

INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI

A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700 800/521-0600

Order Number 9521312

**Coinage and empire: The Athenian standards decree of the 5th
cent. B.C.**

Schoenhammer, Maria O., Ph.D.

City University of New York, 1995

Copyright ©1995 by Schoenhammer, Maria O. All rights reserved.

U·M·I

300 N. Zeeb Rd.
Ann Arbor, MI 48106

COINAGE AND EMPIRE: THE ATHENIAN STANDARDS DECREE OF THE
5TH CENT. B.C.

by

MARIA SCHOENHAMMER

A dissertation submitted to the Graduate Faculty in Classics in partial fulfillment
of the requirements for the degree of Doctor of Philosophy, The City University
of New York.

1995

© Copyright 1995

MARIA SCHOENHAMMER

All Rights Reserved

This manuscript has been read and accepted for the Graduate Faculty in Classics in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

1/30/95
Date

Edward M. Harris
Edward M. Harris

Chair of Examining Committee

1/29/95
Date

Charles R. Beye
Charles R. Beye

Executive Officer

Carmen Arnold-Biucchi

Jennifer Tolbert Roberts

Susan Rotroff

Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

Abstract

COINAGE AND EMPIRE: THE ATHENIAN STANDARDS DECREE
OF THE 5TH CENT. B.C

by

Maria Schoenhammer

Advisor: Edward M. Harris

The subject of this study is an Athenian decree of the 5th cent. B.C. containing regulations about silver coinage, weights, and measures (*ML 45*) which has become known as the Athenian Coinage Decree. Following a recent tendency I find the term “Standards Decree” more appropriate since both coinage and weights and measures function as units of standard.

My dissertation begins with a critical evaluation of the epigraphic evidence. After reviewing the surviving fragments of the decree I present my own composite text, *apparatus criticus*, and translation. The decree is discussed clause by clause, and briefly interpreted. In the second chapter internal epigraphical criteria that have been adduced for the alternative dates are critically assessed as are various external criteria such as related documents, the historical context, and the find spots of the Decree fragments. The issue of the date is also considered in the later chapters, especially in connection with the numismatic evidence.

After a brief discussion of the research methodology, the third chapter — on the numismatic evidence — begins with a series of mints studies. These have been selected to serve as case studies illustrating general tendencies that

may also have applied to other mints. Reasons for revising the chronology of the coin series are presented in great detail, and historical and economic considerations that might affect coinage are taken into account. The remainder of the chapter consists of a summary review of the remaining mints organized by tribute district. The chapter concludes with a brief look at the distribution of coinage in 5th century coin hoards.

In the fourth chapter the state of research on amphora standards is examined as it pertains to provision on weights and measures in the Standards Decree. Finally, in chapter five the Decree is placed in the larger context of imperial finance, and an alternative interpretation of the Decree is advanced.

Preface

The Athenian Standards (or Coinage) Decree has received a fair share of scholarly attention. Almost every survey or textbook of Greek History mentions or alludes to it. Although the various treatments differ in detail, they generally agree that the Athenians replaced the various coinages that circulated in the territory of the Delian League with Athenian owls.¹ This situation conveys the impression that the content and the aim of the Standards Decree are well ascertained. A closer look, however, reveals that there is remarkably little evidence in support of this interpretation.

The Athenian Standards Decree has featured as a point of contention in many scholarly discussions. The controversy revolves around the date of the Decree and the validity of epigraphical criteria for establishing a chronology.² These are certainly very important questions and deserve to be treated in detail. However, with the scholarly interest almost exclusively focusing on the question of the date, the text of the Decree and its potential interpretations have received remarkable little attention.

The focus of my study is the fundamental question of the purpose and context of the Athenian Standards Decree. Of course, I have not omitted the controversial issue of the date from my discussion. However, not making it the central issue allows the relevant evidence to be examined from more varied perspectives. It is hoped that this study will lead towards a more context-oriented understanding of the Athenian Standards Decree.

¹E.g. Bengston 1982, p. 186; Bury and Meiggs 1980, p. 226 with p. 533 no. 20.

²See chapter 2.1. below.

An enormous amount of material evidence is potentially affected by the operation of the Decree. Its provisions concern coinage of silver, and standards of measures and weight. Thus the series of coins of the local mints, containers of standard capacity, such as amphoras, and the official weights of all allied Greek cities could be affected by the operation of the Standards Decree. In view of the enormous amount of material a selective approach had to be adopted. Ideally, the criterion of importance determined what material I studied more closely. On the practical side, more mundane considerations had to be taken into account, such as easy accessibility of the material, and the extent to which I could resort to already existing studies.

At the basis of the reassessment of the Athenian Standards Decree stands a reexamination of the epigraphical fragments from which the provisions of the Decree have been reconstructed. Apart from the fragment from Aphytis which has been republished recently (Stroud 1974a) all the other six inscriptions have been lost or are inaccessible. A newly found fragment has been published by Schwertheim (1988).

The abundance of numismatic material posed considerable problems in terms of both coverage and presentation. It seemed best to examine a number of mints in detail, and treat the rest in a more summary manner. The mints examined in detail are those that have extensive coin series and where new evidence has called for a revision of the chronology. I have placed these detailed examinations at the opening of Chapter 3 so that they may serve as case studies. In the remainder of the chapter the remaining local Greek mints are treated in a more summary manner and by tribute district. In most cases I could resort to already existing studies for a collection of the relevant material which could easily be updated with the evidence from new finds. In addition to published

coins I have seen material housed at the American Numismatic Society, at Ashmolean Museum, and at the British Museum.

The chapter on Weights and Measures is based exclusively on previously published material.

In general I have followed the format set forth in *Hesperia* 1993. For journals and standard works I use the abbreviations listed in *AJA* 1991, or if not applicable those of *L'Année Philologique*. Frequently cited works which do not follow the author/date format are listed in a list of abbreviations.

Acknowledgements

This dissertation has grown out of a project that I worked on during the Graduate Summer Seminar of the American Numismatic Society in the Summer of 1990. My indebtedness is first and foremost to the American Numismatic Society—its curators and staff—for introducing me to the study of numismatics and for generous access to their resources. Special thanks goes to Dr. Carmen Arnold-Biucchi, Margaret Thompson Curator of Greek Coins, for supervising the numismatic component of my dissertation. I would also like to thank the rest of my dissertation committee, Jennifer Tolbert Roberts and Susan Rotroff, and especially my advisor Edward M. Harris. They all have provided me with invaluable counsel and encouragement.

I am most grateful for fellowships and grants from the following institutions: The American School of Classical Studies at Athens awarded me the Heinrich Schliemann Fellowship in 1992/93, and the Edward Capps Fellowship in 1993/94. In 1992/93 I also was the recipient of the American Numismatic Society's Dissertation Fellowship, and in 1991/92 I held a Dissertation Year Fellowship from the City University of New York. Additional funds were provided in 1993/94 by the 1984 Foundation and in 1992/93 by the Germanistic Society of America. My work could not have been undertaken without this support.

For the summer of 1993 the Heberden Coin Room of the Ashmolean Museum in Oxford offered me the Kraay Travel Scholarship which made it possible for me to study the coin collections of the Ashmolean Museum in Oxford and to visit the Department of Coins and Medals of the British Museum in London. I am especially grateful to Michael Metcalf and Chris Howgego for their generosity and professional advice.

I also would like to extend my thanks to the following for their assistance:

Dr. Elmar Schwertheim, Münster, kindly has provided me with a photograph of the newly found fragment from Hamaxitos and has communicated additional information to me. Ute Wartenberg, Department of Coins and Medals at the British Museum, has generously allowed me to use her material collected for *Coin Hoards VIII* prior to its publication. Cathy Lorber and Kevin Cheek made available to me their unpublished manuscript on coin standards. Ron Stroud and Sara Aleshire have made most valuable comments on a draft of my chapter on the epigraphic evidence. Carolyn Koehler has patiently discussed the state of research on amphora capacities with me. Finally, I would like to thank John Link for a sharp editor's eye and for his encouragement through all stages of this work.

My indebtedness to the above mentioned individuals and institutions is enormous. Everyone of them has helped to shape my thesis, but I myself am fully responsible for all errors and shortcomings.

Table of Contents

Coinage and Empire: The Athenian Standards Decree of the 5th cent. B.C.

Abstract	iv
Preface	vi
Acknowledgements	ix
Table of Contents	xi
List of Abbreviations	xiii
Maps	xv
List of Maps	xvii
List of Figures.....	xviii
List of Plates	xix
Introduction	1
1.0 Epigraphic Evidence.....	8
1.1 The Fragments.....	9
1.2 Composite Text.....	34
1.3 Apparatus Criticus.....	36
1.4 Translation.....	40
1.5 Discussion: Clause by Clause.....	42
1.6 Interpretation.....	62
2.0 The Date of the Decree.....	64
2.1 Internal Evidence.....	65
2.2 External Evidence.....	70
2.3 Conclusions.....	78
3.0 Numismatic Evidence.....	80
3.1 Selected Mint Studies.....	84
3.1.1 Skione.....	84
3.1.2 Akanthos.....	93
3.1.3 Thasos.....	126
3.1.4 Abdera.....	132
3.1.5 Dikaia-by-Abdera.....	170
3.1.6 Maroneia.....	185
3.1.7 Ainos	211
3.1.8 Chios.....	231
3.1.9 Knidos.....	238
3.1.10 Aigina.....	242
3.1.11 Summary.....	245

3.2	Survey of Greek Mints by Tribute District.....	247
3.2.1	The Thraceward District.....	247
3.2.2	The Hellespontine District.....	267
3.2.3	The Euxine District.....	275
3.2.4	The Ionian District.....	277
3.2.5	The Karian District.....	290
3.2.6	The Coinages of the Island District (including Aigina and Euboea).....	302
3.3	Evidence from Coin Hoards and Conclusions.....	315
4.0	Weights and Measures.....	322
4.1	Methods for Assessing Amphora Standards.....	323
4.2	Chian Amphoras.....	326
4.3	Thasian Amphoras.....	336
4.4	Conclusions.....	337
5.0	The Standards Decree in Context	339
5.1	Reinterpreting Clause [12]	339
5.2	Tendencies towards Standardization.....	344
5.3	Imperial Finance.....	352
	Conclusions.....	356
	Plates.....	360
	Catalog of Hoards.....	369
	Bibliography.....	378

List of Abbreviations

- ACGC* = Kraay, C. M. 1976. *Archaic and Classical Greek Coins*, Berkeley.
- AMNG* = *Die antiken Münzen von Makedonia und Paionia. Die antiken Münzen Nord-Griechenlands*, Berlin. 1912.
- Asyut* = Price, M., and N. Waggoner. *Archaic Greek Coinage. The Asyut Hoard*, London. 1975.
- ATL* = *The Athenian Tribute Lists*. 4 vols. Meritt, B. D., H. T. Wade-Gery, and M. F. McGregor, eds., Cambridge MA and Princeton NJ. 1953.
- BMC* = *A Catalogue of Greek Coins in the British Museum. 1873-1927*.
- Boston* = Brett, A. B. *Museum of Fine Arts: Catalog of Greek Coins*, Boston 1946, rev. 1955.
- CH* = *Coin Hoards*. The Royal Numismatic Society London. 1975–.
- GHI* = Tod, M. N. *A Selection of Greek Historical Inscriptions 1*, Oxford. 1933, second edition Oxford 1946.
- HCT* = Gomme, A. W., A. Andrewes, and K. J. Dover. *A Historical Commentary on Thucydides*. 5 vols. Oxford. 1970.
- IGCH* = *An Inventory of Greek Coin Hoards*, Thompson, M., O. Mørkholm, and C. M. Kraay, eds., New York. 1973.
- Jameson* = *Collection R. Jameson. Monnaies grecques antiques*, Paris. 1913-1932.
- McClellan* = Grose, S. W. *Fitzwilliam Museum. Catalogue of the McClellan Collection of Greek Coins*, 3 vols. Cambridge. 1923-29.
- ML* = Meiggs, R., and D. Lewis. *A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.*, revised edition, Oxford. 1988.

Olynthos = Robinson, D. M. *et al. Excavations at Olynthus*, 14 vols. Baltimore. 1929-52.

SNG = *Sylloge Numorum Graecorum*.

SNGANS = *The American Numismatic Society*.

SNGBM = *The British Museum. Vol. 9, part 1: The Black Sea*, London 1993.

SNGCop = *The Royal Collection of Coins and Medals, Danish National Museum (Copenhagen)*.

SNGDelepierre = *France, Bibliothèque Nationale. Cabinet des Médailles. Collection Jean et Marie Delepierre*.

SNGOxf = *Ashmolean Museum*

SNGSpencer-Churchill = *Great Britain. Spencer-Churchill and Salting Collections*.

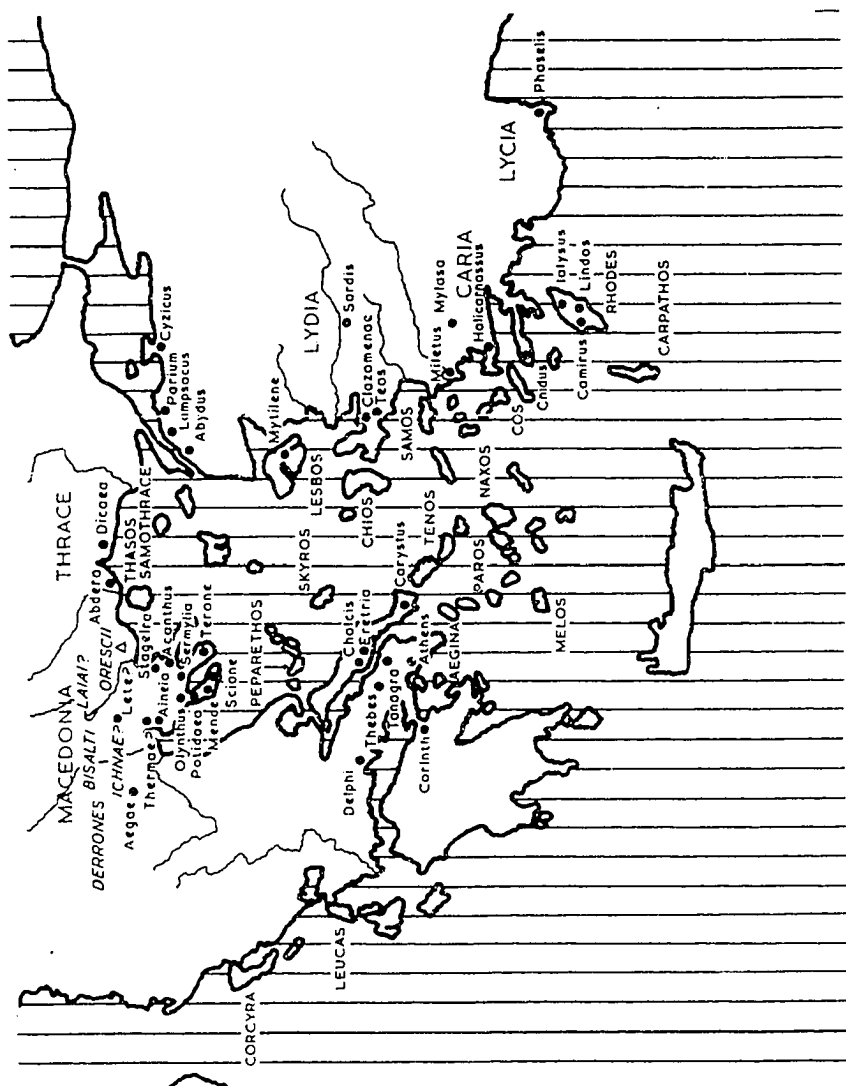
SNGv.Aulock = *Deutschland. Sammlung von Aulock*.

Traité = Babelon, E. *Traité des monnaies grecques et romaines*, Paris. 1904-1912.

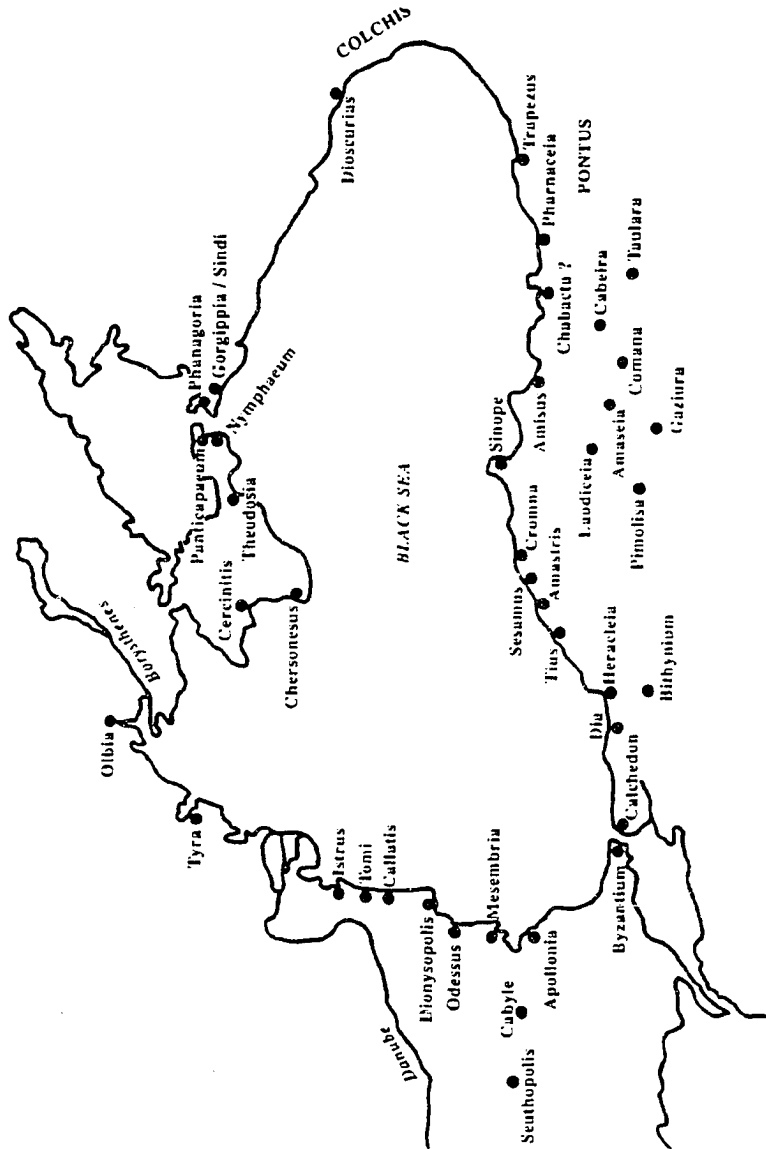
Weber = Forrer, L. *Descriptive Catalogue of the Collection of Greek Coins formed by Sir Hermann Weber*, London 1922-29.

Winterthur = Bloesch, H. *Griechische Münzen in Winterthur*, Winterthur. 1987.

Map 1 - Local Greek Mints
(source: *Asyut*)



Map2 - Mints of the Black Sea Region
(source: SNGBM)



List of Maps

Map 1 - Local Greek Mints xv
Map2 - Mints of the Black Sea Region xvi

List of Figures

Figure 1 - The Fragment from Kos	13
Figure 2 - The Fragment from Aphytis	18
Figure 3 - Akanthos: Chronology	124
Figure 4 - Akanthos: Summary of Weights	125
Figure 5 - Abdera: Chronology.....	168
Figure 6 - Abdera: Summary of Weights	169
Figure 7 - Ainos: Revised Chronology	229
Figure 8 - Coins in 5th Century Hoards	317
Figure 9 - Distribution of Athenian Owls.....	319

List of Plates

(all coins illustrated are at the American Numismatic Society, New York)

- Plate 1 - Akanthos360
- 1 - Akanthos, tetradrachm, obv. lion bringing down bull, floral motive in exergue; rv. four-part incuse (= *SNGANS* 6); Period 1, c. 500-480.
 - 2 - Akanthos, tetradrachm, obv. lion bringing down bull, floral motive in exergue; rv. four-part incuse (= *SNGANS* 10); Period 1, Type F1B, c. 480- c. 465.
 - 3 - Akanthos, tetradrachm, obv. lion bringing down bull,; rv. four-part incuse, ΑΚΑΝΘΙΟΝ in band around (= *SNGANS* 13); Period 2, c. 465-c. 430.
 - 4 - Akanthos, fraction, obv. forepart of lion, floral motive above; rv. four-part incuse (= *SNGANS* 20); Period 2, Series 2, c. 480-c. 465.
 - 5 - Akanthos, fraction, obv. forepart of bull, TE above; rv. four-part incuse (= *SNGANS* 45) Period 2, series 3, after 450.
- Plate 2 - Thasos361
- 1 - Thasos, stater, obv. satyr and nymph; rv. four-part incuse; early dumpy flan; Group 1, after c. 520.
 - 2 - Thasos, stater, obv. satyr and nymph, hand displayed in the form of a Y; rv. four-part incuse; Group 2, before 465.
 - 3 - Thasos, stater, obv. satyr and nymph, with the five fingers displayed, early; rv. four-part incuse; Group 3, after 465.
 - 4 - Thasos, stater, obv. satyr and nymph, with the five fingers displayed, Θ; rv. four-part incuse; after c. 465 (- c. 440?).
 - 5 - Thasos, stater, obv. satyr and "consenting" nymph, dolphin; rv. four-part incuse; Group 4, before 411.
 - 6 - Thasos, stater, obv. satyr and "consenting" nymph, Α; rv. four-part incuse; Group 4, before 411.

Plate 3 - Abdera362

- 1 - Abdera, tetradrachm, obv. griffin; rv. four-part incuse (= *SNGANS* 468); Period 3, c. 475- c. 455/50.
- 2 - Abdera, tetradrachm, obv. griffin, ΗΡΑΚ; rv. four-part incuse (= May 1966, no. 105); Period 3, c. 475- c. 455/50.
- 3 - Abdera, tetradrachm, obv. griffin, ΚΑΛΛΙΔΑΜΑΣ; rv. four-part incuse ΑΒΔΗΡΙΤΕΩΝ in band around (= May 1966, no. 144a); Period 4, c. 455/50- c. 430.
- 4 - Abdera, tetradrachm, obv. griffin, bird symbol; rv. incuse ΕΠΙ ΗΡΟΔΟΤΟ in band around (= May 1966, no. 132); Period 4, c. 455/50- c. 430.
- 5 - Abdera, tetradrachm, obv. griffin; rv. katharos, ΕΠΙ ΑΛΕΞΙΜΑΧΟ in band around (= May 1966, no. 203a); Period 5, c. 430- c. 405.

Plate 4 - Maroneia363

- 1 - Maroneia, didrachm, obv. forepart of a horse, ΕΠΙ ΑΡΧΕΜΒΡΟΤΟ; rv. four-part incuse (= Schönert-Geiss 1987, no. 28/5); Period 3, first series, c. 470-c. 460/55.
- 2 - Maroneia, didrachm, obv. forepart of a horse; rv. four-part incuse with ΜΑΡΟΝΙΤΕΩΝ retrograde in band around (= Schönert-Geiss 1987, no. 38/4); Period 3, third series, c. 455.
- 3 - Maroneia, tetradrachm, obv. horse with kantharos and ΜΑΡΟΝ; rv. vine with ΕΠΙ ΜΗΤΡΟΔΟΤΟ in band around (= Schönert-Geiss 1987, no. 103); Period 5, after c. 440.
- 4 - Maroneia, tetradrachm, obv. horse with head above; rv. vine with ΜΗΤΡΟΦΩΝ in band around (= Schönert-Geiss 1987, no. 134); Period 5, after c. 440.
- 5 - Maroneia, tetradrachm, obv. horse with wheel above; rv. vine with ΜΗΤΡΟΦΩΝ in band around (= Schönert-Geiss 1987, no. 143/2); Period 5, after c. 440.

Plate 5 - Ainos	364
1 - Ainos, tetradrachm, obv. head of Hermes; rv. goat with AIN above (= Strack 272), Period 1, c. 470-440.	
2 - Ainos, tetradrachm, obv. head of Hermes; rv. goat with AIN above (= May 1950a, no. 2556), Period 2, c. 440-400.	
3 - Ainos, tetradrachm, obv. facing head of Hermes; rv. goat with AINION above, Period 3, early 4th century.	
Plate 6 - Potidea, Aphytis	365
1 - Potidea, tetradrachm, obv. horseman mounted; rv. diagonally divided incuse (=SNGANS 687), Series 1, c. 530-480.	
2 - Potidea, fraction, obv. horseman mounted; rv. head of Athena (= SNGANS 692)	
3 - Potidea, fraction, obv. horseman mounted; rv. head of Athena with inscription (= SNGANS 698)	
4 - Aphytis, fraction, obv. bearded head with wreath; rv. vine ΑΦΨΤΑΙΟΝ around in incuse (= SNGANS 209), c. 430's.	
Plate 7 - Mende	366
1 - Mende, tetradrachm, obv. donkey with bird on rump. ΜΙΝΔΑΙΟΝ retrograde; rv. windmill-sail incuse (= SNGANS 293); Period 1, early 5th century.	
2 - Mende, tetradrachm, obv. Dionysos on donkey, bird and ivy; rv. vine with ΜΕΝΔΑΙΟΝ in incuse (= SNGANS 327); Period 2, c. 460/55	
3 - Mende, tetradrachm, obv. Dionysos on donkey, bird; rv. vine with ΜΕΝΔΑΙΟΝ in incuse, sloping N (= SNGANS 335); Period 2, c. 460/55	
4 - Mende, tetradrachm, obv. Dionysos on donkey; rv. vine with ΜΕΝΔΑΙΟΝ in incuse (= SNGANS 347); Period 2, c. 460/55.	

Plate 8 - Terone367

- 1 - Terone, tetradrachm, obv. amphora; rv. four-part incuse (= *SNGANS* 741); Group A, before c. 485.
- 2 - Terone, tetradrachm, obv. amphora; rv. four-part incuse (= *SNGANS* 744); Group B? before c. 485.
- 3 - Terone, fraction, obv. oinochoe; rv. four-part incuse (= *SNGANS* 747), third quarter of the 5th century.
- 4 - Terone, fraction, obv. oinochoe, letters T E; rv. four-part incuse (= *SNGANS* 752), third quarter of the 5th century.

Plate 9 - Dikaia in Macedonia, Neapolis.....368

- 1- Dikaia in Macedonia, fraction; obv. cock; rv. sepia; (= *SNGANS* 243); first half of 5th century.
- 2- Dikaia in Macedonia, fraction; obv. cow with head reversed licking its raised hindfoot; rv. 4-pt. incuse (= *SNGANS* 242), early 5th century.
- 3- Neapolis, stater, obv. Gorgoneion; rv. 4-pt. incuse (= *SNGANS* 404), Group 1, after 520.
- 4- Neapolis, stater, obv. Gorgoneion; rv. 4-pt. incuse (= *SNGANS* 417), Group 2, before 465.
- 5- Neapolis, fraction, obv. Gorgoneion; rv. female head (= *SNGANS* 429), last quarter of the 5th century.

Introduction

At the center of this study stands an Athenian decree of the 5th cent. B.C. that contains regulations about silver coinage, weights and measures (*ML* 45). In the scholarly literature this decree has become known as the Athenian Coinage Decree.¹ The choice of the name “Coinage Decree” is symptomatic of the emphasis that has been put on the stipulation about coinage. Following a recent tendency I find the term “Standards Decree” more appropriate.² It underlines the fact that both coinage, and weights and measures function as units of standard.³ In addition, treating the “Coinage Decree” as “Standards Decree” allows one to widen the scope of the interpretation from Athenian monetary policy to the realm of imperial administration and economy.

The text of the Athenian Standards Decree has been reconstructed from eight very fragmentary inscriptions found at various places in the Greek world.⁴ Traditionally it has been interpreted as a measure whereby Athens required all members of the Delian League to use Athenian coins, weights and measures. All independent silver coinages were banned. The allied cities had to close their mints and bring their silver coins to Athens for conversion into Athenian

¹ See e.g. the titles of Lewis 1987; Mattingly 1987; *idem* 1974; *idem* 1961a.

² This term is used e.g. by Chambers *et al.* 1990; Mattingly 1993.

³ See below, chapters 4 and 5.

⁴ A composite text was first presented by Segre (1938, pp. 149-78). His restoration was improved by Meritt, Wade-Gery and McGregor in several points, and has been included in the 2nd edition of the *Athenian Tribute Lists*; see *ATL* 2, D14.

currency.¹ Throughout my thesis I will refer to this interpretation as the “traditional interpretation.”

The traditional interpretation—the argument that Athens imposed uniformity of coinage upon its allies—features prominently in discussion of the aims and methods of Athenian policy towards its allies. After the Persian Wars many of the Greek cities became allies of Athens in the Delian League. They sought protection against Persia, and under this premise they welcomed Athenian leadership. In the early days of the League the Athenians were foremost among autonomous allies who were taking counsel together. From the very beginning the Athenians held the most powerful positions: they decided whether an ally paid tribute or contributed ships and they fixed the amount of tribute or number of ships. The league-treasurers (*hellenotamiai*) were Athenian, and the entire military-naval command was Athenian.²

After the battle of Eurymedon, in 466, when the Persian threat was eliminated, the cities wanted to pursue their own local political and economic interests. Rather than let this happen, Athens attempted to monopolize the cities' resources and cut them off from their traditional partners. Thus the Greek cities found themselves “subject to the authority of another state which acted to advance its own interests, political and material,” and their relation to Athens deserves to be called *ἀρχή* rather than *συνμαχία*.³

With the transferal of the League treasury to Athens the allies had factu-

¹ See e.g. Bengston 1982, p. 186; for a concise summary of the traditional interpretation, see also Cahn 1970, p. 163.

² Thuc. 1.96-97 with Meiggs 1972, pp. 42-49.

³ Quote from Finley 1981b, p. 43; for forms of economic, political and material control, see *op. cit.*.

ally lost their influence over the process of tribute.¹ The tribute and other monetary charges promoted Athens' military superiority, while economically weakening the ally.²

An imperial decree that bans all local silver coinages and replaces them with Athenian money fits well into the historical context outlined above. Although scholars disagree as to what motivated Athens in passing such a measure the traditional interpretation has been extremely attractive.

The idea that Athens in the 5th century enforced uniformity of coinage on its allies goes back to Wilamowitz. He made this suggestion in a speech entitled "Von des attischen Reiches Herrlichkeit" and dedicated to the German Kaiser.³ Throughout this speech Wilamowitz stresses the similarities between the Athenian and the German empires. Only recently in Germany the *Mark* had been introduced as a common currency replacing the earlier regional currency systems.⁴ In Wilamowitz' opinion the purpose of a unified monetary system—ancient as well as modern—was to facilitate trade relations. As he saw it Athenian leadership brought benefit and stimulus to the subject states. In this line of thought an improving economy would have benefited everyone in the

¹ Although they may have retained some nominal right for appeal. Cf. the treaty with Chalkis (*ML* 52): τὸν φοροῦν...ὅν ἂν πείθοι. In the reassessment of 425/4 (*ML* 69) the cities are required to send representatives to Athens. Hearing which amount of tribute has been proposed they have the right to appeal the assessment at a special court of 1000.

² Often when a city revolted its tribute was raised, and indemnities were inflicted. Places that served Athenian interest—for example as military or trading bases-- were rewarded with low assessments (e.g. Brea, Amphipolis, and the Chersonese).

³ Wilamowitz (1880, p. 30 with note 56) conjectured the existence of such a decree based on Aristophanes, *Aves* 1040-1041.

⁴ On the currency reform in Germany, see Rittmann 1975, pp. 761-94; Schultz 1976, pp. 34-53.

Greek world.¹

Finley, on the other hand, contended that Athens pursued hard-line imperialism. For him the Standards Decree was mainly politically motivated: the encroachment upon the allies' right to strike their own coins was intended as a blow to their feelings of independence and autonomy.¹ At the same time Finley did not rule out that the Athenian Standards Decree also could have been passed in an effort to facilitate the financial administration of the empire.²

Subsequent assessments of Athens' motivation for passing this decree differ in the emphasis they place on the political component. Mattingly, for example, has regarded the Athenian Standards Decree exclusively "as a political and imperial manifesto."³ Others have stressed the possible practical advantages of the Decree.⁴ Although these scholars differ in their assessment of the motivation for enacting the Decree they all agree on its result: that the Athenian Standards Decree enforced a general ban of all local silver coinages.⁵

The question of the date of the Athenian Standards Decree has generat-

¹ Wilamowitz 1880, p. 30.

² See Finley 1973, pp. 168-69; *idem* 1979, pp. 22-24; *idem* 1981b, p. 56, with note 46. Finley conceded that one of the aims of the Athenian Standards Decree might have been to facilitate the collection of tribute and other administrative and military payments (1973, p. 168). He downplayed this aspect in order to support the thesis of political motivation (*Machtpolitik*) that he has pitted against the theory of commercial imperialism (*Handelspolitik*) (1979, pp. 22-24). Commercial imperialism is not the same as streamlining the administration of the empire. This distinction has become somewhat blurry, most notably in the presentation of Martin (1985, pp. 196-206) who advances the theory that the Athenian Standards Decree might have been motivated by considerations of imperial finance by contrasting it with Finley's thesis.

³ E.g. Mattingly 1987; quote from *op. cit.*, p. 65.

⁴ E.g. Martin 1985, pp. 196-206. For a concise discussion of possible practical aspects of the Standards Decree; see Lewis 1987, pp. 60-62.

⁵ For recent tentative suggestions of a more restricted applicability, see Schuller 1974, pp. 215-17; Martin 1985, pp. 196-207; Koch 1991, pp. 380-81.

ed significant controversy. After the discovery of the first fragments the Decree was dated to the years around 423. When a fragment in Attic script was found to contain a three-barred sigma most scholars were inclined to move the Decree to the 440's. Recently, however, epigraphists have found more and more evidence suggesting that a three-barred sigma may have been used after 446.¹

Also bearing on the date of the Decree are the coin series of the local Greek mints. If a monetary reform made the Athenian owl the only legal silver currency in the empire, and if the allied cities were forbidden to strike and use their own local coins, one would expect to find this reflected in the numismatic material. In 1949, E. S. G. Robinson undertook a thorough and comprehensive examination of the local coinages.² He confirmed the results of earlier studies, namely that the activity of some mints ceased in the middle of the 5th century.³ But on the other hand he admitted that the evidence did not really suggest the Decree was ever successfully implemented. He dated the Decree to the 440's—the period immediately after the peace of Kallias—on epigraphic rather than numismatic grounds. Subsequently many numismatists, on the basis of Robinson's authority, have taken for granted a break of 10 years in the local coinages starting around 449/8. Often this becomes an important chronological anchor in their sequence of issues.⁴ In recent years, the dates traditionally assigned to early classical Greek silver coinages have been lowered, mostly based on the evidence from the Asyut Hoard (*CH* VIII, 844) and from the Elmalı

¹ Cf. Chambers *et al.* 1990, pp. 38-63.

² E. S. G. Robinson 1949, pp. 324-26.

³ For an earlier study, see Gardner 1913.

⁴ E.g. for Akanthos, see Desneux 1949; for Ainos, see May 1950; for Abdera, see May 1966; for Knidos, see Cahn 1970; for the coinage of Maroneia, see Schönert-Geiss 1987; cf. also *ACGC passim*.

Hoard (*CH* VIII, 48).¹ As a consequence of the downdating, the coin series continue into the break postulated in the 440's. This speaks against dating the Standards Decree in the 440's, but it does not necessarily imply that a break occurred in the 420's, the other favorite option for a date.²

My dissertation starts with a critical evaluation of the epigraphic evidence. After reviewing the individual fragments I present my own composite text, with *apparatus criticus* and translation. The decree is discussed clause by clause, and the findings are then briefly interpreted. The second chapter introduces the question of the date of the Decree. The internal, epigraphical, criteria that have been adduced for the alternative dates are critically assessed as well as various external criteria such as related documents, the historical context, and the find spots of the Standards Decree. Since this material does not permit the Decree to be dated conclusively, the issue of the date again will be considered in the following chapters, especially in the evaluation of the numismatic evidence.

After a brief introduction discussing my research methodology, the numismatic chapter begins with a series of mints studies. These have been selected to serve as case studies illustrating general tendencies that may also have applied to other mints. Reasons for revising the chronology are presented in great detail, and historical and economic considerations that might affect coinage are taken into account. The remainder of this chapter consists of a summary review of the remaining mints organized by tribute district. The chap-

¹ See *Asyut*, pp. 117-25 for a summary of the chronological consequences. For the Elmalī Hoard, see esp. Fried 1987; Kagan 1987.

² Mattingly (1970; 1977a; 1981; 1988) reviews several local coinages and finds evidence for a break in the 420's.

ter closes with a brief look at the distribution of coinage in 5th century coin hoards.

In the next chapter the relevance of the provision on weights and measures is examined. The state of the research on weights and measures precludes any detailed conclusions about the date of the Decree. Coinage, weights and measures have in common that they are all units of standard. By placing the emphasis on the issue of standardization, the Decree can be better understood as an effort to facilitate the administration of the empire. Thus, finally the Decree is placed in the larger context of imperial finance, and an alternative interpretation is advanced.

1.0 Epigraphic Evidence

The Athenian Standards Decree is a composite text based on eight fragmentary inscriptions found in different parts of the Greek world. Most of the provisions of the Standards Decree are only very partially preserved. Nevertheless, specific and detailed restorations and interpretations have been proposed.¹ The purpose of this chapter is to review the preserved epigraphic evidence and to produce a composite text limiting restorations to those warranted by the extant text. Throughout this chapter I focus on the scholarship after 1969, because up to that date Erxleben has discussed it adequately.² Similarly, the emphasis in the *apparatus* is on recent editions of the composite text.

The general assumption is that the restored composite text comes very close to the original text of the Decree as it was passed in Athens, and immediately thereafter set up in the allied cities.³ Since some of the text on the fragments overlaps, it is justifiable to produce a composite text. In the text that is extant in different copies there are only a few slight differences, but large portions of the Decree are missing. The composite text should be understood as a construct that in this form may never have existed.⁴

After presenting the individual fragments, my composite text with *apparatus criticus* and translation, I will then defend my restorations, clause by clause,

¹For a summary of the traditional interpretation, see e.g. Cahn 1970, pp. 162-66.

²Erxleben 1969; cf. *idem* 1971.

³Cf. *ML*, pp. 111-17.

⁴Mattingly (1993, p. 101) raises and dismisses the possibility that the decree might have been set up in the various cities at varying dates, depending on when they joined the League. Mattingly (*ibid.*) also raises the possibility that the local variations of the text were greater than reflected in the passages preserved in the composite text.

and explain why I have departed from certain other restorations. My composite text will become the basis for a re-interpretation of the provisions of the decree. The epigraphic evidence leads directly to the problem of the date, which I will discuss in the next chapter.

1.1. The Fragments

The Fragment from Hamaxitos¹

Editio Princeps: Schwertheim, E. 1988. "Ein Dekretfragment aus dem 5. Jhdt. v. Chr. aus Hamaxitus," *Arastirma Sonuçları Toplantısı* 6, pp. 283-86.

The text is reprinted in *SEG XXXVIII*, 1251.

Photo: Schwertheim 1988, p. 286.

Disposition: Gülpınar.

Recent Bibliography: Mattingly, H. B. 1993. "New Light on the Athenian Standards Decree," *Klio* 75, pp. 99-102.

Context: Found in 1987. It was built into a wall near the sanctuary of Apollo Smintheus at Gülpınar.

Dimensions: H: 0.22 m.; W: 0.12 m.; Th: 0.07 m.; L.H: 0.008 m.

Description: Fragment of a slab; very worn, esp. in the lower part; no information on type of stone.

Letterforms: Stoichedon; Attic with four-barred sigma; reverse lambda; sloping nu.

¹ I am grateful to Professor Schwertheim (*per. ep.*) for much of this information.

1 ΚΟΙΕ
 ΟΙΔΕΕΛΛΕ
 ΑΝΔΕΤΙΣΑΜ
 ΕΝΟΤΑΜΙΑΙ
 5 ΕΘΕΣΜΟΘΕΤ
 ΔΕΤΙΣΤΟΝΑ
 ΔΕ ΤΟΝ
 ΔΕ
 ΝΟ

Epigraphical commentary

Line 5: Stoich. 2 is E, not H (Schwertheim, *per. ep.*).

Text

Lines 1-9 cf. Kos lines 2-12 = [1]-[4].

Lines 5-9 cf. Aphytis lines 1-6 = [3]; [4].

Stoich. 54?

1 [ΙΚΟΙΕ[...11... πόλεσι ἔ ἄρ.....28..... [2] h]
 οι δὲ ἐλλείνοταμίαι ...25..... ἀναγραφόντων· ἐ]
 ἀν δέ τις ἀμ[φισβετεῖ ...7... τὸν πόλεον τινὸς ἐσαγέσθον οἱ δὲ ἐλλ]
 ενοταμίαι [.. ἐς τὲν ἐλαιάν τὲν τὸν θεσμοθετὸν13?... οἱ
 5 δὲ θεσμοθέτ[αι πε...10...ντον...14...ασι ἕκαστον. [3] ἐὰ
 ν] δέ [τις] τὸν ἄλλον ἀρχόντον τὸν ἐν τῆσι πόλεσι μὲ ποιῆι κατὰ
 ἐφσεφι
 σ]κμ[έ]να ἔ] τὸν [πολιτῶν ἔ τὸν χσένον ἄτιμος ἔστο καὶ τὰ δὲ
 χρέματα αὐτ
 ὀ] δε[μύσια ἔστο καὶ τῆς θεῶ τὸ ἐπιδέκατον. [4] καὶ εἰ μέ εἰσιν
 ἀρχοιτες "Α
 θεναίον] οἱ

3 ἀν δέ τις Ἄμ[αξιτῶν Schwertheim 1988. **6** δέ [τις] τὸν ἄλλον? *idem*. **7** δέ [τις]
 τὸν *idem*.

Length of line: By comparing the position of the text in relation to the text on the fragments of Kos and Aphytis I have calculated the length of line as stoich. 54. The length of the lacunae has been arrived at in the same manner. Although the fragments from Kos and Hamaxitos are both written in the Attic dialect, there may be slight differences in the rendering of the text, e.g. Hamaxitos does not appear to use the aspirate.

Commentary:

Line 3: Schwertheim's restoration ἂν δέ τις Ἀμ[αξιτῶν is to be rejected. As pointed out by Herrmann in *SEG XXXVIII* 1251 the ethnicon of Hamaxitos is Ἀμαξιτεύς or Ἀμαξιτηνός.

Line 6: The restoration κατὰ τὰ ἐφσεφισ]μένα results in 56 letters for line 6. Either line 6 was longer than the other lines, or there was an omission, e.g. τὰ after κατὰ could have been dropped by mistake.

Kos and Aphytis read: τῶν ἄλλων ἀρχόντων ἐν τέσσι πόλεσι.

Line 7: Stoich. 2 should read M instead of Δ. This is suggested by the overlap with the text on the fragment from Aphytis, and also by the relative position to the text on the fragment of Kos.

Line 9: Stoich. 8 being omicron leads to a word order that is slightly different from Aphytis and Kos: Καὶ εἰ μὴ εἰσι ἄρχοντες Ἀθηναίων οἱ ἄρχοντες οἱ ἐκάστης τῆς πόλεως εἰ...17... τῷ ψηφίσματι.

The Fragment from Kos

Editio Princeps: Segre, M. 1938. "La legge ateniese sull' unificazione della moneta," *Clara Rhodos* 9, pp. 149-78.

Reprinted with some changes in *IG XII suppl.* 480 II.¹

Photo: Segre 1938, pl. 1; *ATL* 2, pl. 5, D 14.

Context: Found in 1933 among the debris of the earthquake in Kos.

Disposition: Reported as lost by the Ephoria in Rhodes (*per. ep.*, 03/02/93).

Recent Bibliography: Mattingly, H. B. 1977. "The Second Athenian Coinage Decree," *Klio* 59, pp. 83-100.

Dimensions:² H: 0.235 m.; W: 0.29 m.; Th: 0.115 m.; L.H.: 0.009 m.

Description: Island marble, probably from Paros;³ from c. line 8 downward the original right edge of the stone preserved.

Letterforms: Stoichedon; Attic with three-barred sigma.

¹The changes are summarized by Erxleben 1969, p. 96 note 5.

²Pritchett (1965, p. 439) has Th: 0.125 m.; L.H.: 0.008 m.

³Cf. Georgiades and Pritchett 1965, pp. 400-425.

Epigraphical Commentary:

Line 1: Pritchett (1965, p. 440) reads T as I; Meritt (1967, p. 127) defends T.

Pritchett (*ibid.*) describes the preceding space as occupied by "the base of an upright stroke."

Line 7: At the end of the line, Erxleben (1969, p. 100) reads on the squeeze Π with certainty, but the next letter could be either P or E.

Line 12: Initial alpha read by Pritchett (1965, p. 440) and Meritt (1967, p. 127, note 32), but not by Erxleben (1969, p. 212).

Line 16: Last letter Π dotted by Segre (1938, p. 153), but by none of the later editors.

Line 17: Segre (1938, p. 159) writes ελαττ[ον [by mistake?]; Pritchett (1965, p. 440) sees in the space of the second T "a slightly sloping vertical stroke, as of a malformed iota or Attic lambda." According to Pritchett (*ibid.*) nothing of the original surface is preserved in the following space.

Text

Lines 2-12 cf. *Hamaxitos* lines 1-9 = [1] - [4].

Lines 8-17 cf. *Aphytis* lines 2-10 = [3] - [5].

Stoich. 41.

1	---] αι τὰ γ[...6...
	---c. 12---ΚΟΙΕ...11... πόλεσι ἔ ἀρ[...5...
	...23... [2] ἦοι] δὲ ἠελλενοταμίαι
	...25... ἀναγραφόντων· ἔάν δ
5	έ τις ἀμφισβετεῖ ...7... τῶν πόλεων τινὸς ἐσαίγες
	θον ἦοι δὲ ἠελλενοταμίαι εἰς τῆν ἐλιαίαν τὲν τῶν θ
	εσμοθετῶν ...13... ἦοι] δὲ θεσμοθέ[τ]ται πε[.
	...8...ντων12.....]ασι ἠέκαστοι. [3] ἐάν δέ [τ
	ις τῶν ἄλλον ἀρχόντων ἐν τῆσι πόλεσι μέ ποιῆι κα[τ
10	ὰ τὰ ἐφσεφισμένα ἔ τῶν πολιτῶν ἔ τῶν χσένον [ἀτ]μιοσ

ἔστο. τὰ δὲ χρέματα αὐτὸ δεῖμῶσια [ἔσ]το καὶ τῆς θεῶ τῷ
 ἐπιδέκατον. [4] καὶ εἰ μέ εἰσιν ἄρχοντες Ἀθηναίων ἐ[..
19..... φσε]φίσματι hoi ἄρχοντες ἡ
 15 οὐ heκάστες τῆς πόλεος· καὶ] ἔαμ μέ ποιῶσι κατὰ τῶν.
23.....]όντων τούτων περὶ [ἀτ.
22..... [5] τῷ ἀργυποκοπίο τὸ ἀρ
γύριον17..... ἔλαττοίν ἔ ἡμυσου καὶ ἀ

1-3 ἀδόκιμα ἐνταῦθα τὰ γέγραμμένα νομίσματα ἐν ἡπάσῃσι τέσσι πόλεσι ἔ ἀρχονταῖς
 Ἀθηναίων παραδέχσασθαι Erxleben 1969, pp. 98, 131.

Length of line: Segre, Erxleben, Meritt, and Mattingly have made various suggestions depending mostly on their restorations of the text.¹ Meritt, having examined the stone, calculated that the space between the last legible letter and the preserved right edge of the stone could accommodate only one letter in lines 8 and 9.² Line 10, the line that can be restored most securely, amounts to 41 letters.³ In lines 5-8, 10, 12, and 14 where there is sufficient overlap with the text of other fragments I have arrived at 41 letters as well. However, there may be irregularities even in a stichedon text, and it is possible that the stele got wider towards the bottom.⁴

¹ Segre (1938, p. 154) suggests 40 letters for lines 1-8, 41 for line 10, 40 letters for line 11, and 41 letters for lines 12-17. Erxleben (1969, p. 212) thinks the stele gets wider towards the bottom and proposes 40 letters for lines 1-7, and 41 letters for lines 8-17. Meritt (1965, p. 127) has stich. 41 for the entire fragment, and so does Mattingly (1977, p. 85).

² Meritt 1967, p. 127; cf. Erxleben 1969, p. 212.

³ Segre 1938, p. 154; Erxleben 1969, p. 97; Meritt 1967, p. 127 (Meritt's line 11).

⁴ Mattingly (1977, pp. 84-85) tries to calculate how much of the decree was missing before the beginning of the text on the Kos fragment. His calculations do not allow for variations in the different copies, and are based on the assumption that there was the same number of letters in all the lines of the fragments from Kos and Aphytis.

Commentary

Line 9: Inserting <ἐ> (Erxleben 1969, p. 104) leads to 41 letters: ἐὰν δέ τις <ἐ>

τῶν ἄλλων ἀρχόντων ἐν τῆσι πόλεσι μὲ ποιῆι κατὰ τὰ ...

Also joining with the text on the fragment from Aphytis, but requiring a slightly different rendering of the text from Hamaxitos would be: τις

ἄλλος <ἐ> τῶν ἀρχόντων ἐν τῆσι πόλεσι ...

Line 11: καὶ τὰ χρήματα δημόσια ἔστο on Aphytis line 4.

The Fragment from Aphytis

Editio Princeps: Robinson, D. M. 1935. "A New Fragment of the Athenian Decree on Coinage," *AJPh* 56, pp. 149-154.

Photo: D. M. Robinson 1935, pl. I; Segre 1938, fig. 2; Stroud 1974a, pl. I.

Recent Bibliography: Stroud, R. S. 1974a. "Three Attic Decrees," *CSCA* 7, pp. 279-298. Meritt, B. D. 1975. "Perikles, the Athenian Mint and the Hephaisteion," *ProcPhilSoc* 119, pp. 267-274.

Context: Found 1928 in a field c. 1 km west of modern Aphyto.

Disposition: Thessaloniki, Museum.

Dimensions: H: 0.50 m.; W: 0.33 m.; Th: 0.126 m.

Description: Local limestone, badly weathered; original right edge preserved in lower part (c. line 12 and below).

Letterforms: Stoichedon; Ionic.

Epigraphical Commentary:

Line 6: Robinson (1935, pp. 152-52) wrote the last letter as Φ , but he noted that

I would also be possible. The letter I has been confirmed by the fragment of Kos I. 13 that overlaps here with the text from Aphytis.

Line 8: Stroud (1974, p. 280) reads the last letter clearly as T, which Robinson has as Σ .

Line 9: Stroud (*ibid.*) sees at the left edge a small segment of a circular letter and writes O.

Line 10: The A at the end of the line, dotted by D. M. Robinson (1935, p. 152), is clearly seen by Stroud (*ibid.*).

Line 17: Stroud (*ibid.*) sees traces of a triangular letter before A, the first letter recorded by Robinson. According to Stroud (*ibid.*) the traces would suggest Λ or A.

Line 20: Stroud (1974, p. 283) sees a clear Σ at the beginning of the line.

Text:

Lines 1-6 cf. *Hamaxitos* lines 5-9 = [2] - [4].

Lines 1-10 cf. *Kos* lines 7-17 = [2] - [5].

Lines 18-24 cf. *Syme* β lines 1-5 = [8]; [9].

Stoich. 42.

1	<u>οἱ δὲ θεσμοθέται πε...</u> 9... <u>ἴντων</u>12..... <u>α</u>
	<u>σι ἕκαστον.</u> [3] <u>ἐὰν δέ τις</u> ἄλλος <u>τῶν ἀρχόντων</u> τῶν ἐν ταῖσι πό
	<u>λεσιν</u> <u>μη ποιῆι</u> <u>κατὰ τὰ ἐψηφισμένα</u> ἢ <u>τῶν [πολιτῶν ἢ τῶ</u>
	<u>ν ξένων ἀτιμος</u> ἔστω <u>καὶ τὰ χρήματα δημόσια</u> ἔστο <u>καὶ</u>
5	<u>τῆς θεοῦ τὸ ἐπιδέκατον.</u> [4] <u>καὶ εἰ μὴ εἰσι ἀρχόντες</u> Ἄθεν
	<u>αἰων</u> <u>ε.....21.....</u> ἠφίσματι <u>οἱ [ἀρχοντ</u>
	<u>εS.....20.....</u> ἐὰμ <u>μὴ ποιῶσι</u> <u>κατὰ [τὰ ..3</u>
	<u>..21.οντων]</u> <u>τούτωμ</u> <u>περι.</u> ἀτ.4..
	<u>....18...[5]..τῶι</u> <u>ἀργυροκοπίω</u> <u>τὸ ἀργυρίο</u>
10	<u>ν</u>19.... <u>μὴ ἔλαττον</u> ἢ ἡμυς <u>καὶ ἀλ..</u>

.....27.....] αἱ πόλεις πραττ[.
27.....] δραχμὰς ἀπὸ τῆς μν
 [.....28.....] ἀλλάττεν ἢ ἐνόχο
 [...27...[6].. γίγνηται ἀργυριο
 15 [...21... ἀποδιδόσθαι ἢ τοῖς στρατ
 [ηγοῖς ...20.. [7] ἐπελδάν δὲ ἀποδοθῆ
 [...28...] λαι καὶ τῶι Ἑφαισ
 [...20 [8].. τις εἶπηι ἢ] ἐπιψηφίσηι περ
 [....28....] τι χρῆσθαι ἢ δανε
 20 [ἴζειν ...21... πρὸς τοὺς ἕνδεκα οἱ δ
 [ἐ ---c. 9---ΣΑΤΩΙΖ---c. 9--- ἐάν] δὲ ἀμφισβητῆι ἐσ
 [...22...ον [9] κήρυκ]ας δὲ ἐλέσθαι το
 [...28...]ενα ἕνα μὲν ἐπὶ νή
 25 [σους ἕνα δὲ ἐπὶ Ἴωνίαν ἕνα δὲ ἐφ' Ἑλλήσπολιτον ἕνα δὲ ἐ
 [πὶ τὰ ἐπὶ Θράικης το ---

17-18 λαι καὶ τῶι Ἑφαισ[τικῶι ἀπὸ Λαυρέου. ἐάν δέ τις ---] Stroud 1974, pp. 281-82.

Length of line: The lines that can be fully restored (lines 2-5, 24) have 42 letters.

Commentary:

Line 4: τὰ δὲ χρέματα αὐτῶ δεῖμῶσια [ἔσ]το on Kos line 11.

Line 17: Stroud (1974, p. 281) reads the beginning of line 17 as λαι. Epigraphically ααι would also be possible, but then one has to assume a stonemason's error for [Ἐφαισ]αίαι. There are no other errors in this inscription, and since the restoration is not confirmed by the text of any other fragment it should be dismissed.¹ The interpretation of λαι is unclear. It could be an aorist infinitive or a feminine noun.²

Line 21: The relative position of line 3 from the fragment Syme β is uncertain.

¹ Mattingly (1974, p. 281, note 4) and Meritt (1975, p. 270 with note 32) maintain that the spelling [Ἐφαισ]αίαι remains possible. The examples they cite are all either from private dedications where the spelling is often faulty, or from fourth century documents.

² Stroud 1974, p. 282.

The Fragments from Syme (α; β)

Editio Princeps: Chaviaras, N. D. 1922. "Σποράδων ἐπιγραφαί," *AE* 39-41, no. 13

α; β.

Hiller von Gaertingen (1923, p. 116) identifies the fragments as belonging to the Standards Decree.

Photo: Chaviaras 1922, p. 39.

Disposition: Reported as lost by the Ephoria in Rhodes (*per. ep.*, 03/02/93).

Recent Bibliography: for Syme α see Mattingly 1977.

Context: Found in the lower part of the Akropolis, in a garden.

Dimensions: α: 0.65 x 0.088 m.; β: 0.22 x 0.165 x 0.057 m.; L.H.: 0.014–0.009 m.

Description: Limestone. Broken off; on β left edge preserved from c. line 4 on.

Letterforms: Non-stoichedon; Ionic; unskilled lettering, unevenly spaced.

Chaviaras (1922, p. 39) dates the decree to the third century B.C because of the letterforms, esp. Γ, Σ, Ψ, Ρ. He notes the occurrence of V and Y, and of both E with all three horizontal bars of the same length, and of E with a shorter middle bar.

α)

1 ΟΛΕ

ΟΝΤΕ

ΛΛΗΝ

β)

1 ΕΙ
 ΗΔΑΝ
 ΣΑΤΩΙΖ
 ΟΝΚΗΡΥΚΑ
 5 ΕΝΑΜΕΝΕΠΙ
 ΙΘΡΑΙΚΗΣΤΟ
 ΠΟΣΤΕΛΑΝΤ
 ΡΑΨΑΙΔΕΤΟΨΗ
 ΛΗΙΔΙΘΙΝΗΙΕΝΤ
 10 ΤΟΑΡΓΥΡΟΚΟΠΙ
 ΗΘΗΝΑΙΔΕΑΥΤΩΙ
 ΙΔΕΠΡΟΣΤΟΝΟΡΚ
 ΔΙΕΑΝΤΙ. ΚΟΠΤ

Epigraphical Commentary

Syme α:

Line 3: Chaviaras (p. 39) saw the left half of Ω after the N. According to *ATL 2* (p. 62) this could also be the trace of O.

Syme β:

Line 1: Klaffenbach (1925, p. 218)¹ reads Σ in the space before ΕΙ.

Line 3: Klaffenbach (*ibid.*) reads ΣΑΤΩ..and can not see ΙΖ in the following two spaces which Chaviaras has seen.

Line 8: Erxleben (1969, p. 120) reads ΡΑΨΑΙ on squeeze. Klaffenbach (*ibid.*) has . ΝΑΙ.

¹ Klaffenbach in Hiller von Gaertingen and Klaffenbach 1925, pp. 218-19. It is not stated explicitly whether Klaffenbach examined stone, squeeze, or photograph.

Line 11: Last letter read by Klaffenbach as N, by Chaviaras as I.

Line 13: Klaffenbach has ΔΕΕΑΝΤΙΣΚΟΠΤ. Chaviaras' reading of the second legible letter as I has been confirmed through the fragment from Odessa line 6.

Text

Syme β

Lines 1-8 cf. Aphytis lines 18-24 = [8] - [9].

Lines 7-13 cf. Siphnos lines 1-11 = [9] - [12].

Lines 8-13 cf. Smyrna lines 1-7 = [10] - [12].

Lines 9-13 cf. Odessa lines 1-6; = [10] - [12].

Non-Stoich. c. 55-59?

- 1 καὶ εἴπερ τις εἴπηρι ἢ ἐπιψηφίσηι περὶ ----c. 27----τι
 χρῆσθαι] ἢ δανείζεν ----c. 21---- πρὸς τοὺς ἔνδεκα οἷ δὲ --c. 7--
 -2-3-]ΣΑΤΩΙΖ[-c. 9-- εἴπερ δὲ ἀμφισβητῆι ἐσ-----]
 ον [9] κήρυκα[ς δὲ ἐλέσθαι το-----ενα]
- 5 ἓνα μὲν ἐπὶ [νήσος ἓνα δὲ ἐπὶ Ἰωνίαν ἓνα δὲ ἐφ' Ἑλλήσποντον ἓνα
δὲ ἐπὶ τὰ ἐπ]
 ἰ Θράκιος το[----- ἄ]
 ποστελάντων ---c. 15?--- εὐθυνόσθω μυρίας δραχμαῖς --?-- [10] ἀναγ]
 ράψαι δὲ τὸ ψήφισμα τότε τοὺς ἀρχοντας τῶς ἐν ταῖσι πόλεσιν
---?--- ἐν στη]
 ληι λιθίνη ἐν τῇ ἀγορᾷ ἐκάστης τῆς πόλεως καὶ τοὺς ἐπιστάτας
ἔμπροσθεν]
- 10 τῶ ἀργυροκοπίο ταῦτα δὲ ἐπ---c. 16---εἴ μὴ αὐτοὶ βόλωνται
[11] δε]
πθῆαι δὲ αὐτῶν] τὸν κήρυκα τὸν ἰόντα ὅσα ἐλεύσιν Ἀθηναῖοι
[12] προσγρά]
 ι δὲ πρὸς τὸν ὄρκλον ὄν τῆς βολῆς τὸν γραμματέα τὸν τῆς βολῆς
--?--
- .]δι εἴπερ τις κοπτῆι νόμισμα ἀργυρίου ἐν τῇσι πόλεσιν -----

12 τὸν γραμματέα τὸν τῆς βολῆς καὶ τὸ δῆμο Erleben 1969, p. 124.

Syme α

Relative position of the text: There is no consensus where the smaller fragment from Syme fits in relation to the other fragments. The editors of *ATL 2* maintain that Syme α corresponds to Kos lines 1-3.¹ Erleben rejects a correspondence between Syme α and Kos lines 1-3, partly because this would yield only 55 letters per line for the fragment Syme α. Based on comparison with Syme β where he restores lines between 56 and 62 letters Erleben thinks that also on Syme α the lines should be longer.² Since the fragments from Syme are not stoichedon his argument is not entirely convincing.³

It has become difficult to fit Syme α with Kos lines 1-3 now that the fragment from Hamaxitos also overlaps with the fragment from Kos in these lines. Syme α must then belong to some part of the decree which is not preserved on any other fragment. Therefore it is of no help in establishing a composite text.

Syme β

Length of line: Especially in the parts where the text of Syme β can not be put in relation to the text of fragments that are in stoichedon (Aphytis and Odessa), it is difficult to estimate the length of the lacunae. Of the lines which can be restored with fair certainty, line 5 amounts to 58 letters,

¹ *ATL 2*, pp. 62-63. In the restorations of clause [1] by *ATL* and *ML* Syme α supplements Kos lines 1-3; cf. Mattingly 1977, p. 85 with note 11. The preserved letters of l. 1 on Hamaxitos make these restorations very improbable.

² Erleben 1969, pp. 97-101.

³ Another reason why Erleben (*ibid.*) rejects the restoration of *ATL* is his different interpretation of Kos lines 1-3, especially on the point of the identity of the ἀρχοντες ἐν τῆσι πόλεσι.

and line 11 to 59 letters. However, since the fragment is not stoichedon, one can not necessarily assume that all the lines had the same number of letters.¹ The length of the lacuna in line 10 has been calculated in relation to the stoichedon text on the fragment from Odessa.

Line 12: If one restores the text of the fragment from Odessa this line amounts to only 50 letters. Erxleben (1969, p. 124) assumes there was a lacuna of c. 9 letters at the end of the line.

Commentary

Line 9: I have given the text of this line according to the fragment from Odessa.

The fragment of Smyrna has a different word order: ἐν τῇ ἀγορᾷ τῆς πόλεως ἐκάστης καὶ.

¹ I think Erxleben (1969, p. 118) places too much weight on the conjectured length of the lines.

The Fragment from Siphnos

Editio Princeps: Hiller von Gaertringen 1909 in *IG XII*, 5 no. 480A.

Photo: ---

Recent Bibliography: ---

Context: Found in 1895 by Hiller von Gaertringen on Siphnos in the village
Kastro apud Angelum Prokum (Hiller von Gaertringen 1909).

Disposition: *in situ* ?

Dimensions: H: 0.20 m.; W: 0.20 m.; Th.: 0.065 m.

Description: white marble, broken off an all sides.

Letterforms: Non-stoichedon; Ionic.

1 ΝΟΣΘΩΜΥΡΙΑ
 ΑΙΔΕΤΟΨΗΦΙΣΜΑΤ
 ΝΤΑΙΣΙΠΟΛΕΣΙΝ
 ΙΛΙΘΙΝΗΙΕΝΤΗΙΑΓ
 5 ΔΕΩΣΚΑΙΤΟΣΕΠΙΣΤ
 ΡΟΚΟΠΙΟΤΑΥΤΑΔΕΕΓ
 ΑΜΜΗΑΥΤΟΙΒΟΛΩΝΤΑ
 ΤΟΓΚΗΡΥΚΑΤΟΝΙΟΝΤ
 ΑΙΟΙΠΡΟΣΓΡΑΨΑΙΔ
 10 ΒΟΛΗΣΤΟΝΓΡΑΜΜΑ
 ΣΚΘΠΤΗΙΝΟΜΙΣ
 ΗΧΡΗΤΑΙΝΟΜ
 ΣΤΑΘΜΟΙΣ
 ΝΚΑΙΣ
 15 .Τ

Epigraphical Commentary

Line 1: Of the third and second letter to the end lower half of vertical bar preserved.

Line 5: Of the first letter there is \.

Line 6: Last letter Π or Γ.

Line 9: There is an unidentifiable trace of the fourth from the last letter preserved.

Line 15: On the squeeze Erxleben (1969, pp. 125-26) reads the last letter as T, and can not identify the second to last letter.

Text

Lines 1-11 cf. Syme β lines 7-13 = [9] - [12].

Lines 2-15 cf. Smyrna lines 1-10 = [10] - [12].

Lines 5-14 cf. Odessa lines 1-9 = [10] - [12].

Non-Stoich. c. 32-37.

1 -----εὐθυλόσθω μυρίαίς δραχμαῖς --?--[10]
 ἀναγράφαι δὲ τὸ ψήφισμα τίςδε τὸς ἄρχον
 τας τὸς ἐν ταῖσι πόλεσιν| -----
 ἐν στήλῃ| λιθίνῃ ἐν τῇ ἀγορᾷ ἐκάστης
 5 τῆς πόλεως καὶ τὸς ἐπιστάτας -----
 τῷ ἀργυροκοπίῳ ταῦτα δὲ ἐπ[---c. 16-----
 -----ἐλάμ μὴ αὐτοὶ βόλονται [11] δεηθῆναι δὲ
 αὐτῶν |τὸν κήρυκα τὸν ἰόντα ὅσα κελεύουσ
 10 ιν Ἀθηναῖοι [12] προσγράψαι δὲ πρὸς τὸν ὄρκον
 τὸν τῆς] βολῆς τὸν γραμματέα τὸν τῆς βολῆς τα
 δί ἐάν τις κόπτῃ νόμισμα ἀργυρίο ἐν ταῖσι πό
 σιν καὶ μὴ χρῆται νομίσασιν τοῖς τῶν Ἀθ
 ηναίων ἢ ἰσταθοῖς [ἢ μέτροις -----
 ----- μέτροις] καὶ ἰσταθοῖς -----
 15 -----]. τ[-----

Length of line: The fragment is broken off on all sides which makes it difficult to assess with certainty where the line breaks were. For the lines that can be fully restored I have arrived at the following number of letters per line: line 2: 32 letters; line 4: 33 letters; line 8: 34 letters; line 9: 34 letters; line 10: 36 letters; line 11: 37 letters. This could indicate that the fragment became wider towards the bottom.

Line 12: Inserting τῶν leads to 35 letters vs. 32.

Commentary

Line 14: In accordance with the text from Syme β and Odessa I have restored the first letter as N instead of the Σ read by Hiller von Gaertringen.

The Fragment from Odessa

Editio Princeps: Karyskovskij, P. O. 1961. "Olbia und der athenische Bund," *Materialy* 3, pp. 64-70. In Russian; *non vidi*.

Karyskovskij's text is reprinted in *SEG XXI*, 18; for circumstances of find and description of the stone, see Erxleben 1969, pp. 121-23.

Photo: —

Recent Bibliography: Meritt, B. D. 1967. "The Second Tribute Assessment," *GRBS* 8, pp. 128-29.

Context: Found c. 1930 in the store-room of the Archaeological Museum, Odessa.

Disposition: Lost prior to Karyskovskij's publication.

Dimensions: —

Description: Broken off on all sides; finely granulated bluish marble [?].¹

Letterforms: Stoichedon; four-barred sigma; letterforms allegedly of late 5th or 4th cent. appearance (cf. Erxleben 1969, pp. 121-23).

1	Τ Ο Κ Ο Π Ι Ι Β Ο Λ Ω Ν Τ Α Α Ο Σ Α . Ε Λ Ε Υ Ο 5 Ρ Κ Ο Ν . Ο Ν Τ Η Σ Β Ι Ε Α Ν Τ Ι Σ Κ Ο Α Ι Μ Η Χ Ρ Σ Η Μ Ε Τ Σ Κ Α
---	---

Text acc. to *SEG XXI* 18.

¹Cf. Lewis 1987, p. 54.

Text

Lines 1-6 cf. Syme β lines 9-13 = [10] - [12].

Lines 1-9 cf. Siphnos lines 5-14; Smyrna lines 2-9 = [10] - [12].

Stoich. 41.

1 ορᾶι ἐκάστης] τῆς πόλεως καὶ τὸς ἐπιστάτας ἔμπροσ
 θεν τῷ ἀργυροκόπιῳ ταῦτα δὲ ἐπ.....16.....
 ἐὰν μὴ αὐτοῖ βόλωνται [11] δεηθῆναι δὲ αὐτῶν τὸν κήρυκ
 α τὸν ἰόντα ὅσα κελεύουσιν Ἀθηναῖοι [12] προσγράψαι δὲ
 5 πρὸς τὸν ὄρκον τὸν τῆς βολῆς τὸν γραμματέα τὸν τῆς
βολῆς ταδῖ ἐάν τις κάπτη νόμισμα ἀργυρίο ἐν τῆσι
πόλεσιν καὶ μὴ χρῆται τοῖς νομίσμασιν Ἀθηναίων ἢ
σταθμοῖς ἢ μέτροις -----
 . μέτροις καὶ σταθμοῖς -----

Length of line: Being written in stoichedon the fragment from Odessa makes it possible to correlate the text from fragments of Syme β, Siphnos, and Smyrna. It further allows for more precise estimates about the length of some lacunae.

Commentary:

Line 9: I have given this line as it appears on the fragments from Smyrna and Siphnos.

The Fragment from Smyrna

Editio Princeps: Baumeister, A. 1855. *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königl. Preuß. Akademie der Wissenschaften zu Berlin* (= Preuß. Akademie der Wissenschaften zu Berlin. Monatsberichte), pp. 187-99; no. 22.

Baumeister's text is reprinted in *IG XII,5* no. 480B.

Photo: —

Disposition: Reported as lost since 1897 (Wilhelm 1897, p. 3).

Recent Bibliography: —

Context: The fragment was seen by Baumeister in Smyrna, among other fragments allegedly collected by Lord Arundel in Asia Minor. The findspot is unknown.

Dimensions: Unknown.

Description: White marble, broken off on all sides.

Letterforms: Non-stoichedon; no further information available.

1 ΡΧΟΝΤΑ. .Ο
 ΕΝΘΙΑΓΟΡΑΙΤΗ
 . ΑΡΓΨΡΟΚΟΠΙΟΤ
 ΝΤΑΙΔΕΗΘΗΝΑΙΔ
 5 ΑΘΗΝΑΙΟΙΠΡΟΣΓΡ
 ΜΜΑΤΕΑΤΟΝΤΗΣ
 ΑΡΓΥΡΙΟΕΝΤΗΣΙΠΟ
 .ΩΝΗΣΤΑΘΜΟΙΣΗΜΕΤ
 ΜΕΤΡΟΙΣΚΑΙΣΤΑΘΜΟΙΣ
 10 ΡΟΝΨΗΦΙΣΜΑΟΚΛΕΑΡΧ

ΑΙΤΟΞΕΝΙΚΟΝΑΡΓΥΡΙΟΝ
 ΤΑΜΒΟΛΗΤΑΙΤΗΝΔΕΠΙΟ
 ΑΥΤΟΝΔΕΤΑ ΑΥΤΟΕΚΑΣΤ
 ΡΟΚΟΠΙΟΝΟ. ΕΠΙΣΤΑΤ
 15 ΓΡΑΥΑΝΤΕΣΚΑΤΑ
 ΠΙΟΣΚΟΠΕΝΤΩΙΒΟ
 ΕΝΙΚΟΝΧΩ
 ΝΑΡΓΥΡΙ

Text acc. to Baumeister 1855, p.197, no. 22.

Epigraphical Commentary

Line 1: Last letter should be O instead of Θ that Baumeister had copied.

Line 2: Last letter read I by Baumeister should be H .

Line 3: First letter \ .

Line 8: First letter lower half of a vertical bar.

Line 9: First letter lower half of \ .

Text

Lines 1-6 cf. Syme β lines 8-14 = [10] - [12].

Lines 1-9 cf. Siphnos lines 2-14 = [10] - [12].

Lines 2-9 cf. Odessa lines 1-9 = [10] - [12].

Non-Stoich. c. 48-50?

1 ----- τὸς ἀρχοντας τοῖς ἐν τῆσι πόλεσιν ---c. 12?--- ἐν
 στήλῃ
 ἰ λιθίνῃ ἐν τῆι ἀγορᾷ τῆς πόλεως ἐκάστης καὶ τὸς ἐπιστάτας
 ἔμπροσθεν τῶ ἀργυροκοπίο ταῦτα δὲ ἐπ.....16..... ἐὰν
 μὴ αὐτοὶ βόλωνται [11] δεηθῆναι δὲ αὐτῶν τὸν κήρυκα τὸν ἰόντα ὅσ
 5 α κελεύουσιν Ἰ᾿Αθηναῖοι [12]προσγράψαι δὲ πρὸς τὸν ὄρκον τὸν τῆς β

ολῆς τὸν γραμματέα τὸν τῆς [βολῆς ---?----ταδι ἐάν τις κόπτη
 νόμισμα ἀργυρίο ἐν τῆσι πόλεσιν καὶ μὴ χρῆται νομίμασιν
 Ἀθηναίων ἢ σταθμοῖς ἢ μέτροις -----
 -----] μέτροις καὶ σταθμοῖς [-----
 10 -----]ρον ψήφισμα ὃ Κλέαρχος -----[13]-----
 -----]αι τὸ ξενικὸν ἀργύριον [-----
 -----]ταμ βόληται τὴν δὲ πόλιν -----
 -----]αὐτὸν δὲ τὰ αὐτο ἕκαστ[-----
 -----]ροκοπιον . [14] Ο[.] ἐπιστάτ[-----
 15 -----].ραψαντες κατα[-----
 -----]πιο σκοπῆν τῶι βο[-----
 -----]ενικὸν χω[-----
 -----]ν ἀργύρι[-----

Length of line: Since the fragment is non-stoichedon, and broken off on all sides, it is difficult to reconstruct precisely where the line breaks were. In my version, there are 50 letters in lines 2 and 3, and 49 letters in lines 4 and 5. Restoring line 6 with the text from the Odessa fragment, results in only c. 43 letters. It is possible that there were some more letters inserted on the fragment from Smyrna.¹ This uncertainty in the length of line 6 affects the reconstruction of line 7, for which I have proposed c. 48 letters.

¹Cf. Erxleben 1969, pp. 124-25.

1.2. Composite Text

Recent Bibliography:

- Meiggs, R., and D. Lewis. 1988. *A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.* revised edition, Oxford. No. 45, pp. 111-17; 311 (=ML).
- Koch, C. 1991. *Volksbeschlüsse in Seebundangelegenheiten. Das Verfahrensrecht Athens im Ersten attischen Seebund. (Europäische Hochschulschriften, 3, 446)*, Frankfurt/Main. T 12, pp. 369-403.
- D. Lewis 1993 in *IG I³* 1453.

Fragments Preserving the Text:

- [1]: Kos; Hamaxitos.
 [2] - [4]: Hamaxitos; Kos; Aphytis.
 [5] - [8]: Aphytis.
 [9]: Aphytis; Syme β; Siphnos.
 [10] - [12]: Syme β; Siphnos; Smyrna; Odessa.
 [13]; [14]: Smyrna.

- [1] [---]αι τὰ γ[---]c. 18---]ΚΟΙΕ[...11...π]όλεσι ἢ ἀρ[---]c. 28---].
- [2] Οἱ δὲ ἐλλενοταμίαι ---c. 25--- ἀναγραφόντων· ἐὰν δέ τις ἀμ[φισβητεῖ ...7... τῶν πόλεων τινὸς ἐσαγέσθων οἱ δὲ ἐλλενοταμίαι [ἐς τὴν ἐλαιάν τὴν τῶν θεσμοθετῶν ---c. 13--- οἱ δὲ θεσμοθέται πε[---c. 10---]ντων [---c. 12---]ασι ἕκαστον.
- [3] Ἐὰν δέ τις [ἄλλος ἢ τῶν ἀρχόντων ἐν ταῖσι πόλεσιν μὴ ποιῆ κατὰ τὰ ἐψηφισμένα ἢ τῶν [πολιτῶν ἢ τῶν ξένων [ἄτ]μος ἔστω καὶ τὰ χρήματα δημόσια [ἔσ]τω καὶ τῆς θεοῦ τίδ' ἐπιδέκατον].
- [4] [Καὶ εἰ μὴ εἰσι ἄρχοντες Ἀθηναίων ἐ[---c. 18--- τῶι ψηφίσματι οἱ ἄρχοντες οἱ ἐκάστης τῆς πόλεως· καὶ] ἐὰν μὴ ποιῶσι κατὰ τὰ ἐψηφισμένα ...14...]όντων τούτων περὶ ἀ[τ]μ[---c. 16---].
- [5] [Ἐν δὲ τῶι ἀργυροκοπίῳ τὸ ἀργύριον ---c. 15-20--- μὴ ἔλλαττον ἢ ἡμισυ καὶ ἀ[---c. 28---]ι αἱ πόλεις πράττ[---c. 28---] δραχμᾶς ἀπὸ τῆς μιλᾶς ---c. 23--- καταλλάττειν ἢ ἐνόχους ---c. 20---].
- [6] [---]λίγνηται ἀργυρο[---c. 20--- ἀποδιδόσθαι ἢ τοῖς στρατήγοις ἢ ---c.

19---].

- [7] [Ἐπειδὴ δὲ ἀποδοθῆι [---c. 28---]λαὶ καὶ τῶι Ἡφαισ[---c. 14---].
- [8] [Καὶ ἐάν τις εἴπηι ἢ] ἐπιψηφίσηι περὶ ---c. 27---]τι χρῆσθαι ἢ δανείζειν
---c. 21--- πρὸς τοὺς ἑνδεκα· οἱ δὲ --c. 9--]ΣΑΤΩΙΖ[---c. 9-- ἐάν] δὲ
ἀμφισβητῆι εἰσαγ[---c. 20---]ον.
- [9] Κήρυκας δὲ ἐλέσθαι το[---c. 28---]ενα ἓνα μὲν ἐπὶ νή[σους ἓνα δὲ ἐπὶ
Ἰωνίαν ἓνα δὲ ἐφ' Ἑλλάσπο]ντον ἓνα δὲ ἐπὶ τὰ ἐπὶ Θραίκης
το[----- ἀ]ποστελάντων ---c.
15?--- εὐθυ]νόσθω μυρία[ς δραχμαῖς].
- [10] [Ἀναγ]ράψαι δὲ τὸ ψήφισμα [ὅδε τὸς ἀρχοντας τῶς ἐν ταῖσι πόλεσιν
[καὶ θεῖναι ἐν στή]λῃ λιθίνῃ ἐν τῇ ἀγορᾷ [ἐκάστης] τ[ῆς πό]λεως καὶ
τὸς ἐπιστ[άτας ἔ]μπροσθεν] τῷ ἀργυροκοπίῳ. ταῦτα δὲ ἐπ[---c. 16---
ἐ]ὰμ μὴ αὐτοὶ βόλωνται.
- [11] Δεηθῆναι δὲ αὐτῶν τὸν κήρυκα τὸν ἰόντα ὅσα κελεύουσιν] Ἀθηναῖοι.
- [12] Προσγράψαι δὲ πρὸς τὸν ὄρκον τὸν τῆς βολῆς τὸν γραμματέα τὸν τῆς
[βολῆς ---?--- τα]δὶ· ἐάν τις κόπτηι νόμισμα] ἀργυρίο ἐν τῆσι
πόλεσιν καὶ μὴ χρῆται νομίσμασιν Ἀθηναῖων ἢ σταθμοῖς ἢ μέτροις
-----] μέτροις καὶ σταθμοῖς
[-----]ρον ψήφισμα ὃ Κλέαρχ[ος -----].
- [13] [-----]αὶ τὸ ξεινικὸν ἀργύριον [-----
-----]ταμ βόληται τὴν δὲ πολιν -----
-----]αὐτὸν δὲ τὰ αὐτο ἕκαστ[-----
ἀργυ]ροκόπιον.
- [14] Ο[.] ἐπιστάτ[-----ἀνα]γράφαντες κατα[-----]πιο
σκοπὲν τῶι βο[-----ξ]εινικὸν χω[-----
-----]ν ἀργύρι[-----].

1.3 *Apparatus Criticus*

[1] ---]αι τὰ γ[- α νομίσματα ἢ ἄρχοντες ἐν τῆσι πόλεσι ἢ ἄρχοντες Ἀθηναίων καταλλαττόντων· **Hiller von Gaertringen 1939 in IG XII suppl., p. 215; Robinson, E. S. G. 1949, p. 325; ---]ολε[---c. 27---]αι τὰ γ[---c. 19---ἄρχοντες ἐν ταῖς πόλεσι ἢ ἄρχοντες Ἀθηναίων ---c. 14--- *ATL 2, p. 67; ἢ ἄρχοντες ---c. 22--- *ML 45; ---]αι τὰ γ[...32... πόλεσι ἢ ἄρ[...27... *Erleben 1969, p. 138; Koch 1991, p. 374; ἄρχοντες ἐν ταῖς πόλεσι ἢ ἄρχοντες οἱ ἐκάστης τῆς πόλεως *Balcer 1976, p. 273.******

[2] ἑλληνοταμίαι τὰ ἀργυροκόπια ἐν ταῖς πόλεσιν ἀναγραφόντων· εἶν δὲ μὴ ὀρθῶς ἀναγραφῆι τὸ ἐκ τῶν πόλεων τινός *ATL; ἑλληνοταμίαι τὰς τε πόλεις καὶ τὸ ἀργύριον ἀ] *Erleben; ἀναγράφοσι τὸ τῶν π] *Erleben; Lewis; ἑλληνοταμίαι ---c. 24---ἀναγραφόντων· εἶν δὲ μὴ ---πόλεων *ML.****

ἐσαίγέτω ὁ βουλόμενος αὐτίκα μάλα εἰς τὴν ἐλαιάν τὴν τῶν θεσμοθετῶν τοὺς ἡδίκηκότητας· οἱ δὲ θεσμοθέτῃαι πε[νθ' ἡμερῶν δό]ντων [δίκας τοῖς φήνῃσι ἕκαστον *ATL; ML; ἐσαίγέσθω μὲν δίκη ἀπὸ χυμβολῶν ἐς τὴν ἐλαιάν τὴν τῶν θεσμοθετῶν κατὰ τὸν νόμον *Erleben; Lewis; πε[ρι? ζεμισσάντων [φυγῆι καὶ χρέμασι *Erleben.***

εἶν δὲ μὴ ὀρθῶς ἀναγράφωσι τὰ τῶν πόλεων τινός, ἐσαίγ.....23.... ἐς τὴν ἡλαιάν τὴν τῶν θεσμοθετῶν κατὰ τὸν νόμον **Koch; πε[---c. 10--]ντων (*vel ντων*)[---c. 11---]ασι **Koch.****

[3] ἐὰν δὲ [ἄλλος ἔξω τῶν ἀρχόντων *ATL; ML; Balcer 1976, p. 272; ἐὰν δέ [τις ἄλλος τῶν *Erleben; Koch; Lewis; ἐὰν δέ [τίς πο πλὴν τῶν ἀρχόντων *Mattingly 1977, pp. 85-86.***

[4] ἐπιτελεσάντων ὅσα ἐν τῶι ψ] *ATL; ML; Erleben; Balcer 1976, p. 272; ἐπι13..... ἐν τῶι] ψηφίσματι *Koch; Lewis.**

ἔστω κατὰ τῶν ἀρχόντων τούτων περὶ [ἀτιμίας δίωξις Ἀθήνησι *ATL; ML; Balcer 1976, p. 272; τούτωμ περὶ ἀτιμίας *Erleben; ...14...όντων τούτων πέρι ἄτιμοι ὄντων καθ' ἑαυτοῦ *Koch; ...14...όντων τούτων πέρι ἀτ[...18...]. *Lewis.****

[5] τὸ ἀργύριον τὸ νῦν ὑπάρχον κόψασθαι **Segre 1938, p. 159;** καὶ ἀπὸ τούτου ὅσον οἱ ἄρχοντες καὶ αὐτὰ] αἱ πόλεις πράττωσι καταλλάττειν δίδοντας ἑκατὸν δραχμᾶς ἀπὸ τῆς μιλῆς τοὺς ἐπιστάτας τὸ ἀργύριον καταλλάττειν ἢ ἐνόχους εἶναι κατὰ τὸν νόμον· **Segre 1938, p. 159.**

τὸ ἀργύριον δεξαμένους εὐθὺς κόψαι μὴ ἔλλαττον ἢ ἡμισυ καὶ

ἀποδόσθαι ὡς ἂν νόμισμα ἰκανὸν ἔχῃ αἱ πόλεις. πράττεσθαι δὲ αἰεὶ ἐπικαταλλαγὴν τρεῖς δραχμᾶς ἀπὸ τῆς μνῆς· τὸ δὲ ἄλλο ἤμισυ πέντε μηνῶν καταλλάττει ἢ ἐνόχους **E. S. G. Robinson 1949, p. 327.**

ἀργύριον δεξαμένους κόψαι **ATL; ML** πράττεσθαι δὲ αἰεὶ τοὺς ἐπιστάτας τρεῖς δραχμᾶς ἀπὸ τῆς μνῆς **ATL; ML**; ἀργύριον τὸ ξεικὸν αὐτίκα κόψαι μὴ ἔλλαττον ἢ ἤμισυ καὶ ἀπὸ τούτου, ὅσον οἱ ἄρχοντες καὶ αὐταὶ αἱ πόλεις πράττουσιν, καταλλάττει λαβόντας τρεῖς δραχμᾶς ἀπὸ τῆς μνῆς· τοὺς ἐπιστάτας τὸ ἀργύριον καταλλάττει **Erleben 1969, p. 137.**

ἤμισυ καὶ ἀ---c. 29---ἢ αἱ πόλεις **ML**; τὸ δὲ ἄλλο ἤμισυ ...5... μηνῶν καταλλάττει ἢ ἐνόχους εἶναι ...12... **ML**; ἐνόχους εἶναι τῆι προδοσίαι **Koch**; ἐνόχους εἶναι κατὰ τὸν νόμον **Lewis.**

[6] ὅσον δὲ ἂν γίγνηται ἀργύριον **D. M. Robinson 1935, p. 152**; ὃ δὲ ἂν περιγίγνηται ἀργύριον κόψασθαι μὲν αὐτίκα καὶ **Segre 1938, p. 175**; ἃ δὲ ἂν περιγίγνηται **Meritt 1975, p. 271**; ἀργυρίου τοῦ πεπραγμένου κόψαι καὶ ἀποδόσθαι **E. S. G. Robinson 1949, p. 327; ATL; ML; Meritt 1975**; ἀργυρίου ἐκ τῆς ἐπαλλαγῆς κόψαι **Erleben.**

ἀποδόσθαι ἢ τοῖς στρατήγοις ἢ τοῖς ἀποδέκταις εὐθύς **ATL; Erleben**; στρατήγοις ἢ τοῖς ---c. 15--- **ML**; στρατήγοις ἢ τοῖς ἔργων ἐπιστάταις **Meritt 1975.**

ἰὸ δὲ ἂν περιγίγνηται ἀργυρίου ...28...σθαι ἢ τοῖς στρατήγοις ἢ ...19... **Koch; Lewis.**

[7] [τὸ ἀργύριον διδόσθω καὶ τῆι Ἀθηναίαι καὶ τῶι Ἡφαίστῳ τὸ ἐπιδέκατον **D. M. Robinson**; ἴψηφίσασθαι καὶ περὶ τῶν τῆι Ἀθηναίαι καὶ τῶι Ἡφαίστῳ ὀφειλομένων **Segre; ATL; Erleben**; [οἰκοδομησαὶ ἐπὶ Κολωνοῦ τῆι Ἀθηναίαι καὶ τῶι Ἡφαίστῳ νεῶν καὶ βωμόν **Meritt 1975**; [κοσμησαὶ τὸν ἐπὶ Κολωνοῦ τῆι Ἀθηναίαι καὶ τῶι Ἡφαίστῳ ἰδρυμένον ναόν **O. Hansen 1990a, p. 157.**

---αι καὶ τῶι Ἡφαίστῳ ---- **ML, 45**; τῆι Ἀθηναίαι καὶ τῶι Ἡφαίστῳ **Lewis**; Ἡφαιστῷ ...13... **Koch.**

[8] περὶ τούτων ἐξεῖναι ξεικῶι **Tod 1949; ML**; περὶ τούτων, ὅτι ἔστι ξεικῶι **ATL 2**; περὶ τὸ ἐξεῖναι ἅπασιν ξεικῶι **Erleben**; περὶ τούτων, ὅτι ἔστιν ἀπ' αὐτῶν ἐς ἄλλο τι **Meritt 1975.**

δανείζειν, ἀπογραφέσθω αὐτίκα μάλα πρὸς **ATL; ML**; ἢ τούτων ...14... ἐς ἄλλο τι χρῆσθαι ἢ δανείζεσθαι, ἀπαγωγὴν αὐτοῦ εἶναι πρὸς **Lewis 1974, p. 84; Mattingly 1974, p. 281**; δανείζεσθαι, ἀπαγέσθω αὐτίκα μάλα πρὸς **Meritt 1975**; περὶ τούτων ...14... ἐς ἄλλο τι χρῆσθαι ἢ δανείζειν, ἄτιμος ἔστω καὶ

ἀπαγέσθω πρὸς] τοὺς ἔνδεκα Koch; περὶ τούτων ...15... ἐς ἄλλο] τι χρῆσθαι ἢ δανεῖζεσθαι, ἀπαγέσθω αὐτίκα μάλα πρὸς τοὺς Lewis.

οἱ δὲ ἔνδεκα θαν]άτωι ζ[ημιωσάντων· ἐάν] δὲ ἀμφισβητῆι εἰσαγαγόντων ἐς τὸ δικαστήριον *ATL*; *Erleben*; *ML*; Koch; Lewis.

[9] τὸν δῆμον καὶ πέμψαι εἰς τὰς πόλεις κατὰ τὰ ἐψηφισμένα *ATL*; Balcer 1976, p. 269; τὸν δῆμον καὶ πέμψαι ἀπαγγελοῦντας τὰ ἐψηφισμένα *Erleben*; Meritt 1975, p. 267 note 3; Koch; Lewis; τὸν δῆμον ---c. 25--- τὰ ἐψηφισμένα *ML*.

τοῖτούτοις δὲ τὴν πορείαν ἐκάστωι συγγράψαντες οἱ στρατηγοὶ *ATL*; *Erleben*; *ML*; Lewis.

ἀποστειλάντων· εἰ δὲ μή, καθ' ἓνα ἕκαστον εὐθυινόσθω [μυρία]ις δραχμαῖς *ATL*; *ML*; Balcer 1976, p. 269; ἀποστειλάντων· εἰ δὲ μή, εὐθυινόσθω μυρία]ισι δραχμηῖσι *Erleben*; ἀποστειλάντων αὐτίκα μάλα· εἰ μή, εὐθυινόσθω μυρία]ισι δραχμηῖσι Koch; Lewis.

[10] καταθεῖ]ναι δὲ τὸ *ATL*; *ML*; Balcer 1976, p. 270.

ἀναγράφαντας ἐν στή]λῃ *ATL*; *ML*; Balcer 1976, p. 270; καὶ θεῖ]ναι ἐν *Erleben*; στή]λῃ Koch.

[Ἀνα]γράψαι δὲ τὸ ψήφισμα τί]δε τὸς ἀ]ρχοι]ταις ἐ]ν ταῖσι πό]λεσιν [καὶ θε]ῖναι Lewis.

ταῦτα δὲ ἐπιτελέσαι Ἀθηναί]ους *ATL*; *ML*; Balcer 1976, p. 270; Lewis; ἐπιτελέσαι Ἀθηναί]ος *Erleben*.

ἔμπροσθεν τῶ ἀργυ]ροκοπί]ο· ταῦτα δὲ ἐπιτελέσαι Ἀθηναί]ος Koch.

[11] [αὐτῶ]ν Koch; αὐτῶ]ν Lewis; [κ]ελεύ[ουσιν] Lewis.

[12] δὲ πρὸς τὸν ὄ]ρκον Koch.

τῆς [βολῆς εἰς τὸ λοιπὸν τα]δί *ATL*; *ML*; τῆς [βολῆς καὶ τὸ δῆμο τα]δί *Erleben*; τὸν γραμματέα τῆς [βολῆς τα]δί Koch.

νομίσμασιν τοῖς Ἀθηναί]ων ἢ σταθμοῖς ἢ μέτ]ροις ἀλλὰ ξενικοῖς νομίσμασιν καὶ μέτ]ροις καὶ σταθμοῖς, [τιμωρή]σομαι καὶ ζ[ημιώ]σω κατὰ τὸ πρότε]ρον ψήφισμα ὁ Κλέαρχ[ος εἶπεν *ATL*; *ML*; Balcer 1976, p. 263; vel [γενόμε]νον *ATL* 2, p. 67; [ἐσαγγελλέ]σθω ἐς] τὴν βολῆν κατὰ τὸ ἡμέτε]ρον *Erleben*; νομ[ίσμασιν τοῖς] Ἀθηναί]ων ἢ μέτ]ροις ἢ σταθμοῖς ἀλλὰ ξενικοῖς νομίσμασιν καὶ σταθμοῖς καὶ μέτ]ροις [καταγνώ]σομαι καὶ τίμ]ῃσω <sic> κατὰ τὸ πρότε]ρον ψήφισμα ὁ Κλέαρχ[ος εἶπεν Koch.

πό]λεσιν] καὶ μὴ χρῆται νομίσμασιν τοῖς Ἀθηναί]ων ἢ σταθμοῖς ἢ μέτ]ροις ἀλλὰ ξενικοῖς νομίσμασιν καὶ σταθμοῖς καὶ μέτ]ροις, ῥ---c.

14---]τ[---c. 6--- κατὰ τὸ πρότε]ρον ψήφισμα ὁ Κλέαρχ[ος εἶπεν --- c. 19 ---?]

Lewis.

[13] ἔξειναι δὲ καὶ ὄττωι οὖν ἀποδιδόν]αι *ATL; ML*; τὸς δὲ ἰδιώτας ἐν τῇ πόλει ἀποδόν]αι *Erleben*; [---c. 28---]αι *Koch*.

Ἰὸ ἂν ἔχη καὶ καταλλάττειν κατὰ ταυτὰ ὄ]ταμ *ATL; ML*; Ἰὸ ἂν ἔχῃσι, καὶ καταλλάττειν ἕκαστον ὄ]ταμ *Erleben*; [---c. 29---ὄ]ταμ βόληται *Koch; Lewis*.

πόλιν ἀνταποδοῦναι αὐτῷ νόμισμα ἡμεδαπόν.] *ATL; Erleben; ML*; πόλιν ---c. 31---] *Koch; Lewis*.

ἑλαυτοῦ ἕκαστον κομίζειν Ἀθήναζε καὶ θεῖναι εἰς τὸ *ATL; ML*; ἕκαστον ἀπογράψαι καὶ καταβαλεῖν ἐς τὸ *Erleben*; τὰ ἑλαυτὸ ἕκαστον ---c. 23--- τὸ ἀργυρόκοπιον *Koch*; ΑΥΤΟΝ δὲ τὰ ἑλαυτὸ ἕκαστον *Lewis*.

[14] οἱ δὲ ἐπιστάται ἅπαντα τὰ παρ' ἐκάστων ἀποδοθέντα ἀναγράψαντες καταθέτων παρὰ τὴν στήλην ἔμπροσθεν τοῦ ἀργυροκοπίου *ATL*; καταθέτων στήλην λιθίνην ἔμπροσθεν τοῦ ἀργυροκοπίου *ML*; οἱ δ' ἐπιστάται τὰ παρ' ἐκάστων ἀποδοθέντα ἐς λευκώματα ἀναγράψαντες καταθέτων παρὰ τὴν στήλην *Erleben*; οἱ δ' ἐπιστάται ---c. 33--- ἀναγράψαντες καταθέτων ---c. 13--- ἔμπροσθεν τοῦ ἀργυροκοπίου *Koch; Lewis*.

βόλομένωι ἀναγράψαντων δὲ καὶ ξύμπαν τὸ ἀργύριον τὸ ξεικὸν *ATL; Erleben; Koch; Lewis*; τὸ νόμισμα τὸ] *ML*.

χωρὶς τὸ τε ἀργύριον καὶ τὸ χρυσίον, καὶ ξύμπαν τὸ ἡμεδαπόν] *ATL; ML*; χωρὶς τὸ ἐκ τῆς ὑπερορίας, χωρὶς τὸ ἐκ τῆς πόλεως πεπραγμένον] *Erleben*; χωρὶς ---c. 44---]ν ἀργύριον ---- *Koch; Lewis*.

1.4 Translation

[1] [----] to the cities or [---c. 28---].

[2] The hellenotam[ia]i [---c. 25---] are to [w]rite up. But if anyone dis[putes] ---c. 7--
-] of something of [the c]ities, the hellenotamia[i] [are to be] brou[ght]
bef[ore t]he heliaia of th[e thesmothetai] ---c. 13--- t]he thesmothetai [----]
are to [---c. 10---] (with) [---c. 12---] each one.

[3] But if anyone [else, either (anyone) of t]he offici[als in t]he cities does not act
accor[ding to what has been decre]ed, or (anyone) of the [citiz]ens or
(anyone) of the foreigners, [he is to lose his r]igh[ts, and his prop]erty [is]
to be confiscated and t[he tenth] (is to go to) the goddess.

[4] [If there] are [n]o officials of the Athenians [---c. 18--- to the d]ecree the
official[s of each city. And] if they do not act according to w[hat has been]
decreed ---c. 14---] of these about loss of r[ights] ---c. 16---].

[5] [In th]e mint, the silv[er] ---c. 15–20--- not l]ess than half and [---c. 28---] the
cities exact[---c. 28---] drachmas from the mn[a] ---c. 23--- to ch]ange or
[to be] liabl[e ---c. 20---].

[6] [---a]mounts (to) silve[r]---c. 20---]is to be [given] either to the strat[egoi] or ---
c. 19---].

[7] [Wh]en it has been given back [---c. 28---] and to Hephaist[---c. 14---].

[8] [And if some]one puts [forward (a motion) or] puts to vote concern[ing] ---c.
27---] to use or to lo[an] ---c. 21--- in fron]t of the Eleven. [B]ut the [---c. 25-
---] but [if] he denies [brought] before [---c. 20---].

[9] T[he] [----] are to elect heralds [---c. 28---] one to the is[lands], one to Ionia, one
to the Hellesp[ont], one t[o the] Thracew[ard area] the [---c. 30--- they are]
to send aw[ay] ---c.15---] to be fin[ed] with tenthous[and drachmas].

[10] [The officials [i]n the cities are to write [up] thi[s] decree [and they are to set it up on a] stone [ste]le in the agora [of each c]ity, and the overs[eers (are to set it up) in front of] the mint. But this [---c. 16--- i]f they themselves do not want (to).

[11] The herald that goes is to ask from them all that the Athenians ord[er].

[12] The secretary of the [boule] is to add to the oath of the boule [---- the follow]ing: ... if someone in the ci[ties] strikes *nomis[ma]* of silver [a]nd does not use *nom[ismata]* of the Athen]ians or (their) weights or meas[ures ---c. 30---] measures and weights [---c. 30---] decree which Klearch[os ---c. 15---].¹

[13] [---c. 10---] the foreign silver [---c. 25---] wants the ci[ty ---c. 25---] each [one] his (?) own [---c. 20--- m]int.

[14] [--] overse[ers ---c. 20---] writing [up ---c. 25---] to look at for [---c. 25--- f]or- eign [---c. 25---]silv[er ---].

¹For the interpretation of *nomisma*, see below, chapter 5.0.

1.5 Discussion: Clause by Clause

Clause [1]

Most scholars assume that the preserved text of the Athenian Standards Decree starts with the first step of the exchange process.¹ The fragmentary condition of the first sentence leads them to expound their ideas about the logistics of the exchange process. Segre, who does not restore the text, thinks that the subject is the collection of foreign money in the cities by Athenian magistrates.² In Hiller von Gaertringen's restoration, the first clause captures the purpose of the entire decree: "The magistrates in the cities or the magistrates of the Athenians are to exchange the money..."³ Erxleben envisions the exchange process as a rather complicated undertaking that is to be carried out in several stages. Before the exchange in Athens can take place, Athenian magistrates in the cities have to take at least part of the foreign money out of circulation. Then it has to be transported to Athens. Thus in Erxleben's restoration the first sentence specifies the collection of some of the local money through the Athenian magistrates.⁴

Very little has survived of the first clause. The composite text is likely to be missing a large portion at the beginning. There is no trace of the customary formulas that usually introduce an Athenian decree. The preserved text starts abruptly in the middle of something. There is no reason to assume that the first

¹ E.g. Mattingly (1993, p. 100, note 3) calculates a preamble of 6 lines, followed by the first line preserved on the fragment from Kos.

² Segre 1938, p. 164.

³ Hiller von Gaertringen 1939 in *JG XII suppl.*, p. 215, no. 480 II.

⁴ Erxleben 1969, pp. 97-98.

extant clause of the composite text corresponds to the first step of the exchange process.

Clause [2]

Clause [2] specifies that it is the responsibility of the hellenotamiai to write up something.¹ In case someone disputes the correctness of their action concerning “of something of the cities” (τῶν πόλεων τινος) a certain legal procedure will apply, and the hellenotamiai are to be brought before a heliaia ...² As indicated by the preserved definite articles a noun in the genitive plural, now lost, further describes the heliaia (τῆν ἐλιαίαν τῆν τῶν). One can restore “the heliaia of th[e thesmothetai]” (ἐλιαίαν τῆν τῶν θεσμοθετῶν) because immediately after the lacuna follows the word θεσμοθέται.³ Then follow specifics about the juridical procedure that the thesmothetai are to adopt.⁴ Each one [of the hellenotamiai] will be fined a penalty. The amount is not preserved.⁵

We know from other sources that the hellenotamiai register incoming trib-

¹ According to Mattingly (1977, p. 86) clauses [1] and [2] concern the archons in the cities. He puts the fragment Syme α at the beginning of the composite text, and restores *hoi archontes hoi en tēsi poleysi*.

² The earlier restorations *ἐὰν δὲ μὴ* etc. have to be given up in light of the text on the fragment from Hamaxitos (see above, chapter 1.1). The restoration of the verb in the passive voice *ἐσαίγέσθων* (“they are to be brought into court, prosecuted”) is supported by the conclusion of clause [2] where a penalty is mentioned that is to be applied to each one of the hellenotamiai. This suggests that the hellenotamiai are the subject of the legal process that is described in clause [2]. The restoration *ἐσαίγέσθων* furthermore fits in the lacunae in the text of the fragments from Hamaxitos and Kos (see above, chapter 1.1).

³ Cf. *ML 52* (Chalkis Decree), lines 71-76: in cases involving exile, death, and loss of rights there will be appeal at the heliaia of the thesmothetai.

⁴ The letters ...*ντων* (Aphytis I. 8) probably are the ending of an imperative in the third person plural: “...the thesmothetai are to ...”

⁵ *ἕκαστοι* (“per person, each”) indicates that the penalty is to be applied to the members of a group, presumably the hellenotamiai, who are mentioned in the same clause.

ute payments and take note of missing payments. They also hand over the aparche to Athena.¹ In keeping with their function as treasurers and record keepers, the task mentioned in the Standards Decree is probably the recording of some financial transactions.² There are precautions to prevent embezzlement as to be expected when a group of officials deals with very large sums of money. Anyone who finds fault with the actions of the hellenotamiai can have them summoned before the heliaia of the thesmothetai.³ (“But if anyone dis[putes] of something of the cities, the hellenotamiai [are to be] brought before the heliaia of th[e thesmothetai].”) This ensures that allied cities can resort to legal procedure in case Athenian officials are not acting properly.

The person who finds fault with the behavior of the hellenotamiai (ἐὰν δέ τις ἀμ[φλοβητεῖ] initiates the summons. Since this person is not specified one can assume anyone could initiate the eisagoge. The usual procedure in such a case is initiation by the graphe of a boulomenos.⁴ The provision in clause [2] of the Standards Decree is very similar to the provisions of the Kleinias Decree (*ML* 46, lines 31-35) where anyone (ο boulomenos) can initiate a graphe against persons who have committed illegal acts with regard to the tribute pay-

¹ *ML* 46, lines 18-22; *ML* 68, lines 11-14; 18-22; *ML* 60, lines 11-13. Koch (1991, p. 382) is mistaken in attributing executive power to the hellenotamiai. Their function as treasurers and recordkeepers is strictly administrative. Cf. Meiggs 1972, pp. 234-37, 244-46; Schuller 1974, pp. 36-37.

² In the restoration of *ATL* 2 (p. 67) the hellenotamiai are to draw up a list of the local mints; cf. Meritt 1975, p. 267; but see *ML*, p. 114. Erxleben (1969, pp. 99-100) thinks they record all the non-Athenian silver money that has been collected in the cities. Lewis (1987, p. 55) suggests “names of cities” without further specification. According to Koch (1991, pp. 369, 382) the hellenotamiai record all the silver coins that have been collected in the cities and that have been brought to Athens for the exchange.

³ Cf. *ML* 68, lines 42-51. For a summary execution of the entire board except for one, see Antiphon 5.69-71; for the heliaia of the thesmothetai, cf. also Antiphon 6.21.

⁴ This is also the gist of the restoration of *ATL* and *ML*, although with the fragment from Hamaxitos the wording has to be different. The fragment from Hamaxitos renders obsolete the complicated interpretation of Koch (1991, p. 383) who thinks the thesmothetai initiate the eisagoge.

ments.¹

Clause [3]

Clause [3] starts with a conditional sentence *ἐὰν δέ τις [---] τῶν ἀρχόντων ἐν ταῖσι πόλεσιν μὴ ποιῆι κατὰ τὰ ἐψηφισμένα* (“but if anyone [else, either (anyone) of t]he offici[als in t]he cities does not act accor[ding to what has been decre]ed”). Before the sentence ends, two more nouns in the genitive plural are inserted: *ἢ τῶν [πολι]τῶν ἢ τῶν ξένων* (“or (anyone) of the [citiz]ens or (anyone) of the foreigners”). These two genitives are syntactically parallel to the first genitive plural after the lacuna: *τῶν ἀρχόντων ἐν ταῖσι πόλεσιν* (“... of the officials in the cities”). The two genitives, inserted almost as an afterthought, introduce two more groups of persons who are affected by the provisions of clause [3]. The conditional clause ends: *ἀτιμὸς ἔστω καὶ τὰ χρήματα δημόσια [ἔσ]τω καὶ τῆς θεοῦ πρὸ ἐπιδέκατον* (“he is to lose his rights, his property is to be confiscated, and one tenth is to go to the goddess”).² The content of “what has been decreed” (*κατὰ τὰ ἐψηφισμένα*) is not known. It is probably described in detail in a passage that is no longer preserved.

Clause [3] refers to a group of persons other than the *hellenotamiai* addressed in clause [2]. The group addressed in clause [3] is in some way defined through “... officials in the cities, ... citizens, and foreigners.” *Πολῖται καὶ ξένοι* refers to the citizens of the cities of the empire, and to the foreigners in those

¹ Cf. also *ML* 68, lines 43-47.

² For parallels concerning *ἀτιμία*, confiscation of property, and the *epidekaton*, cf. Segre 1938, pp. 154-55. For *ἀτιμία*, see Balcer 1976, p. 266 note 23.

cities.¹ The term ἄρχοντες ἐν ταῖσι πόλεσι applies in a general manner to the local officials of the cities in the empire.² The restoration that Segre first proposed is still the most attractive: ἐὰν δέ τις ἄλλος τῶν ἀρχόντων...³ This reading takes the three genitives as syntactically parallel, and defines the subject of clause [3] as a group of people different from Athenian officials like the hellenotamiai who were dealt with in clause [2].⁴ “But if anyone [else, either (anyone) of t]he offici[als in t]he cities does not act accor[ding to what has been decre]ed, or (anyone) of the [citiz]ens or (anyone) of the foreigners, [he is to...”

Some scholars take the second and the third genitive as apositives specifying the first one.⁵ Then the condition in clause [3] would read: “... if someone, not of the officials ..., [but] either of the citizens or of the foreigners ...”. These restorations imply that clause [2] contained a provision concerning ἄρχοντες ἐν ταῖσι πόλεσι, (“local officials”) since it would be awkward if this group of per-

¹ Cf. Koch 1991, p. 616 note 6. Gauthier (1971, pp. 55-56) interprets πολῖται as Athenians and ξένοι as the citizens of the cities of the empire. For convincing arguments against this interpretation, see Leppin 1992, pp. 266-68.

² This interpretation goes back to Gomme (*HCT* 1, pp. 381-83), and has been defended recently by Leppin (1992). Leppin sensibly points out that in decrees where this phrase occurs it can only refer to local officials and not to Athenian magistrates (notably in the Kleinias Decree *ML* 46; cf. Leppin 1992, pp. 260-63); for this term in the Standards Decree see Gomme, *op. cit.* p. 382 note 1; Leppin *ibid.* pp. 264-68. For the contrary argument, that ἄρχοντες ἐν ταῖσι πόλεσι stands for Athenian officials see Erxleben (1969, pp. 104-106); for a summary of the discussion and a bibliography, see Leppin 1992.

³ Segre 1938-39, pp. 154-55. This reading has also been adopted by Lewis for *IG* I³ 1453.

⁴ The alternative character of the three genitives is well emphasized by Erxleben 1969, pp. 104, 131. Since in the fragment from Kos the lacuna leaves room for 10 letters, vs. 9 letters on the fragment from Aphytis, Erxleben inserts ε̅ and reads: ἐὰν δέ τις ἄλλος ε̅ τῶν ἀρχόντων.

⁵ E.g. *ATL* 2, pp. 63-64; Mattingly 1977, pp. 85-86 with note 15. Lewis (1987, p. 55) implies that “citizen or foreigner” is an attribute of the magistrates.

sons was first introduced in its negative.¹

Clause [4]

Clause [3] contains provisions for local officials and other non-Athenians (citizens and foreigners) who live in the cities. It is a self-contained unit, and a quasi insertion after clause [2] that deals with at least one group of Athenian officials, the hellenotamiai.² Clause [4] takes up the train of thought that has been interrupted by the insertion of clause [3]. It deals with the situation in which there are no Athenian officials present in the cities.

At the beginning of clause [4] εἰ has to be restored. The remaining three spaces can be filled with καὶ.³ In spite of the fragmentary nature of the text it is clear that the ἄρχοντες who are to be in charge if there are no Athenian officials present must be the local magistrates. Segre's restoration οἱ ἄρχοντες οἱ ἐκάστης τῆς πόλεως captures this meaning and fills the lacuna, provided one inserts καὶ before the next conditional clause.⁴ The first lacuna must have contained a verb specifying the responsibility of the local officials. Ψήφισμα in the dative suggests that the local officials were to act according "to the decree."⁵

¹ For the editors of *ATL* and for Mattingly this problem does not arise since they interpret ἄρχοντες ἐν ταῖσι πόλεσι as Athenian officials of whom at least the hellenotamiai have been discussed in clause [2].

² Cf. Leppin 1992, p. 267.

³ On the fragment of Kos there is an extra space that can be filled by transcribing εἶσι from the text of Aphytis as εἶσιν; cf. Segre 1938, pp. 154-55; Erxleben 1969, pp. 131-32.

⁴ Segre 1938, pp. 154-58. His restoration has been generally accepted e.g. Erxleben 1969, p. 104; *ML* 45; Leppin 1992, p. 268 with notes 58, 59; Lewis, *IG* I³ 1453. The restorations differ slightly on the fragments from Aphytis and Kos: ἐάν δέ μὴ on Aphytis vs. καὶ ἐὰν μὲ on Kos; cf. Segre *loc. cit.*; Erxleben 1969, p. 107.

⁵ Cf. the restoration ἐπιτελεσάντων ὅσα ἐν τῷ ψηφίσματι οἱ ἄρχοντες οἱ ἐκάστης τῆς πόλεως Segre; cf. *ML* p. 113.

The next sentence deals with the possibility that the local officials do not fulfill their responsibility, i.e. that they do not act according to the decree. Thus κατὰ τὰ ἐψηφισμένα can be restored. The clause ends with the announcement of the penalty for their misconduct that the local officials will face. The penalty is most likely ἀτιμία.¹

Clause [5]

Clause [2] deals with provisions concerning the hellenotamiai, their “writing up” something, and the procedure to adopt if someone disputes the correctness of their doing so. In clauses [3] and [4] the liability of various groups of persons to a decree is specified. The content of this decree is unknown. Clause [5] introduces a different subject matter. There are very specific procedures concerning “mint”, “silver”, “exchange”, and a certain percentage of money.² It is unclear how the provisions of clauses [1] to [4] relate to clause [5].

Most scholars situate the mint mentioned in clause [5] in Athens.³ The arguments for this identification are not drawn from the text of clause [5], but from references to a mint further below in the Decree (clauses [10] and [13]). In clause [10] “mint” occurs in conjunction with ἐπιστάται (overseers). The term ἐπιστάται is attested for minting officials in Athens, and thus, the argument goes, the mint in question is the one in Athens.⁴ But the mints mentioned in

¹ On line 8 of the fragment from Aphytis the last two letters at the right edge are α and τ. Koch (1991, p. 622 note 65) wrongly attributes the restoration τούτων περί ἀτιμοὶ ὄντων καθ' ἑαυτοῦ to Erxleben and *ML*.

² Koch (1991, p. 374) appropriately regards [5] as the beginning of a new paragraph.

³ E.g. Segre 1938, p.159; E. S. G. Robinson 1949, p. 327; Erxleben 1969, pp. 107-110, 115-16; *ML*, p. 113; Koch 1991, p. 617 note 10.

⁴ This argument is not entirely convincing since ἐπιστάται is a rather general term (cf. ἀρχοντες) that could also be applied—in a decree issued by Athens—to the overseers of the local mints. For the view that the local mint was meant, see Klaffenbach 1950, p. 35.

clause [5] and in clause [10] need not be identical. Clauses [3] and [4] deal with the situation in the cities. One would expect that if clause [5] refers to a location in Athens, this would be stated explicitly, yet in the passages preserved it is not.¹ Thus one can not be entirely certain about the location of the mint mentioned in clause [5].

The opening of clause [5] can be restored as [ἐν δὲ τῶι ἀργυροκοπίῳι. Then there is “silver” and after a lacuna “not less than half” probably referring to the silver. After the next lacuna there are “the cities” in the nominative. This noun could govern the verb πραττ[---. πραττ[--- could also introduce a new sentence and serve as an infinitive used for the third person of the imperative (“they are to exact...”).² After the next lacuna some tax is mentioned ---] δραχμᾶς ἀπὸ τῆς μίᾱς. Clause [5] closes with --- κατ]αλλάττειν ἢ ἐνόχο[υς --- (“... to change or to be liable ...”). The preserved text suggests that an exchange has to be carried out according to certain specifications that are now missing. The liability (ἐνόχο[υς) must have been specified, e.g. according to a decree. Somewhere in the lacunae the party that was responsible for the exchange must have been mentioned.³

Scholars disagree about the specifics of the exchange process. This is in part due to the fragmentary nature of the text. It also reflects the considerable logistical difficulties that Athens would have encountered if it had attempted to re-

¹ Nor do any of the proposed restorations account for this omission.

² See Smyth § 2013b; cf. the restoration of the text by *ATL* and *ML*.

³ Cf. Koch 1991, pp. 390-391, 623 note 70.

coin all the money circulating in the empire.¹ The fragmentary text of clause [5] need not imply such a rigorous and all-encompassing monetary policy. It is conceivable that an exchange was mandatory only for silver that was intended for a certain purpose, e.g. as payment to Athens. The text breaks off before the penalty for non-compliance is described. It is impossible to assess with certainty how rigorous a measure this provision actually was.

The following alternative hypothesis could be considered: In the mint something has to be done with silver. If it is silver intended for official payments to Athens, coins could be checked for plating and other tampering.² “Not less than half...” could indicate that not less than half of the coins have to be

¹ According to Segre (1938, pp. 158-63) the mint in Athens is to coin not less than half of its supply of uncoined silver so that the cities have some money, while their own foreign silver is collected and sent to Athens. The newly-struck Athenian coins are to be exchanged immediately against the foreign money when it gets to Athens. The overseer of the mint is to exchange this money according to its real silver value without any profit for Athens. Thus at the end of the exchange procedure the same amount of silver is left in Athens as there was in the beginning. This silver will be coined into Athenian money and handed over to the strategoi [6].

E. S. G. Robinson (1949, p. 327; cf. also Meritt 1975, p. 267) thinks that Athens will apply a surcharge to the minting (c. 3% would be a reasonable assumption), and that the exchange process takes place in two steps: half of the foreign silver is exchanged immediately, the other half later.

The authors of *ATL* 2 (p. 67) basically agree with E. S. G. Robinson's interpretation, but specify the time period in which the exchange of the second installment has to be accomplished as five months.

In Erxleben's opinion (1969, pp. 107-111) the exchange can not have happened at once, but requires several stages. The first shipment of silver from the cities comes from some sort of reserve supply. To prepare for the exchange about half of the foreign silver in the state treasury in Athens is coined into Athenian money. Athens collects a tax to make up for losses incurred in the process of reminting.

ML (no. 45, p. 113) present a slightly more conservative text and offer only a very summary interpretation: “The masters at the mint at Athens are to convert foreign currencies, belonging to state or individuals, into Attic coin, and a minting fee (?3 drachmas in the mina) is probably specified.” Epigraphically πέντε δραχμῶν minting fee is also possible “but seems too high.”

Koch's restoration (1991, p. 374) is more conservative. He accepts Athens as the location of the mint (p. 617), but rightly notes that the text does not permit one to reconstruct details of the collection or exchange process except that the cities had to collect silver money and bring it to Athens (p. 617 n. 11). He also raises the question of whether the provision to exchange foreign silver coins against Athenian coins applied as a general rule, or whether it was limited to certain circumstances (*ibid.* p. 390).

² Cf. the Athenian law on silver coinage from 375/4; ed. princ. Stroud 1974b.

checked. A fee will be charged for this procedure. Silver coins, which do not fit the specifications, will be changed.

Clause [6]

This clause refers to the situation after the exchange process. The sentence starts with a subordinate clause as indicated by the subjunctive form γίγνηται. Most editors restore the opening as ὃ δὲ ἂν περιγίγνηται ἀργυρίοι-- (“what is left of the silver”). Erxleben interprets this as the profit that Athens derives from the exchange transaction.¹ Segre takes it as the amount of foreign silver that corresponds to the the amount of Athenian money supplied by Athens at the beginning of the exchange transaction to provide for the allies' immediate needs.² According to E. S. G. Robinson the provision applies to any sums that might be left over from the exchange process and are not accounted for otherwise.³

These interpretations and restorations are not contingent upon specifics of the exchange process that are preserved in the text. They reflect scholars' reasoning about the logistics of the exchange process. Taking a more conservative approach I come back to D. M. Robinson's rendering of the text on the fragment from Aphytis. I prefer the verb γίγνηται (“what it amounts to”) to περιγίγνηται (“what is left”), because γίγνηται captures better the conversion

¹Erxleben 1969, pp. 111-12; cf. Meritt 1975, p. 267.

²Segre 1938, pp. 160-61.

³Robinson, E. S. G. 1949, p. 327.

aspect.¹ The silver is to be given either to the strategoi or to some other institution the name of which is not preserved. The editors of *ATL* think this other institution could be the apodektai.²

Clause [7]

The opening ἐπεὶ δὲ ἀποδοθῆι [-- (“when it has been given back...”) summarizes the process expounded in the preceding clause. ἐπεὶ δὲ ἀποδοθῆι [-- has a temporal function indicating that after the provisions of clause [6] have been carried out, the new provisions of clause [7] having to do with Ἡφαίστος- will take effect.³ It is impossible to decide whether the reference is to Hephaistos, or to the Hephaistikon mine.⁴ Regardless of whether Hephaistos, or the Hephaistikon mine is mentioned, there is no indication of a payment different from the one mentioned in [6].

¹ Koch (1991, p. 617 note 14) finds support for the restoration περιγίγνηται in the occurrence of this term elsewhere in the context of tribute that is left over (*Xen. Hell.* 2,3,8; *IG I³* 450). These passages can support the restoration only when it is taken for granted that this is the meaning required in clause [6]. Note that Koch (1991, p. 618 note 14) doubts whether the fragmentary condition of [6] permits any detailed interpretation.

² The apodektai are financial officials known to receive payments which they hand on to the treasurers (tamiai). E.g. *IG I³* 84, l. 16-17 (418/17); *Ath. Pol.* 48, 1.2; cf. Koch 1991, p. 618 note 15.

³ The proposition that there was mention of the payment of a sum to Athena and Hephaistos has to be given up on epigraphical grounds. According to Stroud's new reading the restoration (Stroud 1974a, pp. 280-282) Ἰ'Αθηναίαι is impossible. However, the letters Ἡφαίστος- preceded by an article in the dative form need explanation. Although allowing for the possibility that there could have been mention of a repayment to Hephaistos, Stroud (*ibid.*) favors the restoration Ἡφαίστου ἀπὸ Λαυρέου, the mine called Hephaistikon in the Laureion silver mines.

⁴ Hephaistos, the god of metal working, is not completely out of place in a decree concerned among other things with the striking of coins; cf. D. M. Robinson 1935, p. 153; Segre 1938, p. 163 note 4; Stroud 1974a, p. 281. The reference to an Athenian mine would also be plausible since the mining area Laureion is also mentioned in the “Banking Decree” (Stroud 1974a, pp. 282-90), and since the Hephaistikon mine is mentioned elsewhere (e.g. *IG I²* 347, line 15; *IG I²* 348, line 60; *IG I²* 366, line 14) as source of revenue for building operations (Stroud 1974a, p. 282).

D. M. Robinson, in his restoration of [7] first suggested the payment of a tithe to Athena and Hephaistos.¹ Establishing a chronological connection with the Decree of Kallias (*ML* 58), Segre envisions the repayment of a loan to Athena and Hephaistos.² Erxleben adheres to Segre's textual restoration, but dissociates the repayment of the loan to Athena and Hephaistos from the Decree of Kallias.³ Mattingly thinks it unlikely that repayment of a debt is involved, but rather that some funds were earmarked for Athena and Hephaistos.⁴ Stroud has strong grounds to reject the association with Athena and Hephaistos, yet he is inclined to adhere to the idea of a repayment either to Hephaistos, or to the Hephaistikon mine.⁵ Only *ML* note that the context in which Hephaistos, and perhaps also Athena, is mentioned is entirely unclear.⁶ Thus for lack of evidence all that can be said about [7] is that it talks about what is to happen after the conditions of [6] have been fulfilled. This probably involves either Hephaistos or the Hephaistikon mine.

Clause [8]

The sentence starts with a conditional clause: "If someone puts forward a

¹ D. M. Robinson 1935, pp. 152-53.

² Segre 1938, pp. 161-63.

³ Erxleben 1969, pp. 112-16. Erxleben also offers a convenient summary of the chronological argument that has been made relating to the Decree of Kallias.

⁴ Mattingly 1974, p. 281.

⁵ Stroud 1974a, pp. 280-82.

⁶ *ML*, p. 114.

motion or puts to vote concerning ... to use or to loan ...” It is reasonable to assume that “money” or “silver” was mentioned because it fits the context of “to use or to loan” (χρησθαι ἢ δανε[ί]ζειν). Πρὸς τοὺς ἕνδεκα after the lacuna indicates that if someone has made these proposals he is to be brought in front of the Eleven.² The legal procedure to be adopted is further specified.³

For the opening of clause [8] Tod's restoration has found almost unanimous acceptance: “... concerning [this, that it be possible] to use or to loan [foreign coinage] ...”⁴ Erxleben thinks [8] applies to the general use of foreign currency, and restores the sentence accordingly.⁵ Erxleben's main argument is that the death penalty—in his reading of the closing sentence—is too severe a punishment for the proposed unauthorized use of only a particular fund.⁶ *ML* adhere to Tod's restoration, but interpret it, in Erxleben's sense, as referring to the pro-

¹ Cf. *IG* I³ 46 (= *ML* 49); *IG* I³ 63. As the formula ἐάν τις εἴπηι ἢ ἐπιψηφίσῃ indicates, the provisions of this clause only concern members of the boule or the prytany; cf. Koch 1991, p. 392.

² For the Eleven, cf. Harrison 1971, pp. 17-18; Rhodes 1981, pp. 579-82; Koch 1991, p. 393.

³ Cf. Lewis 1974, pp. 84-85; Koch 1991, pp. 393-97. Lewis (1987, p. 55) writes: “I am sure that the traditional interpretation, which makes proposals for the use of foreign money liable to the death penalty, is wrong.”

⁴ Tod 1949, pp. 104-105; earlier and differing restorations can be found in Erxleben's apparatus for the fragment of Aphytis (Erxleben 1969, p. 132), and are discussed by Erxleben 1969, pp. 116-17. Koch (1991, p. 374) offers the restoration περὶ τούτων ...14... ἐς ἄλλοι τι χρησθαι which has first been proposed by D. M. Lewis (1974, p. 84).

⁵ Erxleben 1969, p. 117.

⁶ Erxleben (1969, p. 117) interprets the silver mentioned in [7] as the silver that is left in Athens after the exchange has taken place. For the restoration of the death penalty, see my discussion below.

visions of the Decree in general.¹ Koch proposes the phrase could refer to the use of all the silver coins that have been brought to Athens, or, alternatively, to the Athenian coins that have been minted in exchange for the foreign silver. Koch believes the purpose of this provision is to prevent loans to individuals from the silver that has been collected from the allied cities.²

My criticism regarding these interpretations is that they are too speculative. There is no evidence in the preserved parts of the text that suggests foreign coinage was mentioned. It is probably more likely that clause [8] pertains to some particular type of money specified in the preceding text.³ If the provision refers to clause [6], then the exchange transaction has already taken place, and—according to most interpretations—there is no foreign coinage left.⁴ The possibility that it refers to the fund of Athena and Hephaistos can be excluded since it appears now that no such fund was mentioned.⁵

Clause [7] specifies an action that has to take place after the provisions of [6] have been carried out. Clause [8] provides for a situation that could arise during or after the completion of the clauses [5] through [7], not for an action contingent on the completion of [7]. Clause [8] refers to the silver mentioned in clauses [5] and [6]. Concerning the intended use of it, all we learn in clause [6] is that it is to be handed over to the strategoi. Clause [8] describes what is to be

¹ *ML*, p. 114. They take the threat of the death penalty as an indication of the importance of the Decree. Lewis (1974, p. 84) takes the provisions of clause [8] to refer to a particular fund that was mentioned in the two preceding clauses, but that can no longer be identified because of the lacunae in the text.

² Koch 1991, p. 392.

³ Segre (1938, p. 161) took it as referring to the silver that was left once the exchange was completed.

⁴ This problem has been pointed out by Segre 1938, p. 161 note 1.

⁵ Cf. above clause [7].

done if someone proposes to use this money for something different or as a loan (the purpose of which was probably specified in the lacuna).

I do not think too much weight can be placed on the mention of the death penalty. Klaffenbach, in his examination, could not see ΙΖ, the last two letters read by Chaviaras.¹ He wrote a Σ without a dot before ΑΤΩ. This letter seems hard to reconcile with the Ν that would be needed in ΘΑΝΑΤΩΙ. I do not know of the results of any other examinations of the stone or squeeze, but I would like to caution against placing too much argumentative weight on an insecure reading.

Clause [9]

Heralds are to be chosen and their route of dispatch is given.² At the end of the clause the fine of 10,000 drachmas is mentioned. This clause generally has been taken to mean that heralds, under the supervision of the strategoi, are to be sent to the four districts of the empire to announce the Decree.³ As pointed out by Koch the involvement of the strategoi cannot be taken for granted.⁴ The subject of the fine that is threatened is not known. It has been thought that the fine is intended either for each of the strategoi, or, alternatively, for each of the

¹ Klaffenbach 1925, p. 218 (in Hiller von Gaertringen and Klaffenbach 1925). Unfortunately, it is not stated clearly whether Klaffenbach examined the stone, squeezes, or photographs. Cf. above 1.1.

² Cf. *ML* 69, lines 5-6; cf. *ibid.* lines 40-41. On the office of the heralds, cf. Balcer 1976, pp. 269-71.

³ Cf. the restorations in the *apparatus criticus*. This clause also has been used to establish a date for the Decree; see below, chapter 2.0.

⁴ Koch (1991, p. 391) points out that in a comparable context (*ML* 69, lines 40-41, reassessment of 425/4) taktai take care of the route of the heralds. Note with Koch (*ibid.*) that in a similar context (Samos Decree, *ML* 94, lines 34-35) "strategoi" is restored.

heralds, if they do not comply.¹ The fine of 10,000 drachmas is unusually high.² Too much of the text is missing to allow satisfying conjectures about this provision.

Clause [10]

This clause provides for the publication of the Decree.³ “The local archons are to write up the Decree [and are to set it] up on stone stelai in the Agora of each city and the overseers (are to set it up) [in front] of the mint. But this ...if they don't want.” The Decree is to be published in the cities and in Athens. In the cities, the local archons are responsible for having it engraved and set up in the Agora. In Athens, the epistatai are to set it up in front of the mint. In many instances, the place where the Decree is put up may have been the same in Athens and in the cities. This is assuming that the mint in Athens was in the Agora, and that in most of the cities, the mint was also in the Agora.⁴

The last sentence (ταῦτα δὲ ἐπι[....]16... ἐλάμ μὴ αὐτοὶ βόλωνται.), although very fragmentary usually has been interpreted in the sense of “but Athens is to provide for this, if they [the cities] do not want.”⁵

¹ For the various earlier readings cf. Erxleben (1969, pp. 118-19) who also points out the linguistic and technical problems with this interpretation.

² Cf. Koch 1991, p. 392 with note 75. The text is preserved solely on the first line of the fragment from Siphnos, which appears rather hard to read; cf. above 1.1.

³ For the restorations ἀναγράψαι and καὶ θεῖναι see Erxleben 1969, p. 120; cf. above 1.1.

⁴ For the Athenian mint, cf. Camp 1986, pp. 128-30.

⁵ Koch (1991, p. 618 note 23) interprets: the Athenians will provide the [inscribed] stelai, if a polis wishes so, but the polis will have to pay for it. He imagines an Athenian stonecutter coming to a city and working under the protection of an Athenian archon, a strategos, or a keryx. Unlike *ML* (p. 115), Koch (*ibid.*) does not see in this clause the provision that Athens would enforce the publication if a city were recalcitrant. The implications of this clause have been pressed to help date the various fragments by their letterforms; see below, chapter 2.1.

Clause [11]

This clause presents difficulties although the text is almost completely preserved (“The herald who goes is to ask from them all that the Athenians order”). Interpretations differ as to what it was that the Athenians order. I do not think that this clause refers to the accommodation of the herald, and the responsibility of the city to provide him with food, transportation and other incidentals.¹ One would tend to think these routines of imperial administration were set forth elsewhere, and with a general applicability so that they would not need to be specified in each particular case. Alternatively, this clause has been taken to mean that the herald is to ask them to pay for the publication of the Decree.² But the issues relating to the publication were already dealt with in [10]. Nor is it stated in [10] or [11] that the herald is involved in the publication; in the city this is the duty of the local archons.

The phrase ὅσα κελεύουσιν Ἀθηναῖοι is rather general. To Erxleben this intentional ambiguity is typical of the language of Athenian imperialism.³ It is conceivable that when a herald goes to a city, he is to announce all that the Athenians order him to announce, i.e. other unrelated business.⁴ As indicated by δεηθῆναι and ὅσα this might be payments to Athens. The herald does not exact payments anyway, he only asks, i.e. announces that payment is required. In this sense the phrase could refer to the payment of the silver that is mentioned further above (clauses [5] and [6]). The ambiguous wording possibly in-

¹ This interpretation has been suggested by Hiller von Gaertringen and Klaffenbach 1925, p. 220.

² Koch 1990, p. 619 note 24.

³ Erxleben 1969, p. 121.

⁴ Cf. Koch (1990, p. 388) thinks the heralds could have e.g. also summoned the persons mentioned in [3] to the courts in Athens.

dicates that a different amount is exacted from every city. The ambiguous wording is difficult to reconcile with a total withdrawal of all money in circulation.

Clause [12]

Clause [12] contains an addition to the oath of the boule to be added by the secretary of the boule. The formula specifies what is to happen in case someone strikes *nomismata* of silver (i.e. silver coins) in the cities and does not use *nomisma* and weights and measures of the Athenians but different ones.¹ A decree of Klearchos is mentioned.² The penalty threatened is not preserved.

It is not clear whether the formula is to become part of the general bouletic oath, since its provisions concern a very specific case.³ If it is, it indicates that the Decree is intended to remain in force over a longer period of time, requiring more than a short term and non-recurring enforcement.⁴ As Koch suggests, it is conceivable that the addition to the bouletic oath in the Standards Decree refers to an oath that contains more specific conditions, and that stood

¹For *nomisma*, see below, chapter 5.0.

According to Thür and Stumpf (1989, p. 174) the persons to be prosecuted by the provisions of the oath would be the officials of each city who are responsible for the mint, and maybe also those who worked in the mint. Cf. Koch (1991, p. 625 note 101).

²Koch (1991, p. 400) rightly points out that because of the very fragmentary condition of the text one can not be sure whether the Decree of Klearchos belongs to clause [12], or whether it was mentioned at the beginning of clause [13].

³Rhodes (1972, pp. 194-99) is inclined to think that changes must have been made to the oath before this addition could have been made. (Note that Rhodes [*ibid.*] identifies the Standards Decree with the Decree of Klearchos mentioned in [12], and that he accepts an early date). Doubts as to whether the formula became part of the general oath are expressed by Koch 1991, p. 616, note 26.

⁴Cf. Koch 1991, p. 616 note 26.

at the opening of the Decree.¹

There is uncertainty with regard to Klearchos and the decree that is mentioned. Most editors restore πρότερον, “the former decree.”² This would then be an earlier decree, and the Standards Decree might contain an addition or an update to this earlier decree.³

Clause [13]

Large parts of the text of clause [13] are missing. “Foreign silver” is mentioned, “if (?) he wants”, and “the city” in the accusative case. At the end, “mint” is mentioned again. I find it difficult to make sense of this very fragmentary text. Erxleben restores this clause as containing provisions for the collection and the exchange of foreign money that is circulating in Athens, or that is in the possession of Athenian citizens.⁴ *ATL* and *ML* interpret this clause in a more general way, that people can bring their money to Athens to have it exchanged.⁵

¹ Koch 1991, p. 616, note 26; p. 398. This would be similar to the oath that is part of the Chalkis Decree (*ML* 52).

² Erxleben (1969, pp. 125-126) prefers ἡμέτερον.

³ Again, the similarity with the Chalkis Decree (*ML* 52; cf. lines 3, 49, 76) comes to mind. Balcer (1976, p. 266) proposes that the decree of Klearchos has nothing to do with coins, weights, and measures, but that it is an outline of judicial restrictions and procedures. Balcer suggests that the reference in the Chalkis Decree is to the Decree of Klearchos, which would then be identical with the “Athenian Judicial Decree”; cf. Balcer 1978, pp. 119-42; *idem* 1984, pp. 396-401. The editors of *ATL* 2 (p. 67) maintain that there is no earlier decree of Klearchos, but that Klearchos calls his own decree πρότερον since it is “earlier” from the point of view of the member of the boule who will take the oath in the future. This interpretation is rightly rejected by *ML* (p. 114). Cf. also the discussion of the variants by D. M. Lewis (1987, pp. 59-60) who finds the evidence for two decrees on coinage not very strong.

⁴ Erxleben 1969, pp. 126-27. In Erxleben's restoration it is further suggested, that everyone himself records the amount he exchanges, an idea that seems rather improbable. Koch (1991, p. 620, note 31) incorrectly attributes this interpretation also to *ML* and *ATL*.

⁵ *ML* 45; *ATL* 2, p. 66; cf. Meritt 1975, p. 268.

Clause 14

In clause [14] epistatai (“overseers”) are mentioned, in connection with the writing up of something.¹ In the next line there is “to look at for anyone who wants to.” Then there is “foreign”, and in the last line “silver”.

According to *ATL* and *ML* the epistatai publish the sums of money on a stele in front of the mint. According to Erxleben this is done on whitened wooden boards.² Again there is disagreement about the restoration of the text that starts with $\chi\omega\rho\iota\varsigma$ “separately”. According to Erxleben, the overseers are to write up the total of the foreign silver separately for the various provenances. *ATL* and *ML* would rather have separate categories for silver and gold.³

¹ For the epistatai, cf. Koch 1991, p. 620 note 32.

² Cf. Erxleben 1969, p. 128.

³ *ML* 45; *ATL* 2, p. 67; cf. Meritt 1975, p. 268.

1.6 Interpretation

The analysis of the conservatively restored composite text of the Athenian Standards Decree has revealed that the surviving fragments do not provide enough evidence to support the traditional interpretation. The extant text does not state explicitly that the local mints have to be shut down or that the use of local currency is forbidden under any circumstances.

Clause [5] is the first clause to explicitly discuss matters relating to currency. References to “mint”, “silver”, “exchange”, and a certain percentage of money suggest that in the mint silver coinage is to be exchanged. However, this need not imply that Athens decreed recoinage of all foreign coinage circulating in the empire. The text is too fragmentary to allow for a specific restoration. It is conceivable that the exchange was mandatory only for coinage that was intended for a certain purpose, or that did not meet certain specifications.

According to the traditional interpretation clause [8] contains a prohibition on the use or loan of foreign money. However, in the preserved parts of the text “foreign” coinage is not mentioned. Clause [8] may have a more restricted applicability and pertain to the silver mentioned in clauses [5] and [6].

The addition to the bouleutic oath in clause [12] specifies that legal action “according to the decree of Klearchos” will be taken if someone strikes *nomismata* of silver (i.e. silver coins) in the cities and does not use *nomisma* and weights and measures of the Athenians.¹ We do not know the content of the decree of Klearchos, and the severity of the penalty. In clauses [13] and [14], there is “foreign silver” and “mint,” but the text is too fragmentary to yield an interpretation.

¹ For a detailed analysis of the term *nomisma* and for further discussion of clause [12], see below, chapter 5.0.

These open endings notwithstanding two important points can be learnt from clause [12]. One is that, provided the formula becomes part of the general bouletic oath, the Decree is intended to remain in force over a period of time, and has not been conceived as legislation that demands a short term and non-recurring enforcement. The other important point is that along with *nomismata* (silver coins) “measures and weights” are included in this provision. A common system of coinage, weights and measures would facilitate the collection, accounting, and redistribution of imperial payments, such as tribute and taxes.¹ If the Standards Decree is motivated mainly by considerations of practical expediency, then its provisions may apply only to coins, weights and measures used in official transactions between the allied cities and Athens. In this scenario the Decree is not a one-time measure, but rather a legislation that will be enacted repeatedly. Equally concerned with streamlining the logistics of imperial finance are regulations concerning the collection of tribute.² Like the Standards Decree these decrees apply only to a specific situation, and are enacted only periodically. The Standards Decree belongs in the context of other regulations concerned with imperial finance.³

More supporting evidence for this hypothesis will emerge in the following chapters. For the moment, it will suffice to point out that a more restricted objective, i.e. the regulation of weights, measures and coinage in official transactions with Athens, accords with the epigraphic evidence.

¹ Cf. Schuller 1974, pp. 215-17; Martin 1985, pp. 196-207; Koch 1991, pp. 380-81.

² E.g. the decrees *ML* 46, 68, 69 that are concerned with the collection of the tribute (e.g.). Note that both in tribute decrees (*ML* 46 lines 18-22; *ML* 68 lines 11-14, 18-22) and in the Standards Decree (clause [2]) *hellenotamiai* are mentioned.

³ E.g. the decree about the repayment of loans (e.g. *ML* 58), regulations of imports (e.g. *ML* 65), the “Banking” decree from the Athenian Agora (*IG*³ 90), and the harbor tax of 413 (Thuc. 7.28.4).

2.0 The Date of the Decree

The date of the Standards Decree has been a source of great controversy. The dates proposed range from 449 to 416/15, most support being given to either the 440's, the "early date," or the 420's, the "late date." As of now, the question has not been resolved, and, in my opinion, a definitive solution will only be reached if fragments are found that contain clear internal evidence for a date, such as the name of a known archon or secretary.

The criteria for dating the Decree can be divided into two categories: internal and external. Internal criteria are letter forms and the occurrence of certain grammatical forms or expressions that are thought to be typical of a certain time period.² External criteria are considerations about the historical context in which such a decree would make sense, as well as material evidence that might reflect upon the decree, e.g. numismatic evidence, or allusions to it in literature or other documents.

In this chapter I will examine the question of the date mainly on the basis of the epigraphic evidence. Some external evidence will be considered as well, such as possible allusions to the Standards Decree in Aristophanes (*Aves* 1021-1057) and in the Decree of Kallias (*ML* 58). In addition, I will critically review attempts to date the Decree on the basis of the general historical context, and I will also examine the chronological implications of the find spots of the fragments. The discussion of the date will continue in the later chapters where

¹ Erxleben (1971, pp. 145-46) has summarized the various proposed dates; cf. Meritt 1975, p. 268. My focus is on the scholarship after 1970.

² For a critical assessment of the validity linguistic and stylistic criteria, see W. E. Thompson 1979-80, pp. 75-86.

more relevant material, especially the numismatic evidence will be examined.

2.1 Internal Evidence for the Date of the Standards Decree

Letter Forms

The letterforms of most of the fragments are in Ionic script which is notoriously difficult to date.¹ The writing on the fragments from Syme and Hamaxitos is extremely untidy.² The fragment from Aphytis is inscribed in neat and regular stoichedon script. It has been dated by Jeffery to later than 450-445.³ Not too much weight can be placed on the description of the Ionic letterforms on the fragment from Odessa as "4th century" unless this can be confirmed by a reexamination of that fragment.⁴

Since these fragments are so uninformative, it is not surprising that most arguments for a date on epigraphic grounds are based on the fragment from Kos. This fragment is written in the Attic dialect and with Attic letterforms. Its most salient feature is a three-barred sigma. According to an orthodox school of thought among epigraphists there is no dated example for this letterform on public Athenian documents after 446, and consequently the Standards Decree

¹ See Lewis 1987, p. 54. On the problems of dating public documents in Ionic script, cf. Walbank 1974, p. 164 with note 10.

² Smyrna, of which only a transcript exists, was supposedly cut by a more competent hand; see Baumeister 1855, no. 22: "... mit den schönen einfachen Schriftzügen der attischen Periode."

³ Jeffery 1990, p. 364 note 1.

⁴ See Exleben 1969, pp. 121-23; cf. Schuller 1974, p. 215; Meritt 1975, p. 272; Lewis 1987, p. 57.

can not have been passed after that date.¹ Even for adherents of the conservative dating this presents some problems. The decree was passed in Athens, but like the other copies the fragment from Kos may not have been inscribed in Athens. Then the *terminus ante quem* of 446 that has been established for three-barred sigmas on Attic public inscriptions need not apply to the fragment from Kos. As a way around this, clause [10] has been interpreted to imply that the Athenians will publish the inscription in case an ally will not do so.² The scenario envisioned is that the stone is inscribed in Athens, and then shipped to Kos. Thus the same criteria for dating by letterform can be applied to the fragment from Kos as to any other public Athenian document. For a while the plausibility of this argument was enhanced by the fact that the marble of the fragment from Kos was described as Pentelic, which would speak for an Athenian origin.³ But when the marble was analyzed and found to be certainly not Pentelic, but rather of island provenance, this argument was seriously weakened.⁴

If one compares the fragment of Kos not to an Attic text, but rather to other public or semi-public texts from other allied cities, then the three-barred sigma does not rule out a later date.⁵ The mason may have used an obsolete letter-

¹ For the orthodox dating of 5th century inscriptions, cf. e.g. Lewis 1987, p. 57; Meiggs 1966. Walbank (1974, pp. 168-69) finds the last occurrence of a three-barred sigma in 443/42 (*IG* ² 343); cf. *idem* 1978, pp. 39-41.

² Cf. my discussion of clause [10] in chapter 1.5, above.

³ Segre 1938, p. 153.

⁴ See Georgiadis 1965. One can date the letter forms as on any other public Athenian inscription, only if one can be sure that the inscription was cut by an Athenian mason, or at least in the fashion of Athenian inscriptions of the time. Cf. Pritchett 1965; *ML*, p.115; Meritt 1975, p. 272.

⁵ The three-bar sigma is also found on Samian horoi. Tod (1949, p. 105) accepting a date of c. 440-439 for these horoi, argues that the Standards Decree could be at least as late as 439. But cf. Barron (1964, pp. 39-45) who dates the Samian horoi before 446 because of the three-barred sigma.

form like the three-barred sigma in an attempt to be deliberately archaizing, or to enhance the typical Athenian character of the decree.¹

A more unorthodox school of thought among epigraphists challenges the dogma that no three-barred sigma can be found in public Athenian inscriptions after 446. In a series of articles, Mattingly proposes later dates for a number of inscriptions that contain three-barred sigmas.² Most recently, at least some of Mattingly's readings have found support through sophisticated technological testing.³ However, the debate concerning the three-barred sigma is far from over.⁴ Personally, I find myself unable to take sides, and for almost every one of the crucial documents containing a three-barred sigma strong arguments for either an early or a late date can be adduced. The results of the computer-enhanced photography, combined with laser technology seem convincing, but one would like to have this technology tested more extensively on inscribed and subsequently reused stones, before one can have full confidence.⁵ I am also not sure how much it would really help in dating the Standards Decree, if it were established as a fact that on public Athenian documents a three-barred sigma could occur after 446. As the other local fragments of the Standards De-

¹ It has been pointed out by Lewis (1987) that Athens for some time had been virtually the only city in the Attic-Ionian world that used a three-barred sigma: "Even some time after Athens had abandoned it [three-barred sigma], a foreigner might think that he was giving the proper flavour by using it" (p. 58). Note that apart from the sigma, the other letterforms, being rounded and straight, agree well with a later date; cf. Erxleben 1971, pp. 159-60.

² E.g. Mattingly 1987; 1984; 1977; 1974; 1971; 1970; 1966; 1964; 1961; 1961b.

³ Chambers *et al.* 1990, pp. 38-63.

⁴ E.g. Henry 1992; Chambers 1993; Henry 1993.

⁵ As pointed out by Henry (1992, pp. 142-45) both camera and laser beam will treat and record the traces left by the original inscription (or rather by the process of inscribing) in the same manner as traces caused by subsequent re-use. The stone examined by Chambers *et al.* (1990) was re-used as a door-sill.

cree indicate, the criteria for official Athenian documents do not apply to the copies of this decree. When an inscription with Attic letterforms is found in an area where one would not expect it, one should be prepared to question the applicability of standard criteria for Attic inscriptions.¹

Linguistic Criteria: Dative Plural Endings

There are old dative endings in $\tau\epsilon\sigma\iota$, $\tau\eta\sigma\iota$, and $\tau\alpha\lambda\sigma\iota$ on the fragments from Kos, Siphnos, and Smyrna. These forms were in use until at least c. 419/18. Starting around c. 430, and parallel to the old forms, the newer endings in $-\alpha\lambda\varsigma$ began to appear.² Because of their mixed occurrence the endings do not help establish a date.³

The Number and Order of the Tribute Districts

In the Athenian Tribute Lists from 443 to 438 there are five district headings including Karia. Thereafter there are four headings and the Karian district is included in the Ionian district. In clause [9] of the Standards Decree four tribute districts are mentioned: the Islands, Ionia, the Hellespont, and Thrace. Erxleben concludes that the Standards Decree was passed after 438, since there are only four districts.⁴ In the tribute lists from 454 to 446, however, the cities are not listed in a strict geographical order. In the tribute-quota list of 449, there is a

¹ Bean and Cook (1957, pp. 124-25) even raised the possibility that the fragment might have been brought to Kos long after it was inscribed somewhere else.

² See Erxleben (1971, pp. 153-154) with reference to Wade-Gery 1931, pp. 78-82; cf. also Mattingly 1990. Lewis (1987, p. 59) notes some of the old long dative endings in the Athenian recodification of the laws of 410-404 (*IG* I³ 236, line 37; 237 bis, line 4). However as Lewis (*ibid.*) points out, the dative forms may have been copied from the originals.

³ Cf. Walbank 1974, p. 162 note 6.

⁴ Erxleben 1971, pp. 147-50; this is also the opinion of Ruschenbusch (1977).

group of cities from Karia, but it is not clear whether they form a separate district.¹ Thus the number of four districts in clause [9] of the Standards Decree could still be compatible with a date around 446.²

The four districts in the Standards Decree are in the same order as in the tribute lists of 421/20, the Thoudippos Decree (*ML* 69), and the Kleinias Decree (*ML* 46). Accepting a date of 423/2 for the Kleinias Decree, Erxleben takes the order of the districts as further evidence for a late date of the Standards Decree.³ But the order of the districts in the Kleinias decree is not entirely certain, since it is heavily restored.⁴

The order of the districts may be of no significance at all. In the tribute lists the order is very irregular, and in the assessment of Thoudippos the districts appear in a different order than in the tribute lists that go with that assessment.⁵ The number and order of the districts are of little help in establishing a

¹ Ruschenbusch (1977) argues for the existence of five tribute districts in the assessment of 449 mainly because in the tribute quota list of that year he finds a group of 13 Karian cities. In my opinion this need not indicate the existence of a Karian district. If the cities were listed in the order their payments were received, one would expect to find cities of geographical proximity together. It would make a lot of practical sense for the couriers of several neighbouring cities to travel together when they brought the tribute to Athens (cf. *ATL* 3, p. 12).

² This is the conclusion of Schuller (1974, p. 212) reviewing Erxleben's argument. Cf. *ML* p. 85; Erxleben 1971, p. 148.

³ Erxleben 1971, pp. 151-153; Mattingly (1961, p. 157) dates the Kleinias Decree to the winter of 425/4.

⁴ Mattingly 1974, pp. 284-85. Erxleben (1971, pp. 151-153) refers to the order as restored by Mattingly (1961, pp. 158-169; 1966, pp. 187, 189) unaware that Mattingly subsequently (1971, pp. 29-31) retracts his restoration.

⁵ This is pointed out by Schuller (1974, p. 212) who observes that in all lists before 421/20 where there are four districts they appear in a different order. Mattingly who in 1974 (p. 285) maintains the order of the districts is of chronological significance, admits in 1977 (p. 89) that the order could be merely coincidental. Lewis (1987, p. 59) thinks it is possible that "...the Athenians varied their procedures and word-order without there being any particular significance to the variations."

date for the Standards Decree.¹ Equally unconvincing are attempts to date the decree on the basis of the wording τὰ ἐπὶ Θραίκης for the Thracian district.²

2.2 External Evidence

Aristophanes, *Birds*

Wilamowitz conjectures that Aristophanes in the *Birds* (*Aves* 1040-1041) presents a parody of the Standards Decree.³ The year 414, in which this play was first produced, thus provides Wilamowitz with a *terminus ante quem* for the Standards Decree. It is impossible to say to how recent an event Aristophanes is alluding. Those who propose a late date for the Standards Decree tend to assume that only a recent event was suitable for a joke.⁴ This may or may not have been the case.⁵ The Decree is explicitly announced as a “new” decree

¹ The matter is complicated by the fact that the argument about tribute districts is tied up with Pericles' Congress Decree (Plut. Per. 17.2) “which is no longer a respectable text” (Lewis 1987, p. 59); cf. Schuller 1974, p. 212 note 10; Koch 1991, pp. 370-71.

² According to Mattingly (1984, p. 498-99) until 438 the heading of the Thracian panel is ἐπὶ Θραίκης φόρος and not Θραίκιος φόρος; cf. Thuc. 2.9.4 on the Athenian alliance of 431. Mattingly explains ἐπὶ Θράικεν in the reassessment decree of 425/4 with Thoudippos' desire for uniformity. The expressions τὰ ἐπὶ Θράικης and ἐπὶ Θράικης are common in literature and inscriptions down to 417/16 (*ibid.* with references), but this can only provide circumstantial evidence for a date.

³ Wilamowitz 1880, p. 30 with note 56. Aristophanes, *Aves* 1040-1041: χρῆσθαι Νεφελοκοκκυγιάς τοῖσδε τοῖς αὐτοῖς μέτροισι καὶ σταθμοῖσι καὶ ψηφίσμασι καθάπερ Ὀλοφύξιοι. Bergk in the Teubner edition of 1857 suggests νομίσμασι instead of ψηφίσμασι. This has been adopted by Blaydes and Van Leeuwen as an emendation in their edition of 1902. The emendation has justly been criticized by *ML*, p. 114; cf. Meiggs 1972, p. 587; Lewis 1987, p. 53.

⁴ E.g. Erxleben (1971, p. 161) thinks that if an event was more than a decade in the past, the Athenians would no longer have understood the allusion.

⁵ Balcer (1976, pp. 266-67) thinks it is possible that Aristophanes in 414 B.C. referred to a decree passed around 449 B.C.

(Aristophanes, *Aves*. 1037) but this may be a joke in itself, implying that in fact it was an old decree.¹ It is often difficult to decide what was funny in Greek comedy, and why. In my opinion it is impossible to reach reliable chronological conclusions on the basis of the allusion in Aristophanes.

It is important to consider the context in which Aristophanes presents his parody of the Standards Decree. In the passage in the *Birds* (1021-1057) an episkopos comes to the city “Cloudcuckoobury,” which has just become part of the Athenian empire. Then a “decree-seller” announces among other “new laws” the parody of the Standards Decree.² Any Athenian law to be announced in a city that just joined the empire could be called a “new” law, because no matter when it was first passed, it is new for the inhabitants of that city. This could imply that the Standards Decree was in force for some time, and that every city that joined had to adopt it.³

νόμισμα ἡμεδαπὸν in the Decree of Kallias (ML 58) and the Fund for Athena and Hephaistos

A chronological argument has been made on the basis of the occurrence of the phrase νομίματος ἡμεδαπῶ (“of our currency”) in the Decree of Kallias (ML 58 A, line 4). The conservative date of 434/3 for the Decree of

¹ See Pouilloux 1953, p. 118 note 3. According to Koch (1991, p. 371) the joke could be underlined by the outdated form in which the *nomos* is presented, and by Aristophanes’ use of the datives μέτροισι and σταθμοῖσι which are out of use by 414, and which Aristophanes does not use elsewhere.

² See Meiggs 1972, pp. 585-86.

³ This was the case with other regulations some of which are alluded to by Aristophanes; cf. Meiggs 1972, pp. 586-87. Under the provisions of [12] every city would then have a copy of the decree made and set up. Under this scenario every fragment could have a different date, none of which would be necessarily the same as the date when the decree was first passed.

Kallias should probably be changed to 431.¹ It has been cited in favor of an early as well as a late date for the Standards Decree. Proponents of the latter argue that the phrase νομίματος ἡμεδαπῶ indicates that at the time when the Decree of Kallias was passed foreign currencies were still in use and thus the Decree of Kallias predates the Standards Decree.² Segre, to the contrary, thought the reference in the decree of Kallias was compatible with an early date of the Standards Decree.³ His argument revolves around the repayment to the fund of Athena and Hephaistos which he restored in clause [7] of the Standards Decree.⁴ Since this restoration can no longer be defended, Segre's conjectures about relationship between the Standards Decree and the Decree of Kallias have lost their validity. Erxleben has shown that the expression νόμισμα ἡμεδαπὸν occurs until the end of the Peloponnesian War. Thus it can not be used to date the Standards Decree.⁵

Since Stroud's reexamination of the fragment from Aphytis, it has become extremely unlikely that clause [7] of the Standards Decree mentions a fund for Athena and Hephaistos. Chronological arguments nevertheless continue to be made on the basis of the supposed reference to this fund. Thus Meritt

¹ See Kallet-Marx 1989b. The date of 422/1 proposed by Mattingly (1964; cf. 1968) is not convincing.

² E.g. Schäfer (1939, pp. 253-57) who dates the Standards Decree to 413/12, after the fall of Dekeleia.

³ Segre 1938, pp. 161-63.

⁴ Segre (1938, pp. 161-63) suggests that the decision in the Decree of Kallias to repay 3000 Talents in Athenian coin to Athena, and 200 Talents to the other gods had been made shortly after the Standards Decree was passed, when the term νομίματος ἡμεδαπῶ still made sense. A common fund for the repayment of debts to the other gods, except to Athena must have been created soon after the Standards Decree, because in the Standards Decree there was still separate mention of Hephaistos.

⁵ Erxleben 1969, p. 115 with references; cf. *idem* 1971, p. 160; Schuller 1974, p. 214; Koch 1991, p. 372.

defends the restoration Ἀθηναῖαι καὶ Ἡφαίστωι. He restores an explicit reference to a temple and altar of Athena and Hephaistos in clauses [6] to [8] and places the decree in the context of Perikles' Building program.¹ Meritt thinks it is almost certain that the Standards Decree authorized the building of the Hephaisteion in 449.² This would prove an early date independent from the argument about letter-forms. Recently it has been argued that the Standards Decree does not refer to the building of the Hephaisteion in 449 but to its decoration about a dozen of years later. Then the decree would date to 438.³ This argument does not have much force since it presumes a date for the Standards Decree based on the argument about the tribute districts.⁴

Mattingly uses the alleged fund for Athena and Hephaistos as an argument for a late date.⁵ He thinks the same fund is also mentioned in *IG I² 84.18*, Hyperbolos' regulations for the Hephaisteia in 421/0. Subsequently Mattingly has retracted this proposition and has admitted that too little of the text of the Standards Decree survives to allow conjectures.⁶

These conjectures about the fund for Athena and Hephaistos do not help

¹ Meritt 1975, pp. 270-71; for the restoration cf. above, chapter 1.3.

² Meritt 1975, pp. 270-73.

³ O. Hansen 1990a, p. 156. For the date of the Hephaisteion and its decoration he cites A. W. Lawrence (1967. *Greek Architecture*, 2nd ed., Harmondsworth, p. 177). O. Hansen also thinks it is conceivable that the Koan fragment of the Standards Decree was cut from the same shipment of Parian marble that was used for the Hephaisteion decorations (*op. cit.* p. 157).

⁴ O. Hansen (1990a, pp. 156-57) refers specifically to Ruschenbusch (1977, p. 215).

⁵ Mattingly 1974, p. 282.

⁶ Mattingly 1977, pp. 89-90 with note 37; cf. W. E. Thompson's (1977, pp. 249-51) response to Mattingly 1974.

to date the Standards Decree.¹ Even if there was mention of a fund for Athena and Hephaistos, this would not give an unequivocal indication of a date.²

The Historical Context

The Standards Decree is usually regarded as an expression of Athens' rigorous policy towards its allies. Thus the Standards Decree would belong to the years when Athens was at the peak of its imperialism.³ There is disagreement about when this was the case. Some scholars hold that already in the 440's the Delian League had been converted into the Athenian empire, and that Athens openly acknowledged this.⁴ Another school of thought—promoted especially by Mattingly—maintains that Athens' imperialism was a product of the period of the Peloponnesian War, and that the imperialistic tone of the Standards Decree reflects the time of Kleon, i.e. the 420's.⁵

Assessing the “tone” of the Standards Decree and a suitable context is a very subjective procedure, considering how little of the Decree is actually left

¹ Stroud (1974a, p. 282) favors the restoration τὸ Ἡφαιστικὸν ἀπὸ Λαυρείου, but he is careful not to draw chronological conclusions from this restoration.

² Cf. W. E. Thompson 1977, p. 251.

³ Lewis (1987, p. 55) has cautioned against taking this correlation as a given. It is conceivable that the Standards Decree was not passed at the time when Athens' imperialistic attitude is attested also in other sources, but somewhat later.

⁴ Meiggs (1972, pp. 170, 172) cites the Erythrai Decree from the 450's in which the league is still called a *summachia* vs. the wording “the cities which Athens rules” in proxeny decrees (*IG* ³ 19, lines 8-9; 27, lines 14-15) which date to the years before 445.

⁵ Mattingly (1987, pp. 66-67; cf. *idem* 1992) finds parallels for the overtly imperial tone of the Standards Decree in documents of the 420's and the following decade (*ML* 45; 65; 73; Thuc. 5.18.7-8; 6.84.2-3, 85.2; 7.57.4-7), and especially with the Decree of Kleinias (*ML* 46), which he dates after 425/6 (see Mattingly, 1970, pp. 131, 133). Meiggs (1972, p. 170) thinks one should not date the Standards Decree in comparison with the Kleinias Decree, since the date of the decree of Kleinias is itself uncertain.

and how little securely dated comparative material there is.¹ Arguments based on the “tone” of the Standards Decree are not very helpful.

There also have been attempts to establish a context for the Decree based on considerations of economy and imperial finance. Because the Standards Decree implies a complete reorganization of the methods of accounting, Schuller thinks it belongs to the 440's rather than to the time of Kleon.² Mattingly proposes a connection with *IG I³ 90*, the so-called Banking Decree from the Agora.³ According to Mattingly *IG I³ 90* with provisions for gold or electrum, silver, and clay storage containers is a supplement to the Standards Decree, and it was issued one or two years after the first decree.⁴ Mattingly speculates that *IG I³ 90* was cut on the lower part of the same stele that carried the Standards Decree and that stood outside the mint in Athens.⁵ There is no positive evidence to support these speculations.

¹ As Schuller (1974, p. 216) points out, the arguments stressing the “imperialistic tone of Kleon” are necessarily indebted to Thucydides's description of Kleon which can not be taken as an objective account.

² According to Schuller (1974, pp. 215-16) Kleon was not re-organising, but rather applying existing practices with greater rigour (cf. *ML* 69).

³ Mattingly, 1970, p. 142; 1987, pp. 70-71; for *IG I³ 90* see Stroud 1974a.

⁴ Walbank (1974, p. 169 note 21) has identified the hand that cut *IG I³ 90* on several other decrees dated to 421/0.

⁵ Mattingly, 1970, p. 142; 1987, pp. 70-71; Stroud (1974a, p. 283) draws attention to the great thickness of the stone on which *IG I³ 90* was cut. In his assessment it could have been part of a building block, and is not a stele.

The Find Spots of the Fragments of the Standards Decree

The find spots of the fragments are not very instructive for a date. The fragment from Aphytis is cut on local limestone, and probably came from the city itself.¹ In the Athenian Tribute Lists Aphytis is registered as paying tribute since 451, and Siphnos since 449.² These dates can only provide *termini post quem* for the local copies of the Decree. Kos appears in the tribute lists first in 450. During the next four years there are many partial payments recorded. The city is absent again from the lists in 445 and 443. There is a partial payment in 431.³

The fragment from Smyrna was part of a collection. It certainly came from somewhere else, since Smyrna was never a tribute paying member of the empire.⁴ It is impossible to establish the provenance of the fragment that was found in the store-room of the museum at Odessa.⁵ Athens claimed tribute from the Black Sea area only after 425, but this need not date the Decree.⁶ Syme appears in the Tribute Lists from 433, at first with the amount of 1,800 drachmas

¹ See above 1.1; cf. Meritt 1975, p. 267.

² For Aphytis see *ATL* 1, pp. 242-43; for Siphnos see *ATL* 1, pp. 406-407. Cf. Lewis 1987, p. 56.

³ *ATL* 1, pp. 326-27; cf. Lewis 1987, p. 56. Bean and Cook (1957, pp. 124-25) have raised the possibility that the stone might not originally have been set up in Kos at all. It could have come from somewhere else to the Athenian naval base that was at Kos. Note that the modern city where the fragment was found was the state center of Kos only after 366.

⁴ See above 1.1; cf. Lewis 1987, p. 55.

⁵ It has been argued that it came from Olbia, but there is no way to prove this. The situation is complicated because the inscription is lost, and only insufficiently recorded. See Erxleben 1969, pp. 121-23, and above 1.1.

⁶ It has been suggested that the fragment came from Olbia, but it is not clear whether Olbia was subject to Athens at all (cf. Erxleben 1969, pp. 121-23). The fragment has been described as of bluish finely granulated marble, which in the opinion of Lewis (1987, p. 54) "doesn't seem normal for Olbia." Mattingly (1993, pp. 100-101) strongly argues for a provenience from Olbia.

paid by individuals.¹ Its payments become only gradually more regular during the early years of the Peloponnesian War.² However, 433 need not be the earliest possible date for the fragment from Syme. The city could have joined the league earlier and its payments could have been included in a group of cities.³

Hamaxitos is mentioned in the Tribute Lists for 425/24 and 421.⁴ In the editio princeps of the fragment from Hamaxitos, Schwertheim argues that Hamaxitos must have been a tributary member of the League by 454/453.⁵ Schwertheim relies on the date of 449 for the Standards Decree, but the date of the Standards Decree is not securely established, and one cannot have another chronology depend on it. Thus the editors of SEG offer for the fragment from Hamaxitos the dates of either c. 449/48 or of c. 420, the two alternative dates for the Standards Decree.⁶ Hamaxitos was part of the Lesbian Peraia, and it did not come under Athenian control before 427, when the Mytilenean revolt was put down.⁷ Mattingly thinks the late 420's are a likely date for the setting up of

¹ *ATL* 1, p. 416; for the *ιδιωται* rubric in the Tribute List, cf. Schuller 1981.

² In the lists of 442/1, 441/0, and 440/39 Syme is absent from the full panel (*ATL* 1, p. 416, lists 13, 14, 15). In 434/33, 433/32, and 432/31 Syme appears in the *ιδιωται* rubric with an *aparche* of 30 drachmas which corresponds to a tribute payment of 1,800 drachmas (its name is restored in 433/32 and 432/31). In 429/8 *Συμαῖοι* appear in the *βουλή* rubric with the same amount restored. In 425/4 *Σύμε* pays half a talent tribute.

³ According to *ATL* (1, p. 553) when Syme was first entered under the *ιδιωται* list in 434/3 it had separated by *apotaxis* from the Chersonesioi, with whose payments its own had formerly been included (for Chersonese cf. *ATL* 1, pp. 562-63, 3, p. 211, n. 73). Cf. Lewis 1987, p. 56. But cf. Mattingly (1966): "...the argument that the Syme fragments prove a date after 433 is very strong ..."

⁴ For the tribute record see *ATL* 1, p. 229. The first appearance is in the tribute list of 425/4 (A9) with 4 talents: *ἡ[α]μαχισιτός*; for the next assessment (421) the number is not preserved, and of the name there is *Ἰ[α]μαχισιτός*.

⁵ Schwertheim 1988, p. 285.

⁶ *SEG* XXXVIII 1251.

⁷ Mattingly 1993, p. 100; cf. *Thuc.* 3.50.3.

the copy of the Standards Decree in Hamaxitos, since at that time there was an anti-Athenian uprising in the area.¹ But even if one is inclined to accept this date for the fragment from Hamaxitos, this does not necessarily imply that this was also the date when the Decree was first passed in Athens.² If the Decree remained in force, a city had to adopt it along with other regulations when it joined the League.

2.3 Conclusions

Additional material bearing on the question of the date will be advanced in the following chapters. Meanwhile some preliminary conclusions can be summarized. The examination of the epigraphic evidence has not produced any decisive results for a date, neither in the 440's nor in the 420's. The individual fragments need not have been inscribed when the Decree was first passed in Athens. It is conceivable that a city had to adopt the Decree when it joined the empire, and set up a new copy under its provisions. This is suggested by the passage in Aristophanes (*Aves* 1021-1057), and to some extent also by the historical context of the sites where fragments of the Decree were found.

If this hypothesis is correct, then the quest for a date is counter-productive to some extent. The significance of the Standards Decree is not confined to the day (or the year) when it was passed. Like any other legislation it should be understood as a process rather than as an event. There may have been other regulations leading up to it, and after it was passed it may have been modified. The

¹ Mattingly 1993, p. 101; cf. Thuc. 4.52, 75.1.

² Mattingly (1993, p. 101) is aware of this problem, but dismisses it by adducing numismatic evidence.

decrees about the tribute collection illustrate this process very well.¹ An affinity between regulations concerning tribute and taxes and the Standards Decree has already been suggested by the analysis of the composite text of the Decree.

¹The tribute was first instituted in 478/7, and in 454/3 the treasury was moved from Delos to Athens. The Decree of Kleinias (*ML 46*) was an effort to tighten up the collection of the tribute and to prevent leaking of tribute between dispatch in the cities and receipt in Athens. Another decree (*ML 68*) regulates the appointment of tribute collectors in the cities. An exceptional reassessment took place in 425/4 (*ML 69*). In 413 (Thuc. 7.28.4) the tribute was abandoned for a harbor tax of 5%.

3.0 Numismatic Evidence

Since the Standards Decree contains provisions on the production and use of coinage, the numismatic evidence should somehow reflect the operation of the Decree. If, as the traditional interpretation goes, the Decree enforced an absolute ban on the use and production of any coinages other than the Athenian, then one should be able to detect a clear interruption in the series of local coinages. At some point in the second half of the 5th century all local coinages should come to a halt, and should be replaced by Athenian coinage. If such a break was found, it would establish a date for the Decree independent from the controversial and inconclusive epigraphic evidence. To this aim, previous scholars, notably E. S. G. Robinson and Erxleben, have systematically surveyed the local coinages of the allied Greek cities.¹ In spite of the enormous scope, the results of their studies are inconclusive, and both scholars rely mainly on their assessment of the epigraphic evidence to date the Decree and to support the traditional interpretation.²

Recently new numismatic material has come forth which calls for a reexamination of the chronology of the coin series.³ Although desirable, the sheer

¹ E. S. G. Robinson 1949; Erxleben 1970.

² E. S. G. Robinson 1949, pp. 336-40. E.S. G. Robinson (*ibid.* p. 324) accepts the date of 449 on the basis of the epigraphic evidence, notably the three-barred sigma on the fragment from Kos. Erxleben (1971, pp. 160-62) arrives at a date of c. 425 mostly on the basis of his assessment of the epigraphic evidence and because of considerations of the general historical background.

³ The evidence from two large hoards, the Asyut Hoard (*IGCH* 1644) and the Elmali Hoard (CH VIII, 48) requires some adjustments of the chronology of early Greek coinages. For the chronological consequences of the Asyut Hoard, see *Asyut*, pp. 117-25 with Cahn 1977 and Kraay 1977. For the Elmali Hoard, see Fried 1987; J. Kagan 1987. See also my discussion of the chronology under the heading "Catalog of Hoards" in the back.

number of local Greek mints prohibits a fully comprehensive and thorough study. Like Erleben and Robinson I have endeavored to account for every allied Greek city that produced coins during the 5th century. In most cases I was able to resort to already existing die studies for a representative corpus of material. In cases where I could not rely on existing studies it became desirable to collect more material and examine the coin series in greater detail. Unfortunately, within the framework of this study, this was not always possible.

For my study of the local mints it seemed best to adopt an approach that was both varied and selective. Several mints strike plentiful coinages and feature prominently in previous discussions of the Standards Decree. I present a detailed revision of the chronology of their coin series with special attention being paid to historical or economic factors that might have influenced the coin production. These extensive studies form the first part of the following chapter (3.1), and are intended as case studies to illustrate general tendencies that may also apply to other mints.

The second part of the chapter (3.2) consists of a more summary review of the remainder of local Greek mints organized by tribute district following in roughly geographical order.¹ Many of these smaller mints cease their coin production in the first half of the 5th century. These coinages could only be indicative of the operation of the Standards Decree if the end of their output could be dated precisely to 449, the "early date" proposed for the Decree.

In addition to the selection of material, other methodological problems need to be addressed. For a break to be discernible in a coin series, usually an interruption must have lasted at least a decade. This means if the Decree was

¹ I follow basically the geographical arrangement adopted by Meiggs (1972, pp. 538-59).

in force for less than ten years, its impact will hardly be perceptible in the numismatic record. In order to associate a break with any of the dates proposed for the Standards Decree, there have to be firm chronological anchors in the coin series preceding the break. Only if a lengthy break with securely established dates occurs at a significant number of mints at the same time can one suppose that it indicates an imposed ban of minting.

The main problem with ascribing a halt in minting to the operation of the Standards Decree is that it is unlikely that most local Greek mints struck coinage on a regular basis, i.e. year by year. If over the course of the 5th century the output of a mint is irregular, how certain can one be in attributing any particular break to the Standards Decree? Many mints produce only small and occasional series of coinage. The interruptions in such issues are not relevant unless there are firm absolute dates that suggest a connection with the Standards Decree. There is a tendency for coinages to decline in the second half of the century, probably related to a general economic decline. The issues gradually get smaller, heavy denominations are replaced by fractional coinage, and sometimes also the weights of the individual coins get lighter. When coinage finally stops it is not a sudden break as one would expect if there was an imposed regulation. Rather it can be seen as the culmination of the factors that led to the previous decline in minting and the halt need not be attributed to an imperial decree. These considerations caution against assuming that any break that is discernible reflects the operation of the Standards Decree.

In the future more detailed analyses may suggest modifications of the chronological conclusions I have reached for some mints. However, it is unlikely that an individual case will affect my general result. The objective of my study—to determine whether at some point a significant number of local Greek

mints stopped issuing coins—depends on the cumulative assessment of a large number of mints.

In dating Greek coinage the evidence from coin hoards plays an important role. More information on the coin hoards that are most important for my arguments can be found in the "Catalog of Coin Hoards" in the back. For several of the larger mints it seemed helpful to summarize some of the chronological conclusions in tables which can be found at the end of my treatment of these mints. Plates illustrating the most important coin types are included in the back. The location of most of the local Greek mints is indicated on the maps in the front.

3.1 Selected Mint Studies

3.1.1 Skione

Chronology

The mint of Skione on the Chalkidike produces a coinage that is not plentiful, but remarkable for its variety of types. In the second half of the 5th century only small denominations are struck. Since the output of the mint is so small, one can not assume that the coins are produced in a continuous sequence.¹ This makes it virtually impossible to trace an interruption that could be attributed to the operation of the Standards Decree. It is equally impossible to assign precise dates to the various series. Unless otherwise indicated, the chronology below gives the range of years within which the various series reasonably fall rather than their precise starting and end dates. To Erxleben's system of groups, I have added some more varieties, most notably the coins with grapes as their reverse types (Group I.3b), and the variety with a pigeon on the reverse (Group I.4).²

The earliest series of coinage (Group I.1) consists of tetradrachms, didrachms, and a set of smaller fractions. All denominations have as types a Corinthian helmet on the obverse, and a plain incuse on the reverse. A tetradrachm of this group was part of the Demanhur Hoard (*IGCH* 1637), closed c.

¹ See the Catalog at the end of this chapter for a record of the coins and for divisions into groups.

² Cf. Erxleben 1970, pp. 118-21.

500 or a little later.¹ The occurrence in this hoard suggests that the tetradrachm was struck towards the end of the 6th century. This implies a starting date for Skione's coinage probably in the last quarter of the 6th century.²

The second series of Group I consists of tetradrachms, didrachms, tetrobols and triobols. On the obverse of the tetradrachm there is a lion bringing down a stag, on the didrachms there is a lion gnawing on an animal thigh, and on the fractions there is a lion's protome with head turned backward.³ Compared to the preceding group the reverse type, a fourpart incuse square, has become much neater and more regular. A chronological reference point for Group I.2 is provided by the Asyut Hoard (*IGCH* 1644) which contains two tetradrachms with the obverse type of a lion bringing down a stag. The closing date of c. 475 for the bulk of the Asyut Hoard provides the *terminus ante quem* for Gr. I.2. A date of c. 490 for the beginning of this group agrees with the evidence of a tetradrachm (*Winterthur* 1408), that is overstruck on a coin from Akanthos, dated to the years before 480.⁴

In Group I.3 different types are used, and there is a greater variety of smaller denominations. I only know of two tetradrachms of this series, both struck from the same obverse die. On the obverse of the tetradrachm there is a helmeted head with the legend ΠΡΟΤΕΣΙΑΑΣ, and on the reverse there is the

¹ Dressel and Regling 1927, pp. 28-104, no. 21, pl. 1:21. For a similar coin struck on a more dumpy flan, see *AMNG* 2, pl. 2:7.

² Cf. Exleben 1970, p. 119.

³ For an enlarged illustration of the tetradrachm obverse (=Asyut no. 193), see Cahn 1973, pl. 2:1.

⁴ Exleben (1970, p. 118) compares the undertype to Desneux 1949, nos. 37-38, that is Group F1, struck before 480; for Akanthos, see 3.1.2 below. A coin of this type was the latest coin of Akanthos in the Asyut Hoard, which confirms that it was coeval with tetradrachms from Skione Gr. 1.2. Bloesch (*Winterthur* 1408) dates the overstrike to 490-480.

prow of a ship with letters Σ Κ Ο Ι in the four corners of incuse. On the tetrobols there is on the obverse a youthful male head, not wearing a helmet, but a tainia. The reverse type is a human eye.¹ A series of lighter coins (tritartemoria?) uses the grape cluster as a reverse type. There are even smaller fractions (hemi-obols?) that employ both reverse types. Since there is considerable stylistic development, one can suppose that the series of fractional coinage extend over some time, and that several different reverse types are in use at the same time.² Judging from the surviving specimen the output of tetradrachms is small, and ceases early in the series, probably already some years before the middle of the century.³ By style and in relation to the preceding Group, Gr. I.2 which is dated to the years around 480, a starting date of c. 470 for Group I.3 seems likely.⁴ Two tetrobols of this group were part of two hoards found in the Olynthos excavations.⁵ They are both exceedingly worn, and appear to belong to the middle or later part of this series.⁶ Since both specimens are not among the latest coins in the finds, the hoard context is not of much help in establishing a chronology. However, from the general composition of both hoards, a date be-

¹ This has been interpreted by Erxleben (1970, p. 119) as an abbreviation for the prow of a ship.

² Early in their series are e.g. *SNGANS*706 and *Winterthur*1414, whereas *SNGANS*709 and *Winterthur*1417 are late. Cf. also Bloesch 1964, p. 61.

³ The tetradrachm obvers could be contemporary to some of the earliest fractions, e.g. *SNGANS*706 and *Winterthur*1414.

⁴ Cf. the dates assigned by Bloesch (*Winterthur* nos. 1414-1417; Bloesch 1964, p. 61) and Erxleben 1970, pp. 118-19.

⁵ Hoard III and Hoard VIII in *Olynthos* 9. For Hoard III and no. 135 see *ibid.* pp. 168-171; for Hoard VIII and no. 1, see *ibid.* pp. 179-183.

⁶ Cf. e.g. *SNGANS*708 and 709.

fore 450 for these tetrobols is unlikely.¹ Group I.3 as a whole could have come to an end c. 440.

In Hoard VIII from Olynthos, along with the tetrobol of Gr. I.3 there was also a tetrobol of the later group, Gr. II.1, which has a large youthful head with fluffy hair and tainia as obverse type, and a Corinthian helmet as reverse type.² By style, this group roughly dates to the third quarter of the 5th century.³ Between Group I.3 and Group II.1 another series was struck, Group I.4. Like in Group I.3b the obverse type is a youthful male head with tainia tied on the forehead, and on the reverse there is either a Corinthian helmet or a pigeon. Both reverse types will appear again in the coinage of Group II, and in the 4th century bronze coinage.⁴ This suggests that Group I.4 was of rather short duration and fell somewhere in the years between c. 440 and c. 425. In Group II.2 bronze as well as silver coinage was struck. In this group round punches are used, and the types are of late appearance, suggesting that it belongs to the early 4th century.

This chronology is not very firm due to the lack of chronological anchors. There may have been gaps in the sequence of issues. Coinage was produced as needed, and as silver was available. Large denominations are produced until the middle of the century, and later there are only tetrobols and smaller de-

¹ Bloesch (1964, p. 61) dates *Winterthur* 1417, a hemibol late in Group I.3b, to the 420's on the basis of a perceived similarity with a hemibol of the Chalkidian League, dated from 427 to 421, and with diobols from Ainos, dated conservatively to 435/4-425. The hemibol from the Chalkidian League belongs to Group C, see *Olynthus* 9, pl. 2:e (=SNGCop 239). The coins from Ainos invoked by Bloesch are of Groups 18 to 23; see May 1950a, pl. 8-9. My revised date for these diobols is c. 440-c. 430. For Ainos, see 3.1.7 below.

² No. 2 from Hoard VIII; see *Olynthus* 9, pp. 179-83.

³ Cf. SNGANS 712; Erxleben (1970, pp. 118-20) dates Group II.2 to the years between 435 and 421.

⁴ On this group, see Schwabacher 1939, p. 3.

nominations. All in all, it appears that the activity of the mint declined in the second half of the century. Skione's coinage probably ended by 423 when Skione defected to Brasidas and was subsequently subdued by Athens.¹

The numismatic evidence assembled does not permit to discern a break of ten years that could be attributable to the operation of the Standards Decree. The individual series are not closely datable, and gaps in the production could have occurred at virtually any time, and are no indication of an imposed ban of minting.

Standard

The standard on which Skione starts striking its coins has been variously called "light Attic," "Persian," or "reduced Euboic-Attic."² The term "reduced Euboic-Attic" is the most appropriate since it alludes to the fact that the earliest coinages of the Chalkidike are derived from a Euboic stater rather than from an Attic tetradrachm.³ The heavy pieces correspond in weight roughly to three Persian sigloi, but are divided into fractions of four and six like most Greek coinages. The various denominations are significantly lighter than the corresponding Attic pieces. The tetrobols of this standard correspond to the tetrobols of the Third Thraco-Macedonian Standard (theoretical weight 2.45 g) that several mints in the area produce.⁴

¹ See Thuc. 4.120-23, 129-33.

² It corresponds to the standard that Ainos adopts for its coinage starting after c. 470. Gardner (1918, p. 286) calls it light Attic. May (1950a, p. 13-14; 267) calls it Persian. Strack (1912, p. 152) calls it reduced Euboic-Attic.

³ See *ACGC*, p. 133.

⁴ See Raymond 1953, p. 23-24. Tetrobols of 2.45 g are struck e.g. by Perdikkas and by the Chalkidian League.

In Groups I.2 and I.3 at Skione tetrobols are the denomination that is most frequently struck. It appears that in Group I.3 the tetrobols are slightly lighter than in Group I.2.¹ The weights correspond to those of the tetrobols that Akanthos produced in Period I [c. 525- c. 465] and Period II [c. 465- c. 430]. In these two periods also in Akanthos a tendency towards weight reduction can be observed.² The two hoards from Olynthos that contain tetrobols from Skione, also include tetrobols of Perdikkas II, Terone, Akanthos, Aineia, and Olynthos that are all of a comparable range of weights.³ This find context indicates that tetrobols of the same weight circulated together and were interchangeable.

In the later groups, when coinage becomes even scarcer, it is difficult to identify the standards in use. Of the 3 tetrobols that I have recorded in Group I.4, two are heavy (2.75 g and 2.74 g) and could pass for a Persic half-siglos or an Asiatic drachm. Group II.1 has been described by Erxleben as being struck on a Phoenician standard, but the weights I have collected for the tetrobols could still pass for the reduced Euboic–Attic standard as employed in Group I.3.⁴ It is clear, however, that the 4th century coinage of Group II.2 with round punches certainly belongs to a different standard.

¹ In Group I.2 of a total of 8 tetrobols most weights are between 2.54 and 2.38 g; one coin each has 2.21 g, and 2.61. In Group I.3 the weights of the 10 tetrobols recorded fall between 2.37 and 2.17 g.

² For Akanthos, see 3.1.2.

³ *Olynthos* 9, Hoards III and VIII, pp. 168-171, 179-183.

⁴ Erxleben 1970, pp. 119, 121.

Catalog

(Groups adapted after Erxleben 1970, p. 118)

*indicates illustration of good quality)

Group I.1

Tetradrachm: obv.: Corinthian helmet; rv.: irregular incuse square; small dumpy flan.

16.97 g *AMNG 2, pl. 2:7.

16.75 g *Dressel and Regling, *ZfN* 1927, pl. 1:21; from Demanhur Hoard; larger flan, but still dumpy.

Didrachm: as above; rv.: "Union Jack," with one triangle broken off.

8.18 g SNGANS 702.

Fractions: obv.: helmet; rv.: four-part incuse.

1.92 g (triobol) *Traité*, pl. 52:2.

The following listed in *Traité*, no. 1631:

1.25 g (diobol)

1.00 g (trihemibol)

0.93 g *Traité*, pl. 52: 3

0.90 g

0.80 g (obol?)

0.71 g SNGANS 703

0.73 g SNGANS 704

0.78 g SNGANS 705.

Group I.2

Tetradrachms: obv.: lion and stag; rv.: fourpart incuse; small, dumpy flan

16.95 g *Asyut*, no. 192;

16.49 g *Asyut* no. 193; same dies as *Asyut* no. 192 (Cahn 1977, p. 286)
=Cahn 1973, no. 1 (*ibid.* *pl. 1:1; *pl. 2:1 enlarged obv.)

16.20 g *Winterthur* 1408; (= Bloesch 1957, no. 1; pl. 1:7; *ACGC no. 462) overstruck on Akanthos; flan flatter [because of overstrike?]

Didrachm: obv.: lion gnawing on animal thigh; rv.: as above.; small, thick flan.

7.20 g Berlin, *AMNG 2, pl. 26:15 (=Bloesch 1957, no. 2; pl. 1:6); Cahn (1973, pp. 7, 12) puts it earlier than tetrads. of Gr. I.2.

Tetrobols: obv.: lion's protome with head turned backwards, Σ K I O N (retrograde); rv.: as above.

2.42 g *AMNG 2, pl. 21:9; rv. irregular, punch broken.

2.38 g BM; *AMNG 2, pl. 21:9.

2.54 g *Winterthur* 1409; as above, obv. ΣK ON; rv. central dot.

2.47 g *Winterthur* 1410; same dies as above.

2.61 g **Winterthur* 1411; as above, obv. ΣKIONAION (retrograde).

2.40 g *Winterthur* 1412; as above, obv. ΣKI O NAION .

2.52 g SNGANS 719; as above, obv. ...NAION.

2.21 g SNGANS 720; obv. no border visible.

Triobol ?

1.69 g **Winterthur* 1413; as above, obv. ΣΚΙΟΝΑΙΟΝ (retrograde); = *Jameson* 4, 2447.

Group I.3a)

Tetradrachm: obv.: helmeted head ΠΙΠΟΤΕΣΙΑΑΣ (retrograde); rv.: prow of a ship with letters Σ Κ Ο Ι in four corners of incuse.

16.47 g; BM, *Hill, NC 1926, pl. 5:7 (= *Babelon 1951, pl. 1:6)

15.50 g; Paris, same obv. die as above, *Babelon 1951, pl. 1:5.

Tetrobol: Obv.: youthful male head; rv.: eye and Σ ΚΙΟ in incuse square.

2.31 g; Paris = *Traité* no. 1634a, pl. 52:4; *AMNG* 2, pl.2:5.

2.21 g *SNGANS* 706

2.21 g *SNGOxf* 2371

2.33 g *SNGOxf* 2372

2.37 g *SNGANS* 707; same obv. die as above.

2.22 g *SNGANS* 708

2.17 g *Olynthos* 9, no. 135, from Hoard III.

2.18 g *Olynthos* 9, no. 1, from Hoard VIII.

2.34 g *SNGANS* 709.

2.17 g **Winterthur* 1415 (same dies as *SNGANS* 709, but much more worn).

Hemiobol: obv.: as above; rv.: eye.

0.32 g *SNGOxf* 2373.

0.30 g *Traité*, pl. 317:15

0.31 g *SNGANS* 710.

Tetartemorion? as above.

0.21 g *Traité*, pl. 317:16.

b)

obv.: youthful head with tainia; rv.: grape cluster; Σ Κ Ι Ο in corners of incuse square.

Obol

0.61 g London; same dies as *Winterthur* 1414; *Wroth 1905, pl. 14:3.

Tritartemorion

0.45 g **Winterthur* 1414 (= *Bloesch 1964, no.1).

0.49 g *SNGOxf* 2374.

0.54 g **Winterthur* 1416; as above, but head to r.; grape cluster with two leaves in diagonal incuse (= *Bloesch 1964, no.3).

0.45 g *SNGOxf* 2375; rv.: grapes and wine-leaves.

Hemiobol: as above, but later style; rv. only one leaf.

0.36 g **Winterthur* 1417 (= *Bloesch 1964; no. 4).

Group I.4

Tetrobol: obv. as above, head small, but advanced, with tainia tied on forehead; rv. helmet and ΣΚ ΙΩ in incuse.

2.75 g BM, *AMNG* 2, pl. 21:12 (=Wroth 1905, pl. 14:4).

2.02 g Berlin, *AMNG* 2, pl. 21: 11.

2.74 g *Jameson*, pl. 94:962A.

0.26 g *SNGOxf* 2376 as above hemiobol; this group?

triobol?: obv.: as above; rv.: pigeon with ΣΚΙΩΝ in square incuse.

2.07 g **SNGANS* 711.

2.10 g *Schwabacher 1939, no. 2, two coins of same dies reported as seen in Thessaloniki in 1936; as above; rv. two pellets.

Group II.1

Tetrobol: obv.: as above, head larger and with short curly hair; rv.: Corinthian helmet, with ΣΚΙ in square incuse with slightly rounded corners.

2.18 g *SNGOxf* 2377.

2.13 g; Vienna; *AMNG* 2, pl. 21:14.

2.21 g; *Olynthos* 9, no. 2, from Hoard VIII.

2.33 g **SNGANS* 712; rv. Incuse square with rounded corners.

Obol: as above; traces of letters on rv.

0.47 g; Paris; *AMNG* 2, pl. 21:13.

0.31 g; *SNGANS* 714.

0.41 g; *SNGANS* 715.

Group II.2

a) and b) have round punches, and are of advanced style.

a) obv.: youthful head with taenia (obv. similar to Group II.1); rv: Corinthian helmet; Σ ΚΙΩΝ ΑΙΩΝ (last four letters written upward) .

Triobol?

1.66 g **Winterthur* 1418; same rv. as *SNGOxf* 2379 and *SNGANS* 713.

1.92 g **SNGANS* 713; same rv. as above.

1.88 g *SNGOxf* 2379; same rv. as *Winterthur* 1418 and *SNGANS* 713.

1.65 g *SNGOxf* 2378.

cf. *SNGANS* 716 obv. as above but later; rv. Corinthian helmet; ΣΚΙΩΝΑΙ; AE coinage of 4th cent. date.

b) obv.: female head (Aphrodite?); rv.: pigeon, inscr.; AE coinage of 4th cent. date.

cf. *Winterthur* 1419-1420; *SNGANS* 718.

3.1.2 Akanthos

Topography and Resources

Akanthos is located on the north-eastern shore of the isthmus that connects the Akte peninsula with the mainland of the Chalkidike. This is about 2 1/2 miles to the north-west of the canal which Xerxes dug in 480. Today, the modern Erissos is close to the ancient site of Akanthos.¹ An ancient wall and the ancient cemetery have been excavated.²

Unlike the rest of Macedonia and Thrace, the Chalkidike south of the Chomolon mountains has a Mediterranean climate that allows olives, grains and wine grapes to grow.³ The mountainous interior of the Chalkidike is rich in timber.⁴ There are mines in the interior of the Chalkidike, but they were not worked before the middle of the 4th century.⁵ Akanthos probably derived its silver from near-by Mt. Pangaion.⁶

Of the three promontories, the Akte was the least populous, the least wealthy, and the most difficult to access.⁷ Akanthos, however, was easily accessible from the sea since it is situated to the north of the isthmus. Protected against south-west and south-east winds, the bay of Erissos was safe for an-

¹ Cf. *ATL* 1, p. 467; for a boundary inscription cf. Munro 1896, *JHS* 16, p. 313 no. 1. Ancient sources are Strabo VII, frg. 35 (Loeb); Skymnos 646-648; cf. also Hdt. 7.22.2; Thuc. 5.18.5.

² Cf. Papangelos 1982, pp. 209-211.

³ Borza 1990, p. 49; cf. Casson 1926, p. 5.

⁴ Casson 1926, pp. 52-53

⁵ Borza 1982, p. 11; cf. *idem* 1990, p. 54; cf. also Zahrnt 1971, p. 136 note 9 with a full bibliography.

⁶ Cf. *ACGC*, p. 132.

⁷ Meiggs 1972, p. 336; cf. Borza 1990, p. 50.

chorage.¹ A large ancient mole attests of the ancient harbor.²

Akanthos' source of income was mainly agriculture.³ Along the bay of Erissos a fertile coastal plain stretches from Akanthos north to Stratonikion Oros.⁴ The small fertile plain at the Singitic gulf also may have been within Akanthos' territory.⁵ As we learn from Thucydides (4.84), Akanthos also produced wine.

History

Akanthos is a joint foundation of Andrians and Chalcidians. There is a story that when founding the city the Chalkidian leader ran ahead to claim the place for Chalkis. The Andrian leader, in turn, anticipated him by throwing his spear into the city. The Andrian claim was upheld by arbitration over which Samos, Eretria and Paros presided (Plut. *QG* 30). The historical settlement probably took place in the middle of the 7th century when Andros founded four colonies between Athos and the mouth of the Strymon.⁶

During the Persian Wars Akanthos sides with the Persians. The Akanthians help Xerxes dig his canal, and support his campaign (Hdt. 7. 22; cf. 7. 116).

¹ Casson 1926, p. 29.

² For the harbor, cf. Leake 1835, vol. 3, p. 147. It is not impossible that already in the 5th century timber from the hinterland was exported through Akanthos, but there is no direct evidence for this conjecture. Cf. Casson 1926, pp. 52-53.

³ Cf. the Akanthians' concern for the crop when Brasidas threatens to destroy it (Thuc. 4.84-88).

⁴ Cf. Zahrnt 1971, pp. 146-47; Leake 1835, vol. 3, p. 135.

⁵ This might have led some ancient sources to erroneously place Akanthos on the southwestern shore of the isthmus (e.g. Strabo VII, frg. 33; Livy XXXI 45). Cf. Zahrnt 1971, pp. 146-47.

⁶ The colonies of Andros are Sane, Akanthos, Stageiros and Argilos; cf. Bérard 1960, p. 94. For the date, see Zahrnt 1971, pp. 29-30.

Akanthos serves as a base for Xerxes on his march (Hdt. 7. 121; 124). It is not known when Akanthos first joined the Delian League. Absent from the lists of the first assessment period of 454/3–451/0 it first appears on the lists of 450/49 with a tribute of probably 5 talents.¹ From 446/5 to 429/8 Akanthos contributes 3 talents per year, a figure appropriate for a place of its size and resources.² It has been suggested that Akanthos appears only in the lists of 450/49 because in 454/3 it still contributes ships.³ However, there is no evidence to support this hypothesis.⁴ Another explanation for Akanthos' late appearance in the tribute lists is that at the time of the first assessment it is not yet a member of the Delian League.⁵ Unfortunately, there is not enough evidence to reach any conclusion as to when Akanthos joined the League, and what its relations to Athens were.⁶

By 424 there is some anti-Athenian sentiment in Akanthos. When Brasidas is in the north, Akanthos is the first city he tries to win over (Thuc. 4. 84). A faction of Akanthians invites him to Akanthos together with the Chalcidians. When the city is torn whether to let him in or not, Brasidas gives his famous speech (Thuc. 4. 85–87). When finally a vote is taken the majority of the Akanthians votes to defect from Athens. They join Brasidas,—according to Thucydides—in part persuaded by Brasidas' speech, in part for fear of losing the crop

¹ The figure is restored. There is not enough space for the smaller quota of HHH (300 drachms, the sixths of a tribute of 3 talents). Cf. *ATL* 2, p. 4.

² Tribute record in *ATL* 1, pp. 224–25. No records are preserved for the years 441/0–439/8, 438/7–436/5, 434/3, 431/0.

³ This explanation is favored by the authors of *ATL*. Cf. *ATL* 3, pp. 223, 242–44, 267–68.

⁴ Cf. Zahrnt 1971, p. 148.

⁵ Meiggs (1972, p. 525) thinks Akanthos might have stayed away from the Delian League in sympathy with her mother city Andros.

⁶ Cf. Zahrnt 1971, p. 32.

which Brasidas threatened to destroy.¹

Brasidas approached Akanthos before any other cities in the Chalkidike probably because it is well suited as a base for his attacks on Amphipolis.² After Akanthos, Brasidas wins over Stagira and Argilos, Andrian colonies on the route to Amphipolis (Thuc. 4. 88; 103). Argilos is ready to defect, and becomes instrumental in the attack on Amphipolis. Thucydides mentions tensions of old between Argilos and Athens.³ It is possible that Andros had stirred up some anti-Athenian feeling in its colonies.⁴

Some inference about the possible causes of discontent on Akanthos' side can be drawn from the incentives Brasidas offers for defection from Athens. He assures the Akanthians that the authorities in Sparta have taken a solemn oath to make them autonomous allies (ξυμμάχους αὐτονόμους). He promises in particular that there will be no interference in the city's internal affairs (Thuc. 4. 86). The Akanthians take this offer of autonomy seriously. Before they finally join sides they hold Brasidas personally responsible for the oath of the Spartan authorities (Thuc. 4. 88).

Under the terms of the peace of Nikias in 422/1 Akanthos again becomes a member of the Delian League. The city is supposed to pay the tribute as in Aristides' assessment, and is entitled to autonomy (Thuc. 5.18). Autonomy in this context has very much the same meaning as in Brasidas' speech, that is

¹ Cf. Meiggs 1972, p. 335.

² Cf. *HCT*3, p. 551 on Thuc. 4. 84.1.

³ Thuc. 4. 103 ... οἱ Ἀργίλιοι (...) αἰεὶ ποτε τοῖς Ἀθηναίοις ὄντες ὑποπτοὶ ...

⁴ Cf. Meiggs 1972, pp. 335-336. As early as 450 an Athenian cleruchy had been imposed on Andros. Cf. *ibid.*, p. 121; Plut. *Per.* 11. 5-6; *HCT*1, p. 380; *ATL* 3, p. 298.

the right to administer one's internal affairs independently.¹

The fact that Akanthos, along with eight other cities which defected under Brasidas, is made to pay tribute according to Aristeides' assessment, has sometimes been taken as evidence that Akanthos was a tributary ally from Aristeides' time, that is from the beginning of the Delian League.² But the extant tribute lists reveal that the phrase τὸν φόρον τὸν ἐπ' Ἀριστείδου is taken rather loosely to indicate prewar figures.³ In the case of members who join later, it probably means " ... a return to a scale like that of Aristeides ..."⁴

The relations between Akanthos and the Chalcidians are rather obscure. At some point in the second half of the 5th century, and again later, towards the end of the 5th or in the early 4th century, Akanthos issues a small series of obols with the head of Apollo on the obverse and a lyre on the reverse. These types, which are very similar to those of the Chalcidians, have been cited to support a variety of opinions about the relations between Akanthos and the

¹ De Ste Croix (1954/5, p. 20) gives three elements which are essential to the definition of autonomy: "the right of the city to chose, alter and administer its own laws (above all, of course, its political constitution), to elect and control its own magistrates, and to exercise full judicial sovereignty in its own courts." Cf. *ATL* 3, p. 348; *HCT* 1, pp. 384-5. The right to contribute ships is not a formal criterion of αὐτονομία (cf. Ostwald 1982, p. 28), nor is there a necessary correlation between coinage and autonomy. For a convenient summary of the scholarly literature on the concept of αὐτονομία, cf. Schuller 1974, pp. 109–111.

² E.g. *ATL* 3, pp. 221-22; West 1918, p. 11.

³ Cf. *ATL* 3, p. 221; Zahrnt 1971, p. 32; Meiggs 1972, pp. 340–43; *ML* 75.

⁴ *ATL* 3, p. 222.

Chalkidian League.¹ But there are many uncertainties about this coinage, and before any conclusions can be drawn, the obols with the Apollo/lyre type will first have to be properly studied with regard to their date, and in their relation to other coinages of the area.

Some information about the relations between Akanthos and the Chalcidians can also be found in Thucydides. In 424 a party of Akanthians invites Brasidas to Akanthos together with the Chalcidians (Thuc. 4.84).² By calling on the Chalcidians, these Akanthians may have wanted not only to defect to the Spartan side, but also to seek rapprochement with the Chalcidians. But Akanthos certainly does not become part of the Chalkidian state. In his account of Brasidas' march to Lynkos in 423, Thucydides mentions Akanthian troops separately along with Chalcidians (Thuc. 4.124). This attests that Akanthos was still an independent state.³

¹ E. g. West (1918, pp. 22-25) thinks the uniformity of type and standard must reflect a close political alliance. He connects Akanthos' Apollo/lyre types with its revolt from Athens in 424. Gaebler (*AMNG* 2, p. 26) dates some of these Akanthian coins to c. 450, and denies they are Apollo types at all. Those coins which he identifies as Apollo-types, he dates after 400 (*ibid.*, p. 29 with note 1). According to him they are struck c. 383 when Akanthos is threatened by the Chalkidian League. Zahrnt (1971, p. 149) dismisses the coins completely as evidence for any relations between Akanthos and the Chalcidians. Cf. also *HCT* 1, p. 206 note 2. I will discuss the date and the significance of the Apollo/Lyre obols below.

² In 432 under Perdikkas' influence several smaller communities had abandoned their homes, and moved to Olynthos (cf. Thuc. 1.58). The resulting political organization, which should be called a state rather than a league or confederation, in turn formed alliances with other political entities such as the Bottiaean, and Potidea. Cf. West 1914, pp. 27-28; esp. Zahrnt 1971, pp. 53-66.

³ Cf. Zahrnt 1971, pp. 148-49; Kahrstedt 1935, p. 427 note 54; p. 430; West (1918, p. 21) thinks Akanthos joined the Chalkidian League soon after 424.

Coinage (see plate 1)

The tetradrachms of Akanthos have been the subject of a very thorough study by Jules Desneux.¹ Recently many new tetradrachms have come forth which can easily be integrated in Desneux' classification of issues. The fractional coinage of Akanthos, excluded by Desneux, has not yet been studied in detail. Drawing mainly from the fractions housed at the American Numismatic Society in New York I have included the issues of small coinage in my survey of Akanthian coinage.² Clearly my conclusions with regard to the fractional coinage are of a preliminary nature.

Akanthos' coinage is mostly known for the beautiful tetradrachms which show a lion or lioness bringing down a bull.³ On the tetrobols there is either the forepart of a bull or of a lioness, and on the obols there is either the head of a lioness or the head of a bull. Furthermore, some diobols were struck which have a head of Athena with a crested helmet on the obverse. All the reverses are first anepigraphic with a simple quadripartite incuse square. In the Second Period of coinage the tetradrachms have the ethnic ΑΚΑΝΘΙΟΝ around a small central incuse square. Apart from a late series of Athena diobols the reverse of the fractional coinage is always anepigraphic. Peculiar among Akanthian coinage are the obols that have on the obverse a laureate head of Apollo and on the reverse a lyre and the ethnic inscribed around it.

¹ Desneux 1949; *idem* (1952).

² For a summary of the issues, see the tables at the end of this chapter.

³ *ACGC* (p. 133) suggests that Akanthos' mint first produced half staters of the running winged figure type. Seyrig (1948) attributes the heaviest known early Greek coin with a lion head obverse (68.88 g) to Akanthos. These attributions, however, are very doubtful. Cf. Desneux 1949, p. 25 note 3.

During Akanthos' First and Second Period the heavy pieces with the lion and bull obverse hold a norm between 16.90 g and 17.24 g. This is only slightly lighter than the ideal Euboic stater of 17.2 g which becomes the equivalent of an Attic tetradrachm.¹ The fractional coinage is probably always struck on a local Thraco-Macedonian standard.² In its Third Period of coinage Akanthos strikes its heavier pieces on a reduced version of the Thraco-Macedonian standard.³ The actual norm is between 14.00 g and 14.29 g.

Desneux only reluctantly accepts an interruption in the series of tetradrachms that could be attributed to the operation of the Athenian Standards Decree. He suspects a break in the 440's mainly because for Akanthos' Second Period of coinage there are far fewer tetradrachms extant. Since there is no indication for a break on the stylistic level one should rather assume that striking continued on a smaller scale, but without unusual interruptions. A break between Period II and III can not be supported either, since there is continuity in style and technique, although the weight of the tetradrachms has been reduced.

Chronology of Akanthos' Coinage: Period I

The earliest coin of Akanthos (Desneux 1, Type A) comes from a dated context, the Taranto Hoard (*IGCH* 1874). It is a tetradrachm struck on a small, very thick flan, and is of a somewhat oval shape. On the obverse type the face

¹ Although it is impossible to say whether these Akanthian coins were perceived as Euboic staters or as Attic tetradrachms, it has become customary to refer to them as tetradrachms. Cf. *ACGC*, p. 133; the standards and weights are discussed in greater detail below; see also the tables at the end of this chapter.

² Because of the small size of my sample I was unable to determine precisely the norm of the fractional coinage.

³ This standard is often wrongly referred to as Phoenician. Cf. *ACGC*, p. 331; Raymond 1953, p. 24 note 18.

of the lion that is bringing down the bull is shown from the front. The reverse is very rough. The Taranto Hoard contains two more Akanthian tetradrachms which are of a slightly later type (Desneux 11a; 14; Type B). Their flan is larger, but has the oval shape which is characteristic of the early issues. The reverses are still very rough. The incuse have irregular quarterings and a very uneven surface. With a proposed date of burial for the Taranto Hoard of 510–508, Babelon estimates that coinage at Akanthos started c. 515 to 510.¹ Desneux rightly thinks these dates were too low, and suggests 530 as a starting date.² The dates of the Taranto Hoard have now been lowered to between 500 and 490.³ Therefore Desneux' date of 530 should be brought down by about a decade, which in turn means that coinage at Akanthos probably started in the last quarter of the 6th century.⁴

Of the first series of tetradrachms (Type A) only one pair of dies was known to Desneux.⁵ Between Type A that has a small and dumpy flan, and Type B with the oval shaped flan, there was a transitional type. Six specimens of this transitional type were the earliest coins of Akanthos in the Asyut Hoard (*IGCH* 1644).⁶ Their flan is flat and almost as large as in Type B and also has the irregular oval shape that is characteristic of Type B. The obverse type, how-

¹ Babelon 1912, p. 14; for the date of burial cf. *ibid.* 38-40.

² Desneux 1949, p. 25. But as Desneux (*ibid.*, p. 23; 1952, p. 113) admits the date for the beginning of coinage can only be conjectured.

³ The lowered dates were first suggested by Kraay (1956, p. 49) because of a reevaluation of the date of the Metapontum pieces, the latest pieces in the Taranto Hoard. The lowered date has been accepted by e.g. the authors of *Asyut* (p. 19), and by the authors of the Selinus Hoard (Arnold-Biucchi *et al.* 1988, p. 33).

⁴ Cf. *Asyut*, p. 42.

⁵ This series was probably not very large; cf. *Asyut*, p. 41; Cahn 1973, p. 11.

⁶ *Asyut* nos. 153-158; cf. Picard 1989, p. 229.

ever, is smaller than Type B, and almost as small as Type A. This makes the flan appear as if it is too large for the obverse type.

In addition to the early coins that are transitional between Types A and B, the Asyut Hoard contains coins of the Type B, Type C, Type E, and of Type F.¹ Since the bulk of the Asyut Hoard was buried between 475 and 460, this establishes c. 480 as *terminus ante quem* for Type F, the latest type of the Akanthian tetradrachms in the hoard. Other hoards containing coins from Akanthos lend further support to this chronology. Two tetradrachms of Type B are part of the Benha Hoard (*IGCH* 1640), buried c. 485 (=Desneux 11c; cf. Desneux 1949, p. 51). In the Gela Hoard (*IGCH* 2066), buried c. 480, there are two tetradrachms of Type D (cf. Desneux 24). A hoard from Djebelle in the Seleucis (*IGCH* 1479) contains two coins of Type F (=Desneux 41; 41^{bis}), and one specimen of this type is also in the South Anatolian Hoard (*IGCH* 1177; cf. Desneux 35-40). The latter two hoards were buried c. 480 which can be taken as *terminus ante quem* for Type F.

The Antilibanon Hoard (*CHVI*, 4 and 5), buried around the same time as the Asyut hoard, has one coin each of Type E and F, and one coin with a “rosette,” or Θ in the field above the lion, a type called F1B by Desneux.² This is the earliest occurrence of type F1B in a dated hoard context.³ The specimen is in mint condition, and was probably among the last coins that were added to the

¹ See *Asyut*, pp. 40-41. Of the series intermediate between Type A and B, there are 6 coins (*Asyut*, nos. 153-158), cf. above; there is one coin of Type B (*Asyut*, no. 166); 6 coins of Type C (*Asyut*, nos. 159-164); 9 coins of Type E (*Asyut*, nos. 167-172; 185-187); for Type F, see *Asyut*, nos. 178-184.

² The Antilibanon Hoard has been published by Hurter and Pászthory (1984). *Ibid.* no. 8: type E (cf. Desneux 28-29); no 9: type F (cf. Desneux 43); no. 10: type F1B (cf. Desneux 48-68). For preliminary publications of this hoard, see *CHVI*, 4 and 5 where it is reported as two separate hoards, one from Latakia, the other from Homs in Syria.

³ The specimen *Asyut* 190 is considered intrusive; cf. *Asyut* p. 41.

hoard.¹ The series F1B is very close to the F-Type series which occurs in hoards buried c. 480 (Djebble *IGCH* 1479, South Anatolian *IGCH* 1177), and in the Asyut Hoard. As outlined above, the Asyut Hoard contained tetradrachms of almost all types of Akanthos, from the early types down to the very end of the F-series, but no example of the F1B series. This suggests that when the bulk of the Asyut Hoard was put together the types with the rosette were not yet widely circulating. Although strictly speaking an argument from silence, Type F1B probably started around 480, but hardly much later than c. 478, since this would conflict with the date of burial of the Antilibanon Hoard.²

Around 465 to 460, when the Elmali Hoard (*CH* VIII, 48) was interred, obverses with symbols were widely used accounting for the majority of the 37 coins from Akanthos in this hoard.³ Most coins are said to be of Type F1B with the rosette symbol.⁴ On one obverse there is a tiny Δ next to the rosette.⁵ On other coins in the Elmali Hoard there is a pellet instead of the rosette. Desneux classifies this variety as Type G, following immediately after the F1-Types, since it is of a slightly more advanced style.⁶ Four coins in the Elmali Hoard are of Type F2, the second-to-last group of Akanthos' First Period. This type, which Desneux only knew from one specimen, has the letter A in the field above the

¹ Hurter and Pászthory 1984, p. 123.

² Picard 1989, p. 228 note 7.

³ According to Fried (1987, p. 3) only 9 coins are of an earlier type (=type C; cf. Desneux 16).

⁴ The following description of the coins of Akanthos from the Elmali Hoard is after Fried (1987, pp. 3-4).

⁵ This is said to be the same obverse as Desneux 72.

⁶ Desneux 1949, p. 78. A pellet instead of the rosette is on Desneux no. 86.

bull's head.¹ A new obverse variety in the Elmali Hoard has a large boss in the exergue.²

As demonstrated above, type F1B, the first series with symbols or letters in the field, started only around 480. Seven different groups of this type are known.³ These issues easily cover the decade before 470. The group with the letter A on the obverse accounts for the last issues in the Elmali Hoard. It can not have been struck long after 470 in order to have entered this hoard that was buried c. 465-60. Desneux classifies this group as F2. On one of its obverses there is the abbreviated ethnic AKAN (Desneux no. 91).⁴

The final issue of Period I is known from one pair of dies only (Desneux no. 92). It has the letters AKAN in the field above the lion. The floral symbol in the exergue is replaced by a fish, a symbol that will reappear in Period II (cf. Desneux nos. 95–103). The obverse type is of advanced style, and very similar to the first types of Period II with the ethnic in full around the reverse square.⁵ This series is clearly transitional and not very large. A date of c. 465 for the end

¹ According to Fried (1987, p. 3) one obverse is the same as Desneux no. 90, the other 3 obverses are new dies. Cf. *ibid.* pl. II, 13.

² Fried 1987, p. 3. For the piece with the boss in the exergue, see Fried 1987 pl. II, 12.

³ The symbols are rosette; rosette with Δ ; rosette with A (Desneux 84); lion's head (Desneux 82) pellet instead of rosette; conch shell (Desneux nos. 86–88); boss in exergue.

⁴ Coins of Akanthos' Period I were also included in the Zagazig Hoard (*IGCH*1645) dated to c. 470 (Desneux 19; 20 = type C; Desneux 28 = type E); one coin of Type F (cf. Desneux 43) was included in the Monte Bubbonia Hoard (*IGCH*2071) dated c. 475–470 (cf. Jenkins 1970: 22-24; 154-155); one fragment of a tetradrachm of type F1B was also included in the Black Sea Hoard (*CH* VI, 15), date of burial c. 420; cf. Kraay and Moorey 1981.

⁵ Cf. Desneux 1949, pp. 26, 82. Dressel and Regling (1927, p. 108) date this coin after the Persian Wars on the basis of style.

of Period I and for the beginning of Period II seems plausible.¹ This date that has been arrived at mostly on the basis of hoard evidence is compatible with Desneux' revised date of ± 470 .²

During Period I, Akanthos' mint not only produces a plentiful series of tetradrachms, but also tetrobols, diobols, and obols. There are two series of tetrobols, one with the forepart of a bull, the other with the forepart of a lioness. On both series symbols are often to the right of the head of bull or lioness. The symbol most frequently used is the floral symbol, sometimes referred to as Pan-gaian rose. The diobols have as a type the head of Athena wearing a crested helmet. There is also a series of obols showing the head and neck of a lioness from above, but the attribution of this series to Akanthos is not entirely secure. All denominations have a plain quadripartite incuse square as reverse type.

Akanthos strikes tetrobols from early on. An early tetrobol of Akanthos with the bull type was part of the Taranto Hoard (*IGCH* 1874), buried c. 500-490.³ The second series of tetrobols has as an obverse type the forepart of a lioness as seen from above. On both series of tetrobols the truncation is emphasized with a line of dots between two straight lines, and there is a dotted circle around the type. A dotted ground line, however, occurs only on the tetrobols

¹ Cf. Kagan 1987, pp. 23, 25; *ACGC*, p. 135.

² Desneux 1952, p. 114. Desneux first dated the end of Period I to c. 480 (1949, pp. 26-27). The chronological anchor for this date was the similarity of the inscribed reverse of Period II tetradrachms with the reverse of the octadrachms of Alexander, which were then dated to c. 480 (by Gaebler, *AMNG* 2, p. 25. As will be pointed out below this date has now been lowered. Reviewing Desneux' study, May suggests lowering the end of Period I by c. ten years (1950, pp. 156-157). May's main argument is that by thus extending Period I while shortening Period II, it is easier to account for the comparatively large number of tetradrachms in Period I and the comparatively small number of tetradrachms in Period II. Desneux has acknowledged this criticism, and has revised the end date of Period I to ± 470 .

³ Babelon 1912 no. 30 (= pl.2,10; cf. *SNGANS* 17).

with the lioness type. There are symbols above the lioness, most often floral symbols.¹ On two coins (*SNGANS* 22; 23) there is a conch shell above the lioness. The tetradrachms Desneux. 86–88 (Type G), which are very late in Period I, and show a lioness bringing down a bull, also have the conch shell as a symbol. One may assume that the tetrobols with the conch symbol accompanied tetradrachms with the same symbol. This indicates that the tetrobols with the lioness type were struck until almost the end of Period I. Since one lioness tetrobol was part of the Asyut Hoard (*Asyut* no. 165) the series must have started by at least c. 480, but it could go back further. The series may have overlapped—at least in part—with the bull type tetrobols.²

Judging by their style the diobols with the head of Athena in an Attic helmet with neckflap and crest appear to have been struck rather early.³ Athena's hair is rendered in dotted beads that are visible at the end of the neckflap, and on the forehead. The end of the neck is represented as a dotted line, and the eye is shown *en face*.⁴ They should certainly be placed within Period I.

Period II

Period II follows immediately after Period I. According to Desneux the obverse of the last tetradrachm of Period I (Desneux no. 92) is stylistically very close to the obverses of the tetradrachms early in Period II. There is similarity in

¹ Gaebler *AMNG* 2, p. 25, no. 14 differs slightly from this usual type: the lioness is to the left, and instead of a symbol above the lioness there is a drooping floral symbol in the exergue.

² On the tetradrachms the obverses with lion and lioness respectively do not appear to have followed in any particular chronological order; cf. *Asyut*, p. 42.

³ Cf. *SNGANS* 24–26; *SNGOx* 2216–17; cf. Gaebler *AMNG* 2, p. 25 no. 18.

⁴ Provided the small series of obols with the head and neck of lioness seen from above within a dotted circle really belongs to Akanthos, one would also attribute it to Period I (cf. Gaebler *AMNG* 2, p. 25 nos. 16; 17; *SNGANS* 27–29).

the position of the lion, and in the stylization of the mane.¹ As in the last groups of Period I, in Period II symbols and initials appear regularly, and in various combinations. They are placed either in the field or in the exergue, and on two obverses the letters ΔI are on the thigh of the bull.² There is a new variation of the obverse type that appears first in Period II (Desneux nos. 93-94). A lion, on top of a bull, holds under his right thigh the neck of the bull who has his head turned back. This type, first used together with the earlier one in which the bull has his head on the ground, finally becomes the exclusive type (Desneux nos. 103ff).³

The most obvious feature that distinguishes Period II from Period I is the new reverse type. Already in the last issues of Period I the ethnic has appeared on the tetradrachms, in the abbreviated form AKAN on the obverse.⁴ In Period II all tetradrachms have the ethnic inscribed in full on the reverse. The eight letters AKANΘION are arranged within the incuse on a band around a small central quadripartite square. Although initially imperfect in position and letter form, the reverse type reached soon its final, and definitive type of excellent quality. Already from the beginning the letters are symmetrically placed, but in the first issues the letter N is oblique, and the letter A is placed too far inward (e.g. R 83; Desneux pl. 14). In later issues the letter N is straight, while the A is still dis-

¹ Desneux (1949, p. 28) compares Desneux no. 92 especially to Desneux no. 95.

² Classification of Period II according to symbols and initials (Desneux 1949, pp. 27-28):

- 1) two ivy leaves to the right (Desneux 93; 94);
- 2) fish in exergue, no initials (Desneux 95 to 101);
- 3a) fish in exergue, and ΔI on thigh of bull (Desneux nos. 102 and 103);
- 3b) one or two laurel branches in exergue, and ΔI in field above lion (Desneux 104 to 111);
- 4a) ΔH in exergue (no. 112);
- 4b) vine with grape and vine leaf in exergue, and ΔH in field above lion (nos. 113 to 115).

³ Desneux 1949, p. 27.

⁴ Desneux nos. 91; 92.

placed (e.g. R 85). Finally, the letter A is arranged in precise symmetry to the letter Θ and O respectively (e.g. R 89; Desneux 1949, pl. 15).¹

Other mints in Northern Greece produce very similar reverse types. In the absence of hoard evidence, their stages of development provide reference points for Akanthos' chronology. Desneux compares the reverses of Akanthos' Period II to the reverses of Alexander's Group II octadrachms, for which he accepts a date of c. 480.² Since Doris Raymond's thorough study of Macedonian regal coinage the chronology of Alexander's coinage has been considerably refined.³ The first experiments with an inscription around the reverse square do not start before c. 470.⁴ Around c. 465/60 a symmetrical arrangement of the letters is achieved.⁵ On one reverse of Alexander (Raymond no. 46), minted shortly before the symmetry of the inscription is adopted, the slanting N recalls the first reverses of Akanthos' Period II (Desneux nos. 93; 94). Thus the beginning of Period II at Akanthos probably took place around 465. This date coincides with the end date of Period I that has been established independently on the basis of hoard evidence. Towards 460 the letters AKANΘION are arranged in perfect symmetry around the small central square (e. g. Desneux no. 99).

Desneux dates the end of Period II to 424. On account of their style he suggested a date of c. 430 or later for the last coins of Period II (Desneux nos.

¹ Cf. Desneux 1949, p. 36 with fig. 6.

² Desneux 1949, p. 27 with the date for the Alexander octadrachms after Gaebler *AMNG* 2, p. 25.

³ Raymond 1953; a convenient summary of the development of the inscribed reverse can be found in Kraay 1977, pp. 190-93.

⁴ Kraay 1977, p. 192.

⁵ Kraay 1977, pp. 191-92.

114 and 115).¹ In Desneux' opinion the year 424, when Akanthos defects from Athens, provides a likely historical background for the discontinuation of the Attic standard which marks the beginning of Period III. May in his review of Desneux' study raises doubt whether there is in fact a necessary connection between the revolt of Brasidas in 424 and the adoption of the reduced standard.² He correctly points to the mints of Abdera and Maroneia that also adopt this standard without any indication of a revolt.³ In May's opinion it is most likely that Akanthos changes to this standard at the time when neighboring Olynthos starts to strike coinage on the same standard, which is in the 430's.⁴ Akanthos' change of standard should be seen not so much as political gesture as a response to economic circumstance.⁵ Desneux, in his response to May's review, accepts this suggestion and an ending date of Period II of ± 430 .⁶

Akanthos' output of tetradrachms is much larger in Period I than in Period II.⁷ A convenient explanation for this disproportion has been the operation of the Athenian Standards Decree. May suggests that a break of ten years in the

¹ Desneux 1949, p. 91.

² May 1950b, p. 157. May (*ibid.*) calls the standard that Akanthos adopted in 424 "Phoenician," but it is really a reduction of the Third Thraco-Macedonian standard. See below.

³ May *ibid.*; cf. below chapters 3.1.4; 3.1.6.

⁴ Cf. *Olynthos* 9, p. 128.

⁵ May *ibid.* This problem is discussed in greater detail further below.

⁶ Desneux 1952, p. 114.

⁷ For Period I Desneux finds 89 obverse and 82 reverse dies accounting for 92 different die-combinations. For Period II he finds only 19 obverse and 21 reverse dies accounting for 23 different die-combinations. See Desneux 1949, p. 41; also May 1950b, p. 157. Recent hoard finds (Asyut, Elmali) have increased the number of dies for the First Period, while tetradrachms of Period II are wholly absent from recorded hoards.

440's was responsible for the small number of dies.¹ Desneux would only reluctantly accept this solution.² As his thorough analysis reveals, all the dies of Period II are very close stylistically. But if an interruption of ten years took place at some point, one would expect to find this reflected on the stylistic level as well.³ Period II lasted from c. 465 to c. 430, and there are simply fewer tetradrachms struck than in Period I.

In Period II the output of tetradrachms is supplemented by tetrobols and obols. The tetrobols have on the obverse the forepart of a bull in a dotted circle, invariably to the right. Although the type is similar to the first series of tetrobols struck during Period I, it is of a clearly advanced style, most prominent in the treatment of the neck. There is also a difference in the posture of the bull. During Period I, in the first series of tetrobols, the backward looking head of the bull is always higher than the bull's body. In Period II, in the Third Series of tetrobols, the backward looking head of the bull is below or at the same level as the bull's body, never above it. The truncation of the bull is no longer emphasized. Symbols and/or initials can often be found above the head of the bull.

A few specimens of the bull tetrobols are of a transitional type. The posture of the bull with the head backward looking above the body is similar to the

¹ May 1950b, p. 157.

² Desneux 1949, pp. 27, 29; cf. *idem* 1952, p. 114.

³ Cf. Desneux 1949, p. 28; also Erxleben 1970, p. 106. Cahn (1970, p. 164 note 462) proposes a break of ten years between Desneux no. 94 and no. 95, that is between the reverse with the slanting N and the symmetrically arranged reverse. But in analogy with the reverse development of the Alexander coinage, the perfect reverse arrangement is probably developed rather quickly. Also the obverse style of the coins in question does not suggest such a long break. *ACGC*, p. 136 would have Period II end already in the early 440's, the time when the Standards Decree allegedly went into operation. Then there would have been a break of 20 years, and Period III would have started only c. 420. This theory is untenable in view of the stylistic continuity between Period II and Period III as discussed below. E. S. G. Robinson (1949, p. 334) thinks coinage continued uninterrupted to the 430's.

tetrobols of Period I. The truncation is still emphasized, but only with one thick and bulging line, instead of the earlier line of dots. The position of these coins—intermediate between the early tetrobols struck in Period I, and those of the Third Series struck during Period II—is most obvious in the treatment of the bull's neck. On the early tetrobols the bull's neck is treated as one field covered by lines which are either wavy or broken into three segments. The intermediate types already point forward to the Third Series of tetrobols where the folds of the neck will be treated in a less severe and more naturalistic manner. On the intermediate type at the American Numismatic Society in New York (*SNGANS* 30; same obverse as *SNGOxf* 2208) the folds of the neck and the bull's mane are clearly separated. The mane is a short and stiff row of bristles that points upward. The folds of the neck with their curved lines emphasize a downward direction.¹ This small intermediate group must have been struck early in Period II before the bulk of the Third Series of tetrobols started. This date is supported by the inclusion of one coin of this type in the Olynthos Hoard 5.²

The tetrobols of the Third Series were first thought to have been struck only after c. 424.³ Evidence from the excavations at Olynthos has shown, however, that the Third Series of tetrobols must have been minted before 424, and that the series starts certainly as early as c. 450.⁴ Hoard 5 from Olynthos con-

¹ Among the tetradrachms a similar transitional treatment of the neck can be found on *SNGANS* 11 with conch shell symbol, a coin that comes towards the end of Period I.

² *Olynthos* 6, no. 101; cf. *SNGANS* 30.

³ Gaebler (*AMNG* 2, pp. 24; 28) dates the early bull tetrobols to the years before 480, and those of a more sophisticated style only after 424. Cf. Babelon (*Traité* 2/1, p. 1177 nos. 1700, 1701, 1703) who allows for pieces with symbols and initials a date between c. 450 and 424.

⁴ *Olynthos* 9, p. 265; cf. *ibid.* 180, 182, 215 note 1. The crucial coins come from Hoard 3 (*Olynthos* 6, pp. 13, 14) which in the later publications is referred to as Hoard 5 (*Olynthos* 9, pp. 173-76). Note that the conclusions reached in *Olynthos* 9 supersede those from *Olynthos* 6.

tains 12 tetrobols of the Third Series. The hoard was buried 421/0.¹ Judging from their attrition the most recent issues of the tetrobols were probably issued not too long before the hoard was buried, around c. 430-425. The earliest coins that follow the intermediate group must go back well into the 450's.²

This chronology is supported also by the evidence of the coins themselves. The initials ΔΙ occur both on tetrobols and on tetradrachms struck in the middle of Period II. It is likely that both denominations with the same initials were issued contemporaneously.³ The Third Series of tetrobols with the forepart of a bull is accompanied by a series of obols with a bull's head to the right in a dotted circle. Most coins have no symbols or initials, but on one specimen at the ANS there is a swastika above the bull's head.⁴ The swastika is a symbol that also occurs frequently on the Third Series of tetrobols, either alone or in combination with other symbols or initials.⁵ This links the obols with bull's head to the tetrobols, and thus in turn to the tetradrachms of Period II. However, it is not clear when the series of obols started, and whether it could have continued into Period III.

¹ *Olynthos* 9, p. 174. There was no Chalkidian piece in the hoard from later than the last period of Group C (c. 427-421). Therefore the hoard must have been in the ground by the end of this period, or not long thereafter. For the date of Group C cf. *Olynthos* 9, pp. 147-48.

² *Olynthos* 9, p. 175.

³ Tetradrachms: Desneux nos. 102-111; tetrobol: *SNGANS* 49.

⁴ ANS inv. no. 1991.93.2.

⁵ Swastika only: *SNGANS* 39; ANS inv. no. 1992.54.15; *Olynthos* 9, p. 31 no. 116; swastika and olive leaf: *Olynthos* 3, p. 23 no. 53; swastika and olive spray: *SNGANS* 37; 38; Γ and swastika: *SNGANS* 42; Γ, swastika, and bay leaf with fruit: Gaebler *AMNG* 2, p. 28 no. 35 (pl. VII, 13).

Period III

Period III follows immediately after Period II. Although in Period III the tetradrachms are of lighter weight, following the reduced Thraco-Macedonian standard, there is continuity between the two periods. On the basis of the coin types it is impossible to propose a lengthy break at this point.¹ The last tetradrachm of Period II (Desneux no. 115) is related to the first tetradrachm of a reduced weight (Desneux no. 116).² Both coins are of the highest workmanship. They are of similar fabric, and share the same obverse and reverse style. Both coins have the same motif in the exergue: grape and vine leaf. Yet, it is clear that no. 116 is of a different standard. The piece weighs only 14.23 g, and is of a considerably reduced diameter (less than 23 mm).³ In Period III the obverse continues Type H which became the standard type in Period II. The bull to the left rests on one knee, and has its head turned backwards, as if "strangled" by the lion.⁴ In the exergue or in the field there are initials, or magistrates' names, sometimes abbreviated. The reverse type is essentially the same as in the preceding period, except that the four quarterings are now of granulated surface. They gradually become pyramidally shaped. The style of the tetradrachms of Period III is very much uniform, so that it would be difficult to propose a lengthy break caused by the Standards Decree at any point.⁵

¹ Cf. Desneux 1949, pp. 28, 30; Gaebler *AMNG* 2, p. 27; Gardner (1918, p. 280) also arrives at the conclusion that there was no break. But as Desneux (*ibid.*) points out the particular coins Gardner has compared and found of almost identical reverse (=Desneux no. 93 and Desneux no. 118) are c. 50 years apart.

² Desneux 1949, p. 28, 30.

³ Desneux 1949, p. 30. Desneux thinks the very small size of the flan might be a conscious attempt to announce a new period of coinage.

⁴ Desneux 1949, p. 30 with pl. 36.

⁵ Cf. Desneux 1949, p. 31.

For the end of Period III various dates have been proposed ranging from the early to the middle years of the 4th century. Since the end date of Period III does not have any direct bearing on the question of the Standards Decree I will not discuss this question.¹

The chronology of the fractional coinage of Period III poses considerable problems. There are a few diobols with the head of Athena. These coins are certainly much later than the first series of Athena heads from Period I. The obverse is of a much later style, and on the reverse the four letters AKAN are put into the quarterings of an incuse square. This arrangement is similar to the reverses of Akanthos' bronze coins. The bronze coins have the head of Athena on the obverse, and on the reverse the letters AKAN in the four quarterings of a wheel or a square. They are dated after 400, and some of the silver diobols could be of a similar date. It is possible, however, that some of the Athena diobols with inscribed reverse are of a date earlier in the second half of the 5th century.² In the absence of a more detailed study I am unable to propose a more precise chronology.

Equally problematic is the chronology of the small series of obols with the Apollo type. This series clearly stands out among the Akanthian coinage. On the obverse there is a laureate head of Apollo, and on the reverse there is a lyre surrounded on both sides and on top by the inscription ΑΚΑΝΘΙΟΝ. In their coinage starting after c. 432/1 the Chalkidians use very similar types, and

¹ Desneux (1949, pp. 94-96; cf. *idem* 1952, pp. 114-15) proposes the end of Period III at 380. Cf. May (1950b, pp. 157-58) proposes the years between 395 and 382. Under May's hypothesis the tetradrachms of Akanthos cease under the influence of the Chalkidian expansion. A date as late as 350 has been proposed by D. M. Robinson and Clement (*Olynthos* 9, pp. 261-65); cf. Zahrnt 1971, pp. 149-50.

² Cf. *SNGANS* 50 which seems much earlier than ANS inv. no. 1987.2.2.

one is tempted to see some kind of relationship between the two coinages.¹ Gaebler divides the Akanthian obols with the head of Apollo into two groups. He dates the first group from c. 450 to 424, and the second group after 424.² Gaebler arrives at the date for the first group because on one specimen he finds some stylistic similarity with a head of Hermes on a tetradrachm from Ainos. He dated the second group after 424 because of its circular incuse punch. The problem with Gaebler's chronology is that Akanthos' early Apollo types would precede by two decades the Apollo types of the Chalkidians which were issued not before c. 432/1. Why would the Chalkidian League have adopted the types of a small series of obols from a neighboring city for its coinage? And why would Akanthos have chosen to issue obols with types completely unrelated to the rest of its coinage, and especially why would it have done so at a time when it had already produced obols of the bull type?

These general considerations speak against an early starting date for the Apollo/lyre obols at Akanthos. The numismatic evidence points in the same direction. Gaebler's argument for the early date was based on the stylistic similarity that he saw between the head on an Akanthian obol (*AMNG* 2, p. 26 no. 26; pl. VII: 16) and a Hermes' head on a tetradrachm from Ainos.³ The stylistic similarity consists mainly of an elongated chin and an ear that is somewhat too high. Gaebler therefore thought that both coins must belong to the same stylistic period, which he put in the middle of the 5th century.⁴ This argument is not very

¹ For the starting date of the coinage of the Chalkidians, cf. *Olynthos* 9, p. 128; Raymond 1953, pp. 158–59 puts the starting date one year later.

² Gaebler *AMNG* 2, pp. 26, 29; the same chronology is adopted in *Olynthos* 9, p. 265.

³ The tetradrachm from Ainos: Weber 2,2305 = *Nomisma* 4, pl. I: 10 = May 1950a, no. 28.

⁴ Gaebler *AMNG* 2, p. 26 no. 26; pl. VII: 16.

strong since from one mint to another there can be considerable variations in style. Even on the Akanthian obols which Gaebler dates after 400, he observes features similar to the one specimen which he dated c. 450.¹ Confronted with the question of why Akanthos adopts the Apollo types before the Chalkidians do, Gaebler proposes that the coins which he put early in the series do not depict a laureate Apollo but a youth with a plaited coiffure similar to the hairstyle of Hermes' head on Ainos' tetradrachms. But—as Gaebler himself remarks—on the tiny obols it is not really possible to distinguish with certainty the laureate head of Apollo from a youth with a plaited coiffure.

In the absence of a more convincing argument for an earlier date, the Akanthian obols with Apollo/lyre type should be seen as somehow related to the coins of the Chalkidians with similar types—whatever the specific circumstances. The latter start c. 432, and the Akanthian types should be dated post 430. It is difficult to assess when the series ends. The circular shape of some reverse dies is sometimes cited as an argument for a date after 400.² However, as on the Chalkidian reverse punch Type II, the outline of the punch is almost never entirely on the flan, and therefore one can not be quite sure what the shape of the punch is.³ In the absence of a more comprehensive study I would propose c. 430 as a starting date for the Apollo/lyre series, and leave the end date open.

¹ Gaebler *AMNG* 2, p. 29 no. 41 with note 1.

² Gaebler *AMNG* 2, p. 29 no. 41 with note 1; for the date of the Akanthian obols found at Olynthos after 424 because of their circular incuse, see *Olynthos* 9, pp. 265-66 note 30; but a date between 392 and 372 is suggested in *Olynthos* 6 (p. 32, nos. 118-119).

³ For the reverse punches of the coins of the Chalkidian League, see *Olynthos* 9, pp. 87-88. Of the coins I was able to inspect in person, ANS inv. nos. 1992.54.40-43 definitely have a square punch with rounded corners. On *SNGANS* no. 52 the punch die is possibly circular.

Standards

Period I and Period II

The heavy pieces of Period I and Period II are struck with most of their weights between 16.90 g and 17.24 g.¹ This is only slightly lighter than the Euboic-Attic tetradrachms which have a theoretical weight of 17.2 g, and it has become customary to refer to these pieces as "Attic tetradrachms."² At the very beginning of the series Akanthos' heavy pieces might as well have been perceived as Euboic stater of the same weight. Before the Euboic stater became assimilated to the Attic tetradrachm in the last quarter of the 6th century it was divided into thirds, sixths, and twelfths.³ On the Euboic system, the most common small denomination is the sixth with a theoretical weight of 2.9 g which corresponds to a tetrobol on the Attic system.⁴ At Akanthos the most popular fractions were the tetrobols, while there were never any drachms found. This suggests that originally the high denomination may have been perceived as a Euboic stater rather than as an Attic tetradrachm.

Akanthos' fractions of Period I are too light to match the Euboic-Attic standard.⁵ Of the tetrobols with the bull's type I have recorded 4 weights from 2.43 g to 2.66 g. The 11 tetrobols with the lioness type cover weights between 2.27 g

¹ See the tables at the end of this chapter. Although there are far fewer weights available for Period II than for Period I (23 vs. 130), it appears that both periods held the same norm.

² This weight standard is a common feature of the coinages of the Chalkidike which are otherwise rather varied. Cf. *ACGC*, p. 133.

³ *ACGC*, p. 133.

⁴ *ACGC*, pp. 133, 329-30. The Corinthian stater is half of a Euboic stater, and divided into three drachms of 2.9 g. Alexander (1953, p. 202 with note 6) states that Potidea introduced the Corinthian system in the Chalkidike. But Potidea never struck any pieces of the weight of a Corinthian stater. Its heavy pieces had the weight of a Euboic stater or Attic tetradrachm. On Potidea, see also *ACGC*, p. 134.

⁵ See the table below.

and 2.59 g. Five pieces fall in the category from 2.40 g to 2.44 g. This is significantly too light for tetrobols of the heavy pieces of Period I.¹ However, these fractions match rather well the weights of tetrobols on the Third Thraco-Macedonian standard.²

The diobols with the head of Athena weigh between 1.08 g and 1.26 g.³ Four of the nine recorded weights fall between 1.10 g and 1.14 g. As in the case of the tetrobols, this comes closer to the Third Thraco-Macedonian standard than to the Attic standard.⁴ The same is true for the obols with the head of a lioness. Most coins are between 0.45 g and 0.59 g. Although this is slightly too light for the Third Thraco-Macedonian standard with an ideal obol of 0.61 g, the obols correspond rather well to the diobols with the head of Athena.⁵

In Period II the tetradrachms have the same weights as in the First Period. Most of the tetrobols are now lighter than in the previous period.⁶ This suggests a tendency towards weight reduction, but only a larger sample of weights could substantiate this assumption.

In Period II the obols with the bull's head have a clear norm between

¹ A tetrobol of the ideal Attic-Euboic tetradrachms of 17.2 g has 2.9 g. A tetrobol of the tetradrachms of Akanthos with their actual norm between 16.90 g and 17.24 g should weigh between 2.81 g and 2.87 g.

² The theoretical weight of a tetrobol on the Third Thraco-Macedonian standard is 2.45 g. Cf. May 1966, p. 8 note 4; Raymond 1953, pp. 23 ff.

³ One coin (ANS inv. no. 1992. 54. 2) has only 0.79 g.

⁴ Some of these diobols are very worn (ANS inv. nos. 1992. 54. 2–6).

⁵ Of the obols with the head of the lioness 11 weights are recorded between 0.32 g and 0.66 g. Of these, 7 coins have weights between 0.45 g and 0.59 g.

⁶ Although in Period II the tetrobols cover the same range of weights (2.15 g to 2.49 g) as in Period I most coins are now lighter than 2.40 g to 2.44 g, the weights held by most coins of Period I. In Period II 27 % of the 33 coins weigh 2.40 g or more, while 72% percent are lighter than 2.40 g. In Period I 8 coins of a total of 11 were 2.40 g and higher.

0.30 g and 0.44 g.¹ Compared to the previous period, this is a reduction in weight. The obols have become too light for the Third Thraco-Macedonian standard.

Period III

In Period III, Akanthos' heavy pieces are struck on a standard that was significantly lighter than the Euboic-Attic of the previous two periods. With a norm of 14.00 g to 14.29 g these pieces are tetradrachms of a reduced Thraco-Macedonian standard.² Of the later diobols with the head of Athena and the inscribed reverse only four weights are recorded (0.77 g; 0.86 g; 1.00 g; 1.22 g).³ Given the erratic weights and the small sample it is not possible to identify the weight standard with certainty. It is most likely, however, that they are underweight diobols on the reduced Thraco-Macedonian standard.⁴ Of the obols with the Apollo/Lyre types I was able to record only 8 weights between 0.35 g and 0.69 g. Three weights are between 0.40 g and 0.44 g. These weights are too erratic and the sample is too small to reach any definitive conclusions about the weight standard.⁵

¹ Of 31 recorded weights spread between 0.15 g and 0.59 g, 22 (that is 70%) cluster between 0.30 g and 0.44 g.

² The 58 tetradrachms assembled by Desneux are spread between 13.60 g and 14.54 g. 53% of these coins weigh between 14.00 g and 14.29 g. Various names have been applied to this standard. Most often it is called Phoenician. Cf. *Olynthos* 9, pp. 209–210.

³ Excluded: Gaebler *AMNG* 2, p. 28 no. 38 with 0.75 g (very worn).

⁴ The theoretical weight of these diobols would have been 1.16 g to 1.19 g.

⁵ The theoretical weight of an obol on the Third Thraco-Macedonian is 0.61 g. To match the Akanthian tetradrachms of the reduced Thraco-Macedonian standard the theoretical weight of an obol would be 0.58 g to 0.59 g.

Interpretation of Akanthos' standards

Akanthos' discontinuation of its series of tetradrachms on the Euboic-Attic weight standard has often been interpreted as a political statement, indicating Akanthos' dissociation from Athens and the League. Following this line of thought, the beginning of the tetradrachm series on the reduced standard has been dated to 424, the year when Akanthos revolted from Athens.¹ But when Akanthos' abandoned the Attic-weight tetradrachms it was probably a response to economic circumstances rather than because of political motives.

As discussed above Akanthos never adopted the Attic standard as a manifesto of its political allegiance. Although its heavy pieces match the weights of Attic tetradrachms when they were first minted they were probably perceived as Euboic staters. Thus the fact that Akanthos used tetradrachms of Attic weights can hardly have had any political significance. Once the standard was adopted it was convenient to adhere to it, especially in a time when Akanthian tetradrachms were struck for export. The interchangeability with the Athenian tetradrachm was advantageous in transactions with Athens, and also with the rest of the Greek world where Athenian tetradrachms circulated widely. Since many cities on the Chalkidike were using the Euboic-Attic standard for their high denomination as well, it was also a convenient standard for the regional markets. This was an economic or commercial motive rather than a political one.² In its series of smaller denominations Akanthos employed right from the beginning the Third Thraco-Macedonian standard, a standard very popular in Northern Greece. This standard was used a. o. by Abdera, Dikaia, and

¹ Cf. Desneux 1949, p. 23.

² Facilitation of tribute payments to Athens can only have been a secondary consideration in employing this standard since Akanthos' first tribute payment to Athens is recorded only in 450/49 when Akanthos had been striking tetradrachms on the Attic standard already for about seventy-five years.

Maroneia, and it was also the standard of Macedonian regal coinage. Thus the smaller denominations, intended for local circulation, were compatible with the small currencies of the regional markets.

Already in Akanthos' Second Period the weights of the fractional coinage were debased. Thus the change from the Third Thraco-Macedonian standard to the reduced Thraco-Macedonian was not a sudden event. When in Period III the reduced standard was finally adopted in the series of tetradrachms it had already been in use in the tetrobols and obols of Period II.¹ This makes it difficult to connect the change of standard with one particular event, and to interpret it as a political statement. The theory that the tetradrachm series on the reduced weight standard was occasioned by Akanthos' revolt from Athens should be abandoned. Further, the gradual change makes it most unlikely that there was a break occasioned by the Athenian Coinage Decree when the standard of the tetradrachms was changed.

The adoption of the reduced Thraco-Macedonian standard was primarily a response to a changed economic situation. Around 430 this standard was in use at Abdera and Maroneia, and Olynthos adopted it in the 430's.² It was also the standard that Perdikkas used for most of his series of heavy tetrobols.³ Already in Period II Akanthian tetradrachms had ceased to travel abroad. In Period III Akanthos also struck its higher denominations for circulation within regional markets rather than for export. Together with coins of Perdikkas, Akanthi-

¹ Cf. May 1950b, p. 158.

² Erxleben (1970, p. 106) is mistaken when he argues that the reference to the Phoenician standard which was used by Abdera and Maroneia is of no avail, "... da beide Städte gerade um 430 v. u. Z. zum attischen Fuß übergehen ...". This is incorrect. See for Abdera, chapter 3.1.4. below, and for Maroneia, see 3.1.6. For Olynthos, see Raymond 1953, pp. 158-59.

³ Raymond 1953, pp. 155-58.

an tetradrachms and tetrobols of Period II and later have been found at Olynthos, which is evidence for their regional circulation.¹

Although direct evidence is lacking it is possible that Akanthos encountered problems with its silver supply following the Athenian foundation of Amphipolis in 437. Athenian interest in the lower Strymon area was very much provoked by the desire to control the trade in timber and metals, and thus Akanthos' access to the silver resources of Mt. Pangaion may have been obstructed. A shortage of silver might have played a role in the choice of a lighter weight standard.

Conclusions

No break that could be ascribed to the operation of the Athenian Standards Decree has been found in the series of Akanthian tetradrachms. Over the 5th century Akanthos strikes its coinage in fairly uninterrupted issues as continuity in style and technique attests. The starting date of Period II should be lowered to c. 465, and its ending date should be changed to c. 430. Thereby Akanthos' adoption of a reduced weight standard in the tetradrachm series is dissociated from its revolt from Athens in 424. In the series of fractional coinage the process of weight reduction already starts in Period II and is a gradual development rather than a drastic change. The ensuing debasement also of the tetradrachms should be seen as a response to economic circumstance rather than as a political statement. In the 430's Akanthos' coins no longer travel to far-off markets as they did in the late 6th and early 5th century. Thus a local standard becomes more convenient also for the high denominations. In the 430's Akan-

¹ *Olynthos* 9, pp. 263–65. For the tetrobols of Perdikkas that have been found at Olynthos, see also Raymond 1953, pp.160–61.

thos may have experienced problems in securing its silver supply, and this could have also influenced its decision to strike coins on a lighter standard.

The obols with Apollo/lyre types have probably not been struck before 430, the time when similar types are used by the Chalkidians. Although Akanthos never becomes part of the Chalkidian state, there exist economic and political ties, as attested by coin finds and the account of Thucydides (Thuc. 4.84; 124). Unfortunately, there is no evidence as to what circumstances led Akanthos to issue the small series of obols with Chalkidian types.

Figure 3 - Akanthos: Chronology

Period	Desneux' date	revised date
I	530 (?)— c. 480	c. 525—c. 465
II	c. 480—424	c. 465—c. 430
III	424—380	c.430—

Figure 4 - Akanthos: Summary of Weights

	Period I	Period II	Third Thraco- Macedonian	Period III	
denomination	actual norm	actual norm	theoretical	actual norm	cf.
tetradrachm	16. 90—17. 24	16. 90—17. 24	14. 73	14. 00—14. 29	Maroneia
tetrobols	2. 40—2. 44	2. 15—2.49	2. 45	—	Ainos
diobol	1. 10—1. 14	—	1. 22	0. 77—1. 22	
obol	0. 45— 0. 59	0. 30 — 0. 44	0. 61	0. 40—0. 44	

3.1.3 Thasos

History

Thasos is a colony of Paros.¹ Thasos itself founded several colonies, among them Stryme, Galepsos, Oisyme, and Neapolis.² Thasos derives its wealth largely from its properties on the mainland, and from its mines. Gold mines were at Skaptae Hylae on the mainland, as well as on the island itself. It is estimated that Thasos' revenue from these mines was 200-300 talents per year.³ By the time of Darius' advance Thasos possessed a fleet and strong fortifications (Hdt. 3.46).

Thasos joins the Delian League in 479/79 after the victory over the Persians. In 465 an argument with Athens arises concerning the mainland possessions and mines (Thuc. 1.100). Thasos revolts. After a siege of three years it capitulates (Thuc. 1. 101). Under the terms of surrender Thasos has to destroy its walls, hand in its ships, pay a large indemnity and tribute, and give up its ports and the mainland possessions, including the mine.

From 454/3 to 446 Thasos is recorded with only 3 talents tribute. This amount is surprisingly small considering Thasos' wealth. It is likely that Thasos paid indemnities for the revolt and for the siege separately. In 443 Thasos' tribute rises to 30 talents, ten times its previous payment. As an explanation for this drastic increase it has been suggested that around this time Thasos could have been given back its mainland possessions.⁴ However, it is equally likely, that

¹ On the foundation of Thasos, see Graham 1978.

² See Hdt. 7.107, 116; Thuc. 4.107; 5.6; for Neapolis, see *ML* 83.

³ Hdt. 7. 46; cf. Courtils *et al.* 1982, pp. 409-17.

⁴ See Graham 1983, pp. 82-83. But in 424/23 Thucydides still draws the profits from a gold mine on the Thasian mainland (Thuc. 4.105).

Thasos' tribute was raised because it had paid off the war indemnity.¹

In 411 Thasos defects from Athens (Thuc. 8.64). In 407 with the help of Neapolis Athens regains control over Thasos.²

Coinage (see plate 2)

The staters of Thasos depict on their obverse a nymph struggling against a satyr.³ For the reverses Thasos employs a 4-part incuse punch die.⁴ Real reverse types occur only on some fractions towards the end of the century.

The coinage of the 5th century falls into four groups. In the first group the flan is small, thick and dumpy. (e.g. *ACGC* no. 518). In the second group the flan is flatter and wider. The figures on the obverse are larger. In this stage, the raised arm and the spread hand of the nymph form the shape of a "Y" (e.g. *ACGC* no. 519). In Group 3 the five fingers of the nymph's hand are fully displayed (e.g. *ACGC* no. 520). Group 4 is clearly of a different and later style. The nymph is now depicted in a "consenting" pose with her arm no longer raised in defense, but rather around the shoulders of the satyr (e.g. *ACGC* no. 521).

In addition to the staters there are hemihekte depicting a running satyr, and smaller fractions with either one or two dolphins on the obverse.⁵ Fractions are struck from early on, since they are found in an early hoard together with

¹ On the possible criteria that may influence affect how much a city is assessed, see Nixon and Price 1990.

² See *ML* 83, 89; cf. Meiggs 1972, pp. 575-78.

³ For preliminary studies, see Picard 1987; *idem* 1982a; *idem* 1982b; Le Rider 1968.

⁴ Some of the earliest staters have a diagonally divided incuse, e.g. *IGCH* 1185 nos. 4 and 5.

⁵ Cf. Le Rider 1968, pl. 1:4, 9-10; cf. Picard 1987, pp. 157-58 with note 37.

stater of Group 1.¹ In Group 3 no fractional coinage is struck.² In Group 4 there are thirds, hekta, hemihakta, fourth and eighths of the hekta.³ The thirds have the same type as the staters. There are two distinct stylistic groups: in the earlier group the nymph and satyr are depicted in profile view, in the later issues, the face and body of the satyr are shown in three-quarter view.⁴ The hemihakta take up the type of the running satyr of the hemihakta that were struck early in the 5th century. The satyr now holds a kantharos in his hand, and on the reverse there is a kantharos and the inscribed ethnic.⁵ In Group 4 Thasos issues hekta for the first time. On the obverse there are two satyr heads and on the reverse two craters and the ethnic.⁶ Two more denominations of small fractions are produced. The heavier piece, the tetartemorion, has a head of a satyr on the obverse, and two dolphins on the reverse, and the lighter piece has a female head on the obverse and one dolphin on the reverse.⁷

¹ For the Pontolivado Hoard (*CHVIII*, 16), see Oeconomides 1990.

² Picard 1987, p. 150 note 4.

³ See Picard 1987, p. 150. For the division of the staters according to the Ionic system into sixths and thirds, see *ibid.*, pp. 152-53 with notes 13 and 14.

⁴ Cf. Picard 1987, pp. 150-51, pl. 40:8-10.

⁵ See Picard 1987, p. 154.

⁶ See Picard 1987, p. 154. For the attribution of the hekta and hemihakta to this group, see *ibid.*, pp. 154-55 and *idem* 1982c.

⁷ See Picard 1987, pp. 155-57.

Weight Standards

Over the course of the 5th century, the weights of the coins are gradually reduced. The early staters with the dumpy flan all weigh around ± 10 g.¹ In Group 2 most weights are at 9.6 g. In Group 3, the weights are spread evenly between 9.1 g and 8.5 g.² In the series with the “consenting” nymph the staters weigh c. 8.59 g.³ In relation to the thirds of the earlier series (3.65 g) and of the later series (3.49 g) the accompanying the staters are underweight.⁴ The thirds follow the third Thraco-Macedonian system.⁵ The weight of the staters corresponds to two attic drachms allowing for easy exchange with the Athenian owls.⁶ The hekte weigh c. 1.49 g and are thus underweight with regard to the thirds.⁷ The hemihekte with c. 0.83 g correspond better to their theoretical norm.⁸ The tetartemoria hold a norm of 0.39 g, and the few recorded weights of the smaller fractions yield a norm of 0.26 g.⁹

The reduction of the weights may be related to difficulties with the silver mines. Among Thasos' terms of surrender in 463 is the loss the mining area on the mainland (Thuc. 1.100). This may have been a factor in the reduction of the

¹Weights after Kraay and Emeleus 1962, p. 22.

²Weights after Kraay and Emeleus (1962, p. 22). Note that Picard (1982b, pp. 420-22) suspects that some staters with weights as low as 7 g may be Thracian imitations.

³Weights of Group 4 after Picard (1987, p. 153) .

⁴See Picard 1987, p. 153.

⁵See Raymond 1953, pp. 18-42; May 1966, pp. 8-9 note 4.

⁶Cf. See Picard 1987, p. 153.

⁷See Picard 1987, p. 154.

⁸See Picard 1987, p. 154.

⁹See Picard 1987, p. 155.

weights in Group 3 and 4.

Chronology

Staters of Group 1 with the small and dumpy flan were part of hoards buried c. 500-495.¹ This suggests that Thasos probably started minting c. 525. In the Asyut Hoard (*IGCH* 1644) and the Elmali Hoard (*CH* VIII, 48) there were only staters of the second group with larger figures and struck on a flat, wide flan.² Criteria like wear of die and little variation in the type suggest that these coins must have been struck in great quantity, and over a relatively short period of time.

Neither in the Asyut Hoard, buried c. 475, nor in the Elmali Hoard, buried c. 465, was there any specimen of Group 3, the type with the nymph having the five fingers displayed. This suggests that Group 3 did not start before Thasos' revolt from the Delian League in 465. Group IV is struck towards the end of the 5th century. A *terminus ante quem* of 411 for its starting date is provided by epigraphic evidence.³

After 465 Thasos' wealth is diminished because of the terms of surrender imposed by Athens, and several years may have passed before Group 3

¹ *IGCH* 1185 (Kagan 1992, nos. 4-11); Demanhur *IGCH* 1637 (Dressel and Regling 1927, nos. 4-15); Pontolivado Hoard *CH* VIII, 16 (Oeconomides 1990).

² *Asyut*, nos. 100-128; in the Elmali Hoard (*CH* VIII, 48) there were 9 staters of Group 2 struck from 6 obverse and 8 reverse dies, similar to the pieces in the Asyut Hoard, see Fried 1987, p. 3. A stater of Group 2 was also in the Antilibanon Hoard (*CH* VI, 4 and 5), buried c. 475; see Hurter and Pászthory 1984, no. 3.

³ Picard 1987, p. 161; for the inscriptions mentioning the denominations of Group 4, see *ibid.*, pp. 152-53 with notes 13 and 14. For hoard evidence, see *ibid.*, p. 156 with note 35; cf. *idem* 1982a, p. 126; 1982b, p. 424. *Idem* (1987, p. 162-63) suggests that Group 4 started c. 413/11 and lasted only a few years, because most of the dies may have been cut by the same die-engraver. It can not be ruled out, however, that Group 4 started earlier, for a die-cutter could have worked easily for 20 to 30 years.

started. In Group 3, there is more stylistic diversity among the dies, indicating that relatively fewer dies were in use over a comparable time period. A break between Group 3 and 4 is conceivable on stylistic grounds.

Can any of these possible interruptions be related to the Athenian Standards Decree? Group 3 is likely to have lasted c. 15-20 years. Even assuming that it started already by c. 460, it would have extended into the 440's, the early option for the Standards Decree. On the other hand, it is unlikely to have ended only in the 420's, the alternative option for the Standards Decree. The end of Group 3 and the years without new coinage are probably unrelated to the Standards Decree. The reasons for not minting any coins may have been similar to those for the interruption in coinage after 465, i. e. problems with the silver supply or a general economic decline.

These considerations are admittedly tentative. Professor Picard is preparing a comprehensive and detailed study of the coinage of Thasos, which will certainly yield a more precise chronology.

3.1.4 Abdera

Topography

The ancient city of Abdera was located on a cape projecting into the sea and extending from the alluvial plain that stretches between the river Nestos in the West, Mount Rhodope in the North, and Lake Bistonis in the East.¹ It is difficult to assess the size of the area, the *χώρα*, that belonged to Abdera. Herodotos (7.126) reports that in his time the Nestos river passed through Abderan territory. With the Nestos today being c. 15-20 km to the west, this indicates a *χώρα* of rather large dimensions—provided the river has not changed its course much since antiquity.² The plain in which Abdera lies is marshy but fertile, and produces—among other things—wine and grain.³ There are no metal resources in the immediate surroundings of Abdera.⁴

The river-valley of the Nestos does not provide easy access into the interior. It is a river-gorge without room for a road.⁵ However, there was a pass through the hills and Mount Rhodope east of the river Nestos. Thucydides

¹ For a recent account of Abdera's topography, see Graham 1992, pp. 51-53; cf. also Casson 1926, pp. 9-10; Isaac 1986, pp. 73-76. For maps, plans, and discussion of archaeological finds, see Lazarides 1971; Skarlatidou 1986, pp. 99-108; Koukouli-Chrysanthaki 1986, pp. 82-98; cf. also *ATL* 1, p. 463 with ancient sources. For excavation reports see Koukouli-Chrysanthaki, *Ergon* 1987, pp. 17-18; *Arch. Rep.* for 1988-89, p. 85.

² Casson (1926, p. 25) gives the distance as 20 km, Graham (1992, p. 53) as 16 km. For the correct interpretation of the passage in Herodotos, and earlier misinterpretations cf. *op. cit.*, p. 53 note 56. The passage in Herodotos says that the river passed through Abderan territory, and not through or by the city itself, but there is still the possibility that the river changed course since antiquity.

³ For agricultural production in the 20th century, see Casson 1926, pp. 9-10; Lazarides 1971, p. 4. Fertility in antiquity is attested in Pindar's Second Paean, lines 17-18; cf. Diodor 15.36; also Livy 43. 4.8.

⁴ Casson 1926, pp. 74, 90-91; Lazarides 1971, pp. 3-4.

⁵ Casson 1926, p. 9 "...the sides of the river-gorge descend almost vertically to the water-edge and there is no room even for a path...."

(2.97) mentions this road as the shortest land route to the Black Sea.¹ Leading through the Rhodope mountains via what is today Plovdiv to the lower Danube, it gave access to the Pontic coast and to the territory north of the Danube. Although it was faster to reach the Black Sea area by sea, the land-route was an important alternative.² Abdera probably also had quite a decent harbor in antiquity.³

Early History

The theory has been put forward that “Abdera” is a Phoenician name, and that the city was founded by Phoenicians. There is some indication of Phoenician presence in the area, but conclusive evidence for Abdera being a Phoenician foundation is lacking.⁴ According to Herodotos (1.168) it was first settled by Ionians from Klazomenae who were later expelled by Thracians.⁵ Eu-

¹ According to Thucydides (*ibid.*) it took eleven days for a man without luggage. Cf. Casson 1926, p. 32; Danov 1976, p.138; Isaac 1986, pp. 74, 90-91.

² Cf. Isaac 1986, p. 74. It was more expensive to travel by sea, and the sea-route could easily be blocked by those who controlled Bosphoros and Hellespont. May (1950a, p. 6) thinks the land-route was hardly ever practicable in winter.

³ Cf. Feyer 1942-43, p. 177 with note 1; Lazarides 1971, p. 3 with maps 28-30. Casson (1926, pp. 31, 34-35) is refuted by Isaac (1986, pp. 74-5, note 15) who rightly points out that in 491 the Thasian fleet could only have been brought to Abdera if the city had a harbour (cf. Hdt. 6. 46). May (1966, p. 1) thought Abdera's harbour inferior to that of Thasos or Ainos.

⁴For a general discussion of Phoenician presence in Thrace see Graham 1978, pp. 88-92; for a discussion of Phoenicians at Abdera and further references see Graham 1992, pp. 44-45; Isaac 1986, pp. 76-77. Although aware of the problematic Phoenician etymology of the word “Abdera,” Graham (*loc. cit.*) maintains that Abdera was named by Phoenicians, and that that happened before 654 BC.

⁵ Isaac 1986, p. 78.

sebios gives the date of 654 for the Klazomenian foundation.¹ In 544 Abdera was resettled by Teians who sought escape from Persian rule.² At some point during its early history Abdera sent some settlers back to Teos to help refound its mother-city.³ At least until the first half of the 5th century Abdera and Teos maintained a very close relationship.⁴

Abdera is known to have been a loyal friend of the Persians.⁵ In 491, when the Thasians were denounced for plotting revolt, Darius instructed them to destroy their walls and bring their ships to Abdera, as a security against rebellion.⁶ According to Herodotos (8.120) the Abderites claimed that Xerxes on his retreat went to Abdera. He felt safe and concluded bonds of friendship with Abdera. Whether it is true or not "... the people who told Herodotos their story, apparently had not the slightest inclination to hide their city's pro-Persian past."⁷

¹ See Graham 1992, p. 46. For the Eusebian foundation date see Cook *JHS* 1946, p. 77. Greek graves dating to the second half of the 7th and the early 6th century have been found in the so-called North West cemetery near Abdera (for references to the excavations see Graham 1992, pp. 46-48). Graham (*ibid.*) attributes these graves to the Klazomenian settlement. But no settlement associated with the cemetery has been found so far.

² Hdt.1.168; Strabo 14.1.30. Graham (1992, pp. 49-50) attempts to reconstruct details about the Teian colonization effort from Pindar's Second Paeon, lines 59-70. Archaeological evidence attributed to the Teian settlement are a shrine with earliest votives dating to the 3rd quarter of the 6th century, and parts of the city wall dated to the 2nd half of the 6th century. For references to excavation reports see Graham 1992, pp. 48-49.

³ Cf. Pindar, Second Paeon, lines 28-34.

⁴ The relevant inscriptions are conveniently collected and discussed by Graham (1992, pp. 53-59).

⁵ The date of the Persian conquest can not be closer determined than between c. 520 and c. 512. For a brief discussion of the chronological problems and relevant bibliography see Graham 1992, pp. 50-51.

⁶ See Hdt. 6.46. It has been suggested that Thasos might even have been denounced by Abdera; see Pouilloux 1954, p. 57 with note 5.

⁷ Quote from Isaac 1986, p. 90. For Abdera as Persian garrison see *ATL* 3, pp. 216-17.

Abdera in the Delian League

It is not known under which circumstances Abdera joined the Delian League.¹ Abdera first appears in the tribute lists of 454/3 with the odd amount of 12 talents and 5,120 drachms. In 452/1, 450/49, 447/6, 445/4, 442/1, 436/5, 435/4, and 433/2 it pays 15 talents. This is one of the highest amounts of tribute recorded.²

In 448/7 Abdera is registered with a payment of 14 talents. The remaining talent appears in the list of the following year and next to it the words ἔς [Εἰλίονα ἡβδερῆ]. Partial payments of this kind were supposedly made directly to officials in the area before the tribute was sent to Athens, and only appear in the tribute record of the following year.³ The official in Eion was probably a military commander who used the money for campaigns.⁴ In 443/2 Abdera is absent from a full panel. In the assessment of 432/1, following the revolt of Potidea, the number of tributaries in the Thraceward panel declined from 38 to 27.⁵ Abdera is not among the absentees, but in 432/1 and 430/29 it contributes 10 talents in-

¹ A connection with the fall of the Persian garrison at Eion in 477/76 has been suggested by *ATL* 3, p. 217; cf. Meiggs 1972, p. 69. Isaac (1986, pp. 90-91) takes a gnomic statement in Pindar's Second Paen (lines 20-22) as an exhortation for Abdera to be a responsible member of the League.

² See *ATL* 1, pp. 216-17.

³ *ATL* 3, p. 45 with note 3, p. 265; cf. Meiggs (1972, pp. 158, 164). The problem is discussed in detail by French (1972, pp. 10-18).

⁴ It has been suggested that the money was used for the Strymon campaign and the settlement of Brea (*ATL* 3, p. 60 with note 58). Note, however, that the location of Brea has never been determined with certainty (cf. Borza 1990, p. 137), and that the Strymon campaign is only mentioned indirectly by Plutarch (*Per.* 11.5). A date of 446 for the campaign is suggested by *ATL* 3, pp. 287-88 with note 64; cf. *ML* 49, pp. 130-33.

⁵ Meiggs 1972, pp. 252-53.

stead of the earlier 15.¹

There might be a connection between the lowering of the tribute and the negotiations of Nymphodoros of Abdera.² Formerly regarded as an enemy to Athens he was made an Athenian proxenos in the summer of 431. His sister was a wife of Sitalkes, the Odrysian king. Nymphodoros succeeded in winning over Sitalkes for assistance against the disaffected Chalcidians and furthermore reconciled Perdikkas with Athens.³ It is likely that Abdera—at least temporarily—also paid tribute to the Odrysians.⁴ Although Abdera was at the fringes of Odrysian influence, its trade with the interior depended upon a free passage through the Rhodope mountains.⁵ Regardless of formal tribute payments, Abdera probably also had to offer “gifts” to the Odrysian kings and aristocracy.

In 425 Abdera and Dikaia, its neighbor and colony, were assessed to make a joint payment of 75 talents. This enormous sum bears witness to their

¹ The so-called “list 2” in *ATL* is attributed to the year 430/29, but can not be dated with certainty; cf. Meiggs 1972, pp. 513-17. In the lists of 429/8 where only Abdera’s name is preserved, it probably also paid 10 talents; cf. *ATL* 1, pp. 216-17.

² According to *ATL* (3, pp. 310-11) the lowered tribute reflects counterclaims by the Odrysian king. The silver would have gone to Sitalkes instead of Athens. Isaac (1986, p. 102 note 15) suggests that decline of prosperity at Abdera might have been the reason for the lower payments. Considering the high amount that Abdera was assessed five years later, this does not seem a very likely explanation. Cf. Graham 1992, p. 61 with note 112.

³ Thuc. 2.29, 67; Hdt. 7.137; cf. Walbank 1978, pp. 167-68, no.30; Isaac 1986, pp. 99-104; Borza 1990, p. 144; Graham 1992, pp. 61, 66-67. Sadokos, the son of Sitalkes was made Athenian citizen; cf. see Aristoph. *Acharn.* 134ff.

⁴ Contra *HCT* 2, pp. 243-44; Thuc. 2.97 mentions Abdera as the southern limit of Odrysian influence. For Odrysian tribute, cf. Graham 1992, p. 61; *ATL* 3, p. 310 with note 54. For Ainos, see also chapter 3.1.7.

⁵ Isaac 1986, p. 97; cf. May 1966, p. 148.

prosperity.¹ The assessments of 422/21 and 418/17 may have been slightly reduced.² There is no historical record of how the campaign of Brasidas in 424/2, and the foundation and capture of Amphipolis affected Abdera.³

Abdera at the End of the 5th Century

As Athenian influence was declining, Abdera revolted from Athens. The adoption of a coin standard that was presumably Aiginetan has often been taken as an indication for Abdera's disloyalty.⁴ But there is also direct and unambiguous evidence for a revolt at Abdera. Diodoros (13.72.1-2) reports that in the spring of 407, after Thrasyboulos had reduced Thasos he sailed to Abdera and reduced that city, too. Thus 407 is established as the end of the uprising. For the beginning of the revolt at Abdera, 411 is a likely date, since it is shortly after the beginning of the Chian revolt, its spread among the cities of Asia Minor, and the defection of Thasos.⁵

¹ Graham (1992, pp. 59-61) expresses doubt whether the restoration (A9 in *ATL*) that attributes the high sum of 75 talents to Abdera and Dikaia-by-Abdera is actually correct. He cites epigraphic reasons, and the fact that "(1) Abdera and Dicaea never pay in syntely in any extant list; (2) the figure of 70+T is a far bigger multiple, at nearly five times, of Abdera's and Dicaea's largest combined tribute of earlier years, 15 1/2 T, than is generally found even in the optimistic assessments of A9" (*op.cit.* p. 60). However, if one accepts the thesis that concessions to the Odrysians were responsible for the lowered assessments of 431 and 429, then the high assessment of 425 could indicate that in disregard for Odrysian interests Athens now claimed all the tribute which the cities had previously paid both to Athens and the Thracians. Cf. *ATL* 3, pp. 310-11; Figueira 1991, p. 190 note 73.

² There was, however, no return to the figures of the Aristidean assessment in 421 as West (1925) had assumed; cf. *ATL* 3, pp. 347-53. The grounds against this thesis are summarized by Meiggs 1972, pp. 340-43; cf. *ML* 75.

³ Cf. *HCT* 1, p. 222. The decline in the output of coinage in these years suggests that Abdera had problems securing its silver supply.

⁴ May 1966, pp. 181-3; cf. *ACGC*, p. 155: "... a clear anti-Athenian step ..."; cf. Isaac (1986, p. 105): "This was a distinctively Peloponnesian system and the adoption of it must therefore be interpreted as a political gesture." Cf. below for arguments against this interpretation.

⁵ May 1966, pp. 179-82.

Resources and Trade

The location of Abdera was an important factor for its prosperity. It was situated in a fertile plain where important agricultural produce would grow, it had a harbor, and nearby was a pass leading into the interior of Thrace. As tribute records and the output of coinage indicate, Abdera was one of the richest cities in the region. Revenues from farm products can hardly account for this extraordinary wealth. Trade with the interior probably played an important role.¹

Since Abdera early in its history struck heavy silver pieces which have been found in the East and in Egypt, it appears that one of its main items of export was silver.² In Abdera's environs, the nearest silver mines were in the Mount Pangaion area, and it is most likely that here was Abdera's source of silver.³ It must have been difficult for Abdera to secure its access to the silver, since one would think that there was some competition among the cities and tribes of the area.⁴

As a port for the interior Abdera could have served a similar function as

¹ Cf. Casson 1926, pp. 90-91; Meiggs 1972, p. 61. May (1966, p. 2 with note 2) suggests Abdera traded in wheat and wine, since the ear of grain, the grape-cluster and the drinking cup was on its coin types, and an amphora storeroom or shop of the 4th century was discovered at the site of Abdera. This, however, hardly proves that Abdera exported these items in any quantity. For the amphora storeroom or shop, see *Ergon* 1956, pp. 52-53 with fig. 51.

² E. g. May 1966, p. 2.

³ According to Graham (1992, pp. 49-51) when the Teians settled Abdera they gained access to the metal resources around Pangaion by driving out the Paeonians. This interpretation is based on a reading of Pindar's Second Paeon, lines 59-70. May (1966, p. 49) thinks Abdera exploited "the famous metalliferous regions of Western Thrace," by which he probably means Mt Pangaion. He does not discuss how Abdera might have gained access to these resources. Isaac (1986, p. 98) makes a puzzling statement: "On the one hand she [Abdera] was an important exporter of silver, on the other she had no minerals of her own and had to buy everything from Thracians." He is probably thinking of the Macedonian tribes that lived around Mount Pangaion.

⁴ There may have been some rivalry with Thasos. According to Raven (1967, p. 291) Abdera's output increased considerably after the fall of Thasos in 462/62. Similarly Abdera's output declined markedly when Athens founded and subsequently recaptured Amphipolis, and thus established its influence in the Strymon area. Cf. May 1966, p. 151; Barron 1968b, p.101.

Ainos and Maroneia. Soon after 479 Abdera's coins were probably no longer struck for export to Egypt and the East but for trade with the hinterland and along the coast.¹ This is indicated by the weights of the coins which were compatible with other coinages in the area.²

The Egyptian Connection

Hoard found in Egypt contain early Abderite coinage.³ It has been thought that traders from Teos—and possibly also from Chios—, brought coins from Abdera to Egypt having obtained them in exchange for textiles and other manufactured goods.⁴ From inscriptions, pottery, and coins we know that traders from Teos were prominent in Naukratis, and also that Teos had to rely on imported grain which Egypt could have provided.⁵ Since Abdera—like most Thraco-Macedonian cities—did not need to import grain, it has been proposed that there existed something like an exchange network from Thraco-Macedonian silver producers, via Ionian middlemen, to Egyptian grain produc-

¹ Raven 1967, p. 296.

² See the table at the end of this chapter. An early example of Abderite silver that travelled to the Thracian hinterland is a hoard reported from Kârdzali in Bulgaria (*IGCH* 694) containing c. five octadrachms (described like *AMNG* 2, pl. 1:2-3; = May Period II, Gr. 20). Cf. Gerasimov, 1938, *BIAB* 12, p. 456.

³ E. g. Demanhur Hoard (*IGCH* 1637; cf. Dressel and Regling 1927, pp. 28-104); Sakha Hoard (*IGCH* 1639; cf. Weber 1899, pp. 269-287; Dressel 1900, pp. 231-258); Asyut Hoard (*IGCH* 1644; cf. Price and Waggoner 1975).

⁴ See Roebuck (1950, pp. 238-41) who is refining the earlier theories of Sutherland (1943) and Milne (1939); cf. May 1966, p. 2 with note 4.

⁵ The evidence is collected by Roebuck (1950, pp. 240-43).

ers.¹ This is a very doubtful hypothesis.² First of all, coined silver was only one of many possible materials that could be exchanged for grain. Second, there need not be a direct connection between the find spot of a coin and its place of origin. This is especially true in the case of Egypt which had no silver of its own, and thus attracted the metal in any form, e.g. as cut-up coins, bullion or scrap metal.³

The Flow of Silver to the East

May stresses the importance of "... the central and Eastern areas of the Persian Empire as a market for Greek silver." He suggests that Ionian or Phoenician merchants brought the silver to Tyre or Sidon which served as a commercial center from which the silver was further dispersed.⁴ But coins found in the Eastern hoards could have traveled there also as tribute payment to the Persians.⁵ May places so much importance on the trade to Persian markets because he supposes that Abdera has devised its own 'Abderite' standard on a bimetallic ratio for the purpose of ensuring easy convertibility with Persian gold.

¹ Isaac 1986, pp. 87-88; May 1966, p. 2: "...Abdera's silver was directed towards Oriental or Egyptian markets." Roebuck (1950, p. 240) even suggests that Abdera was in an "area of Chian influence" since he interprets the Abderitan coin standard as related to the Chian. This is certainly wrong; cf. May 1966, p. 2 note 4; Raymond 1953, p. 25.

²The hypothesis has been successfully debunked by Finley (1979, pp. 18-21); cf. Lloyd 1975, pp. 30-32.

³Cf. Kraay 1964a; *idem* 1969c.

⁴ May 1966, pp. 3-4 with note 4. Coins of Abdera have been found in the Ras Shamra Hoard (*IGCH* 1478; see Stucky 1984), the Persepolis Deposit (see esp. Root 1988), and according to May, one coin was found near Latakia; not included in May's study were the South Anatolian Hoard (*IGCH* 1177), the Antilibanon Hoard (*CH* VI, 4 and 5; Hurter and Pászthory 1984), and the Elmali Hoard (*CH* VIII, 48; cf. Carradice 1987).

⁵ According to *ACGC*, pp. 152-53 the high number of octadrachms in the years around 500 could be: "... connected with the payment of tribute in silver during the Persian occupation of the Thracian coast."

As will be demonstrated below, Abdera did not strike its heavy pieces on an 'Abderite' standard. Until c. 430 it followed the system of Thraco-Macedonian weights that the Macedonian tribes had adopted, conceivably in response to the obligation to pay tribute to the Persians.¹ Therefore at least part of the Abderite silver found within the Persian empire might have traveled there as tribute rather than as payment for merchandise.

Chronology of Abdera's Coinage (see plate 3)

Abdera's coin type is the griffin, usually turned to the left. This obverse type is sometimes accompanied by symbols, letters, or abbreviations of magistrates' names. The reverse type evolves from a simple incuse punch to a quadripartite square with an inscription in the band around it, and later, a symbol occupies the place of the central square. The same coin types are used on the fractional coinage. John M. F. May in his study of Abdera's coinage has been able to assemble a much larger corpus of material than earlier scholars had done.² He produces a convincing sequence of issues, and is able to explain the puzzling weights of the Abderite coins. May puts the beginning of Abdera's coinage at 540, very soon after the foundation of the city. He proposes a break from 449 to 439 occasioned by the Athenian Standards Decree. The subsequent publication of the Asyut hoard suggests that May's chronology should be lowered by 10-15 years. Evidence from the Elmalı Hoard (*CH* VIII, 48) con-

¹Doris Raymond (1953, p. 43) thinks that the Macedonian tribal coinages extend over most of the sixth century, but according to *ACGC* (p. 139) the tribal issues date to the later 6th and early 5th century being "a common response to a common pressure (...) the obligation to pay tribute in silver to the Persian Empire in the period 514/513–479."

² May 1966; for an earlier study, see e.g. Strack 1912. Of the 9 periods into which May divides the Abderite coinage, only the first 5 periods, down to the end of the 5th century, will be discussed below.

firms this tendency. As a consequence of this proposed downdating, the break between 449 and 439 that has been attributed to the Standards Decree would be eliminated.¹

Period I

Period I consists of eleven groups, dated by May to the years from 540 to c. 520/15.² Most issues have symbols, and toward the end of the period letters appear on the obverse.³ From its outset the Abderite coinage displays an astonishingly high artistic level.⁴ May contends that Abdera's earliest coins were struck little later than 540, although he is disconcerted by the idea that so soon after its foundation Abdera gained access to local sources of silver.⁵ Fortunately, Abderite coins of Period I and II occur in recorded hoards, a fact that helps establish a chronology. A didrachm of Group II has been discovered in the

¹ For the Asyut Hoard, see *Asyut*, p. 37; cf. Mattingly 1977, pp. 92-99. For the Elmali Hoard, see Fried 1987, p. 3; Kagan 1987, p. 25; Price 1987, p. 45. The break from 449 to 439 has already been disputed earlier by Barron (1968, p. 101). For an overview of May's chronology vs. my revised chronology, see the table in the back.

² May (1966, p. 53) has recorded 11 octadrachms with 9 obverse and 11 reverse dies occurring in 10 combinations; 27 tetradrachms with 11 obverse and 12 reverse dies occurring in 13 combinations; 3 didrachms struck from one set of dies; 2 drachms struck from one set of dies; 3 obols with 3 obverse and reverse dies in 3 combinations. These numbers ought to be increased at least by the new dies from the two tetradrachms from the Selinus Hoard and from the Asyut Hoard. For the Selinus Hoard, see Arnold-Biucchi *et al.* 1988.

³ Group XI has an A and six pellets; there is a Δ on *Asyut* no. 129 which belongs to the end of Period I. Cf. *Asyut*, p. 37.

⁴ May (1966, p. 54 with note 1) attempts to explain the high artistic level from the start by suggesting die-cutters from Teos arrived together with the early settlers. But there are no Teian prototypes for Abdera's early coinage. The beginning of Teos' silver coinage has recently been downdated to at least 530. See *Asyut*, pp. 86-87; Hurter and Pászthory 1984, p. 123.

⁵ May (1966, p. 2 note 1) suggests that possibly "... some form of commercial connexion existed with the sources of silver before the actual foundation." But cf. *op. cit.* pp. 49, 51 note 3: "The mint and the silver trade on which it is based must have required some interval [since the arrival of the first settlers], even if this was evidently a short one, to establish themselves."

foundation deposit of the Apadena at Persepolis (*IGCH* 1789).¹ It is the earliest coin of Abdera in a datable context. The accompanying inscriptions date the deposit to the time before Darius' expedition to Thrace, for which dates ranging from 519 to 510 have been proposed.² May dates the coin of Group II "not later than 535." This date seems rather early, but strictly speaking, the Apadena deposit provides only a *terminus ante quem* for Abdera Group II, and 511 is the lowest possible *terminus ante quem* of burial.³ However, all coins in the deposit are in excellent condition, and it has been suggested that they were minted not long before burial.⁴

A tetradrachm of Group VI has been found in the Ras Shamra Hoard (*IGCH* 1478) from Syria. This coin plays a crucial role in May's chronology. It appears to have been fairly new when put away, and with a closing date of 525/20 for the Ras Shamra hoard, May concludes that this specimen of Group VI has not been struck not earlier than 530.⁵ Since the publication of May's monograph, the Ras Shamra hoard has been restudied, and based on its archaeological context it has been redated to the years after 510-500 B.C..⁶ In keeping with May's assessment of the fresh appearance of the Abderite tetra-

¹ May 1966, p. 53, no. 4/1 (A 4, P 3), no magistrate symbol.

² For the various dates and their proponents, cf. Root 1988, p. 3 note 6.

³ Margaret Cool Root (1988) convincingly refutes arguments for a later date as proposed most prominently by Vickers (1985).

⁴ Cf. Kroll and Waggoner 1984, p. 338; Holloway (1967, p. 321) proposes the coins were minted only one or two years before being buried.

⁵ May 1966, p. 53, no. 9a (A 9, P 8).

⁶ The Ras Shamra Hoard was first published by Schaeffer (1939), and has been re-examined by Stucky (1984) who dated it *post* 510-500, since ceramic finds show that the place was resettled only at the end of the 6th century.

drachm, the lowered date of burial leads to a date of 520/15 for Group VI.¹

A tetradrachm in the Demanhur Hoard (*IGCH* 1637) from Egypt is die-linked to the Ras Shamra piece. There were seven Abderite tetradrachms in the Demanhur Hoard, all of Period I: one of Group I (May no. 2a), the piece of Group VI (May no. 10a) that is die-linked to the Ras Shamra coin, 4 tetradrachms from Group VII to IX (May nos. 15a; 15b; 16a; 16b), all struck from the same obverse die, and one coin of Group X (May no. 23a), which is the second to last group of Period I. Demanhur provides a *terminus ante quem* of c. 500 for the Groups I to X.² With a revised date of 520/15 for Group VI, the last Abderite groups in Demanhur can not have been issued long before burial. A tetradrachm of Group X, very similar to that in the Demanhur Hoard, has been found in the Selinus Hoard, buried in the last decade of the 6th century.³

With Group VI dated to 520/15 and burial dates from c. 510 to c. 500 for Group X, it seems appropriate to propose c. 515 as *terminus post quem* for Group X.⁴ This date could be brought down further if one accepts burial dates in the later range of the dates proposed for Demanhur and Selinus. Since Group X is the second to last group of Period I, these considerations directly affect the end date of Period I.⁵

¹ When May (1966, pp. 56-57) evaluates the style of Period VI he refrains from assigning a date after 530 "...in view of its presence in the Ras Shamra hoard."

² For the Demanhur Hoard following dates ranging from 510 to 490 have been proposed: Kraay (1956, p. 48): 510/500; Holloway (1962, pp. 5-6): after 500 and contemporary with the Taranto Hoard (*IGCH* 1874).

³ Arnold-Biucchi *et al.* (1988, p. 14) describe the coin as a new obverse die that comes closest to May 1966, nos. 22, 23. May 1966, no. 23 is the obverse die of Group X in the Demanhur hoard. Arnold-Biucchi *et al.* (*ibid.*) date Group X between 510 and 505.

⁴ Contra May 1966, p. 52.

⁵ Cf. *Asyut*, p. 37.

In hoards of the early 5th century there are only a few coins of the later groups of Period I. There were two didrachms of Groups VII-IX, struck from the same obverse die in the core group of the Sakha Hoard (*IGCH* 1639) that was buried in the first decade of the 5th century.¹ In the Benha Hoard (*IGCH* 1640), buried around 485, there was one tetradrachm of Group IX.² Most Abderite coins in the Asyut Hoard (*IGCH* 1644) were from Period II, but there was also one coin of Period I with a new reverse type, and a Δ on the obverse. It definitely belongs to the end of Period I.³

These considerations support the lowered chronology that has been suggested for Abdera's early coinage.⁴ Period I probably continued down to the end of the 6th century, and coinage at Abdera did not start before 530. The arguments can be summed up as following:

- the occurrence of Group II in the Persepolis Deposit (*IGCH* 1789), assuming the coin was minted not long before burial. This leads to a starting date of Period I not before 530.

- the lowered date of burial for the Ras Shamra Hoard (*IGCH* 1478), and the consequently lowered date for Group VI.

- the evidence of the Demanhur Hoard (*IGCH* 1637) and the Selinus Hoard, placing these hoards rather late in the proposed range of burial dates,

¹ Didrachms: May 1966, nos. 18 (A 16, P 17); 19 (A 16, P 18). According to Dressel who published both the Sakha Hoard (Dressel 1900) and the Demanhur Hoard (Dressel 1927) the Sakha Hoard also contained a badly damaged tetradrachm (Dressel 1900, no. 29) from Group X that was struck from the same die as the tetradrachm in the Demanhur Hoard (Dressel 1927, no. 154). This information is not verifiable since the coin from the Sakha Hoard (Dressel 1900, no. 29) cannot be located any more. There are problems with this hoard which was put together from several packages, and may also contain some intrusions.

² May 1966, no. 14 (A 13, P 13); for the Benha Hoard cf. Robinson 1930, p. 94.

³ *Asyut*, p. 37. I would place this coin between Group X (May 1966, nos. 22, 23) and Group XI.

⁴ See *Asyut*, p. 37; cf. Arnold-Biucchi *et al.* 1988, p. 14.

and assuming the latest coin of Group X was minted not long before its burial. This hypothesis is strengthened by the occurrence of only Group VII and later coins in hoards from the early 5th century.

- the lowered end date for Period II as evident from the Asyut Hoard and the Elmali Hoard (*CH VIII*, 48) which bring down Abdera's early coinage by at least ten years.¹

Period II

Period II consists of 16 issues of octadrachms and one issue of tetradrachms. Small coinage is rare.² It is unlikely that this period extends over more than twenty years. Letters that are abbreviations of magistrate names appear on the obverse, sometimes in addition to symbols already familiar from Period I.

With a few exceptions that were added later, the bulk of the Asyut Hoard was closed around 475.³ Apart from one tetradrachm of Period I, all Abderite coins in the Asyut Hoard are from Period II. May's dates for Period II (from 520/515 to 492) seem rather early for the latest Abderite pieces in the Asyut Hoard which show very little wear. The authors of *Asyut* as well as Mattingly have argued that one should bring down the end of Period II to c. 480.⁴ This revised date has been widely accepted, although the argument rests mainly on

¹ Cf. below.

² According to May's classification (May 1966, p. 72) there were 30 octadrachms with 22 obverse and 24 reverse dies occurring in 26 combinations; one single tetradrachm; 3 drachms with 2 obverse and 2 reverse dies in 2 combinations; and 4 obols with 3 obverse and 3 reverse dies in 3 combinations. There were at least 4 new obverses of octadrachms, and one new tetradrachm obverse in the Asyut Hoard. There were probably three new octadrachm obverses in the Elmali Hoard.

³ Cf. Kraay (1977).

⁴ *Asyut*, p. 37; Mattingly 1977a, p. 92. See also my discussion in the Catalog of Hoards in the back.

the state of conservation of the coins, and on the general impression that the traditional chronology for many Thraco-Macedonian mints is too high.¹

The preliminary publication of the Elmali Hoard has lent further support to 480 as a closing date of Group II. The latest coin in the Asyut Hoard (*Asyut*, no. 143) is die-linked to a tetradrachm in the Elmali Hoard, which has a proposed date of burial of 465/2. There are 5 more octadrachms in the Elmali Hoard, going down to the end of Period II, followed by 13 tetradrachms early in Period III.² This indicates that the Asyut Hoard contains the latest specimens available in circulation at its time, struck not too long before the hoard closed.

The evidence from the Elmali Hoard also confirms Mattingly's date for the octadrachm (May 1966, no. 44, Group XXII/IV) found in the South Anatolian Hoard (*IGCH* 1177), buried c. 480.³ On the basis of its fine state of preservation compared to other coins in the hoard, Mattingly dates it to the 480's—as opposed to May's date of c. 500.⁴ The earliest octadrachm in the Elmali Hoard is probably struck from the same set of dies as the specimen from the South Anatolian Hoard, which makes a date in the 480's very likely.⁵ The two octadrachms in the Antilibanon Hoard (*CH* VI, 4 and 5), buried c. 475, fit very well into this re-

¹ The grounds for 480 as the ending date of Period II are stated rather vaguely by *Asyut* (p. 37): “The Demanhur hoard contained seven coins all of period I, and the conclusion is inescapable—that period I continued down to the end of the 6th century, and that period II should be dated c. 500-480.” Mattingly (1977a, p. 92) seems to arrive at the closing date on the basis of the fact that the latest coins in the Asyut Hoard were “splendidly preserved.” A closing date of 480 for Period II has been accepted by Arnold-Biucchi *et al.* 1988, p. 29; cf. Kraay 1977, p. 192. This date has been criticized by Cahn (1977, pp. 281-82). Holloway (1978, p. 598) dates *Asyut*, nos. 143 to 491 based on his chronology of Abdera proposed in 1967.

² Fried 1987, p. 3; cf. Price 1987, p. 45. For the date of burial cf. Kagan 1987.

³ E. S. G. Robinson 1961, no. 3; 108. For date of burial cf. *op. cit.*, p. 107; W. P. W. Wallace 1962, p. 42; Kraay 1975, p. 153.

⁴ Mattingly 1977a, p. 92; May's date has been accepted by E. S. G. Robinson 1961, p. 108.

⁵ Cf. Fried 1987, p. 3.

vised chronology, since they fall within the earlier range of issues covered by the Asyut Hoard.¹

This accumulated evidence strongly supports the conclusion that Period II, which May dates to 520/515-492, continues until at least 480. A starting date shortly before 500 seems plausible for Period II, which in turn supports a lowered date for the beginning of coinage at Abdera.

Period III

The 20 groups of Period III (Gr. XXX—L) constitute the main series of Abderite coinage. Periods III and IV are distinctly different from Period II. The octadrachms have disappeared and are replaced by regular issues of tetradrachms, struck in considerable volume and with much greater accuracy of weight at ± 14.90 g.² For the first time triobols are struck, and the output of obols has increased.³ While the tetradrachm issues continue to be struck with the quadripartite incuse square on the reverse, on the fractional issues real reverse types are employed. On the triobols the reverse types are bull's head and lion's scalp, and on the obols there is an eagle's head. These changes have been

¹ Hurter and Pászthory 1984, pp. 112-13, nos. 1, 2. No. 1 is struck from the same die as May 1966, no. 36 (Group XVI). No. 2 with grape-cluster as symbol is probably a little later. The grape-cluster as symbol occurs in Group XVII and XXII.

² For Period III May (1966, pp. 84-85) records 68 tetradrachms with 37 obverse and 33 reverse dies occurring in 40 combinations; in Period IV he records 130 tetradrachms with 52 obverse and reverse dies occurring in 61 combinations. Period III has to be increased by the new dies from the Elmali Hoard; cf. below. For the volume of Period IV see Raven 1967, p. 291.

³ According to May (1966, pp. 84-85) in Period III there were 80 drachms with 12 obverse and 10 reverse dies occurring in 13 combinations; in the first series there were 12 triobols all from the same pair of dies, and 5 obols with one obverse and 4 reverse dies in 4 combinations; in the second series 17 triobols with 2 obverse and 4 reverse dies occurring in 4 combinations and 4 obols with 3 obverse and 2 reverse dies in 3 combinations. For Period IV May records 3 drachms struck from one pair of dies; 12 triobols of the third series with 2 obverse and one reverse die; 16 obols with 7 obverse and 6 reverse dies in 8 combinations; and 2 hemiobols of 2 obverse and 2 reverse dies occurring in 2 combinations.

interpreted to indicate a short break in minting, and possibly a reorganization of the mint.¹

May dates Period III to the years from 492 to 473/470. There is evidence suggesting that the starting date for Period III should be lowered. The majority of coins from Abdera in the Elmali Hoard (*CH* VIII, 48) consists of issues of Period III. There are 13 tetradrachms representing 4 magistrates which come early in the sequence of the issues of Period III.² Instead of 492-473/2, as May suggests, Period III probably starts around 475, and continues with 20 groups until c. 455.

The single Abderite tetradrachm in the Jordan Hoard (*IGCH* 1482) belongs to the same group as the last Abderite coins in the Elmali Hoard.³ The Jordan Hoard was not closed before 450, and the Abderite piece is among the later pieces in the hoard. With Group XLI being in the middle of Period III this fits very well with the revised chronology suggested for Period III.⁴ In addition to the hoard evidence there is also an overstrike of Ainos on an Abderite tetradrachm issued shortly after the last group of tetradrachms represented in the Elmali hoard.⁵ Coins of Period III, from Group XXXVII to L, have also been found in a

¹ May 1966, pp. 68, 82 with note 1; cf. *Asyut*, p. 37.

² See Fried 1987, p. 3. One tetradrachm with the symbol scallop shell above griffin (this symbol is used by magistrates of the Groups XXXII-XXXIV); 3 tetradrachms with the abbreviation ΗΓΗ (Group 36); 3 with ΙΗΝ (Group 39; cf. *op. cit.* pl. 1.8); 6 tetradrachms with the letters ΤΕΛΕ struck from 4 obverse dies, some of them with palmette (Group 41; cf. *op. cit.* pl. 1.9, from same obverse die as May 1966, no. 83). The occurrence of only these groups confirms May's sequence of the issues. The coins do not show any signs of circulation.

³ For the coin from the Jordan Hoard, see Kraay and Moorey 1969, no. 13 (= May 1966, no. 84, Group XLI: ΤΕΛΕ, no palmette). Of the tetradrachms with ΤΕΛΕ and without palmette from the Elmali Hoard no illustration is published. Cf. Fried 1987, p. 3.

⁴ For a closing date of the Jordan Hoard, see Kraay 1977, p. 193; for the Abderite tetradrachm, see Kraay and Moorey 1969, p. 209; Mattingly 1977a, p. 93.

⁵ The overstrike is discussed in detail in chapter 3.1.7.

hoard discovered at the site of Abdera. This hoard contains pieces of Period IV going down to at least Group LVI, probably even further.¹

Period IV

Continuity between Period III and Period IV is attested by stylistic and technical features. Period IV introduces the fashion of placing an inscription around the reverse square. Although a new feature, it does not indicate an interruption of coinage. The last issues of Period III are transitional leading over to the new reverse arrangement. In Group XLIX and L, the last two groups of Period III, the magistrates Herodotos and Phittalos inscribed their names in full on the obverse, not abbreviated as was the earlier practice. Inscribed around the reverse square these two names also appear in the earliest groups of Period IV. The names probably refer to the same magistrates, and May accepts that at least Phittalos during his term of office struck coins with both inscribed and uninscribed reverses. The same could have been true for Herodotos.² Continuity between Period III and IV is also reflected in the style of the griffin types on the obverse. The similarity is such that May thinks the last griffin types of Period III and the first of Period IV can be from the hand of the same craftsman.³

The issues of fractional coinage also point to continuity. In Period IV,

¹ The coins that May attributes to the hoard from Abdera go down to Group LVI (May 1966, no. 147a). Raven (1967, p. 292) suggests more coins might have come from this hoard which he argues might have been concealed during the Athenian campaign against Thasos. Mattingly (1977a, p. 93) finds pieces down to Group LVIII possibly deriving from this hoard.

² See May 1966, pp. 86, 92. Already in Group XLVIII of Period III there is the inscription ΣΜΟΡΔ and a satyr as symbol on the obverse. In Group LIII of Period IV, there is the kantharos symbol on the obverse, and ΕΠΙΣΜΟΡΔΟΤΟΡΜΟΚΑΛ inscribed around the reverse square. This inscription has been explained as Smordos followed by his patronymic (read: ἐπὶ Σμόρδο τῷ Ερμολοκάλῃ ... cf. *op. cit.*, p. 47, note 1). It is not clear whether this is the same magistrate.

³ May 1966, p. 92.

there is no remarkable change in the reverse types of the triobols. Having started in Period III, the second series, the lion's scalp reverse, may have been struck into the early years of Period IV, before the third series of triobols with bull's head on the reverse takes over.¹ The reverse type on the obols is abandoned, probably because of the technical difficulty of producing a reverse type on such tiny coins.²

Because Period IV follows immediately after Period III, the revised chronology calls for a starting date of 455/50. With 20 separate issues, Period IV continues into the 430's, thus covering the decade when according to May's chronology the mint was closed in observance of the Athenian Standards Decree.³ There is no indication that a break of unusual length could have occurred within Period IV.

¹ May 1966, pp. 83, 93-94.

² In Period III there are many fractured dies; cf. May 1966, p. 95.

³ Mattingly (1977a, pp. 92-94) attempts to eliminate the break in the 440's. He accepts 480/79 as ending date for Period II, and thinks Period IV continues into the 440's. His chronology of Period IV is mainly anchored on the issues of Pythes and Nymphodoros (Groups LI and LV) which he dates to c. 450 on prosopographic grounds.

Break Between Period IV and V?

Having dissociated the ending date of Period IV from 449, the date when the Standards Decree allegedly was enacted, one can reconsider whether the numismatic evidence sufficiently supports a lengthy break between Period IV and Period V.¹ The major numismatic argument for a lengthy break between Period IV and V is that the tetradrachms of Period V are struck on a different standard, the reduced Thraco-Macedonian standard of 14.15-13.85 g, as opposed to their earlier norm of ± 14.90 g.² Features typical for Period V are the use of smaller size flans, and the invariable use of a reverse type.³ It is questionable, however, whether this is sufficient evidence for a break of ten years. As pointed out by Barron and Mattingly, a change in weight standard does not necessarily point to an interruption in the output of the mint.⁴ The reduced size of the flans can be understood as directly related to the lowered weight of the coins.⁵

Although it is true that the invariable use of reverse types is characteristic

¹ Before May's study the Abderite coinage was assumed to have been minted without interruption, see e.g. E. S. G. Robinson 1949, p. 333; Erxleben 1970, pp. 102-103. May (1966, pp. 146-147) places the beginning of Period V at 439/7 because of the style of the coinage, the practice of other mints along the coast, and Athens' most likely policy towards Abdera.

² See May 1966, pp. 143-145. The reduced Thraco-Macedonian Standard is thought to be a reduction from the Thraco-Macedonian standard of the third series where the norm for a tetradrachm is 14.73 g. On the whole, in Period V coinage is struck on a smaller scale than in Period IV. The issues of triobols, however, are rather more plentiful than before, and still follow the same weight standard as in Period III and IV. May (1966, p. 144) records 60 tetradrachms with 24 obverse and 37 reverse dies occurring in 38 combinations; 44 tetrobols with 6 obverse and 6 reverse dies in 8 combinations; 29 triobols with 6 obverse and 7 reverse dies in 9 combinations. According to Raven (1967, p. 292) there were only 19 obverse dies of tetradrachms in Period V.

³ May 1966, p. 143; cf. *ACGC*, p. 153.

⁴ Barron 1968, p. 101. Mattingly (1977a, p. 95) rightly observes that May proposes no break between Period V and VI although there is another change in weight standard.

⁵ Mattingly 1977a, p. 94.

of Group V, there are already some examples of this practice in the final issues of Group IV. May himself writes about the reverse types of Period IV Group LX (Molpas), Group LXVIII (Deonysas), and Group LXIX (Artemon): "In the method of presentation these reverses are almost identical with those of Period V, which follow after the short interval imposed by the Coinage Decree."¹

The obverse types bearing the names of Deonysas, or of Artemon, and many other later griffin types of Period IV, are similar in many ways to the obverse types of the early issues of Period V.² Most noticeable is the griffin of Group LXII (Blosys) that is depicted in the act of springing off a plinth. Deonysas' griffin (Group LXVIII) is not dissimilar to this type, and the griffin springing off a short base is very common in Period V.³ The differences between these late issues of Period IV and the early issues of Period V are weight standard and size of flan. However, the unique Deonysas coin (May 1966, no. 186, Group LXVIII) weighs 14.12 g, and thus comes close to the weight standard of Period V.⁴

These considerations suggest that Period V follows after Period IV with little or no delay. Unfortunately there is no hoard evidence available to anchor the groups of Period V. Nineteen issues of this period are recorded. With a revised starting date of c. 430 Period V probably goes down to the last decade of

¹ May 1966, p. 115. Note that Molpas' group was placed earlier because of its obverse type; elsewhere May (*op. cit.*, p. 118) says it belongs to the same time as Deonysas and Artemon.

² May 1966, p. 116.

³ Cf. May 1966, pp. 120-21, 154-55.

⁴ Mattingly (1977a, p. 94) regards the issue of Deonysas (May 1966, no. 186, Period IV) as transitional in scale, size and fabric. Mattingly thinks its reverse square is closer to no. 200 of Period V (Anaxipolis) than to nos. 184, 185 and 187 of Period IV (Blosys and Artemon), and that Artemon and Deonysas can not be split since their obverses share a fine, mature style, and the unique feature of the griffin's tail tucked forward through its hind legs.

the 5th century.¹ This revised chronology also helps account for types reflecting the “Parthenon style” which can hardly have been struck before the temple was completed.²

Break in the 420's?

The revised chronology leaves no room for a break caused by the Standards Decree dated to the 420's. A break at that date, subsequent to Period V and extending from 425 to 411, has been proposed by Mattingly in 1977. Mostly on the basis of the Asyut Hoard he accepts a closing date of 480/79 for Period II. His chronological anchor for Period III is the coinage issued by Pythes and Nymphodoros (Group LI and LV). He identifies Nymphodoros with the Athenian proxenos mentioned by Thucydides (2.29) who won over Sitalkes to the Athenian side, and Pythes as his father. Mattingly argues that the issues bearing Pythes' and Nymphodoros' name are struck around 450, at the time when Nymphodoros concludes a marriage alliance with Sitalkes, and when the family is extremely influential.³ Even if one accepts that the names on the coinage represent these historical persons, it escapes me how it is possible to link the issues to one particular event in the family's history. Mattingly seems to imply that the most influential person or family assumed charge of the coinage, and that coinage was a means for these families to “advertise” their power.

¹ May (1966, p. 143) argues that although the coinage in Period V was struck on a smaller scale than in Period IV, it covered comparatively more years: 26/27 years vs. 25 years in Period IV.

² May (1966, p. 146 with note 5, p. 156) has to go through considerable trouble to account for “Parthenon style” in Group LXXVI (*Athenaios*, May 1966 no. 216, pl.13) which in his chronology would be in the late 430's. According to the revised chronology this group falls into the 420's.

³ Mattingly 1977a, pp. 92-94.

Nowhere is there the slightest evidence that this was the case.¹

Based on his revised date for the Nymphodoros issue Mattingly has Period IV end in the 440's.² As a starting point for Period V he accepts May's date of 439 but he wants to fit the surviving 19 issues of Period V into the years to 425.³ Mattingly attempts to support this chronology by allusions to historical events which he purportedly finds in the coin types. For example he sees in Nikostratos' reverse type, the naked warrior, "at least a side-reference to Sitalkes' famous peltasts and his promised aid to Athens."⁴ He identifies Demokritos, one of the last magistrates of Period V with the famous philosopher. "His turn as a mint-magistrate at Abdera is unlikely to have been any later than 425."⁵

These speculations are an unlikely basis for chronology. Although one can not adhere strictly to a theory of annual issues, it seems safe, in the absence of strong evidence to the contrary, to take the number of distinctive groups—e.g. distinguished by magistrate names—as the *minimum* number of

¹ Mattingly (1977a, p. 94): "...Sitalkes' Abderite marriage should be put c. 450 and the premier position of Pythes' family; which it implies would be suitably advertised by the contemporary issues of Pythes and Nymphodoros." The significance of the so-called "magistrate" names on the coins is still a matter of speculation; cf. Furtwängler 1982.

² Mattingly 1977a, p. 95.

³ Mattingly 1977a, pp. 97-98. Yet he acknowledges new issues might still be discovered (*op. cit.*, p. 97, note 91).

⁴ Mattingly 1977a, p. 98. The Nikostratos issue belongs to Group LXXIX in the middle of Period V.

⁵ Mattingly 1977a, p. 98. According to Diogenes Laertios (9. 34-43) the philosopher came to Athens in the time of Socrates. Mattingly (*ibid.*) puts this event in the 420's.

years covered.¹

Coinage into the 4th Century

May dates Period VI from 411/10 to 386/5, and Period VII from 386/5 to 375, the date of the invasion of the Triballoi.² Although this arrangement is not beyond question I will refrain from a detailed discussion since the dates of these periods have no direct bearing on 5th century chronology. The tetradrachms of Period VI will be treated in some detail under the heading of "Coin standards below."

Coin Standards

The coin standards of Abdera present puzzling problems. In the 5th century there is a general decline in weights, and weights are often very erratic. High denominations and fractional issues can not always be brought into a straightforward relationship. Only rarely can corresponding systems of weights be found at other mints. This makes it very difficult to identify the standards in use. May's frequency tables provide a useful survey of the weights of the coins and the changes that applied to them.

¹ For another misapplication of the theory of annual issues, see Holloway 1967, p. 321. Assuming that the early Abderite coin in the Persepolis deposit was buried within a year or two of its issue, he fits the 68 separate issues from Period I to IV in the period from 517 to 449. Counting backwards from 375, the end of May's Period VII, Holloway arrived at 426 as the date when coinage resumed after the break caused by the Athenian Standards Decree. This methodology cannot be accepted, since it does not seem possible to rigorously translate each issue into one year. Even if annual issues were intended as the rule, there may have occurred irregularities in the minting process. And finally one should allow for the situation that not every issue that was struck may be represented in the surviving corpus of coins.

² May 1966, pp. 177-89.

Period I and II [c. 530- c. 500; c. 500- c. 480]

The octadrachms are struck on a wide range of weights with the heaviest specimen at 29.95 g and the lightest at 29.20 g.¹ Only a few pieces are under 29.50 g, and most pieces are at 29.85 g.² The tetradrachms cover an equally wide range of weights extending from 15.00 g to 14.40 g. Judging from the extant material the norm could have been around 14.80 g.³ There is a single issue of didrachms with only two known weights of 7.38 g and 7.6 g.⁴ Four drachms and 6 obols are recorded with weights between 3.65 and 3.0 g, and 0.72 and 0.55 g respectively.⁵ These weights can be interpreted as belonging to the Third Thraco-Macedonian weight standard only if one allows for very careless observation of the theoretical weights.⁶

Period III and IV [c. 475—455/50; 455/50—c. 430]

The plentiful tetradrachm issues of Period III and IV provide a much better basis for metrological analyses. Most weights are recorded between 14.95 g and 14.80 g with very few coins above 14.95 g. The norm is certainly at ± 14.90

¹ May 1966, pp. 9-10. Lighter specimens are chisel-cut or in a poor state of preservation.

² Acc. to (May 1966, p. 9, table I) 5 pieces are at 29.5 g, with 20 being heavier, and 5 lighter. All octadrachms from the Asyut and the Antilibanon hoard were over 29.55 g with 4 pieces over 30.20 g. If one adds the Asyut coins to May's frequency table, most coins [6] are at 29.85 g.

³ To the 25 specimens recorded by May (1966, p. 10, table II) the two tetradrachms from the Asyut hoard with weights over 14.80 g can be added.

⁴ May 1966, pp. 10-11. The coin at 7.38 g is heavily gashed.

⁵ The weights (after May 1966, p. 11) are: 3.0 g; 3.40 g; 3.2 g; 3.65 g (drachms); 0.55 g; 0.57 g; 0.59 g (2); 0.65 g; 0.72 g (obols).

⁶ For the theoretical weights of the Third Thraco-Macedonian Standard, see May 1966, p. 8, note 4. May (*op. cit.* pp. 10-11) puts the drachm with the third Thraco-Macedonian series where the norm is 3.68 g. He thinks the high denominations are struck on the 'Abderite' standard of 14.90 g which was in use during Period III and IV. Cf. below for my arguments against the 'Abderite' standard.

g.¹ Drachms are plentifully struck in Period III, but hardly at all in Period IV. Their norm clearly was between 3.35 and 3.30 g.² The norm of the triobols is between 1.60 g and 1.50 g, which is observed very accurately in Period IV.³ Most of the obols weigh between 0.55 g and 0.50 g.⁴ There are also a few specimen of Period IV hemiobols recorded with weights under 0.21 g.⁵

The fractions relate to the drachm, and are struck lighter than their theoretical weight. With regard to the tetradrachm the fractions are grossly underweight.⁶ May proposes that the fractional coinage was struck for local circulation, and that it does not follow the same weight standard as the tetradrachms which were supposedly struck mainly for export. According to May the fractions of Period III and IV are struck according to the Second Series of Thraco-Macedonian weights.⁷ If this was the case, then the weights do not match very accurately. The Abderite drachm would be overweight, while the smaller fractions were underweight.⁸

¹ May 1966, pp. 12-13, table III.

² May 1966, pp. 13-14, table IV.

³ May 1966, pp. 14-15, tables V and Va.

⁴ May 1966, pp. 15-16, table VI.

⁵ May 1966, p. 16.

⁶ Theoretically a drachm of 3.35 g corresponds to a tetradrachm of 13.40 g, thus being 1.5 g too light for the tetradrachm of 14.90 g.

⁷ May 1966, pp. 5-6, 8 with note 4, pp. 12-16. The system of Thraco-Macedonian weights has been reconstructed by Doris Raymond (1953, pp. 18-42).

⁸ In the second Thraco-Macedonian series the drachms would weigh 3.27 g; the triobol 1.64 g; the obol 0.545 g; the hemiobol 0.27 g. Cf. May 1966, p. 8, note 4; Raymond 1953, pp. 23-24. Cathy Lorber and Kevin Cheek [unpublished manuscript] interpret the drachms as a trite based on a stater of 9.82 g (First Thraco-Macedonian Standard; see May *ibid.*), and the triobol as a hekte. The theoretical weight of the trite is 3.27 g, and of the hekte 1.64 g.

Identification of the Standard Employed Until 430: The Theory of Bimetallism

The tetradrachm of ± 14.90 g does not fit with any known weight standard. May calls it the 'Abderite' standard, and explains Abdera's choice of this standard for its high denomination by the fact that it is easily convertible into units of Persian gold.¹ May also contends that the octadrachms and tetradrachms of Period I and II, in spite of their erratic weights, are minted on the ± 14.90 g standard to ensure convertibility with gold.²

But bimetallism is an insufficient explanation for these weights. Considering the erratic striking in Period I and II it does not appear very likely that the silver currency has been adjusted to a gold ratio.³ May supposes that the Abderite silver was struck for export to countries within the Persian empire, where "the inhabitants thought naturally in terms of gold."⁴ Whether this was the case or not, in these regions coinage was essentially treated as bullion, and coins were weighed rather than counted.⁵ Therefore why would one have wanted to adjust the individual pieces to the current gold ratio? No other mint that exported silver to the same markets adopted a bimetallic standard. What incentive could there have been for Abdera to do so?⁶

According to May's theory the Abderite tetradrachm of ± 14.90 g tallied

¹ May 1966, pp. 16-18, 82.

² May 1966, pp. 9-11.

³ Holloway 1967, p. 321.

⁴ May 1966, p. 17.

⁵ Cf. Kraay 1969, pp. 44-45.

⁶ Cf. Holloway 1967, p. 321; Raven 1967, p. 295.

with a gold piece of 8.35 g.¹ But the gold Daric of this weight was introduced only at the end of the 6th century.² This seems difficult to reconcile with May's early date for the heavy pieces at Abdera.³ Persian influence in the Aegean was declining after 480 which makes it equally difficult to account for the weights of the tetradrachms in Period III and IV by easy convertibility into Persian gold. May thought that in spite of these changed circumstances, Abdera's market for the silver remained largely the same.⁴ This is supported by hoard evidence for Period III, but not for Period IV, in which there are no hoards from within the Persian empire recorded.⁵

Implications of the Tribute Record for 454/3

In addition to the numismatic material there is another crucial piece of evidence available to help identify Abdera's coin standard. The tribute record of 454/3 states that Abdera paid the odd amount of 12 talents and 5,120 drachms.⁶ This sum has never been explained, and its far-reaching implications previously have been overlooked.

The tribute lists reflect the sums of money as they were counted and/or

¹ Assuming the gold to silver ratio was 13 1/3 : 1, then 7 1/2 silver tetradrachms of ± 14.90 g matched one gold daric of 8.35 g. Cf. May 1966, p. 17 note 2.

² Cf. Root 1988, pp. 5, 11. *Terminus ante quem* for the Type II Daric is 500. In the opinion of E. S. G. Robinson (1958, pp. 188-91) the weight of 8.35 g probably was adopted around 515.

³ May (1966, pp. 9-11) places the heavy octadrachms at the beginning of striking, between 540 and 535.

⁴ May 1966, p. 18.

⁵ Cf. Kraay 1969, p. 45.

⁶ *ATL* 3, p. 270. Abdera's quota for 454/3 is recorded as 1,285 drachms and 2 obols, the sixtieth of a tribute payment of 12 talents and 5,120 drachms.

weighed when they were received in Athens. Thus the lists are drawn up in the Attic alphabet with Attic spellings, and the amounts of silver are reckoned in Attic units of weight.¹ Most payments are recorded in round numbers. It has been argued that odd amounts in the tribute records may have resulted from the conversion of round sums in non-Attic currencies into units of Attic silver.²

In the years in which Abdera's tribute is recorded down to 433/2 the city always pays 15 talents. The odd amount of 12 talents and 5,120 drachms occurs only in 454/3, the first extant list. The authors of *ATL* estimate that in that year the actual assessment was also 15 talents, but they have no explanation for the discrepancy between the assessment and the amount recorded.³ But the odd amount corresponds almost precisely to 15 talents on the third Thraco-Macedonian standard.⁴ This is not only a round number, it is also the same sum that Abdera pays in the following years. The implication is that in 454/3 Abdera made its payment in 15 talents of the local weight standard instead of Attic talents. Upon arrival in Athens, when the tribute was reckoned in terms of Attic units it amounted only to 12 talents and 5,120 drachms. In the years thereafter Abdera always pays 15 Attic talents of silver, as Athens expected it to do.

This is strong evidence for the use of the third Thraco-Macedonian standard at Abdera. However, as expounded above, the actual weights of Abderite silver coins do not match this standard. They are of very erratic weights, and

¹ Cf. Eddy 1973, pp. 47-48.

² E.g. Eddy (1973) tries to explain some odd amounts as payments made in Kyzikene electrum staters. Cf. Mattingly 1977a, pp. 90-92; Lewis 1987, pp. 62-63.

³ The amount of 15 talents given by *ATL* (3, p. 20) is an estimate, not the actual record. Cf. *op. cit.*, pp. 19-20, 269.

⁴ With an Attic drachm of 4.3 g, the 12 talents and 5,120 drachms would be 331.616 kg of silver. Fifteen talents on the third Thraco-Macedonian standard amount to 331.200 kg of silver with a drachm of 3.68 g (with a drachm of 3.685 g it would be 331.650 kg).

when in Period III and IV the weights of the tetradrachms are more carefully observed, their norm falls at ± 14.90 g which is 0.17 g above 14.73 g, the theoretical norm of the Third Thraco-Macedonian standard. Yet, when in 454/3 the Abderites weighed out the silver for the tribute to Athens they used the Third Thraco-Macedonian standard.

The implications of these findings are rather disconcerting. In most cases, it is only through frequency tables that numismatists can find out about weight standards. But Abdera's case reveals that the actual weight norm of the coins as derived from frequency tables can differ considerably from the standardized weight with which it should be identical. It also shows that large amounts of coined silver—like tribute payments—were definitely weighed and not counted.¹ To facilitate tribute collection Athens had to ensure that the cities weighed their tribute on an attic standard, and this was quite unrelated to the actual weights of the coins used in the payment.

May's proposition of a separate Abderite Standard therefore has to be rejected. Although the actual norm of the tetradrachm is at ± 14.90 g Abdera's standard is the third Thraco-Macedonian with an ideal tetradrachm of 14.73 g.² Coins for export were probably assessed by weight rather than denomination. The fractional pieces were getting constantly lighter. They probably circulated mainly locally, and may have been exchanged at their fiduciary value rather than as bullion.³ The Third Thraco-Macedonian weight standard is related to

¹ If Abdera had counted out 15 talents, the total amount of silver would not have corresponded to the theoretical standard, but rather to the actual weight norm of the coins.

² This identification was already made by Raymond 1953, pp. 24-27; cf. Raven 1967, p. 295.

³ The light tetrobols of the early Macedonian kings were not only lighter but even debased with copper, see *ACGC*, p. 142; Kraay and Emeleus 1962, pp. 20ff.; Hersh 1991.

several coin standards in use in Northern Greece, e.g the tribal coinages from which Abdera probably had adopted it, the coinage of Alexander of Macedon, and most notably, the Thasian stater of 9.82 g.¹

Coin Standards after 430

In Period V coinage is struck on a much smaller scale than before. The denominations are tetradrachms, tetrobols, and triobols. The weights of the tetradrachms range between 14.10 g and 13.80 g with most coins being struck between 14.00 and 13.90 g. This is a reduction of almost one gram from the earlier standard of ± 14.90 g. This standard is often referred to as 'reduced Thraco-Macedonian.' It is the standard on which Maroneia strikes staters in the first half of the 5th century, and which it uses for its issues of tetradrachms struck since c. 460/450.² Abdera's tetradrachms are accompanied by triobols holding the same norm (1.50–1.60 g) as in Period III and IV, and struck now in greater quantity.³

Early in Period V (Group LXXIV) the mint of Abdera produces one rather large issue of coins weighing between 2.80 and 2.55 g. Following the Greek system of division by three or four these pieces cannot be related to the contemporary tetradrachm or triobol. The fraction can be understood, however, as

¹ Cf. Raymond 1953, pp. 23-38. Alexander struck a tetradrachm of 13.08 g and a triple stater of 29.46 g (= 2 x 14.73 g). Great fluctuation in weight also is characteristic of the tribal coinage and of the coinage of Alexander and Perdikkas.

² Cf. May 1966, pp. 20, 23.

³ These fractions can be understood as hekte following the third Thraco-Macedonian standard, or as triobols of the second Thraco-Macedonian standard. In both cases the theoretical weight is 1.64 g. They could also pass for grossly underweight triobols corresponding to the 'reduced Thraco-Macedonian' standard of the tetradrachms with a theoretical norm of 1.75 g.

a fifth, or a so-called Asiatic drachm, of the contemporary tetradrachm.¹ The weight is that of a Persian half-siglos, and thus it corresponds to the weight standard that is in use at the mint of Ainos, that is used widely in the areas of former Persian influence. Probably Abdera's striking of fractions that are one fifth the weight of its tetradrachm, is influenced by the large output of fractional coinage at Ainos during Period II.² The most plentiful issues at Ainos are struck probably around 435. They must have circulated in quantity along the Thracian coast, and probably also in the hinterland. It is only fair to assume that Abdera's "Asiatic drachms" are struck for the same purpose. The compatibility of Abdera's coinage with its neighboring cities Ainos and Maroneia indicates that markets closer to home became more important. Coinage is no longer struck primarily for export, but rather is supposed to circulate along the Thracian coast and in the hinterland.

The general decline in the size of Abdera's output could indicate that Abdera's access to silver resources has been obstructed by the developments that took place in the Pangaion region (e.g. the foundation of Amphipolis in 437/6). At the same time, Abdera still must have been relatively prosperous as is attested by its high assessment of 75 talents together with Dikaia-by-Abdera in 425.

Coinage into the 4th Century

Although the coinage of Period VI and after has no direct bearing on 5th century chronology I want to discuss the standard of the high denomination of Period VI, since it may serve to exemplify some problems related to the interpretation of coin standards. The norm for the heavy piece is between 12.60 and

¹ I owe this observation to Cathy Lorber and Kevin Cheek [unpublished manuscript].

² The weight norm of an Ainos tetrobol is between 2.80 g and 2.70 g, and of a diobol between 1.35 g and 1.25 g; see May 1950a, p. 267.

12.40 g, more than a gram less than in the previous period. This piece should probably be called a stater rather than a tetradrachm.¹ The weight of this piece is well above the Aiginetic standard.² But May identifies the standard as Aiginetic, and interprets its adoption as an intentional pro-Peloponnesian statement.³ It is mostly on the basis of this presumed political context that May places the starting date for Period VI at 411/10, the time when Abdera is probably in revolt from Athens.⁴ However, the revised chronology suggests that Period V continues into the last decade of the 5th century, and the political motivation for the change of standard is not beyond doubt. In the history of Abdera this would have been the first time that Abdera uses its choice of coin standard to make a political statement. If this particular coin standard has such distinctly anti-Athenian symbolic value, how will one explain that it is maintained after 407, when Abdera has been recovered by Athens?⁵ If Abdera in choosing its coin standard is motivated by its political allegiance, why should it then strike its coins consistently above the Aiginetic standard? This is especially hard to understand in view of the fact that this was a period when Abdera obviously was short on silver as the bronze issues and the reduced volume of silver coinage clearly demonstrate.⁶

¹ Cf. May 1966, p. 26 with note 2. There is also a half-unit with a norm between 6.11 g and 6.02 g.

² Note the various norms that have been proposed for the Aiginetic stater: Gardner (1918, p. 114): 12.44 g; Hill (*CAH5*, p. 132) 12.30 g; *ACGC* (p. 329): 12.2 g.

³ May 1966, p. 179; cf. *ACGC*, p. 155.

⁴ Cf. May 1966, pp. 179-83.

⁵ Cf. *ACGC*, p. 155: "... though Abdera was recovered in 407, Athenian power in the last years of the Peloponnesian war was not sufficient to secure the abandonment of the standard, which from the number of named annual issues remained in use until c. 386."

⁶ Cf. the survey in May 1966, p. 178.

At least from the second half of the 5th century on, it seems that in the choice of its standards Abdera is influenced by standards that are in use along the Thracian coast. This can hardly have been intended as a statement of political allegiance, but rather indicates that these coinages circulated together, and that the same weight standard allowed to exchange the one for the other. This is demonstrated by the accordance of the fractional pieces with those produced by Ainos. In a period when Abdera's silver trade is oriented towards markets along the Thracian coast or in the hinterland, this practice also makes sense for the higher denominations. Like in Period V, Abdera chose its standard in Period VI probably with a view to neighboring Maroneia, which strikes staters of the same weights.¹

The debasement of the weights is an ongoing process at Abdera throughout the 5th century. Along with revolt, siege and Athenian recovery, Abdera probably experienced problems with the silver supply. It is therefore unlikely that the choice of standard was primarily politically motivated. The debasement was necessitated by the scarcity of silver. In the choice of the standard, considerations of expediency, such as easy exchange with other coinages in the area, play a major role.

Conclusions

The reexamination of Abderite coinage has shown that the chronology proposed by May is too high. Abdera does not start minting before c. 530. Mainly on the basis of the Asyut Hoard (*IGCH* 1644) and the Elmalı Hoard (*CH* VIII, 48) the ending date of Period II has to be brought down to at least 480. Period III then covers the years from c. 475 to c. 455/50. Period IV follows immediately,

¹ Cf. Schönert-Geiss 1987, pp. 24-27. From c. 411/10 to 398/97 Maroneia struck staters with most weights between 12.50 and 12.19 g. There is no indication of a revolt at Maroneia.

and continues into the 430's. There is no break between Period IV and V. Period V extends to the end of the 5th century. There is no evidence for an imposed break of 10 years either in the 440's or 420's. This has been confirmed by continuity in the stylistic and technical development of the coinage. In the coinage of Abdera of the 5th century no break is found which could reflect the closing of the mint due to an Athenian ban of local coinage.

An irregularity in the tribute record results from Abdera's use of its local standard in 454/3 when weighing out the silver that was to be sent to Athens as tribute. In the years thereafter the payments are recorded in round sums which indicates that Abdera weighed its tribute on an Attic standard. This is completely independent from the weight standard on which the coins are struck. The use of local weight standards complicated the tribute collection, and Athens must have insisted on the use of an Attic standard—to weigh the tribute, not to strike the coins.¹ The Athenian Standards Decree, whatever its specific terms, was probably a response to problems of a similar kind.

Abdera uses the Third Thracian-Macedonian weight standard in its first four periods of coinage. Afterwards the weights of its coins correspond to those in use at the neighboring cities of Maroneia and Ainos. This indicates that Abdera aimed at compatibility with the currencies alongside which its own coinage circulated.

¹For this purpose standard weights must have been brought to the allied cities, and must have been kept there.

Figure 5 - Abdera: Chronology

Period	May's date	revised date
I	540—520/15	c.530—c.500
II	520/515—492	c.500—c.480
III	492—473/2	c.475—455/50
IV	473/2—449/8	455/50—c.430
V	439/7—411/10	c.430—c.405

Figure 6 - Abdera: Summary of Weights

	Period I and II	Period III and IV	Third Thraco-Macedonian	Period V	
denomination	actual norm	actual norm	theoretical	actual norm	cf.
octadrachm	29.95–29.50 g	—	29.46 g	—	
tetradrachm	15.00–14.80 g	±14.90 g	14.73 g	14.10–13.90 g	Maroneia
didrachm	7.38 g; 7.36 g	—	7.36 g	—	
drachm	3.65–3.00 g	3.35–3.30 g	3.68 g	—	
tetrobols	—	—	<u>2nd Th. - Mac</u>	2.80–2.55 g	Ainos
triobol	—	1.60–1.50 g	1.64 g	1.60–1.50 g	
obol	0.72–0.55 g	0.55–0.50 g	0.545 g	—	
hemiobol	—	0.21 g	0.27 g	—	

3.1.5 Dikaia-by-Abdera

Dikaia is a city of moderate size compared to its neighbors Abdera and Maroneia. Its coinage stopped before the second half of the 5th century. The Athenian Standards Decree therefore does not concern Dikaia. I have nevertheless included Dikaia in my survey of Greek mints, since its coinage provides reference points for the chronology of other mints.

Topography

In the Athenian Tribute Lists Dikaia is referred to as Δίκαια παρ' Ἄβδηρα to distinguish it from another Dikaia, an Eretrian foundation on the Thermaic gulf.¹ The exact site of Dikaia is unknown. According to the ancient sources it was at the seaward mouth of Lake Bistonis, on a narrow peninsula.² Abdera was to the south-west, on the same side of the lake, about ten miles away. Maroneia was to the east, on the other side of the lake, about twenty miles away.³ Lake Bistonis divides the alluvial plain that extends from the Nestos to Maroneia. Since Lake Bistonis stretches back to the mountains in the north, this was a tough spot for traffic going east-west. The traffic either had to squeeze in between the mountain ridge and the lake, or it had to go along the shore, and this route probably led over the peninsula where Dikaia was situated.⁴

As a trading post along this road Dikaia may have profited from its control

¹ A variation for Δίκαια παρ' Ἄβδηρα is Δίκαια παρὰ ἡβδηρα; cf. *ATL* 1, pp. 264-65.

² Dikaia is thought to have been south or south-east of modern Porto Lagos. Cf. *ATL* 1, pp. 517, 544; Lazarides 1971, p. 45 with maps. The most important ancient sources are Hdt. 7.109; Skylax 67; Strabo VII frg. 43; 46. Cf. also May 1965a, pp. 1-2 and Isaac 1986, p. 109.

³ May 1965a, p. 2.

⁴ For a description of the terrain, cf. Casson 1926, pp. 9-10 with fig. 8. It is likely that since antiquity the shore line has changed somewhat; cf. May 1965a, pp. 1-2.

over the mouth of the lake, i.e. control over the east-west route.¹ In Northern Greece, however, the more important trade routes are those that lead into the interior of Thrace. Dikaia has no direct access to any of these routes, and thus it always remains a site of minor importance. There may have been a harbor in the lake, but without a connection to the interior, it can hardly have attracted much traffic.² The coastal plain is fertile, but without mineral resources.³ Like Abdera, Dikaia probably got its silver from the Mt. Pangaion region.

History

It is not known when Dikaia was founded, or by whom. Since Dikaia's coinage has the head of Herakles as its obverse type, it has been suggested that Herakles was the oikist, and Samos the mother city.⁴ Herakles is said to have dug the seaward outlet of Lake Bistonis in his Thracian Labor. He appears therefore on the coins of Dikaia as a figure of local mythology, and one need not necessarily assume he was also oikist.⁵

If there was any connection with Samos, it might be reflected in the bull's head, a Samian type, which Dikaia employs as its reverse type on the di-drachms of Period II. This type occurs on Abdera's first series of triobols as well,

¹ Cf. May 1965a, p. 2.

² Cf. May 1965a, p. 2; Isaac 1986, p. 110.

³ Cf. Isaac 1986, p. 110; May 1965a, p. 2.

⁴ This has been suggested in analogy to Perinthos, a Samian foundation where Herakles was the oikist. Cf. Gardner 1918, p. 192.

⁵ Cf. Raven 1967, p. 293. The ancient sources for Herakles' Thracian Labor are Strabo VII frg. 44; Pindar, P. Oxy. 2450.1: fr. 169 Sn³.

and Dikaia could have adopted the type from its neighbor.¹ In any case, the head of the head type indicates a commercial relationship rather than evidence for colonization.²

Apart from some entries in the Athenian Tribute Lists little is known of Dikaia during the 5th century. By analogy to other cities on the Thracian coast, some guesses can be made about its history. One may assume, for example, that Dikaia had come under Persian dominance.³

It is not known when Dikaia first joined the Athenian League. Probably it was not among the original members.⁴ It might have joined alongside with Abdera, but, unfortunately, we do not know when Abdera joined either.⁵ It has been suggested that Abdera joined the League around 477/76, the time when the Persian garrison at Eion fell. But this date should be regarded as *terminus post quem*, not as an absolute date.⁶

In the first extant lists of 454/3 Dikaia is recorded as a tributary member of the Delian League. Up to 447/6 Dikaia paid half a talent, and in 446/5 and

¹ May 1965a, pp. 2-3.

² May 1965a, pp. 2-3. Furthermore, the bull's head-type, is not the only reverse type in use at that time at Dikaia. The cock is used on didrachms, drachms, and triobols. Because of the cock Babelon (Traité 2.1, p.1222) thinks Karystos in Euboia was Dikaia's mother-city. But the use of the same type is not sufficient evidence for colonization.

³ Hdt. 5. 2; cf. Schönert-Geiss 1975, p.15; but cf. *ibid.* p. 16 note 2: "... sofern es [Dikaia] tatsächlich unter persischer Kontrolle gestanden hat ..."

⁴ According to *ATL* (3, p. 217) it might have been excluded because it was beyond the geographical limits of the area which was included in the first assessment. Cf. *ibid.*, p. 194.

⁵ Schönert-Geiss 1975, p. 15; May 1965a, p. 19-20.

⁶ Cf. May 1965a, pp. 19-20: "We do not know at what precise time Dikaia joined the Delian confederacy, but it seems unlikely that she would have preceded her larger neighbor Abdera in such a course. Abdera, herself, may not have joined till after Kimon's successful Eion campaign of 476, and Dikaia's entry was probably contemporary." Cf. *ATL* 3, p. 217 note 106.

445/4 it paid 2,000 drachms.¹ In 443/2 Dikaia is absent from the full panel. In the lists of 442/1 and 440/39 the amount of the payment is not preserved. In the assessments of 435/4 and 434/3 it was probably half a talent, the amount that is also recorded in 432/1. Dikaia is again absent from the full panel in 430/29. In 425/4 Abdera and Dikaia were reassessed to make the joint payment of 75 (?) talents. In 421, they probably again made a joint payment of the same amount.

Dikaia's entries can be interpreted by analogy to what is known about other cities in the area, and the factors influencing their tribute. In 443/2 also Dikaia's neighbor Abdera is absent from a full panel. In 432/1, the year following the revolt of Potidea there is a drastic decline in the number of tributaries in the Thraceward district. Abdera has its tribute reduced from 15 to 10 talents, while Dikaia pays its full amount.² In 430/29, when Abdera again contributes ten talents, Dikaia is absent from a full panel.

This is all that can be said about Dikaia on the basis of the sparse historical record. Some more information can be gleaned from Dikaia's coinage, although the numismatic material is not plentiful either.

Chronology of Dikaia's Coinage

Dikaia's coinage has first been studied by May in 1965.³ A decade later, when more material has become available, Edith Schönert-Geiss refined the die study in some points while following May in the main points.⁴

¹ *ATL* 1, pp. 264-265. The amount is restored in the record of 454/3.

² Cf. Meiggs 1972, pp. 252-53; see also 3.1.4 above.

³ May 1965a. The article was published only after May's death.

⁴ Schönert-Geiss 1975. All references to coins in this chapter are to the numbers in Schönert-Geiss 1975, unless otherwise indicated.

Dikaia issues silver coinage in a variety of denominations.¹ The obverse type is usually the head of Herakles.² The moderate output of Dikaia's mint falls into two periods. The second period is marked by the introduction of a reverse type which replaces the earlier simple incuse punch. According to the traditional chronology Dikaia's coinage starts c. 540/35, and the first period ends in 492. The second period has traditionally been dated from c. 492 to 476/5. The chronology will be reexamined on the basis of hoard evidence, and by comparing style and technique of Dikaia's coinage with neighboring mints.

Period I

In Period I distaters, staters, and some fractions are struck. All the denominations have the head of Herakles on the obverse, and a punch type on the reverse. From the development of style and fabric it appears that the staters are struck first, followed by the fractions, and finally by the distaters.³

The staters of Period I are struck on a thick and dumpy flan. Their reverse punches evolve from a diagonally crossed incuse square to a type in which one or two of the resulting triangles are bisected, "as though the die-cutter was feeling his way towards the full 'Union Jack' pattern."⁴ All reverse punches with a diagonal division are referred to as 'Series A.' The reverses with a quadripartite incuse square are referred to as 'Series B.'⁵

¹ For attribution problems concerning the coinage of Dikaia-by-Abdera, see Schönert-Geiss 1975, p. 16 with notes 7-9; p. 18; May 1965a, pp. 3-4.

² Except for the very small issue of triobols in Period II with the head of Herakles is on the reverse.

³ Cf. May 1965a, pp. 9-10.

⁴ May 1965a, p. 9.

⁵ Cf. May 1965a, p. 9.

Several staters of Period I come from hoards from Egypt, buried in the early years of the 5th century.¹ In the Adana Hoard (*CHI*, 4), buried in the early years of the 5th century, there was also one stater of Period I.² A fragment of one stater and 3 distaters of Period I are included in the Asyut Hoard (*IGCH* 1644), buried 475-465.³ Based on the earliest occurrence in a datable hoard context, c. 510 should be proposed as *terminus ante quem* for these staters.

Except for one specimen the staters in the above mentioned hoards have diagonally sectioned reverse squares of the “quasi Union-Jack” type.⁴ This reverse type dates to the years before c. 510-490. It is preceded by the earliest coins which have a plain diagonally divided reverse square. Of these very early coins only three specimens are known.⁵ Their reverses are of rough and uneven surface and, according to May, similar to the first reverses of Thasos and “Lete.” The coinage of Thasos and “Lete” probably starts not before the last quarter of the 6th century.⁶ The development of the reverse punches suggests that Dikaia starts minting a little later than Abdera did, and probably shortly be-

¹ Demanhur Hoard (*IGCH* 1637), c. 500–495: nos. 12, 13, 15; Sakha Hoard (*IGCH* 1639), 500-490: no. 10; Mit Rahineh (*IGCH* 1636), c. 500: no. 11. Cf. Schönert-Geiss 1975, p. 21 note 4; Price in *CHI* 3,2 with fig. 1:1. The stater no. 13 from the Demanhur Hoard shares its obverse die with a coin that was found in Afghanistan (no. 14). No. 14 was probably not part of the Balkh Hoard (*IGCH* 1820); cf. Troxell and Spengler 1969, pp. 18-19. A stater (no. 15/2) in the Hoard *IGCH* 1185, buried c. 500, is die-linked to another stater in the Demanhur Hoard (no. 15). On the Hoard *IGCH* 1185, see Kagan 1992.

² E. S. G. Robinson 1973, p. 231 no. 5. This coin is struck from the same obverse die as no. 11 which was part of the Mit Rahineh Hoard (*IGCH* 1636).

³ Stater: *Asyut* no. 144; distaters: *Asyut* nos. 145-147.

⁴ Nos. 10-14. Only one stater in the Demanhur Hoard has the quadripartite incuse square (15).

⁵ Nos. 7-9 struck from three different pairs of dies.

⁶ Cf. May 1965a, p. 9; for a revised chronology cf. *Asyut*, p. 35. For early coins of Thasos and “Lete” with diagonally divided reverse, see e.g. *IGCH* 1185 nos. 4, 5 (Thasos), and 12,13 (“Lete”).

fore Maroneia.¹ A date of c. 525 for the beginning of coinage at Dikaia can be reconciled with the hoard evidence as well as with the development at the neighboring mints.

The latest obverse in the series with the diagonally divided reverse square appears more developed than the earliest obverse of the series with the quadripartite reverse.² This suggests that although Period I starts with staters of Series A, and ends with staters of Series B, the two series may have overlapped. This hypothesis is supported by the fact that the Demanhur Hoard contained both the last known specimen of Series A, and the earliest known specimen of Series B.³ This means the quadripartite reverse square was in use already before c. 500-495, the burial date of the Demanhur Hoard. With only three pairs of dies extant, Series B could have ended c. 505/0. This date is compatible with May's stylistic assessment of the obverse of the latest stater which, on stylistic grounds, he places at the last decade of the 6th century.⁴

The fractional coinage suggests as well that there was an overlap between Series A and B. According to May all the fractions have reverses with diagonally crossed incuse squares.⁵ The obverse of the latest fraction appears influenced by the obverse of the latest stater which has a quadripartite incuse

¹ May 1965a, p. 9; Schönert-Geiss 1987, p. 5.

² May 1965a, p. 10. One of the latest obverses of Series A (no. 13) is from the Demanhur Hoard. The earliest obverse of Series B (no. 15) is also from the Demanhur Hoard.

³ As May 1965a, pp. 9-10 puts it: "While we may be sure that series A begins well before B, and that B continues after A, it is by no means certain that all the type A incuses on the staters are prior to the introduction of those of type B." Cf. Dressel and Regling 1927, p. 30.

⁴ May 1965a, p. 10 estimates that the latest obverse (no. 17) "must bring us to the last decade of the sixth century and leads directly to the first of the magnificent types of the double-staters A.13 [= no.1/2]."

⁵ May 1965a, p. 10; but Schönert-Geiss (1975, p. 25) describes reverse of the trite no. 18 as an irregularly divided incuse.

square.¹ May thinks that the last fraction “is probably contemporary with the first double staters at the end of Period I.”² If so the fractional coinage would also provide a link between the staters at the beginning of Period I, and the distaters at the end of Period I.

All the distaters have the plain incuse divided into four very unevenly finished squares.³ The earliest obverse (no. 1) comes from the Delta Hoard (*IGCH* 1638). The Delta Hoard was buried c. 500-490, and the distater must therefore have been struck earlier.⁴ The earliest distater was probably struck c. 500, for the obverse is very similar to the last of the staters and to the last of the fractions.⁵ Around 475-465, when the Asyut Hoard was buried, Dikaia's distaters had already mostly replaced the staters. A starting date of c. 500 for the distaters would also correspond to the development of their reverse types which invariably was the quadripartite incuse square. Comparable incuses were in use at Abdera in Period I and early Period II.⁶

The ethnic appears first on the obverse of the distaters. The letters ΔΙΚ are inscribed in retrograde under the head of Herakles. The epigraphic obverses (nos. 4-6) belong to the end of Period I, but there is also a die-link with an

¹ May 1965a, p. 10.

² May 1965a, p. 10.

³ Schönert-Geiss (1975, p. 23) has 7 specimens with 4 anvil and 5 punch dies occurring in 6 combinations. This number must be increased by 3 specimens found in the Asyut Hoard (*Asyut* nos. 145-147). It seems that the distaters in the Asyut hoard were all struck from previously unknown dies.

⁴ *Asyut*, p. 20.

⁵ May 1965a, p. 14 even thinks the obverse of the last stater and the obverse of the earliest distater could have been cut from the same hand.

⁶ According to the revised chronology Period II at Abdera started c. 500. See above 3.1.4.

anepigraphic obverse.¹

May arrived at a date for the distaters by comparing the style of the head of Herakles on the obverse to works of art in other media. He compares especially the obverse of the earliest distater (no. 1) to the "Rampin" horseman dated to the middle of the 6th century, and also to the Kyknos metope from the Athenian treasury at Delphi dated to 510-500.² He compared also (no. 3) to some metopes of the Athenian Treasury, and to some Herakles painted by Euphronios, and dated to c. 510-500.³ These comparisons, however, should not be interpreted as yielding absolute dates for Dikaia's distaters. For on the one hand, coin types tend to be archaizing, on the other hand there may be variances in the development of local styles.⁴

It is justified to propose c. 500 as starting date for the distaters. Given the small size of the series it probably did not last longer than c. 485. This date would also leave enough room for the distaters to travel to Egypt, especially since the anepigraphic specimens in the Asyut hoard are probably not the last coins of the issue.

Period II

In Period II a greater variety of denominations is struck. The obverse type

¹ No. 3 (anepigraphic) shares its reverse with the epigraphic no. 4. Cf. Schönert-Geiss 1975, p. 17.

² May 1965a, pp. 14-15. For the "Rampin" horseman, cf. Payne and Mackworth-Young 1950, p. 6 note 1; Seltman 1948, p. 47; for the metopes of the Athenian treasury, cf. Richter 1950, pp. 126-27.

³ May 1965a, p. 15. The Herakles painted by Euphronios are on the Geryon kalyx in Munich (cf. Furtwängler and Reichold 1967 vol.1, p. 100 with pl. 22), and Herakles struggling with Antaios on a Louvre kalyx (cf. *op. cit.* vol. 2, p. 173).

⁴ Cf. *ACGC*, pp. xx-xxi.

is again the head of Herakles, but on the reverse 'real' types have replaced the plain incuse square. The triobols are the most common denomination in Period II.¹ The reverse type is a cock in an incuse square with dotted border. The cock holds a worm in its beak. Most of the triobols are anepigraphic. The letter Δ on the obverse appears only in the later part of the series (from no. 46 on). Since the triobols are stylistically very close to the latest coins of Period I, Period II must have followed with little or no break.² In May's assessment some of the triobols could even be contemporary with the distaters of Period I.³ The obverse design of the triobols resembles very much the head of Herakles on the distater obverse (no. 1), although gradually a more naturalistic treatment of the lion's mane is attempted.⁴ Judging from their obverse style May thinks that none of the triobols needs to be later than the first didrachms or drachms.⁵

Apart from one specimen which has the cock as its reverse type all didrachms have on the reverse a bull's head in an incuse square without a dotted border.⁶ The bull's head type is almost identical to the one used on the reverses of Abderite triobols, and the two reverses should be roughly contemporary.⁷ May gave the Abderite triobols with the bull's head a starting date of "a little be-

¹ Schönert-Geiss (1975, pp. 27-29) has 42 specimens with 14 obverses and 12 reverses occurring in 20 combinations.

² May 1965a, p. 17.

³ May 1965a, pp. 13-14, 17.

⁴ May 1965a, p. 17.

⁵ May 1965a, p. 17.

⁶ No. 27 has as a reverse the cock in incuse square with dotted border.

⁷ Cf. May 1965a, p. 18.

fore 480.”¹ According to the revised chronology a date of c. 470 seems more likely. Around that time the didrachms at Dikaia could have been struck as well. It is also not impossible that Dikaia's didrachms preceded Abdera's triobols.² A starting date of c. 470 would also agree with May's assessment that the style of the head of Herakles on the obverse of the didrachms has advanced by at least one decade compared to the distaters of Period I.³

The earliest drachm obverses are very similar to the head of Herakles on the triobols.⁴ The obverses of the later drachms are of a clearly advanced style.⁵ Therefore the last drachms were probably issued when the triobols were already discontinued. On the smallest denomination—the trihemiobols—the obverse and reverse types are reversed. Thus the head of Herakles is on the reverse in an incuse square, while on the obverse, there is the cock on a short groundline. For the first time symbols appear on the obverse. On nos. 52-53 there is a Θ above the cock, and on no. 54, there is an amphora. In May's assessment the trihemiobols are later than the triobols as well.⁶

The Second Period of Dikaia's coinage lasted c. 20 years, and could have come to an end c. 465. May dates the end of Dikaia's coinage to 476/5, when Dikaia allegedly joined the Delian League.⁷ There are some problems

¹ For the chronology of the Abderite triobols cf. May 1966, pp. 93-94; cf. May 1965a, pp. 3, 18.

² Cf. May 1965a, pp. 2-3.

³ May 1965a, p. 19.

⁴ May 1965a, p. 19.

⁵ May 1965a, p. 19 with Schönert-Geiss 1975, nos. 30-31.

⁶ May 1965a, p. 19.

⁷ May 1965a, pp. 19-20.

with this assumption. First of all, Dikaia's coinage cannot be dated so precisely that a date within a year or two could be justified. Second, it is not known when Dikaia joined the League. The date of 476/5 is possibly a *terminus post quem* for Dikaia's League membership. If one accepts a connection between Dikaia's joining of the League and the end of its coinage, then coins could still have been struck beyond 476/5. It is of course purely hypothetical that Dikaia's coinage ended with its League membership.¹

Weight Standards

The staters and distaters of Period I follow the First Thraco-Macedonian standard with a theoretical weight of 9.82 g for the stater. Judging from the small number of extant weights, they may be slightly underweight.² Maroneia starts its coinage with staters on the same standard, and so does Thasos.³ Dikaia's smaller fractions are probably triobols on the Third Thraco-Macedonian standard, with a theoretical weight of 1.83 g.⁴ In the Second Period, the plentiful triobol issues adhere to the same weight standard with most pieces between 1.65 g and 1.84 g.⁵ The Third Thraco-Macedonian weight standard is used for all denominations in Period II. The weights of the didrachms are evenly dis-

¹ The assumption even appears somewhat arbitrary, since in the cases of other cities League membership and tribute payments are sometimes taken to account for an increased output of coinage; e.g. Maroneia's first issue of tetradrachms has been seen as connected to its first appearance in the tribute lists of 454/3.

² The 13 recorded weights for the staters range between 9.39 g and 9.92 g. For the distaters Schönert-Geiss (1975, p. 23) records 7 weights ranging between 18.36 g and 19.32 g. Note, however, that 2 of the 3 distaters from the Asyut Hoard are rather heavy (19.62 g; 19.74 g).

³ For Thasos, see 3.1.3; for Maroneia, see 3.1.6.

⁴ Schönert-Geiss 1975, p. 21 records the following weights: 2.01 g; 1.98 g; 1.87 g; 1.79 g. There is one heavier fraction of 2.86 g. Cf. May 1965a, pp. 5-6.

⁵ Cf. May 1965a, pp. 6-7 with frequency table for triobols.

tributed between 6.97 g and 7.39 g.¹ Compared to the theoretical weight of 7.36 g most specimens are slightly underweight. This is true also for the drachms. The theoretical weight of a drachm according to the Third Thracian-Macedonian weight standard is 3.68 g, and most of the recorded weights are between 3.45 g and 3.69 g. Only the weights of the trihemioobols are concentrated around their theoretical norm of 0.91 g.²

Apart from the small series of staters on the First Thracian-Macedonian standard, Maroneia struck all of its earlier coinage on the Third Thracian-Macedonian standard.³ In its Second Period Maroneia issued three series of drachms, all clearly on the Third Thracian-Macedonian standard and matching the weights of Dikaia's drachms. In a revised chronology Period II at Maroneia should probably be dated from c. 490 to c. 475.⁴ This means that Dikaia's output of drachms follows very soon after Maroneia's. In Period III, starting c. 475, Maroneia issues a variety of denominations, all on the Third Thracian-Macedonian standard. The coinages of Maroneia and Dikaia could easily circulate together, since they were interchangeable.

In May's opinion Dikaia adopted the Third Thracian-Macedonian standard because it sought to be commercially independent of Abdera, and preferred to turn towards Maroneia instead.⁵ This interpretation is based on the assumption

¹ Twelve of the 13 weights recorded by Schönert-Geiss (1975, p. 26) are between 6.95 g and 7.39 g.

² Of 13 recorded weights 7 are between 0.85 g and 0.94 g.

³ Cf. Schönert-Geiss 1987, p. 4. The fractions of Maroneia's First Period may have been underweight. For the tetrobols there are only two weights recorded, and for diobol and obol only one each.

⁴ See 3.1.6.

⁵ May 1965a, p. 8.

that Abdera uses a particular "Abderite" standard for its high denominations. I have shown, however, that in spite of irregular striking, Abdera adheres to the Third Thracian-Macedonian system of weights, at least for its high denominations.¹ Dikaia does not debase the weights of the fractional coinage as much as Abdera does, but keeps its understriking more in the range of Maroneia's weights. This is probably done to ensure compatibility with the Maroneitan currency. The traffic between Maroneia and Abdera passed through Dikaia. Abdera's fractions could not be substituted for Dikaia's, or if they were it was at Dikaia's loss since they were lighter. But that might not have been such a problem since Abdera was only c. 10 miles away, and Abderitean money could be spent there easily. Maroneia, however, was not only twice as far away, but also on the other side of Lake Bistonis. It might have been more important for Dikaia to keep its currency compatible with Maroneia's, since if Maroneitan money remained in Dikaia it could not be spent that easily. This does not preclude any commercial involvement with Abdera. All this reasoning is of course entirely hypothetical, but it illustrates that various explanations for the adoption of particular coin weights can be found.

There are also other indications of a connection between Abdera and Dikaia. As noted above, the bull's head type on the reverses of Dikaia's didrachms could have been borrowed from Abdera.² A trihemionbol of Period II (no. 55) has been found near Abdera. Furthermore, there is the joint assessment of Abdera and Dikaia in the Athenian Tribute Lists of 425 and 421.

The coins of Dikaia traveled to the same areas as the Abderite coinage, although in much smaller quantities. Distaters and staters of Period I have

¹ See 3.1.4.

² May 1965a, pp. 7-8.

been found in Egypt, in the interior of the Persian Empire, and in Asia Minor.¹ The coins of Dikaia's Period II probably circulated more locally, and some specimens were found in the Thraco-Macedonian area.²

This is all that can be said about Dikaia, its history and coinage. Like its neighboring mints Abdera and Maroneia, Dikaia used standards that were familiar in the region. Although Dikaia's coinage ceased too early to be affected by the provisions of the Athenian Standards Decree, its chronology is of help in dating the early issues of other mints, most importantly those of Maroneia.

¹ Cf. May 1965a, p. 7; Schönert-Geiss 1975, p. 21 note 4. More recent finds are the Adana Hoard (*CHI*,4) and the Asyut Hoard.

² Skione on the Chalkidike (near Mende): didrachm no. 27; Macedonia: drachm no. 29/5; near Abdera: trihemionbol no. 55.

3.1.9. Maroneia

Topography and History

Ancient Maroneia is situated midway between the Hebros and Nestos rivers, about 4 km south from a modern settlement that bears its name.¹ Maroneia is close to the shore, and it is likely that it had a harbor. Maroneia also had easy access to the hinterland as it is situated south of a pass that cuts through the Rhodope mountains.²

It is not known whether Maroneia was an original member of the Delian League.³ From 454/3 down to the end of the 440's Maroneia pays one and a half talent tribute. This is quite a small sum.⁴ In 436/5, 435/4 and 434/3 its tribute rises to 10 talents. It is absent in the list of 431. After 430 it is registered with 3 talents.⁵ It is possible that Maroneia's tribute was already reduced in 433/2. The lowering of Maroneia's tribute coincides with the rising of Odrysian power under Sitalkes I and Seuthes I. while at the same time Athens' influence in the region is weakened because of Brasidas' campaigns.⁶

It is possible that in 411/10 Maroneia like other Greek cities defected from Athens, although it is not mentioned in our historical sources.⁷

¹ Cf. Schönert-Geiss 1987, p.1; May, 1965b, p. 27; cf. *ATL* 1, pp. 517-18.

² For Maroneia's trade with the interior, cf. Meiggs 1972, p. 61.

³ Meiggs, 1972, p. 52.

⁴ E.g. Abdera paid 15 talents at that time; cf. May, 1965b, p. 30.

⁵ Cf. Meiggs 1972, p. 253.

⁶ Cf. Schönert-Geiss 1979b, pp. 446-47; see also 3.1.7.

⁷ Schönert-Geiss (1987, p. 24) thinks Maroneia revolted, although she acknowledges the lack of any historical record.

Chronology of Maroneia's Coinage (see plate 4)

The coinage of Maroneia has been the subject of a monograph by Edith Schönert-Geiss.¹ For the first half of the 5th century Schönert-Geiss has mostly adopted the chronology of May.² The obverse type of Maroneia is a horse, and in the first issues a horse protome. The reverse evolves from a punch of irregular shape with rough surface to a more formalized quadripartite square. In Period II there are reverses with a floral star. Like on other coinages of Northern Greece, in Period III an inscription is placed on a band around a central quadripartite square. The next series adopts the vine with grapes as the central reverse type.

Maroneia uses several coin standards over the 5th century. In its first three Periods Maroneia strikes on the Third Thraco-Macedonian Standard. Already in Period III the coins tend to be struck underweight. In Period IV and V Maroneia adopts a reduced version of the Thraco-Macedonian standard. Maroneia's weight standards correspond to those in use at Abdera, and it is likely that there was some degree of coordination between these mints.³

Problems in Chronology

The first hoard that contains coins of Maroneia dates to the early 4th century. In the absence of a recorded hoard context for coins of the 5th century one has to resort to a comparative evaluation of style and technique. "Style" can be a misleading chronological criterion, because skillfulness of execution depends largely on the artistic level of individual die-cutters. The development of the re-

¹ All references to coins in this chapter are to the numbers in Schönert-Geiss 1987, unless otherwise indicated.

² May 1965b.

³ Cf. *ACGC*, p. 153.

verse punch die undergoes a development which is technical rather than stylistic. In the execution of the reverse certain trends or fashions are discernible among the mints of Northern Greece. Although these changes do not occur at all the mints at precisely the same moment, they indicate a general timeframe of maybe ten to fifteen years.¹ The letter-forms of the reverse inscription are of limited use since archaic letter types can be used deliberately. Neatness of execution is a better criterion. Once a balanced distribution of the letters around the reverse square has been achieved, it can be imitated even by die-cutters of a less advanced personal artistic level.² To some extent this is also true of the vine that features as a central reverse type. The arrangement of vine and grapes can be copied even by a die-cutter who is unable to achieve a skillful rendering of the details.

Because of the absence of hoard evidence my chronology for the 5th century coinage of Maroneia can only be very approximate, and a range of five to ten years should be allowed for any absolute date. Relative dates, i.e. the duration of issues, are problematic, too. The chronological implications of magistrates' names and symbols are not entirely clear. Previous studies have spread the issues evenly over time, allowing only for one long break attributed to the Standards Decree. However, there is no reason to assume that the output of an ancient mint was continuous as a rule. Production depended on the need for coined money and on the availability of silver. Short interruptions were nothing out of the ordinary. In order to discern any impact of the operation of the Standards Decree, one is looking for an extraordinary, clearly discernible break. Although in the case of Maroneia, it is difficult to establish absolute dates for the

¹ However, sometimes individual mints do not adopt these reverse fashions; e.g. Thasos adheres to the anepigraphic quadripartite incuse square until the end of the 5th century.

² Cf. Kraay 1977.

individual issues, one can look for so extraordinary an interruption as to indicate the operation of the Standards Decree.

Period I (c. 520—510/05) [c. 520-c. 485]

The mint of Maroneia starts production on a very small scale with a series of staters, followed by some fractional coinage.¹ These early coins are anepigraphic with the forepart of a horse on the obverse, and reverse punches with irregular incuse squares. Like on the earliest issues of the neighboring mints of Abdera and Dikaia-by-Abdera the flan is thick and dumpy.

The three reverse punches of the staters of Period I are completely different from reverses later in use at Maroneia.² On two specimens (nos. 1, 2) the reverse square is divided by two diagonal lines, a reverse type familiar from Dikaia-by-Abdera.³ The incuse on the earlier coin (no. 1) is rather rough, and has an uneven surface. On the second coin (no. 2) the surface is less rough and the diagonal lines are somewhat more regularly aligned. On the third extant stater (no. 3) the incuse square is divided into four quarterings, the more usual reverse arrangement in Northern Greece. The surface of this punch is uneven and roughly stippled. Similar reverses are known from the early coinage of Dikaia-by-Abdera and Abdera.⁴

¹ Of the staters only 3 specimens are known, struck from 3 different obverse and reverse dies. Of fractions there are 2 tetrobols struck from 2 sets of dies (nos. 4,5), one diobol (no. 6) and one obol (no. 7). For coins wrongly attributed to Maroneia, see May 1965b, p. 29; Schönert-Geiss 1987, p. 3 note 3.

² May 1965b, p. 35.

³ Schönert-Geiss 1987, pp. 4-5. The reverse punch of no.1 is comparable to Dikaia-by-Abdera, Schönert-Geiss 1975, no. 7-9. The reverse of no. 2 is comparable to Dikaia-by-Abdera (*ibid.*) no. 10.

⁴ No. 3 comparable to Dikaia-by-Abdera, Schönert-Geiss 1975, no. 16; for Abdera, cf. May 1966, nos. 12-18.

According to the revised chronology the specimens of Abdera and Dikaia-by-Abdera that are comparable to Maroneia's staters of Period I are dated after 530/25. Maroneia's coinage is unlikely to have started earlier. This date is in keeping with the stylistic assessment of Maroneia's obverses which May dates not earlier than 520.¹

The earliest extant fraction of Maroneia is the tetrobol no. 4. Its reverse square is similar to the quadripartite incuse of the last stater of Maroneia (no. 3).² The other fractions are of a slightly more advanced style.³ The production of the fractional coinage therefore started only after the last staters were struck. The characteristic feature of Maroneia's fractions is that the quarterings of the reverse square have an uneven surface and are pressed deeply into the flan. Since the flans of Maroneia are thick and dumpy the deep impression produces a bulging border around the punches. This is very similar to the reverses of the fractions at Dikaia-by-Abdera, struck towards the end of Period I, c. 485.⁴ A simi-

¹ May 1965b, p. 36 "The Maroneia staters nos. 1-2, the work on the obverses of which is not unskillful, are unlikely to have appeared before the last quarter of the sixth century, and it would be difficult to place them earlier than c. 520." Schönert-Geiss (1987, p. 5) approves of May's date of c. 520 for the early coinage of Maroneia "... da seine Vs. [Vorderseite] bereits erste Ansätze einer detaillierten Linienführung zeigt, besonders deutlich zu erkennen bei Kopf und Mähne des Pferdevorderteils." Cf. *ACGC*, p. 154.

May's main argument (1965b, pp. 29-30) for the starting date of c. 520 for Maroneia's Period I is the size of the early issue compared to the issues of Abdera and Dikaia-by-Abdera. At Maroneia, there is less material which in his opinion warrants a date before the last years of the sixth century, and thus he assumes that Maroneia's coinage starts 15 or 20 years later than the first issues at Abdera and Dikaia-by-Abdera. With starting dates for Abdera and Dikaia of 540 and 540/35 respectively this yields a starting date of c. 520 for Maroneia's coinage, a date that coincides with the *terminus post quem* proposed on stylistic grounds. The size of the output, however, is not always a reliable indicator for the length of the time period over which the coinage was struck. A production that was small and irregular may cover the same number of years as a plentiful coinage.

² Schönert-Geiss 1987, p. 5.

³ Cf. Schönert-Geiss 1987, p. 4.

⁴ Cf. May 1965a, nos. 10-12. The dies are very worn, but the square is neat and regular. Cf. 3.1.5.

lar reverse technique is used at Abdera on drachms and fractions of Period II. However, at Abdera, the flans are flatter and do not produce a bulging border.¹ While the quarterings are as heavy as at Maroneia, the cross is more regular, and the punch more evenly sunk into the flan. Compared to Maroneia this reverse technique is more advanced. According to the revised chronology Period II at Abdera lasted from c. 500 to c. 480, and Dikaia's Period I ended c. 485. Judging from their technical and stylistic development, the fractions at Maroneia could have been roughly contemporary with Dikaia's, and slightly earlier than Abdera's. Thus they could have been struck until c. 485, which thus dates the end of Period I at Maroneia.

Period II (510/05–495/90) [c. 485–c. 475]

In Period II only drachms are struck. There are three different reverse types: a stellate flower within the incuse square; an incuse square with a dotted border, and the four letters MHTI in the four quarterings of the square; and finally the anepigraphic quadripartite incuse square.² The obverses have a dotted border around the type with the horse protome and the letters MAP or MAPΩ next to it. On some obverses there is a grape symbol.³ The forepart of the horse is rather short, and the neck is elongated. The mane is brushed stiffly forward and ends abruptly between the pointed ears. The legs of the horse are thin and

¹ Drachms: Abdera, May 1966, nos. 55-56; obols: *ibid.*, nos. 57-58; cf. May 1966, p. 73; *idem* 1965b, p. 36 note 1.

² For origin and significance of the floral reverse type, see May 1965 b, pp. 38-39.

³ Schönert-Geiss 1987, p. 5. The grape symbol occurs on nos. 10, 19-21. According to May (1965b, p. 38) MAP(Ω) does not stand for the ethnic but for Maron, the mythical founder of the city.

bent in a very steep angle.¹ Due to their clumsy workmanship the obverses appear rather early.²

The series with the anepigraphic reverse square has the more skillful obverses and therefore belongs to the end of the Second Period.³ The relative position of the coins with the letters MHTI on the reverse is established through a die-link with the series that has the floral reverse type. The obverse die V 8 is first used with a floral star reverse R 10 (no. 17), and then in already worn condition with the MHTI reverse die R 11 (no. 18). In even more worn condition, the same obverse V 8 is combined again with the same floral star reverse R 10 (no. 17/6). Only one reverse with the letters MHTI is known (R 11). It occurs in combination with two obverses: the above mentioned (V 8) that is also combined with the floral reverse type, and another of rather crude style (V 9).⁴ This indicates that the MHTI series was rather small, and that it only briefly interrupted the series with the floral star reverse.

The anepigraphic reverse squares of Period II are of advanced style compared to the last coins of Period I. The outline of the square is drawn neatly, and the four quarterings and the central cross are quite regular. The surface is no longer rough and uneven but either smooth or granulated. The skillful rendering of this design suggests that these reverses are cut late in Period II. The mint of Abdera produces comparable reverses in Period II and III, i.e. according

¹ Schönert-Geiss 1987, p. 9; May 1965b, p. 38. On V 7 and V 8 the mane ends in a conically shaped crown of curls, resembling a bunch of grapes.

² Cf. May 1965b, p. 37.

³ Nos. 22-26; cf. Schönert-Geiss 1987, p. 9; May 1965b, p. 37-38.

⁴ May 1965b, p. 40; Schönert-Geiss 1987, pp. 7, 9. May (*ibid.*) describes the obverse A 13 as “... a remarkable mixture of crudity and comparatively skillful detail.”

to the revised chronology c. 480/75.¹ This seems an appropriate closing date for Period II at Maroneia.²

The rendering of the obverse type of the last series of drachms points forward to the drachms early in Maroneia's Third Period.³ The body of the horse is skillfully modeled and the details are meticulously treated. On the obverses of Period III the horse protome is generally longer, but head and forelegs are still treated in a manner very similar to the type of Period II. This indicates that both periods followed with little or no interruption.⁴

Period III (c. 495/90—449/48) [c. 470—c. 445/40]

In Period III a variety of denominations is struck. There are didrachms, drachms, triobols, diobols, and trihemioobols. The drachms provide the bulk of the coinage.⁵ The fractional issues are very small. There are abbreviations of the ethnic on the obverse. For the first time at Maroneia, there are also magistrates names. Several different reverse types are in use. All denominations are struck on the Third Thraco-Macedonian standard with didrachms and drachms tending towards reduced weights.

¹ Schönert-Geiss (1987, p. 9) compares the reverses R 12 and R 13 (nos. 20-21) to the reverse May 1966, no. 45 in Abdera's Period II. She further finds some similarity between reverses R 14-17 (nos. 22-26) and the reverses of the drachms May 1966, nos. 65-66 early in Abdera's Period III. For the revised chronology of Abdera's series, see 3.1.4 above.

² May (1965b, pp. 37-38) dates Maroneia's drachms with the quadripartite reverse square (nos. 22-26) to the decade at the turn of the 6th to the 5th century. He admits, however, that both the beginning and the ending date may be outside these limits.

³ May 1965b, p. 41.

⁴ Cf. May 1965b, p. 38.

⁵ May 1965b, p. 32. According to May (*ibid.*, p. 45) there were 14 obverses and 18 reverses occurring in 17 combinations. Schönert-Geiss (1987, p. 15) records 21 obverse and 24 reverse dies in 33 combinations.

Didrachms

In Period III there are three different series of didrachms.¹ The first series has the magistrate's name Archembrotos on the obverse (ΕΤΙ ΑΡΧΕΜΒΡΟΤΟ), and a simple quadripartite incuse square as the reverse type. In the second series, the inscription ΜΑΡΩ appears on the obverse type, while a quadripartite reverse type is used. The didrachms of the third series have no inscription on the obverse, but the ethnic ΜΑΡΟΝΙΤ(Ε)ΩΝ around the reverse square.

The first series of didrachms that has the magistrate's name Archembrotos on the obverse is not very large.² As on the obverse types of the last drachms of Period II, the mane of the horse is pointing stiffly upwards, and the legs are in a very sharp angle.³ The lettering of the inscription is also similar to that of the previous period. The modeling of head and body, however, is done with greater skill than on the drachms of Period II and the forepart of the horse generally is longer.⁴

The skillfulness in the rendering of the quadripartite incuse square already observed on the last drachms of Period II, is brought to greater perfection on the reverse squares of the Archembrotos didrachms.⁵ Parallels for the reverses of the last drachms of Period II at Maroneia have been found in coins of Abdera's Period II and III. The more advanced reverses of the first didrachms in

¹ At May's time the second series of which only one pair of dies exists was not known. Thus May 1965b, p. 32: "...two distinct series, separated by a considerable interval of time."

² There are three obverse and reverse dies occurring in four combinations.

³ Cf. May 1965b, p. 45; Schönert-Geiss 1987, p. 13.

⁴ Cf. May (1965b, p. 45) on the archaic appearance of the obverses V 1 and V 2: "... due to the lightness of the inscription and also to the sparse treatment of the mane and the meagre delineation of the forelegs." But the modeling of head and body is more advanced than on the types of Period II, and comparable to some of the earliest drachms of Period III.

⁵ Schönert-Geiss (1987, p. 13) compares the reverses R 2 and R 3 of nos. 28-30 with the last drachms of Period II, especially with R 17 of no. 25 and no. 26.

Maroneia's Period III are comparable to those of Abdera's first tetradrachms of Period III.¹ In these series both mints produce very regular incuse squares, and their treatment of the surface is very similar. In accordance with the traditional starting date of c. 492 for Period III at Abdera, May dates the Archembrotos series at Maroneia to immediately after 495/90.² According to the revised chronology Abdera's Period III starts only c. 475, and that in turn lowers the date of Maroneia's Archembrotos series to c. 470.³

After the completion of May's study a unique didrachm (no. 31) has come forth that has on the obverse the inscription ΜΑΡΩ and a quadripartite incuse square on the reverse. This coin is very similar to the Archembrotos didrachms except for the lettering which is neater and closer to the lettering of the following series. This unique coin has a position intermediate between the first and the third series of didrachms.⁴

The obverse types of the third series of didrachms are generally of an advanced style. Only the earliest didrachm has a rather crude obverse with the forepart of the horse being still rather short.⁵ On the rest of the series the forepart of the horse is longer and the style is considerably more advanced. The horse has lost its previous stiffness and is treated more freely. The preoccupation with formal detail and stylization is gone. The body is skillfully mod-

¹ Schönert-Geiss (1987, p. 13) compares them especially to May 1966 Abdera nos. 60 and 61; cf. May 1966, pl. IV.

² May 1965b, p. 45.

³ For Abdera's revised chronology, see 3.1.4. Note that on the basis of the inscription Jeffery (1990, pp. 365, 370, no. 31) accepts a date in the the second quarter of the 5th century for the Archembrotos didrachms.

⁴ Cf. Schönert-Geiss 1987, p. 14.

⁵ V 5 of no. 32; cf. May 1965b, p. 48.

eled, and the mane is delicately rendered.¹

On the reverses of the third series of didrachms there is the full ethnic MAPONITΩN or MAPONITEΩN on a band around a small central quadripartite incuse square.² The small central square has a roughly stippled surface with flat or slightly convex quarterings. This particular reverse arrangement—an inscription on a band around a small central quadripartite incuse square—occurs also at Abdera on tetradrachms of Period IV.³ The beginning of Period IV at Abdera has been conservatively dated to 473/72. The revised starting is c. 460/55.⁴ Because of their untidy lettering May compares the earliest inscribed reverses from Maroneia in particular to the Abderite coins issued under the magistrates Pythinnes II and Nestis. He therefore suggests a date of 470-60 for the earliest inscribed reverses at Maroneia.⁵ In May's opinion the didrachms with the ethnic around the reverse square cover the second half of Period III. According to May Period III ends at 449, when the Standards Decree supposedly brought minting at Maroneia to a halt.⁶

Kraay compares the reverses of Maroneia's third series of didrachms to the first inscribed reverses of Akanthos. Writing in 1976 he still accepts the traditional starting date of c. 470 for Akanthos' second period. Assuming that

¹ Cf. Schönert-Geiss 1987, p. 14; May 1965b, p. 48.

² There are 4 obverse and 6 reverse dies.

³ May (1965b, p. 48) compares them to the tetradrachms of Abdera (May 1966) nos. 126-163; pl. 8-10. At Abdera usually the magistrate's name is put around the reverse square, except for May (*ibid.*) nos. 142-150 which have the ethnic ABΔHPITEΩN around the reverse square.

⁴ See 3.1.4.

⁵ May 1965b, p. 48. Pythinnes II and Nestis are Abdera Group LVII and Group LVIII, nos. 151-155, cf. May 1966, pp. 130-1, pl. IX; X.

⁶ May 1965b, pp. 33, 47-48.

Maroneia introduces the inscription around the reverse square at the same time as Akanthos does, he dates the beginning of Maroneia's third series of didrachms to c. 470. Because of its small size he thinks the issue lasted only one decade, until c. 460.¹

Edith Schönert-Geiss dates the introduction of the inscribed reverse at Maroneia some years earlier. In her assessment a date shortly after 476/5 is compatible with the style of the didrachms. This date allows her to interpret the appearance of the full ethnic ΜΑΡΟΝΙΤΕΩΝ as an expression of Maroneia's pride in its freedom from Persian dominance.² Although attractive, this hypothesis is built on weak grounds. First of all, the date of 476/75 as the end of Persian dominance at Maroneia is not entirely securely established.³ Second, the use of the full ethnic need not necessarily reflect this particular political background. If it does, how would one then explain the appearance of the full ethnic on the coinage of Mende or Akanthos where this particular political situation does not apply?⁴ The change in the reverse style is better explained as a reaction of the die-cutters or minting authorities to certain regional trends that are of a formal or aesthetic nature and not caused by a particular political situation.

In Northern Greece the fashion of placing an inscription around the reverse square is first introduced by Alexander and the Macedonian tribes.⁵ Many

¹ *ACGC*, p. 154; cf. Kraay (1977, pp. 191-92) downdates the beginning of Akanthos' Period I to after 470, probably c. 465.

² Schönert-Geiss (1987, p. 14; cf. *eadem* 1979, p. 441) uses the term "lokal-nationales' Bewußtsein."

³ Cf. Meiggs, 1972, pp. 52-53.

⁴ May (1966, pp. 86-87) connects the appearance of unabbreviated magistrates' names on the reverse of Abdera's coinage with the liberation of Persian rule. Accordingly he dates these issues to c. 476.

⁵ Cf. Kraay 1977, pp. 190-92; Raymond 1953, nos. 45-75; pl. 6; 7.

of the Northern Greek mints adopt and modify this reverse design at some point during the 5th century. The first experiments with a reverse inscription on the coinage of Alexander cannot be dated before 470, and thus any other coinage that adopted this design must be dated after 470.¹ The date of 476/5 for Maroneia's earliest inscribed reverses is unacceptable.

The lettering on the reverses of Maroneia's didrachms of the third series has an undeniably early appearance. The letters are thick and rounded, and their positioning is rather unsteady. These features also occur on pieces of Alexander Group I and early in Alexander Group II, dated not later than c. 465.² Similar untidy inscriptions are also typical of the early reverses at Abdera in Period IV, dated c. 455/50. Especially on the coins that have the ethnic ABΔHPITEΩN around the reverse square (May 1966 nos. 142-150) not only the letter forms, but also the positioning of the letters is similar to the reverses at Maroneia.³

A common feature of Maroneia's early didrachms with the ethnic on the reverse, of Abdera's tetradrachms with the reverse inscription ABΔHPITEΩN (May 1966 nos. 142-150), of the Alexander octadrachm (Raymond 1953 no. 46a) of Group II, and of the earliest reverses from Akanthos' Period II (Desneux 1949 nos. 93; 94, pl. 14) is the slanting *N*. On the coins from Maroneia and Abdera the lettering is thick, rounded and unstable. On the reverses of Akanthos the letters are crisp, slender and straight—except for the slanting *N*. This re-

¹ Kraay 1977, p. 192; cf. also Kraay and Moorey 1981, pp. 2-3 with note 5: the inscribed reverse cannot be earlier than 465.

² For Alexander Group I cf. Raymond 1953, pl. 3:1; 4:5; Kraay 1977, pl. 15: 2. For Alexander Group II cf. Raymond 1953, pl. 6: 45a, 46a, 48a, 53.

³ May (1965b, p. 48, nos. 151-155; *idem* 1966, pp. 130-31; pls. 9, 10) compares Maroneia's early reverse inscriptions in particular to Groups LVII and LVIII at Abdera, the groups that in his arrangement follow the coins with the ethnic around the reverse square.

verse arrangement comes much closer to symmetry than on the reverses of Abdera and Maroneia. The fashion of placing the inscription around the reverse square was first invented in the Macedonian regal coinage where it developed rather quickly towards a neat and symmetrically arrangement.¹ Akanthos adopted this type at a stage when it had already developed thin and straight letters—with exception of the slanting *N*,—and when it aimed at, but had not yet fully achieved a symmetrical arrangement. The city of Akanthos is very close to the area of Macedonian influence, and therefore it was able to fashion its reverses after the latest coins of Alexander. However, Abdera and Maroneia are further to the east, and influences from Macedonia are likely to have reached these cities later. Thus in spite of their clumsy appearance the inscribed reverses of Maroneia should be placed later than the Alexander coins of Group I and early Group II, of which their lettering is reminiscent. They are certainly after 465, and were probably struck around 455.

Drachms

The drachms provide the bulk of coinage in Period III at Maroneia.² The output of the mint is considerable, and probably more than one pair of dies is in use at one time.³ On the obverse there is again the horse protome, and on the reverse there is a ram's head in an incuse square. Most of the obverses have the ethnic in various abbreviations. On one obverse there is a barley grain as a

¹ Cf. Raymond 1953, pl. 6.

² May 1965b, p. 32. According to May (*ibid.*, p. 45) there were 14 obverses and 18 reverses occurring in 17 combinations. Schönert-Geiss (1987, p. 15) records 21 obverse and 24 reverse dies in 33 combinations.

³ Several dies show traces of hard wear. Cf. May 1965b, p. 45.

symbol, on others there is one or several globes.¹ On some of the reverses are initials or abbreviations of magistrates' names.²

The drachms of Period III probably follow very soon after the last drachms of Period II.³ The earliest obverse (V 1, no. 39) is very much in the spirit of the last horse protomes of Period I. The legs are still in a very steep angle. There is a high degree of stylization most obvious in the rendering of the mane. These features, in particular the detailed treatment of the neck, are also typical of the Archembrotos didrachm (nos. 27-30), the first series of didrachms in Period III.⁴ The obverses V 2-4 of the drachm series are combined with reverses with the letters ΠΟΛ. If the reverse inscription ΠΟΛ indicates the term of a new magistrate, then these drachms were minted after the Archembrotos didrachms.⁵ As the series progresses there is some development in the modeling of the body and the rendering of the details on head and forelegs.⁶ The series closes with two anepigraphic issues, which are similar to the third series of didrachms with the ethnic around a central reverse square. Therefore the anepigraphic issues should be dated to c. 455, or later, the time when the di-

¹ Cf. Schönert-Geiss 1987, p. 14. Anepigraphic obverses: nos. 39-71; ΜΑΡΩΝΟΣ: nos. 39-43; ΜΑΡΩ: nos. 56-58; 67; ΜΑΡ: nos. 45-55; 61-66; ΜΑ: nos. 44; 59-60; barley grain as a symbol on no. 44; one globe: no. 59-60; globes nos. 61-66.

² ΠΟΛ on nos. 40-44; nos. 48-53: Α; nos. 64-65: ΑΘΗ. The series starts with the ram's head to the right, superseded by reverses with the ram's head to the left. The head on the later types tends to be bigger than on the earlier ones. Cf. May 1965b, pp. 45-46.

³ May (1965b, p. 44) dates the beginning of the drachm series in Period III to the second decade of the 5th century.

⁴ Cf. especially V 2-4 of the drachm series.

⁵ Cf. Schönert-Geiss 1987, p. 16; May 1965b, p. 46.

⁶ More skillful obverses are e. g. nos. 61-63, 67. Cf. May 1965b, p. 46.

drachms with inscribed reverse were struck.¹

In Period III Maroneia also struck triobols, diobols, and trihemioobols.² All fractions are anepigraphic and probably were struck in the earlier years of Period III.³

Ending Date for Period III

May dates the end of Period III to 449, the year when in his opinion the Standards Decree is enforced.⁴ This date has also been accepted by Edith Schönert-Geiss.⁵ The numismatic evidence alone, however, does not account for this date. As pointed out above, it is not possible to assign precise dates to Maroneia's issues since dating for the most part has to rely on a comparison of stylistic and technical development. On the basis of style May suggests for the last issues of Period III " ... a date approaching the middle decades of the century."⁶ He narrows this date down to 449 on the basis of conclusions drawn from the fragmentary and controversial epigraphic evidence relating to the Athenian Standards Decree. As discussed elsewhere, from an epigraphic point of view the date of 449 for the enforcement of the Standards Decree is not securely es-

¹ Cf. May 1965b, p. 47. The anepigraphic drachms are nos. 70 and 71. May (*ibid.*) compares them to the didrachms May nos. 49-54.

² Schönert-Geiss records 6 obverse and 6 reverse dies of the triobols occurring in seven combinations. Of diobols and trihemioobols there are 2 obverse and 2 reverse dies each, occurring in 2 combinations each.

³ Cf. Schönert-Geiss 1987, p. 16; May 1965b, p. 47. The reverse dies resemble the last reverses of Period II and those of the Archembrotos didrachms.

⁴ May 1965b, p. 48.

⁵ Schönert-Geiss 1987, pp. 10, 17.

⁶ May 1965b, p. 46 on the drachms nos. 61-63, 67.

established. Therefore the epigraphic material cannot be used to establish absolute dates for the series of coinage. In view of these problems one has to accept a less narrowly defined ending date for Period III.

The most secure chronological anchor in Period III is the introduction of the inscription around the central reverse square. The third Series of didrachms which first adopts this feature starts c. 455. With 4 obverse and 6 reverse dies extant of which 7 combinations are known, this series probably comes to an end after 5 to 10 years. This leads to an ending date of c. 445/40 for the third Series of didrachms, which is also the ending date of Period III.

In my revised chronology Period III is dated between c. 470 and c. 445/40. This is a period of c. 25/30 years as opposed to a period of 40 or 45 years proposed by May and Schönert-Geiss. Without resorting to inferences drawn from non-numismatic material it is not possible to assign a more specific ending date to Period III. If the ending date proposed here is correct, then Period II extended over the years when according to the traditional interpretation the Standards Decree brought minting to a halt.

Period IV (c. 437/36—436/35) [c. 445/40]

Period IV consists only of a very small and transitional issue. The didrachm is the only denomination with only one obverse and two reverse dies known. The obverse shows the horse protome, now treated in a more realistic manner. On the reverse there is the inscription ΠΟΣΕΙΔΙΠΠΟΣ around a central square with a vine. With weights between 6.35 g and 6.89 g these didrachms employ a reduced Thracio-Macedonian standard.

May and Schönert-Geiss date Period IV from c. 437/36 to 436/35, after a break of more than a decade supposedly occasioned in 449/8 by the operation

of the Athenian Standards Decree. In their opinion the iconographic, stylistic and metrological features warrant a lengthy break between Period III and Period IV, and a starting date of 437/36 for Period IV.¹

The change from the plain quadripartite central reverse square to a reverse square with a real type, however, need not necessarily indicate a lengthy interruption in the output of a coinage. Abdera, towards the end of its fourth period of coinage puts a real type in the central reverse square replacing the plain quadripartite square.² As May explicitly points out at Abdera these types are part of Period IV, and no interruption separates them from the reverses with the plain central square.³ May compares the reverses of the Maronitean Poseidippos didrachms with the vine in the central square to tetradrachms of Mende that have the same reverse type.⁴ At Mende, the introduction of the reverse type with the ethnic ΜΕΝΔΑΙΟΝ around a central square with vine was first dated to the 430's when supposedly coinage resumed after a lengthy break imposed by the Standards Decree.⁵ But now an overstrike at the mint of Gela provides a *terminus ante quem* of c. 450-440 for the tetradrachms with the inscribed reverse at Mende.⁶ Tetradrachms similar to Mende (Noe 1926) no. 55 which provides a type close to the one that was overstruck at Gela were minted shortly before

¹ Cf. Schönert-Geiss 1987, pp. 17-19; May 1965b, p. 49.

² May 1966 nos. 159, 160 (Group LX; youthful male head in profile), no. 186 (Group LXVIII; horse), no. 187 (Group LXIX; kantharos).

³ May 1966, pp. 115-116. May places the types before the operation of the Standards Decree.

⁴ May 1965b, p. 49.

⁵ May 1965b, p. 49; cf. *ACGC*, p. 137.

⁶ *ACGC*, p. 137; Jenkins 1970, pp. 65-66. For Mende, see also 3.2.1 below.

450.¹ Since Mende (Noe 1926) no. 55 is not among the earliest types that have the reverse with inscription around a vine the series started earlier, probably c. 455.² In analogy with the reverse development at Mende, a date of c. 445/40 for the Poseidippos didrachms at Maroneia seems called for. This date is compatible with my revised chronology, and supports the dates proposed for the earlier periods.

There is no clear break between Period III and Period IV on stylistic grounds. Schönert-Geiss notes that in Period IV the horse protome is rendered with greater realism, and that this indicates a significant departure in style.³ However, the tendency to greater realism has been an on-going process in the earlier periods as well. The impression of greater realism on the obverse of Period IV is mostly due to the position of the horse's legs. They are now in a less steep, more natural angle. Other features which contribute to greater realism have already been announced in the previous period and are now developed further. The mane falls naturally, and the shoulder muscle has become softer and is less bulging.⁴ The dotted line at the end of the protome is finally gone. Like already in the preceding period greater care is applied to the rendering of the details of the head.⁵ Thus the more realistic representation that is achieved in Period IV has gradually evolved from earlier periods. On stylistic grounds, there is no reason to propose a break between Period III and Period IV.

¹ Jenkins 1970, p. 65.

² For the revised chronology of Mende, see below 3.2.1.

³ Schönert-Geiss 1987, p. 18.

⁴ Cf. Schönert-Geiss 1987, p. 18. The strong shoulder muscle has already disappeared in Period III, V19-21 (no. 69-71); cf. *op. cit.*, p. 16.

⁵ Cf. Schönert-Geiss 1987, p. 18; for Period III, cf. May 1965b, p. 46.

The Poseidippos didrachms are struck on the reduced Thracο-Macedonian standard with a norm of $\pm 6.7 - 6.8$ g.¹ Although the earlier periods follow the Third Thracο-Macedonian standard a tendency towards reduced weights is already perceptible in the drachm and didrachm series of Period III. As these considerations show it is not possible to account for a lengthy break between Period III and IV solely on iconographic, stylistic and metrological grounds. The very short Period IV therefore belongs somewhere into the years between around c. 440.

Period V (c. 436/35-411/10) [c.440-?]

In Period V only tetradrachms are struck. Like the Poseidippos didrachms the tetradrachms are struck on the reduced Thracο-Macedonian standard and have their norm at ± 14.00 g.² On the obverse there is a horse accompanied by various symbols, and often there is the ethnic, either abbreviated or in full. The reverse type is already familiar from the Poseidippos didrachms. It is the vine in an incuse square, and a magistrate's name in the band around it. The stem of the vine tends to become upright as if to divide the central square. The bunches of grapes are often almost symmetrically arranged on both sides of the stem.³

The only chronological anchor in Period V is its starting date at c. 440. On stylistic grounds there is hardly any doubt that Period V followed with little

¹ Note that the frequency table in Schönert-Geiss 1987, p. 17 is based on twelve weights only.

² Schönert-Geiss 1987, pp. 19-20 with frequency table VI.

³ Cf. R 5 (no. 90/2), R 6 (no. 91), R 41 (nos. 131, 132/1), R 44 (134, 135/1), R 46, 47 (nos. 138-140), R 49, 50 (nos. 143, 144). On R 52, 54-57 (nos. 146, 148-151) towards the end of Period V the central square appears as if almost divided into quarterings by the four bunches of grapes.

or no delay after Period IV. On most of the tetradrachms there are magistrates' names on the reverse and symbols on the obverse. As a rule of thumb one likes to assume that the number of magistrates' names or symbols is roughly equivalent to the minimum number of years a series of coinage covered. In the case of Maroneia, however, this convenient rule of thumb does not work out, and we have to face the fact that we do not know the significance of the so-called magistrates' names and symbols, nor their chronological implications.¹ In Period V some magistrates use more than one symbol, and sometimes one symbol is used by more than one magistrate. There are 8 magistrates' names and 11 symbols. The kantharos symbol is used by 4 magistrates. The name Metrodotos is combined with 10 different symbols, and one of his issues is without any symbol. The magistrate Metrophon who follows after Metrodotos uses 3 of his predecessor's symbols. Two magistrates use no symbols at all.² If one maintains

¹ Furtwängler 1982, see esp. p. 21 on Maroneia.

² The following outline of magistrates and symbols is based on Schönert-Geiss 1987, pp. 20-24:

- Deonys: symbol: kantharos (5 obverse dies, nos. 85-90),
- Denyotos: kantharos (no. 91; Deonytos shares V 5 with Deonys),
- Gene : kantharos (V6, no. 92),
- Metrodotos: kantharos,
 - : star (V 15),
 - : crescent (V 16-17, nos 109-110, V 18-20),
 - : "cap?" (V 21, nos. 114-115),
 - : wreath of laurel (V 22-25, nos. 116-121),
 - : lyra (V 26, no. 122),
 - : head of a satyr (V 27, nos. 123-125).
 - : head of Apollo (V 28, nos. 126-128; 134); die-links: R 37 used with V27 (no. 124) and V 28 (no. 127); R 38 used with V 27 (no. 125) and V28 (no. 126).
- Metrodotos: no symbol (V 29-30).
 - : wheel with four spokes (V 31, no. 131); same reverse die (R41) as V 30 (no. 131).
 - : owl? V 32 (no. 132)
- Metrophon: head of Apollo (V 28, no. 135); cf. Metrodotos.
 - : wheel (V 31); cf. Metrodotos.
 - : owl? (V 32); cf. Metrodotos; same reverse (R 44) as wheel with Metrophon.
- Posideios: helmet (V 39-42).
- Athenes: no symbol (V 43, no. 152).
- Pythodoros: no symbol (V 44, no. 153).

that magistrates change annually, this yields only eight years for for the tetradrachms of Period V. This seems too short considering the large number of dies, and the plentiful output. Especially the numerous issues under Metrodotos caution against a rigorous application of the theory of annually changing magistrates' names.¹

West, writing in 1929, attributed the kantharos issues to only one year allowing for the situation that sometimes two officers were in charge of the mint.² Now that more numismatic material has become available, West's theory of one symbol per year can no longer be maintained. The kantharos appears in combination with four different magistrates. It seems unlikely that all four officials shared the responsibility for the mint of Maroneia during one single year.³

Schönert-Geiss modifies West's theory.⁴ In her interpretation a symbol usually indicates one year of coinage. As an exception the kantharos symbol is used by four magistrates who hold office in four consecutive years. Judging from the size of the issue one of these magistrates, Metrodotos, uses the kantharos symbol for two or three years.⁵ When his term of office is extended over some more years he marks his issues by annually changing symbols (except nos. 129-130 without symbol). If one allows 2 or 3 years for Metrodotos' kantharos issues, one year each for his ten different symbols, and one year for the issue without a symbol, one arrives at 12-13 annual issues, i.e. a term of office

¹ According to Schönert-Geiss (1987, pp. 20-21) there are 120 specimens of Period V. Of these 63 coins (26 obverses and 35 reverses) were issued under Metrodotos.

² West 1929, pp. 68, 76-78.

³ Cf. Schönert-Geiss 1987, p. 22.

⁴ Cf. Schönert-Geiss 1987, p. 22.

⁵ Cf. Schönert-Geiss 1987, p. 22 with note 4. Of Metrodotos' kantharos issue eight obverse and twelve reverse dies are known.

of the same duration. Schönert-Geiss allows for the possibility that Metrodotos and Metrophon may have worked together at the some point since they use the same dies. Alternatively, when Metrophon took office he could have used the obverse dies of his predecessor Metrodotos.¹ The small number of dies does not allow for more than two years for Metrophon's term of office.² The subsequent issues of Posideios, Athenes, and Pythodoros are all small, which makes it likely that these magistrates were in office for only one year.³

Schönert-Geiss' chronological calculations lead to a total of 21 annual issues for Period V.⁴ With 436/5 as the date when Period V starts she arrives at 415/14 as its ending date. Leaving room for new magistrates or symbols she further lowers this date to 411/10, the year when many Greek cities revolted from Athens. This yields 25 years for Period V.⁵ Schönert-Geiss assigns each issue to a particular year, and presents her result in a chart.⁶ This type of presentation conjures up the idea of "absolute" dates, whereas dating is in fact highly speculative. Schönert-Geiss' chronology is entirely contingent upon her interpretation of the significance and chronological implications of magistrates' names and symbols on Maroneia's coinage. She asserts that the names on the coins stand for annually changing eponymous officials, because the preposi-

¹ See Schönert-Geiss 1987, p. 22.

² See Schönert-Geiss 1987, p. 22 with note 6. Of Metrophon's issue 9 obverses and 8 reverses are known. Of these 3 obverses have already been used by Metrodotos.

³ See Schönert-Geiss 1987, p. 22 Posideios: 4 obverse and 7 reverse dies; Athenes: 1 obverse, 1 reverse die; Pythodoros 1 obverse, 1 reverse die. Athenes and Pythodoros use no symbols.

⁴ Schönert-Geiss 1987, p. 23.

⁵ West (1929, pp. 76-77) dates Period V from c. 450 to c. 420. He is followed by Erxleben 1970, p. 111. Note that since West wrote the number of dies has been increased.

⁶ Schönert-Geiss 1987, p. 23.

tion ETII sometimes accompanies these names. She has to admit, however, that the use of the preposition ETII is not consistent, and that at least one magistrate, Metrodotos, stayed in office over several years.¹

Another chronological reference point for Period V is provided by the reverse R 51. On this reverse (R 51) the vine is not confined by the central incuse square, but spreads out to the lettering. It is likely that this reverse was modeled after similar reverses known from Mende.² The Mendean coins date to c. 435-425. They are unlikely to have influenced the reverses at Maroneia before 430-25.³ However, this does not allow to further specify the beginning or end date of Period V at Maroneia.

One has to admit that no precise chronology can be established for Period V. The date of 411/10 that Schönert-Geiss assigns to the end of Period V, is not without problems either. She chooses this date, because in her opinion it provides a likely historical background for the end of Period V. In 411/10 many Greek cities revolted from Athens, but there is no historical record that Maroneia was among them.⁴ Thus also the ending date of Period V at Maroneia has to be left open. It could have lasted 30 years or even more, but there is no supporting numismatic evidence.

¹ Only Gene (?), Athenes, and Pythodoros use the preposition consistently. Metrodotos and Posideios use it sometimes, Deonys, Deonytos, and Metrophon use it never. Schönert-Geiss 1987, p. 23 with note 2. For a detailed discussion of the problems associated with magistrates' names on Greek coins, cf. Furtwängler 1982.

² Cf. Mattingly 1988, p. 327.

³ Cf. Noe 1926, pp. 47-49, 58-59, pl. 7:69, pls. 8, 9:81; West 1929, p. 69-70, pl. 8:18. For Mende, see also 3.2.1.

⁴ Cf. Schönert-Geiss 1987, pp. 23-24.

Period VI (411/10-398/97)

In Period VI staters and triobols were struck. Like on the tetradrachms of Period V, the obverse type is a horse, often accompanied by a symbol. The reverses have the vine as central type surrounded by a magistrates' name on a band, or, at the end of the period, by the ethnic (nos. 166-72). The triobols have the horse protome on the obverse, and a bunch of grapes in the reverse square surrounded by a dotted border.¹ The norm of the staters falls around 12.15 g to 12.69 g which corresponds to the weights of the Abderite staters of P VI, that start towards the end of the 5th century.² The triobols are stylistically later than the staters. Their reverses are very similar to those of the triobols of Period VII.³

The series of staters begins under the magistrate Metrophon who uses as a symbol the wheel. The same name combined with the same symbol appears in Period V (no. 154).⁴ The name of the next magistrate, Deonys, is also familiar from Period V.⁵ Altogether, Schönert-Geiss has assembled 8 different magistrates and 6 symbols. Sometimes there are also symbols on the reverse.⁶ Because in this series symbols are not used consistently Schönert-Geiss denies their chronological significance. She adheres to the theory of annually changing magistrates with each magistrate's name standing for one year of

¹ Nos. 173-17 are anepigraphic; nos. 177; 178 have the letters ΜΑΡΩ on the obverse.

² Schönert-Geiss (1987, p. 24) 57. For Abdera's staters of Period VI, cf. May 1966, p. 26.

³ Schönert-Geiss (1987, p. 27) compares V 4 (no. 177, P VI) to V 6 (nos. 187-188, P VII) and V 5 (no. 178, P VI) to V 4 (no. 185, P VII).

⁴ Schönert-Geiss (1987, p. 26) thinks this means that Metrophon was after three years again in office. In the meantime Posideios, Athenes, and Pythodoros had held office.

⁵ In Schönert-Geiss' chronology c. 25 years have passed, since Deonys appears first in Period V. Therefore she argues for two different magistrates with the same name, Schönert-Geiss 1987, p. 26; cf. West 1929, p. 73.

⁶ For the names and symbols, see Schönert-Geiss 1987, p. 26.

coinage.¹

The find of a 4th century hoard from the environs of Abdera indicates that Period VI was larger than Schönert-Geiss assumed.² This large hoard contains coins from Abdera and Maroneia. Among the 31 recorded specimens from Maroneia's Period VI, are 9 new combinations (15 coins) of magistrates' names and symbols. The composition of the hoard suggests that Period VI starts around the end of the 5th or early 4th century.

The staters of Period VI followed with little or no delay after the last tetradrachms of Period V.³ The official Metrophon appears both in Period V and VI. The starting date of Period VI provides an end date for Period V.

Conclusions

Although no precise dates could be assigned to Maroneia's coin series, it seems very unlikely that there was a lengthy break due to the operation of the Standards Decree. Period III probably extended to 445 or 440. In addition, there is continuity between Period III and Period IV, which does suggest an unusual interruption either. Period IV consists only of a very small and transitional issue leading directly into Period V. Period V could have lasted 30 years or even more. Since there is no indication of a lengthy break in Period V, this rules out a possible interruption because of the Standards Decree also in the 420's.

¹ Schönert-Geiss 1987, p. 26. It is difficult to understand how Schönert-Geiss arrives at a minimum number of 6 years although there are 8 different magistrates' names, and she explicitly does not allow for colleagues in office.

² Lorber 1990, pp.176-83.

³ Compare e.g. R 7 (no. 161) to R 56 (no. 150). On the later coins (e.g. no. 166-171) the vine has an artfully twisted stem, similar to the presentation on the Persian tridrachms of P VIII. An exception is R 17 (no. 172).

3.1.10 Ainos

Topography and Resources

Ainos, modern Enoz, is located on the eastern shore of the Hebros river which today separates Greece and Turkey.¹ Ainos' topography has changed completely over the years. In antiquity the city was on a peninsula close to the mouth of the river.² The harbor inlet was easily accessible from the sea, and provided safe anchorage. Along the Thracian coast between Abdera and Maroneia no other harbor was of comparable quality. The Hebros, the largest of the North Aegean rivers, gave easy access to the fertile plains of Thracian hinterland. Overland routes connected Ainos with Apollonia Pontica and Mesembria.³

Ainos had no mineral resources of its own. Its immediate environs were not particularly suited to agriculture, and its climate was notoriously unpleasant.⁴ With regard to commerce however, the location was excellent. The harbor was suited to accommodate maritime traffic from the Aegean. The Hebros and its tributaries offered an easy route to the interior with rich cornlands, and timber and fruit producing regions. As an additional advantage, the site was easily defensible being "a narrow isolated ridge dominating the surround-

¹ *ATL* 1, p. 465; cf. Isaac 1986, pp. 140-57 with references to previous scholarship and ancient sources.

² Today the inlet which formed the harbor is completely silted up. Detailed topography with maps in May 1950a, pp. 2-7.

³ Isaac 1986, p. 140; Casson 1926, p. 255 with map.

⁴ The cold northern winds reached it through the river valley of the Hebros. Frost occasionally damaged the vineyards; cf. Casson 1926, pp. 18, 99.

ings.”¹

Trade

Archeological finds suggest there was a great demand for Greek products among the Thracians of the interior. Greek pottery and metalware from the second quarter of the 5th century has been found in the Thracian plain along the middle Hebros river. Most of the gravegoods in the Odrysian graves at Duvanli north of Plovdiv (Philippopolis) are Greek dating to the second half of the 5th century. There is Attic pottery, and jewels, gold and silver plate from Attica and the Bosporean cities.² The silverware could in part represent gifts or tribute to the local aristocracy, but much of the Greek goods may have been exchanged for products from the Thracian hinterland.³ The natural route of transport would go through Ainos. Thereby the city would have had substantial income from harbor dues, and from taxes levied on goods.⁴ Isaac argued that Ainos was one of Athens' main suppliers of slaves.⁵ Slaves were certainly among the commodities that passed through Ainos, and a large percentage of Athens' slave population was “Thracian,” in particular those who worked at the mines in Laureion. But the ethnic “Thracian” may have been applied rather indiscriminately, and it is likely that slaves from the Black Sea area were trans-

¹ Isaac 1986, p. 142. From the south and east Ainos was inaccessible because of lagoons; to its west were the Hebros and marshes, and in the northeast were a lake and hills.

² Archibald 1983, pp. 304-306; Hoddinott 1981, p. 106; Filow 1934, pp. 209-10 and *passim*.

³ Cf. Thuc. 2.97; cf. Fol 1988, pp. 20-21.

⁴ Cf. Nixon and Price 1990, p. 149.

⁵ Isaac 1986, p. 145. cf. Antiphon 5. 22.

ported over the faster sea-route rather than over the land-route via Ainos.¹ The Athenians were also interested in Thracian peltasts for their mercenary army, and Ainos was a likely place of assembly.²

Early History

The first Greeks to settle at Ainos were Aiolians from Alopekonesos on the Thracian Chersonese, later Mytilene and Kyme sent additional settlers.³ The date of the foundation is not known. Since Ainos is mentioned by Herodotos in the context of Xerxes' expedition, it must already have been well established by that time.⁴ Xerxes passed by Ainos, and stayed at Doriskos, a Persian garrison eleven miles up the Hebros. A supply base since Darius' Skythian expedition, Doriskos remained in Persian hands still long after 476.⁵ Commanding the lowest crossing of the Hebros it was a point of crucial strategic importance. All the traffic between Ainos and the Thracian hinterland had to pass by Doriskos, which thus could easily control Ainos' trade.⁶ When the Athe-

¹ Cf. Finley 1981a, pp. 168-73; for slaves at the Laurion mines, cf. Lauffer 1979, pp. 140-43.

² May 1950a, p. 86; Best (1969, p. 13) points out that in Thuc. 4.28 the peltasts are Greeks from Ainos, not Thracian natives. But on the other hand the Athenians asked also Sitalkes for horsemen and peltasts. Cf. Thuc. 2.79; 4.93; 4.129. All references pertaining to the years from 429 to 423.

³For Ancient source, see Isaac 1986, pp. 147-48.

⁴ Hdt. 7.58,3; Isaac (1986, p. 148) suggests that it was founded in the second half of the 7th century or the first half of the 6th.

⁵ Hdt. 7.58-59, 105-107; cf. Meiggs 1972, pp. 52, 68-69. Probably soon after the capture of Eion in 476 the Athenians first attempted to take Doriskos.

⁶ May (1950, p. 12) suggests that the preparations for Xerxes' campaign at Doriskos brought additional trade to Ainos. But only goods that came on the sea-route would pass through Ainos, and it is doubtful whether this was the major means of transport for Persian supplies. It seems unlikely to me that the Greek settlement profited from a build-up of hostile forces in its neighborhood.

nians, probably soon after 476, attempted to take Doriskos, it was still strong enough to threaten Greek interests. At that time, commerce in Ainos probably suffered from being intercepted.¹ Ainos' prosperity later in the 5th century has been taken as an indicator of Doriskos' declining influence.²

Ainos in the Delian League

One can only speculate whether Ainos was among the original members of the Delian League.³ Gomme thinks that the presence of the Persians at nearby Doriskos induced Ainos to seek protection under the League.⁴ But it has also been suggested that Ainos may not have joined the League in the beginning in order to avoid open confrontation with Doriskos.⁵

Ainos was listed as a member of the League in 454/3. It was assessed 12 talents in the first two periods, and 10 talents in the third and fourth period down to 439. This was one of the highest assessments in the district.⁶ In 436/5 the tribute was reduced to 4 talents. Ainos was absent from a full panel in the lists of 435/4, 431, and 429. In 425 it is reassessed with 20 talents.

¹ Cf. *ATL* 3, p. 216 note 98: "...the change in relative wealth between the two cities came about only after some delay and considerable attrition."

² *ATL* 3, p. 216: "The measure of the greatness of Ainos is its early tribute of 12 talents [454/3], and the reduction of Doriskos is attested not only by the silence of Thucydides but by the later scornful reference to it by Aeschines [3.82] who could say that Demosthenes had ferretted out the town, though it was so obscure that nobody before had ever known its name."

³ Contra: *ATL* 3, p. 240; Meiggs 1972, pp. 52-53.

⁴ *HCT* 1, p. 291.

⁵ May 1950, p. 12; cf. Isaac 1986, p. 149: "... the Greeks may have been careful and hesitated to join as long as they felt themselves menaced by Persian troops."

⁶ In part these high tribute payments certainly reflect wealth derived from trade with the interior. Cf. Meiggs 1972, p. 61.

Problems Relating to the Lowering of Ainos' Tribute

A connection between the lowering of Ainos' tribute in 436/5 and the consolidation of the Odrysian kingdom has been suggested. Opinions are divided as to the nature of this interaction. Eduard Meyer has suggested that as a concession to the Odrysians Athens had given up claiming tribute from Ainos.¹ Instead of Athens the Odrysians would have profited from Ainos' wealth. Casson believed that by exacting tribute and controlling trade the Odrysian kingdom had weakened Ainos' economy to such an extent that Ainos was considered unable to pay tribute to Athens.² Gomme proposed the existence of a garrison to which Ainos paid directly instead of sending tribute to Athens.³

It does not seem very likely that the Odrysians completely devastated Ainos' economy as Casson suggested, although they undoubtedly took their share. Ainos probably paid tribute to the Odrysians, and "offered gifts."⁴ It is most likely that the Odrysians charged "taxes" on goods that were transported through their territory. Thereby the Odrysians profited directly from Ainos' prosperity. As Isaac has sensibly pointed out, to ruin Ainos' economy would have been against Odrysian self-interest.⁵ The plentiful issues of coins also speak

¹ Meyer 1939, p. 722; cf. Danov 1976, p. 309.

² Casson 1926, pp. 200-201. According to Strack (1912, pp. 132-34) Odrysian control of the hinterland caused the trade to the Black Sea to be diverted from the land route to the sea route thus causing Ainos' impoverishment. But the overland trade to the Black Sea area probably was not a major part of Ainos' commercial activity. Cf. Isaac 1986, p.152.

³ Gomme *HCT* 1, pp. 277-78.

⁴ Although the highest figures were under Sitalkes, the coastal cities from Abdera to Byzantium were probably already tributaries to his predecessor Sitalkes. Thuc. 2.97; cf. *ATL* 3, p. 310 with note 54. A treaty between Athens and Thrace (*GHI* 2, no. 151) from 357 mentions the coastal cities from Abdera to Byzantium as liable to "inherited" tribute (τὸμ φόρον τὸμ πατρῶν). Cf. Xen. *Hell.* 3.4.25.

⁵ Isaac 1986, pp. 97-98, 152, 155-56.

against an impoverishment after 435.¹ The most powerful argument is probably Ainos' reassessment of twenty talents in 425, regardless of the fact whether Ainos ever paid this amount. Although the criteria in this assessment were much harsher than in previous periods Ainos obviously was considered a wealthy city that could come up with a high payment.²

Gomme's suggestion that Ainos' payments directly went to a near-by garrison is attractive, but corroborating evidence is lacking.³ May suggested that the diobol issues of Ainos Period II were minted to pay the soldiery of the garrison.⁴ The factors influencing the output of an ancient mint are too complex to warrant this speculation, let alone to take the fractional coinage as evidence for a garrison. It has also been noted that soldiers may have been paid monthly, which would make the association of soldiers' pay and fractional coinage an unlikely hypothesis.⁵ The existence of a garrison near Ainos has to remain an attractive but unconfirmed hypothesis.

Gomme thought that "Ainos was more likely to be garrisoned against Sitalkes, at least in his earlier years, than to have had its revenues surrendered to him."⁶ But the circumstances of the Athenian-Odrysian alliance in 431 sug-

¹ Although Ainos temporarily struck fractions only, the volume of coinage was still considerable. This is as an indicator of relative prosperity, especially since Ainos had no silver resources of its own. Cf. Nixon and Price 1990, pp. 156-58.

² The argument that by that time Ainos was not under Odrysian control anymore (although Sitalkes died only 424) does not affect this line of thought. Had Ainos' economy really been ruined it would have taken considerably longer to recover. For the reassessment of 425, cf. Meiggs 1972, pp. 324-39.

³ *HCT*1, pp. 277-78. Payments to a garrison have already been suggested to explain Ainos' –alleged–partial payments in the lists of 447. But besides the maintenance of a garrison there are many possible explanations for partial payments. Cf. *ATL* 3, pp. 48, 50, 59-60.

⁴ May 1950, p. 83.

⁵ Raven 1950, p. 154; cf. Griffith 1935, p. 269.

⁶ *HCT*1, p. 278.

gest rather that the Athenians wanted to secure friendly relations with Sitalkes so that he would not encroach upon their territory.¹ Athens wanted Sitalkes as an ally in order to win back places in the Thraceward district.² Sitalkes had given refuge to Philip, Perdikkas' dissenting brother, a constellation of which Athens took advantage. The Athenians certainly wanted to make sure Sitalkes was on their side so he would not back up cities in revolt or try expansions on his own while cities were weakened by internal strife.

Sitalkes' friendship was obviously of considerable importance to Athens, and one wonders what Sitalkes got for all he had to offer. It is most likely that Athens offered more than only citizenship for his son. What Athens had to offer probably had to do with trade and with Ainos.³ Although the thesis that the tribute was lowered by Athens to give financial benefits to Sitalkes is appealing, there are problems with it as well. According to the theory above, the concessions appear to have been part of the alliance, but the alliance was made only in 431, while the reduction in tribute had taken place already in 435.⁴

Due to the insufficiency of the historical record the relations between Athens and the Odrysian kingdom remain very much in the dark. It is only possible to speculate about how these relations might have affected Ainos. The existence of a garrison near Ainos is hypothetical, too. It is not possible to explain Ainos' disappearance from the tribute lists. There is no indication, however, of an impoverishment of Ainos in the decade from 435 to 425.

¹ Thuc. 2.29; cf. Meyer 1939, p. 722.

² Chalkidians and Bottiaians were still in revolt after the siege of Potidea. Cf. *HCT*2, p. 91.

³ Meyer (1939, p. 722) supposes that the Athenians let Sitalkes have the city of Ainos or at least its tribute.

⁴ The reassessment of 425 would then have to be interpreted as disregard for the Odrysians; cf. *ATL*3, p. 311. Sitalkes died in 424.

In 425 peltasts from Ainos came to Athens and took part in the expedition against Pylos.¹ Thucydides reports that in 415 Αἴνιοι ὑποτελεῖς fought in Sicily. In the passage in question ὑποτελεῖς implies tribute liability.² There is no evidence that Ainos revolted from Athens, although this possibility should not be excluded.³

Coinage (see plate 5)

The coin type of Ainos is the head of Hermes on the obverse and a goat type on the reverse. Only on the first issue of tetradrachms, and on some of the early diobol issues the reverse type is a caduceus. Until the end of the 5th century the Hermes head on the obverse is shown in profile view; then it is replaced by the facing head motif. Except for the first issues of tetradrachms, the goat on the reverse is always accompanied by some symbol.

Ainos struck its coinage on a standard that has variously been called "Persian" or "light Attic."⁴ The heavy pieces correspond in weight (16.50–16.20 g) to three Persian sigloi (3 x 5.50–5.40 g), but are divided into fractions of four and six as most Greek coinages. Therefore the high denomination should be regarded as a tetradrachm, and the fractions as tetrobols, diobols etc.⁵

It is not easy to establish an absolute chronology for Ainos' coinage. No

¹ Thuc. 4.28; according to Gomme (*HCT* 3, pp. 487-88) these peltasts may have been paid from the treasury of Athena.

² Thuc. 7.57; cf. *HCT* 1, p. 277 note 3; *ATL* 3, p. 215 takes ὑποτελεῖς to indicate that the Aineians were "unwilling allies."

³ Cf. *ATL* 1, p. 465: "It is possible that after the rise of Odrysian power Ainos passed out of Athenian control."

⁴ Strack (1912, p. 152) calls it reduced Euboic-Attic; Gardner (1918, p. 286) calls it light Attic. May (1950a, pp. 13-14, 267) calls it Persian.

⁵ Cf. May 1950, pp. 267-68.

coins of the fifth century occurred in any recorded hoard context. Within one group, there can be considerable difference in style between high denominations and fractional coinage, and even between die-linked coins.

Earlier Numismatic Studies

In 1950 J. M. F. May did a comprehensive and detailed study of the mint of Ainos. His monograph has replaced the earlier, seminal studies of Von Fritze and Strack.¹ According to May the 5th-century coinage of Ainos falls into two periods. Starting at 474/3 Period I ends in 449 due to the operation of the Standards Decree. With the reopening of the mint at 435 Period II begins and goes down to 405/4. Period III follows immediately. In Period III coinage is struck on the Chian weight standard, and the head of Hermes on the obverse is shown *en face*.

May has based his chronology on the assumption that because of the Athenian Standards Decree the mint is closed down between 449/8 and 435. He does not discuss his grounds for this date, nor does he mention at all the controversy surrounding the Athenian Standards Decree.²

It has been questioned whether the numismatic evidence supports a gap of fifteen years in the middle of the 5th century. Erxleben points out that the last tetradrachms in Period I and the first tetradrachm in Period II have obverses that are stylistically not so different as to justify a break of over 15 years. He places both groups in the decade from 450 to 440 followed by issues of fractional coinage. Erxleben accepts May's chronology again from 425 onwards. In his

¹ See Von Fritze 1909; Strack 1912.

² May 1950a, p. 9.

arrangement Ainos' coinage continues through the 5th century without any interruptions caused by the Standards Decree.¹ Mattingly has welcomed Erxleben's elimination of a break in the 440's, but he is inclined to see a lengthy break between Periods II and III.² He argues that all Period II coinage could have been struck in the years from 440 to 425.

May's chronological arrangement has also been criticized on a more basic level.³ Although adhering to the theory that symbols represent an annually changing mint authority, May has some groups cover a two-year period. He dates each group closely allowing for no gaps in the sequence of issues except for the one ascribed to the Standards Decree.⁴

Beginning of Coinage

A tetradrachm of Period I, Group III (May 1950a, no. 9) is struck over a coin of Abdera thus providing a clue for a date.⁵ The overstruck coin, with the cock symbol and the magistrates' name ΔΕΟ.... on the obverse, belongs to the group following the latest Abderite coins in the Elmalı Hoard (palmette symbol and ΤΕΛΕ; cf. May 1966 nos. 83 and 84).⁶ A date of c. 470 seems appropriate

¹ Erxleben 1970, pp. 104-105. The stylistic closeness had already been noticed by Von Fritze 1909, p. 22.

² Mattingly 1977a, pp. 99-100.

³ Raven 1950, pp. 153-54.

⁴ May (1950a, p. 10 with note 2) admits in theory that coins are not necessarily struck every year, but in his discussion of the issues, the possibility of a gap in the output never comes up.

⁵ For the coin from Abdera see May (1966) no. 92 belonging to May's Period III, Group XLII.

⁶ Cf. Price 1987, pp. 45-46.

for the last coins of Abdera in the Elmalı Hoard (*CHVIII*, 48).¹ Next in sequence is the group with the cock symbol and ΔEO which provided the flan for the overstrike at Ainos. A likely time period for the overstrike is from c. 465 to c. 460 thus allowing time for the coin to travel from Abdera to Ainos.² May's date of 471/0–469/8 for Ainos Group III thus needs to be brought down by 5 to 10 years.

Group III shares no dies with the following or preceding groups. Group I and Group II are die-linked and very small.³ It seems impossible to go back beyond the early 460's for the introduction of coinage at Ainos.⁴

Break from 449-435?

May dates the "Antiadas coins" (Period I, Group XVI) from 453/2 to 451/0 on stylistic grounds. On these coins the legend ΑΙΝΙ is written on Hermes' petasos on the obverse. The inscription ΑΝΤΙΑΔΑΣ is placed around the reverse square which contains the goat type. The Thracian mints Abdera and Maroneia use similar reverse types with a vine as the center type.⁵ Ainos modifies the standard reverse type by putting a symbol, the statue of Pan, into the band of

¹ May (1966, p. 84) puts this group early in Period III.

² According to May (1966, p. 91) the ΔEO coins were "...at least as early as 480, thus allowing a specimen of this issue ample time to have reached Ainos in the course of trade, and there to have been restruck at the end of the decade." May allows for considerably more time to elapse until the overstriking takes place.

³ Of Group I only one pair of dies is known. The obverse die (A1) is used by Group II as well. Group II introduces a small issue of drachms. The tetradrachms of Group II are struck on 3 obverse and 2 reverse dies which were interchanged.

⁴ Price (1987, p. 45) puts the beginning of coinage at Ainos not "before the later 460s." Caradice and Price (1988, p. 74) think Ainos began minting only in the 450's. Cf. Gardner (1913, p. 175) had dated the beginning of coinage at Ainos to "about 460 BC."

⁵ Cf. similar reverses from Regal Macedonian Coinage, Akanthos and Mende.

the inscription at the right side of the reverse square, thus interrupting the lettering. In spite of this unusual arrangement, the reverse die achieves an overall appearance of balance. This suggests that the die cutters at Ainos have been inspired by reverses in use at Abdera and Maroneia at a time when these mints have their reverse types already fully developed. A likely date is the late 440's, which accords with the revised chronology of Ainos.

The Antiadas tetradrachms are followed by a small issue of diobols, the last group in Period I (Group XVII). As on the tetradrachms the legend AINI is written on Hermes' petasos on the obverse. This is the first group of fractional coinage that has the goat type on the reverse. The abbreviated magistrates' name (HMI) is placed above the goat, and the caduceus symbol to the right of the goat.¹

Period II starts with three groups of diobols (Groups XVIII, XIX, and XX). They have the goat type with a symbol on the reverse, and instead of the magistrates' name the ethnic AINI above the goat. On the obverse, Hermes' hair is treated in short locks which tend to become more formal in Group XIX and XX.²

The next symbol that Ainos employs is the double axe appearing on a tetradrachm and a series of tetrobols (Group XXI).³ May has dated this group to 431, because he took the double-axe symbol as reflective of the Athenian-Odrysian alliance of 431/29.⁴ But as Erxleben points out, the double axe group

¹ Only two specimens struck from two sets of dies recorded by May (1950a, p. 69; pl. 7:92, 93).

² In each group there is room for diversity in the treatment of the hair.

³ It was Ainos first issue of tetrobols. With 2 obverse and 9 reverse dies of which 10 combinations are known, the issue of tetrobols was fairly large. The tetradrachm is known in one specimen only.

⁴ May 1950a, pp. 78, 84-85, 107. Although the double axe can be associated with an Odrysian context it need not necessarily reflect this particular event.

shows stylistic similarities to the Antiadas coins.¹ Within this group, the hairstyle varies considerably between the two denominations. On the tetradrachm Her-
mes' hair is held up by a plait which shows under the brim of the petasos. This is the usual hairstyle of Period I, except that instead of finely distinguished individual strands the hair is rendered in heavy locks which, in front of the ear, curl into the face. On the tetrobols of Group XXI the hair is arranged in long formal curls falling on either side of the ear. This resembles the hairstyle of some diobols of the preceding Groups XIX and XX.

The two denominations share features like the smaller proportions of the face, a steeper profile, less emphasis on the lower part of the profile, and the eye with a heavy upper-lid which is correctly profiled. These features were already foreshadowed in the last groups of Period I. The closeness to the Antiadas coins is especially striking in the rendering of the eye. The artist of the Antiadas coins has aimed at a more profiled representation of the eye with lunate iris and pupil, which, on the double-axe tetradrachm, is fully achieved. One gets the impression that the tetradrachm of Group XXI has been cut with the latest example of that denomination in mind, while the artist who cut the tetrobols of this group follows the fashion of the previous diobol issues. The difference is more in the choice of hair-style than in the execution of details. It seems unlikely that fifteen years or so have passed since the Antiadas coins were issued.² Continuity between Period I and Period II is further attested in the diobols of Group XVII, last group of Period I. Being the first fractional issue that has a goat type reverse with a symbol this group clearly looks forward to the fractional

¹ Erxleben 1970, pp. 104-105.

² In May's chronology, there is a gap of twenty years (see May 1950a, p.107). For a stylistic comparison between the Antiadas coins and the double-axe tetradrachm, see Von Fritze 1909, pp. 21-22.

coinage of Period II where this has become the standard arrangement.¹

According to my revised chronology, the Antiadas coins belong to the late 440's. There are die links among the diobols of Groups XVIII, XIX, and XX. These issues must therefore have followed in close sequence. Even if one allows for a short break before or after these three groups the date for the double-axe issue can hardly be brought down to more than c. 435, that is five to ten years after the Antiadas coins. This time frame seems appropriate to reconcile the continuity of the overall proportions of the obverse type with the change in the choice of hairstyle.

Date for the Beginning of Period III

The first coins that feature the new obverse type, the facing head of Hermes, are two small issues of diobols (Groups XXXVII and XXXVIII). The new reverse type with the goat poised forward was already introduced by the last group of diobols in Period II (Group XXXI). The first two groups of diobols with the facing head are apparently still struck on the weight standard of Period II.² The next Group (Group XXXIX) consists of diobols and tetradrachms on the Chian standard.³ A die-link between Group XXXVIII and Group XXXIX suggests that the two groups on the different standards follow without interruption.⁴

May dates the beginning of Period III to 405/4, and the first group on the

¹ If May were correct and there was a fifteen year gap before the next issue, would it not seem strange that Period II picked up a design that had been used only once and in a very small issue? Group XVII consisted of 2 obverse and 2 reverse dies with 2 known combinations.

² Weights between 1.26 g and 1.32 g (6 coins); 2 coins of Group XXVIII with 1.06 g and 1.21 g.

³ A tetradrachm on the Chian standard weighs ca. 15.55 g.

⁴ The obverse die A 201 is used for no. 323, a diobol of Gr. 38, and for no. 339, a diobol of Gr. 39.

Chian standard from 402/1 to 400/399. He associates the change in weight standard with Ainos' commercial reorientation after the fall of Athens when the trade is directed towards the coast of Ionia and Rhodes rather than to the Thracian hinterland and the Aegean. The new type, the facing Hermes, supposedly helped to identify coins on the new standard.¹ In the choice of the type Ainos follows the examples of Amphipolis, Syracuse and Rhodes that already earlier employed facing head motives.²

Recent research suggests that the traditional dates for the introduction of the facing head coinages are too high. In Syracuse, the facing Arethusa is struck only after 405/4.³ A date as late as 370 has been suggested for the beginning of coinage at Amphipolis.⁴ This means that, at Ainos, Period III cannot have started earlier than the first decade of the 4th century, probably it started later.⁵ May's date for the beginning of Period III should therefore be brought down by at least 10 to 15 years.

There is also another reason to rethink May's argument. Scholars of ancient economy tend to assume nowadays that in an ancient city-state considerations of economic expediency usually did not enter the political debate. Since the striking of coinage, however, was a privilege of the "state" decisions con-

¹ May 1950a, pp. 174-76.

² Cf. May 1950a, p. 204: "[Ainos' facing head type] is influenced in its pose and the fashion of the hair by the facing Apollos on the coins of Amphipolis, which must already have been in circulation for a number of years." According to May (1950a, p. 177) the facing head motive was introduced at Amphipolis "probably soon after her revolt to Brasidas" at Syracuse in 413 by Kimon, and at Rhodes in 408.

³ Boehringer 1978, p. 138; cf. Mildenberg 1976.

⁴ Lorber 1990, pp. 52-56.

⁵ Lorber (*Numismatic Fine Arts*, Dec. 1991, no. 37) suggests that Ainos' facing head coinage began only ca. 372/1-370/69.

cerning the change of coin standard were not primarily motivated by the desire to facilitate trade.¹ If the reorientation of Ainos' trade was not the decisive factor in the adoption of the Chian coin standard, the beginning of the Period III coinage may not be directly related to the fall of Athens in 404, but could rather be related to Ainos' political alliances in the early 4th century.

The date for the beginning of Period III affects the date for the end of Period II as well. It does not seem that there was a long interruption between Period II and III.² The first diobol issues with the facing head were clearly transitional issues, which continued to use the reverse type of the last small group of Period II. The concluding date for Period II should therefore be brought down to at least 400.

Break in the 420's?

Mattingly has argued that all Period II coinage could be accommodated between 440 and 425, and that there was a lengthy break due to the operation of the Standards Decree until the mint reopened with issues on the Chian standard.³ As argued above, the starting date for Period III has to be brought down into the 4th century, and the numismatic evidence does not suggest that between Period II and III three decades or so had passed.

Although it is difficult to establish absolute dates for the groups of Period II, they certainly went beyond 425. There are 19 Groups of coinage in Period II,

¹ This has been pointed out by Schmitz (1986, pp. 69-71). For the separation of politics and trade cf. esp. Finley (1965), see further references in Schmitz (1986, p. 69 note 46). Carradice and Price (1988, pp. 79-80) also interpret the change in weight standard as a political statement.

² Cf. May (1950a, p. 176): Period II and III followed without interruption.

³ Mattingly 1977a, pp. 99-100.

and it is impossible to press them into the 15 years between 440 and 425.¹ It seems more appropriate to assume that Period II goes from c. 440 to the beginning of the 4th century, and that the succession of the issues depends on the availability of silver and the need for coined metal. There were gaps, but there is no indication of a break of unusual length that could be attributed to the Athenian Standards Decree.

Coinage in Context

There is no conclusive evidence that Ainos was affected by the Athenian Standards Decree. The break in the 440's can be eliminated with fair certainty. If coinage was interrupted in the 420's, it was a short break as it occurred occasionally, and there is no reason to attribute it to an enforced ban rather than historical circumstance.

Ainos struck coinage on a standard that was based on a Persian unit of weight. During the Persian occupation Ainos had become familiar with the Persian weight standard. The standard was in use at Doriskos, the Persian garrison near-by. Most of the Thracian tribes in the interior weighed their silver on the Persian standard throughout the fifth century, and even later. Therefore this unit of weight was an obvious choice when coinage was first introduced, and it remained in use due to convenience and conservatism.²

Ainos was a Greek city in Thrace, and a commercial city through which Greek as well as Thracian products passed. This is reflected in the fact, that al-

¹ Even if one goes to the extremes of packing groups with very similar symbols (Groups XXVIII and XXIX; Groups XXXII and XXXIII), and die-linked groups (Groups XVII—XX) into one group each, one still is left with 15 groups. To translate the 15 groups into 15 years means to assume that there was coinage struck in every year. It seems more reasonable to account for occasional gaps, especially when a city does not have its own supply of silver as is the case with Ainos.

² Cf. Isaac 1986, p. 150; May 1950a, p. 13, esp. pp. 267-69; ACGC, p. 159. On the spread of coinages based on the Persian unit of weight; cf. Cahn 1970, pp. 191-92.

though based on a Persian unit of weight, Ainos' denominations were divided according to the Greek system. The pieces were the familiar tetradrachms, tetrobols, diobols etc., but they were lighter than e.g. the corresponding Attic pieces. Ainos' importance as a commercial center was hardly affected by the different coinages that were in use. It was a place where commodities were exchanged for other commodities and coinage played an all but intermediary role. The use of a common weight standard certainly would appear to have facilitated the procedure of levying taxes etc. but one should not underestimate ancient resourcefulness.

The commerce-related flow of silver to mainland Greece probably was not considerable, but Ainos had to pay tribute to Athens, and it seems likely that most of it was paid in local silver. The Persian standard was an "international standard," well-known at Athens, and the conversion was relatively easy. One Persian siglos exchanged to 1.25 Attic drachms which makes 10 Attic drachmas worth 8 sigloi.¹ Compared to the miscellaneous local standards, it caused relatively few problems.

Before concluding that the Athenian Coinage Decree interpreted as Standards Decree did not have any effect on Ainos either, one should take into account that from 435 on there is no conclusive evidence for Ainos as a tributary of Athens. In case the Standards Decree was mainly concerned with the facilitation of tribute and other imperial payments, and in case it belongs into the 420's, it may simply not have applied to Ainos.

¹ M. B. Wallace 1984, p. 14; cf. Xen. *Anab.* 1.5.6. Vickers (1989) has shown that various odd weights of silver objects in the Acropolis inventories can be divided onto round numbers of Persian sigloi.

Figure 7 - Ainos: Revised Chronology

	May's date	denom.	notes	revised date
Period I	474/3-449			post 470-c. 440
Group I	474/3-473/2	4d	die links between	
Group II	473/2-471/0	4d.; d	Group I and II	
Group III	471/0-469/8	4d	overstrike	c. 465-460
Group IV	469/8-467/6	4d	same die (A8) in	
V	467/6-466/5	4d	Group IV, V, and	
VI	466/5-464/3	4d; d; 2ob.	VI Group IV-VI	until c. 460
				diobols Gr. VII-IX
Group VII	464/3-463/2	4d	same die (A15) in	
VIII	463/2-462/1	4d	Group VII, VIII,	
IX	462/1-461/0	4d; d	and IX	until c.455
Group X	461/0-459/8	4d	same die (A23) in	
XI	459/8-458/7	4d 2ob	Group X and XI Group X and XI	c. 452
Group XII	458/7-457/6	4d	Crescent symbols;	Group XII
XIII	457/6-456/5	4d	A27 in Group XII	XIV
XIV	456/5-455/4	4d 2ob	and XIV Gr. XII-XIV?	XIII
Group XV	455/4-453/2	4d		c.445 diobols Gr. XV
Group XVI	453/2-451/2	4d	Antiadas	late 440s
Group XVII	451-449/8	2ob	HMI diobols	
Period II	435/4-405/4			c. 440-c.400
Group XVIII	435/4-433	2ob	diobols with	
XIX	433-432	2ob	rv. goat type;	
XX	432-431	2ob	die links	
Group XXI	431-429	4d; 4ob	double-axe	c. 435
Group XXII	429-427/6	2ob		
Group XXIII	427/6-425/4	2ob		
Group XXIV	425/4-423/2	4d; 2ob		
Group XXV	423/2-421/20	2ob		

Group XXVI	421/20-419/8	2ob		
Gr. XXVII	419/8-417/6	2ob		
Gr. XXVIII	417/6-415/4	4d	boy w/th ivy	
XXIX	415/4-413/2	4d	ivy-branch	Gr. XXVIII 4ob.;2ob
Group XXX	413/2-412/11	4d		
Group XXXI	412/11-410/9	4d	largest 4d series	
Group XXXII	410/9-409/8	4d	willow tree	
XXXIII	409/8-408/7	4d; 2ob	laurel branch	Gr. XXXII dr; 2ob
Gr. XXXIV	408/7-407/6	4-; 2ob		
Group XXXV	407/6-406/5	2ob		
Gr. XXXVI	406/5-405/4	2ob	poised goat iv	
Period III	405/4-357/6			
Gr. XXXVII	405/4-403/2	2ob	Facing head	Early 4th c.
XXXVIII	403/2-402/1	2ob	"Persian" stand.	
Group XXXIX	402/1-400/399	4d; 2ob	Chian stand; die linked to Gr. XXXVIII	as late as 375?

3.1.8 Chios

Classification and Typology of Chian Coinage of the 5th Century

The mint of Chios started its production, probably c. 550 with electrum and silver coinage.¹ In the 5th century, there are at first staters (or didrachms) with varying symbols in front of the sphinx (Series I). Then the amphora appears consistently (Series II, e.g. *ACGC* no. 887).² The next type (Series III) is distinguished by a bunch of grapes that is suspended above the amphora. The entire type is put on a convex, shield-like surface (e.g. *ACGC* no. 888).³ In this series the didrachms (staters) are supplemented by an issue of tetrobols (thirds). Subsequently a greater variety of denominations is struck (Series IV). There are tetradrachms, drachms and hemidrachms (e.g. *ACGC* no. 890).⁴ The last series (V), already going into the 4th century, employs for the large denomination a formalized version of the reverse square with striated background and the magistrate's name inscribed upon the central band (e.g. *ACGC* no. 891).⁵ In addition to the silver coinage of the 5th century, there is a very small issue of electrum. The sphinx has its paw raised as if to pluck a bunch of grapes from the encircling vine. The four planes of the reverse punch are set at different an-

¹ These early issues will not be considered here.

² Kraay (*ACGC*, p. 242) puts the beginning of this series after Ionian revolt.

³ This series is dated after c. 460 by Kraay (*ACGC*, p. 242).

⁴ Kraay (*ACGC*, p. 243) suggests the sum mentioned in the inventory of 429/8 was made up of these denominations.

⁵ The drachms still have the old reverse type. Kraay (*ACGC*, p. 243) dates the beginning of Series V to c. 420.

gles.¹

Weight Standard and Denominations

Throughout the 5th century Chios' system of coinage is based on a heavy piece of c. 15.5 g.² This standard, usually called "Chian" is quite widespread along the coast of Asia Minor. It is adopted by Ainos in Period III for its facing-head coinage to be dated to the early 4th century.³ In Chios' early coinage, the heavy denomination should be called a stater, and the fraction a trite, since they follow the Asiatic system of division. From Series IV on, the heavy piece is divided by four, and thus it should be called a tetradrachm and its division a drachm.⁴

Proposed Chronological Arrangements

In the scholarly literature it has been stated that the electrum coin, stylistically transitional between Series III and IV, was minted in response to the Athenian ban on silver coinage.⁵ The amphora on the electrum coin is described with a bulbous neck, like on the last didrachms (Series III). Because actual amphoras of this type (C III) date from c. 450 to c. 435, the electrum coin has been

¹ See Hardwick 1993, pl. 13:11. Kraay (*ACGC*, p. 242) dates the electrum issue to c. 449, and interprets it as a measure to legally circumvent the ban on silver coinage.

² Erxleben 1970, p. 76: tetradrachm: 15.60 g; didrachm: 7.80 g; drachm: 3.88 g; hemidrachm: 1.87 g; tetrobol: 2.62 g.

³ See 3.1.7.

⁴ Cf. Barron 1984, pp. 96-97.

⁵ See e.g. E. S. G. Robinson 1949, p. 330 (chart); Barron 1966, pp. 86-87; *idem* 1984, pp. 96-97; *ACGC*, p. 242; *ML* p. 116.

thought to have been minted in this time period as well.¹ A *terminus ante quem* for the series of tetradrachms and drachms (Series IV) is derived from an entry of Chian silver in the Treasury of the Other Gods, dated to 429/8.² The amphora depicted on the obverses of this series has a straight neck, like the actual jars introduced in the third quarter of the 5th century.³

Alternative chronologies that eliminate a break in the 440's have been proposed by Erxleben and Mattingly.⁴ Erxleben argues there was no break at all in Chios' coinage during the 5th century. Following Mavrogordato he dates the end of Series III, the didrachms and tetrobols with amphora and bunch of grapes, to c. 440.⁵ For the beginning of Series IV, the series of tetradrachms, Erxleben accepts Baldwin's date of 440, and thus eliminates a break between Series III and IV.⁶ The series of tetradrachms then extends to c. 412 when Series V introduces the formalized reverse with the magistrates' name.⁷

Mattingly accepts Mavrogordato's ending date of 431 for Series III, the last silver issues that display a bulbous neck amphora.⁸ Although Mattingly concedes that the style of the unique electrum stater is intermediate between the

¹ See Barron 1966, pp. 86-87.

² *IG*² 310.112; for the interpretation, see Barron 1966, pp. 86-87.

³ For the chronology of Chian amphoras, see below 4.2.

⁴ Erxleben 1970, pp. 76-77; Mattingly 1981, p. 80. Mavrogordato (1915, pp. 373-94) dates the start of Series IV to the years before 431.

⁵ Erxleben (1970, p. 76) dates Series III between 478 and 440.

⁶ See Baldwin 1915, pp. 44-47.

⁷ Erxleben (1970, p. 76) compares the introduction of Series V with a similar formalization of the reverse at Ephesos dated to c. 415-410. At Chios a likely date for the introduction of the formalized reverse is c. 412 when the city revolted.

⁸ Mattingly 1981, p. 80; Mavrogordato 1915, pp. 364-67.

silver issues of Series III and those of Series IV, he argues that the electrum issue need not have been occasioned by the provisions of the Standards Decree.¹ The inscription *IG I² 310.112* provides the *terminus ante quem* of 429/8 for Series IV where tetradrachms, drachms and hemidrachms are struck.² According to Mattingly this means that Series IV was struck immediately after Series III, and there was no break in the coinage of Chios in the 5th century.

Reexamination of the Chronology of Chios' Coinage

Since the early studies of Baldwin and Mavrogordato new evidence from hoards provides valuable information on the chronology of the Chian series. The material has been gathered and examined by Hardwick in a 1991 Oxford dissertation.³ The early series (Series I) without amphora on the obverse occurs in hoards buried between c. 500 and c. 490.⁴ Together with specimen from Series II with the amphora, Series I is found in hoards dating from c. 480 to 470.⁵ This indicates that coins of Series I were still circulating around 480, when Series II had already started. In Series II, the amphora in front of the sphinx becomes a constant feature, and there are some variations in the rendering of the obverse type. On a few coins a wreath is put around the obverse type.⁶ These

¹ See Mattingly 1981, p. 80.

² Mattingly 1981, p. 80; for *IG I² 310.112*, the Treasury of the Other Gods, see Boardman 1958/59, p. 308 note 23.

³ See Hardwick 1991, pp. 111-52. For a summary, see *idem* 1993.

⁴ *IGCH* 1165 (c. 500); Mit Rahineh (*IGCH* 1635, c. 500); Delta (*IGCH* 1638, c. 500-490); Sakha (*IGCH* 1639, c. 500-490?); Demanhur (*IGCH* 1637, c. 500-495).

⁵ Chios (*IGCH* 1172, c. 480-470); Asyut (*IGCH* 1645, c. 475); Antilibanon (*CH* VI, 4 and 5, c. 475); Chios? (*CH* VII, 14, *post* 475?)

⁶ E.g. Antilibanon (*CH* VI, 4 and 5) no. 46; Chios? (*CH* VII, 14).

coins are found in hoards buried c. 475, the *terminus ante quem* for this very brief issue. Series IIa with the amphora in front of the sphinx already started earlier. This is indicated by the inclusion of coins of this type in hoards buried in the first two decades of the 5th century.¹ In another variant of Series II, Series IIb, the entire obverse type is put on a raised disk. One coin of this type, in very fresh condition, and together with earlier coins, is included in the Elmali Hoard, buried c. 465. Another specimen, considerably worn, is in the Naukratis Hoard, buried c. 440-430.² The inclusion of a coin of Series IIb in the Elmali Hoard suggests that this series started at least by c. 470. Series IIa and Series IIb circulated together. It is conceivable that the production of the two series overlapped, although Series IIa started earlier.

Coins of Series II were found in hoards together with coins of Series III, the next series.³ The raised disk, introduced by Series IIb, is now a constant feature. In addition, a bunch of grapes is suspended above the amphora. In this series, staters and thirds are struck. Occurrence in the same hoards as well as stylistic continuity suggests that Series III followed after Series II without any delay. Although it is difficult to determine when precisely Series II ended, it must have been at some point in the second half of the 5th century. Coins of Series III are part of some early 4th century hoards. Their worn condition suggests that they were issued several decades earlier.⁴ Series III probably starts at some

¹ Taranto Hoard (*IGCH*1874, c. 490) pl. 3:7; Benha Hoard (*IGCH*1649, c. 485) no. 23 (latest coin, first decade of 5th century, cf. E. S. G. Robinson, 1930, p. 94; Schlumberger 1953, p. 10, no. 25); South-Anatolian Hoard (*IGCH*1177) c. 480, no.36.

² Naukratis (*IGCH*1647, 440-430), for the coin, see *Boston* (Brett 1955), no. 1946.

³ *IGCH* 1179 from Chios? Phanae (*IGCH* 1191); the dates of these hoards are uncertain.

⁴ See Hardwick 1991, pp. 142-44; cf. *idem* 1993, pp. 218-20.

point in the third quarter of the 5th century. In the absence of better datable hoards the chronology must remain tentative.¹

Hardwick's thesis sheds new light on the electrum stater that has been interpreted as Chios' response to the imposed ban of silver coinage. He finds that the obverse die of the electrum stater is very similar to the obverse of a silver tetradrachm. This suggests that both coins were more or less contemporary.² It has been related in the scholarly literature that the amphora depicted on the electrum coin has a bulging neck, similar to amphoras dating from c. 450 to c. 435.³ As Hardwick correctly points out, the amphora on the electrum stater is clearly of the later straight-necked variety introduced only after c. 435.⁴ When the straight-necked amphoras were produced, the old coins of Series III that depict a bulging neck amphora were still circulating. A stamp on a straight-necked amphora is cut after an obverse type of a stater of Series III, and as pointed out above, Series III staters were still part of early 4th century hoards. Thus the first dies that depict a straight-necked amphora were cut only after c. 430-425. There might have been a brief delay in the issue of these coins, but this need not be attributed to the operation of the Athenian Standards Decree. As the hoard evidence and the coin type used as an amphora stamp indicate the staters of Series III continued to circulate. According to the traditional inter-

¹ Cf. Hardwick 1991, p. 145. The hoards IGCH 1179 and Phanae (IGCH 1191) can be dated only after the Chian coins.

² Hardwick 1991 pp. 162-65; *idem* 1993, p. 216. For the silver coin of 15.35 g, see *idem* 1993, pl. 13:12 (= Hübl, A. *Die Münzensammlung des Stiftes Schotten in Wien. 2. Band: Griechische Münzen.* Vienna and Leipzig. 1920, no. 3360. For the electrum coin, see Hardwick 1993, pl. 13:11.

³ See e.g. Barron 1866, pp. 86-87.

⁴ Hardwick 1991, p. 165. For an illustration, see Hardwick 1993, pl. 13:11 (= *Traité* pl. 8:9). The elongated neck and the vertical handles are characteristic of the straight-necked variety. The area around the rim is somewhat blurry, which may have been mistaken for a bulge.

pretation this would be a breach of the regulation that forbids the striking and the use of non-Athenian coins. There might have been a brief interruption in the output because there just wasn't any need for new coinage, or because for some reason it was difficult to secure the silver necessary for minting. In Chios a combination of the two factors might have applied, as the old coins still circulate, and as a problem with the silver supply could be indicated by the use of electrum.

The straight-necked amphora also appears on the next series of silver coins, Series IV. As the shape of the amphora and the denomination of the heavy silver coin indicate, the electrum coin and the associated silver tetradrachm must have shortly preceded Series IV. In this series a new set of denominations is introduced. There are tetradrachms, drachms, as well as fractional coinage.¹ The increased output of fractional coinage might have been occasioned by the Chians' need to pay the crews of the ships they had to furnish for joint expeditions with Athens.²

Hardwick places Series IV only after 412, when Chios defects from Athens.³ While this is not an impossible chronological arrangement, it is not the only one feasible. Personally, I am inclined to suppose that coinage continued without any major interruptions over the 5th century. A break in the 440's can be ruled out. There are no firm chronological anchors that would allow one to argue convincingly for a break in the 420's occasioned by the Athenian Standards Decree.

¹ Cf. Hardwick 1991, pp. 166-68.

² After the secession of Mytilene in 428/7 Chios was Athens' only ship-contributing ally; cf. Barron 1984, p. 101. For Chios' participation in naval expeditions, see Thuc. 4.129 (against Skione and Mende in 423), Thuc. 5.84 (against Melos in 416), Thuc. 6.31 (Sicily in 415).

³ Hardwick 1991, pp. 162-68.

3.1.9 Knidos

Knidos was a member of the Delian League until 411. Its tribute varied between 3 and 5 talents.¹ On Knidos' coinage there is a forepart of a lion on the obverse, and the head of Aphrodite on the reverse. The coinage has been the subject of a very thorough and comprehensive study by Herbert Cahn.² His results will be briefly summarized, and points of controversy will be discussed.

Cahn dates the beginning of coinage at Knidos to c. 530. The first series on the Milesian standard consists mostly of trihemiochms with only a few hemidrachms and obols.³ Starting with Series II from 520 onwards Knidos employed the Aiginetan standard which it abandoned only in the 4th century.⁴ In Series II the bulk of the coinage is provided by drachms; in addition there are a few staters, hemidrachms and hemiochms. The next series (Series III), dated by Cahn from 490-465, consists almost entirely of Aiginetan drachms.⁵ The same is true for Series IV which Cahn thinks ended at 449. Aiginetan drachms continue to be struck between 449 and 411 (Series V). Drachms and fractional coinage is produced between 411 and 394 (Series VI). Despite the fact that coinage is struck after 449, Cahn maintains that Knidos complied with the Athenian Standards Decree. He accepts a date of 449 for the Decree, and adheres to the traditional interpretation according to which the Decree enforced a gener-

¹ See *ATL* 1, p.314; Cahn 1970, p. 16. the following entries are preserved: 5 talents in 450/49 and 448/7; 3 talents in 444/43, 442/41 and 441/40.

² Cahn 1970.

³ For the frequency table, see Cahn 1970, p. 175, discussion of the standard, *ibid.*, pp. 179-92.

⁴ For frequency tables, see Cahn 1970, p. 175-77; discussion *ibid.*, pp. 192-95.

⁵ Cahn 1970, pp. 36-43.

al ban of the striking and use of all silver coins other than Athenian.¹ He explains the coinage between 449 and 411 as occasional and isolated issues that sprung up at times when Athens was unable to enforce the Decree.²

Cahn's chronology needs to be lowered. His starting date of 530 is based on *comparanda* by which the Knidian coin types were influenced. These are the lion obverses of Lindos, in particular of Series F, and the Corinthian coins that have a head of Athena on the reverse, and a Pegasus on the reverse.³ Cahn's dates for these *comparanda*, however, are too high. The Corinthian Pegasi with a head of Athena on the reverse previously dated to 550, should be downdated to c. 520-510.⁴ The beginning of coinage at Lindos is not before c. 515/10, and Series F is unlikely to have been struck before c. 500.⁵ An Knidian obol struck from the last reverse in Series I together with coins of Series II was part of the Asyut hoard, buried c. 475.⁶ It is unlikely that Series I started before c. 515. There are also two specimens of Series II in the Asyut Hoard.⁷ Series II could have started c. 490.

The chronological anchor in Series III is the reverse die R 47. Cahn compares this die with the Demareteion by which it may have been inspired. He

¹ See Cahn 1970, pp. 162-66.

² Cahn 1970, pp. 165-66.

³ Cahn 1970, pp. 74-75, 77.

⁴ Cf. Kleiner 1971. The *terminus ante quem* for the introduction is provided by the inclusion of the a Pegasus with an Athena reverse type in the Taranto Hoard (*IGCH* 1874), buried c. 490; cf. *ACGC*, pp. 78-81 and Kraay 1977, pp. 195-96. The date of 500 proposed by the authors of *Asyut* (p. 78) is too low.

⁵ For Lindos, see 3.2.5 below.

⁶ *Asyut* no. 664, the reverse is Cahn 1970, R 22.

⁷ *Asyut* no. 665, cf. Cahn 1970, no. 41; *Asyut* no. 666, cf. Cahn 1970, no. 49A-B.

dates the reverse R 47 accordingly to the decade following the Demareteion.¹ Cahn's date of 480 for the Demareteion should be lowered to the 460's.² In consequence, Cahn's dates for Series III need to be lowered by ten to fifteen years. Thus Series III would date from c. 475 to c. 450. Series III and Series IV share a reverse die indicating that they followed without interruption.³ As a result, Series IV goes down to the 430's, and covers the period when supposedly the Standards Decree was in operation.

Of Series V only 12 specimen are known. They are struck from five obverse and reverse dies, issued in two series, and not connected to any previous or subsequent series.⁴ Cahn's argument that Series V was exceptionally small needs to be modified. Indicative of the size of an issue is not the number of extant specimen, but the number of known dies. As noted by Kraay, at least 373 specimens of Series IV have survived, albeit struck from only four different obverse dies.⁵ The large number of extant specimen is due to the discovery of one or more very large hoards that contain coins of Series IV.⁶ The relation of specimen to dies indicates that we have a relatively complete picture of Series IV, while our knowledge of Series V is rather limited.⁷ In Series V there were cer-

¹ Cahn 1970, p. 143.

² Kraay 1969c, pp. 19-42.

³ Cahn 1970, p. 144.

⁴ See Cahn 1970, p. 166. For Series V, see e.g. *ACGC*, no. 946.

⁵ *ACGC*, p. 246.

⁶ These hoards are the Huberfund (*IGCH* 1186) that may have contained as many 2000 pieces, and the Zitelli Hoard (*IGCH* 1200). Both hoards reached the market and were dispersed without being sufficiently recorded; cf. Cahn 1970, pp. 2-3.

⁷ One one coin of Series V comes from a hoard context, the Zitelli Hoard (*IGCH* 1200) that contained mainly coins of Series VI.

tainly more coins struck that have not survived, and it is possible that more dies existed that have not survived. But even assuming that our sample of dies is representative, the number of dies in Series V is still larger than in Series IV. Cahn allows for the possibility of gaps in output of the earlier series.¹ The gaps in the output of Series V need not have been caused by the Standards Decree.² Rather, they probably indicate a general decline in minting as can be observed at many other mints around this time period. Series V can easily fit in the years before 411 when Series VI starts which runs into the 4th century.³

¹ See e.g. Cahn 1970, pp. 143-44; cf also *ACGC*, p. 246.

² As Cahn (1970, p. 166) assumes.

³ For Series VI, see Cahn 1970, pp. 168-74.

3.1.10 Aigina¹

Aigina starts striking staters with the characteristic turtle type on the obverse around c. 550.² The flan, which at first is dumpy and unflattened, becomes wider and flatter towards the last quarter of the 6th century. Hoard evidence allows to determine when the change from the early turtles with a thin collar to turtles with thick collar occurred. In the Dunbabin Hoard (*IGCH 1*), dating probably to the end of the 6th century, there are only turtles with thin collar.³ The Aiginetan coins in the Taranto Hoard (*IGCH 1874*), buried c. 490, are similar to those from the Dunbabin Hoard.⁴ In the South Anatolian Hoard (*IGCH 1177*), buried c. 480, there are 4 turtles with thin collar and 6 of a variety with heavy collar.⁵ In the Asyut Hoard (*IGCH 1644*), buried c. 475, there are pieces with turtles of both the “thin collar” and the “heavy collar” variety. Both types show similar signs of wear and have similar reverses.⁶ This suggests that turtles of the thin collar type still circulated in some quantity in the 480's. The thin collar types that are part of the Asyut Hoard may have been minted until c. 490.⁷ The so-

¹ For studies of Aiginetan coinage, see Milbank 1925; Brown 1950; Holloway 1971; Asyut, pp. 69-76; Arnold-Biucchi *et al.* 1988, pp. 14-22.

² *Asyut*, p. 76. Previously the beginning of the Aiginetan coinage was placed at c. 580; cf. Holloway 1971.

³ See Holloway 1971.

⁴ See Babelon 1912. According to Holloway (1971, p. 7 note 18) there was possibly also a “heavy collar” type in the Taranto Hoard. This coin (= *McClellan* no. 6022) was not part of the original account of the hoard. Cf. *Asyut*, p. 74 note 100.

⁵ Cf. Holloway 1971, p. 7. For the South Anatolian Hoard, see E. S. G. Robinson 1961.

⁶ *Asyut*, p. 75.

⁷ *Asyut*, p. 75.

called proto-tortoises are minted from the very beginning alongside the turtles.¹ A variety with trefoil collar in the Asyut Hoard (*Asyut*, nos. 509-513) appears to be contemporary with the thin collar turtles. With regard to reverse types, in the Asyut Hoard there are both early small skews (*Asyut*, nos. 541-542) and proto-skews (*Asyut*, nos. 538-540). Both reverse types are combined with obverses of the thin collar type and are connected by die-links.² In the Elmali Hoard (*CH VIII*, 48) there are 5 staters from Aigina: 3 are early and worn; 2 are fresh and have been described as the latest coins in the hoard.³ The turtle on the obverse has dots in the form of a T on the back and a trefoil collar. The reverse type is a large skew. No coins of this type are part of the Asyut Hoard. The development of the reverse skew indicates a later date, after 480.⁴

The change from the latest sea-turtles with T-patterned shell to the tortoises is usually dated to 457/6 when Aigina was defeated by Athens.⁵ Obverses both of the turtle type and of the tortoise type are combined with reverses of the broad-banded skew pattern.⁶ This indicates that both types follow with little or no delay. It is unlikely that the Athenian victory over Aigina caused a signifi-

¹ Holloway 1971, pp. 12, 19; *Asyut*, p. 76.

² *Asyut*, p. 74.

³ Fried 1987, p. 6.

⁴ See Fried 1987, p. 6. One of these latest staters is *Sternberg XV*, 11/12 April 1985, no. 124. For the date, see *ACGC*, p. 44; *Asyut*, pp. 73-76.

⁵ For the latest sea-turtles with the T-patterned shell, see e.g. *Traité*, pl. 30:15, 17, 18. For the date, see E. S. G. Robinson 1961, p. 111; *ACGC*, p. 42; For the Athenian victory over Aigina, see Thuc. 1.105.2 with Meiggs 1972, pp. 51-52.

⁶ See E. S. G. Robinson 1961, p. 111.

cant break in the output of the mint.¹ As several overstrikes indicate the striking of the land tortoises overlaps with the reign of Azbaal of Kition who has his *floruit* c.430.² The Naukratis Hoard (*IGCH* 1647) buried c. 440-430, and the Massyaf Hoard (*IGCH* 1483) closed c. 425-20, contain tortoises as well.³ These hoard finds establish 430 as *terminus ante quem* for the Aiginetan tortoises. In the summer of 431 (Thuc. 2.27) the Athenians drives out the inhabitants of Aigina and resettle the island. Thereafter no more coins are struck until when in 404 Lysander restores Aigina to the Aiginetans.⁴

If the Standards Decree was in force in the 420's, it had no effect on Aigina since the mint was already closed by that time. From c. 456 to c. 431 Aigina produces strikes tortoises, without any evidence for a break in the 440's, the early option of the Standards Decree.⁵

¹ Before the tortoises were securely dated to the 5th century, it was thought, that Aigina's mint was closed from 457/6 to the end of the Peloponnesian war; see Meiggs 1972, p. 184 with references to the early view. Cf. also E. S. G. Robinson 1961, p. 111: "It is hard to believe that in the brief period following 457, when the power and presumption of Athens was at its height, she should allow the coinage of her hated rival to continue."

² For Azbaal of Kition, see E. S. G. Robinson 1961, p. 111; Kraay and Moorey 1968, pp. 215-16. For overstrikes, see Noe 1954, pp. 89-90; with E. S. G. Robinson 1960b, p. 34; Kraay 1969a, pp. 19-20; Troxell and Spengler 1969, p. 11.

³ For the coin from the Naukratis Hoard, see *Boston* (Brett 1955), no. 1113; the specimens from the Massyaf Hoard (*IGCH* 1483) are Kraay and Moorey 1968, nos. 50-53.

⁴ For the coinage after 404, see *ACGC*, p. 48.

⁵ E. S. G. Robinson (1961, pp. 111-112) suggests that Aigina was exempted from the ban on coinage because in a stipulation of the treaty of the 30-year peace that it should be autonomous (Thuc. 1.67.2). The modern assumption (*ibid.* p. 112) that "[c]oinage to the Greeks was always a cherished symbol of autonomy..." notwithstanding, it is not clear, to what matters the autonomy clause exactly refers.

3.1.11 Summary

The local Greek mints that I have examined some detail have not produced any conclusive evidence for a lengthy break occasioned by the operation of the Athenian Standards Decree. Previous studies of the major mints Akanthos, Abdera, Maroneia, Ainos, and Knidos had integrated an interruption of 10 to 15 years after 449 into the sequence of issues. These studies often were done at a time and in a climate when the early date for the Standards Decree was widely accepted.¹ On the basis of recent hoard finds many of these coin series need to be downdated. This affects the gap in the output that has been surmised in the 440's.² But it does not necessarily mean, that the break in the coinage should then be moved to the 420's.³

My revision of the chronology has shown that it is really not possible to invoke the numismatic evidence as evidence for an imposed break. In order for such a break to be perceivable as a distinct change of style or minting technique it would have to have lasted at least 10 years. Since the local mints did probably not strike coins on a year by year basis anyway, criteria that could indicate an imposed break are difficult to ascertain. These problems become even more pressing in the case of mints that have only a small output, e.g. Skione, and where chronological reference points are few.

Although the reexamination of these mints has not yielded a date for an imposed ban of the local coinages, it has provided some interesting insight on the operation of the local mints. Fluctuations in the output of coinage seem to

¹ See e.g. May 1950; 1966; Cahn 1970, p. 164 note 462; Schönert-Geiss 1987.

² For the consequences of the Asyut Hoard on the chronology of the Northern Greek mints, see *Asyut*, pp. 120-21, for the Elmalı Hoard, see e.g. Price 1987.

³ See e.g. Mattingly 1977a, 1988.

be related to events in the local history rather than to imperial regulations. As the choice of coin standards indicates, several mints in Northern Greece struck their money for circulation in regional markets, and compatibility with the Athenian owls was not a primary concern.

In the following summary review of local mints by tribute district these issues will surface again, although they will be treated less extensively.

3.2 Survey of Greek Mints by Tribute District

3.2.1 The Thraceward District

The cities of the Thraceward District produce some of the most abundant local Greek coinages. Unlike the other districts, Thrace has local sources of silver which afford a steadier output.¹ The mints of Northern Greece have been cited as evidence for the operation of the Standards Decree in the 440's as well as in the 420's.² I have examined in detail several of the major mints in chapter 3.1. The results of these studies are integrated in the survey of the region below.

South of Chalkidike:

Perparethos

In the Athenian Tribute Lists, Perparethos is listed in the Thraceward District, although it is not part of Northern Greece proper.³ All denominations combine a grape-cluster on the obverse with several different reverse types. This caused previous scholars to attribute these coins to different mints.⁴ The period of minting was probably not very long. Balcer suggests a date of c. 500, since

¹ On the metal resources of Northern Greece, see e.g. Borza 1982, pp. 8-12; *idem* 1990, pp. 50-53.

² For the 440's, see e.g. Cahn 1970, p. 164 note 462; for the 420's, see e.g. Mattingly 1977, 1988.

³ See Balcer 1967. Balcer has assembled 9 tetradrachms on the (reduced?) Euboic-Attic standard, one didrachm, and 3 tetrobols.

⁴ The problem of the attribution is discussed in detail by Balcer 1967.

one coin was part of the Taranto Hoard (*IGCH* 1874), buried c. 500.¹ Tetradrachms of Perparethos are also included in the Asyut Hoard (*IGCH* 1644) and Elmali Hoard (*CH* VIII, 48) suggesting that the coinage of Perparethos may extend into the first decades of the 5th century.² The small number of extant dies suggests that the series was very small, and that striking might not have been continuous. Perparethos resumes minting only in the middle of the 4th century. This mint could not have been affected by the Standards Decree.

Chalkidike

The output of the mints of the Pallene peninsula is affected by the general, tumultuous, historical events. There were revolts from Athens as well as subjugations.

Potidea (see plate 6)

The mint of Potidea struck its coinage on the Euboic-Attic standard.³ The type on the staters is Poseidon Hippiion combined with a quadripartite incuse square on the reverse. On the drachms there is a horseman on the obverse, and a female head on the reverse. On the obols there is a horse on the obverse and a female head on the reverse. The first series starts c. 530/25 and ends c.

¹ Balcer 1967, no. 7 (= Babelon 1912, pl. 3:1). The coin has four dolphins around the grape-cluster on the obverse and a *dolphin rider* on the reverse. This coin was considered a forgery, but die linkage authenticates it; see Balcer 1967, p. 26 note 10. Balcer (*ibid.*, p. 25) further reports one tetradrachm from a hoard from Kos (Noe no. 273), buried at a similar date as the Taranto Hoard.

² For the coin in the Asyut Hoard, see *Asyut* no. 232; for the two tetradrachms from the Elmali Hoard, see Fried 1987, p. 4. The earlier one in the hoard is struck from the same set of dies as Balcer 1967, no. 3 and *Asyut* no. 232. The other tetradrachm (= *Bank Leu* 38, 13 May 1986, no. 78) is struck from the same set of dies as Balcer 1967, no. 4.

³ For the coinage of Potidea, see Alexander 1953.

480.¹ The smaller denominations of the next series end c. 432/29 when Potidea is taken by Athens after a siege (Thuc. 1.56, 58; 2.70). The staters of this series had ended earlier, c. 450. There is no evidence for a lengthy break in the 440's.² No coinage is produced during the 420's.

Mende (see plate 7)

The Eretrian foundation Mende strikes plentiful coinage on the Euboic standard.³ The coinage of the 5th century falls into two distinct groups. The first series has a donkey on the obverse, usually with a bird on its rump. On the obverse there is often the ethnic, abbreviated or in full. The earliest tetradrachms of Mende are struck on a thick and dumpy flan (e.g. *ACGC* no. 458). They are followed by pieces on a wider flan with windmill-sail or diagonally divided reverse types.⁴ On the obverses of the later group there is Dionysos reclining on a donkey, and the reverses have a vine in a central incuse square with the ethnic inscribed on a band around it. The second series of tetradrachms is accompanied by fractional coinage with types derived from the iconography of the tetradrachm types, and occurring in different combinations on the various denominations.⁵

¹ Alexander's date of 550 needs to be downdated to c. 530/25; see *Asyut*, pp. 45-46.

² Cf. Alexander 1953, pp. 208-215.

³ For Mende as a foundation of Eretria, see Thuc. 4.123.

⁴ For discussion of the early series, see Kagan 1992, pp. 7-8. The hoard evidence indicates that the windmill-sail reverses precede the diagonally divided reverses.

⁵ See *SNGANS* 351-371 for fractions struck from c. 460 to 423, and with the following types: tetrobols (nos. 352; 353): a male figure standing behind a donkey on the obverse, and a crow on the reverse; on various other small denominations there is a donkey on the obverse, combined with a crow on the reverse.; nos. 357, 358, (0.45 g; 0.42 g tritartemorion?) and on coins of even lighter weight there is the forepart of a donkey, combined with a kantharos).

Since the two groups of tetradrachms are of a distinctly different style, it has been thought that the second group started when minting resumed after an interruption in the 440's imposed by the Athenian Standards Decree.¹ An over-strike at the mint of Gela provides a *terminus ante quem* of c. 450-440 for the tetradrachms with the more sophisticated obverse type and with the inscribed reverse.² Tetradrachms similar to the one that is overstruck at Gela must have been minted around c. 450.³ But there are still earlier types in the series with the inscription around the vine. This suggests that the second series started earlier, at least by c. 455. In the Asyut and Elmalı Hoards only tetradrachms of the first group with a donkey on the obverse and simple reverse punch are present.⁴ The burial dates of these hoards make it unlikely that the inscription around the reverse square was introduced before 460. Thus a likely date for the beginning of the second group of tetradrachms is c. 460/55.

The Kaliandra Hoard, an excavation find from the site of ancient Mende, contains tetradrachms of both types.⁵ This hoard may have been buried in 423 previous to the plundering of the city by the Athenians. On the last issues some new experimental reverse types are introduced.⁶ The sequence of issues in the Kaliandra Hoard shows that the coinage of Mende continued without any major interruptions until it ends, probably around 423 when the city was subdued by

¹ See Robinson 1949, p. 335.

² *ACGC*, p. 137; Jenkins 1970, pp. 65-66.

³ Cf. Noe 1926, no. 55.

⁴ In the Asyut Hoard (*IGCH* 1644) there were 9 tetradrachms of the early type, see *Asyut*, pp. 44-45, nos. 195-211. In the Elmalı Hoard (*CH* VIII, 48) there is one single tetradrachm, see Kagan 1987, p. 25.

⁵ See Noe 1926.

⁶ Cf. *ACGC*, p. 137 nos. 462-63. Noe 1926, nos. 81-83; 86, 87.

Athens.¹

Coinage at Mende continued uninterrupted throughout the 440's, the early date suggested for the Standards Decree. If coinage ended at 423 it was probably because of the general devastation that the Athenian take-over caused.

Skione (see 3.1.1)

As at Mende coinage at Skione stops around 423 when both cities are subdued by Athens.² Compared to Mende Skione's issues are less abundant, although there is a great variety of types and denominations. No precise absolute dates can be proposed for Skione's small series. The impression is that striking was occasional and not continuous. Neither Mende nor Skione show evidence for a break occasioned by the Standards Decree.

Aphytis (see plate 6)

On the coins of Aphytis the obverse type is a bearded head wearing an Attic helmet. Aphytis is situated just across the peninsula from Mende.³ It adopts a reverse arrangement very similar to Mende's: a vine with grapes in a central incuse square, and the ethnic inscribed on a band around it. There are two issues of small denominations, probably hemidrachms on the Euboic-Attic standard. At Mende a *terminus ante quem* of c. 450 for the type with the reverse vine is provided by an overstrike from Gela.⁴ Aphytis' early coins with the re-

¹ Cf. *ACGC*, p. 137.

² Thuc. 4.120-23, 129-33.

³ See *ATL* 1, p. 474.

⁴ See Jenkins 1970, pp. 65-66; cf. above.

verse vine are somewhat later than the first coins of this type at Mende, and probably belong to the 440's.¹ In the next series the helmet on the obverse is wreathed.² This series should date about a decade later.³

It appears that Aphytis is not affected by the Standards Decree. If the dates proposed here are correct, then coinage is struck during the 440's and down to at least the 430's. Aphytis' output is small and occasional, and no special explanation needs to be sought for an interruption. It has to be kept in mind, however, that near ancient Aphytis a fragment of the Standards Decree has been found.⁴

Sermylia

Sermylia and Terone are the only tributary cities on the Sithone peninsula that strike coins. Sermylia, modern Ormylia, is situated at the North end of the peninsula.⁵ Sermylia's coins with a horseman hurling a spear as the obverse type are struck on the Euboic-Attic standard. Hoards and overstrikes indicate a date between c. 500 and c. 480.⁶

¹ For the hemidrachms, cf. e.g. *AMNG* 3.2, pl. 27:44; cf. Price 1987, pl. 9:9.

² E.g. *AMNG* 3.2, pl. 38:20; *SNGANS* 209. Price (1987, p. 46) dates the second series to the third quarter of the 5th century "... in apparent contravention of the Decree."

³ Cf. Erxleben 1970, p. 107.

⁴ See above, chapters 1.1, and 2.2.

⁵ *Olynthos* 3, p. 11.

⁶ Cf. *Asyut*, pp. 46-47. In the Asyut Hoard (*IGCH* 1644) there are two tetradrachms of Sermylia (nos. 219, 220). No. 219 is die-linked to *SNGSpencer-Churchill* 125, which is overstruck on a coin of Mende (cf. *Asyut* nos. 190, 191) from the early 5th century. A tetradrachm and an obol are in a hoard from Olynthos (*IGCH* 356), buried c. 479; see *Olynthos* 3, p. 9, nos. 10, 11.

Terone (see plate 8)

Terone is situated at the southern end of the peninsula with access to the sea.¹ Striking at this mints was irregular and the years around the middle of the century when no coinage was struck need not be related to the operation of the Standards Decree.

The early tetradrachms with the amphora on the obverse are accompanied by tetrobols and obols with an oinochoe as obverse type.² Some of the tetradrachms are on the Euboic-Attic standard (Groups A and C), some are on a local standard of c. 14 g (Group B). A securely dated excavation hoard from Olynthos (*IGCH* 356) provides a *terminus ante quem* of 479 for Group A.³ Robinson and Clement think that the coins from this hoard may have circulated for 60 to 80 years before the hoard was closed.⁴ But the bad state of preservation of the coins is due to fire damage and heavy cleaning rather than to striking from worn dies, or wear of coin through circulation.⁵ Kraay puts the three specimens he has been able to identify early in Group A.⁶ The authors of *Asyut* propose to date Group A from 490-480.⁷ In addition to Group A the *Asyut* Hoard (*IGCH* 1644), closed c. 475, contains coins of a later group, Group C. Therefore I prefer a slightly earlier ending date (c. 485) for Group A. In this group there is heavy use of dies and many shared dies, which points to a relatively short and

¹ *Olynthos* 3, p. 11 with note 11 for references to ancient and modern sources.

² E.g. *Olynthos* 3, pl. 1:1-9.

³ *IGCH* 356 buried 479, see *Olynthos* 3, pp. 8-12, pl. 1; *Olynthos* 9, pp. 165-66.

⁴ *Olynthos* 9, p. 166.

⁵ See Schwabacher 1938a, p. 71.

⁶ Kraay 1954, p. 12.

⁷ *Asyut*, p. 48.

intensive period of minting of not more than c. 10 years. This group ended c. 460.

Group B is struck on a different weight standard than Gr. A and C.¹ The authors of *Asyut* date Group B to c. 500-490 placing it before Group A.² In their assessment the reverses of Group B are distinctly rougher than those of Group A.³ In support of an earlier date for Group B they also cite hoard evidence: in the Benha Hoard (*IGCH* 1640), buried c. 485, there were two specimens of Group B, but in the Zagazig Hoard (*IGCH* 1645), buried c. 460-50 there were three specimens of Group A. It is true that the reverses in Group A appear somewhat more regular and are often stippled, but not too much weight can be placed on the hoard evidence.⁴ As the evidence from the Asyut Hoard indicates, around 475 all three groups circulated together. Group B could have been an early contemporary of Group A. There is no doubt, that Group C is the latest group starting c. 485/80.⁵

In the second half of the 5th century there are only small and occasional issues of tetrobols and smaller fractions. Some of the later tetrobols with an oinochoe on the obverse between the letters TE are part of Hoard 8 from Olynthos (*IGCH* 375).⁶ In analogy with coins from Skione and Akanthos in this

¹ In Group B the tetradrachms weigh c. 14 g.

² See *Asyut*, pp. 47-48.

³ See *Asyut*, nos. 221-222.

⁴ The coins in the Zagazig Hoard (*IGCH* 1645) may have been accumulated over some time, and thus the date of burial can only provide a *terminus ante quem* for the coin series; cf. *Asyut*, p. 22.

⁵ The two specimens in the Elmalı Hoard, buried c. 465, are in relatively fresh condition; cf. Fried 1987, p. 4.

⁶ For tetrobols, see e.g. *SNGANS* 751-754. On Hoard 8, see *Olynthos* 9, pp. 179-83.

hoard, these coins should date to the third quarter of the 5th century. The next series of tetrobols with a stippled surface on the reverse belongs only to the late 5th or early 4th century.¹

Akanthos (see 3.1.2)

On the Athos peninsula only Akanthos strikes coins. A revision of the coinage has shown that no break occurred during the 5th century.

Upper Chalkidike

Stagira

The series of Stagira with a lion bringing down a boar on the obverse ends c. 480.² There is another series with four roses attached to a central dot over a boar on the obverse. The attribution of these coins to Stagira is questionable.³ This series also ends c. 480. The mint of Stagira was not active at a time when it could have been affected by the Standards Decree.

Olynthos and the Chalkidian League

In the tribute lists both Olynthos and the Chalkidian League are called Ὀλύνθιοι.⁴ In the early part of the 5th century Olynthos is not a city of great importance.⁵ As a foundation of Chalkis, Olynthos starts striking on the weight standard of its mother city, the Euboic-Attic standard. There is a small early se-

¹ Coins of this type are in Hoard 7 from Olynthos (*IGCH*366); see *Olynthos* 9, pp. 177-79.

² Cf. *Asyut*, pp. 42-43, no. 191; Cahn 1958, pp. 37-40; *idem* 1973, pp. 7-13.

³ Cf. *Asyut*, p. 30. For more pieces of this type, see Cahn 1984, pp. 43-44, 50.

⁴ Cf. *ATL* 1, pp. 362-63.

⁵ Cf. *ACGC*, p. 135.

ries of tetradrachms with a quadriga on the obverse, and an eagle on the reverse, dated c. 500-480.¹ A later series of tetrobols depicts a horse on the obverse and an eagle with the letters ΟΛΥΝ on the reverse.² These tetrobols date to the third quarter of the 5th century, shortly before the foundation of the Chalkidian League in 432/1.³ They are struck on the third Thracο-Macedonian standard, the same standard used by several other mints of the region and later used by the Chalkidian League.⁴

When the Chalkidian League was established in 432/1 Olynthos became its capital where the coinage of the League was minted.⁵ The output began immediately after the foundation of the League. At first only tetrobols were issued in some quantity. The types are a laureate head of Apollo on the obverse, and a lyre with the ethnic ΧΑΛΚΙΔΕΩΝ on the reverse. A tripod replaces the lyre on denominations below the tetrobol. The issues of tetradrachms start only after 420, proceeding in regular series and usually accompanied by tetrobols.⁶

Since the autonomous issues of Olynthos were produced infrequently until 432/1, it is impossible to discern an imposed interruption. Similarly, there are no interruptions in the coinage of the Chalkidian League that is struck

¹ See *ACGC* no. 475; *Asyut* no. 212; *SNGANS* 463. For attribution to Olynthos, cf. Gaebler 1925, pp. 198-200.

² See *ACGC* no. 476; *SNGANS* 464-466.

³ Erxleben (1970, p. 115) dates these tetrobols to the 430's because of their close stylistic similarity with the tetrobols of the Chalkidian League that were minted probably shortly after 432/1. Cf. also Gaebler 1925, pp. 205-206.

⁴ E.g. Akanthos, Mende, Neapolis, Skione.

⁵ For the starting date of the coinage of the Chalkidians, cf. *Olynthos* 9, p. 128. Westermark (1988) maintains that the coinage only started in the 4th century.

⁶ For a survey of the coinage of the Chalkidian League, see *Olynthos* 9, p. 376; also *ACGC*, p. 138.

thereafter.

Aineia

Aineia, at the entrance to the Thermaic Gulf, is at the northwestern limit of the league.¹ From the first assessment on it is recorded with a payment of 3 talents tribute, until in 430/429 the amount is lowered to one sixth of a talent.² Three talents is more than most of the neighboring cities pay. Fertility of soil alone cannot account for this high assessment.³ It is likely that Aineia was a port. Its commanding position at the entrance to the Thermaic gulf allows to control the shipping traffic to and from Therma.⁴ The output of Aineia's mint was not plentiful. During the 5th century only three small series of coinage were struck. Only few coins occur in a hoard context. In order to establish a chronology one has to resort to stylistic criteria.⁵

The early tetradrachms show on their obverse the city's mythical founder Aeneas as he is leaving Troy together with his family. This scene is depicted as a successfully balanced group: Aeneas carrying Anchises advancing to the right preceded by Creusa who carries Ascanius on her shoulders.⁶ The reverse

¹ Cf. Hdt. 7.123; Skylax 66: ... Ἀξιὸς ποταμός, Ἐχέδωρος ποταμός, Θέρμη πόλις, Αἴνεια Ἑλληνίς, Παλλήνη ἄκρα μακρὰ εἰς τὸ πέλαγος ἀνατείνουσα· καὶ πόλεις αἶδε ἐν τῇ Παλλήνῃ Ἑλληνίδες. Therma was still a Macedonian city and paid no tribute. For a discussion of the location on the basis of ancient sources, see Edson 1947, pp. 88-89; cf. *ATL* 2, p. 84. The promontory is now called Cape Karaburnu.

² For the tribute record, see *ATL* 1, pp. 220-21.

³ For fertility of soil, see Livy 44.10.7; also Rey 1921-22, p. 161.

⁴ For a small stone pier, see Hammond 1971, p. 186. Casson (1926, pp. 87, 94) suggests that Aineia could have been a market for the gold and the silver.

⁵ Cf. *AMNG* 2, pp.20-22; Erxleben 1970, pp. 103-104; Robinson 1949, p. 334.

⁶ For the artistic problems that the depiction of this scene posed, and comparative material, see Fuchs 1973, pp. 615-32.

is a quadripartite incuse square. Of these early tetradrachms only three specimens are known: one in Berlin, one at the ANS, and one from the Asyut Hoard (*IGCH* 1644), buried c. 475.¹ The coin from the Asyut hoard has on the obverse the retrograde inscription ΑΙΝ, and as a symbol a ram's head. This symbol also appears on the coin at the ANS. The specimen in Berlin has the inscription ΑΙΝ ΕΑΣ written in full and as a symbol a rosette.

The flat flan and the execution of the figures call to mind other local coinages of the early 5th century. The figures on the coin from the Asyut Hoard resemble in particular those on the early Thasian coinage by the form of their heads and by the rendering of the hair. In addition, Anchises' hand is raised with two fingers spread in the manner of the Thasian nymph in Thasos Group 2.² On the coin in Berlin Creusa is clad like the female figure on the "Lete coins."³ On the basis of these comparisons a date from c. 500 to c. 485 for the extant tetradrachms seems plausible. This date is compatible with the occurrence of a tetradrachm of this type in the Asyut Hoard, buried c. 475.

The tetradrachms on the Attic-Euboic standard are accompanied by tetrobols and diobols.⁴ On the obverse is the head of Aeneas of archaic style, bearded, with hair in formal curls, wearing the Corinthian helmet. On the reverse, there is a quadripartite incuse square. Of the fractions only one tetrobol comes from a recorded hoard context, the Antilibanon Hoard (*CH* VI, 4 and 5),

¹ The coin in Berlin is illustrated in *ACGC* no. 469; for the specimen at the ANS, see *SNGANS* 67 (=Jameson 932)s; for the coin from the Asyut Hoard, see *Asyut*, pp. 43-44, no.194.

² For the comparison see *Asyut*, pp. 43-44.

³ *Asyut*, pp. 43-44; Head *BMC Macedonia*, p. xli.

⁴ For the fractional coinage, see e.g. *AMNG* 2, pl. 5: 34-36; *BMC Macedonia* nos. 1, 2.

buried c. 475.¹ The closing date of the hoard agrees with a date of c. 500-485 for this group.

Group 2 consists of tetrobols struck on a different weight standard.² The obverse depicts the head of Aeneas in a later style, with slight beard and wearing a crested helmet. The reverse has AINEΑΣ written around the border of an incuse square.³ By their style and by the rendering of the inscription these coins should date around 450-40.⁴

The tetrobols of Group 3, struck probably on the same weight standard as Group 2, have on the obverse the head of Athena wearing an Athenian helmet bound with olive. On the reverse there is a bull in the incuse square and the inscription AINEA or AINEΑΣ.⁵ E. S. G. Robinson dates this series to c. 430, and this date seems about right.⁶

With so few specimens and approximate dates one cannot argue for an interruption due to an imposed ban of coinage. From the sparse evidence one might rather conclude that coinage was issued on a small scale occasionally throughout the 5th century, and that there were probably gaps in the output of the mint.

¹ Hurter and Pászthory 1984, no. 7.

² The weights vary between 1.98-2.40 g. This is the same weight standard that Skione and Neapolis used, and which later the Chalkidic League adopted.

³ For tetrobols of Group 2, see e.g. *AMNG* 2, pl. 5:37; *BMC Macedonia* nos. 3, 4.

⁴ Cf. Price 1987, p. 46: "... a coinage of the third quarter of the century;" E. S. G. Robinson 1949, p. 334: "...by its style goes most comfortably after 450, though it might be just before...;" Erleben 1970, p. 104: "...dem Stil des Aeneaskopfes...nach eher kurz nach als kurz vor 450 v. u. Z."

⁵ Cf. e.g. *AMNG* 2, pls. 5:38, 6: 2.

⁶ E.S. G. Robinson 1949, p. 334.

Dikaia in Macedonia (see plate 9)

Dikaia in Macedonia, a foundation of the Eretrians, followed the coinage of its mother-city quite closely.¹ Dikaia struck tetrobols and hemiobols. The weight standard is the third Thraco-Macedonian with a norm of 2.45 g, comparable to an Attic tetrobol.² There are tetrobols with the obverse type of a cow with head reversed licking its raised hind-foot.³ The reverse is a quadripartite incuse. These tetrobols are struck early in the 5th century, as indicated by the irregular and dumpy flan. The next series on a wider, flatter flan has a cock on the obverse and a squid on the reverse.⁴ These coins probably belong in the first half of the 5th century.⁵ In addition, there is a later series of tetrobols and hemiobols with a female head on the obverse and the forepart of a cow on the reverse to which the ethnic (either abbreviated or in full) is added. The reverse type is struck with a circular punch.⁶ The same types occur on Dikaia's bronze coinage of the 4th century. These coins date not before the third quarter of the 5th century.⁷ The chronology of the coinage of Dikaia-of-the-Eretrians is not very precise. The issue is rather small, and Dikaia may not have been striking continuously. Breaks occurring at the respective dates proposed for the Standards

¹ Cf. Schönert-Geiss 1975, pp. 30-31.

² Cf. Schönert-Geiss 1987, p. 30.

³ E.g. ACGC no. 472; *SNGANS* 241, 242.

⁴ E.g. ACGC no. 473; *SNGANS* 243.

⁵ Erxleben 1970, p. 110.

⁶ E.g. *SNGANS* 244; cf. Schönert-Geiss 1975, p. 30, nos. 1-14.

⁷ The weight standard corresponds to the Perdikkas' series of heavy tetrobols, struck in the third quarter of the 5th century; cf. Raymond 1953, pp. 141-47, nos. 176-245, dated from c. 443/2 to 425/4. Schönert-Geiss 1975, p. 30 compares the nymph's head to similar heads on the coins of the Bottiaioi (*AMNG* 3.2, pl. 12:22-23) dated to c. 432-400, of Neapolis (*AMNG* 3.2, pl. 16:25-31) dated to c. 424-350), and of Thasos (*SNGCop* pl. 20: 1017-1019) dated to c. 463-411.

Decree, could be envisioned at this mint, but there is no conclusive evidence.

Tinde?

Robinson suggests that the silver staters with the inscription ΤΥΝΤΕΙΝΟΙ were issued by the mint of the Τινδαῖοι who are listed as paying tribute in 434/3.¹ These coins were issued early in the 5th century and could not have been affected by the Athenian Standards Decree.

Tragilos and Bottiaioi

There is a small series of the mint of Tragilos dating after 440.² Towards the end of the century the Bottiaioi, who have their capital at Spartolos, strike a very small issue of silver coins.³ These two coinages start too late and are too small to be instructive about the operation of the Standards Decree.



The coinages of the Chalkidike present a diversified picture. Akanthos and Mende, the two major coin producers of the region, strike uninterrupted until Mende closes in 423. Many mints produce only small and occasional issues which often end when these cities are subdued by Athens. In none of the issues is there evidence for a break, either in the 440's or 420's, that could be

¹ *ATL* 1, p. 555; E. S. G. Robinson 1949, p. 336; for the staters, see *Traité*, pl. 159:14; *AMNG* 3.2, p. 211 no. 42, pl. 24:40; Kraay and Moorey 1968, p. 183 no. 10 (from Jordan Hoard = *IGCH* 1482).

² For the coins, see *AMNG* 3.2, pl. 24:32, 33. For the date, see *Olynthos* 9, p. 318; Erleben 1970, pp. 122-23.

³ For the Bottiaioi and Spartolos, see *ATL* 1, pp. 412-13, 550. For the coins, see *AMNG* 3.2, pl. 12:22-23; and *Olynthos* 9, pp. XXIV-XXV Addenda (from Olynthos Hoard 10 = *IGCH* 374).

clearly attributed to the operation of the Athenian Standards Decree.

A common weight standard, especially in the early series, is the Euboic-Attic standard. The spread of this standard can be explained by the fact that many of the cities are Euboic foundations. Especially in the second half of the century, the output of the mints declines. The weights of the individual denominations become lighter, comparatively more fractions are struck, and overall less coinage is produced. There is a tendency especially for the fractional coinage to conform to a form of the local Thracian-Macedonian standard, which is compatible with a lighter-weight version of the Euboic standard. This probably also reflects a reorientation of the flow of silver to local markets and the hinterland.¹

East of Strymon

Thasos (see 3.1.3)

The cities east of the Strymon produce abundant silver coinages, which in the archaic period travel widely over the Mediterranean. Thasos, a rich and influential city, struck plentiful issues of coins with the nymph and satyr type, especially in the early period. The decreasing size of Thasos' issues and the decreasing weights of the individual coins are probably related to the Thasos' loss of mining areas on the mainland. A more detailed and precise chronology can be expected once Professor Picard's study is completed. From my survey it emerges that the staters of Group 3 with the nymph displaying five fingers starts probably around 465. The next group, Group IV with the "consenting nymph" on the staters, was struck before 411. Both groups are comparatively small, and

¹ Cf. *ACGC*, p. 133. This phenomenon is discussed in my chapter on Akanthos, 3.1.2 above.

there must have been years when no coinage was struck. Whether these interruptions were caused by the provisions of the Standards Decree is a different question. Group 3 is likely to have lasted between 15 and 20 years and thus extends into the 440's, the early date proposed for the Standards Decree. Group 3 probably had already ceased by the 420's, the later option for the Standards Decree. The years in the second half of the 5th century when no coinage was struck may be seen as related to the general decline of minting, and not necessarily as a the result of an enforced ban.

Neapolis (see plate 9)

Neapolis was a foundation of Thasos.¹ It struck its coinage on the same weight standard as Thasos and there are parallels in the development of the two issues.² The obverse type of Neapolis' coinage is a Gorgoneion. The early series of staters is struck on a small and dumpy flan similar to Group 1 at Thasos starting c. 520.³ Contemporary with the staters are hekte. Like the staters they have the Gorgoneion as obverse type.⁴ In the second group there is a large number of staters, struck on a wide and flat flan (e.g. *ACGC* no 524). This series may have ended at the same time as the comparable series at Thasos, i.e. c. 465.⁵

A later series of fractional coinage is included in the Aidhonokorion

¹ Ancient Neapolis is located near the site of modern Kavalla; cf. *ACGC*, p. 150.

² See Pouilloux 1954, p. 160.

³ E.g. *SNGDelepierre* 817-821.

⁴ Stater and hekte of Neapolis together with staters, hekte and smaller fractions of Thasos were found in the Pontolivado hoard; see Oeconomides 1990, pp. 533-40.

⁵ Cf. *ACGC*, p. 150.

Hoard (*IGCH* 364), buried c. 400-375.¹ These coins were probably struck in the last quarter of the 5th century.² This suggests that the mint of Neapolis had already ceased production before the Standards Decree was possibly enacted. Neapolis thus cannot provide any evidence for the operation of the Standards Decree. Compared to Thasos the output of the mint of Neapolis was small. At Thasos coinage slowed to a trickle after 465, and stopped intermittently, whereas at Neapolis it stopped completely between c. 465 and the late 5th century.

Abdera (see 3.1.4)

Dikaia-by-Abdera (see 3.1.5)

Maroneia (see 3.1.6)

The mints of Abdera, Dikaia-by-Abdera, and Maroneia appear interrelated by their choices of standards and denominations. In the coinage of Abdera no major break occurs during the 5th century. The issues of Dikaia-by-Abdera end by c. 470. The coinage of Maroneia presents the greatest difficulties for establishing an absolute chronology. Although the individual series cannot always be dated precisely, evidence for an unusual break is lacking.

Ainos (see 3.1.7)

Ainos on the Hebros is oriented towards the East and the Hinterland as much as to the Greek cities in the West and South. The weights of its coins are based on a Persian unit of weight widely used in the Thracian hinterland and in the East. No conclusive evidence for a break either in the 440's or the 420's can be observed.

¹ On this hoard, see Lorber 1990, pp. 39-40.

² Cf. Gaebler *AMNG* 3.2, p. 80.

Samothrace

Only the discovery of the Kiourpet Hoard (*IGCH* 696) has allowed certain identification of the coinage of Samothrace. The output of the mint is not very large, and the production stops at some point before the middle of the 5th century. Schwabacher, in the publication of the Kiourpet Hoard, divides the coins into groups, and establishes a relative and absolute chronology.¹ Schwabacher's relative chronology is sound.² His absolute chronology, however, is somewhat problematic. He arrives at his dates by stylistic comparison with other coinages of the region, especially with the coinage of Abdera. In 1938, when Schwabacher wrote, the coinage of Abdera had not yet been systematically examined, and Schwabacher had to rely mostly on the material that Strack had assembled in 1912.³ Provided the comparisons between the sphinx types on the coinage of Samothrace and the griffin types from Abdera are valid, the lowered chronology of Abdera's series affects Samothrace. Thus, for example, Group A at Samothrace should be downdated to c. 470, since this has emerged now as the date for the comparable pieces from Abdera.⁴ Schwabacher compares Gr. B, the last coins from Samothrace in the 5th century to the early coins from Abdera in Strack's Group III (e.g. *AMNG* 2, pl. 1:14), which Strack dated to c. 478. The *comparanda* belong now in the middle of

¹ Schwabacher 1938b.

² Erxleben (1970, p. 117) moves the diobol no. 3 from Group A to the end of the series. He argues that the dotted border around the incuse square on the reverse suggests a later date. Comparable dotted borders can be found, however, as early as c. 485–475, e.g. on the triobols of Dikaia-by-Abdera.

³ Strack 1912.

⁴ Schwabacher (1938b, p. 119) compares it to the Abderite coins of Strack Group II (cf. *AMNG* 2, pl.1:5) then dated from the late 6th century to c. 478. These coins correspond to May's Group II and early Group III.

May's Period IV (cf. esp. May 1966, A 122-126). In my revised chronology Period IV starts not before 455/50. This might suggest that the coinage of Samothrace ends only c. 450. However, I would like to stress, that a chronology arrived at on the basis of stylistic comparison is not very secure. A connection with the Athenian Standards Decree could only be surmised if a number of mints had a securely dated break at this date.



The Greek cities located to the east of the Strymon river strike some of the most abundant local Greek coinages. No lengthy interruption that could be attributed to the Standards Decree could be observed.

3.2.2 The Hellespontine District

The tributary cities of the Hellespontine district are listed roughly in geographical order from north to south and from east to west.

Propontis: European Shore

Selymbria

Selymbria, a colony of Megara, situated on the European shore of the Propontis, pays 6 talents of tribute in the second assessment period (451/50) and 4 talents in the fourth (430/29). In 434 and 432 Selymbria is listed with only 900 drachmas.¹ In 410 Selymbria revolts from Athens (*Xen. Hell.* 1.1.21). In 408 it has to surrender, and the terms of the settlement survive in part (*ML* 87).²

Selymbria's coin type is a rooster, and the coinage is not very plentiful.³ The early issues with the quadripartite incuse square are struck in the first decades of the 5th century.⁴ Over most of the 5th century Selymbria's mint appears to have been inactive. The next group is significantly later. The obverse type is still the rooster, and on the reverse features now an ear of wheat, or, on the fractions, a grain of wheat. This coinage probably belongs to the last quarter of the 5th century.⁵

Thus Selymbria is another example of a mint that stops issuing coins, but

¹ Meiggs 1972, p. 370; cf. *ATL* 3, pp. 310-12.

² Cf. Meiggs 1972, p. 368.

³ See Schönert-Geiss 1975, pp. 35-49.

⁴ No coins of Selymbria occur in a hoard context. Thus the chronology is based mainly on considerations of style, and cannot be very precise. For the first group Schönert-Geiss (1975, p. 43) proposes 492/90- 473/70.

⁵ Schönert-Geiss (1975, p. 44) dates this group between 425/20 and 411/10.

for reasons other than an imposed ban of minting. Selymbria could not have been affected by the Standards Decree, since in the relevant time period its mint was closed anyway. The resumption of minting by the end of the 5th century cannot be dated closely enough to be put in relation with a late date for the Decree.¹

Propontis: Asiatic Shore

Parion

The city of Parion produces a small output of drachms (?) with a Gorgoneion on the obverse and an incuse square with irregular lines on the reverse. Coins of this type are included in the South Anatolian Hoard (*IGCH* 1177), buried c. 480 and in the Asyut Hoard (*IGCH* 1644), buried c. 475.² This small issue is unlikely to have lasted beyond c. 470.

Astakos, Kalchedon

The city of Astakos strikes two issues with a crab on the obverse and a female head on the reverse. The first series dates probably c. 480-470, and the second series was not struck before the third quarter of the 5th century.³ This chronological framework implies that Astakos' coinage was not affected by a

¹ In both groups the heavy pieces weigh between 4.21 g and 4.30 g. They may have been perceived as octobols or third staters on the Second Thracian-Macedonian weight standard with a theoretical weight of 4.36 g; cf. Schönert-Geiss 1975, p. 40. The pieces could also have passed for Attic-Euboic drachms. The fractions were struck somewhat underweight. For the fractions, see Schönert-Geiss 1975, p. 40. The pieces of Group II between 0.61 g and 0.80 g are probably not obols but trihemibols of the Second Thracian-Macedonian Standard were 0.81 g is precisely half the weight of a triobol.

² *Asyut* no. 612; for the piece in the South Anatolian Hoard, see E. S. G. Robinson 1961, p. 113, no. 35. Cf. also *SNGCop* 256; *Traité* pl. 16:22-23; *SNGv.Aulock* 1318.

³ For the first series, see *Traité* pl. 181:1-3; for the second series, see *Traité* pl. 181:4-6; cf. also E. S. G. Robinson 1949, p. 332. The second series is dated in comparison with similar nymph's head at Syracuse that are dated c. 450-39; see E. Boehringer 1929, pls. 26-27.

ban in the 440's, and by the 420's its coinage had already ceased.

Kalchedon produces only occasional coinage during the second half of the 5th century.¹ Its issues cannot be used as evidence to date the Standards Decree.

Kyzikos

Kyzikos strikes fractions of silver with the forepart of a boar behind which is a tunny on the obverse, and the gaping head of a lion in an incuse square on the reverse.² The beginning of the coinage, dated by Von Fritze to the end of the 6th century, should be lowered to c. 490.³ As Von Fritze has shown, the fractional silver coinage of Kyzikos extends without any major interruption over the 5th century.⁴

Hellespont: Asiatic Shore

Abydos

Abydos produces an early series of trihemiohols with a standing eagle on the obverse.⁵ Two coins of this type are part of the hoard *IGCH* 1165, buried c. 500 in Western Asia Minor.⁶ A similar tetrobol is included in the Asyut Hoard,

¹ E.g. *Traité* pl. 181:7-13; *SNGv.Aulock* 481; cf. Erxleben 1970, p. 97.

² E.g. *SNGCop* 45-52.

³ See *Asyut*, p. 83.

⁴ Von Fritze 1914.

⁵ E.g. Bloesch 1958/59, no. 54; *SNGCop* 1-2; cf. *Traité* pl. 147:28; *SNGv.Aulock* 1439.

⁶ For this hoard, see Mørkholm 1971; for the coins, see *ibid.*, p. 86, nos. 46, 47; for the date, see *ibid.*, p. 129 note 4.

buried c. 475.¹ The coins from the hoard *IGCH* 1165 establish c. 500 as a *terminus ante quem* for the beginning of this series.² Even assuming that Abydos might have resumed minting once it recovered from Darius' attack, the series would have ended early in the 5th century.³

The second series of Abydos' coinage employs a Gorgoneion as a reverse type. This series probably ends c. 440.⁴ Towards the end of the 5th or early 4th century Abydos strikes tetradrachms on the Rhodian standard.⁵ Although the chronology of Abydos' series of the 5th century requires further refinement, it is likely that Abydos' mint was active during the 440's, the early date proposed for the Standards Decree. By the 420's Abydos had already stopped minting.

Dardanos

Dardanos struck a small series of coins with a horseman on the obverse and a cock on the reverse.⁶ This coinage probably belongs to the third quarter of the 5th century.⁷

¹ *Asyut*, p. 84, no. 613.

² Mørkholm (1971, p. 129 note 4) suggests that the trihemioiols were struck before the destruction of Abydos by Darius in 512 after his Scythian expedition (Strabo 13.1.22).

³ The authors of *Asyut* (p. 84) suggest that the silver fractions were struck later, in connection with the Ionian Revolt (499-494).

⁴ The drachms on a wide and flat flan with eagle standing and Αβυδηνον on the obverse and a Gorgoneion on the reverse should date c. 475-450; cf. *ACGC*, p. 243. For coins of this type, see e.g. *SNGCop* 3; *ACGC* no. 909; Brett 1955 no. 1917. Somewhat later, and probably dating to the 440's are e.g. *SNGCop* 4 with kantharos symbol and letter (?) on the obverse, and *SNGCop* 5.

⁵ E.g. *Traité* pl. 168:3-4; *Boston* (Brett 1955) no. 1618.

⁶ E.g. *SNGCop* 282, 283; *Boston* (Brett 1955) no. 1628. For the identification of the obverse type, see E. S. G. Robinson 1949, p. 333.

⁷ Cf. Erxleben 1970, pp. 96-97.

Lampsakos

For about two or three decades in the 5th century Lampsakos produces a few silver issues of drachms and smaller denominations.¹ The types are a female janiform head on the obverse, and the head of Athena in a square incuse on the reverse. The heads on the earliest coins (e.g. *ACGC* no. 913) have been compared to the heads of Arethusa on the first Syracusan tetradrachms with dolphins and have been dated accordingly to c. 480. This date agrees with the inclusion of a specimen of the earliest series of Lampsakos in the Asyut Hoard, buried c. 475.² The treatment of the head on the next issue of Lampsakos' silver has been compared to the Athenian dekadrachms, indicating a date in the mid 460's (e.g. *ACGC* no. 914).³

Next Lampsakos strikes a series of coins that are marked with symbols and letters (cf. *ACGC* no. 915). One of the last issues is marked with the letter Ξ. The same letter occurs on a small issue of electrum staters (*ACGC* no. 916). The electrum issue dates around mid-century, and this establishes also a date for the last silver issues.⁴ Kraay sees a connection between the end of silver coinage, the onset of the electrum coinage, and the Athenian Standards Decree: the silver issues were replaced by electrum, in order to circumvent the provisions of the Standards Decree.⁵ There need however not have been such

¹ *ACGC*, p. 244. For Lampsakos, see Baldwin 1924.

² See *Asyut*, p. 83 no. 611.

³ *ACGC*, p. 245; Cf. *Asyut*, p. 83. For the date of the Athenian Dekadrachm, see Starr 1970, pp. 38-44; cf. Kraay 1972, pp. 313-17.

⁴ *ACGC*, p. 245.

⁵ *ACGC*, p. 245.

a causality.¹

Troad

Kebren, Neandreia, Lamponeia

Most of the cities of the Troad produce only small series of coinage, and mint only for part of the 5th century. The mint of Kebren strikes fractions with a ram's head as obverse type. None of the coins date later than the first half of the 5th century.² The coinages of Neandreia and Lamponeia do not start before the last quarter of the 5th century. Lamponeia strikes drachms and fractions with the bearded head of Dionysus with ivy wreath on the obverse and a bull's head with the abbreviated ethnic on the reverse.³ Neandreia produces fractional coinage in the last quarter of the 5th century only. On the obverse there is the wreathed head of Apollo, and on the reverse a ram with the abbreviated ethnic.⁴

Tenedos

The coinage of Tenedos falls into two periods. In both periods the obverse type is a janiform head composed of a male and female head. The reverse type is an axe with the ethnic inscribed next to it. The first period ends in first half of the 5th century.⁵ In the second period the obverse type is larger and

¹ Cf. the supposed connection between striking of electrum at Chios and the Athenian Standards Decree which also has to be rejected. See above 3.1.8.

² E.g. *SNGCop* 254-258; *SNGv.Aulock* 1544, *Traité* pl. 164:15-18.

³ Cf. Erxleben 1970, p. 98. For the coins, see *Traité* pl. 163: 22,23; *SNGCop* 444.

⁴ Cf. Erxleben 1970, p. 99. For the coins, see *Traité* pl. 161:1-3; *SNGCop* 446.

⁵ For an early didrachm, see *SNGCop* 505; for hemidrachms and obols, see *SNGCop* 506-510; *SNGv.Aulock* 1587. The hemidrachms and obols belong to the early 5th century, maybe until c. 470; the didrachm could be late 6th or early 5th century.

of more advanced style. The female head bears a stephanos and the bearded male head is wreathed with laurel. The hair is fluffy. On the reverse, on one side of the axe, there is a bunch of grapes as a constant symbol and on the other side the ethnic Tenedion and a varying symbol.¹ The general style of these coins, especially of the obverse, suggests a date in the late 5th or early 4th century. With Period I ending before 450, and Period II dated to the late 5th century, it emerges that Tenedos struck no coinage in the years when the Standards Decree could have been enacted.

Skepsis

For the coinage of Skepsis E. S. G. Robinson has proposed an interruption between 450 and 400.² Erxleben argues that Skepsis strikes coinage from c. 480 until the end of the century.³ The early coins with a horse protome on the obverse, and a fir-tree on the reverse, have an early appearance, comparable to the early horse-protomes from Maroneia.⁴ The next series with Pegasus protomes on the obverse has a later appearance, and should date to the second half of the 5th century.⁵ Considering the small size of the output, it seems rather likely that there were gaps in the output. However, no comprehensive study of this coinage has yet been done, and it cannot be presupposed that such interruptions are linked to the Standards Decree.

¹ Cf. *SNGCop* 511-518.

² E. S. G. Robinson 1949, p. 332.

³ Erxleben 1970, p. 100.

⁴ E.g. *SNGCop* 469.

⁵ E.g. *SNGCop* 470, 471; *SNGv.Aulock* 1575, 1576.



The cities of the Hellespontine District strike rather small series of coinage. Kyzikos and Skepsis are the only mints that strike throughout the 5th century, but there probably gaps in their output as well. The series of most of the other series end at some point in the first half of the 5th century, and a few resume minting towards the end of the century. Lampsakos is the only mint for which a case could be made that silver coinage stopped around 450 because of an imposed ban. However, the cessation of the silver issues could equally be due to other, more economic reasons.

3.2.3 The Euxine District

Cities from the Euxine are for the first time included in the assessment of 425.¹ The tribute quota list of 420 almost certainly includes a Euxine District indicating that by then at least some cities paid tribute.² There are some problems, however, as to which cities were Athens' tributary. In addition, the coin series of the cities that were possibly members of the League present problems of attribution that cannot be pursued here.³ In the following I adopt basically the attribution and chronology of *SNGBM*.

Mints of the Euxine district that strike coins in the 5th century and could possibly have been affected by the provisions of the Standards Decree are Apollonia Pontica, Istrus, Mesembria, Olbia, Panticapaeum, and Heraclea Pontica. Only the coinages of Mesembria, Panticapaeum, and Olbia could have started by the middle of the 5th century.⁴ Since it cannot be presumed that these mints issued usually silver coins on a steady basis, it is not possible to attribute interruptions or the cessation of coinage to imperial legislation. Most mints of the Euxine District start striking not before the late 5th century, and therefore cannot have been affected by the Athenian Standards Decree.⁵

¹ Meiggs 1972, pp. 328-29.

² *ATL* 3, p. 78, list 34.

³ Cf. E. S. G. Robinson 1949, p. 336; Erxleben 1970, pp. 123-25.

⁴ For Mesembria, see *SNGBM* 265; for Olbia, see *SNGBM* 358; for Panticapaeum, see 836-844; cf. also also Welz 1957, pp. 25-31; *idem* 1962, pp. 3-6.

⁵ For Apollonia Pontica, see *SNGBM* 148-152; for Istrus, see *SNGBM* nos. 225-236; for Heraclea Pontica, see *SNGBM* nos. 1566-72.

Sinope

Sinope was not a member of the Delian League and was not paying tribute. It became an Athenian kleruchy in c. 430. Its coinage should, however be considered for comparative purposes.¹ It has been thought that the coinage of Sinope stopped at 430 when the city became an Athenian kleruchy and complied with the Athenian Standard Decree.² The coins of the series with the “Barbarous Eagle-heads” were in Asyut Hoard (*IGCH* 1644), buried c. 475, in the Zagazig Hoard (*IGCH* 1645), buried c. 460-50, and in a hoard from the Black Sea (*CH* I, 15), buried c. 420.³ The hoard evidence suggests that the “Barbarous Eagle-heads” may have been struck as late as the 430's.⁴ The coinage was probably not discontinued with arrival of Athenian settlers in the 430's. Not part of the Black Sea Hoard were more developed eagle heads with letters in a corner of the reverse. They must be later and could date between 439/36 and 413/12 as proposed by Hind.⁵ A new series with the head of a nymph on the obverse and a sea-eagle on the back of a dolphin, was probably minted after 413/12, the date when supposedly the Athenian settlers withdrew.⁶

The revised chronology indicates that coinage was minted without interruption at Sinope. The local issues continued without any significant break after the establishment of the Athenian kleruchy. Thus in the case of Sinope coinage cannot be treated as a symbol of autonomy.

¹ Cf. E. S. G. Robinson 1949, p. 336; Erleben 1970, p. 125.

² See *ACGC*, p. 245; Hind 1976, p. 3. No break in the series in *SNGBM*.

³ See *Asyut* no. 609; *Zagazig* (*IGCH* 1645) no. 234/5; *CHI*, 15 nos. 38-55.

⁴ Kraay 1981, pp. 6, 17-18; cf. also *SNGBM* nos. 1359-1366 dated from c. 490-425.

⁵ Hind 1976, pp. 1-6; cf. *SNGBM* nos. 1367-1372, dated from 425-410.

⁶ See Hind 1976, p. 3; cf. *SNGBM* nos. 1374-1404, dated c. 410-350.

3.2.4 The Ionian District

The mints of the Ionian and Karian Districts are treated separately. Before reviewing the coinages of the cities that paid tribute to Athens, the autonomous and ship-contributing allies Lesbos, Chios and Samos will be discussed.¹

Lesbos, Chios, and Samos

Lesbos

Lesbos was an autonomous and ship-contributing ally until the crushing of the revolt of Mytilene in 427 (Thuc. 3.2). By that time Mytilene also loses the cities it controlled on the mainland.² Starting c. 485 Mytilene strikes a series of electrum coins and occasional silver issues.³ A silver tetrobol of an early issue (c. 480) is part of the Asyut Hoard (*IGCH* 1644).⁴ Like the electrum coinage, the occasional silver issues continue until c. 427 when the city is subjugated by Athens.⁵

Another city on Lesbos that strikes silver coins is Methymna. An early series of didrachms with the ethnic and a boar type on the obverse and a head of Athena on the reverse dates to c. 480.⁶ The second period consists of drachms

¹ On the autonomy of Chios, Lesbos, and Samos, see Thuc. 1.19; 3.10.5; 3.39.2; *AthPol.* 24.2; *Arist.Pol.* 1284a 38.

² Cf. Meiggs 1972, p. 533.

³ *ACGC*, p. 266.

⁴ *Asyut*, p. 85, no. 614. The obverse type consists of two facing calves' heads conjoined, the reverse type of an incuse square divided by two diagonal lines. Cf. Kraay 1966, no. 694.

⁵ Cf. Erxleben 1970, p. 101; E. S. G. Robinson 1949, p. 332.

⁶ E.g. *ACGC* no. 110; *SNGCop* 345; cf. *ACGC*, p. 39.

with the head of Athena in Attic helmet adorned with crescent on the obverse and a kantharos and the abbreviated ethnic *Μαθ* in an incuse square on the reverse.¹ By style the second period probably belongs to the 430's.² This indicates that as at Mytilene the striking of silver coins at Methymna was occasional, and that it is impossible to link interruptions to the Athenian Standards Decree.

There is only one issue known of the island of Pordosilene just off Lesbos. The coin weighs 3.95 g and is probably a drachm of the Chian standard (*Traité* pl. 162:44).³ The obverse type is a head of Apollo; on the reverse there is a lyre in the incuse square and the inscription ΠΟΡΔΟΣΙΛΑ. This coin was struck at some point in the last quarter of the 5th century.⁴ Considering the small output and the uncertain date this issue is of no avail concerning the Standards Decree.

Antandros was under the authority of Mytilene until 427 when it was taken by Athens.⁵ There is an early issue of staters, struck probably before mid-century, with a lion's protome on the obverse and a goat before a pine tree on the reverse.⁶ In the second half of the 5th century only fractional coinage is struck. The obverse type is a female head, on the reverse there is either the

¹ E.g. *SNGCop* 349; the same types on the obol *SNGCop* 351. On the triobol *SNGCop* 350 there is a facing lion's head on the reverse.

² Cf. E. S. G. Robinson 1949, p. 332.

³ See Erxleben 1970, p. 102.

⁴ Erxleben (1970, p. 102) dates it to c. 420; E. S. G. Robinson (1949, p. 332) to shortly after 427.

⁵ Thuc. 3.50; cf. Meiggs 1972, p. 316.

⁶ *Traité* pl. 163:1; cf. Erxleben 1970, p. 101.

goat and often an abbreviation of the ethnic, or a lion's head.¹ There may be a break in the coinage of Antandros around 450, but it cannot be argued that it was occasioned by the Coinage Decree, since the output was so small and striking not continuous anyway.

Chios (see 3.1.8)

The coinage of Chios has been cited to support a break in the 440's as well as in the 420's. In my opinion, Chios continued to strike coinage without any major interruptions over the 5th century.²

Samos

Samos, one of the most important mints in the Ionian District, is a member of the Delian League, but does not pay tribute. Samos was a ship-contributing ally until 439, when it was forced by Athens to surrender its ships and pay a war indemnity.³ The coinage of Samos has a lion's scalp on the obverse and the forepart of an ox on the reverse. Barron studied this coinage in detail.⁴ For the absolute chronology of the Samian coinage, Barron proposes four alternative models. After discussing the pros and cons of each model, Barron opts for a model that accounts for the operation of the Athenian Standards Decree in the 440's. In 1989 Barron updates his mint study with the material

¹ For reverse type with goat, see *SNGv.Aulock* 1488-1492; *SNGCop* 213, 214, 215, 216. For the reverse type with lion's head, cf. *Traité* pl. 163:2. The lion's head reverse appears also on bronze coinage of late 5th or early 4th cent or later coinage; e.g. *SNGCop* 217, 218, 219; *SNGv.Aulock* 1493.

² For a detailed summary of previous scholarship, and a reexamination of the Chian coin series, see above 3.1.8.

³ Thuc. 1.117; *ML* 56.

⁴ See Barron 1966; cf. also *ACGC*, pp. 240-242, 332-34.

from the Asyut and Elmali Hoards. The Asyut Hoard (*IGCH* 1644) contains one archaic drachm and 18 tetradrachms, stretching from early in Class I with the characteristic small incuse and dotted borders to almost the end of Class II, a shortlived class with square incuse and an ethnic inscription on the reverse.¹ The Elmali Hoard (*CH* VIII, 48) adds 41 tetradrachms and a trihemiobol dating from the earliest issues to Class III, issue viii.² The increased number of specimens makes it easier to determine the Samian weight standard. For its staters Samos aims at 13.3 g before it adopts the Attic standard towards the end of the century.³ The new hoard evidence confirms Barron's relative chronology and the sequence of the symbols.⁴ In addition, the new numismatic evidence makes it possible to build a more reliable absolute chronology. Class I can now be dated from c. 500 to c. 485.⁵ Coinage continued uninterrupted until the end of Class VII, which probably coincides with the Athenian victory over Samos in 440/39.⁶ Class VIII, the small issue of the oligarchs in exile that lacks the ethnic can be attributed either to the exiles of 439 or of 412.⁷ Coinage resumes with

¹ See *Asyut*, nos. 645-663, pp. 89-90.

² See Fried 1987, p. 7.

³ See the updated frequency tables in Barron 1989, pp. 10-11.

⁴ See Barron 1989, p. 10.

⁵ See Barron 1989, p. 14. As the evidence from the Asyut Hoard indicates, Class I began before the Samians departed for Zankle.

⁶ The following chronological outline is the result of Barron's study (1989, pp. 14-16): Class I: 500-485; Class II: 485 (480?) - 478/7; Class III: 477/6-461/0; Class IV-V: 460/59 - 455/4; Class VI-VII: 454/3 - 440/39. Mattingly (1981, p. 85) wants to downdate Class III, which also affects the subsequent issues. Then Class VII comes to an end only in 425/4 and provides evidence for the late date of the Standards Decree. The evidence from the Elmali Hoard, however, indicates that Class III came to an end soon after the concealment of the hoard; cf. Barron 1989, p. 15; Kagan 1987, p. 23.

⁷ *ACGC*, p. 333 places it towards 412, because the large square scalp of the lion on the obverse is closer to the scalp of the tetradrachms of Attic weight that start after 412.

Attic weight tetradrachms dating after 412.¹

The Samian coinage thus does not provide evidence for the operation of the Athenian Standards Decree. In the 440's, the early option for a date, Samos continues to strike coins. In the 420's the Samian mint was already inactive for a decade, and thus it is impossible to discern any effects of an imposed ban of minting. The possibility remains that Samos, an autonomous ally that contributed ships rather than tribute, was exempt from the provisions of the Decree. The cessation of minting in 440/39 when Samos was taken over by Athens could reflect a delayed enforcement of the Decree.² The absence of coinage could however just as well be explained by a general economic decline following the revolt and aggravated by the obligation to pay indemnities to Athens. One could also speculate that Samos disregarded the Decree, or that no such decree was in force in the 440's. In short, it is impossible to find conclusive evidence for the effect of the Athenian Standards Decree on the coinage of Samos.

The coinages of the autonomous allies, Lesbos, Samos, and Chios, do not provide any evidence for an interruption in their output of coins that could be attributed to the operation of the Standards Decree.



Most of the other local coinages in the Ionian District are rather small. The striking was occasional rather than continuous. Without firm chronological anchors for such small issues, interruptions generally cannot be dated precisely, and these coinages offer no evidence for the Standards Decree.

¹ Cf. Barron 1966, pp. 97-101.

² Cf. *ACGC*, p. 241.

Assos, Gargara, Elaia, Kyme

Assos struck coinage from c. 470 to the end of the century. The output was small and may not have been continuous, but it is not possible to attribute a break to the Standards Decree.¹ In the last quarter of the 5th century Gargara starts minting with a variety of types and denominations.² The small issue of fractions at Elaia belongs to about the same date.³ Because of their late starting date these coinages cannot have been affected by the Standards Decree.

The early coinage of Kyme ends at some point in the first half of the 5th century.⁴ The next issues of Kyme only date to the late 5th or early 4th century.⁵

Klazomenai

Klazomenai produces two series of coinage with the forepart of a winged boar on the obverse. The coins are struck on the Milesian standard.⁶ The early coins with dumpy flan and very irregular reverse punches supplement the electrum coins that are struck during the Ionian revolt.⁷ After 479/8 Klazomenai produces silver hemidrachms and and fractions. Combined with the forepart of a

¹ See *Traité* pl. 163:25-29; Cf. Erxleben 1970, p. 76.

² E.g. *SNGCop* 314, 315; *Traité* pl. 163:11, 10.

³ For Elaia, see Erxleben 1970, p. 77; for the history and topography, see Strabo 1923, 333-35; for coins, see e.g. *SNGv.Aulock* 1602, 1603.

⁴ Cf. *SNGv.Aulock* 1622, 1623; *Traité* pl. 157:8; Kraay 1962/63, p. 7, no. 92; *SNGCop* 31-34.

⁵ Cf. E. S. G. Robinson 1949, p. 331.

⁶ See Cahn 1970, pp. 182-83.

⁷ Two dies are used both on electrum and autonomous silver issues, see Dengate 1967. Early coins are included in the Sakha Hoard (*IGCH* 1639, no. 52), buried c. 500-490; in a hoard from the site of ancient Klazomenai (*IGCH* 1167; see Jameson 1911, pp. 60-68 with pl. 2), buried early in the 5th century; and in the Asyut Hoard, buried c. 475 (see *Asyut*, p. 85 no. 615); cf. also *SNGv.Aulock* 1981, 1982.

winged boar are several different reverse types, such as a lion's head or scalp, a Gorgoneion, head of Athena or ram's head.¹ By style this series belongs to the first half of the 5th century, ending around 460.

Erythrae

Erythrae strikes the early drachms and fractions on the Milesian standard.² The obverse type is a young man riding a horse, the reverse is struck with an irregular incuse punch.³ Judging by style and fabric, this type belongs to the early years of the 5th century. In the next period Erythrai adopts a reduced version of the Persian standard. The obverse type is a young man holding a prancing horse by the reins. On the reverse there is a floral rosette in an incuse square, with the four letters of the abbreviated ethnic in the four corners.⁴ On the fractions there is some variation of types, e.g. on the trihemioobols there is a Pegasus on the obverse (e.g. *SNGCop* 561, 562), or a bull's head on the obverse of a tetartemorion (*SNGCop* 563).⁵ Period II probably starts in the second quarter of the 5th century.⁶ Towards the end of the 5th century the third group of coinage starts. The bearded head of Herakles in lion's skin is adopted as obverse type, and combined with a variety of reverse types.⁷ Thus it is likely that

¹ See *Traité* pl. 155:6-19; for a Gorgoneion reverse, see e.g. *SNGv.Aulock* 1986.

² See Cahn 1970, pp. 182-83, 188.

³ E.g. *SNGCop* 554; *SNGv.Aulock* 1943.

⁴ See e.g. *ACGC* no. 905; *SNGv.Aulock* 1944.

⁵ Cf. also the tetartemorion Kraay 1962/63, p. 8 no. 102 (0.22 g) with a round floral motive on the obverse and stellate flower on the reverse.

⁶ Cf. *ACGC*, p. 244.

⁷ E.g. *SNGCop* 564-568. For bronze coins with such types, see e.g. *SNGv.Aulock* 1946, 1947.

no coinage was struck in Erythrae from the early 450's to the late 5th century. In the 450's minting might have stopped in connection with the internal political troubles at Erythrae.¹

Teos

Balcer has assembled and examined the early coinage of Teos.² Teos employs as its obverse type a seated griffin to the right with the left foreleg raised. The reverse is the quadripartite incuse square. The coinage is struck on the Aiginetan standard.³ The denominations are staters, drachms, triobols, trihemibols, obols, hemiobols, tritemoria, tetartemoria, hemiartemoria.⁴ Balcer puts the first coins to c. 540, and proposes that coinage ends at 449 in compliance with the Athenian Standards Decree. There is a small issue on the Aiginetan standard which Balcer dates from 412 to 407, before in 407 Teos starts its series in the Chian standard.⁵

There are several indications that Balcer's dates are too high. In lack of hoard evidence Balcer established the dates mainly by stylistic comparison with the coins of Abdera. For Abdera's chronology he relies on the study of May, but May's dates have to be lowered in the light of recent hoard evidence.

¹ Cf. *ML* 40; Meiggs 1972, pp. 112-15.

² Balcer 1968.

³ There is one stater of the earliest group (cf. Balcer 1968, pl. 11;1-2) that may follow the Milesian standard. It weighs 13.96 g. For this stater, see Hurter and Pászthory 1984, p. 118 no. 44 (= *Bank Leu* 28, 1981, no. 158).

⁴ See Balcer 1968, p. 7. It is disputed whether the early fraction with a head of griffin on the obverse belong to Teos or to Phokaia. In any event, they do not belong to a period when they could have been affected by the Standards Decree. These fractions were e.g. in the hoard *IGCH* 1165, Mørkholm 1971, nos. 30-38. On the attribution problems, see Kraay 1962/63, p. 8; Balcer 1970, p. 26; Mørkholm 1971, p. 85.

⁵ On Period III, see Balcer 1968, pp. 15-16.

Thus also Teos' dates should be lowered accordingly. All the staters of Teos in the Asyut Hoard (*Asyut* nos. 621-626) fall into Balcer's Period I, and they do not go beyond Gr. V, 13 which comes early in the period dated by Balcer to 510/05-495/90. A date more appropriate for the staters in the Asyut Hoard is c. 500-480.¹

It is most likely that the lowering of the chronology also applies to the end of Period II which Balcer places at 449 and connects with the operation of the Standards Decree. Recently Silvia Hurter has published a stater that is overstruck on a coin from Tanagra in Boeotia.² The undertype can be fairly accurately dated to the years between 456 and 446.³ The Tean types are like the staters Balcer (1968) nos. 102-105, late in his Period II, which he dates c. 470/65-449.⁴ It is more likely that the overstrike occurred in the 440's or later rather than in the 450's.⁵ Since types like the overstrike are not at the very end of the series the closing date of Tean coinage should be lowered by at least a decade to the 430's. Thus the end of Period II is dissociated from the enforcement of the Standards Decree in the 440's. Teos resumed minting not before c. 412. The mint probably had already stopped production in the 420's, the alternative date for the Standards Decree.

¹ Cf. *Asyut*, p. 87.

² Hurter 1992.

³ For the undertype, cf. *BMC Central Greece*, p. 61 no. 24, pl. 10:2. It can only have been minted in the decade after the Athenian victory over Thebes in 457, and before in 446 Thebes defeated Athens and thereafter was the only Boeotian mint to issue coins. Cf. *ACGC*, pp. 110-111.

⁴ See Hurter 1992, p. 171.

⁵ Hurter (1992, p. 171) reports that the overstruck stater was part of a hoard—unfortunately not recorded—that closed with Balcer 1968, no. 103, and had several symbols of the period Balcer 1968, nos. 100-103. It contained a large number of die duplicates within this series. This suggests that the record of Tean coinage of mid-century is fairly complete.

Kolophon

The city of Kolophon lay some miles inland in Persian territory. Kolophon struck its heavy pieces on the weight of a Persian siglos, but the smaller fractions may correspond to the Aiginetic or Milesian standard.¹ The coins of Kolophon have as an obverse type the head of Apollo.² Most of the fractions have as a reverse type a monogram indicating their value, a feature unique to the coinage of Kolophon. The coinage of Kolophon has been studied by Milne.³ He spreads the issues evenly over the 5th century, with a possible break between c. 460 and 430.⁴ Milne's arrangement of the individual groups has been disputed, but there is no consensus as to how the coinage should be rearranged.⁵ Short of reexamining in detail Kolophon's coinage, one has to accept that no precise chronology can be assigned to this mint. Thus it cannot be cited as evidence regarding the Standards Decree.

Ephesos

The coinage of Ephesos is struck on the Milesian standard, based on a unit of c. 3.5 g.⁶ The coinage has been assembled by Head more than a hun-

¹ Cf. Cahn 1970, pp. 181-82 with frequency tables.

² On some coins there may be the head of Artemis, but the identification is not entirely certain; cf. Kraay 1962/63, pp. 5-7.

³ Milne 1941.

⁴ Milne 1941, p. 48. In 429 the Persian Itamenes takes over the city at the request of some of the inhabitants. It remains in Persian hands for the rest of the century (Thuc. 3.34.1).

⁵ For various suggestions for a rearrangement, see Robinson E. S. G. 1949, p. 331; Kraay 1962/63, pp. 5-7; *ACGC*, p. 244; Cahn 1970, p. 139 with note 371; Erxleben 1970, p. 80.

⁶ See Cahn 1970, pp. 182-83.

dred years ago, and a more up-to-date study is to be desired.¹ Head divides the 5th century coinage with a bee as seen from above in two groups. The first group ends c. 480, and Group 2 goes from 480 to 415. In Group 2 he distinguishes an earlier series from 480 to 450, and a later series from 450 to 415.²

The first group is struck on a small and dumpy flan with small reverse and obverse types.³ The second group uses a wider and flatter flan, and the dotted border around the obverse type is generally visible.⁴ The reverse punch is now a more regular four-part incuse square. The obverse type is more elaborate with greater attention being given to details. The wings of the bee are no longer straight but curved. The bee is placed between two volutes and the letters Ε Φ.⁵ In the second series of this group the full ethnic is placed around the bee.⁶ The next series struck in the late 5th or early 4th century is distinguished by the magistrate's name on the central band of the reverse type.⁷

In the Elmali Hoard (*CH* VIII, 48), buried c. 465, there were new varieties of Group 1.⁸ These coins have small types and are struck on small and dumpy flans, like the rest of Group 1. The rendering of the bee, and the volutes at its

¹ Head 1880.

² Head 1880, pp. 16-20.

³ Coins of Group 1 were part of the hoard *IGCH* 1165 (Mørkholm 1971, nos. 2, 3) and of the Antilibanon Hoard (Hurter and Pászthory 1984, no. 43); cf. also Fried 1987, pp. 6-7.

⁴ On the early types of Group 1 there was either no dotted border or it was off flan; except on Head pl. 5:10.

⁵ E.g. Head 1880, pl. 5:11,12; *SNGv.Aulock* 1825, 1826.

⁶ Head 1880, pl. 5:13, 14. Probably into Group 2 also belong the fractions with a bee between Ε Φ on the obverse, and a head of an eagle and Ε Φ on the reverse in the incuse square; cf. *SNGCop* 211; Kraay 1962/63 no. 95.

⁷ Cf. Head 1880, pl. 5:18, 19; *SNGv.Aulock* 1827.

⁸ See Fried 1987, pp. 6-7, pl. 4:34-36.

sides are features closer to Group 2. On two coins the letters Ε Φ are inscribed on the wings.¹ This type is leading over towards the obverses of Group 2 with the letters on both sides of the bee. The three specimens from the Elmali Hoard that are illustrated are in relatively unworn condition. This suggests that the starting date of Group 2 should be lowered by about one decade to c. 470.

The absolute chronology for the issues of Group 2 is uncertain. In Group 2 the output was small and appears to have been occasional, but decisive evidence to tie an interruption to the operation of the Standards Decree is lacking.

Miletos

The early coinage of Miletos with lion's protome on the obverse and a floral design on the reverse was struck until c. 494 when the city was destroyed.² The obols weigh between 0.90 g and 1.15 g.³ Obols of the second period, starting after 494 are distinguished by a more shallow reverse incuse square, and a new variety of the floral reverse type.⁴ To the 5th century also belong Attic hemidrachms with a crouching lion on the obverse, and a rosette on the reverse modeled after a reverse of the archaic series of obols.⁵ Although the coins of the 5th century cannot be dated accurately, it appears that the output

¹ See Fried 1987, pp. 6-7. Actually only the Φ on the right wing is visible. On both coins the left wing that would probably have the Ε is off flan (pl. 4:35).

² See Pfeiler 1966; Becker 1988.

³ For the weights, see Becker 1988, pp. 6, 32.

⁴ For the reverse type, see Becker 1988, p. 7, ill. d). Obols of the 5th century were in the Hecatombus Hoard (*IGCH* 1199), buried c. 400; see Welz 1961, p. 100, nos. 1-4; Pfeiler 1962, p. 20, no.1.

⁵ E.g. *SNGCop* 956; *SNGv.Aulock* 2086. For the reverse, see Becker 1988, p. 7, ill. b).

was only occasional. The coins of Miletos can not be used as evidence supporting the traditional interpretation of the Standards Decree.



Most of the mints of the Ionian District strike coins only for part of the 5th century. It was not possible to discern an interruption that could be attributed conclusively to the Athenian Standards Decree in the series of those coinages that cover most of the 5th century.

3.2.5 The Karian District

Western Karia

Kos

Kos produced a small series of coinage, the so-called diskoboloi with a discus-thrower on the obverse, and a crab in the center of two dividing diagonals on the reverse.¹ The dates proposed for this series range from the first to the third quarter of the 5th century.² The inclusion of these coins in the Asyut and the Elmali Hoards, buried c. 475 and c. 465 respectively, indicates that this series belongs to the early years of the 5th century.³ In view of the small size of the series, it is extremely unlikely that coins of this type were struck later than c. 450. The staters are preceded by a small issue of thirdsigloi with a crab as obverse type. Two specimens of this type are included in the hoard *IGCH* 1185, and in the Demanhur Hoard (*IGCH* 1637), both hoards buried c. 500.⁴ Thus the early fractional coinage belongs to the end of the 6th century. Since no coinage was struck in the second half of the 5th century, Kos could not have been affected by the Standards Decree. This is remarkable, since a copy of the

¹ *ACGC*, pp. 245-46 reports 16 obverse dies. To these should be added the new dies from the Asyut and Elmali Hoards, and from the hoard *IGCH* 1146. The coins correspond in weight to three Persian sigloi, and may be called staters; for the weights, see Barron 1968a; they should be c. 16.5 g.

² E. S. G. Robinson (1949, p. 337) dates the diskoboloi to 450-420. Barron (1968a, pp. 83, 85) dates them to the 2nd quarter of the 5th century. Cahn (1970, p. 164 note 462) proposes 490-472.

³ The specimen in the Asyut Hoard (*Asyut*, no. 693) struck from the reverse P5 in Barron Group A; cf. *Asyut*, pp. 93-94. Five coins were part of the Elmali Hoard (*CHVIII*, 48), cf. Kagan 1987, p. 27.

⁴ For *IGCH* 1185, see Kagan 1992; for the Demanhur Hoard (*IGCH* 1637), see Dressel and Regling 1927.

decree was found on the island.¹

Halikarnassos, Astypalaia

Halikarnassos struck coins only in the second half of the 5th century. No clear interruption attributable to the Standards Decree is discernible.² It is disputed whether the coins inscribed ΑΣΤΥ belong to Astypalaia. They do not date later than c. 460, and thus are not affected by the Standards Decree.³

Mylasa, Euromos

Only two cities in the interior of Western Karia strike some coins. There is a small series of Mylasa, struck around 500.⁴ A single coin, dated c. 420 has been attributed to Euromos.⁵ Their output can not be related to the operation of the Standards Decree.

Karian Chersonese and Islands

Idyma

From the mint of Idyma only very few coins dating to the last quarter of the 5th century are known.⁶

¹ See above, chapter 1.1.

² Cf. Erxleben 1970, p. 84.

³ Cf. Erxleben 1970, p. 83; E. S. G. Robinson 1949, p. 330; for the coins, see *BMCCaria*, p. 59-60, nos. 1, 3-5, 7 with pl. 10:1-4.

⁴ Cf. *Asyut*, p. 91 nos. 667, 668; E. S. G. Robinson 1961, p. 114 no. 37.

⁵ *SNGv.Aulock* 2521; cf. Erxleben 1970, p. 83. For Euromos, cf. *ATL* 1, pp. 559-60; *ML* 69.2, line 144.

⁶ Cf. Erxleben 1970, pp. 84-85; *SNGv.Aulock* 2559-2562.

Knidos (see 3.1.9)

The coinage of Knidos has been studied in detail by Cahn who maintains that in compliance with the Athenian Standards Decree Knidos closed its mint in 449.¹ This, however, cannot be proven with certainty. According to my revisions Series IV which Cahn dates before 449, extends to the 430's. There may be interruptions in the output of Series V, just as there were in the earlier series. None of these interruptions can be dated precisely and linked to the Athenian Standards Decree.

ΧΕΡΣΟΝΕΣΙΟΙ

ΧΕΡΣΟΝΕΣΙΟΙ feature in the Athenian Tribute Lists under the heading of Karia.² The entry ΧΕΡΣΟΝΕΣΙΟΙ stands for several cities that form a syntely, for in 428/7 the cities are listed separately with their individual contributions.³ The coinage of the Chersonesians has a lion's head on the obverse and usually the forepart of a bull with the letters ΧΕΡ on the reverse. Cahn has assembled the coinage of the Chersonesians.⁴ His chronology is derived mainly from comparison with the coinages of Knidos and Lindos.⁵ Cahn's dates for these coinages need to be lowered, and this in turn affects the chronology of the coinage of the Chersonesians.

The first series (Group A) consists of a few fractions which could be Mile-

¹ Cahn 1970, esp. pp. 162-66.

² *ATL* 1, pp. 151, 27, 440-41. The Chersonesians pay 3 talents in 452/1, 451/0, 450/49, 448/7, 447/6, 433/2, and 432/1. From 444 to 439 they pay 2 talents and 70 drachms. For the identification of the ΧΕΡΣΟΝΕΣΙΟΙ, see Cahn 1970, pp. 200-203.

³ See *ATL* 3, p. 211 note 73.

⁴ Cahn 1970, pp. 200-211.

⁵ For Knidos, see above chapter 3.1.9; for Lindos, see below.

sian tritartemoria, or underweight Aiginetan obols.¹ By their style they are comparable to Group E at Lindos. In accordance with the revised chronology of Lindos c. 500 seems an appropriate starting date for the coinage of the Chersonesians.² The next issue, Group B, consists of staters of Aiginetan weight, comparable to Series II at Knidos which has been downdated to c. 490.³ Cahn compares Group C of the Chersonesians with Series III and IV at Knidos. His chronological anchor is the coin X 17 that belongs to the time period when the reverse (R 47) at Knidos was struck. The head of Aphrodite on the Knidian reverse was influenced by the female head that is depicted on the Demareteion.⁴ The Demareteion is now dated to c. 465, and X 17 of the Chersonesians should be close to this date as well.⁵ The fractional coinage of Group C introduces some more variety of types. Sometimes there is a winged boar on the obverse, and the reverse type may be a bucranium as on some of the drachms of the same series.⁶

Cahn places the last coins (Group C) to 450, in analogy to Series IV at Knidos. It is however, very likely that Group C extends into the 430's when also Group IV at Knidos ends. This date is compatible with the general appearance of the coins. The output of the Chersonesians was not very large, and coinage was probably not issued on a continuous basis. No direct impact of the Atheni-

¹ Cahn 1970, p. 207. The coins weigh between 0.98 g and 0.87 g.

² See Lindos below.

³ Cahn 1970, p. 208. For the revised date of Knidos, see above chapter 3.1.9.

⁴ Cahn 1970, p. 209.

⁵ For the revised date of the Demareteion, see Kraay 1969c, pp. 19-47; and *idem* 1972, pp. 13-24; 313-17.

⁶ Cahn 1970, p. 210.

an Standards Decree is discernible.

Lindos

The coinage of Lindos has been assembled and examined by Cahn.¹ Lindos strikes its heavy pieces at c. 13.70 g, i.e. tetradrachms of Milesian weight.² Although Cahn's chronology needs to be downdated Lindos' probably stopped before it could have been affected by the Athenian Standards Decree. The obverse type is a lion's head with dotted truncation and gaping jaws. The obverse type is placed within a square frame. The reverse punch evolves over several phases. In the early groups the reverse is struck twice with an oblong square punch. The result is a reverse consisting of two elongated square impressions separated by a central band. The surface of the punch is worked with an Λ incised. In the first two groups (Cahn Groups A and B) there is only one single punch in use.³ The reverse technique in the next group, Group C, is the same, except that there is now a new punch in use with two Λ , instead of one. Thereafter, Lindos adopts the standard practice of striking the reverse once with a single square punch. The punch is divided by a central band, imitating the visual effect of the previous technique.⁴ In Group F there are two central dividing bands next to each other, and in Group G the inscription $\Lambda\text{IN}\Delta\text{I}$ is placed on the central dividing band. In Group G, Lindos adopts a real reverse type: a dolphin

¹ Cahn 1957a, pp. 18-26.

² See Cahn 1957a, p. 24. Tetradrachms of this weight are known elsewhere only on Poseidion? on Karpathos. If the heavy piece of 13.70 g is a tetradrachm then the corresponding didrachms of c. 6.85 g can be found in Klazomenai and Erythrai, a diobol of 1.15 g at Miletos, and a triobol of 1.70 g at Ephesos and Knidos, and a drachm of 3.4 g at Ephesos; cf. Cahn 1970, p. 180

³ See Cahn 1957a, pp. 18-19.

⁴ See Cahn 1957a, p. 19.

in the incuse square with the inscription ΛΙΝΔΙΟΝ around the dolphin.¹

Cahn dates the entire sequence of Groups A-H from c. 560-500.² On the basis of evidence from the Asyut and Elmalı Hoards these dates need to be lowered. The Asyut Hoard (*IGCH* 1644) is the first hoard known to contain early staters from Lindos. There were 5 early staters from Lindos, all from Groups A and B, struck from interlinking sets of dies, and in relatively uncirculated condition.³ This suggests that the starting date of Lindos' coinage should be lowered to at least c. 515/10.⁴ In the Elmalı Hoard (*CH* VIII, 48), buried c. 465, there were 6 staters of Lindos. One of them is identified as struck from a die of Cahn's Group G with the inscription ΙΔΝΙΑ on the central bar of the reverse.⁵ Since this is an example of the second to last group that was struck at Lindos, it seems unlikely that Lindos minted beyond c. 460.

Rhodes

Of the Rhodian mints Ialysos strikes its coinage from the beginning with a real reverse type. On the obverse there is the forepart of a winged boar, on the reverse there is the ethnic ΙΕΛΥΣΙΟ[Ν] and an eagle's head. Staters of the early series are included in the Asyut Hoard (*IGCH* 1644), buried c. 475.⁶ Thirds

¹ See Cahn 1957a, p. 19.

² Cahn 1957a, p. 23.

³ *Asyut*, pp. 95-96, nos. 707-711.

⁴ See *Asyut*, p. 95.

⁵ See Fried 1987, p. 8; for the stater from the same reverse dies as Cahn G3, see *ibid.* pl. 5:46.

⁶ *Asyut*, pp. 94-95; nos. 703-706.

occur in hoards buried between c. 500 and 490.¹ The coins in the Asyut Hoard are rather worn which suggests that they were struck as early as the fractions, c. 510.² Ialysos strikes its coins on peculiar weights.³ Most of the heavy pieces weigh between 14.5 g and 14.7 g, unusual weights in Asia Minor.⁴ In addition, Ialysos struck some small electrum coins.⁵ The silver coins stopped before they could have been affected by the Standards Decree.

Kamiroi on Rhodes struck its coinage on the Aiginetan standard. The obverse type is a fig leaf, the reverse type is a square incuse divided by a horizontal band. The earliest hoard in which a stater of Kamiroi is recorded is the Sakha Hoard (*IGCH* 1639), buried c. 500-490.⁶ This provides a *terminus ante quem* of c. 500 for the early staters. In the Asyut Hoard, buried c. 475, there are 9 early staters struck from 3 obverse and 2 reverse dies.⁷ The coins in the Asyut Hoard show little sign of wear, and are all die-linked. This suggests that these coins were struck over a short period of time, and that they were produced not too long before they became part of the Asyut Hoard.

¹ *IGCH* 1185, c. 500, Kagan 1992, no. 26; Demanhur (*IGCH* 1637, c. 500-495) Dressel and Regling 1927, no. 114; Sakha (*IGCH* 1639, c. 400-490) Dressel 1900, no. 9.

² See *Asyut*, p. 95.

³ See Cahn 1970, pp. 180, 182, 185, esp. p. 190 with note 581.

⁴ See Cahn 1970, p. 190 with note 581. The same standard is used for coins from an uncertain mint in Karia included in the Asyut Hoard (*Asyut*, nos. 712, 713). Cahn (*ibid.*) points to similar weights at Abdera and on Lesbos.

⁵ See Cahn 1970, p. 190 with note 584.

⁶ Dressel 1900, no. 38, no illustration available.

⁷ *Asyut*, p. 94, nos. 694-702. *Asyut* nos. 700-702 are struck from the same reverse as the coin in the Zagazig Hoard (*IGCH* 1645, Dressel and Regling 1927, no. 243), buried c. 460-50.

In the Elmali Hoard (*CHVIII*, 48), buried c. 465, there are 289 coins from Kamiros. This is the largest number of coins from a single mint outside Lycia in this hoard, amounting to c. 18% of the total silver.¹ The coins are all from the early groups with uninscribed reverses. They are struck from only 16 obverse and 15 reverse dies. Two of these dies have also been used for coins of the Asyut Hoard.² Aside from staters there are three drachms in the Elmali Hoard (*CH VIII*, 48), struck from one die.³ The fresh condition of the drachms and staters, and the large number of die-links and die-duplicates indicates that these coins were struck not too long before the burial of the hoard. The combined evidence from the hoards indicates that the series with the uninscribed reverses was struck from c. 500 to c. 480. Staters with a reverse inscription are closely related to coins in the Elmali Hoard, and must be just a few years later.⁴

Poseidonium on Karpathos

It is not certain whether the series of coins with two dolphins belong to Poseidonium on Karpathos. In any event, they date to c. 500-480, and are not affected by the Athenian Standards Decree.⁵

¹ See Fried 1987, p. 7, pl. 5:42-44.

² Cf. Fried 1987, p. 7; *Asyut* nos. 694, 701;

³ See Fried 1987, p. 8, pl. 5:45.

⁴ See Kagan 1987, pp. 25-26. For an inscribed stater, see e.g. *BMCCaria*, p. 224 no. 12; for fractions, see e.g. *op. cit.*, p. 225 nos. 13, 14.

⁵ Cf. *Asyut*, p. 93 nos. 689-92; Waggoner 1983, nos. 639, 640; for the attribution problem, see Cahn 1957b, pp. 11-12.

East of Kaunos

Phaselis

Phaselis, a colony of Rhodes and a Greek city, lies well within Lycia commanding the only harbor on an otherwise inhospitable stretch of coast.¹ Phaselis joined the Delian League in 467, in connection with the Eurymedon campaign.² For its coinage it used a reduced form of the Persian standard. In Phaselis' earliest series of coinage the obverse type is the prow of a war-ship in the shape of the forepart of a boar (e.g. *ACGC* no. 991). The inclusion of this type in early 5th century hoards indicates that this series was introduced by the late 6th century.³ In the Asyut Hoard, buried c. 475, there are 10 staters (or double-sigloi) of the early series, and one coin that has a real reverse type, a ship's stern (*Asyut*, no. 742).⁴ This provides a *terminus ante quem* of c. 475 for the introduction of the reverse type.⁵ In the next stage the first three letters of the ethnic are added to the stern on the reverse.⁶ The series of staters was short and probably ended before 450. In the second half of the century only a few small denominations were struck.⁷ Minting at Phaselis was not continuous, but the interruptions need not be related to the Standards Decree.

¹ Cf. *ATL* 1, p. 560; *ATL* 3, pp. 260-61

² Plut. *Cimon* 12.3-4; for the juridical relations with Athens, see *ML* 31; on this decree see also Meiggs 1972, pp. 231-32.

³ *IGCH* 1185, c. 500; Demanhur (*IGCH* 1637, 500-495); Benha (*IGCH* 1640, c. 485).

⁴ *Asyut*, pp. 98-99.

⁵ *ACGC*, p. 273 puts beginning of this series only to c. 450.

⁶ E.g. *BMCLycia*, p. 79 nos. 3, 4; pl. 16: 7, 8; *SNGv.Aulock* 4393; for fraction, see *SNGv.Aulock* 4394-4396; cf. *Asyut*, p. 99.

⁷ Cf. *ACGC*, p. 273; Erxleben 1970, p. 89

Aspendos

The city of Aspendos is located in Pamphylia, some miles inland up the river Eurymedon. Its name is restored in the reassessment list of 425.¹ Although Aspendos does not appear in the tribute lists it could have been a member of the League since the 450's.² In c. 467 and in 410 Aspendos serves as a base for the Persian fleet.³

Not surprisingly for a city within Persian territory Aspendos' coinage is adjusted to the Persian weight standard so that the stater corresponds to a double-siglos.⁴ In its early series of coinage (e.g. *ACGC* no. 1004) Aspendos employs as an obverse type a soldier with shield and sword advancing to battle, and as a reverse type a triskeles of human legs. On the reverse there is often the ethnic or its abbreviation written in Greek letters but in the Pamphylian form.⁵ In the next series Aspendos strikes only half-staters corresponding to the weight of a siglos. On the obverse there is a horseman galloping and brandishing a spear, and on the reverse a boar with the ethnic (e.g. *ACGC* no. 1005). In the early 4th century Aspendos introduces two wrestlers as an obverse type and a slinger on the reverse.⁶

Aspendos' coinage starts shortly after Kimon's victory, i.e. c. 465-60. An early stater from Aspendos is overstruck on a stater from Phaselis that circulat-

¹ Cf. *ML* 69.2 lines 146, 156-57.

² Cf. Meiggs 1972, pp. 58, 102. The reasoning is that if a city was included in re-assessment of 425, it was a member in the 450's.

³ For 411, see Thuc. 8.46, 59, 87.

⁴ See Mørkholm and Olçay 1971, pp. 22, 23.

⁵ See *ACGC*, p. 277.

⁶ See Kraay 1962a, pp. 7-8; cf. *BMCLycia*, p. 95 nos. 14, 15, pl. 19: 12,13; Mørkholm and Olçay 1971, pp. 21, 28-29, pls. 10, 11.

ed as early as the late 6th century.¹ A coin of Side dating to c. 445-425 is overstruck on a specimen with the hoplite on the obverse and a triskeles on the reverse.² Another stater from Side, dated c. 425-400 is overstruck on a coin of Series I where on the reverse the triskeles is mounted on a lion.³ This fanciful reverse is probably among the latest of the first series. The overstrike provides a *terminus ante quem* of c. 425-400 for the last types of the first series.⁴ On the basis of hoard evidence the half-staters can be dated to 410-375.⁵

The overstrikes suggest that the early series continued during the 440's, the early option for the Standards Decree. It is possible that there were several years without coinage before in 411 the series of half-staters began. Whether a decree in the 420's could have affected Aspendos coinage, depends on the ending date of the early series. In light of the evidence from the overstrikes, the end of the early series cannot be dated more accurately than c. 430-c. 415.

Kelenderis

Like Aspendos in Pamphylia, Kelenderis in Cilicia appears only in the reassessment of 425, but was possibly a member of the League already since the 450's.⁶ Like Aspendos, Kelenderis starts minting around c. 460-50. The obverse type is a horseman dismounting, on the reverse there is first the forepart of a

¹ Kraay 1969a, p. 16, pl. 16:2.

² Kraay 1969a, pp. 17, 19, pl. 16:8.

³ Kraay 1969a, pp. 17-18. For the stater from Aspendos, cf. *ibid.* pl. 16:13 (= *Traité* pl. 23:21).

⁴ See *SNGCop* nos. 153-8; 160-79 for early series from a hoard, found c. 1948.

⁵ See Mørkholm and Olçay 1971, pp. 21, 28-29.

⁶ For the assessment of 425, see *ML* 69.2 lines 146. For membership in the 450's, see Meiggs 1972, pp. 58, 102.

goat (*ACGC* no. 1008; . c. 440), later there is an entire goat.¹ Apart from the very earliest issues, examples of all of the series of the 5th century were part of a hoard found in Kilikia or Pamphylia.² There is no indication of any major interruption in the issues of Kelenderis. The coinage of Kelenderis was obviously not affected by the operation of the Athenian Standards Decree.



With the exception of Knidos none of the mints of the Karian District strike throughout the 5th century. The only mint that stopped issuing coins c. 450 is Phaselis, but its output was never continuous, and it may have stopped for reasons other than an imposed ban.

¹ See *ACGC*, p. 279; *ACGC* no. 1009 (c. 420); no. 1010 (c. 400).

² Kraay 1962a, pp. 1-15; pl. 1-2 (*IGCH* 1255, buried c. 400). There may have been c. 1000 coins of Kelenderis in this hoard. Kraay has assembled 74 coins covering 25 die combinations. There are few known dies of this period that are not among those in this hoard. This suggests we have a fairly complete record of the coinage of that period. There were also at least 40 plated forgeries in this hoard, all struck from the same pair of dies.

3.2.6. The Island District (including Aigina and Euboia)

With the exception of Aigina none of Athens' allies in the Island District strikes coins in the second half of the 5th century. It is beyond the range of this study to determine when precisely the individual mints ceased to issue coins, and whether they continued striking once they joined the Delian League.¹ The case of Melos and Thera who resist Athenian dominance is special.

Andros, Seriphos

Among the islands that stopped issuing coins early in the 5th century is Andros, provided the attribution of the coins with an amphora on the obverse is correct.² The stater of Seriphos with the frog on the obverse are all of archaic date.³

Naxos

The early staters of Naxos do not extend beyond c. 490, when the island was sacked and came under Persian rule (Hdt. 8.45). Naxos' obverse type is a kantharos, on some issues surmounted by a wreath (cf. *ACGC* no. 118). Holloway has argued that the Naxians put the wreath around the kantharos to commemorate their having fended off the Persians after a siege of six months. If his were the case, then the unwreathed issues should precede the wreathed is-

¹ Cf. E. S. G. Robinson 1949, pp. 329, 336; Erleben 1971, p. 126. Kenneth Sheedy at the Australian Archaeological Institute at Athens is preparing a study of the Cycladic mints, and more detailed information can be expected from his work.

² Bloesch (in: Hurter and Pászthory 1984, p. 24) questions the attribution. Andros may not have had a coinage of its own; cf. E. S. G. Robinson 1949, p. 329.

³ E.g. Seltman *NC* 1898, pl. 9:1; 1926, pl. 7:4; cf. also Kraay 1966 pl. 162:529.

sues struck c. 500.¹ This arrangement, however cannot be confirmed by the hoard evidence.² The Demanhur Hoard (*IGCH* 1637) buried shortly after 500 contains one unwreathed and one wreathed stater of Naxos attesting that wreathed coins circulated at least by 500.³ It does not appear that they replaced the unwreathed variety, since the Asyut Hoard, buried c. 475 has only unwreathed coins.⁴ It is most likely that there was a brief issue of wreathed coins at the end of the 6th century, that was both preceded and followed by the unwreathed variety. The coinage does not go beyond c. 490. The mint was re-opened only at the end of the 5th century.

Paros

The coinage of Paros probably stopped in the 470's. Most of the extant material comes from a hoard from Paros (*IGCH* 13), buried c. 475. Lederer, who examined this hoard, distinguished two stylistic groups which he took as representative of the chronological development.⁵ However, as the authors of *Asyut*, point out, coins of both stylistic groups have symbols on the obverse.⁶ This indicates that both stylistic groups are contemporary. The more primitive style re-

¹ See Holloway 1962, p. 6.

² See *Asyut*, p. 80.

³ See *Asyut*, p. 80. Other hoards that contain coins from Naxos with wreath are unfortunately not very helpful: the Santorini Hoard (*IGCH* 7; 500-490?) is inadequately recorded; the Sakha Hoard (*IGCH* 1639; c. 500-490?) is composed of several parcels, and probably includes some intrusions.

⁴ *Asyut* nos. 599-601. Unwreathed specimens were further in the following hoards: Mit-Rahineh (*IGCH* 1636; c. 500); Taranto (*IGCH* 1874; c. 490; but the imported component is earlier) and Benha-el-Asl (*IGCH* 1640; c. 485).

⁵ Lederer 1943, pp. 43-47, pl. 2. See also *SNGDelepierre* 2437-2455.

⁶ *Asyut*, p. 81.

sults from less competent craftsmanship and is not a chronological criteria.¹ The supposition that symbols are a later addition is confirmed by the evidence from hoards. The Parian coins in the Egyptian hoards from Demanhur, Zagazig and Asyut, have no symbols.² Among 39 Parian coins in the Elmali Hoard (CH VIII, 48), buried c. 465, there are three obverse dies with the letter Δ. On the basis of wear, the coins with the symbol have a later appearance than those without.³ For the drachms from Paros no dies later than those in the Elmali Hoard are known. This suggests that the coinage did not continue beyond the 470's.⁴

Delos

The island of Delos was part of the League, but did not pay any tribute. The obverse type is a lyre, sometimes with dolphins and lotus.⁵ On the later issues there is a Δ above the lyre. The reverse is struck with an incuse punch. Only on the last issue of fractions there is a real reverse type, a wheel with the letters ΔΗΛΙ between the spikes (Hackens nos. 21, 22). Unlike most other mints of the islands that strike on the standard of Aigina Delos uses the Euboic standard.⁶

¹ *Asyut*, p. 81 (nos. 602-607).

² For the Zagazig Hoard (*IGCH* 1645, buried c. 460-50), see *ZfN* 1927, pl.5:234; for the Demanhur Hoard (*IGCH* 1637, buried c. 500-495) see *ibid.* pl. 2:81-83; for the Asyut Hoard, buried c. 475, see *Asyut*, p. 81 with nos. 602-607.

³ See Fried 1987, p. 6, pl. 4:31. The group without a symbol in the Elmali Hoard is similar to the coins from the Paros Hoard (*SNG Delepierre* 2453-5). Two coins share an obverse die with a coin from the Zagazig Hoard (no. 234). For the group with a symbol, see Fried *ibid.* pl. 4:32, 33.

⁴ Cf. Kagan 1987, p. 26.

⁵ The coinage of Delos has been assembled and collected by Hackens (1973).

⁶ Cf. Hackens 1973, p. 225. Delos strikes mostly didrachms and a few fractions. The weights may have gotten progressively lighter.

A *terminus ante quem* of c. 500-490 for the earliest series of Delos is provided by the inclusion of a coin in the Demanhur Hoard (*IGCH* 1637).¹ Hackens proposes as a starting date for the coinage c. 540/30.² The other issues can only be dated by stylistic criteria. The series of didrachms with the letter Δ on the obverse and the fractions with the wheel on the reverse stand clearly at the end of the coinage which Hackens tentatively dates to c. 480.³ Hackens' chronology probably needs to be downdated somewhat. Although Delos may have continued minting after the formation of the Delian League, its coinage stopped at some point in the first half of the 5th century, before it could have been affected by the Standards Decree.

Keos

On Keos, the three cities of the island—Koressia, Karthaia and Iulis—strike coins.⁴ Koressia uses a squid as its obverse type, Karthaia an amphora, and Iulis probably a bunch of grapes.⁵ Bloesch sees parallels in the development of the coinages of the three Kean cities, and establishes a rough chronological framework.⁶ The issues without symbols are first and belong in the late

¹ For the coin from the Demanhur Hoard, see Dressel and Regling 1927, no. 78 = Hackens no. 2.

² Hackens 1973, pp. 222-23. This was the time when Peisistratos purified the island (*Hdt.* 1.64; *Thuc.* 3.104). Hackens (*ibid.*) sees a connection between Peisistratid influence and the adoption of the Euboic standard.

³ Hackens 1973, p. 224 with note 59.

⁴ See Erxleben 1970, pp. 70-71. In the Tribute Lists only Keos and Koressia are listed. It is possible the entry "Keos" stands for the other two cities of the island, Karthaia and Iulis.

⁵ Cf. Erxleben 1970, pp. 70-71; *ACGC*, pp. 45-46; for problems of attribution and chronology see esp. Bloesch in: Hurter and Pászthory 1984, pp. 124-25. For Koressia, see *Traité* pl. 61:1-12; for Karthaia, *ibid.*, pl. 60:5-12; for Iulis, *ibid.* pl. 13-29.

⁶ Bloesch in: Hurter and Pászthory 1984, p. 125.

6th century.¹ There is an early series with symbols (dolphin, fish, small cluster of grapes) dating c. 500-480, and a later series that may go down to mid-century.² The output of these mints is irregular already in the first half of the 5th century. Although not impossible, it is not very likely that the Standards Decree brought the coinage of the island to a halt.

Siphnos

The island of Siphnos had silver mines of its own which were particularly productive in the 6th century, but were later abandoned (Hdt. 3.57). The coins of Siphnos' first period are struck on a thick and dumpy flan. The obverse type is an eagle in flight.³ Siphnos is the only Cycladic mint to adopt a true reverse type during the 5th century, and in the second period of coinage the flying eagle appears on the reverse with a legend added. The obverse type is a head of Apollo. The staters ended c. 470.⁴ Then only a few fractions were struck.⁵ It is unlikely that the series of fractions extends beyond mid-century. Erxleben dates one obol to c. 450.⁶ It is questionable whether the end of this series can be dated precisely to 450. But even if this dating scheme is correct, the end of coinage

¹ For Karthaia, see e.g. Seltman 1926, pl. 7: 5.

² In Karthaia there is a gap in the output between the amphoras without symbol (c. 530/20-510) and the first issues with a dolphin (c. 500-490). Bloesch puts the stater no. 40 from the Antilibanon Hoard in this gap comparing it with contemporary coins of Naxos. For later issues with grape symbols, cf. *Traité* pl. 60:11.

³ E.g. *SNGDelepierre* 2457; Kraay 1966, pl. 162:527; *Traité* pl. 61:25. Like many other Cycladic mints Siphnos employs the Aiginetan standard; cf. Erxleben 1970, p. 23. The tritartemoria of 0.59 g and 0.62 g could also pass as obols on the Euboic standard.

⁴ E.g. *ACGC* no. 125; Kraay 1966, pl. 163:534; *Traité* pl. 61:27; cf. Erxleben 1970, p. 74.

⁵ E.g. *Traité* pl. 61:29, 30.

⁶ *Traité* pl. 61:30.

need not necessarily be occasioned by the Standards Decree. Siphnos resumes minting towards the end of the century with hemidrachms and rare gold drachms.¹

Thera

Melos and Thera tried to remain independent both of the Athenian and the Spartan alliances. Thera appears in the tribute lists of 428, and can be restored in the lists of 429.² In Kleonymos' tribute decree of 426 it is mentioned that Thera owes money to Athens that is to be paid in installments.³ Thera only strikes a small archaic series of coins with two dolphins on the obverse.⁴

Melos

Melos struck coinage on the Milesian standard throughout the 5th century until 416.⁵ An exception is the earliest known coin from Melos, a unique archaic specimen of Aiginetan weight.⁶ Coins of the next series of coinage with an apple on the obverse and a square incuse reverse punch are included in the

¹ Hemidrachms (*Hirsch 25, Coll. Philippsen, Munich 1909*, no. 1600, pl. 20), rare gold drachms (*ZfN 21*, 1898, p. 216, pl. 5:5).

² See Thuc. 2.9.4; *ATL 3*, p. 23; *ATL 2*, p. 54.

³ *ML 66*, ll. 21-2; cf. Meiggs 1972, p. 328.

⁴ Coins of Thera were in the Dunbabin Hoard (*IGCH 1*; cf. Holloway 1971, pl. 6:1), and in the Hoard *IGCH 1185*, Kagan 1992, no. 24. Cf. Kraay 1966, pl. 162:528.

⁵ The weights (after Erxleben 1970, p. 72) are: stater: 14.45-13.80 g; hemistater 7.84-7.40 g; obol: 0.39 g; hemiobol 0.31 g. The coins in the Melos Hoard (*IGCH 27*), buried c. 416, fall in the range 13.75 - 14.34 g with a slight peak at 14.05-14.14 g. See Kraay 1964b, p. 12.

⁶ Seltman 1926, p. 145, pl. 7:17. The reverse with five sunken segments is comparable to early reverses from Aigina, e.g. *Asyut Gr. 3* (nos. 438-477), dated from 510 to 485.

Asyut Hoard (*IGCH* 1644).¹ This group dates from c. 515 to 480.² One drachm of this type is also in the Elmali Hoard (*CH* VIII, 48).³ After the Persian wars a jug surrounded with the island's name (cf. *ACGC* no. 124) replaces the apple as the obverse type.⁴ Around the middle of the century the apple features as obverse type again. On the reverse, dots or letters of the ethnic are sometimes placed in the quarterings of the reverse punch (cf. *ACGC* no. 128).⁵

Most of the evidence for the following period of coinage is derived from a large hoard from Melos (*IGCH* 27).⁶ The obverse is always the traditional apple. The 84 coins that are recorded from the hoard are struck from only 14 obverse dies, but there are at least 24 different reverse types (e.g. *ACGC* nos. 129-36).⁷ The pattern of linked dies indicates that several obverse dies were used simultaneously. This suggests heavy striking over a rather short period of time. Only one specimen of this series was found outside of Melos.⁸ The limited circulation and the heavy striking as well as stylistic criteria suggest that this series was struck immediately before or during the Athenian siege of 416.⁹

¹ On the identification of the fruit on the obverse type, see Kraay 1964b, p. 2 note 3.

² Asyut, p. 79, nos. 596-598.

³ See Fried 1987, p. 6.

⁴ See *ACGC*, p. 46. The same type recurs later in the century.

⁵ For a list of coins of this group with letters or dots in the quarters of the reverse type, see Kraay 1964b, pp. 19-20.

⁶ Kraay 1964b; cf. also *ACGC*, p. 48.

⁷ Only one coin (*ACGC* no. 129) has as obverse type the jug like on the earlier issue (cf. *ACGC* no. 124). The number of reverse dies might be as high as 34; see Kraay 1964b, p. 16.

⁸ One with coin triskeles as reverse type (like nos. 35, 36 in the Melos hoard) in the Malayer hoard (*IGCH* 1790).

⁹ See *ACGC*, p. 48.

In the 4th century Melos produced didrachms on the Rhodian standard with reverse types of either a ram's head or a kantharos (e.g. *ACGC* no. 139).¹

Melos resists Athens until 416 when it is taken by force and resettled (Thuc. 4.84-116). In the reassessment of 425, the island is assessed at 15 talents, which it never paid.² Given the independent mindedness of the Melians it seems unlikely that they observed the Athenian Standards Decree.

If there was—as Kraay suggests—a gap between the issues of mid-century and the series that were struck around 416, then this gap cannot be related to the Standards Decree.³ Rather, in that case, Melos would be an example of a mint where the Standards Decree does not apply, but where an interruption occurs for reasons that have nothing to do with the Decree or an imposed ban.

Eubolia

Chalkis

There is some uncertainty about the dates of the early series of Chalkis, but it is clear that the coinage stopped before the middle of the 5th century, and thus could not have been affected by the Athenian Standards Decree.⁴

The earliest issue consists of staters with a quadriga in frontal view (e.g. *ACGC* no. 262). The weight of the stater is that of an Aiginetan tetradrachm, which is then divided into thirds and sixths. The obverse type of the thirds is a

¹ See *ACGC*, p. 49.

² Cf. Meiggs, 1972, p. 328.

³ Kraay 1964b, p. 17. For a specimen of mid-century, see e.g. *ACGC* no. 128. For the later series, see Kraay 1964b.

⁴ Cf. *ACGC*, p. 89; Exleben 1970, p. 75.

horseman with a second horse, and on the sixths there is a horseman alone.¹ On all denominations the reverse punch is a diagonally divided incuse square. Because of reverse punch and fabric this issue has been compared to the Athenian Wappenmünzen, and has been dated accordingly to c. 540.²

To the early period of coinage belongs also a unique specimen (*ACGC* no. 262) with a head as obverse type and the facing quadriga on the reverse. The reverse type is enclosed in a small incuse square surrounded by a broad flattened border like on Wappenmünzen tetradrachms or on some of the earliest Athenian owls dated to c. 530/20.³

On the next series the denominations follow the Athenian system of division. The stater is now a tetradrachm, and its divisions are didrachms and tetrobols. The obverse type is an eagle in flight (e.g. *ACGC* no. 264), in later variants carrying a snake in its talons. The reverse type is a wheel either in a square or in a triangular incuse. On some later issues the abbreviated ethnic appears on the reverse.⁴ In 506 Athens defeated Chalkis after it had invaded Northern Attica in coalition with Thebes (Hdt. 5.74-79). Did this event end the archaic coinage or did the coinage with the eagle and wheel start in conjunction with Chalkis' campaign?⁵ By comparison with Wappenmünzen Kraay dates the eagle/wheel issues from 520 to 506, but W. P. W. Wallace prefers a later

¹ For the attribution of these coins; cf. *ACGC*, p. 89 note 2.

² See *ACGC*, p. 89. This date seems too early and should probably be lowered; cf. *Asyut*, pp. 54-55.

³ See *ACGC*, p. 89.

⁴ See *ACGC*, p. 90.

⁵ See *ACGC*, p. 90.

date.¹ The inclusions of a coin of the early eagle/wheel type in the Asyut Hoard supports the late chronology. The tetradrachms with an eagle with no snake on the obverse and a wheel on the reverse were not struck before c. 510.² Probably around c. 480 started the issues that have an eagle carrying a snake on the obverse (cf. *ACGC* no. 265). This issue was small, and is unlikely to have been struck beyond c. 465.³

Chalkis did not strike any coinage for the rest of the 5th century until in 411 it joined forces with Eretria and Karystos to revolt from Athens. Together they produced the coinage of the Euboian League.⁴

Eretria

Eretria produces a wider range of denominations than at Chalkis, but its coinage presents a similar pattern and similar problems as the coinage of Chalkis.⁵ The obverse type of Eretria is a cow with head reverted and licking its hoof. There is one coin (*ACGC* no. 267) that could be the earliest coin of Eretria, but it might equally well belong to Dikaia in Macedonia, an Eretrian colony.⁶ The coins that have a reverse type, a sepia in an incuse square, probably start around the same time when Chalkis introduces its first reverse types, i.e. around 510.⁷ This date is supported by coins of this type in the Asyut Hoard

¹ *ACGC*, p. 90; W. P. W. Wallace 1962, pp. 39-42.

² See Asyut pp. 54-55, no. 253.

³ See *ACGC*, p. 91.

⁴ See *ACGC*, p. 92; for a detailed examination, see W. P. W. Wallace 1956.

⁵ *ACGC*, p. 92. There were tetradrachm, didrachm, drachm, diobol, obol, and smaller fractions.

⁶ *ACGC*, p. 91 with note 2.

⁷ See W. P. W. Wallace 1962a, pp. 38-42.

(*IGCH* 1644), buried c. 475.¹ The Persian sack in 490 probably brought Eretria's coinage to a stop. If coinage thereafter resumed at all, it was only on a very small scale, and certainly did not go beyond c. 465.² No coinage was struck until 411 when Eretria became the site for the mint of the Euboian League.

Karystos

Albeit less plentiful the coinage of Karystos follows the same pattern as at the other two Euboian mints, Chalkis and Eretria. Karystos' coinage which like Eretria has a cow as its principal type stopped well before mid-century, and thus is not affected by the provisions of the Athenian Standards Decree. In 411 Karystos became part of the Euboian League which produced its own federate coinage.

One specimen of the early series without reverse type is included in the Asyut Hoard (*Asyut* no. 250). On the obverse there are a cow with its head reverted and a swallow its the back. In the field below there are the letters KAP. The reverse punch is in the form of a "Union Jack." In analogy with the early one-type coinages of Eretria and Chalkis this series should date c. 525-500. On account of its reverse punch and because of the inscription on the obverse, the coin in the Asyut Hoard probably belongs towards the end of this series.³

As a reverse type Karystos chose the cock (e.g. *ACGC* no. 271). Two tetradrachms of this variety are part of the Asyut Hoard. One (*Asyut* no. 251) has the inscription KAPΥΣΤΙΩΝ on the obverse behind the rump of the cow, the other (*Asyut* no. 252) has the letters KA on the reverse above the cock. This se-

¹ *Asyut*, pp. 54-56, nos. 254-58. No. 255 could possibly belong to Dikaia in Macedonia.

² Cf. *ACGC*, p. 91 with *ACGC* no. 270; cf. also Erxleben 1970, p. 75.

³ Cf. *Asyut*, pp. 53-56.

ries probably lasts from c. 510 to 480.¹ Slightly later are the didrachms with cow suckling a calf on the obverse (e.g. *ACGC* no. 272) and the accompanying smaller denominations. It is unlikely that this series went beyond c. 460.

The three mints on Euboea–Chalkis, Eretria and Karystos–stopped issuing coins c. 465, and are thus not affected by the Standards Decree.

Aigina (see 3.1.10)

Aigina was a very prolific mint. The early Aiginetan coins with the characteristic turtle obverse type are found in hoards from all over the Mediterranean. Aigina was forcibly incorporated into the League by the Athenians and their allies.² From 454/3 on Aigina is recorded with a tribute payment of 30 talents, the highest amount of any member of the League.³

It has been thought that Aigina stopped minting the well-known turtles after its surrender to Athens in the early 450's and that it resumed minting only at the end of the Peloponnesian War with a new series of tortoises.⁴ The evidence of hoards and overstrikes, however, indicates that the land tortoises

¹ See Asyut, pp. 54-55.

² See Thuc. 1.95, 105 with Meiggs 1972, pp. 51-52, 96.

³ Aigina's tribute record is preserved for the years from 453 to 451, for 441, 440. The amount of 26 Talents and 1200 drachmas is restored in 448; see *ATL* 1, p. 218. Meiggs (1972, p. 183) suggests Aigina might be absent from the list of 447.

⁴ Cf. E.S. G. Robinson 1949, p. 329; *idem* 1961, p. 111; *ACGC*, p. 42. For the Athenian victory over Aigina, see Thuc. 1.105.2. For a detailed reexamination of Aigina's coin series and the relevant hoard evidence, see 3.1.10.

were already struck before 430.¹ Obverses with turtles as well as with tortoises are combined with reverses of a skew pattern with broad bands.² This suggests that the types with the tortoise must follow with little or no interruption after the last turtles. The mint of Aigina closed in the summer of 431 when the Athenians drove out the inhabitants and resettled the island (Thuc. 2.27).

There is no evidence for an interruption occasioned by the Standards Decree. From c. 456 to c. 431 Aigina produced tortoises without any major break in the series. If the Standards Decree was in force in the 420's, it could not have affected Aigina's mint since it was already closed by 431.



The mints of the Island District are remarkably uninformative concerning the Standards Decree. The only mints that could possibly have been affected if the Decree was enacted in 449 are Siphnos and Keos, but the evidence is not very strong.

¹ Several overstrikes indicate that the striking of the land tortoises overlaps with the reign of Azbaal of Kition who has his *floruit* c.430. For Azbaal of Kition, see E. S. G. Robinson 1961, p. 111. For the overstrikes, see Noe 1954, pp. 89-90; with E. S. G. Robinson 1960b, p. 34; Kraay, 1969a, pp. 19-20; Troxell and Spengler 1969, p. 11. In addition, there are tortoises in the Naukratis Hoard (*JGCH* 1647) buried c. 440-430, and the Massyaf Hoard (*JGCH* 1483) closed c. 425-20. This establishes 430 as *terminus ante quem* for the tortoises.

² See E. S. G. Robinson 1961, p. 111.

3.3 Evidence of Coin Hoards and Conclusions

The survey of the local mints has confirmed the general tendencies that emerged from the examination of some selected mints. It is not possible to discern a distinct and lengthy break in the series of the local coinages that reflects an imposed break of minting. The output of many of the smaller mints is irregular and often resists a precise chronology. An addition, with the striking being erratic, there are frequent breaks in the output, and no an external reason like an imperial decree needs to be sought. Although not all of the local mints could be re-examined in detail, it is unlikely that sufficient evidence for the operation of the Standards Decree would be forthcoming. With regard to the date of the Decree the numismatic evidence remains inconclusive.¹

In addition to an interruption in the series of local coins the impact of the Athenian Standards Decree should be perceivable in the hoard evidence. If it had been forbidden by law to strike and to use non-Athenian coins, one would expect that at some point in the 5th century the circulation of local currencies diminished significantly as the Athenian issues took over. This situation should be reflected in the hoard finds by a significant decrease or even disappearance of local currencies and a simultaneous increase in the number of Athenian coins.² A preliminary examination of the hoards of the 5th century that contain Greek coins reveals that in the period after 450/30 the number of hoards buried as well as the number of coins from hoards declines sharply (see

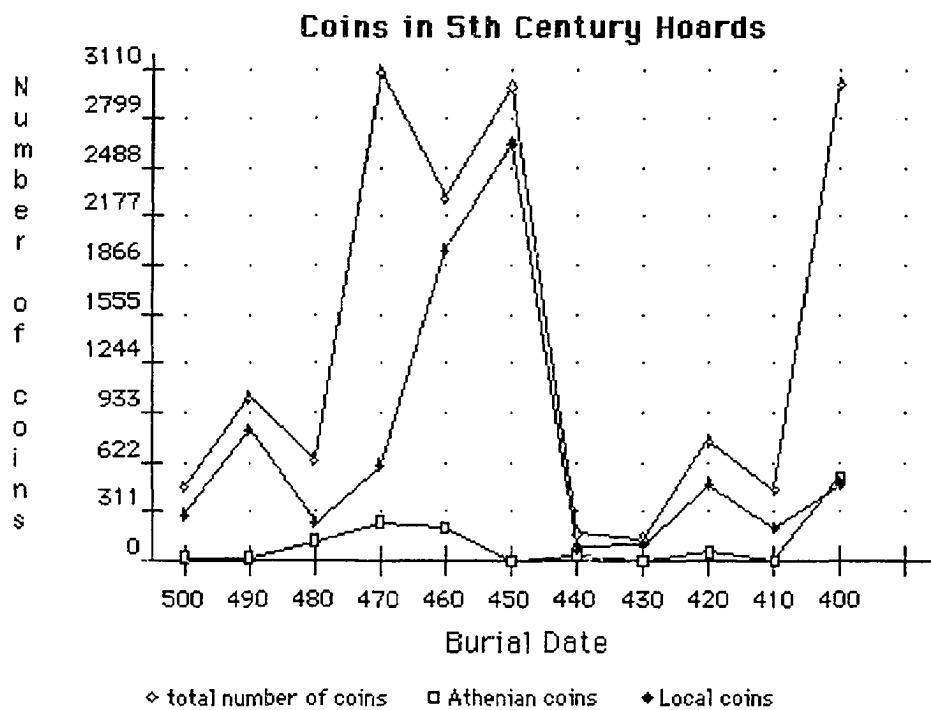
¹This was also the conclusion of E. S. G. Robinson (1949, p. 338) and Erxleben (1970, pp. 125-32).

²Cf. E. S. G. Robinson 1949, p. 339-40.

figure 8).¹ Since all coinage—Athenian and local alike—is affected, the decline can not be attributed to a specific measure. If the decline was caused by the Athenian Coinage Decree one would expect to find a higher proportion of Athenian coins in the remaining hoards. A general decline in minting in the second half of the 5th century has also been observed in the series of the individual local Greek mints. The smaller number of coins—local Greek and Athenian alike—that come from hoards in the second half of the 5th century cannot be related to an imposed ban of local coins. If this was the case, one would rather expect the Athenian coins to replace the local coinages. Instead the two groups show similar tendencies.

¹This chart taken has been compiled on the basis of *IGCH* and *CHI-VII*. As there exists no complete record of the relevant hoard evidence, the numbers cannot be taken as absolutes, but only as approximate and preliminary. Nevertheless this compilation should reflect the general tendencies of the hoard evidence. The same *caveat* applies to fig. 2.

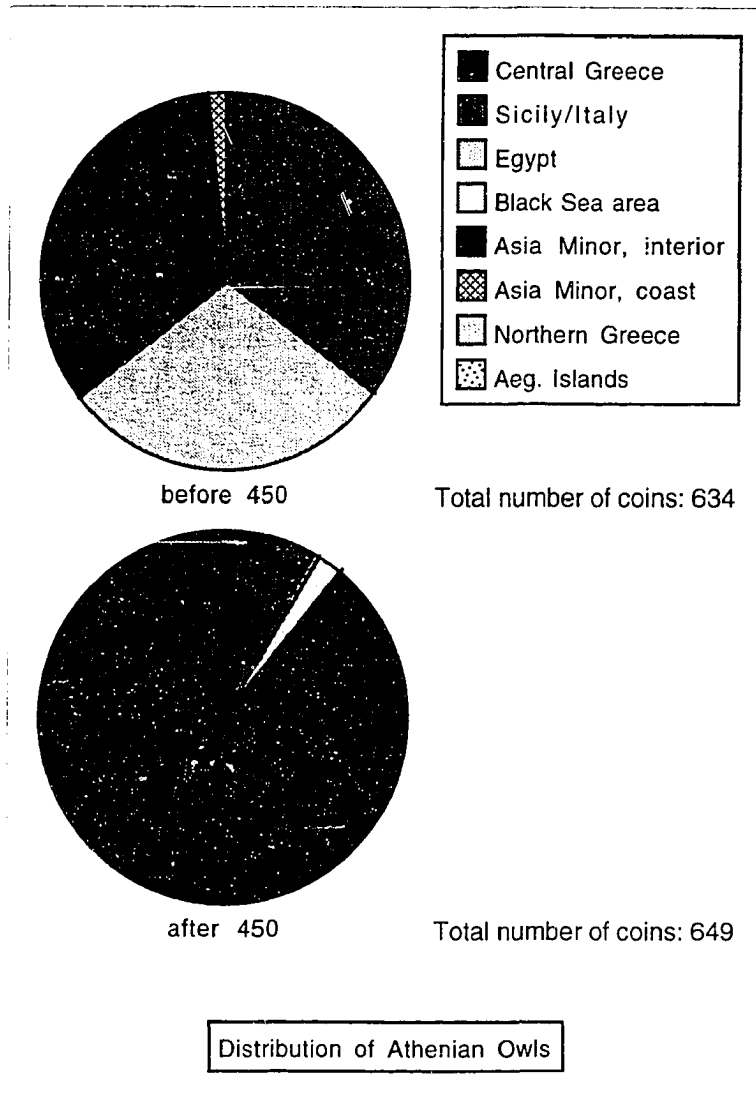
Figure 8 - Coins in 5th Century Hoards



In addition, one might expect that a ban of all local coinages might also affect the circulation patterns of Athenian owls. As they replace the local issues more Athenian coins should be found in the areas of the allied Greek cities. The distribution of Athenian coins over the 5th century is somewhat surprising. As figure 9 indicates, after 450, Athenian owls are not as numerous as one might expect considering the massive striking that has been attributed to this period.¹ After 450, the hoards that contain Athenian coins in some quantity are found either in Central Greece, i.e. close to Athens, or in areas that were not under close Athenian control (such as Sicily and South Italy, Egypt, the Black Sea area, and the interior of Asia Minor). Very few Athenian coins were found in regions where most of the allied cities were located, such as Northern Greece, or the coastal line of Asia Minor. Athenian owls may have circulated there, but that they do not appear to have been hoarded in quantity. Thus also the hoard evidence cannot be used to support a ban on local coinages enforced by a general imperial decree.

¹ See Schönhammer 1993. The same *caveat* as for fig. 1 applies.

Figure 9 - Distribution of Athenian Owls



The numismatic evidence cannot be brought into agreement with a general ban of all local coinages. In order to explain this discrepancy it has been argued that although this was the objective of the Standards Decree Athens was unable to enforce a general ban of all local coinages.¹ In view of the fragmentary condition of the provisions of the Decree, however, it might be appropriate first to investigate whether the decree had indeed such a general and rigorous objective as usually assumed.

The traditional interpretation has focused mainly on the provision that forbade the production and use of all coinages other than the Athenian. Interestingly, copies of the Decree were found at places that did not produce any significant series of coins.² Even though only a fraction of the allied Greek cities produced coinage at all, the Decree had to be set up in every city of the empire as stated in the provision of clause [10] of the Decree.³ This makes it unlikely that the purpose of the decree was a general ban of minting. However, all of the cities paid tribute and other taxes to Athens, and it is more likely that the decree applied to coinage to be used for these payments. In the examination of the epigraphic evidence affinities with regulations pertaining to imperial finance have emerged. Already previous scholars made the implicit assumption that the Decree applied only to official payments, by drawing a distinction between large denominations and fractional coinage. They accounted for the possibility that the Decree was not aimed at money that circulated locally, but only at money that was used for payments to Athens.⁴

¹ Cf. E. S. G. Robinson 1994, p. 338; *ML*. p. 116.

² E.g. Hamaxitos, Syme, and Smyrna.

³ For the discussion of Clause [10], see above chapter 1.5.

⁴ E.g. Erxleben 1970; Alexander 1953.

Since the examination of both the numismatic and the epigraphic evidence has left unresolved the quest for a date, in the following chapter a more unorthodox approach will be adopted. Since neither the epigraphic nor the numismatic evidence unequivocally warrant a general and all-encompassing ban of all local coinages, it will be investigated whether the Decree could have a more limited applicability. In addition, special attention will be paid to the inclusion of weights and measures in the provisions of the Decree. The issue of the date will still be pursued, although it will no longer be at the center of the discussion.

4.0 Weights and Measures

Most discussions of the Standards Decree focus on the regulations concerning coinage and neglect the inclusion of weights and measures. This is reflected in the fact that the decree is usually called "Coinage Decree" rather than "Standards Decree."¹ The focus on coinage in the scholarly literature, and the neglect of weights and measures may have something to do with the fact that the physical evidence pertaining to weights and measures has attracted the attention of scholars and collectors to a much lesser degree than coinage.²

In the addition to the oath of the boule (clause [12]) there appears a provision that threatens a penalty for the use of non-Athenian weights, and measures.³ It has generally been thought that thereby the Athenians forced the allied cities to use Athenian standards of weights and measures, and to abandon their local standards.⁴ In this chapter I will investigate how the practical consequences of the provision on measures and weights could be reflected in the material evidence. Most of the evidence for measure standards derives from amphora capacities.⁵ As progress in the study of amphoras was made one has

¹ The name Standards Decree, however, is used consistently by Grace. Mattingly has adopted it in his more recent articles, and this term has also become popular in some of the more recent scholarship (e.g. Chambers *et al.* 1990, p. 55; Hardwick 1991).

² The pioneering work in the systematic collection and study of amphoras has been done by Virginia Grace and Brashinsky from c. 1930 on. There were some scattered earlier private collections, cf. Grace 1971. For a bibliography of Grace's work, see *Hesperia* 51 (1982), pp. 365-367. Much of Brashinsky's work [in Russian; *non vidj*] is discussed by Garlan (1983, esp. in the notes).

³ The penalty is not preserved; see above, chapter 1.5.

⁴ See e.g. *ML* 45.

⁵ Apart from a few smaller containers marked as public measure that have been found, see e.g. *Agora* 10, pp. 56-64, esp. p. 57.

attempted to relate the development of amphora capacities to the provision about measures in the Standards Decree. The hypothesis is that in compliance with the Standards Decree the cities changed the capacities of their standard containers to match the Attic standard. On the one hand, the Standards Decree and its accepted date is cited to support the chronology of particular amphora series.¹ On the other hand, changes in amphora capacities are cited as evidence to support a particular date for the Standards Decree.²

4.1 Methods for Assessing Amphora Standards

How does one measure the capacity of amphoras, and how accurate are the results? Through years of experimentation scholars have improved their working methods considerably. When a large sample of intact amphoras is measured meticulously and repeatedly, the results will be quite accurate.³ Ideally amphoras that have been soaked sufficiently in water will be measured at least three times with water.⁴ In a controlled environment, the margin of error between the individual measurements is quite small.⁵

Jars that have been mended can only be measured with a dry sub-

¹ Cf. e.g. Grace 1979a, p. 121.

² Cf. e.g. Mattingly 1981, pp. 85-86.

³ For the following see esp. Matheson and M. B. Wallace (1982); M. B. Wallace 1986; Koehler and M. B. Wallace 1987. I would like to thank Carolyn Koehler for discussing these issues with me.

⁴ The method is described in detail by Koehler and M. B. Wallace (1987, p. 57); cf. M. B. Wallace 1986, pp. 93-94.

⁵ Koehler and M. B. Wallace (1987, p. 57) report an "experimental error" of ± 25 ml for amphora sized jars.

stance, and the results are bound to be much less accurate. After early experiments with bird seed, rice, wheat, barley etc. polystyrene beads are now the material of choice.¹ Filling a jar with water is rather straightforward. Filling it with a dry substance gives more opportunity for individual variations and idiosyncrasies which can affect the result. Thus for dry measurements the margin of error between individual measurements is considerably larger.² Dry substances cannot fill a jar uniformly and completely.³ Therefore the results from measurements with polystyrene or other solid substances cannot be taken as absolute values and cannot be compared to the results of measurements taken with water.⁴ These difficulties notwithstanding it has been possible to calculate the standard capacities of a some Hellenistic amphora series by measuring repeatedly and accurately representative samples in a controlled setting.⁵ Although it is possible for one group of researchers to achieve a high degree of consistency during one campaign, it will be impossible to reproduce precisely the same conditions in another season. Thus, strictly speaking the results of one campaign can not be compared to those of another, especially when measuring with dry substances.

Since jars are usually measured up to the brim, the volume will have to

¹ However, also with polystyrene beads there are problems, for after a while they start to disintegrate and build up static.

² Koehler and M. B. Wallace (1987, p. 57) report an "experimental error" of ± 100 ml for amphora sized jars.

³ See Koehler and M. B. Wallace 1987, p. 57. Polystyrene beads pack more densely towards the bottom of the jar, and do not fill the shoulder region completely.

⁴ See Koehler and M. B. Wallace 1987, p. 57 with table 3.

⁵ Measuring 39 Rhodian jars Matheson and M. B. Wallace (1982) arrive at a standard deviation of 665 cc. which is c. 3% under the mean capacity of 25,459 cc.; Koehler and M. B. Wallace (1987) have measured the amphoras from the Hellenistic ship wreck at Serçe Limani. They arrive at a standard deviation of ± 1.32 l which is c. 3.5 % of the mean gross capacity of 38.0 l.

be somewhat reduced taking into account room for stoppering and lining.¹ The next step is to find out if a multiple of a known ancient measure standard is compatible with the calculated capacity.

For amphoras of the 5th century there are relatively few published measurements. Most of them were taken at a time when the methodology for measuring amphora capacities was still in a very early and experimental stage. Thus while the individual measurements may have been taken accurately, measurements taken in different sessions and/or by different persons are not commensurable. When dealing with these early measurements, it is especially important to remember that the results of measurements taken with dry substances are not absolute values. Strictly speaking, even early measurements taken with water can be regarded as absolute values only if it is ascertained that the container had soaked long enough, and if repeated measurements were taken. In order to identify the standard of a particular series, data from a considerable number of measurements needs to be analyzed.²

These general considerations already suggest that only with reservations can amphora capacities be used to draw inferences about the operation of the Standards Decree. Nevertheless it is necessary to present a survey of the arguments that have linked supposed changes in amphora standards to the date of the Decree.

¹ See Koehler and M. B. Wallace 1987, p. 54. On stoppering and lining of amphoras see esp. Koehler 1986.

² For fluctuations that are to be expected within a "standardized" group, see Matheson and M. B. Wallace 1982, and M. B. Wallace 1986.

4.2 Chian Amphoras

A supposed adjustment to the Attic capacity standard in the Chian Amphora Series has been taken as evidence for compliance with the Athenian Standards Decree.¹ Before discussing the problems relating to capacity change, I will establish the chronology of the Chian amphora series on the basis of their contexts.

Chian Amphoras: Chronology

The distinguishing feature of the Chian amphoras down to the third quarter of the 5th century is their bulging neck. The development is towards a longer and slimmer shape with longer handles and a longer neck. The bulge becomes smaller and confined to the upper part of the neck, until it finally disappears completely.² Supposedly the change to the Attic capacity standard occurred between the two final phases of the amphoras with the bulging neck.

The earliest Chian amphoras were found in contexts of the late 6th and early 5th century.³ In this first group (C I) the body of the jar is rather round, the shoulder is wide, and the mouth round.⁴ In this stage the bulge on the neck can be understood as deriving from a simple constriction “as though a cord had

¹ Cf. Grace (1979a, p. 121) dates the Standards Decree and the change of capacity in the Chian amphora series to 449. Mattingly (1981, p. 80) dates the change in capacity to the late 430's, a date that could agree with a late date of the Standards Decree.

² The development of the shape of the Chian amphora can best be seen in Grace 1979b, figs. 44, 45.

³ See *Kerameikos* 9, p. 23, and AP 2422 (= *Hesperia* 1940, fig. 61:336) from the North slope of the Acropolis. The jar in the Agora is very similar to KER 8562 (pl. 48:2). [All references to material from the KER(ameikos) refer to *Kerameikos* 9, unless otherwise indicated].

⁴ Division into groups after Knigge 1976, pp. 20-25.

been tied around the neck of the jar before firing.”¹ The tip at the bottom of the jar is a little hollow cylinder, nearly straight-sided.² Many of these early amphoras have lines or signs of reddish-brown color painted on them, a frequent feature is a circle with a central dot on the neck.³ The find context suggests that C I went out of use c. 475.

In the second group (C II) the jars are slimmer with a more pronounced bulge, the mouth is rather oval and the rim is thicker. The tip at the bottom of the jar is slightly everted.⁴ There are fewer traces of paint.⁵ Amphoras of this type occur in the Kerameikos in contexts dated between 470 and 450.⁶ A well-deposit from the Agora dating from 460 to 440 contains another specimen of this type, very similar to a jar from the Kerameikos that was found together with grave goods dating from c. 460-450.⁷ Sherds of this class were also found in fill of successive floor-levels of the Punic Amphora building at Corinth. The lowest stratum of that building dates to the second quarter of the 5th century B.C., and the building was finally abandoned in the third quarter of the century.⁸ This combined evidence dates the end of C II to c. 450.

In the third group (C III) the shoulder of the amphoras is less steep, the

¹ Grace 1979a, p. 120.

² Cf. Grace 1979a, p. 121, ill.1, 2 (AP 2422, P 24873).

³ It can be seen on Kerameikos, pl. 51:6; pl. 48:2; pl. 49:4; pl. 45:8. According to Knigge (1976, p. 23) this device can also be found on the base of the handle.

⁴ See Grace 1979a, ill. 3.

⁵ See Knigge 1976, pp. 23-24.

⁶ See Knigge 1976, pp. 23-24.

⁷ P 21971 from well N 7: 3 (see *Agora* 12); KER 9433 from grave no. 226 (= pl. 60:1).

⁸ See Williams 1978, pp. 17-20; for a revised chronology see *idem* 1979, pp. 111, 118.

neck is further elongated with the bulge confined to its upper third. The mouth is smaller and the rim thicker. The tip of the jar is turned outward forming a narrow cuff.¹ Two jars of this group have been found in the Kerameikos. KER 9511 is early in the group with features still reminiscent of C II.² This jar comes from a context that is dated by the pottery to the third quarter of the 5th century. The other amphora of C II from the Kerameikos cannot be dated by the accompanying grave goods. It is very similar to a specimen (P 2366) from a deposit in the Agora dated between 440 and 425.³ The same Agora deposit (R 13: 4) contains another specimen of this type together with several amphoras of the later, straight-necked variety (C IV).⁴ Together with C II sherds, C III is also present in the fill of the Punic Amphora building at Corinth that was abandoned in the third quarter of the 5th century.⁵ At least one more amphora of type C III was found in a well in Corinth that contained Attic pottery dating from 460 to 420.⁶ The evidence from the find contexts suggests that amphoras of type C III continue into

¹ See Grace 1979a, ill. 4.

² See Knigge 1976, p. 24; from Grave 290 (=pl. 65:4).

³ From grave 304 in *Kerameikos* 9; illustration pl. 65:8; cf. Knigge 1976, p. 24. I could not find a Kerameikos inventory number for this jar.

⁴ For this deposit see Talcott 1935; also Grace 1934; and *Agora* 12. Mattingly (1981, p. 79 with note 8) assigns a closing date of 430-425 to the deposit without giving any explanation for his downdating. Barron (1986, pp. 98-99) repeats Mattingly's date of 430-425.

⁵ See Williams 1979, p. 118; illustration of types, see *idem* 1978, fig. 5.

⁶ See Pease 1937, with fig. 33:202.

the 430's or later.¹

While Chian amphoras of type C III were still in use, the new straight-necked type (C IV) was introduced. Jars of both varieties were found together in the aforementioned deposit from the Agora.² Sherds belonging to this type are also reported from the site of the Punic Amphora Building in Corinth, but not from within the destruction debris, or earlier layers. Whatever the precise context of these sherds, they do not date before the abandonment of the building, c. 430.³ This dates the introduction of the new style amphoras with the straight neck to the 430's.

The chronological outline that emerges from this survey is not significantly different from the dates proposed by other scholars.⁴ The earliest series (C I) with the round jars, dates from the late 6th century to c. 475. The next group (C II) in which the amphoras are slimmer and have a more pronounced bulge, goes down to the middle of the century. The last group, with a bulging neck (C III) probably ended around 435. It was followed immediately by a series of straight-necked amphoras (C IV).

¹ Barron (1986, p. 98 with note 50) raises the important point that wine was usually aged in the amphoras before drinking. It is certainly appropriate to allow for about 5 to 10 years between the production of an amphora, and its being discarded in Athens or Corinth. However, I do not think one needs to assume a long period of second-hand usage. Although amphoras were used second-hand, they were not regarded as valuable as the readiness to discard them shows. We do not know the background of the amphoras that were found in the Punic Amphora building at Corinth and that were used for the transport and storage of salted fish. The fact that Chian amphoras were used for something other than wine need not necessarily indicate second-hand usage. Moreover, it is not clear whether indeed all the amphoras from that structure were used for fish, and whether not at least some of them also contained wine (cf. Ch. K. Williams 1979, p. 111).

² See Talcott 1935; also Grace 1934. The deposit is called R 13:4 in *Agora* 12.

³ These sherds were reported by Williams in a letter to Mattingly, see Mattingly 1981, p. 78 with note 6.

⁴ Cf. e.g. Grace 1934; 1979; Mattingly 1981; Barron 1986.

Chian Amphoras: Capacities

The capacity of a Chian standard amphora increases over the 5th century by c. 3 l.¹ Some scholars argue that between the last two groups with the bulging neck (C II and C III), the capacity increases from 7 Chian *choes* to 8 Chian *choes*, which is the equivalent of 7 Attic *choes*.² Since the last series with the bulging neck (C III) starts around the middle of the century, the supposed adjustment to an Attic standard has been interpreted as Chios' compliance with the provision in clause [12] of the Standards Decree demanding the use of Athenian weights and measures.³

The Chian *chous* has been reconstructed from an inscribed marble wine measure that has been found on Chios.⁴ This measuring table preserves the standard measure for a *diemiakton* (i.e. two *choes*). Unfortunately, the capacity was not measured under ideal circumstances. Three different measurements are reported to have been taken by three different parties at three different times and employing different methods. Of the results the most reliable is probably the measurement taken by Forrest (5,600 cc.), although it can not be regarded as accurate either.⁵ In comparison, an Attic two-choes measure holds

¹ M. B. Wallace 1986, p. 88; Mattingly (1981, p. 80, note 18) even reports an increase of 5 l.

² Cf. e.g. Grace 1979a, p. 121; Barron 1986, p. 98.

³ Cf. e.g. Grace 1979a, p. 121; Barron 1986, p. 98. As Barron (*ibid.*) puts it: "It will take some imagination to find a better reason for this change than conformity with the Athenian decree ..."

⁴ See Forrest 1956, pp. 63-67; pl. 5; and *idem* 1964, *BSA* 59, pp. 37-38 for a correction of the measured quantities. The wine measure is of uncertain date, probably of the 3rd or 2nd century B. C. In taking this measure as the standard also of the 5th century, one will have to assume that Chios did not change its standard for liquid measure over three to four centuries.

⁵ See Grace and Savvatianou-Petropoulakou 1970, p. 360 note 2. The measures taken by three different and independent parties at three different times were: 5,600 cc. (Forrest), 5,500 cc. (Stephanou), and 5,300 cc. (Grace and White). Grace (*ibid.*) regards Forrest's measure as slightly too high, while noting about her own result: "...this may be a little short due too much zeal in filling the measuring cup each time until it brimmed over."

6,480 cc.¹ Thus 8 Chian choes (22,400 cc. after Forrest's measure) and 7 Attic choes (22,680 cc. after the public measure from the Agora) are commensurate.

An early Chian jar from the Agora (P 24873) when measured with wheat was found to hold 30,900 cc. Grace and Savvatianou-Petropoulakou try to explain this large jar as a *metretes* of 12 Chian *choes*, although the measurement is too low.² A very similar amphora from the Kerameikos reportedly has a capacity of 25.10 l.³ This is almost precisely 9 Chian *choes*.⁴ Another jar of type C I when measured with water to the brim was found to hold 20,460 cc.⁵ This is 860 cc. above 7 Chian *choes* (Forrest's measure). According to Grace and Savvatianou-Petropoulakou this could pass for a 7 *choes* jar when allowing for room for corking.⁶ Similar jars in the Hermitage at St. Petersburg reportedly hold between 19 l. and 20 l.⁷

In 1954 Mabel Lang measured a mended jar of of the second group (C

¹ The capacity of 6,480 cc. for 2 Attic *choes* is derived from public Attic liquid measures from the Agora. See *Agora* 10, pp. 56-64, esp. p. 57 for a standard Attic *kotyle* of 270 cc. which leads to a *chous* (12 *kotylai*) of 3,240 cc. An Attic pottery *klepsydra* from the Agora when measured with rice held 6,400 cc. When measured with water the amount was 6,440 cc. See Young 1939, esp. p. 279 with note 30.

² Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4.

³ The measurement taken by Ursula Knigge is reported by Mattingly 1981, p. 80 note 18. For the amphora, see *AthMitt* 81 (1961), p. 27 no. 43, pl. 23:3.

⁴ Mattingly (1981, p. 80 with note 18) claims it also corresponds to 8 Attic choes, but this runs 500 cc short.

⁵ Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4.

⁶ Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4.

⁷ Measured by Grakov in 1933 (after Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4).

II). The jar held 18,120 cc. of barley.¹ The amphora was found with pottery dating between 460 and 440 in a deposit in the Agora (N:3). Grace and Savvatianou-Petropoulakou reason that this result, as often when measuring with a dry substance is probably too low, and that the jar could have easily held as much as 7 Chian *choes*, i.e. 19,600 cc.²

Amphoras both of type C III, the last group with the bulging neck, and of type C IV, the straight-necked variety, were in the same Agora deposit (R 13: 4). Both types are said to conform to a capacity of 7 Attic or 8 Chian *choes*.³ A jar of type C III, with the bulge in its last last stage, and from this deposit, reportedly yielded a capacity of 21,750 cc measured with barley.⁴ This is 650 cc short of 8 Chian or 7 Attic *choes*.⁵ Another jar of the same type and from the same deposit is reported to also have been measured to hold 7 Attic *choes*, a capacity that is also suggested by the letters that are incised on its shoulder.⁶ Mattingly reports that in the last quarter of the 5th century the capacity of the straight-necked new style amphoras increases to 9 Chian *choes*.⁷

¹ P 21 971, measurements after Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4a, and Grace 1979a, p. 125 no. 5.

² Grace and Savvatianou-Petropoulakou 1970, p. 360 note 4. Seven Chian *choes* of 19,600 cc. are calculated after Forrest's measure. Grace and Savvatianou-Petropoulakou (*ibid.*) also cite the capacity of seven Chian *choes* calculated after Grace and White's measure which is only 18,550 cc. There is strong reason to believe that Grace and White's measure is too low; cf. above.

³ With a Chian *chous* of 2,800 cc. (Forrest's measure) this would be c. 22,400 cc.; cf. Grace and Savvatianou-Petropoulakou 1970, p. 360.

⁴ P 2371, see Grace 1979a, p. 125 no 7.

⁵ This jar also has a graffiti on the shoulder that probably should be read as "eight," i.e. 8 Chian *choes*. Cf. Lang 1956, p. 5 no. 10.

⁶ P 2366; see Talcott 1935, fig. 17: 86, and *ibid.* fig. 28:a; see Lang 1956, p. 12 no. 58 for the reported capacity and interpretation of incision.

⁷ Mattingly 1981, p. 80 with note 18. Mattingly's reference is to an unamended typescript of 1954 and a letter of 1975 by Mabel Lang.

In view of the methodological problems outlined above, it is clear that these early measurements that are published can not be taken as absolutes. Even if one wanted to accept the individual measurements as accurate, the number of measured specimens would not allow any generalizations about capacity changes over the 5th century. It is especially deplorable that there are so few measurements available for C II, III, and IV. Even if the two specimens of C III, with the bulging neck in the last stage, indeed hold capacities of 8 Chian *choes*, equal to 7 Attic *choes*, two containers are not representative for a whole series since one has to allow for fluctuations.¹ Equally uninformative is the comparison with the earlier group (C II), where there is only one measurement recorded. Thus it is not clear whether C III adopted a new standard. There are more measurements of jars of the first class, and it appears they vary greatly. With so few measurements available, it is simply unwarranted to claim that all the jars of any given series in question held the same capacities as the jars that were measured. It is frustrating but, given the current state of the research, no definitive conclusion can be reached about capacity changes in the Chian amphora series.

It has been suggested that the appearance of graffiti on amphoras of C III, the last stage with the bulge in the neck, and on amphoras of C IV, the straight-necked variety, indicates a recent change of capacity standard.² A few of the graffiti on Chian amphoras are price markings, but most of them appear

¹ Cf. Grace 1979a, p. 121. For how much results can vary when subsequent measurements are taken, see Matheson and M. B. Wallace (1982); for fluctuations that are to be expected within a "standardized" group, see *ibid.*, and M. B. Wallace 1986.

² E.g. M. B. Wallace 1986, p. 88; Grace 1979a, p. 122; Grace and Savvatiou-Petropoulakou 1970, p. 360; cf. Lang 1956.

to be markings of capacity, expressed in Attic *choes* and fractions thereof.¹ The reasoning is that when the capacity of C III amphoras—that is the last phase of the bulging neck-type—was increased, in order to convince the reluctant customer that the amphoras held one seventh more, the content was measured—supposedly before his eyes—and the result marked on the amphora.² While this in itself is plausible, the evidence cited to support this is not without problems. On several of the jars, the amount incised, is actually larger than the supposed standard capacity of 7 Attic *choes*.³ On one jar, the marked amount is not reckoned in Attic *choes*, but in Chian *choes*, which suggests that it was marked before being shipped to Athens.⁴ On a Chian amphora that dates early in the 5th century there is an incision as well, marking the capacity as 7 *choes* of supposedly Attic standard.⁵ It is also possible that some incisions refer to later reuse. Thus the appearance of graffiti on amphoras of C III, the last group with a bulging neck, need not indicate a recent change of capacity.

Stamps on Chian amphoras and the change of the shape of the container have been interpreted as a way of marking clearly and endorsing the change of capacity, and thus as an indirect response to the Athenian Standards Decree.⁶ The first amphoras to bear stamps are those of the straight-necked vari-

¹ See Lang 1956 nos. 2, 8, 10, 15, 17, 30, 58, 62, 63, 72; cf. Talcott 1935, pp. 495-496, 514-516, figs. 17, 28.

² Cf. e.g. Grace and Savvatiadou-Petropoulakou 1970, p. 360.

³ Lang 1956 nos. 8, 15, 17. No. 8 (SS 1840) and no. 15 (SS 1839, from Agora deposit R 13: 4, are both of the straight-necked type (C IV) and bear stamps. No. 17 (P 18989) is dated to the second half of the 5th century by Lang (*ibid.*), and might possibly be a type C III container.

⁴ Lang 1956 no. 10 (= P 2371). Probably also the jar that has the price marked in staters was incised in Chios. Staters are not an Athenian currency.

⁵ Lang 1956 no. 2 (= P 11068).

⁶ Grace and Savvatiadou-Petropoulakou 1970, p. 360.

ety, type C IV. They are stamped with the coin type of Chios depicting the sphinx seated before an amphora with a bulging neck. It has been thought that the stamp bearing the “badge” of the city was intended and perceived as an endorsement that the amphora met the official standard. Interestingly, also amphoras of C IV, the series with the straight neck, are marked with letters indicating their capacity.¹ This suggests that people still thought it necessary to check on the capacity, and that the stamp was not perceived as guaranteeing a certain standard capacity.²

In view of the material available and the methods of interpretation, there is slim evidence to convey that the standard capacity of the Chian amphoras changed around mid-century to conform better to an Attic standard. Even if, once the material has been subjected to a reexamination, there would be more evidence in support of this hypothesis, a change of standard capacity need not necessarily be occasioned by the Athenian Standards Decree. Chios was one of Athens' “autonomous” allies, and, as Malcolm Wallace points out, “... the decision might have been a private one, by Chian exporters suiting their customers, or a public one, by Chian authorities pleasing either Athens or their own exporters or both.”³ It is more likely, I think, that already earlier some amphoras had capacities easily convertible to Attic measures, and that at some point, there was an effort to better standardize Chian containers. In order to link such tendencies to the operation of the Athenian Standards Decree, similar changes would have to be observed in several states.

¹ Lang 1956 nos. 8; 15.

² Cf. Grace and Savvatianou-Petropoulakou 1970, p. 360; M. B. Wallace 1986, p. 88.

³ M. B. Wallace 1986, pp. 88-89.

4.3 Thasian Amphoras

Unfortunately, no comprehensive study of Thasian amphora types of the 5th century and their chronological sequence has been published.¹ Nevertheless, Mattingly attributes a supposed change of capacity in the Thasian amphora series to the operation of the Athenian Standards Decree.² Mattingly's argument is based mainly on Braschinsky's study of Thasian amphora capacities.³ Braschinsky has found that Thasian amphoras in the middle of the 5th century, and in the 4th century and later conformed to a local Thasian standard of 2.94 l per *chous*.⁴ In addition, Mabel Lang has communicated to Mattingly the capacity of a fractional jar, dated to the second half of the 5th century, which Mattingly identifies as 5 Thasian *choes*.⁵ Braschinsky has a jar, dated to the third quarter of the 5th century, the capacity of which Mattingly reports as "... 25+ liters or 8 Attic *choes* ..." ⁶ On the basis of this scanty evidence Mattingly draws the conclusion that in the third quarter of the 5th century, Thasos had been forced to adopt the Attic standard. To support this assumption Mattingly cites a Thasian inscription of 425 which gives specifications for the construction of pithoi. Mattingly accepts Mabel Lang's interpretation that the inscription pro-

¹ For preliminary studies, see Grace 1934, pp. 210, 209; *eadem* 1946; Garland 1988, pp. 12-14; Johnston 1991. For Thasian amphora capacities, mostly of later periods, see *Études Thasiennes* 4, pp. 17, 21; Salviat 1986, pp. 176-77.

² E.g. Mattingly 1981, pp. 85-86.

³ Braschinsky 1978, *VDI* 144, pp. 135-43; *idem* 1976, *Soviet Archaeology* 3, pp. 87-102 (both are in Russian; *non vidī*).

⁴ After Mattingly 1981, p. 85. Mattingly (*ibid.*) does not state how many jars were measured and what methods of measuring were employed.

⁵ Mattingly 1981, pp. 85-86 with note 52. The jar reportedly holds 14.87 l.

⁶ Mattingly 1981, p. 85. Eight Attic *choes* translate to 25.92 l.

vided for pithoi to conform to the Attic standard.¹ However, as Mattingly himself admits this is not sufficient evidence for a change of capacity standard in compliance with the Athenian Standards Decree.²

4.4 Conclusions

This brief survey has shown that at the present stage of research it is not possible to observe changes in amphoras capacities that would allow conclusions about the possible impact of the Athenian Standards Decree. Hopefully, scholars will soon analyze more material that could yield more conclusive results. Even if there were data forthcoming which indicated that at some point in the 5th century a city with a large flow of goods to Athens had changed the capacities of its amphoras so that they could be more easily converted to Attic measure, this need not indicate that this change was imposed by Athens. A different size for the standard container might just as well have been adopted by the city in order to facilitate trade. In any event, if there were data that would allow observation of such changes, they would have to occur at several cities, and preferably at cities that had no major trade relations with Athens. Only then would there be some probability that these changes were occasioned by an imperial decree rather than being a response to a particular situation.

In addition to measures of capacity, the term *metron* in clause 12 of the Standards Decree could also apply to measures of length. For measures of length there is even less evidence available that could help determine whether

¹ Lang 1952. Lang's interpretation has been criticized by Bon and Bon 1957, p. 37; and by Salviat 1986, p. 177.

² Mattingly 1981, p. 86. Cf. also M. B. Wallace 1984, p. 13.

there was a an enforced change of standard.¹ In addition to measures, clause [12] specifically mentions weights (*stathmoi*). For weights the evidence is equally difficult to come by.² Theoretically, a city should strike its coins on a standard that corresponds to its weight standard. However, since coins are often struck on very erratic weights, or become increasingly lighter it is difficult to reconstruct the weight standard on which the coinage was originally based.³

In sum, the examination of the material evidence pertaining to weights and measures has produced no conclusive evidence that could reflect on the operation of the Athenian Standards Decree.

¹ There is a metrological relief in Oxford, dating probably around the middle of the 5th century. It depicts the upper body of a man with outstretched arms, and in the field the sole of a foot. The foot is on a different scale of measurement from the rest of the figure, but it is not an Attic foot. Date and provenance of the relief are uncertain; see Gomme, A. W. 1936, *CR*, p. 9; Barron, 1966 p. 87 note 37. For a less skeptical view, see Grace 1971, pp. 86-87 with note 89. The relief is discussed and illustrated in Boardman *et al.* 1967, p. 12, fig. 42.

According to Lang (1952, pp. 21-22 note 5) it is clear from buildings in Ionia that Athenian allies continued to use the Ionic foot during the 5th century. But Lang (*ibid.*) also think it is possible that linear measures may not have been included in the Standards Decree.

² For standard weights of the 5th century from the Athenian Agora, see *Agora* 10.

³ Cf. e.g. the weights of Abdera's coinage, above 3.1.4, especially the tables at the end of the chapter, and Thasos, above 3.1.3.

5.0 The Standards Decree in Context

5.1 Re-interpreting Clause [12]

For weights and measures, not enough material has been analyzed to allow any definite statement, but the evidence from the local coin series and from coin hoards is sufficient to rule out an enforced ban of coinage either in the 440's or in the 420's. This invalidates the traditional interpretation. The Athenian Standards Decree did not result in a general ban of all local coinages. The analysis of the epigraphic evidence has suggested that the Standards Decree could have had a more restricted application, and that it is likely to belong in the context of imperial finance. This alternative will be investigated further, and special attention will be paid to the inclusion of weights and measures in the provisions of the Decree.

My reinterpretation of the Decree will depart from clause [12], which contains the provisions on coinage, weights and measures. The text reads as follows:

ἐάν τις κόπτη νόμισμα ἀργυρίου ἐν τῆσι πόλεσιν καὶ μὴ χρῆται νομίσμασιν Ἀθηναίων ἢ σταθμοῖς ἢ μέτροις...

“... if someone in the ci[ties] strikes *nomis[ma]* of silver [a]nd does not use *nom[ismata]* of the Athen]ians or weights or meas[ures]”

The general meaning of *nomisma* is “anything sanctioned by current or established usage.” In a financial context *nomisma* refers to any standardized unit of currency, usually coinage.¹ *Nomisma* can refer to the actual coin, to a

¹ E.g. *nomisma* is used of the iron spit currency of the Spartans; see Plutarch, *Life of Lysander* 17.2-3. All definitions after *LSJ*.

coin type, or to a coin standard, i.e. a system of various denominations of a particular unit of weight.¹ In addition, *nomisma* can be a standard of liquid measure.² Aristotle uses the term *nomisma* more abstractly as a standard which measures the value of goods, providing, like currency, a common denominator that allows to compare things that are of a different kind.³ In sum, *nomisma* can be used in an abstract sense referring to any unit of standard, or it can be used in a concrete sense, meaning “coin,” i.e. a particular unit of standard. Thus the term *nomisma* has the potential to comprise standards of coin, weight and measure. Coinage is *nomisma* in the sense that it both has a standard (i.e. the particular system of weight on which it is based), and that it itself is a standard to assess the value of things. Thus even in passages where *nomisma* refers to coinage the connotation “standard” is always present as well.

In the first occurrence of *nomisma* in clause [12] the connotation of “coinage” is in the foreground since *nomisma* is combined with “striking” and “silver”: ἐάν τις κόπτῃ νόμισμα ἀργυρίου; “... if someone in the ci[ties] strikes *nomis[ma]* of silver ...”, i.e. silver coins as concrete standardized units of silver.

In its second occurrence in clause [12] (καὶ μὴ χρῆται νομίμασιν Ἀθηναίων ἢ σταθοῖς ἢ μέτροις....) *nomisma* could theoretically mean coin, coin type or coin standard. The meaning intended cannot be determined on the basis of the preserved text alone, but only by inference from relevant material evidence.

Neglecting the connotation of “standard” that *nomisma* always has, the

¹ E.g. in a passage of Aristotle on Solon's monetary reform (*Ath. Pol.* 10); cf. Kraay 1968.

² Aristophanes *Th.* 348.

³ *NE*1133b11ff; currency is implied.

traditional interpretation takes *nomisma* in both instances in clause [12] to mean “coinage.” Thus according to the traditional interpretation the provision in clause [12] forbids the striking and use of coins other than the Athenian. As pointed out above, the numismatic evidence does not suggest that such a ban was ever enforced.

I have briefly entertained the idea that *nomisma* in the context of clause [12] might not mean “coin,” but “coin standard.” Although this reading is philologically defensible, and the imposition of a common coin standard in the allied cities would also make sense as a measure to facilitate the imperial administration, the numismatic evidence does not really suggest that an unusually high number of Greek mints adopted an Attic coin standard at a certain point in the 5th century.¹

Koch decides that *nomisma* means “coin” both times when it occurs in clause [12]. However, his arguments for this choice are somewhat ambiguous. Although not explicitly stated, it appears that Koch, at least theoretically, allows for the possibility that a city could use Athenian dies or types for its coinage.² Athenian imitation coins were quite plentiful, but mostly confined to Egypt, and dating not before the 4th century.³ The practice was rather unpopular with

¹ See Schönhammer 1994. This is also the conclusion of E. S. G. Robinson 1949, p. 339. The preponderance of the Euboic standards (or a version thereof) in Northern Greece is probably due to the fact that many cities, especially in the Chalkidike were Euboean foundations. Overall, the choice of the weight standard of a city was oriented towards compatibility with the denominations that circulated alongside its coinage. See e.g. for the case of Abdera, Maroneia, and Dikaia-by-Abdera, above 3.1.4-6.

² Koch 1991, p. 380: “Nicht nur die Verwendung anderer als athenischer Münzstempel für die eigene Münzprägung einer Polis wird untersagt, sondern sowohl das Prägen als auch die Verwendung eigener Münzen durch die Poleis.” His main argument for the sense of “coin” is that *nomisma* occurs in the plural. It is not quite clear to me why the plural form of *nomisma* could not equally well apply to coin types or dies. There were always at least two dies and types (obverse and reverse) in use, and usually even more since there were several denominations.

³ Cf. Buttrey 1979b; *idem* 1984.

Athens, as ancient documents indicate.¹ However, taking *nomisma* in clause [12] as coin types would imply that the use of Athenian types was encouraged and that the use of local types was discouraged. Only a thorough study of all Athenian-type coinage will shed more light on this very interesting problem.

The two other terms that are used in conjunction with *nomisma* in clause [12] of the Standards Decree, σταθμὸς and μέτρον, are units of standard as well. Σταθμὸς means “weight,” or “standard weight.” It is often used in conjunction with μέτρον, “that by which anything is measured.” It can refer to a “space or length,” or it can be a “measure of content, whether solid or liquid.”

Nomisma, *stathmos*, and *metron* all share the property of being units of standard. Standardized units facilitate quantification, which is important in the area of public finance, especially for tax purposes and tribute.² For example, the procedure of levying taxes on shipments of bulk goods that passed through the Piraeus must have been much easier if the cargo came in containers of a standard size.³

Standardized units would have facilitated the assessment and collection of tribute as well.⁴ We know from epigraphic evidence, especially from the Athe-

¹ Cf. Stroud 1974b; Buttrey 1979a; *idem* 1981.

² This aspect of the Standards Decree has been stressed by Schuller 1974, pp. 216-17; see also Martin 1985, pp. 197-205.

³ Around 413 a 5% tax was introduced on all sea-borne traffic (Thuc. 7. 28. 4). In 410 Alcibiades imposed a tax of 10% imposed on merchants sailing out of the Euxine (Xen. Hell. 1.1.22; Polybios 4.44.4). In the decree of Kallias (*ML* 58, line 7) a 10% tax, is mentioned. For a 2% tax on imports in Piraeus in 399, see Andocides 1.133-134. There was a limit on the amount of grain that cities could get from the Black Sea; the limits were defined in Athenian measures and controlled by the Hellenespontophylakes; cf. *ML* 65 (Methone 430); *ATL* 2, D21 (Aphytis). Athenian allies and Athenian farmers had to send to Eleusis each year to honor Demeter: 1/600 of all barley and 1/1200 of all wheat (*ML* 73; c. 422).

For taxes in Greek states in Nixon and Price 1990, p. 145 with note 7; p. 149 with note 15.

⁴ The criteria determining the amount each city paid are rather intricate. See Nixon and Price 1990, esp. pp. 145ff.

nian Tribute Lists, that the sums assessed and collected were reckoned in silver according to Attic units of weights.¹ However, odd sums in the records attest that the incoming payments were not always made in Athenian money, and some numbers have been explained as conversions from payments that were made in electrum rather than silver.² Further above (3.1.4) I have resolved an odd entry in the tribute record of Abdera as a payment that was made in a local coin standard. These diverse payments must have complicated the logistics of imperial finance. It is conceivable that efforts were made to receive more uniform payments and to find means to facilitate tax and tribute assessment. The imposition of a common standard of coinage, weights, and measure suggests itself. In order to avoid, however, to project modern reasoning some more evidence from the 5th century that is related to standardization needs to be examined.

¹ Cf. also the re-assessment of 425/4 (*ML* 69).

² See Eddy 1973; cf. Mattingly 1977a, pp. 90-92; Lewis 1987, pp. 62-63. W. E. Thompson (in *Assyrian Studies* 31 (1981), pp. 95-100) has argued that some Karian cities may have been assessed in sigloi, and may have paid with local coins or ingots of metal. Odd amounts and entries of non-Athenian currencies can also be found in other official records, e.g. payments to treasuries, aparche, inventories etc. See *ML* 59 (Parthenon-building accounts, 434/3) where electrum from Lampsacus and Kyzicene is mentioned. See also Bodenstedt 1981, pp. 83-84; 71-73.

5.2 Tendencies in Standardization

In the following I will focus on tendencies in standardization that affected coinage and amphoras in the 5th century. Since my purpose is to track general developments rather than establish a chronology, this can be done in spite of the many unanswered questions that the amphora material presents, and in spite of the unresolved issue of the date of the Decree.

Coin Standards

There are multiple factors determining the weights of coins. In theory, the weight of a coin should be a multiple or a sub-division of the unit of weight on which its standard is based.¹ However, the actual weights of coins do not always observe this standard, and the reasons for this are rather complex.²

In the course of the 5th century, many mints gradually reduced the weights of their coins. For instance, when Thasos, around 525, started striking staters with the characteristic dumpy flan, they all weighed around ± 10 g. In the second series, probably starting around 480, where the flan is wider, most coins weigh 9.6 g. In the third series, dated after 465, the weights are spread evenly between 9.1 g and 8.5 g. In the following series, with the so-called “consenting” nymphs obverse type, the weights fall between 8.8 g to 8.4 g.³

¹ See *ACGC*, pp. 8-9.

² Cahn 1970, p. 194 with frequency tables on pp. 175-77: Knidos in Series II - IV (520-449; Cahn's dates) struck drachms on the Aiginetan standard, with very accurate weights. Aigina, however, allows for a greater range of weights. Chios in its earliest series uses very irregular weights (after Cahn *ibid.*, p. 190 with note 576).

³ Weights after Kraay and Emeleus (1962, p. 22), and based on a frequency table of 145 coins. Note that Picard (1982b, pp. 420-22) suspects that some stater of Group 3 which have weights as low as 7 g, and thus fall far below the norm of Group 4 (8.40–8.70 g) may actually be Thracian imitations. For Thasos, see above 3.1.3.

The reduction of the weights can often be attributed to lack of access to silver mines. For many mints of Northern Greece the major local source of silver was around Mount Pangaion. Athens' territorial claims in this region, culminating in the foundation of Amphipolis in 437/6, curtailed the allied cities' access to these mineral resources.¹ In addition, there were events that affected individual cities.² For example Thasos was finally recovered by Athens in 463 after a two-year siege. Among the terms of surrender was the loss of all its territory on the mainland including a mining area (cf. Thuc. 1.100). This may have been a factor in the reduction of the weights of the coins of Group 3 and 4.³

During the second half of the 5th century, such difficulties with the silver supply were probably the reason for a general decline in minting manifesting itself in smaller series, an increase of smaller denominations, and decreased weights for the individual coins. The weights of the smaller denominations are usually more erratic. At least sometimes, and especially towards the end of the century, there may have been a tendency for them to pass at face value.⁴ This is indicated by the fact that the various denominations bear different designs to be

¹ Already in 476/5 there had been an attempt to settle the site near Eion. Then during the revolt of Thasos (465-63) 300 Athenians were sent to settle Ennea Hodoi and were annihilated (see Thuc. 4.102). In 424 Brasidas took Amphipolis. Akanthos probably experienced problems in the silver supply due to the foundation of Amphipolis, but direct evidence is lacking. Abdera's output declined markedly when Athens founded and subsequently recaptured Amphipolis, and thus established its influence in the Strymon area. Cf. Barron 1968, p.101; May 1966, p. 151.

² E.g. the debasement of the weights is an ongoing process at Abdera throughout the 5th century. Along with revolt (411?), siege and Athenian recovery (407), Abdera probably experienced problems with the silver supply.

³ No coins of Group 3 were in the Asyut Hoard (*JGCH* 1644) or in the Elmalı Hoard (CH VIII, 48), which suggests that this group probably started only after 465, when Thasos revolted from Athens.

⁴ Cf. *ACGC*, pp. 8-9.

more easily distinguishable.¹

Deliberate and distinct changes in the coin standard of a city are mainly linked to changes in trade, and are not primarily an expression of political allegiance. For example Akanthos' discontinuation of its series of tetradrachms on the Euboic-Attic weight standard has often been interpreted as a political statement, and linked to Akanthos' revolt from Athens in 424.² However, it is more plausible that the change to a different, lighter-weight local standard, the "reduced Thracio-Macedonian standard," was a response to a changed economic context. Around 430 this standard was also used at the near-by cities Abdera, Maroneia, and Olynthos,³ as well as by the tribal leader Perdikkas.⁴ Finds of Akanthian coins at Olynthos attest to their regional circulation.⁵ Earlier in the 5th century, when Akanthian coins traveled far, as hoards attest, the Attic-Euboic standard was advantageous since it allowed easy conversion with the widely-circulating Athenian owls. However, later, when Akanthos' coins circulated mainly to regional markets, a different standard, compatible with neighboring currencies, was more expedient.

The fact that quite frequently high denominations and fractions are struck on different standards renders the political connotation of coin standard implau-

¹ Cf. Bérend 1984, p. 12. For the bronze-plated silver coins of 406, see Kroll 1993, p. 7.

² Cf. Desneux 1949, p. 23. Between Period II and Period III the weight of Akanthos' heavy pieces changed from c. 17.2 g to 14.00-14.29 g.

³ Erxleben (1970, p. 106) is mistaken when he argues that the reference to the Phoenician standard which was used by Abdera and Maroneia is of no avail, "... da beide Städte gerade um 430 v. u. Z. zum attischen Fuß übergehen ...". This is incorrect. Cf. above, chapters 3.1.4 and 3.1.6. For Olynthos, see Raymond 1953, pp. 158-59.

⁴ Raymond 1953, pp. 155-58.

⁵ *Olynthos* 9, pp. 263-65. For the tetrobols of Perdikkas that have been found at Olynthos, see also Raymond 1953, pp. 160-61.

sible. Rather, it suggests a practical motivation: fractional coinage may have been adjusted to the regional markets, while larger denomination were for export.¹

These observations suggest that there was an awareness of the practical importance of coin standards. How well these standards were actually observed is determined by a variety of factors. It is quite possible that towards the end of the 5th century a tendency for coins to pass at face value might have mitigated against greater accuracy of weights.

Amphora Standards

As expounded above we do not know how well the capacities of amphoras in the 5th century observed a theoretical standard. In later periods the theoretical standard of amphora capacities is quite well observed. An example for this occurs in Hellenistic Rhodes, for which the capacities have been tested extensively and accurately.² This tendency towards better standardization might have already started in the 5th century, but hard data are lacking.

From the middle of the 5th century onwards, on an increasing number of jars, there are scratchings that often appear to indicate how much the container actually held. The occurrence of these tally marks may reflect an increasing concern with capacities as well.³

Virginia Grace has advocated the view that stamps on amphoras are

¹ For instance, in its earlier series, when Akanthos struck tetradrachms on the Euboic-Attic, it always used a local standard in its series of smaller denominations; in late 6th century Thasos and Neapolis accompany their staters with metrologically unrelated drachms.

² See Matheson and M. B. Wallace 1982; also Koehler and M. B. Wallace 1987.

³ See, e.g. Lang 1956.

certificates of their capacity.¹ In her opinion, the stamps do not necessarily indicate how much a jar actually contains, but rather they certify that a jar can hold the standard capacity that is associated with its particular type.² This hypothesis finds support in the systematic and long-continued patterns of stamping on Rhodian and Knidian amphoras between in the 3rd and 2nd centuries B.C. with capacities being more uniform when the jars are stamped.³ The earliest series of amphoras with stamps indicating official endorsement are supposedly the Chian amphoras of the third quarter of the 5th century, the Thasian amphoras of the last quarter of 5th century, and maybe also the early Mendeian series.⁴ Grace sees a connection between the earliest use of stamping and the Athenian Standards Decree, but unfortunately she does not specify how precisely the Decree may have led to the use of stamps.⁵

As more material has been examined, it has become clear that as a general statement it cannot be maintained that stamps are certificates of capacity. Quantitative analysis of stamped and unstamped amphoras has shown that in many cases only a small percentage of the jars of a series may have been

¹ Cf. e.g. Grace and Savvatianou-Petropoulakou 1970, p. 279.

² By size and shape a container is immediately recognizable as of a particular type, even if different types bear the same stamp. In keeping with the official character of this endorsement the stamp often employs the ethnic adjective or, according to Grace, the state's badge as it also appears on coins. The same stamps can be used on half-sized and full-sized amphoras, see Grace and Savvatianou-Petropoulakou 1970, pp. 279-80.

³ Grace and Savvatianou-Petropoulakou 1970, p. 279; Matheson and M. B. Wallace 1982, p. 301; see also M. B. Wallace 1986, p. 92.

⁴ Grace 1949, p. 182.

⁵ Grace 1949, p. 182: "It appears probable that these jars, and perhaps the early Mendeian, were stamped in compliance with the Athenian imperial standards decree of c. 449 B.C., and subsequent supplementary regulation."

stamped.¹ There are cases in which the stamp is not very legible or has been impressed at a spot where it is barely visible.² Although true for some later series like the Rhodian or the Knidian of the 3rd and 2nd centuries B.C. it cannot be proven that also in the 5th century B.C. stamped jars are always better standardized than unstamped ones.³ It seems most likely that it was not the stamp, but the shape and size of the jar, that indicated how much quantity that receptacle could contain.⁴ In any event, neither a stamp that was impressed on the jar before firing nor a recognizable shape could guarantee how much and what substance a particular jar actually contained. If assurances of that kind were desired, they would have to be written on the jar or on a tag after the amphora was sealed.⁵ Only checking and measuring could in the end protect a customer from receiving a standard container that contained less than the standard amount. There has been no comprehensive study to show that stamped jars of the 5th century are better standardized than unstamped ones.⁶



A prerequisite for better standardization of both coins and amphoras is

¹ See Empereur 1982, pp. 221-32.

² According to Garland (1983, p. 32) Thasian stamps, especially around 340 B.C. were printed very faintly. Sometimes amphoras were covered in creamy slip before firing which could make the stamp almost illegible. In other instances, stamps are on the feet and barely visible.

³ Garland 1983, p. 33.

⁴ Garland 1983, pp. 32-33; M. B. Wallace 1986, p. 92.

⁵ See M. B. Wallace 1986, p. 92.

⁶ Garland 1983, p. 33.

greater technical knowledge and craftsmanship in the production process. Marks of identification, that is symbols and names or abbreviations on coins and stamps on amphoras, suggest perhaps a greater degree of organization at the places of production, and the need to communicate some information about the product. However, during the 5th century the practice of putting marks of identification on coins and amphoras is rather irregular and experimental.¹

There is no consensus as to the significance of symbols and names or abbreviations on coins. Some scholars think that they refer to magistrates, which has some plausibility. We do not know enough about the operation of a mint in Classical Greece to determine what the function of these “magistrates” was, but it seems that the symbols or names contain information about a person or a body that was somehow involved in the minting process.² These marks of identification possibly reflect a greater degree of organization at the place of production which could have been a prerequisite for better standardization. But as outlined before, there were a number of factors determining how well the coins of a particular series observed their theoretical weights, and marks of identification cannot be interpreted as guaranteeing an accurate weight.

The two bodies of evidence discussed here, amphoras and coins, share the property of being units of standard. Capacity standards operate in a restricted area: when goods are traded in jars. The value of a filled container depends upon the quantity of the good that is exchanged. Thus there is an incentive to achieve greater accuracy and uniformity of the capacity that jars of a particular

¹ See Grace 1946, pp. 31-38. Most Thasian stamps before mid 4th cent. bear two names, and no preposition that would indicate that one serves as a date while the other is an endorsement. It is possible to build a sequence of eponymous officials needed for a chronology.

² On the problem of “mint magistrates,” see Furtwängler 1982.

type will hold. Coins, on the other hand, are units of standard in a twofold sense: they have a standard, i.e. the particular unit of weight on which they are based, and they are themselves a standard that can be used to assess the value of things. The accuracy with which coins observe their own standard does not necessarily affect their potential to serve as standardized units, as is exemplified by coins that have a fiduciary value.

Standardization is a concern in situations where quantification is important, above all in the context of trade and finance. Although quantification is also possible without properly standardized units, in complex situations it is greatly facilitated by uniform standards.¹ The evidence indicates that changes in coin standards are connected to changing trade patterns. For the amphora series, data that would allow one to draw inferences from changes in capacity standards are not yet available. Along with improved craftsmanship, marks of identification—both on amphoras and on coins—indicate a greater degree of specialization that could be a prerequisite for better standardization. Although these developments do not occur everywhere at the same time and in the same form, they reflect a general climate that was concerned with improving means of quantification.

¹ For trade with storage jars of widely different types and capacities in the 19th century Aegean, see Blitzer 1990.

5.3 Imperial Finance

In modern times coins (and banknotes) have come to symbolize the political and economic power of the issuing state. From Wilamowitz to Finley, scholars assumed that this symbolism also applied to 5th century Greece, and that Athens exploited coinage as a medium to propagate its dominant role over the allied cities.¹ A coin type, frequently called the “badge of the city” has been taken as a powerful expression of a state's economic and political supremacy.² The Athenian *Coinage Decree* was not only seen as an effort to facilitate trade, and stimulate the economy, but at the same time it was interpreted as a clear and emphatic statement of Athens' political dominance.³

Unified weights and measures could equally facilitate trade and stimulate the economy, but they lack the political symbolism that the modern era attributes to coinage.⁴ When the coin type of a city appears on public weights its primary purpose is to authenticate the object. Amphoras, tiles, and the like, are also sometimes stamped with the coin type. But on these objects the “badge of

¹ Cf. Wilamowitz 1880, p. 30 with note 56; Finley 1973, pp. 168-69; *idem* 1979, pp. 21-24; cf. also Mattingly 1987, p. 65.

² This view can still be found in recent literature, e.g. *ACGC*, pp. 71-72.

³ For a concise summary of the traditional interpretation, see Cahn 1970, p. 163. For emphasis on the political aspect of the Standards Decree, see Finley 1973, pp. 168-69; *ACGC*, pp. 71-72. For emphasis on the practical and economic consequences of the Standards Decree, see Schuller 1974, pp. 216-17; Martin 1985, pp. 196-208. The discussion is conveniently summarized by Lewis (1987, pp. 59-63).

⁴ It is significant, that when scholars want to emphasize the economic motivation of the Standards Decree, they point to the fact that it includes weights and measures as well. E.g. Schuller 1974, pp. 216-17; Martin 1985, pp. 197-205.

the city” does not lend itself that easily to a political interpretation.¹ These considerations suggest that the provision in the Standards Decree about the use of weights and measures was not motivated by the desire to send an abstract political message through the physical products that were adjusted to these standards. Rather, it aimed at the practical results of a uniform system of weights and measures.²

The prescribed use of standard containers makes most sense in the context of tax assessment. The procedure of levying taxes on bulk goods is facilitated by the use of containers of a standard size. The use of stamps may have been one means of indicating that a container followed a prescribed standard, but it was not a necessary prerequisite. If the containers were not filled to their standard capacity, it was not to the detriment of the taxing authority, but rather to the detriment of the party being taxed. Taxes were probably levied on goods in the local markets as well as on exports, and stamped and unstamped amphoras are found in approximately the same proportion at home and abroad.³

There is evidence that the use of local weight standards complicated the tribute collection, and that Athens insisted on the use of an Attic standard. In all the years for which there are records, the tribute of the city of Abdera is 15 talents. The odd amount of 12 talents and 5,120 drachms occurs only in 454/3, the

¹ Note that in Grace's interpretation of standard changes in the Chian amphora series, the amphora type that conforms to the Attic standard is stamped with a coin type that (in the chronology accepted by Grace) was used before the mint stopped producing silver coins. This interpretation is inconsistent chronologically (for the type used as a stamp would have been out of use by c. 15 years), and also inconsistent with Grace's interpretation of coin types as politically charged symbols. For coin types on the Thasian amphora series of late 5th century, see Grace 1946, p. 35.

² The Standards Decree, like any imperial legislation, contains of course also a political component. The question should not be “Was the Decree a political measure or was it motivated by practical considerations,” but rather, “Was the Standards Decree more overtly political than any other legislation, because it aimed at coins, weights and measures?”

³ Cf. Garland 1983, pp. 32-33. For a local regulation enforcing the use of a container of a particular size, see Lang 1952.

first extant list. This odd amount corresponds almost precisely to 15 talents on the local weight standard that Abdera used.¹ The implication is that in 454/3 Abdera made its payment of 15 talents using the local weight standard instead of the Attic standard. Upon arrival in Athens, when the tribute was reckoned in terms of Attic units, it amounted only to 12 talents and 5,120 drachms. In the years thereafter Abdera always paid 15 Attic talents of silver, as Athens expected it to do. To facilitate tribute collection Athens had to ensure that the cities weighed their tribute on an Attic standard of weight, not on a local standard. This, however may have been quite unrelated to the weights of the individual coins used in the payment.

It must have been desirable for the Athenians that the allied cities make their payments in a form that was easy to register and process in Athens.² Obviously, the most convenient solution was to demand that all payments be made in Athenian money. However, the numismatic evidence does not suggest that the allied cities had enough Athenian owls at their disposal to account for their tribute.³ As the example of Abdera's tribute record shows the sum may have usually been composed of whatever silver there was available. It is conceivable that the Athenian Standards Decree regulated the processing of these miscellaneous currencies. In order to encourage the use of Athenian coins or coinage that was easily convertible, a fee was to be applied to the exchange process (clause [5]). The addition to the oath of the boule in clause [12] could equally refer to the use of coinage, weights and measures in official payments.

¹ With an Attic drachm of 4.3 g, the 12 talents and 5,120 drachms would be 331.616 kg of silver. Fifteen talents on the third Thracian-Macedonian standard amount to 331.200 kg of silver with a drachm of 3.68 g (with a drachm of 3.685 g it would be 331.650 kg). See above 3.1.4.

² Cf. Kagan 1987, p. 26.

³ Extremely few Athenian coins have been found in the territory of the allied cities that date to the period covered by the Athenian Tribute Lists; cf. above, chapter 3.7.

In the second half of the 5th century the Athenians issued several decrees dealing with the practical challenges of imperial finance, such as the logistics of tribute assessment and collection.¹ There is a decree from the Athenian Agora that mentions along with *nomisma*, banking tables and *kerameia* (possibly standard containers). The fragmentary text of this decree does not allow for a specific interpretation, but it seems to address issues of conversion as well.² The replacement of the tribute in 413 by a harbor tax (Thuc. 7.28.4) was desirable not only because it yielded greater profit, but also because it eliminated the complicated process of tribute assessment and collection. These regulations attest to the efforts of Athens to come to terms with the practical challenges of administering the empire.

By examining coinage in the context of weights and measures, it has emerged that coinage, weights, and measures, as units of standard, are at the center of a heightened sensitivity towards quantification and standardization. Problems of quantification were especially pressing in the context of imperial finance, and the Standards Decree is best understood as a response to problems of quantification in the context of imperial finance.

¹ *ML* 46: Kleinias Decree concerned with the logistics of tribute collection; *ML* 68: appointment of tribute collectors and late payments; *ML* 69: procedure for re-assessment in 425.

² For the decree from the Athenian Agora (*IG*³ 90), see Stroud 1974a, pp. 279-98. The word *katallatein* (to change) occurs.

Conclusions

The aim of this study was to investigate the purpose and context of the Athenian Standards Decree. This required a critical reexamination of the traditional interpretation which maintained that the Decree enforced a general ban of all local Greek coinages. With regard to the traditional interpretation the result of my study is negative: there is not sufficient evidence to support it. Although some may find a negative result reprehensible it was necessary to create this *tabula rasa* in order to make room a fresh approach.

The issue of the date—which has received so much attention in the scholarly literature, and which to some extent is connected to the traditional interpretation—also has been considered. The individual fragments of the Decree cannot be dated exclusively by letter forms, and conclusive external evidence is lacking as well. It is quite possible that not all of the fragments were inscribed at the same time. This is also suggested by the context in which Aristophanes alludes to the Standards Decree (*Aves* 1021-1057). Aristophanes' parody is set in a city that only recently joined the empire, and the Standards Decree is part of a package of other new laws that the city had to adopt. This implies that the Decree was in force over some time, and that a city had to adopt it when it joined the League. If this was the case, then one could accept a late date for the fragment from Hamaxitos, and an earlier date for the initial passage of the legislation in Athens.

Although the scope of the numismatic material did not permit an exhaustive survey, a significant number of mints could be analyzed in detail. The results of my examination caution against dating the Standards Decree by look-

ing for a 10-year gap in the series of the local mints.¹ Many of the issues can be dated only very approximately and one cannot assume as a rule that coins were struck every year. Rather it appears that the output of many mints was quite erratic and probably was determined by a variety of factors, such as the availability of silver and the need for newly coined money. During the second half of the 5th century there was a general decline in minting, and thus in the 420's the issues of many local mints had already ceased. (The evidence from coin hoards reflects this general decline of minting as well). Had there been an imposed ban of coinage one would expect to find an abrupt halt in the series, but this is not the case.

My findings suggest that the traditional interpretation must be abandoned. They also provide a basis from which to view the Standards Decree from a new perspective. Since local currencies continued to be minted, one must assume either that the Decree was never enforced, or that its application and terms are different from those assumed by the traditional interpretation. My new approach to the Standards Decree is based a conservative reading of the preserved text.

The highly fragmentary decree contains instructions to local magistrates on matters of currency in the cities of the empire, but it does not state explicitly that the local mints have to be shut down nor does it say that the use of local currency is forbidden under any circumstances.² For example, in clause [5] contains very specific procedures concerning "mint", "silver", "exchange", and a certain percentage of money. Traditionally, this clause has been taken as an

¹See above chapter 3.0.

²For recent tentative suggestions of a more restricted applicability, see Schuller 1974, pp. 215-17; Martin 1985, pp. 196-207; Koch 1991, pp. 380-81.

order to recoin all the local currencies circulating in the empire.¹ The fragmentary text of clause [5] need not imply such a rigorous and all-encompassing monetary policy. It is conceivable that an exchange was mandatory only for silver that was intended for a certain purpose, e.g. as payment to Athens. It is impossible to assess with certainty how rigorous a measure this provision actually was since the text breaks off before the penalty for non-compliance is described.

The addition to the bouleutic oath in clause [12] specifies that legal action “according to the decree of Klearchos” will be taken if someone strikes *nomismata* of silver (i.e. silver coins) in the cities and does not use *nomisma* and weights and measures of the Athenians.² Again, we do not know the content of the decree of Klearchos, and the severity of the penalty.

It is conceivable that the Standards Decree did not have such broad objectives as is usually assumed. The language and content of the extant fragments displays affinity with legislature aimed at facilitating the imperial financial administration, such as regulations concerning the collection of tribute and issues of taxation.³ An alternative interpretation must account for the fact that the allied cities continued to strike and use non-Athenian coinage. The ban on the production and use of non-Athenian coinage may only refer to money to be used in official payments and not to local transactions. If this was the case then there would have been no need to close down the local mints, and local curren-

¹ See above chapter 1.5.

² For a detailed analysis of the term *nomisma* and for further discussion of clause [12], see above, chapter 5.0.

³ Cf. e.g. the decrees *ML* 46, 68, 69 that are concerned with the collection of the tribute, or also the decree about the repayment of loans (e.g. *ML* 58), regulations of imports (e.g. *ML* 65), the “Banking” Decree from the Athenian Agora (*JG I*³ 90), and the harbor tax of 413 (Thuc. 7.28.4).

cies could have continued to be minted throughout the 5th century.

In this context, the inclusion of weights and measures in the provisions of the Standards Decree (clause [12]) is revealing. From my examination of the material evidence pertaining to weights and measures it emerges that in the 5th century, there was an ongoing concern with standardization, an issue that was especially pressing in the context of imperial finance.

A common system of coinage, weights and measures would facilitate the collection, accounting, and redistribution of imperial payments, such as tribute and taxes.¹ If the Standards Decree is motivated mainly by considerations of practical expediency, then in analogy with the stipulation on weights and measures, the provision on coinage may apply only to silver money to be used in official payments to Athens, or in context where Athens would apply taxes.

My new reading improved on several of the shortcomings of the traditional interpretation. It explains why the many local mints continued to strike coins. It is furthermore compatible with the epigraphic evidence, since in the extant text it is not stated explicitly that the local mints must be shut down under all circumstances. In addition, this interpretation sees the Standards Decree not as a unique measure —the first instance of a state monopoly on coinage—, but places it into the context of the practical exigencies of imperial administration in 5th century Greece.

¹ Cf. Schuller 1974, pp. 215-17; Martin 1985, pp. 196-207; Koch 1991, pp. 380-81.

Plate 1 - Akanthos



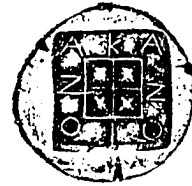
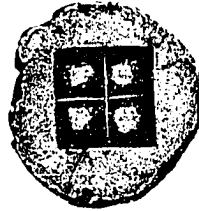
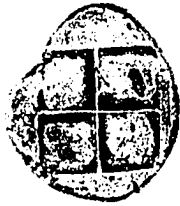
1



2



3



4



5



Plate 2 - Thasos



1



2



3



4



5



6



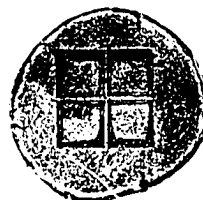
Plate 3 - Abdera



1



2



3



4



5



Plate 4 - Maroneia



1



2



3



4



5



Plate 5 - Ainos



1



2



3



Plate 6 - Potidea, Aphytis



1



2



3



4



Plate 7 - Mende



1



2



3



4

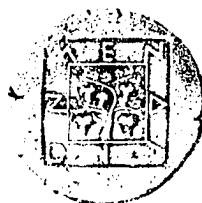


Plate 8 - Terone



1



2



3



4



Plate 9 - Dikaia in Macedonia, Neapolis



1



2



3



4



5



Catalog of Coin Hoards

The following is a survey of the coin hoards that feature most prominently in chapter 3. The discussion is mostly confined to the issue of the date. The publications cited offer a fuller treatment and list the contents of each hoard. Additional bibliography for each hoard can be found in the entries of *IGCH* or *CH*. The coin hoards are organized by date of burial.

IGCH 1 DUNBABIN, Near Matala, Crete, 1943 525?
69 coins at the Ashmolean, casts of two Aiginetan staters; 1 coin from Thera, the rest Aiginetan thin collar turtles.
a.k.a. Matala Hoard

Holloway 1971.

From the description of the finder Dunbabin identified the olpe that held the hoard as mid 6th century.¹ The authors of *Asyut* suggest to downdate this hoard to 500 or later.²

IGCH 1185, bef. 1880 500 (no later than)
30+ AR.

Kagan 1992
superseding the record in *IGCH*, which is based on Naster 1959, p. 148 no. 887.

The find spot of this hoard has to remain uncertain.

¹ Holloway 1971, p. 3.

² *Asyut*, pp. 69-76.

IGCH 1165 ASIA MINOR, probably SW coast or islands, bef. 1895 c. 500
1 EL; 75 + AR

Mørholm 1971
cf. *CHV*, 1; Becker 1988.

The Milesian obols are the latest pieces in the hoard.¹

IGCH 1637 DEMANHUR, 500-495
1km SE of Alexandria, c. 20 km NW of Naukratis, 1900-1901
165 AR; 2 ingots; many coins heavily corroded.

Dressel and Regling 1927, pp. 28-104.

There is some question about the authenticity of the find spot. Dressel and Regling suggest that Demanhur and Zagazig could be two parts of a larger finds, but since the coins in Zagazig are later than those in Demanhur, there were probably two separate finds.²

Compared with *IGCH* 1185 some of the coins are later, but none earlier.³ Since *IGCH* 1185 is buried c. 500, this suggests a slightly later date for the Demanhur Hoard.⁴

IGCH 1639 SAKHA, c. 100km east of Alexandria, 1897 500-490?
72+ AR, and fragments

Weber 1899; Dressel 1900, pp. 231-258; pl. 8.

The hoard was put together in several packages.⁵ There are some intrusions and there is at least one forgery.⁶ A core group can be reconstructed that ap-

¹ Becker 1988, p. 26.

² Dressel and Regling 1927, pp. 2-3.

³ Cf. Kagan 1992, pp. 22-23.

⁴ Cf. Brown (1950, p. 185); Asyut, p. 18; Becker 1988, p. 26.

⁵ Weber 1899, p. 269; Dressel 1900, p. 231.

⁶ Asyut, p.18; Kagan 1992, p. 19; Barron 1966, p. 31. For the forgery, see Weber 1899 no. 10; cf. E. S. G. Robinson *NC* 1956, pp. 16-17, no. 8; Brett, *AJN* 1914, pp. 55-58.

pears to be of approximately the same date, going down to c. 500, or early 5th. The mints that belong to this core group are Abdera, Dikaia-by-Abdera, Thasos, Chios and Samos.¹ The situation is complicated by the fact that, in a later package, some coins of mints that are represented also in the core group cannot belong to the hoard, because of their different state of corrosion.

IGCH 1638 DELTA, Delta, Egypt, 1887

500-490?

30 AR

29 recorded; 4 intrusive?

Greenwell 1890

This hoard presents many problems.

The coins from Tyre are intrusive. Most of the other coinages are later than *IGCH 1185*, but earlier than those in the Asyut Hoard (*IGCH 1644*). The exception is the Lycian coin (1.19). In comparison with the coins from Asyut, which were probably struck early in Kuprlli's reign, this coin has a later appearance.²

It must be after 485, the beginning of Kuprlli's reign.³

On the basis of the other coinages in the hoard a date in the first decade of the 5th century, but hardly later than c. 490 seems called for. The Lycian coin would require a date of burial of at least 480. It could be intrusive.

There may be more intrusions in the hoard. It should be restudied.⁴ As of now, it can be used as for chronological arguments only if supported by other evidence.

IGCH 1874 TARANTO, Calabria, 1911

c. 490

c. 600 + AR. In a vase with c. 6 kg of ingots and worked silver

Babelon 1912.

Cf. Kroll and Waggoner 1984, p. 327 with note 13 for additional bibliography.

The hoard record is incomplete, and there is particular confusion with regard to the number and type of the Metapontum pieces present. The presence of

¹ Cf. Kagan 1992, p. 22.

² It is similar to *SNGv.Aulock 4075*, a tetrobol of 2.57 g.

³ Mørholm and Zahle (1972) date Kuprlli to 485-440.

⁴ Cf. Kagan 1992, p. 3.

medium-flan incuse pieces from Metapontum is indisputable.¹ These are the latest coins in the hoard, and establish a closing date of c. 500-490 for the hoard.² The element of imported coins was put together somewhat earlier, and could have a closing date of c. 510.³ Among the latest imported coins are the Athenian owls. Dates proposed range from 527/20 to 506.⁴

IGCH 1640 BENHA EL ASL, 50 km N of Cairo, 1929 c. 485
15 AR; dumps

E. S. G. Robinson 1930; *idem* 1931; Newell 1931.

The hoard is not completely recorded.⁵ The date for this hoard rests on the coin from Chios (no. 23) dated to the first decade of the 5th century, and apparently the latest coin in the hoard.⁶

IGCH 1177 SOUTH ANATOLIAN, c. 480
southern Asia Minor, before 1961
38 AR

E. S. G. Robinson 1961

Among the latest coins in the hoard is a coin of the Samians at Zankle, which is precisely datable to 489.⁷ In addition, there are three archaic Athenian owls dating to c. 485/80.⁸ This establishes the date of burial as not earlier than 480.

¹ Noe 1984, p. 37.

² See Kraay 1977a, 195.

³ See Kraay 1977a, 195; *Asyut*, p. 129 note 12.

⁴ Kraay (1956, pp. 43-68, esp. pp. 54-55; 1977a, p. 195) opts for 527/20; *Asyut* (p. 64) for 506.

⁵ Cf. E. S. G. Robinson 1930, p. 93; *idem* 1931, p. 71; Newell, 1931, p. 66.

⁶ E. S. G. Robinson, 1930, p. 94; Schlumberger 1953, p. 10, no. 25.

⁷ See Robinson 1961, p. 107.

⁸ See Kraay 1975, p. 153; *Asyut*, p. 22.

IGCH 1644 ASYUT, Asyut , 300 km S of Cairo, 1968/69
c. 900 AR

c. 475

Asyut

cf. Cahn 1977; Kraay 1977.

The authors of *Asyut* assign a closing date of c. 480 to the bulk of the hoard with several specimen being added slightly later.¹ In their assessment the whole hoard was accumulated over a period of not more than c. 15 years (c. 490-475), and the bulk of it was brought to Egypt c. 480.² Cahn rejects this conclusion. His assessment of hoard evidence as a criterion for dating is extremely negative.³ He argues that the components of the hoard were probably put together at different times, and thus wear is invalid as a dating criterion.⁴ The latest coin in the hoard is the Alexander octadrachm (no. 152) dating c. 476-60, and thus the hoard cannot have been closed before 460.⁵ Validating Raymond's sequence Kraay narrows the date of the Alexander coin down to c. 465-60. In his opinion, which I follow, this coin was a later addition and does not invalidate the chronological conclusions for the bulk of the hoard drawn by the authors of *Asyut*.⁶ The latest examples of most mints in this hoard were struck not too long before the hoard was closed.⁷ There is no significant group of material that need have been accumulated in the years before the closing of the Demanhur Hoard.⁸ This hoard requires a lowering of the dates assigned to most of the major Greek coinages.

¹ *Asyut*, p. 121. The authors of *Asyut* (pp. 38-39) date the Alexander octadrachm (no. 152) before 475 by reverting the chronological sequence of Group I and Group II that Raymond (1953) arrived at; cf. *Asyut*, p. 119.

² *Asyut*, p. 121.

³ Cahn 1977, p. 281-82.

⁴ Cahn 1977, p. 282. From reading *Asyut*, I came away with the impression that the authors were aware that e.g. the coins from Western Greece came as separate parcels, and that they do not really use the criterion of wear to determine which coins are latest in the hoard.

⁵ Cahn 1977, p. 282. The Alexander coin is dated by Raymond (1953, p. 100) to 476-460 (Raymond Group II).

⁶ Kraay 1977a, pp. 192-93; cf. also Arnold-Biucchi *et al.* 1988, p. 29.

⁷ *Asyut*, p. 117.

⁸ *Asyut* p. 120.

CH VI, 4 and 5 ANTILIBANON, Homs? Latakia?, 1978
c. 70 AR; + 20 kg hacksilber etc.

c. 475

Hurter and Pászthory 1984.

In composition and date this hoard is very similar to the Asyut Hoard (*IGCH* 1644).

CH VIII, 48 ELMALI, Elmali, Lycia, 1984
c. 2000 AR

c. 465-60

Carradice 1987a (preliminary publication).

In addition to Athenian tetradrachms and dekadrachms, this very large hoard contains coins from the major mints of the Northern Aegean, and from the Islands, as well as from Lycia. The numerous die-links indicate that most of the Greek component is composed of several "parcels".¹ As a single group arrived the coins from Northern Greece, from Athens, and maybe also from the island mints. These coins may have come out of some sort of treasury, rather than out of general circulation.² This is indicated by the fact that both earlier and later issues show a similar degree of wear, and that the latest coins are usually the most frequent.³ Many issues are of a later style than those in the Asyut Hoard (*IGCH* 1644). The latest two Aiginetan coins are not worn, and of a style not found in Asyut, dating between 470 and 457. As Kagan proposed, a closing date of c. 465-60 is likely for this hoard.⁴ The evidence from this hoard suggests that many of the issues of the major Greek mints need to be downdated by one or two decades.

¹ Cf. Fried 1987, p. 8.

² See Kagan 1987, p. 21; also Barron 1989, p. 15; Mattingly 1989, p. 63-64.

³ Kagan 1987, p. 21.

⁴ Kagan 1987, p. 24.

IGCH 1645 ZAGAZIG, Zagazig, upper Nile delta, 1901 460-450
at least 84 AR , with 5 AR bars, 2 fragments of bars, 11 dumps

Dressel and Regling 1927, pp. 104-138.

A total of 34 Athenian tetradrachms is recorded, both of the pre-Persian and the post-Persian period.¹ Unfortunately, this hoard is not sufficiently published, and the post-Persian pieces are not illustrated. From the description and from the line drawing, Kraay supposes some of them could date as late as 450.² A burial date after 470, c. 460-450 is also suggested by the coins from Lycia and Sinope (nos. 207-223).³

IGCH 1482 JORDAN, Jordan, Hauran region, c. 445
near anc. Bostra, 1967
113 AR with jewelry and Ar ingots

Kraay and Moorey 1969.

In composition this hoard is comparable to the Zagazig hoard (IGCH 1635), except for the fact that there is only one coin from Cyprus.

Most coins are at least a quarter of a century old. Many are reduced to small fragments. Coins from Athens account for over one third of the coins in the hoard.

The date of burial is established by the latest coins in the hoard which came from Athens (nos. 43-46, c. 450, very little wear), from Lycia (no. 62) and from Tyre (no. 88).

¹ See Starr 1970, pp. 30, 90.

² Kraay (and Moorey 1968, p. 208 note 1) withdraws the date of c. 470 proposed in 1964 (Kraay 1964a, pp. 76-78), because he had failed "to give full weight to the Athenian group of tetradrachms which are only described, but not illustrated." This must refer to nos. 207-223. According to Kraay (and Moorey 1968, p. 208 note 1) a substantially later date is indicated by their description and by the line drawing (Dressel and Regling 1927, pl. VI). Cf. Barron 1966, p. 44; Starr 1970, p. 30. *Asyut*, p. 22.

³ The Lycian coin no. 247 is close to 1.19 in the Delta Hoard. It is later than comparable coins with forepart of boar in the Asyut Hoard, which are probably early in Kuprlli's reign which is dated between 485 and 440 (cf. Mørholm and Zahle 1972). A date earlier than c. 470 for this coin seems unlikely. Coins from Sinope like the "Barbarous Eagle-head" no. 235 (cf. Kraay 1981, nos. 23-55) must have been minted by c. 485 at the latest since a coin of this group was in the Asyut Hoard. However, a coins of this type were also present in the Black Sea hoard of c. 420, and it is likely that the series continued into the 430's (cf. Kraay 1981, pp. 6, 17-18).

IGCH 1647 NAUKRATIS, 20km SE of Demanhur, 1885 440-430
 15 AR with cast and cut silver lumps (42 oz.), from excavation
 a.k.a Silversmith's hoard

Head 1886
 cf. Barron 1966, pp. 76-77.

The hoard record is complete, but insufficiently described and documented, especially for the Athenian component.

The date of the hoard is based on the latest coins from Lycia, Aigina, and Samos.¹

IGCH 1483 MASSYAF, Syria, 1961 c. 425-20
 100 AR with AR jewelry
 a.k.a Lebanon Hoard, Syrian Hoard

Kraay and Moorey 1968, pp. 181-235; pl.19-28.
 cf. Mattingly 1989.

The record of the hoard is complete.² The date is based on issues from Athens, Aigina, Azbaal from Citium, and Tyre. Most of the Athenian coins belong to the period after c. 450, probably to 430/25.³ The Aiginetan staters with the tortoise on the obverse (nos. 50-53) were minted between 456 and 431.⁴ Azbaal's reign overlapped with the time when Aigina struck its land-tortoises, as there are several overstrikes.⁵ The issues from Tyre were minted in the third quarter of the 5th century, before in the last decade of the 5th century the obverse type was changed from dolphin to Melcarth on hippocamp.⁶ There is a strong possibility that at least some of the coins from Sidon are intrusive, and thus they cannot be

¹ Head 1886, p. 8; Barron 1966, pp. 76-77; Mattingly 1970, pp. 142-44; *idem* 1981, pp. 82-85. For the Lycian coin, see Mørkholm 1972, no. 47; for the early skew tortoise, dated between 475 and 431, see Brett 1955, no. 1113.

² Cf. Kraay and Moorey 1969, p. 210.

³ Kraay and Moorey 1969, p. 221; Starr 1970, p. 85.

⁴ Kraay and Moorey 1969, p. 221.

⁵ Nos. 60-61.

⁶ Kraay 1968, p. 218.

adduced as evidence for a date.¹

CHI,15 BLACK SEA area ?, c. 1970

c. 420

a.k.a Samsun Hoard

108 AR, many frgs, ingots, hacksilber

Kraay and Moorey 1981

Date based on issues from Athens, Sinope, Lycia, Tarsos, and "Paphos." With one exception (no. 5) all Athenian coins were struck after 450. The varying condition of wear suggests a succession of issues with a terminal date of c. 430/25.² The barbarous issues of Sinope (nos. 23-55), probably go down into the 430's.³ The Lycian coins (no. 56; no. 126) belong to the 440's.⁴ The coins from Tarsos (no. 128) probably was minted as late as 425.⁵ The coins attributed to "Paphos" fit with a terminal date of c. 420 as well.⁶

¹ For the coins of Sidon, see Betlyon 1976. No. 77 (cf. Betlyon no. 16) cannot be dated before c. 380; cf. Kraay 1968, pp. 217, 222. There is a strong possibility that this piece was added later to the hoard.

² Kraay and Moorey 1981, p. 17; cf. Mattingly 1989, p. 61.

³ Kraay and Moorey 1981, p. 18.

⁴ Kraay and Moorey 1981, pp. 12, 18.

⁵ Kraay and Moorey 1981, p. 13; cf. *ibid.*, p. 8.

⁶ Kraay and Moorey 1981, p. 18.

Bibliography

- Alexander, J. A. 1953. "The coinage of Potidea," in *Studies presented to D. M. Robinson* 2, pp. 201-217.
- Archibald, Z. H. 1983. "Greek Imports: Some Aspects of the Hellenic Impact on Thrace," in *Ancient Bulgaria. Papers presented to the International Symposium on the Ancient History and Archaeology of Bulgaria, University of Nottingham, 1981* 1, Nottingham, pp. 304-321.
- Arnold-Biucchi, C. 1990. *The Randazzo Hoard 1980 and Sicilian Chronology in the Early Fifth Century BC* (Numismatic Studies, 18), New York.
- Arnold-Biucchi, C., L. Beer-Tobey, and N. Waggoner 1988. "A Greek Archaic Silver Hoard from Selinus," *ANSMN* 33, pp. 1-35.
- Ashton, R. 1993. "A Revised Arrangement for the Earliest Coinage of Rhodes," in *Essays in Honour of Robert Carson and Kenneth Jenkins*, London, pp. 9-15; pl. I-III.
- Austin, M. M., and P. Vidal-Naquet 1977. *Economic and Social History of Ancient Greece: An Introduction*, Berkeley.
- Babelon, E. 1912. "Trouvaille de Tarante," *RN*, pp. 1-40.
- ___ 1913. "La Politique Monétaire d'Athènes au Ve siècle avant notre ère," *RN*, pp. 457-85.
- ___ 1922. "La Trouvaille de Mendè," *RN*, pp. 103-120.
- ___ 1951. "Protésilas à Scioné," *RN*, pp. 1-11; pl. 1.
- Badian, E. 1987. "The Peace of Callias," *JHS* 57, pp. 1-39.
- ___ 1988. "Towards a chronology of the Pentekontaetia Down to the Renewal of the Peace of Callias," *Echos du Monde Classique* 23 n.s., pp. 289-320.
- Bakalakes, G. 1961. *Ἀρχαιολογικές έρευνες στη Θράκη, 1959-60*, Thessaloniki.
- Balcer, J. M. 1964. "From Confederate Freedom to Imperial Tyranny: A Study of the Restrictions Imposed by Athens on the Political Self-Determination of the Member States in the Delian Confederacy 478-431" (diss. University of Michigan, Ann Arbor 1964).
- ___ 1967. "Perparethos: the Early Coinage Reconsidered," *SNR* 56, pp. 25-33.

- ___ 1968. "The Early Silver Coinage of Teos," *SNR*, pp. 5-50.
- ___ 1972a. "The Persian Occupation of Thrace, 519-491 B.C.: The Economic Effects," in *Actes de I^e Congres International des études du sud-est europeen* 2, pp. 241-58.
- ___ 1972b. "The Date of Herodotus IV.1: Darius' Scythian Expedition," *HSCP* 76, pp. 99-132.
- ___ 1974. "Separatism and Anti-Separatism in the Athenian Empire (478-403)," *Historia* 23, pp. 21-39.
- ___ 1976. "Imperial Magistrates in the Athenian Empire," *Historia* 25, pp. 257-287.
- ___ 1978. *The Athenian Regulations for Chalkis. Studies in Athenian Imperial Law (Historia Einzelschriften, 33)*, Wiesbaden.
- ___ 1984a. *Sparda by the Bitter Sea*, Chico CA.
- ___ 1984b. "Miletos (IG I2, 22 [IG I3 21] and the Structures of Alliances," in *Studien zum Attischen Seebund*, Balcer, J. M., Gehrke, H. J., Raaflaub, K. A., Schuller, W., eds., (*Xenia* 8), Konstanz, pp. 11-30.
- ___ 1988. "Persian Occupied Thrace (Skudra)," *Historia* 37, pp. 1-21.
- Baldwin, A. 1915. *The Electrum and Silver Coins of Chios Issued During the Sixth, Fifth and Fourth Centuries*, New York.
- ___ 1924. "Lampsakos: the Gold Staters, Silver and Bronze Coinages," *AJN*, pp. 1-76.
- Barron, J. P. 1966. *The Silver Coins of Samos*, London.
- ___ 1968a. "The fifth-century Diskoboloi of Kos," in *Essays in Greek Coinage, presented to Stanley Robinson*, Oxford, pp. 75-89.
- ___ 1968b. Rev. of J. M. F. May, *The Coinage of Abdera*, in *CR* 18, pp. 99-101.
- ___ 1983. "The Fifth-century *Horoi* of Aigina," *JHS* 53, pp. 1-12.
- ___ 1986. "Chios in the Athenian Empire," in *Chios. A Conference at the Homereion in Chios: 1984*, J. Boardman, and C. E. Vaphopoulou-Richardson, eds., Oxford, pp. 96-103.
- ___ 1989. "The silver coins of Samos come of Age," in *Kraay-Mørkholm Es-*

- says, Louvain-La-Neuve, pp. 9-22; pl.2-5.
- Baumeister, A. 1855. *Bericht über die zur Bekanntmachung geeigneten Verhandlungen der Königl. Preuß. Akademie der Wissenschaften zu Berlin*, pp. 187-199, no. 22.
- Bean, G. E., and J. M. Cook 1957. "The Carian Coast III," *BSA* 52, pp. 124-25.
- Becker, F. 1988. "Ein Fund von 75 milesischen Obolen," *SNR* 67, pp. 1-33; pl. 1-4.
- Bengston, H. 1982. *Griechische Geschichte. Von den Anfängen bis in die Römische Kaiserzeit*, 6th ed., Munich.
- Bérard, J. 1960. *L'Expansion et la Colonisation grecque jusqu'aux Guerres mediques*, Paris.
- Bérend, D. 1984. "Réflexions sur les Fractions du Monnayage Grec," in *Festschrift für Leo Mildenberg*, Wetteren, pp. 6-30; pl. 1; 2.
- Best, J. G. P. 1969. *Thracian Peltasts and their Influence on Greek Warfare*, Groningen.
- Betlyon, J. W. 1976. "A New Chronology for the Pre-Alexandrine Coinage of Sidon," *ANSMN* 21, pp. 11-35; pl. 2-4.
- Bickerman, E. J. 1958. "Autonomia: Sur un passage de Thucydide (1,144,2)," *Revue internationale des droits de l'antiquité* 5, pp. 313-44.
- Blackman, D. 1969. "The Athenain Navy and Allied Naval Contributions to the Pentecontaetia," *GRBS* 10, pp. 179-216.
- Blanchet, A. 1895. "Observations relatives au type des monnaies d' Erétrie, de Dicaea et de Mendè," *RBN*, pp. 165.
- Blitzer, H. 1990. "ΚΟΡΩΝΕΪΚΑ: Storage-jar Production and Trade in the Traditional Aegean," *Hesperia* 59, pp. 675-711.
- Bloesch, H. 1957. "Die Löwen von Skione," *SNR*, pp. 5-10.
- ___ 1958/59. "Das Winterthurer Münzkabinett 1948-58," *SNR* 39, pp. 5-21; pl. 1-4.
- ___ 1964. "Noch einmal Skione," *SM* 13/14, pp. 59-61.
- ___ 1987. *Griechische Münzen in Winterthur*, Winterthur.

- Boardman, J. 1958/59. "Excavations at Pindakas in Chios," *BSA* 53/4, pp. 295-309.
- _____. 1970. *Greek Gems and Finger Rings. Early Bronze Age to Late Classical*, London.
- _____. 1980. *The Greeks Overseas. Their Early Colonies and Trade* 3, London.
- Boardman, J., J. Dörig, W. Fuchs et al. 1967. *The Art and Architecture of Ancient Greece*, London.
- Bodenstedt, F. 1981. *Die Elektronprägung von Phokaia und Mytilene*, Tübingen.
- Boehringer, C. 1978. "Rekonstruktion des Schatzfundes von Ognina," *SNR* 57, pp. 102-143.
- Boehringer, E. 1929. *Die Münzen von Syrakus*, Berlin.
- Bogaert, R. 1976. "L'essai des monnaies dans l'antiquité," *BCH* 122, pp. 5-34.
- Bon, A. M. 1936. "Monnaie inédite de Galepsos," *BCH* 60, pp. 172-4; pl.24.
- Bon, A., and A. M. Bon 1957. *Les Timbres Amphoriques de Thasos (Études thasiennes, 4)*, Paris.
- Bonner, R. J. 1923. "The Commercial Policy of Imperial Athens," *CIPh* 18, pp. 193-94.
- Borza, E. N. 1982. "The Natural Resources of Early Macedonia," in *Philip II, Alexander the Great and the Macedonian Heritage*, Adams, Lindsay W., Borza, Eugene N., eds., Washington, D.C., pp. 1-20.
- _____. 1987. "Timber and Politics in the Ancient World," *ProcPhilSoc* 131, pp. 32-52.
- _____. 1990. *In the Shadow of Olympos*, Princeton.
- Boulter, C. 1953. "Pottery from the Mid-Fifth Century from a Well in the Athenian Agora," *Hesperia* 22, pp. 59-115.
- Bradeen, D. V., and M. F. McGregor 1973. *Studies in Fifth-Century Attic Epigraphy*, Oklahoma.
- Brashinsky, I. B. 1980. *Les importations céramiques grecques sur le Don inférieur du Ve au IIIe siècle avant notre ère*, Petersburg.

- Brett, A. B. 1913. "The Electrum and Silver Coins of Chios," *AJN* 48, pp. 1-60.
- ____ 1955. *Catalogue of Greek Coins, Museum of Fine Arts, Boston*. Boston.
- Bridges, A. P. 1980. "The Athenian Treaty with Samos, ML 56 (Notes)," *JHS* 100, pp. 185-188.
- Brown, W. L. 1950. "Pheidon's Alleged Aeginetan Coinage," *NC*, pp. 177-204.
- Burnett, A. 1987. "Reasons for minting," in *Coinage in the Roman World*, A. Burnett, London, pp. 88-92.
- Bury, J. B., and R. Meiggs. 1980. *A History of Greece to the Death of Alexander the Great*, 4th ed., rev., New York.
- Busolt, G., and H. Swoboda. 1926. *Griechische Staatskunde. 2 Vols.*, Munich.
- Buttrey, T. V. 1979a. "The Athenian Currency Law of 375/4 B.C.," in *Greek Numismatics and Archaeology: Essays in Honor of Margaret Thompson*, pp. 33-45.
- ____ 1979b. "Pharaonic Imitations of Athenian Tetrachms," in *Proceedings of the 9th International Congress of Numismatics, Berne 1979* 1, pp. 137-40.
- ____ 1981. "More on the Athenian Coinage Law of 375/4," *NumAntCl* 10, pp. 71-94.
- ____ 1984. "Seldom what they seem --- the case of the Athenian tetradrachm," in *Ancient Coins of the Graeco-Roman World. The Nickle Numismatic Papers*, Waterloo, Ontario, pp. 292-94.
- Cahn, H. A. 1957a. "Die archaischen Silberstatere von Lindos," in *Charites. Studien zur Altertumswissenschaft*, K. Schauenberg, ed., Bonn, pp. 18-26.
- ____ 1957b. "Poseidion on Karpathos?," *NC*, pp. 11-12.
- ____ 1958. "Ein Tetrachmon von Stagira," *Antike Kunst* 1, pp. 37-40.
- ____ 1960. "Die Gewichte der Goldgefäße," *Antike Kunst* 3, pp. 26-29.
- ____ 1970. *Knidos. Die Münzen des Sechsten und des Fünften Jahrhunderts v.Chr. (Antike Münzen und geschnittene Steine, 4)*, Berlin.
- ____ 1973. "Skione - Stagira - Akanthos," *Antike Kunst Beiheft* 9, pp. 7-13.

- ____ 1975. "Étalons monétaires an Asie Mineure jusqu'au 5^e siècle," in *Kleine Schriften zur Münzkunde und Archäologie*, Basel, pp. 66-69.
- ____ 1977. "Asiut. Kritische Bemerkungen zu einer Schatzfundpublikation," *SNR* 56, pp. 279-87.
- ____ 1984. "Stagira in Tel Aviv," in *Festschrift Mildenberg*, Wetteren, pp. 43-50.
- Camp, J. M. 1986. *The Athenian Agora. Excavations in the Heart of Classical Athens*, London.
- Cargill, J. L. 1977. *The Second Athenian League: Context, Organization, and Nature*, Berkeley.
- Carradice 1987a = *Coinage and Administration in the Athenian and Persian Empires. The ninth Oxford Symposium on Coinage and Monetary History* (BAR International Series, 343), I. Carradice, ed., Oxford, 1987
- Carradice, I. 1987b. "The "Regal" Coinage of the Persian Empire," in: Carradice 1987a, pp. 73-93, pl. 10-15.
- Carradice, I., and M. J. Price 1988. *Coinage in The Greek World*, London.
- Casson, S. 1926. *Macedonia, Thrace and Illyria*, Oxford.
- Chambers, M. 1993. "The Archon's name in the Athens-Egesta Alliance (IG 13, 11)," *ZPE* 98, pp. 171-174.
- Chambers, M. H., R. Gallucci, and P. Spanos 1990. "Athens' Alliance with Egesta in the Year of Antiphon," *ZPE* 83, pp. 38-63.
- Chaviaras, N. D. 1922 (1924). "Σποράδων ἐπιγραφαί," *AE*, pp. 39-41; no. 13 α; β.
- Courtils, J. d., T. Kozelj, and A. Muller 1982. "Des Mines d'or à Thasos," *BCH* 106, pp. 409-17.
- Danov, K. M. 1976. *Altthrakien*, Berlin; New York.
- Dengate, James A. 1967. "A Mint for the Coinage of the Ionian Revolt" (lecture, Boston 1967), abstract in *AJA* 1968, p. 164.
- Desneux, J. 1949. "Les tetradrachmes d' Akanthos," *RBN* 95, pp. 1-122.
- ____ 1952. "A propos de la chronologie du monnayage d'Akanthos," *RBN* 98,

pp. 113-115.

De Ste. Croix, G. E. M. 1954/5. "The Character of the Athenian Empire," *Historia* 3, pp. 1-41.

Dressel, H. 1900. "Altgriechischer Münzfund aus Ägypten," *ZfN* 22, pp. 231-58; pl. 8.

Dressel, H., and K. Regling 1927. "Zwei ägyptische Funde altgriechischer Silbermünzen," *ZfN* 37, pp. 1-138.

Eddy, S. K. 1973. "Some irregular amounts of Athenian Tribute," *AJP* 94, pp. 47-70.

Empereur, J. 1982. "Les anses d'amphores timbrées et les amphores: aspects quantitatifs," *BCH* 106, pp. 219-33.

Erleben, E. 1969. "Das Münzgesetz des Delisch-Attischen Seebundes," *Archiv für Papyrusforschung* 19, pp. 91-139.

____ 1970. "Das Münzgesetz des Delisch-Attischen Seebundes," *Archiv für Papyrusforschung* 20, pp. 66-132.

____ 1971. "Das Münzgesetz des Delisch-Attischen Seebundes," *Archiv für Papyrusforschung* 21, pp. 145-62.

Feyel, M. 1942-43. "Nouvelles Inscriptions d'Abdère et de Maronée," *BCH* 66-67, pp. 176-99.

Figueira, T. J. 1991. *Athens and Aigina in the Age of Imperial Colonization*, Baltimore - London.

Filow, B. 1934. *Die Grabhügelmetropole von Duvanli in Südbulgarien*, Sofia.

Finley, M. I. 1973. *The Ancient Economy*, London.

____ 1979. "Trade and Politics in the Ancient World. Classical Greece," in *Second International Conference of Economic History* 1, M. I. Finley, ed., New York, pp. 11-35.

____ 1981a. "The Slave Trade in Antiquity: The Black Sea and Danubian Regions," in *Economy and Society in Ancient Greece*, Finley, M. I., B. D. Shaw, and R. P. Saller, eds., London, pp. 167-175.

____ 1981b. "The Athenian Empire: A Balance Sheet," in *Economy and Society in Ancient Greece*, Finley, M. I., B. D. Shaw, and R. P. Saller, eds., London,

pp. 41-61.

- Fol, A. 1988. "Der geistige Umschwung in Hellas und Thrakien," in *Der Thrakische Silberschatz aus Rogozen Bulgarien*, Komitee für Kultur der Volksrepublik Bulgarien, ed., pp. 19-28.
- Fol, A., B. Nikolov, and R. F. Hoddinott 1986. *The New Thracian Treasure from Rogozen, Bulgaria (British Museum Publications)*, London.
- Forbes, W. H. 1895. *Thucydides Book I*, Oxford.
- Forrest, W. G. 1956. "A Chian Wine Measure," *BSA* 51, pp. 63-67; pl. 5.
- Franke, P. R. 1952. "Geschichte, Politik und Münzprägung im frühen Makedonien," *Jahrbuch für Numismatik und Geldgeschichte* 3/4, pp. 99-111.
- French, A. 1972. "The Tribute of the Allies," *Historia* 21, pp. 1-20.
- _____. 1993. "A Note on the Size of Athenian Armed Forces in 431 BC," *AHB* 7, pp. 43-48.
- Fried, S. 1987. "The Dekadrachm Hoard: an Introduction," in: *Carradice 1987*, pp. 1-3.
- Fuchs, W. 1973. "Die Bildgeschichte der Flucht des Aeneas," *ANRW* 1, Berlin, pp. 615-632.
- Furtwängler, A., and K. Reichold 1967. *Griechische Vasenmalerei. Auswahl hervorragender Vasenbilder*. Rome.
- Furtwängler, A. 1982. "Griechische Vieltypenprägung und Münzbeamte," *SNR* 61, pp. 5-25; pl.1,2.
- Gaebler, H. 1925. "Zur Münzkunde Makedoniens. VI," *ZfN* 35, pp. 193-216.
- _____. 1930. *Die Münzen von Stagira (Sitzungsberichte der Preussischen Akademie der Wissenschaften, Phil.-Hist. Klasse, 19)*.
- _____. 1931. "Fälschungen makedonischer Münzen," *Sitzungsberichte der Preussischen Akademie der Wissenschaften, Phil.-Hist. Klasse* 12, pp. 195-215.
- _____. 1935. *Die antiken Münzen von Makedonia und Paionia (Die antiken Münzen Nord-Griechenlands, 3.2)*, Berlin.
- Gale, N. H., O. Picard, and N. Barrandon 1988. "The Archaic Thasian Silver

Coinage," in *Antike Edel- und Buntmetallgewinnung auf Thasos*, Wagner, Günther A., Weisgerber, Gerd, eds., (*Der Anschnitt, Zeitschrift für Kunst und Kultur im Bergbau. Beiheft*, 6), Bochum, pp. 212-23.

- Gardner, P. 1913. "Coinage of the Athenian Empire," *JHS* 33, pp. 147-88.
- ___ 1918. *A History of Ancient Coinage 700-300 B. C.*, Oxford.
- ___ 1920. "The Financial History of Ancient Chios," *JHS* 40, pp. 163.
- Garlan, Y. 1983. "Greek Amphorae and Trade," in *Trade in the Ancient Economy* P. Garnsey, K. Hopkins, and C. R. Whittaker, eds., London, pp. 27-35.
- ___ 1988. *Vin et amphores de Thasos*, Athens.
- Gauthier, P. 1971. "Les Xenoï dans les textes athéniens de la seconde moitié du V^e siècle av. J.-C.," *REG* 84, pp. 44-79.
- ___ 1973. "A propos des clérouquies athéniennes du Ve siècle," in *Problèmes de la terre en Grèce ancienne*, M. I. Finley, ed., Paris, pp. 163-178.
- Georgiadis, A. 1965. "The Koan Fragment of the Monetary Decree. Première Partie. Contribution à la recherche de la provenance de certains marbres antiques," *BCH* 89, pp. 400-422.
- Gernet, L. 1909. "L'approvisionnement d'Athènes en blé au Ve et au IV^e siècle," *Mélanges d'histoire ancienne* 25.
- ___ 1938. "Sur les actions commerciales en droit athénien," *REG* 51, pp. 1-44.
- Gomme, A. W., A. Andrewes, and K. J. Dover 1945-70. *A Historical Commentary on Thucydides*, Oxford.
- Grace, V. 1934. "Stamped Amphora Handles Found in 1931-1932," *Hesperia* 3, pp. 197-310.
- ___ 1946. "Early Thasian Stamped Amphoras," *AJA* 50, pp. 31-38.
- ___ 1949. "Standard Pottery Containers of the Ancient Greek World," in *Commemorative Studies in Honor of Theodore Leslie Shear (Hesperia Supplement, 8)*, Baltimore, pp. 175-89.
- ___ 1971. "Samian Amphoras," *Hesperia* 40, pp. 52-95.
- ___ 1979a. "Exceptional Amphora Stamps," in *Studies in Classical Art and Archaeology. A Tribute to Peter Heinrich von Blanckenhagen*, G. Kopcke, and

- M. B. Moore, eds., New York, pp. 117-127; pl. 35, 36.
- _____. 1979b. *Amphoras and the Ancient Wine Trade* revised, (*Excavations of the Athenian Agora. Picturebook*, 6), Princeton.
- Grace, V., and M. Savvatiadou-Petropoulakou 1970. "Les timbres amphoriques grecs," in *Exploration archéologique de Délos* 27, pp. 277-382.
- Graham, A. J. 1978. "The Foundation of Thasos," *ABSA* 73, pp. 61-98.
- _____. 1983. *Colony and Mothercity in Ancient Greece* Second Edition; corrected and enlarged, New York.
- _____. 1984. "Commercial interchanges between Greeks and natives," *Ancient World* 10, pp. 3-10.
- _____. 1991. "Adopted Teians: a passage in the new inscription of Public Imprecations from Teos," *JHS* 111, pp. 176-78.
- _____. 1992. "Abdera and Teos," *JHS* 112, pp. 44-73.
- Grandjean, Y., and F. Salviat 1988. "Décret d'Athènes restaurant la démocratie à Thasos en 407 av. J.-C.: IG XII 8,262 complété," *BCH* 112, pp. 249-78.
- Greenwell, W. 1890. "On a Find of Archaic Coins in Egypt," *NC*, pp. 1-19.
- Grierson, P. 1965. "The Interpretation of Coin Finds," *NC* 5, pp. i-xiii.
- _____. 1963. "Coin Wear and the Frequency Table," *NC*, pp. i-xvi.
- Griffith, G. T. 1935. *The Mercenaries of the Hellenistic World*, Cambridge.
- Hackens, T. 1973. "Le monnayage de l'atelier de Délos à l'époque archaïque," in *Études Déliennes (BCH Supplement, 1)*, Paris, pp. 209-226.
- Hammond, N. G. L. 1972. *A History of Macedonia. Historical Geography and Prehistory*, Oxford.
- _____. 1980. "The Extent of Persian Occupation in Thrace," *Chiron* 10, pp. 53-61.
- Hammond, N. G. L., and G. T. Griffith 1979. *A History of Macedonia. 550-336 B.C.*, Oxford.
- Hammond, N. G. L., and F. W. Walbank 1988. *A History of Macedonia, 336-167*, Oxford.

- Hansen, O. 1986 [1990a]. "Epigraphica Varia," *ArchEph*, pp. 154-59.
- ____ 1990b. "The date of the Alliance between Athens and Egesta (Nr. 37 M.-L.)," *Hermes* 118, pp. 376-377.
- Hardwick, N. 1991. "The Coinage of Chios from the Sixth to the Fourth Century B.C." (diss. University of Oxford, England).
- ____ 1993. "The Coinage of Chios from the VIth to the IVth Century B.C.," in *Proceedings of the XIth International Numismatic Congress organized for the 150th anniversary of the Société Royale de Numismatique de Belgique, Brussels, September 8th-13th 1991* 1, Séminaire de Numismatique Marcel Hoc, ed., Louvain-la-Neuve, pp. 211-22.
- Harrison, A. R. W. 1971. *The Law of Athens. Vol. 2: Procedure*, Oxford.
- Hasebroek, J. 1931. *Griechische Wirtschafts- und Gesellschaftsgeschichte bis zur Perserzeit*, Tübingen.
- Head, B. V. 1880. *History of the Coinage of Ephesos*, London.
- ____ 1886. "Coins discovered on the Site of Naukratis," *NC*, pp. 1-18; pl. 1. (= "Silversmith's Hoard," in *Naukratis* 1, Petrie, W. M. Flinders, ed., London, pp. 64-65).
- ____ 1911. *Historia Numorum: A Manual of Greek Numismatics*, Oxford.
- Henry, A. S. 1977. *The Prescripts of Athenian Decrees*, Leyden.
- ____ 1978. "The Dating of Fifth Century Attic Inscriptions," *CSCA* 11, pp. 75-108.
- ____ 1979. "Archon Dating in Fifth Century Attic Decrees: the 421 rule," *Chiron* 9, pp. 23-30.
- ____ 1992. "Through A Laser beam Darkly. Space-age Technology and the Egesta Decree (IG I³ 11)," *ZPE* 91, pp. 137-46.
- ____ 1993. "Athens and Egesta (IG I³ 11)," *AHB* 7, pp. 49-53.
- Herrmann, P. 1981. "Teos und Abdera im 5. Jahrhundert v. Chr.," *Chiron* 6, pp. 1-30.
- Hersh, C. A. 1991. "A Fifth-Century Circulation Hoard of Macedonian Tetrobols," in *Mnemata: Papers in Memory of Nancy M. Waggoner*, Metcalf, William E., ed., New York, pp. 3-19; pl.1-8.

- Heurtley, W. A. 1939. *Prehistoric Macedonia*, Cambridge.
- Hill, G. F., R. Meiggs, and A. Andrewes 1962. *Sources for Greek History between the Persian and Peloponnesian Wars*, Oxford.
- Hiller von Gaertingen, F. 1923 (1925). "Ἀττικὸς νομισματικὸς νόμος ἐκ Σύμης," *AE*, pp. 116-17.
- Hiller von Gaertingen, F., and G. Klaffenbach 1925. "Das Münzgesetz des ersten Athenischen Seebundes," *ZfN* 35, pp. 217-221.
- Hind, J. G. F. 1976. "The Eagle-head Coins of Sinope," *NC*, pp. 1-6.
- Hoddinott, R. F. 1975. *Bulgaria in Antiquity*, London.
- ____ 1981. *The Thracians*, London.
- Hodlofski, L. 1979. "Macedonian Relations with Athens to 413 B.C.," .
- Hoffman, R. J. 1975. "Perdikkas and the Outbreak of the Peloponnesian War," *GRBS* 16, pp. 359-77.
- Holloway, R. 1962. "The Crown of Naxos," *ANSMN* 10, pp. 1-8; pl. I.
- ____ 1967. "Review of May, *Coinage of Abdera*," in *AJA* 71, pp. 320-321.
- ____ 1971. "An Archaic Hoard from Crete and the Early Aiginetan Coinage," *ANSMN* 17, pp. 1-21.
- ____ 1978. Rev. of M. Price, and N. Waggoner, *Archaic Greek Coinage. The Asyut Hoard*, , in *Gnomon* 50, pp. 597-600.
- How, W., and J. Wells 1928. *A Commentary on Herodotos*, Oxford.
- Howgego, C. 1990. "Why did Ancient States Strike Coins?," *NC*, pp. 1-25.
- Hultsch, F. 1882. *Griechische und römische Metrologie* 2, Berlin.
- Hurter, S. 1992. "Teos over Tanagra," in *Studia in Honorem U. Westermark edita*, Stockholm, pp. 171-73.
- Hurter, S., and E. Pászthory 1984. "Archaischer Silberfund aus dem Antilibanon," in *Festschrift für Leo Mildenberg*, Wetteren, pp. 111-25; pl. 14-17.
- Imhoof-Blumer, F. 1890. *Griechische Münzen (Neue Beiträge und Untersuchungen)*, München.

- Isaac, B. 1986. *Greek Settlements in Thrace until the Macedonian Conquest (Studies of the Dutch Archaeological and Historical Society, 10)*, Leiden.
- Jameson, R. 1911. "Trouvaille de Vourla, Monnaies Grecques des VIe et Ve siècles," *RN*, pp. 60-68; pl. 1, 2.
- Jeffery, L. H. 1990. *The Local Scripts of Archaic Greece. A Study of the Origin of the Greek Alphabet and its Development from the Eighth to the Fifth Centuries B.C.*, revised, with a supplement by A. W. Johnston, Oxford.
- Jenkins, G. K. 1970. *The Coinage of Gela*, Berlin.
- Johnston, A. 1991. "An Archaic Amphora of Thasian Type," *Hesperia* 60, pp. 363-65.
- Kagan, J. H. 1987. "The Decadrachm Hoard: Chronology and Consequences," in Carradice 1987, pp. 21-28.
- ____ 1992. "ICGH 1185 Reconsidered," *RBN* 138, pp. 1-24; pl. 1-5.
- Kahrstedt, U. 1935. "Chalcidic Studies," *AJPh* 57, pp. 416-444.
- Kallet-Marx, L. 1989a. "Did Tribute fund the Parthenon?," *CA* 8, pp. 250-266.
- ____ 1989b. "The Kallias Decree, Thucydides, and the Outbreak of the Peloponnesian War," *CQ* 39, pp. 94-113.
- Karwiese, S. 1980. "Lysander as Herkliskos Drakonopnignon," *NC*, pp. 1-32; pl.1-2.
- Karyskovskij, P. O. 1961. "Olbia und der athenische Bund," *Materialy* 3, pp. 64-70 [*non vidj*].
- Klaffenbach, G. 1950. Rev. of B. D. Meritt *et al.*, *The Athenian Tribute Lists*. Vol. 2, in *DLZ* 71, pp. 33-37.
- Kleiner, F. S. 1971. Rev. of H. Cahn, *Knidos. Die Münzen des Sechsten und des Fünften Jahrhunderts v.Chr.*, in *AJA* 75, p. 448.
- Knigge, U. 1976. *Der Südhügel (Kerameikos. Ergebnisse der Ausgrabungen, 9)*, Berlin.
- Koch, C. 1991. *Volksbeschlüsse in Seebundangelegenheiten. Das Verfahrensrecht Athens im Ersten attischen Seebund. (Europäische Hochschulschriften, 3, 446)*, Frankfurt/Main.

- Koehler, C. G. 1981. "Corinthian Developments in the Study of Trade in the Fifth century.," *Hesperia* 50, pp. 449-58.
- ___ 1982. "Amphoras on Amphoras," *Hesperia* 51, pp. 284-292.
- ___ 1986. "Handling of Greek Transport Amphoras," in *Recherches sur les amphores grecques*, J. Y. Empereur, and Y. Garlan, eds., (*BCH Suppl.*, 13), Paris.
- Koehler, C. G., and M. B. Wallace 1987. "The Hellenistic Shipwreck at Serçe Limani, Turkey. Appendix. The Transport Amphoras: Description and Capacities," *AJA* 91, pp. 49-57.
- Koukouli-Chrysanthaki, C. 1986. "Abdera and the Thracians," *Thracia Pontica* 3, pp. 82-98.
- Kraay, C. M. 1954. "Greek Coins Recently Acquired by the Ashmolean Museum, Oxford," *NC*, pp. 10-15.
- ___ 1956. "The Archaic Owls of Athens: Classification and Chronology," *NC*, pp. 43-68.
- ___ 1962a. "The Celenderis Hoard," *NC*, pp. 1-15; pl.1-2.
- ___ 1962b. "The Early Coinage of Athens: A Reply," *NC*, pp. 417-23.
- ___ 1962/63. "Monnaies provenant du site de Colophon," *SNR* 42, pp. 5-13.
- ___ 1964a. "Hoards, Small Coinage and the Origins of Coinage," *JHS* 84, pp. 76-91.
- ___ 1964b. "The Melos Hoard of 1907 Reconsidered," *NC*, pp. 1-20; pl. 1-3.
- ___ 1966. *Greek Coins*, photographs by Max Hirmer, London.
- ___ 1968. "An Interpretation of Ath. Pol. Ch. 10," in *Essays in Greek Coinage, presented to Stanley Robinson*, Oxford, pp. 1-9.
- ___ 1969a. "Notes on the Mint of Side in the Fifth Century B.C.," *NC*, pp. 15-20, pl. 16.
- ___ 1969b. "Hoards and Circulation," in *Greek Coins and History: Some Current Problems*, C. M. Kraay, ed., London, pp. 43-63.
- ___ 1969c. "The Demareteion Reconsidered," in *Greek Coins and History: Some Current Problems*, C. M. Kraay, London, pp. 19-42.

- ___ 1972. Rev. of Ch. Starr, *Athenian Coinage, 480-449*, in *NC*, pp. 313-17.
- ___ 1975. "Archaic Owls of Athens: New Evidence for Chronology," in *Thorikos and the Laureion in Archaic and Classical Times, (Miscellanea Graeca, 1)*, Ghent, pp. 145-160.
- ___ 1976. *Archaic and Classical Greek Coins*, Berkeley.
- ___ 1977. "The Asyut Hoard: Some Comments on Chronology," *NC* 17, pp. 189-198; pl.15.
- ___ 1979a. "A Hoard of Corinth and Leucas from N.W. Greece," *CHV*, pp. 19-33.
- ___ 1979b. "The Coinage of Ambracia and the Preliminaries of the Peloponnesian War," *NumAntCl*, pp. 37-66.
- ___ 1984. "Greek Coinage and War," in *Ancient Coins of the Graeco-Roman World, The Nickle Numismatic Papers*, W. Heckel, and R. Sullivan, eds., Waterloo, Ontario, pp. 3-18.
- Kraay, C. M., and V. M. Emeleus 1962. *The Composition of Greek Silver Coins: Analysis by Neutron Activation*, Oxford.
- Kraay, C. M., and R. S. Moorey 1968. "Two Fifth Century Hoards from the Near East," *RN* 10, pp. 181-235; pl.19-28.
- ___ 1981. "A Black Sea Hoard of the Late Fifth Century BC," *NC*, pp. 1-19; pl. 1-9.
- Kracht, P. 1990. "Überlegungen zum Problem des attischen Handels während des Peloponnesischen Krieges," *Münstersche Beiträge zur antiken Handelsgeschichte* 9, pp. 95-98.
- Kroll, J. H. 1981. "From Wappenmünzen to Gorgoneia to Owls," *ANSMN* 26, pp. 1-32.
- ___ 1993. *The Greek Coins (The Athenian Agora, 26)*, Princeton.
- Kroll, J. H., and N. M. Waggoner 1984. "Dating the Earliest Coins of Athens, Corinth and Aegina," *AJA* 88, pp. 325-340.
- Lang, M. 1952. "A new inscription from Thasos: Specifications for a measure," *BCH* 76, pp. 18-31.
- ___ 1956. "Numerical Notation on Greek Vases," *Hesperia* 25, pp. 1-24; pl. 1-6.

- Lang, M., and M. Crosby 1964. *Weight Measures and Tokens (The Athenian Agora, 10)*, Princeton.
- Larsen, J. A. O. 1968. *Greek Federal States, Their Institutions and History*, Oxford.
- Lauffer, S. 1979. *Die Bergwerkssklaven von Laureion 2, (Forschungen zur antiken Sklaverei, 11)*, Wiesbaden.
- Lazarides, D. 1971. *Ἀβδηρα καὶ Δίκαλα (Ancient Greek Cities, 6)*, Athens.
- Le Rider, G. 1968. "Les monnaies thasiennes," in *Guide de Thasos*, Ecole Française d'Athènes, ed. Paris, pp. 185-96; pl.1-5.
- Leaf, W. 1923. *Strabo on the Troad*, Cambridge.
- Leake, W. M. 1835. *Travels in Northern Greece*, London.
- Lederer, P. 1943. *Neue Beiträge zur antiken Münzkunde aus Schweizerischen öffentlichen und privaten Sammlungen*, Bern.
- Legon, R. P. 1972. "Samos in the Delian League," *Historia* 21, pp. 145-58.
- Lepper, F. A. 1962. "Some Rubrics on the Athenian Quota Lists," *JHS* 82, pp. 25-55.
- Leppin, H. 1992. "Die APXONTEΣ EN TAIΣ ΠΟΛΕΣΙ des Delisch-Attischen Seebundes," *Historia* 41, pp. 257-71.
- Lewis, D. M. 1974. "Entrenchment-Clauses in Attic Decrees," in *ΦΟΡΟΣ: Tribute to Benjamin Dean Mertitt*, Locust Valley, pp. 83-89.
- _____. 1986. "Temple Inventories in Ancient Greece," in *Pots and Pans: A Colloquium on Precious Metals and Ceramics in the Muslim, Chinese and Graeco-Roman Worlds, Oxford 1985 (Oxford Studies in Islamic Art, 3)*, Oxford, pp. 71-81.
- _____. 1987. "The Athenian Coinage Decree," in: Carradice 1987, pp. 53-63.
- Lloyd, A. B. 1975. *Herodotos Book II. Introduction (Études préliminaires aux religions orientales dans l'empire romain, 43)*, Leiden.
- Löbbecke, A. 1890. "Griechische Münzen aus meiner Sammlung. VI," *ZfN* 17, pp. 1-26; pl. 1; 2.
- Lorber, C. C. 1990. *Amphipolis: the Civic Coinage in Silver and Gold*, Los An-

geles.

- MacDowell, D. M. 1987. *The Law in Classical Athens*, London.
- Mamroth, A. 1952. "Einige Worte über die sogenannten Fälschungen von Tetradrachmen der makedonischen Stadt Mende," *Berliner Numismatische Zeitschrift* 9, pp. 249-52.
- Martin, T. R. 1985. *Sovereignty and Coinage in Classical Greece*, Princeton NJ.
- Matheson, P. M. W., and M. B. Wallace 1982. "Some Rhodian Amphora Capacities," *Hesperia* 51, pp. 293-320.
- Mattingly, H. B. 1961a. "The Athenian Coinage Decree," *Historia* 10, pp. 148-88.
- ___ 1961b. "The Methone Decrees," *CQ n.s.* 11, pp. 154-65.
- ___ 1963. "The Growth of Athenian Imperialism," *Historia* 12, pp. 258-73.
- ___ 1964. "The Financial Decrees of Kallias (IG i² 91/2)," *Proceedings of the African Classical Association* 7, pp. 35-55.
- ___ 1971. "Formal Dating Criteria for 5th Century Attic Inscriptions," in *Acta of the Fifth Congress of Greek and Latin Epigraphy Cambridge 1967*, Oxford, pp. 27-33.
- ___ 1970. "'Epigraphically the Twenties are too late'," *BSA* 65, pp. 129-149, pl. 41.
- ___ 1974. "The Protected Fund in the Athenian Coinage Decree (ATL D.14, par 7f)," *AJP* 95, pp. 280-85.
- ___ 1977a. "The Second Athenian Coinage Decree," *Klio* 59, pp. 83-100.
- ___ 1977b. "Vocabulary Change and Epigraphic Dating," *Mnemosyne* 30, pp. 66-69.
- ___ 1981. "Coins and Amphoras - Chios, Samos and Thasos in the 5th century BC," *JHS* 101, pp. 78-86.
- ___ 1984. "The Tribute Districts of the Athenian Empire," *Historia* 33, pp. 498-499.
- ___ 1987. "The Athenian Coinage Decree and the Assertion of Empire," in: Carradice 1987, pp. 65-71.

- ___ 1988. "Methodology in Fifth-Century Greek History," *EMC* 7, pp. 321-28.
- ___ 1989. "The Jordan Hoard (*IGCH* 1482) and Kimon's Last Campaign," in *Proceedings of the 10th International Congress of Numismatics. London, September 1986*, I. Carradice, ed., Wetteren, pp. 60-64.
- ___ 1992. "Epigraphy and the Athenian Empire," *Historia* 41, pp. 129-138.
- ___ 1993. "New Light on the Athenian Standards Decree," *Klio* 75, pp. 99-102.
- Mavrogordato, J. 1915. "A chronological Arrangement of the Coins of Chios," *NC*, pp. 1-52; 361-432; pl. 1, 2, 18, 19.
- May, J. M. F. 1950a. *Ainos, Its History and Coinage, 474-341*, Oxford.
- ___ 1950b. "Les Tétradrachmes d'Akanthos. By Dr. Jules Desneux," *NC*, pp. 155-157.
- ___ 1953. Rev. of D. Raymond, *Macedonian Regal Coinage to 413 BC*, in *NC*, pp. 165-170.
- ___ 1965a. "The Coinage of Dikaia-by-Abdera," *NC*, pp. 1-25; pl. I; II.
- ___ 1965b. "The Coinage of Maroneia," *NC* 5, pp. 27-56.
- ___ 1966. *The Coinage of Abdera*, London.
- May, J. M. F., and P. Naster 1951. "A propos des coins des monnaies d'Ainos," *RBN* 97, pp. 157.
- Meiggs, R. 1966. "The Dating of Fifth-Century Attic inscriptions," *JHS* 86, pp. 86-98.
- ___ 1972. *The Athenian Empire*, Oxford.
- Meiggs, R., and D. Lewis 1988. *A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.*, revised edition, Oxford.
- Meritt, B. D. 1925. "Tribute Assessments in the Athenian Empire from 454 to 440 B.C.," *AJA* 19, pp. 247-273.
- ___ 1944. "Greek Inscriptions," *Hesperia* 13, pp. 211-29.
- ___ 1945. "Greek Inscriptions," *Hesperia* 14, pp. 122.
- ___ 1964. "Greek Inscriptions," *Hesperia* 33, no.40, pp. 177-78.

- Meritt, B. D. 1932. *The Financial Documents of the Fifth Century*, (*University of Michigan Studies. Humanistic series*, 27), Ann Arbor.
- ___ 1937. *Documents on Athenian Tribute*, Cambridge.
- ___ 1967a. "Collectors of Athenian Tribute," *AJPh* 88, pp. 29-32.
- ___ 1967b. "The Second Tribute Assessment," *GRBS* 8, pp. 121-132.
- ___ 1975. "Perikles, the Athenian Mint and the Hephaisteion," *ProcPhilSoc* 119, pp. 267-74.
- ___ 1926. *Studies in the Athenian Tribute Lists*, Princeton.
- Meritt, B. D., and H. T. Wade-Gery 1962. "The Dating of Documents to the mid-Fifth Century 1," *JHS* 82, pp. 67-74.
- Meritt, B. D., H. T. Wade-Gery, and M. F. McGregor 1939-53 = *The Athenian Tribute Lists*, 4 vols., B. D. Meritt, H. T. Wade-Gery, and M. F. McGregor, eds., Cambridge MA and Princeton NJ 1939-53.
- Meritt, B. D., and A. B. West 1934. *The Athenian assessment of 425 BC* (*University of Michigan Studies. Humanistic series*, 33), Ann Arbor.
- Meyer, E. 1939. *Geschichte des Altertums. Das Perserreich und die Griechen: Bis zum Vorabend des Peloponnesischen Krieges*. 4 3, Stuttgart.
- ___ 1956. *Geschichte des Altertums. Der Ausgang der Griechischen Geschichte* 4 4, Stuttgart.
- Michaux, F. 1981. "Les tétrobols de Mendé," *RBN* 127, pp. 5-18.
- Milbank, S. R. 1925. *The Coinage of Aegina* (*Numismatic Notes and Monographs*, 24), New York.
- Mildenberg, L. "Kimon in the Manner of Segesta," in *Actes du 8e Congrès International de Numismatique, Washington 1973*, Paris; Basle 1976, pp. 113-21; pls. 10-11.
- Milne, J. G. 1939. "Trade between Greece and Egypt before Alexander the Great," *JEA* 25, pp. 177-83.
- ___ 1940. "A Group of Coins attributable to the Revolt of Naxos in 467," *NC*, pp. 76-88.
- ___ 1941. *Kolophon and Its Coinage: A Study* (*NNM*, 96), New York.

- Mitchel, F. W. 1974. "Three Bars or Four," in $\Phi O P O \Sigma$, *Tribute to B. D. Meritt*, Locust Valley, NY, pp. 107-109.
- Montgomery, H. 1984. "Silver, Coins and the Wealth of a City-State," *Opuscula Atheniensi* 15, pp. 123-33.
- Mørkholm, O. 1964. "The Classification of Lycian Coins before Alexander the Great," *JNG* 14, pp. 65-78.
- ____ 1971. "Une trouvaille des monnaies grecques archaïques," *SNR* 50, pp. 79-91.
- ____ 1981. "Some Reflections on the Production and Use of Coinage in Ancient Greece," *Historia* 31, pp. 295-96.
- Mørkholm, O., and N. Olçay 1971. "The Coin Hoard from Podalia," *NC*, pp. 1-29, pls. 1-11.
- Mørkholm, O., and J. Zahle 1972. "The coinage of Kuprlli. Numismatic and Archaeological Study," *Acta Archaeologica* 43, pp. 57-113.
- Moucharte, G. 1984. "À propos d'une découverte de monnaies de Milet," *RBN* 130, pp. 19-35; pl. 2.
- Mussche, H. 1975. "Thorikos in Archaic and Classical Times," in *Thorikos and the Laurion in Archaic and Classical Times (Misc. Graeca, 1)*, Gent, pp. 45-54.
- Naster, P. 1959. *Catalogue des Monnaies Grecques, La Collection Lucien de Hirsch*, Brussels.
- Nesselhauf, H. 1933. *Untersuchungen zur Geschichte der delisch-attischen Symmachie (Klio, Beiheft, 30)*.
- Newell, E. T. 1914. "A Cilician Find," *NC*, pp. 1-33; pl. 1-4.
- ____ 1931. "Additions to the Delta (Benha el-Asl) Hoard," *NC*, pp. 66-68.
- Nixon, L., and S. Price 1990. "The Size and Resources of Greek Cities," in *The Greek City: From Homer to Alexander*, O. Murray, and S. Price, eds., Oxford, pp. 137-170.
- Noe, S. P. 1926. *The Mende (Kaliandra) Hoard (NNM, 27)*, New York.
- ____ 1954. "Countermarked and Overstruck Greek Coins at the American Numismatic Society," *ANSMN* 6, pp. 85-93.

- ___ 1957. "Overstrikes of Magna Graecia," *ANSMN* 7, pp. 13-42.
- ___ 1984. *The Coinage of Metapontum. Parts I and II (Numismatic Notes and Monographs, 32 and 47)*, with Additions and Corrections by A. Johnston, New York.
- Oeconomides, M. 1985-86. "Επιδράσεις των Ελληνικών αποικίων της δύσης στην εικονογραφία των νομισμάτων Ελλάδας και Ανατολής," *The Griffon* n.s 1-2, pp. 13-27.
- ___ 1990. "Αρχαϊκός "θησαυρός" αργυρών νομισμάτων απο το Ποντολίβαδο (1971)," in *Festschrift D. Lazarides*, Thessaloniki, pp. 533-540.
- Ostwald, M. 1982. *Autonomia: Its Genesis and Early History (American Classical Studies, 2)*, Chico, Calif.
- Papangelos, I. A. 1982. *Chalkidiki*, Thessaloniki.
- Payne, H., and G. Mackworth-Young 1950. *Archaic Marble Sculpture from the Acropolis 2*, London.
- Pease, M. Z. 1937. "A Well of the Late Fifth Century at Corinth," *Hesperia* 6, pp. 257-336.
- Peristeri-Otatzi, C. 1986. "Amphores et timbres amphoriques d'Abdère," in *Récherches sur les amphores Grecques (BCH Supplement, 13)*, Empereur, J. -Y., Garlan, Y., eds., Athens - Paris, pp. 491-496.
- Pfeiler, B. 1962. "Zur Münzkunde von Milet," *Schweizer Münzblätter* 12, pp. 20-21.
- ___ 1966. "Die Silberprägung von Milet im 6. Jahrhundert v.Chr.," *SNR* 45, pp. 5-25.
- Picard, O. 1979. "Découverte d'une mine à Thasos," *Bulletin de la Société Française de Numismatique* 34, pp. 507.
- ___ 1982a. "Problèmes de Numismatique Thasienne," *RA*, pp. 169-74.
- ___ 1982b. "Monnayage Thasien du V^e siècle av. Jésus-Christ," *CRAI*, pp. 412-424.
- ___ 1982c. "L'organisation de l'atelier de Thasos au IV^e siècle," in *Proceedings of the 9th International Congress of Numismatics. Berne September 1979*, T. Hackens, and R. Weiller, eds., Louvain-la-Neuve - Luxembourg, pp. 123-28.

- ___ 1987. "Monnaies et Gravure Monétaire à Thasos à la fin du V^e Siècle," in *Festschrift G. Mylonas 2*, Athens, pp. 150-63; pls 40-41.
- ___ 1989. "Le Lion et le Taureau sur les monnaies d' Acanthe," in *Numismatic Studies in Memory of C. M. Kraay and O. Mørkholm*, G. Le Rider, K. Jenkins, N. Waggoner *et al.*, eds., Louvain-la-Neuve, pp. 225-31.
- Pouilloux, J. 1954. *Recherches sur l'histoire et les cultes de Thasos. I: De la fondation de la cité à 196 av. J.C. (Etudes Thasiennes, 3)*, Paris.
- Price, M. 1974. *Coins of the Macedonians*, London.
- ___ 1979. "Tymnes, Tyrant of Termera, Caria," *Meddelelser fra Norsk numismatisk forening* 3, pp. 8-12.
- ___ 1987. "The Coinages of the Northern Aegean," in Carradice 1987, Oxford, pp. 43-47.
- Price, M., and N. Waggoner 1975. *Archaic Greek Coinage. The Asyut Hoard*, London.
- Pridik, E. M. 1917. *Inventory-catalogue of the Stamps on Handles and Necks of Amphorae, and on Bricks, of the Hermitage Collection*, Petrograd. [in Russian; *non vid]*
- Pritchett, W. K. 1953. "The Attic Stelai," *Hesperia* 22, pp. 225-99.
- ___ 1956. "The Attic Stelai," *Hesperia* 25, pp. 178-317.
- ___ 1961. "The Attic Stelai," *Hesperia* 30, pp. 23-9.
- ___ 1963. "The Three-barred Sigma at Kos," *BCH* 87, pp. 20-23.
- ___ 1965. "The Koan Fragment of the Monetary Decree. Second part.," *BCH* 89, pp. 423-440.
- ___ 1977. "The Hellenotamiai and the Athenian Finance," *Historia* 26, pp. 295-306.
- Quinn, T. J. 1981. *Athens and Samos, Lesbos and Chios 478-404*, Manchester.
- ___ 1964. "Thucydides and the Unpopularity of the Athenian Empire," *Historia* 13, pp. 257-266.
- Radt, S. L. 1958. *Pindars zweiter und sechster Paian. Text, Scholien und Kommentar*, Amsterdam.

- Ravel, O. E. 1945. "The Classification of Greek Coins by Style," *NC*, pp. 123-24.
- Raven, E. J. P. 1950. Rev. of J. M. F. May, *Ainos, Its History and Coinage*, 474-341, in *NC*, pp. 153-5.
- ___ 1967. Rev. of J. M. F. May, *The Coinage of Abdera*, in *NC*, pp. 289-97.
- ___ 1968. "Problems of the Earliest Owls of Athens," in *Essays in Greek Coinage presented to Stanley Robinson*, C. M. Kraay, and G. K. Jenkins, eds., Oxford, pp. 40-58.
- Raymond, D. 1953. *Macedonian Regal Coinage to 413 BC* (*NNM*, 126), New York.
- Regling, K. 1923. "Mende," *ZfN* 34, pp. 7-35.
- ___ 1924. *Die Antike Münze als Kunstwerk*, Berlin.
- Rey, L. 1921-22. *Observations sur les premiers habitats de la Macédonie, recueillies par le service archéologique de l'Armée d'Orient 1916-1919*. Paris. (= a republication of *BCH* 41-43 (1917-1919)).
- Rhodes, P. J. 1972. *The Athenian Boule*, Oxford.
- ___ 1981. *A Commentary on the Aristotelian Athenaion Politeia*, Oxford.
- Richter, G. M. A. 1950. *The Sculpture and Sculptors of the Greeks* new revised edition, New Haven and London. first published 1929.
- Ridgeway, W. 1892. *The Origin of Metallic Currency and Weight Standards*, Cambridge.
- Rittmann, H. 1975. *Deutsche Geldgeschichte*, Munich.
- Robinson, D. M. 1931. *The Coins found at Olynthus in 1928* (*Excavations at Olynthus*, 3), Baltimore-London-Oxford.
- ___ 1935. "A New Fragment of the Athenian Decree on Coinage," *AJPh* 56, pp. 149-154.
- Robinson, D. M., and P. A. Clement 1938. *The Chalcidic Mint and The Excavation Coins found in 1928-1934* (*Excavations at Olynthus*, 9), Baltimore.
- Robinson, E. S. G. 1930. "A find of Archaic Greek coins from the Delta," *NC*, pp. 93-106.

- ___ 1931. "Further Notes on the Delta (Benha el-Asl) Hoard," *NC*, pp. 68-71.
- ___ 1949. "The Athenian Currency Decree and the Coinage of the Allies," in *Commemorative Studies in Honor of Theodore Leslie Shear (Hesperia: Supplement, 8)*, pp. 324-340.
- ___ 1958. "The Beginnings of Achaemenid Coinage," *NC*, pp. 187-93; pl XV.
- ___ 1960a. "Some Problems in the Later Fifth Century Coinage at Athens," *ANSMN* 9, pp. 1-15.
- ___ 1960b. "Two Greek Coin Hoards," *NC*, pp. 31-36.
- ___ 1961. "A Hoard of Archaic Greek Silver Coins from Anatolia," *NC*, pp. 107-117.
- ___ 1973. "A Hoard of Greek Coins from Southern Anatolia," *RN*, pp. 229-237; pl. 25.
- Roebuck, C. 1950. "The Grain Trade Between Greece and Egypt," *CP* 45, pp. 236-247.
- Romstedt, M. 1914. *Die wirtschaftliche Organisation des Athenischen Reiches*, Weida.
- Root, M. C. 1988. "Evidence from Persepolis for the Dating of Persian and Archaic Greek Coinage," *NC*, pp. 1-12; pl. I.
- Ruschenbusch, E. 1977. "Zur Zahl der Tributbezirke des delischen Seebundes und zur Datierung des Kleinias- und des Münzdekrets (Meiggs-Lewis 45 und 46)," *ZPE* 26, pp. 211-15.
- Sallett A. v. 1876. "Zur griechischen Numismatik," *ZfN*, pp. 47-60; 135-136.
- ___ 1878. "Zur griechischen Numismatik," *ZfN*, pp. 103-108.
- Salviat, F. 1986. "Le vin de Thasos. Amphores, vin et sources écrites," in *Récherches sur les amphores Grecques (BCH Supplement, 13)*, Empereur, J. -Y., Garlan, Y., eds., Athens - Paris, pp. 145-196.
- Schaeffer, C. F. A. 1939. "Une Trouvaille de Monnaies Archiques Grecques à Ras Shamra," in *Mélanges syriens offerts à Monsieur René Dussaud 1 (Bibliothèque Archéologique et Historique, 30)*, Paris, pp. 461-487.
- Schäfer, H. 1939. "Beiträge zur Geschichte der attischen Symmachie," *Hermes* 74, pp. 225-64.

- Schlumberger, D. 1953. "L'argent grec dans l'Empire Achéménide," in *Trésors monétaires d'Afghanistan*, Curiel, R., Schlumberger, D., (*Memoires de la délégation Archéologique française en Afghanistan*, 14), Paris, pp. 3-64.
- Schmitz, W. 1986. "Händler, Bürger und Soldaten. Die Bedeutung von Münzgewichtsveränderungen in der griechischen Poliswelt im 5. und 4. Jhd. v. Chr.," *Münstersche Beiträge zur antiken Handelsgeschichte* 5, pp. 59-87.
- Schönert-Geiss, E. 1970. *Griechisches Münzwerk: Die Münzprägung von Byzantion (Schriften zur Geschichte und Kultur der Antike)*, Berlin.
- ___ 1975. *Griechisches Münzwerk. Die Münzprägung von Bisanthe - Dikaia - Selymbria (Schriften zur Geschichte und Kultur der Antike, 13)*, Berlin.
- ___ 1979a. "Die Geldzirkulation Attikas," *Klio* 56, pp. 377-414.
- ___ 1979b. "Zur Geschichte Maroneias von den Anfängen bis zum 4. Jhd.," *Klio* 61, pp. 437-51.
- ___ 1985. "Maroneia und die Thraker—Wechselbeziehungen zwischen Polis und Hinterland," *Eirene* 22, pp. 39-53.
- ___ 1987. *Griechisches Münzwerk: Die Münzprägung von Maroneia (Schriften zur Geschichte und Kultur der Antike, 26)*, Berlin.
- Schönhammer, M. 1993. "Some Thoughts on the Athenian Coinage Decree," in *Proceedings of the XIth International Numismatic Congress organized for the 150th anniversary of the Société Royale de Numismatique de Belgique, Brussels, September 8th-13th 1991* 1, Séminaire de Numismatique Marcel Hoc, ed., Louvain-la-Neuve, pp. 187-91.
- Schuller, W. 1974. *Die Herrschaft der Athener im Ersten Attischen Seebund*, Berlin.
- ___ 1978. *Die Stadt als Tyrann: Athens Herrschaft über seine Bundesgenossen*, Konstanz.
- ___ 1981. "Über die ἰδιώται-Rubrik in den attischen Tributlisten," *ZPE* 42, pp. 141-51.
- Schultz, B. 1976. *Kleine Deutsche Geldgeschichte des 19. und 20. Jahrhunderts*, Berlin.
- Schwabacher, W. 1938a. "Die Münzen der Olynthos-Grabung. Zu Hugo Gaebler's "Fälschungen Makedonischer Münzen II"," *AJA* 42, pp. 70-76; pl. 10-

12.

- ___ 1938b. "Ein Fund archaischer Münzen von Samothrake," in *Transactions of the International Numismatic Congress organized and held in London by the Royal Numismatic Society, June 30–July 3, 1936* J. Allan, H. Mattingly, and E. S. G. Robinson, eds., London, pp. 109-120; pl. 11.
- ___ 1939. "Contributions to Greek Numismatics," *NC*, pp. 1-20; pl. 1.
- ___ 1952. "Cabiri on Archaic Coins of Samothrace," *ANSMN* 5, pp. 49-51; pl. 12:1-3.
- Schwertheim, E. 1988. "Ein Dekretfragment aus dem 5. Jhdt. v. Chr. aus Hamaxitus," *Arastirma Sonuçları Toplantısı* 6, pp. 283-286.
- Seaby B. A. LTD 1960. "A Hoard of Ancient Greek Coins from Egypt," *Seaby's Coin and Medal Bulletin*, pp. 9-10.
- Segre, M. 1938. "La legge ateniese sull' unificazione della moneta," *Clara Rhodos*, pp. 149-78.
- Seltman, C. T. 1924. *Athens. Its History and Coinage Before the Persian Invasion*, Cambridge.
- ___ 1926. "Aegean Mints," *NC*, pp. 137-153, pls. 7, 8.
- ___ 1955. *Greek Coins*, second edition, London.
- Seyrig, H. 1948. "Double octadrachm de la Chalcidique," *RA*, pp. 968-70.
- Sherwin-White, S. M. 1978. *Ancient Cos (Hypomnemata, 51)*.
- Skarlatidou, E. 1986. "The Archaic Cemetery of Abdera," *Thracia Pontica* 3, pp. 99-108.
- Smyth, H. W. 1956. *Greek Grammar*, revised by G. M. Messing, Cambridge.
- Starr, C. G. 1970. *Athenian Coinage 480-449 BC*, Oxford.
- Sternberg Claudia 1985. "Ein umgeschnittener Vorderseitenstempel einer Großmünze der Derronen.," *Schweizer Münzblätter* 35, pp. 2-6.
- Strack, M. L. 1912. *Die Münzen der Thraker und der Städte Abdera, Ainos, Anchialos (Die antiken Münzen Nordgriechenlands, Thrakien, 2)*, Berlin.
- Stroud, R. S. 1974a. "Three Attic Decrees," *CSCA* 7, pp. 279-298.

- ___ 1974b. "An Athenian Law on Silver Coinage," *Hesperia* 43, pp. 157-88.
- Stucky, R. A. 1984. "Zum Münzschatz von Ras Shamra-Kgirit-Leukos Limen (Syrien)," *SNR* 63, pp. 5-15; pl. 1-5.
- Sutherland, C. H. V. 1943. "Corn and Coin: A Note on Greek Commercial Monopolies," *AJP* 64, pp. 129-47.
- Svoronos, J. N. 1919. *L'Hellénisme primitif de la Macédoine* (JIAN, 19), Paris; Athens.
- Talcott, L. 1935. "Attic Black-Glazed Stamped Ware and Other Pottery from a Fifth Century Well," *Hesperia* 4, pp. 477-523.
- Thompson, M. 1965. "The Coinage of Prokonnesus," *RN*, pp. 30-35; pl. 1.
- ___ 1979. "Hoards and Overstrikes. The Numismatic Evidence," *Expedition* 21, pp. 40-47.
- Thompson, M., O. Mørkholm, and C. M. Kraay 1973. *An Inventory of Greek Coin Hoards*, New York.
- Thompson, W. E. 1964. "Gold and silver ratios at Athens during the fifth century," *NC*, pp. 103ff.
- ___ 1971. "The Chian Coinage in Thucydides and Xenophon," *NC*, pp. 323-324.
- ___ 1977. "The protected fund of Athena and Hephaistos," *AJP* 98, pp. 249-51.
- ___ 1979-80. "Linguistic and Stylistic Criteria for Dating Attic Inscriptions," *CIMed* 32, pp. 75-86.
- Thompson, W. E., and R. E. Wycherley 1972. *The Agora of Athens* (*The Athenian Agora*, 14), Princeton.
- Thür, G., and G. Stumpf 1989. "Sechs Todesurteile und zwei plattierte Hemidrachmen aus Dyme," *Tyche* 4, pp. 171-183; pl. 13.
- Tod, M. N. 1933. *A Selection of Greek Historical Inscriptions* 1, Oxford.
- ___ 1949. "Rev. of *ATL* 2," in *JHS* 69, pp. 104-105.
- Tracy, S. V. 1970. "Identifying Epigraphical Hands," *GRBS* 11, pp. 325ff.
- ___ 1975. "The Lettering of an Athenian Mason," *Hesperia suppl.* 15.

- Troxell, H., and W. F. Spengler 1969. "A Hoard of Early Greek Coins from Afghanistan," *ANSMN* 15, pp. 1-19; pl. 1; 2.
- Unz, R. K. 1985. "The Surplus of the Athenian *Phoros*," *GRBS* 26, pp. 21-42.
- Vickers, M. 1985. "Early Greek Coinage, a Reassessment," *NC*, pp. 1-44.
- ____ 1986. "Silver, Copper and Ceramics in Ancient Athens," in *Pots and Pans: A Colloquium on Precious Metals and Ceramics in the Muslim, Chinese and Graeco-Roman Worlds, Oxford 1985*, (*Oxford Studies in Islamic Art*, 3), Oxford, pp. 137-51.
- ____ 1989. "Panagyurishte, Dalboki, Loukovit and Rogozen: Questions of Metrology and Status," in *The Rogozen Treasure. Papers of the Anglo-Bulgarian Conference, 12 March 1987*, London, pp. 101-111.
- ____ 1990. "Golden Greece: Relative Values, Minae and Temple Inventories," *AJA* 94, pp. 613-25.
- Vinogradov, J. g. 1986. "ΑΝ ΤΟΣ ΠΙΘΟΣ ΣΗΜΗΝΗΤΑΙ," *Récherches sur les amphores Grecques*, (*BCH Supplement*, 13), Athens - Paris, pp. 197-200.
- Von Fritze, H. 1909. "Die autonomen Münzen von Ainos: eine chronologische Studie," *Nomisma* 4, pp. 16-32; pl.1; 2.
- ____ 1914. "Die Silberprägung von Kyzikos," *Nomisma* 9, pp. 34-56.
- Wade-Gery, H. T. 1931. "The Financial Decrees of Kallias (IG I², 91-92)," *JHS* 51, pp. 57-85, pl. I-III.
- Waggoner, N. 1983. *Early Greek Coins from the Collection of Jonathan P. Rosen* (*ACNAC*, 5), New York.
- Wagner, G. A., and G. Weisgerber 1985. *Silber, Blei und Gold auf Sifnos*, Bochum.
- Walbank, M. B. 1974. "Criteria for the dating of Fifth-Century Attic Inscriptions," in *ΦΟΡΟΣ. Tribute to Benjamin Dean Meritt*, Locust Valley, NY, pp. 161-169.
- ____ 1978. *Athenian Proxeny of the Fifth Century BC*, Toronto - Sarasota.
- Wallace, M. B. 1984. "Texts, Amphoras, Coins, Standards and Trade," *AncW* 10, pp. 11-14.
- ____ 1986. "Progress in Measuring Amphora Capacities," in *Récherches sur les amphores Grecques*, (*BCH Supplement*, 13), Athens - Paris, pp. 87-94.

- Wallace, W. P. W. 1956. *The Euboian League and its Coinage* (NNM, 134), New York.
- ___ 1962a. "The Early Coinages of Athens and Euboa," *NC*, pp. 23-42.
- ___ 1962b. "Note on the New Anatolian Hoard," *NC*, pp. 42.
- Weber, H. 1898. "A Small Find of Coin Mende etc.," *NC*, pp. 251-258.
- ___ 1899. "On Finds of Archaic Greek Coins in Lower Egypt," *NC*, pp. 269-287; pl. 15; 16.
- Weil, R. 1906. "Das Münzmonopol Athens im ersten attischen Seebund," *ZfN* 25, pp. 52-62.
- ___ 1910. "Das Münzrecht der Ξύμμαχοι im ersten attischen Seebund," *ZfN* 28, pp. 351-64.
- Welz, K. 1957. "Griechenmünzen vom Schwarzen Meer," *Schweizer Münzblätter*, pp. 25-31.
- ___ 1961. "Kleinmünzen aus Milet," *Schweizer Münzblätter* 10, pp. 99-101.
- ___ 1962. "Zu Pantikapaion," *Schweizer Münzblätter* 12, pp. 3-6.
- West, A. B. 1914. "The Formation of the Chalcidic League," *CP* 9, pp. 24-34.
- ___ 1918. *The History of the Chalcidic League*, New York.
- ___ 1925. "Aristidean Tribute in the Assessment of 421 B.C.," *AJA* 29, pp. 135-51.
- ___ 1929. *Fifth and Forth Century Gold Coins from the Thracian Coast* (NNM, 40), New York.
- Westermarck, U. 1988. "The Coinage of the Chalcidian League Reconsidered," in *Studies in Ancient History and Numismatics Presented to Rudi Thomsen*, Aarhus, pp. 91-103.
- Whitehead, D. 1976. "IG I² 39: "Aliens" in Chalcis and Athenian Imperialism," *ZPE* 21, pp. 251-59.
- Wilamowitz, U. v. 1913b. "Pindars Paean für Abdera," in *Sappho und Simonides. Untersuchungen über griechische Lyriker*, Wilamowitz, U. v., Berlin, pp. 246-57.

- ___ 1880. "Von des attischen Reiches herrlichkeit. eine festrede," in *Philologische Untersuchungen* 1, pp. 1-46.
- Wilhelm, A. 1897. "Bericht über epigraphische Studien in Griechenland," *AnzWien* 26, pp. 1-11.
- Will, E. 1975. "Fonctions de la monnaie dans les cités grecques de l'époque classique," in *Numismatique antique. Problèmes et méthodes*, Louvain - Nancy, pp. 233-246.
- Williams, C. K. II. 1978. "Corinth, 1977: Forum Southwest," *Hesperia* 47, pp. 15-20.
- ___ 1979. "Corinth, 1978: Forum Southwest," *Hesperia* 48, pp. 105-144; pl. 41-52.
- Wroth, W. 1905. "Select Coins in the British Museum," *NC*, pp. 324-41.
- Young, S. 1939. "An Athenian Clepshydra," *Hesperia*, pp. 278-80.
- Youroukova, Y. 1976. *Coins of the Ancient Thracians (BAR Supplementary Series, 4)*, Oxford.
- ___ 1989. "Le monnayage du souverain thrace Seuthès II.," in *Kraay - Mørkholm Essays*, pp. 317-321.
- Zahrnt, M. 1971. *Olynth und die Chalkidier (Vestigia, 14)*, Munich.
- Ziebarth, E. 1929. *Beiträge zur Geschichte des Seeraubs und Seehandels im alten Griechenland*, Hamburg.