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SCIENTIFIC EXPEDITIONS IN THE PORTUGUESE
OVERSEAS TERRITORIES, 1783-1808; THE ROLE
OF LISBON IN THE INTELLECTUAL-SCIENTIFIC
COMMUNITY OF THE LATE EIGHTEENTH CENTURY.

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OVERSEAS TERRITORIES, 1783-1808; THE ROLE
OF LISBON IN THE INTELLECTUAL-SCIENTIFIC
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by

WILLIAM JOEL SIMON

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Abstract

SCIENTIFIC EXPEDITIONS IN THE PORTUGUESE OVERSEAS TERRITORIES, 1783-1808; THE ROLE OF LISBON IN THE INTELLECTUAL-SCIENTIFIC COMMUNITY OF THE LATE EIGHTEENTH CENTURY

by

William Joel Simon

Advisor: Professor Harry Bernstein

During the late eighteenth century the national life of Portugal was modernized through the reforming efforts of the Prime Minister, Sebastiao Jose de Carvalho e Melo, the Marquês de Pombal. Both educational and religious life were secularized and the Inquisition lost many of its powers. The University of Coimbra was reformed in 1772. New courses of study emphasized contemporary philosophy, sciences as well as medicine while retaining strong faculties of civil and canon law as well as theology.

The Portuguese Crown patronized the sciences both at the University of Coimbra and in Lisbon by establishing and financing a Natural History Museum, Chemical Laboratory, and Botanical Gardens on the grounds of the Ajuda Palace. After the graduation and advanced training of several Brazilian-born naturalists at the Ajuda Palace Gardens three expeditions were sent to Brasil, Angola and Moçambique to collect specimens for the Natural History Museum, the Botanical Gardens, and to prepare detailed studies of the flora, fauna, mineral deposits and natives of those regions.

In Brasil Dr. Alexandre Rodrigues Ferreira (1756-1815) led a scientific team, supplemented with artists and gardeners to Pará, São José do Rio Negro (Amazon region), Cuiabá, and Mato Grosso from 1783 to 1792. He returned to Lisbon and held a succession of Crown appointments and high honors. In Africa, Joaquim José da Silva was both naturalist and Secretary of Government in Angola from 1783 to approximately 1808. He explored Cabinda, the mouth of the Dande River, Massangano, Ambaca and the Huila plateau and participated in a two year expedition in the interior of Benguela (southern Angola) in search of the Cunene River. Manuel Galvão da Silva was also naturalist and Secretary of Government in Moçambique from 1783 to approximately 1793. He also briefly visited Goa, a Portuguese territory in India in 1783-1784. During his ten years in Moçambique, Silva explored the coastal regions near Moçambique Island, and travelled in the Rios de Sena territory visiting Tete and Manica. João da Silva Feijó also performed the duties of Crown naturalist in the Cabo Verde Islands, the Captaincy of Ceará and worked in Lisbon at the Ajuda Palace Chemical Laboratories.

Both of the naturalists in Africa were hampered by their additional duties as Secretary of Government. Ferreira in Brasil and the Silvas in Africa were often immobilized for long periods due to tropical fevers.

Domingos Vandelli, professor of Natural History and Chemistry at the University of Coimbra was the sponsor of these expeditions. Martinno de Melo e Castro, Minister of Navy and Overseas aided the

expeditions by providing the necessary financial resources of the Crown and smoothing the way for assistance in the field from local Crown officials.

A large portion of the collections which these naturalists made in Brasil, Africa, Goa and other places, were seized by Étienne Geoffroy Saint-Hilaire during the French occupation of Lisbon in 1808. Only a small portion of Ferreira's manuscripts has been published although some of Manuel Galvão da Silva's diaries and letters have been published. Some of Joaquim José da Silva's inventory lists have been published. Very few of the specimens collected have been preserved or studied until recently.

The Portuguese Crown was virtually the only patron of the sciences and scientific inquiry in Portugal and Brasil during this period. In spite of anti-intellectual elements in church and society the Crown continued to promote the sciences because it recognized the useful knowledge, new technological developments and discoveries of natural resources would benefit the nation. Through Crown patronage, moreover, specimens of African and Brazilian tropical flora and fauna were sought after by scientists from Northern Europe. Domingos Vandelli maintained a continuous exchange of classified specimens with scientists, thus allowing Portugal to participate in Western European contemporary scientific studies.

-Preface-

The late eighteenth century was a time of rapid scientific advances. In all fields of science dedicated individuals strived to increase knowledge of their environment through experimentation, observation and exploration. Scientists sought support from wealthy patrons, various Royal Academies and governments to promote their research in tropical countries and at home in ever expanding astronomical observatories and chemical laboratories. Men of science communicated their ideas to one another through their personal correspondence and the publications of learned societies. Societies and Academies sponsored expeditions to distant lands in cooperation with governments in the hope of increasing the store of knowledge about these regions or hoping to discover new lands, peoples as well as flora and fauna.

Scientific expeditions were an expression of the science of the Enlightenment. Portugal as part of Europe played a role in the movement of men and ideas of the Enlightenment. Leaders of government and men of science in Portugal desired to participate in the developing community of eighteenth century scientists. By promoting scientific expeditions to Brasil, Angola and Moçambique, supporting scientific education at the University of Coimbra as well as by creating a scientific cadre, the Portuguese Crown contributed to expanding the knowledge of tropical flora and fauna in Europe.

Dedicated Portuguese scientists undertook different expeditions in the Brazilian interior and the African sertão to collect specimens for

an expanding scientific establishment in Lisbon and to provide materials to study and exchange with other European scholars. Dr. Alexandre Rodrigues Ferreira, João da Silva Feijó, Manuel Galvão da Silva and Joaquim José da Silva were among those Coimbra educated and Brazilian-born scientists whose scientific studies helped them to participate in the devoted and difficult effort of exploring Portugal's vast overseas territories.

When Baron Alexander von Humboldt wrote in 1811 of the Spanish Crown's contribution to the endowment and patronage of science, he was still unaware of what the Portuguese Crown had done for science, for years. When Dr. Samuel L. Mitchell, botanist and natural scientist of Columbia College, stated in 1813 that "There is probably not a government on earth that has expended so much money for the advancement of this branch of natural history [botany] as that of the Castillian monarch," he did not know what the Portuguese Crown had done.

This book is an effort to show what the Portuguese Crown did, what scientists there wrote and what their work was. The bitter hurt of the Portuguese writers that their language and culture is fit only for the tomb, should not now be repeated for their eighteenth century scientists.

-Acknowledgements-

Preparing a doctoral dissertation has not been an easy task. The long months in several countries and the intensive periods of writing and editing were made more tolerable and were considerably shortened through the assistance of many individuals. The preparation of this dissertation has been measurably advanced through the financial assistance of the Serviço Internacional da Fundação Calouste Gulbenkian which provided an initial research grant during the Summer of 1971, the Woodrow Wilson National Fellowship Foundation which awarded me a dissertation year fellowship for 1972-1973, and the Graduate Center of the City University of New York which has consistently supported my advanced studies through grants.

In England many ideas and suggestions came from the staff of several major institutions where I worked. Librarians and curators of the British Museum (Natural History) Library and Botany Library, the Linnean Society, the Royal Society and Kew Gardens were especially helpful. In France I can name but a few of the persons who assisted my research. Mr. Yves Laissus, curator of the Bibliothèque Central du Museum d'Histoire Naturelle, Mme. Alicia Lourteig of the Laboratoire de Phanerogamie du Museum d'Histoire Naturelle, Professeur Leon Bourdon of the Institut Portugais et Brésilien of the Sorbonne, and many other librarians were very helpful.

In Portugal, where I did the bulk of the research, a great many people have my sincere gratitude for their assistance. Mrs. Asta-Rose

Alcaide of the American Embassy's Cultural Attaché office is an indispensable person for the visiting American researcher and I owe her much for many calls and letters. To the staff and librarians of the Arquivo Nacional da Torre do Tombo, the Bibliotheca Nacional, the Library and Secretary's Office of the Academia das Ciencias de Lisboa, the Library of the Sociedade de Geografia de Lisboa, the Arquivo Histórico Ultramarino, and the Arquivo da Universidade de Coimbra I owe my sincere thanks. To Commandante Avelino Teixeira da Mota of the Junta de Investigações do Ministério do Ultramar and Dra. Maria Nogueira of the Museu Bocage, Faculdade de Ciências and Professor Abílio Fernandes of the University of Coimbra, I extend a strong "muito obrigado."

My thanks especially to my sponsor Professor Harry Bernstein for his patience and guidance, and to Professor Ruth Pike and Dr. Howard Irwin, President of the New York Botanical Garden for reading the dissertation.

I am in great debt to the New York Public Library and its staff members for the many years I worked in its American History and History of Science as well as Rare Book collections and especially for the special facilities extended for research in the Wertheim Room. Without this special assistance my work would have been made more difficult.

W. J. S.

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2. A Color photograph of a watercolor (11"x14") made by José António the artist assigned to the Angola expedition in late 1783. The drawing depicts José António with Joaquim José da Silva at the mouth of the Dande River observing the area from a sandbar. The original is preserved in the library of the Museu Bocage, Faculdade de Ciências, Lisbon, Portugal. 271

List of Abbreviations

ACL	Academia das Ciências de Lisboa (Lisbon, Portugal)
AHU	Arquivo Histórico Ultramarino (Lisbon, Portugal)
ANTT	Arquivo Nacional da Torre do Tombo (Lisbon, Portugal)
AUC	Arquivo da Universidade de Coimbra (Coimbra, Portugal)
BM	British Museum (London, England)
MB	Museu Bocage, Faculdade de Ciências (Lisbon, Portugal)
RIHGB	Revista Trimestral do Instituto Histórico e Geográfico Brasileiro (Rio de Janeiro)

A Note on Orthography

In the text of this dissertation proper names and place names have been spelled in the Portuguese form where applicable. That is to say "Brasil" appears with an "s" and not a "z" as in the English form. Contemporary Portuguese orthography has been used in the text. The exceptions have been those words which are quoted. Old-style Portuguese has been used in the Appendix, reproducing documents as near to the original as possible.

CHAPTER I

The "Philosophical Journeys" and their Basis in the Portuguese Enlightenment of the Late Eighteenth Century.

The Portuguese Enlightenment was a movement of men and ideas which influenced the vital aspects of life in both European Portugal and its far-flung Overseas Empire. The concepts of religious reform, economic change, educational progress, as well as literary and artistic expressions of the late eighteenth century current in Northern Europe came to Portugal slowly and in spite of opposition from elements of the nobility and Church hierarchy. At the same time a few prominent Churchmen recognized the need to modernize the country, and were willing to risk the introduction of new ideas in the sciences even though these ideas might interfere with orthodox religion. Among them were the Rector of the University of Coimbra and the Bishop of Beja. The debate and the internal politics of the elite of the clergy and the Portuguese Court eventually produced wide reforms.

The interest in modern science in Portugal began during Portugal's maritime expansion to India, East Asia, Africa and Brasil in the late fifteenth and early sixteenth centuries. The need for accurate maps stimulated an interest in Cartography, Astronomy, Mathematics, Physics,

and Philosophy. During this early period of discovery, when Vasco da Gama opened a maritime route to India, the Portuguese Crown favored a policy of not sharing its discoveries with other nations. As the growth of trade with the Orient increased the wealth of Portugal, the Crown desired to prevent other countries from disrupting this valuable monopoly.

The medical sciences also flourished in Portugal during this period. There was a great interest in both classical medicine as well as the newly discovered drugs from the Orient. Joao Rodrigues de Castelo Branco, known as Amato Lusitano, wrote In Dioscorides (Lisboa, 1553), a commentary on Greek medicine. Garcia d'Orta wrote Colóquios dos Simples e Drogas (Goa, 1563) partially based on his studies of medicinal herbs used in India. These and other works by Portuguese scientists were translated and used by contemporary European scholars. In the following century the works of Zacuto Lusitano (1573-1642) such as Pharmacopaea elegantissima (1642) continued the Portuguese interest in medical and
1
pharmaecological sciences.

During the Spanish occupation of Portugal (1580-1640) there were few notable achievements in the arts and sciences, as many Portuguese intellectuals and artisans gravitated towards the Spanish Court. In architecture, the Italians Torralva for the cloister at Thomar and Terzi for his Convent of São Vicente da Fora in Lisbon are worthy of note as is the poet and historian Manuel de Melo. Only in astronomy and the

1
Damião Peres, História de Portugal, vol VI (Porto, 1927), p. 453 et passim. Chapter IV by Luis de Pina.

navigational arts did the Portuguese continue their earlier scientific tradition. With the restoration of independence the arts flourished again. During the reign of King João V (1706-1750) the wealth of the Brazilian diamond and gold mines allowed the King to build the convent-palace of Mafra, patronize musicians, artists, writers in Portugal and even subsidize talented Portuguese students to study in Northern Europe.

The first part of King João V's reign was notable for Portugal's peace with Spain and other European countries as well as his passion for building; in the latter portion of his reign the country declined as the King became morosely concerned with religious matters, leaving the country to the government of indecisive men. The Court itself during the earlier period of King João V's reign had a foreign flavor as both his mother and his wife were of the Hapsburg Austrian Court and his father's Court had a French influence. The country remained isolated from foreign trends by an emphasis on religious orthodoxy as well as the lack of a popular demand for radical change.

Portugal as well as France and Spain accepted the official ecclesiastical prohibitions against the teachings of Pierre Bayle, Newton, Voltaire, Copernicus and Kepler. The emphasis in teaching was Aristotelian rather than one of Cartesian rationalism and Baconian-Newtonian experimentalism. The physical and moral universe of the orthodox was penetrable and it was breached in Portugal. Although some works were banned by the Church, the King's library as well as that of the Conde de Ericeira, one of his premier nobles, contained many of those

books. King Joao V became the patron for the publication of the Vocabulário Português e Latino (1712-1721) by the Theatine father, Padre Rafael Bluteau (1638-1721). This work contained much in the way of Newton's theories, the work of Kepler and his adherence to the prohibited Copernican system, as well as material from the especially condemned Pierre Bayle. Padre Bluteau included the warning that certain cosmological systems were condemned by the Inquisition. If Bluteau's work was a "shock" to the solid wall against modern science in Portugal, as Hernani Cidade noted in his famous essay, A crise mental do século XVIII (Coimbra, 1929), then its impact would wait many years² before being felt.

King João V was the personal patron of Bluteau, as he was also the patron of literature and history. The Royal Academy of Portuguese History, founded in 1720, began publishing excellent historical works. The efforts of the Royal Academy of Portuguese History as well as several of the literary societies (associated with the Conde de Ericeira) attracted some attention in other parts of Europe, with notices of its activities reported regularly.³ Although the Jesuits have often been singled out as the most prominent group favoring Aristotelian teachings, even in the early portion of the eighteenth century in Lisbon some Jesuits were promoting experiments in physics. In 1725 and 1726 a course in

² Hernani Cidade, Lições de Cultura e Literatura Portuguesas, 2^a vol., 3^a ed., "Ensaio sobre a crise mental do século XVIII" (Coimbra, 1948), p. 45-50.

³ António Coimbra Martins, "Notícias do Jornal de Verdun sobre Academias em Portugal no Tempo de João V," Bulletin des Études Portugaises et de L'Institut Français au Portugal, vol. 22 (1959-1960), pp. 265-281.

Mathematics, Physics and Astronomy was given by an Englishman, Louis Baden, at the Palace of the Conde de São Miguel. The Jesuits of the Colegio de Santo Antao were involved with experimental physics in the 1720's. They had utilized the most advanced methods of analysis for problem solving as well as proposed free discussion of methods outside traditionally acceptable ones. The course offered by Louis Baden was reported in the Journal de Verdun⁴ which was published in Luxembourg. A book concerning the program of the course was published in Portugal by Jose Freire de Montassoio Mascarenhas, Notícia da Academia, ou curso de Filosofia Experimental novamente instituida nesta Corte para instrução e utilidade por Luis Baden, natural de Grã Bretanha (Lisboa, 1726). By 1751 the Colégio das Artes, the Jesuit-run preparatory school in Coimbra, offered courses in physics, mathematics⁵ and experimental philosophy. There was still a general bias against Newtonian ideas as it was believed that Newton's reliance on the atomists would lead his adherents towards materialism, the Jesuits preferred the⁶ more orthodox Descartes.

The actual members of the Portuguese intelligentsia was not

4

Ibid.

5

J. Pereira Gomes, "Os Começos da Historiografia Filosófica em Portugal," Filosofia, ano 3, no. 11 (Lisboa, 1956), pp. 145-169.

6

Colm Kiernan, Science and the Enlightenment in eighteenth century France. Studies on Voltaire and the Eighteenth Century, vol. LIX, ed. Theodore Besterman (Institut et Musee Voltaire, Geneve, 1968), pp. 56-57.

great. Those few who were able to travel to northern Europe on diplomatic missions, as scholarship students, or as aides to royal princes, remained abroad often for many years, gaining their reputation in England, France, the Netherlands or even Russia. With such a small country and a correspondingly small elite the impact of those in the elite who accepted the need for a secularization of thought was still smaller. Some scholars who gained a reputation in northern Europe were not able or were unwilling to return because of the threat of Inquisitorial persecution. Dr. Jacob de Castro Sarmiento (1691-1762) was a member of the Royal Society in England, yet he advised King Joao V on matters of education and health, although he preferred to remain in England. Sarmiento, who translated Francis Bacon's Novum Organum into Portuguese (London, 1731), also advocated Newtonian ideas, and was a follower of Boerhaave in his medical philosophy. Sarmiento was already prominent in England at the time when Linnaeus visited there and it is possible that the Swedish naturalist may even have come to know him. Later on Linnaeus extended his direct contacts with Portugal. Sarmiento was a contemporary of Martinho de Mendonca de Pina e Proença Homen (1693-1743), a travelling companion of Infante D. Manuel, who although not himself a scientist, stimulated others through his contacts with Liebnitz, Newton, Wolf and S'Gravesande.

Another major figure of the Portuguese Enlightenment was Dr.

António Nunes Ribeiro Sanches (1699-1782) who studied at the University of Coimbra and later at the University of Salamanca in Spain. Fearing imprisonment by the Inquisition following a denunciation of Judaizing, because his family was of New Christian origin, Ribeiro Sanches left for England. He lived there and practiced medicine, studied with Boerhaave in Leyden, and was eventually recommended for a position at the Imperial Court in Russia. His publications both in French and Portuguese had an effect on the study of medicine, theology and what was then called "political economy" in Portugal. He brought both his practical experiences in Europe and Russia as well as the modern authors he had studied into his works.

8

The tenor of his books varied from the practical to the theoretical, but in all of them it can be said that he had the best interests of his native country foremost. His works were translated into French and German. He prepared practical medical treatises such as Tratado da conservação da saúde dos povos ... (Paris, 1756) and a more technical one, Método para aprender a estudar a medicina (Paris, 1763).

A much more important work of the Portuguese Enlightenment was Cartas sobre a educação da mocidade (Paris, 1760), written shortly after the expulsion of the Jesuits from Portugal (June, 1759). The book contains a variety of subjects and though statist in tone also has much to

8

Manuel Cardozo, "The Internationalism of the Portuguese Enlightenment: The Role of the Estrangeirado, c. 1700-1750," The Ibero-American Enlightenment, A. Owen Aldridge, ed., (U. of Illinois, Chicago, 1971), pp. 188-190.

say on liberty of civil and religious conscience, the false pride of the nobility and the necessity of a well-directed education for the future
9
leaders of the nation.

There has been a continuing discussion whether or not the works of Ribeiro Sanches had a direct influence on the foundation of the Real
10
Colégio dos Nobres (1761) or whether there was a more direct influence
11
from the works of Luís António Vernei (1713-1792), a Portuguese Capuchin father who lived most of his life as an expatriot in Italy. The works of Ribeiro Sanches were concerned with the sciences, political economy, medicine and direct proposals for reform, Vernei's Verdadeiro Método de Estudar (Rome, 1746) aroused much more furor
12
in Portugal because of the attacks Vernei made on the contemporary teaching of theology and canon law. Although the physical and natural sciences were not well taught in Portugal there was no lack of Aristotelian-inclined professors to teach theology. When the University of Coimbra was reorganized in 1772, following several years of preparation, both the works of Ribeiro Sanches and Vernei influenced the new courses of study and goals of the Reform: to produce a new class of educated youth

9

Ibid., pp. 179-182.

10

See Rómulo de Carvalho, História da Fundação do Colégio Real dos Nobres de Lisboa; 1761-1772 (Lisboa, 1954).

11

See António Alberto de Andrade, Vernei e a Cultura do seu Tempo (Coimbra, 1966), for a full discussion.

12

Cardozo, op. cit., pp. 188-190.

capable of serving the Crown and the Church in the modern world.

The reign of King João V (d. 1750) did not see many marked changes within Portugal. The beginnings of the changes that took place in the subsequent reign of King José I can be traced to the reign of his father. The writings of the expatriates were read in Portugal and in the second half of the eighteenth century a much larger number of the elite became aware of the ideas of the Enlightenment. By embracing these ideas they became alienated from the Portuguese people. With such a large percentage of the population isolated from the elite which ruled the country and removed from the urban settings of Porto and Lisbon changes in the national life had to be instituted from above rather than through popular outcry.

The reign of King José I (1750-1777) is totally identified with the major figure in Portuguese history of the eighteenth century, Sebastião José de Carvalho e Melo (1699-1782), first as Conde de Oeiras, but better known later as the Marquês de Pombal, Prime Minister of Portugal. The Marquês de Pombal was an exceptionally canny and utterly ruthless individual who rose from the obscurity of the country nobility through marriages and family connections to dominate European Portugal and its overseas dominions. The Marquês de Pombal manifested the best and the worst tendencies of the eighteenth century philosophy of "enlightened despotism," in that the adoption of foreign practices were instituted with little regard for the traditions of the country. The traditional balances of the country, maintained by the nobility, merchants,

the craft guilds and clergy were upset by curbing the powers of the nobility, the Inquisition, merchant monopolies and foreign capitalists. These changes were not accepted gracefully by those groups and national reform gained many enemies.

The Marquês de Pombal had been Portuguese Minister in London and later spent a portion of his time on a special mission to the Austrian Court. Whether or not Pombal was influenced by the works of Ribeiro Sanches and Vernei when he authorized the changes in national education is not entirely certain. It appears that his extended visits to England and Austria may have had some influence. In England he was elected to the Royal Society, although his election may have been more of a courtesy to his rank. He may have attended its meetings for the purpose of mingling with the intellectual and political elite of England. In England he could not have been unimpressed with the material progress the country had made and the number of its leading nobles actively interested in agricultural, economic, humanitarian and other organizations concerned with the material and moral progress of the country. The English parliamentary system of government, albeit relying on a Ministry of nobles may have suited Pombal's taste. Yet the Austrian Court at Vienna with its Imperial trappings, its Catholic traditions and its close family ties with the Braganças, was more to Pombal's liking. In both England and Austria he had ample time to observe the innovations in medical education, public security, government promotion of industry and especially the secularization of daily life. Moreover, Pombal's

second wife was Leonor Daun, daughter of Marshal Daun, an Austrian military figure.

Although Pombal decreed many innovations he also aided earlier inroads against scientific backwardness made by other Portuguese. Manuel Gomes de Lima (1727-1806) is associated with the foundation of Real Academia Cirúrgica Protótipo Lusitânica, in Porto, 1748, later known as the Academia Medica Portopolitana, which enjoyed the patronage of the Archbishop of Braga (a brother of King João V). Professor Hernani Cidade calls this Porto Academy "the first attempt of Portuguese doctors and scientists or humanists of the most advanced modern culture to associate in an academy."¹³ Even at the often maligned Jesuit University of Évora (closed in 1772), courses in the history of philosophy¹⁴ were offered in the 1740's and the works of Liebnitz were also taught. As has been mentioned, not all members of the Jesuit teaching order were inexorably opposed to experimental science. Padre Inácio Soares, S. J. (1712-1783) published Philosophiam Universam Eclecticam ... (Lisbon, 1754) which denied the Aristotelian-Tychonian proposition that comets were of sub-lunar origin. Soares accepted Kepler and Newton's view that comets originated outside of the solar system and had mathematically definable orbits. This concept ran contrary to

¹³

Cidade, op. cit., pp. 149-153.

¹⁴

J. Pereira Gomes, "Os Começos da Historiografia Filosófica em Portugal," Filosofia, ano 3, no. 11 (Lisboa, 1956), p. 162.

to ecclesiastically acceptable views of an unchanging solar system.

Even more advanced than Soares was Padre Manuel Alvares' História da Creação do Mundo conforme as ideias de Moizés e dos Filósofos, ilustrada com um novo sistema e com várias notas e dissertacoes (Porto, 1762), favoring both the heliocentric cosmology and the contemporary cosmogony of Buffon, which postulated the creation of the solar system by a solar accident where a comet hit the sun and the planets were formed by the resulting explosion.¹⁶ This work was in the contemporary mainstream of discussion of theories of the creation of the solar system, linked with controversies on the age of the earth, and must have shocked the orthodox in Portugal (though it did pass the Inquisitorial censors).

In 1668, during the reign of King Pedro II the Congregation of the Oratory of S. Felipe Neri (founded in Rome in 1550), entered Portugal. The Oratório de São Felipe Neri, was neither a contemplative nor strictly teaching order in that its members lived among the people, performed priestly duties, taught, studied and involved themselves in the daily life of the country. The Oratory was considered a "competitor" by the Jesuits who resisted the Oratory's efforts to gain recognition for its preparatory schools or colégios. In 1755, however, the Mesa de Consciência e Ordens specifically mentions the efforts of the Oratório

15

António Alberto de Andrade, "Filosofos Portugueses do Século XVIII," no. 3 (Lisboa, 1957).

16

Cidade, op. cit., pp. 141-144.

de Sao Felipe Neri in promoting the sciences.

In 1761, two years after the Jesuits were expelled from Portugal, the Real Colégio dos Nobres was founded in Lisbon. Its director, Jacupo Facciolati, and several of the faculty members such as Miguel Franzini were Italian educators who had been brought to Portugal at the invitation of the Marquês de Pombal. Newtonian mathematics and experimental physics were taught at the Colegio, but the student body at the time of its dissolution in 1771 was only forty-five. In essence the Crown decided to concentrate its efforts at the University of Coimbra, and when the University was reformed the Colégio was disbanded and its equipment transferred to Coimbra.

At the time of its foundation in 1761 the Real Colégio dos Nobres was placed under the jurisdiction of the Real Mesa Censória, the Crown's official replacement for the book-licensing and censorship functions of the Inquisition. The establishment of the Real Mesa Censória by Royal

Mario Alberto Nunes Costa, ed., Documentos Para a História da Universidade de Coimbra (1750-1772), 2 vols. (Coimbra, 1959), Mesa de Consciência e Ordens, Registro de Cartas e Alvarás, from ANTT, Lisboa, 15-III-1755, fl. 99, allows students from the Oratorio of Sao Felipe Neri to enter the University of Coimbra, pp. 200-201:

....a congregação tenha por este trabalho de ensinar, outro estipendio, ou intereçe, mais q̃ o de servir ao publico, e trabalhar por este modo pello mayor bem espiritual e temporal deste Reyno, e a este fim, p^a. mayor fervor dos estudos, e aumento das Sciences em q̃ o publico notoriamente se utiliza

Rómulo de Carvalho, ... Colegio Real dos Nobres.

Decree of 4 April, 1768 re-affirmed the Crown's Real Padroado, or State Patronage, over the Church and its internal affairs by removing the licensing of books from the purely "ecclesiastical arm" and transferring it to the "civil arm" of the Crown, even if the majority of the members of the Real Mesa Censória were still clergy. This act was the beginning of the secularization of intellectual life in the country.

Although Protestant authors were not banned merely because of their religious affiliation, some Catholic authors such as Voltaire, Diderot, and Baron d'Holbach were completely banned because their works "...continually inundated the literary world and infecting it with metaphysical tendencies impiety, libertiness..."¹⁹ Although the intellectual climate improved during the Pombal period, it had not become as free as France (where even Buffon retracted some scientific ideas under pressure from the theology faculty of the Sorbonne) nor as open as England.

In 1771, two years after the Crown established the Real Mesa Censória, the Crown granted this body control over primary education. In 1770 the Junta de Providência Literaria was created. This new group of ecclesiastics and Crown ministers met for nearly two years working out new Statutes for the University of Coimbra. Two of the ecclesiastical members of the Junta were Bishop Fr. Manuel de Vilas-Boas Cenáculo (1724-1791) who received the title of Bishop of Beja in

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António Ferrão, "A Censura Literária durante o Governo Pombalino," sep. of the Boletim da Academia das Ciencias de Lisboa, vol XVII (Coimbra, 1926), p. 50.

1777. He was a Franciscan who became Provincial of his order in Portugal in 1768 and was also a member of the Real Mesa Censória. The Marquês de Pombal won him over to his policies and had him named confessor of the heir-apparent to the throne, Infante D. José in 1769 (he later died because his mother, Queen Maria I refused to allow him to be inoculated against smallpox). After the fall of the Marquês de Pombal in 1777, Bishop Cenáculo was ordered to take up residence in Beja. D. Francisco de Lemos was Bishop of Coimbra in 1768, then became Rector of the University of Coimbra in 1770. After the fall of Pombal he was for a time in disgrace during part of Queen Maria I's reign. After the University of Coimbra was reformed, the Junta de Providência Literária's members, most likely Francisco de Lemos and a Crown Minister, José Seabra da Silva (1732-1813) prepared a long anti-Jesuit tract, Compêndio Histórico do Estado da Universidade de Coimbra, which blamed the decay of the University solely on the Jesuits. The anti-Jesuit campaign official policy during the Pombal period and numerous books and pamphlets appeared throughout Europe.

The expulsion of the Jesuits caused a shortage in the number of teachers both in the University of Coimbra and in the country's preparatory schools. The Oratorians alone could not make up for the shortage nor could the other religious orders. The Crown employed the recourse of offering positions to foreign professors, mainly Italians, at the University of Coimbra, the Real Colégio dos Nobres and in some government posts as well. These professors were settled in the already

established faculties at the University of Coimbra several years before the University was reformed. Though it cannot be definitely established that these new professors were permitted to teach the most current scientific and medical theories in their classes, they were able to stimulate the students through the wealth of their experiences, foreign correspondence, personal collections, libraries and enlightenment approach towards a secularization of education.

The University of Coimbra was closed for approximately one year until the Marquês de Pombal arrived for a month's residence during the Fall of 1772 in order to supervise the re-opening of the University. During this year a complete new set of statutes was prepared including course material, separation of faculties, reorganization of medical instruction, and revitalization in teaching of theology and canon law as well as civil law. The importance that the Crown attached to the re-opening of the University of Coimbra was reflected in the parades, pageants, ecclesiastical participation, presence of the upper nobility and popular enthusiasm of the students. The Brazilian students at the University prepared a special celebration for the Marquês de Pombal.

Domingos Vandelli (1735-1816) was already a medical doctor and a professor of chemistry before leaving his native Padua for Portugal in 1764 in order to take a position at the University of Coimbra. His

Portuguese career as a teacher, Crown official, inventor, and businessman still deserve more serious study. Vandelli had considerable connections with contemporary European naturalists, founded both the natural history museum and the botanical gardens of the University of Coimbra and aided in preparing the new statutes of the University itself. He exercised a considerable influence on his students, including Dr. Alexandre Rodrigues Ferreira, João da Silva Feijó, Joaquim José da Silva, Manuel Galvão da Silva, Manuel Arruda da Câmara and Dr. Joaquim Velloso de Miranda, all Brazilian-born naturalists, explorers and Crown officials during the late eighteenth and early nineteenth centuries. These students were present in residence at the University of Coimbra during the first years of the Reform. Some of them changed their courses of study several times before deciding on "natural philosophy," or what today is known as natural history.

Even before Vandelli came to Portugal he had published several works in Latin dealing with his own "philosophical journeys" in the northern Italian principalities where he collected enough specimens to
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form a small museum. In Portugal he continued his correspondence with Linnaeus and sent the Swedish naturalist numerous specimens from the Portuguese colonies in Africa and Brasil, which, in the latter instance measurably assisted Linnaeus in expanding his knowledge of the

Brasilian natural history of that century. Vandelli became Director of the Museum and Botanical Gardens of the Ajuda Palace in Lisbon and a member of the Junta de Comércio. He married the daughter of Barão Quintella, one of the richest men in Portugal during the late eighteenth and early nineteenth centuries.

A good descriptive account of the history of the University of Coimbra by Theóphilo Braga, História da Universidade de Coimbra nas Suas Relações com a Instrução Pública Portuguesa 4 vols (Lisboa, 1898-1902), devotes virtually all of the third volume to the eighteenth century with especial emphasis on the Reform period. In spite of Braga's anti-clerical attitude, the work is valuable for its documentation and clear exposition of the conflicts of the late eighteenth century. The University of Coimbra was not a place of radical intellectual ferment in the sense that foreign concepts were proposed by the faculty and students, but the introduction of contemporary European trends in physical and natural sciences as well as theology and philosophy stimulated considerable interest. In the process of Reform many of the older faculty retired and younger professors promoted. Even an ex-Jesuit, José Monteiro, was promoted in the Faculty of Mathematics. Reform

Letters from Vandelli to Linnaeus from Padua, Lisbon, and Coimbra are in Linnaeus Correspondence, (mss.) vol. XVI, Linnaean Society, London and published on microfiche by the Inter-Documentation Service (Zug, Switzerland). Linnaeus' replies to Vandelli are in Domingos Vandelli, Florae Lusitanae et Brasiliensis Specimen... et Epistolae ab Eruditis Viris Carolo a Linne, Antonio de Haen (Coimbra, Imprensa da Universidade, 1788).

did not mean radicalism either in theology or philosophy, and the Inquisition was ever vigilant in ferreting out impiety and heresy among students and faculty.

During the first five years when the University of Coimbra functioned under the new statutes, the Brazilian students were most frequently enrolled in the physical or natural science courses offered by Domingos Vandelli, Miguel Franzini, Guiseppe Antônio Dalla Bella, or José Monteiro. Alexandre Rodrigues Ferreira and his brother Bartolomeu Ferreira both matriculated in the "Faculdade da Filosofia" on the same day, 26 November, 1774.²³

Like Ferreira, Manuel Galvão da Silva was born in Bahia. He prepared for admission to the University at the "Instituto" in 1770-1771 and when his degree was conferred in September, 1776, it was with honors of the highest order.²⁴ Joaquim José da Silva and João da Silva Feijó were from Rio de Janeiro and Joaquim Velloso de Miranda was a native of Vila Rica in Minas Gerais.²⁵ The new courses of study offered

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Américo Pires de Lima, "As Matrículas do Doutor Alexandre Rodrigues Ferreira," Boletim da Sociedade Broteriana, vol. xxviii, 2^a série (Coimbra, 1954), pp. 77-79.

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Arquivo da Universidade de Coimbra (AUC), Livro da Matricula do "Instituto," Livro 88, fl. 277v, 1770-1771, and ANTT, Maço 993, Ministério do Reino, "Universidade," Letter from Bishop Francisco de Lemos to Marquês de Pombal, Coimbra 4-IX-1776, with an entire list of students for that year: "Manuel Galvão da Silva, fl. do outro, n^{al.} da Bahia ... Formados em filosofia, aprovados, Nemine Discrepente."

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For a complete list of Brazilian students at the University of Coimbra see: Brasília, suplemento ao vol IV, Faculdade de Letras da Universidade de Coimbra, Instituto de Estudos Brasileiros (Coimbra, 1949).

the students an opportunity to expand their knowledge of the sciences. They changed their programs of study from law and theology to natural philosophy. Others such as José Francisco de Lacerda e Almeida, the São Paulo-born mathematician would opt for the physical and mathematical sciences. Lacerda e Almeida was a member of the 1777 Demarcation Commission in Brasil and later died while attempting a trans-African crossing in 1798. Joaquim Velloso de Miranda was already an ordained priest before he began to study natural history. He was later Secretary of Government in Minas Gerais during the administration of the Visconde da Barbacena, who also himself had a considerable interest in the arts and sciences. The intellectual interests of these students varied considerably. Eschewing any radical intellectual or political dissent during their formative years they were later able to enter the service of the Crown or the Church, rise in the hierarchy, aspire to military titles, sinecures, and pensions as members of the Ordem de Christo.

One of the primary influences in the reorganized course of study for natural history at Coimbra was the use of Linnaeus' works on botany, his systematization of flora, fauna and minerals as well as the advice to explore the resources of the land contained in those works. Linnaeus (1707-1778) was primarily a teacher-botanist but the binomial system of plant classification he adopted was applied to all forms of life, markedly aiding naturalists in describing and identifying specimens and relating each individual species to others on the basis of natural affinity. There were numerous criticisms of Linnaeus' method as overly "artificial"

by the followers of Buffon, but it was many years before an alternative system was advocated by de Jussieu among others. Buffon, in fact never challenged Linnaeus' primacy as a botanist. He objected to his classifications of quadrupeds because Buffon preferred a "natural" system which took into account more of how a particular animal appeared to physically harmonize with others than how it specifically compared with others on details of bone structure. It is possible that Linnaeus was acceptable in Portugal even though he was a Protestant author because he never challenged orthodox ecclesiastical interpretations of the creation, while Buffon may have been unacceptable for his statements on the age of the universe and the creation of the solar system.

As a teaching vehicle, however, the revised Systema Naturae (1755) of Linnaeus was perfect because of its simplicity while Buffon's Histoire Naturelle was still incomplete at the time of the re-opening of the University of Coimbra. As has been mentioned, Linnaeus became a correspondent of Domingos Vandelli, who even wrote to the Swedish naturalist telling him about the reformation of the University of Coimbra, the expulsion of the Jesuits and his hopes for an improvement of intellectual life in Portugal. ²⁶ Linnaeus was even able to reach out to direct contact with Brasil through the good offices of Dr. Ribeiro Sanches.

Most of the "sociedades" founded in colonial Brasil under the patronage

of Royal Governors and some Viceroy's were literary in character; the Academia Cientifica (installed in Rio de Janeiro in 1772) was scientific in nature. Its members prepared memoirs on local agriculture and manufactures and founded a botanical garden. Linnaeus obtained a "diploma" for the Academia Científica of Rio de Janeiro from the Academy of Uppsala.²⁷

Linnaeus' first journeys in his own country had gained him well-deserved recognition. In the Lapland Journey (1735), originally published in Latin, Linnaeus makes it clear that a naturalist must first know the natural resources of his own country before he could visit others and that a complete knowledge of a country's resources and potential was the key to economic development. In the Systema Naturae Linnaeus utilized the knowledge he had obtained in this early expedition and in his visits to England, France, and the Netherlands, in order to prepare concise, complete and useful work for all naturalists which could be used both in the anatomy theater and on field trips; moreover, with this and other works such as Philosophica Botanica (1751), Linnaeus presented ideas on methodology of description which were necessary to remove doubts in classification of species. To the student and teacher such works were invaluable in a classroom. To the student especially, the possibility to emulate the scientific discoveries and the fame and rank

of Linnaeus through a career in the sciences must have been very exciting.

It is difficult to trace any specific influences that set the young Brazilian students towards their careers in the sciences at the University of Coimbra. Perhaps they were influenced by the position their teacher, Domingos Vandelli, enjoyed in the world of letters, since he was a correspondent of Linnaeus and Sir Joseph Banks (1743-1821), explorer and later President of the Royal Society in London, as well as his position as a consultant of the Portuguese Crown in scientific matters. It is also possible that these young men were impressed by the lavish expenditure the Crown made in establishing a natural history museum at the University of Coimbra and founding a useful botanical garden for the medical and philosophical faculty. Although during the reign of King João V Crown patronage and scholarships to study abroad were given to Portuguese students, it was not until the reign of King Jose I that the Crown began supporting the natural sciences to any degree. Most likely, however, the possibility of a respectable position as a scientist within the ranks of Royal Service after graduation from the University of Coimbra or possibly even the offer of a post at the University itself firmly attracted the students to the natural sciences instead of legal or ecclesiastical careers.

The Bahia-born and Coimbra-educated Alexandre Rodrigues Ferreira began his career in the natural sciences even before he was graduated from the University of Coimbra as a "bacharel," in 1778.

During his last year as an undergraduate student he was an unpaid assistant in Vandelli's classes. In December of 1777 and January of 1778, six months before Ferreira took this first degree, the Rector of the University, Dom Francisco de Lemos, proposed another reform of the "Corpo da Faculdade Filosofica." He suggested to the Crown that it was in the best interest of the University to create six "doutores" in that faculty in order to make it equal in status with the Mathematics faculty which already had begun to award the degree of "doutor". Three of the six names that he proposed included those of Alexandre Rodrigues 28 Ferreira, Padre Miranda and Manuel Galvão da Silva.

After his graduation from the University of Coimbra in May 1778, Ferreira immediately entered into Royal Service. He worked with the other recently graduated naturalists and fellow Brazilians at the Ajuda Palace Gardens and Natural History Museum (then known as a "gabinete"), and made several field trips in Portugal. He visited the coal mines at Buarcos near Cabo Mondego with João da Silva Feijó (who had specialized in chemistry at the University). The coal mines had just begun to be developed during the Pombal period under the supervision of Professor 29 Domingos Vandelli. While Ferreira was at the Buarcos coal mine with

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ANTT, Maço 519 Ministério do Reino, "Papeis diversos." "Negocios Públicos da Universidade de Coimbra. Sétimo Negocio." Letter from Bishop Francisco de Lemos to the Marquês de Vila Nova de Cerveira, Lisboa, 30-XII-1777.

29

H. Gabriel Mendes, "As Explorações Pombalinas da mina do Cabo Mondego Numa Planta da Mapoteca do Instituto Geografico e Cadastral," Boletim de Minas, vol. 7, no. 4, pp. 283-297.

Feijo, he took several days' leave in order to receive the doctor of philosophy degree on 10 January 1779, the "first Sunday after the Day of Kings" (Epiphany), and to visit Lisbon.

It was precisely this sort of field trip and scientific investigation that Linnaeus would have approved. During his Lapland Journey to the north of Sweden, Linnaeus visited iron mines where he observed smelting operations to produce pig iron. Portugal was not alone in promoting careful exploration of its natural resources in order to expand its industries and advance scientific knowledge in the then much studied field of geography. There was considerable discussion over rival theories of the creation of earth and with geological exploration new facts were marshalled by opposing scientific camps. The French government, through its Intendency System, promoted regional map-making to determine locations of exploitable mineral deposits. Promotion of national industries in order to stem the outflow of capital was a cardinal economic policy of the Pombal period.

These field trips to the coal mines near the mouth of the Mondego River, and to other locations which the naturalists attached to the Ajuda

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Américo Pires de Lima, "Ainda o Dr. Alexandre Rodrigues Ferreira," Anuario da Sociedade Broteriana, Ano XX (Coimbra, 1954), pp. 11-14.

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Rhoda Rappaport, "Problems and Sources in the History of Geology, 1749-1810," History of Science; An Annual Review of Literature, Research and Teaching, vol 3. (Cambridge, 1964), pp. 60-78.

32

See Jorge Borges de Macedo, Problemas de Historia da Indústria Portuguesa no Século XVIII (Lisboa, 1963).

Palace Museum and Gardens had made, were part necessary training for an expedition to Pará, in Brasil. The mines were of interest to the Crown as their coal provided fuel for the iron works in Paço dos Arcos, near Lisbon. Domingos Vandelli, one of the planners of this expedition to Pará, and in all phases of the planning, maintained close contact with the Minister of Overseas and Marine, Martinho de Melo e Castro (1716-1795), the foremost patron of the sciences in Portugal during this period.

Melo e Castro held degrees in canon law and philosophy from the University of Évora. He was destined for an ecclesiastical career, but his friendship with King José I led him to embark on a diplomatic career. He became Minister for Overseas and Marine during the reign of King José I, following the death of Pombal's brother, Francisco Xavier de Mendonça Furtado in 1756. Although it was widely believed that Melo e Castro would succeed Pombal in 1777, he remained in the same post from 1756 until his death in 1795. Melo e Castro maintained his offices on Ajuda Hill in the Quinta do Meio (also known as the Palácio do Pátio das Vacas), very close to the Ajuda Palace Gardens. From this office he conducted the business of the overseas territories where Melo e Castro could personally oversee the work of the Ajuda Palace Gardens and Museum.

In June of 1778, Vandelli wrote to Melo e Castro, reporting his progress in planning and proposing the wide program for the expeditions in Brasil, also mentioning the naturalists who would be in the party:

The Naturalists of whom I have had the honor to

write to Your Excellency about, are already ready in terms of instructions, that which is lacking is the exercise of one trip, in which I might be free from the occupations of the University, which Your Excellency will determine.³³

Vandelli not only planned the expeditions and apparently desired to participate in them, even if only in Portugal and not in Brasil. Vandelli also maintained close contact with Ferreira while he was about to receive the degree of doctor of philosophy. In reporting to the Minister Melo e Castro about the coal mine and other matters related to the Ajuda Chemistry Laboratory and the University of Coimbra, Vandelli referred to:

The complete description of the Coal Mine with the drawings is finished and Alexandre [Rodrigues Ferreira] in a few days will leave and return to the Court, and present it to Your Excellency.³⁴

Very early in his career as a scientist, therefore, Ferreira became known to highest levels of Portuguese government.

The year of 1779-1780 was an exceptionally active one for educa-

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Arquivo Histórico Ultramarino (AHU), Maço 26, Reino, letter from Domingos Vandelli to Martinho de Melo e Castro, Coimbra, 22-VI-1778:

Os Naturalistas de q̃ tive a onra de escrever a V. Ex^a. estão já prontos pa. o q̃ respeita as instrucções, o q̃ falta senao o exercicio de huma viagem, na qual eu os posso estar livre das ocupações da Universid^e. sobre isso determinará V. Ex^a.

34

AHU, Maço 26 Reino, letter from Vandelli to Martinho de Melo e Castro, Coimbra, 4-I-1779:

A exacta descripção da Mina do Carvão com as figuras está acabada, e o Alexandre [Rodrigues Ferreira] entre poucos dias partirá p^a. restituir-se a Corte, e Presentala a V. Ex^a.

tional reform in Portugal, especially in the sciences. In 1779 the Crown established the Royal Academy of the Navy, whose professors enjoyed the same benefits as those of the University of Coimbra. The Academy of Sciences of Lisbon was also founded in that year (receiving the additional title of "Royal" several years later), under the patronage of D. João de Bragança, the Duque de Lafões. The Duque de Lafões was an uncle to Queen Maria I and had recently returned to Portugal. He enjoyed a high reputation in European intellectual circles.

Before the most advanced elements of the Portuguese intelligentsia could proceed to the establishment of the Academy of Sciences of Lisbon, the intellectual outlook of the new Queen's ministers and chief advisers had to be assured and the new status of the University of Coimbra confirmed. Without high-level protection and even patronage in the government, not all of Domingos Vandelli's scientific projects would ever have been financed, and the entire set of University reforms would have been forgotten. Immediately after the death of King José I, the Rector of the University of Coimbra, Bishop Francisco de Lemos, wrote to the Minister Martinho de Melo e Castro, asking him to present the case for the advancement of the sciences at the University of Coimbra:

Hoping that the Queen Our Mistress will give the same protection to Letters, that her Great Father gave in his Glorious Reign; we hope that from Your Excellency's wisdom and zeal, that you will not omit from placing before that same Lady those Reports which seem appropriate to you in order to promote the good of the Sciences in this New University; and the justly expressed

usefulness of so useful and magnificent an Establishment
are not frustrated.³⁵

Several weeks later he wrote again concerning the fate of the University of Coimbra under the new government of Queen Maria I:

I have had the honor to request Your Excellency's Protection for this University, which has again begun to grow; and, which needs great subsidy in order not to be reduced to its former condition. Already rumors are being spread about by the enemies of Letters, that in it are taught erroneous and dangerous doctrines; with such news one finds all the youth perturbed and alienated. Nobody better than Your Excellency knows how much evil these rumors can overwhelm the good of the State. For this reason I return to the same request, begging Your Excellency, desiring you to turn your eyes towards this new Establishment, whose Spirit is so well known by Your

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AHU, Maço 33, Reino, Letter from Bishop Francisco de Lemos to Martinho de Melo e Castro, Coimbra 27-II-1777:

Confiando em que a Rainha, N.S.^{ra}. dará a mesma protecção as Letras, que deu sue Grande Pai no seu Glorioso Reinado; esperamos da sabedoria, e do zelo de V. Ex^a. que não omitirá perante a mesma Senhora os Officioz q̃ lhe parecerem convenientes, para q̃ se promová o bem das Sciencias nesta Nova Universid^e; e não se frustrem as utilidades justam^{te} espresadas de tao util e magnifica Establecimento.

Excellency; which you have seen born, and emplanted
beneath your view.³⁶

This eloquent defense of the University of Coimbra by its Rector, Bishop Francisco de Lemos, is a demonstration of the Portuguese Enlightenment's concern with its youth and the advancement of the sciences. The University was protected and in fact did continue to grow.

Later in the same year Bishop Francisco de Lemos prepared a report on the first five years of the Reform at the University of Coimbra for the man who replaced Pombal, the Visconde de Vila Nova de Cerveira, Tomás Xavier de Lima Nogueira Vasconcelos Teles da Silva (1727-1880) who enjoyed a favorable reputation at Queen Maria I's Court because his father had been a victim of Pombal. Jácome Ratton, the French-born capitalist, considered him to be "a man of great learning in theological

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AHU, Maço 33, Reino, Letter from Bishop Francisco de Lemos to Martinho de Melo e Castro, Coimbra, 14-III-1777:

Ja tive a honra de suplicar a Protecção de V. Ex^a. para esta Universid^e, que principia agora a nascer; e q necessita de g^{de}. subsidio, para se nao reduzir ao seu antigo estado. Já vão correndo vozes espalhadas pellos inimigos das Letras, q nella se ensinão doutrinas erroneas, e perigrozas; com as quaes noticias já toda a Mocidade se acha perturbada e alinita. Ninguem melhor do q. V. Ex^a. conhece q^{to}. mal pode pellas redundar ao bem do Estado. Por isto torno a respeitar a mesma supplica, rogando a V. Ex^a. queira por os seus olhos neste novo Establecimento, cujo Espirito he tão conhecido por V. Ex^a.; q vio nascer, e plantarse debaixo da Sua vista.

sciences," but "ignorant of politics and economics." It remained the task of Rector Francisco de Lemos to defend the University before the new government. Recognizing the religious orthodoxy of the Queen and her ministers, the Bishop who owed his appointment to Pombal wrote:

....many times liberty of opinion in the Sciences might cause men to make some errors in religion and politics; but in the midsts of thos ills who can coubt, that it is less the latter, that the constant and unchanging state of darkness, in which the spirits of nations are held prisoner and deprived of reason, which is theirs. The faculty of thought is free in man, and for this reason ought not to have other limits, unless those of reason and religion. 38

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See Grande Encyclopaedia Portuguesa e Brasileira (Lisboa, 1945), vol 22, p. 449: Tomás Xavier de Lima Nogueira Vasconcelos Teles da Silva, 14th Visconde de Via Nova de Cerveira and 1st Marques de Ponte de Lima (1727-1800), Minister of State (Alvará of 14-III-1777), "Gozou de grande valimento na Corte de D. Maria I, como filho de umas das vítimas do governo pombalino." Also see Recordações de Jácome Ratton, fidalgo cavalleiro da caza real, cavalleiro da Ordem de Christo, exnegociante da praca de Lisboa, e deputado do tribunal supremo da Real Junta do Comercio, Agricultura, Fabricas e Navegação. Sobre occurrencias do seu tempo, em Portugal, durante o lapso de sessenta e tres annos e meio, aliás de maio de 1747 a setembro de 1810, que rezidio em Lisboa: acompanhadas de algumas subsequentes reflexoens suas, para informaçoens de seus proprios filhos. Com documentos no fim. (London, 1813), pp. 300-301.

38

D. Francisco de Lemos, Memoria de introdução a Relação do Estado da Universidade de Coimbra de 1772-1777, introdução de Theofilo Braga (Lisboa, 1894), p. 130:

....muitas vezes a liberdade de opinar nas Sciencias possa induzir os homens a alguns erros de religião, e de política; mas no meio dos males quem pode duvidar, que he menos este, do que o que se poem as nações por estarem prezos os espiritos, e privados de racionio que lhes é natural. A faculdade de pensar é livre no homem, por isso nao deve ter outros limites, que nao sejam os da razão e da religião.

This defense of the freedom of opinion is one of the finest examples of the ideas of the Enlightenment in Portugal during the late eighteenth century. In a period of frank reaction to the major trends of European science and philosophy a leading churchman in Portugal had the courage to defend science and the secularization of educational life. Even if the sciences might perturb orthodox religion, the leaders of the government could not afford to ignore its benefits to industry, commerce and the arts. In enumerating those benefits the sciences could bring to the State, Rector Francisco de Lemos noted the wealth and material progress of England, France and the Netherlands and especially the advances Russia had made since the establishment of the Academy of Sciences of St. Petersburg during the reign of Peter the Great.³⁹

In 1777 only two of the Brazilian science students, Manuel Galvão da Silva and Padre Joaquim Velloso de Miranda, had finished their courses of study. Alexandre Rodrigues Ferreira and João da Silva Feijó completed their courses in the following year; Joaquim José da Silva was still a student in 1778. The death of King José I in 1777, the changes in government and the spectre of reaction must have profoundly effected these young men. Yet the immediate crisis passed. Vandelli's plans for his students, however, were not curtailed and he continued his preparations for a "Philosophical Voyage" to Brasil.

How much Ferreira and his colleagues participated in the planning

stages of the expedition is uncertain; their professor, Domingos Vandelli in his role of Director of the Ajuda Palace Gardens and adjunct scientific establishments, was the major figure in planning the expedition to Para. As early as June 1778 (Ferreira had graduated in May) Vandelli wrote to Minister Martinho de Melo e Castro, concerning his progress in planning, and presented some new ideas on the scope of the expedition:

I have exercised all speed in order to complete the plan of the Naturalists expedition, and send it to Your Excellency in this post, however the continual work of the University had not allowed me to finish it, and only now I present to Your Excellency the list of instruments, and other items necessary to the journeys of the Naturalists, in order to execute the instructions which they have, and thus to fashion with the greatest possible urgency an exact Natural History of so vast a Continent; and because it might be of greater usefulness, it seems to me convenient, that in addition to those Naturalists, which have to accompany the Mathematicians, the Júlio [Mattiazi] should remain in the company of one Naturalist in Rio de Janeiro, from where they might be able to examine a large part of the coast, concentrating upon it up to 40 or 50 leagues, and in this way if they discover useful things, the transportation would be easier, and they could obtain a greater number of natural products, which so easily one cannot hope to obtain from the interior.⁴⁰

40

AHU, Maco 26 Reino, Letter from Vandelli to Martinho de Melo e Castro, 22-VI-1778:

Tenho feitas todas as diligencias p^a. completar o plano da expedição dos Naturalistas, e remetter a V. Ex^a. nest correio, porem o continui trabalho da Universid^e. não me tem dado lugar a acabalo, e somente agora presento a V. Ex^a. o rol dos instrumentos, e outras cousas necessarias as viagens dos Naturalistas p^a. executar as instruções q̃ tiverão, e assim formar com a maior diligencias possível huma exacta Historia Natural de tao vasto Continente; e porque esta seja de maior utilidade, me pareceria conveniente, que alem daquelles Naturalistas, q̃ devem acompanhar os

Clearly Vandelli was the scientific and supervisory intermediary between the Crown, the University, and the naturalists themselves. Since the Overseas Ministry was financing the expedition, the personnel were salaried employees of the Ajuda Palace Gardens, and the necessary equipment might be either purchased with Ministry funds, or simply requisitioned from existing supplies. Thus the Crown committed itself to patronage of a major scientific expedition.

At the same time, however, the example of Portugal's Iberian neighbor, Spain, in promoting botanical expeditions to Venezuela, Peru, and Mexico, may have given Vandelli the idea for the expedition. Peter Löffling, one of Linnaeus' students came to Spain in 1751 at the invitation of the Spanish Crown. He later went to Venezuela to participate in a scientific expedition which had the additional goal of establishing boundary lines to comply with the 1750 Luso-Spanish demarcation treaty of

Mathematicos, ficasse Júlio em companhia de hum Nat^a. no Rio Janeiro de donde poderião examinar huma grão parte da costa internandose athe 40 ou 50 legoas, e deste modo se se descobrissem cousas uteis, mais facil seria o transporte, e maior quantidade de produçoens Naturaes se poderião obter, o q̃ tão facilmente não se pode esperar da os interiores sertoes, donde o naturalista não se pode caregar de muitas produçoens da Natureza.

41

1750. He died in 1756 while on the expedition.

Royal Botanical Gardens were founded in 1755 in Madrid, and Casimiro Gómez Ortega (1740-1818) one of Vandelli's correspondents eventually became its director. In 1776 the Royal Natural History Museum was opened to the public in Madrid. It was during this period that the French naturalist Joseph Dombey with two Spanish botanists, Ruíz and Pavón explored Perú and Chile, collecting specimens, writing reports and preparing descriptions of plants for eventual publication in Spain.

42

Vandelli later obtained seeds collected on these expeditions in exchange for some collected by Ferreira in Brasil.

43

41

Arthur Robert Steele, Flowers for the King; the Expedition of Ruíz and Pavón and the Flora of Perú (Durham, N. C., 1964), pp. 31-33. Also see an "Abstract of the most useful articles mentioned by Peter Löfving, botanist to His Catholic Majesty, in his travels through Spain, and that part of America called Cumana, consisting in his life, and in systematical descriptions of the plants of both countries, referred to the pages of the original Swedish edition" in Bossu, N, Travels through that part of America formerly called Louisiana (London, 1771), vol II, pp. 69-422. Translated from Per Lofling, Iter hispanicum eller. Resa til spanska läanderna ut: Europa och America, förrattad ifrån år 1751 til år 1756, med beskrifningar och rön öfver de märkvärdigaste växter, utgif ven efter dess frånfälle af Carl Linnaeus (Stockholm, 1758).

42

Ibid., pp. 50-60.

43

Museu Bocage, Lisboa, mss. letters from Casimiro Gómez Ortega to Domingos Vandelli, Madrid, 8-III-1798 and 6-X-1798 and Vandelli to Gómez Ortega, Lisboa, 26-XII-1792 Jardin Botanico de Madrid, Biblioteca, Armario I', 5^a Div, Carpeta 79, no. 871, fol. 310. The letters are exchanges of botanical information, seeds, current work, and introductions of visiting scholars. Ortega hoped to have close cooperation with Vandelli.

The interests and goals of the Academy of Sciences of Lisbon included the foundation of a major Natural History Museum. Although José Silvestre Ribeiro simply states that "The Royal Academy of Sciences of Lisbon conceived a plan in 1781 for a natural history museum,"⁴⁴ the idea for a "National Museum" probably originates earlier in the history of the Lisbon Academy. In 1781 the Academy of Sciences of Lisbon published a pamphlet which was sent to every Royal Governor in the Overseas Territories, Breves Instrucçoens aos correspondentes da Academia das Sciences de Lisboa sobre as remessas dos productos e noticias pertencentes a história da Natureza para formar hum Museo Nacional (Lisboa, 1781). The pamphlet provides precise instructions on the collection, preparation and shipment of specimens and mineral samples as well as requesting detailed diaries of each correspondent. It is possible that the pamphlet was the result of the work of the naturalists at the Ajuda Gardens, partially based on their experiences in collecting, observing and describing the natural history of Portugal.

In its first year of existence (1779-1780) the Academy of Sciences of Lisbon elected many new members. Among them were a large number of corresponding members, both Portuguese and foreign. Included in the number of corresponding members were Dr. Alexandre Rodrigues

44

Jose Silvestre Ribeiro, História dos Estabelecimentos Scientificos, Litterários e Artisticos de Portugal nos Successivos Reinados da Monarchia, tomo II, (Lisboa, Typografia da Academia Real das Sciencias, 1875), p. 43:

A Academia Real das Sciencias de Lisboa concebeu em 1781 o projeto de formar um museu de historia natural...

Ferreira and Dr. (Padre) Joaquim Velloso de Miranda, elected at the session of 22 May, 1780.⁴⁵ Thus it seems likely that the leadership of the Academy of Sciences of Lisbon wanted to acknowledge Ferreira's work at the Ajuda Palace Gardens from 1778-1780 and prepare him for his position as leader of the expedition destined for Para in Brasil. While Ferreira worked in Lisbon and went on field trips, the government and the scientific-academic world of the country was well aware of the proposed expedition.

At the 2 October, 1780 session Ferreira's reply was noted in the records, thanking the Academy for the honor bestowed upon him.⁴⁶ In his letter (see Appendix) he mentions that only he was honored with election while his "companions," Manuel Galvão da Silva, João da Silva Feijó⁴⁷ and Joaquim José da Silva were not similarly honored. It is possible that Ferreira as well as Miranda were elected because they already held the degree of "doutor," whereas the others only had the degree of "bacharel" and were therefore inferior in status to individuals such as Vandelli,

45

Academia das Ciências de Lisboa (ACL), Secretaria, Actas da Academia, tomo I, p. 4v.

46

Ibid., p. 9v.

47

ACL, Secretaria, dossier of Dr. Alexandre Rodrigues Ferreira, letter, without date, to President of the Academy of Sciences of Lisbon, D. João de Bragança (the Duque de Lafões), which mentions:

... de meio de todos os meus companheiros Manoel Galvão da Sylva, Joaquim José da Silva, João da Silva Feijó, eu consinto ser o único elito a participar daquellas Instruções, de q̃ eu, e elles igualmente necessitamos.

Abade Corrêa da Serra, D. João de Bragança (the Duque de Lafões), and other leading members of the Academy of Sciences of Lisbon.

As early as June 1780, the members of the Academy of Sciences of Lisbon discussed their projects for future years. One of the major items of interest was a "Physical and Economic Description of a District, or large Territory of this Kingdom, with observations useful to Agriculture and Industry." At the 18 October, 1780 public session of the Academy of Sciences of Lisbon, Ferreira read a memoir on "forests and their cultivation in Portugal." This work may have been based on observations made during field trips or on research conducted at the Ajuda Palace Gardens. Traditionally the Portuguese Crown promoted the planting of trees on barren lands as the country was wood-deficient. The subject of forests continued to interest Ferreira and his fellow naturalists in Brasil as well as Africa, since the Crown considered forest resources necessary to support Portugal's maritime expansion. In the early nineteenth century, José Bonifácio da Andrade e Silva, another Brazilian who achieved considerable fame in Portugal, Brasil and in Europe as a scientist, prepared numerous reports on forests in Portugal in his role as Intendent of the Leiria forests.

48

ACL, Secretaria, Actas, tomo i, p. 5v:

Huma Discripção Fizica e Economica de algũa Comarca ou Territorio consideravel deste Reino com observações uteis á Agricultura e á Industria," public session of 7-VI-1780.

49

ACL, Biblioteca, Mss. Azul, no. 780, "Apontamentos para a história da Academia Real das Sciencias, 1779-1906, p. 9.

Ferreira's memoirs presented at the Academy of Sciences of Lisbon continued to attract attention not only from his former professor Domingos Vandelli, but from important persons in the government. At the public session of 21 November, 1781 Ferreira read a memoir on the "Abuse of Conchiology, serving as an introduction to that which he plans to present on the 'Theology' of Invertebrates." By "Theology," Ferreira probably meant a very complete study, possibly a major book. In an undated letter, the Brazilian Visconde de Barbacena mentioned to Domingos Vandelli that he had read "Dr. Alexandre's 'Introduction to his Theology of Invertebrates,' in which he mentions the abuse of Conchiology," and also he had read the "analysis of the coal of Buarcos." The study of shells during the eighteenth century was of interest to both naturalists and geologists. Linnaeus at one time agreed with those who maintained that fossil shells were not necessarily the same species as contemporary shells; Buffon, however, asserted that the fossil shells proved the great antiquity of the earth. The debate over the antiquity of the earth was often involved with explosive theological issues. The memoir on coal may have been prepared with the assistance of Feijó who was trained as a chemist and had accompanied Ferreira to the coal mines in 1779.

From the time they were graduated from the University of Coimbra

50

Ibid., p. 16, 21-XI-1781: "Dr. Alexandre Roiz. Ferreira ... Memoria sobre o abuzo da conchialogia, servindo de introduccão a q pretende apresentar sobre a Thiolgia dos Vermes."

51

Christovão Ayres, Para a História da Academia das Sciencias de Lisboa (Coimbra, 1927), p. 533.

and took positions at the Ajuda Palace Gardens, they trained and studied to prepare for an expedition to Brasil. Theóphilo Braga, the anti-clerical and anti-monarchist Portuguese historian, placed the blame for the expedition's five year starting delay on the Crown's anti-intellectual policy.⁵² There was, however, a logic in providing additional years of study for the young Brazilian naturalists. Domingos Vandelli was at the University of Coimbra much of the year and the naturalists were probably under the supervision of Júlio Mattiazi, the Chief Gardener. In 1782 Vandelli requested permission to give a course in Natural History and another in chemistry at the Ajuda Palace Gardens in order to "make useful to Society the Products of Nature."⁵³ Most likely these courses were given for amateurs and it is possible that the naturalists assisted as Ferreira had been Vandelli's unpaid "demonstrator" while still a student at the University of Coimbra.

At some point changes were made in Vandelli's original plan. Vandelli prepared a complete list of equipment for each naturalist to take with him to Brasil and proposed widening the scope of the expedition. The original equipment list is an interesting document that presents the complete contents of a portable medical chest, plant presses, butterfly nets, axes, saws, dissection tools, weapons, artist's supplies, a portable

52

Theóphilo Braga, História da Universidade de Coimbra nas Suas Relações com a Instrução Publica Portuguesa, vol III 1700-1800 (Lisboa, Typographia da Academia Real das Sciencias, 1898), pp. 636-637:

"....as incoherencias da acao governativa..."

53

AHU, Bahia, Avulsos, no. 11.461.

chemistry kit for mineral analysis, and a fairly good library on natural history, practical agriculture, indigo and sugar processing, and maps.

Although most of the books on practical agriculture were generally written by contemporaries such as Duhamel de Monceau (1700-1781), author of Art de raffiner le sucre (Paris, 1764) and Éléments d'agriculture (Paris, 1762), three books on Brasil were from either the sixteenth or seventeenth century: Willem Piso, De Indiae utriusque ure naturali et medica (Amsterdam, 1658), George Marcgraf, Historia naturalis Brasiliae ... (Amsterdam, 1648) and Jean Lery, Histoire d'un voyage fait en la terre du Brésil... (La Rochelle, 1578). The use of these books demonstrate the lack of know-

ledge in Europe about Brasil, causing naturalists to rely on very outdated
54 texts. The list of books eventually to be taken to Brasil was altered

and the Piso, Marcgraf, and Jean Lery titles were left in Lisbon.

In the Fall of 1782, the long-planned expedition to Brasil underwent a radical change in its personnel. Manuel Galvão da Silva, the Bahia-born mathematics graduate of the University of Coimbra, received a three-year renewable appointment as Secretary of Government in

55 Moçambique. This appointment was partially related to the need for a

54

AHU, Maço 26, Reino, letter from Vandelli to Martinho de Melo e Castro, Coimbra, 6-VI-1778, with complete equipment list for each one of the naturalists. See Appendix.

55

ANTT, Chancelaria de D. Maria I, Livro 20, fl. 224, Alvará do Emprego do Secretario de Moçambique de Manuel Galvão da Silva, published in Fontes para a História, Geografia, e Comércio de Moçambique (Século XVIII), ed., Luiz Fernando de Carvalho Dias (Junta das Missões Geográficas e de Investigações do Ultramar. Estudos de Geografia da Espansão Portuguesa, Anais, vol IX, tomo I, Lisboa, 1954), pp. 37-38.

Secretary of Government in Moçambique as the previously appointed official died en route to that African colony. After Manuel Galvão da Silva was appointed as Secretary in Moçambique by the Alvara of 23 November, 1782, another naturalist received a similar appointment to Angola. Joaquim José da Silva (of Rio de Janeiro) was appointed Secretary of Government in Angola by the Alvará of 14 December, 1782.⁵⁶

João da Silva Feijó was re-assigned to the relative obscurity of the Cabo Verde Islands, and in his varied career as chemist, military officer and teacher, eventually returned to his native Rio de Janeiro. It was some months before any of the naturalists left for their assignments in Africa. It remained for Dr. Alexandre Rodrigues Ferreira to lead a small group of artists and botanical collectors into Brasil on a ten-year scientific odyssey.

Ferreira did not leave Lisbon until July 1783. Already in Brasil, however, were other recent graduates of the University of Coimbra whom Vandelli thought of as "...good, capable of making observations and collecting products of nature..." Included in Vandelli's list were Dr. Joaquim Velloso de Miranda, José da Silva Lisboa (the future Visconde de Cairú), and Francisco Vieira de Couto of Serro Frio in Minas Gerais whose memoirs on nitrates were stolen from Lisbon and brought to

56

AHU, Caixa 56, Angola, original copy of Alvará da Mercê do lugar do Secretario do Reino de Angola given to Joaquim José da Silva, registered in ANTT, Chancelaria de D. Maria I, Libro 84, fl. 321 v.

Paris in 1808 by Étienne Geoffroy Saint-Hilaire.

In 1783 an interesting book appeared in Lisbon dealing with the necessity of making "philosophical journeys" in Portugal and its colonies. José António de Sá, a corresponding member of the Academy of Sciences of Lisbon and a professor of law at the University of Coimbra, wrote Compêndio de Observações que formão o plano da viagem política e filosofica que se deve fazer dentro da pátria (Lisboa, Officina de Francisco Borges de Sousa, 1783). The book was dedicated to the Prince of Brasil, D. João, Prince Regent for many years, later King João VI. The author praised the Prince of Brasil as a patron of the sciences and asked his "protection" as recognition of his claim to be the "first among the Portuguese, to present a project of a Journey, for the utility of the fatherland..."

57

AHU, Maço 26 Reino, attached to Vandelli's letter of 6-VI-1778 is a list of "Bachereis de Filosofia q assistem no Brasil." See Appendix for listing.

58

José António de Sá, Compêndio de observações que formão o plano da viagem política e filosofica que se deve fazer dentro da pátria (Lisboa, Officina de Francisco Borges de Sousa, 1783), from the preface and dedication to the Prince of Brasil, D. Joao:

A Collecção dos productos naturais, que formão o Museu de V. Alteza, indica bem o seu genio, e gosto particular para aquellas Sciencias, que promovem a Agricultura, as Artes, o Commercio, e o verdadeiro interesse das Nações Mereca pois a Alta Protecção de V. Alteza nao o meu merecimento, mas o meu zelo, ser o primeiro entre os portuguezes, que apresenta hum projecto de Viagem, para utilidade pa Pátria ...

There is probably no basis to Sá's claim. His close relationship with Domingos Vandelli, the promoter of the expeditions, is evident, however from the praise which he literally heaps upon Vandelli, mentioning the Italian professor's expeditions in Italy during the 1750's and 1760's, before coming to Portugal.⁵⁹ Vandelli and Sá must have been close as colleagues at the University of Coimbra because Sá utilized quotations from letters which Linnaeus sent to Vandelli in 1765, mentioning the wealth of Portugal's colonies, unpublished until 1788.⁶⁰

In March 1783 the Royal Army Arsenal sent two shipments of equipment to the Ajuda Palace Garden. The list of the two requisitions is very similar to that prepared by Domingos Vandelli in 1778. There are numerous drugs, weapons, harpoons, chemicals, weights, sounding devices and knives as well as artist's supplies.⁶¹ Although some equipment must have been specially purchased in England, much was obtained from existing pharmaceutical and military supplies.

59

ibid., pp. 13-14:

O Senhor Doutor Vandelli, que temos a felicidade de estar entre nós, interessou com as suas viagens, os Estados, e a República das Letras ... Fez notaveis descobertas, e indagações, mercendo por isso a estimação não só de todos os sabios: mas dos mesmos Principes da Europa ...

60

Ibid., pp. 24-25, quoting a Linnaeus letter to Vandelli, Uppsala, 12-II-1765, which was printed in Domingos Vandelli, Florae Lusitanicae ... (Coimbra, 1778), pp. 80-82.

61

AHU, Maço 22 Reino, "Relação dos Materiaes, que se remetem do Arsenal Real do Exercito p^a o Jardim Botanico," 14-III-1783 and 26-III-1783. See Appendix.

With the arrival of supplies from the Royal Army Arsenal and the Royal Appointments for Joaquim José da Silva and Manuel Galvão da Silva, the destinations of the naturalists were fixed. There would be no grand expedition to Brasil as Vandelli had planned. Ferreira and his assistants were assigned to Pará, their salaries fixed and duly registered on 11 April, 1783.⁶² The decision to change the personnel of the Brasil expedition, limiting it to Ferreira and three assistants, was probably not made by Domingos Vandelli. Most likely Martinho de Melo e Castro, Minister for Overseas and Marine, made the decision.

The "Philosophical Journeys" to Brasil and Africa sponsored by the Portuguese Crown during the late eighteenth century were practical experiments in the enlightenment philosophy of the age. A wider interest in natural history was part of the taste of non-scientists and nobility during the period. There was almost a "mania" to collect things. A great deal of social prestige was garnered by having animals and plants from tropical countries in private menageries.⁶³ The eighteenth century was very much the age of the Encyclopaedia. The drive to display scientific curiosities from unknown areas of the world was great in Europe. The tastes of the French and English nobility were reflected in some of their Portuguese counterparts who had their own natural history "cabinets". By the end of the eighteenth century one writer was able to say "...ignor-

62

AHU, Cod. 337, Pará, Conselho Ultramarino, fls. 139-140.

63

Otis Fellows, "Buffon's Place in the Enlightenment," Studies on Voltaire and the Eighteenth Century, vol xxv (Institut et Musée Voltaire, Geneve, 1963), p. 608.

64
ance is no longer the appendage of all Portuguese noblemen ..."

Portuguese students, including many Brasilians, studied medicine abroad,
65
especially in Edinburgh and Montpellier. The renovating economic ideas
of the physiocrats had a good reception in Portugal. Domingos Vandelli
is considered a physiocrat from his memoirs on agriculture and industry
and colonial agriculture as is his Coimbra colleague, José António de Sá.
Portuguese Physiocratic writers were very interested in studying the
agricultural potential of their country, importing new plants and trees
from countries with similar climates and utilizing them to expand the
66
economic base of the country in order to make it more self-sufficient.

Domingos Vandelli, and the Minsiter for Overseas and Marine,
Martinho de Melo e Castro, sponsored, protected and ultimately launched
the "Philosophical Journeys" because they believed in the necessity of
change. With patronage, direction and the promise of a high reward upon
return to Portugal, the young Brazilian naturalists set about their task of
cataloging the untapped natural resources of the overseas empire. Domingos
Vandelli advocated useful employment for the young men trained in the

64

Cormatin, Pierre Marie Felicite, Baron de, (Duke de Chatelet),
Travels in Portugal 2 vols (Paris, 1793), ed. J. F. Bourgoing, English
Translation John Joseph Stockdale (London, 1809), vol II, pp. 100-101.

65

See Manoel Xavier de Vasconcelos Pedrosa, "Estudantes
Brasileiros na Faculdade de Medicina de Montpellier no fim do século
XVIII," RIHGB, vol. 243 (April-June, 1959, Rio de Janeiro), pp. 35-71.

66

See Moses Bensabat Amzalak, O Fisiocratismo; As Memorias
Economicas da Academia e os Seus Colaboradores (Lisboa, 1922).

physical and natural sciences at the University of Coimbra. Vandelli thought that one of the surest methods of continuing the protection of the sciences at the University of Coimbra was to insure steady, honorable, and remunerative government jobs for his scientist-graduates. He knew that new students would be hard to train if there were no jobs waiting for them after graduation.⁶⁷

In undertaking the task of preparing a competent and complete natural history and natural history resources index of the Portuguese colonies the Portuguese Crown, in the person of Martinho de Melo e Castro, the University of Coimbra and the Academia das Ciencias de Lisboa, were represented by Domingos Vandelli and the young naturalists they themselves had varied goals. The Crown sought to continue its patronage of the sciences and finance its costs and resources; Vandelli had to advance the cause of modern science and induce the young naturalists to begin their own careers.

67

ANTT, Maço 512, Ministério do Reino, "Universidade: Contas e Propostas," report signed by António Pereira, José Monteiro da Rocha and Domingos Vandelli, Coimbra, 8-VI-1782:

He claro, que jamais poderá haver concurrencia de Ouintes para as faculdades das Sciencias Naturais, se nao houver a providência de se destinarem Empregos Lucrativos e honorificos, que se confirao uniamente aos formados, ou graduados nellas, que mais se houveram distinguido, e que por outra parte tiveram as qualidades necessarias para bem servirem os mesmos Empregos.

CHAPTER II

Dr. Alexandre Rodrigues Ferreira (1756-1815),
Naturalist and Portuguese Crown Official; A
Late Eighteenth Century Scientist and Contri-
butor to the Luso-Brasilian Enlightenment.

Dr. Alexandre Rodrigues Ferreira (1756-1815) led a nine-year scientific expedition in Brasil from 1783-1792. His scientific memoirs and the unfortunate fate of his collections have been the subject of several historical, scientific, and biographical studies. A portion of his detailed diaries and monographs on ethnography, geology, as well as agriculture have been published, though little studied. An extensive, though incomplete selection of his correspondence with Royal Governors and minor officials in Brasil, and the Portuguese Minister of Overseas and Marine, Martinho de Melo e Castro, has been published twice. In spite of all that is already known about Ferreira's contributions to natural history, it should be interesting to consider the value of the unknown and scattered materials as well as those which have been lost, stolen, or decayed.

Ferreira was born into a well-to-do Bahia merchant family in 1756. His father, Manuel Rodrigues Ferreira was a businessman and possibly a slave dealer, had financial interests in the property seized

1
from the Jesuits (after 1759). Ferreira went to Lisbon and then Coimbra with his brother Bartholomeu Rodrigues Ferreira and they even attended courses together. Following his graduation from the University of Coimbra in 1778 and the award of the advanced doctor of philosophy degree Ferreira and his fellow Brazilian colleagues Manuel Galvão da Silva, Joaquim José da Silva, and João da Silva Feijó took up residence at the Ajuda Palace Gardens in preparation for five more years of study to prepare themselves for overseas expeditions.

By the time Dr. Alexandre Rodrigues Ferreira left Lisbon for Belém do Pará on 14 July, 1783 with his assistants his colleagues had been given assignments to Angola, Mocambique, and the Cape Verde Islands and did not accompany him to Brasil. The equipment Ferreira's party took with them to Brasil included a field kitchen, a portable laboratory, hunting and fishing gear, a medicine chest, and a library.²

The library which Ferreira used to perfect his scientific observations during his travels contained eleven books, a map of the Amazon River Basin, and the manuscript copy of the Ouvidor Francisco Xavier Ribeiro Sampaio's The Diary of the Philosophical Journey in the Captaincy

1
Rodolfo Garcia, "Dr. Alexandre Rodrigues Ferreira," (Conferência), *Collecção Brasileira de Divulgação*, série II Biografia, no. 3 (Rio de Janeiro, 1946), p. 14.

2
Museu Bocage (MB), Ferreira Papers, Maço 5., no 7, "Expedição Filosofica do Pará de que he Naturalista o Doutor Alexandre Rodrigues Ferreira, os Riscadores, José Codina e José Joaquim Freire, e Agostinho do Cabo Jardineiro Botanico, o qual partio aos 14 de Julho de 1783. Relação de que Levou o ditto Naturalista deste Real Gabinete de Ajuda."

of São José do Rio Negro (1774-1775), which was eventually published by the Academy of Sciences of Lisbon (1825). The classical natural history works of Piso and Marcgraf were still included in Ferreira's library although Jean de Lery's L'histoire d'un voyage au Brésil as well as other practical contemporary works on agriculture indicated in Vandelli's original list of 1778 were excluded. Of prime importance for Ferreira's work in Brasil was the inclusion of three of Linnaeus' classic works on natural history: Systema Naturae, Genera Plantarum, and Species Plantarum.³

Ferreira's arrival in Brasil did not signal the arrival of the Enlightenment in Brasil, nor in the Americas for that matter. The culture, philosophy and science of the Enlightenment preceeded Ferreira. The Academia Científica was founded in Rio in 1772. Ferreira's colleagues at the University of Coimbra had already returned to Brasil and some were correspondents of Domingos Vandelli. The educated élite had more than a superficial acquaintance with contemporary European literature even though some of it was banned by Royal censorship. Although Brasil lacked a university it did not lack educated men. When Ferreira arrived in Vila Bela, capital of Mato Grosso Captaincy in 1789, he found not only a classmate from Coimbra, Joaquim José Cavalcante de Albuquerque Lins, as Secretary of Government, but met the Governor Luis de Albuquerque de Melo Pereira e Cáceres, an individual of great culture and

learning and also the owner of a private library as complete and modern⁴
as one could expect to encounter in contemporary Europe.

The practical work for Ferreira's ten-year odyssey in Brasil began aboard ship. One of Ferreira's travelling companions was the newly appointed Bishop of Para, Fr. Caetano Brandão. The Bishop wrote⁵ a diary of his own journeys in Para but never made any mention of Ferreira. There may have been a shipboard diary of the voyage kept by Ferreira's assistant, Agostinho Joaquim do Cabo, the gardener, though it is not⁶ extant. Although Ferreira did not keep a formal Diary of the voyage, he did make scientific notes towards preparing a complete set of anatomical descriptions of fish as caught. Watercolors were also made of these deep water and coastal species of fish.

Part of the instructions Ferreira received from Domingos Vandelli prior to setting out from Lisbon dealt extensively with how he should conduct himself on the voyage and supervise his assistants as well as make detailed studies of the fish caught by the sailors. He was instructed

4

See Gilberto Freyre, Contribuição Para Uma Sociologia da Biografia: O Exemplo de Luis de Albuquerque, governador de Mato Grosso no fim do século XVIII, vol I (Lisboa, 1968), pp. 159-184.

5

Universidade de Coimbra, Library, Manuscript Section, Cod. 189, "Diario das visitas do Bispo Fr. Caetano Brandão ... 1784-1789."

6

Artur César Ferreira Reis, "A Amazônia Vista Pelo Dr. Alexandre Rodrigues Ferreira," Boletim da Sociedade de Geografia de Lisboa, Julho-Setembro, 1957, pp. 323-336, mentions a Diary of the ocean voyage from Lisbon to Belém de Pará and a visit to Marajó Island written by Joaquim do Cabo, citing Anais da Bibliotheca Nacional suplemento ao vol. IX. (Rio, 1883), Catálogo da Exposição de História do Brasil.

to catch as many fish as possible, study them, make notes, drawings and preserve some specimens for shipment to Lisbon. He was also instructed to learn the art of "pilotage," or the use of the sextant to determine latitude and longitude.

Although the watercolors of the fishes caught on "the high seas" are missing, Ferreira's careful descriptions are extant. He described several species of fish including the dory or "dourado," and the shark or "tuburão." In describing one fish, he recognized the limitations of his equipment and library, he noted the necessity for a complete reference library to make a more accurate description. In this memoir Ferreira's literary-scientific style begins to develop. His digressions are observations of an encyclopaedic intellect, with a taste for minutiae as well as major questions. He wrote with an economy of words but with a certain curiosity, typical of the age, that impelled him to note the superstitions of the sailors concerning the appearance of certain species of fish as bad omens, how to properly cook shark as well as the commercial advantages of selling dried shark fins to the Chinese and how the latter

7

João Ribeiro Mendes, "Instruções Relativas a Viagem Filosófica Effectuada pelo Naturalista Dr. Alexandre Rodrigues Ferreira, nos Anos de 1783-92," Revista da Sociedade Brasileira de Geografia, tomo LIII (Rio, 1946), pp. 46-52. The source of the published manuscript is noted in Virgílio Corrêa Filho, Alexandre Rodrigues Ferreira: Vida e Obra do Grande Naturalista Brasileiro (Rio, 1939), p. 25, as Bibliotheca Nacional, Rio de Janeiro, Manuscript Secion, cod. no. 1-16, 1, 35.

8

MB, Ferreira Papers, Maço 6., no 37, "Descrição de Peixes do Mar."

9

prepare shark-fin soup. He gleaned his information from the sailors during the voyage noting everything in the same way he would later observe and describe the customs of the Indian tribes he encountered.

Ferreira's effective years of work in Brasil are from September 1783 to February 1792, with the city of Belém do Pará as his arrival and departure point. Although it does not appear from extant manuscript and published Ferreira correspondence that he maintained any direct continuous contact with Domingos Vandelli during the Brasil expedition, Vandelli did provide him with a set of instructions. Vandelli instructed Ferreira in the necessity of practicing with the sextant, studying fishes, and supervising his assistants. He also suggested to Ferreira that a rest period would be necessary to recover from the voyage before beginning field trips in the neighborhood of Belém do Pará, mentioning that a month and a half in that area would be sufficient before leaving for the interior
10
after making a shipment of specimens to Lisbon.

Ferreira wrote to the Minister of Overseas and Marine, Martinho de Melo e Castro, from Belém do Pará on 8 October, 1783, describing his first shipment of drawings of fishes, other specimens and some observations. The fish drawings must have been the ones made during the voyage, the specimens collected locally, and the observations a brief

9

Ibid.

10

João Ribeiro Mendes, "Instruções Relativas ..." paragraph nine:

A falar-se a verdade, mes e meio para discurso e
exame dos productos do Pará he tempo suficiente.

report on the area of Belém do Pará. In the same report Ferreira noted that the area of Belém do Pará was not suitable for the cultivation of linho de cânhamo seeds (Cannabis sativa, more commonly known today as indian hemp or marijuana) because the land was too "salty." Ferreira erred, as salt content is negligible, and crops are grown near to the ocean. Vandelli sent to Italy for such seeds to be eventually brought to Brasil in
11
(an already cited letter) 1778. Ferreira was overwhelmed by the richness of the land, and the opportunities it afforded him for study:

The land in itself, Your Excellency, is a Paradise;
here there are so many products that I don't know
which side to turn...¹²

By late December 1783, Ferreira was able to form some opinions concerning the progress of his assignment in planting the linho de cânhamo seeds, as well as inspect the progress of cacao, indigo, sugar, and coffee cultivation in the Pará coastal region. He considered that the general state of agriculture in Pará was one of decadence, that crops were planted in

11

AHU, Reino, Maço 26, Letter of Domingos Vandelli to Martinho de Melo e Castro, Coimbra, 26-VI-1778:

Em execução das ordens de V. Ex^a. escrevo, e
encomendo em Italia as sementes do Linho cânhamo,
q̃. serão dirigidas a V. Ex^a. com a maior brevidade
possivel.

12

D. A. Tavares da Silva, O Cientista Luso-Brasileiro Dr. Alexandre Rodrigues Ferreira (notas para o seu estudo), (Lisboa, Sociedade de Geografia, 1947), Letter from Ferreira to Martinho de Melo e Castro, Belem do Para, 8-X-1783, pp. 87-88:

A terra em si, Sr. Ex^{mo}., he hum Paraiso; aqui
mesmo são tantas as Produçõens q̃. eu não sei
a q lado me volte ...

land unsuitable to good development and that those in charge were "incompetent." At the same time he reported that the gardener, Agostinho
13
Joaquim do Cabo, was ill for nine days. Illness was a major factor in delaying the expedition's progress because at one time or another some or all of the members of the party would be ill or others would suffer the mental effects of prolonged illness in the tropics.

In early 1784 Ferreira's party temporarily split up in order to allow individual members to carry out their assignments where they would be most effective. In that manner, José Joaquim Freire, the artist, went to Cametá to prepare some drawings of the town, while Codina remained in Belém do Pará to prepare several copies of drawings of the Governor's Palace. Ferreira became anxious to leave Belém, but could not because the Governor lacked canoes, supplies and rowers as well as
14
soldiers to send with him upriver to Barcelos. Although the Governor lacked the manpower to enable Ferreira to make a long trip to Barcelos, thus stripping him of soldiers and indians; he could, however, allow him sufficient supplies, canoes and assistants to make local trips. Ferreira's
15
Roteiro lists a two-week trip on the Rio dos Tocantins in January 1784.

13

Silva, op. cit., Ferreira to Martinho de Melo e Castro, Belém do Pará, 23-XII-1783, pp. 91-92:

14

Silva, op. cit., Ferreira to Martinho de Melo e Castro, Belém do Pará, 8-II-1784, pp. 95-97.

15

"Roteiro das Viagens que fez o Dr. Alexandre Rodrigues Ferreira no Brasil, 1783-1792," Boletim do Museu Nacional, vol. IX, no. 2 (Rio de Janeiro, 1933), pp. 103-104. The original manuscript is in the Ajuda Palace Library, Lisbon.

From mid-February to early March 1784 Ferreira was out of Belém attending to his linho de cânhamo cultivation. He may have gone with his entire party or left some in Belem, though he most likely took Joaquim Agostinho de Cabo, the gardener. His entry in the Roteiro for February, 1784 is as follows:

I left at ten o'clock in the morning, on the assignment of finding an appropriate location for the plantation of the Indian Hemp, in conformity with the Orders, which I was given by the Ministry. And finding it at a distance of one and a half leagues downriver from the City [Belém do Pará], I stopped there and ordered the forest cut down, and the above mentioned Indian Hemp planted until the 3rd of March when I withdrew to Para.¹⁶

This part of Ferreira's duties is related to the Crown's efforts in promoting the maritime economic development of Portugal and Brasil. Portugal, as a maritime power, needed naval stores for its merchant shipping; and rope, made from marajuana plant fibers was a valuable product as were the numerous hardwoods and resins available in the Brazilian interior.

By late March of 1784 Ferreira and his party had still not been able to leave for the Captaincy of São José do Rio Negro because of the lack of large, river-going canoes. Although some canoes were available, they could only be assigned for the purpose of maintaining regular

16

Ibid., 15-II-1784, pp. 104-105:

Embarquei pelas 10 h. da manhã, na diligencia de descobrir sitio apropriado para a plantação do Linho Cânhamo, na Conformidade das Ordens, com que fui instruido pelo Ministério. E achando na distancia de leg e 1/2 baixo da Cidade, alli me demorei em mandar roçar o mato, e plantar o referido linho ate 3 de Março que me recolhi ao Para.

communication with the interior and could not be spared for a large party of explorers and assistants. Continuing to send specimens, drawings and reports to Martinho de Melo e Castro in Lisbon, Ferreira mentioned the great scope of the assignment and his inexperience:

...the Papers which Your Excellency will evaluate as it may please you, remembering how extensive the commission which was confided in only one man, very inexperienced as yet along the paths of useful Scholarship, and which not only includes the searching out of Inscriptions, Customs, Writings, Commerce, Agriculture, in addition to the great duty of collection the products of the Three Kingdoms, but also that of making copies of everything that has to be sent, and that which remains.¹⁷

When Ferreira mentions "...only one man...", he refers to himself and the fact that the original complement of the expedition was reduced from four naturalists to only one. Here he felt the weight of his assignment and the loneliness of separation from his colleagues.

By the end of June 1784, Ferreira had been seriously ill for two months when he wrote to the Minister Martinho de Melo e Castro, describing his symptoms and the medical opinions of the local doctors.

17

Silva, op cit., Ferreira to Martinho de Melo e Castro, 21-III-1784, Belém do Pará, pp. 97-99:

....os Papeis q̃ V. Ex^a. avaliará como for servido, lembrando-se do quão extansa foi a commissão q̃ confiou de hum so homem, muito novo ainda nos caminhos da Sabedoria util, e q̃ não so trata de averiguar Inscriptoens, costumes, Litteraturas, Commercios, Agriculturas, além do pezo enorme das producçoens dos 3 Reinos, mas q̃ ha de faser, copiar de tudo copias p^a. irem, e para ficarem.

Evidently he had been suffering from a tropical fever, which resulted in a loss of body fluids, in turn causing an irregular heartbeat. This set of circumstances often causes death in children and older persons.

18

One doctor believed Ferreira was suffering from "melancholy."

Ferreira was prepared to treat a wide variety of illnesses with the various medicines the party brought from Lisbon. The party possessed a medicine chest which would be replenished several times during their
19
journey. During his years in Brasil Ferreira prepared a small "Brazilian Pharmacopoeia," with recipes of medicines and instructions for their use in treating a wide variety of tropical fevers, ulcers, and infections utilizing mercury compounds, Brazilian herbs, quinine compounds and opium. There was a reliance on mercury compounds without regard to potential side effects. Ferreira's "Pharmacopoeia Brasiliense," was partially based on the contemporary Pharmacopeia Tubalense (Lisboa, 1735) and Padre João de Jesus Maria, Pharmacopea Dogmatica ... (Porto, 1772).

By September 1784 Ferreira recovered his health and was preparing to send the third shipment of specimens to Lisbon. In a letter of 1 September, 1784 he discussed the progress of indigo cultivation in the

18

, Silva op cit., Ferreira to Martinho de Melo e Castro, Belém do Pará, 30-VI-1784, pp. 100-102.

19

See MB, Ferreira papers, Maco 5, no. 7 "Expedição Filosófica do Pará...", already cited, in Appendix, containing a portable pharmacy. Also see Américo Pires de Lima, "As boticas do Dr. Alexandre Rodrigues Ferreira (fim do século XVIII)," Anais da Faculdade de Farmácia do Porto, vol. IX (Porto, 1949), pp. 5-21.

Pará region, mentioning the efforts of Luis Pereira da Cunha and the latter's long experience in Brasil. He had given Cunha several of the books brought from Lisbon, written in French, for him to use and translate. Luis Pereira da Cunha became Ferreira's father-in-law, though²⁰ in 1784 they were merely collaborators in agricultural development.

During September 1784 Ferreira prepared to leave Para for the interior. Mounting an expedition of such a nature must have put a strain on the resources of the Governor of Pará, Martinho de Sousa e Albuquerque, with whom Ferreira had worked for over a year. Perhaps the Governor was pleased to see the naturalists depart, and possibly he would miss their company, but the friendly tone of Ferreira's letters implies a working relationship between the Governor and the departing naturalist. Ferreira prepared many memoirs on agriculture, natural history and commerce for the Governor's immediate use and for that of his superior in Lisbon, Martinho de Melo e Castro.

From 2 October, 1784 until 2 March, 1785 Ferreira and his party travelled up-river to reach Barcelos, the capital of the Captaincy of São José do Rio Negro, where João Pereira Caldas was Governor and Captain General. In his Roteiro, Ferreira noted the major rivers which empty into the Amazon and stopping at various small towns along the route. At times he would go up small rivers and examine the interior as he did in late November and early December of 1784 when he visited the Serra de

Daytona. By February 1785 he had reached the mouth of the Rio Negro, which he calculated as 300 leagues from Belem. From the time of his arrival in Barcelos, until 20 August, 1785 Ferreira and his party rested²¹ and prepared the specimens collected on the Pará-Barcelos journey.

From late August 1785 until mid-April 1786 Ferreira and his party explored the region of the Rio Negro. From this great enterprise, there is one major published collection of observations on the Indians, the flora and fauna, the Portuguese military and religious establishments, as well as the influences of the neighboring Spanish settlements. The Diary of the Philosophical Journey in the Captaincy of São José do Rio Negro (Revista do Instituto Histórico Geografico Brasileiro) (vols. 48, 49, 50, 51) is an exceptional document because it contains a variety of fine and detailed observations and reflecting the encyclopaedic scope of Ferreira's mission in Brasil. During the Journey, no doubt he took a great many notes; it is probable that the party did not stop in any one place long enough for Ferreira to complete a report. Each little report on a settlement is a gem because of the concise approach of cataloging its human, animal and agricultural resources. The reports were meant to be read carefully by the Governor and Captain General João Pereira Caldas as well as by the Minister Martinho de Melo e Castro. Insofar as the purely scientific aspects of the reports are concerned, it is difficult to determine whether Ferreira intended them for his own future use or to pass them on to Domingos Vandelli. It is unlikely that Ferreira planned to publish the

21

"Roteiro das Viagens . . ." pp. 107-108.

reports because of their official nature, though non-official observations were incorporated into separate memoirs.

Ferreira did not enter into the region of the Rio Negro unprepared. His year in Pará initiated him into the realities of the tropical environment more than the instructions of Domingos Vandelli, which have an aspect of naive aphorisms when compared to the practical lessons learned in the field. Ferreira brought with him the Diary of the Captaincy of São José do Rio Negro written in 1774-1775 by Ouvidor Francisco Xavier Ribeiro de Sampaio (not published by the Royal Academy of Sciences of Lisbon until 1825). The manuscript which Ferreira used is still extant in the Museu Bocage in Lisbon. There are numerous references to this Diary of 1774-1775 in Ferreira's Diary of 1785-1786 as the earlier Diary provided him with the necessary frame of reference for his journey, as did the archives of the Governors of Pará and Rio Negro in preparing his lengthy reports. A comparison of the two Diaries, written ten years apart, is difficult since the scope of Ferreira's visit was much wider than that of Chief Judge Sampaio. Ferreira's visit was anticipated by local Portuguese officials who had to provide additional supplies. With fully five months of preparations in Barcelos Ferreira was very well aware of what to expect in the Rio Negro.

Before departing Ferreira received his additional instructions from the Governor and Captain General of São José do Rio Negro, João Pereira Caldas. Under the terms of Ferreira's general instructions he came under the immediate authority of the Governor in whose jurisdiction

he travelled, and was also to aid that Governor in preparing reports.

In this case, the Governor specifically mentioned that Ferreira was to explore the Branco, Araca, Paduari, Caúburis, Uaupés, Içana and Ixíe rivers, travelling up-river to the military post of São José de Marabitanas, virtually at the limit of Portuguese territorial control.

In addition Ferreira was to report to Governor João Pereira Caldas on the cultivation of indigo and assist local planters in its preparation in
22
the territories he visited.

Ferreira and his party travelled in a "large and slow canoe" stopping to collect specimens. It was in these large dugout canoes that Ferreira and his party travelled, slept, ate and performed their duties along the Rio Negro and its tributaries from 20 August, 1785 till 7 January, 1786 when they returned to Barcelos from São José de Marabitanas. By 11 September, 1785 the party arrived at the Rio Uaupés, travelling along the Rio Negro. This river follows a course partially in Colombia and partially into the Orinoco River system in Venezuela. Following the Rio Negro and entering the Rio Ixíe via the Rio Içana, the party arrived at the "fortress" of São José de Marabitanas on 14 November, 1785. They then returned to Barcelos via the Rio Caúburis, which runs parallel to the Rio Negro for part of its course, and eventually by following other

22

Dr. Alexandre Rodrigues Ferreira, "Diario da Viagem Philosophica pela Capitania de São José do Rio Negro . . .," Revista Trimestral do Instituto Histórico e Geografico Brasileiro (RIHGB), vol. 48 (Rio, 1885), pp. 1-3.

"collateral rivers," as Ferreira termed them, they re-entered the Rio
23
Negro and returned to Barcelos.

From the time Ferreira returned to Barcelos in early January, 1786 until he left for the Rio Branco journey on 23 April, 1786, the rest of the party remained in Barcelos, resting and preparing specimens for shipment to Lisbon. The actual reports of the Rio Negro journey were prepared and dated just after returning from that region. The party had several months to rest and work on specimens in Barcelos as well as prepare reports to present to the Governor and send to the Ministry in Lisbon. Each shipment of specimens had to be carefully packed and inventoried for the long journey to Belém and then on to Lisbon.

Ferreira styled each one of his reports "Participação," or a "notice," much in the sense of a detailed bulletin for a superior officer to read. The reports are valuable as Ferreira noted the population make-up of each settlement, its agricultural products, the state of the church, the energy or lack of it among the local residents and sometimes some of the recent history of the area. The "First Notice," based on a visit to the settlement of "Nossa Senhora do Monte de Carmo do lugar de Moreira," sets the tone of Ferreira's essentially caustic observations.

This little settlement numbered about four hundred persons composed of whites, Indians and Negro slaves. Ferreira noted that the "moradores" and Indians hardly produced any crops other than those needed for local consumption and there were no village manufactures

such as woven fishnets for trade with other settlements. He noted that there was a lack of industrious freemen, though could not recommend a solution to the problem with the introduction of more slaves. He found the soil capable of producing rice, beans, manioc, corn, cotton,²⁴ and coffee as food and cash crops.

Leaving Moreira on 25 August, 1785 for Tomar he also visited other small settlements in that area. Ferreira noted that disease had decimated the Indian population. The Indians were unable to withstand smallpox and dysentery as well as virus infections. Evidently Ferreira compared the population statistics of the 1774-1775 diary of Chief Judge Sampaio with the notes he made in 1785. He noted that the area still produced cotton, manioc and coffee as well as small amounts of other crops, and that there was some local industry in pottery manufacture²⁵ as well as indigo preparation. In Tomar, Ferreira gave out linho de cânhamo seeds and instructions for its cultivation as well as that of²⁶ indigo and its preparation, collecting appropriate receipts.

He left Tomar on 1 September, 1785 and after a few hours arrived at Lamalonga. He noted that they started early, rested several hours and travelled again. After two years in tropical Brasil, he knew that

²⁴

Ferreira, "Diario ... Participação Primeira, " RIHGB, vol. 48, pp. 17-18.

²⁵

Ibid. , "Participação Segunda," pp. 21-37.

²⁶

Ibid. , pp. 49-50.

it was unwise to risk overexposure to the sun and was careful to measure each day's pace. His party spent four days in Lamalonga and Ferreira was displeased with what he saw, and some months later put his impressions into the report. The settlement, for Ferreira, epitomized a sense of decadence. Although there was some coffee produced and there were local hand manufactures, he was unimpressed with the slovenly and careless "director," as well as the two white "moradores." He summed up his impressions:

Regarding agriculture, there is nothing new to report, if there is, it consists, in that which makes one so much more feel its decadence, in considering how appropriate the land is for growing the products of the country. ²⁷

The "Fourth Notice" relies in part on Ferreira's examination of local archives and Royal Decrees as well as earlier reports of the region. He recalled an indian uprising believed to have been abetted by the Dutch from Surinam, mentioning the heroism of the Indian chief and his suicide to avoid capture. There was always room for discussion of specimens ²⁸ collected while travelling along the rivers.

The greater part of the "Fourth Notice" is devoted to comments on the incompetence of the local officials, problems with the semi-

27

Ibid., "Participação Terceira," p. 43:

Quanto á agricultura nenhuma novidade ha, que participar; si a ha, consiste, em que tano mais se deve sentir a sua decadencia, quanto mais proprias são as terras para as produções do paiz.

28

Ibid., "Participação Quarta," pp. 52-53.

settled Indians, the lack of a definitive policy regarding settlement, population, agriculture, and commerce and some comparisons with earlier Portuguese colonization experience. He had a number of unkind things to say about the character of the Portuguese. He felt that the decadence in the interior was partially due to the "get-rich-quick" attitudes of finding a gold mine and an unwillingness to work, lack of responsibility in general and a predilection towards selfishness. He compared Portugal and its colonies to Spain and its American colonies, showing that each country was a sieve for enormous wealth to pass to England.²⁹

In the "Fifth Notice," Ferreira noted that La Condamine previously made a trip down the Amazon (1745), but it was difficult to rely on observations made forty years earlier because the Indians changed the names of their villages or moved when their leaders died. There may have even been prohibitions on mentioning the names of their departed leaders, thus making it more difficult to obtain information from the Indians. In this section Ferreira recounts the introduction of indigo cultivation in the region and noted his experiments in producing market-³⁰able indigo cones from the raw leaves. From the list of chemicals, flasks, balances and other modern equipment he carried with him in the portable chemical laboratory, Ferreira was able to prepare a refined indigo.

29

Ibid., pp. 63-65.

30

Ibid., "Participação Quinta," pp. 117-119.

Ferreira may have had some conceptions about the Indians and their way of life before leaving for Brasil from reports, diaries, and printed sources. He was also familiar with Crown Decrees concerning the liberty of the Indians as well as the problems encountered after the Jesuits were expelled in 1759. He noted that the Indians were still exploited and that not enough effort was made by the Portuguese to educate them and make them into "useful citizens." Clearly Ferreira, for all his training in the sciences of the Enlightenment, was hardly a follower of Rousseau. He had no illusions about the Indian as a "noble savage." He rejected the idea that the total freedom of the Indian was enviable or even desirable for the Indian and supported efforts to settle Indians under Portuguese control. He recognized the reality that the Indians would not willingly work in sedentary agriculture.

It is possible that through his long stays at Indian villages Ferreira shed any illusions he may have harbored about the Indians. He had ample

31

Ibid., p. 118:

É para sentir, que viva tanto gentio embrenhado no mato, sem servir nem a si nem a ninguém; e que elles não descem, nem hão de descer acariciados das nossas dadivas, dos nossos costumes e das imunidadea, que lhes concedem as leis do estado, quotidianamente o mostra a historia dos descimentos.

Liberdade não os convida, porque absolutos e livres em todo o sentido são elles no mato; costumes também não, porque muito mais apertados são os nossos do que os seus; quanto ao sustento e vestido corre por conta da natureza.

opportunity to observe their customs, study their village crafts, examine their clothing and obtain some idea of their religious beliefs. In doing so he was able to prepare reports requested from field naturalists by the Academy of Sciences of Lisbon in the Breves Instruccoens (Lisboa, 1781), where correspondents were requested to provide details on all aspects of the daily life, history and customs of the new people with whom they came into contact. Ferreira prepared seven memoirs on the flora and fauna as well as the customs of the Indians of the Rio Negro. One of these memoirs, entitled "On the instruments which the Indians use to
32
take snuff," has been the subject of a detailed anthropological study.

The expedition continued on during 1785 in order to reach the "fortress" of São José de Marabitanas. On 29 October, 1785 the party divided at the mouth of the Içana river in order to allow Freire and Codina to go along one branch and prepare "the greatest possible number of drawings," and especially one of the "first large waterfall on the Içana river." During this part of the journey Ferreira fell ill again. Later he was able to recount the "symptoms of the fevers common to that river,"
33
describing his eight-day siege of fever and delirium.

Ferreira spent only five and a half days at the "fortress" of Sao

32

See S. Henry Wassen, "A Naturalist's Lost Ethnographic Collection from Brazil -- the Case from 1786; a Contribution to the Study of South American Indian Drugs," Göteborgs Ethnografiska Museum, Arstryck, 1970, pp. 32-52.

33

Ferreira, "Diario da Viagem Philosophica ... Participação Sexta," RIHGB vol. 48, p. 191.

Jose de Marabitanas, and took three days to return to Sao Gabriel where he had earlier given instructions to local planters in indigo cultivation. While at Sao Jose de Marabitanas he wanted to visit the nearby Serra de Cacuhi, but because it was too close to the frontier with Spanish controlled territory. Ferreira noted that "Dr. Lacerda" had been able to visit³⁴ the Serra de Cacuhi while there several years earlier. Ferreira was cognizant of the provisions of the 1777 Spanish-Portuguese Treaty concerning control over streams flowing towards the Orinoco (Spanish) and those flowing towards the Amazon (Portuguese). Ferreira was able to provide an intelligent exposition of Portuguese "rights" in the frontier³⁵ areas when he prepared his "notices." By early December, 1785 Ferreira's party was in the region of the Cauburi River, in the triangle of Brazilian territory between modern day Colombia and Venezuela. He approved of recent Portuguese efforts at populating the region against³⁶ future Spanish incursions.

The last, and "Seventh Notice," concerning the Rio Negro exped-

34

Dr. José Francisco de Lacerda e Almeida (1753-1798) was born in São Paulo, Brasil, destined for the clergy, studied at the University of Coimbra, was awarded a Ph.D. in Mathematics in 1777, and taught in Portugal before being assigned to the Demarcation Team in 1780. Later after teaching at the Royal Naval School in Lisbon he was named Governor of Rios de Sena in Moçambique and died while attempting a trans-African expedition to Angola.

35

Ferreira, op. cit., "Participação Sexta," pp. 211, 213.

36

Ibid., "Participação Sétima," pp. 218-219.

ition, is essentially a summary of Ferreira's observations and impressions of the region and the immediate area of Barcelos. Ferreira was cognizant of contemporary agricultural techniques. He noted that the "moradores," or property owners, as well as the Indians overplanted their crops and were either unaware of the damage this practice caused or unwilling to change this practice that led to the degradation of the soil. He felt that the "moradores brancos" were not involved in agriculture so much as in commerce. Ferreira also noted the prevailing "slash-and-burn" agricultural methods, which still predominate in Brasil
37
and in much of the tropical world.

Ferreira was not the only one to attempt to introduce a new agricultural product into the Amazon region. For some time European settlers had brought in varieties of vegetables and fruits, not native to the Americas. The Italian architect and Royal official, Guiseppe Landi, who had explored the Amazon for many years, as well as some European-born priests tried to introduce dates, varieties of mangoes as well as
38
fruits native to the Far East.

By the time Ferreira arrived in Portugal as a student, slavery had been abolished there and the importation of slaves to Lisbon prohibited (in 1761). Ferreira accepted the reality of a slave based agriculture in the Amazon and carefully noted the levels of slave imports. It is likely

37

Ferreira, "Diario ..." RIHGB, vol. 49, pp. 198-199.

38

Ibid., p. 203.

that he was familiar with some of the economic ideas of the period. Contemporary economists were opposed to slavery but recognized that it could be justified only in economic terms when slaves were employed in high value agricultural production, such as sugar or coffee, but not in subsistence, or low value, production. Ferreira complained that the distribution of slaves was wasteful and the landowners who were supposed to supervise the slaves were themselves lazy. The result of such a chaotic system was that the slaves were not employed in cultivating cash crops; rather, they planted manioc, rice or corn, all of which
39
were subsistence crops. Ferreira recognized that the slaves, just as the Indians, would flee to where they came from, if only they had the
40
means to cross the sea to Africa.

Ferreira remained in Barcelos with his party until late April, 1786, when he began his Rio Branco expedition, partially retracing the sections which he had passed on his way from Belém do Pará to Barcelos the previous year. Before leaving for the Rio Branco expedition, Ferreira had to prepare the major portion of the specimens, drawings, maps, and memoirs for transmittal to Lisbon. In a letter of 17 April, 1786 to his superior, Martinho de Melo e Castro, he noted the shipment of

39

Ferreira, op. cit., RIHGB, vol. 49, pp. 207-208.

40

Ferreira, "Participação Quarta . . ." vol. 48, RIHGB, p. 57:

. . . . si os pretos não fogem para Africa, donde vem,
nao é por falta de vontade, mas pela de meios
para atravessarem tantos e tão distantes mares.

nineteen cases of specimens and one hundred and eighteen drawings as well as the reports he prepared on the Rio Negro expedition. Ferreira then expressed his strong desire to return to Lisbon. Perhaps it was his health, possibly the other members of his party felt they had worked hard enough, or as he wrote to the Minister, it was time to return since the original commission for three years was about to end. It was necessary to begin studying the specimens they had collected:

The more the collection of products is prolonged,
the more the individual knowledge of each will
be delayed in the midst of a confusing chaos⁴¹
of thousands of diverse products ...

Ferreira was well aware of the chance that the specimens already in Lisbon were neither being organized into collections, carefully preserved, nor adequately studied. He knew from experience as a student and demonstrator at the University of Coimbra as well as an assistant at the Ajuda Palace Gardens that collections of valuable specimens could be easily lost or destroyed.

From late April 1786, until the beginning of August 1786, Ferreira and his party explored the area of the Rio Branco, much in the same manner they had in the Rio Negro region, travelling by large canoes and at times making overland journeys. His party left Barcelos on 23

41

Silva, *op. cit.*, Ferreira to Martinho de Melo e Castro, Barcelos, 17-IV-1786, pp. 119-121.:

... quanto mais se prolonga a collecção dos productos, mais retardará depois o conhecimento individual de cada huma no confuso chaos de milhares de produções diversas ...

April, 1786 and spent eight days on the Mereuini River along the way arriving at the fort of São Joaquim by the mouth of the Tacatú River on March, 1786. From that point the party made an eight day overland trip to the Serra dos Cristais, in the Brasil-Surinam border region. Later, in June they visited an area where the Spanish were expelled by Governor João Pereira Caldas, before beginning the return trip to Barcelos.⁴²

From Barcelos on the way to the Rio Branco they stopped at most of the river settlements along the south bank of the Rio Negro. On the second day out of Barcelos they stopped at Poiares where Ferreira made his customary inventory of the Crown and Church properties and observed the state of local agriculture and industry. Here Ferreira was visibly impressed by the decimation of the Indian population caused by the measles, against which the Indians had not yet developed immunity. He noted that as soon as the Indians were settled into a village disease struck⁴³ and the entire village was wiped out.

Ferreira accepted the reality of slave-based agriculture in Brasil. Although he must have been aware of the dehumanizing aspects of the

42

"Roteiro das Viagens ..." pp. 112-114.

43

Ferreira, "Diario da Viagem Philosophica . . .," vol. 50, RIHGB, p. 20:

Ao sarampo, que no estabelecimento da aldea suf-
fucou a sua população, ajunte V. Ex^a cada uma
das causas, que se lhe seguiram, e o coadjuvaram,
para acabar de diminuir os indios, particular-
mente depois que se formalizarem as povoações
em villas e lugares, e sahirão na somma total
os coefficients da sobredita diminuição.

slave system and its brutality, he was less interested in side effects than the great wealth that could be generated by slave labor. He felt that since Brasil had been made wealthy and civilized by slave labor⁴⁴ the Amazon could "progress" by slave labor as well. What perturbed Ferreira was the decay, disorder, laziness and stupidity of the landowners. It was the great waste of the potential of the region that persuaded Ferreira that large-scale introduction of slave labor was justified. He further excoriated the "moradores":

The almost entire laziness of the inhabitants of the country; the bad distribution and application that they are accustomed to make of their servants and slaves; the disorder with which they make use of the same abundance of so many and so different products of the country, wanting at the same time to branch out to all kinds, and without at the same time establishing a permanent type of Agriculture, abandoning with the greatest ease the sown lands or plantation of whatever kind ...⁴⁵

Continuing along the river in late April, Ferreira and his party

44

Ibid., pp. 59-76.

45

Ferreira, "Dairio ..." RIHGB, vol. 50, p. 55:

A quazi geral preguiça dos habitantes do paiz; a ma distribuição e applicação que costumam fazer dos seus servos e escravos; a desordem com que fazem uso da mesma abudancia de tantos e tao diferentes generos da producção do estado, querendo ao mesmo tempo abranger a todos, e sem que de ordinario nunca formem certo e permanente estabelecimento de agricultura, abandonando com a maior facilidade a sementeira ou plantação de qualquer genero ...

46

stopped at Moura and Airao, both on the south bank of the river. At times Ferreira would encounter an incompetent official or an exceptionally praiseworthy priest. Perhaps he had a certain sympathy for the life of a priest as he once prepared for an ecclesiastical career. He never hesitated to praise or criticize when he felt either was due. At Airao he found the "director" of the settlement to be incompetent, but the priest, Fr. José da Conceição, to be worthy of high praise for his piety and resignation to his illnesses. ⁴⁷ Possibly not all the priests Ferreira encountered in the Amazon were so worthy of mention.

As has been mentioned Ferreira had ample time to observe many of the Indian tribes of the interior. He and his party bartered with them for their handicrafts and perhaps exchanged gifts as signs of friendship. Some of Ferreira's ideas and preconceptions concerning the Indians were gleaned from Robertson's History of the Americas, a compilation of descriptions made by earlier travellers. Some of Ferreira's comments may have been based on hearsay from soldiers and long-time settlers. Ferreira's observations provide descriptions of Indian settlements, their customs, utensils, and ornaments, as well as weapons. ⁴⁸ References abound in watercolors and drawings of both the Indians and their settlements made by Ferreira's assistants Freire and Codina.

⁴⁶

Ibid., "Participação Quinta," pp. 81-82.

⁴⁷

Ferreira, "Diario ..." RIHGB, vol. 51, pp. 10-20.

⁴⁸

Ibid., pp. 7-9.

Ferreira's Indian memoirs are valuable for modern anthropologists because tribes which Ferreira described have either disappeared or have been absorbed within the caboclo or racially mixed population of the interior. Some of the tribes Ferreira encountered had recently been "discovered" by Europeans during the Demarcation Expeditions following the 1750 Spanish-Portuguese Treaty. Some of these tribes had been induced to settle under Portuguese supervision either by missionaries or by local governors through determined preaching or by valuable gifts and promises of protection from other tribes. In his comments on the Indians and their customs Ferreira attempted to locate each tribe in its own geographic area. In some instances he was able to note that even two hundred years ago some tribes practiced genocide upon their neighbors, wiping out groups competing for the same hunting areas.

Official Portuguese policy was to encourage settlement of the interior by European-born Portuguese. One legal obstacle to voluntarily inducing soldiers to remain in the interior was the prohibition against marriage between whites and Indians. This prohibition was removed in 1755, at the time that the Crown decreed the legal freedom of the Indians. Ferreira often noted the evasion of the legal liberties of the Indians by unscrupulous individuals. As has been mentioned Ferreira had no illusions about the Crown's ability to induce the Indians to settle in villages instead of changing locations frequently. The protein (meat) resources of the region are limited and intense cultivation and hunting deplete an area's resources rapidly. It is clear that this fact of life in the Amazon

was not understood by the Portuguese who pursued the settlement policy.

Although some of the watercolors Freire and Codina prepared from observations of individual Indians are not extant, Ferreira's identifying memoirs are available. A very fine description of this type is one Ferreira wrote to accompany a watercolor of a Mauhá (or Mauá) tribesman. This tribe generally inhabited the region of the Cumiary and Jupurá Rivers and their affluent streams. This tribe was unknown to Europeans until the Spanish-Portuguese Demarcation team entered their region. Ferreira described the tribesman's particular outfit made from thin wooden strips and how the corset was made. The description itself is exceptional in its detail (see Appendix).⁴⁹

Ferreira and his assistants had returned to Barcelos in early August 1786. He remained there until 27 August, 1788. During these two years Ferreira wrote, studied, explored and prepared shipments of specimens to be sent to Lisbon; although a general lack of data on Ferreira's activities for this period is apparent, his Roteiro does not list individual expeditions from Barcelos, perhaps then, Ferreira and

Andão sempre espartilhados, ao uso das Damas da Europa: para fazerem o espartilho, preparão huma Lamina de madeira avermelhada, do comprimento de huma, até duas varas, em ordem, a darem com ella taes voltas em roda do ventre, como se fosse huma cinta, adelgaçando de tal forma a referida Lamina, que as nas lhe deixão a consistencia que tem os arcos das bocetas de faia.

his companions were ill and in need of rest. In November, 1786, Joao Pereira Caldas, Governor of the Captaincy of São José do Rio Negro, wrote to the Minister Martinho de Melo e Castro describing the efforts of Ferreira and his assistants, praising them, but at the same time
50
stating they were all ill and in need of rest. Although Ferreira at one time or another wanted to visit certain areas under Governor Caldas' jurisdiction he was not granted permission. Possibly the Governor felt the areas Ferreira wanted to visit were too dangerous and did not want to incur the displeasure of the Minister Martinho de Melo e Castro through a report of Ferreira's death. The Governor sidestepped the issue by stating that Ferreira would have to have his original instructions amended to allow him to expand the areas of exploration. Specimens from those areas Ferreira was unable to visit were obtained through intermediaries.

Although some of the inventories of the natural history specimens Ferreira and his assistants collected have been published, many of the listings are extant only in manuscript. An examination of these inventories provides an indication of the wider scope of Ferreira's collections
51
than was previously known. For example there is a published letter concerning a shipment of specimens to the Ajuda Palace Gardens and Museum, though the inventory is extant in manuscript. The actual ship-

50

Silva, op. cit., Governor João Pereira Caldas to Martinho de Melo e Castro, Barcelos, 3-XI-1786, p. 125.

51

See Américo Pires de Lima, O Doutor Alexandre Rodrigues Ferreira: Documentos Coligidos e Prefaciados (Agência Geral do Ultramar, Lisboa, 1953).

ment of 18 August, 1786 from Barcelos to Lisbon included seven large boxes and two barrels, generally containing minerals, flora and fauna, Indian ornaments and trade goods used among the Indians in the upper reaches of the Rio Branco River region. In the inventory Ferreira noted that some of the ornaments the Parauana Indians used were obtained by trading with the Dutch from Surinam.

52

Several unpublished inventories of Ferreira's natural history specimens sent from Barcelos to Lisbon from 1785 to 1788 when the expedition used that settlement as a base of operations. His shipment of 26 July, 1785 is not referred to in any published letters and is exceptionally interesting for its diversity. The inventory lists a large number of ornaments used by different Indian tribes as well as a considerable variety of domestic utensils and weapons. There is a diversity in the flora and fauna as well as a herbarium and a collection of seeds of the dried plants. Of especial interest is a prepared skin of a sloth and the headdress of an Indian chief. The bulk of these items must have been

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52

See Manuel José Maria da Costa e Sá, "Memoria da terra que serve de limite ao Brasil pelo lado das Guyanas, e do Rio Branco, que dele vem ao Rio Negro," História e Memórias da Real Academia das Sciencias de Lisboa, tomo X parte 1^a (Lisboa, 1827), p. 247, mentions a rifle which Ferreira had obtained from the Indians, who had originally obtained it from the Dutch. The rifle was in the possession of Ferreira's family. Ferreira discusses his Rio Branco expedition in Silva, op. cit., letter from Ferreira to Martinho de Melo e Castro, Barcelos, 10-VIII-1786, pp. 180-186.

53

MB, Ferreira Papers, Maço IX, no. 72, "Inventário da remessa," of 26-VI-1785.

collected on the Rio Negro expedition and during the trip downriver to Barcelos from Belem do Para.

Ferreira was prevented from entering certain regions by Governor Caldas; he was able to obtain specimens from local officials. A letter of 20 February, 1787 from Barcelos mentions an impending shipment of plants, drawings, and ot other specimens. In this shipment Ferreira sent a variety of items from Indians of the Rio Branco region. From an area Ferreira had been unable to visit either because of illness or official prohibition, he obtained a sample of the "Uirary poison," with the blowgun and darts used by the Indians. This poison is known as "curaré" and although still used by the Indians it is also used by modern surgeons as an anesthetic. In this shipment Ferreira also sent several samples of the wax that Indians of the Mahua' tribe collected in the forests and traded with the Spanish settlers for tools and beads. He mentions that the Portuguese should take advantage of this trade.

Two other unpublished inventories, one of which is mentioned in a published letter. The seventh shipment of 30 September, 1787 contained twenty-three large boxes and six flasks of specimens as well as items obtained from the Indians. In this shipment there were several turtles, a manatee, a monkey skeleton (species undetermined), a small

54

Pires de Lima, O Doutor Alexandre . . ., Ferreira to Martinho de Melo e Castro, Barcelos, 20-II-1787, pp. 202-204.

55

MB, Ferreira Papers, Maço IX, no. 72, Inventory list of the shipment of 24-II-1787.

box with sixty-eight watercolors, two pipes "which the Indians use to take parica tobacco" (a form of narcotic snuff), jewelry, snakes and tropical fruits. The eighth shipment of 4 June, 1778 contained twenty-seven large boxes and two barrels and is generally similar in content to the seventh shipment.⁵⁶ The ninth and last shipment from Barcelos of 30 August, 1788 has been published.⁵⁷ Since Ferreira was concerned about loss and possible damage en route to Lisbon as well as the chance of loss after arrival, he tried to send the greatest number of specimens as well as the greatest variety of different specimens. Thus some shipments duplicated others and served as a form of insurance.

The Breves Instrucçoens ... (Lisboa, 1781) contained many instructions on how to prepare specimens for shipment to the Ajuda Natural History Museum, especially on the use of alcohol as a preservative. In Vandelli's letter of instructions to Ferreira, already mentioned in regard to how Ferreira should conduct himself on the ocean voyage, there is a specific instruction about making two shipments of each specimen, one of which was to be sent to the nearest Governor and the other to remain with the naturalist to be taken to Lisbon.⁵⁸ Ferreira made

56

MB, Ferreira Papers, Maço IX, no. 72, Inventory list of the shipment of 30-IX-1787.

57

MB, Ferreira Papers, Maço IX, no. 72, Inventory list of the shipment of 4-IV-1788. Pires de Lima, O Doutor Alexandre ... Ferreira to Martinho de Melo e Castro, inventory list, pp. 280-284.

58

Mendes, op. cit., paragraph 26 of the "Instruções ..."

shipments to Lisbon, but did not keep specimens with him as extra baggage would have impaired his party's mobility.

Until 27 August, 1788, when Ferreira left Barcelos for the Rio da Madeira and the Mato Grosso, he spent his time not only resting and working in Barcelos, but making overland trips to the forest Indians, preparing botanical, zoological and geological observations.⁵⁹ During this Barcelos period Ferreira wrote to the Minister Martinho de Melo e Castro on a regular basis, though the Minister rarely replied. In one letter Ferreira mentioned the considerable efforts his assistants and he had made in collecting specimens. He mentioned the special project of preparing a complete flora of the Amazon, noting that there was a similarity with many of the plants already known in the Guianas. In praising his assistants Freire and Codina, he noted they were ill but had produced⁶⁰ over four hundred watercolors in three years.

In Lisbon Ferreira's monumental efforts were not considered sufficient nor satisfactory. In a letter of 31 October, 1787 Ferreira was admonished by the Minister Martinho de Melo e Castro for not sending enough specimens, advised to exercise more patience and rejected⁶¹ Ferreira's excuses for delays. Evidently the Minister was displeased

⁵⁹

"Roteiro das Viagens ..." p. 113.

⁶⁰

Silva, op. cit., Ferreira to Martinho de Melo e Castro, Barcelos, 14-XI-1786, pp. 125-127.

⁶¹

Ibid., Ferreira to Martinho de Melo e Castro, Barcelos, 31-X-1787, p. 134.

with Ferreira's efforts during the expedition's first four years in Brasil, and especially the nearly one year delay in leaving Pará for the interior. In Vandelli's instructions to Ferreira, the naturalist was told not to delay leaving Pará after making the first shipment of specimens. The Minister in Lisbon did not accept Ferreira's reports on the Governor of Para's inability to provide support to the expedition.

Ferreira's reply of 11 Ferbruary, 1788 is full of sadness over the Minister's admonition but also one of disappointment at not being recalled to Lisbon after four and a half years in Brasil. Ferreira had written to Minister Martinho de Melo e Castro requesting recall to Lisbon after three years in Brasil. Instead of being returned to Lisbon the expedition was ordered to proceed to Vila Bela in the Captaincies of Mato Grosso and Cuiabá via the Rio da Madeira. Although expressing a desire to return to Lisbon, and recounting the hazards of the Rio Branco and Rio Negro journeys, Ferreira could not disobey his superior's orders and expressed his "shame for having incurred the disapproval of his
62
Excellency."

By February 1788 Ferreira was resigned to leaving Barcelos for Mato Grosso. He began preparations for the journey by requesting supplies, canoes, and men from Governor João Pereira Caldas. He needed Indian rowers and "preparadores," food for at least eight months,

various equipment for his artists and a replenishment for his portable pharmacy. In addition to his material supplies, he requested the Governor to assign a chaplain to the expedition, explaining that such a journey would be "morose" and risky, and that there was a need for a priest to administer "spiritual remedies."⁶³ The expedition was assigned a priest for the journey from Barcelos to Vila Bela. A listing of the personnel of the expedition to the Mato Grosso included Fr. Antônio de Santa Catarina, of the Carmelite Order.⁶⁴

From the time Ferreira received his orders to proceed to Vila Bela until he was ready to go, at least eight months were spent making adequate preparations. Ferreira required soldiers, rowers, hunters, cooks, servants, and porters, as well as an adequate supply of food, medicines and other equipment to make the journey without having to depend on uncertain supplies in the interior. Ferreira left Barcelos on 27 August, 1788 and spent a month travelling to reach the mouth of the Rio da Madeira where it entered the Amazon River. From that point the party travelled up that river, exploring the rivers that flowed into it, making portages at numerous waterfalls, until they reached Vila Bela on 3 October, 1789.⁶⁵

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Pires de Lima, *O Doutor Alexandre ... Ferreira to João Pereira Caldas, Barcelos, 5-II- 1788*, pp. 227-239.

⁶⁴

MB, Ferreira Papers, Maço 5, no. 8, "List of Persons who accompanied the naturalist ... to Vila Bela ...

⁶⁵

"Roteiro das Viagens ...," pp. 113-114.

This journey of thirteen months is one of the least known and studied expeditions of the Brazilian interior. Considering the numerous explorations of the smaller rivers flowing into the Rio da Madeira, and his own the thirteen-month journey, there is very little documentary evidence of Ferreira's daily activities. From Ferreira's Roteiro it does not appear that the expedition had a schedule to meet. He may have had orders to explore the rivers flowing into the Rio da Madeira in the same manner he explored the small rivers in the Rio Negro and Rio Branco regions.

In October 1788 the party explored the Rio Aripuana for thirty-five leagues, following along the Rio das Amaras for twenty-three leagues, and also travelled nine leagues along the Rio Manicoré.⁶⁶ Numerous stops were made for rest, portages, and to allow the artists to prepare watercolors of the many waterfalls along the course of the river. During these stops Ferreira pursued his collections of flora and fauna, wrote his observations on the natural history of the region. Although the published Roteiro of Ferreira's nine years in Brasil includes the Rio da Madeira journey, there is a detailed published "Diary," containing historical notes of the Portuguese settlements along the river, the flora and fauna and the nature of the river itself.⁶⁷

⁶⁶

Ibid.

⁶⁷

See João Ribeiro Mendes, Dr. Alexandre Rodrigues Ferreira-Geógrafo (Ensaio de Síntese); tese apresentada ao X^o Congresso Brasileiro de Geografia em 1944 (Rio de Janeiro, 1945).

In this "Diary of the Rio da Madeira" Ferreira's observations of the thirteen month journey contain a sense of awe at the huge territory his party explored. At the same time he felt the intense necessity to note the minute details concerning the color of the river water and why only rain water should be consumed, as well as the dangers of river currents. In making these notes during the journey Ferreira always intended to revise them later utilizing a more complete library in order to complete his work on the flora and fauna as well as a description of the Portuguese settlements on the river.

Ferreira was a careful enough observer to note the region's wealth of forest resources even though it does not appear that the party made long penetrations into the forest. He felt that the forest itself was "clean" in comparison to the growth along the banks of the Rio Negro which was exceptionally dense and impeded passage. He noted at least forty different species of palm trees that could be commercially exploited.

With the difficulties of such a long journey even Ferreira felt that at times he was unable to make minute descriptions of every specimen collected because of the lack of facilities en route to Vila Bela. During the journey some shipments were sent to Lisbon utilizing transportation going from Vila Bela to Belém do Pará on normal commercial

68

Ibid., Letter from Ferreira to Martinho de Melo e Castro, Cachoeira de Santo António do Rio da Madeira, 30-I-1789, p. 29 (also published by Carlos Franca, Bol. Soc. Broteriana, vol II, 1922).

69

Ibid., p. 42.

or military journeys. Ferreira reserved the time to study these specimens for the future after his return to Lisbon as he did not wish to make errors which "posterity would not forgive."

70

There is no doubt that the thirteen months travelling to Vila Bela from Barcelos took its physical and emotional toll among the members of the expedition. There was no further mention of the priest in the diary of the expedition, and it may be supposed he fulfilled his duties as a member of the party and did not die en route. Just a few days after arriving in Vila Bela, the gardener, Agostinho Joaquim do Cabo, died. Although he died of a fever, the accumulated effects of the journey, fatigue and dysentery also took their toll. The death of Cabo, whom Ferreira had known since his years as an assistant in the Ajuda Palace Gardens, must have deeply saddened Ferreira. An inventory of Cabo's property was made, the valuable items sold, and the money held for his family.

The inventory itself is a reflection of the range of items an individual could successfully take with him in the tropics during that period as well as an example of the gardener's own tastes. There are notations for velvet breeches, lace shirts, silver forks and cheeses, as well as the very necessary items such as hammocks, mosquito nets and pistols. Included in the inventory are personal books such as a "Portuguese

71

Dictionary," and several religious books. Considering Ferreira's request for a priest to accompany the expedition and Cabo's interest in religious books it cannot be said that the men of the Portuguese Enlightenment were radical atheists.

Ferreira and the remaining three members of the original party rested and enjoyed the hospitality of the Governor in Vila Bela, Luis de Albuquerque de Melo Pereira e Cáceres. It was there that Ferreira was able to use the Governor's library and perhaps had the opportunity to discuss his expeditions and adventures, confide in the Governor his successes and disappointments, and even reminisce about the Lisbon they left behind. Also in Vila Bela Ferreira had the opportunity to renew his acquaintance with one of his colleagues at the University of Coimbra, Joaquim José Cavalcanti de Albuquerque Lins, Secretary of Government
72
of the Mato Grosso administration.

In addition to using Vila Bela as an administrative base for his expeditions in the Mato Grosso, Ferreira had a place to work and study

71

MB, Ferreira Papers, Maco 5, no. 9, "Inventário dos bens do falecido Agostinho Joaquim do Cabo, Jardineiro Botânico," which includes the following books:

Hum Livro mestre da vida
Hum Diccionario Portuguez
Humas Horas Marianas
Hum Livro intitulado Plano de Huma obra Pia
Hum d^o trata das obrigações das pessoas do mundo

72

Pires de Lima, O Doutor Alexandre ... Ferreira to Martinho de Melo e Castro, 1-IV-1790, Vila Bela, pp. 297-299.

his collections prior to sending out shipments when he was still uncertain of his eventual recall to Lisbon. In Vila Bela, Ferreira wrote a detailed natural history study, "General and Specific Observations of the Class of Mammals in the Territories of the Amazon, Negro and Madeira Rivers..." constituting twenty-two manuscript notebooks, dated 28 February, 1790, 73 Vila Bela, and signed by Ferreira. This scientific work has chapters on the "peixe-boi," or the manatee common to Caribbean, West African and northern South American fresh-water areas (known as Trihechus manatus in the Amazon), and the "boto," or fresh water dolphin (Inia geoffrensis) also common to the Amazon.

Since Ferreria was able to supplement his portable library with the more complete one of the Governor, there appear many references to works he had not been able to consult after leaving Lisbon. In Vila Bela he was able to read Buffon's Histoire Naturelle, a major reference work utilized by most naturalists and amateurs during the eighteenth century and La Condamine's Voyage sur la Rivière des Amazones (Paris, 1745) which was referred to in the Diary of Chief Judge Sampaio. Ferreira may have also been able to consult the diaries and manuscript notebooks of the Governor Luis de Albuquerque de Melo Pereira e

73

MB, Ferreira Papers, Maço VII, no. 39, notebook no. 10, "Observacoes Geraes e Particulares, sobre a Classe de Mammaes observados, nos Territorios dos Rios das Amazonas, Negro e da Madeira; Com as descripções circunstanciadas que, de quazi todos elles, derão os antigos, e modernos Naturalistas, e principalmente com a dos Tapuyas," Vila Bela, 28-II-1790. Also published in Revista do Instituto Histórico e Geografico da Bahia. No. 60 (1934), pp. 5-217.

Cáceres, as the latter had a serious interest in the natural history of
74
the region where he had lived for seventeen years.

Ferreira's travels were not continuous. In Vila Bela all of the members of the expedition needed rest. Even on the canoe trip from Barcelos to Vila Bela there was a five month stop at the Santo António Waterfalls to rest, collect specimens, make reports, and replenish their food supply. From the time the party arrived in Vila Bela in October 1789 until April 1790, it seems unlikely there were any major expeditions. In April 1790, Ferreira received a letter from the Minister Martinho de Melo e Castro, written while the explorer was travelling from Barcelos to Vila Bela. Although the Minister was not one to lavish praise or reverse his opinions, his words to Ferreira were one of the few official recognitions the explorer received while in Brasil:

From the Papers, and Reports that His Excellency
[Governor João Pereira Caldas] sent to me, and
particularly by your work on Natural History, I
see that Your Worship has well employed your time in
the journeys you have made in those remote Lands;
and you have seen them ⁷⁵with the eyes of an exact
and judicious observer.

74

Freyre, op. cit., vol. 1, pp. 107-111 and 159.

75

Silva, op. cit., Melo e Castro to Ferreira, Palácio de Queluz, 30-XI-1788, pp. 137-138:

Pelos Papeis, e Relações que V. Ex^a. me remetteo,
e particularmente pela sua Obra de História Natu-
ral, vejo que V. M. tem empregado muito bem o seu
tempo nas Viagens que tem feito nesses remotos
Paizes; e que os tem visto com olhos de hum exacto,
e judicioso observador.

Replying to the Minister's letter, Ferreira humbly thanked him for his recognition and informed him of plans to explore the Cuiaba and Paraguay Rivers as well as examine a grotto which had been discovered
76
during the 1781 visit of the demarcation team.

The first grotto that Ferreira and his assistants examined was not the one which he mentioned to the Minister; instead it was one which had been discovered in 1778 by a party of "bandeirantes" searching for gold. Ferreira examined the original report of the discovery in the Cuiabá archives and spent two weeks travelling overland with his assistants to reach the "Grotto of the Jaguars" (Gruta das Onças). In a little memoir concerning the journey and the grotto, Ferreira explained that the name of the grotto originated in the bandeirantes' discovery of jaguar tracks deep inside the grotto. Ferreira described the geological formation of the grotto in detail, noting the color of the rocks, the height, the length as well as the great natural beauty of the cave as seen by torchlight. Ferreira caught a severe cold after wading in the below freezing water of the grotto and was ill for several months in Cuiabá. It is possible that his weakened condition made him more susceptible to
77
colds and fevers. The memoir was dated 5 October, 1790, some months after Ferreira had left Vila Bela.

76

Pires de Lima, O Doutor Alexandre . . ., Ferreira to Martinho de Melo e Castro, Vila Bela, 16-IV-1790, pp. 300-301.

77

Dr. Alexandre Rodrigues Ferreira, "Viagem á Gruta das Oncas," RIHGB, 2^a ed., vol. XII (Rio, 1874), pp. 87-95.

Ferreira and his party remained in the ~~Quibá~~ Cuiabá area until February 1791 and then began to travel extensively in the interior towards the frontier areas of the "fortress" of the Príncipe da Beira and the Presídio of Nova Coimbra, visited by the 1781 demarcation team. The route of the expedition and the exact places the party rested can only be guessed at for the period they were out of Cuiabá and Vila Bela. The entries in the Roteiro are sketchy, and there are few extant letters from that period. From sometime in the Spring of 1790 until late June 1791 there are considerable gaps in the expedition's activities and there is no extant diary for that period.

From Ferreira's Roteiro it is evident that a great deal of territory was covered both overland and by canoe in the interior. By March 17, 1791 he was en route to the Presídio of Nova Coimbra, arriving there by the 30th of that month. During April 1791 the expedition explored the upper reaches of the Paraguay River as well as sections of the Jaura
78 River. Sometime during this expedition Joaquim José Codina, one of the artists, died and was buried at the Barreiro do Sitio dos Garujus. This left Jose Joaquim Freire as the only remaining member of the party to accompany Ferreira on the return trip to Lisbon.

Although Ferreira sent samples of gold dust and gold nuggets to Lisbon he did not apparently visit any of the diamond mining areas. Both regions were forbidden areas under military control in order to prevent

smuggling. Initially Ferreira planned to be out of Vila Bela for several months and leave for Pará in June of 1791.⁷⁹ In order to complete the last months of his planned expeditions in the interior Ferreira requested the Governor of Cuiabá, João de Albuquerque to provide his party with a considerable amount of supplies including five large canoes, rowers⁸⁰ and soldiers. While he was still in the Cuiabá region Ferreira presented a memoir, in the form of a letter to the Governor concerning his visit to "Hell's Grotto" (Gruta do Inferno), which was the one he had intended to explore and mentioned in a letter written to the Minister Martinho de Melo e Castro some thirteen months earlier.

Ferreira knew the grotto had been explored by the engineer and explorer Ricardo Franco de Almeida Serra in 1786 (while Ferreira was still in Barcelos).⁸¹ Ferreira intended to make a comparison of the two grottos, but found the second one more spectacular in its own way. The grotto was totally dark, making it necessary to use torches to walk inside. Ferreira noted the strange reaction the light caused in his vision after exiting the grotto. The absolute darkness was frightening even to Ferreira and he agreed that "Hell's Grotto" was an appropriate name. The artists returned three times to complete the drawings of the grotto.

79

Pires de Lima, O Doutor Alexandre . . ., Ferreira to Martinho de Melo e Castro, Vila Bela, 21-V-1790, pp. 312-317.

80

Ibid., Ferreira to João de Albuquerque, Cuiabá, 20-II-1791, pp. 340-343.

81

See Virgílio Corrêa Filho, "Ricardo Franco de Almeida Serra RIHGB, vol. 243 (Rio, 1959), pp. 3-19.

For Ferreira its absolute emptiness, and lack of life, even of bats,
82
was its splendor and horror at the same time.

In late June 1791 Ferreira returned to Vila Bela. He rested there and prepared for the return trip to Belém do Pará. At this point he knew he would be en route to Lisbon within a few months. Most likely he began preparing shipments as well as studying some of his specimens and making notes. More than anything else Ferreira probably needed to rest after the strenuous Mato Grosso expeditions. It is difficult to determine exactly what specimens the expedition collected in the Captaincies of Mato Grosso and Cuiabá. In a letter to the Minister Martinho de Melo e Castro, after returning to Vila Bela, Ferreira noted that he had complied with the official orders to visit the frontier areas and had concentrated on making collections of mineral specimens.
83

It was three more months before Ferreira and Freire would leave Vila Bela for Pará. No doubt it was necessary to again prepare for a long expedition by gathering supplies, assigning rowers and soldiers as well as making provision for re-supply along the way, since the party would again be travelling via the Rio da Madeira. Ferreira and Freire left Vila Bela on 3 October, 1791 and arrived at Belém do Pará on 12 January, 1792, making the journey in three and a half months compared

82

"Gruta do Inferno. Descripcao feita pelo Dr. Alexandre Rodrigues Ferreira em Cuiabá," RIHGB, vol. IV, (Rio, 1863), pp. 363-367.

83

Silva, op. cit., Ferreira to Martinho de Melo e Castro, Vila Bela, 26-VI-1791, pp. 143-144.

with the thirteen month trip from Barcelos to Vila Bela. Since no more side trips, specimen collecting or reporting was required, all that Ferreira and Freire could have been concerned with, was a quick trip to Belém do Pará, and from there, to Lisbon.

Once again in Belém do Pará, Ferreira was able to write to the Minister Martinho de Melo e Castro, report his arrival and mention some of the positive changes which had taken place in Pará since the time he had first arrived there in 1783. He also renewed the request he had made nearly two years earlier in Vila Bela, for permission to visit
84
Bahia and see his parents. For some inexplicable reason he never received permission to visit Bahia, then returned to Lisbon shortly thereafter.

During his later stay in Belém do Pará Ferreira had married Germana Pereira da Cunha e Queirós, daughter of Luis da Cunha, the
85
plantation owner who Ferreira knew from his visit of 1783-1784. Brazilian historians and especially some biographers of Ferreira tended to make this event into an especially romantic one, imparting noble gestures on the part of Ferreira for marrying a poor girl with no dowry, or suggesting he had fallen in love with her when he had first seen her as a child and held her in his memory during the long years in the

84

Ibid., Ferreira to Martinho de Melo e Castro, Belém do Pará, 6-II-1792, pp. 144-146.

85

Ibid., Luis da Cunha to Martinho de Melo e Castro, 1-X-1792, pp. 146-147.

86

interior. It is possible that Cunha saw that Ferreira was likely to go far in the Royal Service, was of a good family and therefore a good prospect as a son-in-law. At the same time Ferreira may have felt that it was a proper time to marry and marriage to a daughter of a prosperous planter was probably acceptable to his family in Bahia and could not hurt his career.

Ferreira did at least have the hint if not the actual promise of a fine career ahead of him upon the eve of his return to Lisbon. Earlier when he was en route to the Mato Grosso, the Royal Academy of Sciences of Lisbon had elected him as a "Sócio da 1^a. Classe," on 30 January, 1789. Thus, from corresponding member in 1780, he had now been raised to the highest ranks of the intellectual-scientific elite of Portugal; he may, however, have been unaware of this honor since he was not in close communication with Lisbon. A promise or agreement must have existed between Ferreira, Vandelli and Martinho de Melo e Castro.

87

Certainly Vandelli had a vested interest in the success of Ferreira's expedition, since it would prove the value of the great investment the Crown made in the sciences at the University of Coimbra and the Ajuda Palace Gardens, as well as enhance his own prestige among his contemporaries in the major European scientific centers. In presenting

86

Virgílio Corrêa Filho, Alexandre Rodrigues Ferreira: Vida e Obra do Grande Naturalista Brasileiro (Rio, 1939), pp. 143-146.

87

ACL, Secretaria, Dossier of Dr. Alexandre Rodrigues Ferreira.

a series of ideas on reforms in the teaching of the sciences at the University of Coimbra as well as proposing positions for graduates with science degrees, Vandelli mentioned the necessity of making effective use of the facilities of the Ajuda Palace Gardens, Natural History Museum and Chemistry Laboratory. He felt that a teaching chair should be established at the Museum in Natural History and that "Dr. Alexandre Ferreira who is presently in Pará could properly carry out the duties of such a chair..."⁸⁸

Whether or not Ferreira was aware of Vandelli's efforts on his behalf, the naturalist himself had some notion of what sort of official position his efforts in Brasil merited. Just before returning to Lisbon Ferreira wrote to the Minister Martinho de Melo e Castro saying that he "had fixed his gaze upon the Junta de Comércio," hoping for Royal favor, and reminding the Minister that while a student at the University of Coimbra he did not cause any trouble.⁸⁹ It was not until 1807 that

88

ANTT, Ministério do Reino, Maço 519, "Memoria sobre a Faculdade Filosofica da Universidade de Coimbra," (no date):

E havendo na Ajuda hum dos mais ricos Muzeos de Historia Natural, Jardim Botanico, e Laboratorio Chymico seria conveniente, q̃ o publico se aproveitarse destes grandiosas estabelecimentos erigindo hũa Cadeira de Historia Natural, e Demonstração de Chymica . . .

O Dr. Alexandre Ferreira q̃ esta presentente.^{te} no Pará desempenhará bem tal Cadeira, e a Demonstração de Chymica o Feijó, q̃ está nas Ilhas de Cabo Verde.

89

, Silva, op. cit., Ferreira to Martinho de Melo e Castro, Belém do Pará, 6-II-1792, pp. 144-146.

Ferreira received the appointment to the Junta de Comércio, but other honors came his way.

Even at the time Ferreira left for Brasil in 1783 he used his "connections" in the government to obtain an ecclesiastical appointment for his recently ordained brother, Bartolomeu Rodrigues Ferreira, in their native city of Bahia.⁹⁰ Later on, while Ferreira was in Barcelos, he evidently had some contact with his brother Bartolomeu and made further requests on his behalf. He asked the Minsiter Martinho de Melo e Castro to have his brother's ecclesiastical stipend doubled because the cost of living had risen considerably in Bahia.⁹¹ Obtaining favors for one's family was not extraordinary for individuals established in the Royal Service or for the nobility, but the favors granted to Ferreira's brother were not based on the latter's merit, rather they proceeded from the naturalist's entree with the Minister for Overseas and Marine.

Considering Ferreira's nearly ten years in the Brazilian interior, it is no wonder that he was anxious to return to Lisbon and obtain the rewards due a man who had successfully completed an arduous assignment. The nature of his assignment had many facets, and it is difficult

90

MB, Ferreira Papers, "Observações Gerais ..." referring to the patronage enjoyed by Ferreira from Martinho de Melo e Castro:

...Contemplou o Irmão do Naturalista, em hum dos Canonicatos da sede Archiepiscopal da Cidade da Bahia. Honrou-o, e protegeu-o por obras e por palavras.

91

Pires de Lima, O Doutor Alexandre ..., Ferreira to Martinho de Melo e Castro, Barcelos, 20-II-1787, pp. 202-204.

to determine those he was more successful in carrying out as well as the ones he was unable to devote as much attention to as he would have liked. In examining his detailed reports, memoirs, collections of statistics, historical notes from colonial archives, transcriptions of oral interviews with Portuguese settlers, ex-soldiers, Indians and his careful notations on which officials and Indian chiefs had assisted the expedition, one can see the tremendous scope of his interests. Perhaps the intent of the expedition to Brasil was to write a complete history of the Portuguese settlements in the interior, as Ferreira often mentions. If so, then such a work may have had the dual purpose of a serious scientific study and also serve as a political justification to Portuguese claims in the Spanish-Portuguese and Portuguese-Guiana frontier areas. Often in the correspondence of the luso-brasilian naturalists in Africa, the two Silvas in Moçambique and Angola, there are references to plans for a complete natural history of the areas they explored.

The reports Ferreira wrote for the Governors of Pará, São José do Rio Negro, Mato Grosso and Cuiabá had the immediate value of providing detailed information on remote regions as well as the long-range or strategic information about the natural resources as well as capabilities for future settlement and defense. In a sense Ferreira made inspection visits, yet he was without power to immediately correct the errors in agriculture and government he observed. Yet he was able to note the many changes which had taken place in Pará concerning the treatment of Indians during his absence. Perhaps the Governors made

serious use of his suggestions, although it is possible that they waited for official orders to come from Lisbon.

Ferreira arrived in Lisbon in early 1793 after an ocean voyage of eighty-nine days; he was unable to land the first day in the Tagus Estuary because of bad weather and disembarked the following day. Minister Martinho de Melo e Castro, anxiously awaiting his arrival, allowed Ferreira to call upon him almost immediately after arriving in Lisbon. Ferreira's description of this encounter with his superior in Castro's offices in the Quinta do Meio on Ajuda Hill, is contained in a letter to the Governor of Pará, Martinho de Sousa e Albuquerque.

This letter, albeit incomplete, is a gem because it reflects the close relationship Ferreira enjoyed with the Royal Governors in Brasil. It also demonstrates the obedience Ferreira held for Castro, who embodied the will of the Portuguese Crown and was the chief patron of the sciences in Portugal. In recounting his audience with the Minister for Overseas and Marine, Ferreira says:

I effectively disembarked at eight o'clock the following day and immediately took myself to His Excellency who hardly delayed in speaking to me: I've come, I said to him, more humble and lowlier than a snake, to receive the punishment for my omissions. He received me and spoke to me in such a way, that I was confounded. He showed himself to be in sympathy with my efforts, and seemed to me less deaf than I expected he might be, at the ear of such an important Minister. He then asked me about Your Excellency's health, and about Pará he told me all the bad things he could, how the ungrateful are doing. In the same manner he went on, Your Excellency, to enumerate what

Para was before Your Excellency, Indians free
in name (he said) and slaves on the works:
Governors in love with services for the few,
and not of the Public...⁹²

Perhaps the conversation turned to matters of Ferreira's career, his recent marriage, or of his other adventures in Brasil, though they did
93
discuss economic questions relating to the Amazon.

If his discussion with the Minister turned to Ferreira's career and honors due him, he did not have long to wait. In the same year he returned he was appointed as an official of the Ministry of Overseas and Marine. This appointment was a sinecure because Ferreira worked at the Ajuda Palace Gardens and Natural History Museum as he had done before leaving for Brasil. With the death of Júlio Mattiazi in September 1794, Ferreira was named interim Vice-Director of the entire scientific establishment of the Ajuda Palace Gardens; the formal decree, however,

92

MB, Ferreira Papers, Maço 5, no. 10, fragment of a letter from Ferreira to the Governor of Pará, Martinho de Sousa e Albuquerque, c. February, 1790, Lisbon:

Desembarquei com effeito pelas 8 h. da manhã do seguinte dia, e dirigido me immediatamente a S. Exa., que nada tardou em me fallar: Aqui venho lhe disse eu, mais humilde e rasteiro q̃ hua cobra, a receber o castigo das minhas omisoens, recebeo me e falou me de hum modo, q̃ me confundio. Mostrou compadecer se dos meus trabalhos, e pareceo me menos surdo de q̃ eu esperava q̃ fosse, a orelha de hum Ministro delegado. Perguntou me logo pela saude de V. Ex^a., e pelo Pará lhe disse o mal que pude, como fazem os ingratos. Laia e passou, S. Ex^a. a enumerar o q̃ era o Pará antes de V. Ex^a. Indios Livres no nome (dizia elle) e escravos nas obras: Governadores apaizonados pelo Servico dos Particulares, e não pelo do Publico ...

93

Ibid.

naming him as Vice-Director of the Ajuda Palace Gardens, Museum, Laboratory, and Design House, was not signed until a year later on 11 September, 1795.⁹⁴ In his position as Vice-Director of the Museum, with its library, gardens, chemistry laboratory, artist's workshops and staff, he was finally able to begin a study of the specimens sent back from Brasil as long as twelve years earlier. In this new position he was often called upon to give an official opinion of natural history specimens offered for sale to the Crown.⁹⁵

His duties at the Museum ranged from the purely administrative, as in supervising construction of new cabinets, to protecting the collections from haughty nobles who wanted to borrow specimens from the Royal Museum without the authority of the Prince Regent. He was able to study the writings of his colleague and "countryman," Dr. Joaquim Velloso de Miranda, and may have also had the opportunity to study the collections made by Feijó and the two Silvas in Africa.⁹⁶

94

Manuel José Maria da Costa e Sá, "Elógio do Doutor Alexandre Rodrigues Ferreira," História e Memórias da Academia Real das Sciencias de Lisboa, tomo V, parte 1^a. (Lisboa, 1817), p. lxiii.

95

MB, Ferreira Papers, uncatalogued, no. 5, 17-X-1795:

Sua Alteza Real o Principe Nosso Senhor manda remeter a V. M^{ce}. o Raconte junto que lhe offreceo o Napolitano Felipe Ruzzi para informar se tem alguma raridade como o Mesmo Senhor lhe ordenado.

96

MB, Ferreira Papers, Maço 10, no. 115, letter from Ferreira to Vandelli, 19-VI-1795 at Alcocena (see Appendix for text).

Within a short time Ferreira's wife came from Para and they lived on the Palace grounds in a house allowed the Vice-Director. The Habit of the Order of Christ, which Ferreira had asked to be conferred in 1783 before leaving for Brasil was bestowed by an order of 8 July, 1794, before he was named interim Vice-Director of the Ajuda Palace Gardens and Museum. The Decree of the Crown mentioned his five years' work at the Gardens from 1778-1783 without salary, his other official posts such as custodian of the Royal Quintas of Queluz and Bemposta, though especially his journeys in "The State of Pará with the difficult commission of being there the first Portuguese Subject, who exercised the duty of Naturalist ..."⁹⁷ With recognition and reward from the Crown, it can be seen that the sciences enjoyed the highest Royal patronage, and that scientists would also be rewarded for services to the Crown.

From this point Ferreira's work appears to have been conducted entirely at the Natural History Museum. He does not seem to have been active in the functions of the Royal Academy of Sciences of Lisbon as there are no listings for further contributions of his memoirs, though he may have attended its meetings. Throughout the late 1790's and early years of the nineteenth century Ferreira was both physically and mentally able to work actively in his duties as Vice-Director of the Ajuda Museum and Gardens. Among the extant Ferreira papers there is a

⁹⁷

Sá, "Elógio ..." op. cit., pp. lxxi-lxxii.

considerable amount of official correspondence with the Overseas Ministry, with his immediate superior, the Director of the Gardens, Domingos Vandelli, but there is no foreign correspondence. Much of the correspondence addressed to Ferreira concerns shipments of plants, seeds and occasionally chemical analysis of indigo or metals.

From this correspondence it can be seen that the Ajuda Palace Gardens served as a clearing house or entrepot between Portugal, its Overseas Territories and northern Europe (especially England's Kew Gardens in London). The Vandelli papers more so than Ferreira's demonstrate the connections maintained with other European institutions and individuals concerned with exchanging specimens and seeds only obtainable from Africa or Brasil. Lisbon was the vital intermediary for northern european naturalists who wanted to study rare specimens from tropical Brasil or Africa.

When shipments of live cinnamon and other trees arrived from England, the future Overseas Minister D. Rodrigo de Sousa Coutinho, wanted special care taken to preserve them so that they could later be shipped to Brasil and cultivated there. The Overseas Ministry maintained close contact with Ferreira regarding the cinnamon trees as he was requested to prepare exact instructions for their care during the ocean voyage and also to prepare instructions from printed sources for Royal Governors in Brasil to promote the cultivation of cinnamon as a

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useful export. Ferreira's opinion must have been highly regarded at the Overseas Ministry because Domingos Vandelli had some doubts about the safe transport of the cinammon trees during the Winter to Brasil, proposing the trees be held over to the Spring; the Ministry, however, wanted Ferreira's "impartial feeling" on the matter. Since Ferreira's duties included supervision of the Ajuda Chemistry Laboratory, the Overseas Ministry's requests for chemical analysis of mineral samples, such as lead, were directed to him.

Ferreira served as an intermediary in promoting the economic development of the Overseas Territories. Cinnamon might originate in Ceylon, but it was purchased from a dealer in London or traded for some rare specimen with Kew Gardens. One especially important product was tobacco. Brasil exported tobacco to West Africa for slaves. Hypólito José de Costa Pereira, before falling from official grace, sent a variety of seeds to Lisbon from North America, including a variety of Virginia tobacco. The Overseas Ministry ordered Ferreira to cultivate the Virginia tobacco in the Ajuda Gardens for the eventual goal of having the seeds produced there planted in Brasil. Other shipments of seeds

99

MB, Ferreira Papers, uncatalogued, no. 13, João Felipe da Fonseca to Ferreira, 23-X-1797, and no. 14, 4-XI-1797.

100

MB, Ferreira Papers, uncatalogued, no. 16, 1-XII-1797.

101

MB, Ferreira Papers, uncatalogued, no. 20, 14-VI-1798.

102

MB, Ferreira Papers, uncatalogued, no. 33, 16-V-1799.

came to Lisbon from Pereira in Philadelphia. He sent pine tree seeds
103
as well as other North American native species. Promotion of pine
tree forests in Portugal was of major interest to the Crown. It is not
certain whether species of North American pine were transhipped to
Brasil via the Ajuda Palace Gardens.

During this period Ferreira probably did not have direct contact
with the exiled Abade Francisco José Corrêa da Serra whom he had
known since the inception of the Royal Academy of Sciences of Lisbon in
1779. Ferreria may have met him after his return in 1793, but Corrêa
da Serra fled to England in 1795, falling into official disgrace after aid-
ing the French Botanist Auguste Broussonet. Only D. Rodrigo de Sousa
104
Coutinho and the Duque de Lafões maintained contacts with him.
Abade Corrêa da Serra regularly sent seeds to D. Rodrigo de Sousa
Coutinho from Kew Gardens in London. Ferreira was directed to plant
105
the seeds and note their progress.

103

MB, Ferreira Papers, uncatalogued, no. 76, 27-II-1800 and
also, no. 84, 25-VIII-1800.

104

See Leon Bourdon, "Lettres inédites du duc de Lafões à José
Corrêa da Serra (1795-1804), Bulletin des Études Portugaises, nouvelle
série, tome trente-deux (Lisboa, 1971), pp. 71-97.

105

MB, Ferreira Papers, un catalogued, no. 86 and also no 93, with-
out date:

... os Sementes, que de Londres mandou o Abade
Corrêa, para dellas faça o uso que julgou mais
proprio; notando em todo o tempo serem mandados
pelo mesmo Abade Corrêa, para que se veja o zelo
e diligencia com que se occupa de tudo o que
pode ser util á propagação dos conhecimentos
Bottanicos.

As noted, Ferreira was able to examine some of the memoirs that Dr. Joaquim Velloso de Miranda had written in Minas Gerais. It is difficult to determine whether Ferreira had any other contacts with his former colleagues at the Ajuda Palace Gardens during his training period. He did examine the specimens received from Joaquim Jose da Silva in Angola, João da Silva Feijó in Cabo Verde (who later worked with him in Lisbon), and Manuel Galvão da Silva in Moçambique. Ferreira was able to examine some of Silva's memoirs on Angola, but was obliged
106
to return them to Overseas Ministry files.

Although Ferreira was known outside of Portugal he was not as well known as Vandelli. He did have contacts with foreign visitors. He probably met August Broussonet in 1795 when the French botanist lived in apartments of the Royal Academy of Sciences of Lisbon and visited the Ajuda Palace Gardens. H. J. Link, the professor from the University of Rostock, who visited Portugal from 1797 to 1799, knew Ferreira, Vandelli, and Feijó. He disliked Vandelli's "pretensions" and mentioned that Ferreira had been in Brasil for many years and suffered from the
107
gout. Domingos Vandelli would later have some correspondence and

106

MB, Ferreira Papers, uncatalogued, 13-VII-1799.

107

H. J. Link, Voyage en Portugal Depuis 1797 Jusqué en 1799, t. 1 (Paris, 1803), p. 301:

Le second conservateur de ce cabinet et du jardin, est Dom Alexandre Rodrigues Ferreria, dont on ne peut dire autre chose sinon qu'il a été longtemps au Brésil, et qu'il est gotteux.

dealings with H. J. Link's patron, Count Hoffmannsegg, author of a major botanical work, Flor du Portugal (1809).

The interest of the Crown was strong in developing the Ajuda Palace Gardens and Natural History Museum into a major European showplace. As early as the 1770's during the period of King Jose I (1750-1777), and his Prime Minister the Marques de Pombal, the latter envisioned the Ajuda Palace Gardens as the equal of any he had known in London, Paris or Vienna. The Prince of Brasil, D. João, since 1792 Prince Regent, had a keen interest in the patronage of the sciences in Portugal. Ferreira was called upon to evaluate a list of potential Crown purchases for the Natural History Museum's collections. The Prince Regent had been praised for patronizing the sciences and for promoting the expedition to Brasil. The personal interest of the Prince Regent in the sciences must have been important to Ferreira as the Ajuda Palace Gardens and Museum belonged to the Prince himself. And when the Prince Regent planned a visit to personally inspect the "Saltpeter, Cinnamon, and additional products just arrived in the convoy

See Balthazar da Silva Lisboa, Discurso histórico e politico, e economico dos Progressos e estado actual da Filozofia Natural Portugueza, acompanhado de algumas reflexoens sobre o estado do Brasil, offrecido a Sua Alteza Real O Serenissimo Principe Nosso Senhor ... (Lisboa, 1786), pp. 38-39.

109

from America. . . , Ferreira had to be prepared to address the Prince Regent and his entourage.

Ferreira's family grew almost at the same time that honors and responsibilities came his way. Records show his son, Germano, was baptized 9 September, 1795, a daughter Maria das Mercês was baptized 4 October, 1801 by Bartolomeu Rodrigues Ferreira in Lisbon (Ferreira's brother whom he had earlier assisted in obtaining ecclesiastical posts in Bahia), and a second daughter, Guiomar Joaquina, born 13 September, 1807 and baptized 15 September, 1807, for whom Domingos Vandelli and
110
"Our Lady of Mercy," were godparents. With one child in the family

and another on the way, Ferreira was awarded another handsome sine-cure in the form of an appointment as "Sellador mor" of the customs
111
house of Maranhao. Six years later, on 24 June, 1807, several months before his third child was born, Ferreira was named to a post on the Real Junta do Comércio. As has been mentioned Ferreira asked for this post from Martinho de Melo e Castro as a reward for his services in

109

MB, Ferreira Papers, uncatalogued, no. 43., 11-VII-1799:

O Ilmo. e Exmo. Sor. D. Rodrigo de Souza Coutinho
manda participar ao S^{or}. D^{or}. Alexandre Rodrigues
Ferreira, que S. A. R. o Principe Nosso Senhor tem
determinado ir sabbado ao Muzeo, para ver o Salitre,
Canela, e mais Productos, que vierão agora no
Comboy da America.

110

See Pires de Lima, O Doutor Alexandre . . ., pp. 400-401, Pires de Lima, "Ainda o Dr. Alexandre," Anuário da Sociedade Broteriana, ano XX (Coimbra, 1954), pp. 11-14, and Rodolfo Garcia, op. cit., p. 8 and p. 31.

111

ANTT, Chancelaria de D. Maria I, L. 65, fl. 99, "Mercê do lugar do sellador mor da alfandega de Maranhão . . . 400\$00 mil reis. . ."

Brasil.

By this date the appointment as a deputy on the Real Junta do Comercio must have had little meaning to Ferreira other than the salary it provided. He immediately requested permission from the Prince Regent to allow Domingos Vandelli to receive the nomination in his place and to exercise his voting functions at the meetings of the Real Junta do Comércio as his health was poor.¹¹² It is extremely difficult to determine when Ferreira ceased to be active and merely collected his various salaries (if they were collected at all). Although Ferreria's characteristic signature appears on many documents, it becomes increasingly weaker after 1807, indicating failing health.

Success in his work, approval and recognition in Court circles as well as financial security with official appointments no doubt brought Ferreira satisfaction and at the same time created enemies. Felix de Avellar Brotero (1744-1828) was a priest and a highly competent botanist, but assuredly an enemy of Ferreira. When H. J. Link met Brotero during his Portuguese visit of 1797-1799 at the University of Coimbra he noted Brotero's objections to Ferreira's appointment as Vice-Director of the Ajuda Palace Gardens, saying that he had obtained the post due to Vandelli's influence and that Ferreira was "uneducated."¹¹³

¹¹²

ANTT, Junta do Comércio, Maço 59, no. de ordem, 113, fls.152 and 159.

¹¹³

Link, op. cit., vol. 1, in mentioning Brotero, p. 392:

Vandelli l'éloigna de Lisbonne, parce qu'il avait trop de conaissances, et trouva moyen de procurer à D. Alexandre, homme sans erudition, une place qui était dire au merité de Brotero.

Some years later Brotero again voiced a strong desire to have Ferreira's position. Writing to the Conde de Galvêas, João de Almeida Melo e Castro (a close associate of Vandelli) on 6 December, 1810, after Vandelli had been exiled from Portugal for suspected collaboration with the French, Brotero dwelt on Ferreira's supposed incapacity:

Dr. Alexandre [Rodrigues Ferreira], subaltern of Vandelli, and Inspector of the Quintas do Infantado, has been paralysed and in convulsions for three years in bed, as is well known, without hope of recovery, according to the doctors, and in spite of all their advice they cannot persuade him to stay sober, which today seems impossible, in view of the fact that his bloated stomach constantly requires a greater quantity of liquor to stimulate him...¹¹⁴

In spite of Brotero's vivid description, it is difficult to accept the statement of a rival that Ferreira spent his last eight years as a hopeless alcoholic, confined to bed. Only after both Vandelli (1816) and Ferreira (1815) died, Brotero would have the appointment as Director of the Ajuda Palace Gardens. Even then, Ferreira's widow, D. Germana prevented

114

Américo Pires de Lima e J. R. Santos Júnior, "Cartas Ineditas de e Para Brotero," Anuário da Sociedade Broteriana, Ano X (Coimbra, 1944), carta no. 10, Brotero to João de Almeida Melo e Castro, Conde das Galvêas, 6-XII-1810 (original extant in AHU, Reino, Maço 26), pp. 39-41:

O D^r. Alexandre, subalterno de Vandelli, e Inspector das Quintas do Infantado, acha-se ha trez annos convulso e entrevado em hum camma, como he notorio, sem esperanças de restablecim^{to}., conforme dizem os medicos, q̃ apezar de todos os seus conselhos lhe não poderao ja maes persuadir a sobried^e., a qual hoje parece ser impossivel, visto q̃ o seu embotado estomago exige cada vez mais maior quantidade de licores, pa. o estimularem.

him from occupying the house she and her husband had lived in on the grounds of the Ajuda Palace Gardens for some years.

A more objective reconstruction of Ferreira's last years is necessary to strike a balance to Brotero's partisan comments. A main source for Ferreira's biography is the Elegy presented by his colleague Manuel José Maria da Costa e Sá at the Royal Academy of Sciences of Lisbon in 1816, and published in 1817. The Elegy recounted most of the important events in Ferreira's career from the time he arrived in Portugal as a fourteen year old student.

Sá readily stated that Ferreira was in a state of extreme melancholia for a number of years, mentioning that he disliked Court life after so many years in the Brazilian interior, and that he preferred to devote his time to studying natural history specimens, remaining absorbed in his work instead of going out. Sá also mentioned that Ferreria was very unhappy that his "original companions" of the time of "illusions and hopes" had not been fully rewarded for their efforts.

115

The careers of the naturalists Joaquim José da Silva and Manuel Galvão da Silva in Africa will be discussed separately. Yet Ferreira was very much aware of the lack of recognition for the two Silvas compared to his singular success. João da Silva Feijó did return to Portugal after many years in Cabo Verde and H. J. Link mentioned a brief meeting with him.

By 1807, at the time of his appointment to the Real Junta do Comercio, Ferreira's health was declining. Ferreria as well as his assistants were often desparately ill during their journeys in Brasil. Only Ferreria and Freire (who died in 1814) survived the long years in Brasil; their overall health must have been severely impaired. Had the expedition been terminated in 1786 as Ferreria requested, then both Codina and Cabo would have probably returned alive to Lisbon. Cabo died shortly after arriving in Vila Bela, and Codina died while exploring the Mato Grosso with Ferreira and Freire. The extra years in Brasil shortened Ferreira's life expectancy. Of the many diseases common to the tropics, Ferreira suffered skin disorders, gastro-intestinal problems, bacterial infections, amoebic dysentery and possibly nutritional deficiencies. It is possible that he contracted Chagas disease, a debilitating nerve disorder, not immediately fatal. He may have become progressively weaker.

Ferreira's strength and ability to work on his natural history collections after 1807 is moot. In 1808, during the period of the French occupation of Portugal, the private libraries, church holdings, and family possessions of loyal nobles as well as the best specimens and manuscripts from the Ajuda Palace Natural History Museum were taken to France as the spoils of war. The question of the dispersal, loss, misappropriation and irreparable damage which has occurred to Ferreira's specimens, manuscripts and watercolors makes a study in itself. The wealth of these Portuguese collections was known in France,

Germany, Spain and Scandinavia years before Étienne Geoffroy Saint-Hilaire (1772-1844) expropriated these collections for the Paris Muséum d'Histoire Naturelle. Domingos Vandelli exchanged specimens with naturalists from many countries and many foreigners visited Portugal and examined the Ajuda collections.

As early as 1802 the French had offered to exchange botanical specimens with the Portuguese in order to establish a concordance between the classifications of Brazilian flora used at the Paris Jardin des Plantes and the Ajuda Palace Gardens. The intermediary between de Jussieu and Vandelli was D. Rodrigo de Sousa Coutinho, then serving as Minister of Finances, who approved of the idea and encouraged
116
Vandelli to act on the proposal. At about that time some seeds from the Ajuda Gardens were sent to the Jardin des Plantes in order to satisfy a request for specimens from the Portuguese colonies. The request
117
was sent to Ferreria to expedite.

Sir Joseph Banks, President of the Royal Society in London, must have known of the collections through his friendship with Abade Corrêa da Serra, his correspondence and exchanges with Vandelli, and from his letters from Auguste Broussonnet who described the Lisbon collections to Banks in 1794 when he was waiting for permission to go to England.

116

MB, Vandelli Papers, no. 45. D. Rodrigo de Sousa Coutinho to Domingos Vandelli, 23-XII-1802, and no. 45a, from de Jussieu to D. Rodrigo de Sousa Coutinho, Paris, 17-IX-1802.

117

MB, Ferreira Papers, uncatalogued, Secretariat of State, Lisbon, to Ferreira, 23-X-1802.

Although Abade Corrêa da Serra first saw the collections as they arrived from Brasil he may have later seen the collections while he was in Paris. While Baron von Humboldt lived in Paris from 1804 to 1827, he may have examined the Brazilian collections from the Ajuda Palace Museum. He was a friend of both Abade Corrêa da Serra and Étienne Geoffroy Saint-Hilaire.

The inventory of Saint-Hilaire's "selected items" is astonishing because he chose carefully to obtain specimens the Paris Muséum d'Histoire Naturelle lacked. The French were permitted to remove the collections under the terms of the Convention of Sintra under which they withdrew from Portugal. The individual specimens taken comprise part of Ferreira's mineral and geological collections, Brazilian flora and fauna, and items from the African collections as well as specific items from Portugal itself. The Portuguese were able to prevent Saint-Hilaire from seizing as much as he would have liked, as he reported to his colleagues at the Paris Muséum d'Histoire Naturelle, but it is possible that he may have actually removed more specimens than those for which he gave receipts to the Ajuda Palace Museum's Director, Domingos
118
Vandelli.

Ferreira's collections were enormous. Even considering the

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E. T. Hamy, "La Mission de Geoffroy Saint-Hilaire en Espagne et en Portugal (1808)," Nouvelles Archives du Muséum d'Histoire Naturelle, quatrième série, tome dixième, premier fascicule (Paris, 1908), pp. 59-65, "Catalogue des Objects choisis parmi ceux des collections d'Ajuda..." Original extant in Archives Nationales de France (Paris).

specimens that Saint-Hilaire took, those parts remaining in Lisbon and at the University of Coimbra were considerable. At the same time, it should be noted, Saint-Hilaire took only the best. He took specimens of previously unknown and undescribed new world monkeys and some varieties of fresh water dolphins. Saint-Hilaire also had Ferreira's manuscripts in Paris from 1808 until 1814 when they were returned. He could have easily studied both the specimens and Ferreira's Latin descriptions. He had previously studied Nile River Crocodiles when he was in Egypt in 1798 and may have been interested in the alligator specimens Ferreira sent to Lisbon. One of the specimens Ferreira sent of the "boto," or fresh water dolphin, is known by the scientific name of Inia geoffrensis, and another is known as Sotalia pallida; it is not possible to determine which species Saint-Hilaire removed from Lisbon and studied in Paris. It is certain that Ferreira studied these mammals while in the Mato Grosso and Amazon regions.

Some historians have raised the question of rivalry between Ferreira and Vandelli, or of jealousy of Vandelli towards Ferreira. Vandelli sent specimens collected by his former students to his correspondents in northern Europe and utilized their findings to write his own memoirs for the Royal Academy of Sciences of Lisbon. Although Vandelli was most responsible for allowing Saint-Hilaire access to the Ajuda Museum, it is likely that the Frenchman would have obtained the specimens he desired without Vandelli's permission. Vandelli was the

"padrinho" at the baptism of Ferreira's third child, implying a close relationship between the two scientists. Vandelli, more than once utilized Ferreira's collections for his own studies without ever acknowledging Ferreira, as in the case of a specimen of a Brazilian fish, named Loricaria spinosae by Ferreira and sent to Lisbon in 1786. Later Vandelli renamed it L. hystrix and then sent it to Lacepede in Paris. By the mid-nineteenth century this fish was assigned the scientific name of Chaetotomus hystrix, without giving any credit to Ferreira.

119

The subsequent history of the Ferreira natural history collections is unfortunate for any stronger claim of Ferreira to be a major eighteenth century naturalist. The project for removal of Ferreira's manuscripts from Lisbon to Brasil for the purpose of publication was delayed and virtually forgotten, although some memoirs and diaries have been published. The major part of the watercolors have either disappeared into private collections or deteriorated like the manuscripts. There are several listings of Ferreira manuscripts extant in Brasil, though these collections are hardly utilized. Contemporary scientists are only now beginning to uncover and appreciate the botanical collections of Ferreira's Brazilian expedition through the herbarium which still exists

120

119

Carlos França, "Doutor Alexandre Rodrigues Ferreira (1756-1815); História de uma Missão Científica no Brasil no Século XVIII," Boletim da Sociedade Broteriana, vol. I, 2^a série (Coimbra, 1922), pp. 25-26.

120

See Alfredo do Valle Cabral, "Alexandre Rodrigues Ferreira. Noticia das Obras Manuscritas e Inéditas á Viagem Philosophica do Dr. Alexandre Rodrigues Ferreira, Pelas Capitanias do Grão Pará, Rio

in the Paris Jardin des Plantes and is now proving to be a valuable
121
source for updating knowledge of the Amazon flora.

One odd problem in evaluating Ferreira's work is that he did not publish any of his Brazilian memoirs during his lifetime. Insofar as the Rio Negro and Rio Branco as well as the Rio da Madeira Diaries are concerned, a possibility exists that these were never meant to be published. They probably were for the exclusive use of the Overseas and Marine Ministry, the Overseas Council or for Ferreira's own use. Most likely his study of Brazilian mammals, written at Vila Bela in 1790 was meant to be published. Ferreira, however, constantly hoped for a complete library and time to study his collections before publishing anything.

A wealth of material still exists in the known Ferreira papers. Much remains to be studied in terms of eighteenth century medicine, useful descriptions of Indian tribes which have long since disappeared or have altered their customs through the influence of modern civilization as well as descriptions of agricultural practices of the period.

Negro, Mato Grosso, e Cuyabá (1783-1792) Anais da Bibliotheca Nacional (Rio de Janeiro. 1875), vols. I-IV. Also see Edgar de Cerqueira Falcão, "Breve notícia sobre a "Viagem Filosófica" de Alexandre Rodrigues Ferreira (1783-1792)," Revista de História, vol. XL, no. 81 (São Paulo, 1970), pp. 185-197, and by the same author, two volumes of the water-colors painted by Freire and Codina extant in the Museu Bocage, Lisbon, Viagem Filosófica, 2 vols. (Gráficos Brunner, São Paulo, 1970), and Jose Honorio Rodrigues, "Alexandre Rodrigues Ferreira; Catálogo de Manuscritos e Bibliografia," Anais da Biblioteca Nacional (Rio de Janeiro, 1952), pp. 11-151.

121

J. J. Wurdack, "The Melastomataceae Collections of A. R. Ferreira," Taxon 20 (4): 595-596, August, 1971.

He also supplied statistical information on slavery, the role of the church in remote regions, and an awareness for planned development in the Amazon.

Contemporary scientists may eventually begin a serious examination of Ferreira's papers and scholars can evaluate his work in the context of his own particular time and place. Ferreira was the product of both the Luso-Brasilian Enlightenment and the Pombal Reforms. His education was probably the best that Portugal provided during the late eighteenth century. He studied natural science and philosophy, as well as contemporary economics, yet never lost his faith in the Church or the Portuguese Crown. He sensed the urgent need for reform, but never advocated an end to the social and political order which gave him his education and high position.

CHAPTER III

Manuel Galvão da Silva, Naturalist and Secretary of Government in Moçambique: 1783-1793

Manuel Galvão da Silva was not only a fellow student of Dr. Alexandre Rodrigues Ferreira at the University of Coimbra and its preparatory school, the "Instituto," but he was also a fellow Bahian. After graduation from the University of Coimbra both of these young Brazilian scientists spent five years together at the Ajuda Palace Gardens in Lisbon preparing for an expedition to Brasil. Ferreira and his brother Bartolomeu, Silva, and the two Lisboa brothers, Baltasar and José, were all students at the University of Coimbra at about the same time and must have been close friends as they shared not only a native city, but an interest in natural history.

Along with Ferreira, Feijó, Joaquim José da Silva, and other Brazilians, Manuel Galvão da Silva was a student of Dr. Domingos Vandelli, professor of Chemistry and Natural History at the University of Coimbra. While Ferreira was influenced by Vandelli to pursue a course in the natural sciences, Silva was more inclined towards mathematics in which he excelled. Silva attended the "Instituto" in 1770-1771, about the same time Ferreira was a student there. He was born in 1750,

1

making him six years older than Ferreira. Although records in the Arquivo da Universidade de Coimbra are incomplete concerning Silva's academic progress, he was awarded the degree of "bacharel" from the Philosophy Faculty in 1776 at the same time his fellow Brazilian, the botanist Padre Joaquim Velloso de Miranda of Minas Gerais (1733-1815),
2
received his degree.

Sometime in 1778 Manuel Galvão da Silva, along with Joaquim José da Silva and Feijó, were named as members of the Natural History Expedition to Pará under the leadership of Ferreira. Feijó and Ferreira worked together on several field trips during the period of 1778-1783, though it is not certain how often Silva accompanied them. The expedition to Pará did not leave Lisbon for five years and when the naturalists were not engaged on field trips they worked at the Ajuda Palace Gardens under the supervision of Júlio Mattiazi, the Chief Gardener, and Dr. Domingos Vandelli, their former professor at the University of Coimbra

1

Arquivo da Universidade de Coimbra (AUC), Livro da Matrícula do "Instituto," Livro 88, fl. 277v., 1770-1771; and, Abílio Fernandes et Rosette Fernandes, "Les Voyages de Manoel Galvão da Silva au Mozambique," Comptes Rendus de la IV^e Réunion de l'AETFAT (Junta de Investigações do Ultramar, Lisboa, 1961), pp. 153-159.

2

Arquivo Nacional da Torre do Tombo (ANTT), Ministério do Reino, Maço 993, Letter from the Bishop Francisco de Lemos, Rector of the University of Coimbra to the Marquês de Pombal, Coimbra, 4-IX-1776, with a list of all the students registered that year, noting the graduates:

Manuel Galvão da Silva, fl^o. do outro, n^{al}.
da Bahia ... Formados em filosofia, aprovados
Nemine Discrepente.

who was also Director of the Ajuda Palace Gardens and Natural History Museum.

Vandelli's original plan for the expedition to Brasil called for all of the four naturalists and their assistants to be led by Ferreira. Sometime in late 1782, this plan was altered, and Ferreira later went to Brasil alone and the others were assigned to the African colonies. In nominating the two Silvas to be Secretaries of Government in Angola and Mocambique and sending Feijó to the Cabo Verde Islands, the Minister for Overseas and Marine, Martinho de Melo e Castro, who was the chief patron of the sciences in Portugal during this period, may have been obliged to consider governmental economy first instead of scientific necessities. There was a lack of well trained and educated officials in the African colonies. Many of the soldiers, settlers, and priests were sent to Africa from Brasil, Portugal and even Goa (Portuguese India) as "degredados," or condemned criminals. Some were sent for life and forbidden to return to their country of origin; others were sent for a specific term. There were few volunteers for African service.

The nomination of Manuel Galvão da Silva as Secretary of Government for the Captaincy General of Moçambique is contained in an Alvará³ (Royal Decree) of Queen D. Maria I, dated 23 November, 1782. His

3

ANTT, Chancelaria de D. Maria I, Livro 20, fl. 224, Alvará do Emprego do Secretario de Mocambique dada a Manuel Galvão da Silva. Published in Luíz Fernando de Carvalho Dias, ed., Fontes para a História, Geografia, e Comércio de Moçambique (Século XVIII) (Junta das Missões Geográficas e de Investigações do Ultramar, Lisboa, 1954). Estudos de Geografia da Expansão Portuguesa, Anais, Vol. IX, Tomo I, pp. 37-38.

nomination as Secretary of Government, with duties as naturalist, relates not so much to the need of a naturalist in Moçambique, but for a Secretary of Government. Silva's "predecessor" as Secretary of Government, Francisco Barbosa de Miranda, died on the voyage to Moçambique, creating a vacancy. The Governor and Captain General of Moçambique, Pedro de Saldanha e Albuquerque, nominated Jerónimo José Nogueira de Andrade as Miranda's successor, subject to Crown approval. A Royal Alvará of 27 January, 1785 for Andrade's nomination was invalid as Silva was still Secretary; this confusion was corrected by a Royal Aviso of 19 January, 1788, confirming Silva as Secretary and naturalist in Moçambique.

In a "requerimento" or petition Silva made to the Interim Governors (Governor Albuquerque having died before Silva arrived) of Moçambique (approved 23 June, 1784), he asked permission to begin his expeditions. In this petition he mentioned that he was to be sent to Moçambique as Secretary of Government, because the Queen had decided that it would be of great benefit to study the "Natural Products" of that part of Africa, and that he had been discharged from his duties as a member of the

⁴
Arquivo Histórico Ultramarino (AHU), Moçambique, Cod. 1357, Letter of Governor Pedro de Saldanha de Albuquerque.

⁵
Ibid., Alvará de Mercê do Emprego do Secretario do Govêrno de Moçambique, to Captain Jerónimo José de Nogueira de Andrade and also Aviso of the Conselho Ultramarino to confirm Manuel Galvão da Silva as Secretary of Moçambique, 19-I-1788.

6

Para expedition at the time he was ready to leave for Brasil. This indicates that the decision made by the Minister for Overseas and Marine, Martinho de Melo e Castro, was a last minute affair. It may have also been the inspiration to separate Joaquim José da Silva from the Para expedition and send him to Angola as Secretary of Government.

The Governor of Moçambique, Pedro de Saldanho e Albuquerque, was sent an Aviso concerning Silva on 26 March, 1783. The Governor was informed of Silva's appointment, his duties as Naturalist as well as the Governor's responsibilities in directing the expeditions in Moçambique, and Silva's authority over his two assistants, the artist and gardener. This Aviso was registered in Moçambique on 26 April, 1784, over a year after Silva had left Lisbon and about two months after he had arrived in Moçambique. It is difficult to determine whether this Aviso was delayed a full year in arriving or whether Silva presented a copy himself.

At about the same time the Lisbon Ministry informed the Governor of Moçambique of Silva's appointment, the Governor of Bahia, the

6

AHU, Mocambique, Cx. 21, Petition of Silva to the Interim Governors, approved, 23-VI-1784:

Representa a V. Ex^{as.} e S^{as.} Manoel Galvão da Silva, que tendo-o S. Mag^{e.} despachado para Secretario deste Governo, dispensando-o para isto das Expedições do Pará, para onde estava moneado, e bem proximo a partir, não foi com outro motivo mais, do que considerar S. Mag^{e.} esta Africa tão interessante nas Suas Produções Naturaes, como as demais Partes do Mundo...

7

AHU, Moçambique Cod. 1472, fl. 1, Aviso concerning Manuel Galvão da Silva, 26-III-1783, registered in Moçambique 26-IV-1784.

Marquês de Valença, acknowledged a communication concerning Silva from the Minister of Overseas and Marine, Martinho de Melo e Castro. The Bahia Governor acknowledged impending arrival of the newly appointed Secretary of Government of Mocambique and that:

The Naturalist, Manuel Galvão da Silva is permitted to take from this city, a mulatto to serve him, called Manuel, and whatever else he desires to take from his house to be transported to the Captaincy of Mocambique...⁸

Under the provisions of a Royal Alvara of 1761 slavery was abolished in Metropolitan Portugal; moreover, it was forbidden to export slaves from Brasil. Although it is possible that "Manuel" was a liberto or free-man, it is more likely that he was a family servant. A dispensation was obtained in this case because of Silva's official position. He may have also been able to take furniture and books as well as clothing with him to Mocambique without paying freight charges.

It is not certain how long Silva visited Bahia en route to Mocambique; he was probably the very welcome guest of his family, greatly honored by them and their friends. He had been in Portugal for thirteen years, and returned home with academic honors and a government post. In addition to spending time with his family, Silva also performed his duties as a naturalist. He worked under the orders of the Marquês de

8

AHU, Bahia, Avulsos, no. 11.237:

...que permita Levar desta cidade o Naturalista Manoel Galvão da Sylva hum mulato para o servir chamado Manoel, e o mais que de Sua Caza quizesse transportar para a capitania de Mossambique ...

Valença because the Minister Martinho de Melo e Castro ordered him to. He did not receive any additional salary or expenses for the time he spent making experiments and writing reports for the Governor of Bahia.⁹

Silva left Lisbon on 7 April, 1783 and did not arrive in Mocambique for nearly a year. Shortly before he left Lisbon the Minister Martinho de Melo e Castro sent an Aviso to the Governor of Goa, D. Frederico Guilherme de Sousa, informing him that Silva and his assistants would also visit Goa and conduct a natural history expedition in that territory.¹⁰ Mocambique, Goa, Timor and Macau were at that time still considered to be units of the Estado da India. The designation of Estado da India

⁹
AHU, Moçambique, Cx. 21, Petition from Silva, concerning his salary:

O Sup^e. servio a S. Mag^e. no Mar; e sendo necessario a ha de provar, servio-a na Bahia, não recebendo daquelle Estado mais do que hum Escaller com dez Remeiros e hum Patrão, sem valer-se da ordem oral do Il^{mo}. e Ex^{mo}. S^{or}. Martinho de Mello [e Castro], que lhe disse, pedisse ao Governador para Sua parte, o que precisasse, para executar o de que tinha imcombido e fez ali muitas experiencias, e gastou a maior parte do tempo ... em escrever as mesmas ...

¹⁰
José Justino Teixeira Botelho, "Subsidios para a História das Sciencias Naturais em Portugal. O Naturalista Manuel Galvão da Silva e as suas excursões scientificas em Moçambique nos fins do século XVIII," Boletim da Segunda Classe da Academia das Sciencias de Lisboa, vol. 18 (1923-1924), pp. 181-183 with some documents, previously published in J. H. da Cunha Rivara, Observações sobre a história natural de Goa feitas no ano de 1784 por Manuel Galvão da Silva ... (Nova-Goa, Imprensa Nacional, 1862).

was administrative and ecclesiastical and lasted until 1750 when Mocambique was raised to the status of Captaincy General with an independent administration. Moçambique and Goa conducted a considerable trade and many of the merchants and priests in Moçambique were either Indian Christians or Hindus. Silva spent nearly two months in Goa from 4 December, 1783 until 31 January, 1784 examining the flora and fauna as well as the mineral deposits of the territory. The naturalist, with the aid of his assistants, prepared a shipment of specimens and a report for the Ministry and the Ajuda Palace Gardens.

The text of Silva's report on Goa was published in Latin and Portuguese by the Évora historian J. H. de Cunha Rivara, entitled Observações sobre a historia natural de Goa feitas no anno de 1784 por Manuel Galvão da Silva . . . (Nova-Goa, 1862), with some introductory material as well as several Avisos concerning the naturalist's visit. The text shows Silva's concern for detail, carefully noting the plants he was able to describe according to the Linnean system, and his visit to the iron and gold mines as well as the pearl fisheries. Saint-Hilaire removed a considerable portion of the Ajuda Palace Natural history collections in 1808. In Saint-Hilaire's inventory there is an "Herbier de Goa . . . 35 plantes," and there is no doubt it was the one collected by Silva in Goa in 1783-1784.

Not long after Silva's arrival in Moçambique his difficulties with the Interim Governors began. The Provedor Mor of Moçambique refused to pay Silva the salary due him after April 1784. He had been advanced¹² one year's salary at the time he left Lisbon. The earliest date for Silva exercising his official duties is 10 February, 1784, signing a¹³ promotion list for officers. This date may be somewhat in error since he did not leave Goa until 31 January, 1784 and it is difficult to accept such a quick trip across the Indian Ocean. It is possible that the document was "backdated" by Silva. Nonetheless he was unable to collect his salary in Moçambique without a complicated bureaucratic process because the Provedor Mor had "doubts" about Silva's appointment. Some¹⁴ of the documents of Silva's petition date from May, 1784.

After approximately four months in Mocambique, Silva petitioned the Interim Governors for permission to perform his duties as Naturalist. He mentioned in the petition that the Governors were ordered by the Minister Martinho de Melo e Castro to name the locations he was to explore, under the instructions of the Aviso of 26 March, 1783. Silva explained that both a gardener and an artist on the Royal payroll were not performing their duties; moreover, he stated it was necessary to

¹²

AHU, Moçambique Cod. 1356, list of official orders, 2 April, 1783.

¹³

AHU, Moçambique Cod. 1356, fls. 10-10v.

¹⁴

AHU, Moçambique, Cx. 21, Silva's petition concerning payment of his salary, cited in footnote nine. For complete text see Appendix.

begin botanical collecting as quickly as possible in order to describe the
plants while still in flower.¹⁵ A brief note at the top of Silva's petition
acceeds to his request and approves an expedition in the region of
Mocambique Island and a future journey to the Rios de Sena.¹⁶

Several months later, Silva still had not left for Rios de Sena, nor had he been able to visit the region near Moçambique Island. In a letter to his superior in Lisbon, Martinho de Melo e Castro, dated 18 August, 1784, Silva mentioned he had been ill since the visit to Goa, almost nine months before, and that his duties as Secretary of Government prevented him from performing his duties as naturalist; he had already entered into communication with the Governor of Rios de Sena, Antonio Manuel de Melo e Castro. In this letter, he further mentions

15

AHU, Mocambique, Cx. 21, Silva's petition to the Interim Governors concerning his expeditions, approved 23-VI-1784:

... e por não ter athé agora tratado desta materia, nem lhe serem nomeados os Lugares e Costas, onde deve hir viajar, na conformidade do Avizo de Vinte seis de Março proximo passado e das Instruccoes particulares, que do Il^{mo.} e Ex^{mo.} S^{or.} Martinho de Mello e Castro recebeo o Sup^{e.} em taes circunstancias recorre a V. Ex^{as} e Sn^{rs.} para que attendo, que S. Mag^{e.} esta pagando a hum Dezenhador, e a hum Jardinheiro Botanico, sem destes se seguir utilidade, por não trabalharem; que as Plantas vivem, e florescem em diferentes Estações do anno, que não podem ser examinadas, descriptas, e dezenhadas, se não quando florescem, e fructificação, e por isso todo o tempo que se perde não serve mais do que diminuir as produções ...

16

Ibid.

that the only place he had been able to visit was "Si Culle," which he¹⁷
spent eight days and prepared a diary of the visit. In late eighteenth
century accounts "Si Culle" or Sancul is noted as a small village of
"mouros," with its own "xeque," (sheik) who was loyal to the Portuguese.
This town is on the coast, about eight miles to the SW of Moçambique
Island. This diary is not extant but shows Silva made an earnest effort
to pursue his duties as a naturalist. Although Silva received permission
to visit Rios de Sena, it was withdrawn in November 1784 by the Interim
Governors, because the winter weather would have impeded overland
travel.¹⁸

The first informative reports Silva prepared for the Minister of
Overseas and Marine date from August 1785, based on a journey through
the region of the African mainland near Moçambique Island and inhabited
by tribes then peaceably disposed towards the Portuguese. His report
unfortunately, does not bear a date, nor does he give the exact date for
when he began the journey. The only positive date for his return to
Moçambique Island can be determined from two medical certificates,
date 18 August, 1785, concerning the general state of his health and the

17

AHU, Moçambique, Cx. 21, Letter from Silva to Martinho de
Melo e Castro, Mocambique, 18-VIII-1784:

...saindo apenas de la [Moçambique] hums oito
dias, q̃. gasety em Si Culle [Sanculle] cujo
Diario tenho feito p^a. delle Extrair em algum
tempo a pequena p^{te}. ha de entrar na Istoria da
Africa Portugueza.

18

AHU, Moçambique, Cod., 1358, fl. 9.

fevers and fatigue brought on by his journey.

In discussing his difficulties during 1785, Silva mentioned that he had written in the previous year about a planned trip to Rios de Sena, but that the Interim Governors had cancelled it because of impending inclement weather on the advice of the Governor of Rios de Sena, António Manuel de Melo e Castro. Silva also became ill during January 1785, but even then he hoped to conduct some short expeditions. He also anticipated the arrival of a new Governor with whom he had the official responsibility to review the proceedings of the Interim Government.

20

His illness in August may have resulted from not having fully recovered from a previous indisposition and in part from the effects of a short journey to the mainland during June 1785. Silva spent twenty-six days exploring the Serra da Mutipa and the Serra do Utigulo. Mount Mutipa lies about twenty-six miles NW of Moçambique Island and Mount

19

AHU, Moçambique, Cx. 22, medical certificates, signed and dated by the Chief Physician, and Chief Surgeon in Moçambique, 18-VII-1784.

20

AHU, Moçambique, Cx. 22, Report from Silva to Martinho de Melo e Castro, Moçambique, August, 1785:

...por estar convalescendo de huma molestia grave, que me tinha atacado a Seis de Janeiro, e me deixava sem forças athe' aquelle tempo; mas dita não foi a legitima cauza, para deixar de por em execução o projecto, que tanto trazia diante dos olhos, sem a lembrança de que dalí a dois mezes chagaria talvez General, que da necessidade precisaria da quem impartialmente lhe narasse todos os acontecimentos favoraveis, e desfavoraveis do Estado.

Utigulo lies about thirty-three miles NW of Moçambique Island; the main purpose of the journey was to verify rumors about deposits of copper and other minerals. It was the wrong season to make botanical
21
collections.

From this journey Silva was able to send three boxes of specimens to Lisbon, including rock samples from the Serra da Mutipa and the Serra do Utigulo. He included iron ore samples, shells (including some collected before his arrival in Moçambique) and marine plants. In explaining why he had not sent any bird specimens, Silva mentioned their great variety but also his difficulty in catching them. He proposed to purchase them with his own money from "moors and kaffirs" in Moçambique,
22
assuming the Moçambique government would not re-imburse such expenses.

21

Ibid.

... propondo-me logo correr alguma parte das Serras da Mutipa, e eo Utigulo, principiando por aquellas onde está Situado o Páo, conhecido por este nome dos Marinheiros, pela sua figura, e que dista de Moçambique pouco mais ou menos dez Legoas; e dalí passar a Meza que tambem he da nome da sua figura (e que esta nas Terras da Coroa) distante desta Ilha oito Legoas, onde ouvia dizer, que não só havia cobre, mais outras Minas; este interesse unido aquelle de fazer a minha obrigação me inspirou esta Viagem, ainda que o tempo era o mais improprio para a indagação dos Vegetaveis ...

22

Ibid.

Eu não tenho podido remetter passaros, havendo-os aqui tão raros ou mais, do que na America, e que se-verião ornato ao Gabinete de historia natural, pelos não poder alcançar, a pezar de ter prometido a Cafres e Moiros, que moram nas Terras Firmes de lhes pagar bem, se os apanharem, mas como para isso não sou ajudado da vox dos Governadores pouco, ou nada farei ...

He further explained that he had not sent any specimens of fish, amphibians, or invertebrates to the Ajuda Palace Gardens because Dr. Domingos Vandelli and Júlio Mattiazi had not written about the condition
23
of the specimens which he had sent from Goa.

In order to provide a complete report for the Minister of Overseas and Marine and the Ajuda Palace Gardens concerning the samples of iron ore that Silva sent to Lisbon, he prepared a description of his visit to the region in which the iron ore originated, known as the Montanhas da Mutipa, near the coast. Visiting only one mine, he was able to obtain secondhand information concerning the other mine as there were
24
no Portuguese in the region and the location of the mine was unknown. He did not visit the other mine, though he spent a night near it and obtained some samples of iron ore from the natives. He mentioned that the Macua tribe, often fierce enemies of the Portuguese during that period

23

Ibid.

Quanto a peixes, amphibios, e vermes, que os há differentissimos, não me resolve a mandar, porque nem o Doutor Vandelli, nem Júlio Mattiazi me tem escripto sobre o estado, em que chegarão os peixes, que mandei de Goa, p^a. saber como os hei de mandar.

24

AHU, Mocambique, Cx. 22, Report of Silva concerning Iron Mines, Mocambique, 21-VIII-1784:

Ainda que eu não encontrei outra Mina se não a de ferro, podem com tudo aquellas Montanhas de toda antiguidade, conter algũa outras, que a falta de ter oriundo alí Portuguez algum, as conserve ainda occultas.

fashioned musket balls as well as spear points and other tools from the
25 iron. The report is interesting for its brevity and accuracy. Silva noted items he obtained by trade and those he collected himself as well as assessing hearsay information.

During the following year and a half Silva remained in Moçambique Island, attending to his duties as Secretary of Government. Manuel Galvão da Silva's signature appears on the papers of the Secretariat, the Senado da Câmara (the Town Council) and merchant ship Passports. Although many high ranking government officials appear as members of the Confraria da Nossa Senhora da Conceição, Silva's name is absent from membership lists for the 1780's and 1790's when he lived in Moçam-
26 bique. Silva encountered problems with the Interim Governors, Vicente Caetano de Maya and José António Moraes Durão. It is possible that Silva's education and direct contact with the Minister Martinho de Melo e Castro in Lisbon was resented. It is possible that the Interim Governors preferred José Nogueira de Andrade instead of Silva in the post of Secretary of Government. Although Silva was a native of Bahia, a region in Brasil which was dependent on slave labor, it is possible that he did not adjust to life in Moçambique where slave export was a

25

Ibid.

...os Macuas o modo de que se servem della he este p^a. fazerem os Seus Zagaia, e outros instrumentos ...

26

AHU, Moçambique, Cod. 1343, Termos e Assentos da Confraria de Nossa Senhora da Conceição.

major part of commerce. Perhaps Silva did not fit into the closed provincial society of "degradados," traders, soldiers and priests.

During this period in Moçambique there were serious personal rivalries among the high government officials. Before Silva's arrival in 1781, upon the death of Fr. José de Vasconcelos, then serving as Governor, Vicente Caetano de Maya Vasconcelos became Interim Governor, but the Governor of Rios de Sena, António Manuel de Melo e Castro protested and had the Senado da Câmara of Tete elect him as Governor of Moçambique, claiming that his commission as "Capitão da Mar e da Guerra," gave him precedence over "Tenente Coronel" Vicente
27
Caetano da Maya Vasconcelos.

Eventually António Manuel de Melo e Castro was named Governor and Captain General of Moçambique on 16 January, 1785. Before Silva arrived Governor Pedro de Saldanha de Albuquerque died on 24 November
28
1783. As mentioned, Silva delayed his departure from Moçambique for the interior, hoping to report to a new Governor all the events of government from the time Silva first arrived; moreover, the duty-conscious Secretary of Government felt responsibility to the new Governor "...who out of necessity would need someone to impartially narrate

27

Jose Justino Teixeira Botelho, História Militar e Política dos Portugueses em Moçambique de descobrimento á 1833 (Lisboa, 1934), p. 465.

28

AHU, Moçambique, Cod. 1351, fls. 47, letter from the Interim Governors of Mocambique to Martinho de Melo e Castro, 15-VIII-1784.

to him all the favorable and unfavorable occurrences of the State."

Daily life for the European and Brazilian born government officials and military officers stationed in Moçambique must have been trying. Most of the soldiers were "degradedados." The entire population of "Christians" in Moçambique, including Goans and catechized natives,³⁰ was about 2,000 by 1780. In spite of the isolation and insalubrious conditions, some officers maintained efforts at discipline and education. During the period that Silva was in Moçambique one of the garrison's officers, Captain José Amado da Cunha, held an Aula da Mathemática³¹ in the chambers of the Senado da Câmara. Since Silva was trained in mathematics at the University of Coimbra, he may have participated in the sessions of the Moçambique Aula da Mathemática.

As mentioned, Silva encountered difficulties with the Interim Governors in Moçambique. He ran afoul of the two Interim Governors during December 1785 and was subsequently tried and convicted of insulting the Chief Judge, António José de Moraes Durão. His sentence was a week's confinement to the Fortress of St. Sebastian in January 1786. Dispositions of witnesses and the minutes of the proceedings against Silva reveal that his crime was failing to tip his hat to the Chief Judge

29

See above cited footnote twenty-three.

30

Fritz Hoppe, A África Oriental Portuguesa no Tempo do Marquês de Pombal (1750-1777); (Agência Geral do Ultramar, Lisboa, 1970), pp. 107-112.

31

Botelho, História Militar ... a 1833, p. 458.

32

in public, but accompanying letters and dispositions make it clear that there were other frictions within the Moçambique Government. A letter from Vicente Caetano de Maya Vasconcelos to his co-Governor, Chief Judge António José de Moraes Durão, mentions there were preparations to replace Silva should he prove to be insubordinate in the future. The same letter also recognizes that Silva had to be released to attend to

33

his duties.

After a week of "ceremonial detention" Silva was released. The incident was not forgotten and two months later António José de Moraes Durão recounted the entire series of events, with disdain for Silva, since he felt the Secretary of Government had failed to perform his duties as a naturalist and that Silva had played tricks on tipsy officials at a party by giving them papers to sign without revealing their contents. After his "punishment" Silva returned to his duties as Secretary until he began the expedition to Rios de Sena.

32

AHU, Moçambique, Cx. 23, Dossier of the trial of Silva, notarized by Benjamin Ferrão, clerk.

33

Ibid., Letter of Tenente Coronel Vicente Caetano de Maya Vasconcelos to Desembargador e Ouvidor Geral de Moçambique, António José de Moraes Durão, Moçambique, 28-I-1786.

34

Ibid., Letter from Chief Judge António José de Moraes Durão to LTC Vicente Caetano de Maya Vasconcelos, Moçambique, 20-III-1786:

...o que tem Vicente Caetano de Maya dado varios banquetes na Fortaleza, e depois de embriegar os Convidados lhe faz assignar varios papeis, que ignorão a que contem ...

Antônio Manuel de Melo e Castro was nominated Governor and Captain General of Moçambique in November of 1785. Whether or not he took note of the process against Silva is not known. Silva expressed a desire to inform whomsoever was appointed Governor of all the procedures of the Moçambique government. The new Governor had some reservations about the double duties Silva was assigned because of their incompatibility. The Governor recommended that a new Secretary be
35
appointed. It is interesting to note that the Governor made this recommendation just a few weeks before Silva was to depart for Rios de Sena to perform his duties as naturalist as well as other important administrative tasks. The Governor nominated Jerônimo José Nogueira de Andrade to the post of Secretary. Andrade was an Artillery Captain who had been previously nominated by Governor Albuquerque for the
36
same post in 1783.

35

AHU, Moçambique, Cx. 22, Petition to the Queen, from Governor Antonio Manuel de Melo e Castro, Moçambique, 29-XI-1786:

me parece não devo por ora nomear algum outro para
Secretario deste Governo; ficando com tudo na in-
telligencia de propor, se o houver de nomear, o
Capitao Jerônimo José Nogueira ...

36

Botelho, História Militar ..., p. 457. Andrade was a capable officer and a graduate of the Military Academy of Rio de Janeiro. He wrote, "Descrição do estado em que ficaram os negocios de Mocambique nos fins de Novembro de 1789," Investigador Português (London, 1818-1815); the manuscript of this memoir is preserved in the Library of the Sociedade de Geografia, Lisbon. The memoir is a fine summary of events from 1783 to 1789 in Moçambique with detailed and concise descriptions of many of the presídios Silva visited.

Governor António Manuel de Melo e Castro informed his superior in Lisbon, the Minister of Overseas and Marine, Martinho de Melo e Castro, on 1 December, 1786 that Manuel Galvão da Silva was ready to depart for Rios de Sena during that month (though in fact he did not depart until sometime in January, 1787). The Governor explained that illness and official duties prevented Silva from undertaking any expeditions.³⁷ The Governor considered Silva's extended journey to Rios de Sena most opportune to initiate a major project of registering and examining all the Crown land grants made in that district. The purpose of the survey was to adjust the taxes paid by each "foreiro," thus hopefully ending the continual litigations and disturbances among the landowners³⁸ in the area.

37

AHU, Moçambique, Cx. 23, letter from Governor Antonio Manuel de Melo e Castro to Martinho de Melo e Castro, Moçambique, 1-XII-1786:

Daqui a poucos dias, neste mesmo Mez, parte o Secretario deste Governo para as Expedições dos Rios de Sena, que até agora não tem podido executar assim por cauza das muitas, e repetidas molestias que tem padecido, como pela occupação de Seu ministerio, visto que não foi possivel dispensar-se de assistir ao Despacho e Expediente da Secretaria por não haver nella officiaes de maior intelligencia ...

38

Ibid.

.....tenho resolvido encarregallo ao mesmo tempo de tombar as terras de Sesmaria daquelles Rios para se evitarem as Contendas, e Litigios, que muitas vezes se Suscitão entre os Seus Foreiros pela falta, que em todo tempo tem havido de hum Tombo proprio daquellas terras ...

The prazo system was a complicated semi-feudal system of dual allegiance by Portuguese settlers to both the Portuguese Crown and native chiefs. The Portuguese Crown often confirmed in law what a family already held in practice from an African prince. There were numerous family alliances as well as civil wars in the interior for many
39
years. The Governor sent Silva into this turbulent district in January 1787 to explore its natural resources and survey the landholdings of the often violent and quarrelsome senhores do prazo.

Approximately a month before his departure for Rios de Sena, Silva wrote to the Minister Martinho de Melo e Castro, discussing his impending expedition. He did mention his additional duties of surveying land grants, issuing deeds and noting all of his surveys in a main register. He had dismissed the gardener José da Costa from the Royal Service with the Governor's approval, and enrolled him in the Moçambique Infantry Regiment because of his inability to perform his duties and his

See Allen F. Isaacman, Mozambique: The Africanization of a European Institution: the Zambesi Prazos, 1750-1902 (Madison, Wisconsin, 1972), p. 47. The Zambesi senhor do prazo had a mixed life-style somewhere between a feudal lord, Brazilian fazendeiro, petty African chief and frontier adventurer. Often beyond the control of the Portuguese Governors the senhores do prazo traded for gold, ivory, and slaves, made war on each other, the Africans and the Portuguese. There was no real plantation economy or stable export agriculture as existed in Brasil. Making few Christian converts among their colonos the senhores do prazo introduced special trade goods such as cloth, beads, guns and salt, but failed to "civilize" the people who worked their lands.

40

"shamelessness." It is possible that Jose da Costa may have been one of the causes of some of Silva's problems with the Ouvidor Geral, António José de Moraes Durão, as the latter in a letter of 20 March, 1786 mentioned the "harmful expense to the Royal Treasury of two
41
vagabonds, called gardener and artist ..."

Interestingly enough, Silva mentions the Governor's letter of 1 December, 1786, but adds new details to the plan of his expedition. He considers that it could take three years to complete his assignment, including journeys to Sofala and Inhembane, not mentioned in any other

40

AHU, Moçambique, Cx. 23, Report from Silva to Martinho de Melo e Castro, Moçambique, 15-XII-1786:

... e o Segundo [José da Costa] por Se achar com praça assentada no Regimento de Infantaria, não tendo athe aquí prestado para os Serviços a que veio destinado não só por conservar-se na mais reprehensivel ignorancia, sem querer instruir-se p^a. vir a ser util as mesmas Viagens; mas porque cahindo de vicio em vicio tinha chegado a ponto de perder a vergonha, e de todo fazer-se insensivel as mais asperas correçoens...

41

AHU, Moçambique, Cx. 23, Letter cited in footnote thirty-four:

...continuando em tanto a grave despeza da Real Fazenda com dois vadios chamados jardineiro e desenhador ...

42

official correspondence. Silva's health did not permit him to visit Sofala and Inhembane and he was obliged to limit his expeditions to the interior during 1787 and 1788.

Governor António Manuel de Melo e Castro addressed two letters to Silva on 13 January, 1787 containing specific instructions. One letter dealt exclusively with Silva's duties as a naturalist and the other with his duties and the "Juiz nomeado do Tombo das Terras da Coroa," detailing the routes to be taken and the times of year to travel as well as the necessity of avoid delays in unhealthful coastal regions.

The set of instructions the Governor gave Silva for his mission as the "Juiz do Tombo" is exceptionally interesting as it reveals the Governor's intimate knowledge of the agricultural practices of the area he formerly administered, as well as the difficulties of the task he set for Silva. The Governor mentions that the most favorable time for the demarcation would be in the fall, when the land would be cleared by

42

AHU, Moçambique, Cx. 23, cited above in footnote forty:

Quanto as Viagens, sera V. Ex^a. informado, por huma das Cartas do Governo, do tempo que se faz necessario p^a. concluillas, que he o de tres annos, attendida a grande extensão das Terras que tenho p^a. correr, pertencentes a Jurisdição dos Ryos de Sena; e a ser me precizo para completar as viagens, passar dos mesmos Ryos as Terras de Sofalla e Inhembane, hindo ao mesmo tempo que as for indagando, tirando-lhes as Suas cartas geographicas, e mineralogicas ...

43

burning the remaining stalks. This practice is known as the "queimada." It is common to many tropical areas as well as temperate climates. By burning the stalks after a harvest the land is cleared and the remaining ash serves as a fertilizer; if the fire is not controlled serious damage can result to the brush and tree cover.

The second set of instructions the Governor prepared for Silva concerned his duties as a naturalist. The terms of the original Aviso of 26 March, 1783, allowed the Governor of Moçambique to "determine and regulate the Sites, Places and Coasts," where Silva was to visit. He ordered Silva to:

examine, and describe all that there might be in this Continent Relative to Natural History, and to collect, prepare, and send to this Capital [Moçambique] everything that has to be sent to the Court, in the Conformity with the Copies of the Instructions, which the Academy of Sciences of Lisbon published...⁴⁴

43

AHU, Moçambique, Cod. 1358, Letter from Governor of Moçambique to Silva, containing instructions, Moçambique, 13-I-1787, fls. 35-35v.:

Pelo que nos mezes do Setembro, Outubro, e Novembro, que naquele Continente se alimpão as terras, ou se queimão as palhas, e por isso se chama o das queimadas, he o mais oportuno para V. M^{ce}. fazer as ditas demarcações ...

44

AHU, Moçambique, Cod. 1358, Letter from the Governor of Moçambique to Silva, Moçambique, 13-I-1787, fls. 35v-36v:

Tendo Sua Magestade determinado por Carta do Ex^{mo}. Secretario. do Estado desta Repartição dirigida ao meu antecessor na data de 26 de Março de 1783, que determinasse elle, e regulasse os Citios, Lugares, e Costas onde V. M^{ce}. ha de hir fazer as expedições

The Governor maintained control over Silva while the latter was in the field, and retained the authority to recall him to Moçambique Island.

The Governor also advised the feitores at the inland posts to assist Silva at Quilimane and other towns, with canoes and porters as well as food and equipment. Silva was advised against remaining at Quilimane because of the unhealthy climate.⁴⁵ The Governor also stated that the best time for conducting the expeditions is from May until September, and that Silva should start exploring the banks of the Zambese River, from Tete and finish in Quilimane, then return to Tete on the⁴⁶ opposite bank of the River. By conducting his natural history duties

a que foi mandado, e tendo eu na conformidade da dita ordem determinado, que passe V. M^{ce}. na presente monção com o Riscador António Gomes para os Rios de Sena para examinar, e descrever tudo o que houver nesse Continente Relativo a Hystoria Natural, e a Recolher, preparar, e Remetter a esta Capital tudo o que houver de se dirigir á Corte na Conformidade dos Exemplares das Instrucções, que a Academia das Sciencias de Lisboa publicou a este Respeito, e das Instrucções Particulares que trouxe a este mesmo assumpto ...

45

Ibid.

... não se demorando em nenhuma das duas primeiras [Quilimane e Sena] mais que os dias que absolutamente lhe for necessario, visto que a presente Estação sao ellas muito mais doentias e por isso perigosa toda a demora que fizer nellas ...

46

Ibid.

O Tempo opportuno, e benigno naquelle Paiz, hé o de Mayo por diante quando V. M^{ce}. pode fazer Suas Expedições athé os fins de Setembro, discorrendo ambas margens do Zambese principiando em Tete e acabando em Quilimane, e Luabo, descendo por hũa, e Subindo por outra ...

during the spring and early fall months, Silva could then be free to work on the demarcations of the prazos during the fall, (and rest while the Winter rains would make any overland travel impossible) as well as work on his reports, prepare shipments of specimens and attend to administrative duties.

Recognizing that a complete description and mapping of the Zambese River could possibly last two full summers, the Governor suggested that Silva limit himself to working on the area in and around Tete during the first year and then in the following year proceed downriver towards Quilimane, eventually visiting the more isolated interior forts or presídios of Manica and Zumbo.⁴⁷ Although the Governor allowed Silva a degree of latitude in his travels, he was to consult with the Governor of Rios de Sena concerning his journeys.

Governor António Manuel de Melo took the opportunity to remind Silva to continue to send specimens and reports at the times regular

47

Ibid.

E porque só a descripção das Margens do Zambese, e das Terras circumvezinhas a ellas desde Tete, ate Quilimane não é possível Conseguir-se nem em hum, e nem ainda em dous Veroens, no primeiro discorrerá V. M^{ce}. hũa, e outra Margem delle, e as Terras da sua Circumvezinhança, pertencentes a Jurisdição de Tete, ou aquella parte das mesmas, que puder, nos outros Sequintes dahi para baixo athe Quilimane, e Luabo, como fica dito; O que concluido passara V. M^{ce}. pelo interior das mesmas Terras, ultimamente parrara a Manica, e ao depois ao Zumbo ...

reports were sent from Rios de Sena or from other Portuguese settle-
ments he might be visiting to Moçambique Island.⁴⁸ These reports
would inturn be sent to Lisbon for inspection. In this way, both Silva
and the Governor would faithfully perform their duties to the Crown and
the Ministry would have no cause to reprimand their actions.

By the middle of May 1787 Silva was already at work on the land
survey project in the Tete region. Silva arrived in Tete on 26 March,⁴⁹
1787. In May the Governor wrote to Silva from Moçambique concern-
ing the latter's difficulties in carrying out the survey. Mentioning a
report Silva had sent on his progress, the Governor took exception to
the high costs of the survey and provided a special supplementary set
of instructions concerning sálaries for the bailiffs (merinhos) as well as
Silva's own fees.⁵⁰

48

Ibid.

De todas as Observações que V. M^{ce}. fazer, e o Riscador,
me darão conta em todas as Monções Remettendo as produc-
ções, que forem recolhendo para as enviar para a Corte
com as mesmas observacoes, que tiverem feito.

49

AHU, Moçambique, Cx. 23, Letter from Silva to the Minister
Martinho de Melo e Castro, Tete, 16-VII-1787, published by Botelho,
"Subsidios para a história das Sciencias Naturais em Portugal," op. cit.,
pp. 180-181:

Ainda que há mais de tres mezes que estou na Capital dos
Rios de Sena, tendo a ella chegado aos vinte seis de Marco,
e partindo e Mossambique aos quinze de Janeiro ...

50

AHU, Moçambique, Cod. 1358, Instructions to the Juiz appointed
to the Tombo das Terras da Coras, Manuel Galvão da Silva, 16-V-1787, fl. 50:

...determino que V. M^{ce}., e os Seus Competentes Offic-
iaes, quaes V. M^{ce}. nomear para a Referida diligencia do
Tombo, não possam Levar mais Selarios, e Custas do que
o que estão estipuladas aos Juizes de Fora no Regimento
das Minas ...

In Silva's brief report of 16 July, 1787 from Tete, he again mentions that he is ill, alone and lacks proper mathematical instruments to complete the survey. Although he mentions that he had sextants with him to measure longitude and latitude, he lacked other instruments, probably transverses, for the survey.⁵¹ Since he was unable to perform the duties of an "artist," and the expedition lacked essential equipment, the results would be limited to whatever Silva could collect and prepare himself.

By July 1787, Silva knew that his artist, António Gomes, had died of a fever in Moçambique; moreover, he mentioned Gomes' death in a letter to the Minister Martinho de Melo e Castro. Gomes had been assigned to accompany Silva to Rios de Sena and his name is mentioned in orders the Governor of Moçambique sent to the feitores at the inland trading posts during December, 1786 and January, 1787. The Governor of Moçambique sent an official letter to Martinho de Melo e Castro on 28 September, 1787, noting that António Gomes died in Moçambique on

51

AHU, Moçambique, Cx. 23, Letter from Silva to Martinho de Melo e Castro, cited in number fifty:

Suplico a V. Ex^a. queira dignar-se de remediar esta falta de Desenhador, sem o qual não posso dar hum passo, não só no Reyno Vegetal, mas em tirar a Carta Geografica das terras por onde passar; Eu não sei riscar, o que posso fazer e tomar as Latitudes e as Longitudes dos Lugares, tão certas como mas derem dois maos Sextantes que tenho, emquanto de Inglaterra não chegão Instrumentos de Mathematica, que mandei buscar.

52

9 March, 1787. Thus, four years after leaving Lisbon, Silva was alone in the interior of Moçambique; one of his assistants had to be dismissed and the other died of a fever. There are no further references to Manuel, the servant who accompanied Silva from his home in Bahia to Moçambique.

The Governor of Moçambique, António Manuel de Melo e Castro, had doubts about Silva's ability to perform both the duties of Secretary of Government and naturalist. When Silva went to Rios de Sena, the Governor arranged additional administrative work in the form of the land survey in order to justify to himself the expedition's natural history role. The Governor requested the Overseas Council to appoint a new Secretary of Government for Moçambique and allow Silva to continue in his post as Naturalist. The Overseas Council, however, chose to continue Silva in his post of secretary with additional duties as naturalist. The Overseas Council agreed that it was an error to have named Jerónimo José Nogueira de Andrade to the position already filled by

52

AHU, Moçambique, Cx. 23, Letter from Governor António Manuel de Melo e Castro to the Minister Martinho de Melo e Castro, Moçambique, 28-IX-1787:

Aos nove de Março do Prezente anno faleceu nesta Capital o Riscador António Gomes, que em Companhia do Naturalista Manoel Galvão da Silva Secretario deste Governo veio dessa Corte a Servir a Sua Magestade nesta Conquista no exercicio da dita sua occupação ...

53

Silva. Clearly Silva was not able to perform the duties of both Secretary of Government and Naturalist because the Governor of Moçambique would not permit him to leave on the journeys necessary to make his natural history collections. He was not replaced as Secretary until the Spring of 1793.

In the fall of 1787 Silva made a short trip, following a more or less triangular route, in the Tete district; he went from Tete to Cabra-baca Maxinga, Chicorongo, and then returned to Tete. The diary of this trip has previously been published twice.⁵⁴ The diary is often cited in general histories of Moçambique. In the diary Silva mentions that he was ill virtually from the time he arrived in Tete on 26 March, 1787 until the time he made this short trip in the middle of October 1787. At the time he should have made the expedition during the summer, he was

53

AHU, Moçambique, Cod. 1357, fl. 118, Letter from the Overseas Council to the Governor of Moçambique, 19-XII-1788:

...não podieis Cumprir a ditto Ordem em Razão de se achar actualmente provide por mim o dito lugar em Manoel Galvão da Silva, que se não somente o estava servindo, mas incumbido de fazer as viagens, e expedições philosophicas por esse Pais ...

54

Manuel Galvão da Silva, "Diario ou Relação das Viagens Philosophicas, que por ordem de Sua Magestade Fidellissima tem feito nas terras da Jurisdição da Vila de Tete, e alguns dos Maraves. Sena 4 de Julho de 1788," Anais do Conselho Ultramarino (Parte não Official), 1ª Série, 1854-1856, pp. 242-246; and also reprinted in Fontes para a História, Geografia, e Comércio; Século XVIII, op. cit., pp. 313-319; the original manuscript is preserved in the Library of the Academy of Sciences of Lisbon, no. 1.011.

ill in Tete; and when he should have been conducting the land survey, he made the expedition in the Tete region. This pattern of operations somewhat contradicted his orders from the Governor. Evidently the illness of "intermittent fevers," and most likely dysentery, kept him from doing any work in the Tete area. During this trip Silva did not collect any botanical specimens because of poor weather conditions as well as the lack of an assistant; he concentrated on collecting mineral specimens
55
and examining the gold workings.

Silva described the operations of the already known and exploited surface gold workings, which were operated by the senhores do prazo who paid tribute to the local chiefs in order to freely work the mines because the senhores do prazo utilized large numbers of female workers, and their camps were guarded by armed serfs. In addition to examining the gold workings Silva visited a thermal spring and made an analysis of its waters. In the Cassunsa (now Chicorongo) area he located a potent-
56
ially exploitable iron mine. Silva travelled overland about twelve and
57
a half miles a day. After returning to Tete on 16 November, 1787, he

55

Ibid., p. 313:

Tudo concorreo para intentar meramente aplicar-me
ao conhecimento das Minas.

56

Ibid., p. 318.

57

Ibid., p. 315. Silva mentions a distance of twenty-two leagues between Tete and Maxinga. A league during this period was calculated as one hour's march. The distance between Tete and Maxinga is 110 kms. or about sixty-three miles. Silva made the march in five days, or about twelve and a half miles a day.

was ill until the following April suffering from intermittent fevers.

Although Silva mentions the "quartain fever," this may have been malaria or another viral infection; he does not mention dysentery. It was this recurring fever that forced him to cancel plans to make botanical collections during the spring of 1788.

Although Silva planned to leave for Sena on 1 August, 1788, he waited until the 19th to leave Tete. From two published diaries and the lack of extant reports covering this period Silva spent in the field, it is difficult to reconstruct his activities. It is possible that he attempted to continue the land survey in spite of his illness and may have written some observations on agriculture or native customs. The second of Silva's known diaries of this period has been published as well as translated into English and French. The diary of Silva's journey to Manica, on the frontier of Portuguese penetration, covers barely a month from 19 August to 14 September, 1877. Silva journeyed from Sena to Sungue, and then to Manica; from Manica he returned directly to Sena. In all likelihood Silva travelled to Sena from Tete by large river canoe, though his diary does not

58

Ibid., p. 318.

59

Manuel Galvão da Silva, "Diario das Viagens feitas pelas Terres de Manica por Manuel Galvão da Silva em 1790," Fontes para a História ... op. cit., pp. 323-332; previously published: "Voyage a Manica par terre de Manuel Galvão da Silva en 1788," Bulletin de la Société de Géographie de L'Est 2^a Trimestre, Nancy, 1886), pp. 221-230; and also James, MacQueen, ed. "Journey of Galvão da Silva to Manica Gold Fields in 1788 ...," Journal of the Royal Geographical Society, vol. xxx (London, 1860), pp. 155-161. The manuscript is preserved in the Library of the Academy of Sciences of Lisbon, no. 1.013.

mention it. He again conducted his expedition at the season of the "queimadas," when he should have been working on the land survey. It is possible that by this time he had been relieved of the land survey duties, though there is no extant correspondence to confirm this. Perhaps he felt that because of his illness in 1788, which he calls a "pleurisy," it would serve the Crown better were he to visit Manica instead of making the land survey. In any event, in the winter of 1788-1789 he would not be able to conduct either the natural history expeditions or the land survey because of the rains.

In the overland journey to Manica Silva apparently made no botanical collections. From the diary it can be seen that even though the trip was brief there were many problems. Several river crossings were negotiated with difficulty. Silva's party was forcibly entertained by a local chief who extorted gifts in exchange for safe passage. Silva describes this custom in detail and his bargaining with the chief or mambo "in whom⁶⁰ rested all local power." Silva was able to observe the gold workings, and the trading town of Manica; on the return trip to Sena his party had to⁶¹ fight off an attacking band and flee.

One of Silva's diaries was written at Sena in July 1788, some nine months after the expedition to Tete; and, the second, dated 1790,

60

Ibid., pp. 324-325:

[o mambo] ... reside o sumo Poder, não deixa com
tudo de haver quantidade de pequenos principes ...

61

Ibid., pp. 331-332.

/X

may have been written in Moçambique after his return from Sena. The
earliest date placing Silva in Moçambique Island is 12 February, 1790.⁶²
Silva's adventures in Manica were known in Moçambique either before
he returned to the island or shortly thereafter. His manuscript diaries
may have been circulated among the garrison's officers and officials. In
a memoir written by Captain Andrade, there is a mention of Silva's jour-
ney to Manica and, when one of the mambos discovered Silva was making⁶³
examinations of his lands, the naturalist was forced to flee for his life.
Andrade's account does not exactly agree with Silva's. The naturalist
mentions that his party was attacked when he was travelling with the
Capitão Mor of Manica. Andrade may have confused events with the
incident where Silva was obliged to spend a night in a mambo's kraal
before he reached Manica. It is possible that the events themselves

62

AHU, Moçambique, Cod. 1361, official entries made on 12-II-1790, and signed by Silva.

63

Jerónimo José Nogueira de Andrade, "Descrição do estado em que Ficarem os negocios de Moçambique nos fins de Novembro de 1789," Investigador Português (Londres, 1814-1815) April, 1815 edition, pp. 185-186:

O Secretario Manoel Galvão da Silva, naturalista no serviço de S. M. fez viagens pelos sertões da Manica, e custou-lhe a escapar-se de hum Regulo, que o atalhou logo que soube que o dito naturalista andava reconhecendo os terrenos, e fazendo as indagaçoens, a que elle se havia destinado. Este naturalista poderá melhor que eu, dizer como a natureza enriqueceo aquelles sertões; por isso mesmo que esteve sobre l local, e o examinou, e reconheceo com não pequeno trabalho, e risco da sua vida.

became confused in Silva's version because they happened in 1788 and were not committed to a final version until 1790.

Silva sent few specimens to Lisbon. The number of his shipments were often spaced several years apart. Prior to leaving for Rios de Sena, Silva sent out a small shipment which included shells, two barrels of fish preserved in alcohol and the head of a hippopotamus.⁶⁴ In August 1789, there was a shipment to Lisbon of mineral samples Silva collected in Manica and Tete during 1787 and 1788.⁶⁵ The diary of the journey to Manica along with samples, was sent to Lisbon in 1790.⁶⁶ The next shipment was sent in August 1791 and contained items sent to Moçambique from outlying presidios and not collected by Silva himself.⁶⁷

From the time Silva returned to Moçambique Island until 1793, when his name disappears from administrative records, Silva continued in his post as Secretary of Government. He continued to work on the land survey while in Moçambique.⁶⁸ There are numerous letters and other documents signed by Silva or copied in his own handwriting which

64

AHU, Moçambique, Cx. 23, letter of 3-XII-1786, published by Botelho, "Subsidios ..." op. cit., p. 177.

65

Ibid., AHU, Moçambique, Cx. 2, letter of 16-VIII-1789, published in Botelho, "Subsidios ...," op. cit., p. 178.

66

Ibid.

67

Ibid., Monção de Agosto, 1791.

68

AHU, Moçambique, Cod. 1346, May, 1790, "Plano das Terras da Jurisdição de Quilimane."

appear in the bound Moçambique Codices, recording the daily activities of the colonial government.

With Silva leaving his role as explorer behind him upon returning to Moçambique, he entered into the more bureaucratic aspects of the colonial government. In early 1791 he was appointed "Procurador da Coroa e da Fazenda" for Moçambique in order to fill a vacancy.⁶⁹ This post was one of many the Governor could fill without waiting for Crown approval. There is no mention of Silva's yearly salary. Several months later Silva's name begins to appear regularly as "Sellador da Alfandega,"⁷⁰ beginning in July 1791, again in January 1792 and finally in January 1793. This position was approximately the equivalent of an official notary for the customs house. Evidently this was an unimportant job and several persons held it in quick succession. Its main importance was the fees it represented.

During this period Silva made two shipments of specimens to the Ajuda Palace Gardens. There was the already mentioned one made in August 1791 and another in September 1791. The exact contents were not described and it is possible that the two shipments were really one. Evidently the commanders of the presídios in the interior were not

69

AHU, Moçambique, Cod. 1353, fls. 116v-117, "Registro da Carta Patente de Procurador da Coroa, e Fazenda Pacada a Manoel Galvão da Silva," 1-III-1791, also registered in AHU, Moçambique, Cod. 1362, fl. 86, 28-II-1791.

70

AHU, Moçambique, Cod. 1360, fls. 114, July, 1791, fls. 138v., January, 1792, fls. 139, January, 1793, and does not appear in July, 1793, fls. 201.

sending specimens to Moçambique and Silva did not make any further expeditions. Whether or not he continued to write scientific reports on mineral samples or prepare maps is not known.

The last date that he was active in his duties as Secretary with the Moçambique Government was 2 March 1793.⁷¹ There is no indication from the Moçambique records that Silva died while in the Royal Service. There is a possibility that Silva left Moçambique at the time D. Diogo de Sousa (later Conde do Rio Pardo) replaced António Manuel de Melo e Castro on 19 March, 1793. At about that time José Joaquim de Araújo Aranha e Oliveira became Secretary of Government, but he did not last long in that post and the new Governor sent him into enforced residence in Sofala for "drunkenness, thievery and extortion."⁷²

Silva's major contributions to Africa's natural history were chiefly in his mineral collecting efforts. His training in the mathematical and physical sciences prepared him for making examinations of mines, thermal springs and conducting land surveys rather than collecting plant specimens and preparing herbariums. Although he was probably capable of making the surveys and maps, he often requested replacements for his assistants to help collect plants and make drawings and watercolors. Silva's descriptions of the gold workings in Tete and Manica confirm those made by Captain Andrade. Silva's descriptions of poten-

⁷¹

AHU, Moçambique, Cod. 1362, fl. 195.

⁷²

Botelho, História Militar . . . , pp. 490-495.

tially valuable iron and copper mines are important, but effective development of Portuguese East Africa did not really begin until this century. Silva also mentioned deposits of bituminuous coal at Gorongoza in the Tete district as well as the "rich copper and gold mines in the possession of the kaffirs, at Mozozorus, Abutua, Mixonga, and in the Kingdom of Manica."⁷³ Even in the reports that António Manuel de Melo e Castro prepared when he was Governor of Rios de Sena there are specific mentions of iron ore, gold and copper as well as rock crystal obtained by trading with natives from the "lands of the Emporer Changamira,"⁷⁴ and from the "Sertão of Orange."

The only definite botanical contribution Silva made during his journeys was the already noted small herbarium of thirty-five plant specimens collected in Goa in 1783-1784. There is no record of his botanical collections in Moçambique; moreover, he often mentions his inability to make botanical collections because of illness, bad weather or the wrong season of the year. There is the possibility that he did make some effort at botanical collecting during his early field trips around the area of Moçambique Island and the coastal region when his

73

Silva, "Diario de Tete" ...op. cit., p. 319:

...e me parece superfluo dizer, que em poder dos Cafres he que estão algumas minas do Cobre e as de Ouro mais ricas, como no Zumbo, Mozozuras, Abutua, Mixonga, e Reino de Manica.

74

AHU, Moçambique, Cx. 22, "Relação das Amostras ... 15-VI-1785," published in Botelho, "Subsidios ..." op. cit.

two assistants were working with him in the Spring of 1784. Other than Silva's Goa herbarium, the list of items Saint-Hilaire removed from the Ajuda Natural History Museum in 1808 does not reflect any other specimens Silva might have collected either in Goa or Moçambique during his ten recorded years of service to the Portuguese Crown in its Overseas Territories.

There has been some confusion over the botanical collections of Joaquim José da Silva made in Angola and subsequently taken by Saint-Hilaire and those Manuel Galvão da Silva might have made in Moçambique arising from the similarity in their names and the removal of all of their specimens at the same time from Lisbon. The possibility of a substantially larger botanical collection made by Silva in Moçambique is not a reality, since the Angolan and Moçambican floras are widely divergent in species.⁷⁵ The bulk of the mineral samples Saint-Hilaire selected from the Ajuda Palace Natural History Museum were from Ferreira's Brazilian expeditions or were collected by other former students of Dr. Domingos Vandelli. There is a possibility that some of the gold samples, coal or rock crystal were sent by Silva to Lisbon, but they are⁷⁶ not specifically mentioned in Saint-Hilaire's inventory.

It is difficult to measure Silva's success as a naturalist in

75

A. Fernandes et Rosette Fernandes, "Les voyages ..."
op. cit., pp. 158-159.

76

Hamy, op. cit., (Catalogue of specimens removed from the Ajuda Natural History Museum), pp. 59-65.

Moçambique. He was hampered by indifferent bureaucrats, hobbled by recurring illness, limited by the unfortunate death of one assistant and the dismissal of the other, and perhaps from the beginning of his journeys destined to a semi-obscure career in Moçambique. With his dual assignment of Secretary-Naturalist in Moçambique, he lacked authority to travel in the interior of the African Continent in order to perform his duties; moreover, the Overseas Council would not allow the Governor of Moçambique to name a new Secretary of Government to allow Silva his freedom as a scientist. Even though Silva was virtually forgotten in Lisbon, he continued to perform his duties.

Although the sum of Silva's contributions is not great in numbers of specimens and reports and cannot bear any comparison with Ferreira's efforts in Brasil, his efforts and his very presence in Africa are important. Dispatching Silva to Moçambique may have limited Ferreira's effectiveness in Brasil by depriving him of a skilled mathematician; moreover, Silva's administrative duties limited his scientific obligations. At the same time Silva's presence in Moçambique is an expression of the Crown's faith in the Enlightenment.

Silva was a graduate of the newly reformed University of Coimbra. The Crown had invested large sums of money to promote the sciences at the University of Coimbra. By employing Silva as both a naturalist and as a government official in Moçambique, the Crown turned to younger non-military and non-ecclesiastical officials to administer its Over-

seas Territories. Although Silva may not have been able to send large shipments of specimens to Lisbon he more than returned the Crown its investment in his education through his years of service.

CHAPTER IV

Joaquim Jose da Silva, Naturalist and Secretary of Government in Angola: 1783-1808

During the same time that Ferreira and Silva were active in Brasil and Moçambique, their fellow Brazilian and former colleague at the Ajuda Palace Gardens and the University of Coimbra, Joaquim José da Silva, was working in Angola. He was approximately the same age as Ferreira because he enrolled in the mathematics course during the same year Ferreira did at the University of Coimbra. There is no indication that Silva attended the "Instituto" in order to complete entrance requirements for the University of Coimbra.

Silva was a native of Rio de Janeiro and may have known his fellow carioca João da Silva Feijó who was a fellow student of the sciences and later destined to work with Ferreira and the two Silvas for five years at the Ajuda Palace Gardens in Lisbon. At the University of Coimbra Silva attended courses in both the medical and mathematics¹ faculties. University of Coimbra records do not show the year Silva received the degree of "bacharel," though it was probably in 1778 at the time Ferreira graduated. Silva was not recommended by the

1

See Brasilia, suplemento ao Vol. IV, Faculdade de Letras da Universidade de Coimbra, Instituto de Estudos Brasileiros (Coimbra, 1949), p. 295.

Philosophy Faculty for an advanced degree and most likely he went to work at the Ajuda Palace Gardens shortly after his graduation from the University of Coimbra. He spent five years there with his fellow naturalists preparing for the expedition to Brasil.

Silva may have made some field trips with Ferreira and Feijo² in and around the Tejo region; in the Ajuda Palace Gardens he worked with the other naturalists under the supervision of Júlio Mattiazi and Dr. Domingos Vandelli. The men who accompanied him to Angola were also assistants at the Ajuda Palace Gardens and the establishment's adjunct institutions. Angelo Donati, an artist and naturalist, prepared many fine watercolor plates of tropical plants and even designed a europeanized concept of natural history expedition in Africa to serve as the frontispiece of a folio volume of color plates from Africa that he³ never lived to complete.

As discussed in the case of Manuel Galvão da Silva, the original complement of the "philosophical journey" to Brasil was altered in late 1782. It is possible that the decision to re-assign Manuel Galvão da Silva to Moçambique with the dual assignment of Secretary-Naturalist may have inspired the Minister of Overseas and Marine, Martinho de Melo e Castro, the foremost patron of the sciences in Portugal during

2

Arquivo Histórico Ultramarino (AHU), Reino, Maço 26, List of stipends and food expenses for the naturalists, 1780-1781.

3

Manuscript volume of watercolor plates, bound and preserved in the Library (reservados) of the Museu Bocage, Lisbon.

this period, to send Joaquim José da Silva to Angola with the same dual assignment of Secretary-Naturalist. Silva was also assigned almost at the last moment to Angola just as Manuel Galvão de Silva was to Mocambique:

Having been one of those nominated for the Assignment relative to the Natural History objective of Portuguese America, following the orders her Royal Highness directed to the University of Coimbra, and delaying five years in Lisbon in the Royal Service with my companions, I was finally dispatched with the same goal to this Kingdom [Angola] in 1783, the same August Lord, granting me the Merce of Secretary of this Secretariat⁴ for three years.

When Silva wrote the above quoted statement he had been in Angola over twenty-one years, and confused the reign of Queen Maria I with her son, D. João, who served as Prince Regent after 1792 because of the incapacity of his mother. It can be seen that the original goal was a

4

AHU, Angola, Cx. 54, Petition, 29-VIII-1804, published J. B. Teixeira, "Le Naturaliste Joaquim José da Silva et les Itinéraires des Expéditions qu'il a effectuées en Angola, de 1783-180", Comptes Rendus de la IV^e Réunion Plénière de L'AETFAT (Lisboa, Junta de Investigações do Ultramar, 1961), pp. 103-109 (in part):

Tendo eu sido hum dos nomeados para a Diligência relativa a os objectos da Historia Natural da América Portuguesa, segundo as ordens que para o fazer foi por Sua Alteza Real dirigida a Universidade de Coimbra, e demorado com os meus Companheiros no Real Serviço em Lisboa cinco annos, fui finalmente despachado com o mesmo fim para este Reyno em 1783, fazendo me o Mesmo Augusto Senhor Mercê do Secretario desta Secretaria por três annos ...

three-year stay in Africa for both Silvas. At the same time, however, Ferreira only expected a three year assignment in Brasil.

Silva was named Secretary of Angola in a Royal Alvará⁵ of 14 December, 1782, but he did not depart Lisbon until the following Spring. His three-year assignment to Angola became a lifetime residence. After arriving in Benguela from Lisbon he went to Luanda and from there to Cabinda and the Rio Dande area. After returning to Luanda he went to Massangano. From 1785 to 1787 Silva explored the interior of southern Angola, in search of the Cunene River. Following this expedition Silva returned to his administrative duties in Luanda; eventually, however he was assigned to Ambaca, a presídio on the Huila plateau. By this time he had acquired a wife and family, in spite of a strong desire to return to his native Rio de Janeiro, and remained in Angola. Once again in Luanda he held a number of government posts eventually being re-appointed Secretary of Government. From all official records he continued to hold this post until his death sometime after 1808. After 1800, however, he did not make any field trips although he continued to send specimens to Lisbon when they arrived from the interior.

From the date Silva was named Secretary of Government in Angola, his name no longer appeared on the payroll of the naturalists at

5

Arquivo Nacional da Torre do Tombo (ANTT), Chancelaria de Maria I, Livro 84, fl. 32lv., "Alvará da Mercê do lugar do Secretario do Reino de Angola..." with the original preserved in the AHU, Cx. 56, Angola.

the Ajuda Palace Gardens in Lisbon. The complement of the Angola expedition noted only "Angelo Donati, naturalist and artist, and Jose Antonio, artist," with their respective salaries of 400\$00 and 300\$00⁶ mil reis each per year. This entry infers that Donati and not Silva was the leader of the natural history expedition to Angola. This impression is re-inforced in some contemporary scholarship but recent research⁷ confirms Silva's leadership.

In an Aviso to the Governor of Angola José Gonçalo da Câmara, the Minister of Overseas and Marine, Martinho de Melo e Castro defined Silva's duties in Angola, much in the same language he used in the Aviso sent to the Governor of Moçambique concerning the appointment of Manuel Galvão da Silva. The Governor of Angola was ordered to render all assistance to Silva, indicate the areas to be explored, and pay Silva and his assistants salaries and expense money. The naturalists were to:

...examine and describe all that there might be in that Kingdom relative to Natural History, and collect, prepare and send to this Court all that might be necessary to send to it, in conformity to the Copies of the Instructions that

6

AHU, Reino, Maço 26, published in Américo Pires de Lima, O Doutor Alexandre Rodrigues Ferreira (Lisboa, 1953), p. 105.

7

See Luís da Pina, "Deontologia científica," Comércio do Porto, 16 December, 1937, p. 1, and Grande Encyclopaedia Portuguesa e Brasileira, vol IX, pl 245, which gives the erroneous impression that Angelo Donati was the leader of the natural history expedition to Angola.

the Academy of Sciences of Lisbon published to this respect ...⁸

In Lisbon Martinho de Melo e Castro could not have known of the death of Governor José Gonçalo da Câmara in December 1782. During his tenure of office the Governor undertook defensive measures to prevent French and English slave ships from ascending the Congo (Zaire) River by establishing the Cabinda outpost⁹ which was subsequently destroyed by the French. Although Elias Alexandre da Silva Corrêa, the contemporary Brazilian historian of Angola, states that the Governor died on 12 December, 1782, a report signed by the Governor on 16 December, 1782 shows him to have been alive at that time.

This report of 16 December, 1782 is an account of Governor José Gonçalo da Câmara's efforts to comply with earlier Ministerial instructions to collect specimens for shipment to Lisbon. He mentions that large numbers of birds shipped from Angola to Lisbon via Bahia

8

AHU, Angola, Maço 6 (D. O.), Aviso signed by Martinho de Melo e Castro to Governor of Angola, José Gonçalo da Câmara, 16-IV-1783:

...com a obrigação de se empregarem debaixo das Ordens de N. S^a, em examinar, e descrever tudo o que houver nesse Reyno relativo á Historia Natural, e em recolher, preparar, e remeter a esta Corte tudo o que houver de dirigir-se a ella, na conformidade dos Exemplares das Instruções que a Academia das Sciencias de Lisboa publicou a este respeito ...

9

Elias Alexandre da Silva Corrêa, História de Angola, ed., Manuel Murias (Lisboa, 1937), vol. II, pp. 71-77.

10

and Pernambuco died en route. On the same ships the Portuguese sent slaves to Brasil they also sent live animals to Lisbon for the Crown's naturalists to study.

Joaquim José da Silva, Angelo Donati and José António departed Lisbon in May, 1783 for a four month ocean voyage to Angola: none were destined to return to Lisbon. The party made its first landfall in Africa at Benguela. In a report to Martinho de Melo e Castro of 1 October, 1783, Silva mentions the "one hundred and forty-six days of travelling, including those which we waited at Benguela, there were nineteen additional." Recounting his first impressions for the Minister of Overseas and Marine, Silva mentions:

A simple quick look at this most curious, how unjustly feared coast, is enough to persuade me of the utility of this expedition: I cannot explain the feeling with which I left in Benguela many curious plants, that the short time and fatigue of a long voyage of four months did not allow me to collect, contenting myself with some, that from here in a few days, together with some fish from the open sea, which with great difficulty I collected, I am sending to Your Excellency.¹¹

10

AHU, Angola, Maço 16, Report from the Governor of Angola to Martinho de Melo e Castro, Luanda 16 December, 1782.

11

AHU, Angola, Cx. 38, Report from Joaquim José da Silva to Martinho de Melo e Castro, Luanda, 1-X-1783:

Hum simples golpe de vista sobre esta curiossissima, quanto injustamente timida costa, basta p^a. me persuadir da utilidade desta expedição: Não posso explicar o sentimento com q̃ deixei em Benguella muitaz e curiosaz plantaz q̃ o pouco tempo e fadiga de huma viagem de quatro mezes me não deixarem recolher, contentando-me p^r. então cõ algumas, q̃ daqui a poucaz diaz, juntam^{te}. com hunz peixes do mar alto, q̃ com grande dificuldade pude recolher devo enviar a V. Ex^a.

As mentioned Ferreira also caught fishes during his voyage from Lisbon to Pará which he described and sent to Lisbon for further study. His first impressions of Pará are almost as enthusiastic as those of Silva in Benguela.

Accompanying Silva on the voyage to Angola was a Captain of Grenadiers, Alvaro de Carvalho e Matoso. Silva and Matoso became close friends in Lisbon; Silva convinced his superior Martinho de Melo e Castro to order the Governor of Angola to detach Matoso from his duties as Adjutant in Angola to accompany the naturalist and his assistants on their expeditions to the interior. ¹² Matoso did accompany Silva on a short expedition to Cabinda but official duties kept him in Luanda while Silva was in the interior on later expeditions.

By the time Joaquim José da Silva arrived in Angola, the Governor had been dead for about ten months and a government, Correa calls

12

AHU, Conselho Ultramarino, Cod. 549, pp. 60-60v, Aviso from Martinho de Melo e Castro to Governor José Gonçalo da Câmara, referring to Alvaro de Carvalho e Matoso:

Como este Official parte deste para esse Reyno, em o mesmo Navio, em que vão os Naturalistas, entre os quaes hé hum o Secretario Jozé Joaquim da Silva, com o qual principalmente contrahio amizade o mencionado official, e me persuado o que elle tem acticidade, e zelo para se empregar em tudo o que pertence ao Real Serviço, ajuntando a isto o conhecimento, e pratica que tem desse Reyno, e Seus diferentes destritos, será muito util, que nas digreçoens, e jornadas que fizerem os mencionados Naturalistas sejam acompanhadas por este mesmo official, o qual espero lhes sirva de hum grande Sucorro para desempenho das incumbencias de que vão encarregados.

the "First Triumvirate," was in office. This Interim Government of Bishop D. Fr. Luis de Anunciação, Coronel João Monteiro de Moraes, and the Judge (Ouvidor) Joaquim Manoel Garcia de Castro Barbosa. Although Corrêa belittled the quality of the Portuguese civil, military and ecclesiastic officials in Angola during the late eighteenth century he says:

The Ouvidor was a figure of learning: there wasn't a science or Art unknown to him; and he never stopped trying to practice them .¹³

Unless Corrêa was sarcastic, it is possible that Silva may have encountered a government official with an interest in the sciences in Angola.

After arriving in Luanda to begin his duties as Secretary of Government, Silva experienced difficulties with the Interim Governors. Although Corrêa does not offer a complete account, it would appear that there were efforts to replace Silva with a servant of the Bishop who was one of the members of the Interim Government:

Not wishing at this point to stain the honorable comportment, interest and propriety of the Secretary Joaquim José da Silva, whose property it was [the Secretariat], I will make mention of the policy of "position" which constrained him, in order to put in his place a semi-cleric, servant of the Esteemed Prelate...¹⁴

¹³

Correa, op. cit., p. 80:

A do Ouvidor era figura de erudicto: não havia sciencia, ou Arte, q̃ lhe fosse desconhecida; e se não achasse do alcance de a praticar.

¹⁴

Ibid., p. 109:

Não convindo neste ponto macular o honrado com-

Although Silva and his assistant, José António (Angelo Donati having died shortly after arriving in Luanda), went to Cabinda shortly after arriving in Luanda for the purpose of making a survey of the region and to collect specimens, their absence may have served the designs of those persons who conspired to obtain his post in the government.

The first report (other than a letter on his arrival) Silva made to Martinho de Melo e Castro, describing his activities in Angola, is dated 20 March, 1784. Alvaro de Carvalho e Matoso at this time also wrote a letter to the Minister Martinho de Melo e Castro and Silva sent a shipment of specimens to the Ajuda Palace Natural History Museum. In this first report (see Appendix), Silva informed his superior of the death of Angelo Donati, "...whom I had hoped would help me, which happened just a very few days after disembarking in this City [Luanda]..."¹⁵ Donati was only able to perform his duties in Benguela during their brief stopover of nineteen days.

From Silva's report on his journey to Cabinda it is difficult to

portamento, inteireza, e probidade do Secretario Joaquim Jozé da Silva, q. de propriedade o era, farei menção da politica de posição a q o constrangerão, para em seu lugar caber hum simi-clerigo, fâmulô do Exmo. Prelado ...

15

AHU, Angola, Cx. 39, Report of Silva to Martinho de Melo e Castro, Luanda, 17-III-1784:

....o fallecimento de Angelo Donati, que eu esperava me ajudasse, acontecido mui poucos dias depois do nosso desembarque nesta Cidade ...

determine how much time he and José António spent there. As Cabinda was small and the climate uninviting, it could not have been a lengthy trip:

But the burning Sun, and the small area of Cabinda, that now one is able to walk in without risking one's life, only permitted me to collect a curious looking fish, and some plants and some insects ...¹⁶

The journey was not without dangers at sea as well. Silva reported that the small galley which took them to Cabinda was nearly swamped in the enormous current at the mouth of the Zaire (Congo) River, but¹⁷ they were saved by a Portuguese frigate. Silva found that a reported iron deposit in Cabinda was of poor quality. He also noted some flint deposits. Returning to Luanda by sea, Silva and Jose Antonio briefly stopped in the Dande River region and examined asphalt deposits:

I asked permission from the Government, in order to examine a source of asphalt which was said to be in the neighboring area of that [the Dande] River, that was in fact a little to the Southeast of the same, some three leagues distant from the sea, or from

16

Ibid.

Mas o ardente Sol, e o pequeno espaço da terra de Cabinda, que agora hé licito andar sem risco da vida, so me permittirão recolher hum peixe de curioza vista, e algumas plantas, e insectos ...

17

Ibid.

.. nas vizinhanças da Bahia de Cabinda, ainda sobre a corrente do Rio Saire, donde ao depois se salvou com o socorro da Fragara Graça surta oito legoas dalli ...

the mouth of the Lifune River to the North of the same River Dande. The samples that I am sending now clearly show that the above mentioned source is the real Petroleum, which runs there in droplets...¹⁸

Silva and José António explored the mouth of the Rio Dande and the latter as artist of the expedition prepared a watercolor of the mouth of the Rio Dande, showing the houses, limestone furnaces, church, slave cabins and the course of the River. In the middle of this watercolor José António depicted Silva examining the region with a telescope and the artist himself drawing the scene (see Illustrations).¹⁹

In Silva's inventory list of the shipment of specimens sent to Lisbon, 20 March, 1784 (see Appendix), there are mineral, flora and fauna specimens from several regions in Angola. Insofar as quadrupeds are concerned, Silva sent the horns of a "mountain goat," and an "ox". There were thirty-seven specimens in the little herbarium Silva prepared, but there is no indication from which regions the specimens originated. Like Ferreira in Brasil, Silva had with him in Africa a

¹⁸

Ibid.

...pedi licença ao Governo, para examinar huma Mina de Breu que dizião, estava nas vizinhanças daquelle Rio, e que esta de facto hum pouco ao Sueste do mesmo, coiza de três legoas distante do mar, ou da embocadura do Rio Lifune ao Norte do mesmo Dande. Das amostras que agora remetto se pode ver claramente, que a sobredita Mina o he de verdadeiro Petroleo, que alli corre em lagrimas.

¹⁹

One of six watercolors by José António preserved in the Library (reservados) of the Museu Bocage, Lisbon.

copy of Linnaeus' Systema Naturae (Leyden, 1755). In order to name some of the specimens he collected according to the accepted binomial classification system Linnaeus developed, Silva had to have used Linnaeus' works. In the inventory list of 20 March, 1784 Silva notes:

Three pieces of Flint (Silex Mormorensis)
from Cabinda ...

Seven Rib bones of the Manatee, which is
the Trihechus Manatus of Linnaeus.²⁰

In the late eighteenth century only one species of the manatee was known and described by Linnaeus, the Trihechus manatus. The species Silva collected is properly known as Trihechus senegalensis, native to West African rivers from the Gambia to northern Angola.

At approximately the time that Silva and Jose António returned to Luanda from Cabinda, the newly appointed Governor of Angola, José de Almeida Vasconcelos de Sevelal e Carvalho, Barão de Moçamedes (later Visconde da Lapa), received his instructions. In a note dated 9 March, 1784, the Minister of Overseas and Marine, Martinho de

20

AHU, Angola, Maço 16:

Rellação das Peças que vão Na caixa pertencente
a História Natural Remetida pello Naturalista
de Angola ...

Três pedaços de Pederneira (Silex marmorensis)
de Cabinda ...

Sete Costellas do Chamado Reixe Mulher que he o
Trihechus Manatus de Lineo ...

S. Paulo da Asumpção 20 de Março de 1784,
Joaquim José da Silva

Melo e Castro, reminded the Barão de Moçamedes of his duties to supervise the "three naturalists" in Angola, and not permit them to become lazy. In an expanded letter of 4 April, 1784 (see Appendix), the Minister ordered the Barão de Moçamedes to investigate the activities of the naturalists in Angola:

In such circumstances Her Majesty Orders Your Lordship as soon as you arrive in that Kingdom to become informed with all exactness about the discord and disunity mentioned above and the origins of it, and also what are the progresses which they have made in the duties which they were entrusted; and Your Lordship finding them living in disorder, by its own account, or by whatever guilty motive, if they have not followed the useful ends for which they were sent, notwithstanding the same orders, and which do not require similiar instructions; Your Lordship will order them arrested and sent to this Court under quard, in the case that both merit punishment, and in the case that only one merits it, that one will be sent in the above indicated

21

AHU, Angola, Cx. 39, Martinho de Melo e Castro to Barão de Moçamedes, Lisbon, 9-III-1784:

E ordena S. M. q̃ tenha particular cuidado, em dirigir e promover o trabalho dos mesmos Naturalistas, de sorte que as remessas das producçoens Naturaes que se esperão de Angola ... conhecer q̃ eles não estão ociozos.

manner, without the title of Secretary having any value ...²²

It was some time before the Barão de Moçamedes was able to reply to the Minister's instructions.

By the time that the Barão de Moçamedes arrived in Luanda on 7 September, 1784, Silva had already been in Luanda, prepared his reports, attended to his duties in the Secretariat and left for Massangano with his assistant José António. His report written in March 1784, along with a letter from Alvaro de Carvalho e Matoso (see Appendix), had reached Lisbon and served to partially reassure the Minister Martinho de Melo e Castro that Silva was performing his duties in Angola.

Correa mentions Silva's stay in Massangano with great admiration:

22

AHU, Angola, Cx. 38, Aviso from Martinho de Melo e Castro, to the Barao de Mocamedes, Lisbon, 4-IV-1784:

Nestas circunstancias Ordena S. Mage.^e q̃ V. S. logo q̃ chegar aquele Reino se informe con toda a individuação se há entre os referidos Naturalistas, a discordia, e desuniao asima indicada e motivos dela, como tambem quaes são os progressos que tem feito nas incumbencias de q̃ forão encarregados; e achando V. S. q̃ eles vivem em desordem, que por conta dela, ou por outro qualquer motivo culpavel, se não tem conseguido deles os uteis fins para que forão mandados, antes pelo contrario q̃ as mesmas desordens continuão, e que não há que esperar de semelhantes sujeitos; V. S.^a os mandará prender e remeter a esta Corte debaixo da mesma prisão, no caso de serem ambos merecedores deste castigo, e quando seja sómente algum deles, este deverá ser remetido na formas assima indicade, sem lhe valer a hum o titulo de Secretario ...

Since the already mentioned Secretary [Silva] was graduated in the Science of Naturalism [sic], they exterminated him [sic] to the interior of the country, to collect rarities: being one of those to escape with his life from a residence made at the Town of Massangano (exile of all the criminally inclined of Angola, where his Artist died), in order to fish for manatees and hippopotami in the lagoons of that Presidio.²³

In a letter of 17 August, 1784, Silva tells of his illness at Massangano to his close friend Alvaro de Carvalho e Matoso. Although he does not state how long he had been at Massangano, nor what he had thus far accomplished, he mentions that he had the "cezoenz," an intermittent fever, possibly malaria or a recurrent viral infection. His letter (see Appendix) is exceptionally friendly and Silva asks his "dear friend,"²⁴ while in Massangano to have his watch repaired in Luanda. Silva's letter to Matoso was sent to Lisbon with a covering letter (see Appendix) from Matoso to the Minister Martinho de Melo e Castro, explaining that Silva had been in Massangano attending to his duties as a naturalist because the Interim Governors would not give him permission to explore

23

Corrêa, op. cit., p. 109:

Sendo o mencionado Secretario formado na Sciencia do Naturalismo, o exterminarão para o interior do paiz, a recolher raridades: sendo hũa delles escapar com vida da rezidencia q̃ fêz no Villa de Massangano (desterro dos criminosos d'Angola, a onde faceceo o seu Desenhador), para pescar nas Lagoas daquelle Prezidio, Cavallos marinhos, e Peixes mulheres.

24

AHU, Angola, Cx. 39, letter from Silva to Alvaro de Carvalho e Matoso, Massangano, 17-VII-1784:

Amigo da coração já p^a. mais de hũa vez me tem sido sensível a falta da sua doce companhia ...

the Quanza River region. Matoso further explained to the Minister of Overseas and Marine that because Silva was absent from his post as Secretary, some of Silva's official duties fell to Matoso to perform. 25
Matoso's letter, written before the new Governor arrived, may have also served to calm the severe intentions of the Minister in Lisbon.

Not long after writing to his friend Matoso from Massangano concerning his own health, Silva's artist José António died. Silva returned to Luanda in late September, 1784. After a year in Angola both of his original companions were dead. Matoso, who would have preferred to explore the interior with Silva, was unable to leave Angola's capital because of his own official duties. After three weeks in Luanda the Barão de Moçamedes sent a report to the Minister of Overseas and Marine, which for all appearances served to free Silva from any charges of misconduct. His comments make clear the exigency of life in Africa and its deteriorating effects on Europeans:

25

AHU, Angola, Cx. 39, Alvaro de Carvalho e Matoso to Martinho de Melo e Castro, Luanda, 4-IX-1784:

Não posso deixar de fazer certo a V. Ex^a. q̃
pertendendo o Secretario desta Joaquim José
da Sylva partir p^a. Ryo Quanza a explorar os
productos da Istoria natural, offrecime em
cumprimento das ordens de V. Ex^a. e do Aviso
que foi expedido em parte p^a. este effeito;
mas não pude obter Licença dos Governadores
Interinos, àpezar das instâncias q̃ p^a. isto
for o ditto Secretario, por eu ser o unico
Ajudante d'Ordens q̃ então havia, e ser impra-
ticaval ficar o Governo sem algum.

Already Your Excellency will have the news of the death of the Artist Angelo Donati just a few days after arriving in Angola, and the same just happened now to a Young Fellow [Jose Antonio was thirty-seven at the time of his death] in Massangano, who in order to replace the loss of the former [Angelo Donati], accompanied the Secretary of this Government [Silva] in making discoveries to decorate the Museum of Her Majesty. I still have not seen the above mentioned Secretary, who just returned to this Capital [Luanda], a few days ago, such being the state of his health, and so funereal the African Climate, especially the interior of this Continent, so diversified from that of Benguela which is more healthy than that of the interior. I know, however, that the mentioned Secretary sent down on the Quanza River a large hippopotamus and two manatees which have not yet arrived ...²⁶

The Governor replied to the Minister's request for information explaining that two of the three men in Silva's party died within a year of arriving in Angola. The report cleared Silva of wrongdoing or lack

²⁶ AHU, Angola, Cx. 39, Barão de Moçamedes to Martinho de Melo e Castro, Luanda, 30-X-1784, 2^a. via:

Já V. Ex^a. terá noticia do falecimento do Desenhador Angelo Donati muito poucos dias depois de chegar a Angolla, e o mesmo aconteceu a hum Rapaz em Massangano, que para suprir a falta daquelle acompanhou o Secretario deste Governo em descobrimentos para ornar o Muzeo da Sua Mag^e.; Ainda não vi o dito Secretario, que não há muitos dias chegou a esta Capital, pois tal hé o estado da sua suade, e tão funesto o Clima Africano, especialmente o Certo deste Continente, diversificando do de Benguela que he mais sadio do que o Certo. Sei porem que o mencionado Secretario deixou para embarcar no Ryo Quanza hum grande Cavallo Marinho, e dous Reixes Mulheres, que não tendo ainda chegado ...

of activity; to the contrary, moreover, the Governor noted Silva's efforts at a time when the naturalist was ill. The Governor also requested that at least one replacement be sent to Angola to assist Silva because the naturalist totally lacked the services of an artist. ²⁷

From September 1784 to May 1785, Silva was in Luanda. During that period, when he attended to his duties in the administration of the colonial government, there are no recorded shipments of natural history specimens to the Ajuda Palace Natural History Museum. It is possible that he may have spent some time studying and classifying specimens locally obtained or sent to Luanda by the commanders of the interior presídios. Most likely Silva was obliged to convalesce from the fever attacks he suffered in Massangano. During this period the new Governor, Barão de Moçamedes, and Silva may have planned further expeditions into the Angolan interior.

On 25 May, 1785 Silva left Luanda as a member of a military column under the command of Captain António José da Costa, and did not return for over two years. The purpose of this expedition as well as another one which left Luanda at the same time was to discover the mouth of the Cunene River on the Atlantic coast of Angola. In addition, Correa mentions that the expedition had a secondary goal of establishing

27

Ibid.

...e pouco em quanto V. Ex^a. nos não mandar algum novo Desenhador, de que ficámos inteiramente desprovidos.

some form of trans-continental communication with Mocambique and at the same time would hopefully discover more about the interior of Angola. There are some uncertainties about exactly how long Silva
28
was out of Luanda.

The concept of a trans-African expedition was not unique in Portuguese African policy. The predecessors of Martinho de Melo e Castro in the Office of Minister of Overseas and Marine were very aware of the need to establish overland routes between Moçambique and Angola. There was a lack of exact geographical knowledge about the directions and origins of major rivers as well as the extent of mountain chains. In the eighteenth century the Dutch in the southern end of Africa did not pose a threat to Portuguese rule in Mocambique or Angola. The French and English competed for slaves as did other nations. In the late eighteenth century (1795) after the English established themselves at the Cape of Good Hope, the Portuguese began to feel menaced; moreover, after the removal of the Portuguese Court to Rio de Janeiro in 1808, there were renewed fears that the English would seize the Portuguese possessions in Africa. Direct military and commercial communication between Moçambique and Angola would open up the African interior to Portuguese

28

Corrêa says Silva was gone two years and seven months, but the expedition was gone two years and two months. He is however correct when he says, pp. 139-140:

...não fêz produzir algum beneficio á Coroa,
nem aquelle Estado...

penetration and establish a more tenable claim of control.

The primary goal of Silva's expedition was to locate the mouth of the Rio Cunene. His expedition travelled inland from Benguela and then to Cabo Negro on the coast, afterwards making a wide sweep inland and eventually returned, but without finding the mouth or even touching the Cunene River. ²⁹ Silva gained a reputation in Angola as an explorer of the interior. He might even be termed a sertanista, a more descriptive Brazilian word for explorer. Many years after he had permanently settled in Luanda, later explorers were advised to seek ³⁰ him out and discuss plans for a trans-African expedition.

Silva was in the interior of southern Angola for about two years. Although Silva mentions a map and a diary he made during the extended journey, only the map is extant (preserved in the Instituto Geografico e Cadastral, Lisbon). In a letter Silva wrote to the Minister Martinho de Melo e Castro from Benguela 20 May, 1787, he included a brief outline

29

AHU, Angola, Cx. 56, "Autos de Serviço" of Joaquim José da Silva, p. 18, mentioning that he was ordered to discover the mouth of the Cunene River:

...chegou quazi a latitude de dezanove graos
ao Sul ...

30

Letter from João Alvares de Melo to Miguel António de Melo, Luanda, 7-XII-1798, Arquivos de Angola, vol. I, no. 1 (Outubro, 1933); discussing a trans-African expedition:

Não deixei de falar nesta materia com o Naturalista tambem chamado Joaquim José da Silva, hum dos homens de melhores conhecimentos que tem entrado nos Sertoens de Benguella ...

of his expedition, and some mention of the specimens he collected. The long journey, attacks by natives, drought and the lack of assistants prevented Silva from obtaining more specimens. The expedition's overall route was determined by the Governor of Angola, the Barão de Moçamedes. Silva specifically mentions in his report to the Minister that the number of specimens of animals is small only because he lacked assistance; moreover, he was unable to prepare drawings of the plants which formed his herbarium because he lacked an artist. He obtained some copper ore as well as additional samples of asphalt
31
(see Appendix).

Silva was concerned that the lack of specimens from the expedition would anger the Minister Martinho de Melo e Castro, and the naturalist plainly said:

From all of which Your Excellency, you can easily see, that the lack of my shipments is not due to negligence, it had been made inevitable beforehand, if it had been understood about working alone; in regard to the long marches which I spent two years on, and on which my expedition had always been viewed and treated as secondary. Everyone knows that I have not stopped, and that I have never had any other object for my thoughts and duties, knowing thus it was my duty. Your Excellency, you have to have sympathy for me, pardoning me for not doing more than my physical abilities

and talents would let me ...³²

Silva desired to serve the Crown through his natural history studies; and, yet, he was unable to fulfill his mission because he lacked assistants and his duties were secondary to those of the military column.

The two years in the interior of Benguela must have taken a terrible toll on the health of the naturalist. Corrêa who knew Silva in Luanda describes him upon returning from the expedition:

The Secretary Naturalist, almost dead, decrying his miserable luck, the skin of his face appeared to have changed color; and fainting in spite of having completely stripped-off his clothing in order to cool himself with some breezes; fanning himself wildly: [put on] a bit of Mud, that calmed him down.³³

32

Ibid.

Donde Ex^{mo}. Senhor, bem vê V. Ex^a., que a falta de remessas minhas não de devida á negligencia, antes tem sido inevitavel, se se attender a q̃ trabalho só; ao longe das marchas referidas, em q̃ gastei dous annos, e ao haverem sido as minhas expediçoens sempre olhadas e tratadas como secundarias. Todo o mundo sabe, que eu não teho parado, e q̃ não tem sido nunca outro o objecto das minhas cogitaçoens, e conveniencias, conhecendo, que assim he e meu dever. V^a. Ex^a. por quem he se com-padeça de mim, desculpando me de não fazer mais do que podem as minhas forças e talento ...

33

Corrêa, op. cit., p. 139:

O Secretario Naturalista, lamentando quaze moribundo a sua miseravel sorte, se lhe percebeo alterar-se a côr: a pelle: o Sem-blante, e desfalecer-se apezar de se haver totalmente despido, para refrigerar-se com os toques de algum ar; e combates de ventilação; hum pouco de Lodo, o desalterou.

As mentioned, both Ferreira in Brasil and Manuel Galvao da Silva in Moçambique were ill for months at a time. Silva not only suffered from fevers in Angola, but was exposed to the extremes of the African climate.

The only firm natural history evidence of the expedition to the Angolan interior was the shipment of two boxes of specimens to Lisbon on 9 July, 1787. As Silva mentioned in his letter of 20 May, 1787 from Benguela, the shipment was mainly a herbarium and some mineral samples. In his letter of 9 July, 1787 (see Appendix), Silva again mentioned that the small quantity of specimens was due mainly to the
34
lack of assistants, and that he had done his best.

A few months after he returned to Luanda and regained his health, Silva requested a transfer to Rio de Janeiro, his birthplace. As Silva had been in Portugal and Africa at least seventeen years, his desire to return home was normal. He wrote to the Minister Martinho de Melo e Castro and although he did not mention his own health nor his work as a naturalist, he did stress family ties as a reason for returning to Rio de Janeiro. He said his parents were becoming older and that

Queira V. Ex^a. por sua Benevolencia attender que esta Remessa, senão Corresponde proporcionalmente aos meynos, e possibilidades, que tenho tido, ajudado de muita deligencia, e por entre muitas dificuldades, que nunca julguei occorressem, sendo a principal, a falta de Companheiros.

his unmarried sister needed his protection.

Silva did not receive an immediate answer. A response, of sorts, came over two years later when a new Secretary of Government was appointed to replace Silva and the Minister of Overseas and Marine granted Silva permission to return to Lisbon and not to Rio de Janeiro. At the time Manuel de Almeida e Vasconcelos, brother of the Barão de Moçamedes, was preparing to leave Lisbon and replace him in the post of Governor of Angola, the Minister Martinho de Melo e Castro informed him on 23 October, 1789 of Silva's leave to return to Lisbon:

As you find a Secretary nominated by this Government, who is embarking on this occasion on the Warship on which Your Excellency is being transported, Your Excellency can extend Permission to the Naturalist Joaquim José da Silva, who is serving as Secretary 36 in order to transport himself to this Kingdom.

35

AHU, Angola, Maco 4B cont., Silva to Martinho de Melo e Castro, Luanda, 14-X-1787:

...animado a pedir humildemente a V. Ex^a. se sirva de despachar me com a Secretaria do Rio de Janeiro, onde tenho meos Pays alcançados em annos, e huma Irman solteira que na falta daquelles ficará desamparada.

36

AHU, Angola, Cx. 41, Aviso from Martinho de Melo e Castro to Manuel de Almeida e Vasconcelos, 23-X-1789, Palacio de Queluz:

Como se acha nomear Secretario para esse Governo, o qual embarca nesta occasião na Nau de Guerra em que V. Ex^a. se transporta, pode V. Ex^a. permitir Licença ao Naturalista Joaquim José da Silva, que servia de Secretario para se transportar para este Reyno.

It is interesting to note the long delay in acceding to Silva's request to leave Angola. He did not request a severance from the Royal Service, but rather a transfer. Perhaps it was not Crown policy to allow Royal officials to serve in their native provinces. Or it is possible that no vacancy existed in Rio de Janeiro. By 1789 Silva had been in Angola six years. Lacking a detailed diary, it is likely that he married some time after returning from the Benguela sertão and he subsequently decided to settle in Angola, remaining in the Royal Service. After the new Governor arrived Silva continued to attend to his duties as a naturalist, preparing shipments for the Ajuda Palace Natural History Museum. From the summary of the shipment sent on 15 August, 1790, there was no indication whether Silva himself collected the "bird, and a Barrel
37
with a Manatee for the Museum," or he received them from the commanders of the interior presídios.

Notwithstanding Silva's own plans and hopes for a successful career in the Royal Service, the newly arrived Governor, Manuel de Almeida e Vasconcelos, wanted Silva to remain in Luanda. In order to do this, his predecessor already named Silva as Capitão Mor (commander)

37

AHU, Angola, Cx. 41:

Relação dos Offícios que acompanhão esta, remet-
tidos a Corte em 15 de Agosto ... no. 4:
Acompanha huma Ave, e hum Barril com hum Peixe-
mulher para o Muzeo ...

Secretaria do Estado em S. Paulo de Assumpção,
de Angolla, a 15 de Agosto de 1790. Joaquim José
da Silva.

of Massangano, the very same unhealthy place Silva journeyed to in 1784; however, the naturalist never returned to Massangano as the appointment was in name only.

In Lisbon the Minister Martinho de Melo e Castro did not approve of the Governor's juggling of officials and unauthorized dispositions of salaries. In reprimanding the Governor, the Minister of Overseas and Marine stated:

...governors do not have any authority whatsoever to dispose of the salaries of the Secretariat, conferring them on those who do not work, and separating the emoluments, in order to give to those whom you please. The reprehensible abuse was already practiced unwisely by your Predecessor, depriving Joaquim José da Silva of the office of Secretary who was then nominated by Her Majesty (whom now Your Lordship deems worthy of the same Secretariat) and putting in his place João Ribeiro de Sousa...³⁸

From the Minister's tone it can be seen that he was an individual not only to be respected and obeyed, but feared by his subordinates even thousands of miles from Lisbon. Silva continued to attend to his duties

38

AHU, Angola, Maco 4B cont., Order from the Minister Martinho de Melo e Castro to the Governor of Angola, Palácio de Queluz, 8-VIII-1791:

...os governadores não tem autoridade algũa para dispor dos ordenados da Secretaria, conferindo-os a quem não serve, e separando os emolumentos, para os dar a quem querem que sirva: Este reprovado abuso já foi praticado impolitamente pelo Predecessor de V. S., privando do exercicio da Secretaria a Joaquim José da Silva nomeado então por Sua Magestade (o qual agora V. S. acha digno da mesma Secretaria) e metendo em lugar delle a João Ribeiro de Sousa ...

as a naturalist and shipped specimens to Martinho de Melo e Castro in Lisbon. A short inventory list of 31 December, 1791 includes several boxes, barrels and cages of large and small birds. The contents of the boxes and barrels was not listed separately and there is no way to determine whether Silva sent more quadrupeds or whether he concentrated on mineral samples.

Governor Manuel de Almeida e Vasconcêlos replied to the Minister's letter of 8 August, 1791 (see Appendix) in January 1792. The Governor recapitulated some of Silva's adventures for the Minister and explained that when the Barão de Moçamedes arrived in Luanda, Silva was in Massangano performing his duties as naturalist. In Silva's absence Sousa was allowed to perform the Secretary's duties. He continued in that capacity while Silva explored the interior of Benguela for

39

AHU, Angola, Cx. 41:

Relacção dos Officios que vão remettidos ao Ilmo.
e Exmo Senhor Martinho de Mello e Castro, Ministro
e Secretario de Estado dos Negocios Ultramarinos
e da Nariha ... 31 de Dezembro de 1791 ... no. 2:
Hum Officio para o Mesmo Ilmo e Exmo Snr accompan-
hado as producçoens de Historia Natural; Duas Cai-
xas, Hum Tunel, Hum Barril, Huma Ancoreza, ou Pe-
queno Barril. Quatro Gayolas de Aves Grandes; Hum
Viveiro de Passaros ...

40

two years. The Governor further explained that he had put his personal secretary in Silva's successor's place and paid him separately and not from the Royal Treasury; moreover, the Governor mentioned the difficulty of finding someone to accept a low-paying administrative post in Angola.

41

The apparent confusion over what position Silva held, where his salary came from, and what his duties were is partially due to a lack of information provided by Governor Manuel de Almeida e Vasconcelos. Shortly before the arrival of the new Governor, the outgoing Governor, Barão de Moçamedes, appointed Silva Capitão Mor (commander) of the presidio of Massangano on 6 October, 1790. Since Silva's replacement who arrived with the new Governor lacked experience, it became necessary to retain Silva in Luanda, allowing him to perform the duties of Secretary. Silva's name had to be kept on the roll of paid Royal officials

40

AHU; Angola, Cx. 42, Report from Manuel de Almeida e Vasconcelos to the Minister Martinho de Melo e Castro, Luanda, 25-I-1792:

...elle não foi expulso ou excluido pelo meu predecessor, mas sim constame, que nao o achando aquí, quando chegou, por andar no Sertão nas expedições de Istoria Natural, se vio na precisão de practicar o mesmo encarregando a João Ribeiro de Souza a expedição da Secrettaria, que era Official Maior della, e de continuar, quando em execução das Ordens de Sua Magestade o proprio Joaquim Jozé da Silva foi para a Sertão de Benguella na mesma dilligencia ...

41

Ibid.

in Angola. The Governor allowed the officer actually in charge at Massangano to remain there while Silva was assigned to Luanda to work⁴² in his former position. The new Governor did not change things but left them as he found them or adapted to the inquiries of the Ministry in Lisbon.

From 1790 until 1798, Silva held the official title of Capitão Mor of Massangano, though he was transferred to Ambaca in 1794.⁴³ He may have actually relinquished the title but retained the rank of Capitão Mor with its salary and perquisites. In a promotion list for 1791, Silva is

42

AHU, Angola, Cx. 56, Autos de Serviço of Joaquim José da Silva, "Carta de Comissão," of the Barão de Mocamedes, for the post of Capitao Mor of Massangano, 6-X-1790:

Faço Saber aos que esta Minha Carta de Comissão virem, que attendendo ao prestimo e honra com que tem Servido o Emprego de Secretario do Estado deste Reyno, Joaquim Jozé da Silva, e que vindo provado por Sua Magestade o Successor a falta de pratica, e outras mais circunstancias, exigem a Conservação do mesmo Antecessor na Secretaria, para diversas incumbencias do mesmo Real Serviço: Hey por bem de o prover (Como por esta o provo) no Posto de Cap^{ao}. Mor da Villade Massangano, e ficar devolvido no Capitao Mor do Campo e Reyno Domingos Jozé da Vidtoria, ou no Tenente da Infantaria da mesma Villa, em quanto a Raynha Nossa Senhora não Mandar o contrario, e Eu entender he conveniente ao Seu Real Serviço com o qual haverá o solde competente, pago na formas das Reaes ordens ...

43

Ibid.

Por esta Appostela passa ser Capitão Mor do Prezidio e Jurisdição de Ambaca o mencionado Capitão Mor de Massangano Joaquim José da Silva ... São Paulo de Assumpção, 1º de Março de 1796.

listed as Capitão Mor of Massangano, "Held over in the Secretariat: in charge of renovating the books of the same, the Naturalist, Joaquim José da Silva."⁴⁴

During the 1790's and until the time of his re-appointment to the post of Secretary of Government in 1802, Silva continued to hold a number of administrative posts in Luanda and at Ambaca. He continued to work in the Secretariat and attend to his duties as a naturalist, sending specimens to Lisbon. His performance as a naturalist appears to have been more than satisfactory to Governor Vasconcelos who wrote to the Minister Martinho de Melo e Castro:

I am taking the occasion to send out the shipments of the "products of nature" which up to the present have been collected and constitute listing which I have the honor to place in the Presence of Your Excellency in the reductions made by Joaquim José da Silva, with whom I have worked on the assignment with diligence; whose knowledge in this science has assisted the lack of mine enabling me to secure for Your Excellency, [specimens] whose work would be consid-

44

AHU, Angola, Cx. 42, List of Officers Promoted in Angola during 1791:

Cap^m. Mor de Massangano, Conservado na Secretaria, Encargado de Reformador dos Livros da mesma, o Naturalista, Joaquim José da Silva.

erably advanced with the aid of an Artist,
for the Natural History Cabinet...⁴⁵

The published inventory is exceptionally diverse. It contains a variety of the indigenous Angolan flora and fauna, as well as mineral specimens and native weapons. In many instances Silva used the Linnaean scientific nomenclature as well as the indigenous name and the common Portuguese name for a specimen. In listing a "Hyena" (Crocota crocota L.), he also noted the common Portuguese term, "lobo" (wolf), and the native name, "quimalanga," In order to effectively describe the conches and smaller shells Silva collected, he must have had a detailed natural history text, such as Linneaus' Systema Naturae with him in Luanda.

45

AHU, Angola, Cx. 41, Report from Governor Manuel de Almeida e Vasconcelos to Martinho de Melo e Castro, Luanda, 5-XI-1791:

...aproveito a occasião de fazer as remessas de producções naturaes que até o presente tenho conseguido constantes de Mappa que tenho a honra de por na Presença de V. Exa. na forma das reduções feitas por Joaquim José da Silva, que tenho trabalhado com efficacia nesta dilligencia, com os seus conhecimentos tem servido a falta dos meus nesta sciencia podendo segurar a V. Exa. de que se com elle aqui tivesse do Desenhador poderia adiantar consideravelmente o Gabinete de Istoria Natural ...

46

Arquivos de Angola, vol. I, no. 1, (Outubro, 1933):

Relação de productos Naturaes, que pela Secretaria de Estado da Repartição do Ultramar vão remetidos ao Real Gabinete .. 5 de Novembro de 1791:

Hum Barril, com 1 Lobo, a que chamão no Paiz, Quimalanga, o qual suposto tenha grande semelhança com o Hyena de Lineu, deve notar-se que tenho entre a Cuada e o Anus, hũa bolsa, ou glandula, em que se depoem hũa sustancia semelhante ao cheiro dos Castores, offerece a apparencia de Hermaphrodita, cujo nome lhe deverá competir na Especie.

At this point Silva did not travel to the interior himself and in Luanda was obliged to prepare specimens for shipment without assistance.

The inventory list of the shipment sent to Lisbon on 2 February, 1792 (see Appendix) also reflects Silva's use of the Linnaean classification system, but unlike the shipment of 5 November, 1791, only describes the specimens and does not list each item. Although the shells are individually noted, another group is listed as "sixteen fossils" and "marine plants." Live animals were also sent and Silva prepared instructions for the ship's captain on their care and feeding. Silva signed the inventory list, but the Governor prepared a cover letter for the Minister⁴⁷ Martinho de Melo e Castro noting where the animals were caught.

Approximately a year later another shipment was sent to Lisbon, with a covering letter from Governor Vasconcelos. The inventory reflects Silva's interest in Angolan flora and especially in medicinal plants. Mineral wealth as well as the abundant flora and fauna are also well represented in this already published inventory. Silva used the native names for most specimens and some scientific names. Each item

47

AHU, Angola, Cx. 42, Report of Governor Manuel de Almeida e Vasconcelos to Martinho de Melo e Castro, Luanda, 2-II-1792, with:

Relação das curiosidades pertencentes á Istoria Natural, ... 2 de Fevereiro de 1792, signed by Manoel Paulo de Saldanha, Official Maior da Secretaria, and an attached document signed by Joaquim José da Silva, constituting an inventory of the shipment.

is listed with its origin. It appears that the commanders of the interior presidios were sending specimens to Luanda on a regular basis for Silva to examine and forward to Lisbon. Silva also tried to diversify the specimens by adding items of potential economic value such as eight different species of edible beans and various native cotton dyes as well as locally made cloth which may have been used as currency in the interior.

Governor Vasconcelos' covering letter (see Appendix) of 13 February, 1793 mentions where several of the specimens were caught, but it is essentially a personal plea to the Minister Martinho de Melo e Castro on Silva's behalf. The Governor praised Silva's good conduct and behavior, but mentioned the need for relief from his "present state of indigency" and the "lack of means of subsistence," further mentioning a letter Silva sent to the Minister at that time (not extant). Although the Governor supported Silva's claim for assistance, he deferred to Ministerial judgement for final action. It can be inferred that Silva's letter

48

Arquivos de Angola, vol. 1, no. 4 (Novembro, 1935):

Relação dos Productos Naturaes que pela Secretaria de Estado da Repartição do Ultramar, vão remetidos ao Real Gabinete da Ajuda ... em 18 de Fevereiro de 1793 ... Joaquim José da Silva.

49

AHU, Angola, Cx. 43, Report of Manuel de Almeida e Vasconcelos to Martinho de Melo e Castro, Luanda, 13-II-1793:

...Joaquim José da Silva, me roga implorar a benignidade de V. Exa. em seu beneficio, compadessendose da indigencia, em que se acha, e

to the Minister requested either a transfer to Rio de Janeiro or some form of financial assistance.

Silva remained in Luanda until the summer of 1794. The Minister of Overseas and Marine in Lisbon failed to respond positively to Silva's pleas. He failed to respond and left Silva to his own means in Luanda. There are no further records of shipments to Lisbon in 1793 and 1794; it is possible that Silva continued to send small shipments of individual specimens. Without trained replacements for his long deceased assistants to prepare drawings or help in preserving animals, and Silva's dependence on specimens from other government officials, it is doubtful his shipments could have been large.

Governor Vasconcelos found a solution for the problem of what to do with Silva since he could not send him home to Rio de Janeiro and the naturalist did not apparently want to return to Lisbon, when the Capitão Mor of Ambaca retired. Since Silva already had the rank of Capitão Mor through his appointment as Capitão Mor of Massangano, the Governor could appoint Silva to the post at Ambaca. The date of Silva's formal appointment to Ambaca was 1 March, 1796 but he left for that presídio about two years earlier in June, 1794:

falta de meios de subsistir, como exporá' a V. Exa. na sua carta junta, podendo eu attestar da sua boa conductta e comportamento, pois que do seu prestime sabe V. Exa. conhecer muito melhor do que eu.

taking with him in his Company his family,
a Corporal, a Soldier and all their res-
pective equipment ... 50

Silva held the title of Capitão Mor of Massangano for two years while
he was at Ambaca. Documents in Silva's Service Dossier for the Order
of Christ praise his efforts at a "humane" tax collection policy in the
51
Ambaca region from 1794 to 1797.

During the period Silva was at Ambaca he did make some record-
52
ed botanical collections. As has been mentioned, Silva's efforts at
tax collecting in Ambaca were worthy of official recognition more than
his natural history duties:

... and moved to Ambaca, by Official Note,
whose government he held for four years and
one month, having this digression's prin-
cipal objective to put into practice a new
system of Collecting the Royal Tenth, with-
out causing the people vexations, and with

50

AHU, Angola, Cx. 56, "Autos de Serviço" page 11, Travel
Orders for Silva to the Presídio of Ambaca:

Passaporte de S. Exa p^a. a m^a. Marcha p^a. este
Prez^o.: Marcha o Capitão Mor de Massangano Joa-
quim José da Silva desta Capital para o Prezi-
dio de Ambaca, que vay reger, e toda a sua Juris-
dição, levando em sua Companhia a sua Família,
hum Cabo, e hum Soldado, e as suas respectivas
Cargas de couzas pertencentes ao seu uso...
Quartel General de Angola, 7 de Junho de 1794,
Manoel de Almeida e Vasconcelos.

51

Ibid., "Certidão de EsCRM. do Presídio de Ambaca, António
de Azevedo Galiado, pp. 22-23v, "Autos de Serviço."

52

See Teixeira, op. cit., "Le Naturaliste Joaquim José da
Silva ..."

the greatest profit possible; from there
retired due to illnesses ...⁵³

In Silva's Service Dossier for the Order of Christ prepared in 1803 (see Appendix), the documents reveal that upon returning to Luanda Silva was named to the post of General Treasurer for the Properties of Deceased and Absent persons, some form of Surrogate Court custodian,⁵⁴ for one year, beginning 26 February, 1799.

At about the time Silva received this temporary post in Luanda, the outgoing Governor of Angola, Miguel António de Melo (who succeeded Governor Vasconcelos) recommended the re-appointment of Silva as Secretary of Government in Angola. In spite of Silva's inability to ship as many specimens to Lisbon as he would have liked and his other duties which prevented expeditions, he was a valued Royal official:

The Governor and Captain General of Angola,
D. Miguel António de Melo, recommends Joaquim
José da Silva for the position of Secretary of

53

AHU, Angola, Cx. 56, "Autos de Serviço" pp. 17-18v:

... e passou por Appostilla para Ambaca, cujo
governo teve quatro annos e hum mez, tendo esta
digressão por objecto principal por em practica
o novo Systema da Cobranca dos Dizimos Reaz sem
vexação dos povos, e com o maior Lucro possivel;
daqui retirado por occasião de molestias ...

54

Ibid., pp. 12-12v:

... thezoureiro Geral dos Bens e Fazendas dos
Defuntos e Auzentes, Capellas e Reziduos da
Repartição da Cidade e as suas Conquistas por
tempo de hum anno ... 26 de Fevereiro de 1799,
... Doutor Felix Corrêa de Araújo, Juiz da Fora,
e Ouvidor Interino...

Government; [who is] a Bachelor of Arts in Philosophy, and has been seventeen years in that Kingdom [Angola], where he already served in the Position of Secretary and other posts of distinction with intelligence and probity ...⁵⁵

Until he was formally re-appointed Secretary of Government, Silva continued to work in the Secretariat after completing his term as General Treasurer of the Properties of Deceased and Absent persons. The official date of his re-appointment to office is 12 February, 1801; by the fall of that year he was exercising his official functions and prepared copies of an Alvara concerning botanical collections.⁵⁶
⁵⁷

Possibly with a view towards preparing a complete Service Dossier for the Order of Christ, an award Silva earnestly hoped to be granted, he requested an authenticated copy of the Alvará of his re-

55

AHU, Conselho Ultramarino, Cod. 550, letter from the Minister of Overseas and Marine, D. Rodrigo de Sousa Coutinho to the Governor of Angola, D. Fernando António de Noronha, 3-IX-1800, Palácio de Queluz:

O Governador e Capitão General de Angola, D. Miguel António de Mello, recomenda para o Lugar de Secretario de Governo, a Joaquim José da Silva, Bacharel formado em Filosofia, e que ha 17 annos está naquelle Reino, onde já servio o Emprego de Secretario, e outros Lugares de distincção com intelligencia e probidade ...

56

ANTT, Alvará de Mercê do lugar do Secretario do Reino de Angola, in Chancelaria de D. Maria I, Livro 66, fl. 126v., 12-II-1802, the original is preserved in Angola, Cx. 56, within the Service Dossier for the Order of Christ.

57

AHU, Angola, Cx. 50, Order of 12-XI-1802, signed and copied by Silva.

appointment as secretary and permission to allow him to "swear fealty"
58
to the Crown before the Governor of Angola. Although the award of
the Order of Christ was a Royal recognition for merit, it also carried
a financial reward. Since Silva's financial condition must have been
precarious as he was dependent on a fixed income and had a growing
family, it is not surprising he petitioned the Crown for aid. During the
time he was preparing the Service Dossier for the Order of Christ, he
petitioned the Crown for the "Special Grace" to have the post of Secretary
of Government of Angola conferred upon him as his property in order
that he might pass it on to his sons. Although he mentioned his ill
health and large family the official in the Ministry of Overseas and Mar-
ine who prepared the "parecer" or review mentioned that a special
knowledge of scientific matters would be necessary to pass judgments on
Silva's merits:

... in order to merit the special grace; which
is to petition for life, that which is also dif-
ficult to be convinced, when it is about an occu-

58

AHU, Angola, Cx. 53, Petition:

Diz o Bacharel Joaquim José da Silva, por seu
procurador nesta Corte, que expedindo-se-lhe
Alvará do emprego de Secretario do Reino de
Angola, com a clazula ... na chancelaria, não
pode vereficar-se a dita clazula, por se achar
o Suppe. naquelle Reino ... Pa.:V. Alteza Real
se digne despençar a dita clazula, mandando que
o Suppe. preste o juramento perante o Governador
e Capitão General do mesmo Reino de Angola.

E. R. M^{ce}. Palacio de Queluz, em 20 de Marco e 1802.

pation which depends on scientific aptitudes and knowledge.⁵⁹

Silva's request went unheeded.

Silva made another request to the Ministry, supported by the Governor, D. Fernando António de Noronha. Silva mentioned his previous appointment as Secretary and better financial status; after his re-appointment he found that he was no longer able to pay for the purchase of the Secretariat's supplies out of his salary. He further stated that these costs had risen to 150\$00 mil reis annually but the costs were not required by regulation, rather by "custom". The Governor endorsed Silva's petition, but was unable to offer him any relief because there was no provision for buying the supplies in the official budget.⁶⁰

The complete Service Dossier for the Order of Christ is itself a major document. Silva gathered numerous attestations of his long service in Angola, beginning with his arrival in 1783, the expeditions to Cabinda, Massangano and the two year trek through the interior of southern Angola. As mentioned, conferral of the Order of Christ meant not

59

AHU, Angola, Cx. 54, Petition from Silva, without date, requesting the "property" of the office of Secretary of Angola; the "par-ecer" of a Ministry official, denies the request:

...para merecer a especial graça; q̃ requer em vidas, o que tambem é difícil de converse, quando se trata de huma ocupação que depêde segundo dar entender da aptidão e conhecimentos scientificos.

60

AHU, Angola, Cx. 54, Endorsement of a Petition from Silva by the Governor, D. Fernando António de Noronha, Luanda 10-VI-1803, in order to relieve Silva of supplying the materials used in the Secretariat.

only Royal recognition of services rendered and loyalty to the Crown itself but it brought financial rewards.

The numbers of military, civil as well as ecclesiastical officials and foreigners who held the Order of Christ grew towards the end of the eighteenth century to such an extent that a special rank of Commander of the Order of Christ had to be created to distinguish among degrees of merit. For Silva in Angola, conferral of the Order of Christ may have been some form of social distinction; moreover, the financial assistance in the form of an annual pension may have been very important for Silva.

Part of the Attestation to Services, outlining Silva's twenty years in Angola, recounts his dangerous and virtually fruitless expedition in the savannah of southern Angola:

[The Barão de Moçamedes sent Silva to Benguela] at a time when the Army was there, under the command of the Captain of Grenadiers, António José da Costa, with whom he ascended to the interior heights; where, by order of the same Barão [de Moçamedes], he was in charge of the Direction of march of the same Army, that among other [orders], had for objective the discovery of the banks, or at the least the Mouth of the Cunene River, of whose industry Resulted a small Map, made by him, only after filling in all the regions he had to note on the Map, which was presented to the Ministry by the Engineer, Luís Candido Cordeiro Pinheiro Furtado, in which is shown many Rivers, until then, unknown, and noted on the map; and continuing, arrived almost at the latitude of nineteen degrees South, completely destitute of all the necessary instruments, until arriving at Cabo Negro with a small detachment, that was marching to that encampment for other purposes, and by the course of infinite calamities he followed the detachment to the Coval River, from where he went to Caconda Nova,

where he rested, having suffered hard marches, hunger, thirst, and blows, and fights with the enemy, whose lands they crossed, particularly in Cabo Negro ...⁶¹

The map referred to above is preserved in the Instituto Geográfico e Cadastral, Lisbon, and the diary of the expedition is not extant. Considering Silva's difficulties in the two-year expedition, it is much to his credit that he was able to collect any natural history specimens for the Ajuda Palace Natural History Museum.

61

AHU, Angola, Cx. 56, "Autos de Serviço," part of a narrative summary of Silva's expedition in southern Angola, pp. 17-18:

...a tempo que já ali estava o Exercito, que commandado pelo Capitão de Granadeiros António Jozé da Costa, com o qual subio para aquellas Sertoens; one por Ordem do mesmo Barão foi encarregado da Direcção das marchas do mesmo Exercito, que entre outro, tinha por objecto o descobrimento das margenz, ou ao menos da Fóz do Rio Cunene, de cuja dilligencia Rezultou hum pequeno Mapa, por elle feito que ao depoiz servio de suprir o que daquelles regioenz estava por notar no Mapa, que ao Ministério se apresentou feito pelo Ingenheiro Luíz Candido Cordiero Pinheiro Furtado, em que mostrou muitos Rios, athe ali dezconhecidos, e no dito Mapa notados: e proseguindo chegou quazi a latitude de dezanove graos ao Sul, destituido de quaze todos os instrumentos necessarios, athé chegar a Cabo Negro com hum pequeno destacamento que para outros fins marchas daquelle acampamento, e por meio de infinitas calamidades, seguio o destacamento athe ao Rio Coval para onde elle fez conduzir de donde passou a Caconda Nova, onde descansou tendo sofrido trabalhozas marchas, fomes, sedes, choquez, e combates de inimigo, cujas terras atravessarão particularmente em Cabo Negro...

Silva continued to attend to his duties as a naturalist while exercising the functions of Secretary of Government. As has been noted, one of the first official acts Silva performed after being re-appointed was copying an Alvará concerning shipments of seeds for the Ajuda Palace Gardens. Silva sent a shipment of medicinal plants and roots, as well as seeds of commercially valuable crops. His list provided the common Portuguese name, the scientific name and the indigenous name, if known.⁶² Silva also noted the origin of each item, its value in local trade and whether it was good to eat. In order to provide the scientific names he must have had with him a copy of Linneaus' Classes Plantarum (Leyden, 1738). Since Silva had spent many years in Angola and had suffered many of the tropical fevers he was reasonably well qualified to comment on the curative powers of a particular root or plant.

Silva's financial condition had not improved a year after submitting the Service Dossier for the Order of Christ. There was no official reply for relief of the burden of providing the supplies for the Secretariat, nor to his petition to have the office of Secretary conferred upon him as his "property." In petitioning the Crown again for the concession of the office of Secretary of Angola, he began by recounting his original assignment as a member of the Para expedition in 1783 and his subsequent re-assign-

AHU, Angola, Cx. 54, Report of D. Fernando de Noronha to the Minister of Overseas and Marine, Luanda, 19-V-1803; also published by Ruela Pombo, "Medicina Ingígena," Diogo Cão, vol. 4, pp. 105-112 and vol. 5, pp. 149-152 (Lisboa, 1935).

63

ment to Angola. In the remainder of the petition (see Appendix) Silva mentions his large family, poor health and "lack of talent in Commerce," as well as his re-appointment as Secretary of Government. In hoping to influence the Ministry further he mentions the excellent education of his sons, and requested that one of them be appointed as his successor. The Governor of Angola, D. Fernando António de Noronha, attested to Silva's services (see Appendix), but the "parecer" or review of the petition by an official in the Overseas Ministry denied the request to make the office of Secretary of Angola "hereditary property" even though such practices had been allowed in the past.

64

It is difficult to determine when Silva ceased to exercise his duties as Secretary of Government in Angola's colonial administration; moreover, it cannot be determined when he died and if he did while still in the Royal Service. After 1804 there were still shipments of natural history specimens to Lisbon but the number of shipments and the contents were not of the same quality as when Silva was active in

63

AHU, Angola, Cx. 54, Petition from Silva for the concession of the Office of Secretary as his "property," Luanda, 29-VIII-1804 and partially published in Teixeira, "Le Naturaliste Joaquim José da Silva..." op. cit.

64

Ibid., review of petition in the Ministry:

...isto não pode justificar a utilidade desta inoportuna medida ...

65

Angola during the 1780's. After the French invasion of Portugal and the subsequent establishment of the Portuguese Court at Rio de Janeiro it is possible that natural history specimens were sent there instead of Lisbon until Portuguese authority was firmly re-established in Lisbon. Silva's death must have occurred sometime between 1808 and 1817 as his son, Ignacio José da Silva who had obtained the post of Chief Clerk in the Secretariat, mentions his father's death in a petition asking for
66
appointment to a post in Bahia.

Silva's career in Angola falls into two mutually exclusive periods. Insofar as his duties as a naturalist are concerned, he was active in the 1780's and for the four years from 1794-1798 when he was able to make some field trips in the area around Ambaca. The Interim Government and later the Governors of Angola were cooperative in that they did not prevent Silva from making field trips as was the case with Manuel Galvao da Silva in Moçambique. The Minister of Overseas and Marine, Martinho de Melo e Castro, was displeased by the lack of natural history specimens sent to Lisbon from Angola; his suspicions of misconduct

65

AHU, Conselho Ultramarino, Cod. 550, p. 222, Aviso noting receipt of shipment of live birds and a "spotted black man," who was probably a partial albino, 15-VIII-1805. There was a shipment of "petroleu" and "brêu" noted in a report contained in AHU, Angola, Cx. 58, Luanda, 3-VIII-1808.

66

AHU, Angola, Maço 9A, Petition of Ignacio José da Silva, with documents dated 1817 and 1821, requesting a appointment to Bahia, mentioning "o fallecimento de seu Pay, Joaquim José da Silva," sometime before 1817.

were removed by favorable reports from the Governor, Silva's friend Alvaro de Carvalho e Matoso and Silva's own detailed reports and collections of specimens. In the Barão de Moçamedes the Governor of Angola from 1784-1790, Silva found an official to promote his natural history studies.

At the same time he was a scientist Silva was also a Royal official; moreover, he was an official whose presence was vital to the daily routine of the colonial government. Since Silva was absent from Luanda for two years in the interior of southern Angola, another official attended to his duties. Silva's education and training in the sciences may have made him a valuable asset to the Governors who needed him to prepare reports as well as attend to the necessary details of official correspondence and notarial work as well as the supervision of the administrative staff. Silva was a valued member of the government whose marriage conferred additional respectability to his proven loyalty; in addition, he spoke both French and English. Knowledge of these languages may have made Silva's presence in Luanda valuable to the Governors who often had to deal with foreign merchant and slave traffic vessels which traded along the African coast. He prepared a lengthy Service

67

"Angola no fim do Século XVIII," Boletim da Sociedade da Geografia de Lisboa, 1886 6^a série, no. 5, p. 285:

Thesoureiro dos defuntos e ausentes da cidade de S. Paulo da Assumpcao e da provedoria da comarca, Joaquim José da Silva; pelos provedores respectivos, na forma do regimento de juizo, sem pensao; emolumentos incertos de 320\$500 reis pagos pela

Dossier for the Order of Christ in 1803 and 1804, attesting to his services to the Crown over a period of twenty years in Africa and five years at the Ajuda Palace Gardens in Lisbon. This petition was finally favorably acted upon by the Overseas Council in Lisbon on 26 November, 1805 and approved by the Prince Regent, D. João, on 12 February, 1806. Silva received a grant or pension of twelve thousand mil reis in remuneration for his services and the Habit of the Order of Christ.

68

provedoria da cidade e 30\$00 reis pela comarca. natural de Rio de Janeiro. Veiu para este reino provido em secretario do governo, e depois que acabou, havendo aqui casado, foi por meu antecessor provido em capitão mor de Ambaca, que bem servio. E bacharel formado em philosophia pela Universidade de Coimbra, tem muita boa instrucção das linguas franceza e ingleza, e pelo seu procedimento e prestimo merece louvor e estimação. É branco.

68

ANTT, Ministério do Reino, "Conselho Ultramarino," Maço 324, petitions from colonies. The dossier of Silva's services to the Crown is a summary of the "Autos de Serviço" prepared in Luanda in 1803. There is an error in Silva's parentage and place of birth in this document which mentions:

Joaquim José da Silva, filho de Manuel José da Silva, e natural do Reyno de Angola ...

Silva was the son of António José da Silva and a native of Rio de Janeiro. The petition to admit Silva to the Order of Christ with a pension was approved by the Prince Regent, D. Joao, at the Palácio de Vila Viçosa 12-II-1806, with the note "Como parece." The summary of the Conselho Ultramarino for the Prince Regent is:

Parece ao conselho, conformando se com a resposta do Dez^r. Conselheiro Fiscal das Mercês, que o Sup^e. lhe se faz digno de que V. A. R. lhe confira a Mercê do Habito da Ordem de Nosso Senhor Jezus Christo, com doze mil reis de Tença, em Renumeração dos seus serviços. V. A. R. porem determinará o que for servido. Lisboa vinte e seis de Novembro de mil oito centos, e cinco.

Silva may have prepared a detailed diary of the two year expedition into the savannah of southern Angola, even if it has not been found; he prepared resumes of his journey to Cabinda and Dande in 1784. Insofar as his stay in Massangano in 1784 is concerned, there are some extant letters but no detailed diaries. With the death of Silva's assistant, José António, no further watercolors recorded the progress of the expedition to Angola. It is only through comparison of the inventories of Silva's collections and the inventory of the specimens taken from the Ajuda Palace Natural History Museum and shipped to the Paris Muséum d'Histoire Naturelle by Étienne Geoffroy Saint-Hilaire in 1808 that an approximate scientific judgment can be made.

It is difficult to identify the specific items that Saint-Hilaire took from the Ajuda Palace Natural History Museum as those collected by Silva in Angola during the late eighteenth and early nineteenth centuries. Silva's inventory list of specimens for the shipment of 5 November, 1791 contained one Hyena (Crocota crocota, L.). One object of Saint-Hilaire's assignment in Lisbon was to collect specimens the Paris Museum d'Histoire lacked. Since Saint-Hilaire's inventory lists a Hyena, this specimen was most likely the one Silva sent to Lisbon in 1791. Insofar as

E. T. Hamy, "La Mission de Geoffroy Saint Hilaire en Espagne et en Portugal (1808): Histoire et Documents," Nouvelles Archives du Muséum d'Histoire Naturelle, quatrième série, tome dixième (Paris, 1908), "Catalogue des Objets Choisis Parmi Ceux des Collections d'Ajuda..," pp. 59-65. The original of this inventory is preserved in the Archives Nationales de France, codex "Jardin des Plantes," no. 840, "Collection d'Ajuda (1808)."

birds are concerned, Silva did not apparently send any or if he did, none were listed other than a few live specimens. He lacked trained assistants to prepare specimens for shipment. He collected fishes on the outward voyage to Angola as well as during his long stay there and these may figure among the specimens taken by Saint-Hilaire. Although Silva sent at least one crocodile, the one that Saint-Hilaire took to Paris was probably a Brazilian alligator (jacaré) from the Amazon collections of Dr. Alexandre Rodrigues Ferreira. It is also possible that the manatee that Saint-Hilaire also took was from Ferreira's collections and
70
not from Silva's.

In two of Silva's inventories there are a large number of shells. Among the "volutes" listed by Saint-Hilaire in his inventory some were those originally sent to Lisbon by Silva. Silva listed the "Voluta olla," and "Voluta Hystrix," and two murex species, the "Murex lampas," and "Murex Erinaceus," which correspond to the designation "murex"
71
in Saint-Hilaire's inventory. Although Silva did send insect specimens to Lisbon and Saint-Hilaire removed some, since Silva did not list them individually it cannot be determined which remained in Lisbon, which went to Paris, nor which species Silva collected.

A similar problem of identification exists concerning Silva's collection of plants. In his letters to the Minister Martinho de Melo e

70

Ibid.

71

Ibid., p. 62.

Castro he lists botanical collections made at Benguela during a brief stopover, Cabinda, Dande and Massangano. In his subsequent two-year expedition to the interior of southern Angola, Silva also made botanical collections as he did during his four-year residence at Ambaca. He rarely listed individual species. Even after returning to Luanda he continued to prepare shipments of botanical specimens to Lisbon. In the inventory prepared by Saint-Hilaire there is a herbarium of 216 specimens prepared by "J. J. da Silva from the coast of Africa." Since Silva travelled to and lived in several different regions of Angola and did not limit himself to its coast, Saint-Hilaire was partially in error when he made the listing. Silva's collection of Angolan flora is still contained in the collections of the Paris Muséum d'Histoire Naturelle as are the bulk of those made in Brasil by Dr. Alexandre Rodrigues Ferreira and the small collection made by Manuel Galvao da Silva in Goa.

It is difficult to evaluate Silva's successes in the pursuit of natural history in Angola. Although he hardly approached his goal of

72

Arquivos de Angola, 2^a série, vol. xix, nos. 75-78, (Luanda, 1962), p. 47, Report of D. Fernando António de Noronha, Luanda, 18-VII-1803:

O Secretario deste Governo Joaquim José da Silva, que S. A. R. em outro tempo mandou para este Reyno para as descobertas de Historia Natural, he quem formalizou a mencionada Relação, e preparou as Sementes e continua no indagação de outras que possam servir ao fim proposto.

73

Hamy, op. cit., pp. 45 and 61.

preparing a complete natural history of Angola; he did attempt some serious collections. He was hampered by a dependence on military transport and the primary necessities of the colonial government. The Governors could not afford to have Silva out of Luanda for indefinite periods as he was a vital member of the administration. Without replacements for Angelo Donati and José António, Silva's scientific work was clearly limited. There was a wealth of material to be drawn, but Silva was not an artist. The expedition to southern Angola produced limited results because here too Silva lacked assistants to make the necessary collections and to preserve the specimens for future shipment. In spite of these limitations Silva did perform remarkably well in Angola. Silva's collections and his reports were studied in Lisbon and the map he prepared of southern Angola proved valuable for future explorers.

In the course of his stay in Angola Silva married and raised a family; at one point, however, he desired to return to Rio de Janeiro though he never fulfilled this goal. Not only did he remain in Angola, but he held a series of administrative posts in Angola and in Ambaca. At least one son entered the Royal Service and went to Brasil. Through this long service in Angola Silva more than repaid the investment the Crown made in him as an individual and in the policy of Royal patronage for the sciences at the University of Coimbra. By sending Silva to Angola the Crown filled the need for a competent and educated official; moreover, it partially obtained the necessary information on Angola's natural resources.

The Overseas Council was satisfied with retaining Silva in Angola in administrative posts after his return from the interior of southern Angola. No replacements for his assistants were sent and Silva's future work was limited. There appears to have been no communication between Silva and his former professor at the University of Coimbra, Domingos Vandelli. Most likely Vandelli examined Silva's shipments when they arrived in Lisbon. It is possible that Silva may have been able to conduct more expeditions and produce greater results from his stay in Angola had new assistants been provided and had he been freed from the duties of Secretary of Government. Had Silva gone to Brasil with Ferreira and worked under his direction it is possible that much more would have been accomplished there. For the purposes of the Portuguese Crown the limited number of available men of the new scientific elite created through the Pombal Reforms at the University of Coimbra had to be sent to several distant colonial outposts to serve the Crown not only in science but also in government.

CHAPTER V

An Appraisal of the Crown sponsored Natural History Expeditions to the Portuguese Overseas Territories and some Aspects of Portugal's Scientific-Intellectual Relations with Late Eighteenth Century Europe.

The preparation, support, salaries and expenses involved in successfully mounting a major scientific expedition to Brasil, and two other expeditions to Angola and Moçambique was very substantial. Although the Crown economized on the salaries of Joaquim José da Silva in Angola and Manuel Galvão da Silva in Mocambique by assigning both of these naturalists to administrative duties, Dr. Alexandre Rodrigues Ferreira in Brasil was a full-time naturalist during his ten year sojourn in the Brazilian interior.

In Angola and Mocambique both Silvas were eventually able to supplement their salaries as Secretaries of Government with additional appointments. Ferreira did not have other Royal appointments until he returned to Lisbon where he was named to several administrative posts and received the honors and pension of the Order of Christ.

In Brasil the bulk of the scientific and administrative duties of the expedition fell to Ferreira. From late 1782 when the original party was reduced from four naturalists to only Ferreira until the time when

Ferreira who wrote the reports, dealt with Royal Governors, requisitioned supplies, examined and collected specimens and performed experiments. Ferreira's assistants, the artists and gardener, also conducted some local expeditions but their duties were limited.

It is possible that had Ferreira had the additional resources of the two Silvas and Feijó to assist him, as well as the personnel assigned to them for their own expeditions to Africa, Ferreira would have been able to accomplish considerably more in Brasil. Each of the naturalists expected to remain in his assignment for a period of three years; moreover, Ferreira as well as the others requested recall from their duties or re-assignment to other posts.

Certainly had Feijó accompanied Ferreira to Brasil the duties of preparing chemical analysis of minerals, indigo preparation and other duties might have fallen to Feijó instead of entirely to Ferreira. Since Manuel Galvão da Silva was oriented towards mathematics as well as astronomy he would have been able to prepare detailed maps, star sightings and other calculations. Joaquim José da Silva was apparently accomplished in several areas of the sciences as he prepared maps, collected plants for herbariums, examined mineral deposits and wrote reports. With additional scientists, artists and gardeners in Brasil Ferreira could have expanded his operations or divided his party into smaller, mobile groups and covered more of the previously unknown interior.

Considering the quantity and quality of Ferreira's collections

he does not appear to have been hampered by the lack of scientific assistance. He may have felt the lack of his companions many times while he and his assistants travelled in the forbidding interior of Brasil. Ferreira wanted to explore regions in the Captaincy of São José do Rio Negro which were not specifically indicated in his commission from the Overseas Ministry. The Governor of São Jose do Rio Negro was Joao Pereira Caldas, who aided Ferreira in his expeditions to the Rio Negro and Rio Branco regions. It is possible that the Governor lacked resources to lend to Ferreira or he may have considered that Ferreira's own resources were insufficient. While Ferreira was in Barcelos, the capital of São José do Rio Negro, for about two years from 1785 to 1787 awaiting orders to return to Lisbon, he made local expeditions, prepared reports and made shipments of specimens to Lisbon. Had Ferreira been assigned personnel during this period it is possible that a much more detailed natural history of the region could have been prepared.

Although Ferreira prepared detailed memoirs on agriculture, internal commerce, forest resources, mineral deposits, Indian tribes, Brazilian mammals, his colleagues in Angola and Moçambique did not prepare reports anywhere approaching the quantity or quality of Ferreira's. Although Joaquim José da Silva did prepare a diary of his two-year expedition in southern Angola in search of the Cunene River, it is not extant. At best, his reports on the short expeditions to Cabinda and Massangano are descriptive letters that only provide summaries of major events. From ten recorded years of Manuel Galvão da Silva's

journeys in Mocambique there are two already published diaries and several descriptive letters of brief journeys in the neighborhood of Mocambique Island on the African Continent.

Silva in Angola did study some of the specimens he shipped to Lisbon. He would have to had studied some of these specimens in order to prepare detailed inventories of the various shells, insects, mammals, and fish with notations according to the Linnaean Binomial classification system. Manuel Galvão^N da Silva also utilized the Linnaean system in preparing a small herbarium in Goa in 1783 and 1784. During the long periods Silva spent in Moçambique awaiting an opportunity to explore the interior he may have been able to study specimens sent to him from the interior; he did not leave detailed memoirs or diaries such as those Ferreira prepared in Brasil during his rest periods. It is possible that the administrative duties assigned to both Silvas in Angola and Mocambique prevented or even discouraged them from attempting serious scientific studies. In addition, it does not appear that at any time either Joaquim José^é da Silva or Manuel Galvão^N da Silva enjoyed good health. Both suffered from tropical fevers which left them in a debilitated condition. Illness may not have encouraged scientific study; Ferreira, however, in Brasil was also seriously ill several times but managed to write a diary, prepare many useful memoirs, and direct his assistants.

Ferreira expressed a desire to return to Lisbon and begin the study of his collections after he had been in Brasil three years. Since both Silvas held administrative posts in Africa, their recall depended

less on the needs of science than on those of their respective colonial governments. Joaquim José da Silva in Angola, when his replacement as Secretary of Government arrived in 1790, was assigned other administrative duties in the Royal Service in Angola, partially allowing him to attend to his duties as naturalist. Although Joaquim José da Silva married and settled in Angola there is no extant record concerning Manuel Galvão da Silva's departure from Moçambique, nor one of his possible death there. He may have left the Royal Service in 1793 and quietly returned to his native Bahia.

While Ferreira was still in Brasil he was elected as a member of the Royal Academy of Sciences of Lisbon in 1789 in recognition of his contributions to the study of Brazilian natural history. His memoirs, reports, and collections must have aroused considerable interest among the intellectual-scientific and government elite in Lisbon. Neither of the two Silvas nor Feijó was elected to membership in the Royal Academy of Sciences of Lisbon although Joaquim José da Silva was eventually honored with the Habit of the Order of Christ, as was Ferreira.

Ferreira's collections from Brasil were varied in their scope and augmented by hundreds of beautiful watercolors prepared by Freire and Codina, his artists. Ferreira collected everything of interest from potentially valuable tree resins and Indian ornaments to exotic birds and mammals as well as reptiles, insects, mineral samples and agricultural exports from the Brazilian interior. Joaquim José da Silva in Angola prepared a large herbarium of Angolan plants and had an especial

interest in medicinal plants and roots. He also was able to send some native weapons in addition to some skins, and partial mammal skeletons, mineral samples, fish and a few watercolors to Lisbon. He was limited severely by the loss of his assistants and by the Ministry's lack of interest or inability to send replacements. Manuel Galvão da Silva's efforts in Moçambique did not make any extensive plant collections but concentrated on mineral samples, shells and whatever else was sent to him from the interior.

By far, Ferreira's party produced the greatest results during their ten-year odyssey in the Brazilian interior. Ferreira did not have administrative responsibilities in the sense the two Silvas had. Although he did prepare reports for the Governors of Pará, São José do Rio Negro, Mato Grosso and Cuiabá, Ferreira was not tied to any single government, other than the Ministry in Lisbon. None of Joaquim José da Silva's reports or letters to his superior in Lisbon, Martinho de Melo e Castro, have previously been published; some of the inventories of his shipments have been published. Two of Manuel Galvão da Silva's diaries, a number of his letters, and a brief report on his visit to Goa in 1783-1784 have been published; the extent of his collections is small. While it is not possible to compare either of the collections made by the two Silvas to that of Ferreira's either individually or combined, some comparison of the work of Joaquim José da Silva in Angola and Manuel Galvao da Silva in Moçambique is possible.

Both Silvas were burdened with administrative duties which

restricted their ability to travel to the interior of the African Continent. Both were deprived of their assistants within a short time of arriving in Africa. Both were ill for periods of time and were totally disabled. It was the Crown's desire to economize on salaries and reduce the complement of the Brazilian expedition that ultimately limited the ability of both naturalists to perform effectively either as scientists or as Royal officials in Africa. There does not appear to have been any coordinated plan of action for their expeditions. Each naturalist was under the immediate orders of the Governors of Angola and Moçambique. It would have been an ideal scientific adventure to assign the two naturalists the goal of attempting a trans-African expedition, each starting from their respective Atlantic and Indian Ocean coasts, exploring the interior and meeting. It is also conceivable that both Silvas leading an expedition could have attempted a trans-African crossing during the late eighteenth century, had the vision and resources been provided them in the form of sponsorship and supplies. It was not until the mid-nineteenth century that a successful trans-African expedition established Portuguese claims to the African interior.

The combined efforts of the Portuguese Crown's naturalists during the late eighteenth century served to provide the base for a fine Natural History Museum at the Ajuda Palace Gardens as well as improvement of the holdings in the Natural History Museum of the University of Coimbra, founded in 1772. The total number of specimens on display at one time may not have been large, though the size of the Natural

History Museum's total holdings in Lisbon was great enough to provide specimens for a separate Museum at the Royal Academy of Sciences, the Natural History Museum of the University of Coimbra, and to trade with foreign institutions as well as amateurs with their own substantial collections.

The German professor Heinrich-Friedrich Link visited Portugal from 1797 to 1799 in the company of Johann Centurius, Comte d'Hoffmannsegg (1766-1819), Link was able to examine both the Ajuda Palace Natural History Museum and the Natural History Museum of the University of Coimbra. He formed favorable opinions of both institutions. By this time Ferreira had returned from Brasil as had Feijó from the Cabo Verde Islands. As has been mentioned, Link met both Ferreira and

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Heinrich-Friedrich Link, Voyage en Portugal Depuis 1797 Jusqu' en 1799, tome premier (Paris, 1803), p. 298:

Toutefois, le cabinet d'histoire naturelle à Ajuda merite d'etre vu: il ne soutient pas à la merite, la comparision avec celui de Paris, ni même avec celui de Madrid; il est petit, aucune partie n'y est complète; on y trouve moins d'ovjets relatifs au Bresil, qu'on dev-rait s'y attendre: cependant on y remarque plusieurs pièces importants ...

Link did not prefer the Natural History Museum of the University of Coimbra, p. 392:

Son cabinet d'histoire naturelle est peu considerable, et ne contient que très-peu de chose remarquables. Il est classe par le ci-devant inspecteur Vandelli, d'apres le système de Linné.

Feijo and examined the herbarium Feijó had prepared from Cabo Verde
2
flora. Although Link did not present a favorable opinion of Domingos
Vandelli, he was impressed with the work and reputation of Felix de
3
Avellar Brotero (1744-1828), whom he met at the University of Coimbra.

During the period that Link and the Comte d'Hoffmannsegg
visited Portugal, a scholar from neighboring Spain, José Cornide y
Saavedra, spent three years from 1798 to 1801 attending to officially
sponsored research projects while gathering intelligence for Spain to
use against Portugal during the so-called "War of the Oranges" in 1801.
Cornide y Saavedra was introduced to Domingos Vandelli by the director
4
of the Madrid Botanical Gardens, Casimiro Ortega (see Appendix).
Cornide y Saavedra was well received in Lisbon and attended meetings
of the Royal Academy of Sciences of Lisbon, describing this event and
many others in a series of letters to Joseph López de la Torre Ayllon

2

Ibid., p. 295

3

Ibid., p. 392:

Vandelli l'éloigna de Lisbonne parce qu'il
avait trop de connaissances, et trouva moyen
de procurer à D. Alexandre homme sans eru-
dition, une place qui était due au mérite
de Brotero.

4

Museu Bocage (MB) Vandelli file, letter from Casimiro Ortega,
6-X-1798, Madrid to Vandelli:

Presentará a Vmd. esta el S^{or}. Joseph Cornide,
que pasa á esa Corte de orden de la nuestra
con cierta comision literaria, sobre que estan
de acuerdo ambas Cortes.

y Grillo. During January, 1799 Cornide y Saavedra attended a session of the Royal Academy of Sciences, noting that it was housed in the same building as the Real Sociedade Marítima (the Royal Naval Society). The Prince Regent, D. João attended, but followed the proceedings from
5
behind a curtain.

Although Cornide y Saavedra did not comment on the Royal Academy of Science's library or natural history collections, he did comment on those of the Royal Botanical Gardens and Natural History Museum, comparing both to Spanish institutions:

I doubt the Garden occupies a quarter part of ours, it is well aranged, there are in it some american plants which we do not have, but also we have others that they lack here: I was taken around by the Director Vandelli, co-disciple and correspondent of our friend Ortega . . . The Cabinet is small, but systematically arranged and has many precious things, especially in birds and shells.⁶

5

Fidelino de Figueredo, ed., "Viajantes Espanhois em Portugal," Boletim da Faculdade de Filosofia, Ciencias e Letras, no. 3 (São Paulo, 1947), Cartas ineditas de Joseph Andrea Cornide y Saavedra a Joseph López de La Torre Ayllon y Grillo, letter of 15-I-1799.

6

Fidelino de Figueredo, ed., "Viajantes Espanhois em Portugal," Boletim da Faculdade de Filosofia, Ciencias e Letras, no. 3 (Sao Paulo, 1947), Cartas ineditas de Joseph Andrea Cornide y Saavedra a Joseph López de La Terre Ayllón y Grillo, letter of 26-I-1799, Lisbon, p. 46:

El Jardin dudo que ocupe una quarta parte del nuestro, esta bien arreglado, hay en el algunas Plantas Americas que no tenemos alla, pero tambien tenemos otras de que aca se carece: Me condujo en su segia el Director Vandelli, condiscipulo y corresponsal de nuestro amigo Ortega. . . .El Gabinete es pequeno per arreglado systematicamente y tiene cosas muy preciosas, especialmente en eves y conchas.

From both the views of Link and Cornide y Saavedra, it would appear that the Ajuda Palace Gardens and Natural History Museum were small, but worthy of note. Both the Museum and the Gardens remained private in the sense that they were part of the Palace grounds. The Museum was essentially the private natural history collection of the Prince Regent and was often referred to as a "cabinet," as well as a "museum." Prior to the visits of both these foreign scholars, a large number of the specimens collected by Ferreira, Feijó, the two Silvas and the other correspondents and former students of Domingos Vandelli in Brasil were given to the Royal Academy of Sciences. In May 1795, the triplicate and quadruplicate specimens of the Ajuda Palace Museum's collections were given to the Royal Academy of Sciences of Lisbon by the order of the Prince Regent.⁷

Although the Natural History Museum, the Ajuda Palace Botanical Gardens, and the Royal Academy of Sciences of Lisbon were focal places of scientific interest for foreign visitors, it was the individuals connected with these institutions who performed the collective role of intermediaries between Portugal's overseas territories and Northern European scientists who had an interest in the natural history of both Portugal and its colonies. Abade Corrêa da Serra, Fr. Felix de Avellar Brotero, Domingos Vandelli and others in Portugal were known and respected by their cont-

7

Mercurio Historico, Politico e Litterario de Lisboa "Noticias Literarias," vol. 6, Maio de 1795 (Lisboa, na officina de Simão Thaddeo Ferreira).

emporaries in northern Europe, Spain and Italy.

Domingos Vandelli maintained a correspondence with Sir Joseph Banks for a number of years. Vandelli sent the English naturalist many valuable specimens from Brasil during the period Dr. Alexandre Rodrigues Ferreira and his contemporaries were actively collecting specimens in Brasil and Africa. One of the items Vandelli sent Banks was a collection of watercolor plates of some specimens of the flora of Minas Gerais made by Dr. Miranda (preserved in the Botany Library, British Museum, Natural History, Cromwell Road, London). Although the Portuguese names Dr. Miranda assigned such as "Lafoensia," "Barbacenia," and "Bragantia," were changed by future taxonomists the actual designs were later copied several times in European botanical works without crediting Dr. Miranda. Banks' letters to Vandelli are not extant; those of Vandelli to Banks, however, are available.

During the 1770's, when the Portuguese Crown began to intensify its patronage to the sciences, Vandelli solicited an exchange of specimens in order to aid the Portuguese in establishing a Natural History Museum and a botanical garden in Lisbon. Vandelli kept Banks informed of progress towards this goal of founding a Natural History Museum and

even dedicated a book he wrote to Banks as a token of their friendship.

Even more than Vandelli, Abade Corrêa da Serra, possibly one of the best-known Portuguese ex-patriot intellectuals of the late eighteenth and early nineteenth centuries, was one of the intermediaries between his country and foreign scientists. Several years after the foundation of the Royal Academy of Sciences of Lisbon, Abade Corrêa da Serra felt himself menaced by the Inquisition and fled to France. The Portuguese botanist met the amateur botanist Sir James Edward Smith in Paris in 1786 (who had purchased the Linnaean collections in 1784) while the latter made a "tour of the Continent." Smith met Abade Corrêa da Serra at the home of Antoine-Laurent de Jussieu and he provided the young English traveller with introductions to his friends in Rome. Not long after their first meeting, Smith again encountered him in Rome.

10

From the time Abade Corrêa da Serra returned to Portugal and Smith returned to England, and until Corrêa da Serra was forced to go into a more permanent exile in 1795, both botanists must have maintained very friendly relations. During the period prior to the French Revolution of 14 July, 1789 Abade Corrêa took the opportunity of introducing by letter António de Araújo de Azevedo (1754-1817), the future Conde de

9

British Museum, Add. MS 8094, pp. 40-41, letter from Vandelli to Banks, Lisbon, 9-VIII-1771 (Latin), concerning Banks' voyage to the Pacific, establishment of the Ajuda Palace Botanical Gardens and Vandelli's dedication of Fasciculus Plantarum to Banks.

10

Lady Smith, Memoir and Correspondence of the late Sir James Edward Smith, M. D. (London, 1832), vol. 2, pp. 201-206, from a letter of Smith to his father, Paris, 12-II-1787.

Barca, who was then serving as Portuguese Minister in Paris. Corrêa da Serra described Azevedo as his "oldest and closest friend," who had an interest in meeting English "Naturalists and Philosophers."

For the courtesy of introducing Azevedo to the English intellectual and scientific elite, Abade Corrêa da Serra promised to pay Smith "in good botanical money." In introducing Azevedo to Smith, Abade Corrêa da Serra promised that his friend would give the Englishman the latest news about the progress of the sciences at the Royal Academy of Sciences of Lisbon, showing him that Corrêa da Serra was profitably employing his time and that finally Portugal "was being converted to Letters and to
11
Philosophy." (see Appendix) The future Conde da Barca although considered a francophile was very much involved in interchange of scientific ideas between Portugal and especially England and Germany; he leaned to Germany for the physical and natural sciences but to England
12
for literature, economics and political thought.

11

Linnaean Society, Smith Papers, Mss. letter from Abade Corrêa da Serra to Smith, Lisbon, 28-V-1789:

M. Le Chevalier d'Araújo, Envoyé de notre Reine pres des Etats Generaux, mon encien et intime ami, et que vous trouverez surement tres supérieurs a l'idée que l'on a communement des Portugais ... M^r. Le Chevalier d'Araújo pourra vous donner des nouvelles aussi par rapport a des sciences et a notre Academie, qui vous seront vos que je passe mon temps occupe a bien de la regne, mais qu'enfin Le Portugal va se convertir auz Lettres et a La Philosophie, et que l'est un rude metier que celui d'Apotre.

12

António Pedro de Sousa Leite, O Conde da Barca e o seu papel em alguns aspectos das Relações Culturais de Portugal com a Inglaterra e a Alemanha (Braga, 1962), pp. 42-43.

During his "Continental Tour" Sir James Edward Smith met another Portuguese who would later come to be considered the protector and patron of the sciences in Portugal. At the time Smith met D. Rodrigo de Sousa Coutinho (1755-1812), the future Conde de Linhares was Portuguese Minister in Turin. Lady Smith in a biography of her husband, Sir James Edward Smith, calls Coutinho the "...Maecenas of Botany and indeed of general Science." At the time Coutinho was Minister at Turin¹³ he held a weekly meeting of the intellectual elite of Turin. Smith corresponded with Coutinho and the latter wrote him concerning botanical studies from Turin.¹⁴ When Sir James Edward Smith established the Linnean Society of London (1790), he insured that both his friends, D. Rodrigo de Sousa Coutinho and Abade Corrêa da Serra, were included¹⁵ among its charter members.

Don Rodrigo de Sousa Coutinho was a representative of the Portuguese Enlightenment in government. His father, D. Inocencio de Sousa Coutinho, was Governor of Angola from 1764-1774 during the period when the Marques de Pombal was effectively exercising his despotic powers in Portugal. The Marquês de Pombal selected the young Coutinho, who had been a student at the Real Colégio dos Nobres in Lisbon, to be a companion for the future king,¹⁶ the Prince of Brasil,

¹³

Lady Smith, op. cit., vol. II, p. 337.

¹⁴

Ibid., p. 360-362.

¹⁵

Ibid., p. 347.

¹⁶

Marquês de Funchal, O Conde de Linhares (Lisboa, 1908), p. 29.

D. José; unfortunately D. José died because his mother, Queen D. Maria I, refused to allow her son to be inoculated against smallpox. After the death of the Minister of Overseas and Marine Martinho de Melo e Castro in 1795, Coutinho succeeded to that post and held it and that of the Minister of Finances until 1803 when French pressure forced D. João, the Prince Regent, to temporarily remove Coutinho because of his pro-English sympathies.

Sir Joseph Banks not only corresponded with Domingos Vandelli in Portugal, but also he communicated with another Portuguese savant, Padre João Loureiro S. J. (1710-1791), a Jesuit priest and doctor who spent forty-six years as a missionary and court physician to the Emperors of Viet-Nam in Hué, Tonkin, and in China at Canton. Although Padre Loureiro could not enter any Portuguese possessions after the Jesuits were proscribed by the Marquês de Pombal in 1759, he continued on his own in Southeast Asia, eventually returning to Lisbon in 1782 after restrictions on the Jesuit Order had been virtually removed by Queen D. Maria I. Loureiro and Banks corresponded on the priest's botanical collections and the corrections and additions for his work Flora Cochinchensis (Lisbon, 1790). Banks attempted to induce Loureiro to settle in England and work there because conditions would be better:

...I hear the customs of Lisbon, the nation in general not being much addicted to learning and the scarcity of Books which I noticed when I was there in 1766 will make your publications more difficult

as well as less useful if effected there.

Padre Loureiro also contributed a number of memoirs to the Royal Academy of Sciences of Lisbon, most of which were published posthumously. He was also able to work on the manuscripts Dr. Joaquim Velloso de Miranda (also a priest) sent to Lisbon from Minas Gerais; moreover, he criticized his fellow botanist for taking the liberty of naming a species after himself.

Although Sir Joseph Banks did not retain a high opinion of Lisbon, the Portuguese and scholarship in that country, other European visitors noted that changes had taken place since the time of Sir Joseph Banks' visit in 1766. Portuguese nobles, much like their counterparts in England and France, had developed a taste for collecting natural history specimens. Although the Duc du Chatelet visited Portugal after the fall of the Marques de Pombal and met some of the leading nobles, the Marquises Angeja, Marialva and Penalva, he found that their private natural history "cabinets" were not of great interest. A later edition of the Duc du Chatelet's

17

Library of the Muséum d'Histoire Naturelle, Paris, Mss. 2443, letter of Sir Joseph Banks to Padre João Loureiro, London, 24-XII-1782.

18

Mss. 2445, Library of the Muséum d'Histoire Naturelle, Paris, Loureiro Papers, mss. of four pages, "Notas sobre as Fasciculas das plantas do Brasil de Joaquim Velloso de Miranda, noting:

"Vellozia," sahindo a luz estas plantas em nome de S^{or}. Vellozo, hé contra os principios da Ethica, q̃ elle ponha o seo nome a algũ dellas...

Though undated it is circa 1784-1785.

Travels in Portugal was up-dated by a French editor, Jean Francois Bourgoing, who noted that "ignorance is no longer the appendage of all
19
Portuguese noblemen," also mentioning the publications, prizes and projects sponsored by the Royal Academy of Sciences of Lisbon during the late eighteenth century.

Foreign books on the sciences, literature, medicine and agriculture as well as other subjects were translated and published in Lisbon during the late eighteenth century and evidently enjoyed a wide enough audience in Portugal and its overseas territories to merit publication and distribution. The sessions of the Royal Academy of Sciences of Lisbon were regularly reported with notices of the memoirs read. The books published at Lisbon varied from Portuguese translations of the British physician John Hunter, Paragraphs for recovery of people apparently drowned (Royal Humane Society, London, 1776), books on the French revolution, and a version of Benjamin Franklin's Poor Richard's Almanac, entitled, Meio facil de pagar os tributos, ou Sciencia do bom homem
20
Ricardo, traduzido do Inglez do Doutor Franklin.

Although the Duc du Chatelet may not have held a high opinion of the natural history "cabinets" of some of the Portuguese noblemen,

19

Duke de Chatelet, Travels in Portugal, ed. J. F. Bourgoing, trans. John Joseph Stockdale (London, 1809), vol. I, pp. 100-101.

20

Mercurio Historico, Politico e Litterario de Lisboa, "noticias literarias," April, 1794, p. 230; January, 1796, p. 108.

he evidently could not have visited the home of Luis de Albuquerque de Melo Pereira e Cáceres who had been Governor of the Captaincy of Mato Grosso in Brasil for seventeen years. Dr. Alexandre Rodrigues Ferreira utilized Governor Albuquerque's private library to prepare his natural history studies while he was in Vila Bela in 1790. After his return to Portugal, Governor Albuquerque maintained an active interest in natural history and evidently owned an extensive private "cabinet".

Luis de Albuquerque de Melo Pereira e Cáceres exchanged specimens from his own collection with Domingos Vandelli who in turn provided Albuquerque with specimens he desired from the duplicates of the Ajuda Palace Natural History Museum; moreover, Albuquerque was able to maintain correspondence with collectors in England and to exchange specimens he had collected in Brasil (see Appendix).²¹ The natural history of the Mato Grosso was partially known before the journeys of Dr. Alexandre Rodrigues Ferreira and Albuquerque's long governorship. As early as May 1772 Domingos Vandelli sent Linnaeus a manuscript copy with watercolor plates of some specimens of Mato Grosso flora.²²

Exchange of natural history specimens was conducted informally by Domingos Vandelli through his scientific contacts in other European

²¹

MB, Vandelli File, letter of Luis de Albuquerque de Melo Pereira e Cáceres to Vandelli, Sao Sebastião da Pedreira, 28-VII-1796.

²²

Linnaean Society, Linnaeus Letters, mss vol. XVI, p. 76, letter from Vandelli to Linnaeus, Lisbon, 18-V-1772 (Latin).

countries, and through the foreign contacts long established by Abade Correa da Serra as well as by D. Rodrigo de Sousa Coutinho, who obtained the personal patronage and protection of the Prince Regent, D. João, for scientific interchange and promotion of modern technology in Portugal and its overseas territories. Domingos Vandelli maintained an active correspondence with Linneaus and Sir Joseph Banks as well as other botanists for the purpose of exchanging specimens.

Although not all of Vandelli's correspondence is extant, an examination of the letters, inventories and administrative papers pertaining to his tenure as Director of the Ajuda Palace Natural History Museum and Gardens (preserved in the Museu Bocage, Lisbon) demonstrates the wide range of contacts in Spain, Italy, France, England, Germany, Scandinavia and Brasil. In the case of the exchange that Vandelli had arranged with Luis de Albuquerque de Melo Pereira e Cáceres, there was a request for "rarities," in addition to those specifically arranged for seeds, live plants and dried specimens. Some of the requests directed to Vandelli were sent indirectly through resident Portuguese Ministers in England and other countries and through travellers; others were sent to him directly. During the late eighteenth century, when the normal commerce of Europe was disrupted by war, and private communication was uncertain, Portugal did send ships in convoys for protection. There is no extant direct correspondence between Domingos Vandelli and Abade Corrêa da Serra after the latter went into exile in 1795. It is possible that aside from the Duque de Lafões and D. Rodrigo de Sousa

Coutinho, it was unsafe for ordinary persons to receive letters from this prominent exile.

Domingos Vandelli's name was known in the highest circles of the amateur botanists among the British nobility. Vandelli received requests for exchanges of live plants and seeds from the Marchioness of Bute with a recommendation from D. João de Almeida de Melo e Castro, the Portuguese Minister at the Court of St. James during the late 1790's. Castro wrote to Vandelli in Italian praising the Marchioness of Bute as a "most noble lady of the Court" who had a great interest in "Natural Science" and an excellent botanical garden, as well as good contacts, "particularly with Kew Gardens." The Marchioness of Bute sent Vandelli seeds of 132 different species from Bengal, North America and Australia, and in return hoped for an exchange:

At the same time she takes the liberty of mentioning to the Doctor Vandelli that she should be most thankful to him for a few seeds of Brazil plants or from the Portuguese settlements in Africa which he has any to spare, she also encloses a list of plants she believes are natives of Portugal, and Brazil the seeds of any of which would be new to her...²⁴

It is possible that Vandelli's name was suggested to the Marchioness of Bute either by the Portuguese Minister or by Abade Corrêa da Serra.

23

MB, Vandelli file, no. 14, D. João de Almeida de Melo e Castro to Vandelli, 7-II-1797 (Italian).

24

Ibid. enclosure, The Marchioness of Bute to Dr. Vandelli, London, 28-II-1797.

Somewhat earlier than the communication received via the Portuguese Minister in London, Vandelli had a letter from Henriette North (died 16-XI-1796) wife of Brownlow North (1741-1820), Bishop of Winchester, delivered to him by Frederick North (1766-1827), later Earl of Guilford. Henriette North appealed to Vandelli to assist the "good understanding between the amateur Botanists of different countries," offering to send him plants which she knew the Ajuda Palace Gardens did not possess. In return for those she could send him from England, Lady North specifically requested plants and seeds from Brasil which were continually arriving from that colony to the Ajuda Palace Gardens in Lisbon (see ²⁵ Appendix).

The exchange and shipment as well as the purchase of seeds and plants from England was not without risk. Abade Corrêa da Serra performed the tasks of an intermediary by making arrangements for shipping live plants to Lisbon; payment and careful investigation of the value of the exchanges fell to D. João de Almeida de Melo e Castro, the Portuguese Minister in London. Minister Castro and Abade Corrêa da Serra had made arrangements to purchase not only plants and seeds but also

25

MB, Vandelli file, Henriette North to Vandelli, London, "14 d'Auot ..." (French):

...je vous écris dans la persuasion que vous m'approuverez la bonne intelligence entre les amateurs de la Botanique de differens Pays, me paroisaient le plus sur moyen de faire fleurir sa cause.

mathematical instruments to be sent to Lisbon. The Portuguese Minister addressed Vandelli in terms of respect and friendship, advising him of the problems in making exchanges and purchases:

In that respecting the Plants Your Lordship should know that the greatest part might be conducted in Kew Gardens but that all Negotiations are useless and fruitless in this regard: Your Lordship does not send plants or seeds which might serve as an object of exchange. The seeds purchased in establishments which deal in this commercial product are subject to the risk of not flowering, and in order to purchase live plants, I believe that there could not be a worse combination than the possible delay of the Convoys; and, the delay of plants about those Ships without a person who has been expressly destined to care for them on board, would leave them to total ruin.²⁶

In the same letter the Portuguese Minister also informed Vandelli that Abade Corrêa da Serra had attended to ordering "instruments for the Laboratory from the first Artist of this Capital ...".²⁷ This "first

26

MB, Vandelli file, D. João de Almeida de Melo e Castro to Vandelli, London, 21-IX-1796:

Pelo q̃ respeita as Plantas saberia V. Sa. q̃ a maior parte se deviã~o negociar no Jardim de Kew mas toda a Negociação he inutil e infructuosa em q^{to.}: V. Sa. não mandar plantas ou sementes que possã~o servir de objecto de permutação. As sementes compradas em casa dos q̃ fazem commercio desse artigo estã~o sujeitos ao risco de não vegetarem, e p^{r.} comprar plantas vivas, creio q̃ não pode ser peio a conjunctura suposta a demorra dos Comboyos; e a detenção das plantas a bordo dos Navios sem q̃ haja huma Pessoa destinada expressam^{te.} p^{a.} cuidar nellas seria expostas a sua total ruina.

²⁷Ibid.

Em q^{to.} aos instrumentos p^{r.} o laboratorio ja mandei a V. Sa. pelo Abade Serra q̃ serão encomendados ao primeiro Artista desta Capital...

Artist" was Jesse Ramsden (1735-1800), who was an optician and instrument maker with a reputation for excellence. The Portuguese Crown sponsored two apprentices in Ramsden's shop during the late 1790's and Abade Corrêa da Serra as well as the Portuguese Minister, supervised their stay in London.

In addition to the exchanges effected by Vandelli in order to enrich the collections of the Ajuda Palace Gardens Abade Corrêa da Serra also acted as an intermediary commissioned by D. Rodrigo de Sousa Coutinho. Coutinho in his capacity as Minister of Overseas and Marine had an interest in promoting the economic and commercial development of the Portuguese colonies as well as to advance the sciences in Portugal itself. D. Rodrigo de Sousa Coutinho maintained an active correspondence with Abade Corrêa da Serra, promoting his ideas and protecting his interests at Court. The Abade, in turn, demonstrated his loyalty to both the Portuguese Crown and the nation by actively carrying the purchasing commissions of D. Rodrigo de Sousa Coutinho, maintaining contacts with the intellectual-scientific elite of England, and continuing his own botanical studies. Although he was not a diplomat in the sense of a career diplomat he did perform certain missions for D. Rodrigo de Sousa Coutinho, and later was Portuguese Minister to the United States.

D. Rodrigo de Sousa Coutinho had a special interest in promoting Portuguese maritime expansion. He was the prime mover in the foundation of the "Sociedade Real Marítima" which was chartered by Royal Alvara on 30 June, 1798.²⁹ Among the goals of the Royal Maritime Society was study of ocean currents, preparation of stellar navigational charts, detailed tidal charts, coastal maps and especially to promote improvements in naval construction. The opening address of the Minister D. Rodrigo de Sousa Coutinho before the Sociedade Real Marítima made mention of the need to promote Portugal's economic independence through a strong merchant fleet which would serve as a bridge to reunite the Crown's vast dominions, and the considerable efforts which had been made to expand production of naval stores in Brasil.³⁰

In England Abade Corrêa da Serra reported on recent scientific events, his efforts at obtaining plants to be acclimatized in Portugal and then transported to Brasil, and other matters. As a general practice Abade Corrêa da Serra and D. Rodrigo de Sousa Coutinho wrote to each other once a month, exchanging information, news of the Portuguese Court and communicating their strong friendship. It was Abade Corrêa da Serra who arranged the purchase of cinnamon and tea plants for

29

See Avelino Teixeira da Mota, "A Sociedade Real Marítima e os Primeiros Estudos de Mares em Portugal," Anais do Instituto Hidrográfico (Lisboa, 1965), p. 1 and reproduction facsimile of Alvará of 30-VI-1798.

30

Ibid., p. 19.

shipment to Brasil after suitable acclimatization in Portugal. Abade Corrêa da Serra also was very interested in promoting the cultivation of tea in Portugal and devoted a considerable portion of his letter of 31 October, 1797 to Chinese tea cultivation and different varieties of tea. He was well connected with the botanists of Kew Gardens in England and obtained a promise that the first seeds produced by the "sasunqua" tea plant would be sent to Portugal to be cultivated. Prior to the English mission of Lord Macartney to the Chinese Empire the Chinese impeded
31
the export of the plant. (see Appendix).

31

MB, Corrêa da Serra file, letter of 31-X-1797, London to D. Rodrigo de Sousa Coutinho. In addition to discussing the works on naval theory by Henrik Fredrik Chapman, there is a mention of a private shipbuilding society which was founded in 1791 (see Charles Singer, ed., History of Technology, vol. I, p. 579). The Abade Corrêa da Serra also made an oblique mention of an English colonizing attempt in Portuguese Guinea on Bolama Island (see Philip Beaver, African Memoranda relative to an attempt to establish a British Settlement on the Island of Bulama, on the Western Coast of Africa in the year 1792 (London, 1805, reprinted, 1970 Negro Universities Press). The main interest of the letter, however, is Corrêa da Serra's familiarity with Chinese tea as well as the British interest in that product (see Sir George Staunton, An Authentic Account of an Embassy From the King of Great Britain to the Emperor of China . . . from the papers of the Earl of Macartney . . . 2 vols. of text 1 vol. of engravings (London 1797). Sir George Macartney (1737-1806) was related to the Earl of Bute by marriage to his daughter. The Bute family had an interest in Portugal and Spain. Lord Macartney was in China from 1792-1794. Corrêa da Serra paraphrases his remarks on the Camellia sesanqua from Embassy to China, vol. 2, pp. 464-468:

....yields a nut, from whence is expressed an
esculent oil equal to the best which comes
from Florence.

Dom Rodrigo de Sousa Coutinho replied to the Abade's letter on 22 November, 1797, noting the arrival of the cinnammon plants in Lisbon³² in the best possible condition, and that they were destined for Brasil.

The subject of the mutual correspondence of Abade Corrêa[^] da Serra and D. Rodrigo de Sousa Coutinho varied from the very necessary problems of financial support for the Abade which D. Rodrigo obtained from the Prince Regent, to D. Rodrigo's request lists for technical books on iron foundries, steam engines, cotton gins, coal mines, maps, nautical³³ charts and other matters.

From Lisbon Domingos Vandelli maintained his correspondence not only with European scientists but also with his former students at the University of Coimbra who had returned to their native towns in Brasil. Vandelli recieved not only natural history specimens but also valuable memoirs concerning the commerce and industry of various regions in Brasil. As has been mentioned Vandelli sent Sir Joseph Banks the descriptions and watercolors of plants indigenous to Minas Gerais prepared by Dr. Joaquim Velloso de Miranda in Vila Rica in 1785; moreover, some of the specimens Dr. Alexandre Rodrigues Ferreira sent Vandelli from Barcelos in the Amazon were in turn sent to

32

Library of the Muséum d'Histoire Naturelle, Paris, Mss. 2442, Corrêa[^] da Serra letters, letter of D. Rodrigo de Sousa Coutinho to Corrêa[^] da Serra, Lisbon, 22-XI-1797.

33

See Léon Bourdon, op. cit., and Mss. 2442, Library of the Paris Muséum d'Histoire Naturelle. Professor Bourdon is presently editing a definitive edition of these and other letters of Abade Corrêa[^] da Serra.

other scientists without crediting Ferreira.

Although it is not possible to determine how closely Vandelli corresponded with his former students it can be determined from the tone of their letters to him that he was held in great esteem. Vandelli's former students not only sent him specimens, but they asked him to intervene for them at Court, to purchase books and supplies, and they hoped for encouraging letters from their former professor.

In a letter of 17 December, 1797, Dr. Joaquim Velloso de Miranda wrote to Domingos Vandelli mentioning he had not received a letter from his former professor for some years (see Appendix).³⁴ Dr. Miranda had prepared a shipment of more than three hundred watercolors of plants and animals with their respective descriptions to be taken to Lisbon by the Visconde de Barbacena, prepared during a period when the Crown had provided him with a subsidy. He also obtained some nitrate samples from a cattle ranch and sent them along.

The main object, however, of Dr. Miranda's letter was his difficulties with the newly arrived Governor concerning Dr. Miranda's appointment as Secretary of Government. It is possible that there were

34

MB, Vandelli file, letter from Dr. Joaquim Velloso de Miranda, Vila Rica, 17-XII-1797:

O Snr. Visconde fez hir agora em sua companhia a remessa de trezento, e tantos desenhos de plantas, e alguns animaes, com as suas descrições, q̃ estão feitos ha annos ...

some doubts as to Dr. Miranda's loyalty. During a period when the Portuguese Crown wanted to remove suspected "jacobins" from office, Dr. Miranda felt it necessary to turn to Domingos Vandelli and obtain
35
intercession at Court. In a subsequent letter to Vandelli, Dr. Miranda asked Vandelli to assist the bearer in purchasing books and "instruments of Physics." Dr. Miranda also sent Vandelli a shipment of live plants
36
and other natural history specimens. Vandelli must have thought well enough of his former student to dedicate a species of a Brazilian plant genus, Vellozia, to Dr. Miranda in his Florae Lusitanae e Brasilinae Specimin (Coimbra, 1788).

When Manuel Arruda da Câmara (1752-1810) was a student of Domingos Vandelli at the University of Coimbra, he was already an ordained priest in the Carmelite Order, having taken the name of the Padre Manuel do Coração de Jesus Arruda. After completing his studies in the sciences at the University of Coimbra, he studied medicine at Montpellier, France, where he was one of several Brazilian students
37
registered at the Faculty of Medicine in the late eighteenth century. At Montpellier he obtained an ecclesiastical release from the priesthood and eventually returned to his native Pernambuco. Manuel Arruda da

35

Ibid.

36

MB, Vandelli file, letter from Dr. Joaquim Velloso de Miranda, Vila Rica, 1-IV-1799.

37

See Manoel Xavier de Vasconcelos Pedrosa, "Estudantes Brasileiros na Faculdade de Medicina de Montpellier no fim do século XVIII," RHGB vol. 243 (April-June, 1959, Rio), pp. 35-71.

Câmara was commissioned by D. Rodrigo de Sousa Coutinho to "travel the entire Captaincy of Pernambuco." In a letter of 11 December, 1797 to Vandelli, written during his travels, he thanked his former professor for having aided him in receiving the appointment.

In his letter (see Appendix) Câmara explained that he was already travelling in the sertão, the arid and semi-deserted interior of Pernambuco, in search of "what there might be in minerals, and more things pertaining to Natural History." ³⁸ Communication between Brasil and Europe was disrupted by warfare and Câmara noted that one of his shipments of specimens to Vandelli had been seized. In this letter he also noted the shipment of watercolors of cotton plants and of beetles which attacked the plants, as well as a machine he had invented for packing raw cotton. He also mentioned the need for some form of expense account to pay for travel and hiring of horses and assistants; moreover, he requested that Vandelli send him trained assistants, asking him to ³⁹ speak to D. Rodrigo de Sousa Coutinho regarding this request.

38

MB, Vandelli file, letter from Manuel Arruda da Camara, Pirauhá (interior of Pernambuco), 11-XII-1797:

Já estou de viagem para os certões a fim de indagar o que ha de mineralogia, e mais couzas pertencentes a Historia Natural ...

39

Ibid.

Huma das couzas, que me he mais necessario, he hum desenhador, e hum escrevente; pois que eu não posso absolutamente desempenhar os tres officios ...

After 1800 it appears that the semi-formal method of receiving natural history specimens, duplicate specimens of herbarium materials, live plants and seeds was not entirely suitable to expanding the holdings of either the Natural History Museum or the Botanical Gardens at the Ajuda Palace in Lisbon. Even earlier there had been some problems in obtaining sufficient support from the Crown to effect the necessary botanical exchanges. In the early 1790's Vandelli complained to the Minister of Overseas and Marine:

It is already two years, that this Garden does not correspond with the others of England, France, Sweden, Germany, and Italy from which we have had many rare plants; lacking the means for Júlio [Mattiuzzi] to obtain the seeds and plants which are required ...⁴⁰

From this communication it would seem that at one time the Royal Household Cavalry was utilized to effect shipment of plants and seeds, either as couriers in Portugal between Coimbra and Lisbon or through
41
the diplomatic post.

It is difficult to determine whether this neglect to continue correspondence and exchange was totally due to "the lack of means," or whether

40

AHU, Reino, Maço 14, note from Vandelli concerning the Ajuda Palace Gardens:

São já dois annos, que este Jardim não corresponde com os outros d'Indhilterra, França, Allemagha, e Italia, dos quaes tem tido muitas, e raras plantas por falta de meios. p^a. Júlio [Mattiuzzi] ir a buscar as sementes, e plantas que vem procuradas ...

41

Ibid.

Vandelli was too occupied with his other government appointments and business interests in pottery manufacture to attend to his duties as Director of the Botanical Gardens. In a letter to Casimiro Ortega, the Director of the Madrid Botanical Gardens, dated 26 December, 1792, Vandelli acknowledged receipt of seeds Ortega had sent a year earlier from Madrid (see Appendix). After briefly discussing recent botanical work by F. Jose Conceição Velloso and Dr. Felix de Avellar Brotero, Vandelli explains his lack of time to devote to botanical studies:

I am, however, lazy in this field because I am very occupied in the Royal Board of Commerce; In spite of this I haven't deserted my first passion, which obliged me to come to this Kingdom.⁴²

With his retirement from active teaching at the University of Coimbra some years earlier and subsequent appointments to the Directorship of the Ajuda Palace Gardens and Natural History Museum, the Royal Board of Commerce and his business interests, Vandelli became less of an active scientist and investigator and more of an intermediary for scientific exchanges and an administrator. After the death of Martinho de Melo e Castro in 1795 and the elevation of D. Rodrigo de Sousa Coutinho to the post of Minister of Overseas and Marine, there was a renewed impulse in Crown patronage of scientific exchanges.

42

Jardin Botanico de Madrid, Biblioteca, Armario 1^o, 5a. Division, Carpeta, 79, no. 871, fol. 310, letter from Domingos Vandelli, Lisbon 26-XII-1792 to Casimiro Ortega:

Eu porem estou ociozo nesta parte por ser bastante. occupado na R. Junta do Comércio; não obstante isto não deixo a minha primeira paixão, q me obrigou vir p^a. este Reino.

Although Vandelli did communicate regularly with England during the 1790's via Portuguese diplomatic representatives, there was little regular correspondence with Portugal's Iberian neighbor, Spain. As noted, Casimiro Ortega sent Vandelli a letter of introduction for Joseph Cornide y Saavedra in 1798. In that same year Vandelli sent Ortega two Danish botanists with a similar letter of introduction. Ortega's letter of 8 March, 1798, acknowledging Vandelli's introduction and good reception of the two Danish botanists, is interesting because it infers a series of letters between Vandelli and Ortega as well as the latter's familiarity with his colleague's books. Ortega recognized the need for a more regular exchange of correspondence between Spain and Portugal; moreover, he expressed a certain kinship between Vandelli and himself as both had been educated in Italy:

Being Portugal and Castile Kingdoms so close,
it is almost shameful that their literary correspondences are not more frequent and expeditious.
We should do what we can.
I have from all the Professors who know Your
Worship a thousand reasons to esteem you, and
also particularly because I have been educated in
Italy, and with the same Masters of Your Worship:

43

MB, Vandelli file, letter from Casimiro Ortega, Madrid, 8-III-1798, to Vandelli:

E visto que en varias ocasiones he recibido
los favores de Vmd. , y no ha mucho tiempo sus
ultimas preciosas obras que leo con fruto y
admiro gusto sam^{te}.

from which I am very pleased.⁴⁴

Vandelli and Ortega evidently continued their mutually profitable scientific exchanges over a period of years, concentrating on rare species of plants from the American possessions of both kingdoms. In the inventory of specimens taken from the Ajuda Palace Natural History Museum in 1808 by Saint-Hilaire there is a herbarium of three volumes, containing 289 plant specimens from Perú.⁴⁵ There is no doubt that this item was sent to Vandelli by Ortega and comes from the collections made in Perú during the 1780's by Ruíz, Pavón and Dombey. Eventually D. Rodrigo de Sousa Coutinho became directly involved in the operations of the Ajuda Palace Gardens and its allied establishments, and was, in effect, Domingos Vandelli's superior.

In this manner, when Abade Corrêa da Serra sent catalogues from Kew Gardens to D. Rodrigo, he was assured of full compliance with requests for exchanges. D. Rodrigo de Sousa Coutinho was himself an amateur botanist and was a correspondent of Sir James Edward Smith,

44

Ibid.

Siendo Portugal y Castilla Reynos tan vecinos, es casi vergonoso que sus correspondencias literarias no sean mas frequentes, y espeditas. Hagamos nosotros dos lo q^e. podamos.

Yo tengo mil motivos generales á todos los Profesores q^e. conocen el merito de Vmd. para estimarle, y tambien particulares por haverme educado en Italia, y con los mismos Maestros que Vmd: de lo qual me glorio mucho.

45

E. T. Hamy, "La Mission de Geoffroy Saint-Hilaire en Espagne et en Portugal (1808)," Nouvelles Archives du Muséum d'Histoire Naturelle, tome dixième (Paris, 1908), p. 63.

founder of the Linnean Society in London. Through this interest in the natural sciences, D. Rodrigo must have convinced the Prince Regent to expand the facilities of the Ajuda Palace Gardens and to this purpose, further empowered Abade Corrêa da Serra to obtain more seeds, which the Ajuda Palace Gardens lacked, as well as formulate a plan to facilitate such exchanges in a letter from D. Rodrigo de Sousa Coutinho of 9
46
November, 1801 (see Appendix).

Somewhat over a year after entrusting Abade Corrêa da Serra with improving the system of botanical exchanges between England and Portugal, D. Rodrigo de Sousa Coutinho ordered Domingos Vandelli to cooperate with the Paris Jardin des Plantes in preparing an exact concordance of the Brazilian collections preserved in the Ajuda Palace Gardens and those specimens of Brazilian plants already belonging to
47
the French collections.

The proposal to exchange information on botanical holdings was sent to D. Rodrigo de Sousa Coutinho from Antoine Laurent de Jussieu in a letter of 17 September, 1802. Many years earlier, de Jussieu had met both Abade Corrêa da Serra and Felix de Avellar Brotero as exiles in Paris. Wartime conditions, de Jussieu explained, made it impossible

46

Library of the Muséum d'Histoire Naturelle, Paris, Mss. 2442, D. Rodrigo de Sousa Coutinho, Lisbon 9-XI-1801, letter to Corrêa da Serra.

47

MB, Vandelli file, no. 45, note from D. Rodrigo de Sousa Coutinho to Vandelli, Queluz, 23-XII-1802.

to communicate with Brasil from where he desired to obtain plant specimens.

The French botanist addressed D. Rodrigo as the "Protector of the Sciences in Portugal," and as one "disposed to favor the communication of those ⁴⁸ who cultivate [the sciences]." The proposal called for the shipment of a portion of the Portuguese collections to Paris, with the names and descriptions the Portuguese botanists had assigned to the plants in order to have a complete comparison made with the French collections, resulting in a concordance to be utilized by both countries. ⁴⁹

The French botanist was fascinated by the prospect of studying Brazilian flora and communicating with Brazilian botanists, especially "M^r. da Câmara," who was one of his students in Paris; moreover, de Jussieu considered the Brazilian flora to be far more interesting than

48

MB, Vandelli file, no. 45a., Antoine Laurent de Jussieu to D. Rodrigo de Sousa Coutinho, Paris, 17-IX-1802:

Vous en etes le Protecteur en Portugal des Sciences et vous etes disposé a favoriser la Correspondence de ceux qui les cultivent.

49

Ibid.

Si vous nous faisiez parvenir ces echantillons, nous comparerions avec ce que nous possedons et nous transmeterions ensuite aux Savants de Lisbonne le resultat de nos observations. Il en resulteroit un rapport exact entre les Herbiers dex deux Pays, et le travail que l'on entreprenotroit ensuite, offriroit des nouveautes mieux constatées qu'elles ne peuvent l'etre d'apres de simples description.

the Peruvian or Chilean collections. The Brazilian "M^r. da Câmara," was Manuel Arruda da Câmara, the former student of Domingos Vandelli, who was at that time conducting an expedition in the interior of Pernambuco. It is interesting to note that de Jussieu, much in the same way many of his contemporaries, tried to overcome the enmities of war and continue with valuable scientific work, hoping to exchange specimens and botanical information and to correspond with former students as well as maintain friendships (see Appendix).

Exchange of botanical specimens continued over a period of several years with the French Jardin des Plants. D. Rodrigo de Sousa Coutinho as the superior of Domingos Vandelli maintained control over the exchange of these specimens, noting the progress in preparing plates, descriptions, and assignment of mutually agreed upon botanical names for new species. Vandelli sent D. Rodrigo all the pertinent data on the "Ayapant, " or Eupatorium, a brasilian plant known for its anti-venomous properties, which D. Rodrigo recommended for publication by the French (evidently de Jussieu at the Jardin des Plants). In the same note, D. Rodrigo praised Dr. Alexandre Rodrigues Ferreira for discovering the plant and describing it, but also faulted him for failing

Je regard le Bresil comme l'une des contrées
les plus riches en productions vegetales dif-
ferentes de tout ce qu'on connoit, en ce
point elle ne paroît le ceder ni au Perou ni
au Chili.

to properly study the plant.⁵¹ Evidently Ferreira was active during this period though it is possible that he also devoted excessive time to administrative matters rather than to purely scientific investigation.

The bulk of the correspondence of Vandelli and Corrêa da Serra between Portuguese and foreign scientists, diplomats, amateurs and other correspondents, points to a preponderant European interest in botany in Portugal and its overseas territories. It is possible that this interest in botany was much in the way of a reflection of the interests of the times. Much in the same way the European nobility kept their own natural history "cabinets" of curiosities and rare specimens obtained from exotic parts of the world, there was a corresponding interest in cultivating private gardens with rare plants. As has been mentioned, Vandelli, received inquiries about botanical exchange from ladies of the upper nobility in England; moreover, the gardens the nobility maintained were hardly in the amateur class when they could trade with major botanical institutions such as Kew Gardens and the Ajuda Palace Gardens with specimens from their own collections.

Botany had at the same time its practical as well as decorative

51

MB, Vandelli file, no. 50, letter of D. Rodrigo de Sousa Coutinho, Arroyos, 5-VI-1805, concerning an engraving of a plant and its description by Ferreira. This particular plant, the ayapana (Eupatorium triplinerve) was known as an anti-venom and was sent to Lisbon by Ferreira in 1785-1786. For other foreign interest in the ayapana and Ferreira see: Américo Pires de Lima, "O Conde de Hoffmansegg e a flora do Brasil," Anais da Faculdade de Farmácia do Porto vol. xii (Porto, 1952).

values. Abade Corrêa da Serra, Domingos Vandelli, D. Rodrigo de Sousa Coutinho and their correspondents in Europe and Brasil kept uppermost in their minds the goal of obtaining plants including trees and grasses, which would be compatible with conditions in Portugal, Brasil and Africa. When Abade Corrêa da Serra obtained cinnammon trees, tea plants and other exotic flora from commercial suppliers in London, he aimed to eventually establishing a flourishing spice industry in Brasil. The Crown was interested in promoting scientific study for its own sake, but also in advancing the commerce and prosperity of Portugal and its colonies, thus making both self-sufficient in products formerly imported as well as generating useful articles of trade to other countries.

It is no accident that mineral samples do not figure in the items exchanged between Portuguese savants and their contemporaries in Europe. Crown policy prevented even its own scientists, such as Dr. Alexandre Rodrigues Ferreira, from visiting the diamond and gold mining district in Brasil. It is therefore not surprising that the Crown would wish to prevent foreigners from learning of the mineral wealth in Brasil and Africa. Although it is possible some secondary metals such as copper and specimens of rock crystal were exchanged as were some fish specimens with other countries, gold, silver and precious stones were not exchanged for the most part.

For some time following the natural history expeditions of the late eighteenth century, there was a continuing interest in the collect-

ions that the expeditions sent back to Lisbon. Serious study was conducted at the Ajuda Palace Natural History Museum to determine the potential scientific value of the different plants and minerals. These collections attracted the interest of major foreign institutions and the prominent scientists attached to those institutions, engaging a wide range of Western European correspondents for Portuguese scientists during the late eighteenth and early nineteenth centuries. Portugal was clearly part of Western European science. A great deal of the credit for promoting the sciences in Portugal and Brasil should go to Martinho de Melo e Castro and D. Rodrigo de Sousa Coutinho, who protected and promoted the individual scientists and their studies during the crucial years of the Pombal Reforms, the "viradeira" of D. Maria I, and the politically troubled period of the long Regency of D. Joao.

From the time that Ferreira returned to Lisbon in 1792, until the period of the French invasions and occupation he attended to his administrative duties as well as scientific studies. Manuel Galvão da Silva was in Moçambique for ten years from 1783-1793, and except for a few brief field trips, a two-month stay in Goa, and a journey to the interior which was not entirely devoted to natural history studies, Silva mainly attended to his duties as Secretary of Government. In Angola Joaquim José da Silva made field trips to northern Angola, Massangano and also joined a two-year expedition into southern Angola in a fruitless search for the Cunene River. In Silva's expedition to Angola, originally intended as a three year visit, he lost both companions to disease, eventually

married, raised a family and settled in Africa. His scientific duties became secondary to his administrative functions, since he never received replacements from Lisbon and was left on his own.

João da Silva Feijó (1760-1824), was in Cabo Verde until about 1793, returned to Lisbon and worked in the Ajuda Palace Chemistry Laboratory, was assigned to Ceará about 1799 and eventually held a teaching post in the Military Academy in Rio de Janeiro. While in Cabo Verde Feijó observed and described a major eruption on the Ilha do Fogo in 1786. This scientist demonstrated his loyalty to the Crown by naming two of the volcanic mountain's new peaks for D. Maria I and the Prince of Brasil, D. João and another for Martinho de Melo e Castro.⁵²

Several of Feijó's other memoirs on Cabo Verde were published in the Memorias Económicas da Real Academica das Sciencias de Lisboa (see vols. 4 and 5) and a memoir on Ceará in Brasil in 1810.

The Brazilian and African collections made by these naturalists attracted the attention of contemporary European scientists. These items were effectively used as articles of scientific exchange in order to allow the Ajuda Palace Natural History Museum and Gardens to expand its collections of rare plants from China, India, Spanish America,

See Orlando Ribeiro, A Ilha do Fogo e as Suas Erupções (Junta de Investigações do Ultramar, Lisboa, 1954). The Feijó mss. concerning the 1786 eruption was originally published in Memórias da Real das Ciências de Lisboa, classe de Ciências, nova série, tomo II, p. 1. For Feijó see Dicionário Bibliográfico, vol. IV, p. 35, vol. X, pl 348, vol. XI, p. 306 for biography and publications.

Scandinavia and North America. Northern European scientists and doctors had an exceptional interest in obtaining new drugs for the treatment of fevers. Although Perú was a major source of quinine from the bark of the tree Cinchona officinalis there were other drugs from the Brazilian interior which were sought after by Ferreira and other scientists.

The number of foreign visitors to the Ajuda Palace Natural History Museum and Gardens could not have been great during the 1790's, although those who did visit generally had favorable impressions of the Portuguese collections. In France de Jussieu and his colleagues not only were able to examine specimens from Brasil but they also worked with prominent botanists such as Fr. Felix de Avellar Brotero, Abade Corrêa da Serra and even taught to Brazilians such as Manuel Arruda da Câmara who had studied with Ferreira and his colleagues and knew the collections of the Ajuda Palace Gardens and the University of Coimbra as well as the native flora and fauna of their own regions in Brasil.

Sir Joseph Banks and Sir James Edward Smith as well as many other fellows of the Royal Society, personally knew Domingos Vandelli, D. Rodrigo de Sousa Coutinho, Martinho de Melo e Castro, and Abade Corrêa da Serra. Many of the manuscripts written by Abade Corrêa da Serra while in England and later published are preserved in the Library of the Royal Society; he was, moreover, elected as a member of the Royal Society on 3 March, 1796, having been proposed by James Edward Smith, Aylmer Bourke Lambert, William Marsden and others who con-

sidered him "as likely to prove a valuable member."⁵³ Through these valuable personal contacts and correspondence, the wealth of the collections made by Ferreira, the two Silvas, Feijó and other correspondents of Domingos Vandelli, came to be known in Europe.

Political events in Europe eventually ended the efforts of the Portuguese Crown to promote the natural sciences and to establish a major natural history museum and botanical garden in Lisbon. After many years of maintaining a pro-English neutrality, Portugal was invaded by French forces and the Royal Family, large numbers of officials, the nobility and all their servants fled to Rio de Janeiro where the Court and government was re-established. Although the Portuguese Crown avoided the fate of the Bourbon House in Spain, Portugal itself and much of the movable wealth of the nation was left to the mercy of the occupying army. The invasion of Portugal was long-planned, and abetted by Manuel Godoy, the Spanish "Prince of the Peace," who was promised his own Kingdom after Portugal was occupied and divided.

53

Library of the Royal Society, London, listing of Fellows, vol. V, p. 268:

Mr. Joseph Correa de Serra, L. L. D., Secretary to the Royal Academy of Sciences at Lisbon, of Pen-tonville, being desirous of becoming a fellow of the Royal Society, we the underwritten, believing him to be highly worthy of the honour he solicits, do, on our personal knowledge, recommend him as likely to prove a valuable member.

James Edward Smith, A. B. Lambert, Maxwell Garth, Samuel Solly, William Marsden, et. al.

Almost immediately after the French forces had established themselves in control of Lisbon, under General Junot, different branches of the French government began to become interested in seizing the wealth of the Portuguese Crown, the monasteries and private persons as well as libraries, museums and educational establishments. Even before Étienne Geoffroy Saint-Hilaire had the idea to go to Portugal and Spain to obtain specimens for the Muséum d'Histoire Naturelle the French Navy requested General Junot's assistance in obtaining as many maps and coastal charts describing the Portuguese possessions in Africa, Brasil and India:

...there probably exist in the archives, depots, and Public Libraries of Lisbon, Maps, Plans and Memoirs in manuscript on those parts of Asia, Africa, and of America, which remain dependencies of the Portuguese and still today are under their domination. I know that these Establishments contain information very much and particularly interesting on Southern Africa and the Indian Ocean.⁵⁴

It is possible that Napoleon planned even further military adventures in

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Service Historique de l'Armée, Vincennes, Armée du Portugal, coté c-7-3, letter of Magendie, Minister of the Marine to General Junot, French Commander in Lisbon, Paris, 7-I-1808:

...el existe probablement dans les archives, Depôts, et Bibliothèques Publiques de Lisbonne, des Cartes, Plans, et Mémoires manuscrits les parties de l'Asie, de l'Afrique, et de l'Amérique, je dit dependente des Portugais, et sur celles qui sont encore aujourd'hui sous leur domination. Je sais que ces Etablissements renfermoient des renseignements fort intéressans et particulièrement Sur l'Afrique, et sur la mer des Indes.

Africa, India and Asia as well as South America after dominating Europe.

Within two months of occupying Lisbon, the French Minister of the Interior, Emmanuel Crétet (1747-1809), proposed to the directors of the Muséum d'Histoire Naturelle that they assign a French naturalist to Lisbon to examine the Portuguese collections and take those specimens to Paris that were of interest. In agreeing to send Saint-Hilaire to Lisbon, the Directors of the Museum had the intention to exchange specimens in order to mutually enrich the collections of both the Ajuda Palace Museum and the Paris Museum:

It is without a doubt that our establishment can profit from such a journey. We know that in Portugal there are many public "cabinets," rich in the products of the three kingdoms, from India, and from Brasil, which we are without, due to the lack of relations with distant countries. Portugal itself produces many products which would be interesting for France...⁵⁵

With this seemingly innocent beginning, Étienne Geoffroy Saint-Hilaire

55

Hamy, op. cit., p. 3, letter from Crétet to the Directors of the Museum d'Histoire Naturelle, 7-I-1808.

56

Hamy, op. cit., pp. 4-5, Directors of the Museum d'Histoire Naturelle, Paris, 8-I-1808:

Il n'est pas douteux que notre établissement ne puisse beaucoup profiter de ce voyage. Nous savons qu'il y a en Portugal plusieurs cabinets publics, riches en productions des trois règnes de l'Inde et du Brésil, dont nous sommes privés, faute de relations avec ces contrées éloignées. Le Portugal lui-même produit plusieurs objets qu'il sera intéressant de procurer à la France...

effectively removed some of the prize specimens of the Ajuda Palace Natural History Museum, including complete herbarium collections from Angola, Goa, Cabo Verde, and a portion of Ferreira's Brazilian flora as well as numerous manuscripts of scientific memoirs written by Ferreira and other correspondents of Domingos Vandelli. Not only was serious scientific study disrupted in Portugal, it was virtually ended for many years.

Saint-Hilaire left France for Portugal during April 1808, travelling via Madrid, where he also hoped to obtain specimens from Spanish collections. After difficulties with insurgent Spanish forces, Saint-Hilaire eventually reached Lisbon by 17 May 1808. Prior to Saint-Hilaire's departure Junot confirmed permission from Vandelli to obtain duplicate specimens from the Ajuda Palace Natural History Museum.⁵⁷ The wealth of the Ajuda Palace Natural History collections impressed Saint-Hilaire, who reported to his colleagues in Paris that the collection surpassed all his hopes, and that:

Half of the collections is composed of Brazilian animals, and all of that portion you lack.
The principal wealth of the Ajuda collections is composed of mammals, birds and insects.⁵⁸

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Service Historique de l'Armée, Armée du Portugal, coté c-7-16, "Quartier Général du Lisbonne," 20 Avril, 1808, p. 211.

58

Hamy, *op. cit.*, p. 43, letter of Saint Hilaire to Administrators of the Museum d'Histoire Naturelle, Lisbon, 19-V-1808:

La moitié de la collections est composée d'animaux brésiliens, et toute cette moitié vous manque. La principale richesse des collections de Ajuda se forme de mammiferes, d'oiseaux, et d'insects.

After making his initial inspection of the Ajuda Palace Natural History Museum's collections, Saint-Hilaire proceeded with Vandelli to examine the specimens held in storage and not on public display. Saint-Hilaire's comments strongly confirm the fears that Ferreira expressed during his Brazilian expedition when he requested a recall to Lisbon to study the specimens already collected, fearing loss, destruction and lack of interest on the part of other persons. In effect, the bulk of Ferreira's collected specimens remained in packing cases, untouched, unstudied and uncatalogued since the 1780's when they arrived in Portugal. In mentioning that he had inspected the herbariums of Pará, Angola, Maranhão, the Indies and the Rio Negro, Saint-Hilaire noted:

All are untouched, nobody has taken the trouble to work on them: not one plant, not one botanical idea, nor are they sorted. ⁵⁹

As mentioned, Link visited Portugal in the late 1790's and his two-volume work, Voyage en Portugal (Paris, 1803), was certainly available to Saint-Hilaire before visiting that country. In addition, Abade Corrêa da Serra was well known to French botanists. From Saint-Hilaire's letters to his colleagues there is an indication that the Frenchman spoke to Corrêa da Serra in order to obtain some information

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Hamy, op. cit., p. 45, letter of Saint-Hilaire to the Administrators of the Museum d'Histoire Naturelle, Lisbon, 24-V-1808:

Tous sont vierges, on ne s'est pas donné la peine de les ouvrir: ni une plante, ni une idée botanique n'en sont sorties.

about Lisbon's scientists and its establishments before leaving Paris. In mentioning a visit to Padre Joaquim Conceição Velloso, author of the major botanical work, Flora Fluminensis he noted an introduction from Abade Corrêa da Serra.⁶⁰ Although Corrêa da Serra would have hardly approved of the French invasion and the occupation of his native country, perhaps he willingly introduced Saint-Hilaire to his countrymen who were also his scientific colleagues.

After the English forces entered Portugal during August 1808, quickly forcing the French out of Lisbon after a popular insurrection in the city, the French and English signed the Convention of Sintra, allowing the French forces to evacuate Portugal, taking with them the bulk of the private property seized during their occupation as "spoils of war." Although this agreement was denounced by English partisans of Portugal and the Portuguese themselves, there was no avoiding the necessity of forcing the French to depart, albeit temporarily, without further fighting. Étienne Geoffroy Saint-Hilaire left Portugal with his spoils from the Ajuda Palace Natural History Museum, amounting to seventeen cases of specimens, manuscripts, books and other rarities taken from convents and private homes.

English and Portuguese officers attempted to prevent Saint-Hilaire

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Hamy, op. cit., p. 48, letter of Saint-Hilaire to Cuvier, Lisbon, 28-V-1808:

Le moine Velloso, dont M. Correa m'avait parlé,
a fait d'immenses travaux d'histoire naturelle,
je ne me sers pas d'une expression trop forte.

from removing the specimens he had obtained and the Frenchman appealed to Sir Joseph Banks to aid him in removing the items which he had been freely given by Domingos Vandelli.⁶¹ Although Banks does not appear to have replied or assisted Saint-Hilaire, the Frenchman evidently had his way and the collections went to Paris in October 1808. Saint-Hilaire did not take out all of the specimens he wanted. He was obliged to restore three cases containing minerals and large sea turtles to Portuguese ownership before being allowed to depart with the rest.⁶²

The inventory that Saint-Hilaire prepared of the specimens taken from the Ajuda Palace Natural History Museum, signed by Vandelli, is an amazing display of the wealth of the natural history of Brasil and Africa. In addition to the specimens themselves Saint-Hilaire took precious manuscripts written by Ferreira in Brasil, books and other items of value to Paris. These specimens were eventually studied by Cuvier, de Jussieu, Thouin, Lacépède and Saint-Hilaire himself, without ever crediting the original collectors. Although the number of specimens taken appears to be large, there were still many left both in the

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Hamy, *op. cit.*, pp. 50-51, letter of Saint Hilaire, Lisbon, June, 1808, to Sir Joseph Banks. There is another copy, probably the original in the Banks Papers, British Museum, London.

62

Archives Nationales de France, Paris, Côté Muséum, AJ 15, Procés Verbal des Seances du Muséum d'Histoire Naturelle, seance de 6-VIII-1808, p. 80, reporting on a letter from Saint Hilaire:

...mais M. Geoffroy annonce que les anglaise
et les portugais l'ont forci de restituer trois
de ces caisses d'histoire naturelle

Ajuda Palace Natural History Museum and at the Natural History Museum in the University of Coimbra. A brief summary, indicating that most of the items originated in Brasil, is necessary to give an idea of the collecting efforts made by Ferreira and his colleagues in Brasil and Africa:

<u>Type</u>	<u>Species</u>	<u>Individuals</u>
Mammals	65	76
Birds	238	384
Reptiles	25	32
Fish	89	97
Shells	277	468
Crustaceans	5	12
Insects (including butterflies)	294	538
10 herbariums total plant specimens 2,855		
Minerals	59 separate packets of rare gems, iron, cobalt, coal, mica, granite, etc.	
Fossils	miscellaneous specimens	

The inventory and description of the specimens removed is only a brief indication of the richness of the Ajuda Palace Natural History Museum's collections.

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63

Hamy, op. cit., pp. 59-65, "Catalogue des Objets Choisis Parmi ceux des collections d'Ajuda destines a être transportés a Paris et y Servir a L'Accroissement des Collections du Muséum d'histoire Naturelle."

After the full restoration of Portuguese rule, a purge was begun by the Intendant of Police during the Regency of all those francophiles suspected of aiding the French during the occupation. The animosity generated during this period extended for many years; and, D. Francisco de Lemos, Bishop of Coimbra, who went to France to pay his respects to Napoleon, was later the target of much patriotic abuse when he was elected as a member of the Cortês in 1820, never took his seat. Of more immediate importance was the expulsion of Domingos Vandelli in 1810, accompanied by his son Alexandre António Vandelli into exile, first at Ilha Terceira in the Açores, and then to England, until he was allowed to return in 1815; he died in 1816. The suspicion that Vandelli openly aided the French led to his expulsion during a wave of anti-foreign popular feeling in Lisbon.

There is an indication that Saint-Hilaire may have removed more specimens from the Ajuda Palace Natural History Museum in 1808 than he acknowledged. An inventory of ninety-two cases of specimens, Indian artifacts, books, watercolors and memoirs by Dr. Alexandre Rodrigues Ferreira on various Indian tribes, fishes and quinine is preserved in the Library of the Muséum d'Histoire Naturelle, Paris. This inventory notes that some items were to be re-shipped to the Museum (Ajuda) by the order of the Conde de Redondo, the Portuguese diplomatic representative in Paris after the fall of Napoleon. It is difficult to determine which of the items remained in Paris and which were returned, other

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than Ferreira's manuscripts. It is certain that Ferreira's herbarium
65
is still in Paris.

The Portuguese Crown made a vital contribution to the study of the Natural History of Africa and Brasil by promoting these expeditions of the 1780's and 1790's as well as by supporting the teaching of the physical and natural sciences at the University of Coimbra during the period of the Pombal Reforms and afterwards. The collections made by Ferreira, Feijó and the Silvas as well as other naturalists in Brasil were studied in Lisbon for potential commercial value. The Portuguese Crown was fortunate in having the allegiance of scientists such as Ferreira, who could have emigrated to either England or France and made a career for themselves there. Instead, Ferreira, Corrêa da Serra and Brotero also returned to Portugal and served the Crown in their native country and even in exile through promoting a better understanding of their country and by continuing their botanical studies.

Although the memoirs Ferreira wrote in Brasil were not published until this century, a portion of his diaries appeared about one hundred years after he explored the Rio Negro and the Rio Branco. His collections and manuscripts were examined in Paris by Abade Corrêa da Serra Baron von Humboldt while both resided in the French capital. Saint-

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Library of the Muséum d'Histoire Naturelle, Paris, Mss. 2441, "Relação dos Caixões pertencentes ao Real Museo com a Marca, R. M., e nos. 1 ate 92."

65

See J. J. Wurdack, "The Melastomataceae Collections of A. R. Ferreira," Taxon, 20 (4): 595-596 (August, 1971).

Hilaire did not read Portuguese (he hired a translator), though he would have understood the Latin portions of any of Ferreira's memoirs. In addition to the manuscripts Saint-Hilaire had from 1808 to 1814, he also reported on memoirs and specimens sent to Lisbon by "a certain Couto," concerning cobalt. This correspondent of the Ajuda Palace Natural History Museum was José Vieira Couto, a contemporary of Dr. Joaquim Velloso de Miranda and Manuel Ferreira da Câmara Bittencourt Aguiar e Sá,⁶⁶ Intendent of Mines in Minas Gerais, Brasil.

The generation of Dr. Alexandre Rodrigues Ferreira and his colleagues is the one just prior to the rise of José Bonifácio da Andrade e Silva, Silvestre Pinheiro Ferreira and other plentiful scientific contemporaries who lived to see the separation of Brasil from Portugal and the Liberal Wars in Portugal. These men who were also scientists of the first rank, yet were more European in outlook, through their long years of Royal scholarship travels in northern Europe, though they were nonetheless loyal to the Crown. José Bonifácio was Secretary of the Royal Academy of Sciences of Lisbon before returning to Brasil; moreover, he led the student batallion of the University of Coimbra against the French in 1808.

The French invasions and the subsequent removal of a large portion of the natural history collections virtually ended the efforts of

See Marcos Carneiro de Mendonça, O Intendente Câmara 2nd. ed. (Rio, 1958), chapter VII. There is also information on Dr. Alexandre Rodrigues Ferreira and his role in preparing opinions on future scientific expeditions in Brasil after his return to Lisbon.

the most enlightened government ministers and scientists to prepare valuable natural history studies of the Portuguese Overseas Territories. Ferreira died a few years later in 1815 after a long illness and there were few trained scientists who were able to replace him and his contemporaries for several generations. It cannot be said that the efforts and expenses of the Crown and its scientists were a total loss; it is true that the eventual use of the collections, their study and publication were made in France by scientists who did not have to suffer the hardships of the Brazilian interior or the fevers of the African savannah.

The saddest part of the history of the Portuguese Crown's natural history expeditions has been the virtual lack of recognition of the efforts of Ferreira, Feijó, and the two Silvas not only by their contemporaries but also by subsequent generations of scientists. There has been no definitive study of Ferreira's herbariums nor those prepared by Joaquim José da Silva in Angola, nor that of Padre João Loureiro which was also taken to Paris by Saint-Hilaire. There has been virtually no contemporary examination of Ferreira's memoirs on Amazon Indians nor on Amazon mammals even though some of these memoirs have been published in this century.

Considering the disaster of the French seizure of the natural history collections, it is only reasonable to again remember Ferreira's own fears for his collections. He was quite correct: the packing cases were not opened until Saint-Hilaire arrived and either through the pressure of his other duties, illness or Vandelli's indifference, his collec-

tions were not studied in Lisbon. The efforts of Ferreira and his colleagues and the vision of ministers such as Martinho de Melo e Castro and D. Rodrigo de Sousa Coutinho, however, are very much worthy of note in the context of their times and of their faith in the intellectual principles of the Enlightenment.

The Brazilian expeditions of Ferreira and his collections were known in Europe. The richness of Brasil's flora and fauna stimulated many scientific expeditions in Brasil during the nineteenth century. Spix and Martius travelled in Brasil under the sponsorship of the Bavarian Crown from 1817-1820 partially retracing Ferreira's journey in the Rio Negro region at about the same time August Saint-Hilaire and his party was in Brasil (1816-1822) conducting botanical expeditions. Brasil in the nineteenth and twentieth centuries has continued to be a fertile field for scientific expeditions either undertaken exclusively by foreigners or in conjunction with Brazilian scientists.

These men sought to serve the Portuguese Crown in a period of reaction against liberal thought and at a time when reform was associated with revolution. With limited financial resources and with few dedicated scientists there was a concerted effort made to improve the country's economic position through scientific development of its resources both in Portugal and in Brasil. The scientific efforts, unfortunately, were ignored for many years and utilized by foreign institutions and researchers. Their efforts, however, were equal to those of their Spanish contemporaries in Perú, and although did not achieve the notoriety of Sir Joseph

Banks, Bougainville or other contemporaries, Dr. Alexandre Rodrigues Ferreira, Joaquim José da Silva, Manuel Galvão da Silva and João da Silva Feijó were worthy successors to the ideals and precepts of Linneaus who encouraged naturalists to study their own country before journeying to others.

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A P P E N D I X I :
D O C U M E N T S P E R T A I N I N G
T O C H A P T E R O N E :
THE "PHILOSOPHICAL JOURNEYS" AND
THEIR BASIS IN THE PORTUGUESE
ENLIGHTENMENT OF THE LATE EIGHT-
EENTH CENTURY.

LETTER OF DOMINGOS VANDELLI TO
MARTINHO DE MELO E CASTRO, COIMBRA,
22-VI-1778 WITH LIST OF CORRESPON-
DENTS IN BRASIL AND AN EQUIPMENT
INVENTORY NECESSARY FOR EACH NATURA-
LIST ON HIS JOURNEY.

LETTER OF DOMINGOS VANDELLI TO MARTINHO
DE MELO E. CASTRO, COIMBRA, 22-VI-1778
WITH LIST OF CORRESPONDENTS IN BRASIL AND
AN EQUIPMENT INVENTORY NECESSARY FOR EACH
NATURALIST ON HIS JOURNEY.

II^{mo.} e Ex^{mo.} S^{nr.}

Tenho feitas todas as diligencias p^{a.} completar o plano d'expedição dos Naturalistas, e remetter a V. Ex^{a.} neste correio, porem o continuo trabalho da Universid^{e.} não me tem dado lugar a acabalo, e somente agora presento a V. Ex^{a.} o rol dos instrumentos, e outras cousas necessarias as viagens dos Naturalistas p^{a.} executar as instruções q̃. tiverão, e assim formar com a maior diligencia possivel huma exacta Historia Natural de tão vasto Continente; e porque esta seja de maior utilidade, me pareceria conveniente, que alem daquelles Naturalistas, q̃. devem acompanhar os Mathe- maticos, ficasse Júlio [Mattiazi] em companhia de hum Nat^{a.} no Rio Jeneiro [sic] de donde poderião examinar huma grão parte da costa internandose athe 40, ou 50 legoas, e deste modo si se descobrissem cousas uteis, maes facil seria o transporte, e maior quantidade de produccoens Naturaes se poderiao obter, o q̃. tão facil- mente não se pode esperar da os interiores sertoes, donde o naturalista não se pode caregar de muitas

producçoens da Natureza. No caso q̃. a V. Ex^a. lhe parecesse conveniente q̃. Júlio [Mattiazi] viajasse a costa em Companhia de hum Naturalista, ou dois instruidos tambem na Mathematica, lhe sera preziso hum relógio de segundos, hum grafometro, compasso de proporcao, etc.

Os Naturalistas de q. tive a onra de escrever a V. Ex^a. estão já prontos p^a. o q̃. respeita as instruçoens, o q̃. falta sena o exercicio de huma viagem, na qual eu os posso estar livre das occupaçoens da Universid^e. sobre isso determinará V. Ex^a.

Em execução das ordens de V. Ex^a. escrevo, e encomendo em Italia as sementes do Linho cânhamo, q̃. serão dirigidas a V. Ex^a. com a maior brevidada possivel.

Supplico V. Ex^a. continuarme o seu alto Patrocínio, tendo a onra de servir.

De V Ex^a.

Coimbra 22 de Junho de 1778

Umil^a. O F^m. Criado

Domingos Vandelli

Bachereis de Filosofia q. assistem no
Brasil

D^r. Joaquim Vellozo

Villa Rica

Francisco Vieira de Couto

Serro do frio

Serafim Fran^{co}. de Macedo

Villa de S. Fran^{co}. da Cidade da Bahia
Jozé da Sylva Lisboa

Bahia

Estacio Gularte

Rio Jeneiro

Estes são todos bons, e capazes de
observar, e recolher produções naturaes;
os seguintes podem ser bons correspondentes,
como,

António da Rocha Barboza

no Rio de Jeneiro

Joaquim Barboza de Almeida

na Bahia

Rol dos Instrumentos, Drogas, e mais utensilios pertencentes a Historia Natural, Physica, e Chimica, q̃. são indispensaveis á hum Naturalista, q̃. viaja.

Instrumentos

Lente grande convexo-convexa de diametro de 3 poleg.		1
Lente pequenas de diametro de 1 poleg.		2
Microscopios simples		2
Oculo dever ao Longe		1
Arames diversas grosuras		3
Linhas grosas ordinarias de pano de linha		2
Tuila e barbante		6
papel pardo de marca grande	balha	½
papel de escrever	resma	1
livros em branco de 8'		12
Nanquim	caixinha	1
tinteiro de algibeira		1
laire p ^a . os herbarios		2
lapis de Inglaterra	duzias	3
Caixas de metal para os mesmos		1
tenazes p ^a . as cobras fig. VIII		2
_____ p ^a . os insectos fig. IX		2
Armação para apanhar borvoletas fig. V.		2
Martellos fig. VI		2
Maxados fig. VII		2
Escropos p ^a . as pedras		2

Serrotes p ^a . as madeiras	2
Imprensa p ^a . as Ervas fig. X	1
Fuzil com seos aparelhos	1
Balancas pequenas de marco	1
_____ Romana, chamada Ingleza	1
Armacao, p ^a . as conchas, e Coraes, fig. III,IV	1
Anzios de differentes tamanhos	100
Espingarda	2
Pistolas	1
Estojo de compassos	1
Estopa p ^a . saquinhos das terras	varios 10
Estojo de Lancetas	1
Papeloins	3
Pergaminho	pelle 1
Folhas de Flandes p ^a . os insectos	
Frascos de lata p ^a . alguns animaes	
Cupellas da Caza da Moeda, no. 40	12
Serrotes de Anatomia	1
Escapelhos de varios tamanhos	10
Navalhas inglezes de molla	4
Tizoiras grandes e pequenas	3
Alfinetes inglezes delgados	arrad ^{as} . 2
Aguihas de varias grossuras, de cada huma	papel 1
_____ grossas de coser fardos	6
Limas de aco fino p ^a . ferro e p ^a . tocar pedras	6
Verromas inglezes de varias grossuras	4
Tinta de impressores em seo vaso de lata	1
E humalos de impressores fig.II	2
Bocetas de varios tamanhos	

Sondas p ^a . os lastros do Mar, Lagoas,	1
Almofarios pequeno de bronze com sua mao	
caixa do Labor, no.34	1
Espatulas de metal, e vidro, no. 2	6
Tolhe fig. I	1

Drogas

Cadilhos	no. 37,38,39	
Vitriolo azul	no. 48	
Galha	no. 42	
sublimado corrosivo	no. 43	2
Nitro	no. 44	3
Tartaro Cru	no. 45	3
Antimonio	no. 46	2
Borax	no. 47	3
Nitro fixo	no. 48	1
Pedra hume queimada	no. 49	1

Drogas que hão de hir em vidros maiores

Azbugue	no. 18	
Acido nitrozo	no. 1	
_____ marino	no. 3	
_____ vitrolico	no. 2	
vinagre distillado	no. 14	
fluxo branco	no. 10	
_____ negro	no. 11	
Sal marino decriptado	no. 13	
Alkali mineral purificado	no. 15	
Alkali phlogistado	no. 16	
Espirito de vinho rectificado	no. 17	

Drogas que hao de hir em
vidros menores

Sal Ammoniaco	no.19
Espirito de Sal Ammoniaco	no.28
Dissolucao de prata	no. 29
<u> </u> de estanho	no. 30
turnesol	no. 35

Tintas

Carmino	no. 36	Ostas 1
Verde bexiga		$\frac{1}{4}$
Rom		$\frac{1}{4}$
Anil		$\frac{1}{2}$
Aleada em pedra		3
vermelhao		1
sinopla fino		onca 1
pinceis grandes e pequenos		duzuas 5
Goma arabica		$\frac{1}{2}$
Colla de Peixe		$\frac{1}{2}$

Botica

Quina	no. 27	1
Agua Lueei	no. 24	vidro 1
Almucar	no.25	onza 1
Laudano opiado	no. 26	vidro 1

Instrumentos Clinicos pertencentes
ao Naturalista

Barometros	2
Thermometros	2
Pezali quores	2
Rman armado, pequeno	1
Agulha de marear	1
Relogio de segundos, p ^a . observar a velocidade das aguas, e outras observacoes Empiricas	1
Grafometro p ^a . a observacam dos montes, e Rios, quando nao basta a bussola	1
Compasso de proporcao	1

Transfiridores

Livros e Cartas Geografica do Paiz

Cartas Geograficas de America, e terra firme do Brazil

p^r. M. de Lyle

Agriculture complete, ou L'Art d'ameliorer

les terres etraduit deL'Anglais de Mortimer, vol 4 em 12

Principes de L"Agriculture p^r M. Rome

_____p^r M. Duhamel

L"Art de raffiner le sucre p^r Duhamel

L"Art de Cultiver le Indigo p^r M. Beauvaus Raceau

Sauvagry, Memoires sur L"Livraison de veas a soye,

la culture des Murieres

L'Art fr Ciergeir p^r. Dulhamel

Plumier, description des plantes de L'Amerique

Memoire sur le defrichemt p. M. Le Marquis de Turbelly

L'Art de L'Indigo Terre

Chimie metallurgique p. ^a M. Gellert

Raquin

Pison

Margravio

Johannes Lery, L'Histoire d'un Voyage du Brezil

Histoire des plantes de Cayenne tom 2., em 4°

Maison rustique de Cayenne

Dissionaire d'histoire naturelle

Este rol serve para provimento de
cada hum dos naturalistas

A P P E N D I X I I :
D O C U M E N T S P E R T A I N I N G
T O C H A P T E R T W O :
DR. ALEXANDRE RODRIGUES FERREIRA
(1756 - 1815), NATURALIST AND
PORTUGUESE CROWN OFFICIAL; A
LATE EIGHTEENTH CENTURY SCIENTIST
AND CONTRIBUTOR TO THE LUSO -
BRASILIAN ENLIGHTENMENT.

I N D E X :

1. ACADEMIA DAS CIENCIAS DE LISBOA (ACL), SECRETARIA, DOSSIER OF DR. ALEXANDRE RODRIGUES FERREIRA, LETTER OF FERREIRA TO THE ACADEMY, c. MAY, 1780.
2. MUSEU BOCAGE (MB), MAÇO 5, no. 7, INVENTORY LIST OF EQUIPMENT FOR FERREIRA'S EXPEDITION TO PARÁ, WHICH DEPARTED LISBON, 14-VII-1783.
3. MB, MAÇO 7, no. 44, FERREIRA PAPERS, DESCRIPTION OF A WATERCOLOR OF A MAHUA TRIBESMAN, c. 1787.
4. MB, MAÇO 5, no. 10, FERREIRA PAPERS, LETTER OF FERREIRA TO THE GOVERNOR OF PARÁ, LISBON, c. FEBRUARY, 1793, (FRAGMENT).
5. MB, MAÇO 10, 115, FERREIRA PAPERS, LETTER OF FERREIRA TO DOMINGOS VANDELLI, ALCOCENA, 19-VI-1795.

ACADEMIA DAS CIENCIAS DE LISBOA (ACL),
SECRETARIA, DOSSIER OF DR. ALEXANDRE
RODRIGUES FERREIRA, LETTER OF FERREIRA
TO THE ACADEMY, c. MAY, 1780.

Levando da honra de obedecer á eleição q̃. de mim se dignarão fazer, para seu discipulo o Exm.^o Sn^r. Duque de Bragança, e V. Ex^a. , nenhuma outra occasiao podia eu ver mais bem logrados os meus dezejos, que no dia de hoje, desde o qual, depois de significar a hum e outro Sn^r. e á Academia em geral, o meu vivo agradecimento, podia proseguir seguro no intento, q̃. sempre tive de instruir-me. Tenho porem a infelicidade de me achar ainda convalecendo de huma pequena molestia. No entanto, q̃. eu não vou pessoalmente^t. agradecer a Piedade, em q̃. pertendem o Exm.^o Sn^r. Presidente, e V. Ex^a. , formar de mim algum dia hum membro digno de tão Ilustre Sociedade, espero q. V. Ex^a. supra a esta falta, significando-lhe, assim como o meu reconhecimento, do mesmo modo, aquela magoa, com q̃. de meio de todos os meus companheiros Manoel Galvão da Sylva, Joaquim José da Silva, João da Silva Feijó, eu consinto ser o unico eleito á participar daquelas Instruções, de q̃. eu, e elles igualmente necessitamos.

Beija as mães.

De. G. V. Exa.

Seu mais affectuozo Cr.

Alexandres Roiz. Frr^a.

MUSEU BOCAGE (MB) MAÇO 5, no. 7, IN-
VENTORY LIST OF EQUIPMENT FOR FERREIRA'S
EXPEDITION TO PARA, WHICH DEPARTED LISBON
14 - VII - 1783.

Expedição Filosofica do Pará de que hé Naturalista o
Doutor Alexandre Rodrigues Ferreira, os Riscadores Jose
Codina, e José Joaquim Freire, e Agostinho do Cabo,
Jardineiro Botanico, o qual partio aos 14 de Julho de
1783.

Relação do que Levou o ditto Naturalista deste Real
Gabinete da Ajuda: a saber:

9	Caixas	} de Folha de Flandes
5	Selindros	
1	Caixa de Laboratorie	
1	Folle	Pertencente ao d ^o . Laboratorio
1	Almofaris de bronze	
2	Caixoes grandes, com ferragens	
1	D ^o . pequeno com hũa verruma	
1	Caixa com hua imprensa	
2	D ^{as} . de pinho com papel, e barracas	
16	Resmas de papel, para as Plantas.	
2	Pessas de Corda, huma inbriada	
1	Rede de arrastar, para conxas	
1	Maquina para extrahir as Plantas do Mar, com sua balla de ferro, chamado Salebre	

1	Resma de papel de riscar, grande
6	Cadernos D ^o . pequeno
3	Resmas de papel de escrever
2	Livros em branco
8	Caixas de penas de lapis
2	Tinteiros grandes
25	Penas de escrever
24	Canivetes
1	Pitipé
1	Estojo Mathematico
3	Thezouras
1	Maco de Linhas
1	Balanca pequena
3	Cartas de Alfinetes
$\frac{1}{2}$	Pessa de escomilha, para as redes das borbuletas
18	Facas Flanebgas
2	Torquezes
2	Alicátes
2	Pedaços de estanho de Inglaterra
10	Agulhas de Colxão [~]
2	Redes com sua armação [~] de pescar
19	Arrates de fia de velha
15	Miadas de Linhas de pescar
1	Barqueta com sua linha, e carreta
2	Sondas, hũa grande, e outra pequena, com sua Linha

1	Pessa de Corda, para p Salebre	
1	D ^a .	
6	Arrates de fio de arama	
	Tinta de China	
10	Sevellas	
3	Alenternas	
5	Caixas de insectos	
3	Barracas com seus pertences	
1	Cuzinha de Campanha com seu espeto, e agulha	
3	Marmitas sorteadas	
2	Cutellas	
3	Cunhas de ferro	
3	Escopolos	
3	Ponteiros	
1	Marreta	
1	Martelo	
11	Limas sorteadas	
1	Maceta com 12 brocas sortidas	
3	Machadas	
2	foices de volta	
2	fisgas	
2	arpões	
4	forcados	
2	picaretas	} botanicos
2	saxos	

- 2 saxos
- 2 solinhadeiras
- 2 altanzen pequenas }
2 D^{as} grandes } de Cobra
- 2 Aros redondos, de insectos
- 2 Atanazes grandes }
2 D^{as} pequenas } de insectos
- 1 Sarrote, com hua de Subrecelente'
- 11 Saquinhos de Brim, que serviraõ para se meter dentro,
preparações Chemicas: a saber:
 - 1 Saquinho de tartaro, e salitre, para fluso
 - 1 Saquinho de Pedra huma
 - 1 Saquinho de tartaro
 - 1 Saquinho de salitre
 - 1 Saquinho de Borrás
 - 1 Saquinho de Sal ammoniaco
 - 1 Saquinho de goma copal
 - 1 Saquinho com verde bexiga, e Antimonio
 - 1 Almofaris de ferro
 - 1 Impolheta
 - 1 Almofaris de vidro
 - 1 Jallapa de fluso vidro
 - 1 Vidro com fluso branco
 - 1 D^o. com negro
 - 1 " com azouge
 - 1 " com vitriolo mercurial

- 1 " com Sublimado Corrusivo
- 1 "com Balsamo de S. Thome
- 1 com Rom
- 1 com Anil fino
- 1 com Sinópla
- 1 com Sandraca
- 1 com Laudano
- 1 com Almiscar
- 6 Baliens de Vidro, para analizes
- 6 Espatullas, de Vidro
- 3 Tunis }
- 2 Frascos de Camphora
- 1 Cantiplora de folha de Flandes, com espirito de v^{or}.
 - " Limadura de ferro
 - " Quina em Casca
 - " Espirito de Sal comun
 - " D^o. de Vitriolo consentrado
 - " " de Alkali volatil
 - " " de Oleo de Amendoas de ces.
 - " " de Gomma ammoniaco
 - " " de Jalapa
 - " " Rezina de mesma
 - " " Tartaro Emetico
 - " " Cremor de Tartaro
 - " " Sal Cathartico de Inglaterra
 - " " Agoa Forte

"	" Caparoza
"	" Galha de Alepo
"	"Jogos de Cadilhos
"	" Opio Thebaico
1	Quintal de Polvora fina
8	Arrobas de Escomilha
1	Caixa com balla de Espingarda, 5 Arrobas, e 12 arrates
2	Arrobas, e 24 Arrates de chumbo groco
2	Espingardas
4	Pistollas
1	Chifarote
11	Cadeados
1	Busula com bastão
2	Milheiros de Pregos sorteados
6	Regoas de Riscar
6	Verrumas Sorteados
1	Caixa com humá Camera escura
1	Canudo de folha de flandes, com a Carta Geographica
1	do Rio de Amazonas
	" Pedreneiras
2	Vidros com Verdette preparado
"	Pinceis
7	Duzias, e 8 Anzões sorteados
1	Amostra do tamanho do que hão de ficar as Pedras
	depois de trabalhadas
	" Ocre clara

"Caparozza
" Verdetta
" Flor de Anil
" Verde monte
" Alvayada
" Sombra de Colonia
: Flor de Jaloe

LIVROS

Flora Guyana
Margrav et Pison
Linn. Systema Naturae
Genera Plantarum
Especie Plantarum
Valerio
Chimica de Baumé
Diccionario de Macquer
Scopoli
Govan. Historia de Poisson
Historia des Insectes
Diario de Capitania de S. José do Rio Negro

MB, MAÇO 7, no. 44, FERREIRA PAPERS,
DESCRIPTION OF A WATERCOLOR OF A MAHUÁ
TRIBESMAN, c. 1787

A Taboa V representa hum, dos Gentios Mauhás, que habitão nas margens do Rio Cumiary, o qual desagoa na margem Oriental do Rio Jupurá. Habitão não so no refirido Cumiary, mas tambem em todos os seus Confluentes, principalmente nos dois que se chamão Cunhare, e Messai. Desta qualidade de Gentio, não havia no Estado hum tão individual conhecimento, como o que delle se adquirio, depois que, pelo dito Rio subirão as Partidas Portuguesas, e Hespanhola, empregadas na Diligencia actual da Demarcação de limites. Contarão para cima de Cem Malocas, povoadas de semelhante Gentio, cuja configuração os distingue mui particularmente dos outros. Andão sempre espartilhados, ao uso das Damas da Europa: para fazerem o espartilho, preparão huma Lamina de madeira avermelhada, do comprimento de huma, até duas varas, em ordem, a darem com ella taes voltas em roda do ventre, como se fosse huma cinta, adelgacando de tal forma a referida Lamina, que apenas lhe deixao a consistencia que tem os arcos das bocetas de faia. Dispõem em roada do ventre, e com immediato contracto com toda a pele, huns grossos ponteiros, perpendicularmente arranjados; os quaes nesta qualidade de espartilhos, ficão servindo de barbatanas,

e sobre elles singem a Lamina de madeira, atando a por fora com fitas que tirão de Palmeira do Tocún, juntadas de diferentes cores, e os nos que lhe dao, pela frente do espartilho, formão o transelim que o ataca, Donde resulta, que ficando por este modo comprimadas as Costellas spureas, pela parte superior das Cristas dos Ilios, se elevao as Costellas verdadeiras para a parte ecterna, fazendo gibboza a Cavidade do Thorax, como succede aos Corcovados; as Cristas dos Ilios, se ellevão em formas de anquinas, e ficão mais vazada, como se ve nos Esqueletos das mulheres.

Para cobrirem as partes vergonhozas, usão huma Sang^{ca} em que acaba o espartilho, pela parte exterior somente, com a qual ficão encobertos os testiculos, que são os que deixão ver, quando assim o permite a posição do corpo. Quanto ao Penis, de nenhum modo se ve, porque o trazem atado pela grando com hum fio de Curaua, de forma que sempre anda perpendicularmente encostado ao pente, e so para o uso das fonçoens naturaes o destão.

Os seus infeites consistem nos Massos de contas de Mossambique, que trazem encruzados ao pescoço, e os comprão a os Hespanhóes pela tres optimas qualidades de Cera branca, a^yarela, e preta, que para o referido negocio tirão do mato em grande quantidade.

MB, MAÇO 5, no. 10, FERREIRA PAPERS, LETTER
OF FERREIRA TO THE GOVERNOR OF PARA, LISBON
c. FEBRUARY, 1793 (FRAGMENT)

Grita o meu dever, e absolutamente me ordena, que ainda
que aceleradamente não perca q̃ esta occasião de partici-
par a V. Ex^a., em como na manhã de 12 do corre.,
chequei a esta Corte com 89 dias de viagem. Digo a
Charrua; porque quanto a mim, sabe V. Ex^a. q̃ devo con-
tar quatro dias menos centoenta dias conto Comm^e. ate
dar vista da I^a. de S^{ta}. Maria, o de entao por diante,
que esperava visto mareiros, por cujo motivo
se chamou a o sul. Sucedeo tudo a o contrario, porq̃
tudo forão . .

. . . . da sobred^a a

por onde contou 80 dias

.

Erão 3 h da tarde, quando me enviara a bordo q̃
foi do Semanario dessa Cid^e. o aviso q̃ havia antecipado
S. Ex^a. o Sr. M.M.C. para desembarcar, antes de ser vis-
itado. Porem ventava e chovia tantao, q̃. o timoneiro
Alex^e., assentou de não desembarcar se não o seguinte
dia. Embarcar dos pr^{os}. / Lasse e a os Algarves, e des-
embarcar dos ultimos pobres Algarves /, cuidarão que
era prudente e q̃ não era se não refinado medo.

Desembarquei com effeito pelas 8 h. da manhã do

seguinte dia, e dirigido me immediatamente a S. Ex^a.,
que nada tardou em me fallar: Aqui venho lhe disse eu,
mais humilde e rasteiro q̃ hua cobra, a receber o castigo
das minhas omisoens. Recebeo me falou me de hum modo,
q̃ me confundio, Mostrou compadecer se dos meous tra-
balhos, e pareceo me menos surdo de q̃ eu esperava q̃
fosse, a orelha de hum Ministro delegado. Perguntou me
logo pela saude de V. Ex^a., e pelo Para, lhe disse o
mal que pũde, como fazem os ingratos. Laia, e passou,
S. Ex^a. a enumerar o q era o Pará antes de V. Ex^a.
Indios Livres no nome (dizia elle) e esc^oravos nas obras:
Governadores apaixonados pelos Serviço dos Particulares,
e não pelo do Publico: he verdade que o govêrno o
Honradissimo J.P.C., porem tinha vontade e nao sao . . . ,
hũa via que elles sao homens de activid^e., e principios,
sucedem milagres. Tem se feito em 2 annos o que há 3
e tantos annos se não tem conseguido. V. S^a. Passou a
dizer de si no contudo de consigo mesmo exemplificar o
q̃ dizia, contou me as injurias q̃ tinha passado no con-
ceito publico, de barbaro, de burro, de Demonio vivo,
q^{do}. se delibrou a estabelecer no Estreito a Esquadra
Portugueza (porem eu me disse elle), em todos elles
cuspiam; huns por agos^{os}. e outras por maliciosos. Vio
se a seguir . . . de commercio, e alguns q̃ deviã pro-
curar me a porta, não o fazem; mas de me hũ delles

estemo os compram^s. estimo sim o serviço publico.

Fallou se nas carnes do Marajó, e perguntando me se
me não tinha V. Ex^a. mostrado o q̃ lhe hacia dito
sobre o sal, respondi lhe, q̃. V. Ex^a. nunca teve nessa
Cid^e.

MB, MAÇO 10, 115, FERREIRA PAPAERS,
LETTER OF FERREIRA TO DOMINGOS VANDELLI,
ALCOCENA, 19-VI - 1795.

Sñor. D^{or}. Domingos Vandelli:

Mui Senhor meu: Tenho a Honra de remetter a V. S^a. as Cópias que me confiou; e devendo dar conta de mim sobre a incumbencia que me deu de saber a quantidade de taboas, que se vão precisias para as Estantes da Mineralogia: Respondo a V. S^a. como que informa o M^e. Carpinteiro ++ Que ainda que para semelhante obra poderao bastar deseseis duzias de taboas de casquinha; mais seguro hé, pedir se mandem até vinte duzias das referidas taboas.

L! com muito gosto as observaçoens Medicas do meu Collega, Amigo e Patricio o D^r. Velloso; e para isso era todo o tempo constar de zelo, com q̃ este illuminado discipulo de V. S^a. serve ao Seu Principe, e a tudo o Genero Humano, faço o q. V. S^a. me lembra, de lançar nas Memorias desta Casa aquella Participação.

Tambem vi o Conceito que de mim faz o Ill^{mo}.

Sñor..Luis Maximo Pinto de Souza; e tanto me lisongeei delle, que immediatamente o mandei Lancar no Registro da Administração desta Caza. Seja embora fanfarronada minha o q̃. vou a dizer; porem o que digo he, que para S. ,ag^e. desfalcar o Seu Museo de húa só Mosca, q̃ lhe sobejo; nao estando S. Mag^e. invormada, q̃ com sobeja

no seu Museu, pode, sem desembolçar dinheiro, adquirir o muito q̃ nelle falta; Honra, e Mercê me faz S. Mag^e. em cometter tal desfalque não a mim, senão a quem muito lhe parecer. Eu o para lhe sirvo, ãe para lhe adquirir, e zelar os seus Productos. Eis aqui o como hé o D^r. Alexandre: e eis aqui, o Documento que dá a os Administradores, q̃ houvessem de lhe succeder.

Sirva-se V. S^a. de distribuir me as suas ordens, q̃ prompto as executarei, como o seu

M^{to}. rever^{te}. discipulo, e obrig^o. Cr.

Alexandre Rodrigues Ferreira

Alcocena, 19 de

Junho de 1795

A P P E N D I X I I I :
D O C U M E N T S P E R T A I N I N G
T O C H A P T E R T H R E E

^N
MANUEL GALVÃO DA SILVA, NATURALIST
AND SECRETARY OF GOVERNMENT IN
MOCAMBIQUE : 1783 - 1793

I N D E X :

1. ARQUIVO HISTÓRICO ULTRAMARINO (AHU), MOÇAMBIQUE, COD. 1472, p. 1, AVISO CONCERNING MANUEL GALVÃO DA SILVA, 26 - III-1783, REGISTERED IN MOÇAMBIQUE, 26-IV-1784.
2. AHU, PETITION OF SILVA TO BEGIN EXPEDITIONS, APPROVED 23-VI-1784, MOÇAMBIQUE, CX. 21.
3. AHU, MOÇAMBIQUE, CX. 21, LETTER OF SILVA TO MARTINHO DE MELO E CASTRO, MOÇAMBIQUE, 18-VIII-1784.
4. AHU, MOÇAMBIQUE, CX. 22, REPORT FROM SILVA TO MARTINHO DE MELO E CASTRO, MOÇAMBIQUE, c. AUGUST, 1785.
- 5.. AHU, MOÇAMBIQUE, CX. 22, REPORT FROM SILVA TO MARTINHO DE MEL E CASTRO, MOÇAMBIQUE, 21-VIII-1784, CONCERNING IRON MINES.
6. AHU, MOÇAMBIQUE, CX. 23, LETTER FROM THE GOVERNOR OF MOÇAMBIQUE, ANTÓNIO MANUEL DE MELO E CASTRO TO MARTINHO DE MELO E CASTRO, MOÇAMBIQUE, 1-XII-1786.
7. AHU, MOÇAMBIQUE, CX. 23, LETTER FROM SILVA TO MARTINHO DE MELO E CASTRO, MOÇAMBIQUE, 15-XII-1786.

ARQUIVO HISTÓRICO ULTRAMARINO
(AHU), MOÇAMBIQUE, COD. 1472,
p. 1, AVISO CONCERNING MANUEL
GALVÃO DA SILVA, 26-III-1783,
REGISTERED IN MOÇAMBIQUE, 26-
IV-1784.

Para Secretario desse Governo vai despachado Manoel Galvão da Silva, Naturalista, levando debaixo da sua inspecção a António Gomes, Riscador, e José da Costa, Jardineiro Botanico, os quaes vao vencendo do Serviço de Sua Magestade, a Saber: o primeiro, o Ordenado, que compete ao referido Emprego de Secretario; e o Segundo e terceiro, o ordenado de trezentos mil reis cada hum por anno, com a obrigação de se empregarem debaixo das Ordens de V. S^a, e, examinar, e descrever tudo o que houver nessa Capitania, relativa a Historia Natural, em recolher, preparar, e remeter a esta Corte tudo o que houver de dirigir - se a ella, na Conformidade dos Exemplares das Instrucções, que a Accademia das Sciencias de Lisboa publicou a este respeito, que a monção passada remeti a V. S^a; e das Instrucções particulares, que leva o dito Manoel Galvão da Silva, debaixo de Cuja Direcção devem trabalhar os outros dois que leva na sua Companhia, fazendo a bem do Real Serviço: Aos mesmos Se ordena sigão em tudo as ordens de V. S^a.

e V. S^a. os mandará auxiliar nas jornadas, ou Viagens que fizerem du humas para outras partes com Gente, e o mais que se fazem preciso para o mesmo fim a que vão destinados, e elles devem dar Conta a V. S^a. do que fizerem, remetendo-lhe as Produccoens, que recolhem, para V. S^a. as inviar para esta Corte com as observaçoens que elles tiverem feito: E nesta intelligencia V. S^a. lhes determinara, regulara os Sitíios, Lugares, e Costas honde hao de hir, na forma que lhe parecer . . . e as despesas que se fizerem com Comedorias, transportes, e tudo mais necessario para estas expediçoens, devem ser pagas do Erario Regio dessa Capitania, e passando-lhe as clarezas necessarias para se levarem em Conta no Erario Regio. Deus Guarde a V. S^a. Palácio de Nossa Senhora da Ajuda, em Vinte e Seis de Marco de 1783 == Martinho de Melo e Castro == Senhor Pedro de Saldanha de Albuquerque == Cumpra-se, e registre-se onde competir. São Paulo 26 de Abril de 1784 == Com tres rubricas.

AHU, PETITION OF SILVA TO
BEGIN EXPEDITIONS, APPROVED
23-VI-1784, MOÇAMBIQUE, CX.
21.

Ex^{mo.} e Il^{mo.} Sn^{r.}

Por hora examina o Sup^{e.} e faço
Dellig^{as.} de que he incumbido nas
vezinhanças desta Cap^{al.} e na primeira
monção hirá aos Rios de Sena para
sahe a prompta e ficara o que for
preciso segundo as ordens de S. Mag^{e.}
- - - expd^{as.} pella Sec^{ro.} de Estado
dos Negocios da Marinha e Ultramar.
Mossambique 23 de Junho de 1784.

Fr: Amaro Jose de Santo Thomas
António José de Moraes Durão
Vicente Caetano de Mayo Vasconcelos

Representa a V. Ex^{a.} e S^{as.} Manoel Galvão da Silva, que
tendo-o S. Mag^{e.} despachado para Secretario deste Governo
dispensando-o para isto das Expedições do Pará, para
onde estava bem proximo a partir, não foi com outro
motivo mais, do que considerar S. Mag^{e.} esta Africa tão
intersante nas Suas Produções Naturaes como as demais
Partes do Mundo, de cujos descobrimentos, e observações
podem resultar muitas utilidades na Agricultura, de
Medicina, ao comércio e Artes, augmentando-se ao mesmo
tempo o Real Gabinete de Historia Natural, pela multipli-
cadade dos Seos Individuos, onde devem existir a ser
possivel, todos os seres do Universo: e como o Sup^{e.}
athé que não tem exercitado senão os officios de Secre-
tario, e vai perdendo continuamente alguns dias, em que

mais desembarcado da Secretaria, e se podia aplicar a este trabalho e sacrificar o tempo do seu descanso de serviço de S. Mag^e. , e por se não ter até agora tratando desta materia, nem lhe serem nomeados os Lugares e Costas, onde deve hir viajar, na conformidade do Aviso do vinte e seis de Março proximo passado e das Instrucções particulares, que do Il^{mo}. e Ex^{mo}. S^{or}. Martinho de Mello e Castro recebeo o Sup^e.; em taes circumstancias recorre a V. Ex^a. e Sn^{ra}. para que attendo, que S. Mag^e. esta pagando a hum Dezenhador e a hum Jardineiro Botanico, sem destes se seguir utilidade, por não trabalharem; que as Plantas vivem, e florescem em differentes Estações do anno, que não podem ser examinadas, descriptas, e dezenhadas, se não quando florescem, e fructificao, e por isso todo o tempo que se pode não serve mais do que de diminuir as producções que vira o Sup^e. a Sentir, augmentando-se na demora os annos porque veio despachado, sejam servidos definir aquillo q. V. Ex^{as}. lhes parecer, para constar a S. Mag^e. que não hé por culpa do Sup^e. que se não fazem as Viagens ao menos por toda esta circumvezinha de Moçambique, Sendo por outra parte tão facil o por em prática algumas pequenas digressões visto ter S. mag^e. cafres a quem sustenta e veste não, havendo por consequente

difficuldade em se-lhes dar aqui ou ali a sua comida ficando nesta parte de nada parte dos auxilios, que S. Mag^e. manda continua ao Sup^e. e muito mais havendo Embarcaçoens do Estado.. Representa em fim o Sup^e. que Sendo hum dos principais objectos destas viagens a Expedição de Sena e propria para isto a Monção pequena ao Seguinte Outubro determinem os Ex^{mos}. Snh^{rs}. se nesse tempo ha de partir para as ditas viagens o Sup^e. ou se gastará por aqui hum anno o que tudo se lhe faz preciso saber para bem do Real Serviço.

E.R. M^{ce}.

AHU, MOÇAMBIQUE, CX. 21,
LETTER OF SILVA TO MARTINHO
DE MELO E CASTRO, MOÇAMBIQUE,
18- VIII-1784.

Sendo em Goa depois de trabalhar tanto, e até perder a Saude não encontrava producção alguma de mayor interesse, q̃. pudese desculparme p^a. com V. Ex^a. se me demorarse algum anno, continuey a carreira do meu destino, e vim p^a. Mossambique, onde todo o tempo é pior ser o de Monção tenho gastando nos off^{os}. da Secretr^a. saindo apenas de lá huns oito dias, q̃. gasteey em Si Culle cujo Diario tenho feito, p^a. delle Extrahir em algum tempo a pequena p^{te}. q. ha de Entrar na Istoria da Africa Portugueza.

Já vouts desanimado, e de todo miseria acorrido, e emvergonhado pello poco fructo, q̃. das minhas fadigas tenho monstrado a V. Ex^a.; senão restase ainda a m^a. Esperança todo vasto Paiz dos Rios de Sena, bem vejo não hirey, senão descrever, o q̃. esta de descoberto pois nada tem escapado á prespicacia do seu governad^{or}.; mas isso não obsta, q̃. cūprir as ordenz de V. Ex^a.; e Com tanto mayor gosto, q^{to}. hé o de Emcontrar o Snr. António Manoel d'Mello, q̃. honrando-me agora Com huma Sua Carta, me promete com a Sua Benevollencia toda a protecção p^a. se fizerem as Expedicoens q̃. venho destinado.

Rogo a Deos Conserve a Precioza Vida de V. Ex^a.
para Amparo de todos os Portuguezes, e principalm^{te}.
daquelles q. occupados no Servico de S. Mag^e. por
terras tão distantes não há quem se lembre delles,
senao a Comizeraçã~o de V. Ex^a.

Deos Gde A. Il^{ma}. e Ex^{ma}. Peçoa de V. Ex^a. m^s. a^s. Mos^e.

18 de Agosto de 1784

Il^{mo}. e Ex^{mo}. S^{or}.

De V. Ex^a.

O mais humilde e mais Obed^e. Criado

Manoel Galvã~o da Silva

AHU, MOÇAMBIQUE, CX. 22, REPORT
FROM SILVA TO MARTINHO DE MELO
E CASTRO, MOÇAMBIQUE, c. AUGUST,
1785.

A monção passada escrevi a V. Ex^a. que me ficava dispondo partir para os Rios de Sena, onde considerava tirar muito maior utilidade das viagens philosophicas, do que em andar por aqui perto correndo a Costa e alguma pequena porção do Continente, como já tem alguma utilidade, tinha feito por Sancule; porem novas circunstancias determinarão os Governadores deste Estado, a não consentirem fosse em Novembro para Sena, sendo humas das Invernadas, que acontecem naquelle tempo, como lhes participou o Governador dos mesmos Rios, dizendo perderia eu inutilm^{te}. aquele, e mais Mezes, sem poder adiantar hum passo no Serviço que me destinava. Difficilmente me acomodará a esta razão se-o receio de não estar ainda affeito ao clima, e passar logo a terras tao doentes, me não retivesse antes, do que o temor dos incomodos, que podia experimentar no Inverno. Correo este tempo, e chegou a monção favoravel de Março mas de nenhũa sorte poderia seguir viagem, por estar convalescendo de hum molestia grave, que me tinha attacado a Seis de Janeiro, e me deixava sem forcas athe aquelle tempo; mais dita não foi a legitima cauza, para deixar de pôr em execução o projecto, me tanto trazia diante dos olhos, sem a lembrança de que dali a

dois mezes chegaria talvez General, que da necessidade precisaria de quem impartialmente lhe narrasse todos os acontecimentos favoraveis, e desfavoraveis do Estado.

Tendo partido os Barcos muito daqui para Quilimane (pois forão pelo meiado de Junho) e acabada a minha tarefa na Secretaria, me rezolvia a passar ao Continente, e entrar algumas Legoas por elle, visto estarem os Cafres pacificos, propondo-me logo correr algua parte das Serras da Mutipa, e do Utigulo, principiando por aquellas onde está Situado o Pão, conhecido por este nome dos Marinheiros, pela sua figura, e que dista de Moçambique pouco mais ou menos dez Legoas; e dali passar a Meza que tambem lhe da nome da sua figura (e que está nas Terras da Coroa) distante desta Ilha oito Legoas, onde ouvia dizer, que não só havia cobre, mais outras Minas; este interesse unido aquelle de fazer a minha obrigação me inspirou esta Viagem, ainda que o tempo era o mais improprio para a indagação dos Vegetaveis, como a experiencia do anno passado me tinha ensinado, quando andei por Sancule; porque huns florescem em Fevereiro e Março, e outras principião a dar a Sua flor em Setembro, a acabão por dar o seu fructo de Novembro athé Dezembro.

Depois de andar vinte seis dias nesta diligencia, apanhando Sóes, e andando muitas Legoas a pé, ja por falta de Cafres, já por cauza dos máos caminhos, me

recolhi a Mossambique, com huma terçaas dupla, que me puzerão as portas da morte, como a V. Ex^a. faço certo pelas attestações dos fizico e Cirugião mor, que me assistirão, ficando inda agora convalescendo, e destituido inteiramente de forças; sentindo só o fazer tao pouca fortuna nesta viagem, que me sahio tão cara; e vendo que não tenho que offerecer dos meus trabalhos se não as minas de ferro, que remetto, e as amostras das pedras, de que se compõem a grande Cordilheira de Montanhas de Mutipa, e de Utigulo (que me dizem estenderem-se athe Sena) e me persuando são da natureza das que compõem os chaçados Picos Fragozos, que ficão entre Moçambique, e as Ilhas de Querimba, e as amostras, de que hé feita a Meza da Montanha, que e tanto isolada, e com húa direcção toda diferente das outras, não deixa de ser assaz grande; pois são precisos dois dias, para se correr apressa o taboleiro, que forma em Sima; se bem que não tem se não pedra, e algumas Arvores, que a cobrem.

Remetto a V. Ex^a. tres caixotes, dois com Arvores Marinhas, e húa, com conchas, parte das quaes tenho recolhido pela Costa, e outras achei na Secretaria, que supponho hia ajuntando o General defuncto, p^a. enviar para a Corte: muitos dos conchylios, que por aqui tenho encontrado, e mando ha no Muzeo de Sua Mag^e.; porem

como quem se destina a escrever a historia de hum Paiz ajunta tudo quanto encontra, esta a razão porque julgo não ser fora do proposito o enviallas, Eu não tenho podido remetter passaros, havendo-os aqui ^{tão} raros ou mais, do que na America, e que se verião ornato ao Gabinete de historia natural, pelos não poder alcançar, a pezar de ter prometido a Cafres e Moiros, que moram nas Terras Firmes de lhes pagar bem, se os apanharem, mas como isso não sou ajudado da vox dos Governadores pouco, ou nada farei; pois athé o presente se nao tem interessado por similhante materia, não me perguntando ao menos o que tenho observado nas Viagens, nem o que tenho feito.. Se algum he trazido pelos Cafres para o vender em Mossambique, ligo os moradores, eu já as casas lhe são mais conhecidas do que a minha o comprarão, e de ordinario, hé para apresentar aos Francezes quando aqui chegão. Quanto a peixes, amphibios, e vermes, que os há differentissimos, não me resolvo a mandar, porque nem o Doutor Vandelli, nem Júlio Mattiazi me tem escripto sobre o estado, em que chegarão os peixes, que mandei de Goa, p^a. saber como os hei de mandar.

Como o estado em que me acho não me permite escrever coiza algia como ordem desse mesmo pouco, que observei pelas terras por onde andei, e so conserve apontamentos no meu Diario, não posso dar como devo a

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V. Ex^a. hua mais clara ideia do que vi, e reservo
tudo para quando as minhas forças permitterem escrever
mais circunstanciadam^{te}. a V. Ex^a.

A Il^{ma}. e Ex^{ma}. Pessoa de V. Ex^a. Guarde Deos
por dilatados e felices annos.

Il^{mo}. e Ex^{mo}. S^{or}.

De V. E^{xa}.

M^{to}. humilde e Rever^{to} Criado

Manoel Galvão da Silva

AHU, MOÇAMBIQUE, CX. 22
REPORT FROM SILVA TO MARTINHO
DE MELO E CASTRO, MOÇAMBIQUE,
21-VIII-1784, CONCERNING IRON
MINES.

A mina de frero achada nas Montahas de Mutipa, ests em
vei as das mesmas pedras, de que manda a amostra. Eu
quebrei as porçoens, que mando das mesmas pedras.
Constou-me pelo Regulo daquelle Sitio, que havia muito
ferro por ali. Ainda que eu não encontrei outra Mina
senão a de ferro, podem com tudo aquellas Montanhas de
toda antiguidade, conter algũa outras, que a falta de
ter oriundo ali Portuguez algum, as conserve ainda oc-
cultas. Quanto a outra mina, que digo ficar ao pé do
Monambo Rio, de que ainda se ignora a origem, e que vem
acabar no mar da Bajona, em distancia de quatro Leguas
de Mocambique, eu não a ví, ainda que dormi hũa noite
bem pouco distante della, sem a saber e os pedacinhos
que mando os recibi de hum Cafre; com tudo ella fica
distante de Mossambique seis Leguas, se muita dof-
ferença, e he dos pedaços, que mando, de que os Macúas,
e ainda Cafres nossos, que morão perto della, fazem
ballas, p^a. as Espingardas. Eu não teno encontrado
mina tão boa; e he isto tão verd^e. que os Macuas o modo
de que se servem della he este p^a. fazerem os Seus
Zagaias, e outros instrumentos, tomao hum pedaço de
mina poem ao fogo, e vão batendo de sorte que as par-

ticulares terrestre sahem em faíscas, e fica-lhe o ferro tudo puro, sem outro trabalho. Esperi ter saude p^a. a hir ver.

O Pão pode, como digo, alem de dar ferro dar outras minas; mas a Meza, cujas amostras de pedra tiradas em diversas sitios, não dão indícios alguns de mineraes, não há que esperar coiza alguma, apezar do que me dizião' alguns Moiros velhos, de que a annos andara por alí hum Mineiro que descubria signaes de cobre, e promettia lá pelas suas olhaduras, mais algima coisa. Tudo impostura.

Moss^e. 21 de Agosto de 1785

Manoel Galvão da Silva

AHU, MOÇAMBIQUE, CX. 22, REPORT
FROM THE GOVERNOR OF MOÇAMBIQUE,
ANTÓNIO MANUEL DE MELO E CASTRO
TO MARTINHO DE MELO E CASTRO, MOÇAM-
BIQUE, 1-XII-1786.

Il^{mo.} e Ex^{mo.} S^{or.}

Daqui a poucos dias, neste mesmo Mez, parte o Secretario deste Governo para as Expedições dos Rios de Sena, que até agora não tem podido executar assim por cauza das muitas, e repetidas molestias que tem padecido, como pela occupação do Seu ministerio, visto que nao foi possivel dispensar-se de assistir ao Despacho e Expediente da Secretaria por não haver nella offi-alem disto de prdenar os Papeis, e Livros da mesma Secretaria, que se a achavão na maior Confusão, e Sendo lhe preciso Registrar pela Sua mão muitas ordens de Sua Magestade, q̃. vindas, havia annos, estavam ainda sem serem Registradas.

Como o menos tempo em que se pode talvez Effectuar as Expedições será o de dous, ou tres annos, tenho resolvido encarregallo ao mesmo tempo de Tombar as terras de Sesmaria daquelles Rios para se evitarem as Contendas, e Litigios, que muitas vezes se Suscitao entre os Seus Foreiros pela Falta, que em todo tempo tem havido de hum Tombo proprio daquellas terras, que

nunca forão demarcadas, ainda que Sejam obrigados a-tomballas, e renovar-lhes os marcos de vinte, em vinte sinco annos os que possuem Prazos da Coroa e para se regularem os Foros que justamente serem devidos a Sua Magestade, e se obviar a desordem, em que actualmente se acha tudo, vindo hũas terras a pagar mais, e outras muito menos do que deverião pagar pela sua qualidade.

A Ilmo. e Exmo. Snr.

De V. Ex^a Guarde Deos. Mossambique 1^o. de
Dezembro de 1786.

Il^{mo}. e Ex^{mo}. S^{or}. Martinho de Melo e Castro

António M^l. de Mello e Castro.

AHU, MOÇAMBIQUE, CX. 23, LETTER
FROM SILVA TO MARTINHO DE MELO E
CASTRO, MOÇAMBIQUE, 15-XII-1786

II^{mo.} e Ex^{mo.} S^{or.}

Em Agosto do anno proximo passado tive a honra de escrever, e dar parte a V. Ex^{a.} de não ter feito as viagens dos Ryos de Sena pelos motivos que então referi a V. Ex^{a.}; agora dou parte a V. Ex^{a.} de estar desembarcado e prompto a partir para Quilimane athe o fim deste Mez, para dar principio as Expedicoens Philosophicas, a pezar de as entrar a fazer so, e sem quem por ora me ajude por me faltarem a este tempo o Desenhador, e o Jardineiro Botanico; o primeiro por estar muito doente, que me persuado em o estado em que o vejo, nao poderá embarcar Senão para a monção de Março; e o Segundo por Se achar com praça assentada no Regimento de Infantaria, nao tendo athe aquí prestado para os Servicos a que veio destinado não só por conservar-se na mais reprehensivel ignorancia, sem querer instruir-se p^{a.} vir a ser util as mesmas Viagens; mas porque cahindo de vicio em vicio tinha chegado a ponto de perder a vergonha, e de todo fazer-se insensivel as mais asperas correcoens, que se-lhe davão: E foi esta a cauza que me obrigou a peder ao General que; he Suspendesse o ordenado que percebia por temer de algum dia vira ser res-

ponsavel a V. Ex^a. pela sua criminosa conducta.

Quanto as Viagens, sera V. Ex^a. informado por huma das Cartas do Governo, do tempo que se faz necessario p^a. concluillas, que he o de tres annos, attendida a grande extensao das Terras que tenho p^a. correr, pertencentes a Jurisdição dos Ryos de Sena; e a ser me precizo para completar as viagens, passar dos mesmos Ryos as Terras de Sofalla d Inhembane, hindo ao mesmo tempo que as for indagando, tirando-lhes as Suas cartas geograficas, e mineralogicas; O que assim exeurarei; a durar - me a vida, e não me ordenando V. Ex^a. o Contrario, visto que Largados de hũa vez of Officios de huma Secretaria, que tanto me tem embaraçado, acho-me em estado de me poder applicar todo as mesmas Viagens.

Fico para Servia a V. Ex^a. e rogando á Deos p^a. dar vida e conservação de V. Ex^a. p^a. meo ampara, e protecção.

A Il^{ma}. e Ex^{ma}. Pessoa de V. Ex^a. guarde Deos m^s.
a^s.

Mosse. 15 de Dezembro de 1786.

De V. Ex^a.

Il^{mo}. e Ex^{mo}. Sn^r.

Muito humilde e Rever^{te}. Cr.

Manoel Galvão da Silva

A P P E N D I X F O U R :
D O C U M E N T S P E R T A I N I N G T O
C H A P T E R F O U R :

JOAQUIM JOSÉ DA SILVA, NATURALIST
AND SECRETARY OF GOVERNMENT IN
ANGOLA : 1783 - 1808

I N D E X :

1. AHU, ANGOLA, MAÇO 6 (D.O.) AVISO TO GOVERNOR JOZE GONCALO DA CAMARA, LISBON, 16-IV-1783.
2. AHU, ANGOLA, CX. 38, LETTER FROM JOAQUIM JOSÉ DA SILVA TO MARTINHO DE MELO E CASTRO, LUANDA, 7-X-1783.
3. AHU, ANGOLA, CX. 39, REPORT FROM SILVA TO MARTINHO DE MELO E CASTRO, LUANDA, 17-III-1784.
4. AHU, ANGOLA, MACO 16, INVENTORY OF SHIPMENT OF NATURAL HISTORY SPECIMENS, LUANDA, 20-III-1784.
5. AHU, ANGOLA, CX. 39, LETTER OF ALVARO DE CARVALHO E MATOSO TO MARTINHO DE MELO E CASTRO, LUANDA, 11-IX-1784.
6. AHU, ANGOLA, CX. 39, LETTER OF SILVA TO MATOSO, MASSANGANO, 17-VIII-1784.
7. AHU, ANGOLA, CX. 40, REPORT FROM SILVA TO MARTINHO DE MELO E CASTRO, BENGUELA, 20-V-1787.
8. AHU, ANGOLA, MAÇO 4B CONT., LETTER FROM SILVA TO MARTINHO DE MELO E CASTRO, LUANDA, 9-VII-1787.
9. AHU, ANGOLA, MAÇO 4B, CONT., LETTER FROM SILVA TO MARTINHO DE MELO E CASTRO, LUANDA 14-X-1787.

10. AHU, ANGOLA, CX. 42, LETTER OF GOVERNOR MANOEL DE ALMEIDA E VASCONCELOS TO MARTINHO DE MELO E CASTRO, 2-II-1792 WITH INVENTORY LIST OF SHIPMENT OF NATURAL HISTORY SPECIMENS SIGNED BY JOAQUIM JOSÉ DA SILVA, LUANDA, 2-I-1792.

11. AHU, ANGOLA, CX. 56, pp. 17-18 OF THE DOSSIER OF SERVICES FOR THE ORDER OF CHRIST, NOTARIZED IN LUANDA, 30-VIII-1803.

AHU, ANGOLA, MAÇO 6 (D.O.), AVISO
TO GOVERNOR JOZÉ GONÇALO DA CÂMARA,
LISBON, 16 - IV - 1783.

Para Jozé Gonçalo da Câmara:

Para Secretario do Governo deste Reyno vai despachado Joaquim Jozé da Silva, Naturalista, levando debaixo da sua inspecção o Angelo Donati; tambem Naturalista, e Riscador, e Jozé António, Riscador, os quaes vão vencendo ao Serviço de Sua Mag^e., a Saber: o primeiro o Ordeado que compete ao referido Emprego de Secretario; O Segundo, o Ordenado de quatro centos mil reis cada anno; e o terceiro o de trezentos mil reis tambem por anno, com a obrigação de se empregarem debaixo das Ordens de V. S^a., em examinar, e descrever tudo o que houver de dirigisse a ella, na conformidade dos Exemplares das Instrucçoens que a Accademia das Sciencias de Lisboa publicou a este respeito, o que já remiti a V. S^a., e das Instrucçoens particulares que leva o dito Joaquim José da Silva, debaixo de cuja Inspeccão devem trabalhar os outros dois que leva na sua companhia; fazendo V. S^a. que estes lhe obedeção em tudo o que fizer a bem do Real Serviço: Aos mesmos se ordena sigão em tudo as ordens de V. S^a., e V. S^a. os mandara auxiliar nas jornadas ou viagens que fizerem com Gente, e o mais que se fizer preciso para o

mesmo fim a que vao destinados; e elles devem dam Conta a V. S^a. do que fizerem, remetendo-lhe as producçoens que recolherem, para V. S^a. as enviar para esta Corte com as observaçoens que elles tiverem feito; E nesta intelligencia V. S^a. lhes determinará, e regulara os Sitíos, Lugares, e Costas onde hao de hir, na forma que lhes parecer mais acertado, e as despezas que se fizerem, com comedorias, transportes, e tudo o mais necessario para estas Expediçoens, devem ser pagas pela Junta de Fazenda deste Reyno, e passando-lhe as clarezas necessarias, para se levarem em conta no Erario Regio.

D^s. G^e. a V. S^a. Palacio de N. S^{ra}. da Ajuda em
16 de Abril de 1783 == Martinho de Mello e Castro ==

AHU, ANGOLA, CX., 38, LETTER
FROM JOAQUIM JOSE DA SILVA
TO MARTINHO DE MELO E CASTRO,
LUANDA, 7-X-1783

A obediencia q̃ devo a V. Ex^a. não permite q̃ perca
esta tão opportuna occasião de noticiar a V. Ex^a. q̃
chegamos eu e meus companheiros a ezta Cidade com cento
e quarenta e seis dias de viagem, com oz q̃ tivemos de
demora em Benguella, q̃ forão dezanove. Aqui espero
com impaciencia as ordens do Governo deste Reyno con-
cernentes a execução das digressões de Historia
Natural, q̃ espero correspondão as Sapiientissimas inten-
ções de V. Ex^a. Hum simples golpe de vista sobre esta
curiosissima, quanto injustamente timida costa, basta
p^a. me persuadir da utilidade desta expedição; Nao posso
explicar o sentimento com q̃ deixei em Benguella muitaz
e curiosaz plantaz, q̃ o pouco tempo e fadiga de huma
viagem de quatro mezes me não deixando recolher, con-
tentando-me p^r. entao co algumas, q̃ da qui a paxoz diaz,
juntam^{te}. com hunz peixes do mar alto, q̃ com grande
dificuldade pude recolher devo enviar a V. Ex^a. Pela
simplez vista q̃ offerece este continente posso segurar
a vossa Ex^a. q̃ só ezta expedição basta p^a. enriquecer
o Real Gabinete de productoz uteis, e curiosoz, q̃ em
cumprimento daz Ordens de V. Ex^a. fazem o aggradavel

objecto das minhas taes e quaes observaçoens, DG. prospere a V. Ex^a. com huma saude igual as dez^o. de V. Ex^a. e neceddid^e. q̃ della tenho p^a. a m^a. felici^de.

Il^{mo}. e Ex^{mo}. Sr. Martinho de Mello e Castro.

De V. Ex^a.

Servo o mais humilde e obe.

Joaq^m. José da S^a.

S. Paulo de Loanda

7 de Outubro de 1783.

AHU, ANGOLA, CX. 39, REPORT
FROM SILVA TO MARTINHO DE
MELO E CASTRO, LUANDA, 17-
III-1784.

Com o mais profundo Respeito vou aos pés de V. excellencia, manifestando do modo que me he possivel a pesar que me tem acompanhado em não ter podido ser mais prompto em buscar as Respeitaveis Ordens de V. Excellencia, e responder pello que me foi incumbido do Servico de S. Mafestade; mas tem se me até agora oposto a falta de huma boa collecso de productos Naturaes, que, attendendo a brevidade do tempo, não pude ainda ajuntar. A que remetto agora, e consta da Relacao incluza, hé muito pequeno; mas pode dar indicio da diligencia que tenho empregado desde a mesma viagem do mar até agora, apezar do mil obstaculos, contando entre estes; no mar, a Rusticidade dos Mariantes, em terra, o tempo improprio, em que cheguei, o fallecimento de Angelo Donati, que eu esperava me ajudasse, acontecido mui poucos dias depois do nosso desembarque nesta Cidade; e a falta de quem ou me prepare, ou aprenda comigo a preparar Animaes, trabalho que pode huma particular e não interrompida applicação em hum clima, como este, quente e humido; vendo muitas vezes por esta cauza frustrado o cuidado que tenho posto em preparar alguns Animaes dos muitos e exopticos que se dão neste Pays.

Não obs^tando estas razoens fiz huma viagem a Cabinda por Ordem deste Governo, so fim de examinar humas pedras, de que vierão Amostras, e que tem servido na Construção das muralhas daquella fortaleza, e que offeraciao indicios de huma boa Mina de Ferro: de cujo engano sahy, vendo a Sua Matrix, que so tem deste metal huma superficie, e em tão pouca quantidade, que apenas merece o nome de ferro; em o qual com tudo se vai todos os dias transformando hum extenso banco de barro esbranquecido, que termina toda a praia de Cabina pello rumo quase Norte-Sul; por modo tao maravilhoso, que pude ver transformado dentro em quinze dias em huma pedra rijá, semelhante com o fuzil, e com todos os caracteres de ferro, huma mesma porcao de barro, que antesso poderia ter o uso das Olarias; Consta, porem, que cousa de huma legoa distante do mesmo estabelecimento, para o Nascente Corre Huma cadeia de montanhas ricas não so deste metal mas de outros, cuja situacao offerece huma Curioza excavação: nao consistendo só nisto as vantagens deste porto, em tudo o mais semelhante aos melhores do Brazil, em cuja descripção me a cargo mais na Historia, que por minha obrigação estou escrevendo deste Continente. Mas o ardente Sol, e o pequeno espaço da terra de Cabinda que agora he licito andar sem risco da vida, so me permittirão recolher hum peixe de curioza vista,

e algumas plantas, e insectos: sem referir outros embaracos, como o dar a Costa a Gallera, que nos transportava a mim, e ao dezenhador José António, nas vizinhanças da Bahia de Cabinda, ainda sobre a corrente do Rio Zaire, donde ao depois se salvou com o soccoro da Fragata Graça surta oito legoas dalli; não ficando eu sem alguma perda para mim consideravel dos meus poucos bens; accressendo saber em Cabinda, que a Feitoria não fora ordem alguma do Governo, para se nos darem allí as Comedorias conforme as Determinacoens de S. Magestade, fundados nas quaes so nos preparamos conforme as posses que entao tinhamos, e vivendo dependentes da generosidade alheia por expaço de hum mes que nos demoramos naquelle Abaracamento, dando-se-nos ao depois por cauza deste inconveniente ezquecimento de huma coisa até a minha partida tao lembrada.

Como a Gallera tinha de demorrrar-se, antes de ir para Cabinda, a bouca do Rio Dande, sete legoas, ao notdeste desta Cidade, a carregar de mantimentos para o sobre-dito Abaracamento; pedi licença ao Govêrno, para examinar huma Mina de Brêu que dizião estava nas vizinhanças daquelle Rio, e que esta de facto hum pouco ao Sueste do mesmo, coiza de três legoas distantes do mar, cuja embocacura do Rio Lifune ao Norte do mesmo Dande. Das amostras que agora remetto se pode ver claramente, que a sobredita Mina o he de verdadeiro Petroleo,

que alli corre em lagrimas pellas fendas e poros da Ganza, que forma nos mesmo sitio altos, e ezcalvados montes, que eu cuido se devem contar entre os que com mais alguma applicação, e sem gosto sensivel pode fazer muita conta a sua facil colheita, e transporte; dando alias indicios de carvão de pedra dos quaes me não pude segurar, estando a Gallera quaze carregada, e prestes a partir. Actualmente se enchem deste Petroleo alguns pouquissimos barris, que o Dembo Indoy que administra aquellas terras faz, tanto monta á força recolher para o uso do Real . . . desta cidade.

Remetto tambem algumas Plantas, e entre estas, duas amostras do Sene chamado Italico, de igual uzo, que o de Alexandria, e outras coizas que alli pude haver de segunda mão, na demora, que alli teve a embarcação a vinda para Angola.

Fico esperando o tempo proprio para as jornadas, nas quaes oreio ajuntar materia para remessas consideraveis accompanhadas de resultados de uteis ecperiencias que tenho de emprender.

Espero Excellentissimo Senhor, que V. Excellencia confia no zelo com que pretendo fazer uteis, e bom impregados as despezas, que com nosco faz S. Magestade, concendo-me V. Ex^a a Sua Alta Protecção; para conseguir

a qual rogo incessantemente a Deos guarde a V. Excellencia,
como necessitamos.

S. Paulo da Assumpção, 17 de Marco de 1784.

Il^{mo}. e Ex^{mo}. Senhor Martinho
de Mello e Castro, Ministro e
Secretario dos Negocios da
Repartição do Ultra-Mar.

De V. Excellencia
Muito humilde, e muito
obediente Servo.

Joaquim José da Silva

AHU, ANGOLA, MAÇO 16, INVENTORY
OF SHIPMENT OF NATURAL HISTORY
SPECIMENS, LUANDA, 20-III-1784

Relação das Peças que vão Na caixa pertencente a Historia
Natural Remetida pello Naturalista de Angola:

Hum Herbario com trinta e sete esqueletos

Huma collecção de onze Estampas

Hum frasquinho de Petroleo do Dande

Hum pedaço de Talco Rubrica do Dande

Tres pedacos de Pederneira (Silex Marmorensis) de Cabinda

Dois ditos do Dando

Hum pedaço da pedra de que se faz no Dande a Cal para
as Obras

Reaes

Dois dictos de Marmore Rude de Angola

Huma Caixinha de Pau Com Insectos

Dois Pedacos de Enxofre de Benguella

Hum pedaço de Mina de Cobre de Benguella (do Sertão)

Huma ponta de Cabra Monteza de Benguella

Duas dictas de outro animal ainda não observado por mim

Oito dentes de Cavallo Marinho do Quanza

Sete Costellas do Chamado Peixe Mulher que he o

Trihechus Manatus de Linero

Duas pontas de Espadarte

Quatro Crystais de Sal de Quisana

Relação das Peças Avulsas em que não vão na Caixa
sobredita:

Hum Cylindro de Lata com peixes do mar alto, e
desta Costa

Dois Couros de Boi Silvestre.

Fim.

S. Paulo da Assumpção 20 de Marco de 1784.

Joaquim José da Silva

AHU, ANGOLA, CX.39, LETTER OF
ALVARO DE CARVALHO E MATOSO TO
MARTINHO DE MELO E CASTRO, LUANDA
11-IX-1784.

Animado sempre da Bondade e da honra com que benignamente attendo aos que se empregão no serviço de V. Ex^a. tem a confiança segunda vez de pôr na Respeitavel Presença de V. Ex^a. estes pequenos productos, que pude colher a mão em hum Paez tao esteril delles, por me não ter sido possivel sahir da Cidade; ainda que na mesma juntei os que ja remiti a V. Ex^a. no Navio Jesus Maria José^{plo}. Sobrecarga José Fernandes, q̃ desta Cidade partio no mes de Marco do Corente. Ao Cap^m. Ten^{te}. João Ferreira de Souza entreguei dous caixotes, e hũa pelle de Leao p^a. Levar e entregar a V. Ex^a.

Não me tem sido possivel té aquí chegar os productos medicinaes, q̃ incumbi aos meus amigos do Sertão, pois q̃ a falta de dependencia, e imposição, he tal vez a cauza de q̃ seMão Lembra de mim.

Não posso deixar de fazer certo a V. Ex^a. q̃ pretendendo o Secretario desta Joaq^m. Jozé da Sylva partir p^a. o Ryo Quanza a explorar os productos da Istoria Natural, offrecime em cumprimento das ordens de V. Ex^a. e do Avizo q̃ foi expendido em parte p^a. este effeito; mas não pide obter Licença dos Governadores Interinos, apezar das instancias q̃ p^a. isto fez o ditto Secretario,

por eu ser o unico Ajudante d'Ordens q̃ então havia, e ser impraticavel ficar o Governo sem algum.

Estando o mesmo Secretario na Villa de Massangano, me fez esta carta, q̃ remeto a V. Ex^a. na certeza, q̃ eu sempre desejo cumprir as ordens dos meus Superiores, e muito mais as de V. Ex^a. em quen fundamento todas as minhas esperanças.

Eu, e todos meus compatriotas, e habitantes desta Colonia, com as mais vivas vozes agradecemos a V. Ex^a. a grande mercê que recebemos no Governador q̃ nos envia: este Ex^{mo}. Barao de Mossamedes nos tem cauzado hum contentamento geral, e nello esperamos Certament^e. estar seguros na Protecção de V. Ex^a., e fazer-nos felices na Alta Prezenca de S. Mag^e. q̃ D^s G^{de}.

A V. Ex^a. dezejo disfrute vigorosa saude, porque della depende, não só o Povo Português, mas com especificidade os deste Reino.

D^s. G^{de}. a V. Ex^a., e Reserve a Precioza Vida por dilitados annos.

Il^{mo}. e Ex^{mo}. Snr.

Martinho de Mello e Castro^a.
De V. Ex^a.

O mais obediente Crdo. e mto.
fiel devoto

S. Paulo de Assumpm.

11 de Stbro. de 1784

Alvaro de Carvalho e Matozo

AHU, ANGOLA, CX. 39, LETTER OF
SILVA TO MATOSO, MASSANGANO, 17-
VIII-1784.

Am^o. da coraçãõ: já p^r. mais de hua vez me tem sido sensi-
vel a falta da sua doce companhia, ainda estando em Saude
maz se a sua pessoa acompanhandome avia de passar em meu
Lugar os incomodos que eu encarei suportey, e tenho de
passar, melhor foy o que deste Respeito rezolverãõ os
q mandãõ; p^r. q com a Saude de V. M^{ce}. desejo as Suas
Comodidades e Socego. Isto nao he dizer, q não tenha
tambem p^r. cá experimentado alguns effeytos do bom animo,
Sincera Comp^a. o q estou experimentando ainda nesta
cama prostrado p^r. teimosas Cezoenz, e Sentencia da
Medicina de Ferro e fogo. He verdade, q a Recalumbo,
Mux^{ma}. , Massang^{no}. me valeo o passappte do meu bom tempera-
mento, e preservativos; mas desde q puz o pe nesta ul-
tima, não sey, q couza he Saude. p^r. Cuja Cauza na es-
crevo aos Snh^{rs}. do Governo, q não devera Como V. M^{ce}. .
desculparhao in caso enfermo.

Posso a V. M^{ce}. encarecidam^{te}. queira como Am^o.
desculparme per^{te}. O S^r. Alvaro de Carv^o e Menenzes de
me não haver despedidi dele, e q me faça da m^a. p^{te}. hua
vizita muito grande pois o venero e amo.

E^{pa}. a a Sorte Livrou a V. M^{ce}. da m^a. ma companhia,
não o quiz; porem, Livrar das m^{as}. empertinencias; entre
as q. pode V. M^{ce}. contar a q reparo q^{ra}. tomar de me

dar esse Relógio aconsertar, q̃ tem o espigão da pendula quebrado, e os dentes da Roda de prata dezamparados.

E, quanto ao mais remeto \$4000 R. para pagamento de Relógio espero Ficando Certo, q̃ o seu respeito, e conhecida Authorid^e. não serão precizos empregarse p^a. a mayor brevid^e. poçivel, q̃ dezejo neste conserto. No cazo porem de emportar em mais, V. M^{ce}. me avizara p^a. lhe remeter o resto pr^{ta} m^{te}.

Em fim neu am^o. do Coração a falta da sua Comp^a. hé nuito gr^e. mas Deos Remediara ao menos emp^{te}. de gostos: e Eu Sou

De V. M^{ce}.

Servo M^{to}. attendo e amigo verdadr^o.

Joaq^m. Jozé da S^a.

Massang^{no}. 17 de Agosto de 1784.

AHU, ANGOLA, CX. 40, REPORT
FROM SILVA TO MARTINHO DE
MELO E CASTRO, BENGUELA, 20-
V-1787

II^{mo.} e Ex^{mo.} Snr.

Havendo o Ex^{mo.} Barão de Mossamedes apromptado huma Expedição de Mar p^{a.} Angra do Negro, nesta Costa, e outra de Terra, destinado ao descobrimento da foz do Rio Cunene, determinou me, acompanhasse eu a primeira para que nos diversos desembarques que se houvessem de fazer na mesma Costa, fizesse eu as observacoens e colheitas de Historia Natural, de que estou encarregado. Havendo ambas estas expediçoens aportado em Benguella, informado, assim da propria experiencia e analogia do reste desta Costa, como de veridicas informacoens da sua esterilidade em tudo quanto faz impracticavel conseguir as deligencias de Historia Natural em desembarques precipitados, como devião ser, e forao os que ali se fizerão: determinei seguir antes o Exercito pellos Sertoens, com cujo favor, aproveitando me antes das demorras, q̃ este teria em diversos Sítios, ficasse eu de huma vez conhecendo a pleno as Produccoens deste Sertão, e tudo, quanto diz respeito à expedição de Historia Natural; onde com mais commodidade fizesse as colheitas, que devam ornar o Real

Gabinete de Sua Magestade, Animado deste pensamento parti de Bengueuella para o Sul, em companhia do Exercito, passando pellas Provincias de Quirengue, e Bembes; onde por Carta do Mesmo Ex^{mo}. Barão me foi encarregada a Direcção do Diario de Marcha e successos daquelle Corpo, que continuei a fazer ate Cabo Negro, e daqui, pello Coval e Gambue, athé Caconda, donde partí para esta Cidade de Bengueuella, e nella me apromptou para partir para Angolla, à cuidar remessa das producçoens e raridades, que pude colher nas sobreditas longas digressões.

Nellas pude obrer a favor dos meus braços hum volumoso Herbario, enriquecido de muitas Plantas Novas, de que tenho feito o Catalogo, seguindo o Systema da Natureza, e algumas outras raridades, ficando certo, q se a estas Plantas pidesse haver ajuntado as suas estampas e desenhos, não duvido, q só o meo Herbario bastante a fazer recomendavel hum Gabinete. A falta de Dezenhadores, e de Preparadores fazem as minhas remessas sejaõ nas diminuitas, contendo o Interior desta Costa por onde passei sufficiente materia para formar hum Gabinete de Passaros, e outros animaes rarissimos: nao succede com tudo o mesmo a respeito de Mineraes, pois a excepção das Minas de Cobre de Selle, e dos Muganguellas, de q não pude ainda aliançar amostras, so achei muitas de Sal pellas vizinhanças, de Cabo Negro,

de q̃ hão de ir amostras e as de Petroleo, de que envie já alguma porção colhido no Sertão do Dande, quando lá fui. Em quanto as amostras, que devião ir de pedras, seria necessario huma particular expedição so dedicada a esta fim, de Tropa e Carregadores, pella difficuldade da falta deste so empregados nos transportes de guerra, coiza q̃ já mais pude conseguir, e que com tudo espero conseguir. Fico advertido de cuidar agora em Angolla, em apromptar com a maior brevidade possivel, as pelles do Cavallo Marinho e Peixe-Mulher, remetendo as em aguardente, visto haverme mostrado a experiencia, q̃ de outra modo não conseguirei a conservação deste animaes tão sugeitos á corrupção apezar de todas a precauçoens.

Donde Ex^{mo}. Senhor, bem ve V^a. Ex^a. , que a falta de remessas minhas não hé devida á negligencia, antes tem sido inevitavel, se se attender a q̃ trabalho só; ao longe das marchas referidas, em q̃ gastei dous annos, e ao haverem sido as minhas expediçoens sempre olhadas e tratadas como secundarias. Todo o mundo sabe, que eu não tenho parado, e q̃ não tem sido nunca outro o objecto das minhas cogitaçoens, e conveniencias, conhecendo, que assim hé o meu dever. V^a. Ex^a. por quem he se compadeça de mim, desculpando me de não fazer mais do que podem as minhas forças e talento; pos não me tenho poupado, nem a marchas pessiveis, nem a combates

con gentio, nem a fomes e sedes mortaes, nem a outras calamidades; de baixo das quaes fiz a derrota de Cabo Negro, marquei a no Mapa todas as terras que passei, e sendo o Principal Rio Itabo, q̃ desemboca em Cabo Negro, eu só reconheci, e donde so achei prostrado o Real Padrao, e o levantei com os meos bracos, chamando a todo o exercito para que a visse: coizas que se encerrao algum merecimento, nao tenho quem dellas me passe attestações, nem eu as procuro mas q̃ do ceo, que me deo este ardente dezejo de servir o meo Soberano: ficando na deligencia de aprontar o Mapa, por cuja exactidão não divido a tudo o tempo responder.

V^a. Ex^a. queiria Pôr em mimos seus piedosos olhos; pois he V^a. Ex^a. o unico amparo que tem a minha vida, e os meos Estudos. D^s. V^a. e S^r. G^e. a V^a. Ex^a.

Benguella em 20 de Mao de 1787

Il^{mo}. e Ex^{mo}. Sn^r. Martinho ee Mello e Castro
Secretario de Estado dos Negocios do Ultramar e da
Marinha.

De V^a. Ex^a.

Subdito muito humilde

Joaquim José da S^a.

AHU, ANGOLA, MAÇO 4B CONT.
LETTER FROM SILVA TO
MARTINHO DE MELO E CASTRO,
LUANDAM 9-VII-1787.

Il^{mo.} e Ex^{mo.} Senhor

Pondo na Respeitavel Presenca de V^{a.} Excellencia dous Caxoens, como constão do Rol nessa Cassa incluzo, que creio irão pello Navio Amavel Donzella, Capitão Domingos X^{er.} Ribeiro. Estes encerrão a colheita de huma continua diligencia de dous annos pellos Sertoens de Benguella, por onde quis antes demorarme, q̃ ver me sugeito a mais digressoens infructouzas: sobre o que devo humildemente pedir a V^{a.} Excellencia as Suas Ordens, para que eu daqui mesmo de Luanda possa escrever francamente para os Sertoens e Presídios, exigindo aos que os administram, tudo q̃ eu souber tem lugar no Real Muzeo de S^{a.} Mag^{e.}

Queira V^{a.} Ex^{a.} por Sua Benevolencia attender que esta Remessa, senão Corresponde proporcionalmente aos Meyos, e possibilidade, que tenho tido, ajudado de muita deligencia, e por entre muitas dificuldades, que nunca julguei se occorressem, sendo a principal a falta de Companheiros, E sendo verdade tudo quanto exponho, q̃ que não tem sido outraos os meos cuidados, e interesses mais, que applicacao ao que me foi encarregado neste Continente, estou certo que mereco a Attenção

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que V. Ex^a. concede aos que asim fazem.. E asim pesso
a V. Ex^a., queira augmentar a minha fortuna empregando-
me cada vez mais no Real Serviço de S^a. Mag^e. aqui
que somente aspiro com o mais sincero zello, ou neste
mesmo Continente, ou em outra parte, como a V^a. Ex^a.
agradar, pois tenho por muita felicidade alcançar a
graça de V^a. Ex^a. unico amparo dos homens sinceros.
D^s. G^{de}. N. S^r. G^{de}. a V^a. Ex^a. por dilitados annos.

Luanda em 9 de Julho de 1787.

Il^{mo}. e Ex^{mo}. S^r. Martinho de Mello e Castro
Ministro e Secretario de Estado do Ultramar, e da
Marinha.

De V^a. Ex^a.

Subdito m^{to}. humilde

Joaq^m. Jozé da S^a.

AHU, ANGOLA, MAÇO 4B., CONT.
 LETTER FROM SILVA TO MARTINHO
 DE MELO E CASTRO, LUANDA 14-
 X-1787

14 de Outubro de 1787

Il^{mo.} e Ex^{mo.} Senhor

Supposto que eu me não considera com mercimento algum para Mercês de S. Mag^{e.}; pois lhe não tenho feito os Serviços que eu desejava; Consta com tudo, q̃ eu tenho da minha parte feito toda a deligencia possivel para os fazer, como V. Ex^{a.} exige de todo o mundo: E por este lado me considero digno da Protecção de V^{a.}

Excellencia, e animado a pedir humildemente a V. Ex^{a.} se sirva de despacharmen com a Secretaria do Rio de Janeiro, onde tenho meos Pays alcançados em annos, e huma Irman solteira que na falta daquelles ficará desamparada. O que imploro a V^{a.} Ex^{a.} na consideração de q̃ não contravenho ao gosto e vontade de V^{a.} Ex^{a.} em que mais tudo dezejo convir. Beijo a Mão de V^{a.} Ex^{a.} e D^{s.} G^{de.} e N. S^{ra} G^{de.} a V^{a.} Excellencia para meo amparo.

Luanda em 14 de Outubro de 1787.

Il^{mo.} e Ex^{mo.} Snhr. Martinho de Melo
 e Castro, Ministro e Secretario de
 Estado do Ultramar e da Marinha.

De. V. Excellencia
 Subdito humilde e obediente
 Joaq^{m.} Jozé da S^{a.}

AHU, ANGOLA, CX. 42 LETTER OF
GOVERNOR MANOEL DE ALMEIDA E
VASCONCELOS TO MARTINHO DE
MELO. E CASTRO, 2-II-1792 WITH
INVENTORY LIST OF SHIPMENT OF
NATURAL HISTORY SPECIMENS SIGNED
BY JOAQUIM JOSÉ DA SILVA, LUANDA
2-I-1792

Il^{mo}. e Ex^{mo}. Senhor

Por Pernambuco no dia q5 do Mez proximo passado responde aos Officios, que de V. Ex^a. recebi na Eragatta da Sua Magestade, o Golfinho, que no dia 18 tinha entrado neste Porto; e pela mesma o respeito em segundas vias, partindo hoje para o Rio de Janeiro em conformidade das Ordens, que o seu Commandante me diz ter recebido.

Foi presentamente soccorrida de tudo, o que me foi requerido, e a seu bordo embarcar hum grande passaro, a que no Paiz de Ambaca, onde foi apanhado, chaman Martinette, e hum cazal de outras Aves, a que aquí dão o nome de Garças e hum Gatto do Algalloa, que pela sua grande mancidão, e não ter nanhum cheiro he de bastante raridade; ao mesmo tempo, que aquellas não iguallam a boa quallidade das duas, que mandei pela Nau Bellem, que a terem chagado creio deverem estimação, o que dezejo saber, e se a Sua Magestade e Altezas fez gosto esta minha dilligencia, e cada remessa de outras, que formam na Cirveta, Nossa Senhora da Conceição, e S. Bento com huma porção de Productos Naturaes, de que agora tambem vão dois Caixotinhos.

Aproveitando a occasiã de não dispende frete, vão na mesma Fragatta onze caixoes de cãnos de espingardas e pistollas, que aqui se fazem inuteis, por não terem coronhas, nem seixas, com que se possam por em exercicio, e a qualidade, e numero dos Artífices, que há, não permittir, reduzillas a Serviço, não perdendo de vista todas as Respeitaveis Ordens, e Sabias Instrucçoens de V. Ex^a. a que obedeço com a mais pronta, e reziagnada vontade.

D^s. G^{de}. a V. Ex^a. m^s. a^s. S. Paulo d'Assumpção
2 de Fevereiro de 1792.

Il^{mo}. e Ex^{mo}. Senhor Martinho de Mello e Castro.

Manoel de Almeyda e Vasconcellos

Relacao das Produccoens Naturaes que pela Secretaria
d'Estado dos Negocios do Ultra-Mar vão remettidas ao
Real Muzeo, Pelo Il^{mo.} e Ex^{mo.} S^{or.} Manuel de Almeida
e Vaconcellos, G^{or.} e Capitão General deste Reyno, na
Real Fragatta Golfinho em 2 de Fevereiro de 1792.

No. 1 Hum Caixão com o Seguinte:

1 Lingua de S. Paulo (Dens Squali)

1 Peça de Cabo fabricado pelos Negros de Benguela

Mytilus Fluviatilis Specim 2

Tellina Corticata, Fluvialitis Specim 3

Tellina Rosea **Specim 3**

Mya **Specim 5**

Tellina Radiata Specim 6

Cypraea Porcus **Specim 2**

Murex **Specim 11**

Venus Vorrucosa **Specim 1**

Venus Dysera **Specim 2**

Venus Dente posteu ovali oblongo

Venus Gallina **Specim 2**

Pinna Rudes **Specim 2**

Pinna Rudes Varietas **Specim 4**

Helix Specim 59

Nerits Undulata (mihi) Specim 2

Donax Pubescens **Specim 2**

Helix Gualterana **Specimin 4**

Echinus

Trochus

Specim 6

Helix ex Turritis

Specim 13

Patella

Specim 2

Venus

Specim 3

Passeros non visi plumae

Pici Species .

No. 2: Hum Caixão com o Seguinte:

Dois Buzios

Desaseis Petrificados

Plantas Marinhas

S. Paulo da Assumpção^N 2 de Janeiro de 1792

Joaquim Jozé da S^a.

Pertencem aquí mais: Hum Cazal de Garças, Hum
Martinette

Hum Gatto de Matto

AHU, ANGOLA, CX.56, pp. 17-18
OF THE DOSSIER OF SERVICES FOR
THE ORDER OF CHRIST, NOTARIZED
IN LUANDA, 30-VIII-1803

Attestamos nós abaixo assignados, que Doutor Joaquim José da Silva Actual Secretario de Governo deste Estado, chegando a este Reino em Outubro de 1783, tempo em que ao Governo do Ex^{mo}. Governador, e Capitão General Jozé Gonçalo da Câmara sucedera o Interino Governo, passados diaz foi mandado indafar o Terreno do porto de Cabinda, já então quase bloqueado pelos Negros do paiz; a cuja deligencia parto ma Galera do Ronção, incumbido tambem pelo mesmo Governo de fazer embarcar no porto do Dande a Cal que estava feita, e alguma que sendo elle presente se fabricou para o dito novo Establecimento, como tambem hum mastro que alli se fêz; Cortar para a Bandeira do mesmo Reducto. Entretanto vio as minas do pez, oũ petroleo que está nas Terraz do Dembo Nduy, e tendo conseguido com o socorro do Dezenhador Jozé Antônio huma planta na dira Barra, seguiu para Cabinda, em cuja viagem pegou a Galera, á foz do Rio Zaire, e a gr^{de}. distancia da Terra, pelo que com todos da mesma comitiva se meterão na Lancha e Batel da Galera, e forão tomados a Bordo da Fragata Graça commandada por Antônio Januario do Valle que ao dia seguinte o fez passar ao

novo Redutto que então governava o Coronel Pedro
 Alz^e. de Andrade hum do Governo Interino mendionado.
 Aqui comcorrendo com a demaiz guarnição, de que passado
 hum mez, separou voltando para Luanda, daqui passados
 poucos dias, foi para Massangano a Cblheita de Produc-
 coens Naturaez, em que fêz os tenuez progressos a que
 derão lugar continuadaz febrez que tanto a elle como ao
 dito Dezenhador, e de que este faleceo, e de que elle
 apenas teve tempo de restablecerse, passados aijunz
 mezes, nesta Capital, para onde o transportarão por
 Ordem do Governador, e Capitão General Barao de Mossamedes
 que já havia tomado as redeaz deste Governo Este
 mesmo o expedio para Benguella a tempo que ja ali es-
 tava o Exercito, que commandado pelo Capitão de Granade-
 iros António Jozé da Costa, com o qual subio para
 aquellas Sertoens; onde por Ordem do mesmo Barão foi in-
 carregado da Dirrecção das marchas do mesmo Exercito, que entre
 outro, tinha por objecto o descobrimento das margenz,
 ou ao menos da Foz do Rio Cunene, de cuja diligencia
 Resultou hum pequeno Mapa, por elle feito que ao de-
 poiz servio de suprir o que daquellas regionz estava
 por notar no Mapa, que ao Ministerio se apresentou feito
 pelo Ingenheiro Luiz Candido Cordeiro Pinheiro Furtado,
 em que mostrou muitos Rios, athe ali desconhecidos e no
 dito Mapa notados; e proseguindo chegou quazi a latitude
 de dezanove graos ao Sul destetuido de quaze todos os
 instrumentos necessarios, athe chegar a Cabo Negro com

hum pequeno destacamento athe ao Rio Coval para onde elle fez conduzir de donde passou a Caconda nova, onde descacou tendo soffrido trabalhozas marchas, fomes, sedes, e choquez, e combates de inimigo, dujas terras atravessarão particularmente em Cabo Negro, onde elle foi, o que apartando-se só o armado, legoa e meia do abaracamento the huma das pontaz do dito Cabo, achou Real padrão que com as suaz maos, e socorro que dali lhe mandou o Commandante que tambem, foi prezente, o ajudou a por no seu lugar, colocando no alto os quatro pedaços da Cruz q̃ fazia parte delle, como ainda hoje se mostra aos Navegantes com irrefragavel prova da posse e direito com que S.A.R. Domina esta Guiné Austral, que aos Dominios de Portugal pertence desde o feliz Reinado do Augusto Senhor Dom Pedro o 2^o. Depoiz de recolhido foi empregado na Secretaria athé o tempo do Ex^{mo}. Governador Manuel de Almeida e Vasconcellos, deste tempo por diante servio quatro mezes, na Secretaria já provido em Capitam mor de Massangano, e passou por Appostilla para Ambaca, cujo governo teve quatro annos e hum mes, tendo esta digressão por objecto principal por em practica o novo Systema da Cobrança dos Dizimos Reaz sem vexação aos povos, e com o maior Lucro possivel; daqui retirado por occasião de molestias, de ordem do novo Governo de DL Miguel António de Mello Ex^{mo}. Capitão General que

foi deste Reino em 1798, foi elleito para succeder ao Thezoureiro Geral dos Auzentes o Capitão Miguel Pirez de Varvalho Emmauz, Jurante serventia recebeu novo Provimento de Secretario deste Estado por Alvará de S.A.R. em que preziste com satisfação de seus devers, Carregando de familia constante de mulher e Cinco filhos; fazendo-se por todos os referidos Serviços dignos de toda a Graça com que S.A.R. for servido honralo; E por nos Constar na Verdade todo o referido, e nos ser pedida a prezente a mandamos passar tão somente por nós assignada Nesta Cidade de São Paulo da Assumpção de Luanda aos 3 de Janeiro de 1803.

António Gómes Cortesão
Major

José Ant^o. da Costa Callau
e Campo.

Felizardo Gómes Campos
Crg^m. Mor de Inf^{ta}.

João Veiera Carneiro,
Capitai de Infantr^a.

Reconheco as letras das Assignaturas desta Attestação antecedente serem proprias de punhos de António Gómes Cortesão, Sargento mor de Regimento de Infantaria de Linha, do Capitão de Regimento de Infantaria de Linha Jozé António da Costa Gallau o Capitão do Regimento de Infantaria de Linha João Vierra Carneiro, e Felizardo Gómes Campos Cirugião mor do Regimento de Infantaria de Linha por ter de suas Letras e as Signaturas pleno

-570-

Conhecimento ao que me reporto e em fe do que paso o
prezente. São Paulo de Assumpção 30 de Agosto de
1803.

Em Test^o. de Verd^e.

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Jozé dos Reis Perreira

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JARDIN BOTANICO DE MADRID,
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VANDELLI TO CASIMIRO ORTEGA,
LISBON, 26 - XII - 1792.

Ex^{mo}. Sn^r. D. Casimiro Ortega:

No anno passado receby a sua escolhida colleção de sementes, a qual eu não correspondí, porq̃. quando me forão entregues, não era tempo p^a. eu remeterlhe algumas deste R. Jardim Botanico: Agora q^e. hé o tempo proprio da remessa dellas, mando a S. Algumas, q^e. me parecerão maes raras. Eu desejaria ter alem das Plantas que descobrirão os seus Botanicos na América, huma colleção de plantas officinaes, e de plantas p^a. pastos artificiaes, e algumas sementes do arroz q̃. nasce nos lugares secos, porq̃. delle perdi a semete.

Da Flora do Rio de Janeiro de Fr. José Vellozo brevem^{te}. espero q̃. sahira o p^{ro}. tomo das figuras; toda a obra contera mil settecentos e maes taboas.

O D^r. Brotero de Avellar trabalha na Flora de Portugal.

Eu porem estou ociozo nesta parte por ser bastantem^{te}. occupado na R. Junta do Comércio; não obstante isto não deixo a minha primeira paixao, q̃ me obrigou vir p^a. este Reino. E Entanto em attenção das suas

ordens sou seu m^{to}. Ob^e. Crdo.

Deos G^{de}.

Lisboa 26 de Dez. 1792.

Domingos Vandelli

(Jardin Botanico de Madrid, Biblioteca, Armario 1⁰., 5^a.
Division, Carpeta 79, no. 871, f01. 310).

MUSEU BOCAGE (MB) VANDELLI
FILE, NO. 72, LETTER FROM
HENRIETTE NORTH, LONDON,
C. 1795-1796.

1e 14 d'Aout

Monsieur:

Aimant beaucoup la Botanique, et ayant entendu parler de la noblesse de vos sentimens, et de votre reputatuin comme Botaniste, je prends la liberté de m'adresser à vous par le moyen de mon Neveu Mons^{or}. North pour obtenir quelques Plantes qui se trouvent en Portugal, et que je serais charmée de pouvoir ajontar a ma collection. C'est avec beaucoup de satisfaction que j'ai aperis l'honneteté avec la quelle vous avez ecote ma demande, et etant presentement convaincue que je ne metais point trompée dans l'opinion avantageuse que je metais formee de votre caractere, je vous ecris dans la persuasion que vous m'approuverez la bonne intelligence entre les amateurs de la Botanique de differens Pays, me paroisaent le plus sur moyen de faire fleurir sa cause, J'ai appris qu'il vous manquait la Camilla Japonica, L'Illicium Annisetum, et peut être quelques autres plantes qui pourraient vous etre utiles; si vous voulez me les nommer, et m'indiquer le moyen de

vous les faire parvenir a Lisbonne, je serais charmée, de vous envoyer toutes celles que je pourrais me procurer. Je me flatte aussi que vous pourriez me servir sur quelques articles. En vous remerciant pour les Plantes que vous avez eu la bonté de m'envoyer pour Monsieur Nortg, je suis fâchée d'ajouter, que n'ayant pas été empaquetées les pots ont été tous cassés, et les Plantes détruites. Je n'en suis pas moins sensibles a vos intentions obligeantes, et dans l'esperance d'être plus heureuse une autre fois, je vous envoie la liste des plantes que je souhaite beaucoup d'avoir. Je vous serai très obligée de me les envoyer surtout les Plantes Bulbeuse que l'on peut faire venir sans les Pots; et je serai bien aise de vous envoyer ce que vous voudrez ajouter à votre collection. Si vous acceptez ma proposition, je vous prie de m'écrire in mot pour m'indiquer le Vaisseau, et le tems où elles doivent arriver, et si vous voulez avoir la bonté d'employer une personne entendue pour les empaqueter, et les porter au Vaisseau, je serais charmée de les récompenser de leur peine, et je vous supplie de m'apprendre les dépenses que vous ferez pour la Collection, et les moyens de vous rembourser. Permettez moi, monsieur de vous réitérer mes excuses de la grande liberté que j'ai prise,

et a laquelle votre reputation suele a pu me resoudre.
Les Plantes et les Graines venant du Brazil, me feront
grand plaisir. J'apprendes que l'on envoie continuelle-
ment des Plantes de ce Pays la pour les Jardins de la
Reine a Lisbonne, de tres beaux Lys Pancratioms, &
Jaune et d'austres coulours rares pour ce genre. Les
Bulbes sont fort á desirer á cause de leur grande beaute,
et de ce qu'on les transportent aisement. J'ai l'hon-
neur d'etre,
Monsieur,

Votre très humble e très obligée servente

Henriette North

Ayez la bonté de les adresser comme ci dessous = To
the Lord Bishop of Winchester, London, écrivant en même
tems pour l'avertir de leur départ de Lisbonne=par quel
Vaisseau elles sont envoyées, à quel place & a quel tems
elles peurent arriver en Angleterre.

MB, VANDELLI FILE, LETTER FROM
LUIS DE ALBUQUERQUE DE MELO
PEREIRA E CÂNCERES TO VANDELLI,
SÃO SEBASTIÃO DA PEDREIRA, 26-
VII-1796.

Sem embar^{go}. de menos terem chegado as Pedras Elasticas,
ou p^a. melhor dizer flexiceis deferida Meia Ponte na
Capt^a. de Goyas, em que V.S^a. faley. Comtudo por
satisfazer no possivel modo ao cump^o. de S.A.R. na
exped^{am}. dessa remessa de productos naturais do Brasil
de maior rarid^e., e as recomend^{as}, tambem se V. S^a. a
quem sempre desejo dar gosto; lhe remeto pelo fiel do
Real Moseu, Costodio, hum unico bacado, menos urgente^{te}.
precizo q̃. apenas conservava (alem de outro maior q̃ se
acha no meu Gabinete) bem que se achasse destinado para
humã encomenda da Inglaterra, que se me tem feito; e
dezejarey que assim mesmo não g^{de}. como he ainda que
bem carecterizado encha o fim proposto. Ficando eu de
Conseito aproveitar a permutação ofrecida por V. S^a.
de algum outro producto duplicado que eu escolha dos
m^{tos}. que existirão no d^o. Real Moseu, q^{do}. effectuarnos
a nossa já convencion^{da}. visita aquele Sitio, penso
deva ser brevem^{te}. Sig^{de}. participarey con alguma anticip^{am}.
Lembrando tamben V. S^a. já Sucedeu que em reciproca van-
tagem e melhoram^{to}.; possamos então mesmo verificar mais
algumas trocas oportunas, e que p^r. ambas as partes

poderão ser convenientes: com protesto final^{te}. O
mais desejo de Servir a V. S^a. de quem tenho a honra
ser muito atentamente,

S. Seb^{am}. de Ped^{ra}. em
28 de Julho de 1796.

M^{to}. fiel Am^o. e o mays Obd.

Luis d'Albuquerque de Mello
Per^a. e Caceres

MB, CORRÊA DA SERRA FILE, ^
LETTER FROM THE ABADE CORRÊA
DA SERRA TO D. RODRIGO DE
SOUSA COUTINHO, LONDON, 31 -
31-X-1797.

Londres 31 de Outubro de 1797

Il^{mo.} e Ex^{mo.} S^{or.}

Meu Amigo e S^{or.} do C: Prometi a V. Ex^{a.} escrever-lhe
cada mez para lhe avizar o que achasse de importante,
e por esta Carta verá que não falto ao prometido.

A memoria sobre Construções Navaes premiada pela
Sociedad R. está ja impressa na 1^{a.} parte das Trans.
Fil. de 1796, a pag. 46 e he hum papel de M^{r.} Atwood,
que foi aqui mui Louvado. A este respeito devo dizer
a V. Ex^{a.} que se tem aqui noticia de q. em Suecia M^{r.}
Chapman propizera a Acad. das Sciencias couzas import-
antes a respeito da Theoria das Construções Navaes. O
Ministro de Sua Mag^{e.} em Suecia poderá alcançar copia
dellas no cazo que não saiaõ impressas tão cedo. Devo
tambem dizer-lhe que aqui ha hua Sociedade composta de
Proprietarios de Navios, de Constructores, e de alguns
Officiaes distinctos da Marinha Real, com o unico fim
de aperfeicoarem a Construcção, e a Manobra dos Navios,
assim de Guerra, como Mercantes. Não publicão couza
algua, senão em forma de noticias, avisos, q q Committee

da Sociedade comunica a cada hum dos Associados. Dezejo muito, e ando em diligencia de alcançar communicações de isto tudo para uzo de V. Ex^a.; e se o conseguir, de-vello hey certamente a eu não ter Character publico, e estarem figura de desterado; porque os Inglezes são mais Embargeux, do que talvez convenha a hũa tão grande Nação, e a sua desconfiança hé igual para as Nações amigas, como para com as inimigas.

Fui ver as Plantas do Lauro Camphora, e acho que lhe posso mandar hũas cincoenta de quinze até vinte polegadas de altura, bem enraizadas, e talvez poderei alcançar huas poucas de tres ate cinco pes de altura. Pelas pequenas julga M^r. Dickson que poderão das até doze Shillings cada hũa, o que fará por tudo trinta Libras. As grandes as devem ser por muito maior preço talvez de dois, ou tres guinês cada hum. V. Ex^a. mandará dizer o que quer se faça neste asimpto.

Ja V. Ex^a. estará entregue das Canelleiras, das duas especies de Chá, e do Qui-fá. As Canelleiras podem passar muito bem o Ihverno nas Estufas de Ajuda, tendo o cuidado de lhe dar todo o Sol possivel, e de as reger com sobriedade hua vez tão somente cada semana. Pela Primaveira poderão or afoitamente para o Brázil, com outras tantas que ficarao apalavradas, e v/r partirão de cá em Abril. Parece que Pernambuco deve ser o Clima

mais congenial para ellas, a onde nos primeiros annos devem ser cultivadas pelo Governo, para o unico fim de crescer, e multiplicar tanto de Semente, some de mergulhia. O Terreno para isso não dever ser baixo, nem humido. Quando forem mil ou duas mil, o que mui brevemente pode ser, tratar-se-ha entao de fazer as plantações em grande, tanto por Conta da Corôa, como de Particulares, que o Governo pode introduzir a isso. Antes desse tempo mandarei a V. Ex^a. hum papel para se imprimir, a ser distribuída, com as direcções sobre o methodo de as cultivar em grande e da lhe extrahira a casca, tiradas das que M^r. Desfontaines deu nas Colonias Francezes, das quaes temos aqui copia, e das outras informacoens genuinas que poder alcançar. Por ora julguei que este trabalho era desnecessario, e V. Ex^a. dirá quando o julgar preciso. Tendo toda a razão de estar contente desta Encomenda, na certeza absoluta de que nos não had de acontecer o que aconteceu a este Governo em 1772 quando intento estabelecer a Cultura da Canella em S. Vicente debaixo da inspecção de M^r. Rounqi porque depois de muitas despesas achou-se terem sido enganados, e cultivarem em Lugar da Canella verdadeira, outra planta da mesma Tribu.

A respeito do Chá, a Serra da Arrábida actualmente improductiva he hum Lugar excellente para elle, a onde

há de prosperar. Lembro a V. Ex^a. que o S^{or}. Rey D. Pedro gastou alguns mil cruzados em edificar Cazas de Hospedaria, e Cerca grande na Hermida de Carme, q̃ qual pertence á Caza do Infantado, e parece feita de propozito para La se começar esta Cultura, sem outro custo do que Lá pôr hum Jardineiro, e talvez allar o terreno que fica por baixo da Igreja, quando a Cerca não for bastante. Tenho averiguado todas as Plantas de Chá, que lhe posso mandar pela Primaveira, e passam de duzentas cujo primeiro custo ha de ser tres Schillings e meio cada hũa, que faz o total de trinta e algũas Libras, Estas com as que Lá estão começã hũa Plantação que visto multiplicarem muito de Semente, e de estaca, pode em cinco annos ser de alguns mil pes, e ir em grande augmento com brevidade. Os Arbustos não se deixã crescer mais de cinco, ou seis palmos de filheira a filheira, e de quatro palmos entre planta, e planta da mesma fileira. No primeiro anno sera imprudente tirar-lhe folhas. Quando for tempo farei se me mandar; hũa Instruccãozinha sobre a colheita, e manufactura da Chá, que tirei de Kamfer, das Memorias dos Missionarios Jezuitas, e das Mem de Sir George Staunton. Querem Lugar montuozo, terra sêcca, e quente, mas não má; e tudo isto se acha na Serra da Arrabida. A ideia de se cultiva em terra inuteis do Infantado, espero que seja

do agrado de S.A.R. e que o incline a proteger esta cultura, pela affeição bem natural, que lhe supponho à primeira Caza, de que foi Possuidor, e que administrou o seu Augusto Pay, que Santa Gloria haja. He também hum grande beneficio, e exemplo que esta Caza da ao Reyno. V. Ex^a. me ordenara o que for servido: Não he preciso para isto mais dinheiro, porque o que cá está há de chegar ainda mais Longe.

Se for esta segunda remessa de Chá, procurarei juntamente as Plantas de Qui-fá que for possível haver para as acompanharem. As tres Plantas, com que os Chinos comunicação cheiro aos Chás finos sa. a Qui-fá, o Sambar, e a Sasunqua. O Sambar emprega-se so no Sul da China, e o escuzado pensamos em cultivalla em grande em Portugal. A Sasunqua fora hũa grande Conquista para nós. As folhas da Arvore, e os petalos das flores dão o mais fino aroma ao Chá, e a fruta da o Azeite mais delicado da China. Planta cresce em Lugares áridos, e pedragozos, como a Oliveira, e requer o mesmo Clima. Seja a razão qual for, os Chinezes tem sempre enganado os Europeós, quando se trata de transportar esta Planta fora do Imperio (e nisso os ajuda a grande similhaça que ella tem com a outra Camellia, menos na flor, e na fruta), de modo que debalde se buscará em todos os Jardins Europeos. Lord Macartaes, de volta da sua

Embaixada de Pekim, trouxe hũa planta para Ei Rey, a qual está agora viva em Kew. Como ainda não florescei, os Botânicos também ainda duvidão que seja ella. Se o fôr, posso afoitamente prometer a V. Ex^a. que as primeiras que sahirem della seja para Portugal.

O primeiro navio que for levará hũa collecção de quantos Catalogos de Jardineiros pude alcançar, e hum Prezentinho de Sementes, que eu faço a esse Jardim Botânico, Fazia tenção de lhe escrever sobre este assumpto nesta Carta, mas o que tenho, que lhe dizer he muito, e irá juntamente com as Sementes, como também a Resposta ao Rol de Plantas pedidas pelo D^{or}. Vandelli.

Incluzo nesta vai hum dos Cazos do Hospital dos Partos, para que veja os progressos que tem aqui feito nos methodos de tratamentos das Mulheres paridas. A importancia bem a vê. Prometeu-me o D^{or}. Combe., hum dos Inspectores, que mostraria, e explicaria todos os detalhes ao Medico Portuguez que eu lhe apresentasse. Fazia eu tenção quando o filho de Manuel Constancio por aqui voltasse de Edinburgo, Levallo Lá, para nós aproveitarmos do que esta gente faz de bom. Este moço porem não veio a Londres, mais foi de Edinburgo para o Continente, deixando nesta Ilha muitos admiradores, e muitos inimigos, provas ambas de talentos superiores.

Na Conta de Livros aprovados as as Escolas de França, vem hum nove, como todos elles o são, e que me

parece poderá ser proveitado para Portugal, O Titulo he Des Florens, et des Rivieres, avec des obser. sur le Flottage, Etc., in 4^o de 300, e mais paginas, par Le Citoyen Fabre. O Author tem sido vinte annos empregado em trabalhos hydraulicos na Provença, Paiz tão parecido com Portugal, sobre tudo pelo que toca a Rios. Pareceu-me junto apontado a V. Ex^a. e se fôr tambem como os dois Mappas Botanicos que se imprimirão para as Escolas, sera certamente Obra de toda a estimação. Seu preço he doze Libras, em Pariz.

Estou com ancia esperando o que V. Ex^a. dirá a respeito de Guine. Já depois que lhe escrevi sobre isto, tem acontecido couzas que forçarão o Govêrno Logo depois do Paz a concorrer com os Negociantes para a Colonização daquellas terras. Fala volentes ducunt, nolentes trahunt; e voltar-se-ha infalivelmente esta nova folha da Hist. das Colonias Europeas, ve, o o Julgo ainda não suspeita.

Remeto incluzas duas Cartas, hũa de Smith, para V. Ex^a. que me esqueceu inteiramente quando lhe escrevi, mas o abalo que o meu sangue sentia, he bem vacida desculpa; a outra he minha para o Duque de felicitações pela sua nova filha, que tomo a liberdade de pedir a V. Ex^a. mande entregar-lhe porque pelas vias travessas por onde sou obrigado a escrever-lhe save Deos quando

ella chegaria.

S Sou de todo o C. de V. Ex^a. == Criado, e amigo
verdadeiro ==

José Corrêa da Serra.

MB, VANDELLI FILE, LETTER
FROM MANUEL ARRUDA DA CÂMARA
TO VANDELLI, PIRAUHA, (PERN-
AMBUCO), 11-XII-1797.

Il^{mo}. S^{or}. D^r. Domingos Vandelli

Pirauhá, onze de dezembro de 1797

Meu prezadissimo Mestre, não me tenho descuidado de escrever a V.S. desde que cheguei a este paiz, sei com tudo a fortuna e honra de receber letras suas, a ultima que remete a V.S. ja sei que lhe não foi as mãos, porque a embarcação, em que hia, foi aprizionado, e juntamente hum remessazinha de effeitos, que mandava para essa Corte a fim de me virem alguns livros, e outras couzas, que precisava.

Em Julho rece i o Avizo, pelo qual me manda S. Mag^e. viaje toda a Capitania de Pernambuco, dando me hum ordenado annual: a V.S. he que devo dar os agradecimentos desta graça porque sei que havia de concorrer com quanto podesse para isso: depois que receibi o Aviso tenho me desembarcado de todo para melhor me empregar no serviço de S. Mag^e., e se té agora sem ser salariado trabalhava no que podia, com muito maior razao trabalharei agora, que alem da minha vocacao me chamar a isso, a obrigação me faz hum dever. Já estou de viagem para os certões a fim de indagar o que há de mineralogia,

e mais couzas pertencentes a Historia Natural, se tenho tardado te agora, he porque humas cezões me impedião viajar, e tao bem por lançar de mim todos os mais negocios para ficar inteiramente livre, e encarreguei tudo a meu mano: Ainda que o ordenado annual, de que me faz graça S. Mag^e. he pequeno nas circumstancias actuaes de Pernambuco, isto não obito a que eu me dispuzesse.

Logo a cumprir as ordens, que me forão distribuidas== mas devo advertir a V.S., que não posso dar copia de mim a miudo; porque a extensão de paiz, que tenho de viajar he grande, e a maior parte dezerta, pelo que se V.S. tiver occasião de representar isto mesmo ao Il^{mo}. S^{or}. D. Rodrigo, será bom, para que elle não pense, que hé pequeno, porque o não devlo comer no socego da minha casa, como faz hum Professor de grammatica, ou outro qualquer; mais devo viajar, em que infalivelmente hei de pagar a cinco pessoas, que me acompanhão, guiando cada huma sua avalgo dura, estas mesmas deven ser algudas; sem fallar no sustento, &, despesas de quem corre a terra nos lugares, que me parecerem convenientes, pois que o meu destino não he correr paizes simplesmente sem fazer as diligencias necessarias para o bom exito da minha commissão; eu já representei isto mesmo ao Il^{mo}. S^{or}. D. Rodrigo; mas devo pedir a V.S. que reforce as minhas razões; pois o alvo da ambição não hé que me guia sem o interesse da sobrana, e o amor da Patria.

Remetto a V.S. essa carta incluza para fazer entregar ao amigo Fr. José da Conceição Vellozo, juntamente essa Memoria sobre a cultura de algodão, fructos que tenho colhido de experiencias e observacoes do tempo, em que me tenho empregado neste negocio: a carta vai aberta, para que V.S. veja a tal memoria, e depois a faça entregar ao amigo Fr. José Vellozo, para ou leia a Academia, ou fazer o que V. S. e elle por melhor determinação: nella verá duas estampas illuminadas, huma da flor do algodão, outro do gafanhoto cristado, Prillus ovistatus, mais outras quatro especies de gafanhotos, e huma especie de porcovejo, todos estes animaes perseguidores dos algodões; forão pintados por mim mesmo: tão bem vera V.S. ahí desenhada huma maquina de ensacar o algodão, muito commoda, inventada por mim, em que poupei a mão de obra aos agricultores de mais de 20 rs. alem de outros vantagens muito, interessantes, como na mesma memoria pode V.S. ver, alem dito tai bem desenhei os engenjos de assucar....

Humas das couzas, que me hé mais necessario, he hum desenhador, e hum escrevente; pois que eu nao posso absolutamente deempenhar os tão officios de compositor, desenhador, e escrevente; p^a. desenhador já tenho hum em vista; peso a V. S. encarecidam^{te}. , q^o não perco

ocasião se o tiver opportuna, de fallar ao 11^{mo}. S^{or}.
D. Rodrigo a esse respeito, pois contão incomparavel-
mente será mais rápido o progresso, que farei.

Deos G^{de}. a V.S. como lhe dezeja, q he.

De V.S.

Discipulo o mais obrigado

Manuel Arruda da Câmara

MB, VANDELLI FILE, LETTER FROM
DR. JOAQUIM VELLOSO DE MIRANDA,
VILLA RICA (MINAS GERAIS), 17-
XII-1797.

Snr. D^{or}. Domingos Vandelli:

Meu Mestre. Snr. do meu mayor resp^{to}., como não tenho
recibido carta de V.S. ha alguns annos, procuro nesta
ocasião noticias suas, lhe dou parte de algũa couza,
de q̃ deve ser sciente.

O Snr. Visconde fez hir agora em sua companhia
a remessa de trezento, e tanto desenhos de plantas, e
alguns animaes, com as suas descriçoens, q. esta feitos
há annos, em virtude das ordens de S. Mag^e., e athé ao
tempo da suspensão q se fez na assistencia, q̃ aqui
tive, e w agora torna a continuar, por ordem expressa
de S. Mag^e. como he m^{to}. natural q V.S. seja ouvido
sobre o merecim^{to}. da d^a. remessa, eu desejo como seu
discipulo ouvir o seu voto, e saber da correção q̃ a
mesma deve ter; não ostante o cuidado q̃ tive na sua
discripção.

Acchome encarregado por ordens Reiteradas de S.
Mag^e. do exame do salitre natural, e artificial; e como
achei pouco distante desta capital toda a tendencia p^a.
hũa Nitreira artificial, a fiz erigir, e della remetteo
a o Ministro, Secretario de Estado Ill^{mo}. e Ex^{mo}. Snr.
D. Rodrigo, hum desenho, e a sua discrição. Em hũa
fazenda de criaçoens de gado observeo q̃ entrei outras
pedras q formão os muros, e calcados da m^{ma}. Fazenda
se observavão eflorencias nitrozas com hua concreção de

consistencia media entre as pedras, e as terras, martialm ou tinta de ferro, e posora, ou fossem os muros, e calçados antigos, ou de pouco tempo feitos; expostos ao rigor das chuvas, e do sol. Remetti o aqui ao meu Governador hua pequena porção de salitre daquelle lugar; depois de ajuntar lhe a base alkalina as flores assim ditas; e este Snr. a remetteo como amostra a S. Mag^e.

Eu necessito nessa Corte dos Officios da m^{ta}. amizade, e honra q̃ devo a V.S. no negocio q̃ vou expor. O Il^{mo}. e Ex^{mo}. Snr. D. Rodrigo de Souza me fez a m^{ce}. de participar a Graça deste Governo; e continuando as diligencias, de q̃ u estou encarregado pella mesma Snr^a. chegou agora hum Avizo p^a. este Snr., e meu Governador ,e encartar no officio; porem não obstante a amizade q̃ lhe devo, e dizer q̃ não duvida da vóntade de S. Mag^e. a meu favor, quer declaração de hum turmo, ou palavra do m^{mo}. Avizo, q̃ elle diz se deve entender, ou pode interpretar em dous sentidos; e por tanto nao me encarta no officio em q̃ não vier declaração do termo, o q̃ pede nesta occasião.

V.S. queira ser a meu favor, interpondo os seus officios, a fazendo o q̃ achou q̃ convem p^a. hua decisão favoravel dessa fatal dúvida; e ajuntarei essa obragacao mais a tantas outras, de q̃ lhe sou devedor.

Sem me quizer fazer a m^{cc}. de meu dever, pode
p^a. seguranca da sua carta fechala, e metela em outra
capa p^a. o Rio de Janeiro, com o sobrescrito = ao
Sarg^{to}. mor Thomas Goncalves; auzente a Joao Erz.
Vianna. Estes mas remetterao.

V.S. me da occasions de lhe mostra o reconheci^{to}.
com q̃ sou

De V.S.

Discipulo e am^o. o mais obr^o.

Joaquim Vellozo de Mird^a.

Villa Rica 17 de

Dezenbro de 1797

MB, VANDELLI FILE, LETTER FROM
DR. JOAQUIM VELLOSO DE MIRANDA,
VILA RICA, (MINAS GERAIS), I-
IV-1799.

Snr. Domingos Vandelli:

Meu Mestre do meu maior resp^{to}; O portador desta
he o Ten^{te}. Fran^{co}. Xavier Maxado, conductor de hua
remessa de plantas vivas, q̃ aprontei por ordem do
meu Gover^{nor}.; e de outras Produccoens Naturaes, q
o m^{mo}. remette. Daquellas não invio a V.S. o Catalogo,
poq sei q̃ o que vai agora ao Ministério, lhe sera se-
guram^{te}. entregue, e sobre o estado em q̃ se acha a
manufatura do Salitre, algumas cousas mais, de q̃ estou
encarregado, fico dispensado de o dizer o q̃ há na
materia pode V.S. informar se, querendo sabe lo.

O mesmo conductor, Official da Guarnição desta
Praca, q̃ me merece todo o bom conceito de q̃ he digno,
vai encarregado e leva p^a. isso dinh^{ro}., p^a. me mahdar
alguns Livros, de q̃ necessito, e instrumentos de
Fizica; mas como não he versado nestas sciencias nao
pode ter eleição na escolha; e por tanto rogo a V.S.
q o q^{ra}. encaminhar, e noticiar o q̃ eu pesso em hua
lista, q̃ lhe dou.

Dezejo a V.S. as mayores felicid^{es}., e poder mostrar
em tudo o tempo q̃ sou.

v^a. R^a. o 1^o de
Abril de 1799

De V.S.
Discipulo mais obr^o. e f^l;
Joaq^m. Vellozo de Mird^a.

MB, VANDELLI FILE, LETTER FROM
CASIMIRO ORTEGA TO VANDELLI,
MADRID, 8-III-1798.

S^{or}. D^{or}. Domingo Vandelli:

Muy S^{or}. mio y de todo mi atención: He recibido la muy
estimada de Vmd. de 14 de enero . . . por mano de los
S^{rs}. Naturalistas Dinamarqueses Schomboe y Nielson, a
los cuales he servido en quanto me ha sido possible, así
por ser recomendados de Vmd., como por lo que ellos mes-
mos se merecen. Lo have igualm^{te}. con quantos sujetos
se sirva Vmd. dirigirme.

E visto que en varias ocasiones he recibido los
favores de Vmd., y no ha mucho tiempo sús ultimas pre-
ciosas obras que leo con fruto y admiro gustosam^{te}. y
aunque estado no he dejado de corresponder, que he
estado en descubierto, esperando me sirva de disculpa
el ignorar el conduce por donde enviar a Vmd. libros
y semillas sin que le fuese grato el porte alguna
vez se las he remitido baxo del Pliego de ese
S^{or}. D^{or}. Luis Pinto que ha te ido la bondad de con-
testarme, y me honra mucho en Londres: pero la alta dig-
nidade empleo y ocupaciones de los Ministros no per-
miten abusar de su atencion. Por lo mismo estimará a
Vmd. se sirva indicarme un medio para seguir con regu-
laridade n^{ra}. correspondencia . . . recibir yo quantas

semillas guste Vmd. de enviarme . . . dentro de una libro el peso de cada Paquete; . . . se ponga sin mi nombre en el sobrescrito:

A Los Directores de Correos

q Dios m^{s.} a^{s.}

Para el Rl. Jardin'

Botanico de Madrid

Con este sobrescrito recibo de Francia, y creo recibire de Portugal gratis quantos pliegos se me dirigen para beneficio del jardin.

Desde hoy voy a buscar algun conducto por donde enviar a Vmd. este Paquete en que le remito me ultima obrita de Decadas, el Catalogo de este Jardin nasciente, y algunas semillas así descritas en dichas Decadas, como de las de la Flora del Perú.

Permitamen Vmd. le suplique que si Vmd. tiene algun Catalogo de ese Jardin, aunque sea manuscrito, se sirva hacerle copiar a mi costa, y remitirmele.

Igualm^{te.} deseavia que me haga Vmd. el favor de decir, e quales tomes, y a que precio han salido a luz de la Obra de Plantas de America o de Asia publicados por un Religioso, ú otras . . . obras Botánicas en ese Reyno, e finalm^{te.} el puno espero que merecen de Vmd.

Siendo Portugal y Castilla Reynos tan vecinos, es casi verginiso que sus corresponden^{cias.} literarias no

sean mas frecuentes, y expeditas. Hagamos nosotros dos los q^e. podamos.

Yo tengo mil motivos generales á todos los Professores q^e. conocen el merito de Vmd., para estimarle, y tambien particulares por haverme educado en Italia, y con los mismos maestros que Vmd.: de lo qual me gloria mucho.

Me repito á la disposicion de Vmd. y ruego á Dios q^e. su vida m^s. a^s. Madrid a 8 de Marzo de 1798.

B.L.M.de Vmd.

La mas atento Servidor,

Casimiro Ortega

En estos ultimos dias he tenido el gusto de hacer revivir mi grado de D^r. de Medicina en Bolonia y me ha examinado y revalidado en este Protomedicato.

MB, VANDELLI FILE, LETTER FROM
CASIMIRO ORTEGA TO VANDELLI,
MADRID, 6-X-1798.

Madrid a 6 de Oct.^e de 1798:

Muy S^{or}. mio y de mi atención: Presentará a Vmd. esta el S^{or}. Joseph Corinde, que pasa á esa Corte de orden de la nuestra con cierto comision literaria, sobre que estan de acuerdo ambas Cortes. Si este Caballero no fuera tan conocido en ese mismo Reyno, le diría yo á Vmd. algo de su instrucción u de sus demas prendas; bien que á las primeiras conversaciones las echavá Vmd. de ver.

Me aprovecho de esta ocasion para remitir á Vmd. mis Decadas (que voy continuando) y varias semillas de algunas de las Plantas descritas en ellas con outras que he conjeturado podrian quizas a ser le á Vmd. agradables. Para que Vmd. sepa las muchas q^e. nos faltan y con que tal vez podrá favorecernos, incluso el Catalogoguito que hemos impreso de nro Jardin a Madrid.

Aunque Portugal y España debieran naturalm^{te}. tener el comercio y comunicaci^{ón} mas floresciente y no interrumpido, oir los enlaces con que los une la situaci^{ón} y la naturalieza; experimentarnos por desgracia lo contrario, especialmente en materia de Ciencias. Yo he escrito a Vmd. repetidas vezes las gracias por lo que me ha enviado, valiendome del conducto de esa

Secretaria de Estado, creyo digno Gefe el Ex^{mo}. S^{or}.
Cavillero Pinto me honra con su proteccion desde q^e. tuve
el honor de tratarle y comer varias veces en su mesa en
Londres; y por la misma via envié varias semillas.
Nada se de su paradero. Ahora tenemos una buena ocasion
de establecer una correspondencia segura y constante por
el medio que no dexaca de impedirnos y aun de facilitarnos
el mismo Señor D^r. Joseph Cornide, que entre
outros vamos de instruccion cultiva, tambien con mucho
fruto la Historia Natural.

Ratifico a Vmd. mi estimación y deseos de servirle
y de que Dios q^e. su vida los m^s. a^s. q^e. pide su mas
afecto y atentissimo Servidos q. s.m.b.

Casimiro Ortega

S^{or}. D^r. Domingo Vandelli

MB, VANDELLI FILE, NO. 45, ORDER
FROM D. RODRIGO DE SOUSA COUTINHO
TO VANDELLI, 23-XII-1802.

O Principe Regente Nosso Senhor Manda remetter a V. M^{ce}.
a inclusa copia de hua carta de Jussieu para que
aproveitando-se V. M^{ce}. das vantagens que desta Corres-
pondencia devem resultar ao adiantamento da Botanica
tenha a occasião nao so de augmentar a cultura do
Jardim Botanico d'Ajuda e seu competente Herbario mas
tambem de segurar a exaçaõ dos Nomes Botanicos, com-
parando os Nomes das plantas que Jussieu manda com os
que aqui estiverem em uso para mutuamente se fixar os
que devem adoptarse e ficar se usando, no que tambem
muito pode utilizar o adiantamento da Sciencia.

Deos G^{de}. a M^{ce}. p^a. anos. 23 de Dezembro de 1802

D. Rodrigo de Sousa Coutinho

MB, VANDELLI FILE, NO 45 A., COPY
OF A LETTER FROM ANTOINE LAURENT
DE JUSSIEU, PARIS, TO D. RODRIGO
DE SOUSA COUTINHOL, 17-IX-1802.

Monsieur: Je profite de l'occasion que me procure
Mad^e. de Roquefeuil por adresser a Votre Excellence
un demande qui peut interesser des Sciences. Vous en
estes le Protecteur en Portugal des Sciences et vous
etes disposé a favoriser la Correspondence de ceux qui
les cultivent. Il en resulte uhe communication de
lumieres utiles a tous les Botanistes de Perou qui
publient a Madrid un tres bel ouvrage, donnent quel-
que foi comme nouveaux des genres deja connus parce
qu'ils n'ont pur visiter auparavant les Herviera des
François et des Anglois, pour eviter chez cous le même
inconvenient dans la publication des plantes du Bresil
et pour établir entre les Herbiers de Lisbonne et de
Paris une concordance utile pour les Botanistes des
deux Nations, je proposerois a Votre Excellence de
faire extraire des echantillons bien numerottes des
Herbiers du Brésil, aven l'attention d'attacher des
Nos. pareits aux individus semblabes restés dans les
Collections. Si vous nous faisez parvenir ces echan-
tillons, nous les comparerions avec ce que nous pos-
sedons et nous transmettrions ensuite aux Savants de

Lisbonne le resultat de nos observations. Il en resulteroit un rapport exact entre les Herbiers des deux Pays, et le travail que l'on entreprendroit ensuite, offriroit des nouveautés mieux constatées qu'elles ne peuvent l'etre d'apres de simples description. Je regarde le Bresil comme l'une des contrées les plus riches en productions vegetale differentes de tout ce qu'on connoît, en ce point elle ne paroît le ceder ni au Perou ni au Chili. Le desir de correspondance avec les Botanistes Brasiliens este une suite naturelle de cette opinion. M^r. da Câmara l'un deux qui a été mon eleve a Paris m'ap promis en me quittant, de me faire des envois mais la guerre les probablement suspendus. Il faut esperer que le retour de la paix facilitera les communications, surtout si vous avec la bonte de les favoriser. Madame de Roquefeuil m'a promis ses bons offices prés de Votre Excellence, je compte beaucoup sur son ancienne amitié et sur son gout pour la Science, qui l'engageront a seconder mes efforts pour en acceler les progres. M^r. Brotero proffesseur a Coimbre, m'offre aussi, par le Canal de Mr. L'Ambassadeur, sa Correspondance que j'accepte avec beaucoup de plasir. Je serai toujours dispose a donner des plantes de divers pays en exchange de celles du Brésil et de da coté de Malabar. Je prie Votre Excellence d'agreer les assurances de ma respectuse consideration ==

Paris 17 Septembre 1802 == S. Excellence Dom Rodrigo
de Sousa Coutinho, Ministre des finances á Lisbonne.

De Jussieu, de l'Institut Nacional de France, pro-
fesseur de Botanique au jardin des plantes.

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