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ROOTS AND FRUITS: SOCIAL CLASS AND INTERCROPPING IN JAMAICA

by

JOHN RASHFORD

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

1982

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1982

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

9/24/82
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Abstract

ROOTS AND FRUITS: SOCIAL CLASS AND
INTERCROPPING IN JAMAICA

by

John Rashford

Advisor: Professor Eric Wolf

The simultaneous growing of two or more crops in the same field is the traditional practice of the majority of Jamaican farmers. Today, plants brought from all quarters of the world are now intercropped in yards and fields throughout the island. This thesis examines the relation between social class and intercropping. It shows that the control farmers have over land determines the kind of growing plants cultivated and the way in which they are cultivated. When farmers have secure control over land they grow trees and trees intercropped with herbs, vines and shrubs gives rise to what is identified as Jamaica's "Food Forest." This research is based on field work conducted in three districts in northeastern Jamaica.

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It is obvious that a work of this kind could not have been completed without the generous assistance of others. I am indebted to teachers, colleagues, relatives and friends who have supported my efforts. I am especially grateful to the members of my dissertation committee for their patience, corrections and suggestions during all phases of this study.

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My obligation to the scholarship of others is sufficiently acknowledged in this thesis so I take the opportunity here to express my appreciation to those who have ensured my access to the literature cited. My thanks to the library staffs of the Port Antonio Public Library, the University of the West Indies, the Institute of Social and Economic Research (particularly Olive Senior), The Institute of Jamaica, the Research Institute for the Study of Man, The New York Botanic Garden, the Brooklyn Botanic Garden, Rutgers University and the various units of the City University of New York (especially cuny Graduate Center, Lehman College, Queens College and Brooklyn College). I also acknowledge assistance from the Jamaica Agricultural Society, the Coconut Industry Board of Jamaica and Jamaica's Department of Statistics.

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Chapter 1

INTRODUCTION

The history of Jamaican small farmers is a history of resistance to slavery and to wage labor on large estates. In this thesis I am concerned with the role intercropping has played in this process. Specifically, I refer to the history of small tenants and proprietors in Portland, Jamaica, whose economic survival like that of the majority of small cultivators throughout the island has depended on intercropping. Intercropping is the simultaneous growing of two or more species of plants in the same yard or field. A great variety of vines, herbs, shrubs and trees are now intercropped in yards and fields throughout Jamaica and the majority of these plants have come to the island over the past five hundred years from all parts of the world.

I have become increasingly interested in the small farmers of Jamaica and their agrarian practices (including intercropping) because their history is one of opposition to slavery and to estate labor. There is today a growing anthropological interest in the nature and extent of small farmer participation in revolutionary movements. Prior to Moore's Social Origins of Dictatorship and Democracy published in 1966, small cultivators were generally regarded as conservative in nature and

alienated from the centers of political control. Moore pointed instead to their central importance in "modern revolutions." With the development of the Vietnam war, interest in small farmers and their participation in revolutions was intensified. A pathbreaking work in this regard was Wolf's Peasant Wars of the Twentieth Century published in 1969. Based on inductive generalizations drawn from a detailed study of small farmers in the twentieth-century revolutionary wars of Mexico, Russia, China, Vietnam, Algeria and Cuba, Wolf argued that it was the land owning middle peasant rather than poor peasants and landless laborers who were more likely to engage in revolutionary activity because their ownership of land provided them with a strategic material base from which to operate.

The context of Wolf's discussion was the formation of a European capitalist world order and the impact its military, political and commercial activities had on traditional "peasant societies." Though the context remains the same, there is one very important way in which small cultivators of Jamaica and the Caribbean differ in their circumstances from the general context within which Wolf discusses peasant wars of the 20th century. With the development of many Caribbean societies we are able to trace the origin of a class of small cultivators which has come into being as a form of resistance to "plantation society" (P.A.U. 1959; Beckford

1972 a & b). Writing of small farmers in the "West Indies," Marshall (1972:30) notes that

> In the main the peasantry's development has been characterized by economic activity-persistent efforts, both on an individual and co-operative basis, to secure an independent existence through cultivation of the soil outside of the dominant plantation society and sugar economy.

That small farmers in Jamaica continue to survive in the face of economic transformations that have done away with similar social classes on the fringes of plantations in many areas of Latin America (Pearse 1976) is of interest in and of itself. What is remarkable, however, is that they have continued to survive by virtue of intercropping and by government subsidies and programs which have followed the development of mass politics which grew out of the general rebellion of 1938.

Though intercropping has been an old and widespread practice in many parts of the world, especially in the tropics, it is only now beginning to receive serious attention from researchers and planners (Anderson 1952; Netting 1971; A.S.A. 1976). One important reason for its past neglect is that agricultural researchers have chiefly been concerned with problems related to large tropical plantations and large commercial farms in temperate latitudes. In this context, advances have meant the application of science to farming, the development of agricultural technology, mechanization, the

growing of improved cultivars in pure stands and reliance on artificial pesticides, herbicides and fertilizers (Beets 1975, 1977; Chang 1977). Within the framework of these "modern" concerns, intercropping has been viewed as adequate for farming systems based on family labor, limited resources and a low level of agricultural technology (conditions which characterize traditional farming systems in many parts of the world); it was considered irrelevant to contemporary farming, however, and incapable of solving problems of unemployment, food, raw materials and the production of exportable agricultural commodities which now face many poor tropical nations (D. Edwards 1961:235-239; Chang 1977).

The indifference to intercropping is evident in the development of what has been called "the green revolution" (Michie 1973; Mencher 1974; Miller 1976). It is the scientific development of high yielding varieties of wheat in Mexico's International Maize and Wheat Improvement Center and rice in the Philippine's International Rice Research Institute which have since been rapidly and widely adopted in parts of Africa, Asia and Latin America. Pearse (1974:386-387) points out that the green revolution has been variously identified as "a breakthrough in plant breeding," a form of biological and chemical technology and "a development strategy." Viewed from the vantage point of a "development strategy," the green revolution has reinforced reliance on pure

cropping which is the growing of a single species in a given field. Beets (1975:220) writes, for example:

> Multiple cropping systems can be of great help to make better and more intensive use of available resources in countries in Asia and the Far East. It has been a very distinctive feature of agricultural development in Taiwan throughout the years. However, in other countries these studies were somewhat pushed back by the interest in the green revolution: though interest in this field has recently increased again, e.g., at the International Rice Research Institute at Los Banos in the Philippines and the Kasetsart University, Thailand.

We now have a growing understanding of the nature and importance of intercropping. This has been achieved through the work of anthropologists (Conklin 1954, 1969; deSchlippe 1956; Geertz 1963; Netting 1968, 1971; Waddell 1972), agronomists (Webster and Wilson 1966; Norman 1968, 1972, 1973; Fisher 1976; Osiru and Willey 1972), Horticulturalists (Watson 1952; Foster 1976), geographers (Blaut 1959; Eyre 1972; Gorou 1973; Lea 1972; Grigg 1970, 1974), economic botanist (Barrau 1958, 1960, 1968) and microbiologists (Nair and Rao 1977). Our increased understanding has also been achieved by the efforts of others in areas of study as diverse as entomology, soil physics, agricultural engineering, crop physiology, weed control and soil conservation (Patterson 1975:V). We are beginning to appreciate not only the value of intercropping in traditional farming systems around the world, but its great potential for meeting future subsistence

needs (Bradfield 1970, 1972). Freyman and Venkateswarlu (1977:697) report that "Scientific interest in intercropping has developed recently as a means of making use of the entire growing season, and maximizing the utilization of environmental resources, thereby increasing total production from a unit area of land."

It is within the context of this growing scientific interest in intercropping that Harwood and Price (1976), Beets (1975) and Francis et al (1976) indicate that the interplanting of different crops could intensify the use of available resources in Asia and the Far East. In New Guinea this has already occurred with the commercial cultivation of coffee interplanted with other crops (Brookfield 1971, 1973). With a growing understanding of the nature of intercropping and its potential for development, we have begun to see it in a new light. In summarizing the results of the 1975 symposium on multiple cropping sponsored by the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America, Sanchez (1976:374) writes:

> The symposium emphasized the importance and effieiency of...small farming systems which have been generally considered primitive or marginal and, until recently, virtually ignored by researchers and policy makers. The bulk of food consumed in tropical Asia, Latin America, and Africa is produced on these small farms. This realization has fundamental implications to research and development policies. ...

> Most authors agree that improving the productivity of the more complex intercropping systems, rather than attempting to replace them with capital and energy-intensive technology is the appropriate research strategy.

Various attempts have been made to explain the persistence of intercropping. Some researchers (Mintz 1955; Blaut et al 1959; Eyre 1972) point to a single factor such as the impact of fluctuating market demands or farmers' efforts to insure against risk (D. Edwards 1965; Clarke 1974:681); others point to a combination of factors (Wilson and Webster 1966:163-164; Miracle 1967: 159; Wrigley 1969:118).

In this thesis I shall argue that intercropping is important because it allows farmers to accomplish many objectives simultaneously. Chief among these objectives are: (1) to produce efficiently and without interruption a diversity of products for household use and for sale by growing different species of wild and domesticated vines, herbs, shrubs and trees and (2) to do this as the basis for a relatively independent way of life, free from exploitation by slavers, capitalist farmers and landlords and from dependence on charity or state welfare.

Efficiency in production identifies considerations such as the most productive use of labor, the intensive use of available space, maintaining the fertility of the land and preventing its erosion, insuring against risks resulting from pest, disease, theft, hurricane, drought

and fluctuating market demands, achieving a continuous harvest, the control of weeds and pests and the production of crops for household use and for sale. This aspect of intercropping has long been recognized by researchers such as Webster and Wilson (1966), Blaut et al (1959), Miracle (1967) and others. Here the concern is largely with the technique, technology and economics of intercropping. More recently, experimental agronomists have been concerned with the productivity of different systems of intercropping and the way in which they compare to yields from pure cropping.

In contrast to these efforts I have sought in this thesis to show how efficiency in the agricultural production of small cultivators is related to class relations and class struggle. This point is not always recognized by agrarian experts, ecologists, social science researchers, development planners and politicians. In short, I shall argue that intercropping as the traditional mode of cultivation for the majority of Jamaican farmers has served as a basis for resisting proletarianization. This practice as it has developed in Jamaica only makes sense if it is considered as a means of opting out of the rural proletariat characteristic of the Caribbean plantation economy so well described by Mintz (1953, 1956, 1959, 1974), Wolf (1959), Clarke (1957) and Beckford (1972).[1]

To understand the relation between social classes and intercropping, an important consideration is the

extent to which farmers cultivate wild plants, especially trees. While the literature has been chiefly concerned with herbaceous plants (largely for experimental reasons), we must not forget that trees are of great economic importance to Jamaican small farmers and to others of the wet tropics. Trees such as the pimento, ackee, star apple, guinep, Jew plum and mango are a real advantage to small cultivators in providing products for household use and for sale. These trees, moreover, are not necessarily all domesticated. I want to underline in this regard Harlan's (1975:62) important distinction between "Cultivated" and "Domesticated." He notes that although the terms are quite different they are often used synonymously.

> To cultivate means to conduct those activities involved in caring for a plant, such as tilling the soil, preparing a seedbed, weeding, pruning, protecting, watering, and manuring. Cultivation is concerned with human activities, while domestication deals with the genetic response of the plants or animals being tended or cultivated. It is therefore quite possible to cultivate wild plants, and cultivated plants are not necessarily domesticated.

This thesis shows that, though wild trees might be of great economic importance (e.g., pimento), there are particular social conditions under which farmers are led by their class interest to either 'save' or destroy them (see especially Chapter Six).

AGRARIAN SYSTEMS AND SOCIAL CLASSES IN JAMAICA: A SKETCH

Classes are interrelated groups of individuals whose relative hierarchical position and reciprocal interaction in the process of social production are determined by their relation to property--the extent to which they control it, the type of control they exercise, the form of property they control and the uses they make of it. Intercropping with all its variation is primarily the practice of Jamaica's class of subsistence cultivators. They have access to small areas of land through rent, ownership, borrowing, squatting or capture.[2] They produce their means of subsistence by cultivating plants both for household use and for sale. This is done by means of their own labor and that of their household in addition to some cooperation with other farmers and a limited amount of hired labor. When their control of land is secure and free from the restrictions and insecurities of renting or of illegal occupation, not only is intercropping practiced but trees also come to be economically important, giving rise to the different forms of diversified tree-cropping variously identified as "polyculture," "a tangle of productive vegetation," "a tropical jungle garden," "artificial woodlands," "an aboretum," and a "Food Forest." [3]

Small cultivators in Jamaica stand economically and politically opposed to the owners of large estates

and their wage-earning work force. From its development as a former Spanish and British colony, the economic, social and political history of Jamaica has essentially been the history of large estates and this remains true even with the significant development of bauxite production and tourism following the Second World War. The importance of this fact and its relation to similar colonial developments in the Americas, Africa, Asia and the Pacific has led Beckford (1972b) and others (Mintz 1974:297; Bernstein and Pitt 1974:515; P.A.U. 1959) to identify these nation-states as "plantation economies."

The table on the following page from Jamaica's agricultural census (1973) indicates the continued significance of large estates in Jamaica. In 1968, 151,105 farms five acres and under representing 78% of all Jamaican farms controlled only 229,216 acres, which was 15% of the island's 1,489,188 acres of farmland. At the same time there were 992 farms 100 acres and over representing only 5% of all Jamaican farms yet controlling 792,007 acres, which was 53% of the island's total farmland. Historically, these estates have been essentially concerned with producing exportable agricultural commodities. The primary economic crops cultivated over the years have been sugar, coffee, banana, coconut and citrus. For these large estates, pure cropping has been the primary method of cultivation. A major exception to this pattern is that in the parishes of the east and

ACREAGE OF LAND IN FARMS BY SIZE GROUPS

1954, 1958, 1961, 1968/9

YEAR	Acreage	0 to Under 5 Acres	5 to Under 25 Acres	25 to Under 100 Acres	100 to Under 500 Acres	500 Acres and Over
1954 - -	1,914,375	249,047	502,924	232,178	214,131	716,068
1958 - -	1,822,743	270,781	546,300	176,872	130,994	697,796
1961 - -	1,711,430	198,000	389,441	167,607	185,596	770,786
1968 - -	1,489,188	229,216	340,757	127,208	148,048	643,959

Table 1

Source: Census of Agriculture (1973:20)

northeast--St. Thomas, Portland and St. Mary--bananas and coconuts are planted in pure stands as well as intercropped.

Historically, these large estates have embodied the ruling economic interest of colonial planters up until 1838, and of native planters and foreign companies in the years following. They have in all cases been primarily dependent on African Jamaican labor. Until emancipation in 1838 these large estates were dependent on the forced labor of enslavement. Following emancipation they have been dependent on hired labor and on rent payments in the form of labor.

Individuals without land whose primary productive activity involves wage labor on the large estates, constitute a significant part of Jamaica's rural class structure and system. I refer to the island's rural proletarians who are for the most part dependent on purchases from shops and markets for obtaining their livelihood. These are agricultural laborers involved in maintaining fences and roads, in preparing land and in growing sugar cane, banana, coffee, coconut and pimento. These are individuals who as wage-earners are hired to harvest, load and transport the various crops, to process them into saleable products and to facilitate the process of their circulation and distribution.

Jamaica's rural proletarian class had its beginning following emancipation in 1838 when the colonial

planters, who had survived the rebellions of the 1760's, the abolition of the slave trade in 1804 and the 1838 emancipation, were forced to pay wages in order to continue producing sugar (Curtin 1970; Hall 1959). Since that time this class has also developed in relation to the production of banana, coconut, pimento and citrus. The process of proletarianization has gone further in the estate cultivation of sugar, however, than in any other area of agrarian production, especially following the centralization of sugar production in the first quarter of the twentieth century. This point bears directly on the subject of this dissertation. Since proletarianization varies in relation to the main crops produced, it will differ in different areas of the country. This study focuses on the banana and coconut growing area of the northeast. In that area which includes the parish of Portland, the impact in the 1930's of Panama disease (which destroyed the Gros Michel variety of banana upon which the industry was based), the decline in the activities of the large fruit companies in Jamaica, the increased reliance on small cultivators to supply the banana trade and the breaking up of some of the large estates all worked against the formation of a clearly defined proletarian class of the type associated with the growing of sugar.

In the discussion above I have drawn a clear

distinction between wage-earners and small cultivators. It is important to remember, however, that with conditions of temporary employment such as seasonal labor, piece work and time work, and for reasons of self-provisioning and increasing monetary income, many rural Jamaicans regularly engage in more than one form of gainful activity. This point has been made by Comitas (1973), Hicks (1972), Robotham (1976), Fruct (1967) and others. In this thesis, the terms small cultivator and proletarian are used to characterize individuals according to their primary form of productive activity.

THE PARISH OF PORTLAND AND THE AREA OF RESEARCH

This dissertation is based on research done in the Parish of Portland in northeast Jamaica from September 1975 to August 1977. There are three important reasons for the choice of Portland as a research area.

First, the Parish of Portland was chosen because its location in the island's northeast makes it one of the wettest parishes, providing conditions ideally suited for the growth of wild and domesticated trees (Clarke 1974:16; Symes 1971). Jamaica occupies 4,243 square miles and is oval in its general shape. It is 146 miles long with widths varying from 22 to 51 miles. The dominant aspect of the island's relief is its mountainous interior. The mountains are generally aligned in an east/west direction and are often referred to as the

"backbone" of the island (Bent-Goulding 1966:21; Gleaner 1973:3). The highest and most rugged with precipitous peaks, ridges and deep-sided valleys are the Blue Mountains and the John Crow Mountains in the eastern part of the island. These interior mountains coupled with the island's prevailing northeastern Trade Winds influence Jamaica's pattern of rainfall distribution and so account for the remarkable climatic diversity of so small an island. The Yearbook of Jamaica (1973:17) states that:

> The annual mean rainfall totals range from nearly 300" on the eastern Blue Mountain slopes to less than 30" on some parts of the south-coast. High rainfall totals above 100" occur in the Central parts of the Blue Mountain Ridges and on their northeastern slopes down to the coast of Portland and in a second area in the central western parts. Low rainfall totals with less than 50" are limited to a small strip along the north coast between Montego Bay and St. Ann's Bay and to a part of the southern plains between Kingston and the parish of St. Elizabeth.

With the general pattern of rainfall indicated above, the resulting vegetation ranges from near desert with cacti and acacia scrub in the rain-shadowed coastal areas of the southern parishes to luxurious tropical marine rainforest in the wet mountainous northeastern parishes of St. Mary and Portland (Clarke 1974; Symes 1971). Since the cultivation of wild and domesticated trees is a significant factor in understanding the relation between social classes and intercropping, the point I wish to emphasize here with respect to Portland is that

"Tree crop enterprises were important in all those farming systems which were conducted under natural conditions of high rainfall conducive to the growth of the trees" (D. Edwards 1961:105). Describing agrarian practices in the eastern part of the island, David Edwards (1961:60-61) writes:

> The farming systems with least seasonal variation in their farming activities are those found in Areas A, B (St. Mary), and C (St. Thomas). Rainfall in these areas is adequate for plant growth during most of the year and the crops which dominate the system, tree crops and banana, have fairly even labour requirements throughout the year...Preparation of land for planting, tending of crops, and reaping take place throughout the year. The high proportion of time spent in tending the crops is due mainly to the banana crop which requires appreciable attention after planting, in contrast to the needs of well established tree crops.

As I have already said, to understand the nature of intercropping in Jamaica it is extremely important to consider the extent to which wild plants are cultivated by small farmers. In this regard, the second reason for the choice of Portland as a research area takes note of the fact that the various ways in which the parish has been characterized point to the importance there of vines, herbs, shrubs and trees described as wild or as requiring little or no care. This is so whether the parish is viewed as a kind of "Garden of Eden," an area of "agricultural backwardness" or an ideal natural environment that supports an idle population.

The variations on the theme of the parish as a "Garden of Eden" all imply circumstances where "nature" is conceived as "benevolent" and "bountiful." There are many varieties of useful plants that require little or no care and produce an abundance of products in all seasons. In such an environment, it is said, there is always something to eat and one need never fear starvation. Under these conditions, there is little need for labor or for money and no one is completely dependent on the market.

The description of plants that require little or no care is also expressed in the conception of the parish as an area of "agricultural backwardness." Cradwick (Fawcett 1898:286), field instructor in Jamaica's Botanic Department at the end of the nineteenth century, made the following observations in a report on his visit to eastern Portland:

> The portion of the Island visited during this tour, is, I regret to say, one of the most backward agriculturally which I have yet visited. The coffee and chocolate are simply allowed to grow, no attempt at planting at a proper distance is made; no attempt at regulating the growths of the large trees through which the coffee is growing; no attempt at pruning; in fact no attempt (with just here and there a feeble exception) at any kind of cultivation is made at all. Chocolate is simply allowed to grow up into high poles with scarcely even a pod on them. The district is famous I am told for good grapefruits, yet the people are not planting, - I did not see one single young plant outside the large properties except such as had grown spontaneously. A large number of young

> sour oranges were growing through the district, and I carefully showed the people how to bud these, and hope that they will carry out the instructions. I carefully impressed on them the need of a more systematic style of cultivation, for it is really pitiful to see so much fine land put to so little use.

Similarly, Henriques (1953: 73) provides us with a planter's view of the social significance of plants said to require little or no care. It points to the negative impact that this is said to have had on the social character of the people of Portland.

> The owner of a plantation showed me a field lying just outside the window of his house and said, 'You see that field. There is every conceivable fruit and vegetable in the West Indies growing there, and do I have to do anything to them? No, I just stick them in the ground and they grow. That's what's the matter with the people of Portland, the soil is too good for them. They're all lazy. Look, I import labour from a hard parish like St. Elizabeth where they have to fight the soil to grow anything, and they work marvelously until the Portlanders corrupt them.' There is this much truth in the contention that he is always amazed to learn of mulching, a process of manuring, from migrants from 'hard' parishes.

The characterizations of Portland as a "Garden of Eden," an area of "agricultural backwardness" or an environment that leads to an idle population all point to the need to reconsider the cultivation of wild plants. I will show in this thesis that farmers' responses to wild plants--particularly trees--reveal much about the relation between social classes and intercropping in

Jamaica. When, for social reasons, farmers decide not to plant trees or to destroy those which are wild, this decision eliminates a wide range of species and varieties from intercropping irrespective of their actual economic value. This value goes far beyond the fruits, lumber, shade and ornament that trees provide. Nowhere has this been more evident in Jamaica than Yallas Valley which has been one of the most severely eroded areas of the island in the southeastern parish of St. Thomas (Floyd 1970). Blaut et al (1973:60) in their concern with the extent to which conservation measures were or were not practiced noted that

> Among the economic factors, an important one is related to land tenure. Mt. Chester farmers simply will not plant trees on rented land, even if the same plot of land has been rented from the same landlord (local or no-community) for 30 years or more. The universal feeling is that the man who plants trees on another man's land will not reap the benefit of his labour, which appears in any case only after several years. Since much of the land in Mt. Chester is rented, this factor obviously holds back what appears to be the most valuable anti-erosion measure of all, tree-crop planting.

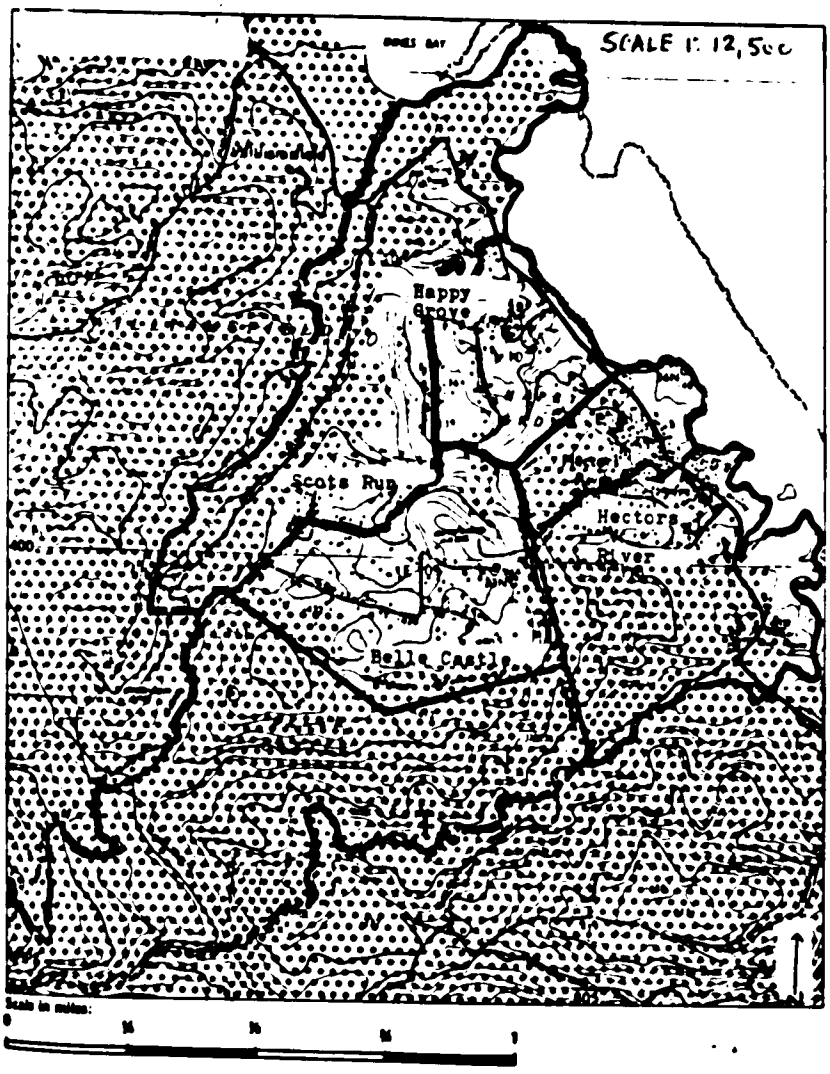
Since the attitude of small farmers toward the planting and saving of trees is a significant factor in understanding the relation between social classes and intercropping, the third reason for the choice of Portland as a research area is that it allows us to consider farmer's attitudes in relation to three historically important trees: the banana,[5] the coconut and the

pimento. From the end of the nineteenth century banana and coconut have been the major commercial crops of Portland and the same can be said of pimento which has become an extremely valuable economic crop over the past 30 years. I will show (especially in Chapter 6) that it is in relation to these trees that we are able to see clearly the impact of class relationships on cropping practices.

THREE DISTRICTS OF EASTERN PORTLAND

Fieldwork was done in the eastern part of Portland in the districts of Hectors River, Belle Castle and Scots Run (see Map 1, page 22). These districts are located on the lower slopes of the John Crow Mountain which form cliffs and bay-beaches where they meet the sea.

As is typical of the Jamaican countryside, the various businesses strung out along the roads form the heart of these districts. There are the usual bars, shops and post office. In Hectors River there are also two schools, two churches, the shops of several artisans (welder, upholsterer, shoemaker, tailor and carpenter), playing fields, a community center and a banana buying station. Behind the commercial areas along the roads and at intersections are dwellings with small yards in which, despite their small size, there are always fruit trees



Map 1

The districts of Hectors River (including Happy Grove), Scots Run and Belle Castle. Source: C.C.P.C. (1970).[4]

present. In the hills where land has been acquired from the breaking up of estates, farms range from three to fifty acres. Where these farms also serve as the residences of farmers, dwellings appear widely dispersed.

These three districts were chosen for the following reasons: First, although they are administratively distinct, in many ways they constitute a single community; second, this community as a whole provides a good cross-section of Jamaica's rural class structure, especially because of the inclusion of Happy Grove area and Happy Grove secondary school. This allows us the widest perspective on the relationship between class organization and cropping pattern. Finally, each of these districts affords us a different view of the relationship between classes and intercropping. In Hectors River, we will look at the relationship between tenancy and cropping patterns. In Happy Grove School, which is part of Hectors River District, we will look at the impact of the state, including the educational establishment, on cropping patterns. In the districts of Belle Castle and Scots Run we will look at the importance of trees in the intercropping of proprietory small farmers.

The information for this dissertation was collected primarily by means of participant observation, formal and informal interviews and through the use of a tape recorder and a camera.

During the research, I was a teacher of geography and music at Happy Grove Secondary School. This was my source of economic support during the period of research and a major determinant of my social participation in the life of the community. The school was important in this research for many reasons, some that were clear to me before I began and many that became clear only after the work was in progress.

First, being a part of Happy Grove gave me my widest day-to-day contact with people. In many rural areas, the school is often the site of the largest regular gathering of people in the countryside, comparable only to political meetings during election time. It is a social situation in which people of different ages, groups, classes and religious affiliations interact on a regular basis; differences in their social attitudes are clearly brought into focus. With a community made up of the maintenance and administrative staff, students, teachers, the headmaster and the members of the board, the school allowed me the opportunity to encounter a wide cross-section of people from the surrounding districts of Hectors River, Belle Castle and Scots Run, from the other districts of eastern Portland, and from as far away as Port Antonio and Morant Bay, both over twenty miles from Happy Grove. In addition,there were teachers who came from other parts of the island and some twelve foreign

teachers who came from Pakistan, Canada, America, England and, for a brief time, from Australia.

Second, getting to know the children individually and collectively, in different kinds of settings both at and outside school, provided me with valuable insights into social life and into the uses of plants in eastern Portland. Although children do not earn wages, they have a regular role in the organization of social labor in rural society. One is made aware of this when some children stop school completely or come to school intermittenly skipping days randomly or regularly as on Fridays. Others come to school in the mornings tired because of the work they do. Their tasks include going to the shops, collecting animal feed, sweeping the yard, fetching water, tying animals and carrying messages. Of course, I was particularly interested in the extent to which children were involved in picking and processing fruits and other floral products. After much experience, I came to respect their knowledge of the local settlement vegetation, particularly the distribution of fruit trees such as mango, guinep, jackfruit and star apples.

Third, the existence of an agricultural program at Happy Grove and the use of the school's thirty-five acres was another important source of insight into plants and social life in Portland. Through the school's agricultural program were expressed the attitudes of students,

teachers, parents and the aims of the Ministry of Education and of the Government. Happy Grove was also the recipient of plants brought to the campus by Board members, teachers, students and staff. The school's plant collection included June Roses (Lagerstroemia indica), golden-showers (Cassia fistula), casuarinas (Casurina equisetifolia), flamboyants (Delonix regia) and Barbados cherries (Malpighia punicifolia).

Fourth, the school was important because it served as a market place for different groups. This was true not only for the main food processors of boxed drinks, candies and flour products such as crackers, biscuits and bread but also for those who came to the school to sell fruits, vegetables, root crops, fish, lobster, janga (crawfish) and honey. The school was not only a market for selling; through its agricultural program it was also a regular supplier of eggs, chicken and pork to the districts.

Also important at the school was the use made of plants in articles of personal ornamentation, in decorations, in arts and crafts and as ornamentals in the school grounds. With regard to the school's cookery program, I was especially impressed by the wide range of culinary products made from the plants of the area. Of particular interest were the many ways in which fruits were used to make beverages (especially wine), preserves and jams. This was of special importance in attempts to

substitute for commodities that were no longer imported or were in short supply.

The conflict between the school and the community over the use of the open grassland areas (which were part of the school grounds) as pastures also proved instructive. In Chapter 4 I show how this dispute was a critical factor in determining the use made of the school's thirty-five acres.

Geography and music were my main areas of responsibility at Happy Grove and both were useful in my research though for different reasons. Teaching geography taught me how the children viewed such topics as climate, weather, agriculture, industry, human settlement, transportation systems and urbanization. The Cambridge and London Ordinary Level geography syllabus encourages students to study their home environments. One of the questions that appears frequently asks the students to report on a field trip or to describe the area in which they live. It was in this context that the upper forms studying geography made a study of Innes Bay and of the northeastern Portland coastline. The aim of our study was to examine the physical characteristics of Innes Bay, the process of wave action and coastal erosion and the resulting formation of features such as arches, stacks, caves and small off-shore islands. We also studied the plants found there and the social uses that were made of the whole bay with its bay-beach and surrounding

headlands. To accomplish this task, the four forms involved were divided into several groups, each working on a different area. Written notes were made, including sketch plans, diagrams and interviews. After this experience, many of the students became interested in helping me with my study. They brought different kinds of edible fruits and gave me information they thought would be of interest. In these situations I got my clearest understanding of the different names given to the same plant in different areas, that certain fruits were associated with different ethnic groups, that there were commonly held ideas about certain plants and their properties and that children often knew well the distribution of edible fruit trees.

Music was an important part of social life in Jamaica and an important part of the way in which fieldwork was conducted. Music in Jamaica could well be described as "the coconut" of social activities. The coconut is distinguished as being by far the most useful plant in East Portland and on the northeastern coast in general. All parts of the plant are used, and it is known for "being in everything"--food, beverages, utensils, construction, handcrafts, fuel, toys, etc. Like the coconut, music enters into all spheres of Jamaican life.

Through music I was involved with the political

parties, the churches and the youth clubs. On National Heroes Day the school's music and dance groups performed in the Port Antonio (parish capital) square. The school's band performed at the ceremony dedicating a site in Moore Town to Nanny, a famed leader of the Windward Maroons. We played at the ground breaking ceremony for the construction of a small business complex in Port Antonio and we performed several times at Trident Hotel and Dragon Bay Hotel (in Portland) as part of the Government's (and the Tourist Board's) "Jippi Jappa" program to encourage tourism. We participated in the second Caribbean Festival of Arts (CARIFESTA) which was hosted in Jamaica in August of 1976. A high point of the school's artistic achievement was our participation in the "Awards Concert" which was a presentation of the best of the year's National Festival selected from around the island. There were other occasions which will be mentioned as they become relevant to this study.

Music in Jamaica strongly reflects the island's culture. In addition to the wealth of social contact made possible through music, it was also the basis for an intimate view of language and ideology in Jamaica. In a country where reading is the privilege and hence the habit of few, music and oratory become critical modes of expressing and experiencing popular culture. The Rastafarian philosophy has dominated popular culture in

Jamaica over the past fifteen years. Through the music of Bob Marley and the Wailers, Burning Spear, Count Ossie, King Tubby and many others, the message has not only been conveyed to Jamaicans but to the world. Musicians sing of Haile Selassie, Marcus Garvey and the struggles of "African people at home and in exile." They sing innumerable variations on themes of peace, love, and justice and of the destruction of the "Babylon system." They sing of the wonders and might of "Jah," his love of the "righteous" and his plan to destroy the "wicked." The development of the Rastafarian movement and its relation to language, ideology and class conflict is an important aspect of social life in contemporary Jamaica and this will be further examined in Chapter 8.

In this research, I was primarily interested in gathering data on intercropping from the vantage point of farmers' conceptions of the plants they were cultivating, why they chose those plants, their perceptions of their characteristics of growth and reproduction and their value for household use and for sale. In collecting these data, a key research stragegy was a formal, yet open-ended interview based on a research notebook that I designed for this purpose.

After I had settled at Happy Grove, one of the first things I did was to make up a list of all the species and varieties of useful plants which were known

to be in the area and I began some initial grouping of them according to their categories of use, such as root crops, vegetables, ornamentals, medicinals, spices, tea bushes and so on. I then went over this list with five men all of whom were over thirty-five years of age, had many years of farming experience in the area and were now members of Happy Grove's grounds staff. I added those plants that I had not initially recorded and also made notes of areas of contradiction in the discussion of plants, particularly where these concerned their names, their characteristics of growth and appearance and their different uses. For the estates, school grounds, yards, fields and other areas I examined, I used separate booklets. I also used these notebooks when I interviewed higglers.[6] These booklets were essential in pursuing my objective and proved effective in dealing with the large number of plants discussed in this thesis.

In Chapter 2 I present a brief history of Jamaica paying particular attention to the settlement of the island. Settlement refers to the relatively permanent structuring of space which has been established in Jamaica with the construction of buildings, roads, fences, etc. and this (in part) determines the distribution of plants in areas of human activity. In fact, the cultivation of trees is part of the relatively permanent structuring of space. Plants intercropped in Jamaica

have come to the island from all parts of the world. Chapter 3 deals with botanic gardens and plant introduction to Jamaica especially as this relates to the island's position in the formation of the "modern world system" (Wallerstein 1974). Native and exotic plants within the areas of human activities constitutes Jamaica's settlement vegetation of which intercropped yards and fields are a part. This is explored in Chapter 4. Given the importance of trees in understanding the link between social class and cropping pattern, I deal in Chapter 5 with trees in the settlement area and their value in the social life of Jamaicans. Chapter 6 and 7 focuses on the types of intercropping practiced by different categories of small farmers. The former focuses on tenants; the latter on proprietors. In these chapters I examine how social class affects cropping pattern, especially where this involves the cultivation of trees. With the efforts being made by the government and private individuals in Jamaica to improve agriculture (particularly as this relates to increasing the local production of food), the theft of agricultural crops is a serious problem; I deal with this in Chapter 8 focussing on the impact of rural theft on cropping patterns. In my conclusion presented in Chapter 9, I discuss agricultural development and local food production as these are related to continued class conflict, the politics of land and the development of

Jamaica's economy. I also explore possibilities for advancing agricultural production in Jamaica as suggested by the results of my research.

FOOTNOTES

Chapter 1

1. "Capture" in Jamaica is a popular term which refers to the deliberate illegal occupation of land, primarily of the large estates.

2. Many individuals in rural areas resist having to work on the large estates because of the social stigma attached to it and because of the demeaning character of social relationships there. M. G. Smith (1973:66) has noted, for example, that "The 'labor shortage' issue [in Jamaica] was not one of labor scarcity but how estates recruited and treated workers and how well the traditional expectations of the rural laborer were fulfilled." He also points out that "In many areas with alleged labor shortages...owners of small and medium-sized farms had no difficulty in getting as many temporary workers as they needed and often had to discourage job seekers" (ibid.).

3. These descriptions of intercropping in Jamaica are presented by various authors whose works will be discussed in detail in Chapter 2 and 4.

4. In the original source (C.C.P.C. 1970), Scots Run is identified as Seaside. During the period of this research, Seaside referred to the Happy Grove area.

5. Though the banana is a large herbaceous plant, it will be referred to as a tree in this thesis for reasons that will be made clear in Chapter 3.

Chapter 2

JAMAICA: THE HISTORICAL BACKGROUND

This chapter provides a brief sketch of the history of Jamaica. There are many perspectives from which this could be done. My focus is on the creation of the island's settlement pattern. This is essential for understanding intercropping which is the customary practice of most farmers. Settlement is emphasized here because it best reveals the context within which we can understand the complex relationship between the constellations of plants and human life characteristic of Jamaica. I view settlement as the relatively permanent structuring of space which conditions social life as well as the distribution of plants, particularly wild plants.

Jamaica's settlement as a whole can be differentiated into three basic types. There is Kingston the island's capital and only city. There are the small coastal and inland towns which have grown along with harbors and roads in relation to large commercial estates, small subsistence farms, bauxite production and tourism. Finally, there are the rural districts with commercial activities (such as shops, bars, artisans, etc.) strung out along the roads or concentrated at intersections and with dispersed farm-dwellings. Understanding these areas as they have been determined by

domestic, economic and ideological activities in relation to the island's relief, climate, drainage and ecology takes us to the heart of Jamaica's history. We will first look at the growth of Kingston and the towns which is to a large extent the history of commercial agricultural production primarily on the island's coastal plains and in its river valleys and inland basins. Then we will look at the settlement of the mountainous interior the form of which is closely related to African Jamaican resistance to slavery and wage-labor on large estates. The growth of Kingston, the towns and rural districts is dealt with in the context of the post-Columban history of the island as it is divided into five major periods. These are: (1) the period of Spanish colonization from 1494 to 1655, (2) the capture of the island by the British in 1655 and the rise and decline of plantation sugar production, (3) the abolition of slavery in 1838 and the settlement of the island's interior, (4) the 1860 rebellion in Morant Bay and the rise of banana production in the northeastern region and, finally, (5) the general rebellion of 1938 and the post-war development of bauxite mining and tourism.

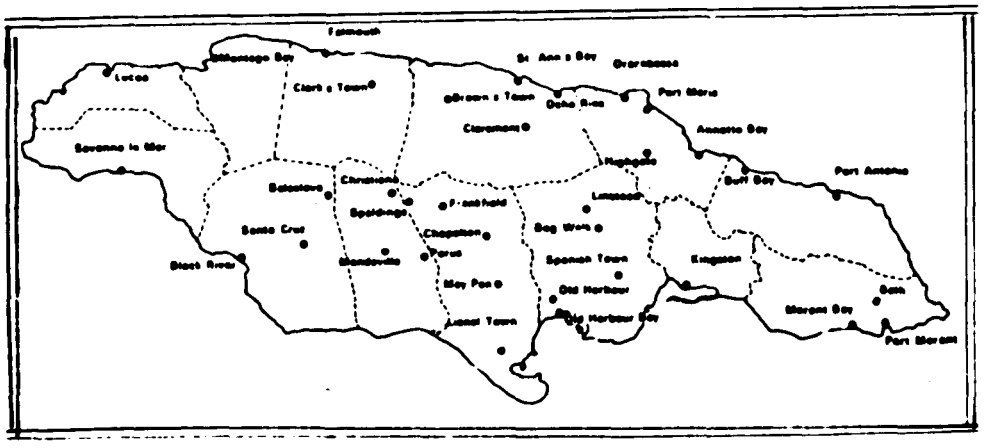
The Spanish and the Earliest Post-Columban Towns of Jamaica

The establishment of the earliest post-Columban towns in Jamaica is best understood in the context of the first 163 years of the Spanish in the New World. The

northern islands of the Caribbean archipelago was first discovered, explored and colonized between 1492 and 1500. During this time Hispaniola was the center of Spanish interest in the new world. Between 1508 and 1515, the Spanish expanded to Jamaica, Puerto Rico, Cuba and Panama. The years from 1515 on saw the Spanish penetration of the America mainland.

Jamaica was discovered by Columbus in May of 1494 while exploring the southern coast of Cuba on his second voyage to the New World. Columbus, after some confrontation with the Indians, landed and took possession of the island "with the usual formalities" (B. Edwards 1972:118-119). While Hispaniola became the center of Spanish imperial interest in the New World between 1500 and 1508 and served as a base from which further explorations and discoveries were made, Jamaica remained largely unexplored. The island was peripheral to Spanish interest. It showed little promise of gold or other sources of wealth and remained unsettled after fourteen years in Spanish possession.

Jamaica was first settled by the Spanish in 1509 during the period of Caribbean expansion. The island's first town was established in what is now the parish of St. Ann[1] on the north coast within a mile of St. Anns Bay, the parish's finest harbor. A fort was built as well as the Governor's palace, a monastery and a theatre. The town of New Seville was, however, never



Map 2
Towns of Jamaica - Source: Clarke (1974:49)

completed. It appears that while still in the process of being built it was abruptly abandoned after only fifteen years. The abandonment of New Seville has been variously attributed to the "unhealthiness" of its wet tropical marine climate, the loss of its labor force with the destruction of the aboriginal Arawaks, the absence of gold, the destruction of fields by ants, the exposure of the settlement to the attacks of French pirates, and the unsuitability of the location for commerce. Whatever particular events led to the abandonment of New Seville, it is clear that the drier coastal plains and river valleys on the island's south were suited to animal husbandry and hunting which became the economic basis of the island as a Spanish supply colony. It was during the years of Spanish penetration

of the American mainland from 1515 onward that Jamaica found its economic niche in the Spanish imperial scheme. The island became a supplier of provisions, its chief products being hog lard, salted pork, beef, horses, hides and cocoa (Long 1972:80).

In fulfilling this economic role, the island's southern plains were ideal. They stretch for some twenty miles west from the Liguanea plains of Kingston through the St. Jago Plains of St. Cahterine to the Vere Plains of Clarendon. Describing the Liguanea plains after the island had been captured by the British, Bryan Edwards (1972:149) wrote:

> This part of the country was also abundantly stored with horned cattle and horses, which ran wild in great numbers; and the first employment of the English troups was hunting and slaughtering the cattle, for the sake of the hides and tallow, which soon became an article of export. It was supposed by Sedgewicke, that the soldiers had killed 20,000 in the course of the first four months after their arrival; and as to horses, "they were in such plenty (says Goodson) that we accounted them the vermin of the country.

It was the development of the island's economic life as a Spanish supply colony that was to lead to the abandonment of New Seville and the development of Jamaica's second town, St. Jago-de-la-Vega. Today it is known as Spanish Town and is, next to Kingston and Montego Bay the third most important town of the island. Spanish Town was well sited on one of the most extensive

areas of flatlands in Jamaica; it was close to the Rio Cobre River, a source of fresh water, and was on one of the major routes of the Spanish across the interior highlands. In addition it was only six miles from the harbors on the southern coastline. This was close enough for Spanish shipping and trade, but far enough away to defend itself against attacks from privateers, pirates and other European imperial powers. For 245 years, the favored location of Spanish Town made it both under the Spanish and the British, the island's chief town and capital.

The Spanish move to the southern plains becomes especially important when we consider that from as early as 1509 the island was regarded solely as an area for producing supplies. Before Juan de Esquivel was sent to Jamaica as Governor in 1509 by Diego Columbus, the island was placed under the authority of officials in Hispaniola "as a provisioning area for their mainland venture, but they apparently had been unable to persuade any followers to assume the mundane function of supplying cassava and other foodstuff from an island without gold" (Floyd, 1973:109). While King Ferdinand did not oppose Diego Columbus' efforts to settle the island, Floyd (1973:110) points out that he wrote urging him

> ...to see that the island produced all the food needed for the precarious Panama venture, but he soon lost confidence in Esquivel who failed to find gold, for he

> judged this due to his lack of knowledge or initiative. He felt, however, that Esquivel was a poor manager of the royal conucos (Indian farms) and farms, which he had charged with laying out, and he had established but one town whereas the contract of Nicuesa and Ojeda, which Esquivel in effect was carrying out, called for a minimum of two. One was especially needed on the south coast of the island, partly because the main salt deposits for the salt pork trade was there, but even more because by 1513 Ferdinand was planning the great Pedrorias expedition to Panama, largest to America since Ovando's in 1502. The two thousand or so expeditionaries would surely face starvation if not well supplied from Jamaica. His fears proved well founded.

For the largely pastoral pursuits of the Spanish and their production of beef, hog lard, salted pork, horses and hides the Southern Plains were ideal. They became the economic foundation of Spanish settlement in Jamaica. It is clear that when the Spanish abandoned New Seville, they abandoned not only the town but also the whole north coast with its hills and its wet climate. The well known 18th century British historian Bryan Edwards (remarking on General Venables' account of the island just after it had been captured from the Spanish in 1655) wrote: "The reader will perceive that no mention is made of the north side of the island; which gives room to conclude, as was undoubtedly the fact, that it was one entire desert, from east to west, totally uncultivated and uninhabited" (1972:149).

European Imperial Competition and Port Royal

Chronologically, Jamaica's third town (now only a small settlement) was the infamous Port Royal. It developed at the end of a narrow strip of land seven and one-half miles long that encloses on the south eastern coast. Port Royal occupied a strategic location at the entrance to the Kingston Harbor. It was only a small settlement when the British captured the island in 1655. By 1692, however, it had achieved the reputation of being the richest and wickedest city of the New World.

Port Royal owed its origin to the competition among Europeans for the control of the New World. From the start of the Spanish conquest of the American mainland and its wealth in gold and silver, their claim to monopoly was challendged by the French and later by the Dutch and English.

As Augier et. al. (1969:28) points out: "when the first English privateering voyages were made, England was on the verge of war with Spain." Following the capture of Jamaica in 1655 until the end of the 17th century, Port Royal developed as the headquarters, chief port and illicit trading center for English buccaneers at a time when piracy--the pillaging and razing of Spanish settlements and attacks on Spanish treasure and supply ships--had become the principle expression of European competition in the New World. It was through the manipulation

of piracy that the French and English forced Spanish recognition of their colonial claims, and it was not until then that piracy was finally suppressed.

In 1692, most of the city of Port Royal was leveled by an earthquake and a large portion of it sank beneath the sea. In 1709, after attempts had been made to rebuild the town, it was virtually destroyed by fire. Describing it at the end of the eighteenth century, Edwards (1972:204-205) wrote:

> Port-Royal, once a place of the greatest wealth and importance in the West Indies, is now reduced, by repeated calamities, to three streets, a few lanes, and about two hundred houses. It contains however the royal navy yard, for heaving down and refitting the King's ships; the navy hospital, and barracks for a regiment of soldiers. The fortifications are kept in excellent order, and vie in strength, as I am told, with any fortress in the King's dominions.

The Settlement of Jamaica in the 18th Century: Sugar and Towns

While the second of the six periods of Jamaica's history begins with the British capture of Jamaica from the Spanish in 1655 and the rise of Port Royal, it was the increasing cultivation of sugar at the end of the seventeenth century and through the eighteenth and early nineteenth century that laid the foundation of Jamaica's present day settlement pattern. This process involved three important factors: the cultivation of sugar cane

on the flat alluvial coastal plains and in river valleys and inland basins, the location and development of suitable harbors close to the plantations and the construction of roads following the lines of least resistance around the coast and along the river valleys through the mountains.

At the points where roads and harbors met developed the island's coastal towns. They became centers of commercial activities. From them sugar and its derivatives--rum and molasses--as well as cocoa, coffee, logwood, pimento and arrowroot were shipped out, and through them food, clothing, tools, lumber and manufactured goods were imported. These coastal towns also gave rise to markets for locally produced foods (and other products) and provided sites for grocery shops, hardware stores, clothing stores and bakeries. The majority of these settlements became parish capitals. They served as centers for the local elites. Churches were built. In some cases, forts, municipal buildings and (in time) schools were also constructed. By 1768 the basic settlement pattern of the island as it was determined primarily by the production of sugar was laid out. The following table was derived from data provided by Long (1972) in his discussion of the settlement of the island at that time.

COUNTY OF SURRY		
PARISHES	**TOWNS**	**HAMLETS**
Kingston Port Royal	Kingston, the county-town Port Royal	
St. Andrew		Half-way Tree
St. David		Yallah's
St. Thomas in the East	Bath	Morant
Portland	Titchfield and More, Negroe-town	Manchineel
St. George	Crawford, Now Charles-town, Negroe-town	
COUNTY OF MIDDLESEX		
St. Catherine	St. Jago de la Vega (Spanish-town), the county-town	Passage Fort
St. Dorothy	Old Harbour	Market
St. John		
St. Thomas in the Vale		
Clarendon		Crofs; Chapel
Vere		Carlifle Bay
St. Mary	Scots Hall Negroe-town	(1) Rio Nuevo (2) Port Maria and (3) Saltgut
St. Anne	St. Anne	(1) Laughlands (2) Runaway Bay
COUNTY OF CORNWALL		
St. Elizabeth	(1) Lacovia (2) Accompong Negroe-town	Black River
Westmoreland	Savannah la Mar, the county town	Queen's Town, alias Beckford Town, Savannah
Hanover	Lucea	
St. James	(1) Montego (2) Furry's, Negroe-town	
Trelawny	(1) Trelawny, Negroe-town (2) Marthabrae	

Table 2

Jamaica's Counties, Parishes and Hamlets in 1768

Source: Adapted from Long (1972:1-234)

Table 2 shows that Long distinguished four levels of administration and settlement in Jamaica in the 1770's. The highest level comprised the three counties of Surry, Middlesex and Cornwall. The next level consisted of the twenty parishes into which the counties divided. Within the parishes were the towns and "hamlets." Eight of the towns were the port-towns: Kingston, Port Royal, Titchfield, St. Anne, Savannah la Mar, Lucea, Montego and Marthabrae. Six of what Long described as "towns" were Maroon settlements located in the rugged Cockpit Country and in the Blue Mountains. These were the settlements of Africans who had resisted the efforts of the British to re-enslave them following the defeat of the Spanish in 1655 and Africans who had fled the plantations. There was Moore Town in the parish of Portland, Charles Town (then in the parish of St. George which is now part of Portland), accompong in the parish of St. Elizabeth, Furry's in the parish of St. James and Trelawny in the parish of Trelawny. The remaining two settlements which Long described as "towns" were combined route and market towns on the main coastal road across the southern plains. These were Spanish Town in the parish of St. Catherine and Old Harbor which was then in the parish of St. Dorothy and is now a part of the parish of Clarendon.

When Long was writing in 1768, Spanish Town was the capital of the island. Laid out in grand Georgian style, it was the center of social and political life of Jamaica. Describing the town at the beginning of the 1790's, Bryan Edwards (1972:203-204) wrote:

> St. Jago-de-la-Vega is situated on the banks of the river Cobre, about six miles from the sea, and contains between five and six hundred houses, and about five thousand inhabitants, (including free people of colour. It is the residence of the governor or commander in chief, who is accommodated with a superb palace; that the legislature is convened, and the Court of Chancery, and the Supreme Court of Judicature, are held.

Following the destruction of Port Royal in 1692, Kingston had by 1768 become the second town of importance in Jamaica.

Between 1700 and 1768 the port town of Savannah la Mar in the southwest developed as the most important town both in relation to the growing of sugar on the plains of Westmoreland and in relation to the whole of Cornwall County. Describing Savannah la Mar in the 1770's when it served as the County town of Cornwall, Long wrote: (1972:200) "The town, at present is but small, consisting only of one tolerable street and about fifty or sixty scattered houses. Most of the produce of Westmoreland, besides some of what belongs to St. Elizabeth and Hanover, is shipped from this port."

On the northwest coast of the County of Cornwall three port towns developed. These were Lucea in the

parish of Hanover, Montego Bay in the parish of St. James and Marthabrae in the parish of Trelawny. The most important of these port-towns was Montego Bay. In 1768, though Savannah la Mar had developed as "the metropolis of Cornwall," Long (1972:200) wrote "... Montego Bay seems to tread close on its heels, and in a few years will probably dispute this preeminence." The fact is the northwest coast was then coming into prominence. Its development had long been restricted because of the long war between the British authorities and the Maroons who controlled the rugged interior hills. Once a peace treaty was signed in 1734, the northwest coast was able to develop rapidly at a time when the production of sugar was approaching its most prosperous years at the end of the eighteenth century.

With the growing production of sugar in the northwestern parishes of St. James and Trelawny, the best harbor of each developed as a town; in St. James there was Montego Bay and in Trelawny there was Falmouth. When sugar production was at its height at the end of the eighteenth century, Falmouth was one of the finest towns in Jamaica. Laid out on a regular grid pattern as was Kingston, it contained fine Georgian architecture, some of which still survives. The parish of Trelawny was created with the partition of the parish of St. James. The first settlement established in Trelawny following

peace with the Maroons was Marthabrea, named after the parish's major river and initially parish capital. Describing the settlement as it was in 1768, Long (1972: 221) wrote:

> The village of Marthabrea stands about two miles above the mouth [of the river], on a rising ground not far from the bridge, and consists of about thirty houses or more; as the late partition of St. James has of consequence tended to establishment of a new town here, which may grow in size in proportion as the lands, at present unsettled in the parish, are brought into culture.

Marthabrea was not to continue as the capital, however. In only ten years, the silting of the river mouth closed it to all but small craft. Writing of the origin of Falmouth, White and Wright (1969:206) state:

> ...about 1790 a new town site was acquired by the purchase of 170 acres at Palmetto Point from Edward Barrett of Cinnamon Hill. Barrett presented the land for a church and the rest was sold off in lots, mostly to the proprietors of Trelawny sugar estate for residential sites; by 1793 there were more than 150 houses where twenty years earlier there had only been one. The principal streets were patriotically named after the royal family and eighteenth-century heroes: King, Queen, Prince's, George, Charlotte, Rodney and Pitt streets; somewhat later came Victoria, Albert, Wellington and Stanley streets. The parish had been after Sir William Trelawny who was Governor at the time it was formed and Falmouth was given the name of his birth-place in Cornwall, England, which was also the usual point of departure for convoys to the West Indies.

Emancipation and the Development of Towns

The nineteenth century saw the political and economic decline of the planters in Jamaica. Among the more important reasons for this were: the industrial development of England and its interests in "free trade" which came into conflict with mercantilist monopolies; the competition from French produced sugar and the exploitation of European beet as an alternative source of sugar; the lack of capital in Jamaica and the difficulty of obtaining credit to make technical improvements in sugar production; the growing resistance of the Africans on the plantations and the development of the abolition movement; and, finally, the ending of the slave trade in 1804 and emancipation in 1838.

Two important changes followed emancipation. The first was the decline in sugar production and its effects on the whole social structure to which it had given rise. Although Kingston was able to grow after 1838 because of the expansion of its commercial activities, there was a general decline of the sea-port/parish capital towns, especially Montego Bay and Falmouth on the northwest coast. The second change was the settlement of the uplands by small farmers. This development was the basis for the growth of inland towns in Jamaica.

> After emancipation the decline of many estates and the volume of exports from and importation to them, was matched by the rapid rise of the island towns and villages. Not only did internal trade vastly increase but, as the small farmers and others entered into the production of export crops and labourers earned their money wages and demanded goods to buy with their earnings, the villages gradually joined the remaining estates in the trade-route pattern ... The general picture of change would therefore be as follows: in the coast or old port towns there was an expansion of trading as distinct from shipping business (for example at Savannah la Mar, Port Antonio, Falmouth and Kingston); on the estate there was a general process of disintegration as estate populations tended to disperse (especially in those areas where estates were abandoned or greatly reduced in size); the old, established interior towns that lay on or near the main roads or new settlements tended to develop as trading centers (for example, Old Harbour, Four Paths, Duncans, Mandeville and Chapelton); and fourthly, there was the building of new towns, villages and settlements, throughout the island by the emancipated population. (Hall 1959:209-210).

The Banana Industry and the Development of Towns

By 1865 all the towns of Jamaica were established or existed in embryo form. From then on the changes that occurred reflected the development of the island's economy in relation to the commercial production of bananas and to the exploitation of tourism and bauxite.

The history of Jamaica between 1865 and 1938 is largely the history of sugar and bananas. The banana came from Southeast Asia to the Guinea Coast of West

Africa, from where Portuguese slave traders took it to the Canary Islands. It was brought from there to the New World in 1516, when Friar Thomas de Berlanga introduced it to Santo Domingo. McFarlane (1964:38) writes that:

> The introduction of the banana plant into Jamaica is believed to have taken place shortly after its arrival in the New World. The island was at this time a Spanish possession and this rendered such a development easy since there was a regular travel between Santo Domingo and Jamaica. There is ample evidence that banana cultivation was a feature of Agricultural practice during the occupation of Jamaica by the Spaniards. No details exist, however, as to the particular varieties most favoured at this time or as to the extent of the cultivations engaged in growing the fruit. It is commonly held that banana was, until the early nineteenth century, a crop cultivated only by slaves in their personal plots of "ground."

Although the Spanish introduced bananas to Jamaica, the variety that became the foundation of the island's industry was not introduced until 1835. While visiting Martinique, the French botanist and planter Francois Poyat was impressed by the variety called Gros Michel and he introduced it to his coffee estate in Jamaica (Hart 1954:212; McFarlane 1964: 38-39). This variety was the staple of the island's banana trade until it was ravaged by Panama disease in the first third of the twentieth century.

Jamaica's overseas banana trade began with

Captain George Busch. As a means of supplementing his supplies from Cuba for the New York market, "In May, 1866, he put in to Oracabessa and obtained five hundred stems and then sailed on to Port Antonio where he completed his cargo of bananas" (McFarlane 1964:39). He was the first to take regular shipments of bananas from Port Antonio and Oracabessa, having "secured the cooperation of two peasants in St. Mary and Portland to supply them with fruit" (Beckford 1968:9). If, however, Busch initiated the Jamaican banana trade, it was Captain Lorenzo Dow Baker and the establishment of the United Fruit Company that transformed it and stimulated the rapid expansion of the industry between 1877 and the Second World War. Baker was the captain of an eighty-five ton schooner sailing out of Wellfleet, Massachusetts. McFarlane (1964:39 states:

> Starting with trial shipments of 160 stems in 1870 and of 400 stems in 1871, Capt. Baker found that there was much profit to be made from trade in Jamaican bananas. By 1877 Capt. Baker had established himself in cultivation in Jamaica and by the early 1880's there were about three ships plying between Jamaica and the U.S.A. The year 1877 is regarded as the beginning of a regular banana trade with the U.S.A. Capt. Baker's original enterprise had led to the formation of the Boston Fruit Company, which later was absorbed in the United Fruit Company. By the late 1880's Capt. Baker's Boston Fruit Company had acquired extensive holdings of banana land in Jamaica amounting to 13,000 acres.

Following the formal incorporation of the United Fruit Company on March 20, 1899, it became an organization controlling plantations in Boston, New York, Philadelphia, Baltimore, New Orleans, Cuba, Jamaica, Dominican Republic, Costa Rica, Panama, Columbia and Nicaragua. In Jamaica, Stone (1974:151) reports that the rapid growth of the fruit trade

> ...thrust the American owned United Fruit Company into a leading position of influence within the economic elite at the expense of the traditional local planter class. The Company not only became the largest private owner of land holdings in the island by 1938 but established control over large sections of the small and middle peasantry, rural middle class and traditional planters through employment, credit, crop liens, banana supply contracts, agency and produce dealings relationships and the manipulation of the local legislature. The effect was to divide the planter class into that sector allied with and dependent on United Fruit and another sector which adopted a nationalist posture to United Fruit's growing banana monopoly power and domination of the farming sector.

The wet lowland areas of the parishes of the island's east and northeast (including parts of St. Thomas as well as the parishes of Portland and St. Mary) provided ideal conditions for the cultivation of bananas. What sugar had done for the south and northwest sea-port and parish capital towns, banana was to do for those on the north coast. These towns flourished with the development of the banana trade. The sea-port and parish-capital towns of Lucea (Hanover), Falmouth

(Trelawny), St. Anns Bay (St. Ann), Port Maria (St. Mary) and Port Antonio (Portland) all prospered. It was, however, Port Antonio, the sea-port and parish capital town of Portland that benefited most.

Because of its mountainous topography and wet climate, the parish of Portland was not ideal for the cultivation of sugar. When sugar production declined generally during the first half of the 19th century, Portland was one of the areas in which estates producing sugar were drastically reduced in numbers. Correspondingly, it was an area in which there was an early development of small farmers. Anthony Troppope (1860:32) in describing his trip across the island to Port Antonio in 1860, gives a picture of the area just prior to the development of the banana trade.

> ...Port Antonio was once a goodly town, and the country round it, the parish of Portland, is as fertile as any in the island. But now there is hardly a sugar estate in the whole parish. It is given up to the growth of yams, cocoas and plantains. It has become ground for ... [Africans] and the palmy days of the town are of course gone.

With the growing production of bananas, Port Antonio became the headquarters of the United Fruit Company and the island's first tourist center. Superceeding Spanish Town, it became after Kingston, the island's second town of importance.

> The half century from 1868 to 1918 was indedd a remarkable one for Port Antonio. In this period the population increased by over 300% and the town boomed. The town boasted a first-class hotel and a tourist trade, four wharves, packed churches on Sundays, a modern market, court house, revenue office, municipal park, a first-class cricket field at Carder Park, modern stores with male clerks and floor walkers, concrete drains, electricity and a modern reservoir with mechanical pressure filters - the first of its type in the island. The American dollar was more evident than the Jamaican bank notes (Anonymous: written in mid 1950's).[2]

Tourism, Bauxite and the Rank Order of Towns

Jamaica's towns were for the most part established in 1860. To understand how they changed with the development of bananas, bauxite and tourism, we may refer to Clarke, who in his book Jamaica in Maps (1974:48-49) ranks the island's towns in order of population size for the years 1943, 1960 and 1970. This information is presented in Table 3.

Of the nineteen towns listed for 1943, fourteen were parish capitals. Of these fourteen, eleven were also ports; the three remaining parish capitals were route towns located on the island's main coastal road across the Southern Plains: Spanish Town (St. Catherine), May Pen (Clarendon) and Mandeville (Manchester). In addition to the fourteen parish capital towns, two ports were not parish capitals: Annato Bay (St. Mary)

	1943	1960	1970
1.	Kingston	Kingston	Kingston
2.	Spanish Town	Montego Bay	Montego Bay
3.	Montego Bay	Spanish Town	Spanish Town
4.	May Pen	May Pen	May Pen
5.	Port Antonio	Savanna-la-Mar	Mandeville
6.	Savanna-la-Mar	Mandeville	Savanna-la-Mar
7.	Morant Bay	Port Antonio	Port Antonio
8.	Port Maria	St. Anns Bay	Morant Bay
9.	St. Anns Bay	Morant Bay	St. Anns Bay
10.	Christiana	Ocho Rios	Ocho Rios
11.	Annotto Bay	Chapelton	
12.	Brown Town	Christiana	
13.	Falmouth	Old Harbor	
14.	Linstead	Port Maria	
15.	Mandeville	Brown Town	
16.	Old Harbor	Linstead	
17.	Lucea	Falmouth	
18.	Black River	Annatto Bay	
19.	Buff Bay	Old Harbor Bay	
20.		Higate	
21.		Black River	
22.		Buff Bay	
23.		Bog Walk	
24.		Lucea	
25.		Porus	
26.		Lionel Town	
27.		Frankfield	
28.		Bath	
29.		Clarkes Town	
30.		Santa Cruz	
31.		Claremont	
32.		Oracabessa	
33.		Balaclava	

Table 3

The ranked ordering of towns by population size - 1943, 1960 and 1970.

Source: Adapted From Clarke (1974:48-49)

and Black River (St. Elizabeth). The remaining three towns were both route and market towns: Linstead (St. Catherine, Brown Town (St. Ann) and Buff Bay (Portland).

After the second World War, changes in the island's economy affected the relative positions social activities and sizes of towns. Most important of these changes were the decline in banana production (because of disease, hurricanes and soil exhaustion) and the development of tourism and bauxite production. The decline in Jamaica's banana industry after 1911 resulted in a decline in all the sea-port parish capital towns, as well as in other sea-port towns involved in shipping bananas. Port Antonio which was second to Kingston until the 1930's was ranked fifth in 1943 and seventh in 1960 and 1970. Likewise, St. Mary's sea-port and parish capital town of Port Maria (which was a major port for shipping bananas at the height of the trade) was ranked eighth in 1943, fourteenth in 1960 and was one of the parish capitals that did not appear in the top ten towns that were ranked for 1970. Other towns affected by the decline in banana production included Annato Bay in St. Mary, which was ranked eleventh in 1943, eighteenth in 1960 and did not appear among the top ten for 1970. Lucea was ranked seventeenth in 1943 and twenty-fourth in 1960. Buff Bay was ranked nineteenth in 1943 and twenty-second in 1960. On all accounts, all the towns involved in the banana

trade declined while those involved in tourism and bauxite mining were growing.

Tourism and the Development of Towns

Tourism has had a marked effect on the ranking of towns in Jamaica between 1943 and 1970. This is especially evident with Montego Bay, which replaced Spanish Town in 1960 to become the island's second largest town; in 1970 its position remained unchanged. The prosperity of Montego Bay (like that of Lucea and Port Antonio) has fluctuated with the rise and decline of Jamaica's major economic activities. In the eighteenth century, Montego Bay was, like Falmouth, one of the finest towns on the north coast. Its prosperity ended, however, with the decline in sugar production in the early nineteenth century.

By the beginning of the twentieth century, Montego Bay was brought back to life with the emergence of the banana trade. Its prosperity again vanished with the decline of the banana industry in the 1930's, caused by the Panama disease. In 1960, however, it was enjoying a new prosperity based on the promotion of tourism on the north coast. Describing this area in 1955, Newman (1955:106) noted:

> From Montego Bay in the West to Port Maria in the East (perhaps even to Port Antonio) is becoming an almost continuous tourist resort. Hotels are springing up almost overnight and

> delightful houses are being scattered among the hotels in the hills behind. To these are coming the visitors from England and America and with them are coming new sources of employment and increased trade

By 1960, the trends in the growth of Jamaica's towns was clearly demarcated in the Government's Report on Jamaica (1960:4)

> On the whole, there has been an increasing tendency to move into the towns, or for towns to spread out and include districts formerly outside their limits. Montego Bay has in fact more than doubled its population. The same is true of May Pen, while Mandeville has quadrupled its. Slightly more than one third of the population now lives in cities and towns with a population of more than 1,000.

With the growth of the banana trade, Port Antonio (and the parish of Portland) became the location of the island's earliest tourist industry as people took advantage of travel on ships transporting bananas. With the decline of the island's banana industry and with the expansion of air travel and cruise shipping, Portland declined as a tourist area while the rest of the north coast was flourishing. Air travel in particular contributed to the rapid development of tourism along the narrow strips of white sand beaches of the north coast, from Ocho Rios to Montego Bay. Ironically, Port Antonio and the parish of Portland which had given rise to the earliest tourist industry came to be considered one of

the most backward and underdeveloped areas of the island. In the discussion of the town and parish in the island's major daily paper during 1966 and 1967, there were many references to the people as being "asleep" and to the need to "awaken them." There were also descriptions of Portland as a "cinderella parish" (GL. 3/3/1966; 2/10/1967) and a "Sleeping Beauty Parish" (GL. 3/3/1966). On February 10, 1966, the Gleaner Correspondent in Port Antonio wrote:

> Portland, with all its rainfall, railway service, electricity and deep sea pier, remains one of the most backward parishes in Jamaica.
>
> The parish has no industrial plants... Today Portlanders have to depend wholly on their banana trade for a livelihood. ...It is distressing to see the complete disinterest which Portlanders show in their birthplace. They readily describe Port Antonio as a ghost town.

In recent years, tourism has set in motion two further changes. First is the growth of Negril in the parish of Westmoreland as a major resort area on the island's west coast Byron.(GL. 14/9/1976) writes: "It used to be a sleepy little seaside village, tucked away at the western tip of Jamaica. Things are different, now, for Negril. Big time financing and development of all sorts are rapidly transforming the town into the island's fifth major tourist resort area." The second change is the new (although limited) prosperity which cruise ships have brought to seaport towns, especially

Montego Bay, Ocho Rios and Port Antonio. In all three the harbors have been improved, piers have been built and tourist dependent services and crafts have come into being.

Bauxite Production and Towns

The rise of Jamaica's bauxite industry contributed to the growth of Mandeville (the route-town and parish capital of Manchester) as well as Ocho Rios and the other north coast towns of St. Ann. Eyre (1973:33) states that at an altitude of 2,000 feet at the center of the parish of Manchester, "Mandeville has grown as a result of the bauxite industry from a crossroads village (represented in early postwar Tourist Board Literature as a 'typical English village') to the third town of the country as measured by banking."

SETTLEMENT OF THE INTERIOR

So far I have shown that the settlement of Jamaica with respect to the growth of Kingston and the towns was expression of the island's colonial history as an area for the production of agricultural commodities for export. I now turn to the settlement of the interior, which losely related to African Jamaican resistance to slaver and to wage-labor.

Hills and mountains as the dominant physical features of Jamaica are not only important in determining the island's climate and vegetation, they are equally

important in the history of its racial and class-organized social life and the settlement pattern to which this has given rise. The hills and mountains of Jamaica have meant different things to people of different classes. For African Jamaicans they have been the locale for a relatively independent way of life and an important factor in the Africans' struggle against economic exploitation and racial oppression. The island's rugged interior has served as a refuge and a natural fortress. Most important, it has been an area where access to land as the basic support of life was ensured. The significance of mountains for the freedom of Africans in the New World is evident in Caroll's (1977:488) discussion of the origin of the word Marron.

> "Marron" is the root of the word marroonage which is based upon the French word Marron. The French term represents an adaptation of the Spanish word Maroon, meaning wild, and the latin word cyma, meaning summit, or mountain top. The word cimarron, therefore, literally meant wild on the mountain top. Additional meanings have been ascribed to the term. In French, Italian and other Southern European languages derivitives of Maroon came to denote a particular type of chestnut, or simply chestnut in color. During the seventeenth and eighteenth centuries the word took on three more meanings: to put a person ashore and abandon him or her on a desolate coast or island; to escape from slavery; and one of a class of...Africans chiefly fugatives or their descendants living wild in the mountains and forests of some of West Indian islands and in Guiana, especially Surinam.

To the ruling elite of planters, merchants and the political and religious intelligensia, the hills and mountains of Jamaica had contradictory meanings. On the one hand they were eulogized for their beauty and "stimulating" climate. On the other hand, they were negatively regarded because (1) they limited the area of 'first class' land; (2) they made the exercise of political control, especially as this was dependent on transportation and communication, difficult, time-consuming, dangerous and expensive; (3) they were occupied by "rebels" and "runaways" who were feared.

Maroons and the Settlement of the Interior

The origin of the Maroons of Jamaica stems from the introduction of Africans to the island in 1517, eight years after the founding of New Seville. This occurred when the Arawaks were rapidly declining in numbers. In fact, the eighteenth century historian Bryan Edwards (1972:131) attributed the abandonment of New Seville to the destruction of the Arawaks: he wrote in defense of his position:

> When...we are told of the fate of the Spanish inhabitants of Seville, it is impossible to feel any other emotion than an indignant wish that the story were better authenticiated and that Heaven in mercy had permitted the poor Indians in the same moment to have extirpated their oppressors altogether! But unhappily this faint glimmering of returning light to the wretched natives, was soon lost in everlasting darkness,

> since it pleased the Almighty, for reasons inscrutable to finite wisdom, to permit the total destruction of this devoted people; who, to the number of 60,000, on the most moderate estimate, were at length wholly cut off and exterminated by the Spaniards, not a single descendant of either sex, being alive when the English took the island in 1655, nor, I believe, for a century before.

According to Edwards, there was no longer a single Arawak in Jamaica by 1555. Robinson (1974:14) reports, however,

> In 1611, another Abbot of Jamaica (a successor to Abbot Villalobos who died in August, 1606) noted the number of confessions that he had ordered to be made with particular care that year. From this form of census he estimated that there were 2,510 persons of all classes and conditions in Jamaica; 223 Spaniards including men and women, 173 children, 107 free negroes, 74 native Arawak Indians, 558 slaves and 75 foreigners.

While the Arawaks had not completely disappeared by 1555 as Edwards believed, it is clear that by 1611 they had ceased to be significant source of Spanish labor in Jamaica. Consequently, for over a hundred years before the British captured the island, especially in the period the southern plains were settled and developed, African labor was the basis of the Spanish exploitation of Jamaica.

When Admiral Venables landed in Jamaica in 1655 (having failed to take Hispaniola), there began a struggle between the English and the Spanish in which

the activities of the Africans were of decisive importance in determining the outcome. This conflict created the Maroons and led to their occupation of the island's rugged and heavily forested interior. Robinson (1974:19) noted that following the capture of the island:

> The (5) years of fighting that lay ahead were to be a training ground for the future Maroon warriors. Africans were present in just about every one of the raids, ambushes, skirmishes or battles which marked the long struggle between the Spanish and the English in Jamaica. They were present as scouts, hunters and foragers and they also fought shoulder to shoulder with the Spanish infantrymen. But they were of greatest value as suppliers of food. Without them the Spanish reinforcements would have been defeated by hunger alone ...
>
> From the beginning they fed the Spaniards who had remained behind in the north of the island after the bulk of the colonists had fled. They hunted the wild animals in the interior with which so many of them were familiar and they established extensive cultivations in the Lliudas Vale area.

Yasassi, the commander of the Spanish forces who led the resistance to the English invasion, recognized that the assistance of the Africans was crucial to their success in defending the island (Robinson 1969: 21). He sought in various ways to retain the loyalty and support of the Africans including his petition to the Spanish King for authority to grant freedom to those who "deserved" it. Yasassi was unsuccessful, however. Between the end of 1659 and February 1660, Juan de Bolas who had emerged as the most powerful leader of the

Africans gave his support to the British. At a Spanish council of war on the 22nd of February, 1660, the Captain Francisco de Belensuela wrote:

> All the Captains were of the opinion that the island should be abandoned as the Negroes are so experienced and acquainted with the mountains that no success could be obtained there, but, that (we) were all exposed to the known risk of being murdered without escape, considering the few troops (we) had and the number of the enemy (Quoted in Robinson 1974:27).

For some seventy years following the defeat of the Spanish, Jamaica remained two countries. The English colonists mainly occupied the coastal plains and river valleys and Africans controlled the mountainous areas of the northwest and the northeast. Describing the island's pattern of settlement in the early eighteenth century, Oliver wrote (1917:17-18) that "surrounding...the comparatively civilised areas...lay wide unreclaimed regions of unfrequented and often impassable mountains and forests." According to Oliver, "only runaways and Maroons lived in the uplands."

The Maroons established three principal settlements. In the difficult broken terrain of the Cockpit Country which formed the interior highlands of the parishes of St. James and Trelawny (in the northwest) and St. Elizabeth (in the island's southwest) were Maroon Town (in St. James) and Accompong Town (in St. Elizabeth). In the upper reaches of the wet and thickly forested

northeastern slopes of the Blue Mountains in Portland was Nanny Town which is now known as Moore Town.

Little is known of the early settlements of the Maroons other than their location in fulfillment of the requirements of seclusion and defense. As regards the present character of the surviving settlements, Robinson writes: "These towns are in no way different in aspect from scores of other Jamaican villages and the people who live in them look like the small farmers in any other Jamaican community" (1974:155).

Provision Grounds and the Settlement of the Interior

Following the establishment of the Maroons in the most rugged areas of Jamaica, the second factor to stimulate the settlement of the highland interior was the cultivation of provision grounds on the fringes of estates. Provision grounds were lands made available by the estate for the cultivation of food crops. With the increasing cost of imported food, the planters found it expedient to encourage the Africans to grow their own food. To this end, they were allowed to cultivate the land surrounding their dwellings as well as plots set aside in foothill areas. The household plots were primarily devoted to tree cropping (Gardener 1971:396-397) while the provision grounds were devoted to the cultivation of plantain and banana as well as tuberous herbaceous plants such as yam, sweet potato

dasheens and cassava. The fact that Africans were to a large extent self-provisioning is an important aspect of the political and economic history of the island. As the period of Spanish colonization and slavery--particularly the five years of armed resistance to British invasion--provided Africans with the required skills for an independent way of life following the capture of the island by the British, so too the cultivation of provision grounds provided the skills necessary for an independent way of life following emancipation in 1838. Through the cultivation of provision grounds, the Africans created products for household use and for sale. The establishment of provision grounds was an important factor in the rise of an island-wide internal marketing system based on the production of commodities for local as well as for foreign consumption. The cultivation of provision grounds gave the Africans a sphere of interaction and cooperation free from direct supervision and control of the planters. It provided them with the opportunity to earn and accumulate money and to exercise some freedom in choosing how it was to be spent. Many Africans were able to buy their freedom with money accumulated from the sale of products from their provision grounds; others were able to purchase land following emancipation with money they had saved (Mintz 1955, Parry 1955, Hall 1959).

Coffee and the Settlement of the Interior

The third important factor to promote the settlement of the upland areas was the growth of the island's coffee industry. The plant was introduced to Jamaica in 1728 by Sir Nicholas Lawes, who was a resident planter, attorney and former governor of the island. The importance of coffee in the settlement of the interior becomes clear when we examine the arguments that were made by the ruling elite to encourage its cultivation. In the first half of the eighteenth century, the elites faced three major problems. First was the fear of African rebellion on the estates and of the attacks of the Maroons. Second was the need to increase what they considered the small number of whites on the island. Third was the defense of the island from other European powers and from pirates.

The ruling elite argued that the cultivation of coffee would be a means of opening up the interior for settlement and it would increase the number of whites in the island, especially in the category of small settlers. Apart from the planters, "the most numerous and important group of 'other' whites in Jamaica" writes Brathwaite (1971:146) were small holders and pen keepers. It was this group of individuals owning not more than 500 acres of land that the government sought to increase through the cultivation of coffee, between the period of

1770 and 1820. "The Assembly," continues Brathwaite "was very much involved with this problem of settlement especially in the parishes of Portland and Trelawny--the areas of sparsest white population and dominated, until 1796, in the interior parts, by fear of the Maroons." For the elite the cultivation of coffee was a way not only to increase the number of whites on the island but to strengthen the militias against the threats of African rebellion and foreign invasion. Long (1972) was also of the opinion that growing coffee would encourage the scientific study of the commercial and medicinal potential of the vegetation of the Blue Mountains and help make agricultural diversification and self-reliance possible.

> "Agricultural diversification" and "self-reliance" was of particular importance in the 1770's as the worsening situation between England and the North American colonies threatened the supply of food and timber products such as staves, boards and lumber (Brathwaite 1971:81).

Nevertheless, the Jamaican coffee industry grew slowly. Although the plant was introduced in 1728, its cultivation did not become a major activity until the end of the century. Rodriguez pointed out that by 1781 "even Blue Mountain Peak had been alienated to a private individual for the growing of coffee" (cited in R. Williams 1975:2). During the colonial period, the best

years of the coffee industry were from the 1790's to 1814. "Jamaica's coffee exports," reports R. Williams (1975:2), "rose from 213 million pounds in 1791 to 613 million pounds in 1795 and more than doubled again to reach 13.4 million pounds in 1801. The peak export volume of 34 million pounds was achieved in 1814."

Emancipation and the Settlement of the Interior

Following (1) settlement of the Maroons for defensive reasons in the most rugged areas of the interior (2) the cultivation of the foothill slopes by workers of the large estate for provision growing and as sources of lumber and fuel (3) and the introduction of coffee. The next important factor that stimulated settlement of the upland areas was emancipation in 1838 (Paget 1956; Mintz 1958). This laid the foundation of Jamaica's settlement pattern, one which has only been slightly modified since.

The history of the Africans after 1838 is often presented as if they simply abandoned the lowland estates after emancipation and took up residence on crown land in the upland areas. From being an enslaved labor force, they voluntarily became an independent "peasantry" producing both for direct household consumption as well as for the local and foreign market. While this is true to some extent, we must also recognize that they were forced (by the efforts of the planters to exert new

forms of compulsion) to seek an independent way of life through small farming. Access to land became the mark of freedom and independence, just as continued work on the estate epitomized the servitude of the past.

The Emancipation Act of 1838 ("An Act for the Abolition of Slavery throughout the British Colonies; for promoting the industry of the Manumitted Slaves and for compensating the persons entitled to the Services of Such Slaves...") left the ruling elite "in control of a revolution they had not made and did not want" (Sherlock 1966:70).

> The revolution of 1830's was...incomplete because it left untouched the constitutional framework that had protected and buttressed plantation slavery. The political power that enforced the revolution came from the Imperial Parliament which passed the Act of Emancipation in the face of determined opposition from the colonial legislature. Each island Assembly claimed the Westminister had no power to legislate for its own internal affairs; yet it was left to these factious Assemblies, representative almost wholly of planter interests, to direct the course of freedom. The revolution 'was an anomaly among revolutions...the political power that enforced the revolution was withdrawn...the ruling minority found itself in control of a revolution it had not made and did not want' (Sherlock 1966:70).

The ruling elite faced the novel and unwelcome task of attempting to continue the profitable cultivation of sugar without the old protections and on the basis of "free labor." If this was to be the new condition resulting from the modification of the island's racial

class structure, if they now had to depend on paid labor, then it was in their interest to make it as "cheap" as possible. They realized that this could only be done by depriving the Africans of alternatives to working on the estates. They recognized that there was a problem, however. As we have already seen, during slavery Africans had become a largely self-provisioning work force, both through direct household production and through the production of food and other commodities for the island's internal markets and for export. Prior to emancipation, the planters encouraged this as a means of reducing their costs of production. Now the planters perceived that, as long as the emancipated Africans had the alternative of turning to their dwelling plots and provision grounds for subsistence, they could withhold their labor without injury; the planters would have no way of compelling them to accept low wages to work on the estates. The planters' policy was, therefore, simple: they sought to evict the Africans from their dwelling plots and provision grounds.

The Emancipation Act of 1834, which abolished slavery and instituted the apprenticeship system, left open the question of rents with the expectation that this would be a means of forcing Africans to continue working on the estates. To a large extent, however, the actions the planter pursued had the opposite effect. They succeeded only in forcing

large numbers of people off the estates and creating a class of small farmers who settled in the interior. They settled on crown land, on land that was made available through the efforts of the Baptist and other missionary groups and on land bought at the division of estates which were cut up and sold by land speculators (Paget 1956; Mintz 1958).

The importance of the island's topography in this emergence of small farmers in the interior can be seen in Hall's (1959:158) economic history of Jamaica between the years 1838 and 1865. He writes:

> In dealing with the agricultural population after slavery...we can distinguish between three general groups of people. There were those who owned and worked freeholds but did not give any labor on the estates (these people were often the employers of labor, and we shall describe them as small farmers); secondly, there were those who, although they owned small freeholds, depended to some extent on occasional money earnings from estate labor (we shall call these peasants); and thirdly, there were those who continued to labor on estates while renting cottages and provision grounds from estate owners (these will be referred to as labourers).

In describing the last of the "three general groups of people" which constituted the new agricultural population, Hall (1959:158) writes that "Emancipation did not create any group of landless agricultural labourers who were entirely dependent on wage labour for a living." Citing the correspondence of Sir Charles Metcalfe (then governor of the island) he notes that "those who remained

on estates, renting land from their employers or neighbouring proprietors, suffered under no compulsion to do so; they were the victors of the wage and rent disputes. In some cases it was temporary expedient until they had saved enough money to buy land of their own. In no case did it imply any power of employers to extort rents from a dependent labour force" (Hall 1959:158-159).

It is clear, however, that Hall's interpretation is contradicted by the very source he cites to support his argument. He justifies his position that "Emancipation did not create any group of landless agricultural labourers" by citing a letter from Metcalfe to Russell who was then Secretary of State. Metcalfe wrote that:

> The two professions of day labourer and market gardner seem rather inconsistent; and as long as they remain united, as they now are in most parts of the Island, continuous labour cannot be expected and all labour must be at the option of the peasant to give or withhold. There is not the same degree of necessity pressing on his as there is on the same class in other Countries. Or rather there is scarcely such a class in this Island as that of agricultural labourers exclusively. The labourer here goes out to labour for such time only as he can spare from the cultivation of his own grounds; and if the desires of the ...[Africans] were limited to what labourers in other Countries are forced to be content with; if they were not fond of luxuries and smart clothes and good furniture and riding horses, or had not the better motives of educating their children or supporting their Church, they would hardly have any inducement to labour quoted in Hall (1959:159).

Now Metcalfe's statement that the two professions of day labourer and market gardner were united "in most parts of the island" implies that there were some parts of the island (limited though they might have been) where they were not united. Contrary to Hall's assertion, emancipation did create a class of landless agricultural labourers. That Metcalfe recognized this is clear when he noted further in his discussion that "there is scarcely such a class in this island as agricultural labourers exclusively." We can best understand Jamaica's small agricultural proletariat which emerged after 1838 by considering it in relationship to the island's topography.

The wet and mountainous northeast was among the first areas where sugar production declined rapidly in the first half of the nineteenth century. Through the activities of the missionaries as well as of land speculators many of the estates were divided into small properties occupied by those who Hall describes as "small farmers" and "peasants." The picture was slightly different, however, in the western part of the island. Oliver (1939:135-136) states:

> On the surviving sugar estates, especially in the great plains of Vere and Westmoreland where the mountain lands were remote or were withheld by their owners from occupation and in Trelawny (where also the land monopoly was strongly maintained), the condition of the estate labourers who were in residence became the most unsatisfactory.

> They remained miserably housed in wattle and cane-trash hovels; the lowlands were not suitable for their food growing and if they had grounds in the mountains they had to walk great distances to attend to them. The slaves in Vere had customarily been fed largely on "guinea-corn" or cassava grown on the estates, and not having grounds in the mountains were less independent. Their poverty under the new conditions became extreme. In Trelawny and on the north coast of St. James the sugar estates had lowland caprecious rainfall. Their soil very suitable for cane growing under the local system of cultivation which enabled the sugar industry long to survive there, was unfavourable for provision growing. The estates 'mountains' lay in the adjacent ranges of flooded hill country often a long way inland. So long as the estates were maintained most of the 'mountains' were kept in their owners' hands and the provision grounds had to be rented. The labourers' houses on the estates remained of the poorest and flimsiest type. The conditions can be recognized as having depressed the traditions and character of Trelawny sugar district even up to this day, although some of the land along the fringe of the mountains was sold and divided into small freeholds; on these a better type of housing is being exhibited under the conditions that have developed with the present century.

THE PARISH OF PORTLAND

I have referred to the parish of Portland in the introduction and at several points in this chapter. Since my research was conducted in Portland, I will at this point bring the different discussions together in a brief summary of the history of the parish.

Though the northeast was known to the Arawaks, it does not appear to have been a major area of settlement

when the island was discovered by Columbus. Under the Spanish the region remained largely unsettled; this was true for Portland and the north coast in general. When the British captured the island in 1655, only a few Spaniards resided in Port Antonio where they had established cattle ranches and traded with passing ships. Venables, in his report of the condition of the island at that time, mentioned that the Spanish were familiar with Port Antonio and maintained a small settlement there.

Under the British, Portland continued to remain largely unsettled. The important obstacles to settlement included the mountainous character of the parish as well as its wet climate and heavy forest cover. In addition, there were few roads and their poor quality made transportation and communication difficult and expensive. All of these things contributed to the region's isolation from the chief towns and areas of major settlements that were rapidly developing on the southern plains and in the lowland areas of the northcentral and northwestern parts. One of the most important factors constraining settlement of the parish, however, was the attacks of the Windward Maroons of the Blue Mountains. This situation did nct begin to change significantly until 1739, when a treaty was signed with the Maroons.

The earliest attempts of the British to settle Portland, despite all the difficulties this entailed,

reflected its strategic military significance both with respect to the way with the Maroons and to European competition for the control and defense of colonial monopolies in the Americas. In 1728 the Jamaica Assembly appropriated twenty acres of land on Navy Island (in Port Antonio's west harbor) for building wharves, erecting storehouses and careening war ships. Long (1972:171) reports that:

> In the year 1733, this work was in great forwardness; and Rear Admiral Stuart, who then commanded on the station, finding the air of the island unhealthy, ordered the wood to be cut down and burnt. Unfortunately, instead of hiring [Africans]...to perform this laborious task, it was assigned to detachments made from the crews of the Lion, Spence and some other ships of war... Many of these men were seized at once with a fever and delirium...This calamity and the peace which not long after happened, occasioned the project to be dropped, although the government had been put to a great expence in erecting several storehouses, and in purchasing the island in propriety.

Although the efforts to establish a military base failed, the settlement of the parish proceeded rapidly after the 1739 treaty with the Maroons. Brown (1976:17) in her history of Portland writes that "within the next 40 years, there were 28 large estates and more than one hundred small properties and cattle pens." Even so, Portland never became an important producer of sugar. "This parish," wrote Long (1972:170) in his description of Portland during the most prosperous years of sugar production,

"comprises a vast tract of fine land; but the settlements are scattered along the coast; and the interior parts are as yet unoccupied, except near the Rio Grande on the North Side, where the most distant are not more than six miles from the sea." Long indicates that in addition to the military base, other attempts were made to develop the area surrounding the Port Antonio harbor. An effort was made by the Duke of Portland while he was Governor of the island to establish a town by the name of Titchfield. Long (1972:174) reports "This town was laid out but not built; for...The parish continuing but very thinly settled, there was not a sufficient encouragement to induce persons to build; not trade, nor manufacture to give a town support ..."

Although the attempt made in 1728 to establish a fort at Port Antonio harbor was unsuccessful as was the attempt to build the town of Titchfield, the strategic significance of the area with its excellent harbor increased with the European competition to secure and maintain colonial monopolies in the New World. Some forty years after the initial attempt to build a fort had failed, Long (1972:171:172) writes:

> The reasons for resuming this scheme are at present extremely strong, since the French have laboured so successfully in fortifying and completing a very large town at Cape Nicola Mole; which lying

> only sixteen leagues and a half from the easternmost point of Cuba, they have got a key which as effectually locks up the navigation of the Winward Passage to the East as Havannah, in the hands of the Spaniards secures it to the west by Gulph of Florida; the consequence of which must necessarily be, in any future rupture with France and Spain, that without a very strong convoy of several men of war, not a merchantship will have the least chance of getting home and I think it is evident, from all the pains and expense which the French have been at in making their establishment at the Mole, that they designed it as an effectual curb upon the Jamaican trade, and for no other purpose...As a check therefore upon their fortress, it would seem absolutely necessary that Port Antonio should be strengthened with fortifications, and the former plan revived of accommodating it for the reception, refitting and careening of his majesty's ships...No time can be so convenient for conducting such a plan as the present interval of peace; and, being carried on with vigour, we should have in another war this sure asylum for the squadron, from whence it might sally forth to distress the enemy, defend our homeward bound fleets and give protection to our ships coming from Britain to Jamaica, or coasting round from the North to the South parts of the island.

By 1824, just prior to the general collapse of sugar production, Brown (1976:17) writes that "there were in Portland eight thousand and eighteen slaves and one hundred and sixty-five proprietors." By 1836, there were twenty-four and by 1854 there were only four. In Portland as elsewhere, the ruined estates were in some cases cut up and sold. Out of this process emerged the districts

of Portland. It was the farmers of these districts that were in a position to provide bananas when the fruit trade began in the 1860's.

The historical sketch presented in this chapter outlines the economic, political and social activities (conditioned by the island's relief, climate and drainage systems) which have given rise to Jamaica's city, towns and rural districts. These broadly defined areas constitute the island's settlement as a whole and represents the relatively permanent structuring of physical space within which daily life takes place. They are also the setting for understanding how human activities determine the distribution of plants in settled areas. I explore this point further in Chapter 4 where I discuss the island's settlement vegetation paying particular attention to wild plants in settled areas including their contribution to intercropping. Settlement vegetation is simply the different communities of wild and domesticated vines, herbs, shrubs and trees which come into being in association with human activities. These plant communities range from street trees in combination with wild roadside plants to the plant communities of large estates and small farms. The majority of the most important economic plants of Jamaica have been introduced to the island from other parts of the world. The next chapter deals with the

creation of botanic gardens and the introduction of plants to Jamaica and serves as a basis for the discussion of the island's settlement vegetation in Chapter 4.

FOOTNOTES

Chapter 2

1. Map 2 (p. 38) which is adapted from the work of Clarke (1974:49) indicates the towns of Jamaica. Going in a clockwise direction starting with Hanover (Lucea) in the northwest, the parishes and their capital town are St. James (Montego Bay), Trelawny (Falmouth), St. Anns Bay), St. Mary (Port Maria), Portland (Port Antonio), St. Thomas (Port Morant), Kingston, St. Catherine (Spanish Town), Clarendon (May Pen), Manchester (Mandeville), St. Elizabeth (Black River) and Westmorland (Savanna-la-Mar).

2. This quotation is taken from a small paper (p. 3) the author of which is unknown. The paper was made available to me by Miss D. Daley, the librarian in charge of the Port Antonio Public Library.

Chapter 3

BOTANIC GARDENS AND THE INTRODUCTION OF PLANTS TO JAMAICA

Out of Albion and Lebanon
Out of Erin and Aberdeen
Out of Guinea and Ashanti
Out of Bombay and Old Cathy
Out of traders' din and slavers' sin
Came the many whose progeny
Motley and suntanned
People this land...[1]

Jamaica's national motto is "Out of Many--One People." While there is recognition expressed in many ways of the diverse geographical and cultural origins of Jamaicans, this has not been generally extended to include the useful plants upon which they depend. Nevertheless, most of these vines, herbs, shrubs and trees also have exotic geographical and cultural origins and are now established as "one" in the particular form of Jamaica's settlement vegetation. This chapter outlines the introduction of plants to Jamaica focusing on botanic gardens and the significant role they have played in this process.

"It is a striking fact," states the 1886-7 Handbook of Jamaica (p. 152), "that with the exception of pimento--'that child of nature'--and a few others of comparatively little value, most of the staple products of the island are derived from exotics or plants introduced from other parts of the globe." William Harris (1910-181) who was sent from Kew Gardens to be Superintendent of

Public Gardens in Jamaica wrote:

> Jamaica may be described as the garden and or orchard of the West Indies. There is probably no tropical colony which has benefitted to such a large extent by the introduction of the fruit, economic and ornamental trees and plants of other lands as this island.

Although I am concerned with the way introduced plants have become an important part of intercropping, the process which has brought many plants to Jamaica is best understood in the wider context of exotic plants distributed throughout settled areas and their contribution to the specific nature of the island's settlement vegetation. In addition to introduced plants which are intercropped in yards and fields, for example, exotics are also widely distributed in other areas of settlement as ornamental, shade and street plants.

Plants from what Grigg (1977) calls the three main centers of "tropical vegeculture" have now become part of the ordered, distinctly Jamaican way in which different species and varieties of vines, herbs, shrubs and trees are distributed throughout the island's settlement area. This process of diffusion began when the Arawaks brought plants of the lowland tropical American flora to Jamaica. It continued more intensively through the period of Spanish colonization, during which some of the most important economic plants were introduced. This process of plant introduction reached its peak, however, during the period

of British colonization. Here Jamaica became an important unit in the establishment of a world-wide network of botanic gardens (Brockway 1977). Thus, Harris (1892:6) in his 1892 report as Director of Public Gardens and Plantations stated:

> The whole of the Botanic Gardens in the British Empire are more or less in communication with one another, exchanging seeds, publications, &c., and all look up to the Royal Gardens at Kew as to their head for advice and assistance. Imperial Federation is already in existence as regards the Botanic Gardens and their work. If any special variety of a plant, or any new culture comes into notice, information and plants are sought sometimes directly from the local gardens, sometimes through Kew as the Botanic Gardens; "Clearing House." The Director of Kew Gardens has at his disposal the services of experts in every branch of botanical enquiry, and is always most willing to aid Colonial Gardens in every way. Any intricate question that arises in chemistry, in diseases of plants, in insect pests, in the value of products, &c., can be determined by reference to Kew. Colonial Gardens are therefore not isolated, but are branches of an Agricultural Department as wide as the British Empire itself.

Roots and Fruits

Most of the world's peoples have depended upon products derived from the family of grasses, which have served directly as food and indirectly as fodder for domesticated and wild animals. Members of this important family of plants include the cereals (wheat, barley, oat

and rye) of Western Europe and the Mediterranean, maize of the Americas, millet and sorghum of Africa and rice of Asia. Exceptions to this subsistence pattern are to be found in the wet equatorial, monsoon and marine areas of the tropics, which include parts of the Americas, West and Central Africa, Southeast Asia and the Pacific Islands. In these areas we find a dependence on a complex of plants I have identified as 'roots and fruits.'

The term 'roots' is not used here only in its strict botanical meaning. It also refers to all food and other useful products (such as starch, medicinals, condiments) obtained from subterranean sources, which, in addition to true root tubers (such as those of yams, cassava, sweet potatoes, etc.), includes stem tubers (such as Irish potato), rhizomes (such as arrowroot and ginger), corms (coco) and hard and fleshy bulbs (such as garlic and onions). The term 'fruits' makes reference to the fact that in East Portland (as well as other parts of the island) grow some of the most useful trees of the tropical world including the coconut, mango, breadfruit, avocado, pimento, coffee, cocoa, orange, almond and tamarind. Here again, as in the case of 'roots,' the idea of 'tree' is being extended beyond its strictly botanic meaning; it includes banana, plantain, pawpaw, bamboo and others, if only because, by their size, they create shade and contribute to the formation of a canopy.

This root and fruit complex of plants is described in a variety of ways all of which identify the importance of trees in combination with vines, herbs and shrubs. Webster and Wilson (1966:212-213), for example, refer to the "unsystematic confused mixture of many kinds of trees and shrubs" as permanent cropping and "mixed tree culture." Grigg (1974:9) like Sauer (1952), Mangelsdorf et al (1971) and others have also identified this kind of cultivation by reference to root cropping or as "vegeculture." Even though the emphasis is on root crops vegetatively propagated, Grigg (1974:9) did not fail to point out that "most tuber-growing communities also collected the fruits of trees such as bananas or coconuts..."

Jamaica's roots and fruits complex of plants is best identified in cultivation as forest cropping. Forest cropping has become important as a direct consequence of the extensive introduction of plants to Jamaica and it is described in a variety of ways. Adams (1971:5-7) writing of "foreign plants" introduced into Jamaica, states: "some...have enjoyed the most spectacular success in their efforts to establish a niche in the Jamaica scene...In areas which have been heavily worked-over, introduced fruit trees like Mango, Rose Apple and Guinep form woodlands [my emphasis] in which it is difficult to find a truly native plant." It is these same "artificial

woodlands" made possible by introduction of plants which the geographer Money (1972:10) identifies as a "tangle of productive vegetation," Fitzgerald (1978:14) as an "aboretum" and the Agricultural Census (1973) as a "Food Forest." In the more romanticized description in the general travel literature, this same collection of largely introduced plants is identified as a "Tropical Jungle Garden" (D. N. 1976: July 28).

The Introduction of Plants to Jamaica by the Arawaks

Of Jamaica's "more elegant fruits" he believed native to the island, Edwards (1972:187) wrote:

> ...the variety is equalled only by their excellence. Perhaps no country on earth affords so magnificent a desert; and I conceive that the following were spontaneously bestowed on the island bounty by nature; guava, sweet-sop of two species, cashew-apple, custard-apple, grenadilla, avocado-pear, pindal-nut, nasbury, prickly-pear, mamee, mamee-sapota, Spanish gooseberry, and perhaps a few others.

It remains uncertain how many of the plants mentioned by Edwards were brought to the island by the Arawaks who are associated with the introduction of the lowland tropical American complex of roots and fruits to Jamaica. In addition to the "mixed tree culture" complexes of South East Asia and Africa, the third such center Grigg (1977: 10) identified was lowland tropical South America, where:

> ...the major root crops were manioc (Manihot utilissima), the sweet potato

> (Xanthosoma) and arrowroot. These crops, together with the peanut, were probably domesticated in the tropical lowlands east of the Andes at some time between 7000 B.C. and 3000 B.C. The crops had been combined into a system, which was subsequently taken into the islands of the Caribbean, and the southern part of Central America.

Added to the root crops mentioned by Grigg (1977:10), there were also corn, beans of different kinds, tobacco and cotton. It is estimated that "over 100 species of plants were cultivated within the New World tropic at the time of European conquest" (Pikersgill and Heiser 1977:804). Mangelsdorf et al (1971), based on the works of Vavlov (1951) and Dressler (1953), presents us with a list of the wealth of plants cultivated in Middle America. Many of these plants could have been introduced to Jamaica by the Arawaks.

The Introduction of Plants to Jamaica by the Spanish

Until the end of the fifteenth century, the world-wide distribution of cultivated plants did not include any significant exchanges between the Old and the New World. Following the introduction of plants to Jamaica by the Arawaks in their migration up the Caribbean archipelago from South America, the second period of plant introduction that significantly contributed to the Jamaica's settlement vegetation began in 1492:

> ...the year in which Columbus first sailed to America and made possible the great interchange of crop plants between the two hemispheres which took place during the following centuries and in effect doubled the vegetable resources of both sections of mankind. This process was begun by Columbus himself, who brought back maize (corn) on his very first voyage from the West Indies to Europe, and on his second voyage took with him seeds of European crops to America (Mansfield 1969:195).

"Since those days there have come from every corner of the world," writes Swabey (1949:61), "little packets of seeds, small plants carefully packed and guarded on the decks of sailing ships, planting material carried swiftly by air: many of these plants have become so abundant that most people do not think of them as foreigners."

Columbus' discovery of the Caribbean as the gateway to the Americas was the first permanent point of contact between the Old World and the New World. As a result of this contact, "The Caribbean became a part of the frontier of Western Europe. The heady new imperialism that produced New Granada and New Spain, New France, New England, New Amsterdam and Nova Scotia won its first foothold in the Caribbean in Hispaniola, Little Spain" (Sherlock 1966:17-18).

Columbus was impressed by the tropical vegetation of the New World and was alert to its potential economic value. He wrote in his journal seven days after the first sighting of land: "I can never tire my eyes on

looking at such lovely vegetation so different from ours. I believe that there are many herbs and many trees that are worth much in Europe for dyes and for medicines; but I do not know them, and this causes me great sorrow..." (quoted in Eric Williams 1963:3). The knowledge Columbus lacked was soon to be supplied by entrepreneurs. The initial contact established by Columbus' discovery of the New World has resulted in what Crosby (1972) has termed the "Columbian Exchange." Plants, animals and microbes were exchanged between the Old and the New World. It can now be said that many cultivars and weeds are now distributed world-wide within their climatic limits (Grigg 1977:24). In a summary account of the post-Columbian history of the world, Brockway (1977: 65-66) writes:

> The changes in the staple food complexes which took place after the fifteenth century contact between the Old World and the New led to a marked increase in world population, a doubling by 1850, before mechanized agriculture was applied, and another doubling in the next century. During this time Europeans invaded and settled the two continents of the Western Hemisphere (plus Australia and South Africa), bringing with them wheat as their major staple, forage crops for their animals, rice, plantains, and certain beans. They accepted the American potato, maize, manioc (locally), and beans. Some of these plants sustained the European settlers, some, the American Indians and... [enslaved Africans]. Some, like the white potato and maize, went back to change the diet of Europeans, while the maize, sweet potato, peanuts, and manioc went to increase the food supply of the

> peoples of Africa and Asia from whom the Europeans were trying to extract wealth either as slaves or in trade goods.

Discovered by Columbus in 1494 and settled in 1509, Jamaica remained a Spanish colony for 161 years. During this time they introduced some of the island's most valuable economic plants especially sugar cane, citrus and banana; all three have been important crops in the economic and social history of the island. Describing what Jamaica must have been like prior to 1494, Swabey (1949:61) presents the following picture:

> From seashore to mountain top the green of the primeval forest was unbroken, save for the scattered clearings of the Arawak Indians. Of the cultivated trees and plants so familiar to us today, we would have seen few except for the little patches of cassava laboriously established by the Indians and possibly pine-apples, arrowroot, annatto and ground nuts. There were no bananas, no sugar cane, no coffee, no logwood, no ackee, and no tamarind trees.

The Spanish also introduced the plantain and Webster (1972:3) suggests that "Favourites from the Mediterranean-jasmine and pomegranate--were widespread in the Caribbean lands" when the British, French and Dutch entered the competition for access to the New World.

Many of the plants introduced by the Spanish had earlier been brought from Asia to Spain and other Mediterranean countries by the Arabs.

> After the Fall of Rome, the diffusion of plants was slowed as the great civilizations became relatively isolated from each

> other. For a long period the Arabs were the most important agents of plant migration. By the eighth century A.D. the Islamic empire stretched from Spain and Morocco in the west, to the Indus and the Jaxartes in the east, and thus effectively cut Europe's land routes to India, China and Africa. However, the Arabs were instrumental in spreading citrus and other crops into the Western Mediterranean. The sweet orange, the sour orange, the lime, the lemon and the citron were all indigenous to southern China and South East Asia. The time of their arrival in the Mediterranean is a matter of dispute (Grigg 1977:26).

Plants in Jamaica that are generally regarded as having originated in Southeast Asia (including Melanesia and the Pacific) have come to Jamaica in three ways. Some like the sugar cane, banana, plantain, orange, lemon and lime reached the Mediterranean and the continental islands through Arab commerce and were taken from there by the Spanish and the Portuguese to the New World. Some like taro or coco (Colocasia esculenta, greater yam (Droscovea olata), breadfruit and otaheite apple (Suzygium malaccensie) had first spread eastward from Western Malaysia into the Pacific islands and archipelagoes. It was from the Polynesian islands that Captain Bligh was to transport breadfruit, almond, mango and other fruits to the Caribbean islands at the end of the eighteenth century.

The Spanish had early introduced to the New World the basic elements of their European diet--wheat, grapes and olives. These did not thrive, however, in the lowland tropics of the Caribbean and the Spanish were forced to

utilize cassava as a staple. Parry tells us that "They were more enthusiastic in their acceptance of native fruit trees. Spaniards have long been lovers of orchards, skilled in the management of fruit trees--one of the gracious characteristics, perhaps, which they acquired from the Moors who ruled and civilized so much of mediaeval Spain" (1955:8). According to Parry, "Few missions and few large houses in colonial America lacked the dignity of a walled orchard, where European exotics might be tended and watered. The local acceptances, naturally, needed no such pampering" (1955:8). Parry continues:

> Among native fruit trees early accepted by the Spaniards were various species of the genus annona--sweetsops, soursops, custard apples or bullock's hearts, and the like; the caimito or star apple (Chrysophyllum cainito)--incidentally one of the handsomest of West Indian trees: the guava (Psidium gajaba); the pawpaw (Carica papaya) which now grows everywhere in the tropics; and the sapodilla or naseberry (Achras zapota), which was highly prized as a fruit tree long before its sticky sap, the source of chewing gum, became a product of commercial importance. These trees may not all have been native to Jamaica, but they were native to the Caribbean area. Oviedo described them all. They grow spontaneously, need little attention and have considerable resistance to drought.

The arrival of the Spanish and other Europeans in the Americas not only established an exchange of plants between the Old and the New Workd, it also led to a wider dispersal of indigenous American plants within

the New World.

> Cocoa, for example, although indigenous to the Andean slopes of the Amazon basin, was only grown in Mexico at the time of the Conquest. The Spanish however introduced it into Trinidad in the early sixteenth century and the Dutch brought it to Surinam in the later seventeenth century, whilst in the eighteenth century it began to be grown in Venezuela, Brazil and Ecuador (Grigg 1974:37).

Exactly when the cocoa was introduced to Jamaica remains in doubt. It was extensively cultivated by the Spanish, however, when the island was taken by the British in 1655.[2]

Introduction from Africa

The forced transporting of millions of Africans and their wide dispersal throughout lowland tropical America beginning in 1505 and continuing for some three and a half centuries led to the early exchange of crops between the Americas and Africa. Grigg (1974:36) writes that "In this way the greater yam, Sorghum vulgare, pearl millet, cowpeas and colocasia reached Brazil and the Indies..."

Plants came to Jamaica from the three major geographical regions of floral domestication in Africa--West Africa, Ethiopia and North Africa. To say when, how and under what circumstances African plants were introduced to tropical America remains obscure in many cases. Early introductions were melon, cow pea and several varieties of yams. Later, through private

individuals and the establishment of botanic gardens came ackee (Blighia sapida), gungu (C janus cajan), castor oil (as the shrub Ricinus communis is called in Jamaica), sesame (Sesamum indicum), okra (Abelmoschus esculentus), kola, African tuliptree (Spathodea campanulata), dracaena, African violet, coffee, bird-of-paradise (Strelitzia reginae), aloe and crown-of-thorns (Euphorbia milii Desmoulins). Special mention should be made of Guinea-grass (Panicum maximum), which was an accidental introduction to Jamaica. The seeds of "valuable and now indispensable" (H.O.J. 1886-1887:153) grass were brought from the west coast of Africa as bird food in 1745.

The Bulletin of the Botanical Department in its list of timber and shade trees cultivated in the botanical gardens for sale to the public presented the following plants as having an African origin: woman's tongue (Albizzia Lebbek), boabab (Adansonia digitata) and Uvaria Kirkii. In a similar list of economic and medicinal plants were included senna (Cassia obvata), tamarind (Tamarindus indica) and African oil palm (Elaeis guineensis). Among the ornamental plants present were varieties of pansies (Viola tricolor) and sweet violet (Viola ordorata).

Botanic Gardens and the Introduction of Plants to Jamaica

The exchange of useful plants between the Old

World and the New World was continued and expanded to an extraordinary degree in the eighteenth and nineteenth century with the formation of botanic gardens. During this time,

> ...agricultural enterprises in the tropics was stimulated by the demand from Europe for agricultural raw materials for use in industry, and for tropical beverages, foods and spices. Crops spread as a result of these developments, and botanic gardens began to play an important role in their dispersal as early as the beginning of the eighteenth century. The best known examples of their work in this respect were the spread of arabica coffee from Java via botanic gardens in Holland and France, and the very famous role of the Royal Botanic Garden at Kew, England, and the Singapore Botanic Garden when they helped to establish the rubber industry in Malaysia using seed collected in the basin of the Amazon River in Brazil (Cobley and Steele 1976:13).

Jamaica's botanic gardens were part of the British imperial network (Brockway 1977) that included not only the gardens themselves and their officials but also commercial establishments, horticulturalists, private individuals and farmers. They were all in one way or another involved in the world-wide distribution of plants.

Enfield Garden

The first public botanic garden in Jamaica was established in 1774. Through the influence of Sir Basil Keith, then Governor of the island, a committee of the legislature recommended the appropriation of £700 for the purchase of suitable land and £300 for the annual salary

of a botanist. In 1775 Enfield, a property in the vicinity of the district of Gordon Town in the hills of St. Andrew, was purchased. Dr. Thomas Clarke, through the efforts of Sir Basil Keith, came to Jamaica to take charge of the garden and to serve as the island's botanist.

In 1779 the garden at Enfield was abandoned and sold and the plants transferred to the district of Bath in the parish of St. Thomas. Enfield was abandoned for two main reasons. The site was unsuitable for a botanic garden, being among other things too steep; and it was difficult to maintain given Clarke's appointment as the official superintendent of all botanic gardens. His duties ("with the typical parsimony of the Assembly" writes Eyre 1966) included not only responsibility for Enfield, but also the position of resident physician at the Bath Spa, some forty-four miles from Enfield.

Bath Garden

Bath was the site of the island's second public garden. Governor Keith had envisioned the formation of both a European and a tropical garden. Until the end of the eighteenth century, as well as between 1848 and 1860, Bath was the island's ideal tropical garden; it was located in one of the wettest areas of Jamaica. Today, Bath is Jamaica's smallest and least visited garden.

"During the eighteenth century," writes Eyre (1966:21), "many now commonplace plants were first established at Bath." Bath was the center for the distribution of introduced plants throughout the island; but there were, however, several problems. The garden was small, easily flooded and was, as Eyre (1966:21) says, "...remote from the capital and from most of the country in those days. Moreover, the soil was largely coarse river wash and not particularly rich..."

Liguanea Garden

Liguanea Garden was the third public botanic garden. Although the land was not acquired by the government until 1790, the garden had already been in existence some twenty years, having been established by Hinton East on his property nine miles from Kingston, in the vicinity of what is now the district of Gordon Town. This was the garden that inspired Sir Basil Keith to act and ultimately led to the purchase of Enfield, which adjoined East's property. When East died in 1790, his garden was "offered by his nephew to the assembly as a public garden at their own price" (Fawcett 1898:2). It was purchased "...the preamble stating," according to Fawcett, "that the garden in Bath was insufficient in extent, and was besides liable to be carried away by the river which had destroyed two-thirds of the town."

As the 1886-1887 Handbook of Jamaica states (p. 152), the history of botanic gardens in Jamaica "...is intimately connected with the various vicisitudes through which the island has passed, and since 1774 it has had its periods of depression no less than those of comparative prosperity." From the end of the eighteenth century to the 1840's, interest in public gardens and plantations waned as the prosperity of the planters declined.

> The colony had now to undergo a period of difficulty and distress, as the slave trade was abolished in 1807 without compensation to the planters, and the wars with France and the United States caused great depression. Accordingly in 1810, the Liguanea garden was sold, and that at Bath was never afterwards adequately supported (Fawcett 1898:3).

Of Liguanea Garden, the Governor, Sir John Peter Grant reported in the Blue Book for 1871 that "the famous Jamaica botanic garden of ancient times, which was not only the highest intrinsic value, but also was admirably situated, was sold, I believe, for a trifle and was broken up a long time ago, in some spasmodic fit of false economy" (cited in Fawcett 1898:5).

Bath Botanic Garden narrowly escaped the same fate. Though by 1824 efforts were already under way by some members of the legislature to restore the botanic gardens to their former value and usefulness, the 1886-1887 Handbook of Jamaica (p. 155) reports:

> In 1883, in another fit of economy, owing to domestic troubles and the need for retrenchment, a committee was appointed "to report on the best means of diminishing the contingencies and expenditure of the island, and to consider whether the Botanic Gardens at Bath could be sold for the benefit of the public." The report was made at the close of the year and ordered to lie on the table. Nothing further, however, appears to have been done for the Garden till 1840, when the sum of £300 was "voted for the improvement of the Garden at Bath and for the services of a Botanist."

Between 1840 and 1860 Bath prospered through the efforts of Nathaniel Wilson who was appointed as the island's botanist in 1846. In the 1850's, however, its limitations became apparent, and in 1860 a new garden was established at Castleton in the Parish of St. Mary. By 2887 Bath, the oldest public garden, though still maintained, was greatly reduced in size. It continued in its greatly diminished form "for the sake of its valuable trees and palms, and as a station for the distribution of seeds and plants in the eastern portions of the island" (H.O.J. 1886-1887:152; Fawcett 1898:4). In time, even the distribution of seeds and plants ceased. Describing the garden in 1966, Eyre (1966:22) wrote, "It continued to be maintained for its valuable trees and palms, though now it is a rather forlorn remnant of its former self."

Between 1870 and 1898, botanic interests revived

in Jamaica. The progress made in this period was indicated by the West Indian Royal Commissioners in their report to the British Parliament. Jamaica became the model for the Caribbean.

> The Botanical establishments in the larger Colonies, such as Jamaica, Trinidad and British Guiana, have already rendered considerable assistance in improving agricultural industries, and they are capable of being made increasingly useful in this respect. In the Windward and Leeward Islands and Barbados, small establishments called Botanic Stations were established a few years ago on the advice of the Director of Kew Gardens, and the results, though not yet extensive have been of a distinctly promising character... These stations should be enlarged in their scope and character, and be organized on the lines found so successful in Jamaica. In the latter colony it is admitted that intelligent and progressive action in the direction of encouraging a diversity of industries has produced most satisfactory results... To achieve this result, has, however, taken more than 20 years of persistent effort, and the Government has spent more than £100,000 during that period on its botanical establishments (cited in Fawcett 1898:279-280).

Castleton Garden

With the revived interest in developing an adequate botanic garden in Jamaica during the latter half of the nineteenth century, Castleton was established as the island's fourth public garden. Writing of the relationship between the limitations of Bath and the formation of Castleton, Eyre (1966:22) reports:

> In 1858 the Sulpher River flooded the garden for the fifth time [since 1848] and a large section on this occasion was completely devoured. Following this disaster the general inconvenience and smallness of Bath garden were increasingly manifest. The need for a larger and more centrally situated garden was felt, and so in 1862 Castleton Garden was established...After Castleton came into being, Bath languished and shrank both in size (to three quarters of an acre) and importance.

Between 1860 and 1875 Castleton was the chief garden from which plants were distributed throughout Jamaica.

Nineteen miles from Kingston, Castleton was situated in the Parish of St. Mary along the banks of the upper reaches of the Wag Water River. At an elevation of 600 feet, the garden was situated on either side of the "Junction" road which was and remains one of the major passages across the interior uplands in the eastern part of the island. The garden consisted at that time of borders of ornamental plants, a palmetum, a collection of economic spice and fruit trees, a large collection of orchids, experimental grounds for testing new industrial plants and a large nursery containing over 40,000 plants such as cacao, olive, sugar cane, rubber plants, nutmeg, clove, black pepper, mango, vanilla, cardamon, pine apples, sarsaparilla, cinnamon, Liberian coffee and tea (H.O.J. 1887:151-152).

Hill Garden

In 1868 Sir John Peter Grant, then Governor of

Jamaica, established the government's Chinchona Plantation. With an original area of six hundred acres, it was located at an elevation of 4,500 to 6,300 feet on the southern slopes of the Blue Mountains in the parish of St. Andrew. Though the garden owed its origin to the growing interest of the British government in the cultivation of chinchona, it was also the realization of Sir Basil Keith's dream nearly one hundred years earlier of establishing a European garden. Hill Garden was Jamaica's fifth public garden.

Parade Garden

Established in 1872-1873, Parade was Jamaica's sixth public garden. It was "formed," writes Fawcett (1898:13), "for the recreation of the inhabitants of the City of Kingston, the principle port of the island and the seat of government." Seven acres in extent, it consisted essentially of borders of ornamental plants, flower beds, shade and ornamental trees, lawns, numerous palms, lily tanks and fountains.

Hope Gardens

By 1873, the need was felt for a new garden in Jamaica. Some of the same arguments for shifting the main focus of the island's botanic interest from Bath to Castleton were now offered in support of establishing an additional garden. As Eyre (1966:28) notes, "Despite

the fact that it was dissatisfaction with the site of Bath which led to...[Castleton's] establishment, the choice of location was the subject of much criticism. It was said to be still too far from Kingston, and like Bath, it was and is subject to periodic inundation and destruction from flash floods."

In 1873, work was begun on the construction of Hope Gardens on the Liguanea plains. The place was to be a pleasure garden and a small experimental sugar cane farm. The importance of both Hope Garden and Parade Garden was clearly expressed in the 1873 report of the Botanic Department: "The Establishment of this garden, simultaneously with that of Parade, coupled with greatly increased command of water in the course of being brought to Kingston, must undoubtedly constitute a new era in the history of norticulture in Jamaica" (Fawcett 1898:7).

The Function of Jamaica's Botanic Gardens

These botanic gardens of Jamaica served many important functions. They distributed information through bulletins, leaflets, reports, newspaper articles, lectures, educational programs, and demonstrations, and contributions to exhibitions and flower shows, they disseminated information both within the island and abroad. In 1893 Fawcett (1893:4), Director of the Botanic Department, wrote "The work of the office is

heavy, and especially the correspondence, 2,041 letters being received and 3,244 written, by the superintendent." Two years later Fawcett (1895:215) reported that the bulletins were published once a month to present "information of a general character," to reduce significantly the burden of correspondence and to convey "intelligence" to those who "would not take the trouble to write requests." For the increase and dissemination of knowledge, the Botanic Department maintained facilities for scientific research. These included a laboratory, herbarium library and greenhouse.

Experiments

Conducting experiments was also an important function of Jamaica's botanical department. Work was done on the cultivation and propagation of many plants and the curing of various products. The plants included cocoa, coffee, kola, oranges, nutmeg, fodder plants, onions, grapes, mangoes, pineapples, cinchona, fruit trees, Chinese indigo, tobacco, eucalyptus, the dragon blood tree, timber trees and rubber trees. In the report for the year ended March, 1894, Fawcett (p. 69) wrote:

> On the side of Chemistry, I am endeavouring to help in the study of the properties of the fresh Kola nut, and the changes that occur during drying; on a cheap method of obtaining the digestive principle of Pawpaw; and the analysis of the West Indian Dragon's Blood in order to compare its properties with those of other kinds.

Trade and Industry

Given the public's practical concern with obtaining reliable information, Jamaica's Botanic Department was actively engaged in meeting this need. They dealt with topics ranging from plant pests and diseases to the adaptation of plants for horticultural, commercial and industrial use. In the latter case, this specifically meant providing new and better varieties of pineapples, mangoes, sugar canes and other cultivars. The Botanic Department provided information on soils, methods of tilling and the use of manures; they recommended plants that were suited to particular localities. They also sought to extend the range of both economic and ornamental plants cultivated in Jamaica. In a report on services rendered to the island, Fawcett (1895:14) wrote:

> ...the Fruit trade of Jamaica was consistently fostered and encouraged by the Botanical Department for more than 20 years. It is entirely due to this Department that the Island now possesses so extensive and superior a supply of fruits. Orange plants have been distributed from the Gardens at the rate of 10,000 to 50,000 annually; also, Lemons, Citrons, Mandarin Oranges, Tangerine Oranges, Brazil Nuts, Tree Tomato, Grape-Vines and Olives. Nearly all the best Pineapples in the Island were introduced by the Department, also East Indian grafted Mangoes, Mangosteen, Durian, &c.

The Botanic Department also sought to establish "minor industries" which included the cultivation of cinchona, cacao, rubber, sarsaparilla, potatoes and ginger. Fawcett

(1895:14) in the report cited above indicated that other industries started by the department were associated with Liberian coffee, nutmegs, vanilla and fiber-yielding plants.

Conservation

The Botanic Department was also concerned with forest conservation in the central ridge of the Blue Mountains and with the planting of timber trees in other parts of the island.

Recreation

Jamaica's botanic gardens with their collection of living native and exotic plants fulfilled recreational and scientific, as well as economic, objectives. Soon after Castleton was established in 1860, Governor Grant "...said that 'it was not too far from Kingston for a holiday excursion' and prophesied that it would become one of the most interesting spots in the West Indies." His prophecy," Eyre (1966:30) continues, "has not gone altogether unfulfilled." The recreational function of Jamaica's botanic gardens was an important aspect of their development. In 1885, reporting on the future of Hope Garden twelve years after it had been established, Dr. Morris (who became Superintendent of Public Gardens and Plantations when Thomson retired in 1878) wrote:

> The lands adjoining the Hope nurseries, about 100 acres in extent, might be

> cleared and laid out as a public park, with grass lawns and shade trees, and afford a convenient and healthful resort for the inhabitants of Kingston and Half Way Tree. At present, persons driving along any of the hot, dusty, and dreary looking roads leading out of Kingston have no place where they could get out of their carriages and enjoy a walk under shade. With the exception of the Parade garden, Kingston, which is largely frequented by the poorer classes of people residing in the immediate vicinity, there is no place of the nature of a park in the island (cited in Fawcett 1898:8).

In the beginning those involved with Jamaica's Botanic Department sought to record the island's native flora and to discover uses to which the plants could be put. Towards the end of the eighteenth century, they became more concerned with the introduction and experimental development of useful economic and ornamental plants from abroad. After the first World War, the gardens for the most part lost their original practical function. The extent to which they were involved in the introduction and distribution of plants declined and they became largely recreational "botanic gardens" (Proctor 1966:11).

The Botanic Gardens and the Introduction of Plants to Jamaica

All things considered, the most important function of the botanic gardens of Jamaica was their part in the constant stream of plants introduced from all parts of the world and distributed throughout the island.

"Directly and indirectly," states the 1886-1887 Handbook of Jamaica (p. 152), "during the last 100 years, the Botanic Department has introduced and propagated some of the most valuable plants, now the sources of the staple products of the island..." These "staple products" included plants cultivated for their beauty. Fawcett (1895: 14) wrote at the end of the eighteenth century: "It is generally acknowledge that Jamaica is better supplied with ornamental and flowering plants than any other portion of tropical America...The Department has fostered these at considerable trouble and expense and it has brought their civilizing influence to bear upon all classes of the Community." Today all classes of Jamaicans grow ornamental plants, even if only a few potted plants on a stand, table, or cement block next to the house.

By road, rail, post and coastal steamer, seeds, seedlings, cuttings, grafts, rizomes, bulbs, stems, corms and runners were sent from one botanic garden to another; they were also distributed to small farmers and to estates and to the grounds of hospitals, churchs, police stations and schools all over the island.

To understand the continuing importance of botanic gardens in Jamaica and the ways in which they functioned, it is necessary first to consider them in the historical context of the last thirty years of the

eighteenth century. By the end of the eighteenth century, African Jamaicans secured their subsistence from two fundamentally different sources. Part they acquired through simple commodity production based on the cultivation of plants and the raising of domesticated animals. The other part consisted of flour and salted meats imported from the north Atlantic colonies. In "the imperial scheme of the eighteenth century," writes Eric Williams (1966:108), "the mainland colonies ran a bad second. Sugar was King, and the West Indian islands the sugar bowl of Europe." In the organization of the mercantilist system, the North American colonies came "to have a recognized place in the imperial economy as purveyors of the supplies needed by the sugar planters and their slaves." For Williams (1966:110), this was an important fact.

> For the West Indian colonies needed food. If they were to concentrate on the sugar to which the economic specialization of the mercantile epoch confined them, they had no back country where staples could not be raised, and their cash crop was too profitable for them to afford the luxury of diverting land and labor to cattle grazing and food crops. "Men are so intent upon planting sugar," a correspondent wrote to Governor Winthrop in 1647 about the West Indies, "that they had rather buy food at very deare rates than produce it by labour, so infinite is the profit of sugar workes after once accomplished." The tradition was thereby established by which sugar became "the Wheat or bread" of the West Indies. Only the possession of the mainland colonies permitted this sugar monopoly of the West

> Indian soil. "To subsist a colony in America," wrote the Abbe' Raynal, "it is necessary to cultivate a province in Europe." Britain voluntarily abdicated this privilege, as the lesser of two evils, to the mainland colonists.

Against a background of deteriorating political relations between the American colonists and the British government, it is easy to understand the urgency the Jamaican planters, the Jamaican Assembly and the British colonial office felt in introducing new sources of food that would feed the island's African population at the lowest cost. This circumstance made the end of the eighteenth century "the great period of plant introduction" (Swabey 1949:61) to Jamaica.

The American revolution initiated the decline of the old mercantile system. "The United States," writes Parry (1955:17), "were now a foreign power, outside the system of imperial preferential trade. Sugar molasses and rum could still be sent to the States, if the Americans would buy them; but salt fish, grain and timber had now to come from Canada, in much smaller quantities and for a time at least at a far higher price, or else from England itself. England had less and less to spare, and soon the threat of another and more serious French War was once again to disorganize Atlantic shipping. Yet still the great armies of slaves on the plantations had somehow to be fed."

The American revolution, coupled with the

commercial conflicts between the English on the one hand and the French, Spanish and Dutch on the other (to which was added a series of devastating hurricanes which struck the island from 1780 on) spelt disaster for Africans in Jamaica. Bryan Edwards gives the following account of the events:

> On the 20th of October [1786], in that year, happened the fifth deredful hurricane, which again laid waste the leeward parishes, and completed the tragedy. We decline to enlarge on the consequences which followed, lest we may appear to exaggerate; but having endeavoured to compute, with as much accuracy as the subject will admit, the number of our slaves whose destruction may be fairly attributed to these prepared calamities, and the unfortunate measure of interdicting foreign supplies, and for this purpose compared the imports and returns of [Africans]... for the last seven years, with those of seven year's preceding, we hesitate not, after every allowance for adventitious causes, to fix the whole loss at fifteen thousand: THIS NUMBER WE FIRMLY BELIEVE TO HAVE PERISHED OF FAMINE, OR DISEASES CONTRACTED BY SCANTY AND UNWHOLESOME DIET. BETWEEN THE LATTER END OF 1780, AND THE BEGINNING OF 1787 (cited in Powell 1973:9).

This historical predicament was to have profound consequences for the introduction of plants into Jamaica. The 1886-1887 Handbook of Jamaica (p. 154) states:

> During the years 1791-1807 the Committee in charge of the Botanic Gardens, with Mr. Shirley as Chairman, greatly developed and improved them. Inquiries were made everywhere for new products; thanks and gratuities were voted for the introduction of valuable plants, and these were cultivated

> and distributed with great assiduity and care. In order to make the island less dependent on America for supplies every encouragement was given to the cultivation of yams, cocoas, maize, plantain, and such products as the breadfruit, zezegany or wanglo, nutmeg, clove, cinnamon, pindars and coffee, it being believed that the "cultivation of these valuable exotics would, without doubt, in the course of a few years lessen the dependence of the sugar islands on North America for food and necessaries; and not only supply subsistence for future generations, but, probably, furnish fresh incitements to industry new improvements in the arts, and new subjects of commerce."

Hinton East, Dr. Thomas Clarke and the Introduction of Plants to Jamaica

Two men and two events were especially important in the introduction of valuable plants into Jamaica at the end of the eighteenth century. The men were Hinton East and Dr. Thomas Clarke; the events were Admiral Rodney's introduction of plants captured from the French and Captain Bligh's introduction of the breadfruit from Polynesia.

East was at the center of all the floral changes that were taking place in Jamaica from 1770 to 1792. A Jamaican from an established creole family, he was educated at Oxford and returned to the island to practice law. Not only was he a planter, he also served the colony in various public capacities between 1776 and 1789. He was Receiver General, Registrar in the Court of

Vice-Admiralty, Public Treasurer and a member of the colony's ruling political body, the House of Assembly. East had an intense interest in plants. "Over a period of seventeen years," writes Eyre (1966:16), "East personally introduced a prolific number of plant species from overseas, in addition to hundreds introduced by a host of acquaintances." Eyre correctly concludes "...that Jamaica's present appearance probably owes more to Hinton East than to anyone else."

Webster (1972:4) describes East as the "benefactor of all Caribbean gardeners." Eyre (1966:15) writes that East's garden "was described by a famous contemporary as "perhaps the most magnificent establishment of its kind in the world," and we have already seen that it inspired Sir Basil Keith to consider the creation of a tropical garden and a European garden. In an interesting comment, Webster (1972:4) identifies a factor which made East outstanding in his own time. She writes:

> East's unique contribution to tropical gardening is that in spite of uncertain sailing ship communication and dependence on slave labour, he obtained hundreds of spices from the Occident and Orient and established them in Jamaica <u>when that island and its fashion influenced the Americas</u> [my emphasis].

In his assessment of East, Eyre (1966:15) correctly emphasizes "The achievement in establishing six hundred species new to Jamaica in the days of unrefrigerated sailing ships that took months to bring their precious

cargoes from as far away as Japan, Sweden and Brazil must not be underrated." Discussing the introduction of plants to Jamaica, Swabey described East as "One of the most tireless of the early enthusiasts" and wrote that "to him and his friend Mr. Wallen [whom Webster (1972:5) describes as 'an Irishman...retired soldier and amateur botanist'] we are indebted for many ornamental and other plants introduced between 1770 and 1790. The Oleander, Trumpet Flower, Camellia, Arum Lily, Water-cress, Honeysuckle, Sweet Violets, and Nasturtium, all started their Jamaican life in this period" (1949:64). Eyre (1966:16) states:

> Among his [East's] earliest introductions were the cypressus from Greece, the mulberry and the tulip tree, Liriodendron tulipifera. In rapid succession followed such familiars as the garden egg from India, cassia, casurina, magnolia, bauhinia, hibiscus, oleander, azalea, cork oak, rhododendron, and jasmine. He established many homely temperate plants such as the watercress and the geranium, even a balm from as far north as Sweden, and brought the golden amaryllis lily from China and the 'bay tree,' Laurus indica, from Madeira.

In Jamaica at the end of the eighteenth century, East's influence extended far and wide. Webster (1972:5) says:

> In the waning eighteenth century, Garden House aglow with red zinnia from North America, sweet scabious from Italy, the yellow rose of Spain, moss roses from France, the camellia of China and the white, sheened spathe of arum flourishing

> side by side with cherimoyer ("the fruit of which is the boast of South America" enthused East) inspired the Governor of Jamaica, Sir Basil Keith, to propose the establishment of two public gardens: one tropical and the other European.

Dr. Thomas Clarke

We have seen that Clarke was appointed both as resident physician at Bath Spa and as the island's first official botanist. He was put in charge of Enfield, the first public garden. The fact that he was stationed at Bath, which was a long difficult journey from Kingston in those days, was one reason why Enfield was sold. Locating a new garden at Bath allowed Clarke to meet both of his responsibilities more effectively. Enfield was purchased in 1775. Fawcett (1898:2) reports that through the 1770's, Clarke had already introduced to Jamaica "the China tea plant, camphor, litchi, Cycas circinalis (the "sage Palm"), and Desmodium gyrans [in 1775]; in 1778 Blighia sapida (Akee); and in 1779 the clove tree." Special mention should be made of the ackee, which came introduced from Western Africa. It is reported that Clarke purchased the seed from a "slaver." In a little over two hundred years, the plant became naturalized throughout the island at low altitudes, and its fruits are now a key ingredient in the traditional "ackee and salt fish," which is the national dish.

Rodney and the Introduction of the Mango and Other Plants

Turning to the two important events of plant introduction at the end of the eighteenth century, we will look first at the introduction of the mango and other plants as the spoils of war.

Two years after the start of the American Revolution, the French began to take an active part in this conflict. General de Rochambeau was sent with six thousand trained soldiers in 1780 to reinforce those of George Washington. A year later, twenty warships under the command of Admiral de Grasse were sent to aid the Americans. In the combined attack at Yorktown, Virginia, which ended the American Revolutionary War with the surrender of Lord Cornwalis in October 1781, Admiral de Grasse was instrumental in preventing the British fleet from saving Cornwallis and his troops. After this victory in the north, de Grasse headed south to drive the British from the Caribbean. Lansing (1953:98) writes: "It was in light of this coming conflict that the King's minister, Lord Sandwich, head of the Admiralty, told Admiral Rodney as he prepared to return to his West Indian Command in 1782: 'The fate of the empire is in your hands and I have no reason to wish it otherwise.'"

In 1782, the same year in which de Grasse was defeated by Rodney, Captain Marshall of the Flora (a vessel in Rodney's squadron) captured a French ship on

its way from Mauritius to Hispanola. On board "were plants, chief among them being spices and mango" (Powell 1972:6). Fawcett writes that "The ship was sent as a prize to Jamaica and Captain Marshall 'with Lord Rodney's approbation' deposited the whole collection in East's garden." As Powell (1972:7) has made clear, however, there was much more to this episode:

> ...not all the plants on the captured ship, La Santie Anne, reached Jamaica. Matthew Wallen, a keen horticulturist, wrote to tell Sir Joseph Banks that some of the plants--nutmeg, clove and black pepper--were destroyed when the French understood that escape was impossible. In fact no plants were mentioned in the Admiralty Papers of the Jamaica Archives as being on board that vessel. According to the ship's papers, she arrived at Mauritius in December, 1781, and remained there until 28th March, 1782, sailing for Hispaniola where she would get a lading to take back to France. The master and part owner, Nicholas Benoist, declared before the Admiralty Court in Kingston that he was taking "ballast and some private adventure" to Hispaniola. When she was captured there were plants on board, and if what Wallen says is correct, Benoist destroyed certain of them--nutmeg, clove and black pepper.

Powell points out that on the eighteenth of February, 1782, the M. de Bellecome, Governor-General of St. Dominque (Hispaniola), wrote to Jean-Nicholas de Cere, then in charge of the Jardin Du Roi Isle De France in Mauritius, that he was sending him some plants and enclosed a list of these plants "consisting of mangoes (many varieties, mostly from Goa), screw pine, jew plum,

woman's tongue, jackfruit, ravensara, cinnamon, carombola, bilimbi, brindonne and ampalis" (Powell 1972:8). Of the plants that were taken from the captured La Sainte Anne, all but four could be accounted for.

> In Cere's list there is no mention of nutmeg, clove or black pepper. At this time, the nutmeg and clove were newly acquired spice treasures, and it was treason to export plants or seeds of these trees from Mauritius. Not until 1787 did the Minister of Marine order Cere, for the first time, to send these plants to St. Dominque. If Benoist had them aboard, it was strictly illegal and hence the destruction of the plants. As far as we know, there was no law against exporting black pepper, but Cere was carrying out investigations on pepper and it is possible that Benoist would have found it embarrassing to explain the presence of pepper plants on his ship (Powell 1972:8).

As far as the mangoes are concerned, Sir John Peter Grant reported in 1872:

> The plant has naturalized itself here in the course of only ninety years, and now spreads itself self-sown over large tracts in all parts of the island. As the propagation has been exclusively from seed, it is surprising to find amongst these wild trees so many bearing fruit at all eatable, which I think could not be the case were not the climate and soil very propitious for this plant. The quantity of fruit produced is remarkable, and it is greedily devoured by horses, cattle and swine (cited in Fawcett 1898:6).

Introduction of the Breadfruit

The breadfruit which reaches a height of over

sixty feet is a native of the moist tropics of South-east Asia and the Polynesian Islands. East was one of the greatest champions in the cause of introducing this tree to Jamaica. Lansing (1953:84) indicates that the tree "had been observed with interest by Captain Cook and others. But William Dampier had been the first to comment on its food value and describe the various uses made of it by the South Sea islanders. Botanists in England had been much impressed, as had the governor of the British West Indies." There were many tales about the marvels of the breadfruit tree; it was said to provide food for most of the year and the only labor required was that of reaping its large, round starchy fruits. So much did the breadfruit appear as the ideal solution to feeding the Africans of Jamaica without detriment to sugar production that the West India Committee, through the Society of Arts, Manufactures and Commerce in London, offered £100 to anyone who would introduce the plant to the West Indies. In a letter to Banks who was President of the Society of Arts, Manufactures and Commerce, East, expressing his great interest in introducing the breadfruit to Jamaica wrote:

> The Acquisition of the be[st] kind of Bread Fruit would be of infinite Importance to the West India Islands in affording exclusive of variety, a wholesome & pleasant Food to our Negroes,

> which wd. have that great Advantage over the Plantain Trees from whence our Slaves derive a great part of their Subsistence, that the former wou'd be raisd with infinitely less labour and not be subject to be destroyd by evry smart Gale of Wind as the latter are. I flatter myself the time is not very distant when measures will be taken by proper Authority for bringin about this desireable Event--should it happen, I conceive with submission the most likely means to succeed wou'd be to bring the Plants or Seeds immediately from the place of their natural growth to the West Indies (cited in Powell 1972:9).

Towards the end of the eighteenth century as his reputation became established, Banks became scientific advisor to King George III. Banks had travelled to Tahiti with Cook and was familiar with the breadfruit from experience. In addition to East, he was also in contact with other West Indian planters and Valentine Morris, Governor of St. Vincent had written him as early as 1772 about the importance of introducing the breadfruit to the West Indies (Powell 1973). In 1778, by order of King George III, Bligh set sail for the Pacific to obtain the legendary breadfruit. This initial effort ended in failure with the well-known mutiny of the Bounty in 1789. East wrote to Banks in October 1790:

> ...I feel with you very truely for the loss of the Bounty and Guardian, (you will allow for my Partiality) in a more particular manner for the Loss of the former--After having heard that she had executed the purpose of her voyage to Otaheite in the most desireable manner, and was returning with a most

> capital Collection of valuable Plants, many of which were destind for this Island, and in all probability wd in due course of years have added greatly to the comfortable living of a numerous race of poor people in this Island--to have all these pleasing Prospects blasted by a set of Miscreants raises such Resentment in my Mind, that the only Consolation I can receive on the occasion, is to hear that those Villains have been all taken, and made to expiate their Crine [sic] on the Gallows. I trust however that it will not be long before the Royal Personage to whose Benevolence, we are indebted for the late but unfortunate attempt, will not let the Business rest, but make a second, send a Vessell of War to attend the one which is to convey the Plants, that the Object may not be again lost from the Cause (quoted in Powell 1972:10).

East, however, did not live to see the breadfruit introduced to Jamaica. He died in 1792. On February 5, 1793, the Providence and Assistant under the command of Bligh put into Port Royal with 346 breadfruit trees along with mangoes, almond and many other species (Powell 1972). Ninety-six of the breadfruit trees were given over to the botanic gardens and the remainder distributed to individuals in all parts of the island where "committees were appointed to make arrangements for their reception, the care of them, and their distribution" (Fawcett 1898:2). Following East's death in 1792, James Wiles who had circumnavigated the globe with Bligh was appointed to take charge of Liguanea garden. In a letter to Banks in 1793 he reported:

> All the trees under my charge are thriving with the greatest luxuriance. Some of the breadfruit are upwards of eleven feet high, and my success in cultivating them has exceeded my most sanguine expectations. The cinnamon tree is become very common, and mangoes are such plenty as to be planted in the...African grounds (quoted in Fawcett 1898:3).

In The Oxford Book of Food Plants Masefield et al write: "Although breadfruit trees have now been established in most parts of the tropics, the fruit has not found much popularity outside its original home in the Pacific and south-east Asia (1969:115). Cobley and Steele (1976:188) hold a similar position. The breadfruit "has never become very popular outside its original home, despite its wide dissemination in the tropics." This is not true of Jamaica, for though, as Powell (1973:7) pointed out, it took some thirty years for breadfruit to be accepted by most Jamaicans, "...it has long since become an integral part of their diet. It is absolutely relied upon in rural areas, where breadfruit, in its season, is eaten three times a day."

Bath Garden and the Introduction of Plants to Jamaica

With the sale of Enfield in 1779 and of Liguanea garden in 1810, Bath became the chief botanic garden and the main center to which plants were brought and from which they were distributed throughout the island. Between 1799 and 1846 several eminent botanists were

assigned to the supervision of Bath. In 1782 Dr. Thomas Dancer took over from Dr. Thomas Clarke; in 1825, the well-known botanist Mac Fadyen was appointed island botanist; followed in 1828 by Thomas Higson, who had "presented to the garden a collection of living plants collected by himself in South America" (Fawcett 1898:3); in 1846 (when the Bath garden was again assuming importance after the economic depression of the early nineteenth century) Nathaniel Wilson became island botanist, after having served as a gardener at Kew Gardens in London. Fawcett (1898:3) points out that:

> He kept up a correspondence with Sir W. J. Hooker, director of Kew gardens and introduced a very large number of plants from Kew and other parts of the world, trusting to be repaid his expenditure by the liberality of the assembly. Baehmeria nivea was imported by him, and he formed a very extensive collection of fibre plants. He also received from Kew in 1846 and 1847 the mangosteen, litchi, durian, and Musa Cavendishii. In 1848-1850, he reports the arrival of Poinciana, Spathodea, Bougainvillea spectabilis, Caesalpinia Sappan, Amherstia and Assam tea.

Bath botanic garden had two periods of glory, as we have seen--at the end of the eighteenth century and between 1846 and 1865. In 1860 the legislature appropriated money for the purchase of Castleton. "Wilson," writes Fawcett (1898:4), "was entrusted with the formation of a garden there on the understanding, however, that the garden at Bath was to be maintained for

supply of seeds to Castleton, and plants for general distribution."

Castleton and the Introduction of Plants to Jamaica

Between 1860 and 1880 Castleton became the chief public garden of Jamaica and the center to which plants were introduced and from which they were distributed to all parts of the island. Fawcett (1898:5) points out that "...up to 1869, there had been no general importation of plants, because of doubts about maintaining the garden on account of its distance from Kingston." Once this reservation was overcome, however, Castleton flourished. Fawcett (1898:5) reports that:

> ...Dr. (now Sir) J.D. Hooker sent out from Kew great numbers of new and valuable plants, 400 different species and varieties, among which were mangosteen, Brazil nut, bhel, Monstera deliciosa, carob bean, cocoa, Tonguin bean, teak, New Zealand flax, and thirty-two species of palms. In the same year two cases of grafted mangoes arrived from India via Kew; Mr. Thomson states that "to His Excellency the Governor, from his personal knowledge of Indian mangoes, we are obliged for their introduction." Even at this early period of its existence the nutmeg trees began to bear fruit, and the clove trees were six feet high.

Chichona or Hill Garden and the Introduction of Plants to Jamaica

Hill Garden as we have seen was established as a consequence of the growing interest in the cultivation of Chinchona. In 1860 Sir W. J. Hooker had sent seeds

of Chinchona succirubra, C. nitida, and C. micrantha to Wilson (who was then superintendent of the Botanic Department stationed at Castleton). Wilson in his report of 1861 said "several hundred plants were ready for planting out" (cited in Fawcett 1898:4). These were planted experimentally in different parts of the southern slopes of the Blue Mountains. In 1868 the "Chinchona Plantations" were established. "Now also," wrote Fawcett (1898: 4), "a first beginning was about to be made to realize the conception of Sir Basil Keith of nearly a hundred years before to have a 'European garden' in a temperate climate." Chinchona's location and its creation as a European garden gave it a unique value. Besides the Chinchona of which 40,000 plants were offered for sale in 1869, this garden was the source of many European fruit and vegetable plants distributed in the island.

At the retirement of Wilson in 1868, Robert Thomson (who had originally been appointed in 1862-1863 as Wilson's assistant just after Castleton was formed) became Superintendent of botanic gardens. At the same time, efforts were made to acquire "a skilled European gardener" for Hill Garden, and in 1874 Nock arrived in Jamaica from Kew to assume that position. In 1875 Thomson reported:

> Mr. Nock has been very successful in producing an assortment of vegetables such as are not grown elsewhere in the island. It is to be hoped that the peasantry will initiate the cultivation of similar vegetables as these experiments show that at this height (5000 feet above the sea) almost all European vegetables can be grown with advantage.
>
> Vegetables have been grown and instruction imparted so successfully that all the settlers round for many miles grow such "English" vegetables as peas, cabbages, carrots, turnips, potatoes, artichokes, horse-radish, cucumbers and beets. Tea has been grown of a quality declared by London brokers to be excellent, and an order has just been received from a planter for 1000 plants. Timber trees of various kinds have been planted out and tended for years, and a knowledge gained of the capabilities of different trees for use in these hills where nearly all the valuable timber has already been cut. The nurseries at present contain some thousand of seedling trees. Fodder plants have been under experiment as well as many different kinds of economic plants, which will be taken up by planters in the near future, such, for instance, as jalap... orris root..., China grass, a variety of ramie which can only be grown successfully in the hills..., and fruit trees of temporate climates, and of high elevation both in the new and old worlds (cited in Fawcett 1898:7).

Hope Garden and the Introduction of Plants to Jamaica

Hope Garden, as we have seen, was established in 1873 as a recreational garden, as a farm for the experimental cultivation of new varieties of sugar cane and fruit trees and as a nursery. By 1889, however, it replaced Castleton as the island's most important botanic

garden and the central clearing house for the introduction and distribution of exotic plants.

So far, I have been discussing the botanic gardens from the vantage point of the introduction of plants and their distribution throughout Jamaica. This is a limited perspective. Jamaica's botanic gardens were part of a network that, in conjunction with gardens in other countries, private individuals, horticulturalists, and commercial establishments such as nurseries, was engaged in the world-wide circulation of plants. Not only were plants introduced and distributed in Jamaica, they were also sent from the island to other parts of the world. The extent of this process of circulation (especially after Hope became the center of the island's botanic activities) can be illustrated by the report of the Director of Public Gardens and Plantations for the period from the first of October 1889 to the thirty-first of March 1891 which is presented in Appendix 1.

I have in this chapter indicated the complex ways in which many of the plants which now constitute Jamaica's settlement vegetation were introduced to the island. In this regard, I pointed out that the role played by the creation of botanic gardens in Jamaica was of particular importance. We should again note here that the idea of settlement vegetation refers to the ordered distribution of plants within the parameters of human settlement.

This includes plants cultivated alone or intercropped in farms or agricultural areas. With regard to intercropping, particular attention was paid to its occurence in the form of forest cropping, which emphasizes the importance of trees and root crops. We saw that this form of cropping was to be found not only in Jamaica, but also in many parts of the wet tropics. In Jamaica forest cropping based largely on introduced or exotic plants has developed under specific natural as well as social conditions and I am concerned with these conditions. In the next chapter, I will examine the significance of wild plants as a part of the island's settlement vegetation and various suggestions of their role in the practice of intercropping.

FOOTNOTES

Chapter 3

1. This is from a poem from H. V. Percy's book, Teacher's Punch. There is no date of publication indicated but I believe the book was published in the mid-nineteen sixties. Percy is a Portland teacher and a poet.

2. Other well-known plants of tropical Central and South America which have been widely dispersed in the region are poinsettia, allamanda, avocado and bougainvillea.

Chapter 4

SETTLEMENT VEGETATION, WILD PLANTS AND INTERCROPPING

In 1929 Beckwith (1969:8) offered the following general description of those she identified as "small settlers."

> A very large number of Jamaica Africans... are small settlers who own a patch or two of land upon which they build a house and raise ground provisions for their own use and for sale in the market, besides planting fruit trees and occasionally a hardwood tree for a future inheritance.

This delineation fails to consider the extent to which the plants were cultivated wild plants, particularly in the case of shade, fruit and timber trees. We are left with the general impression that the assemblages of vines, herbs, shrubs and trees in yards and fields were planted deliberately.

Webester and Wilson (1966:212-213) identify the complex of plants described by Beckwith as "permanent cropping with annuals and perennials," "mixed tree culture" and "root and tree cropping" which they indicate "is by no means confined to Asia, but is found in other parts of the wet tropics, such as the West Indies and parts of Africa..." They describe (1966:212-213) this form of intercropping in the following way:

> A great variety of annual crops may be grown, including vegetables, condiments, spices, tobacco, medicinal herbs and,

> sometimes, a little maize and several kinds of roots; but usually the total area devoted to annuals is small, and some of them are grown under the shade of trees. Most of this plot is usually devouted to an unsystematic, confused mixture of many kinds of trees and shrubs partly self-sown, which provides the family with firewood, timber, building poles and materials for making baskets, mats, hats, roofing, etc., as well as a variety of fruits and certain other foodstuff [my emphasis].

In this chapter I examine the various ways in which discussions of wild, self-sown or naturally distributed plants are related to efforts to explain intercropping in Jamaica. There are those, for example, who argue that farming for rural Jamaicans is little more than collecting from wild plants. Others in their discussion of the island's agriculture give the impression that wild plants are not involved. As a framework within which to understand the patterned distribution of wild plants in settled areas, particularly intercropped yards and fields, I begin this chapter with a consideration of the island's settlement vegetation.

Settlement Vegetation

The term settlement vegetation indentifies all native and exotic plants in the settled areas of the island in contrast to areas of original vegetation. The plants that constitute Jamaica's settlement vegetation are the ones with which people are in regular contact

and upon which, through the activities of cultivation and collecting, they depend for food, ornaments, medicinals (including teas, tonics and bath-bushes), animal feed and a variety of raw materials useful in crafts, fishing, construction and recreation. Settlement vegetation in this context is identical with what Swabey (1949) describes as "secondary successional vegetation." Swabey's analysis of Jamaica's vegetation is presented in Diagram 1.

The diagram indicates that Swabey distinguishes two types of "successional vegetation." These are "primary successional vegetation" and "secondary successional vegetation." The former refers to plant colonization of newly created land, such as land produced by landslides and newly formed mud banks and sand bars. I am here, however, primarily concerned with what Swabey (1949: 60) defines as "secondary successional vegetation."

> Into this group will come the bulk of the vegetation of Jamaica. Man and grazing animals have in one way or another altered most of the natural vegetation of the island. This may range from complete destruction of the original plant cover, for the purpose of cultivation or other development, to the selective felling of scattered trees in otherwise natural woodland. The use of fire, the cutting of fire wood, the grazing of stock have all played their part.

In most parts of Jamaica, the island's original plant communities have been partially or wholly destroyed.

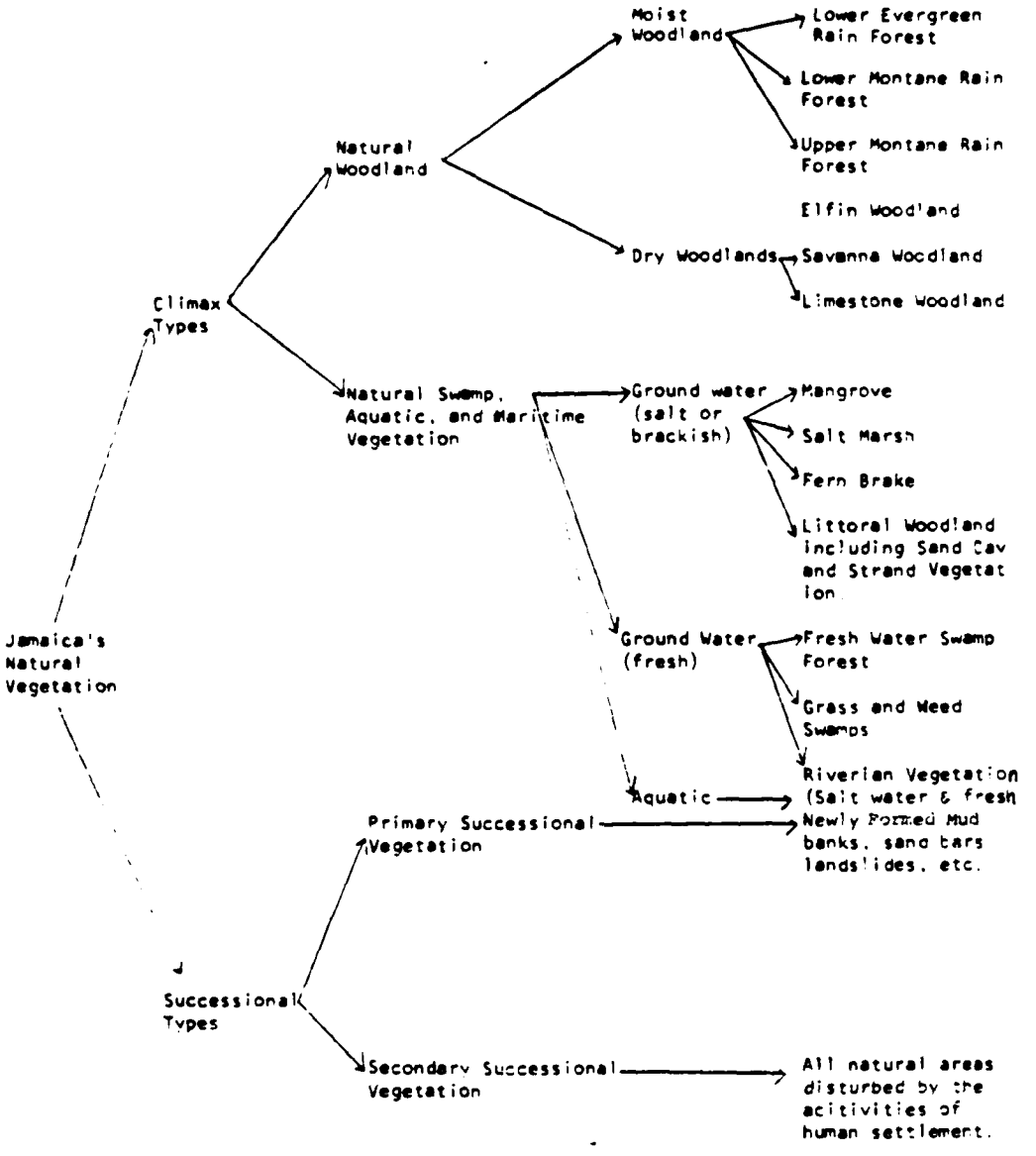


Diagram 1

Jamaica Vegetation Type
Source: Swabey (1949:55-61)

Swabey (1949:46) reports that few areas remain in the "Lowland Evergreen Rain Forest" of Portland and St. Mary. The same is true for the island's original Savanna Woodland of which Swabey (1949:57) writes "there are no original areas of this type left..." This thesis is concerned with the plant communities which have replaced the island's original vegetation. The place of Jamaica's wet lowland forests and dry savannas has been taken by the creation of the island's settlement vegetation.

A consideration of Jamaica's settlement vegetation allows us to recognize that all the plants in the human environment with which people are in regular contact fall into two basic categories. There are the domesticated plants that completely depend on cultivation for survival; these require careful, deliberate, sustained labor to survive. Distinct are those plants which are wild. Here I go one step further and differentiate wild plants into what I shall call naturals and those regarded as weeds. The difference between the two is implied in the following comments by Bailey (1976:1170):

> Some plants are naturally weedy, that is, they invade habitable and cultivated grounds and make trouble and are therefore not wanted. Plants that do not make trouble excite no opposition and are not weeds even though they may have no "uses" in cooking, commerce, ornament or medicine.

Of all the plants in the settlement area, why have only some come to be regarded as weeds? The answer to this question is not as simple as it would first appear. Some botanists point out that there are no "species" of weed and that weed is an "agricultural" and not a "botanical" concept. They also point to the fact that the same plants which are identified as weeds are also appreciated as wild flowers and are used for food, animal feed, medicine and raw material for various purposes. In the literature on weeds, these are most commonly defined as plants "growing out of place" in relation to human activities, particularly agriculture (Chinery 1966:240; Montgomery 1964:XIII; Crafts 1975:4; Bailey 1976:1170). These plants are regarded as being out of place precisely because they generate costs, whether this cost is measured in terms of time, money, energy, productivity, yield, profit, or aesthetics, comfort or health. At best, they are a nuisance; at worst, they are dangerous. These are plants in the settlement area which have been identified as "villainous," "enemy plants," "invaders," "carpet baggers," and "parasites."

While for practical purposes weeds may well be described as plants growing out of place, there is a more fundamental characteristic of plants identified as weeds which we must consider. Bent and Gooding (1973:124) go to the heart of the problem. They indicate "the plant

that the planter or gardener regards as a weed may be growing in conditions eminently suited to it from a botanical point of view, although in his opinion it may be very much out of place." Gooding seeks only to emphasize that the term "weed" is an agricultural, rather than a botanical term. But we are also told that weeds are plants "growing in conditions eminently suited to [them] from a botanical point of view..." These "eminently" suitable conditions are the result of human settlement. Weeds are those plants which thrive best in the "disturbed" or "open" areas created by human activities. Although there are no species of weeds, plants identified as weeds share some botanical characteristics in common. They grow quickly and mature rapidly. They are primarily rosette, upright, or vining herbaceous plants; many are ephemerals and annuals, though some perennial shrubs and trees also can be regarded as weeds, especially in the tropics. They are primarily flowering plants which produce large numbers of seeds. These seeds remain viable for long periods of time and have various ingenious means of ensuring rapid and wide dispersal. These devices include feathery parachutes (as with some of the composites), hooks, burs, and cleavers.

Because of these general characteristics, weeds show a positive adaptation to the human environment and in contrast to naturals are widely distributed in

settled areas as an important part of settlement vegetation. It is in the context of the relation between wild plants and farming in yards and fields that Harland (1975: 63) indicates it is "quite possible to cultivate wild plants, and cultivated plants are not necessarily domesticated." Weeds and naturals contribute to the composition of plants intercropped and farmers response to them reveal much about the relationship between social class and intercropping.

Finally, a consideration of the island's settlement vegetation widens the context within which we may analyze the relationship between people and plants in Jamaica. In addition to the cultivation of economic plants on small farms and large estates, the idea of settlement flora extends our conception to include the cultivation of plants for shade, medicine or ornamentation and for use in religious, artistic and recreational life. Put simply, the number and variety of uses to which a plant can be put is an important factor determining its distribution throughout the settlement area. The importance of this wider perspective is also evident when we consider that the botanic gardens were distributing plants for many different purposes. Economic plants (including timber trees, pasture plants and dye plants) were important, but so were ornamentals and shade trees. These were not only sent to farmers, as we have

seen, but also to such institutions as schools, churches, hospitals, and the constabulary.

By widening our perspective we are able to see the full social basis of the ordered distribution of different plants throughout the area of settlement. This is especially true for wild plants. We see how it is possible for a group of plants to be wild on the one hand, and yet for their distribution also to be socially determined on the other. I can illustrate this point by considering three trees. These are the seagrape and the tropical almond--two of the most common trees on the bay-beaches, coastal cliffs and headlands--and the bamboo. All three are naturals though in some parts of Jamaica the bamboo could be described as a difficult weed.

Seagrape (Coccoloba uvifera)

Well adapted to coastal conditions, the seagrape is distributed throughout the settlement area. It grows wild in inaccessible areas along the coastal headlands and cliffs and also in areas where it has been saved as a shade, ornamental and fruit tree. This is true for Innes Bay which is the favorite bathing beach for the surrounding districts. There seagrape grows along the shoreline, backed by a tall grove of almond trees; both form the border of fields intercropped with bananas and coconuts. Children eat its fruits, climb into its crown, hang their clothing on its branches while swim-

ming, and rest in its shade.

As a wild plant transplanted to favorable locations, the seagrape is also distributed throughout the settlement area of East Portland as a fence-post tree, a fence-line tree, an ornamental tree, a hedge plant and a potted tree. While it is not so used in East Portland, Little and Wadsworth (1964:82) also describe the use of the seagrape as a seaside windbreak. This use would also be a factor determining its distribution in settled coastal areas.

The seagrape is a well-known tree and its soft, fleshy, bunches of grape-like fruits are readily eaten by children. Many adults describe it (as they do the almond and several other fruits) as pickney (children) some'ting.

In a newspaper article titled, "Those 'Noxious Weeds" are Good Food Value," Reymolds (DN:2/21/1977) reported on a lecture presented to the Jamaican Association of Scientists by George Proctor, one of the island's distinguished botanists. In discussing the potential use of wild plants, Reynolds reports Proctor as saying "that in his opinion rural Jamaicans did not make sufficient use of food plants growing wild, even in some cases regarded them as noxious weeds." Among the plants mentioned was the seagrape. In East Portland, however, the seagrape is used to the full extent that it is

available. The trees growing along the bay-beaches are the most productive and children compete for the limited amount of fruits. However, there is no reported use of the fruits to make jelly (Little 1962:163-164); Baily 1976) or in preparing beverages (Little 1962:163-164). Long (1972:790) at the end of the eighteenth century reports that the tree provides "beautiful wood for cabinet ware." The only use I have observed for the woody part of the tree is as firewood and as driftwood collected as ornaments from the beaches. At moonlight cook-outs, the wood is spontaneously used for fuel along with whatever else is available. One informant reports that he uses the bark prepared with herbs, roots, spices, and condensed milk as a tonic taken to maintain his strength. Long (1972:790) also reports the use of juice from the fruits as a medicinal. It "is restringent," he writes, "and for this quality it is remedial in fluxes, particularly such as may ensue from drinking the brackish water, common to the places where they grow adjacent to the sea."

The large, somewhat circular leaves are used in floral arrangements and are spontaneously used as fans and small head covers. In addition to noting the use of the tree to produce cabinet wood, fence-posts, dyes and tannin, Pesman (1962:163-164) reports that the leaves were used as a substitute for "writing paper" and as

plates by the Spanish. Pesman also reports that the leaves were used as wrappers or containers in which the fruits were packed to be sold. With regard to the commercial use of the seagrape fruits, I was told that in Barbados they were sold in the Bridgetown market, but I have no evidence that they are sold in Jamaica.

Tropical Almond (Terminalia catappa)

The almond is much like the seagrape in its distribution throughout the settled areas of East Portland. It is one of the most common uncultivated trees. Stately in appearance, it grows to a height of eighty feet or more, with "the principal branches...typically horizontal and arranged in rather neat tiers, almost as if they were trimmed carefully by some thoughtful gardener" (Hawkes GL 2/6/1877). Like the seagrape, it is widely distributed on the bay-beaches where it is saved as a shade tree. It is also common in inaccessible areas along the coastal headlands and cliffs. In these areas where the trees are exposed to the prevailing northeast trade winds, they assume remarkable shapes, always appearing to brace themselves against the wind.

In addition to the fact that it grows wild in inaccessible areas and is saved on the bay-beaches, the different uses of the almond determine its distribution in settled areas. It is the most common tree on the campus

of Happy Grove and is the principal shade tree. The trees provide shade for higglers who sell fruits, drinks, candies, peanuts, patties and other foods to the school community. They shade those waiting for buses and vans at Flatgrass (in Hectors River). At lunchtime, it is under the shade of these trees that children gather to eat, as well as to pound almonds. Farmers tie their animals close to these trees on the school campus to take advantage of their shade.

In addition to its use as a shade tree, the almond is also appreciated as a 'fruit' tree. The fruit is especially loved by children, and like the seagrape it is often described as pickney (children) some'ting. The thin fleshy part of the fruit is eaten raw, the corky tissue then chewed to extract the juice, and the seed struck open to obtain the kernel.

The nut is also used to make almond drops or almond cakes, by boiling the nuts in sugar with flavoring and spices added; the mixture is then allowed to cool and harden. This is the reason why the children collect such large quantities of almonds.

Soon after I had arrived in Hectors River, I unpacked my books and placed the boxes outside to be discarded; by the following afternoon the boxes were gone. Some of the children would come and ask; others would help themselves. When I asked why they wanted the

boxes, I was told that they were used to collect almonds. On one occasion, after an hour and a half of work, the children collected sixty-seven and one-half pounds of dried almonds.

Bamboo

Bamboo grows all over Jamaica. The bamboo in Jamaica is a giant weed, unintentionally restricted in its competition for space primarily to river courses, ponds and water holes, roadways, inaccessible hillsides, pastures and areas of ruinate (that is, agricultural land abandoned from cultivation).

The bamboo has a great variety of uses in Jamaica. Unlike the seagrape and the almond, it is not important as a direct source of food. It is also marginal as a direct source of commercial products. On occasions, bamboo is sold for yam poles and reaping sticks and for building fences, animal pens, chicken coops and temporary shelters such as stalls and stands. Bamboo cups, vases, containers and ornamental objects are also produced for sale. While the bamboo produce few products that are of direct commercial value, it is, nevertheless, a valuable plant in the overall organization of productive activities. This is true in many parts of the tropics. Berrie (1977:2) writes:

> The greatest versatility of any of the grasses is shown by the bamboo which, in the tropics, provide materials, which

> can be no more elaborate than the seasoned stem, or processed into plants, gutters, drain pipes and innumerable structural components of houses. Fibres are extracted, but only locally, though some bamboos are used for the production of paper.

The grass family is one of the largest, most widely distributed and most useful family of plants in that it includes rice, wheat, corn millet and sugar cane. Most members are herbaceous, but among the notable exceptions is bamboo, which is tall, woody and tree-like. It says much for the significance of bamboo that there are many Jamaican places called bamboo. Gigantic feather-duster clumps of this immense member of the grass family abound in a great many parts of the island. Being so commonplace, many consider the species, Bambusa vulgaris, to be native...[to Jamaica]."

Bamboo, however, most probably originated in Asia and as part of its distribution throughout the tropics, was introduced to Jamaica from Haiti during the eighteenth century. According to Long (1972:753) and Powell (1972:63), it was brought to the island by Mr. Wallen, who owned a plantation called Chiswick Estate in the southeastern parish of St. Thomas, and Mr. Ellis, who was a Jamaican. Whether, as Swabey (1949:63) says, it was introduced at the beginning of the eighteenth century or, as The Farmers Guide (1955) reports, it was introduced at the end of the eighteenth century, by 1774

Long could write that "since its first introduction, it is not flourishing in many different parts of our island; where its growth is astonishingly rapid."

Bamboo is useful in many productive activities in Jamaica. Its strong, straight, light, woody stem exceeds 120 feet in the tallest species and sixty feet in the common Jamaican Bambusa vulgaris, hence the bamboo is ideally suited for picking the fruits of trees.

Bamboo has uses in fishing (floats, fishpots), in cultivation (markers for lining bananas and coconuts, supports for tomatoes, beans, peas) and in making kites, clothesline props, buttons, pencil holders, flower pots, vases and so on. It is in the area of construction, however, that bamboo has been and continues to be of importance in Jamaica. Long (1972:753), writing at the end of the eighteenth century when sugar was the most profitable commodity, saw from his planter's perspective the usefulness of bamboo and wrote optimistically of its great potential in the future of the island:

> The foliage when dried, is used for thatch. The tender tops of the young plants, gathered after they just spring out of the ground, are boiled, and made into an agreeable pickle. The stem and cane is used for wattles or laths, for covering the walls, ceiling, and roofs of buildings...
>
> It is certain, it may be garded as a valuable acquisition to this island; and if it reaches but to moderate bulk here, will be found extremely commodious for huts, and smaller buildings, various

> plantation utensils, conduit pipes, and other necessary uses.

Bamboo remained an important material for building rural houses until the Second World War, after which there was a decline in the use of bamboo in house construction (such as wattle and lattice work). Its continued use, however, is in the sphere of animal husbandry. The Farmer's Guide (1954:227-228) states:

> Bamboo is very popular for farm construction--fences, pigs sties, fowl runs, rabbit hutches and feed hoppers, are all built of bamboo, to say nothing ot its use for wattling houses and kitchens.

In the area of East Portland, where this research was conducted, bamboo is most important for construction of temporary stalls at sports events, fairs and parties in addition to fencing for privacy, protecting plants and penning animals.

The Use of Wild Plants

The seagrape, almond and bamboo illustrate the variety of ways in which wild plants are useful to Jamaicans. As a part of the island's settlement vegetation, weeds and naturals are enjoyed as ornamentals (Hawkes 1974:5) and are the source of foods, teas, medicines, animal feed, products for sale and raw materials used in fishing, construction, recreation and a variety of handcraft. The use of weeds can be highlighted by focusing on what The Farmer's Guide (1954)

considers the island's twenty-five worst weeds (see Table 4 (p. 153).

Of the twenty-five weeds identified in The Farmer's Guide (1954:574-593), those which do not cause physical injury are all sources of useful products. Godbush (Oryctanthus and Dendrophthora species) is sold in the Kingston market as a medicinal. Hogmeat (Ipomoea tiliacea) and Spanish needle (Bidens spp.) are collected as animal feed. Broomweed (Sida spp.) is named after the use to which it is put and water grass (Commelina diffusa), marigold (Wedelia trilobata) and mallow (Urena lobata) are all regarded as wild flowers. Wild hops (Flemingia strobilifera) is collected by students and teachers of Happy Grove secondary school for use in dried floral arrangements.

Of particular interest among the twenty-five weeds of Jamaica is the guava which The Farmer's Guide (1954:581) describes in the following way:

> This well-known shrub is often cultivated for its edible fruit, but in pastures it becomes a serious pest, spreading rapidly and shading out the valuable forage grasses and other plants. Slashing the bushes gives only temporary relief, as new growth quickly springs up from the roots.

The tree is native to tropical America and is now widely distributed through the tropics (Sturtevant 1972: 467-468). It was quickly spread to Africa and Asia by the Spanish and the Portuguese soon after the discovery

A - Weeds that Interfere with the Growth of Crops

1. Bahama grass
   (Cynondon Dactylon)
2. Bracken (true)
   (Pteridium caudatum)
3. 'Bracken' or Net-fern
   (Cleichenia spp.)
4. Broomweed
   (Sida carpinifolia and related spp.)
5. God-bush or Scorn-the-earth
   (spp. of Oryctanthus, Dendrophthora, Phoradendron and Phthirusa)
6. Guava
   (Psidium guajava)
7. Hogmeat or Wild Potato
   (Ipomoea tiliacea and related spp.)
8. Mallow
   (Urena lobata)
9. Marigold
   (Wedelia trilobata)
10. Love-bush or Dodder
    (Cuscuta spp. and Cassytha sp.)
11. Nut-grass
    (Cyperus rotundus)
12. Spanish needle
    (Bidens pilosa and related species)
13. Water-grass
    (Commelina diffusa and related spp.)
14. Wild hops or Jamaica hops
    (Felimingia strobilifera)

B - Weeds That Cause Chemical Injury

15. Cow-itch
    (Mucuna pruriens)
16. Guinea-hen weed
    (Petiveria alliacea)
17. Scratch-bush or Cow-nettle
    (Urera baccifera)
18. Wild leek
    (Allium sp.)

C - Weeds That Cause Mechanical Injury

19. Burr-grass
    (Cenchrus echinatus and related spp.)
20. Burr-weed
    (Triumfetta semitriloba)
21. Devil's Horsewhip
    (Achyranthes indica)
22. Macca Kalalu
    (Amaranthus spinosus)
23. Police Macca
    (Kallstroemia maxima)
24. Razor-grass
    (Schleria spp.)
25. Shame-bush, Shamey Lady, or Sensitive Plant
    (Mimosa pundica)

Table 4

The 25 Worst Weeds of Jamaica

Source: The Farmer's Guide (1954:574-593)

of the New World. The fruits of this small tree, its average height twenty-five feet, are famous throughout Jamaica; they are eaten fresh or used to make jams, jellies, preserves, sweets and drinks. The wood of the guave tree is strong. Occasionally, it branches in the shape of a perfect "Y" and (along with the Lignum vitae (Guaiacum officinale) is one of the trees visited by boys in search of "Y"-shaped branches called "crooks" to make slingshots.

Other Wild Plants

The fact is that a large number of wild plants in the settlement area were collected for various purposes. In addition to the seagrape, tropical almond and guave, other wild plants also provide edible products. These include the fruits of the cerasee, susumba, bird pepper and the leaves of the pepper elder. Several wild plants were also collected for animal feed but these are discussed in Chapter 5.

Agave

Kite season in Jamaica comes in December, when the northeastern Trade Winds are strong. The frame of the kite is made from the midrib of the coconut leaf, or for large kites, from carefully shaved pieces of bamboo. The body is made from kite paper or from writing paper or printed paper. To tether smaller kites, the younger children often pound the leaf of the agave with

a stone to free the long stringy fibers, which are then joined.

Agaves are cultivated as ornamentals (Hawkes GL:2/6/1977) and, because of their sharp apical thorns, are often planted as a bush fence or protective border. Agayes or maypoles (as they are called in Jamaica (Cassidy 1961:367)) grow along the fence-line of Happy Grove High School and are also planted along the sides of some teachers' cottages. To protect the main school compound from "vandalism," the school, in 1976, built a metal fence enclosing the administrative and classroom buildings and the seedlings of the agaves from the old fence-line were planted along the new metal fence to increase security.

Although Hawkes (1974:78) reports that "At Christmas-time in Jamaica, the dried, spent, huge inflorescence is often cut down, painted white and brought into Kingston and other cities for use as a unique tropical Christmas tree," the one maypole that flowered on the school campus remained untouched during Christmas of 1976.

As part of Happy Grove's art program, the children collect plants for various uses. Some bring flowers and ornamental branches and leaves from home to decorate their classrooms; others collect wild flowers such as vervain (Stachytarpheta jamaicensis) and

(Jamaican) marigold (Wedelia trilobata) on their way to school. One art teacher informed me that at times she asked students to bring the husks and shells of coconuts as well as driftwood, shells and sea weeds. For dried floral arrangements, the children also collected the inflorescences of wild cannas (Canna coccinea) and wild hops (Leonotis nepetaefolia) as well as the open fruit pods of the vine Abrus Precatorius. These, when dried, expose bright red seeds with a single round black spot, from which the vine has derived names such as John crow bead, rosary pea and crab's eye. The inflorescences of the Christmas candlestick are also collected for dried floral arrangements and for use as the subject of still-life drawings in the art program of Happy Grove High School. Hawkes (1974:66) reports that "The old spent inflorescences are frequently dried, often sprayed with paint or gilt, and sold as Christmas ornaments."

The duppy pop-gun and devil's horse-whip are the source of amusement for children. The fruits of the duppy pop-gun are moistened with saliva to see them burst open and the seeds scattered. The flowering stalk of the devil's horse-whip would be presented to someone to hold; as soon as the unsuspecting victim holds the stalk, it would then be quickly pulled from their hands leaving the sharp burrs embedded in the finger. The shame-shame

darling (Mimosa pundica) also drew the attention of children who would touch the plant to observe its movements as the leaves closed and the entire plant collapsed to the ground.

"Garden of Eden" - Ideological Conceptions of the Ruling Elites

Having outlined a conception of Jamaica's settlement vegetation, I now consider wild plants growing in yards and fields which are clearly only a portion of those distributed throughout the settled areas as a whole. When in Chapter 1, I indicated the reasons for chosing the parish of Portland as a research area, I pointed to the importance of plants described as wild, self-sown or as requiring little or no care in leading to the characterization of the parish as a "Garden of Eden," as a locality whose residents have been made "idle" or "lazy" by nature's benevolence and as an area of "agricultural backwardness." The prevalence of these characterizations suggests the need to understand the social and economic significance of wild plants in intercropping. This task, however, has to be approached from two distinct points of view. First, I will examine the ideological basis of the "Garden of Eden" concept, which sees most Jamaicans living off wild plants or plants that require "little or no care." Then I examine specific references to wild plants in cultivation. These references deal with

intercropping and they are the reflections of individuals who by their social activity were in a position to provide interesting insights into this practice and into the role of wild, self-sown or naturally distributed plants.

Ideology, as I understand this concept, refers to class interest expressed in people's consciousness of the world, irrespective of whether this conscious is in the form of religion, education, politics or agriculture. Ideology is not the form of consciousness, but the social interest manifest in the different forms of consciousnesss.

Historically, the conservative or reactionary members of Jamaica's ruling elite have always supported some version of the "Garden of Eden" thesis. The variations on the theme all assert the existence of conditions providing all manner of useful vines, herbs, shrubs and trees that require "little or no care" and produce in abundance throughout the year. The arguments are that in such an ideal environment there is always something to eat, and hunger or starvation is never to be feared. Under these conditions where the means of life are naturally and freely provided, there is little or no need for labor, or for money, or for dependence on the market.

This concept of a benevolent nature supporting lazy people is expressed in relation to the wet tropics

of the world, to the Caribbean, to the West Indies, to Jamaica, and to the parish of Portland.

Arguing for his perspective of climatic or geographic determination, Ellsworth Huntington (1945:316) in his Mainsprings of Civilization identifies on a world basis three types of "seasonal agriculture." The first and second types stress the overall dependence of people on grains derived from grasses; these include wheat, corn and rice. The third type he describes is based on "trees and roots." Indicating the 'bountiful' character of this type of "seasonal agriculture" and its social consequences, he writes:

> This type presumably arose in the same general environment where it still previals, that is, in tropical regions favorable to such plants as the coconut, banana, and breadfruit, together with ground crops such as yams, taro, and manioc. Such regions differ little from season to season, although some months have more rain and others less. The trees and roots provide food at practically all seasons. Thus, there is little incentive to take thought for the morrow and lay up food for a season of scarcity.

Boots and Thomas (1976:69) report the following comments of a Jamaican Rastafarian. While in many ways this Rastafarian takes a Huntingtonian view, he looks at the situation of benevolent nature from an ideological stance opposed to that of Huntington. The Rastafarian is reported to have said that God

> ...gave the black man all the most beautiful and naturally provident places to live, and gave the white man all the cold, inhospitable places to live, because if he was so smart he would be able to look after himself. Whereas all the black man had to do was look at a tree and it bore fruit, and if he wanted to flex his brains God gave him ganja in abundance to feed his meditations.

With regard to the West Indies, Alister Hughes (DN 3/18/1976) present us with an interesting variation on the theme of benevolent nature and idle people. Here the mango represents nature's benevolence. In his efforts to stir people to the challenges he sees ahead, Hughes writes:

> There is an old Caribbean saying that "no West Indian ever died of hunger." And it is probably true [which it is not]. Blessed with a fertile soil and warmhearted people, there has always been a relative or friend to help out with a meal. Or, somebody's mango tree provides a belly-full.

Hughes' message is that the golden age of a benevolent nature (symbolized by the mango and <u>bush tea</u>) and the opportunity to be idle is coming to an end. With regard to the current problems of the availability, quality and cost of food in the West Indies, Hughes states:

> Today as we relax in our let-somebody-else-worry-about-it attitudes...more of us are falling back on "bush tea," we still have something to put in our bellies. So, we're not really concerned.

With the passing of the age of a benevolent and indulgent nature, Hughes presents a pessimistic and melodramatic vision of the future:

> The situation is not going to be comfortable. Hungry people are angry people and will do anything to try to keep themselves and their families alive. Crime and violence will multiply. There will be riots and looting. Merely to exist will become difficult and West Indian life will be hell of a terrible nightmare.

This theme of a "benevolent" nature and a "lazy" population has recurred in various contexts. The situation following the abolition of enslavement in 1838 was described by one travel writer (Carpenter 1927:222) as one in which "The freed...[Africans] would work only enough to earn the barest essentials of living, which, in a climate that makes food plentiful and clothing also unnecessary, entailed little effort on their part."

One of the most extreme expressions of this reactionary ideology was presented by the English historian Carlyle. "Anti-democracy, anti-liberty, anti-equality..." was the way in which Eric Williams (1972:67) described Carlyle in his British Historians of the West Indies. Williams (1972:67) writes "...in the England of 1830-1880 Carlyle came up with the closest approximation the world could have been offered to the solution introduced and imposed by Hitler from 1933."

For the planters and their supporters, the major difficulties brought about by emancipation in 1838 was its impact on the supply of labor, its cost and the ability of the planters to control it. The most serious threat to the supply of labor was the existence of lands outside the estates, which made an independent way of life possible for the freed Africans through cultivation and animal husbandry.

Whereas for Hughes it was the mango and "bush tea," for Carlyle the pumpkin was the symbol of "benevolent" nature and an "idle" and "lazy" population. The pumpkin represented a way of life dependent on plants without the necessity of "regular," "steady," "routine" labor. For Carlyle the ideal society was patterned on a military model; and imposed order, "routine" and "drilling" were the means by which it was to be achieved. For Carlyle the pumpkin 'way of life' was unacceptable:

> The gods wish besides pumpkins, that spices and valuable products be grown in their West Indies; thus much they have declared in so making the West Indies: - infinitely more they wish, that manful industrious men occupy their West Indies, not indolent two-legged cattle, however "happy" over their abundant pumpkins. ...Not a pumpkin, Quashee, not a square yard of soil, till you agree to do the state so many days of service. Annually that soil will grow you pumpkins; but annually also, without fail, shall you, for the owner thereof, do your appointed days of labour. The State has plenty

> of waste soil; but the state will religiously give you none of it on other terms (cited in Williams 1972: 81).

Carlyle was adamant that enslavement (in fact if not in name) was to be continued. It was part of the divine plan.

> And first, with regard to the West Indies, it may be laid down as a principle... that no Black man who will not work according to what ability the gods have given him for working, has the smallest right to eat pumpkin, or to any fraction of land that will grow pumpkin, however plentiful such land may be; but has an indisputable and perpetual <u>right</u> to be compelled, by the real proprietors of said land, to be competent work for his living. This is the everlasting duty of all men, black or white, who are born into this world...(cited in Williams 1972:80).

To maintain the argument that the Africans were "idle" and "lazy," reactionaries such as Carlyle were forced to assert that the land to which the people had access was fruitful without labor. Idleness implied dependence on wild plants or on plants that were said to require little or no care. Williams (1972:91) writes that "like Carlyle before him, Trollope was convinced that emancipation bred idleness." Trollope also saw the life of Jamaican Africans as one in which they had the "means to lie in the sun and meditate idle" (Williams 1972:92). If they were ever to be made to accept with gratitude whatever was offered them in work or wages, their independent way of life based on 'wild' plants

could not be tolerated. In pointing to the conditions which made this "idleness" possible for the Africans, Trollope shares Carlyle's view but gives us a more specific and concrete understanding of the meaning of "the pumpkin." He wrote:

> ...my friend and brother over there, my skin-polished, shining, oil-fat negro, is a richer man than I. He lies under his mango-tree, and eats the luscious fruit in the sun; he sends his black urchin up for a breadfruit, and behold the family table is spread. He pierces a cocoa-nut, and lo! there is his beverage. He lies on the grass surrounded by oranges, bananas, and pine-applies. Oh, my hard taskmaster of the sugar-mill, is he not better off than thou? Why should he work at the order? (cited in Williams 1972:92).

For those like Trollope who defended slavery and argued for new ways to compell African Jamaicans to labor on the estates, the plants growing in their yards and fields were an obstacle to progress. This is precisely the line of thinking after emancipation that, as we saw in Chapter 2, led to the cutting down of fruit trees surrounding dwellings and to evictions from provision grounds. The means for an "idle" life had to be removed.

The views of Carlyle and Trollope did not go unchallenged. Dr. Edward Underhill, Secretary of the Baptist Missionary Society of Great Britain, visited Jamaica in 1861 and correctly identified the

circumstances that five years later were to lead to the Morant Bay Rebellion.

> The House of Assembly at the time of emancipation possessed the fullest powers to remedy and defect in that great measure. But it abused its powers. Instead of enacting laws calculated to elevate and benefit the people, it pursued the contrary course. By an Ejectment Act, it gave the planters the right to turn out the enfranchised peasantry without regard to sex or age, at a week's notice, from the homes in which they had been born and bred; to root up their provision grounds, and to cut down the fruit trees which gave them both shelter and food; in order that, through dread of the consequences of refusal, the... [Africans] might be driven to work on the planters' own terms. By a police law, the ejected peasant might be arrested for trespass, if he remained an hour on the estate, after due notice to quit. Compelled to seek a freehold, to secure both a livelihood and independence, the poor buyer had to pay a heavy stamp duty on the transfer and registration of the land he purchased. In slavery times, when corn food had to be provided by the owner of the slave, the import duty was three pence per barrel; for the free man it was raised to three shillings. On rice, salt fish, and pork, the duty was increased two or three hundred percent. The legislators, in their spiteful and blind folly, did not see that the enhancement in the price of the necessaries of life, rendered inevitable by heavy duties, only made the ...[African] the more urgent to obtain land on which more cheaply to live.

Unlike Carlyle, Trollope and others for whom everything was in a state of chaos and decay, Underhill

had a different view on the changes that were taking place. For Underhill, the freehold "...villages, built on the slopes of the hills, or in the verdant hollows between them interspersed with bananas and plantains, shaded by mango, orange, and breadfruit trees, [gave] an animated appearance to the country, and the appearance of an active and prosperous peasantry." Contrary to Carlyle and Trollope, Underhill concluded:

> Tested by figures, it must, I think, be conceded that the [Africans] of Jamaica have made no inconsiderable progress in the acquisition of material wealth; and that the results of their daily toil are sufficient to refute the oft-repeated assertions, that they "eat their yam without work," and that, "on the whole, they laugh, and sing, and sleep through life. Only ignorance, or inverterate prejudice, can be blind to the truth as it really is. The Creole labourers of Jamaica have many faults, and some grave ones; but idleness is certainly not a marked characteristic of the race.

As far as the symbol of "benefolent nature" and "idle population" is concerned, we have seen that for Hughes it was the mango, for Carlyle it was the pumpkin, for Trollope it was the breadfruit, cocoa-nut, orange, banana and pineapple, and (Underhill suggests that) for others it was the yam. The plants change, but what they represent remains the same.

The concept of benevolent nature and idle people which was prevalent in the past was also commonly

expressed by the elite of East Portland during the course of my research in 1975-1977. The agricultural teacher at Happy Grove High School, the Baptist minister at Belle Castle Church, a small commercial tenant cultivator, and others all made some comment to the effect that people were "laxy," "idle," or "backward" because of nature's bounty--the pumpkin or some version of it--made their labor largely unnecessary. All described Portland, the island's wet northeast, as a soft parish in comparison to the drier parishes of the southwest which were said to be hard. In the latter people had to "work"; they had to "fight the soil" to make a living.

One large subsistence cultivator expressed it in this way:

> The people in Portland, especially this side of Portland, the eastern side, they don't exert themselves much. I went to Manchester and how I see people look after their crop and care for the soil, they don't do it here. Strangers come from Manchester and Clarendon, they always make a bigger go than the natives, for they are accustomed to exert themselves and they make a better go.

Happy Grove's agricultural teacher was full of contempt for the people of Hectors River and the surrounding districts. He was incensed that, in my attempt to understand farming in Jamaica, I was interested in looking at the practices of small farmers. As far as he was concerned, they did not "cultivate." He referred to

the plants in their yards and fields, particularly trees, as wild. Their existence in the dwelling space did not reflect the efforts of Portlanders to help themselves. Far from being a product of labor, they were a symbol of idleness. Samll farmers, he said, were lazy and their only interest was hand-outs and stealing.

Ideas of benevolent nature and lazy people as an ideological expression of Jamaica's ruling elites are clearly recognized by Bantji (1976:95) in his article, "Sociological Aspects of Nutrition Education in Jamaica." He states: "Until recently, little study had been done on the social and economic factors which induced malnutrition. It is true that these factors have been taken into account in a general way, but no attempts had been made to assess their importance in relation to specific cases, target groups or programs." In pursuing this objective, he notes that most nutritionists have "an urban middle-class background." In identifying the "class behavior" of this group, which he regards as an important factor in limiting the effectiveness of nutritional education in Jamaica, Bintji shows how widespread are ideas that express the theme of benevolent nature and lazy people.

> It should be pointed out that, in general, the urban middle-class is not familiar with the extremes of poverty that govern

> the daily life of the poorest section of the society. They do not come in contact with these people and make no attempt to do so. Their perception of problems is conditioned by a number of myths that stem from the past and are still reiterated in different forms. There is not a tendency to supplant the cruder qualifications of the lower class by pseudo-scientific arguments. Daily one may hear the opinions expressed that there can be no shortage on the land, because "people can just pick from the trees" (referring to the rather plentiful supply of fruit bearing trees); that people are poor because they don't want to work (supported with the argument that some farmers cannot find field laborers--which is true, but rather as a result of the extremely low wages those farmers offer; that middle-class leadership is indispensable, because the lower-class has no organizational abilities. The atmosphere is one of strong paternalism, sometimes corresponding to near-feudal relationships.

Trees: Further Indications of the Importance of Wild Plants

Turning from the ideological concept of benevolent nature and idle people, we see there are other factors that point to the need to consider the cultural significance of wild plants in intercropping.

As we are concerned with diversified tree cropping and of forest cropping in particular, Adam's (1971) comments as a botanist on what he calls "artificial woodlands" are of great interest. He recognizes that the natural vegetation of Jamaica is essentially forest. It is against this background that he (1971:91) writes:

> As if a natural revulsion against wide open areas of pasture and waving cane existed, man has to continually fight back the woody weeds, but not that the potential for recolonization by native species has been so much reduced in many areas it seems that the strategy of Nature has enlisted the introduced fruit trees to take up the fight. We find instead artificial woodlands of Guava, Mango and Guinep trees interspersed with no small number of Ackee, Rose Apple and Hog Plum reinforcing them [my emphasis].

Among these naturalized introduced fruit trees which contribute to what Adams calls "artificial woodlands," we must also include some varieties of oranges. "The trees yielding the bulk of the present export of oranges from Jamaica," states the 1886-1887 Handbook of Jamaica, "are self-sown seedlings, growing in cattle pastures or in the neighborhood of coffee and provision fields, and they receive little or no cultivation." By the end of the nineteenth century, the Handbook reports, "The export of oranges is increasing by rapid strides. Several well-kept plantations are springing up, which will no doubt in time yield fruit superior..." to any then exported. As large as the trade in oranges, bananas and other fruits had become between 1875 and 1881, the Handbook of 1886-1887 indicates that there were no statistics showing the land under such cultivation. In explaining this, the Handbook states "that with the exception of the banana and pine-apple none of these products can be said to be

cultivated--'the rest for the most part growing wild, unpruned, and untended, yet producing luxuriantly.'"

In assessing the possibilities for the development of the fruit trade in Jamaica, the 1886-1887 Handbook (p. 430) again points to naturally distributed plants which are variously described as wild, self-sown, or "unkept."

> Other delicious fruits such as the mango, the cherimoyer, the naseberry and the sweetsop grow in great profusion without any care or cultivation; some of these might, with care in packing, &c., become articles of export, especially to the United States which are within a week's journey from Jamaica [my emphasis].

Along lines similar to Adams', who also indicates the need to consider wild plants, are the comments of William Harris (1910:181), "It is a remarkable fact," writes Harris, "that nearly all the useful and ornamental cultivated trees and plants were introduced at one time or another." Of these, he writes, "many have become perfectly naturalized as the mango and logwood... and are often regarded as indigenous." [my emphasis] To these we could add some of the timber trees, as well as the June plum, tropical almond and annatto. Harris (1910, 1911, 1912) also describes the Jackfruit (in the Cockpit Country), rose apple (along rivers), logwood, woman's tongue (on the southern plains), and pawpaw as "naturalized" in Jamaica.

Among the native plants in Jamaica's "artificial woodlands," the one most commonly recognized as wild is the pimento. The distribution of this plant is in part associated with the creation of pastures.

> It grows without cultivation of any sort in ordinary pasture land, especially in the high elevations. ...The plant grows on land left to nature and when it comes to maturity on the mere clearing of the ground of the bush the best of all natural grasses in the island springs up spontaneously around the pimento trees and the pasturage which was fruitless before becomes of great value (Handbook of Jamaica 1886-1887: 429).

The need for a greater understanding of the way in which wild plants enter into cultivation becomes clear when we consider the comments of Mintz (1958) in his discussion of Jamaican settlements resulting from the "church-founded free village system." This system began during the period of African apprenticeship from 1834 to 1838 and expanded rapidly after emancipation in 1838. After their 1850 visit to Sturge Town (which was established by the Baptists under the guidance of Rev. John Clark and named after Joseph Sturge, the English Quaker abolitionist) Chandler and Alexander wrote "Each house has its separate acre of land, where, in addition to provisions, pimento, is frequently cultivated..." Commenting on this passage, Mintz (1958:55) stated: "Crop diversification seems strong, but the quotation is naive

in this regard. Pimento, a tree crop, is not 'cultivated' but spread wholly through the agency of nature." It would be fair to say that both positions are naive. It is precisely for such reasons that we need to understand the cultivation of wild, self-sown or naturally distributed plants and to remember that not all cultivated plants are domesticated.

Cradwick and Intercropping by Jamaica's Small Farmers

The sources I have cited all point to the need to consider the importance of wild plants if we are to understand the system of intercropping in Jamaica. Other important comments also deserve consideration. In Chapter 1, I referred to Cradwick's characterization of the parish of Portland in the 1890's as an area of "agricultural backwardness." What people did in Portland, Cradwick believed, could hardly be regarded as cultivation. There was no tilling, no use of fertilizers, no selection of plants or seeds, no pruning, no thinning to provide space and light, and no drainage or irrigation. Instead, the plants were essentially allowed to grow wild. Cradwick's comments are of singular interest because of his social position. He came to Jamaica at the end of the nineteenth century to work for the Botanical Department, one of whose principal objectives at that time was to "develop" the practices of the

majority of Jamaica's farmers. "Our chief aim at present," wrote Fawcett (1898:285) in describing the nature of the field instruction offered by the department, "is to reach the peasant class, who cannot read well enough to appreciate printed matter, or who cannot get just the kind of information he requires." In this respect, the botanical instructor would be placed in a unique social position, as was described by Fawcett (1898:285):

> The Instructor must go into the fields with the people, he must see their cultivation, and point out what is wrong, and how to improve; he must talk over with the people their difficulties, do some work on the spot with their own land and their own plants, that they may watch what difference the draining of the land or the pruning of the trees makes in the crop, and in the general health of the trees. This method is truly scientific and truly systematic. It is supplemented by talks (a lecture, if the term is preferred) to larger audiences in school-rooms wherever there is a good centre. These talks also are much appreciated; they last about an hour, and then for about another hour or two, the Instructor is engaged in answering questions but by his hearers. The questions are generally very much to the point, and show a strong desire to learn and to improve their practice.

These were Cradwick's duties, which he discharged with an enthusiastic commitment. He traveled throughout the island, lecturing on and demonstrating the planting of tobacco, oranges, cocoa, coffee, nutmeg, grapes and peaches; the budding of oranges and the

pruning of cocoa and coffee trees; the curing of coffee and cocoa; the transplanting of coffee; the manuring, forking and draining of "heavy lands" and the treatment of soil in general; and the "proper" organization of plants in a cultivated field. Of particular interest here in the context of Cradwick's duties as field instructor, are his reflections on the practices of the "peasant class." Most of his reports in the Bulletin of the Botanic Department are concerned with where he went, the people he met, the size of the gathering, the subjects on which he lectured and offered demonstrations, the response of the people, and the value of the field instructions as this could be demonstrated from the results of past efforts. Occasionally, however, his attention turned to characterizing intercropping as it was practiced by the "peasant class." In these instances, he raises many questions about the cultural significance of naturally distributed plants in intercropping in Jamaica.

From the way in which Cradwick wrote his reports, we can see that his role as field instructor resembled that of missionary. Cradwick emphasized "the evils" of intercropping. On one occasion, following inspection of a garden in Portland, Cradwick (1897:272) stated that he gave the cultivator "advice as to its better manage-

ment and the better arrangement of it, on a definite plan, and pointed out to him the evils of mixing up his crops." Similarly, while giving demonstrations in Charles Town in the parish of St. Mary, Cradwick (1897:271) reported in addition to lecturing on the budding of oranges and the pruning of cocoa and coffee he "also dilated strongly on the evils of crowding plants and of mixing up crops." Of another occasion in the parish of St. Ann, Cradwick (1897: 275) wrote:

> Wherever I go, I notice almost identical mistakes with the treatment of coffee by the peasantry, namely overcrowding, neglecting to prune, and either shading the coffee until it can scarcely exist for want of air and light, or exposing it to full power of the sun, but gradually in every district where my visits are repeated, I see one or two carrying out my instructions and in this way, I think the good works is bound to spread.

The missionary perspective was also shared to some extent by Fawcett. Describing the basis on which decisions were made as to which areas were visited by the field instructor, he wrote (1898:285):

> With the limits imposed at present, we cannot do anything on what may be called the missionary side of agriculture, --going into new districts, and stirring up people to recognize their agricultural sins. The Instructor is not sent to any district, unless the people in large numbers desire it, and manifest their wish by signing a petition to the Government. Even then, unfortunately, we are not able always to comply with the request. Some choice must be made with our limited means, and as I have said, our choice is determined by the principle of the greatest good for the greatest number.

For both Cradwick and Fawcett, many of the "agricultural sins" were epitomized by the "evils" of intercropping, because this represented the most meager efforts at cultivation.

Wild Plants and Intercropping

One of the important elements in understanding the system of intercropping in Jamaica is the extent to which different socio-economic classes and groups cultivate plants that are described as "wild," "self-sown," "naturalized" or "naturally distributed." Grant, Fawcett, Harris, Cradwick and others all point to this factor in the ways they characterize the cultivation of "the peasant class." Many of the most widely distributed trees are often regarded by small farmers as weeds; these include ackee, sour orange, sweetsop, soursop, guava, jackfruit, mango, pimento, various timber trees, Jew plum, guineps, medicinals, tea bushes, bird pepper, tamarinds and susumba. It is worth repeating here that the Farmers Guide lists guava as one of the twenty-five worst weeds in Jamaica, especially in pastures. Of these twenty-five plants, all those which do not cause chemical or mechanical injury are collected by rural people for use as medicinals, tea bushes, bath bushes, animal feed, ornamentals and food.

The value of naturally distributed plants is that they contribute to the many advantages of intercropping. In Chapter 1, I indicated that intercropping achieves three objectives simultaneously: produces a diversity of food and other products for household use and for sale; does so efficiently; and supports an independent way of life free from exploitation and from charity. Wild plants add to the species and varieties of vines, herbs, shrubs and trees cultivated in the same place and make possible more kinds of products for household consumption and for sale. They contribute to the efficiency of intercropping because they make possible a more intensive use of all available resources. They contribute to farmers' attempts to get maximum benefit for minimum effort. They facilitate effective use of all available space, the supression of weeds and bush, the control of pests and diseases, the protection of the soil from erosion and other deleterious effects of wind, rain and sun. They provide shade for people, animals and other plants. They help to ensure against loss from climatic risks such as droughts, hurricanes and floods, and also against social risks such as fluctuating market demands and theft. As far as efficiency is concerned, naturally distributed plants contribute to saving labor in that they require or receive less cultivation. As we have seen, this is the argument of Grant, Fawcett and Hill.

In this chapter, I have examined various sources which suggest that the extent to which farmers destroy, save or collect plants described as wild, self-sown or naturally distributed must be considered in any attempt to explain the nature of intercropping in Jamaica. I have also argued that an important aspect of explaining the significance of wild plants in cultivation is revealing the social basis of various conceptions that view African Jamaicans as depending on plants which are said to "require little or no care." Harris' reflections on intercropping as he observed it being practiced by Jamaican farmers were assessed and I described the uses of some wild plants in the settlement area.

I conclude this chapter by noting that wild or self-sown plants are related to cultivation in three ways. First, there are those plants which because of their successful adaptation to the human environment, have come to be regarded as weeds; as the Jamaican proverb states, "de bes' of field mus have weed." Second are weeds and naturals that are protected where they spring up in favorable locations. Finally, there are weeds and naturals which are collected and transplanted to favorable locations. Trees are among the important wild plants which are saved and the extent to which they are saved reveals a great deal about the link between social class and intercropping in Jamaica. In the next chapter I explore the usefulness of trees to Jamaicans.

Chapter 5

TREES IN THE SETTLEMENT AREA AND IN THE SOCIAL LIFE OF JAMAICANS

One important link between social class and cropping pattern is the extent to which small farmers cultivated wild and domesticated trees. Small farmers in Jamaica have a distinct attitude toward the cultivation of trees in contrast to the growing of herbs, vines and shrubs. Their attitude toward trees is directly related to property relations as these are embodied in different forms of control over land. It is well known that tenant cultivators do not in general plant or "save" trees (Oliver 1971:342-343; Edwards 1961:112-117; Blaut et al 1973:63). This is a significant fact. A decision not to grow trees eliminates many useful plants from cultivation irrespective of their actual domestic and commercial value. The full consequences of this is, of course, dependent on the social importance of trees to Jamaicans. In this chapter I show that trees are important to Jamaicans. Because they are important, it is significant when farmers choose, particularly for social reasons, not to plant them and to destroy wild seedlings.

The cultivation of trees in Jamaica is a symbol of land ownership and security of tenure. Their existence in yards and fields reflect a concern aimed at investing for a lifetime and for the benefit of succeeding genera-

tions. Growing trees reveal farmers' desires for independence from want and charity, and for freedom from exploitative relations with estates and other small farmers. For small proprietors, the cultivation of trees reflects their efforts to plant for the future and their concern with old age and with a reduced capacity for hard physical work (Edwards 1961:105-109). In their youth farmers care for trees in their early years when these require labor but provide no fruits. In their old age, farmers expect to be supported by their trees with little or no outlay of labor. This was in fact what happened. The labor associated with trees is the harvesting of fruits and in the districts of Belle Castle and Scots Run, higglers (subsistence merchants) were responsible for providing their own pickers. On several occasions I saw farmers paid for crops that they had not themselves harvested.

Trees distributed in the settlement areas are important to the people in many ways. They are useful for their roots, trunk, branches, bark, leaves, flowers, fruits and seeds. Trees contribute to the wide range of vegetable products available and provide many of the most valuable commodities both for the national market and for export. The various products derived from trees enter into many areas of productive and social activities. They are important in cultivation, animal husbandry,

fishing, crafts and commercial activities. From trees come a variety of products: fuel, spice, food, animal feed, medicine and fibre; they provide lumber for making boats, dwellings, furniture and fence posts. They are also appreciated for their shade and beauty. Trees are significant in the religious beliefs of Jamaicans and are an element of their thought as expressed through sayings, phrases, riddles and proverbs.

Throughout the settlement areas of Jamaica are assembled many of the most useful trees of the tropical world. The relatively permanent structuring of space that constitutes Jamaica's settlement has required the destruction of the island's native forests. Now native and exotic trees survive in settled areas as (1) wild plants (not identified as weeds) in abandoned and inaccessible places, (2) as weeds in agricultural areas and as (3) cultivated wild and domesticated plants that, in addition to those in yards and fields, include street trees, shade trees, ornamental trees and fence trees. At this point I turn to a consideration of trees in various areas of social life in Jamaica.

Trees as National Symbols

All the plants which have officially been made national symbols in Jamaica are trees. The fruits of the ackee (along with imported saltfish) provides the

national dish. The lignum vitae bears the national flower and the blue mahoe is the national tree. Interestingly enough, none of the plants representing the nation and its people is important in the island's export trade, although other trees are clearly a significant element of this trade. Moreover, all the trees are wild.

Trees as Historical Landmarks

Of all the varied forms of life, trees are among the largest, heaviest and longest living. Some become prominent features of the landscape and objects of special social significance. Such is the case with the cotton tree (Ceiba pentandra) in Jamaica. It is, says Wright (1927:1), "one of the most imposing and conspicuous objects in the Jamaican landscape." Madden (1970:49) describes the cotton tree as "the monarch of the forest of Jamaica" and Pullen-Burry (1971:95) as "the king of Jamaican forestry." With its great outspread branches (often draped in a green mantle of mistletoes, bromeliads, ferns, lianas and cacti), supported by a massive, steel-grey trunk studded with thorns and braced by huge buttresses, the cotton tree has served as an important historical landmark in Jamaica.

This is evident when, for example, the death of the cotton tree in Port Morant, St. Thomas, did not pass unnoticed. Hemming (GL:1976) writes:

> Old trees that had formed historical landmarks in the parish of St. Thomas, have all now been destroyed with the recent felling of "Cotton Tree" which stood at, and gave its name to Pt. Morant's square where four roads, one leading to Bath, another to Kingston, the third to Harbour Head, and the other to Pt. Antonio, had been shaded by its wing-like branches for over 200 years.

The link between cotton trees and roads--particularly crossroads--is intriguing and reflects more than chance. With the shade they offer, cotton trees provide a resting place. In three well-known cases at least, the tree is associated with crossroads. First is Tom Cringle's Cotton Tree, Jamaica's most famous cotton tree which once stood on the Kingston/Spanish Town road. This tree is described as late as the nineteen fifties by John Watkins (1952:89-90) who writes:

> Most noteworthy to plantsmen is the huge kapok tree, Ceiba pentandra, just halfway to the capital. Here, history records, Michael Scott sat as he wrote his story of West Indian travel, Tom Cringle's Log. If records are authentic, this tree is in its third century of life. Certainly it is the largest ceiba tree that I have ever seen.

The second well-known cotton tree stood at what is called Half-Way-Tree, now a part of the city of Kingston which is in the heart of the Liguanea Plains. The earliest mention of Half-Way-Tree, Sibley (1978:69) writes, was in 1696 when "the Governor was informed that certain prominent citizens had assembled together at

halfway tree in the Parish of St. Andrews and had obliged several of His Majesty's subjects passing that way to drink a health to the late K. James (Cundall, Historic Jamaica, p. 197)." This cotton tree survived from the British conquest of the island until the end of the nineteenth century. Richard Hill, in a post-humously published article in the 1890 "Victoria Quarter-ly" wrote:

> I visited Halfway Tree on Sunday the 25th November 1866. When I first saw the cotton tree at the junction of the four roads through the plain of Liguanea from which Halfway Tree receives its name, it had nearly lived out its time. It is on that lofty straight-stemmed variety of Eriondendron which originally growing among some clustering trees had overtopped them and had spread its horizontal arms out above them at about some fifty or sixty feet in elevation from the root. Four our five of these arms yet remained with a few scattering stems on which a few strag-gling leaves vegetated. An age of surface rains rushing to the sea three miles away had removed all the soluble earth from the platform roots, so that they made arched resting places, where the marketers coming from the mountains would rest themselves in groups for they had reached the Half-way tree... At the time of the conquest of the island 200 years ago, the Halfway Tree was one of those tall and solitary cotton trees of the Liguanea Plan (cited in Cundall 1971:197).

The third cotton tree associated with a cross-road stood in Port Morant. It was the felling of this tree in 1976 that led to Hemming's (GL 1976) reflection on trees which have been historical landmarks in the

parish of St. Thomas.[1]

The relationship between roads and cotton trees, however, remains to be more specifically determined. Writing of the flora of St. Croix, Millspaugh (1902:510) describes the cotton tree as "a fairly common roadside tree." Pullen-Burry (1905:95) makes a similar observation for Jamaica. Describing "several lovely drives to be taken from Mandeville," the parish capital of Manchester, she writes:

> The well-kept roads, bordered by great clumps of bamboos, waving palms, stately cedar-trees, orange-trees, acacia bushes, attracting the multi-coloured humming birds with their sweet-smelling blossoms, mango-trees laden with luscious fruit, are in themselves a never-ceasing source of delight to the lover of nature. Here, too, is the ceiba, the king of Jamaican forestry...

Similarly, Underhill (1970:238) in his account of his trip from Caymanas to visit the post-emancipation settlement of Sligoville established by the Phillippos writes:

> The road, after crossing the river Cobre by a ford historically one of the major passes across the island's interior hills and mountains, was a continuous ascent, and for a mountain road, a very good one...In places we passed some magnificent specimens of the silk cotton-tree.

Although the cotton tree is cultivated in some countries (Baily 1935:93; Britton and Millspaugh 1967:275) in Jamaica the tree is wild. In eastern Portland, cotton trees are primarily found in the wooded areas of the Hectors River Estate. In an interview, one of the headmen or

field supervisors of the estate said there were many on the property which were sold to make boats; and when I asked one fisherman where it was possible to get cotton trees suitable for making boats, his immediate response was "out by Hectors River Estate."

While the cotton tree is known in Jamaica and throughout the tropics for its spectacular dimensions and its luxuriant shade, it is important for the cotton-like fiber called kapok obtained from the fruit which has become a raw material in world trade. Hall (1952:47) writes that kapok is "the most valuable of all the stuffing materials" and that its use is steadily increasing. Uphof (1968:116) indicates the contemporary industrial use of kapok:

> Silky fibre from the pods, called Kapok, is widely used for stuffing pillows, mattresses, life preservers; also used as insulating material, among which is airplanes against cold and sound; equipping automobile trucks for refrigeration the fibre is resilient, buoyant, water resistant and highly moisture-proof.

Kapok is the only major commodity of international trade derived from the silk cotton tree, and Sri Lanka, Java and the Philippines Islands are the major exporting countries (Bailey 1976:239). Usher (1974:134) notes that in the early 1970's over ninety percent of the world production of kapok came from Indonesia to which the tree had been introduced from Tropical America; that an

oil pressed from the seeds is used for making soap and for lighting and that "packing cases, etc." are made from the trunk.

The wood of the huge trunk of the cotton tree is relatively soft and it is the tree from which dugout fishing boats are made in Jamaica (Pullen-Burry 1971:110). During the period of my field research, of the ten boats that were regularly kept on the bay-beaches of Hectors River and Innes Bay, eight were made from cotton trees. Apart from its value in the construction of fishing boats, other uses have been reported for the tree in Jamaica. Storer (1958:26-27) states that the trunks are also used as "cheap coffins." At the end of the eighteenth century, Browne (1972:27) and Lunan (cited in Sturtevant 1972:96) report that the leaves were eaten by African-Jamaicans. I have no knowledge of these practices in the districts studied.

The Cotton Tree and the "Spirit World"

No other tree is as significant as the cotton tree in the African part of the Jamaican world view, particularly as this relates to religion and to political resistance. The attitude of African Jamaicans to this tree has been variously described as "awe" (Senior 1978), reverence and fear. The extent to which the cotton tree symbolizes the big in contrast to the little, the great

in contrast to the small, and the wise in contrast to the foolish is evident in the following three proverbs (Cundall 1972:33):

1. Cotton-tree ebber so big lilly axe cut him.
2. When cotton-tree tumble down, nanny goat jump ober him.
3. Cotton-tree to know how him bottom 'tan,' him no call breeze.

In the first proverb, the virtue of patience and persistence is expressed in the contrast between a big tree and a little axe. The second proverb points to the virtue of understanding the nature of changed circumstances; we see that with the cotton tree and the nanny goat, the small, contrary to normal circumstances, humbles the great. The last proverb points to the wisdom of not sending a challenge without knowing the state of one's own defenses.

Jamaicans believe that "spirits" exist in the world. They are largely of human origin. Identified as "duppies" and "shadows," they are capable of both good and harm. They can be visible or invisible; when visible, they appear in human and non-human forms. They act on their own accord but they can also be manipulated (i.e., "set" and "pulled") by individuals described as Obeah people, Bushmen, or Doctors. The social significance of the spirit world and the extent to which it

impinges on the natural world is clear in the following comments of Beckwith (1969:116):

> However incredible it may seem to us that a whole people can be made to believe in a power which can change not only men's health and material fortunes but their minds--make an inconstant lover ardent, an employer well-disposed toward a man, a judge favorable to his case at court--or can pursue with revenge a thief or a murderer, we must realize that the whole structure built up by the Obeah Men rests upon the basis of very ancient beliefs in the relation between man and natural objects.

In the relationship between Jamaicans and "natural objects," "Plant life," writes Beckwith (1969:117) "is alive with spirit power." In the conclusion of her article, "Duppy Plants in Jamaica," Lilly Perkins (1969: 21) says: "One cannot help wondering if there is any other country with so much of its plant life connected with the supernatural." The silk cotton tree is chief among some forty plants which are for various reasons identified with spirits or duppies in Jamaica. It is traditionally believed that duppies live in the silk cotton tree. Beckwith (1969:89) not only records this belief but also points out that there was the idea that they live in "bamboo thickets" where, it is said they "feed upon bamboo root, 'fig' leaves, and the gourd-like fruit of a vine called 'duppy pumpkin.'" Lilly Perkins (1969:17) states:

> First and foremost of the duppy plants comes the stately Ceiba or Silk Cotton Tree (Ceiba pentandra). This is the

> duppies' own special tree and many are the superstitions that surround it. Being a plant among its fellows and easily the most imposing and awe-inspiring tree in the island, one can well understand its having become an object of dread. The great limbs, often smothered with epiphytes and tangled together with a network of creepers and snake-like cacti, do indeed appear as if something sinister might be lurking in their gloomy shadows.

Whenever a cotton tree is to be felled "a libation of rum must be poured at the roots of the tree, and the tree-cutters must also imbibe deeply if the curse is to be averted" (Perkins 1969:17). The rum serves to appease the spirits and to ensure the safety of those cutting the tree and those who will make and transport the boat. As Perkins (1969:17) notes, "In these days it is said to be the chosen abode of spirits and the man who has the temerity to destroy it must be prepared to face the consequences, for many are the tales of dire misfortune following the felling of a Cotton Tree."[2]

In presenting one reason why the silk cotton tree is associated with spirits, Beckwith (1969:122) states:

> Reptiles have a particularly bad name as vehicles for duppy setting. The snake is the "baddest of all," anyone will affirm, but as there are seldom to be found snakes in Jamaica today this takes one back in the history of obeah to the days of ob, to the voodoo, and the Obeah Man of the past who carried "a staff carved with snakes or with a human head on the handle, a cabalistic book and a stuffed snake." In the past, Banbury says, snakes used to be "set" by the Obeah Man, and the fear of them

> seems to have been not ungrounded, for, though ordinarily harmless, cases are reported of their coiling about an animal or even a ...[African]. The fact that the yellow snake in Jamaica eats eggs and sleeps in hollows of fig and cotton trees is perhaps one reason for the fear of eggs and of the duppy-haunted precincts of the cotton tree.

While Beckwith points to one fact that might account for the association of cotton trees with spirits, others must also be considered.

Cassidy and Le Page (1971:334-390) in Jamaica Talk identify many factors which determine the way in which Jamaicans name plants. These include the size, shape, color, taste and smell of leaves, flowers, fruits, or the plant as a whole. Others have names associated with different countries of origin, different nationalities, or particular individuals. There are also plants named for the type of locality in which they grow, for their association with animals, and for their association with a miscellaneous variety of things.[3]

Plants are also named for their association with spirits. These are the duppy plants of Jamaica of which Perkins (1969) identifies twenty listed on the following page.

One thing is clear from the work of Beckwith (1969); Cassidy (1971) and Perkins (1969). All the plants identified as "duppy" plants--in addition to those regularly associated with spirits though not explicity identified as "duppy" plants--show some striking or

COMMON NAMES	BOTANIC NAMES
cotton tree	Ceiba pentandra
overlook or cut-eye bean	Canavalia ensiformis
tuna	Nopalea coccinellifer
duppy gun	Ruellia tuberosa
duppy rattle or duppy peas	Crotalaria retusa and C. verrucosa
duppy fly-trap	Aristolochia grandiflora
duppy cherry	Cordia collocca
duppy cherry	Ehretia tinifolia
duppy or French cotton	Calotropis procera
duppy coconut	Barringtonia asiatica
duppy tomato	Solanum cilatum
duppy or wild soursop	Annona montana
duppy calalu	Amaranthus spinosus
duppy cap, cup or umbrella	Fungi
duppy cucumber	Cucumis anguria
duppy fee-fee	Centrosema virginianum (and other species)
duppy pindar	Rhynchosia minima
duppy needle	Bidens spp.
duppy melon	Morinda royoc
duppy poison	several species, e.g., Fevillea cordifolia, Cayaponia racemosa and Passiflora sexflora
duppy chocho, jumbie or jumby chocho	(Perkins reports that she is not sure of this plant. It is the Morinda citrifolia and is called hog apple in East Portland. See Cassidy and LePage 1961:226.)
duppy melon, duppy or bitter gourd	Cionosicys pomiformis (Perkins also expressed doubt about the botanic identity of these two plants.)

Table 5

Duppy Plants in Jamaica

Source: Perkins (1969)

puzzling characteristic. In explaining the name "duppy" as a modifying element in compound names, Cassidy (1971: 389) says: "Devil implies some harmful property, duppy, usually less harmful, often merely trickly or mysterious."

Because of their strong fragrance, basil (Ocimum basilicum) and jessamy (Jasminum spp.) associated with spirits. Because of the sounds they produce, duppy fee fee, duppy rattle and duppy pop gun are similarly associated with spirits. Duppy fee fee or duppy fiddle is named for the sound produced when the stems are broken and rubbed together. Duppy rattles are the dried seed pods of Crotalaria retusa which rattle in the breeze or when disturbed. Duppy pop gun is named for the sound produced by the explosive fruit of the Ruellia tuberosa. Plants which resemble things useful in social life but which are actually useless are identified by the prefix duppy in addition to the name of the object of resemblance. Not only are there duppy fee fee, duppy pop gun and duppy rattle, there are also duppy flytrap and duppy darning needle.

The most interesting and important reason for identifying a plant as a duppy plant is that it bears a fruit resembling an edible fruit but which is considered to be poisonous. These plants include duppy cherry, duppy coconut, duppy cucumber, duppy melon, duppy peas, duppy pindar, duppy tomato, duppy pumpkin, duppy soursop

and duppy calalu. To this list we should also add mushrooms which, for their resemblance to some common objects, are called duppy cap, duppy cup, or duppy umbrella.

One factor that has led to cotton trees being associated with spirits is certainly its great size and imposing form.

Other plants associated with spirits, though not identified as duppy plants, should also be mentioned here. Beckwith (1969) refers to the jessamy, bamboo, and fig tree, which, with the exception of the bamboo, are associated with spirits in the rural districts. In addition, one informant associates basil with spirits. In the course of a conversation with four people present, he said "when ghost pass baazli [as basil is called in Jamaica] mint you can always smell it at night. Spirits love baazli because of the smell." The others present said they had also heard that.

Spirits and the Packi (Crescentia cujete) Tree

In the context of discovering why particular plants are associated with duppies, one tree which deserves particular attention is the calabash. By many Jamaicans, the tree and as its fruits and the vessels made from them are all called packi, a term derived from the West African Twi apakyi or large calabash (Barrett 1976:23).

The tree has many uses. Long (1972:752) reports that the wood from the calabash is "very tough, and fitter for the coach-makers' use than any other sort of timber known." This was also the opinion of Harris (1909: 14) who states that "being of crooked growth it is only employed for small work such as handles of tools, carriages, cattle yokes, felloes of wheels &c." Long also reports that the seeds are steeped to make "a tart cooling beverage" and the pulp is used to "cure burns." Browne (1972:266) writes: "The pulp is eat by ... [African-Jamaicans], upon occasions, but not looked upon as either agreeable, or wholesome."

For Jamaicans, the chief product of the packi tree is its fruit, which is variously used as a container and in the making of a variety of utensils.

> The shell of the fruit resembles a groud, is of various size and capacity, from an ounce to a gallon; and is used by the ... [African] to hold water, or rum... The ...[African] supply themselves, from this tree, with very convenient and not inelegant, cups, saucers, bowls, punch, and other ladles, spoons, and other utensils, of various shapes and sizes; upon some of which they bestow the best carved work in their power (Long 1972: 752).

Both Browne (1756:266) and Long (1972:752) report the use of the dried fruit of the calabash tree as a cooking utensil. Long writes: "It is thin, but of a close, firm texture, and serves to boil water, or even broth, as well as an earthen-pot."

The dry fruits of the packi tree are also used to make ornaments. Reporting on his visit to Castleton Botanic Garden in the early 1950's in the company of "five fellow gardeners, four of whom were prominent nurserymen," Watkins (1952:82) writes:

> On leaving Castleton we were besieged by native craftsmen who had surrounded our taxi awaiting our departure. Articles of timber bamboo, artfully carved, the decorated calabashes, and the colorful belts fashioned from tropical seeds are very cheap, usually decorative, and definitely "of the land."

Such curios are still made and sold at Castleton today. At the craft market in Kingston and elsewhere, the dried fruits are used to make maracas for sale. The use of the packi gourd to make shakers is an old practice in Jamaica. The missionary Phillippo (1969:243) describes the custom of "John Cannu" (which was part of the Christmas holiday festivities in the middle of the nineteenth century):

> Several companions were associated with him [the John Connu "hero of the party"] as musicians, beating banjos and tom-toms, blowing cow-horns, shaking a hard round black seed in a calabash, and scraping the bones of animals together...

In the initial data I collected on the use of the packi tree in the districts I studied, the only contemporary practice commonly identified was that of fishermen's taking a dried bowl-like container to sea as a bailer. The varied use of the calabash as a utensil seems largely to have been replaced by use of industrial products,

including empty "cheese-pans" which were widely used as a rough general container in the districts.

In most of the classic sources such as Brown or Long, although the usefulness of the calabash tree is always mentioned, it is not associated with spirits. My first discovery of the possible relationship of the calabash to spirits came while interviewing a tenant subsistence cultivator on the Hectors River Estate. In the course of examining his field, I noted that there were several calabash trees. When I inquired, he said he had planted them. When I attempted to find out why, however, he was evasive in his answers. The question of an association between the calabash and spirits again came up in the course of a conversation at my cottage which included a fellow teacher at Happy Grove School, his father (who was a proprietory subsistence cultivator and a bee keeper) and two students. The father said that in "olden days they use to plant packi as a grave marker as it easy to catch and hard to dead." He said the packi reminded him more of duppies than did the silk cotton tree. He observed that in the Bath graveyard there were many packi trees, all of which were grave markers. This fact is also noted by Beckwith (1969:75):

> Wilfrid says that calabash trees are often planted one at the head and one at the foot to mark the grave (and Barclay also notes this custom), but

> Wilfrid would not admit that their presence had any significance. True, the calabashes when ripe will fall and break; "you can never get a calabash off a grave."

The third link between the packi tree and spirits appears in Cassidy's (1971:165) discussion of "duppy bird." We have seen that some plants--including the silk cotton tree--are associated with duppies because of their unusual characteristics. This is particularly true of plants bearing poisonous fruits that resemble fruits which are edible. In the case of the "duppy bird" or "duppy birds," the feature appears to be their association with graveyards, and this is also the link between the duppy birds and the packi tree. Jacobs writes:

> Duppy bird, the ground dove, which is said to frequent burial grounds, and of which it is believed that if it flies into the church, someone will die (cited in Cassidy and LePage 1967:165).

If the inference is correct, the packi tree is associated with spirits because of its association with graveyards.

There is one final element in the association of the packi tree and spirits which is brought out by Phillippo (1969:247); this is the use of the gourd in making "spells" and "charms." The use of "spells" and "charms" to exact revenge and to control other individuals consist in placing them near the residence of those to be influenced. When they are used to prevent theft they are placed in some conspicuous part of the house or on a

tree where they can be easily seen. Phillippo reports that these spells and charms are "signified" by the use of calabashes containing various ingredients.

Birth Trees

In the context of the social importance of trees to Jamaicans, one interesting custom is the planting of birth trees. After the birth of a child, the placenta and umbilical cord are buried and a sapling planted over them. Dunham (cited in Cassidy 1971:44), while describing Accompong in 1946 writes: "Sometimes the tree is provided by the parents, sometimes by the godparents or other relatives or friends...While a man may have much property and several single trees in various parts of the village, he always points to his birth tree with much pride." This custom of planting birth trees remains to be more fully studied in Jamaica. "Still honoured to some extent" is the way in which Cassidy and Le Page (1971:254) describe the "African institution of the navel string tree, birth tree or natal tree." This is a fair assessment of the situation in the districts which I studied. Birth trees are still an element of social life in East Portland. In discussing the relationship between individuals and their birth trees, Beckwith (1969:55) writes:

> If one injures the tree one must pay the owner for it. If the property upon which it is planted changes hands, a new tree is started from a seed or shoot of the old tree. Formerly the idea was that the tree remained the property of the individual no matter if the land passed into other hands, and writers cite instances of cases of theft tried in the court which were found to turn upon this claim.

The only context in which birth trees came to my attention as a property issue in Hectors River concerned the conflict arising from the cutting of fruit trees. I examine this more closely in my discussion of cropping pattern and praedial larceny.

Although many writers (Cassidy and Le Page 1971: 254; Braithwaite 1974:4; Henriques 1976) have cited Beckwith when discussing the custon of birth trees, few of them have followed up her comments on the reasons for this practice and its implications.

Beckwith states that the navel tree, from the time of its planting, is the property of the child, who can harvest and dispose of its fruits. "Thus the tree is a symbol," she writes "early connected with an infant's career." In her interpretation of this African-Jamaican custom, Beckwith (1969:55) continues:

> I could not discover that any further ceremony attached to the planting of the navel tree or that the tree was believed to be connected with the life of the child. It is used rather as a symbol to the child of property and its returns... The tree...set at the beginning of life,

> has a much deeper meaning in the... [African] mind than the mere "life tree" of our fairy tales. It is the basis of the idea of property and introduces the child to his economic education.

Kerr (1962:29) was told that breadfruit or coconut trees are planted as birth trees, but on the occasion she witnessed a banana plant was used. She offers no explanation for this choice of trees. Dunham, describing her visit to a Maroon settlement also observes that in Accompong, "planting the navel cord is as important as it is in other parts of Jamaica" and that the coconut and breadfruit are usually planted. Beckwith, however, does offer a brief comment concerning the choice of the coconut which is consistent with her perspective on the meaning of the birth-tree in Jamaica. She (1969:56) writes, "A coconut is generally selected because it is 'the only one you can depend upon' to grow and to bring in money."

The breadfruit is probably thus selected because it is in a sense the "staff of life" and because the tree can be easily grown. In fact, the way in which the breadfruit flourishes is a piece of proverbial wisdom in Jamaica. In the proverb "breadfruit, de more you chop it de more it spring," the tree appears as a symbol of resilience, determination and survival. Henriques (1976: 125) also states that the navel string is "planted beside a tree, which is usually a coconut tree." Unlike Beck-

with, however, he suggests that the parents' choice is related to what they can afford. If they can afford it, he reports, a "special tree" is planted. In this respect the choice of the coconut is similar to the choice of the breadfruit and the banana: all are important food trees, all have a market value, and, most important, all are easily grown without great expense.

If we pursue the logical implications of the custom of planting birth trees, with each addition to the household membership comes also a new addition to plants distributed in the dwelling space. With each generation comes also coconuts, breadfruits, calabashes (mentioned in Cassidy 1961:44), bananas and "special trees." Insofar as birth trees are planted in the dwelling spaces, this practice in part defines the nature of intercropping.

Trees and Intercropping

Trees are an important part of intercropping. They are the source of a variety of useful products for household use and for sale. "Tree enterprises," writes Edwards (1961:107), "provided not only some of the most valuable export crops (citrus, coffee, cocoa, pimento, for example) grown on the farms studied, but also some of the most important crops such as breadfruit, mango, coconut and ackee grown for local consumption." A similar indication of the value of trees is presented by Blaut *et al* (1973:47):

> Tree crops, with the partial exception of fruit trees, are grown primarily for sale. The principal varieties of cash tree crops are cacao and coffee; a relatively small amount of citrus of various types is also grown. The most widely grown fruits, in addition to citrus, are breadfruit, mango (of which 24 varieties are grown), star apple, and guava. Coconut, ackee, pimento, and many other fruits are present though not abundant.

Trees add to the diversity of species and varieties of plants available for cultivation. This is especially significant as many trees are wild and farmers only decide to "save" or to destroy the seedlings.

Discussing plantations in the context of the agricultural systems of the world, Grigg (1977:211) writes: "The classic plantation crops (with the obvious exceptions of sugar cane and cotton) are tree crops--rubber, coconuts, oil-palm, ...cocao, and coffee." For the Hectors River Estate and the small farmers in the districts I studied, the main commercial crops are tree crops. These include bananas, coconuts, pimentos, limes and timber trees. Other trees that also provide commercial products, especially for small farmers, are the breadfruit, mango, ackee, Jew plum, avocado, cocoa and plantain. Many trees are of such reliable commercial value that they are identified by farmers as their "tax trees" and as "old age pension."

Insofar as farmers seek by intercropping to create a variety of useful products, trees contribute to the efficiency of accomplishing this objective. They are an important part of the intensive use of space. As companion crops they promote the growth of other plants and they extend the harvest period. Intensive cropping, continuous cropping and companion cropping are important concerns of small farmers. While insuring against economic risk from fluctuating market demands, controlling weeds, pests and diseases, preserving soil fertility, preventing erosion and the efficient use of labor might all be important in explaining why farmers intercrop, these were not the factors most frequently given to researchers in Jamaica. Farmers have emphasized intensive cropping, companion cropping and "continuous cropping." Blaut et al (1973:59) writes:

> ...the previaling practice of multiple cropping (growing several crops together in the same field) was not believed by most to have the function of providing better ground cover. Rather, it was justified on the basis of providing harvests, and thus income, at different times of the year from the same piece of land, providing shade, simplifying planting (several varieties are sometimes planted in the same hole; and minor crops are planted in the already-tilled soil of the yam fields), and allowing different crops with different rooting depths ("friends") to utilize the soil "juices" more fully.

Similarly, Edwards (1961:236) writes:

> The reasons given for intercropping are very enlightening. The one most frequently advanced had to do with the small amount of land available so that the 'small' man, unlike the 'big' man, had to plant everything together. It was pointed out that with intercropping a given piece of cultivated land was always producing; while the farmer was waiting for one crop to bear, another was yielding. It was also said to be the way of getting as much as possible out of the land.

The significance of social class in determining Jamaican cropping patterns, particularly as this relates to the difference between "'small' man" and "'big' man" is a factor I examine in later chapters and in the conclusion. There is, however, one further point in the relationship between trees and intercropping that should be considered here. Trees mature more slowly than herbaceous plants. During the years before they become productive, the labor required to maintain them is expended without immediate reward. While the trees are growing, several crops of herbaceous plants can be harvested before the maturing trees begin to restrict their growth by overcrowding and by shading.

Farmers refer to the trees which are intercropped with herbaceous plants in this way as being "carried." If the cultivated trees are planted in a pure stand, then intercropping would be the result of planting secondary crops while the trees mature. In most cases involving small farmers, however, the trees

themselves are mixed and the cultivation of herbaceous plants to "carry" the trees only contribute to the extent of intercropping. "Carry" cropping is also to some extent a very long-term form of succession cropping. The final outcome is to establish tree cropping as a form of permanent cultivation. This is clearly recognized by Oliver (1971:312) in a generalized description of "peasant cultivation of a mixed character":

> What the Jamaican calls 'bread kind' (tuberous rooted plants producing starch foods) have to stand in some cases two years before they mature. Cassava (manioc) stand three or longer. In between and round about the hills or ridges made for the tubers the quicker-growing plants are set or sown and harvested successively as they mature. Plantains and bananas may be grown around the plot or here and there within it, so as not to rob or shade the earlier crops too much. If the cultivator intends permanent occupation, he will also plant coffee, kola, annatto, or other shrubs to bring in food or money, when the vegetables have been reaped.

Trees and Food

Many of Jamaica's most important food plants are trees. These include fruiting food trees, 'fruit' trees or "orchard trees" (Gov. Publ. 1970, 1974), spice trees and beverage trees. Other important foods are obtained from the citrus fruits as well as the ackee, avocado and mango.

Coconut (Cocos nucifera) and Food

I begin by considering the coconut palm, which

is legendary for its many uses. In Jamaica, a person who appears to be everywhere and in everything is said to be like a coconut. The great diversity of products this tree provides is often described as unlimited, innumerable, or countless. As implied in the following South Sea proverb (Fouror et al. 1962:70), these products enter into all areas of social life: "He who plants a coconut tree plants food and drink, vessels and clothing, a habitation for himself and heritage for his children." Because of the extraordinary variety of ways in which it has been useful to many tropical people, the coconut has become, especially in the past five hundred years, one of the most valuable, well-known and widely distributed member of the palm family.

Although I am here specifically concerned with edible products derived from the coconut palm, I will also take the opportunity to indicate the many uses of the tree. Before proceeding, however, I must take note of the fact that many coconut trees in Jamaica have been destroyed by "lethal yellowing" disease.

Since about 1900 lethal yellowing has spread from the western region to all parts of the island; in the early nineteen seventies between 200,000 and 350,000 trees were lost each year (Tomlinson 1972; Wint 1976). Dave Romney (1976), Director of Research of the Coconut

Industry Board, stated that "about two-thirds of the six million Jamaica Tall coconut trees listed in the 1961 agricultural census are lost already and losses in 1977 [would]...probably be about 200,000 trees."

Lethal yellowing was first recognized as a serious problem in 1891 when the biologist, William Fawcett, reported it in the southwestern part of the island. Romney (1976) indicates that while some biologists have given the impression that the disease originated in Jamaica in 1891 and spread from there to the Bahamas and Florida, he states:

> In fact, the disease was reported from Cayman in 1834, was already present in Cuba in 1906, and is also to be found in the Dominican Republic and Haiti. By the time the disease spread to the Florida mainland in 1971, continuous research on the cause of the disease had been in progress in Jamaica for nine years.

The disease appeared around Montego Bay in the northwest in the early 1930's and by 1952 had spread through St. James and into the neighboring parishes[4] of Hanover to the west and Trelawny to the east. By the middle of the 1950's lethal yellowing had considerably reduced coconut production in these parts of the island. In the 1960's the disease reached "epidemic proportions" (Tomlinson 1972:7), striking at the heart of the island's coconut-growing region. In 1961 it appeared at Kildare near the town of Buff Bay in Western Portland and in

1962 at Fort George (near the town of Annotto Bay) in the parish of St. Mary to the west of the parish of Portland. In 1965, it occurred for the first time in East Portland in the district of Fair Prospect. During the 1960's, it also entered the central upland areas of the parishes of Clarendon, St. Catherine, Kingston and St. Andrew. At the end of the 1960's and the early 1970's the disease made its first appearance in several areas of the eastern parish of St. Thomas, completing its eighty-year spread across the entire island.

Lethal yellowing has destroyed many of the Jamaican Tall variety of coconut palm. Given the importance of the Jamaican Tall coconuts in the social life of the island, the impact of lethal yellowing has been felt by many classes and groups, both in terms of the competition for a reduced supply of nuts which are now more expensive and of the shortages and higher prices of products manufactured from coconut, such as bath soap, detergent and cooking oil. Lethal yellowing has resulted in a reduction in the number of copra factories (D.N. 1975:Aug.6), increased imports of edible oil and other coconut products, a loss of scarce foreign exchange and, especially in rural areas, loss of jobs in an industry one estimated to employ some 30,000 individuals.[5]

The Coconut Palm and Food

Though there are many uses for the root, trunk, leaf and inflorescence of the coconut palm in Jamaica, the fruit (particularly the liquid and the gelatinous and solid endosperm, or the water, jelly and meat as they are called in Jamaica) is by far the most economically important part of the plant. It has the greatest variety of uses and provides the most important commercial products.

The coconut palm is important in relation to food production in several ways. First, it provides food to be consumed either raw or cooked. Second, it is important as an ingredient in preparing many other dishes, as well as in the process of cooking them, both as the fuel and as oil for frying (which is a common method of cooking in Jamaica). Third, it appears in other productive activities related to food, as in raising pigs, bait for fishing, and in feeding poultry.

The coconut is consumed in its immature and mature stages. When immature it is harvested both for its liquid endosperm or coconut water and for the soft, gelatinous endosperm or jelly which is beginning to form. At this stage the fruit is of commercial value to those who sell jelly coconuts. The coconut water is also used in making alcholic and non-alcholic mixed drinks and as a chaser. The jelly is also served mixed

with sugar or molasses.

The appreciation of water or jelly coconuts in Jamaica is an established tradition. In rural areas where dwellings are scattered, where shops or bars are not always in close proximity, where there is no electricity for refrigeration and no money to purchase beer and other beverages, the refreshing drink offered by the immature fruit is highly valued. Many subsistence farmers regard their coconut palms as jelly trees. Whenever I surveyed fields, I was always offered a jelly coconut for refreshment. During the course of field research, I heard a farmer complain loudly to a group of young Rastafarians who he claimed were stealing his jelly coconuts. He said that what bothered him most was that, when his family visited from <u>town</u> (meaning Kingston, the capital), he did not even have a jelly to offer them. Many visitors to Happy Grove Secondary School were offered jelly coconuts for refreshments, picked from the school's grounds. These nuts were picked from mature trees whose fruits were beyond the easy reach of children. Few of the young bearing trees were harvested as the nuts were often stolen. As a geography teacher at Happy Grove School, I often took the upper forms on field trips to study the coastline. As soon as they arrived at the coast the students began picking jelly coconuts and

pounding them on the rocks until the water came pouring through the young husk. After draining the water, they then smashed the shell to get at the tender immature kernel. When I went rock fishing with residents of the district, they always picked jelly coconuts from estate trees along the coast. When I asked if the estate owners did not object, they asserted that the estate only objected if the fruits were picked to be sold.

With their push-carts, donkey-carts, vans and pick-ups, jelly vendors can be found selling coconuts wherever it is dry, hot and dusty and many people are gathered. This is so in the busy downtown areas of Kingston, at bus stops and railway stations, at the markets, hotels, beaches and sporting events, and along roads where people pass in large numbers.

A jelly coconut costs from thirty cents to sixty cents,[6] depending on the occasion, the place and the quality of the fruit. The usual questions asked before buying a jelly are how much is it? Does it have plenty of water? Is it sweet? Does it have jelly?

The most important process for rendering the mature nut usable is to grate the solid endosperm or meat. One product is coconut milk which is used in a variety of ways. It is a standard ingredient in the dish rice and peas, which is part of the traditional Sunday dinner for many Jamaicans. It is also used to make rundown, which

is mackerel (and sometimes saltfish, shad, whelks, crabs or lobster) simmered in a base of coconut milk, to which are added various spices and sometimes bananas. Grated and diced coconut is also used in baking and in making an assortment of candies. Baked products include toto (a kind of pudding), gizzarda (a kind of small cup-cake with grated coconut as the filling), coconut bread and coconut cookies. The candies include grater cake, coconut cup-cake or drop cake (both involving coconut boiled down in sugar) and Busta (a tough molasses-flavoured candy). Another of the sweets derived from the coconut is a by-product of the household production of cooking oil and is called coconut custard.

Uses of the Coconut Palm in General

I found few uses for the palm root in Jamaica. It is casually used for fuel and was mentioned as an ingredient in making a tonic.

The trunk of the coconut palm is also little used in Jamaica. Thus, large stands of beheaded coconut trees are left to rot in many areas of the island. Like the root, the trunk is also casually used for fuel. Occasionally one comes across a coconut trunk used as a foot bridge or as a natural bench. The trunk has also been used to a limited extent in construction and in making furniture. Informants reported that in the past the

trunks were used for coffins, corner posts in house building and in making feeding troughs. Long (1774:739) writes "The trunk is formed into gutters, and occasionally employed for inclosing, and roofing out-houses, and being nailed close, is so hardy as to resist the weather for many years."

The leaves of the coconut are put to many uses. The entire frond is used for covering temporary structures such as selling stalls, judging stands at sporting events and field shelters. Fronds are also used for fencing, for ornmanets and for religious purposes (as in the case of Palm Sunday). The lower portion of the midrib of the leaf used by boys to make cricket bats and to provide the curved stick needed to run the rims of bicycle wheels as a sport. Like the root and trunk, the midrib of the leaf is also used for fuel. The midribs of the leaflets (which make up the large pinnate leaf of the coconut palm) are still used to make brooms and they are used by children to make kites and to make nooses for catching lizards.

In the area of East Portland where I conducted research, there is no indication that the leaves are plaited to make dishes or construction material for walls, ceilings, or roofing. To a large extent, these functions have been fulfilled by the bamboo in Jamaica. I also found no indication that the leaves are used to make mats, fans, hats, or baskets. Although such things are

made in Jamaica, they have traditionally been made from the thatch palm (Thrinax parviflora).

The coarse fibrous mesh at the base of the leaves has traditionally been used as a strainer, although, as has been the case with many other natural commodities, this has been displaced by readily available and inexpensive metal strainers.

The husk of the fruit is, of course, important for producing coir fibres. Although it can also be used to make cords and mats, I have no indication that this was done in East Portland. This absence could be due to the fact that rope (of sorts) for tying animals is made from the inner bark of the trumpet tree (Cecropia peltata). One of the commonest uses for coconut husk both now and in the past, is in the making of brushes for polishing floors. Like the roots, trunk and leaf-midrib, the husk is also used for fuel, especially in roasting breadfruit. When men go rock fishing off the sharp coral limestone cliffs of the coast, they take the husk of the coconut to sit on.

The woody shell of the coconut is hard and durable; it can be carved and inlaid, as well as polished and lacquered. For these reasons, it is used in many ways. Like the root, trunk, leaf-midrib, and husk, the shell is used for fuel, especially in copra production. Cut and polished, it is used to produce a wide range of

personal ornaments such as bracelets, necklaces, earrings, hair pieces, pins and buttons. Children at Happy Grove Secondary School who claimed to be Rastafarians or sympathized with them always wear coconut pins carved in the shape of Africa or simply painted with the colors of red, yellow and green. The shell is also used to make ashtrays, cups, and other containers, and Rastafarians use it to make the water bowls of ganja (marijuana) pipes. The clean shell (as it is described when collected from the beach) is used in East Portland to make musical shakers, as well as money-boxes.

The inflorescence is still used in Jamaica as a yard broom. The stem of the nut is used regularly as part of dried floral arrangements, whose construction is a popular practice in the secondary school's art program.

The palm is also grown as an ornamental and as a shade tree, especially near the beach hotels.

Other Important Fruiting Food Trees

Among the important food trees in East Portland are the banana, plantain and breadfruit. In comparing the banana with the coconut, one female informant who was a domestic worker as well as a small merchant or "higgler" said that though the banana tree had limited uses, it was very "important, especially to people like [her] and the rest when there is no rice and flour." The significance of this point I will examine in the last

chapter.

Bananas are an important source of food. The mature but unripe fruits--green bananas as they are called in Jamaica--are peeled, boiled and eaten; they are also served as mashed bananas. Grated, mixed with flour and boiled, green bananas are used to make dumplings. One informant said in the past, green bananas were used to make flour for feeding children. The bananas are peeled, split, dried, pounded in a mortar and sieved; the result is then boiled. In a similar fashion, the green fruits can be simply peeled, grated and boiled to make a banana porridge.

Because the fruits of the banana are commonly eaten both as starch and as a 'fruit,' it is not only a herbaceous food tree, but also a herbaceous 'fruit' tree. Ripe bananas are primarily consumed as a raw fruit, but are also mashed into a paste with eggs and flour, and fried to make "banana fritters." Ripe bananas are an important ingredient in fruit salads and in addition, are used by some as an ingredient in different kinds of cool beverages (as, for example, fruit punch). One further use of the banana as a beverage plant is in the making of "banana tea." The only informant to mention this use of the banana reported that the young fruit is boiled and mixed with coconut juice for milk.

The leaves, referred to as "banana trash," are

used in many ways. In the bush they are commonly used as something on which to sit or lie. On the Hectors River Estate the trash is used in the transporting of bananas to the boxing plant to prevent their bruising and scarring. It is similarly used by higglers to pack fruits to take to market. Along with "old Man's Beard," "Down-Tree-down," cotton, wire grass and plantain leaf, Long (1972: 860) describes the banana leaf as being used for "Stuffing for Beds, Mattresses, Chair-Bottoms, etc." Informants in the District of Scots Run report that banana trash was used for mattresses in the past, but this practice no longer continues. Moistened with sea water, banana trash is also used at sea to cover fish to prevent them from drying and hardening.

Apart from its uses in packing and cushioning delicate commodities, as a head-pad (kata) and back-pad for carrying loads and in stuffing mattresses, cushions or seats, the leaf of the banana is also used as a plate. The banana leaf is used to wrap boiling shad to prevent them from breaking and to wrap cornmeal which is boiled to make duckunoo, Blue Draws or Boyo. The mid-veins of the leaves are used to make mats, and they are also stripped to produce a poor kind of cord used in various activities such as stringing fish. One informant said that in the past people who suffered from cold used banana mats to cover their whole ceiling.

One way of cleaning a yard for holidays or other special occasions is by white-washing the trunks of trees and the stones which are ornamentally placed around them. "Cleaning" also includes the raking of leaves, sweeping, clearing away bush, weeding and other efforts to "fix up the place." One informant reported that after he harvested the fruit from his banana tree he would cut it down, remove the leaves, beat the trunk until it was soft and "use it to sprinkle white lime at tree root at Christmas time."

During the period of my research, high prices, shortages and discussion of self-reliance led residents to offer many interesting suggestions on how the banana tree could be further utilized. Summarizing the most basic of these suggestions put forward for "agro-industrial" development in the parish of Portland, a correspondent, in a letter to the editor of the Gleaner (3/14/1976) reported that banana flour could be made from green banana, paper and paper products from banana trunks and animal fodder from the green banana leaves.

Ackee (Blighia sapida)

Also important fruiting food trees are the ackee and the avocado. Though I recall as a child eating the fruit of the ackee raw, it is traditionally cooked with saltfish and small pieces of salt pork, along with seasonings and spices, in the favorite national break-

fast dish of ackee and saltfish. The tree was introduced in 1789, although as Hawkes (G:1976) states "a considerable proportion of the Jamaican populace continues to believe that the highly popular ackee" is indigenous to the island.

In the 1920's, Beckwith (1969:14) tells us, "salt cod cooked with the fruit of the ackee or with its substitute, the sosuma berry, is a favorite breakfast dish even upon the tables of the whites." Nowhere else in the world, not even in its native West Africa, is the ackee eaten as much as in Jamaica (Hawkes GL:1976; Ellington GL:1977). Some indication of its significance in the diet of Jamaicans, particularly among the poorest, is given by Ashworth and Waterloo (1970:28), who state that "in times of economic difficulty people may resort to items of questionable nutritional value--voiled green mangoes and ackee as the main part of a meal as observed in the 1963-64 Dietary Survey of Pre-School Children is a case in point."

Here, I take the opportunity to note also that the ackee tree is used as a fence-tree in East Portland and that the Bulletin of the Botanic Department (No. 5, 1888:2) places it in the "list of timber and shade trees cultivated in the [Botanic] gardens" and offered for sale.

Avocado (Persea americana)

Because its flesh can easily be spread when

ripe, the fruit of the avocado tree is used like butter on sandwiches and is traditionally eaten with bread or with bulla (a small, round bread-like cake made of flour, sugar, molasses and spices). Sliced and served by itself or with carrots, lettuce and tomatoes together or separately, the ripe fruit provides the "vegetable" portion of a meal. The fruit is also regularly sold in the market.

The 'Dessert Fruits' of Jamaica

The 'dessert fruits' of Jamaica are often described as being of "infinite variety" (Biglow 1850:65). Phillippo (1969:48) describes the tropical fruits of Jamaica as "delicious and most abundant...every month presents a fresh collation." Bryan Edwards (1972:185) is enthusiastic in his description of the "elegant fruits" which he discusses as part of "the vegetable classes of inferior order." "I mean," he continues, "those which though not of equal commercial importance with the preceding ones (i.e., sugar, indigo, coffee and cotton) are equally necessary to the comfort of subsistence of the inhabitants." For Edwards, among the more "elegant fruits" are the following tree products: coconut, tamarind (Tamarindus indica), pawpaw, guava, sweetsop (Annona squamosa), custard apple (Annona reticulata), star apple (Chrysophyllum cainito), hog-plum (Spondias mombin), mammee (Mammea americana) and naseberry

(Manilkara zapota); "the variety," he writes (1972:187), is equalled only by their excellence." The produts of many 'fruit' trees are usually consumed raw. These include the naseberry, almond, grapefruit, sweetsop, mammee apple, star apple and guinep.

Guinep (Melicocca bijugatus)

Harris (1912:165) reports that the seeds of the guinep, like those of the jackfruit, are "roasted and eaten like chestnuts," but in East Portland, although jackfruit seeds are commonly eaten boiled or roasted, there is no evidence that this is true for the guinep. Also, although I did not observe this in the districts I studied, Harris (1909:17) describes the guinep as a useful timber tree, whose wood is "useful for all purposes except in exposed situations." In recent years, the fruit has become an established item of commerce.

Star Apple (Chrysophyllum cainite)

In the districts of eastern Portland the fruit of the star apple tree is mainly consumed raw. Principally among the elite, however, the fruit is used to make a drink called "Matrimony." The seeds are removed, and the edible fruit is scooped from the skin and finely chopped or mixed in a blender; orange juice and nutmeg are added; the drink is sweetened with sugar or condensed milk.

Mammee (Mammea americana)

There are few mammee apple trees in the districts I studied. The fruit is eaten raw and is there the only product identified for the tree. Like the guinep, the jackfruit and the naseberry (see below)--although mammee apple is not valued as a timber in eastern Portland, Harris (1909:20) describes it thus: "The wood is hard and durable, well adapted for house building, posts and piles and generally for work in exposed situations."

Naseberry (Manilkara zapota)

In many respects the naseberry and the jackfruit resemble the guinep and the mammee. The ripe fruits easten raw are the trees' primary product. None of these trees are mentioned in the districts of eastern Portland as sources of timber. We will see the reason for this when I discuss timber trees. Harris (1909), however, mentions the naseberry and jackfruit as sources of timber. Describing the wood of the naseberry tree, he writes, "It is adapted for inside housework, cabinet-making and furniture, but it is difficult to work on account of its extreme hardness."

Jackfruit (Artocarpus heterophyllus)

The jackfruit tree provides several food products. In Hectors River, Belle Castle and Scots Run, the ripe fruit is consumed raw. The seeds, however, are

commonly eaten boiled or roasted. One informant reported that she used the edible portion of the fruit as a substitute for meat. Just prior to its ripening, the edible part of the fruit was removed, washed in salt water and cooked like meat. She also said she used the fruit to make a preserve. Other useful products are provided by the jackfruit tree. The discarded portion of its very large fruit is used to bait fish pots by some fishermen who believe that the "strong smell" of the fruit ideally suits it for such a purpose. Though it is not regarded as a timber tree in the districts of eastern Portland, Harris (1909:18) writes that "the wood which weighs about 40 lbs per cubic foot is yellow, hard, takes an excellent polish, is beautifully marked, and is one of the handsomest furniture woods." The jackfruit is also the source of superstitious ideas. When I asked higglers if they took it to market they said no. Truck drivers refuse to carry the fruit because it is said to cause flat tires and accidents. Like the Jew plum, the jackfruit was introduced to Jamaica twice--first by Captain Marshall in 1782 and again by Bligh in 1792.

Pawpaw (Carica papaya)

A pawpaw or papaya is a native "herbaceous tree" (Harris 1912:174) of tropical America. Its fruit is usually eaten raw as a dessert. Some people also use the fruit to make cold drinks, as well as to make

preserves. The immature fruit is cooked with meat to act as a tenderizer, and with meats and in soups as a vegetable. The fruit is also preserved for use in baking cakes; the green fruit is boiled in sugar and stored in a jar to which sugar is periodically added. The fruit of the pawpaw is also a regular market commodity. Additional uses of the fruit are identified by Harris (1912:174), who states that it is "also prepared as a sweet in various ways," and that the immature fruit is the source of a medicine. "The juice of the unripe fruit," writes Harris "yields papine, used as a remedy for dyspepsia."

Jew Plum (Spondias dulcis)

The fruits of the Jew Plum, like those of the jimblin, otaheiti apple and others we have already mentioned, are primarily consumed raw. Like the Jew plum and jackfruit the tree was also introduced to Jamaica twice--once after Marshall's capture of the French ship sailing from Mauritis to Hispaniola and a second time in 1792 by Captain Bligh. The tree is common in East Portland, and the fruit has a definite commercial value and is regularly marketed. The mature but unripe fruit is commonly stewed and also on occasions is used to make a preserve. The turn fruit, (at the point when it is about to ripen) is eaten sprinkled with salt or is pickled with salt, vinegar and pepper. In addition to noting that Jew plum is eaten raw or stewed in sugar,

Harris (1912:176) writes that it is "cooked as a pie."

Sweetsop (Annona squamosa) and Soursop (Annona muricata)

The fruits of both the sweetsop and the soursop are eaten raw and are used to make ices, ice cream and drinks. The sweetsop is primarily eaten as a fresh fruit. Several informants reported that in the past the mature but unripe fruit was boiled and eaten.

Although the soursop is eaten raw sometimes, it is commonly used to make a "Sunday drink" and, on occasions, ice cream. All the different parts of the plant and the various forms in which it is consumed are thought to have medicinal value, particularly in relation to what are called nerve problems. The leaves are used regularly as a morning tea by some and are taken by others as nerve food. The heart of the ripe fruit is fed to children to stop bed-wetting. There is also believed to be an association between soursop drink and physical strength. One proprietory subsistence cultivator in the course of discussing the soursop tree said the first time he had sampled the drink was while visiting a friend. After he drank it, he felt his "spirit and strength" were revived and, because of this experience, he has been "drinking it ever since." Another informant reported that the mature green fruit can also be boiled for food. The soursop has a regular market value.

Otaheite Apple (Syzygium Malaccense)

The fruits of the otaheite apple tree (Syzygium malaccense are also consumed fresh, though a few people report they make a preserve of them and use the juice for a cool drink. Though there is no evidence that the following is done in Portland, Harris (1912:159) reports the fruits are "stewed with sugar and a little spice" and that the tree itself is "often planted as a windbreak." There are two principal varieties of Otaheiti apples. One is large and ranges in color red to purple. This variety is not easily bruised or subject to serious worm infestation, and has a "shelf life" sufficiently long for the fruit to be marketed. The second variety is small and pink with white stripes. Easily bruised, subject to infestation and with a tendency to shrivel rapidly, it has only limited market value.

Stews, Drinks, Jams, Jellies and Preserves

Many fruits such as the guava, jimblin (Phyllanthus distichus), Jew plum and Barbados cherry that are eaten raw are also stewed with sugar and used to make drinks, jellies, jams and a variety of preserves.

Guava (Psidium guajava)

The ripe fruit of the guava tree is commonly eaten raw and is used to make jelly, jam, preserves and cold drinks, in addition to being stewed. It is most frequently used to make jam and jelly.

Jimblin (Phyllanthus acidus)

The small sour fruits of the jimblin tree are eaten raw only by children. The fruits, borne in large numbers on the trunk and oldest branches, are rosette in shape and turn yellow when ripe. They are mainly valued in Portland for stewing and for making jellies, jams and preserves. The tree is a native of India and of Malaysia (Harris 1912:168) and was introduced to Jamaica from Timor in 1793. Harris (1912:168) states that the fruit is "very acid and astringent but if pickled, or prepared with sugar... makes an excellent preserve."

Mango (Mangifera indica)

The only edible product of the mango tree is its fruit which is usually eaten raw. The mature but unripe fruit is peeled, sliced and mixed with vinegar to make a pickle. It is also stewed, and is used by some to make a cool drink.

Trees and Beverages

Trees are also a source of leaves, nuts, fruits and roots that are used in the making of hot and cold beverages. Thus, hot beverages are brewed from the seeds of the cocoa and from the leaves of the lime, soursop and pimento trees.

In a tropical country such as Jamaica, cold beverages are of special importance and are regularly consumed. The most famous and celebrated of the cool

drinks comes from the jelly coconuts. I have already discussed the use of the banana, coconut, sweetsop, soursop and mango in making cool beverages and will discuss here the similar uses of the lime, tamarind, guava, cocoa, star apple, Barbados cherry and pimento.

Lime juice is frequently used to make a cool drink variously called lemonade, sugar water, or belly wash, and it is an ingredient in other fruit drinks made from mangos, guavas and bananas. It is also used in mixing drinks with the various bottled syrups and powdered flavorings.

The fruits and leaves of the lime tree are used medicinally in various ways. The fruit is cut and rubbed on the skin in order to alleviate pain in general, and the juice from the fruit is rubbed on the forehead for fevers and headaches. The pure juice is taken for bad stomach and mixed with honey, honey and rum, or with sugar, lime and salt, it is taken for colds. In preparing and cooking fish as well as in cleaning the utensils, limes are used in various ways as a deodorizer. In explaining why the limes are used when washing dishes, particularly in the case of fish, one woman said simply, "because it give them a nice smell." Similarly, the peel is regarded as useful in baking "or anything with egg as it cuts away the rawness."

The sour, bitter, or Seville orange is used in many ways that were similar. Like the lime, it is used in making cool drinks and as an ingredient in the traditional rum punch served at parties and on special occasions. The juice of the orange, like that of the lime, is mixed with sugar or honey and taken for colds. Unlike the peel of the lime, however, the peel of the sour orange is sometimes used to make marmalade. In this regard, Harris (1912:173) writes, "From this fruit the finest marmalade is prepared." The green fruit of the sour orange is used by children as a ball, particularly in playing cricket.

Tamarind (Tamarindus indica) and Cool Drinks

In addition to being eaten raw, mainly by children, the fruits of the tamarind are commonly used to make a cool drink, preserves and a kind of "sweet" or "candy" known as tamarind balls. Harris (1910:187-188) reports "from the pulp of the pods a cooling but somewhat laxative drink is prepared by pouring boiling molasses over it, then diluting with water when cool." In addition to its edible products, the tree is also useful as a source of medicines and timber, and is valued as a shade tree.

The fruit and leaves of the tamarind have long been recognized as having medicinal properties. One

female informant reported that the leaves can be used medicinally to make a tea for colds and for the measles; the leaves can also be boiled and the infusion gargled to cure a sore throat and are described as useful in medicinal baths. Reporting the medicinal virtues of products of the tamarind tree, Long (1972:730) writes:

> The pulp or tamarind, besides its purgative quality, temperates the acrimony of the humours, abates the heat of the bile and blood, quenches thirst, and is good in acute burning fevers. It corrects the fault of violent purgatives, and quickens those that are sliggish. It is frequently made an ingredient in punch, especially at sea, and never fails to open the body.

Long also identifies the tamarind as a timber tree whose wood "sawn into boards is converted to many useful purposes in building." Harris (1910:187) describes the tamarind as "a valuable timber tree," and of the wood he writes (1909:25):

> It is very hard and difficult to work and is applicable for turnery, handles of axes, and other tools. The heart-wood gives a handsome furniture timber, and is used in cabinet work.

As far as miscellaneous uses of the tamarind are concerned, Long reports that "twigs" are used as brooms. There is no indication that this is done in the Portland districts. Plant materials are spontaneously used as brooms, particularly as yard-brooms, but most people are familiar with brooms made from broom-weed (Sida acuta) and the inflorescence of the coconut palm. It should

also be noted that the small branches of the tamarind tree are used as switches for wipping children.

Barbados Cherry (Malpighia punicifolia)

In addition to the fact that it is eaten raw, Harris (1912:163) notes that "the fruit [of the Barbados cherry] which is produced in abundance has an agreeable, spicy acid flavour, and is much esteemed for jellies." Although the fruits are used to make jellies, stews and syrup, in the districts of eastern Portland they are more commonly valued for making a nutritious cool drink.

Pimento and Drinks

I note that the fruits and leaves of the pimento are used to make a cool drink, two kinds of alcoholic beverages, and a medicine. Several informants said the ripe pimento can be used to make a cool drink, but only one indicated that she actually made it "every once in a while." The ripe fruits are crushed, giner is added and the ingredients brought to a boil; it is then cooled and sugar and rum added.

Beverages Made From Plants Other Than Trees

Several important, traditional cool beverages are made from the flowers and roots of herbaceous plants, the most important of which are sorrel, the traditional Christmas drink, and ginger beer which is also served at

Christmas, on Sundays, at parties and on special occasions. Both sorrel and ginger beer are commercially produced and sold in Portland districts as "boxed drinks."

Commercially Produced Beverages

Purchased in the district shops and bars and in Happy Grove High School's truck shop, commercially produced sodas, "boxed drinks," milk and chocolate drinks are consumed regularly. This reflects changes in the drinking habits of Jamaicans that have occurred in the post-war years. Duhaney (DN 3/16/1977) asks:

> ...what has happened to that drink called "beverage"...made with the new sugar or muscovado sugar and water, sometimes with the addition of lime juice or seville orange juice, that was used to wash down these old staples.
>
> Today, it is aerated water or syrup, or some such drink...Fifty years ago beer was a rarity; today it is drunk literally by the million bottles.

Hot Beverages

Hot beverages are consumed, especially by the elites. These include coffee, cocoa, Ovaltine and tea. Some coffee and cocoa is produced in Hectors River and Belle Castle though the majority of people buy coffee and cocoa from the shops.

Alcoholic Beverages

Through the Happy Grove cookery program, youth clubs and various community associations, I saw and

heard of different fruits that are used to make wines. These include otaheiti apples, mangoes, rose apples, Barbados cherries, and tamarinds. The only tree in East Portland traditionally associated with the making of alcoholic beverages is the pimento. In addition to the use of the ripe fruits to make a cool drink, they are used to make pimento dram and pimento wine. For pimento dram, the ripe fruits are crushed and soaked in lime juice. This is then added to cold water previously boiled with sugar and cinnamon sticks. Rum is added, and the mixture stands for two weeks. It is stirred daily and at the end of the two weeks, is strained and bottled.

Other trees' products associated with alcoholic beverages, though not themselves used to make these beverages, are coconut "water" used as a chaser and mixer, the lime used in mixed drinks, and nutmeg used in egg nog.

Nuts

In the districts of eastern Portland, peanuts bought in Kingston are commonly sold at fairs, at the school, at sporting events and on other special occasions when large number of people are gathered. Only the tropical almond produce nuts mainly consumed by children.

Trees and Spices

Trees are also a source of spices and chief

among them is the pimento. I have indicated the ripe berries of the pimento are little eaten as a fresh fruit and that they are used to make pimento drink, pimento wine and pimento dram. The dried unripe berries are the trees most economically important product. They are used as a spice throughout Jamaica but their primary value to farmers is as a spice for sale in the international market.

Pimento spice is used especially in preparing fish, in cooking soups, in making pickles, and as a general spice. Dried pimento fruits are also used in a limited way as a preservative in corning pork and beef, and in boiling coconut oil to prevent it from becoming rancid. One informant, in describing the use of pimento to corn beef and pork, said "first time we use it to corn beef, but not anymore. When you can get it (beef) it is very expensive and we just cook it fresh."

Trees and Pickles

I have already indicated the use of limes in making beverages, as medicine, in baking and in processing food. Limes are also used as a substitute for vinegar. The dried immature fruits of the pimento are used in making pickles. Whole or cut peppers are usually mixed with sliced carrots, onions and chocho in vinegar, to which a few dried pimento berries are added.

Trees and Medicinals

Trees are also a source of drugs, medicinal teas and materials used for therapeutic "baths." In the districts of eastern Portland, this is especially true of the lime, soursop and pimento. Presented in Appendix 2 is a list of all the Jamaican trees which have been identified as sources of medicinal products which I have abstracted from articles written by Asprey Thornton (1953; 1954; 1955a, 1955b) entitled Medicinal Plants of Jamaica and published in the West Indian Journal of Medicine.

Timber and Trees

In addition to its uses in cabinet work and in making fence posts, yam sticks and bean poles, timber in rural Jamaica is used for a wide variety of purposes including construction of boats, buildings, pens, chicken coops and selling stalls and stands.

To provide a context for discussing timber trees in East Portland and to show the extent to which many trees described as food trees, 'fruit' trees and shade trees fulfilled a variety of purposes including providing timber, I present a list (Appendix 3) published by Harris (1900:10-39) in the Bulletin of the Department of Agriculture while he was Superintendent of Public Gardens. He writes that the list provides:

> ...a short description of each of the principal timber trees of the island as far as I have been able to gather reliable information about them (my emphasis). I do not wish it to be

> inferred that the following is a complete list. There are a good many useful timbers with an extremely local distribution, but the identification of the species awaits complete botanical material for careful examination, and this material is being got together as opportunities offer.

It is important to emphasize here the Harris list of one hundred ten timber trees includes many of the plants I have described as historical landmarks, food trees, 'fruit' trees, beverage trees and so on. Many of these same plants will appear again in my discussions of fuel trees, street trees, ornamental trees, fence trees and trees useful in fishing. This points to the variety of uses to which trees can be put, in contrast to the uses of herbaceous plants. Thus, when farmers are restricted in their ability to cultivate trees, their loss is also in terms of the many products derived from each species and variety of tree.

Harris (1909) correctly implies that Jamaica possesses a variety of potentially valuable native and exotic timber trees. Despite the potential, however, it is clear that the island has never really met its own need for timber, but has relied instead on imports. Harris (1893:4) writes:

> ...What I wish to point out is that we have no trees in quantity, yielding timber which could take the place of the Pitch Pine and White Pine lumber now so largely imported. That valuable timber at one time was plentiful here is evident; old buildings and substantial articles of old furniture to be seen in some parts prove this; but

> through waste and, I am credibly informed wanton destruction in many instances, the supply has been reduced to a minimum.

There are three main reasons why Jamaica needs to import most of the timber the island requires. The indigenous forests of the coastal plains, river valleys, inland basins and the lower slopes of the interior hills and mountains have been destroyed, to be replaced by the island's settlement vegetation. Where remnants of natural forests remain, timber trees are few and survive mostly in inaccessible locations where cutting and transporting are difficult and expensive. Finally, it has not been the economic and political interest of Jamaica's ruling classes and groups to engage in the cultivation of timber trees. As I am interested in social class and cropping patterns in the context of the development of Jamaica's settlement vegetation, the latter point deserves particular attention.

In Chapter 3 I indicated how the botanic gardens introduced and distributed all kinds of plants which, in addition to food, 'fruit,' ornamental and shade trees and other potentially valuable commercial plants, included timber trees. However, the distribution and cultivation of timber trees were unsuccessful. In explaining this failure Harris (1893:4) writes:

> Our <u>proprietors</u> and <u>planters</u> generally, have little or no time to devote to the subject of reforesting, even were they inclined to do so. There are thousands

> of acres of land now lying idle, suitable for the growth of West Indian Cedar, than, which, I believe, there are few better timbers for all-round purposes...But there is no reason why planting operation should be confined to the few valuable trees either indigenous, or naturalized here. At the commencement of these notes, I have the names of some of the fruit and other trees and plants introduced to show the wide range we have to select from. If fruit trees, &c. from the places named thrive so well here, why not timber trees? There is no reason why they should not, and as a matter of fact, the Public Gardens have proved that very many valuable exotic timber trees are admirably suited for various parts of this island, but beyond arousing a passing interest, and perhaps disposing of a few plants of several kinds, they have not succeeded in inducing landowners to plant timber trees to any appreciable extent. This is greatly to be regretted. The Department of Public Gardens is in a position to obtain seeds or plants from most parts of the world, but there is no use in putting its correspondents to the trouble of forwarding seeds, and in its incurring considerable expense in raising plants which are not likely to be accepted even as a gift, by those who have the land to grow them.

In addition to the lack of interest of the large "proprietors," tenant subsistence cultivators also have not planted or conserved trees. Moreover, although small proprietors plant and save trees, timber trees are low on their list of priorities because the cultivation of timber trees is an investment over a long period of time which makes no immediate contribution to the material requirements of daily life. Such trees are often viewed as an investment for the next generation.

Food trees and 'fruit' trees that also have useful timber are, of course, exceptions.

In my research booklet, the following twenty plants are the ones described as timber trees by my informants in Hectors River, Belle Castle and Scots Run. It is in relation to these plants that I discuss trees useful for timber and for fuel.

cedar	guango
Spanish elm	ironwood
cabbage	bulletwood
dogwood	fustic
sweetwood	proan tree
mahoe	cherry
fig	bitter damsil
cotton tree	breadfruit
mahogany	coconut
bamboo	wild tamarind

Table 6

Timber trees in the districts of eastern Portland

It is interesting that of the twenty trees, only the breadfruit and the coconut were fruiting food trees also described by my informants as timber trees.

One factor that may encourage the use of the breadfruit as a timber tree is that especially in shaded valleys, the tree grows tall and the fruits become extremely difficult to gather. The fruits are borne at the end of the branches which (like those of the Jew plum, red coat plum and star apple) break easily and are

dangerous to climb. The mature, unripe fruits are generally consumed boiled or roasted. The important point is that, unless the fruits are picked when mature, they ripen on the tree and are lost. If the fruits cannot be harvested, the tree is useless as a food tree and at this point becomes a potential timber tree. Bigelow (1859:67) states: "Among the trees of most value in various ways may be mentioned the breadfruit tree, which takes a fine polish..." Harris (1909:14) describing the breadfruit writes: "the tree furnishes a wood which is pretty when polished, yellowish-grey in colour, rather light and soft, but strong, resistant, and elastic..." Harris reports that the wood is primarily used for making cabinets though he also notes that it is "suited for furniture, boards, and internal housework." Though the breadfruit is one of the twenty-one plants I initially recorded as timber trees, there was little evidence that much use is made of the tree in this way today. Afflick, who was one of my chief informants, said it was "used as lumber long ago but not now." When three breadfruit trees were cut down in the upper gully of Happy Grove's campus, the head of the school's Agricultural Department justified this action by saying the trees had grown too tall and were useless; he intended to use the land to raise goats. There was no mention of using the tree for timber either commercially or in the school's woodwork

program. But, when one of several casuarinas lining the drive from the main coastal road to the school's central complex of buildings died, it was quickly cut to be used as timber in the school's woodworking program.

When I asked Joshua Mcfarlane, one of the two field supervisors of the Hectors River Estate, if tenants cultivated timber trees he said only "one and two." It is not only that tenants do not cultivate timber trees, few cultivate any trees at all. Most species of timber trees grow on the estate. According to Macfarlane, Spanish elm, cabbage, dogwood, sweetwood, bamboo, guango, silk cotton, bulletwood, damsel, coconut, wild coffee, rod wood and wild tamarind are all "plentiful." The mahoe, breadfruit and ironwood were described as "not many" and the cedar and fig were described as "one and two."

In the districts of Hectors River, Belle Castle and Scotts Runn, few proprietory subsistence cultivators have planted timber trees except for the breadfruit and coconut, which are commonly grown. The almond which is both naturally distributed as well as a cultivated wild tree is also an exception. Apart from these, the most common timber trees are cedar, Spanish elm, cabbage, dogwood, bitter damsel and mahoe.

Many trees present in the Portland district that

Harris (1909) identifies as timber trees are not so recognized by the districts' residents. Twelve of the trees Harris mentions, however, deserve particular attention here. Nine of them are not described as timber trees in the districts of eastern Portland because; although the wood of their trunks and branches is useful, the trees are primarily 'fruit' trees and a spice tree. I have already argued that currently bearing food and 'fruit' trees are more important in daily life than is a long-term investment in timber trees. When, however, food or 'fruit' combine with timber in the same tree, exploitation of food and 'fruit' takes precedence over the use of the tree for timber. This explains why the increasing difficulty of harvesting breadfruit transformed it from a food tree into a potential timber tree. The nine trees not identified by the districts' residents as timber trees are the pimento, mango, guinep, naseberry, star apple, jackfruit, tamarind, mammee apple and hog plum. The remaining three of the twelve trees mentioned by Harris (1909) are the almond, seagrape and calabash.

I stated in the previous chapter that the almond and the seagrape grow wild. Since their distribution throughout the settlement area is in many respects the same, I will only discuss the almond here. Then I will

examine the calabash.

In the list of twenty plants my informants had identified as timber trees, there was no mention of the tropical almond. Yet Harris (1909:12) describes it as a timber tree that possess "many of the characteristics of the mahogany," and is used for "furniture and house-work." Though it is not described as a timber tree, the wood of the tropical almond is definitely valued by the people of eastern Portland. A man in Manchioneal district (four miles from Hectors River) reported that several offers were made to buy his almond tree for lumber but he refused them. The tree is beautiful, it provides shade and, as far as he is concerned, it will only be cut after he "is gone." When an old almond tree that had shaded the grounds of the Manchioneal Police Station and Court House finally fell, the wood was claimed by the people working at the station. While the almond grows wild, especially in inaccessible places, it is primarily conserved in occupied areas as an ornamental shade tree which also provides an edible fruit and nut. The wood is used but the tree is not identified as a timber tree in eastern Portland.

Some of the possible reasons why the calabash is not present among the original twenty-one plants are interesting and relate to points that I have touched on in previous discussion. I have already described the

many uses of the calabash tree. As far as timber is concerned, however, there are two things to bear in mind. The calabash is a small tree attaining some twenty feet, with a comparatively crooked trunk eighteen inches to two feet in diameter. Harris (1909:14) describes the wood as "hard, tough and pliant, and being almost 'black'" and he notes that it is capable of taking "a fine polish." As for its uses, Harris reports:

> Being of crooked growth it is only employed for small work, such as handles of tools, carriages, cattle yokes, felloes of wheels, &c.

The calabash is no longer needed for any of these uses, and it is possible that it has, therefore, lost its definition as a timber tree.

To understand the social significance of timber and timber trees in the districts of Portland, we must pay attention to discussions which took place during the efforts to revive the Hectors River Community Council for the third time.

The poor condition of the Community Council building initially led to a discussion concerned with acquiring wood for its repair and for making seats. At the first meeting of the Council, Renford Gibson, speaking on behalf of the newly formed Hectors River Sports Club, told the gathering that in addition to sports activities the Club had three principal objectives:

repairing the Community Center, improving the basic school and offering aid in the district to repair homes of the needy.

On February 15, 1977, the youth club held a regular meeting. As was to be expected, the question of chairs and the repair of the Community Center came up in discussion. The exchange that followed proved interesting.

One of the first suggestions was to buy planks and make benches. The immediate problem was that there was no money. Ben Hanson, the headmaster of Happy Grove, suggested that the members of the youth club go around and "ask for waste boards." Clemment, the assistant secretary of the Community Council and a member of the youth club, said no wood could be obtained in that way as "everyone was collecting for their own future." It is worth noting here that his opinion was correct. When Andrews Hall, a building that was once a planter's residence and had served Happy Grove School as a girls' dormitory and classrooms, was finally abandoned, many people were interested in acquiring the lumber. Several people asked if I would use my influence to secure the wood for them. Long before the building was razed, there began the slow process of dismantling in which doors, panels, and posts were removed. The Headmaster was

accused of giving the wood to his "friends." The man in charge of the ground staff was also said to be saving the wood for himself. The Chairman of the School Board believed that, because the wood was valuable, it should be sold to help finance the new building that was to replace Andrews Hall. There was a general demand for lumber and keen competition for what was available; Clemment was right when, in saying that "everyone was collecting for their own future," he pointed to the fact that there was no "waste board."

O.K., who was a transporter between Hectors River and the parish capital of Port Antonio and who was a member of the youth club, suggested that we could "ask Ramdeen [the _busha_ or overseer for the Hectors River Estate] for a tree." Someone immediately pointed out that Glen, the owner of the estate, was rarely there and since he was unaware of what was happening, Ramdeen was "free" to give a tree if he wanted. After some discussion, however, it was decided that this was not a good idea. No one present was confident that Ramdeen would be willing to provide a tree; even if he did, how was the tree to be cut, transported and sawed into boards without cost and without the use of equipment. At no time was there any discussion about asking Ramdeen as representative of the Hectors River Estate to "contribute" a tree to the "community cause;" neither was there any suggestion of

"confronting" him with respect to the "justice" of providing a tree. At no time was there any discussion of getting a tree apart from asking for it, i.e., of asking Ramdeen to "steal it" since he was "free." At that point, the task of providing seats was beginning to appear insurmountable. I suggested we could make stump seats with the headless coconut trunks that were all about as a result of the lethal yellowing disease. Andre, a member of the yough club who taught arts and crafts, as well as dance at Happy Grove School, said that she had made inquiries into that; the trunks of diseased trees were unsuitable as they were soft inside and the majority of them were already rotting. At that point, someone suggested that we could get bits and pieces of wood from the lumber yard. Many responded that the lumber yard would not give away any wood because they made use of all of it. Whatever they had would have to be paid for. The only firm result of the whole discussion was that Castro, the local cabinet maker of Hectors River, promised to buy the wood and to make a few benches at his own expense.

I have presented the details of the discussions which developed in the meetings of the Hectors River Community Council and the Sports Club to show that there was in the area a real need for timber, although timber trees were cultivated by very few people. When I asked Macfarlane about timber trees on the Hectors River Estate,

he said that they were "all wild; one or two may plant as wire post but de majority wild."

Trees and Fuel

Trees are an important source of firewood and charcoal in Jamaica. Since the early 1970's the rising cost of petroleum and its products has made this fact increasingly clear. With the increasing demands for firewood and charcoal, many now fear for what little remains of Jamaica's native forests. Jamaica's conservation authorities warn (DN 1976) that shortages and increasing cost of gas, kerosense, oil and electricity could have serious consequences for the island's "native forests."

It is indeed interesting that the rising cost of petroleum fuels should now threaten Jamaica's forests, when in the 1950's increasing use of such fuels was regarded as a basis for saving what forests remained. By the end of the nineteenth century, there was already a problem of fuel shortage in Jamaica. Following his discussion of the failure of "proprietors and planters generally" to cultivate timber trees, even with the encouragement of the Department of Public Gardens, Harris (1893:4) writes:

> This is a subject that deserves serious attention; valuable timber is exceedingly scarce in accessible places; even ordinary timber is fast giving place to brushwood, so that firewood is scarce in many parts and an expensive commodity and good fence posts are difficult to obtain at high rates;

> and this in a country where it would only be necessary to put in such plants by the thousand and allow them to grow; nature, in the majority of cases, would attend to their requirements.

Bush (1959) believed that the increasing use of industrial fuels after World War II would slow the destruction of native forests not only in Jamaica, but throughout the Caribbean. He made this point clear when identifying four principal factors which he thought were responsible for the disappearance of native forests. These were "burn-plow-abandon," "'conuco'" or "nomadic agriculture," heavy fuel demands," "overgrazing," and "political indifference." Writing in the late 1950's Bush presents an optimistic view both of the Caribbean islands' future supply of fuel and the fate of their remnant forests. He (1959:65) states:

> Another curse to forest maintenance has been the heavy fuel demands of the people, which has wiped out many tens of thousands of acres of timber, as witness the naked, eroded hillsides of Haiti. Fortunately, however, the increasing use of liquid fuel throughout the region has already dulled the edge of this depredation; and there is the real possibility that, with a steady rise in the general economy, the use of wood for fuel will settle to a level that easily be sustained by low-value shrub growth.

To understand the relationship between trees and the production of firewood and charcoal, it is necessary to consider it in the whole context of trees in the settlement area. Bush (1959) points to agricultural practices, fuel needs, the grazing of animals and

political indifference to account for the destruction of native forests throughout the Caribbean. True as these assertions are, they do not provide the best context within which to understand the destruction of Jamaica's native forests; we must also see it in the perspective of the settlement process as a whole. The destruction of the forests has resulted from the exploitation of trees and from the need to create space for cultivation, animal husbandry, and for other work areas. It has also resulted from the need to create space for dwellings, for footpaths and roads, and for social activities related to health, religion, recreation, education, artistic life, and politics.

With regard to Jamaica's settlement vegetation, we must ask under what conditions are trees able to survive in the settlement areas. These conditions support trees which survive in economic groves and orchards, trees which survive as ornamentals and shade trees in parks, public and private gardens, and along paths and roadsides; and fruiting food trees, spice trees, and 'fruit' trees which survive in sideyards and backyards. Most important for understanding the relationship between trees and fuel, however, is to recognize that trees also survive as weeds and as wild plants in both occupied and abandoned areas of settlement. The most successful of the wild trees have become regularly

exploited for fuel. I can establish this point and provide a basis for understanding trees and fuel in East Portland by referring briefly to discussions of timber trees in Jamaica and by noting those most commonly identified as sources of fuel, whether as firewood or in the production of charcoal.

In preparing his article,"Timbers of Jamaica," Harris (1909:32) consulted Harrison's 1881 The Timber Supply of Jamaica. Harrison mentioned four plants associated with fuel: mountain torch-wood (Amyris balsamifera), black torch-wood, candlewood, and cashaw (Prosopis juliflora). The first three were "readily split up into strips and (were) used by the peasantry for torches." The only tree he positively identified as a regular source of firewood was the cashaw. He stated that the sleepers of the original line of the Jamaica Railway were made from this wood, which was also used for fencing, in making shingles and the "knees" of boats, and in "shipbuilding generally." What is important here, however, is that Harrison described cashaw as the most abundant wood "on the southside" of the island and the "chief firewood."

In his description of the southern plains of Jamaica, Oliver (1971:40-41) indicates the extent to which the cashaw, as a wild tree, is commonly distributed and the uses that were made of it especially as a source of fuel.

> The triangle had its apex between the St. John and St. Dorothy Mountains. This region, flat in the south and rising gradually northwards into low undulations of clayey alluvial soils, corresponding geologically with those of the eastern Liguanea Plain, is the least interesting and, in the dry season, the most depressing part of Jamaica. At such times most of it was a general aspect of being capable of producing nothing but wilted grass, mean scrubby trees and thorny bush. But the irrigation canal fertilizes and keeps green its lower margin nearly as far as Old harbour. Sugar-cane and bananas are still an estate cultivation here, but it is a 'dry weather' district, and most of it is relinquished to cattle pastures, shaded by the drought-resisting cashaw (acacia) chiefly useful for fench-posts, and producing little else but firewood and ticks. Until the mountains are reached the whole region feels accursed.

At the end of the eighteenth century, although he did not mention fuel, Long (1972:838) identified three uses for the cashaw tree. "It is esteemed a good timber wood, and useful for building small craft, and wharf piles, on account of its being offensive to the worm, tough, and lasting." He also saw a potential use for the cashaw in that "Both the bark and roots of this tree 'afford a red dye' which at the time was described as 'unattended to.'"

Trees and Fuel

Using Harrison's work (1881) and that of others already cited, Harris (1909) identified the 110 principal timber trees of the island, of which he listed only seven that provided fuel.

_____	Acacia tortuosa, Willd.
Cashaw	Prosopis juliflora, DC.
Mango	Mangifera indica, Linn.
Park-nut	Acacia macracantha, Humb. & Bonpl.
West Indian Birch, or Mastic	Terebinthus Simaruba, (L.) Wright.
Yellow Candle-wood	Cassia emarginata, Linn.

Table 7
Trees Used For Fuel
Source: Harris (1909:34)

Although Harris identifies Acacia tortuosa as a source of fuel, this was not the way Browne (1972:252) earlier describes the tree. Browne writes "There is no plant more common than this, in the lowlands of Jamaica, though but of little service; for the smell of the whole plant, is so rank and disagreeable, that it can't be used even for firewood." It is clear that all the trees identified by Harrison (1881) and by Harris (1909) as providing wood for fuel were naturally distributed on the southern plains. What is the situation concerning trees and fuel in the districts of eastern Portland?

One informant, while discussing cooking, said that in "the old days" those who had coal-stoves and "iron" wood-stoves were well-off. Meals were usually prepared in the past on the "iron" wood-stove. Today, the elite (including teachers, large estate owners, overseers and religious ministers) primarily depend on gas for cooking and sometimes for providing hot water. Over half the households in the districts--including the households of subsistence and small commercial cultivators, fishermen and higglers--cook on kerosene stoves. Many families also use charcoal and firewood, the latter being used in the detached or outdoor kitchen. In some households, several different types of fuel are used. One woman said gas is now so expensive that she "saved" it for use on rainy days.

Many informants said it is difficult to get firewood in the districts. Good "hard-wood" is "no more" and people reported having "to go to bush for firewood." This accounts in part why the trunks of coconuts killed by lethal yellowing disease are often used for fuel, though coconut is not classed among the best firewoods.

In the districts of East Portland, the trees most commonly providing fuel are the coconut, pimento, dogwood, growstake, Spanish oak, raw moon, bastard cabbage and mango. It should, however, be said that all kinds of plants are on occasion used for fuel. At moonlight

beach parties popular among teachers, students, members of the youth club, and young people in general, driftwood (primarily almond, seagrape and bamboo) as well as coconut leaves, shells and husks are collected for fuel. Pimento, dogwood, growstake, Spanish elm, raw moon, bastard cabbage and mango were all used to make charcoal.

One charcoal maker said that pimento and dogwood are "two of de bes." When I asked where he got the wood, his first response was "anywhere." When pressed for further explanation, he said he got the wood both from the Hectors River Estate and from "small farmers." He "paid" for the wood by giving a portion of the charcoal he produced. If he produced six bags, he gave two to the estate. To avoid having to pay the estate, he cut the wood in small pieces which he took to Happy Grove's campus or to the yard of a friend where he would burn the charcoal. It is clear that he also had to "pay" subsistence and small commercial cultivators for wood to make charcoal. As he said: "If you get de plant from a man field you don't have to give him anything, but usually he expect you to give him some of de coal." At the time of the interview (August, 1976), coal sold for five dollars a sack. My informant said he was giving up making charcoal although there was a good market. The work was difficult, it was hard to work alone and he was unable to get help.

To understand why the pimento, dogwood, growstake,

Spanish Oak, raw moon, bastard cabbage and mango are not mentioned by Harrison and by Harris as sources of fuel, I will examine the particular cases of the pimento, coconut, and mango more closely.

In the discussion of trees and food, I indicated the variety of food uses made of the fruit of the pimento. The tree has many other uses. Pimento wood is hard, heavy and durable and has been used in Jamaica for uprights in dwellings, in cabinet making and as fence posts. In the nineteenth and early twentieth century pimento saplings were prized for making walking and umbrella sticks. These additional uses of the pimento tree are well-known. What is significant here is that the tree is not generally identified as a source of firewood and charcoal. Neither Harrison (1881) or Harris (1909, 1910) mention pimento as a source of fuel. Yet in the districts of East Portland, it is regarded as "one of de bes" kinds of firewood and the ideal wood for making "good" charcoal. It is described as giving "excellent coal." It is easy to see why these writers do not identify pimento as a source of fuel. Its primary value comes from the dried berries produced for the international market. Yet, in understanding that pimento is used for fuel, we find a situation that parallels in essential respects that of the breadfruit. The bread-

fruit becomes a timber tree when it becomes "useless," as a food tree. Pimento trees that are barren or non-fruiting become timber trees supplying fuel. The people describe these trees as man pimento. Because the production of pimento in the districts is still largely based on naturally distributed trees that are conserved and harvested, it is difficult for farmers to distinguish the barren from the fruitful trees until the latter are mature and start to bear fruits. The barren trees (as well as diseased, dying, and dead trees) are used as firewood and to make charcoal.

The way in which the coconut as a fruiting food tree becomes useful as a source of fuel is in some respects similar to the situation described for the breadfruit and the pimento. There are certain differences with respect to the coconut, however. In the Hectors River Estate copra house, the shell of the nut is used for fuel. The midrib of the palm's giant pinnate leaves and the fibrous husks surrounding the large nut are also used for fuel. The husk in particular is ideally suited for roasting breadfruits.

The leaves, husks and shells of the coconut palm provide fuel on a continuous basis without destroying the tree, and the trunk of a stricken tree is also used for fuel. These are trunks of trees killed by lethal yellowing. Here again we see that the uselessness of the tree

as a fruiting 'fruit' or food tree makes it a potential source of timber. As in the case of pimento (and logwood, as we shall see), the coconut is not mentioned as a source of fuel by Harrison (1881) or Harris (1909, 1910).

Logwood, Casuarina and Fuel

Though not identified as sources of firewood and charcoal in East Portland, there are two other trees that should be considered here in understanding the relationship between trees and the production of fuel in Jamaica. These are the logwood and the casuarina.

The logwood, which has short crooked branches and attains a height of about thirty feet, is a small "exotic" tree now extensively naturalized in Jamaica. As Storer (1958:31) remarks the logwood "is now so thoroughly naturalized that people are surprised to learn that it is not native." Depicting the natural history of Jamaica, Lewis (1965:127) similarly describes the logwood as "completely naturalized" and notes that it is useful in making posts and charcoal. Storer (1958) also indicates the use of logwood for fuel and for making charcoal. Neither Browne (1972:221), Harrison (1881) or Harris (1909, 1910) refer to the logwood as a source of fuel.

The logwood was introduced to Jamaica from Honduras in the early eighteenth century as a dye tree. This use is the primary context within which the tree is discussed, but Browne tells of additional uses for the logwood:

"Both the bark and the gum of this tree are gentle sub-astringents; but the last excels, and adds a sweetness to its virtue, which makes it the more agreeable to the palate." Long, however, states that there is more to the tree than this. Referring to the introduction of the logwood to Jamaica, he (1972:754-755) remarks that "although the event did not fully correspond with the benevolent intentions of those who first cultivated it here it has answered many useful purposes."

> Exclusive of its merit as a dye, it possesses other good qualities; it makes an excellent and beautiful fence, which, if kept properly trimmed, grows so strong and thick, that nothing can break through. The smaller items, if of good length, are made into hoops, where better materials are wanting.

Despite all the references to logwood as a source of dye and to all its "other good qualities, there is no mention of the tree's use as fuel. The historical process that transforms the logwood from a dye tree to a fuel tree can be understood in the work of Oliver (1936).

By the end of the nineteenth century, the naturalized logwood, which Oliver describes as a "self-sown weed," provided Jamaica's primary commercial vegetable product for the export market. As in the case of productive breadfruit trees, fruiting pimento trees and bearing coconuts, it seemed unlikely at that time that the logwood (even though it grew wild) would be considered a

fuel tree. Oliver (1971:292) writes:

> After a period of partial recovery and moderate prosperity the sugar industry, between 1880 and 1890, had disastrously collapsed under the competition of bounty fed European beet sugar and improved factory methods for which both capital and the continuous labour required were difficult to obtain. In 1882, when I entered the Colonial Office, the value of sugar exported was £910,000. In 1880 it had fallen to £387,000 and in 1897, when I first went to Jamaica, it was down to about £300,000; manifestly the labouring class must have suffered a heavy loss of demand for its services. Positively the most profitable crop in Jamaica in 1897 was logwood, a self-sown weed of the pastures, the export of which rose steadily as that of sugar declined, until in 1893-94 its value exceeded that of either sugar or coffee. What a record for an agricultural colony, and what an indication of reduced distribution of wages: St. Elizabeth sugar estates, whose abandoned cane-pieces and commons had become overrun with logwood, as midland English acres are now being overrun with hawthorn seedlings.

By the 1930's, however, the logwood trees lost its significance as a dye plant. Oliver (1971:339-340) states:

> All the white limestone country (as distinct from wet areas with deep soil, steep slopes of the Blue Mountains, and dry-weather lowlands from Yallahs Point westwards) reafforests itself very quickly, and as naturally as a sheep's back grows wool. If pastures in Jamaica are not constantly cleaned, they grow up in bush. Since the price of logwood has fallen so low as to make it no worth cutting, and the cleaning of pastures means money out of pocket, what were formerly valuable pen-lands in South Manchester, St. Elizabeth, Westmoreland and Trelawny have become dense jungles

> of scrub and have reverted to the use of small cultivators renting grounds for raising provisions. This involves new clearance and burning. The salable wood is marketed and the round-stick timber used for firewood or house props, the slender stems being sometimes left where they stand, to serve as yam poles.

So we see that, like the breadfruit, pimento and coconut, the logwood became a potential source of fuel as it lost its commercial value. Finally, it may also be noted that the tree is well-known for its fragrance and for the honey produced from its flowers (Hawkes GL 1976). Storer (1958:7) says: "Honey made from the logwood tree is of high quality and very popular."

Casuarina

The last tree I discuss in reference to fuel is the casuarina, whistling pine or Australian pine (Casuarina equisetifolia) which Jamaicans call willow. It was first introduced to the island from Australia and the south-west Pacific in 1788. In his brief list of timber trees, Harrison (1881) does not mention the casuarina, nor does Harris (1909) in his discussion of 110 timber trees in Jamaica. In 1910, however, Harris states that, while the wood of the casuarina is used for poles and rafters, it is "chiefly used for fuel." The only casuarinas I observed in the East Portland districts were planted as ornamentals, lining the road leading into the Happy Grove School campus. As I

remarked in the discussion of trees and timber, when one of these casuarinas died, it was used in the school's woodwork program, not as fuel. The fact that it was not used for fuel is related in a large part to the fact that the school depends mainly on cylinder gas. This was the basic fuel of the teaching staff, the majority of whom lived on the campus, and was also used in preparing school meals and in the school's cookery program. There was little need for firewood or charcoal except to roast breadfruits.

The casuarina is described (Harris 1910, Storer 1958:38) as being useful in soil conservation, particularly in coastal areas. One of its great virtues is that it replenishes, through bacterial action in its root nodules, nitrogen in the soil, which is then used by food crops.

Trees and Fences

One valuable feature of trees that is often overlooked is their utility in making fences. The use of plants to demarcate borders is an important aspect of Jamaica's settlement vegetation. Here trees survive as fence-line trees (where they grow along the fence without actually being part of its construction), as fence-post trees, and as windbreakers; moreover, wild trees are able to grow in areas where the fence-line remains relatively undisturbed.

Fences in Jamaica refer to various forms of markers, borders, or barriers that divide different areas of settlement, secure privacy and control the movements of people and animals. They are constructed of posts carrying barbed, smooth or mesh wire, or of rails, boards, pickets, wattled bamboo, or zinc; they may be made of piled, packed, or neatly fitted stones, concrete blocks, or iron fittings or be formed by cultivating ornamental hedge-plants such as hibiscus, cactus, pinwing macka or crotons; or created by cultivating fence-post and fence-line trees. With regard to fences in Jamaica, Cassidy (1971:97) writes:

> Names for fences vary a great deal from place to place, and Jamaica has a few of its own. Bush-fence does not mean what it once did in the United States; it means a live or quick hedge, such as one of pinguin (pingwing macka), cactus, or the like. A fulling-up fence is one made by stacking logwood hearts between posts until they 'fill up' the space solidly, while a pigsty fence has stakes criss-crossed at a forty-five degree angle to the ground so that they overlap each other. Miss Beckwith also mentioned a takada or wattled fence, of close-set bamboo or of some other wood, carrying five rails which is built around a peasant's house and yard. She interpreted the name as meaning 'take care there!' but it is clearly from Spanish estacada, stockade. It also appears without the final a.

Fences also support naturally distributed vines, some of which provide useful products. These vines include the nightshade, bleeding heart (Antigonon leptopus),

cerasee (Momordica charantia), and John-crow-bead (Abrus precatorius). Describing bleeding heart, which they identify as Mexican creeper, coral vine, loves chain or corallita, the Hargreaves (1960:24) write: "Found along the banks in hedges, on fences, and clambering beside the road is this lacy, bright pink flower." The John-Crow-bead and the cerasee provide useful products. The seeds of the John-Crow-bead are used in the making of various ornaments, especially in forming eyes for wood carvings of birds. The leaves of the cerecy make a medicinal tea, and the fruits are eaten raw, primarily by children.

Many kinds of fences and hedges are found in the districts of East Portland and throughout Jamaica. There is no indication in the Portland districts, however, that the terms Takada, Pigsty fence, or fulling-up-fence are used. Insofar as logwood is associated with "fulling-up fences," one would not expect to find these in Portland districts because the tree is primarily to be found in the southern and southwestern parts of the island. I saw several instances of a Pigsty fence, where the giant fronds of the coconut palm were criss-crossed at an angle, but I do not recall this fence being identified in any particular way.

For Underhill (1970) who defended the interests of free African Jamaicans, even the condition of fences

bore witness to the fact that there had been definite material progress after emancipation. Describing the town of Lucea and its environs, he writes (1970:418):

> The peasantry are, generally speaking, industrious and well-behaved, and are gradually becoming more comfortable in their worldly circumstances. Their grounds were well and fully cultivated; the fences of penguin, logwood, and bamboo, were well kept. They appear, in fact, to be fair speciments of a class rising all over the island into comparative comfort and wealth.

Here again we see Underhill referring to the use of the logwood in making fences and as a fence-post tree. Similarly, Lewis (1969) in his journal account of his stay in Jamaica, comments on the southwestern parish of Westmoreland:

> The air, too, was delicious; the fragrance of the Sweet-wood, and of several other scented trees, but above all, of the delicious Logwood (of which most of the fences in Westmoreland are made) composed an atmosphere, such, that if Satan, after promising them "a busom air, embalmed with odours," had transported Sin and Death thither, the charming couple must have acknowledge their papa's promises fulfilled.

Cassidy (1971:358) states: "Live fence-posts are greatly favoured in Jamaica and considerable number of trees are used for them." Long (1972:859) presents a list of fourteen plants (nine of them trees) used in various ways to make fences:

Logwood	Dog Wood
Penguin	Prickly Yellow Wood
Torch-thistle	Horse, or Grey Nickar
Physic-nut	Jerusalem Thorn
Orange	Palmeto stakes
Lemon	Ebony ditto
Lime	

Table 8

Plants Used To Make Fences
Source: Long (1972:859)

To Long's list we should add bamboo and coconut whose leaves are used to make fences. We should add as well dildoes (Stenocereus hystrix), prickly pear (Opuntia spp.) and various ornamental plants.

Live fences are the most common kind in the districts I studied. These involve barbed wire strung on poles of growtake, hog plum, Spanish plum, or Spanish machete that in time take root and grow. Some, such as the hog plum, are allowed to grow to their full size. Others, such as the growstake (and the Cassia simea used as a street and walk-way tree), are periodically topped. The small flowering tree locally called growstake (which I believe is Gliricidia spoium) is the most commonly planted in the districts as a fence-post tree. Describing this tree and differentiating it from others identified by the same local name, Cassidy (1971:359) writes:

> Grow-Stake, Growing-Stake, Grow-Stick, Growing-Stick, Quick-Stick and Grow-Quick include several different trees, but especially Gliricidia sopium and Erythrina veluntina, and it is the specific names of these two that the general names most often replace. Specific names of the first are Maranga or Marang, St. Vincent, Moses-Weed; Spanish Machete, and Sword-Rose or Sword-Tree. Both these plants burst into flower before the leaves appear, which explains such names as Moses-Weed, Mortelle (a lopped form of French Immortelle), Never-Dead and Never-Die; but whether these are translations or renaming one can only guess. The flower of the latter is scarlet and shaped like a diminutive 'open guard' machete, wherefore the last three names

In Portland the hog plum is frequently seen from the road growing along the fence-line or as part of the fence. In September, October and November when the plum is in season, the road is carpeted with ripe fruit that lend to the air a pleasantly distinct fragrance. The fruit is edible but is seldom eaten because worms seem always to be present in the ripe fruits. The ripe fruits are used by some to make a drink.

Apart from these growing stakes, the fence-line is also used as a specific area for cultivating timber, food and 'fruit' trees. The extension officer of East Portland, who is a young, committed graduate of the Jamaica School of Agriculture, pointed out that fence-lines could be put to much greater use. More timber trees could be intensively planted, as well as food and

fruit trees, that would not only serve as live fence-posts but would also provide shade and food for people and pastured livestock. He spoke critically of farmers who planted willows (casuarinas) in the "yard" or had "just grass" which they had to "cut all the time" rather than planting shoe black (hibiscus), monkey fiddle (or duppy fee fee), or cement blocks, he argued that farmers could "fill in" the spaces between the timber, food and 'fruit' trees with beans and peas. There is, however, a difficulty in using timber, food and 'fruit' trees to make fence-posts. Unlike live fences which can be quickly established by using poles from the growstake or hog plum, for example (which ultimately take root and grow), timber, food and 'fruit' trees cannot serve to support a fence for several years after they are planted.

To combat theft and vandalism, during the time of my research the Headmaster and Board of Happy Grove School decided to fence the school compound. However, a metal fence sufficiently sturdy to enclose a campus of thirty-five acres and to prevent people from entering the area was too expensive. Instead only the main campus (where the administrative buildings, library, classrooms and cafeteria were located) was fenced. Along the base of the metal fence were planted seedlings of the agave, collected from the wider campus fence-line.

Happy Grove's fence-line is varied. The

northeast boundary is largely made of carefully laid limestone blocks topped with cement. Along this fence-line grow seagrape trees that are periodically trimmed. Along the eastern boundary, one almond served as a fence-post tree for barbed wire. Several areas of the eastern fence-line are overgrown in "bush." In one of these areas, by the main gate leading into the Andrew Hall side of the campus, a wild soursop grew and at the time I left was already bearing fruits. On the western side of the Happy Grove campus spathodea, Spanish elm and ackee are fence-line trees.

Apart from trees, other hedge plants on Happy Grove's campus include hibiscus, croton, monkey fiddle, agave, bougainvillea, dwarf poinciana, poinsettia, wandering Jew and oleander.

In the drier areas of southeastern Jamaica, cacti are planted not only as property markers, but also as barriers to the movement of people and animals. Describing the dildo (Cereus spp.), Wright (1927:32) writes: "it is commonly used to make a 'quick' hedge which forms a redoubtable obstacle to human or other trespassers."

The Chinese ackee which Watkins (1952:75) identifies as cat's claw (Pithecellobium unguis-cati) is commonly grown in Kingston and in the dry areas of the southern coastal plans. Watkins says the Chinese ackee,

> native to the Caribbean area, is used extensively for sheared hedges. When planted in double-staggered rows a foot apart and kept well trimmed, this well-known legume makes a capital hedge. Cat's-claw thrives on the Liguanea Plain in spite of the summer drought and alkaline soil, and would probably adapt itself well to use elsewhere in the Americas if given a trial

Other ornamental hedge plants found throughout Jamaica, especially in urban areas and among the elite, are ixora (Ixora coccinea), cat's tail or chenille plant (Acalypha hispida), allamanda or golden bell (Allamanda cathertica), and June rose (Lagerstroemia indica).

Trees and Animal Feed

In my discussion of bamboo, timber trees and trees useful in making fences, I have already indicated the ways in which trees enter into the productive activity of animal husbandry. In comparison with herbaceous plants, trees are not of great importance in feeding animals. In the Portland districts, five trees are identified as sources of animal feed. These are presented in Appendix 4, along with a list of cultivated and (collected) wild plants also used as animal feed.

In discussing the feeding of livestock among small farmers, Edwards (1961:109) offers this general description, which also accurately delineates the situation in the districts of East Portland. He writes:

CULTIVATED TREES	OTHER CULTIVATED PLANTS
coconut	yams
banana	peas
grow-stake	sugar cane
	coco
	potato slips
	leafy part of vegetables
WILD TREES	**OTHER WILD PLANTS**
trumpet tree	hogmeat
hog apple	Spanish needle
bamboo	marigold
	wild mint
	milkweed
	Devil's horsewhip
	broomweed
	corn grass
	Guinea grass
	rawmoon
	pudding wish

Table 9

Sources of Animal Feed in Jamaica

> Most of the livestock were fed on self-sown grass or waste crops rather than on more suitable food. The pigs and poultry were fed mainly on surplus and spoilt produce--the particular kind depending on the farming systems--though some imported feed was purchased for the poultry. The horsekind and cattle population lived almost entirely on grass, and the goats ate grass and bushes. Building and shelter for the livestock were inadequate where they existed at all.

Whereas Edwards mentions "self-sown grass" as a major source of stock feed, "self-sown" herbs are far more important in the districts. Most informants said hogmeat (Boerhavia diffusa) is most commonly used because "it easiest fe look." One individual said that it is "Common, common, common; anywhere you go you see hogmeat. Hogmeat a de hardest someting fe dead. No care how you build (i.e., use a machete to cut away plants from an area), if you don't dig out the root it na dead." The Spanish needle is also described as "very common." "Grass" (in the general sense) is described as not plentiful and its exploitation entailed much walking by farmers and children to collect. Corn grass and Guinea grass are described as being dispersed. The leaves of the trumpet tree are used to feed animals when they are in the field. Vegetables (or what Edwards calls waste crops) used for feed are primarily the discarded portions of food following processing and surplus fruits at the peak of the fruiting seasons.

Trees and Fishing

Trees are useful in many ways in the productive activity of fishing. In addition to providing wood for building boats, as we have seen in our discussion of the silk cotton, they also provide materials for a variety of purposes, among the most important of which are materials for making fish-pots as well as the bait used in them.

In the districts of Hectors River, Belle Castle and Scotts Runn, there are three boats manned by eight fisherman divided into crews of three, three and two. The fish caught by these men are distributed throughout the districts by five female fish-merchants--three in the area of Hectors River and two in the area of Belle Castle and Scotts Runn.

Not only is the silk cotton tree hollowed to form a boat, the cedar is also used in constructing boats. The manchineel (Hippomane mancinella), mangrove and mahoe wood is used to make oars, "ribs," "knees" and other boat fittings. The red-wood, in particular, is used to make oars. The fruit of the calabash is well-known for its use among fishermen as a bailer, as well as a container for fish-bait, hooks, sinkers and other small things. Banana plants provide ripe fruits to be eaten at sea and cordage for stringing fish; the banana leaves called "trash" are also taken to cover the fish

that are caught. Soaked or periodically wetted with water, the leaves prevent the fish from becoming dry and hard.

Trees are an important source of bait for fish-pots. Table presents a list of products identified as bait. They are grouped in three categories: those derived from trees, those from other growing plants, and those derived from other sources.

Of the twenty-nine kinds of bait, the scratch coco (Colocasia species which is common in banana fields), stale bread (purchased from bakers in the parish capital towns of Port Morant, St. Thomas and Port Antonio, Portland), ripe breadfruits, guavas, hog applies and coconuts are most commonly used. One fisherman said in reference to the impact of lethal yellowing disease, "we can't say coconut again because it is all gone."

George Leslie, a fisherman in Hectors River, most readily identified fruits such as naseberry, Jew plum, mango, banana, pear and soursop as suitable for fish-pots. He also emphasized that, because these are human food, they are not regularly used for bait. This situation is similar to the limited use of breadfruit trees for timber and of the pimento tree for fuel. At the height of the season, when fruit is plentiful and is without a commercial market, it is a potential source of bait. This is especially true for common mangos. There is disagreement about the use of jackfruit for bait.

TREES	
hog apple or duppy chocho	Jew plum
breadfruit	naseberry
sour orange	seagrape
mango	soursop
grapefruit	avocado (pear)
guava	ripe and green banana
jackfruit	rose apple
OTHER PLANTS	
wild or scratch coco	pineapples
peppers	river moss
OTHER BAITS	
stale bread (purchased)	herring
congri eel	crabs (in season)
octopus or sea cat	"mash" lobster
sandfish	sprat
mackerel	squid

Table 10

Sources of Bait in Eastern Portland

Leslie said it was a good bait because of its strong smell. Ezra Gale, another fisherman, said it was bad; he believed the water dripping into the boat from fishpots baited with jackfruit causes the sole of the feet to "crack." The jackfruit is always associated with problems; we saw earlier that transport drivers are unwilling to carry jackfruit in their trucks because it is said to cause accidents and flat tires. The seagrape is not ordinarily used as bait because the fruits are scarce. Those obtained are most often consumed by children and are rarely sufficient for bait.

Trees also provide some of the food that is consumed by fishermen at sea and by those engaged in rockfishing. The breadfruit, coconut and banana were important in this regard. In reference to the coconut, one fisherman said "no man can say dem go fishing a rock and don't drink jelly." I asked him if the overseer of the estate did not object to people picking coconuts while rock fishing. As he explained it, "If you come from sea and you pick one or two and drink and eat jelly dem don't trouble you. But if you take a bunch of twelve and drink one and leave the rest on the ground, dem go you trouble." On the occasions I went rockfishing with people from Hectors River, they picked jelly coconuts and dried coconuts were also picked or collected from the ground to be eaten.

The coconut palm serves other purposes in fishing. After the coconut is grated and the milk extracted for cooking or for boiling coconut oil, the remaining "trash" (as it is called) is used to catch soldier crabs which are used as bait in rock-fishing. The coconut husk is used by people rock-fishing as a seat to ensure some relief from the razor-like edges of the eroded coastal limestone; the husk is also used as fuel, particularly in the roasting of breadfruits. Long fronds are used to cover boats on the beaches, and lines for stringing fish are produced from the midrib of the leaves. Lines for stringing fish are also made from banana leaves and from the wild thatch (Thrinax multiflora siad to grow commonly by the seaside). The string produced from the midribs of coconut leaves is also used for the "back string" of fish pots which ensures that the pot is lowered in the correct position. Sugar cane is consumed at sea by fishermen, as well as roasted breadfruits, coconut water, ripe bananas, oranges, tangerines, otaheiti apples, Jew plums, mangoes and avocadoes.

Trees and Cordage

Trees are also sources of various kinds of cordage and ropes. As in the case of many timber trees and fuel trees, the local exploitation of trees for cordage and ropes has largely been displaced by the use of industrial products. Table 10 lists plants presented

by Long (1972) and indicates the variety of trees and other plants from which cordage is derived.

coratoe leaf	laghetto-bark
Penguin leaf	bon-ace bark
silk-grass	trumpet-tree bark
cotton	mountain ebony bark
coconut fibers	lilac bark
mahoe bark	anotto bark
bur bark	palmeto leaf bark
prickly bark	mountain cabbage
torch-thistle fibres	fig-tree bark

Table 11

Trees As A Source of Cordage

In describing markets in Jamaica in the 1920's, Beckwith (1969:45-46) gives some idea of the extent to which many of the plants earlier described by Long and others are still being used for cordage and are on sale in the markets.

> Rope itself is also to be found in the market, although rope-making is a less specialized industry. It is twisted out of trumpet bark, or from the bark of a tree called "burn nose;" from mahoe bark, or the outside husk of the coconut, or thatch, called "silver straw." That of the trumpet bark is the best, thatch rope perhaps the least valuable.

The trumpet tree deserves further consideration. It is widely distributed as a weed in cultivated areas, as a natural in "waste areas," and as part of the "bush" that springs up in areas of "ruinate" (i.e., agricultural

land temporarily or permanently abandoned from cultivation which is overgrown with wild plants. Describing this plant, Cassidy (1971:362) writes:

> The trumpet tree has been known from early days, and probably derives through Spanish: one of its names in Central America is trompeta, a reference, no doubt, to its long hollow stems, often used to make flutes and similar instruments. Sloane was first to record this name, which is still the general one, though snake-wood (unexplained) also has some currency.

When thread, twine or rope is required in animal husbandry, fishing and other activities, most people in the districts use both natural and purchased synthetic products. In addition to the use of the banana and coconut leaves for cordage, a common tree identified with the making of rope is the bascedar. Cassidy (1971:357) writes:

> Then there is bascedar or bass cedar, which the dictionaries have missed though it has been in print for over a century. The first element of this name probably represents bast (as it does in American basswood) in reference to the use of the inner bark in making rope.

Although not a tree, the coratoe bears mentioning in the context of cordage and rope. This plant grows along the southeastern border of the school campus as an ornamental hedge, which also forms a formidable barrier. Around the mature plants, many young seedlings were growing which the ground staff collected to plant along

the newly constructed metal fence that surrounded the main buildings of the campus. On several occasions during the kite season in December, children were seen pounding the leaves to extract the thread-like fibre used to fly small kites often made from the pages of notebooks; the frames for the kites were usually made from the midribs of coconut leaflets.

Trees as Ornamentals

In Jamaica trees are also valued and enjoyed for their beauty. Among the flowering ornamental trees to be found in East Portland are the flame tree or flamboyant, the golden shower (Cassia fistula), the African tulip tree and the hibiscus. All of these trees grow on Happy Grove's campus, which is the only place I observed the golden shower. The casuarina is also planted as an ornamental. The flame tree is by far the most common ornamental and shade tree. At the center of Happy Grove's main campus, where the buildings form a small courtyard, a large almond tree has for many years provided shade for the school community. A wooden bench is built around its trunk and under its spreading branches cars are parked, fruits and other products sold, meetings held, people introduced to the school (as a point of entry) and work conducted. It is a favorite lunch-time spot for the children, as are many of the almond trees on the school campus. When it became clear

that the trunk was badly rotted and that the tree stood in danger of being toppled by the wind, some of its main branches were removed and a small flame tree was planted close by to ultimately take its place.

Shade Trees

In a hot tropical country such as Jamaica, trees are greatly appreciated for the shade they provide both for people and for animals. I have already referred above and in Chapter 3 to the almond which is one of the most important shade trees. In fact, the extent to which it is distributed as a wild plant in the settlement area is in part a reflection of the extent to which it is "saved" as a shade tree.

In the January 1888 Bulletin of the Botanical Department of Jamaica, a list of ninety-five trees was presented under the heading of "Timber and Shade Trees" and these were offered for sale from the botanic gardens. Some of these I have already discussed as timber trees, such as the West Indian cedar, bastard cedar, logwood, and casuarina; some as food trees, such as the ackee, breadfruit and avocado; some as fruit trees, such as the guinep, jackfruit, star apple and mango; and some as ornamental trees, such as the flame tree (Delonix regia) and the African tulip tree (Spathodea campanulata). Of course, most trees can become shade trees. Here, how-

ever, I have considered only those trees which come to be regularly associated with shade.

Street Trees

Some trees are selected to be cultivated as "street trees." They are chosen for their shade as well as their beauty. In September 1887, the Bulletin of the Botanic Department of Jamaica published Notes on Trees Suitable for Planting in and About Towns in the West Indies. These plants were also being offered for sale from the botanic gardens "at the nominal price of 1d to 3d each."

Street trees are planted in Kingston and in rural towns, as well as on the large estates and along the roadways in school grounds, churchyards, and other such areas. In Port Antonio and along the main coastal road past the Grange Hill Estate in Western Portland, the royal palm can be seen growing as a street tree. I have already referred to the use of the almond tree as a street tree, as is the case in Harbor View (on the eastern fringe of Kingston). Among the most commonly planted street trees in Kingston is the Cassia simea. There are no street trees planted along the public roads in the districts I studied. The only shade is provided by trees planted as fence-post trees, or along fencelines, or by wild trees along fence-lines and roadsides.

In this chapter, I have described the many ways in which trees are useful to the people of Jamaica. With

the exception of those mentioned in a comparative context (as in the discussion of timber and fuel), I have focused on trees that are present in the districts of Hectors River, Belle Castle and Scots Run.[7] Given their usefulness, it is significant when, as a consequence of social class, farmers choose not to cultivate domesticated trees and to destroy trees that are wild. Although this is a great loss to farmers (and consumers), it is a greater loss to the society as a whole. In a mountainous country like Jamaica, anything that stops farmers from growing trees becomes a contributing factor to the damage done by leaching and erosion. In the next chapter I explore the significance of trees further in the context of examining the social basis of intercropping focusing on the practices of small tenant cultivators in Hectors River.

FOOTNOTES

Chapter 5

1. Other well-known cotton trees include the one in Morant Bay which gave the name Cotton Tree to the section of the town where it stood (Hemming DN: 1976); the cotton trees on the grounds of the military base in Kingston known as Up-Park Camp, the cotton tree which is identified as Alley's Market Cotton Tree (Hemming DN: 1976); the cotton tree along the main coastal road near Dunns River Falls in the parish of St. Ann and the cotton trees on the grounds of the Negril Lighthouse in the parish of Westmoreland.

2. As if to suggest that there is some truth in the idea that it is dangerous to cut cotton trees, Hemming (DN: 1976) writes:

   "Stubborn against the axeman, as were its companion trees--Tom Cringle's at Ferry Police Station in St. Catherine, and Alley's market cotton tree, which injured an axeman when being felled, and would not be chopped down in Clarendon until white rum was poured around its root--Pt. Morant's cotton tree, destroyed the BITU's office with its mammoth trunk which crashed into the roof and brought to ground, the building which housed it."

3. Cassidy and Le Page (1971:389-390) provide us with an introduction to some of the most widely used generic terms in the way Jamaicans name plants. Red, quite often, is what would be orange or even yellow in Standard usage. Sweet often implies cultivation; bitter sometimes a poisonous quality. Bastard is the ordinary word for a wild or 'false' plant that has not the full property of the 'true' one; it is, or was, very widely used. Prickly is the more recent, prickle the older of the 'white people' forms, while macca is the 'black people' word. Lady implies a finer, more dainty or delicate variety of a plant. Milk, beef, blood, iron suggest respectively that the juice is milky, the texture firm or coarse, the colour red or the plant good for the blood, and the roots or stems tough. Burn refers to the effect on the eyes, nose, tongue or skin. Man and woman designate respectively varieties of the plant that are coarser or finer, stronger or weaker. Doctor is curative; backra is choicer quality. Devil implies some harmful property...Christmas refers to the season at which the plant blooms or bears-appropriately in slave days, the chief holiday of the entire year. The animal

names may mean that the plant is used to feed or care for the animal, or else that it resembles the animal in some way (Cassidy and LePage 1971:389-390).

4. See Map 3, Appendix 5, page 495.

5. This figure is presented in the May 9, 1976 Daily Gleaner by the Jamaican journalist Carl Wint.

6. The reference being made here is to Jamaican cents. In 1976 and 1977, one Jamaican dollar was worth $1.15 U.S.

7. The trees I have dealt with in this chapter do not represent all the different kinds of useful trees present in eastern Portland. They do, however, reflect the majority of those that are widely known among the people.

Chapter 6

TENANTS

There are primarily two kinds of small cultivators in Jamaica: tenants and proprietors. They share in common the control over small areas of land cultivated for household use and for sale. They differ, however, in the form of control they exercise over land and the way in which this influences their decisions to cultivate vines, herbs, shrubs or trees. I examine in this chapter the cropping pattern of tenants, who, as Edwards (1961:112) reveals, "disliked building up someone else's land, their inability to prepare for old age by planting fruit trees, and the lack of 'independence.'" I focus in particular on tenants of the Hectors River Estate.

HECTORS RIVER ESTATE

Hectors River is the name of the estate and the district to which it has given rise. It is also the name of the small river that devides the parish of Portland and the parish of St. Thomas. Situated at the edge of wind-swept coastal cliffs overlooking the Caribbean Sea, Hectors River is the last district in the parish of Portland. The central area of the district is its post office, shops, bars, churches, schools and workshops along the island's main coastal road. The Hectors River

Estate consisted of the valley of the river by the same name and the surrounding foothills of the John Crow Mountains.

Hectors River Estate was purchased by Jasper Hall in 1765. He was both a planter and an important member of the political elite as Receiver General in 1760; Member of the House of Assembly from Kingston from 1764 to 1766, in 1768 and again in 1770; and as Speaker of the House of Assembly in 1778. Jasper Hall had three children--two girls and a boy. At age fifty-seven, in November of 1778 (the year in which he had become Speaker of the House of Assembly) Jasper Hall died and his grandson, Commander E. Condrington Hall inherited the property. Following his retirement from the Navy in 1851, he and his wife, Fanny Page Hall, took up residence in Jamaica. Like his grandfather, he was also an important member of the political elite. He became Custos of Portland which was a position he occupied for the remainder of his life. A Custos is a representative of the Governor-General in each parish who recommends people to serve as Justice of the Peace and who is the Chief Magistrate in each parish.

During the period of this research, the property was still owned by the heirs of Hall, though the efforts of the people of Hectors River and the government headed by the Peoples National Party[1] posed (at that time) serious questions about its future. Edward Condrington

Hall had a daughter who died while still a child. When he himself died, the property went to his sister's son, Jasper Glen, the present owner of Hectors River Estate.

The relationship between property rights and the use of land in Jamaica has been and remains the central question in the social development of the island. This was recognized in the 1930's by Norman Manley, one of the founders of the Peoples National Party and it is also recognized by his son, Michael Manley, who as head of the Peoples National Party (P.N.P.) was elected Prime Minister in 1972 and again in 1976. The P.N.P. has viewed agriculture not simply as one of many areas of economic activity to be developed, but as the foundation to any serious effort at social progress in Jamaica.

To the P.N.P., improving agriculture is the basis for increasing the island's food production, reducing food imports and meeting the nutritional needs of Jamaicans. Food production has been seen as particularly important for a growing urban population and for a developing tourist industry. Establishing Jamaica's agriculture on a sound basis would make it a source of raw materials for national industries and a source of products which would be profitable exports; these exports would increase the island's reserve of foreign currency to pay for necessary imports. The vision of a developed agriculture is that it would provide employment for many, especially

in rural areas and the increased income of farmers would make rural areas a valuable market for indegenous industries. Finally, improving agriculture would mean the building of roads and bridges, the construction of irrigation dams, rural electricication, schools, and in general, a higher national standard of living.

In its efforts to advance agricultural production by confronting the "unequal distribution of land" which it describes as the most important factor limiting this objective, the P.N.P. under Michael Manley's leadership attempted through its Land Lease program which began in 1973 to make land available to greater numbers of Jamaicans. By purchase and rent, the P.N.P. acquired land from estates that were abandoned or maintained in an unproductive condition. It also indicated that it was willing to acquire any property irrespective of its condition in areas where there was serious "social pressures" (GL 7/2/1977, 7/11/1977). The term social pressure was explained by Belinfanti (GL 19/7/1977) who was then Minister of Agriculture "as meaning those cases of heavy rural unemployment, rural villages or towns with no space to grow; and cases where rural farm settlements lacked access roads or other essential amenities."

Because the land and its use was viewed as the fundamental basis for social development in Jamaica, Norman Manley and the early P.N.P were of the opinion

that it had to be subject to social control: "No one [had] the right to misuse or abuse land, or to keep it idle if it be wanted, or to use it wastefully, or to use it selfishly" (GL 5/12/1976). To the P.N.P. this has never meant the abolition of private property, only its modification. Private interest was to be brought into line with the "social good" which was defined by the P.N.P. and administered by the state. For Michael Manley as leader of the P.N.P. when it came to power in 1972, this was expressed as efforts to create a "mixed economy" as the basis for developing a "Democratic Socialist" society. In this society, private property and "social good" were to be harmoniously combined.

Efforts to make land available for small farming in Jamaica are not new nor are they restricted to one political party. The precursor of the Land Lease program of Michael Manley's government was the Land Bonds program of the P.N.P. under the leadership of his father, Norman Manley. Properties were purchased, subdivided and made available to those who sought to become small proprietors and small commercial farmers. Similar policies were pursued by the Jamaica Labor Party (J.L.P.) which in 1962 and 1967 won the first two general elections after the island became independent in 1962.

When the P.N.P. led by Michael Manley came to power in 1972, they presented the Land Lease program as

a major effort toward land reform. They criticized the previous efforts of the J.L.P. claiming that they provided small cultivators with worthless land on steep hillsides which were rocky, without good soil and subject to erosion. They also noted that under the J.L.P. land was just another commodity to be bought, sold, hoarded, abandoned, traded, i.e., it could be used in ways which bore no vital relation to the needs of the society as a whole. By 1976 the P.N.P. had acquired 57,000 acres (P.N.P. 1976) of what it described as "good lands. These lands were made available through Land Lease. In 1976 there were already 22,000 subsistence cultivators on 40,000 acres who had planted food crops valued at 23 million Jamaican dollars. Despite its progressive intentions, the reformist program of the P.N.P. resulted only in the creation of tenants of the state and like other tenants, they also did not plant trees. In a survey of 250 Land Lease cultivators, Stone (1976:319) points out that they primarily cultivated herbaceous root crops, legumes and vegetables.

The J.L.P. under the leadership of Edward Seaga opposed the efforts of the P.N.P. to make land available to the people of Jamaica by means of the Land Lease program. Seaga accused the P.N.P. of mismanagement and incompetence, and of introducing the alien philosophy of "communism" whose only effect was to produce chaos and

CROPS	% OF ALL FARMERS GROWING CROPS
Yams, Cocoa, Dashine, Cassava, etc.	68
Irish, Sweet Potatoes	50
Peas, Beans	42
Vegetables	23
Corn	19
Melon, Pumpkin, Pineapple	21
Paw, Pear, Pimento, Chocolate, Coconut	5
Banana, Cane, Plantain	22

Table 12

Plants Cultivated by Land Lease Tenants
Source: Stone (1976:319)

confusion. Reporting on Seaga's address at a public meeting (just prior to the 1976 election), the Daily News (9/10/1976) said he "blamed the overall decline in agricultural output on the [P.N.P.] Government's refusal to sell land to the farmers..." According to the newspaper report:

> [Seaga] said that the farmers did not wish to be tenants or to exchange one landlord for another but that instead they wanted to own, develop and pass on land to their children. He said that Land Lease offered insufficient security to the farmers because they cannot build houses on them or die and leave land for their children.
>
> According to the release, the Opposition Leader told his audience that the J.L.P. was not prepared to accept this system and that they would sell land to farmers when they formed the Government.

This was the same message Seaga presented to the people of Hectors River in his visit during the 1976 election

campaign. He told them that "Any land that any farmer have in Cuba has been taken away and any land that he has there is rented land. When a government take away a man's land and put him on rent land he is not doing him a favor, because you can't build a house on rent land, and you can't die and leave it for you children. Most of you standing here before me tonight," continued Seaga, "know that if you had not got a start in life with a piece of dead lef land you would not be where you are today."

A third perspective on the issue of land was provided by Trevor Monroe, General Secretary of Jamaica's Marxist-Leninist Workers Party (formerly the Workers Liberation League). In a radio broadcast on October 31, 1976, Monroe said Seaga's plan of selling land rather than leasing it seemed good at first. But he told his audience:

> ...stop and look into this selling of land which is Seaga's plan. If you are going to buy land you need a lump sum of money to pay down on the land and more money to meet the installments if you are lucky to get credit. Where will the country people get this lump sum of money from under Seaga's sell-land plan?

The solution proposed by Monroe was "to give the land to those who need it and are willing to work it. Not lease, not sell, but give the land to the people. It is our land. It is our sweat and blood which soaked into it. Give the land to the people and that would end the oppression of the country people by the land gods."

Since the Workers Party has never held state power in Jamaica, their answer to the "land problem" remains only a proposed solution.

The P.N.P. and the Land Lease Program

There were three aspects of the P.N.P.'s Land Lease project representing three sequential phases. The first phase consisted in the state leasing land from large land owners which was then rented for periods of five to ten years to small cultivators. In addition to efforts to achieve social justice and to ensure that land as the primary national resource was used productively, the immediate practical objective of the first phase was a rapid increase in domestic food production at a time when people were experiencing persistent shortages and high prices. Credit was provided for clearing and preparing the land, for planting materials and for pesticides and fertilizers.

The second phase of the P.N.P.'s land reform program was to make government land and private land that was to be acquired by the government available to small cultivators on a long term basis. Land was to be rented for periods up to forty-nine years. The emphasis was on the young and on long term occupation to facilitate and encourage the full use of land. In addition to providing credit to farmers (including the ability to secure bank loans on the land), the terms of

the lease included hereditary rights and compensation for capital improvements. As in the first phase, land was to be rented rather than sold to ensure its continued use for agricultural production and to keep it out of the control of speculators. Most important of all, it was made immediately available to farmers "with all the security of ownership," (P.N.P. 1976) without them having to produce large sums of money for purchase.

The third phase of the Land Lease program was also to be based on government land and on private land acquired by the government. The objectives were to establish farms which were viable economic units and large farming cooperatives on land which were not to be subdivided. In the third phase of the Land Lease program the emphasis was on creating whole farming communities. In addition to farms, consideration was also to be given to improving roads, constructing irrigation works, providing electricity and building facilities for health, education and recreation.

The Politics of Land and the Hectors River Estate

With respect to the Land Lease projects in Portland, the Gleaner (11/10/1976) in an article titled "Government Acquires Property" in Portland reported:

> The Government had already acquired lands at Muirton, Darlingford, Soho and Anchovy for the people of Portland. The 400-acre Hectors River property was to be acquired shortly and other lands were to be identified for use by small farmers.

On the fifth of October 1976, Michael Manley visited the district of Hectors River to conduct a political meeting on the Hectors River community playing field. Speaking informally and on a popular level, he assessed the land problem in Portland as follows:

> I am going to be very frank with you. One of the main thing that has kept the people of Portland down over the years, is a little clique of land barons who have held all of the best land of the parish. A talking plain, plain. Oonoo [all of you here] look back over the years, the thing that has kept Portland down most of all for the people, is a little clique of land owners that has held all the best land. Some of dem when dem want keep it idle dem keep it idle, while young people are starving. When they feel a mind to open up some and work it, provided oonoo behave you-selves, you will get a little bit, but always the power, has been in the hands of a small clique. Now I am not saying that they are all bad people, so don't let anyone come here and say that I run a whole heap of bad mouth and hatred; I am not talking about individuals personally. Some land barons are good people that have a good heart, others are bad people who have bad hearts. What I am taling about is when you have a little clique of people that own all the land, you are at the mercy of those people. And a father may be a good man but he may have a bad son. When the good father is there you will feel good. When the bad son come, oonoo suck salt. Because there are a lot in that system

> where you don't have any rights, all you depend on is whether you have a good son or a bad son from time to time.

The Daily News of October eighth 1976 reported that "the owner [of the Hectors River Estate] had chosen to communicate with the Ministry through his attorney, to the effect that he was not interested in selling the property." Touching on this point, this was Manley's conclusion in his address to the people of Hectors River.

> Especially at Hectors River you have to see why this country has to come under manners. Would you believe it like how we had big trouble when we buy Muirton for you, we buy Darlingford for your benefit, we buy Anchovy for your benefit, and we have a property down here call Hectors River and if God could see my trial. Hectors River now dying for a chance to get out into some Land Lease for the young people and the older farmers, everybody, get a chance to get some economic activity, and I hear that some owner-man skylarking about he can't find him to buy the property. And I just tell them down there that to tell him (let the world know I say so and let the attorney that represent the owner, hear what I say) is four hundred acres flat land there he is not using, and we wnat that for Hectors River people just like we buy the ones around here, and you can pass the word that I say so. If the man don't show up by Monday and tell us what price him going negotiate for the property I am going to invoke the Compulsory Acquisition Law, put him under heavy manners, and buy the property.

Michael Manley, leading the P.N.P. went on to win the 1976 general election and in the period that followed the tenant section of the Hectors River Estate was acquired by the government as part of its Land Lease program.

Separate from, and yet interrelated with the efforts of the P.N.P. to make land available to the people of Jamaica, there have also been direct efforts by groups in different parts of the island to gain control of land by means of "capture." "Capture" is simply the illegal occupation of government-owned as well as private lands. There were frequent reports of "capture" in the daily papers. The P.N.P.'s response to the direct efforts of groups to gain control over land showed that the laws governing private ownership were now being subject to a new interpretation. The "social good," especially where it was perceived as "the just demands of the people" was to be the new determining factor.

Belinfanti who was then Minister of Agriculture was concerned with easing "the fear of big farmers." He made repeated efforts in 1977 to assure "big farmers" that they were

> ...recognized by the Government as an integral and useful part of the society, and may, therefore, go ahead and produce to his utmost without fear of being dispossessed of his land, or of being treated otherwise with injustice.
>
> The Minister had in these assurances, however, made a single reservation: that where what he described as "social pressures" were found to exist, the Government would feel constrained to go in and acquire at least a part of any big farmers' holding in the area, even if the part acquired was fully developed land. He instanced that, if a town was hemmed in by surrounding large properties and had to find room for expansion; or if a multitude of small

> farmers were perched on small hillside fragments of land while a big property or properties flourished on the level lands below, that would be considered as "social pressure," and the Government would take action (Miller GL 4/7/1977).

Miller was reporting on H.E. Roper's comments from the floor to the Jamaica Livestock Association at their 1977 annual meeting. Roper himself had been chairman of this Association from 1967 to 1973 and Miller describes him as "one of the most colourful figures in agriculture and in national life from the mid-1950's right through to 1973..." Miller (1977) reports that Roper presented one "blunt" prediction. "Unless the big farmer is extricated from the fear under which he now labours...the greatly increased production which the country needs, will not materialize." According to Miller:

> Another speaker related that land-hunger was an endemic feeling among the small farmers of the country, and both district and parish politicians know this well. All that any politician seeking the suffrage need to do, if he lived in an area where a big property or properties surrounded, was to tell the district population that they could get the property lands, if they wanted. "Social pressure" could be brought into play this way, it was pointed out, and the big farmer or farmers involved would lose their security of tenure.

There would seem to be some truth in what Roper had to say to the J.L.A. He raised a legitimate concern about the manipulation of the land issue by politicians

of both the J.L.P. and the P.N.P. for the purpose of being elected. There were individuals in Hectors River who doubted the seriousness of the government's promise to make land available to the people of the district. Describing the efforts of both the J.L.P and P.N.P, MacFarlane (overseer of the Hectors River Estate) said:

> Actually over the years, everybody wanted the land, even from Crown colony government. Every election we hear we going get the estate. A no something new. J.L.P. and P.N.P. a say de same ting. In J.L.P time the P.N.P. don't want the J.L.P. get it and when P.N.P. in, the J.L.P. don't want the P.N.P. get it. Everybody want to say that is their party get it. I believe we going get it in July.

Hectors River Estate

I made four walking tours of the Hectors River Estate with Joshua MacFarlane, one of the property's two headmen. On the first occasion, he not only noted the decline of the estate after Lawrence (the former Busha or overseer) had left, he also pointed out many instances where the estate was not doing as well as the tenants. As he put it the estate was "not as interested as the tenants." On the evening prior to the first trip through the property, MacFarlane said in an interview that with regards to wage labor, "people prefer to work with the tenants than with the estate. The tenants pay more. The tenants cultivate better than the estate. If we walk," he said, "you will see that the estate has no comparison

with the tenants."

As we walked through the property, MacFarlane pointed out several areas of the estate that were abandoned from cultivation. The lime trees planted during Magnus Lawrence's time were unpruned and overgrown. Yet limes were still sold to higglers who harvested the crop themselves. In response to my question concerning the obvious lack of cultivation in areas of the land, particularly in a part called Lacatan, MacFarlane said the estate had stopped planting and caring for it as it was being considered for use as Land Lease. Now, he said, they just harvest. The bananas were overgrown with vines.

During the late 1950's and the 1960's, serious efforts were made to maintain and develop the estate. This was largely due to the influence of Magnus Lawrence. MacFarlane had come to Hectors River Estate with Lawrence. Both had worked together at San San Estate ten miles from Port Antonio. In describing the property during this time, MacFarlane said the estate "flourished." In addition to the main crops of bananas and coconuts, lime trees, fodder crops and small areas of fruit trees such as ackee and breadfruit were planted. Roads were made and the development of a system of irrigation was attempted. There was plenty of work for the district, especially as the Jamaican tall variety of coconut palms had not yet been devastated by lethal yellowing disease,

and people were treated "generously" and "fairly." In contrasting Lawrence with Sidney Ramdeen who was now Busha, MacFarlane said Lawrence was not afriad to spend money in attempting to develop the property.

From the time of Lawrence's departure, MacFarlane felt the property has "gone down." It employed fewer people (in part because of the impact of lethal yellowing disease), many areas of the estate were abandoned from cultivation, fruit trees were unpruned, and little development was being undertaken. During the course of an interview, a tenant subsistence cultivator who rented land in Scots Run district described the Hectors River Estate as "mash up."

The organization of the Hectors River Estate consists of a lawyer, busha (overseer) two headmen (field supervisors), two rangers (watchmen) and a penner (responsible for livestock). The headmen, Leslie Grant and Joshua MacFarlane, are responsible for giving out assignments and supervising the work. They are also responsible for keeping all field records of crops planted and harvested, products made and work completed. Leslie Grant is responsible for the production of copra, the care of the copra house and the collecting of coconuts. He also looks after the fencing of the estate. MacFarlane is responsible for the general clearing and weeding of the estate as well as the harvesting of

bananas and coconuts. The two rangers are William Buchley and Joseph Burger. Their responsibilities include patrolling the property to prevent stealing and trespassing and to impound stray animals. The penner is responsible for livestock and maintaining pastures.

In addition to the lawyer, busha, bookkeeper, headmen, rangers and penners, there are eleven other permanently employed workers, all of whom are tenants.

Esau MacNabb is primarily a banana pruner though he also plants and brush. To brush in Jamaica is to use a machete to keep an area cleared of vegetation. Sidney Agustus Brown is primarily a coconut picker though he also serves at times as a banana cutter. A banana cutter is the man responsible for actually cutting the bunch of bananas from the tree which is then taken by banana headers to places where they are collected and transported to the banana boxing plant. During Faulknor is a trench cutter (digger) and forker. This is a person who prepares the land for the cultivation of bananas. Uriah Dunn plants coconut and is also a brusher in the coconut walk. Coconut walk, banana walk, and pimento walk all refer to areas where these crops have been systematically planted in pure stands. Alexander Kindell, like Dunn also plants coconuts, brushes in the coconut walk and is a banana forker. Henry Brown and Willard Reid are standmen on banana days and an aspect of their activity is

the cutting of banana trash (as the dried leaves of the banana are called) which is used for handling the fruits to prevent bruising and scaring. Standmen are responsible for the bananas brought from the trees and assembled at the specified locations called stands from which they are collected by tractors and taken to the banana boxing plant. Banana days are the days on which bananas are harvested. Shedly Winston and Zedichia Cambell are banana headers who also did weeding and forking. Clarence Fagan was generally employed to fork and plant coconuts.

The estate also had seven to twenty-five regular workers who are always described as "temporary." Their employment is described as "now and again" and is in the form of day work, task work, time work and seasonal work. These workers are primarily involved in brushing coconut and banana walks, pastures and roadsides. They also plant bananas and coconuts. Those with some skill work as banana pruners, trench cutters and in the building and repair of the estate fences.

Women are also employed as temporary workers. On banana days when the fruits are cut and sent to the boxing plant, Violet Hoffman is the regular cook, although several other women always work with her. There is also Marian Smith, the water-woman. On banana days, she takes drinking water to the banana cutters, headers and others. Women also carry water to be used in spraying bananas.

The establishment of a general minimum wage of $5.00 a day by the P.N.P. altered the hiring practices of the estate. Prior to the minimum wage, most regular temporarily employed workers were hired as day labor at a $1.20 to $1.50 per day. Following the passage of the minimum wage law, workers have been primarily employed to do piece-work. MacFarlane gives several examples of this. Women who carry water to spray bananas earned $2.50 until the passage of the minimum wage law. Now they are paid by the drum, being able to earn at the most $3.00 for the day. The line-men, those who line out the areas for the planting of bananas and coconuts, were paid $1.20 to $1.50 in the past for a day's work. It then went up to $2.50 in the early 1970's. Following the minimum wage law, the property wants to make the job piece-work, to which the line-men object and threaten not to work if this is done.

According to MacFarlane, there is little day work now. It is restricted to the planting of coconut trees and the reaping and processing of the nuts to make copra. In addition, when banana trees are blown down, day workers are employed to cut up and dispose of the damaged plants.

Plants Cultivated by Tenants

There are one hundred tenants on the Hectors River

Estate. According to MacFarlane, only a few are new. Some tenants have acquired access to rented land through their parents and grandparents. At the time of my research, most of the tenants were over forty and some have been farming the property for over fifty years.

Trees

Most tenants do not plant or save trees. Tenancy is an underlying cause of great insecurity in farming. The uncertain condition in the cultivation of trees on rented land is the possibility that one will not be able to harvest and enjoy the fruits of their labor. Tree cropping is a major investment, both in terms of the period of time before the trees become productive and the period of time over which they remain productive. The cultivation of trees indicates planning for a lifetime and it is here tenancy introduces the potential for misfortune. After years of labor and just at the point of benefiting, access to the land and all that has been invested in it might cease. The farmer stands in jeopardy of losing his costly and labor-consuming investment. This is the peril of tenancy. One farms with fear; the rights to the fruits of one's labor remain precarious. While most tenants in Hectors River do not plant trees there is one outstanding exception. His name is Benny Goodwin and I examine his unique position further in this chapter.

Banana (Musa spp.)

The banana is commonly cultivated by tenants. Though this large herbaceous plant has many uses, it is primarily cultivated for its fruits produced both for household use and for sale. Twelve varieties were known in eastern Portland. Until the 1940's, the Gros Michel was the most widely planted and the chief commercial variety. Now, however, due to the impact of Panama Disease, it is rare. Lacatan is now the most commonly cultivated variety although it is not as ideally suited as the Gros Michael for international commerce. Robusta and vallery are also cultivated primarily by the estates. Other varieties cultivated to a limited extent are apple banana (which in Moore Town, Portland, is known as Cuban banana), franc banana, frog banana, lady finger or honey banana, black banana, chiny or China banana (which in Jamaica is also known as dwarf, canary, cavendish and governor banana [Larter 1940:3]), Jacob banana, and man-O-war banana.

Plantain (Musa spp.)

Plantains are little cultivated. This is curious, because in the past plantains were the "staff of life" in Jamaica. Cassidy (1961:351) writes: "Before the modern export trade in bananas, the plantain was far more important in Jamaica, being a staple food of African-Jamaicans as it had been in Africa at the end of the

eighteenth century. Browne (1972:364) devotes four lines to "the Banana Tree." He writes: "This plant is propagated in all our sugar-colonies tho' seldom cultivated by any but those that have a particular fancy for the fruit of it, which, when ripe, is sweet, clammy, and soft; but lies heavy upon the stomach." Browne does not mention the boiling or frying of the green fruit, which are two of the important ways in which it is traditionally consumed as a starch food in Jamaica. With the plantain, however, Browne is definite in stating its importance. In a discussion almost seven times as long as that on the banana, Browne (1972:363) reports that the plantain "...is cultivated with great care in all our sugar-colonies, where the fruit supplies the principal part of the sustinence both of the [African]... and the poorer sort of White people." Browne also indicates that in addition to food obtained from the fruit the plantain leaves were used to dress blisters and to make mats and stuff matresses. With respect to its chief use as food plant, Browne (ibid:363) states:

> The fruit is generally used, when full grown, but before it ripens: it is commonly peeled and roasted, and thus served at table, or distributed among the ...[Africans], by whom it is mostly used, tho' many of the whites do really prefer them to any other bread-kind, especially while young and tender. The...[Africans] generally boil them with other messes, as salt-fish, beef, pork, pickle, or crabs, &c. and find them a hearty wholesome food. As the fruit ripens, it

> becomes soft and sweetish, and is then generally made into tarts; or sliced and fried with butter and thus served up in plates.

In a discussion I had with Benjamin Goodwin and David Faulknor, two tenants who were respected for their knowledge of cultivation, Goodwin said "cultivating plantains was a more paying thing than banana." Faulknor agreed but complained that "plantain pay but it hard fe keep cause it fall over." While Goodwin acknowledged that the plantain was difficult to cultivate he pointed out that one could succeed with plantain if it is "cultivated right." Goodwin was of the opinion that "everyting"--including plantain--"pay better dan banana."

Root Crops

A variety of root crops are cultivated by tenants. Among the most important of these are sixteen kinds of yams. The word yam say Alexander and Coursey (1969:406) "is derived from the West African Mande 'niami' or Temme 'enyame', which was adopted as 'ynhame' in fifteenth century Portuguese, or 'name' in Spanish and spread thence into other European languages." Of the different kinds of yams, the most commonly planted were renta or rental, St. Vincent (come-fe-help-we) and, to a more limited extent, Trinidad yam. The name St. Vincent and Trinidad yam is said (Cassidy 1961:341) to indicate the places from which they were introduced to Jamaica.

Although some farmers in eastern Portland describe renta and Trinidad yam as different, The Farmers Guide (1954: 445) treat them as identical. Cassidy (1961:341), however, says, "Renta--a widely known name--has been variously identified with St. Lucia, Barbados, and Trinidad yams; it is white, soft, floury, with a hairy exterior." The Farmers Guide (1954:445) describes renta as a "heavy bearer" and say it "will grow on soils poorer than that which any other yam requires, and with less care. It may be trained to climb on sticks or to run on the ground. It 'cures' well and keeps well like the white yam, and is very palatable when well-cured." Cassidy (1961:341) describes the renta and St. Vincent yam in the same way noting that they "grow virtually wild in bush or forest land."

In a further comment on the St. Vincent yam which offers an explanation for its other name, Cassidy (1961: 341) says:

> St. Vincent is soft, purple-white, and gives an early crop; it also keeps long in the earth, 'propagates itself by seed so that one planting will sometimes perpetuate itself for fifteen years,' and is therefore called come-here-fe-help-we or come-to-help-us.

Other kinds of yams which are also cultivated include yellow yam (Dioscorea cayenensis, also known in Jamaica as yellow Guinea yam and afu), white yam (Dioscorea rotundata), Lucy or St. Lucia yam, taa yam, Negro yam,

mosela yam and yampi (Dioscorea trifida).

Yampi is a native of tropical America and Alexander and Coursey (1969:422) suggest this yam originated in Guyana and Brazil, where many varieties are known, and was spread from there through the Caribbean chain of islands by the Arawaks. Referring to yampi, one informant said "old time people use it and boil soup for their baby and the doctor don't stop you from eating it when you sick." Cassidy (1961:342) says "yampi is the name all over the island though some call it also India or Indian yam, some Portland yam (a pinkish-white variety), some moonshine yam (a dark purple variety, also known as Red St. Vincent), and there is a small white variety with a shiny skin called Chinee."

The Farmers Guide (1954:445) describes Lucea (St. Lucy) yam as soft, white and well-flavored. It indicates that Lucea "is grown in the hills of Hanover and in the hills bordering Westmorland. It is the yam most liked by purchasers in our markets, and it seldom retains its texture when planted anywhere else but in Hanover and the borders of Westmorland." Taa or thaw yam is described as "a cross between the Negro and the yellow yam, both in tuber and leaf." It is further described as hardy, adaptable to poor soil, and "a heavy bearer." According to The Farmers Guide (1954:444), the Negro yam is liked by cultivators "as it produces a

heavy yam...sold easily in the markets." Mosela is also described in The Farmers Guide as "a most prolific bearer."

Other kinds of yams which are not widely cultivated by tenants included Guinea yam, pompom, hard-head congo yam, vitibu, ning-come-posse, and Chiny (or China) yam.

Ceco (Xanthosoma spp. and Colocasia spp.)

Coco in Jamaica refers to species of the genera xanthosoma and Colocasia. Six varieties of coco are cultivated. The most common are sallie coco, ju coco (also called red coco, ju red or red commander), white coco (also called white commander or burbon coco) and dasheen coco. Less frequently cultivated are minti and full-basket. Minti, says The Farmers Guide (1954:447), "thrives in almost any location but does well in cool, damp spots. It is often used as a cover crop in banana and coconut groves, and serves as shade for young cocoa and coffee plants."

Sweet Potato (Ipomoea batatas)

Sweet potatoes are also among the root crops cultivated by many tenants. There are eight varieties of which five are common. The white and red 'tan teady' (stand steady) is the most commonly planted. Lady slip, bunch-of-tea, giant potato, choke woman, modda (Mother) Edward, yellow coby and prison farm are also described

as commonly cultivated. Other varieties which are little planted include blue bud, sense potato and pigeon neck. Several farmers reported that they planted sweet potatoes in the period from 1930 to 1940. This was clearly a reaction to the fact that Panana disease had made cultivation of the Gros michal variety of banana a risky business. They describe themselves as having been "made" by sweet potatoes. Some have now specialized in banana and yams and others in banana and a variety of tomato in Jamaica called salad.

Another root crop commonly cultivated is the cassava of which there are two varieties described as "sweet" and "bitter." The bitter cassava was most commonly cultivated. According to MacFarlane, there was "good money for cassava now; some even price it above banana."

Both red and white varieties of Irish potatoes are cultivated but to a very limited extent. Though an important economic crop in the early nineteenth century, arrowroot (Maranta arundinacea) was also said to be cultivated now by only "one and two" tenants.

Sugar Cane (Succharum officinarum)

Thirteen varieties of sugar cane were cultivated. The most common were described as "eating cane" and the soft white cane, ribbon cane, Cuban or salingo cane, bucket cane and black cane are the varieties most

frequently planted. These are cultivated primarily for domestic consumption though some are also sold for as much as fifty to sixty cents "a stick." Much of the sugar cane is sold and consumed in the districts. Other varieties which are also cultivated to a limited extent include lady-finger, crawfish, cock cane, goat-cheng, red cane and bamboo cane.

Beverage Plants

Ginger is cultivated to a limited extent. While it can serve as a spice and a seasoning plant, in Jamaica it is commonly used to make a beverage called ginger beer. Sorrell is another beverage plant which is cultivated by some tenants. This plant is the source of Jamaica's traditional Christmas drink. Two varieties--red and white--are cultivated.

Peas and Beans

Legumes were cultivated by only a few tenants. According to MacFarlane, the most commonly planted of the beans was the large white Phaseolus lunatus which in Hectors River was called Christmas bean and yearling bean. It is also known in the area and elsewhere in Jamaica as broad bean, Jamaica lima bean, white bean or butter bean (Adams 1971:28). The small lima bean and the bunchy bean are the common beans planted by the few farmers who did such cultivation. Unlike the Christmas bean, the bunchy

bean is described as bearing "right along" i.e., bearing through the year. Also to be found to a limited extent is bonavist bean (Dolichos lablab).

Seven plants are cultivated which were popularly identified as "peas." These included Gungu peas (Cajanus cajan), red peas (Phaseolus vulgaris), white peas, cow peas (Vigna unguiculata, which was also known as marrow-fat peas or black-eye peas) and Jerusalem peas.

Vegetables

Few tenants cultivated other vegetables. Those planted are pumpkin, corn, beet, chocho, turnip, carrot, Indian kale, calaloo, okra, cucumber, cabbage and tomato. In this group we must also include susumba (Solanum torvum), which grew wild in the districts, and seasoning plants such as onion, escallion and thyme which are cultivated to a limited extent and herbaceous spice plants such as the different varieties of peppers (Caspicum spp.) which are also cultivated to a limited extent with the exception of bird pepper which grows wild.

To explain why vegetables are little cultivated reveals much about tenants and about small cultivators in general. The following information was gathered through interviews, discussions, conversations and field trips. Most important was my participation in the Hectors River Community Council.

In the second meeting of the newly revived Hectors River Community Council, several objectives were identified. These were problems related to the quality, cost and availability of food; the repair of the Community Center, including building a fence, establishing ornamental plants, and making provision for a caretaker; providing training and employment for the young; the care of the old and the organization of entertainment for the district. It was in relation to the problems of food that the discussion of vegetables arose.

First it should be said that there is a tremendous demand for vegetables in the district. This is especially true for resident teaching staff of Happy Grove School. Most teachers obtain their food supplies including vegetables from the parish capital markets of Port Antonio (Portland) and Morant Bay (St. Thomas). Both are close to twenty miles from the school. They also obtain food from a female merchant who buys vegetables and root crops such as potatoes and yams in the parishes of Westmorland and St. Elizabeth on the island's southwest and transport them by van to sell in Hectors River and other districts in Portland and St. Thomas. During the period in which this research was conducted, there were seven expatriate members of Happy Grove's teaching staff. When interviewed about their diet while at Happy Grove, they all complained that it was difficult to obtain vegetables and were curious to know why this

should be so in an agricultural area.

In the Community Council meeting, I asked why vegetables were not planted in the district when there was clearly a market for them. The explanations offered were varied and enlightening. Though there is in fact a market for vegetables, one woman said that "the people feel there is no market for it. If someone comes around," she continued, "as in the case of cocoa and coffee, then we would really get the zeal." MacFarlane (who was elected chairman of the Community Council) said that onions, carrots, tomatoes and other vegetables could be grown but there "is no one to encourage their cultivation." Several individuals attributed the lack of vegetables to the limitations of the farmers. A few believed "lack of interest" is responsible. One individual said, "people don't want to work" and that "vegetable ge too much trouble." There is certainly some truth in this last assertion. The cultivation of vegetables is time consuming, they are difficult to grow (because of pests, diseases, inadequate soil, lack of water, and destruction by stray animals) and they are an expensive investment (in relation to the cost of seeds, pesticides, fertilizers, etc.). Disease and pest infestation is a particularly difficult problem in vegetable cultivation. When I interviewed the agricultural extension officer for the area about his own cultivation, he said he

planted no calaloo because it would not grow without spraying and he had lent out his pump. To conclude the explanations offered in the Community Council meeting for the limited cultivation of vegetables, several individuals said there is no "real land" for growing vegetables available. The only woman tenant on the Hectors River Estate said many of them wanted to plant vegetables but they did not have "any land room." This was the general sentiment of thr majority of people present at the meeting. The reasons for this will be made clear in a moment. One farmer arguing for more land explained the situation in this way: "Vegetable can't grow under banana and we want the banana still."

Other difficulties in the cultivation of vegetables which were not brought to light in the Community Council meetings should also be noted here. In an interview with MacFarlane, David Faulknor and Muriel Thompson, MacFarlane offered the following observations on why the majority of tenants do not plant vegetables:

> Peoples' hands are tied. It is only now [i.e. since lethal yellowing disease has destroyed the Jamaican tall variety of coconut] they are getting a little chance because the coconut was all over. It is only now they can plant. And first time, the estate had cows and some of the staff and workers have goat and hogs that destroy the workers' cultivation. These small crops can't stand much of this. The cultivators are suffering.

The evidence that there is much truth to this statement could be seen in the deep holes that are dug in fields to trap pigs. In addition, one farmer in the Community Council meeting complained that his crops were destroyed by estate animals. He reported it to Sidney Ramdeen, the overseer but he was not compensated for his lost crop.

Returning to the Community Council meeting, one tenant who primarily engaged in the commercial production of banana said the people of the district are "well blessed. We just look out from our window on our back-yard and see food." The problem as he saw it is "we do not utilize what we have around us." The only thing lacking he said is "meat-kind" and all one has to do is "go out on the rock and throw a line." After the meeting, however, we met outside on the way home. In a soft confidential tone he told me that the main reason for the lack of vegetables is "laziness." He pointed out that he could go and cut $200 to $250 worth of banana every two weeks; the people are lazy, they do not want to work and the proof is that the tenant area of the estate is in bush.

Though many explanations are offered for the absence of vegetable cultivation there appeared to be general agreement in the meeting that this is due to the lack of land. The reason why this position is taken is

clear. Community Councils in Jamaica generally reflect the political party in power. Most of the members responsible for reviving the Hectors River Community Council are associated with the P.N.P. and they are all keenly interested in the efforts of the party to acquire the tenant section of the estate. The discussion of vegetables was in part a way to highlight, justify and further this objective. A revealing incidence in this respect occurred when MacFarlane was elected chairman of the Hectors River Community Council. He was a member of the P.N.P and a member of one of the two local P.N.P. groups in Hectors River. In the first meeting he started by referring to the gathering as "comrades." He then corrected himself noting that the Community Council was not a partisan organization and that it was to serve all people of Hectors River whether they were P.N.P or J.L.P.

Cropping Patterns

Five types of cropping patterns can be distinguished for the tenants of the Hectors River Estate. These are the pure cropping and intercropping of bananas, root cropping, mixed vegetable cropping and forest cropping.

In general, the cropping pattern of tenants is best described as mixed-form intercropping. This essentially involves the combining of vines, herbs, shrubs

and trees to physically structure space in the most advantageous way. In mixed-form intercropping, the crucial factor is to allow sufficient light to penetrate to the ground level in order to cultivate herbaceous plants. The cultivation of herbaceous plants is accomplished in two ways. Those requiring direct sunlight are planted in open areas of suitable soil and moisture. These plants include vegetables such as tomatoes, beet-roots and carrots as well as peas and beans, spices, seasonings and medicinals. Other plants more tolerant of shade are planted inbetween scattered trees which include bananas, plantains and pawpaws. A wide spacing is maintained between the trees so that while individually the produce shade, they do not form a canopy. Apart from the small open areas for the cultivation of herbaceous plants requiring direct sunlight, trees are intercropped with vines, herbs and shrubs in a variety of ways as we will see.

Root Cropping

The first of the five cropping patters I shall discuss for Hectors River tenants is mixed root cropping. This is one variety of scattered tree cropping which is the practice of an estimated thirty farmers. Many of those who engage in mixed root cropping are small tenant subsistence cultivators; some of them secondarily engage in wage labor.

The following is an account of the cultivation of a tenant by the name of McNabb. He is a pruner, one of the eleven premanently employed workers on the estate. This is considered a skilled activity. Because of a serious accident, however, he does not work as much as he did in the past. He rents two pieces of land totalling five acres. Cultivation is for household use though some products are sold. This accounts for the concentration on root crops. These are primarily several varieties of yams and cocoes. Of the yams the most widely planted varieties are renta and St. Vincent. White yam and marzella are cultivated to a lesser extent. McNabb said white yam sells well but it is difficult to get planting material.

The cropping pattern is essentially a limited scattered tree cropping. The basic character of the field is determined by the fact that the estate had planted coconut trees throughout the tenant section. During the course of this research, many of the tenants were benefiting from the death of the Jamaican tall coconuts. They now had more space. This is true even where (since 1972) the estate has replanted with Malayan dwarf palms, as many of the trees in some areas were still young. In 1977 MacFarlane (the headman responsible for the replanting) reported that 1,150 Malayan dwarfs had been planted throughout the four hundred acre tenant section. In addition to the coconuts, other trees grow in McNabb's

field, including one grapefruit, one jackfruit, one mango, several banana trees, three pimento and a clump of bamboo. The bamboo is there because all McNabb's efforts to kill it have been unsuccessful. The bananas are cultivated primarily for household use. All of these including the coconuts constitute the scattered trees. Growing in the partial shade of the scattered trees are the shade-tolerant minti coco and white coco. In areas of good soil, sufficient space and adequate sunlight, yam hills of renta, St. Vincent, white yam and mozella are established. Here and there in suitable locations are eating sugar cane, beans and peas.

McNabb is not allowed to harvest the coconuts and the pimentos. Pointing out the injustice of the situation, McNabb complained he could not eat the coconut yet the coconuts planted by the estate throughout his field benefited from his efforts to care for his own plants. McNabb said: "If yuh are a tenant yuh can't reap coconut, banana and pimento. Coconut are on de ground rotting but yuh can't trouble dem.

The case of the pimento is also enlightening in what it reveals about the social basis of the cropping pattern. Pimento, unlike the coconut, is for the most part a naturally distributed plant. The numerous berries of each fruiting tree give rise to many seedlings, making

it like the ackee, guinep, soursop and other very weedy plants. The pimento is one of the trees that the people of East Portland talk about saving by allowing it to grow where it springs up in favorable locations or by collecting the seedlings and transplanting them to a favored spot where they could be protected and allowed to grow. With pimento, this is a risky process for it is difficult to tell the fruiting from the non-fruiting trees and a farmer can never be certain if the care of the seedling is justified until the plant matures. McNabb cared for the pimento trees in his fields and for two season (1972 and 1973) he harvested the fruits. In 1972, the first time he harvested the berries he filled one four pound tin. In 1973, from what he had collected before he was stopped, he filled one tin weighing eight pounds. McNabb thought that in 1973 the estate did not trouble him because the trees were young, now, however, they were bearing and the estate wanted to harvest the crop themselves. "Sake of dat," he said, "when ever me see dem [the wild pimento seedlings] me chop dem down." For McNabb, the pimento tree has gone from a valuable economic crop to a weed. As McNabb himself put it: "Me have plenty young tree but me no care dem again; me no worry wid dem again."

Banana Intercropping

The second type of cropping practiced is banana intercropping. In many respects, it was identical to mixed root cropping, the difference being that there is a greater cultivation of bananas for sale. This is the practice of approximately twenty farmers.

Pure Cropping of Banana

The third type of cropping pattern practiced by tenants is the pure cropping of banana. There are fifteen tenants primarily interested in the commercial cultivation of banana. Four are employed by the estate. While these farmers are primarily interested in the production of banana for commerce, some fields are intercropped where the estate has planted coconut trees. Seven of these farmers own other fields as well as house plots in addition to the land rented from the estate. These tenants regularly employ labor. The banana growers regularly employed by the estate are the more privileged of the agricultural wage-earners and for them, the cultivation of banana is a secondary activity.

One of the worker-farmers to whom I have already referred is the headman of the Hectors River Estate for forty years, Joshua MacFarlane. His principle crop is banana although he also cultivates cocoes, yams, sugar canes and gungo peas. Bananas are pure cropped as well as intercropped with the coconuts of the estate and with

coco and dasheen (Xanthosoma sagittifolium and Colocasia esculenta); yams and gungo peas are planted in the small patches of open areas.

MacFarlane is an interesting man to talk with. A Maroon from Moore Town, he came to Hectors River in 1933 and for forty-four years he has been employed by the Hectors River Estate. In a proverbial expression that gives an excellent introduction to his position in the district, he said, "Those who know can't say and those that don't know can't see." He is fully aware of the fact that he knows but cannot say. He told me in the course of an early interview, however, that he was planning to retire and would, therefore, be free to speak. He does not speak freely now because he wants to leave with "a good record." As he put it, after retiring he wants to be able to say "hello" on the street.

MacFarlane regards his position as an "unpopular task" for he has to carry out the unjust policies of the estate. He dislikes being in the position of having to pay people less than their efforts are worth. In one interview he said "the work that is given is too oppressive and there is no money. The people see you every day and is you they feel giving them a story. The two man that in danger are Grant (the other headman or field supervisor) and myself." MacFarlane said that when Ramdeen became busha or overseer, he would tell Ramdeen when he thought the sum set aside for a particular task

was insufficient. He no longer does this. Now MacFarlane says he does not "argue anymore" and the month before his retirement he intends only to be "obedient and just follow instructions." Speaking in reference to Ramdeen, MacFarlane said: "One man want to profit and don't business 'bout nobody else and that can't work." He describes Ramdeen and those of his relatives who are also employed by the estate as "well looked after." They have good land on the estate close to the road that can be irrigated by pipes. They are also able to raise animals without being "molested." This is not so for others. As MacFarlane put it, "him come and him tell you fi tie the goat here so, to move this one from there because him going to plant banana there and so on." For MacFarlane this means "you still not free for you still subject to instructions." Difficulties experienced by tenants have a particular meaning. They are to MacFarlane

> ...a subtle kind of molesting. The law say if a man is on your land working and for seven years you don't molest him and him don't pay rent, they can own the land. This [referring to the animals of the estate and of the permanently employed workers which it was claimed were destroying the fields of the tenants] can be a subtle way of molesting. Nobody tell me that but I am justthinking.

Mixed Vegetable Cropping

The fourth type of cropping pattern for tenants of Hectors River Estate is commercial cultivation of

vegetables. There are seven farmers for whom vegetables are important. In addition to peas, beans, root crops and bananas, these men also cultivate carrots and tomatoes as well as chochoes (Sechium edule), corns and different varieties of calaloo (Amaranthus spp.). When I began work at Hectors River these men were always identified as "good farmers." Unlike others who only planted bananas "they planted everything."

Three of these seven farmers are brothers: Duke, During and David Faulknor, who came from the parish of Clarendon in the 1930's. David Faulknor said that, during his first ten years in Hectors River, he worked "along with another man" cultivating yams, cassavas, potatoes, cocoes, cabbages, peas, beans, tomatoes and some bananas. In 1940 he was able to rent his own land from the estate where he concentrated his efforts on sweet potatoes and cassavas. As he said: "It was sweet potato put me up." In 1954 and 1955 David Faulknor started to grow bananas and yams and reduced his cultivation of vegetables, peas and beans. When I asked why he planted bananas, he said: "We would like to do a few more things but once we go into the banana we don't have the space." Muriel Thompson (another tenant farmer who was present) said: "I don't know, Brother D., we can't leave out banana; banana is the only thing we have market for." Muriel is one of

those described as a "good farmer" because he grows bananas as well as other crops--cocoes, yams, potatoes and tomatoes. For David Faulknor tomatoes and bananas are the basis of his living. He continues with bananas because, although tomatoes pay more, "it is not regular."

Tree Cropping: Goodwin, a Unique Tenant Cultivator

The fifth type of cropping pattern is practiced by only one tenant, Benny Goodwin. He is unique in being the only tenant to consistently plant and protect fruit trees on rented land. Wise, generous and hard-working, he is always described as "de boss of farming." Claude Afflick, one of his early schoolmates, describes him as "a tough working man." Whenever I asked people of the district about farming, I was always instructed to talk to Benny Goodwin; everyone described him as a "real farmer." It is often said that he is the only one who "study it." In my first trip through the estate with MacFarlane, our arrival at Goodwin's farm found him hard at work. Pointing to different parts of Goodwin's field, MacFarlane said: "If yuh tek him on tomato he has a good idea; in potato, a good idea; he knows about farming." I had frequent contact with Goodwin. We both were members of the Hectors River Community Council. We met during my trips through the estate, and I interviewed him on several occasions both at his home and in his rented field.

Benny Goodwin is a tenant who, MacFarlane said,

has been farming land rented from the estate for over fifty years. He lives with his wife in Hectors River in a house on a very small plot of land on the coastal cliffs overlooking the Caribbean Sea. Exposed as his house and yard are to the northeastern trade winds of Fall and Winter and lacking soil, it is unsuited to cultivation. Most of the backyard overlooking the Caribbean Sea and the larger of the two side yards is used for activities related to maintaining his mules and raising pigs. There are four young coconut trees with blighted fruits along the cliff's edge and in the front yard a small ornamental garden with a few roses. In the larger of the two side yards is a store-shed filled with bananas to feed the pigs. It also contains dung collected from Goodwin's two mules, which are tied in the backyard. The dung is first spread to dry, then stored in the shed and under the house to be used as fertilizer in his field. Goodwin uses dung only from his own mules. When I asked if other farmers also use dung as fertilizer, he said "No, deh don't study deeze things." The backyard also contained a small pig-sty.

Goodwin keeps his seeds in a small backroom of the house. These include sorrel, tomatoes, beans, peas (especially gungo peas and red peas), calaloo and carrots. While showing me his collection of seeds he said: "Come short day when everybody running looking fe

seeds I will have. I save my seeds." He also stores nails and files. He believed this is important and necessary because of ever-increasing shortages and higher prices. In addition to mule dung, the space under the house was also used to store coconut husks.

I often visited Goodwin at his home. On one occasion both MacFarlane and I went to visit. We sat and talked on his veranda for most of the afternoon. I reminded him of his wide reputation for being "de bes farmer...the only real farmer..the farmer who planted everything." He laughed and said: "I use to grow all those things but not on the same scale anymore; it require plenty work. I am old and can't get anyone to help."

During the course of the afternoon's wide-ranging conversation, Goodwin was particularly concerned with the weather. He spoke often of "the drought," the "burning sun," and the "Drying winds." "The sun," he said, "is impeding me right now and we don't have any control over it. We have fe just tek it as we get it." If the sun was bad the prevailing wind was worse, for, as he put it, "it will reach where de sun won't reach." The north-eastern trade wind had other important effects. Goodwin siad: "I get lick de odda day when breeze blow. Banana and plantin are de two frailest ting and yuh have to wait long for dem." This was what Hinton East pointed to in his argument for the necessity of introducing the bread-

fruit tree to Jamaica at the end of the eighteenth century. While we were on the subject of weather, I asked if he thought that (as was generally said) when fruit trees bore heavily it was a sign of hurricanes. He said:

> I want to believe it is true. Dem say dat leap year-last year-de fruit trees bear plenty, but dem didn't bear plenty like dis year. Chocolate bear plenty. Everybody sen soursop bear plenty dis year; it was de talk of de district. Mango dis year bear plenty. I seh dem bear, dem bear, dem bear like spite. I see big breadfruit tree dem bear so much de limb break down. Two sign into it. When fruit bear plenty eida storm or some famine. Dere is someting coming out of dis fruit season (1977) dis year. If it is not hunger it is storm. Someting dis year coming. Every fruit tree bear dis year. Pear, even banana. Someting is coming.

During the conversation, Goodwin expressed his fear about the state of the nation. He was concerned about the mounting violence, the unending shortage of goods, and the ever-rising prices of essential commodities. He spoke of the difficulty of getting files to sharpen his machetes and of the increased price of cutlasses, which not long ago cost fifteen cents and now sold for sixty-five cents.

Benny Goodwin cultivates ten acres on the Hectors River Estate. He is best described as farmer first and tenant second, for to him it is more important "to plant everything" than to be restricted because he is a tenant. What really makes Goodwin unique is he plants and saves

trees. His uniqueness is clearly recognized by other farmers who often told me to talk to Goodwin if I wanted to learn about farming. The advantages of "planting everything" is obvious--there is a wider range of items for household use and for sale. The problem resulting from a tenant "planting everything" is also obvious to tenant farmers though not necessarily to those of us interested in studying their methods of cultivation. The nature of this problem is brought to light in an interview with MacFarlane and the Faulknor brothers.

MacFarlane: Any fruit tree away from paw-pay any member of de staff can go dere [i.e., into any tenant farmer's field] and reap.

Faulknor: Deh go to yuh field with mule, mash it up and nothing no back it. Dis is why we don't plant fruit trees; we can't get no benefit from it. Mr. Benny plant coconut, pimento, pear, oranges and can't reap it; he plant cedar and can't cut; if he cut it he go to jail. Plant coconut and he can't reap it.

MacFarlane: Pimento if he broke it he go to jail.

It is clear that Goodwin lives off the fruits of his labor but his right to do so with regards to particular plants remained uncertain. During the Community Council meeting, individuals complained that they had to steal what they planted; and Goodwin, while we were examining his field, described several confrontations he had over the harvesting of "his" pimento and coconut. I taped

the entire conversation as we walked along. The following comments on coconut reveal both the problem of harvesting the fruits of one's labor as well as the "change" that is expected with the application of the Land Lease program to the Hectors River Estate.

Goodwin: (Pointing to the trees he had planted he said) Yuh see doz big dwarf--see dem deh, see one deh, see one deh, see anoda one deh, and see one down in deh, and some more deh plant in deh--is me plant dem when we was planting de odda...fe we coconut [referring to the Jamaican tall variety], but doz dead out. All of dem dead out. Every coconut yuh see in here now is dwarf.

John: So yuh plant coconut in here too?

Goodwin: In here! Is ninety root of coconut me plant when me come here first. Ninety! The seed big so (showing the size with his hands).

John: And de property don't stop yuh from reaping it?

Goodwin: No yuh couldn't reap dem. De property didn't allow yuh to reap dem.

John: So yuh plant dem and can't reap dem?

Goodwin: Can't reap dem. Yuh haffe steal dem if yuh want a couple fe use: yuh haffe steal dem (laughter). But yuh see, de big God is at de wheel spinning and nonbody pon de wheel. Hectors River nonbody pon deh; Jamaica nonbody pon deh; and a no me and yuh a spin it. A him a spin it. And when de number come wha fe happen mus happen. Yuh see de number come now [referring to the

> Land Lease project], yuh see de number come now. Meek dem stop me nuh, meek dem stop me.

As we saw with McNabb and others, coconut and pimento are the two crops that tenants are prevented from reaping. Goodwin protects the seedlings of pimento trees which grow wild in his field. When I asked if he had difficulty collecting the crop he related the following story of his encounter with Burger, one of the two rangers of the estate.

John: And yuh plant pimento too?

Goodwin: Wha! Massi!

Maga: Yuh no reap nothing before though?

Goodwin: Reap wha?

Maga: Pimento.

Goodwin: Fe years. Nuff nuff years. All de property a run jostle wid me fe come bruck dem. But me got better brain more dan dem. All me deh ya with me mule load of pimento out de me two hampa black, Buckley the ranger man come deh, "Mr. Benny yuh a reap pimento?" I say yes! (me a man no fraid or fear yuh know; me a dangerous worker). And him a go round, him a go round and da look, look, look pon dem. And dat was one day. About three or four days after dat the two hampa black again and me deh pon top of de mule. And when me catch up weh de car deh, right whe de car deh, me meet Burger. Burger him come now (a de pimento dem a watch yuh know), hear Burger to me, "But Mr. Benny, yuh a reap pimento." And me seh yes, but (hear the lie me go tell him now), me seh but eh

> me leave pimento tree here Saturday (because me no come a bush Sunday day) and when me come Monday morning me see man bruck pimento all "bout all 'bout. But no man no bruck none, a lie me a tell (laughter). All right. Him seh...here him to me (now yuh know pimento carry strong smell, so him smell it. Dat time the two hampa load and me cover dem down with plastic). Hear him to me "All now yuh have pimento in deh." Me seh yes! See me two hampa black ya. Me two hampa black because me no care a me plant dem. See pimento pon de tree deh; see pimento deh. From now till next week me a bruck dem.

After Goodwin finished his story I asked if he was still having trouble reaping pimento. The conversation again points to the impact that the Land Lease project is having:

John: Dem still giving yuh trouble fe reap pimento?

Goodwin: No. Dem na give no trouble since Land Lease business come tru. Dem stop. See pimento deh [pointing to a pimento seedling].

Maga: Before de Land Lease come tru...

Goodwin: Oh Lord! Dem meek all kind of trouble, trouble, trouble, trouble.

Goodwin recognizes his own unique position. This is evident in his assessment of what Land Lease would mean for him and for other tenants.

> Out of all de tenants of Hectors River, if Land Lease come tru, no man would benefit like me because I have planted everyting--pimento, chocolate, and so on.

Goodwin compares himself to other tenants in a way that reveals his conception of his uniqueness as well as their folly. Referring to the cultivation of trees he said:

> I don't tink two tenants have planted chocolate away from me and it is de only tea I drink morning, noon, and night. Dem don't plant anyting except cash crop and banana because dem seh is backra place. One man who was talking about me now him building grass on property and have nuting to reap.

I asked Goodwin why he plants and protects trees while other tenants do not. He said he planted and protected trees because that was the wise and generous thing to do. "Some people," he said, "seh dat dem not going to plant trees because somebody else will reap, but dis is a selfish attitude." Goodwin's philosophy is to cultivate whatever plants are available. Although he recognizes that he will encounter difficulties in harvesting the fruits of trees he has cared for, Goodwin accepts this situation with the justification that "one plant and anoda reap; nuff a wha we eat a no me and yuh plant it." While Goodwin is willing to plant trees recognizing that others might harvest, it is clear that he does in fact benefit from his trees. In conversation, he always emphasizes the fact that he and his wife were now "living off" trees he had planted in his middle age.

A further insight into Goodwin's sense of generosity that is an important aspect of his approach

to farming is a humorous incident which occurred as we were examining calaloo plants in his field damaged by worms:

Goodwin: See calaloo and all dem ting deh man. But de ting dem cutting dem down. See de heap ya, no calaloo. Worm a cut dem down. Come we go over dis side.

Maga: Yes, yuh have fe plant fe de birds and all dem tings man...

Goodwin: Which girls!

Maga: Me no seh girls! Me seh birds...

Goodwin: Oh!

Maga: ...worm an all dem ting.

Goodwin: Yes. I agree. I agree. I agree to all dat.

Maga: [Speaking to me said] now-an-again yuh have fe give de girls dem a little; right padi?

John: So yuh haffe plant fe de worm and everyting too.

Goodwin: Yes sir, de strong haffe help de weak.

There are others of Goodwin's generation who seem to share his generous philosophy. Describing one woman, I made the following entry into my notebook:

> Her philosophy is you must plant and that she planted everyday even though she soon gone. She said she saw Mr. Davis with a Bissy tree and begged him one. He gave her and she planted it. After, when she saw him, his tree had come to nothing and her tree bears bountifully. People use to pass and ask and she would give them

> away; not anymore. Now they are worth fifty cents per pound and last week she sold twelve pounds. She told the story about bissy to illustrate that you must give plants--it is better; for when yours die, "de one you give wey will be producing and still spreading around." She was a lively, humourous person who said she was not "worried about life." "The generation of today," she said, "every-ting is money, money, money--dem talk thousands!"

One final indication of an element of generosity in rural thinking in relation to plants can be offered here. In the course of discussing the stealing of fruit from trees, one tenant expressed the opinion that no harm was done as "de root was still there."

The plants cultivated by Goodwin are presented below:

TREES	No.	OTHER PLANTS
banana	100+	pineapple (cheese pine,
plantain	800+	sugar loaf, cowboy)
avocado	2	corn
cocoa	100+	pepper
pimento	15	sugar cane (white, water
Jew	6	bucket or strip cane,
coconut	20	bamboo cane)
calabash	3	yam
pawpaw	4	calaloo
ackee	1	coco
naseberry	1	dasheen
lime	1	pumpkin
grapefruit	2	carrot
mango	3	sweet potato
soursop	3	cassava
sweetsop	4	
tangerine	1	

Table 13

Plants Cultivated in Goodwin's Field[2]

Goodwin's method of mixed-form intercropping is best described as scattered tree cropping. Trees are spaced so that although individually they provide shade, their crowns do not join to form a canopy. This permits the cultivation at ground level of shade-tolerant plants. Plants requiring more sunlight are planted in small patches free of shade. In some cases trees are deliberately thinned to permit light to penetrate to the ground level. As we walked through his field, Goodwin, pointing to the cocoa trees said:

> See de chocolate deh. Plenty, plenty chocolate. Is me kill dem out yuh know. Still all a dat, when de chocolate dem meck ready in here and I pick off three hundred pods yuh know, is nuting yuh know! One time! At this point I asked Goodwin if he had planted more than a hundred chocolate trees to which he responded: More dan dat. But no see how me kill dem and space dem. You see me cultivate de place with odda else tings and if yuh leave de chocolate thick it kills de rest of tings.

Not only are some chocolate trees removed to allow the cultivation of herbaceous plants, other trees are pruned for similar reasons. Goodwin has three mango trees. Two are common mangoes and one is an East Indian variety often described as a "special mango." When we came to the East Indian tree, the following conversation took place:

> Goodwin: Dis is a special mango yuh know.

John: What kind is it?

Goodwin: Dem big long St. Julian or East Indian. De big long one.

John: Oh! East Indian.

Goodwin: Yes. It bear, it bear, De odda day me pick a whole heap off of it.

John: And is yuh limb it like dat?

Goodwin: Yes is me limb it. Yuh see, last year me plant yam pon it and lean stick. So because it shady de place bad me cut off de lower limb dem. But me no even waan see a man cut one leaf off a wha lef de now, de mango, see it de.

In addition to the East Indian mango tree, pimento trees, pear trees and even abandoned banana trees are used as center posts for supporting yam sticks. While the East Indian mango tree is deliberately pruned this is not the case with the pimento, which is not a wide-spreading tree although it does cast a dense shade. Moreover, the harvesting of the fruits by removing the bearing branches is itself a form of pruning. Goodwin describes one of his "best bearing pimento trees:"

> Now, I tell yuh a ting now. Dis is one of de best bearing pimento tree I have in here but as de man dem [the estate] was going on so bad last year, I mean inna de pimento season gone when we were breaking pimento, yes last year, I chop dem bad yuh see. I chop dem bad. Oddawise yuh would see the whole place here cover. Look yuh can see the size of the limb dem dat cut off.

The avocadoes or pears are relatively tall trees which, when the lower branches are pruned permit a fair amount of sunlight to reach the ground.

Goodwin was proud of the yams growing around--although at some distance from--the bases of trees. When we came to one of the pimento trees used as a yam pole, he remarked:

> Come here padi meck me show you someting now how we cultivate yam. Dat is yam plant right round de whole pimento tree yuh know. Look pon de vine dem, dem mad. Look over deh pon dat pimento tree again. Yuh see, yuh see how we plant dem--one in, one out; one in, one out, right round, right round. As simple as yuh see it here now is eighty-three yam head plant here. One, two, three, four, five, [pointing to the different heads] right round is eighty-three. So don't believe is two yam. When yuh go fe go dig dis here yam off of dis tree yuh dig till yuh mouth hot yuh. Yuh can't done it; yuh can't done it one time.

The sight of yams growing on banana trees is curious. Edwards (1961:236) says it is generally agreed that yams should not be intercropped with bananas as they do not thrive in shade and the vines interfere with the bananas especially when the yams are being harvested. I asked Goodwin why he allowed the yam vines to grow over the bananas. His explanation is revealing:

> Padi, you see dem yam, when we building [clearing the land] we could kill dem. Is St. Vincent dem. But yuh wouldn't like fe know some breed a yam bear inna deh; some yam in deh! Yuh no see me lef dem pon de banana tree.

The yams were wild from past cultivation and were being saved. The yams were planted first then Goodwin decided to use the land to grow bananas.

Yams are planted in two ways. Some grow in hills between widely spaced banana and other fruit trees. Others grow in banks around the base of trees which serve as supports for yam poles leaned against their trunks. Also growing in the partial shade of banana, cocoa and other trees are dasheen, coco, sorrel (Hibiscus sabdariffa) and pineapple. Pineapples grow in densely clustered patches which in one case included thirty plants. When we came to the pineapples Goodwin said, "Some someting come out de you see!" I asked if he had deliberately planted the pineapples in densely clustered patches.

> No. Is only one sucker plant. But like how yuh see we reap de pine ya now, de suckers dem dat come off drop on the ground and still grow and spread. Dats de way dem spread.

In this description of his pineapple patch, Goodwin gives the impression that from one sucker he planted all the others had grown without any additional effort on his part. From further conversation, however, it became clear that two things are happening. After harvesting the pineapples Goodwin plants the suckers and thus enlarges the size of the patch. In addition, there are also suckers which are able to establish themselves after falling from the parent plant. When we came to examine

another of the pineapple patches (the chees pine variety) Goodwin said:

> Padi, is one bed of pine spread from inna dat middle and tek up. You see like dese suckers now, (you have to be wise in cultivation you know), you see dis sucker, it stop this one [pointing to the parent plant]. This is de pine dat coming now to bear de coming season. But if yuh keep dis pointing to the sucker pon deh, it impede dis [pointing to the parent plant] because it still feeding dis [the sucker] yuh see. A slip it slip me yuh know [meaning he had not noticed it before]. Very well. See anoda one ya. Me a come to oonoo bredda, me a come.

By "me a come to oonoo bredda, me a come" Goodwin meant he would be back to remove the newly discovered suckers and plant them. At this point I asked him again if this was the way in which the pineapple patch was established. He said yes, but that was not all. He plants some suckers but the others "just grow like dat." Pointing to a sucker that had fallen from the parent plant he said:

> Yuh see like how dat one drop deh now, it grow same place deh as it touch de earth yuh know and das why dem spread and come so thick.

Though Goodwin said only dasheen, coco and pineapple do well shaded, other plants in his field grew in partial shade. These were corn, pumpkin and calaloo. The corn had been planted as a carry crop for bananas. While the bananas were young, corn was interplanted to provide a crop while waiting for the bananas

to fruit. Most of the corn crop had been collected. Those growing in the shade of bananas were the last of the crop. When I asked if the pumpkin did well in the shade, Goodwin said no. "Pumpkin is a ting whe don't like shade and it don't like too much water." He let it grow, however, and had gathered a few small fruits. The calaloo plants and sorrel like the St. Vincent yams were plants that continued to grow in the field from past cultivation. When I asked if the calaloo did well in the shade he said:

> Well, not too well yuh know. Is because it shady why yuh see dem look so to. If it didn't shady so much deh would be big and fat, for dem a fat and big breed of calaloo when dem grow yuh know.

Approximately a third of Goodwin's field is taken up with bananas and plantains. Of the bananas, lacatan is the chief variety cultivated for sale. Although banana is the chief commercial crop for all classes of cultivators, Goodwin is ambivalent about its profitability. Vegetables he believes are a much better investment: they paid well, can be harvested more quickly and are not as susceptible to wind destruction. Goodwin often said he was becoming more and more disappointed with the cultivation of banana, particularly because of Gold Tip disease and of the heavy rejection of fruits brought by subsistence cultivators to the banana-boxing plant. He told me: "Me no interested in banana right now teacher and

plenty man disgusted inna it because of what happening now." Whereas some of the estates in eastern Jamaica are experimenting with plastic bags to protect the developing bunches of fruits, subsistence and small commercial cultivators frequently have their fruits rejected because of "cosmetic" damages such as scars, bruises and stains. Although Goodwin questions the value of growing bananas commercially, David Faulknor expresses the opinion of many farmers when he said he could not "leave out banana" because it is the only crop for which there is a "regular market." Nevertheless, Goodwin is concerned that it is becoming more difficult to meet the requirements of this market and especially with the toll taken by Gold Tip disease. In explaining his choice of plants for cultivation, Goodwin said:

> Go Manchioneal [where the boxing plant was located some four miles from Hectors River] see wha dem a do. This week worse. Vegetables pay twice as much. Me no interested inna banana right now teacher and plenty man disgusted inna it because of wha happening now [rejection at boxing plant]. Everyting pay better dan banana. Banana only feed de big belly man dem. Hand touch banana and dem tek out kerchief wipe dem han off.

Goodwin expressed a similar opinion when we first toured his field and came to the area that was primarily pure cropped in banana:

> Well de whole a dem ya place ya now padi me a cut dem out. Me a go sow...leggo carrot and salad [tomato] because is first class land and de banana dem not coming to nuting. Dem wha me a keep dem fa.

The heavy rejection of bananas at the boxing plant, their susceptibility to destruction and the extent to which they were being destroyed by Gold Tip disease all contributed to Goodwin's reluctance to plant more bananas. As we walked through the area that was pure cropped in bananas, he pointed to a tree whose leaves were shriveled and deformed and whose fruits were blackened and rotted.

> Se it ya so. Das what we call de Gold Tip. See it deh. See it deh. The bunch eat off clean. Right down, right down, right down. Das de Gold Tip. All me can do is just cut it down tek off de couple good seed carry it go feed me hog. De balance no good.

Goodwin also cultivates in pure stands what he estimates to be "near eight hundred roots" of plantain. These are of three varieties which he identifies as hog plantain, mackerel plantain and horse plantain. The plantains for which there is a very good price and a steady demand are cultivated primarily for sale. Like bananas, plantain are highly susceptible to damage and destruction by wind.

Other cultivated trees fall into three categories. The majority, including the tangerine, naseberry, coconut, avocado, ackee and lime, are planted. The ackee, common

mango, June plum and pimento are saved. Some of the June plum trees and the pimento trees are also transplanted to favorable locations.

The pimento is, of course, one of the most important economic plants that is saved. This we have already seen in the case of McNabb. When I pointed to the many pimento seedlings to be seen, Goodwin said:

> Yes, is pimento. Young pimento. Deeze now come off of doze big trees. Se de big trees dem deh. De birds dem eat it and carry wey seed all down de road deh. Anywhere yuh go inna woodland down deh yuh see pimento suckers. A de bird dem eat it and carry de seed and drop dem in deh. All over dem place deh, anywhere yuh turn.

Like some of the pimentoes, the ackee tree is also saved. When we came to this tree, Goodwin said:

> Well dat ackee tree is not me plant it. We come meet a little young sucker and I never destroy doze sort of a ting. See what it turn out to be. Sometime when yuh come and see ackee pon deh.

I asked Goodwin if many seedlings sprang up under the ackee. His response was: "sometimes you see dem, but you know as dem under de modda me no save dem. When we building or weeding we just chop dem out while de big modda is over dem." In spite of what he said about "never destroying those sort of a ting," it is clear that Goodwin had all the ackee trees he wanted, for he could easily have transplanted the young seedlings as he did those of the Jew plum.

The Jew plum tree came up many times in our discussion as Goodwin pointed out the trees and explained how they grew and the nature of his cultivation. Jew plum trees are saved and transplanted (when they spring up in unfavorable locations). Goodwin transplanted the seedlings not only to provide them with sufficient space for good growth, but also to facilitate collecting the fruits. The Jew plum is a difficult and dangerous tree to climb. To overcome the problem of harvesting the fruits in good condition, Goodwin collected seedlings and planted them in areas where there was "good earth" to prevent the fruits from being damaged when they ripened and fell.

> I never see a ting dem [Jew plum] grow fast so. No plant ever grow fast so. No plant ever grow fast as Jew plum. And yuh have to be sensible with doze tings yuh know. If yuh plant it in a stony place yuh don't get none of de Jew plum. Every one drop stone damage dem. Dats why we plant it inna pure dirt place, cause if after this tree get big and one hundred yuh fee pick off deh, yuh don't lose one. Dem just drop inna de dirt. But if a stone! You tink a fool fool man dis!

Collecting the ripe fruits on the ground is the chief way in which Goodwin harvests his Jew plum crop.

Initially Goodwin gave the impression (as with the cheese pine pineapple) that all the Jew plum trees were only saved. Wherever the seedlings spring up in favorable locations they are cared for.

Goodwin: Speaking to Maga and pointing to a young seedling he asked : Is what dis padi?

Maga: Plum.

Goodwin: Jew plum. Alright. Well all tru dem place here have dem. Jew plum. After a time me have Jew plum all about deeze place God spare we life.

The second discussion of Jew plum was in reference to a particular tree. Here, Goodwin's comments indicate that he also transplanted Jew plum seedlings.

That Goodwin saved and transplanted Jew plum seedlings is an interesting point, especially when compared to his reflections on the seedlings of the ackee tree. When I asked Goodwin if he saved ackee seedlings he said no; as these grew "under de modda" they are destroyed. In the same way in which Goodwin transplanted Jew plum seedlings he could also have transplanted ackee seedlings. I suspect that the ackee seedlings are destroyed because he had as many ackee trees as he wanted. The ackee seedlings are now only weeds. Goodwin's attitude toward the value of the different varieties of the same species reveals a similar selection of seedlings where some are saved and some are destroyed. The East Indian mango like the Bombay, Julie and hayden is regarded as one of the "special mangoes" of Jamaica and the fruits of these mangos have a good commercial value. The East Indian tree Goodwin planted; the common mango tree he

had saved. When I pointed to the common mango seedlings in his field, he said: "Cho, dem de a old common mango yuh sa. Is common mango de two tree de [pointing to the two mature trees]. Is de odda day when mango was in de season dem mango de drop pon de." Like the seedlings of the ackee and most of the seedlings of the Jew plum and pimento, the seedlings of the common mango are weeds to be destroyed.

In mixed-form intercropping, intercropping which combines different forms of growing plants, the need to control trees to allow sufficient light for the cultivation of herbaceous plants results in a tendency for trees to be scattered and the need to maintain some open areas for plants requiring direct sunlight. Cassava is pure cropped in open areas and vegetables are intercropped in open areas. Areas without shade are also used as nurseries for germinating seedlings of carrots, sorrels and calaloo plants.

> The reason why dis little piece of land leave is because I did want to plant some vegetables so when I was planting plantain I leave out dis little piece of place, and the Land Lease woman come ya come tell me sey (when I start to build it out some time ago to plant the cassava) come tell me seh me no fe build it out. I get...bring law busha yuh se. Me dis meck she know seh, well, is a reason why dis little place leave is me field whe me as paying the property fa. But through I wanted to plant small crop like vegetables and so I didn't plant no plantain in deh cause yuh can't vegetable under de plantain and so

> yuh know yuh want open place. Well since I didn't bodda wid the vegetables, de odda day I just build it out and plant cassava.

In the early part of our tour through his field, I had asked Goodwin specifically which herbaceous plants grew well in the partial shade of the trees (including bananas, plantains, pawpaws). When I asked about the cassava he said, "No, no, no, nc, no, no. Only de coco; only de coco. Yes sir [referring to the cassava], full light it want."

In this chapter I have tried to show that irrespective of their actual commercial and other value, tenants are reluctant to cultivate trees. Because of their form of control over land growing trees is perceived as risky business. I have dealt at length with Goodwin's situation because it shows us the full use that can be made of land when cultivation is not restricted by tenancy. Goodwin is unique because, unlike other tenants, he "plants everything." He is described in the district as a "real farmer." He does not let his position as a tenant prevent him from engaging in the most productive farming practices and for Goodwin this definitely included the planting, saving and transplanting of trees. Unlike McNabb who kills pimento seedlings because he is not allowed to harvest the fruits of the mature trees which he has cared for, Goodwin is determined to take a different position. He is determined to farm productively;

he is willing to grow trees despite the conflict with the estate that results from his efforts to harvest the fruits of his own labor. Goodwin, however, said he is not worried because he had "better brains more dan dem." What is unique about Goodwin is that in growing trees, he cultivates rented land in the way land which is owned is traditionally cultivated in Jamaica. He cultivated backra (European or White people's) land as if it were his own. In the next chapter I deal with the cropping practices of small farmers who own the land they cultivate.

FOOTNOTES

Chapter 6

1. Jamaica has two major political parties: the People's National Party and the Jamaica Labor Party. Both grew out of the "unrest" of the 1930's and developed in the years following the Second World War. The Jamaica Labor Party won the first two elections after independence in 1962 and 1966. The People's National Party won the next two in 1972 and 1976.

2. The numbers indicate the number of trees for each speices present in Goodwin's field. For banana, plantain and cocoa, the figures presented are Goodwin's estimates.

Chapter 7

PROPRIETORS

Proprietors

In this chapter I examine the cropping practices of proprietory cultivators. Because these small farmers have permanent and secure control over the land they cultivate, they, unlike most tenants, grow trees which are planted as well as wild seedlings which are saved in favorable locations and transplanted when they spring up in unfavorable locations. For small proprietors, the cultivation of trees not only provides products for household use and sale, they are also an expression of planning for a lifetime and for succeeding generations and a symbol of a free, dignified and independent way of life.

For small proprietors in the hill districts of Belle Castle and Scots Run, the trees in their dwelling spaces did not form a continuous canopy. It was broken in places because of the deliberate efforts of farmers to maintain open areas. In the wet northeastern region of the island, open areas are a product of continuous labor to remove vegetation or are areas of intense social activities where plants cannot become established. In Chapter 5 I have considered the importance of trees to Jamaicans: now, as an aspect of explaining the cropping practices of proprietors, I will also examine the reasons

for farmers creating open spaces and their importance in rural social life.

The origin of small proprietors in eastern Portland can be traced to the activities of Baptist and Quaker missionaries beginning in the last half of the nineteenth century and to the efforts of politicians in the period following the second World War. In all cases, large estates were acquired and their land divided and sold to small farmers. The Baptist missionaries came to Portland in 1831, the Quakers in 1881, the Seventh Day Adventists between 1914 and 1919, and the City Missiony in 1926. In the late 1960's and early 1970's the Seventh Day Church of God, the New Testament Church of God and the Pentacostal Church arrived. Only the Quakers and the Baptists, however, have contributed significantly to the creation of small proprietors and they are the two most important denominations in the Portland districts.

Since 1943, the Jamaican Department of Statistics has adopted three levels for reporting census data for the island. These are the parish, the parliamentary constituency and the "enumeration districts" are the smallest "area units" for which the Department of Statistics provides population data.[1] The Census (1975: 100-101) presents the following details on population and household for Hectors River, Belle Castle and Scots Run.

DISTRICTS	ENUMERATED DISTRICTS	MALE	FEMALE	TOTAL	NUMBER HOUSEHOLDS
H. River	Original district	156	193	349	62
	Compound	102	120	222	53
	Happy Grove	78	92	170	52
Belle Castle	Belle Castle	165	164	329	80
Scots Run	Scots Run	240	227	467	105
TOTAL.....		741	796	1,537	352

Table 14

1973 Census: Hectors River, Belle Castle and Scots Run. Source: Dept. of Statistics (1975).

When I first came to Hectors River, my initial encounter was with individuals identified by 'proper' names. As I got to know these named individuals and their genealogical histories, I was increasingly able to understand their relationship to each other as these relationships were determined by marriage and descent. Marriage here identifies both legal and common-law unions and descent refers to the link between parents and offspring in the context of marriage and outside of this context.

I collected genealogical data related to seventy-eight distinct 'family names' that were important in Hectors River, Belle Castle, Scots Run, and, to a limited

extent, Haining. In constructing these genealogies, I also recorded the geographical location of relatives. This was to some extent inevitable; in the course of discussing relationships of marriage and descent, many informants using the family name would say, for example, 'there is a Jones in Belle Castle, two in Haining and one in Hectors River.' This process of identifying where relatives are located is not restricted to those present in the districts but included as well those in Kingston, in other parishes and abroad.

From informants' identification of the location of their relatives, we have a sense of the link established between Portland, other parishes and the world. Some families reported relatives in Panama, Central America and Cuba. Many had relatives in England, Canada and the United States.

The Statistical Yearbook of Jamaica (1973:124-125) reports that the period 1881 to 1921 was one of external migration: "Net outward movements amounted to 24,800 during 1881-91, to 43,900 during 1891-1911 and reached their zenith during the decade 1911-1921, when the net outflow amounted to 77,100." I stated in Chapter 1 that during this period, Portland, based on the banana trade, became one of the island's most prosperous parishes. This might well account for what appears to be a limited migration of Portlanders to Panama beginning in the 1880's

and to Central America and Cuba in the early twentieth century. Cumper (1957:270) writes:

> Between 1880 and 1911 the area under cultivation in the island increased from 108,000 acres to 273,000 acres, the number of holdings between 5 and 50 acres doubling even between 1880 and 1902. The cultivated area increased most markedly in the banana parishes of Portland and St. Mary--from 10,000 acres in 1880 to 68,000 acres in 1911. The population of these parishes increased correspondingly, doubling itself between 1871 and 1911 while the population of the whole island increased by 60 percent.

From the 1930's, Portland entered a steady decline from which it has never fully recovered. Precautionary efforts to prevent Panama disease was given up as hopeless and in many places the cultivation of the gros michel banana was abandoned. The United Fruit Company reduced its operations; estates were subdivided and sold to small cultivators; Titchfield Hotel, the symbol of the island's earliest tourist industry, was demolished; wharves were closed; and unemployment increased. After the Second World War, there was some improvement in living standards. A modern hospital, a cinema and offices for the Public Works Department were built in Port Antonio.

The banana trade made a limited recovery following the 1944 hurricane and tourism was revived, although Montego Bay in the northwest became the center of the island's tourist industry. Some employment was provided by the Public Works Department in its swamp reclamation

and road building and maintenance. On a whole, however, Port Antonio and the parish of Portland were never to regain the pre-eminence they enjoyed at the turn of the century. Cumper (1960:403-407) indicates that there has been a significant movement of people from Portland to other parishes and abroad after the Second World War.

> In 1943...the most important flows of migration were toward Kingston and St. Andrew, either from the east (St. Thomas), from the north (Portland, St. Mary, St. Ann), or from the west (Westmoreland, St. Elizabeth, Manchester, Clarendon, St. Catherine)... Kingston, St. Andrew, and St. James still attract young people from other parishes, but St. Thomas and Portland are, if anything, below the average in their power to retain their young men, while St. Elizabeth, formerly above the average for the rural parishes, is now the heaviest loser from migration... all the parishes have been sources of overseas migration, and the populations of Kingston and St. Andrew have contributed less and the populations of Portland, Hanover, and St. Elizabeth more than the average to the stream of overseas migration.

Belle Castle

Overlooking the Caribbean Sea, the district of Belle Castle is located on the lower slopes of the John Crow Mountains, approximately fifty miles northeast of Kingston.[2] From Belle Castle's lookout where the Baptists have built a church, rectory and primary school, one sees Happy Grove's campus to the north and Hectors River district and the Hectors River Estate to the east (see map 1, p. 22).

Inez Knibb Sibley (1965:55), whose mother was the granddaughter of the famous Baptist missionary William Knibb (and who had lived at Belle Castle where her father, the Reverend William Peto Sibley, was pastor from 1891 to 1918) writes that in 1831 the Reverend Joseph Burton, the first of Belle Castle's pastors, acquired the land (then part of a coffee estate) from a Mr. Nugent, a wealthy ship owner, who used the plot on the hill as a military post and lookout. This was the beginning of Baptist history in Portland.

Belle Castle Baptist Church was the first to be established in Portland. The work of the Baptists started in Kingston at the end of the eighteenth century. George Lisle came to Jamaica in 1782 from Virginia to escape efforts to re-enslave him after the death of his owner. In 1783, Lisle (ordained in 1775) established Jamaica's first Baptist Church in Kingston. The island's second Baptist Church was established in 1791 by Moses Baker at Crooked Spring in the parish of St. James. Fleeing slavery in America, Baker came to Jamaica through the assistance of George Lisle.

The second Baptist Church was established in St. James because of G. Lascelles Winn, a Quaker and the owner of the Adelphi estate in St. James. In 1786, Winn bought Africans in Kingston, some of whom were members of

George Lisle's church. They complained of the absence of religious instructions where they were being taken and Winn invited Baker to go back to St. James with him.

To extend their efforts in Jamaica, George Lisle and Moses Baker began writing to John Ryland, then President of Bristol Baptist College in England. They sought his assistance and urged him to send missionaries to Jamaica to further the work they had started. Answering their appeals, "Dr. Ryland finally wrote that one of his students, the Reverend John Rowe, was answering the call to Jamaica. Rowe, along with his wife, arrived in Montego Bay on the 23rd day of February, 1814, thereby forging a link between English and Jamaican Baptists which remains strong until the present day" (Sibley 1965:3). With the arrival of Rowe and other missionaries that followed, Baptist Churches were established in St. James in 1814, St. Catherine in 1819, St. Mary in 1824, St. Andrew in 1827, Westmoreland in 1826, Hanover in 1827-28, St. Thomas in 1828, St. Ann in 1829-30, Portland in 1831 and St. Elizabeth and Manchester in 1840. During this time, the Baptists became firmly established on the island and played an important part in the creation of small proprietory cultivators.

In July of 1838, Reverend James Mursell Phillippo established the first free village in the hills above Spanish Town in the parish of St. Catherine. It was

named Sligoville after the Marquis of Sligo then Governor of the island. This was the beginning of many free villages created by the Baptists in Jamaica (Paget 1956, Mintz 1958, Sibley 1965). Other nonconformist missionaries, land speculators and liberal planters also contributed to the emergence of small proprietory cultivators by making land available to the free Africans.

In eastern Portland (then known as St. Thomas in the East), Hall (1959:25) indicates that by 1840, "... new settlements were growing up at Spring Mount, Amity Valley, Elmwood, Pigeon Hill, Batchelor's Hall, Stoake's Hall, Belle Castle, Happy Grove, and elsewhere." In a dispatch to Lord John Russell in December of 1840, Sir Charles Metcalfe (who was Governor from 1839 to 1842) offered a table on the following page indicating the growth of "free holders" in Jamaica between 1838 and 1840.[3]

Although efforts were made to start a church at Belle Castle in 1831, they did not fully succeed until 1853. The Baptists during the first half of the nineteenth century were opposed by the planters and the Jamaica Assembly which sought in various ways to persecute them and to hinder the progress of their efforts. In 1802 the Jamaica Assembly passed a law requiring a license to preach. Persons found guilty of unauthorized preaching to African Jamaicans were subject to imprisonment with

	1838	1840
Saint Catherine	48	80
Saint Mary	72	278
Saint Dorothy	86	140
Saint John	7	26
Saint Ann	178	598
Manchester	109	585
Vere	90	490
Clarendon	134	1,075
St. Thomas in the Vale	131	592
Portland	96	345
Saint George	111	228
St. Thomas in the East	70	249
Saint David	35	95
Saint Andrew	166	362
Port Royal	15	38
Trelawny	71	406
Saint James	94	382
Hanover	197	239
Westmoreland	258	795
Saint Elizabeth	146	916
Total.....	2,014	7,848
Increase ...		5,834

Table 15

Growth of "free holders" between 1838 and 1840.
Metcalfe cited in Paget (1956:18).

hard labor. When rebellion broke out in St. James in December of 1831 for which Samuel Sharpe, a Baptist deacon was hanged on May 23, 1832, the planters and the Assembly blamed the missionaries, particularly the Baptists. Sibley (1965:8) writes:

> Martial law was proclaimed on 31st December, 1831, and the island population was put under military rule. Even Baptist ministers were ordered to join up and be on guard. Soon after, William Knibb and Francis Gardener were arrested on suspicion of participating in the insurrection, and later, Thomas Burchell, arriving from furlough in England, was arrested on board ship and not allowed to land. All these missionaries were treated with spite and calumny and were threatened with death.

While charges against these men were dropped, the persecution of nonconformist missionaries continued. The 1802 law made it difficult for missionaries to operate. Wright (1973:25) states:

> In due course, this law was disallowed by the Crown, but not before a Methodist missionary duly licensed by the magistrates in Kingston had been convicted of preaching illegally in another parish and sent to prison. The case became a precedent, and thereafter in practice the sectarians remained at the mercy of the Justices of the Peace in each parish, slave-owners to a man, who took it upon themselves to decide upon the validity of a minister's credentials and to grant or withhold permission to preach.

This was the situation when the Baptists sought to establish themselves in Portland beginning with Belle Castle Church. In 1842, Reverend Joshua Tinson was denied

a license to preach at Manchioneal which is approximately five miles from Belle Castle. Tinson came to Jamaica from England in 1822 as a missionary. In 1824 he began one of the earliest efforts in Jamaica to educate the children of merchants and professionals who constituted "the free people of color." Following his failure to secure a license to preach at Manchioneal in 1842, Tinson became the first President of Calabar Theological College when it was dedicated on the sixth of October 1843.

Efforts to build a church at Belle Castle began in 1831 with the Reverend Joseph Burton of Kingston. They were hindered when his successor the Reverend John Kingdon was denied a license to preach. The Baptists in Belle Castle were never fully successful until 1853 when Reverend H.B. Harris, a former student of Calabar College, took charge.

The oldest families of Belle Castle date from the 1850's and the post-emancipation settlement of the island. These families include the Nugents, Percys, Lindseys, Leslies, Afflicks, Lawrences, Fullers, Clarkes, Sylers, Grants, Ledwidges and Plowrights.

To understand the history of the Belle Castle district, it is also important to consider families that formerly existed although they had no representatives there when this research was being conducted. These include the Bowens who came to Belle Castle in 1890 from the parish

of St. James. The Bowens are mentioned here because Samuel Bowen, while Headmaster of Belle Castle Primary School, taught one of the most accomplished generations of students from the surrounding districts. Among them were Alber Chance, who became a doctor, and Walter Hoffman, the first native Headmaster of Happy Grove whose persistent efforts were responsible for the survival and growth of Happy Grove during the difficult years of the depression. Also among Bowne's early students was F.M. Jones, whose family today is one of the largest landowners in eastern Portland and neighboring St. Thomas. Members of this family have been active in national and local politics, in agricultural and commodity associations, education, religion and the arts. Many children of traditional families such as the Afflicks, Nugents, Reids and Holgates were taught by Samuel Bowen.

Quakers and Small Proprietory Cultivators

When Evi Sharpless, who established Seaside Friends Church, came to Jamaica in 1881 as a Quaker missionary from the Iowa Yearly Meeting, this was not the beginning of Quakers on the island but a revival. The history of Quakers in Jamaica takes us back to the early years of the island as a British colony. William Penn, the founder and leader of the Quaker Community in Pennsylvania, was the son of Admiral Penn who played a decisive part in the capture of Jamaica from the Spanish in 1665.

Eric Williams (1944:13) indicates that "In 1661 Quakers [in England] refusing to take the oath for the third time were to be transported." Augier et al (1969:61) points out that in 1665 many were transported to Barbados, Jamaica and Nevis. In 1671, George Fox, the founder of Quakerism visited Barbados and Jamaica. By the end of the seventeenth century there was a thriving Quaker community primarily concentrated in Port Royal which as we saw in Chapter 2, was Jamaica's most important town at that time. Dunn (1972:184-185) writes:

> Port Royal was no ethnic melting pot, but by the standards of the day it was a haven for the persecuted. Most of the Quakers on the island lived here, and even the Quaker hagiographers admitted that they were relatively undisturbed. John Taylor was startled to discover in 1688 that five religious denominations worshipped openly in the town: the Anglicans at St. Paul's Church, the Presbyterians and Quakers at their respective meeting houses, the Catholics at their chapel, and the Jews at their synagogue.
>
> How did this incongrous medley of buccaneers, soldiers, merchants, whores, ... [Africans], craftsmen, Jews, planters, and Quakers manage to live together?

When Port Royal was destroyed by earthquake in 1692, Dunn (1972:186) says, "...the Quakers listed thirty-eight dead out of their community of sixty or so." With the transformation of Jamaica from a pirate's haven to a sugar colony by the beginning of the eighteenth century, Quakerism came close to vanishing from the island. The reasons for this remains unclear. One is

tempted to believe that Quakers fled Jamaica because their opposition to the enslavement of increasing numbers of Africans who were being brought to the island made it impossible for them to accommodate themselves to the society as it was unfolding. This is not completely true, however. Eric Williams (1944:43-44) writes:[4]

> Quaker nonconformity did not extend to the slave trade. In 1756 there were eighty-four Quakers listed as members of the Company trading to Africa, among them the Barclay and Baring families. Slave dealing was one of the most lucrative investments of English as of American Quakers, and the name of a slaver, The Willing Quaker, reported from Boston at Sierra Leone in 1793, symbolizes the approval with which the slave trade was regarded in Quaker circles. The Quaker opposition to the slave trade came first and largely not from England but from America, and there from the small rural communities of the North, independent of slave labor. "It is difficult," writes Dr. Gary, "to avoid the assumption that opposition to the slave system was at first confined to a group who gained no direct advantage from it, and consequently possessed an objective attitude."

In the 1670's, approximately ten years after they first began to arrive in the British West Indies, the planters in Barbados, the Bardadian Assembly and the local Anglican clergy were actively opposed to the Quakers. They resented Quakers for their peace testimony which limited the island's militia, their missionary work among African Bardadians and their practice of disrupting Anglican services and of ridiculing their fashionable mode of Sunday dress. To know the Quakers in Barbados at the

end of the seventeenth century, however, we must ask the same question posed by Dunn (1972:104-105):

> What does the census of 1680 tell us about this embattled religious community? The Barbados Friends operated six meetings at this date and had a membership of several hundred at least. Richard Ford, the Quaker mapmaker, shows a group of "Friends Plantations" near Speighstown. Checking the names of known Quakers against the census lists, I have been able to identify the property holdings of fifty-eight Barbados Quakers in 1680. These people came from all walks of Barbadian society. No less than nine of them were big planters, seven were middling planters, seventeen were small planters, eight were merchants or shopkeepers in Bridgetown, three were physicians, and three were craftsmen. The most important point, perhaps, is that all but four of them were slave owners. Collectively they held 1,626 ...[Africans]. Six of them...owned more than a hundred slaves apiece.

Why did the Quaker Community in Jamaica decline at the end of the seventeenth century? In Caribbean Quakers (1972:55), Durham suggests that "...the Society of Friends vanished from Jamaica most probably as a result of acquisition of sufficient funds to return to England or to move on to the promising American colonies."

Quaker activities in Jamaica were revived when Evi Sharpless who had first visited the island in 1881 returned in 1883 as a Quaker missionary. The land on which Seaside Friends Church and Happy Grove school were to be built had been from the 1820's one of the earliest known estates cultivating arrowroot in Jamaica owned by a doctor Waldron (Handler 1971:75-76). In the 1880's, Lorenzo Dow Baker (out of whose efforts grew the United

Fruit Company) purchased the estate and held it until the Iowa Yearly Meeting was able to pay for it.

In 1883, Evi Sharpless established the Seaside Friends Meeting and the church that still stands today was built in 1908. In 1897 Alsina Andrews also came to Hectors River as a missionary. She was sent by American Friends Board of Missions to open a school for girls. In 1898, Happy Grove Girls School (then known as Grove Hall College) was started with three girls and Alsina Andrews as the school's first Headmistress.

When Evi Sharpless retired he was replaced by Reverend Arthur Swift, who was also a missionary. In 1901 Swift and his wife, Naomi George Swift, started a school for boys at Worcester Place,[5] Golden Grove, St. Thomas, ten miles from Hectors River. The school begain with Milton Kenworthy as Principal and an enrollment of three boys. In 1893 these boys were moved to the Happy Grove campus and the boys and girls schools consolidated.

Located on the foothill slopes of the John Crow Mountains, Happy Grove's thirty-five acre campus consists of two rounded hills separated by a small stream called White Springs.[6]

Boarding girls lived in the remodelled Happy Grove Great-House (now Andress Hall) in the in the area of the campus then known as East Campus. Many of these girls were orphans and some were East Indian wards of the

Immigration Department. When I began field research in 1975, Andrews Hall was virtually an abandoned building. The roof and ceiling were rotted and the windows of the attic were without panes. The buildings second floor was still temporarily being used as classrooms for Happy Grove Preparatory School. Between 1976 and 1977, however, the building was completely dismantled to its foundation.

In 1915, the boys dormitory--Buxton Hall--was built and the school began a five year experiment in industrial education and agriculture. The 1947 "Prospectus of Information for Happy Grove School" indicates that during these early years of the school, "...the ups and downs of hurricane and depressions greatly affected the efforts of the school to offer in turn vocational, industrial, general and academic education." At the end of the five year experiment, the school's objectives were redefined to emphasize preparation for the Cambridge Local Examination. The first group of candidates took the exam in 1920 and all were successful. In the 1920's, especially after the sale of the Haining Estate, the decisive shift towards developing Happy Grove as an academic school became increasingly evident. Kenneth Crooks (1947:4) who was Headmaster from 1941 to 1953 reports that it was "Through the vigorous efforts of the late Montclair E. Hoffman, ... and with the support of

influential men and women both here and abroad, Happy Grove was recognized by the Jamaica Schools Commission in 1921 ..."

Dr. Aubrey Jacobs,[7] a Happy Grove student (1921-1934), teacher (1935-1937, 1940) and a member of the school board since 1940, credited the persistent efforts of Montclair Hoffman in establishing Happy Grove as an outstanding school. Hoffman was born and grew up in Hectors River. He was one of the three students of the boys' school established by the Swifts in Golden Grove, St. Thomas. After leaving Happy Grove, Hoffman went to Howard where he received a Bachelor of Arts degree. Hoffman was the Headmaster of the boys from 1918 to 1919, the first Jamaican to hold that position. He was described (McPherson *et al* 1973:43) as a strict man who stood for discipline. He was a man energetic in his commitment to the cause of education, who toured the island during the summer months to interview primary school teachers in his search for "gifted students," most of whom were given scholarships to attend Happy Grove. He was particularly concerned with parishes such as St. Mary and St. Elizabeth where there were no high schools. In 1923, through the efforts of Hoffman, Harvey Hall was built. Aubrey Jacobs reports that during this period, Hoffman "leaned heavily" on Adrian Gray and Fred M. Jones. Both families have had lasting connections with the school as students, teachers,

benefactors and members of the Board of Governors.

In Happy Grove's 1972 yearbook, the editors present a "random selection" of Happy Grovians who "have become famous in Jamaica:"[8]

> Among the past students that we can all be proud of is Aubrey Jacobs, the present Chairman of our Board of Governors, not only is he a long-term Board member, he is also a past President of the Dental Association and the Jamaican Orchid Society. He has a long and distinguished career with the Freemasons. Happy Grove owes a great deal to his untiring efforts. [Dr.] Lenworth Jacobs was one of the original pioneers of Family Planning in Jamaica, helping in the opening of the first clinic in St. Ann's Bay. In the Government, there is Eric Bell, a Cabinet member and Minister of Public Utilities... Arthur Edgar has recently been appointed Headmaster of Calabar (before he was Headmaster of the William Knibb Memorial High School--his replacement is Ben Hanson, another old boy.) Stanley Parkins is the long-time Headmaster of Morant Bay High School. Martha Gray is the Headmistress of Albany School. Denzil Southwood-Smith is one of the founder members of the justly famous Jamaica Folk Singers. In the Civil Service, Martin Berry is the Manager of the Government Savings Bank, Glen Vincent is Director of training in the Civil Service.

To this list we could add Lee Andrew, Jamaica's best known cartoonist, Shaw, the head of the Sugar Research Institute, and William George Ogilvie, who over a long life has been an educator, planter, journalist and author. In the 1940's and 1950's, Ogilvie was well-known for his many short stories, poems, novels and plays; and during the period of my field research, he taught English at Happy Grove.

Until 1969, Happy Grove was a government aided

private boarding school. Since then the school has experienced rapid changes. Boarding has stopped and as a government school it is now fully opened to the children of Belle Castle, Scots Run and other surrounding districts. R. Fuller gives some idea of the changes that have taken place. Fuller was born in Hectors River. He was an early student of Happy Grove from 1915 to 1917 and in addition to "English, shorthand, typing, Latin and all other subjects," he learned to be a cabinet maker. Apart from seven years in Cuba cutting cane beginning in January, 1920, he spent his life in Hectors River and from 1942 until 1974 was part of the school's maintenance staff.[9] In 1973, three teachers interviewed Fuller for the school's yearbook. When asked about the way things had changed over the years, Fuller said:

> We had to live up to principles. We had to be very careful of what we were doing. The teachers then were more in the temperance way of things. The only thing we could drink was aerated waters. No boy could come through the gate without the permission of Mr. Hoffman. Boys had to go down to the fence and hide and ask outsiders to get them things. There would be trouble if they were caught. All the students down to Dr. Kenneth Crook's days [1941-1953] were different students from these days. In those days we had to be disciplined and we had to show respect. They never used loose language in the street or in the school. The parents, too, are different. They grew up under a different system.

The Quakers contributed in two essential ways to the emergence of small proprietors in eastern Portland.

Part of the original arrowroot estate was sold to create the area now known as Martin Lane or Happy Grove Lane. Some of the Fullers, Clarkes, Burkes, Grants, Plowrights and Nugents left Belle Castle and settled in this area. The Quakers had also acquired Haining Estate with the intention of establishing an agricultural program at Happy Grove. When these plans were abandoned, however, Haining was sold. The estate was later divided by its new owner and sold to small farmers. This was the land acquired in the 1920's by families such as the Percies, Afflicks and Geddes. From there members of these families established households in Scots Run and Belle Castle.

Adrian Gray and Small Proprietors

Adrian Gray has played an important part in the emergence of proprietory cultivators in eastern Portland. Though he was born in Yallahs, St. Thomas, his early education was at Titchfield Secondary School in Port Antonio. Much of his economic, social and political activities have been closely associated with the parish of Portland.

Adrian's father, Thomas Gray, had worked for the United Fruit Company as an overseer. After graduating from Titchfield, Adrian Gray took charge of Muirton Estate (made famous by Michael Scott's Tom Cringles Log) which his father's brother, Leonard Gray had bought. When his uncle Leonard died, he left Muirton to his two daughters

and to Adrian. Fearing that his cousins would soon marry making it possible for others to lay claim to the land, Adrian bought their share of the estate. Adrian Gray was a planter. Typical of Jamaica's rural elite, however, he was active in many areas of social life. He was a successful politician who at one time served as Chairman of the Portland Parochial Board and who, as an influential life member of the National Executive of the People's National Party, was elected to the House of Representatives from East Portland from 1953 to 1955. He took an active part in the formation of agricultural organizations and commodity associations. In the early 1950's he was Vice President of the associated branches of the Jamaica Agricultural Society, Chairman of the Orange Bay Branch of the All Island Banana Growers Association and Chairman of the Livestock Association of Portland and Hope Bay. Adrian Gray's interests were wide-ranging. He was co-founder and Secretary of the East Portland People's Cooperative Bank and a member of the Executive Committee of Portland's Chamber of Commerce. He was also actively involved in education serving as Vice Chairman of West Portland School Board, a member of Titchfield's School Board and of the Titchfield Trust, and Chairman of the Parish Advisory Committee 4-H Club. He was also influential in the development of Happy Grove School, having served in the early 1950's as a member of the school board.

The Haining Estate which Adrian Gray purchased from the Quakers in 1914 (after they abandoned the idea of developing Happy Grove as a school concentrating on agricultural and practical skills) was divided into two sections: Lower Haining of 150 acres and Upper Haining of 250 acres. In the early 1920's when Adrian Gray's father died (he had lived at Haining with George Gray, his oldest son), all the land with the exception of fifty acreas was sold. This fifty acres and the house were later acquired by Henry Jones and then by F. M. Jones.

"Gray is an outstanding man; he is a figure!" This was how Claudie Afflick, one of his contemporaries, described him. "He was for the small farmers of Portland." When I interviewed him at his home in Hope Pasture, Kingston, in July 1977, he told me that he "never sold to big people, only to small people." One life-long friend of the Gray family said Adrian Gray's son had to "rescue" some of the property; "Gray was a real socialist, he would have given it all away."

After he sold Haining, he bought Ecclesdown which comprised 800 acres and was formerly the property of P.L. Carder who was with the United Fruit Company and for whom Carder Park in Port Antonio was named. Gray sold Ecclesdown "out to small people" and bought Betty Hope which contained 200 acres. To help Bruce Miles, who was then overseer of the property, he sold him the house and fifty acres. In

1946 Gray sold the remaining 150 acres to F. M. Jones, along with Airy Castle. Airy was the home of Adrian Gray's father, Thomas Gray. It was perched on a cliff overlooking the Manchioneal Harbor. It was for a time rented by the well-known Sherlock family while the Reverend Sherlock performed his duties in eastern Portland. Gray sold Airy Castle to Jones with the understanding that it would be turnec into a health center, which it is today. In 1955, Adrian Gray also sold Rodney Hall estate which was 350 acres to "small settlers," but he said they did not pay. In 1976, the government bought Rodney Hall and the land was made available to farmers through the Land Lease Program.

While Adrian Gray was actively seeking to make land available to the people of Portland, F. M. Jones was equally active in acquiring land that would make his family in time one of the largest land-owning families in eastern Portland and neighboring St. Thomas. I have already cited two instances in which F.M. Jones acquired land from Gray, but it is clear that their objectives were more opposed than in harmony.

According to Adrian Gray, when it became apparent that Darlingford Estate would be sold, while Gray wrote to representatives in England to determine this fact, H. E. Allan (who was a member of the J.L.P. and supporter of the estate owners) went to Morris Cargill (then the "solicitor"

for the property) and got the agreement to sell the land to F.M. Jones. Gray said he wanted the land for the people but H.E. Allan got "only ten acres for the people at the bottom where it wouldn't disturb the property." In an earlier interview Afflick said "[F.M.] Jones' reasons for supporting Allan was to get at Adrian Gray. He and Gray were enemies."

Yards and Tree Cropping

One characteristic of Jamaica's settlement vegetation is the tendency for trees to be concentrated in dwelling areas (Edwards 1961:114, Blaut 1959:89, Clarke 1970:13), a fact reported in most descriptions of rural and (to some extent) urban Jamaica. As the horticulturalist Watkin (1952:61) describes it, "Growing on the steep mountain-side of the island are scrambled, indescribable tangles of breadfruit, cacao, coffe akee, plantain, banana, coconut, and seedling mango." In My Mother Who Fathered Me, Edith Clarke (1957:28) writes "The anthropologist in search of the family sees first the house, ... emerging between trees of breadfruit, akee or mango in the edge of a yam field; or as a white painted wooden cottage behind regular lines of orange trees with their green and yellow fruit." Growing trees in yards is the practice not only of small proprietors, but others for whom it is a secondary form of productive activity. The extent to which trees are traditionally grown on household land is evident

in Eyre's (1972) discussion of a St. Elizabeth community. As a result of government subsidies and favorable prices, a whole new cropping pattern has become important. Eyre (1972:95-96) reports that "Bearing trees have been cut down to make room for an ever greater acreage of cash vegetables. Most homes in the area surrounding the Bible Camp now stand bare on the landscape, a characteristic most unusual in rural Jamaica, although most claim that they did originally have fruiting trees around the house." The cultivation of trees in combination with vines, herbs and shrubs is defined by the agricultural census (1973?:8) as Food Forest.

> This was the definition given to cases where a canopy of tall economic trees existed (breadfruit, star-apples, mango, avocado pear, etc.) in association, with or without a lower canopy of cocoa, coffee, citrus and other small trees and shrubs and sometimes a third layer of herbaceous crops, in spaces where the light permits such as kale or calaloo. Scattered tree crops were not included in the area of food forest.

Symes, who was in the early 1970's Senior Assistant Conservator of Forest in Jamaica, does not mention this Food Forest in his 1971 article, "The Jamaican Forest." He discusses Jamaica's natural forests which include the Lower Montane Rain Forest, High Montaine Mist Forest, Wet Limestone Forest and Dry Limestone Forest. He also described two sociogenic types of forests: Plantation Forest involving the cultivation

of mahoe, eucalyptus and carib pine as timber trees, and Ruinate Forest growing in areas abandoned from cultivation. That this Food Forest (based to a large extent on exotic plants) should have escaped Symes attention is a curious fact given its importance in the material and spiritual life of Jamaicans. Not only does this Food Forest contribute a significant portion of the island's food supply, the ackee, mango, coconut, star apple, breadfruit, and other plants have also become an integral part of folk and popular music and part of riddles, sayings, phrases, expressions and proverbs. The products of these plants are distributed as gifts and are marketed locally and abroad.

With persistent shortages and with the escalating cost of basic commodities, Jamaicans are being encouraged to make greater use of the plants of this forest as part of a national achievement of greater self-reliance. It is odd, indeed, that Symes ignored this Food Forest which Adams (1971:5-7) describes as an "artificial woodland," Clarke (1974:58) as "polyculture" and "mixed planting," the Daily News (7/28/1977) as a "Tropical Jungle Garden" and Money (1972:10) as a "tangle of productive vegetation."

An unmistakable characteristic of forest cropping and other forms of tree cropping in Jamaica is that, in general, different species and varieties of vines, herbs, shrubs, and trees are not planted in an organized manner

that is readily apparent. The nature of this form of forest cropping (described as a "harvestable forest" by Geertz (1963)) has been discussed for other parts of the tropical world, particularly in relation to swidden cultivators (Conklin 1954, Anderson 1952, Geertz 1963, Webster and Wilson 1966, Netting 1971). In forest cropping, there is no fixed pattern of spacing where the number or density of plants in a given area is carefully controlled. There is, rather, an appearance variously described as chaotic, untidy, confusing, haphazard, disorganized or unsystematic.

While in appearance forest cropping lacks the obvious sense or order which is evident where plants are intercropped in alternate rows or strips, this does not mean that there is no order to this complex form of intercropping. There is order in forest cropping which results from farmers' efforts to take advantage of micro-conditions of soil, shade and moisture; their attempts to save wild plants in favorable locations and to make use of borders and fences; their subtle way of combining mutually beneficial crops; their use of live trees for posts, for making arbors and for shade, and their efforts to facilitate the harvesting of crops by planting trees where fruits will not be damaged when they fall.

The Yard as a Collection of Different Gardens

In describing the cropping pattern practiced by urban proprietors, Hawkes (GL: 8/7/1976) offers a very general picture of yards in Duhaney Park in northwestern Kingston.

> ...rare indeed is the dooryard which does not boast of thriving fructiferous trees, these ranging from ackee to avocadoes to coconuts and flowering mahoe. Potted plants too are frequent as are impressive plots of vegetable crops in home gardens.

In general the description by Hawkes is true and in identifying fruiting trees, potted plants and vegetable plots it supports the idea that the yard of a small proprietor is best described as a collection of different gardens. The most perfect model of what I have in mind is a botanic garden which, as a whole, is made up of a variety of different gardens. Similarly, the yard also has its different gardens--which includes an ornamental garden, vegetable garden, medicinal garden and orchard. In the widest sense, a garden is simply an area marked off or enclosed for the cultivation of wild and domesticated plants. Both the boundaries of the land which constitute the yard and the boundaries between different gardens may be indicated by hedges, borders, fences or simply by the transition from one type of cropping to another.

That the yard in Jamaica is a collection of gardens is evident in the comments of the Baptist

missionary Phillippo (1969:221) who, through the creation of post-emancipation settlements, played an important part in the emergence of small proprietory farmers in Jamaica.

> The villages are laid out in regular order, being divided into lots more or less intersected by roads or streets. The plots are usually in the form of an oblong square. The cottage is situated at an equal distance from each side of the allotment, and at about eight or ten feet, more or less, from the public thoroughfare. The piece of ground in front is, in some instances, cultivated in the style of a European garden: displaying rose bushes, and other flowering shrubs among the choicer vegetable productions; while the remainder is covered with all the substantial vegetables and fruits of the country, heterogeneously intermixed.

We see in Phillippo's description that one factor which determines how the gardens of a yard are spacially arranged is the situation of the house in relation to paths and roads which create the difference between the front yard, side yards and back yard.

Ornamental Front Yards

Although often overlooked by researchers interested in the cultivation of food crops and the uses of medicinal plants, Jamaicans also grow plants for their flowers and ornamental foliage. Most front yards are carefully maintained showplaces. Persistent efforts are made to plant ornamentals, prune trees and shrubs, remove leaves, pull weeds and maintain lawns. Most yards in

Hectors River, Belle Castle and Scots Run have ornamental front yards. These are separated from roads and footpaths and from neighboring yards by boundry hedges usually of hibiscus or croton. In addition to lawns, many ornamental front yards have flower beds along the perimeter of the front yard, along walkways, as islands in lawns and as showy gardens adjacent to the house or in front of the veranda. Ornamental shrubs are planted in front of or adjacent to the house as single plants, in clumps or as foundation borders. Borders are also made to mark boundaries, parallel walks, enclose garden compartments and other areas, form barriers and serve as screens. While front yards are generally open, ornamental, shade, timber and fruit trees are sometimes grown around the perimeter or in the middle of the lawn. Those planted in lawns sometimes have potted plants or flower beds around their base.

Verandas which do exist in many cases are usually the setting for potted gardens of hanging plants, plants on stands and tables and floor pots of varying sizes. In some cases, flower pots are tin cans which have been painted.

The use of the front yard for cultivating ornamental plants is true not only for the free villages Phillippo (1969:221) describes and for most of the homes of eastern Portland, it is true throughout most of

Jamaica. "One's first glimpse of Orange Grove," writes Edith Clarke (1974:26) describing one of the three communities she studied, "is a red dirt roadway running through a fertile valley of farms with neat citrus groves and solid, well-built houses, often with an upper story, set among flower and vegetable gardens."

At the end of the nineteenth century, Fawcett (1898:10) wrote: "The increase in the variety of cultural products, and the humanizing influence of ornamental plants are matters of appreciation in every part of the country from the mountain to the sea coast." As Director of Jamaica's Botanic Department, Fawcett asserted "... it was not the mission of a botanic garden to undertake the work of a horticultural establishment, and supply the public ornamental plants..." This is exactly what he did, however. He believed there was little danger of interferring with private commerce, and he described the "public" interest as "positive and increasing." Fawcett wished to defend the distribution of ornamental plants. Contrary to the doubts and questions raised by others, he believed the government was right to foster the cultivation of ornamentals, whose annual distribution from the botanic gardens had reached 8,000 to 10,000 plants. In his own defense Fawcett (1898:10) wrote:

> It appears to me that the question only needs to be stated for all intelligent persons to answer in the affirmative. Bacon recognises a love for gardening as an index of a nation's advance in civilization, and without doubt it is an important factor in rendering that advance more easy and more certain.

Flowers and other ornamental plants are part of Jamaica's social life in many ways. Illnesses, deaths, births and celebrations of various kinds all involve the use of flowers. Some of the students at Happy Grove bring the flowers of the flame tree (Delonix regia), Jamaican marigold (Wendelia trilobata), oleander (Nerium oleander), periwinkle (Catharanthus roseus), broomweed (Sida acuta) and hibiscus (Hibiscus rosa-sinensis) to decorate their classrooms. The flowers of red ginger (Alpinia purpurata) and hibiscus and the leaves of various philodendrons, wild coco (Colocasia spp.), ferns and crotons (Codiaeum variegatum) are often used to decorate rooms on special occasions: weddings, graduations, tributes to distinguished members of the Happy Grove school community and church celebrations such as Christmas and Easter.

Hibiscus and croton are the most common ornamental hedge plants in eastern Portland and throughout much of rural Jamaica. Others are bougainvillea, June rose (Lagerstroemia indica), monkey fiddle (Pedilanthus tithymaloides), Mussaenda frondosa, poinsettia, Pride of

Barbados (Caesalpinia pulcherrima), maypole (Agave spp.) and Euphorbia cotinifolia. In the drier areas of Jamaica, Chinese ackee or bread-and-cheese (Pithecolobium unguis-cati), Bougainvillaea glabra, Ixora (Ixora coccinea), golden bell (Allamanda cathartica), cat tail (Acalpha hispida) and coral vine are also used as hedge plants. In the extremely dry western parts of the aprish of St. Thomas, the cacti called tuna (Opuntia spp.) and rost pork (Euphorbia lactea) are used to make fences impenetrable to humans and animals. In eastern Portland growstake was most commonly used as a live fence-post tree. The hog-plum (Spondias mombin) and the ackee are also used as fence-post trees. In the hills of St. Catherine in the district of Point Hill, the yellow-coat plum (Spondias purpurea) is used as a live fence-post tree.

Other common ornamental plants cultivated in borders and beds include Joseph's coat (Coleus blumei), bachelor's button (Gomphrena globosa), and bromeliads. Ornamental front yards also include potted plants. Many verandas had potted plants, of which the most common are varieties of caladiums, peperomias, begonias, diffen-bachias, philodendrons, crown of thorns (Euphorbia milii desmoulins), wild coco and ferns.

Side yards and Back yards

Side yards and back yards are usually given over to trees. The extent to which this is done, however, is

limited by several factors. One is the extent to which herbaceous plants are cultivated.[10] The cultivation of herbaceous plants restricts tree cropping. Areas of side yards and back yards are left free of trees in order to grow ground crops, medicinals, condiments, spices and vegetables. Some of these plants are intercropped and others are planted in pure plots.

The second factor that determines the extent to which tree cropping takes place in side yards and back yards is the use of dwelling spaces for activities other than cultivation. These activities require space for pig pens and chicken coops and for tethering animals. Space is also required for clothes lines, outbuildings for cooking, dump sites, latrines, graves, and for various outdoor activities such as oil-boiling, carpentry and making fish pots.

Socially Produced Open Areas

In accounting for the way in which trees are distributed in yards, I realized during my field research that what has also be be explained in eastern Portland and elsewhere in Jamaica is the deliberate effort of proprietors to maintain open areas. Generally speaking, open areas are areas without trees. More specifically, however, open areas are without trees or areas with scattered trees which provide shade without forming a canopy. There are three types of open areas. The first includes footpaths, walkways

and roads. The second consist of areas of wild grasses and other herbaceous plants and the seedlings of shrubs and trees. In some cases, scattered trees might also be present. This kind of open area includes playing fields, roadsides, church yards and the immediate area around dwellings. The third type of open area results from the need to restrict or eliminate trees in order to cultivate herbaceous plants such as root crops, ornamentals, vegetables, condiments, spices, medicinals and fodder. This is an important consideration. Edwards (1961:113) reports that one of the reasons farmers give for using rented land is that it "... was usually free of trees and could therefore grow catch crops better than owner occupied land which was commonly established in trees and bananas." This was also the reason given by some farmers in Hectors River who rented land to grow root crops and bananas.

In eastern Portland all open areas are produced and maintained by human activity. Under natural conditions of good soil and high rainfall, the areas without human activity would be heavily forested. This situation I describe for Portland, Swabey (1949:60) would maintain is true for Jamaica as a whole. He writes: "All grassland in Jamaica is 'artificial.'..." To prevent open areas from being overgrown with large herbaceous plants, shrubs and trees, five members of Happy Grove's grounds staff are regularly employed to cut lawns, trim hedges, prune trees

and weed ornamental gardens. This is also true of the Hectors River Estate where brushing--the use of a machete to keep an area cleared of vegetation--is one of the common forms of employment offered. The brushing of paths and roadsides is also one of the chief spoils of loyal party members after a political victory of their respective party.

Open areas in the yards of proprietors usually involve walkways and footpaths, gardens of herbaceous plants and the land immediately surrounding the house. In relation to the lack of trees near the house, the following comments by Beckwith (1970:13) are interesting:

> Long says, "The ...[Africans] are possessed with an opinion of the good or bad qualities of particular trees when planted near any habitation, as to the effects their neighborhood may occasion to the inhabitants." My repeated inquiries brought very little of this belief to light today. All who I questioned agreed that fruit trees were good about a house with the exception of the pawpaw, which takes the richness from the soil or the strength from the householders themselves. "Never tie a horse to a pawpaw tree," Parkes affirmed. The "night jessamy," too, if planted near a house will "reduce you" he said, but this idea is not general.

Beckwith's (1970:30) failure to find support for Long's idea after "repeated inquiries" could perhaps be explained by considering two factors. First, trees "near" the house and trees "surrounding" the house are not necessarily the same thing. Not planting trees "near" the house means not planting trees adjacent to the house. Thus

while trees are grown around the house, especially in side yards and back yards, they are not adjacent to it; this accounts for the open areas immediately surrounding dwellings. Second, farmers' response to Beckwith's inquiries could have been determined by conditions specific to the area in which the research was being conducted. In eastern Portland, one common explanation for not planting trees close to the house is the fear of hurricanes. "Since 1685," writes Clarke (1974:16), "thirty-seven hurricanes have struck Jamaica. Most make their way westwards along the north coast, and Kingston has been affected only twice since 1880." With driving winds and torrential rainfall resulting in flooding, landslides, shoreline destruction, uprooted trees, downed power and telephone lines and leveled buildings, hurricanes cause enormous damage when they strike (Edwards 1961:32). Henriques' (1976:72) Family and Colour in Jamaica is based on research conducted in Portland in the mid-nineteen fifties. He writes:

> Along the coast some landowners have started coconut production instead of bananas, but coconut trees are the major victims of the scourge of the whole north coast--the hurricane. These tremendous winds occur on the average about once every four years. Their force is sufficient to destroy houses and vegetation alike. Of all the parishes in the island, Portland is the greatest sufferer in this respect. The hurricane has a psychological effect too. People are disinclined to build a better type of house or have more careful cultivation as everything may be destroyed in one morning.

While I remain skeptical of Henriques' idea that Portlanders are "disinclined to build a better type of house or to have more careful cultivation" because of hurricanes, it is clear hurricanes are a factor that people consider in not planting or allowing trees to grow adjacent to the house.

In addition to hurricanes, farmers in Belle Castle and Scots Run give many reasons for not growing trees adjacent to the house. Some say tree roots damage the foundations of buildings. Others speak of the danger of falling fruits and branches, especially those of the coconut, which, moreover, is said to "harbor rats." Many explain that the open area around the house "let in light and breeze," reduces dampness and keeps away lizards and spiders as well as ants, wasps, mosquitos and other insect pests. One proprietor said:

> In days past, they would cut the bush down, then in a few days would set it afire and it would kill off all the insects. This was sixteen years ago. The government stop that. That way, the insects gets so prevalent around. Fire would burn them out. I don't think the chemicals works very well. Since that time, plenty snail and wasp nests.

In addition to insects and lizards, one informant says she does not allow Otaheite apple trees to grow near the house because they harbor patoo (as owls are called in Jamaica) and duck ants. It should be noted that the patoo is associated with duppies or spirits; this is also true of the night jessamy. Beckwith's comments on the night

jessamy and the pawpaw also holds true for eastern Portland; the only clarification needed in the case of the pawpaw is that "to reduce" people or to "take away their strength" refers specifically to limiting their ability to engage in sexual activity.

In addition to its ornamental value, one important use of the open (lawn) space of front yard gardens is the drying of peas, beans, nutmeg and pimento where they can be carefully watched from the veranda. These fruits are often placed on sheets of (roofing) zinc. In some cases they are placed on burlap bags, cloth, trays or other makeshift drying platforms. Several farmers for whom pimento is an important crop have permanent cement barbecues.

Because of the need to remove trees to create space, the Food Forest of Belle Castle and Scots Run could be described as "clumpy" or "patchy" in appearance. In addition, lethal yellowing disease has killed most of the Jamaican tall coconut trees in these districts and this has added greatly to the "patchy" or "clumpy" appearance of the settlement vegetation.

Theatre Cargill and Intercropping in Yards

As one turns away from the coast following the Belmont road leading up the hillside to Belle Castle and Scots Run, the initial appearance of plants in the different yards is chaotic. Nevertheless, each yard has its own

order, while conforming to the general pattern which I have previously described. One front yard is distinctly ornamental with wide lawns, flower beds, attractive shrubs, borders of crotons and a boundry hedge of hibiscus. Occasionally, one finds also an orchid or two on stands, haning from posts or fixed to trees. Next door, another yard has barbed wire stretched between live fence posts of growstake, with a front yard filled with ackee, breadfruit, pimento, Jew plum, avocado and other trees. Close by, another yard is used for the mixed cultivation of root crops, particularly yams and dasheens, with only a narrow track leading to the house which appears to be set in the middle of an agricultural field.

One factor which influences the variation among yards is the age of the proprietor. During their youth, proprietors plant trees which are cared for at a time when they provide no useful product. In their old age, these farmers expect to be "cared for" by mature trees which require little labor to maintain them. When trees are planted, they are usually intercropped with annuals which are said to "carry" the trees during their early years. Carrying cropping, like double cropping (two crops in succession from the same land in one growing season) and relay cropping (two crops from the same land in one growing season where the planting of the second overlaps with

the harvesting of the first) is a form of sequential cropping. Carry cropping is aimed at establishing a system of permanent cultivation of which trees are the primary component. Cultivating annuals helps to defray the cost of waiting for investments to bring return by contributing food and income during the time the trees are unproductive. Carry cropping also contributes to the intensive use of available resources.

The cultivation of carry crops can cease for many reasons: farmers might remove them to prevent competition with trees when the trees mature and become productive; the cultivation of carry crops might end because they are shaded or crowded out by the trees. Declining soil fertility, drought and pests could also lead farmers to abandon the cultivation of carry crops. With all these considerations, however, it is clear that one important factor that leads proprietors to stop the cultivation of carry crops is age. Farmers in their old age are either unwilling or unable to continue the cultivation of carry crops which are annual plants requiring intensive labor. It is here that trees become important. David Edwards (1961:105) writes:

> The choice of tree enterprises reflects certain traits in the farmers: their foresight, their concern about security in their old age when they cannot work hard, and their willingness to wait for returns when they are able to do so. The burden of waiting is somewhat lightened by

> the customary practice of planting the trees with other crops which have to be cultivated and so 'carry' the trees; by planting only a few trees at a time; and by the knowledge that once well established the trees will require little labour.

Most of the tenant farmers of Hectors River Estate are in or past their fifties. The youngest is in his early forties. The same is true of most proprietors. In the course of discussing the plants growing in their dwelling spaces, some of these proprietors said they had stopped planting yams, vegetables, cocoes and other herbaceous crops. As we saw in Chapter 5, for example, Goodwin said he could not plant as many vegetables as he wanted because he was old, labor was scarce and costly, and fertilizer, herbicide and pesticides are often in short supply and expensive when they are available. To illustrate the importance of considering the age of farmers in relation to plants growing in the yard, I will describe the situation of Theatre Cargill.

Theatre Cargill is a small proprietor in Belle Castle. He is seventy-two years old. His yard, a little over half an acre, is typical in the aspects I have already described. From the road, the house is set at the rear of a rectangular plot. There is sufficient space for a small ornamental front yard with a lawn and a boundry hedge of croton and timber trees along the fence line. Behind the ornamental area of the front yard are fruit trees which hide the house from the road. The veranda and the area

immediately before the house is shaded by two grapefruit trees and a red-coat plum tree (Spondias purpurea). Fruit trees also grow in the side yards and back yard.

Of the plants Cargill has stopped cultivating are herbaceous plants. They include ground crops such as yams, cocoes, sweet potatoes and cassavas as well as peas, beans, sugar cane, chocho and calaloo. "Even bananas," said Cargill, "was on its way out." All that remained in the yard was "one root" and, according to Cargill, "mule eat it down." He stopped planting vegetables in 1974. Now there was only one chocho vine and a single tomato plant. There were two bird-pepper plants, which he described as wild. With trees, however, the picture was quite different. There were sixty trees in Cargill's yard.[11]

The age of farmers and their residence on land which as proprietors they own are all factors which determine the kinds of plants growing in their yards. In our efforts to understand proprietory cultivators we must consider one additional factor. Some proprietors cultivate not only their yards but other pieces of land that they own or rent. In most cases land apart from the yard that contributes to the farm of proprietors is owned rather than rented. Among large proprietors owning from ten to twenty acres of land, trees and ground crops are usually cultivated on the land separate from the residences of farmers.

TREES	TOTAL
Fruiting Food Trees	
breadfruit	1
Malaysian coconut	4
ackee	2
avocado	1
'Fruit' Trees: Citruses	
lime	1
grapefruit	5
tangerine	1
'Fruit' Trees: Other	
common mango	1
June plum	7
custard apple	1
sweetsop	1
soursop	5
guava	1
guinep	1
pawpaw	3
pimento	3
Beverage Trees	
coffee	7
Lumber Trees	
cedar	4
mahoe	1
bitter damsel	2

Table 16

Trees present in the yard of Theatre Cargill.

Trees are cultivated in pure stands, in mixed orchard or scattered to permit the cultivation of herbaceous crops.

The extent of tree cropping is influenced by the amount of land available to farmers and its quality. For proprietors who had land separate from their residences, the most important trees were the coconut and the pimento for whose products there is a well-established market. The pimento has only in recent years acquired great commercial value. Unlike the coconut, it is mainly valued in the export market. In my interviews with proprietors, one explained that the pimento was "like a blessing." As he expressed it, "just when coconut gone (referring to the impact of lethal yellowing disease) pimento come in." The relationship between pimento and the stealing of agricultural crops I discuss in Chapter 8, makes clear the great value attached to this tree throughout Jamaica.

Claude Afflick and Cultivation in the Field

To illustrate the use proprietors make of land apart from their yards, I examine the situation of Claudie Afflick of Scots Run. His house plot is one acre in size and he owns three acres at Lower Hairing. He is seventy-two years old and, like Cargill and others to whom I refer, he has largely given up the cultivation of herbaceous plants. In his back yard, what remains from past cultivation are a few plants of Christmas bean and bunchy bean, a small area of sally and ju-coco and a small bed of tomato

plants. Afflick said that, apart from tomatoes, he is not very successful in growing vegetables. He has planted chocho and pumpkin all his life, he said, and has never been able to harvest very much. When I asked about the cultivation of bananas, he said "not anymore," though there are "a few roots" of lacatan left. There are also five gungu pea shrubs in Afflick's yard.

In his field at Haining, the only herbaceous plants of importance are varieties of yams, (white, afoo, St. Vincent, St. Lucy, Negro yam, marzella and yampi) and cocoes (sally, full-basket, red ju coco and white ju coco) planted in a small plot. Bird peppers and susumba grow wild and there are seven plants of scotch-bonnet pepper. As in Afflick's yard, so also in his field: trees are of great importance. The following table shows the trees present in the yard and in the field.[12]

The Reids of Belle Castle

Here I present one other illustration of the cultivation of proprietors in eastern Portland. I also discuss the commercial products of cultivation in this context. George Reid is a farmer, district (or auxiliary police) officer and local politician. He is chairman of the Jamaica Agricultural Society branch in Belle Castle, chairman of the Belle Castle School Board and a member of the Happy Grove School Board. I made several visits to the

TREES	TOTAL	YARD	FIELD
Fruiting Food Trees			
breadfruit	35	5	30
ackee	1	0	1
avocado/black	1	0	1
avocado/white	2	1	1
coconuts	142	2	140
'Fruit' Trees: Citrus			
limes	4	4	0
sour orange	4	2	2
grapefruit	5	2	3
'Fruit' Trees: Others			
number eleven mango	1	0	1
common, hairy, or stringy mango	4	0	4
St. Julian or Julie mango	1	1	0
June plum	1	1	0
hog plum	1	0	1
naseberry	3	1	2
sweetsop	2	2	0
soursop	6	3	3
jimbilin	1	1	0
tamarind	1	1	0
guinep	1	1	0
pawpaw	3	1	2
mammee apple	1	1	0
Beverage Trees			
cocoa	9	1	8
kola (bissy)	2	1	1
coffee	6	2	4
Spice Trees			
pimento	16	11	5
cinamon	1	0	1
Lumber Trees			
cedar	8	1	7
cabbage	4	0	4
bitter damsel	2	2	0

Table 17

Trees in the yard of Claudie Afflick.

Reid's yard and to their eleven and one-half acre field in the district of Grange Hill (approximately three miles from Belle Castle).

The small ornamental front yard shows signs of neglect. Mrs. Reid says in the past she planted anthuriums, wild pines, morning glories, candle bush, lady slippers, cats tail, golden bell and the white June rose. Now, as she expresses it, "everything mash up." One flower bed has been replaced by a cement barbeque for drying pimento, beans, nutmegs and other plant products. The flower bed that borders a hedge of crotons next to the property line was trampled, as the area is now used by Mr. Reid to tether his mules. Only the small flower bed by the front steps leading to the veranda remain; here the hardy survive: ferns, crotons, periwinkles and lilies. Recently Mrs. Reid has also planted five ponsettias in the front yard.

Many of the ornamentals were planted, according to Mrs. Reid, when her daughter (now living in Kingston) "who knew about plants" was at home. People of the district could come to the house for plants. Her daughter was then sufficiently interested in plants to attend the island's annual agricultural show where she won a second prize in one of the competitions. There is one unusual ornamental plant in the Reids' front yard, a Broughtonia sanguinea orchid that Mrs. Reid says her daughter brought from

Haining. The daughter loved orchids and had collected a few "from all over," but only the one remains because the others were "cut off the trees" by Mr. Reid who believes that they are "parasites."

Herbaceous ornamentals are not the only plants no longer being cultivated by the Reids. They have also reduced the cultivation of ground crops, peas, vegetables and other herbaceous plants. The following herbaceous plants are present in the yard and field of the Reids:

PLANT	TOTAL	YARD	FIELD
red pea	2	2	0
small lima bean	6	6	0
banabis bean	8	8	0
sugar cane	2	2	0
St. Vincent yam	3	3	0
renta yam	4	4	0
pineapple	12	0	12
calaloo	4	4	0
bird pepper	4	4	0

Table 18

Herbaceous plants in the yard and field of the Reids.

Apart from the red peas, lima beans, sugar cane and pineapple, all the others are described by the Reids' as wild. With the exception of the bird pepper and susumba, the banabis beans, renta yam, St. Vincent yam and calaloo are all said to be wild survivors of past cultivation. The situation is entirely different with respect to the

cultivated trees both in the yard and in the field.[13]

In the Reids' dwelling space, the trees in the side yards and back yard are so thickly planted that it is difficult to move about in places. During one of my many visits to the yard, I made the following entry in my field notes:

> Mabel and Flo (Mrs. Reid's youngest daughters still living at home) were asked by Mrs. Reid to get some limes. Both were fussing about having to look for limes. When I arrived, Mabel had already gone once to look but returned saying she could not find the tree and that there was too much bush. Later both Mabel and Flo again went and the story was the same. They could not find the tree. Flo said the tree was dead but Mrs. Reid said no. She had seen it a week ago. Even if it was dead, she said, there should still be limes on the ground. Later, Mrs. Reid explained that it was because of the nettles why they said they could not find the tree.

Small Proprietors and the Market

We see that for the Reids, as for Cargill and Afflick, trees are important and a few herbaceous plants are cultivated. Moreover, these trees regularly provide sufficient products for household use, gift-giving and to sell on the national and international market.

The works of Mintz (1955), Blaut et al (1959), Eyre (1972) and others suggest that Jamaican small farmers cultivate a diversity of plants in mixed stands as a form of insurance against a market which has always been plagued by fluctuating demands. This implies that the

PLANT	TOTAL	YARD	FIELD
Food Trees			
breadfruit	5	5	0
ackee	5	2	3
coconut	3	3	0
plantain	7	7	0
lacatan banana	15	15	0
apple or lady finger banana	1	1	0
black avocado	1	1	0
white avocado	5	1	4
'Fruit' Trees			
lime	103+	3	100+
sour orange	3	3	0
grapefruit	7	7	0
common, hairy or stringy mango	8	4	4
East Indian mango	1	1	0
St. Julian (Julie) mango	2	2	0
June plum	4	4	0
Otaheiti apple/pink stripped	3	3	0
custard apple	2	1	1
star apple/white	1	1	0
naseberry	3	3	0
sweetsop	13	10	3
soursop	15	12	3
guava	16	12	4
tamarind	1	1	0
guinep	3	3	0
pawpaw	4	4	0
Beverage Trees			
cocoa or chocolate	1	1	0
coffee	15	15	0
Spice Trees			
pimento	219+	19	200+
Timber Trees			
Spanish Elm	6	6	0
bitter damsel	103+	3	100+
sweetwood	50	0	50
Mahoe	9	6	3

Table 19

Trees in the yard and field of the Reids.

choice of plants intercropped in yards and fields owe their origin and continued cultivation to the nature of Jamaica's marketing system. This is not completely true however. The market is generally important and in some forms of purely commercial cropping it is decisive. In the case of Jamaican small farmers, however, especially proprietors, it is clear that the market alone cannot explain the nature of their cultivation. This is especially true when we consider the relationship between marketing and products derived from trees.

There are approximately 249 different kinds of useful plants I identified in the district studied. Varieties of the same species are each regarded as a different 'kind' of plant. This is necessary as difference within the species is of the greatest importance to farmers. While it is true that 'a mango is a mango is a mango,' East Indian mangoes are easily sold for a good price but common mangoes have limited commercial value. Of the 249 kinds, seventy-eight are present in the Reids' yard and field. The kinds of plants which are missing from the Reids' yard and field or present in limited numbers are herbaceous ornamentals, vegetables, peas, beans, spices, condiments and medicinals. One hundred fifty-eight of the 249 kinds of plants present in the districts have market value: twenty-three of these are present in the Reids' yard and field, and of these twenty-three, only eight are actually

marketed--all are tree crops.

Nine plants providing marketable products that are not sold are the bird pepper, coconut, banana, bean, otaheiti apple, guava, mango, sweetsop, ackee and sugar cane. The reasons for this withholding tells us a great deal about the relation between cropping practices and marketing. Prior to the outbreak of lethal yellowing disease, there were fifty Jamaican Tall coconut trees at Grange Hill and seventeen in the yard at Belle Castle. Now there are only three left in the yard, all displaying the effects of the disease. Prior to the advent of the disease, the nuts were sold to the estates producing copra and to jelly higglers and to oil boilers.

The bird peppers grow wild and, as far as Mrs. Reid was concerned, they had no commercial value. She said only "the people from Boston"--those who make a well-known barbecued dish called jerk pork--would ask for them and she gives them free. When I interviewed one of the men who made jerk pork, he said most of the time he had to pay for bird peppers.

None of the four kinds of beans are marketed. Mrs. Reid says there is not enough for sale. What little exist is sufficient only for "home use" and for "the girls"--her daughters in Kingston. The shrub identified as susumba or gully bean (Solanum torvum) grows wild throughout eastern Portland, including Hectors River Estate. Mrs. Reid

says her husband cuts down the susumba when they spring up in the yard because "him no like se dem 'round de place." In order to emphasize how the value of plants have changed in recent years, Mrs. Reid always refers to the fact that susumba is now being marketed. A small tin sold for ten cents and there are areas in Grange Hill district where higglers collect the fruits to sell in Kingston. The beans are picked young because they become hard and bitter as they mature. They are usually cooked with saltfish or mackerel as a breakfast dish. Whereas red peas and small white beans had a good market value, Mrs. Reid said "people don't generally like banabis bean" and use it only "when dem back against de wall." She describes the dried beans as "tough," difficult to boil and "trashy." The green and the dried beans are used in soups and stews. The dried beans are often boiled and soaked to remove the "trash." Although there are six banabis plants in the yard, Mrs. Reid does not cook the beans very often because it takes too long to remove the "trash." The banabis beans were planted "some years ago" but now they grow wild in the yard. Mrs. Reid reports that, after the 1944 hurricane, banabis as well as calaloo and pumpkin sprang up all over the yard. Many people came and asked for the beans and she gave away most of them. Now, when she thinks of cutting down the banabis that grow in the yard she remembers those days." As in the case of the beans, sugar cane, sweetsop and

pineapple are also for "home use" and for "the girls." To this group we must add the mango, guava, ackee and banana. We should note, however, that there are several factors which affect the extent to which products of the last four plants are marketed.

Only one variety of Otaheite apple called black titi have a market value: the pear-shaped fruits are large, hard and range from bright red to dark purple. The fruits of the other commonly recognized variety are small, soft, pink with white stripes and these are easily bruised. The Reids have this tree which has an extremely limited market value. A similar situation prevails in the case of other fruits whose several varieties differ in commercial value. These include mangoes, bananas, guavas, guineps, avocadoes, breadfruits, peppers, star apples, naseberries, sweetsops and oranges.

The Reids have three varieties of mangoes among their eleven trees: seven in the yard and four in the field. The common mango has limited commercial value at the beginning and the end of the season. The fruits of these trees are not sold by the Reids. Mrs. Reid says she only gets mangoes from the four common mango trees at Grange Hill if she goes to the field when they are ripening or if her son Oniel and the other children bring them home. Most of the mango crop in the field is stolen. Of the remaining three mango trees, two are Julie and there is one

East Indian. These are among the varieties identified as special mangoes and are in the five varieties considered to have the best market value. Yet, none of these mangoes are sold. The East Indian tree is young and its fruits are "full of worms." According to Mrs. Reid's daughter, the mangoes are not sold because there are too many "little pickney [children] mouth." Mrs. Reid explained that even before the mangoes are ripe, "children from all over the place eat dem off." She does not mind giving them fruits from the common mango trees when children asked or when she sees them looking for mangoes under the trees; she does not allow them to use sticks, climb or stone the trees however.

The fruits from the two ackee trees in the yard are sufficient only for household use. Little comes from the trees at Grange Hill because, as with the mangoes, most of the crop is stolen.

Guavas are not sold for reasons similar to the ackee, there is only enough for use and for gift-giving. Moreover, the guavas are the common variety which are small, sour and often infested with worms. There is no market for guavas in the districts and according to Mrs. Reid, they do not repay the effort to collect and transport them to sell in Kingston.

There are only a few bananas in the yard and none in the field. Mrs. Reid says bananas are marketed "only

when there is banana to spare."

The most important fact is that the eight plants which regularly provided the Reids with marketable products from the yard and field are all trees: pimento, breadfruit, Jew plum, grapefruit, soursop, lime, naseberry and avocado. All provide sufficient fruits for household use, for gift-giving and for sale. Wild timber trees which include cedar, bitter damsel, Spanish elm and mahoe are also sources of marketable products.

Trees (including the herbaceous banana plant) provide the major commercial products of eastern Portland and the northeast in general. The primary crops of the estates including Hectors River Estate are banana, coconut, pimento, lime and timber. From the Happy Grove campus the school's agricultural department sells coconut and pimento, and seedlings of grafted mangoes, oranges and grapefruit grown in the school's small nursery. Although these are the only plant products the school's agricultural department sells, there are over thirty kinds of useful trees growing on the school's campus. Apart from the few teachers who cultivate herbaceous plants in small kitchen gardens behind their cottages, the most useful plants to the entire school community are trees.

The pimentos are among the Reid's most valuable commercial trees, especially since most of the coconut

trees have been killed by lethal yellowing disease. Mr. Reid regrets that he did not cultivate more pimentos when he was younger. He is now convinced that in comparison to other trees including the banana, pimento trees provide more income and require less care to maintain. Mr. Reid also describes the pimento tree as a "blessing" and as the "poor man's friend." This tree has taken the place of the coconut in providing a valuable commercial product; moreover, as Reid and other farmers point out, the death of the coconut trees have had a positive effect on the value of pimento. There are now more people available to harvest the crop. The most difficult part of producing a useful commodity from the pimento is the reaping of the fruits. The fruit-bearing branches are broken from the tree, and the unripe berries rubbed from the branches, dried in the sun and bagged for sale. In most cases the berries are dried in the open area of the front yard where they can be guarded from the veranda. For the Reids and many other farmers, the value of their pimento crop is determined more by the number of fruits that could be harvested before they ripen rather than by the number actually borne on the trees. Mr. Reid said he lost three-quarters of his crop in the 1976 pimento season. The ripening of the fruits is spoken of as "the spoiling" of the crop.

Trees are equally valuable commercially to Cargill

and Afflick. Both sell pimento, grapefruit, June plum and timber. Grapefruit trees are common in Belle Castle and Scots Run. Afflick reports that between 1945 and 1947 merchants with trucks came to the districts to buy grapefruits to sell to the citrus factories in Kingston. At that time many trees were planted. Grapefruits are not considered one of the best fruits for marketing by higglers; they are bulky, expensive to transport and do not always bring a profit.

Afflick also sells limes by the (kerosene) tin from trees in his yard. Each tin harvested by the higglers is worth fifty cents. These are then sold in Kingston for $2.50 and $3.00. In 1977 Afflick sold limes three times. The first sale was six tins, the second was two and the third was eight. Mrs. Reid says that until 1975 limes sold in Kingston for fifteen cents a dozen; now they sell for twenty and thirty cents a dozen. Those bought at Coronation Market (the central market in Kingston) by town higglers were resold in the residential areas of the capital at five to ten cents each.

In 1976 Afflick sold one sack of Jew plums for $6.00 in the district. He estimates that the same would bring $12.00 in the Kingston market. One higgler reported earning over $40.00 from Jew plums and soursops she sold in the Kingston market.

Afflick does well with mangoes. Though there is

one number eleven mango and four common mango trees in the field, and one Julie in the yard, only the Julie in the yard provides marketable fruits. I indicated that the Reids are unable to sell their mangoes because the East Indians had worms and the common mangoes are often picked by children before they are fully mature. In the case of Afflick's Julie tree, it is especially easy for children to pick the fruits. Julie trees are small and can be easily climbed or their fruits knocked down with a small stick. Afflick's tree, however, is planted in his front yard in clear view of his veranda where he kept a watchful eye on the tree. Even so, Afflick says he gives away approximately fifteen to twenty per cent of each season's crop and points out that "nobody no beg mango and don't get it." One day he pointed to the Julie in his front yard and said "right there my taxes is paid; right there now it is paid." Afflick made $26.54 from his 1977 Julie crop. For small sales, which ranged from seventeen to thirty fruits, the average return was $2.00. On some occasions there were large wholesale purchases by higglers. One higgler bought two hundred fruits. Before the trees in his yard and field were killed by lethal yellowing disease, Afflick sold coconuts. He also sold, in 1976-77, $25.00 worth of cedar from his field and $17.00 worth of bitter damsel from his yard.

Most of the higglers from Hectors River, Belle

Castle and Scots Run take rural products to market in Kingston and bring back groceries, hardware, cloth and other products for family members and friends. There are seven higglers who buy things in Kingston to sell in the districts. Only one buys and sells in both places. Gladys is from Hectors River; she takes ackee, breadfruit, banana, plantain, pawpaw, cocoa and sorrel to Kingston and brings back tubers, vegetables and condiments to sell in the district. The tubers brought from Kingston are red and white Irish pototoes, varieties of sweet potatoes and sally and ju coco which she says are "the ones people like the most." Of the two varieties of coco, the red is the preferred variety.

The yams Gladys purchases in Kingston come from Hanover, Lucy and Westoreland and include yellow yam and Negro yam. The vegetables are chocho, cucumber, sweet pepper, string beans, pop chow, lettuce, calaloo, turnip, carrot and beetroot. Condiments include thyme, escallion, sweet marjoram, onion and pepper, which she buys in the Kingston market from other higglers who bring them from the hills of St. Andrew and from St. Elizabeth. Gladys says okra is not much liked by the people so she does not "bother with it." The only tree product purchased in Kingston to be sold in the district is the common or sweet orange and the fruit she buys comes from the parishes of Clarendon and Manchester.

For small proprietors of eastern Portland, trees are the source of important commercial products. The value of trees in this respect is particularly significant as many farmers do not--or have stopped--growing herbaceous crops. Many reasons are offered in the districts for the limited cultivation of vegetables and I touched on this point in Chapter 5, where I reported on a discussion of food which took place in the meetings of the Hectors River Community Council.

Happy Grove's resident teaching staff provide any farmer growing vegetables and other herbaceous crops in Hectors River, Belle Castle and Scots Run with a regular market. Farmers have never fully taken advantage of this. Happy Grove's teaching staff has had to look elsewhere for vegetables. While grapefruits, Otaheiti apples, oranges, Jew plums, mangoes, avocadoes, limes, guineps, pawpaws and pineapples are also hawked from door-to-door by women and children, most teachers in order to buy vegetables and groceries travel to Duckensfield's market ten miles away in the parish of St. Thomas, or to the parish-capital markets of Morant Bay (St. Thomas) or Port Antonio (Portland) both approximately twenty miles from Happy Grove. Some teachers are supplied by a female merchant from Yallahs (St. Thomas) who, using a volkswagon minibus, purchases food in southwestern Jamaica and elsewhere and sells it to the school community and in the districts.

Gladys' explanation for the lack of vegetables, condiments and certain ground crops in Hectors River, Belle Castle and Scots Run is simple:

> Everybody interested in de banana. Right now we have a little carrot and sweet potato. We don't have any Irish potato now. Green turnips, carrots, they don't worry to plant because of banana.

Although the commercial cultivation of banana especially among small tenant cultivators is a necessary element of any attempt at explaining the lack of products derived from herbaceous plants, it is not sufficient. Among small proprietors, there is little cultivation of bananas and yet they grow no vegetables. The fact is, when the cultivation of herbaceous plants cease, so does the cultivation of banana and what remains in the farmer's old age are the trees.

One final point deserves consideration. Students at Happy Grove and young people in general are not interested in farming. This was a complaint heard often from Happy Grove's agricultural teacher. He reports that some parents objected to their children studying agriculture arguing that they were learning that at home. One higgler in explaining the limited cultivation of herbaceous plants said:

> Fus time, we use to get alot of things, but older generation are too old and younger generation don't want to plant. Dem seh it is too degrading. Dat is why we have to buy so much. Everybody want crease in dem pants,

> dress up, kotch [stay] up at dem parents and have girl to roll about. Dem don't even think about the future, just the present. Fus time everybody was cultivating; things use to be plentiful and cheap.

I have shown in this chapter that for small cultivators who own land over which they enjoy secure control, growing trees is an important activity. This activity is conditioned by the age of farmers and their residence or non-residence on the land cultivated. For small proprietors, trees, especially those concentrated on household land, symbolize planning over the course of a lifetime and the link between succeeding generations. As one of the most important part of the way in which residential space is permanently structured, trees make a valuable contribution to farmers' efforts to be independent, to have a valuable source of income and to provide food for household consumption and gift-giving.

One condition which both tenants and proprietors face is the theft of agricultural crops. While conducting this research I came to realize the significant impact rural theft has on cropping practices. I explore this aspect of the social determination of cropping patterns further in the next chapter.

FOOTNOTES

Chapter 7

1. The Department of Statistics (1975:1) indicates that the "enumeration districts" are "... designed to be of such a size to provide an equitable work-load for the census-taker." Given the basis on which the boundaries of the "enumeration districts" have been established, they do not fully correspond to localities that are recognized and used as points of references by the people of the area. To the people of eastern Portland, the community of Hectors River is divided into five localities. These are Hectors River proper (the original settlement associated with the Hectors River Estate), Compound (which was an extnesion of Hectors River proper based on land acquired from the Hectors River Estate), Martin Lane (also called Happy Grove Lane), Belmont (the road which leads up the hillside from the coast to Belle Castle, Scots Run and Haining) and Flatgrass (which is the intersection of the Belmont Road and the main coastal road where there are shops, bars and where buses and transport vans stop. The census divides the community of Hectors River into Hectors River proper, Compound and Happy Grove. It makes no mention of Flatgrass, Martin Lane is included in Happy Grove and Belmont (part of Hectors River) is included as a part of Scots Run.

2. In this chapter I will be making reference to several districts in Portland and St. Thomas which were or are still associated with large estates. For easy reference I include a map of eastern Portland in Appendix 6.

3. The table is based on the parishes as they were between 1814 and 1840. This is partially illustrated in the map presented (see Appendix 7) by Kapp (1968:22) in The Printed Maps of Jamaica Up to 1825. Kapp (p. 22) gives the following reference: "1758 Bellin (J.N.) Carte de l'Isle de la Jamaique Par le S. Bellin Ingen. de la Marine 1758." Beginning in 1662, the number of parishes and their boundaries have changed twelve times (Brown 1976:7). The fourteen parishes of today were established in 1867. Bellin's map dates from 1758, seventy-three years before Metcalf's report covering the period from 1838 to 1840. In the years between Bellin's map

and Metcalfe's report, Trelawny (part of St. James) was created in 1770 and Manchester (parts of Clarendon, Vere and St. Elizabeth) in 1814. In 1841, a year after the period of Metcalfe's survey, the parish of Metcalfe (parts of St. Mary and St. George) was created.

4. The footnotes in the citation from Eric Williams (1944: 43-44) are Cadbury (1933) and Gary (1935).

5. Minott (1968:21) reports that Worcester Place was "named for Worcester, Massachusetts, American hometown of Rev. Arthur Swift and his wife Naomi George Swift."

6. For a sketch-map of Happy Grove's campus, see Appendix 8.

7. Aubrey Jacobs is the son of Allan Alexander Jacobs who was a well known Quaker minister in Portland. Allan Jacobs was born in St. John, Antigua, September 27, 1881, son of Jeremiah Jacobs (a sailmaker) and Anne Shervington, his wife. He came to Jamaica through his involvement with the Salvation Army which included a period as Divisional Officer in what was then British Honduras (1927-1929). In 1941, in addition to his ministry, Allan Jacobs was also District Welfare Officer of the Lands Department, a member of Happy Grove School's Board of Management (1931-1937) and a member of East Portland's School Board (1929-1931).

8. Freemasonry (mentioned in Happy Grove's 1972 Yearbook) has a long history in Jamaica beginning in the mid-eighteenth century. Today there are active groups of Freemasons in Jamaica which include English and Scottish Constitutions, the Lone Irish Lodge and others. Many Jamaican businessmen and professionals are masons.

9. In 1944 Fuller was put in charge of the maintenance staff. In 1951 he left the school to open a grocery shop at Belle Castle. In 1963 he was invited back by Donald Burgess (Headmaster from 1963-68) was responsible for a great deal of construction during this period. A home economics room was opened in 1964, Jones Hall and Harvey Hall were remodelled and six staff cottages were built.

10. Given the efforts of the P.N.P. government, the Ministry of Agriculture and the press to promote self-reliance, there has been a campaign to encourage the use of back yards for the cultivation of vegetables and other food crops. The Sunday Gleaner (7/8/1976) reports: "The North St. Catherine Jaycees held the second of their back yard gardening project at the Trinity Preparatory School in Linstead recently. There were about thirty participants. At this session the need for technical guidance in back yard gardens was highlighted."

11. Although there are only four Malaysian coconut trees in Cargill's yard, there were until quite recently two Jamaican tall coconut trees which were killed by lethal yellowing disease.

12. Prior to lethal yellowing disease, Claudie Afflick had seven Jamaican tall coconut trees in his yard and twenty-two in his field.

13. Prior to the impact of lethal yellowing disease, the Reids had seventeen Jamaican tall coconut trees in the yard and fifteen in the field.

Chapter 8

CROP THEFT AND CROPPING PATTERN

Theft and Cropping Pattern

The theft of agricultural crops (praedial larceny) is an important though little considered factor influencing cropping pattern in Jamaica. Crop theft is identified by farmers, politicians and journalists as one of the major problems facing agricultural production. An editorial in the Daily News (14/1/1976) indicates that although farmers have to deal with the lack of irrigation water, labor shortages, bad roads, pests and insects, "one of the most intransigent problems" is the stealing of crops. Responding to the urgently repeated calls of the government to act, Belinfanti, then Minister of Agriculture, invited all leaders of farm organizations to meet with him. The Gleaner (20/2/1976) reports:

> Organizations which have been complaining and which have been invited by Mr. Belinfanti to see him are the Jamaica Agricultural Society, the National Farmers Union, the Pimento Growers Association, the grower-body of the Coconut Industry Board and several cooperatives specializing in particular crops.
>
> Praedial larceny has been declared by all these organizations to have gotten out of hand in recent times, and is possibly the single greatest deterrent to farmers setting about the substantial increasing of their output.

In previous chapters I argued that discussions of farmers' risks usually focus on fluctuating market demand, the impact of climatic conditions such as flood, drought and hurricane and the effects of insect pests and disease. In this chapter I deal with rural theft as an important social risk in agriculture. Edward recognizes this fact when he writes: "Praedial larceny adds to the risk and uncertainty caused by the natural conditions." In this chapter I indicate some of the ways in which crop theft affects cropping patterns.

To put the discussion in a wider context, I first present a brief history of crop theft in Jamaica and indicate some of the many explanations offered for it, its relation to the traditional rights of children and its relation to African resistance in Jamaica. In light of this discussion I then indicate some of the ways in which theft affects the cultivation of plants as this has been reported in the literature and with respect to the districts of eastern Portland.

Historical Perspective on Praedial Larceny

We can distinguish five broad periods in the history of rural theft in Jamaica. The first relates to the sugar production from the end of the seventeenth century to the early nineteenth century. The second includes the apparent decrease in praedial larceny following emancipation in 1838 and its resurgence from the

1850's to the Morant Bay Rebellion of 1865. The period extends from the Morant Bay Rebellion to the general rebellion of 1938 out of which grew Jamaica's national movement. During this time efforts were made to deal with the theft of agricultural crops, especially through the formation of the Jamaica Agricultural Society at the end of the nineteenth century. Writing in the 1930's, Oliver (1936:326) referred to crop theft as a problem of the past:

> For many years the greatest curse of Jamaica's small agriculture, and the greatest impediment to the efforts of the Agricultural Society was the prevalence of praedial larceny. Cultivators were constantly despoiled of any edible or marketable produce they might attempt to grow. Many preventives were tried, including the flogging of praedial thieves. The latter expedient (first introduced by Governor Eyre and, after repeal, again by Governor Hemming) defeated its own object, for the ...[African] people were too humanely disposed to hand over the thieves to a penalty they deemed fit only for slaves; nor were they in any case disposed to resort to the services of the constabulary.
>
> In 1909, when the Agricultural Society had developed numerous branches, a law was passed empowering any branch to appoint 'authorized persons' licensed to arrest on suspicion anyone they met or found in possession of produce which they knew he could not possibly have produced. The burden of proving that he was innocent was thrown on the culprit. The persons approved are responsible men who know their neighbours' business. The system has worked exceedingly well and praedial larceny has now been reduced to a negligible occasional nuisance.

The fourth period takes us from the Second World War to the efforts of the P.N.P. to establish Democratic Socialism in Jamaica during the 1970's. While Oliver saw the stealing of crops as a thing of the past, by the 1950's, rural theft was again being perceived to be a significant problem. Edwards (1961:24) writes:

> In 1954, 1,544 cases were reported to the police: in 1,251 of these, convictions were secured. These figures greatly understate the actual extent of praedial larceny because many cases are not reported. Another reflection of the extent of the occurrence of praedial larceny was the increase in the same year of the number of 'declared areas,' bringing the total up to 7. In these areas, community committees are empowered under the Praedial Larceny (Prevention) Law of 1952, to employ armed patrols and to pay informers for information leading to the detection and conviction of praedial thieves, accomplices and receivers.

The fifth period covers the decade of the 1970's. During this time the incidence of crop theft reached a new height. In an editorial in the Daily News (14/1/1976):

> The Praedial Larceny Law has been on the books for some time. When enacted it was designed to stymie the individual who would steal a bunch of bananas or plunder a yam hill.
>
> Today, the farmers say praedial larceny is no longer...amateurish. It has taken on all the trappings of a well-organized business where whole cultivations of crops are looted.

An editorial in the Gleaner (14/1/1976) indicates a

"study at the J.A.S. (Jamaica Agricultural Society) board of management meeting disclosed that praedial larceny is no longer being carried out only by single and unarmed operators, but also by highly organized groups, operating in a wholesale way, employing trucks to transport the goods they steal."

The theft of pimento from trees or while the berries are drying or being stored for sale is common in Portland and in other pimento growing areas. Pimento drying in the sun has to be watched continuously, even when it is in the open space of the front yard. Noting that "Acts of praedial larceny have become to sophisticated in St. Ann, that thieves are now setting traps for farmers," the Gleaner (26/10/1976) in an article "Pimento Thieves Plague St. Ann Farmers" reports the following incident:

> Acts of praedial larceny have become so sophisticated in St. Ann, that thieves are now setting traps for farmers.
>
> On Friday a pimento farmer in the Steer Town area, said he was awakened by strange sounds outside his house. He said he got his gun and fired at what he thought was the figure of a man bending over his pimento barbeque.
>
> The farmer said he was certain he had hit his target, because he saw the "man" roll over. He made his way to the nearest police station.
>
> On his return, accompanied by the police, he found that what he had shot was an effigy, which he believes was placed there by the thieves.
>
> But a greater shock was awaiting him. When he entered his storeroom in which he

> had left five sealed crocus bags of cured pimento, he discovered his storeroom empty.

Explanations for Praedial Larceny

During the period of slavery and especially after emancipation, when the ruling elite faced the formidable task of transforming the newly "freed" African population into an agrarian proletariat--a class of agricultural wage earners, "natural indolence" was the chief explanation offered for the stealing of agricultural crops. The five-year apprenticeship period which preceded full emancipation in 1838 was designed to "prepare" the Africans for a system of wage labor. Oliver (1936:195) writes:

> ...that was why, when they did not work as apprentices to the satisfaction of estates' overseers, they were flogged and put on the treadmill, had their fruit trees cut down and the roofs pulled off their houses and were otherwise harried by every available form of tyranny in order to drill them within the term of five years into those mechanical habits of labour into which it had taken several centuries of agrarian and industrial transformation to discipline white proletariates.

The objective of creating a class of wage laborers was to dominate and bias the ruling elite's view of the Africans throughout the nineteenth century. Oliver (1936:192) writes:

> From emancipation till near the end of the nineteenth century, when the volume of the ...[African] peoples'

> contribution to the wealth and public revenues of the Island could no longer be overlooked, the character consistently attributed to the Jamaica [African]... by employers and official publicists in the Island, promulgated at second hand by transient visitors such as Lord Stanley (in 1849), Anthony Trollope (1852), asserted by Governor Eyre (1865) and presumed even so late as in 1885, by James Anthony Froude, was that he was 'naturally indolent' and could not be induced to work. These representations were tempered by occasional gleams of insight and understanding; but the facts most liable to impress themselves in England and on the Colonial Office were that the sugar and coffee estates were not prospering, that the finances of the Island were in difficulties, and that the public revenue, the principal source of which was duties on imports, depended on maintaining and increasing exports of the traditional planting staples. This it was believed could not be done because the ... [African] man was idle and would not work.

For Jamaica's ruling elite the extent to which emancipated Africans were unwilling to work on the estates was simply an expression of their "natural indolence" of which rural crop theft was a significant expression. As Hall (1959: 196) states: "... laxiness was commonly offered for the phenomenon. It was the Jamaican counterpart of the picture drawn by Carlyle of the ... [African]... lying under a tree, stupified from a surfeit of rum and pumpkin." What the planters wanted was laborers who could be cheaply purchased to do steady, continuous, routine work in the manner proposed by Carlyle's military model. Oliver (1936:194) recognizes the economic self-interest

which motivated the ruling elite and was the basis of their opinion of the emancipated Africans. Nevertheless, he also indicates that there is clearly a pattern in the agricultural practices of African Jamaican subsistence farming which contributed to this misperception.

> It is true that a very moderate number of days' work on suitable land in the year, on the part of a man, with a little continuous attention on the part of women and children, can provide a Jamaican family with most of the food they require, and in a fertile and seasonable district, will not only feed them well, but will give them salable produce (if properly handled) for their other requisites and leave them a great deal of spare time on their hands. But because in the vocabulary of academic[al] economics, in which all Englishmen are brought up, the words 'labour' and 'work' always mean occupation for an employer at wages, the fact that many freed [Africans] ... refused or were unwilling to occupy themselves in that manner gave rise both in this country and the Colonies to an inveterate habit of representing that they did not work at all.

In addition to those who gave "natural indolence" as the pervasive explanation for rural theft, Hall (1959: 196) says "there were a few observers who pointed to other reasons." These included the 1851 cholera epidemic which was said to have created many orphans who became habitual thieves, the Baptist organized revival in 1861 which we are told caused thousands to abandon their work for attendance at chapels and, finally, the sheer "destitution" of the people. On this last point, Hall (1959:197) writes: "Reverend H. Clarke of Grange Hill,

untypical of the Anglican clergy, ... stated it bluntly in 1865 declaring that the increase of larceny was without doubt due to the lack of food." Reflecting on the explanations offered for the apparent increase in praedial larceny from the 1850's on, Hall (1959:197) writes:

> It is only when we assemble these various explanations together with some additional comment that the real picture emerges. Apart from those few with inherent tendencies towards kleptomania, people who steal do so from a combination of two factors: need and opportunity. We ... see that in 1860's the economic conditions in the island rapidly deteriorated. At the same time, as the small cultivations filled the more accessible areas and moved farther away from parts settled after emancipation, it became easier for passers-by to steal without being detected. Thus the numbers of thefts increased.
>
> The institution of the rural constabulary, moreover, tended to increase the number of apprehensions and accusations, so that greater publicity was given to the increase of crime; the small settlers, and especially the better-off small farmers who had crops worth stealing, grew louder in complaint; and so the circle went round.

Hall suggests that for the combination of reasons he identifies, most stealing was being done by opportunists and desperate people. Dr. Edward B. Underhill was, however, quite specific in identifying the difficult economic circumstances of African Jamaicans as the cause of crop theft. Underhill was Secretary of the Baptist Missionary Society of Great Britain and spent several months in Jamaica between 1859 and 1860. Oliver (1936:165) writes:

> In February 1865, in modest and unprovocative language, he (Underhill) invited the attention of Mr. Cardwell, the Liberal Secretary of State for the Colonies, to what he had himself observed and had more recently had represented to him as unsatisfactory in the plight of the Island. His statements were temperate, and he invited verification. Crime, he said, had increased; convictions for petty offences, chiefly praedial larceny, were multiplying; the number of persons in prison was more than double the annual average up to three years earlier; there had been a great increase in the number of summonses for petty debts and applications for parochial or private relief. He attributed this state of affairs, immediately, to the drought of the two previous years, intensifying privations arising from the poverty of the people, as made evident by much raggedness of clothing 'so contrary to the taste for dress usually shown by ... [African] people,' and by the increasing habit of nakedness among the children. The poverty of the people, he said, was aggravated by the heavy import duties on everything they had to buy. For example, the duty on the cotton goods which they principally used for clothing was 38 per cent on the value. Many were suffering from lack of employment and consequent failure of wages; taxation was too heavy for the island's resources; sugar estates were decaying and could not be revived without capital outlay, for which the owners could not provide, whilst a large proportion of the fertile land in the Island was uncultivated and withheld from productive use.

In later discussions of the relationship between hard times and praedial larceny, the similarities between the 1860's and the 1970's have not passed unnoticed. Scott (DN:9/6/1976) writes: "One thing that was clear during that [1860] period was the deterioration in the economic condition in the island at the time and a similar parallel

could be drawn today. There is unemployment, people are frustrated, Land Lease, Food Farms and the Pioneer Corps do not seem to have the intended effect." A national survey carried out by Market Research Services on behalf of the Private Sector Organization of Jamaica and published in the Gleaner (10/6/1979), ranks the problems identified as most seriously affecting Jamaicans:

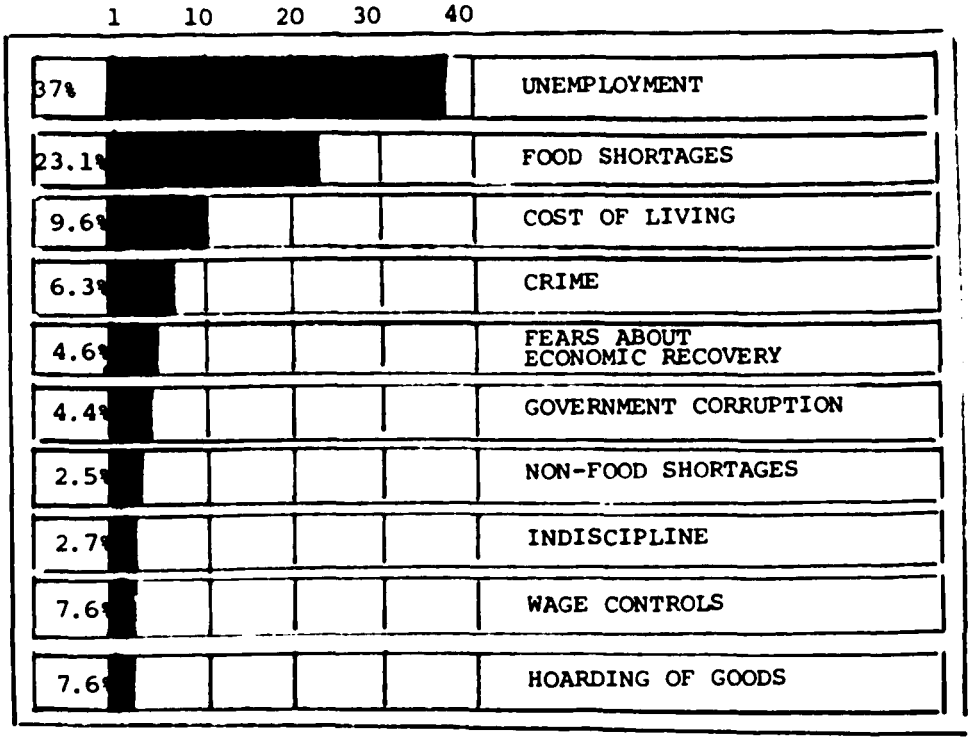


Table 20

Survey of Problems Most Seriously Affecting Jamaicans. Source: Gleaner (10/6/1979)

In its evaluation of the survey, the Gleaner concluded:

> The findings indicated the priority ranking of economic problems in the minds of the Jamaican public and social problems.
>
> Rural dwellers placed more emphasis on food shortages than either Corporate Area residents or urban dwellers in the parishes outside of Kingston and St. Andrew, while self-employed farmers and the unemployed seeking jobs concentrated their complaints primarily on unemployment and food shortages. Male and female responses were remarkably similar as were the responses of the students, the younger (25 to 40) and the older persons (over 40) interviewed.

One illustration of the link that exists between economic need and crop theft is provided by the incidence of food poisoning caused by contaminated flour. The problem began at the end of December, 1975 and through January of 1976 became a major crisis. By January 29, 1976, twenty people were dead, sixty-one were treated at hospitals and nine parishes were affected. As the crisis intensified the Gleaner (29/1/1976) reported that the baking industry was on the verge of a shut-down as people were no longer buying products made with flour. It was not until early February that the situation was brought under control. The source of contamination was Parathion, an organic phosphate insecticide not available in Jamaica. This was the second time in eight years that Parathion has been the source of food poisoning in Jamaica. In 1968 there was a similar outbreak in the parish of St. Catherine and Clarendon.

An unidentified author wrote in the Gleaner (5/2/1976):

> One factor brought home by the poisoning crisis, is that old habits die hard and people are reluctant to give up their favourite food items.
>
> You will notice that for breakfast people still had their bread or fried dumplings and dinner had to contain more dumplings. It was hard to tell them that they should forego patties as well, after all there is hardly a Jamaican man, woman or child who does not like this favourite snack.

For most Jamaicans, especially those of the poorest classes and groups, flour is more than mere habit, favourite food or snack. It is a basic necessity. At the beginning of the crisis, Dr. A.A. Peat, the Acting Medical Officer at Morant Bay (St. Thomas) made this point clearly. He stated (Gl: 10/1/1976): "Flour is one of the main sources of protein in the diet of people in St. Thomas, particularly the poor." In the January 26, 1976 Gleaner, Fuller indicated that "In an interview with several of the hospitalized victims they said that flour was very cheap food and was used by them because they could not obtain rice and other foods as they said there was an overall scarcity of food in the parish." Not only are people dependent on flour, their dependence is greatest in the winter months of December, January and February. Apart from plants which fruit throughout the seasons (such as banana, plantain and coconut) and some root crops which can be stored, the winter and early spring are the less

productive times of the year for harvesting crops, particularly tree crops.

It is in this context of the flour crisis that I present the following link between material need and crop theft. On February 2, 1976, the Gleaner published a letter to the editor from Paul Jones, a member of one of the largest landowning families of eastern Portland and St. Thomas. Paul Jones wrote:

> ...Praedial larceny, for many years, has been endemic in Jamaica. Recently, however, due to the restriction placed on the use of counter flour, larceny of local grown foods has reached epidemic proportions, and the loss of agricultural produce has become extremely distressing to the growers.
>
> One alarming aspect of thefts of this nature is that school children are now being used to raid banana fields in St. Thomas. I speak from personal experience, as only this week, a group of children were seen removing bananas from a field and, when caught, made their escape via the Plantain Garden River, one girl nearly drowning in the process.

Crop Theft and African Resistance

The members of the 1883 Crossman Commission[1] (Oliver 1936:222) held the opinion that "this particular crime [of crop theft] no doubt originated in a survival of slavery traditions, when the slave thought it no harm to take the fruits of his master's field, which he laboured to produce and some of the [Africans]...cannot yet be brought to see that in appropriating growing produce they are committing theft." Similarly, Hall (1959:196) writes:

> During slavery the theft of growing crops, especially cane had been a common practice. Slaves had considered it no crime to rob their masters: "What I take from my master, being for my use, who am his slave, or property, he loses nothing by its transfer." The masters, however, had not accepted this argument, and theft had been punished, though seldom by recourse to processes of law.

The statements of the Crossman Commission and of Hall imply that crop stealing was a simple expression of the activities of Africans who "thought it no harm to take the fruits of their master's field" or who "had considered it no crime." In the former case "they could not be made to understand" and in the latter case they stole with the justification that their owners lost nothing. Although the statements offered by the Crossman Commission and Hall might well be true, they completely neglect the entire question of African resistance in Jamaica and its relation to crop theft both during slavery and following emancipation.

The theft of crop plants is one of the way in which African Jamaicans expressed opposition to exploitation. It is not enough simply to explain rural theft as the activities of opportunists, of the economically desperate or of those variously described as "indolent," "Morally depraved" or "ignorant." We must also consider that, like "working without heart" under conditions of forced labor, sabotaging productive activities, feigning sickness and refusing to cooperate, crop theft is simply

another form of resistance of which the ultimate expression is rebellion. Madden (1970:168), who was sent from England in the 1830's as a special magistrate to mediate the conflict between the planters and the emancipated Africans, writes:

> The [Africans]... we are told, were so happy under the old system, that they had no desire to be absolved from slavery, they were so comfortably provided for; so much better fed, clothed, and houses; and so much less severely worked than English labourers, that they would not change conditions with them.
>
> I find, however, some strange evidences of their happy condition in the annals of Jamaica,--certain little out-breakings of unreasonable discontent year after year, from the commencement of slavery to the close of it: and those little ebullitions which eventually took the form of big rebellions, or actual conspiracies, are noticed in the following list:
>
> 1678, rebellion; first serious one.
> 1686, rebellion; sanguinary, at Clarendon.
> 1691, rebellion; many white people murdered.
> 1702, rebellion; eastern districts
> 1712, rebellion; repeated attempts, causing great alarm.
> 1722, rebellion; Musquito Indians introduced to quell it.
> 1734, rebellion; the...[African] town Nanny taken.
> 1736, rebellion; under Cudjoe.
> 1739, rebellion; under Quaco, in Trelawaney.
> 1740, rebellion; speedily subdued.
> 1745, conspiracy to assassinate the whites.
> 1758, rebellion; in Trelawney.
> 1760, rebellion; under Tackay; sixty whites, 400 ...[Africans], killed.
> 1765, rebellion; Coromantees the insurgents.
> 1766, rebellion; in Westoreland.
> 1769, conspiracy discovered in Kingston.
> 1771, conspiracy; assembly of 300 surprised by the militia.

1777, rebellion; followed by thirty executions.
1782, rebellion; St. Mary's under Three-fingered Jack.
1795, rebellion; Trelawney Maroons.
1796, rebellion; Maroon war; 600 transported.
1798, rebellion; under Cuffee; great destruction of rebels.
1803, conspiracy to murder the whites discovered.
1807, conspiracy of a very serious character.
1807, mutiny of the ...[African] troops.
1809, conspiracy against the whites in Kingston.
1824, insurrection; Portland, St. George's and St. Mary's.
1832, rebellion; 200 killed in the field, about 500 executed.

> If the [Africans]... were in a happy and contented condition, they have certainly taken a very extraordinary way of evincing their content.

It is against the actual historic background that we must consider praedial larceny, something that most discussions fail to do. Phillippo, for example, who was important in the development of small cultivators reveals this kind of ideologically rooted limitation in his understanding of African Jamaicans. In discussing their character, Phillippo (1962:250) writes: "moral honesty, or a conscientious regard to truth, was not only unknown, but unlooked for; no one expected his neighbour to tell the truth, or to be upright in his dealings, any further than suited his convenience or interest; even parents educated their children in all the arts of dissimulation, fraud, and perfidy." Phillippo did not recognize political resistance, although that was clearly the basis of the story he presented to illustrate the lack of "moral honesty."

> "Which way did Fox run?" said an overseer to a ...[African] boy, when in pursuit of a slave who had escaped from punishment. The boy pointed to a thicket in which the fugitive had eluded the grasp of his pursuer. On returning home the overseer was attracted by the shrieks of a child under severe punishment, and which proceeded from the negro village. Curiosity urged him to the spot, and on looking through the crevices of a [African]... hut, he saw the boy to whom he had just addressed himself suspended by his heels, writing and moaning beneath the heavy chastisement inflicted on him by his mother, who repeated during the intervals of the strokes, "Next time buckra ax you which side neger run, you tell him me no know, massa." The overseer is said to have repeatedly put the boy to the test afterwards, but could never get the truth from him again. From these causes, many, as they grew up, were unable to distinguish between truth and falsehood in the common occurrences of life. Truth, indeed, was designated in [African]... parlance "telling lies to buckra."

With respect to stealing agricultural crops in the mid-nineteenth century, Phillippo (ibid:252) writes that the Africans' "views of theft were very similar to those which they entertained with regard to falsehood."

> Depredations on the property of an owner were considered justifiable--crimes only when committed among themselves. Of this the following anecdote is an illustration:-- "Me don't tief notin," said an [African] ... who was detected by an overseer in the very act of stealing sugar--again and again protesting his innocence. "What do you mean, sir? Haven't you got the stolen property now in your possession?" "But me don't tief it, me only take it, massa." "What do you mean by that?" "As sugar belongs to massa, and myself belongs to massa, it all de same ting--dat make me tell massa me don't tief it; me only take it." "What do you call thieving, then?" "When me broke into broder house and ground, and take away him ting, den me tief, massa."

Crop Theft and the Traditional Rights of Children

Before I proceed to analyze the relation between the theft of agricultural crops and class resistance, I must consider one important factor that has not appeared in my discussion so far and which does not appear in the discussions of rural theft by concerned farmers and their organizations as well as by politicians, representatives of statutory organizations, and newspaper columnists. This is the matter of the traditional rights of children with respect to fruits.

We have seen that children not only collected large quantities of almonds, they collected many other fruits as well. During my many interviews with children, I always asked where they collected fruits. I was specifically interested if they concentrated on collecting in the yard and grounds of relatives and family friends. The children made it clear that they collected whatever they could "from all over" whenever they had "free time." This included summer holidays, weekends, trips to and from school, and in between errands such as going to the shop, carrying messages, tethering animals or looking for animal feed.

In a Gleaner article (13/0/1976) Thomas notes that rural pastimes of children are usually improvised. Many who have no access to parks, playing fields or libraries were forced to "arrange recreational activities

for themselves..." One of these recreational activities Thomas describes is children collecting mangoes during the spring and summer months when many trees are fruiting.

> Mango season which comes during the long summer holidays provides [a] ... treat for youngsters. In some of the rural areas mangoes are in such quantities that they are not sold. Anyone is free to visit mango trees of their choice.
>
> But the best ones are for the fittest, so the first ones to wake in the morning to go 'mangoing' would reap the best. This provides a sort of competition among groups.
>
> Sometimes groups wake up too early to be able to see the fruits under the tree. In a hurry no 'bottle lamps' are taken so one has to feel for the mangoes. Sometimes a hand would sink deep into rottening mangoes that have been lying under the trees for days.
>
> The whole idea is not to get a good find for the day's consumption but to see who can find the most and sometimes they are even given away to others.

In considering the tradition rights of children to collect fruits, a novel dimension of the situation is that many fruits such as sweetsops, guineps, soursops, June plums and naseberries, which in the past were considered pickney (children) some'ting, had acquired or are acquiring a permanent market value.

A higgler told me that when she was "a child, only children used to eat soursop. People didn't know it could mix [i.e. used to make a cold drink by mixing it with water and condensed milk]. Only big people in the middle

bracket would have it for Sunday drink. They didn't know it was good for you." Now soursop has a regular market value. Concerning the traditional rights of children, she said:

> With the children collecting, some people make fuss with contention and so on; but they don't remember the days when they were young. With me I don't bother. When I was a child nobody would watch children with fruit trees. When they see you they would just say "I begging you ...' But now a-days, people so change. In those days these fruits and such were really of no [commercial] value. People never use to reap those things and take them to the market. People never use to think that soursop had any value. In those days everybody would call everybody 'cousin' whether you related or not. In those days people never fuss about it because they never take it and make a livelihood, so they just never worry.

This means that in the past children competed with farmers only for the use value of fruits. Now, although the use value of many fruits remains insignificant to the farmers, the fruits have been acquiring a commodity or market value. Hence, exercise of the traditional gathering rights of children can now affect the monetary income of farmers.

The fact that many fruits are acquiring a commodity value does not mean that children are prevented from collecting. Many farmers and householders say they always give to children who ask. They are angered, however, by those children who they describe as wanting "to

fight yuh fe yuh own ting."

The traditional rights of children must be distinguished from cases where children are encouraged to commit thefts such as the case in Jones' letter to the Gleaner complaining about children being used to steal bananas. One informant criticizes higglers who buy fruits from children knowing that they have no trees or fields. Another informant explains why she is unable to reap crops from the family field: "The people who pick the ackee, pear, soursop and mango they don't come themselves, they send their children. Some of them they children pick the fruits and when evening coming and they know you won't be around, or that you would not be there at that hour, they come and collect them."

To illustrate the impact that the traditional rights of children have on farmers and householders, I present the case of Sibil Grant. She is one of the best known members of the community and is loved and respected. Her participation in the social life of the area is long, varied and devoted. A teacher before her retirement, she also served as a Justice of the Peace, a voluntary social worker, a member of the Happy Grove School Board and a librarian (of a small library she was instrumental in establishing). She is an interesting informant because of her long years of service to the community and her intimate knowledge of the people of the districts. She

also loved plants. She told me a friend once described her yard as "a miniature botanical garden." Now, however, because of age, she is unable to do much. Her yard consists of an ornamental front yard garden with potted plants on and around the veranda, and the back yard and side yards given to trees. These include:

TREES	NO.
avocado	1
ackee	2
cocoa	1
calabash	1
pimento	2
yellow coat plum	1
coconut	2
star apple	1
pomgranate	1
black mango	1
barge	1
sour orange	1
ortanique orange (grafted)	1
navel orange (grafted)	1
common mango	1
Julie mango	1
naseberry	1
soursop	4
Barbados cherry	1
guava	2
tamarind	1
pawpaw	1

Table 21

Trees in the Yard of Sibil Grant

The question of stealing (particularly by children) came up several times in my interview. When I asked about her Barbados (or West Indian) cherry tree--how often it fruited, the time of the year and what became

of the fruits--she said:

> It bears about five times for the year; sometimes four but not less. When it flowers the bees are busy; that's what calls my attention to it. The children get all the fruits. Nobody ask anymore.

The soursop is one of the fruits that has recently acquired a market value. Mrs. Grant has four soursop trees. When I asked what became of the fruits, she said "Happy Grove boys pass and pick them and sell them to higglers up the hill and these higglers buy them knowing they don't have any tress." Unlike the cherries, which are stolen for consumption, the soursop are stolen to be sold. In addition to the children who collect cherries, yellow-coat plums and June plums, and the students from Happy Grove who pick the soursops, one other group that Sibil Grant identifies is "the Rastas from Belle Castle." She has caught them on several occasions stealing breadfruits from her tree before it was blown down in 1974, and she believes the Rastas are to be held largely responsible for stealing other fruits.

Of the many young people in the districts who are sympathetic to Rastafarianism (which since the 1960's has become an important part of popular culture), fifteen present themselves as committed Rastafarians. Of the fifteen, two are "Old Dreads" and do not regularly associate with the thirteen who are all identified as "youths." Most people in the districts did not consider

the "youths" to be "true Rastas" and often describe them as rascals or rat-man. As Rastafarianism has spread in Jamaica since the 1930's, it has manifested a range of different economic, political and ideological tendencies (Simpson 1955, Nettleford 1970, Chevannes 1977). The young Rastafarians in Belle Castle and Scots Run reflects one of these tendencies. Like all Rastafarians, they see themselves as Africans locked in a "righteous struggle" against "wicked downpressors." Their condemnation of Jamaica as a part of the "Babylonia" or "Roman system," however, does not go beyond cursing the rural elite and showing contempt for private property rights. In an interview with one young Rastafarian I knew well, I asked about the charge that the Rastafarians in Belle Castle are thieves. He replied: "More time [most times] people say that Dreads are thieves, robbers and crooks, but the problem is that the Dreads in town is not as fortunate as the Dreads in the country. Man can't live off his friends; man can't starve and there is no work and hunger is a necessity. So in town, man will move with a breadfruit. In the country it is not like that." His father, he said, does not stop him from harvesting fruits; he gets a breadfruit whenever he wants. The reply of this Rastafarian youth essentially denies that "Dreads" in Belle Castle steal; they have no need to. Rastafarians in Kingston are forced by economic

necessity whereas those in the countryside (like himself) could live off the fruit trees and cultivation of their families. He answered my question but only defensively. My opportunity to see Belle Castle's young Rastafarians in action came while visiting a friend in Belle Castle in June 1977.

I was sitting on my friend's small veranda, facing the road and another house opposite. Two Rastas were sitting across the road under a coconut tree, reading a book on the life of Christ illustrated as a comic strip. The man who lived in the house opposite walked out into his front yard close to where the Rastas were sitting under the shade of one of his coconut trees along the fenceline and stared at them in silence. After a short time, they told him to go away and an argument ensued. This was not the first time and while the argument which followed was freshly expressed, it was not new; this my friend confirmed.

Initially the Rastas were not interested in a discussion and simply cursed the man. They called him a "ball head," "old batty boy," "soul boy" and "little pussy-cloth." The man, however, would not be put off. He kept asking: "what are the aims and objectives of this [Rasta-farian] movement?" One replied that "Rasta" is not a movement. The man then asked "do you follow the Ten Commandments?" The other youth responded by asking if he knew what the Ten Commandments were. The man began naming

them: "Thou shalt not kill; thou shall not commit adultery; thou shall not steal"--at this point, he launched into his complaint. He asked them if they believed that they should not steal, and, if they did, why was it he could not reap any of his fruits. He spoke about his coconut tree, which was near the road and under whose shade the Rastafarians were sitting. He could not get even a new nuts to drink from this tree, he said, and when visitors came from Kingston, he had nothing to offer them. He spoke of the robin mango tree he had brought all the way from St. Elizabeth and planted thirty-five years ago; now they picked the unripe fruits before he could "even get to enjoy one." During all this time the youths kept on cursing him, boasting that Jah said "the righteous would inherit the earth" and that one day they would "control" the piece of land he occupied. My friend said she had heard this before. "The Rastas," she said, "like to preach especially when they see people." This was not the first occasion I had heard them swearing at people. One Sunday afternoon in June 1977, I saw them cursing women who were returning home from church, referring to them as "old whore," "harlot," "vampire," "open belly," and so on. On other occasions I heard them swear at and threaten the headmaster and assistant headmaster of Happy Grove School, the agricultural teacher, the Baptist minister, and other members of the community.

Theatre Cargill said during our interview that he is afraid of these young Rastas. As a form of defensive action, he befriends them--or attempted to do so--"so as to be able to talk to them." This group (including others in Hectors River) is regarded as wanting to "fight people fe dem own ting." Claudie Afflick recognizes the collecting rights of children and like Sibil Grant and others, he expects children to ask when they want fruits. "When the children they come and ask," says Claudie Afflick, "I give them, but the minute they run up on the tree they have to go." While discussing this point, Afflick's comments moved from children in general to what he called "a set of boys in the district;" they are, he said, "a set of dam thieves, a set of rats dem. They don't want to work, only steal people fowl. Lord Jesus, they going down, down, down. They curse me, they curse me all they like as long as they don't walk through my place or stone or pick my fruits." A few weeks earlier when I had asked him his opinion of the coming generation, this man who was respected for his knowledge of the histories of the families and individuals of the districts said, "the only consolation" he had was that he did not have "much longer to live with them. "Discipline, morality, etiquette," he said, "are all gone in Jamaica." Afflick says he too is afraid of them. Since they are without scruples, they are dangerous and capable of anything. Afflick's house stood

on a hill overlooking the fork in the road leading from the Belmont road to Belle Castle and Scots Run (and to the districts of Haining and Rolandsfield further up the hillside). All the traffic passes right by his veranda. Because the Rastas know he does not like cursing, they curse all the way past his house so that now he goes inside when he sees them coming. It is a "lost generation" says Afflick reflecting on how greatly things have changed since he was a boy.

Solving the Problem of Crop Theft

One of the usual ways in which farmers prevent crop theft is by altering their cropping patterns. This, however, is not their only response. Apart from those who resign themselves to the inevitable loss of a portion of their crops, farmers try in many ways to solve this problem. Before focusing on the way in which rural theft affects cropping patterns, I indicate here some of the other ways in which farmers have tried to control crop theft.

During slavery, theives were flogged, starved, confined or put on the treadmill (Hall 1959, Oliver 1936). From the end of the nineteenth century, efforts by the state, agricultural organizations (particularly the Jamaica Agricultural Society) and commodity associations to control crop theft have been along three principal lines. The first involves the passing or revising of laws to provide stiffer

penalties. The second is the effort to register or license higglers. The third is the government's attempt to secure the cooperation of districts in patrolling fields and reporting thefts.

A law passed in 1951 provides for setting up Community Committees empowered to employ armed patrols, for the payment of informers, and for the conviction not only of thieves, but their "accessories and receivers" as well. In the efforts of the government, agricultural organizations, commodity associations and farmers to control theft, higglers who are identified as "accessories and receivers" come under heavy attack. They are criticized for making excessive profits from the labor of farmers. Others accuse them of exorbitant overcharging of consumers. Their key role in the distribution of locally produced foods is condemned as archaic, chaotic, backward, inefficient and in need of being scrapped. Thomas Wright (31/3/1976) in his Gleaner column writes:

> Next to praedial larceny the thing which most holds back agriculture in Jamaica is this lack of an adequate distribution system. This is why farmers are always tempted to grow crops for export, because it is only in the case of export crops--with the sole and honourable exception of coconuts--that any reliable system of collection, payment and distribution exists.

Wright thought initially that the creation of the Agricultural Marketing Cooperation[2] would provide a more efficient marketing system, but he writes: "... in all

my twenty-six years of farming in Jamaica, no A.M.C., no private firm or distributor, has ever come to me and commissioned a crop at any agreed price. ... So I plant crops for export or coconuts." With regard to the link between crop theft and higglers, he continues:

> ... if the A.M.C. or someone did come along and ask for crops like peas or corn or yams or plantains, the farmer would be in another difficulty for the chances are that most of the crop would disappear to the praedial thieves. Yet, if you pause to think, praedial thievery is itself encouraged by an absence of a proper distributive system and by the higgler system. It is not easy for the thief to dispose of any large quantity of the export crops. But the higgler system for local crops is an ideal system through which to dispose of stolen produce.

The Gleaner (17/5/1976) reports that after three months of study, a special farmers' Committee that had studied the stealing of agricultural crop was recommending the licensing of higglers as an effective means of reducing crop theft. Ray McKinley, then Chairman of the Agricultural Marketing Cooperation and Special Advisor to the Minister of Agriculture, explained that "what the licensing of higglers will seek to do is separate the wheat from the chaff. We want to be able to leave the good people alone, and get at those who operate by night and plunder hard-working and deserving people of their just due."

Community support in establishing patrols has long been viewed as an effective way of dealing with crop theft.

In this respect, the Jamaica Agricultural Society (1959:191) asserts in the Farmers Handbook: "A general mistake has been for farmers to look altogether to government for the remedy. It is a sheer impossibility for government to provide enough police patrols to keep an effective check on praedial larceny. The remedy lies in the hands of the rural community itself. Only by organised communial activity can the plague be checked and brought under control." The Gleaner (21/7/1977) reports that "At the 1977 annual meeting of the Jamaica Agricultural Society, Manley told over six hundred farmers gathered there that they

> would never solve the problem of praedial larceny until they organized themselves under the Home Guard System and worked together with the Security Forces. They must be prepared, he said, to give up even one day each week to do some of the patrolling themselves "and practice some self-reliance" if they wished to solve the problem.

In addition to the actions of the Jamaica Agricultural Society and other farm organizations in conjunction with the state, farmers themselves have their own ways of dealing with crop theft. Some of their methods are direct and extreme. Smallman in a Gleaner (4/3/1977) article says "villagers caught an intended thief and beat him to death." The Gleaner of February 10, 1977 reports a similar case where a thief was chopped to death.

Farmers also attempt to prevent theft by taking advantage of people's belief in "spirits" and their fear

of Obeah. Obeah (the manipulation of "spirits") as I indicated in Chapter 5, is used in efforts to cure illness, exact revenge, win favors, predict the future, ensure success of a venture and detect and punish thieves. Beckwith (1929:127) writes: "The Obeah Man will often prepare a bundle to hang in a conspicuous place in the field, according to Bell and other early writers." The bundle is called a "guard." Beckwith (1929:125) says the use of "guards" still occurred in the 1920's. I did not detect this practice in eastern Portland. Only one farmer in Hectors River is generally recognized by the farming community as having "powers" and capable of using it in defense of his field. In his case, however, the procedure involved the cultivation of calabash or packi trees. When I approached him on the subject, he was evasive and clearly unwilling to discuss it.

In eastern Portland, one of the most common means of protecting cultivation from theft, especially from fields separate from farmers' residences, is simply to increase direct supervision by means of more frequent visits at irregular hours. One informant says she collects only pimento from the family field because her mule died and she is unable to visit the field regularly. She harvests pimento only because there are many trees and the entire crop is never stolen.

Crop Theft and Cropping Pattern

Altering cropping pattern is one of the important ways farmers try to control crop theft. Stealing influences cropping in three ways. It leads farmers to abandon cultivation completely or partially or change the kinds of plants cultivated and the ways in which they are cultivated.

Crop theft discourages farmers from growing certain kinds of plants, particularly herbaceous crops such as roots, vegetables, spices and condiments. In 1909 Pullen-Burry (82-83) stated: "In parts of Jamaica both plantation-owners and peasant-proprietors abstain from planting vegetables and fruits, simply because they never reap the benefit of their labours..." A similar point was made in 1976 in a Gleaner editorial (20/11) concerned with crop theft as a "major problem" which receives "much too little attention."

> The theft of farm produce from the land is perhaps one of the single most important contributors to the lack of improvement in production of domestic crops. The quantity of produce stolen each year must be fantastic, given the number of complaints and the number of farmers who have decided to get out of agriculture or to produce something which is not easily stolen, such as pigs or cattle.

Crop theft (as well as lack of encouragement from marketing organizations and merchants) is the reason the columnist Wright offers for not cultivating food plants and concentrating instead on export crops and coconuts. Crop theft affects not only estate and small farmers, but

the agricultural program of schools as well.

> In St. Catherine, it is the school vegetable gardens in the northern part of the parish that they prey on. The students who are being taught basic agriculture and saving, work hard at their peas and beans and tomatoes only to return to school after a weekend and find the crops they had been looking for hopefully to mature, stolen (Scott Gl. 9/6/1976).

From the beginning, Happy Grove has had little success in establishing a viable agricultural program. In addition to the hilly campus, poor soil and lack of irrigation, the stealing of agricultural crops is identified as a factor in abandoning cultivation. The report of the agricultural department in the school's 1976 yearbook states:

> The agricultural program at Happy Grove School in East Portland is a programme with a difference. The difference lies in the fact that we have decided not to grow crops in the small and hilly area available, but to concentrate on rearing small stock and bees. Although for reasons including praedial larceny, cultivation of crops has been discontinued, we are encouraging the students to engage in home garden projects.

A Gleaner report (Nelson 1/5/1977) on Happy Grove's agricultural program expresses the thinking of the school's agricultural teacher: "keeping an apiary came from the need to reduce praedial larceny, since people are afraid to stone fruit trees or steal coconuts if colonies of bees are interspersed among the trees."

Limiting the extent of cultivation, especially

of herbaceous plants, is indeed, one of the more serious ways in which praedial larceny affects cultivation. The Farmers Handbook published by the Jamaica Agriculture Society (1959:191) states: "the steady growth of this evil in the rural agricultural industry has been cumulative in its effects. Today the gross output of production has so fallen that the shortage makes itself felt in the everyday life of the population. Disheartened cultivators plant less and less." Small (4/3/1977) makes a similar report in the Daily News. She points out that farmers could lose as much as fifteen percent to thirty percent of their crops and that for large estates praedial larceny adds a significant cost to production because of the need for "intense security." She writes:

> Many farmers just will not plan to grow food crops which can easily be stolen. This really cuts down on our agricultural production, particularly herbaceous vegetable and root crops. These crops are almost all now grown on small farms where the farmer can personally over-view his fields.

In addition to abandoning cultivation, Edwards (1961:116) indicates that there is "a tendency for the more attractive to be grown at home and the less attractive on the farm pieces."

Apart from abandoning cultivation or shifting the area in which particular plants are grown, another way in which farmers try to control praedial larceny involves

changes in the selection of plants cultivated and in the way in which they are cultivated.

One way in which the selection of plants is affected is in attempts to use spiritual force to prevent praedial larceny. Wanglo (sesame), calabash, and overlook are associated with this effort. Edwards (1961:116) mentions the cultivation of the overlook bean as a charm planted to "frighten intruders." Cassidy (1961:345) also mentions the overlook (horse, or jack) bean "which planted at the edge of a 'ground' reputedly protects it from thieves." Though the overlook bean was present in the Portland districts, I was unable to determine if it was planted to prevent praedial larceny. Of the overlook bean, Cassidy (1961: 252-253) writes:

> Belief in the evil eye--or something very much like it--is strong. Everybody has a magnet, the power of personal magnetism, which manifests itself through the eye. It may be too strong for another person and do him harm--in which case the first is said to overlook the second. ... This sense of overlook appears to be English: the first instance of it found by the OED was from the Merchant of Venice (III.ii.15), meaning to bewitch; but it has taken on local characteristics in Jamaica. And, curiously enough, the almost contrary sense, to protect from supernatural harm, is found in the name of the overlook bean. ... It may be, of course, that the bean is thought of as overlooking the thief rather than the plantain ground.

In addition to cultivating plants whose association with spiritual forces make them useful in efforts to

control crop theft, there are other solutions that also affected both the composition of plants cultivated and the way in which they are cultivated. In 1959, the Farmers Handbook of the Jamaica Agriculture Society indicated that "Farmers owning small plots with cocoa trees have even been known to cut down the trees in order to grow cane, because of the depredations of the praedial thief." Similarly, in a report on the increasing incidence of praedial larceny in the mid-nineteen seventies which prompted farmers to make "impassioned pleas for the Minister of Agriculture to make penalty under the law stringent," Scott (9/6/1976) writes:

> In St. Thomas the small farmers are about to give up in frustration as their yams, breadfruits, bananas and cattle are being stolen with increasing regularity each night.
>
> They have been thinking of changing to cane planting or other crops that would not be so easily stolen.

Whether the cultivation of cane instead of cocoa, yam, breadfruit, or banana is a practical solution to the serious problem of crop theft is open to question. The following report of farmers attending the annual general meeting of the Long Point Vale Royal Cane Farmers Association at Clark's Town (in the parish of Trelawny) raises doubts. They

> ... complained that the high incidence of praedial larceny in the area had resulted in many farmers seriously considering going out of cane cultivation.

> The farmers were of the opinion that a large percentage of the canes was eaten by unemployed ganja smoking youths who spent most of their time in the cane fields and had an insatiable appetite when the drug took its full effect. The farmers said that the thieves used the canes to feed small livestock and sold them to roadside vendors of cane juice.

If farmers of St. Thomas are considering giving up the cultivation of yams for cane, Edwards (1961:237) indicates that other solutions, while they do not require giving up yams, nevertheless affected the way in which they are cultivated. He reports a farmer in St. Mary as having said "that when yam was inter-planted with other crops it minimized the danger from 'night rats' (thieves), which was great when yam was growing well in a pure stand, for it then presented a strong attraction." Pointing to "several miscellaneous observations" on intercropping ("which while only made by one or two persons may have reflected the view of many more"), not only does Edwards (1961:223) offer insight into the real character of cultivation and the impact of praedial larceny, he also offers insight into the limitations of agricultural officers who do not fully grasp the real circumstances in which people are farming:

> Details of coconut cultivation in Area B [St. Mary] were available from 6 farmers, 5 of whom were considered to use wrong planting practices. All these 5 farmers planted nuts which they covered completely with earth; the officer said the top of the nut should be left exposed. Not one of the farmers agreed with the suggestion; 4 of

> them said the plants did well and 1 of these pointed out also that when covered by a layer of soil the nut was hidden and therefore protected from thieves. The fifth farmer said that he did not have the money to buy 'grow coconuts' (seedlings), and that as he did not have any bearing trees, when he bought 25 nuts he had to plant them and cover them before the family ate them. In this way they were spared the temptation of seeing the nuts. The farmer admitted that it would not have been feasible to try to keep the nuts above ground until they had sprouted because "I would take them myself."

While crop theft leads some farmers to abandon the cultivation of herbaceous plants, this is not always the case with trees. Even where a portion of a tree's crop is stolen, many farmers say they are still able to harvest some fruits. One farmer says he is not too concerned about the stealing of fruits from trees. As he explains it, all that matters is he still has "the roots." However, The Farmers Guide (1959:191) points to situations where cocoa trees were replaced by cane because of theft. In Belle Castle, one farmer who was only able to harvest pimento cut all the other fruit trees and sold them to charcoal makers; in this way, he says he is "getting something." The pimento trees were left because of their economic value and because he is able to collect a portion of the crop in spite of theft.

I was told by an informed, long-term resident of Kingston that residential areas developed in the 1960's and early 1970's where owners either cut down fruiting

trees or refused to plant them, growing ornamental trees and shrubs instead. In the past, individuals stealing fruits would run when detected. Now this is not always true. Discovery in many instances results in confrontations in which owners are cursed and threatened. For some people in Kingston, the problem is not simply crop theft, it is the fear of social conflict and revenge. The Gleaner (17/5/1976) states: "Criminals in the early days of the [Praedial]Larceny Law could be apprehended just by being shouted at, but today they carried guns and were not afraid of police or even soldiers." Although the elimination of fruit trees does not remove the source of the problem, it does remove the immediate cause of a confrontation which the individual householders do not want and in most cases think they cannot handle. Growing ornamentals pose no such social difficulty. They produce no edible products and there is no ready market for flowers and foiliage.

The stealing of agricultural crops is not a subject that is widely discussed in efforts to explain the nature of cultivation. I became increasingly aware of the effects of rural theft on cropping practices while conducting this research and in this chapter I have given a general indication of some of the ways in which this occurs. While many writers in their discussions of intercropping dwell on market risks and risks resulting from climate and other natural conditions, few consider

risk resulting from crop theft. In this chapter I have also argued for the need to distinguish crop theft from the traditional rights of children and the importance of understanding crop theft in the context of class relations and class struggle. It is clear from the initial discussion I have presented that the relationship between crop theft and cropping practices is complex and deserve serious consideration in our efforts to understand the history of intercropping in Jamaica.

FOOTNOTES

Chapter 8

1. Oliver writes that: "In the year 1882, a Royal Commission consisting of Colonel Sir William Crossman, R. E., and Mr. George Baden Powell, with Mr. C. Alexander Harris as Secretary, was appointed to investigate the finances of Jamaica and other West Indian islands, with special reference to the incidence of taxation. The Commissioners spent seven weeks in Jamaica and took evidence in writing and verbally from representatives of all classes as well as from public officials. They took a broad view of their duties and did their best to inform themselves thoroughly as to the means of the taxpayers. Their Report and the evidence published afford, therefore, some fairly reliable impressions of the social and economic state of the Island community at that time."

CONCLUSION

I began this thesis because of my interest in the economic, political and cultural progress of tropical countries like Jamaica and my firm conviction that anthropology has much to contribute towards this objective. The thesis has its origin in graduate courses on "peasants," and my interest in Jamaica's political and economic history. Specifically, I was concerned with "development issues," particularly with problems of food, nutrition, health and employment.

Initially, my attention was focused on land. For African Jamaicans the ownership of land has been viewed as the basis of an independent life. For planters, controlling access to land has been the basis for creating a labor force compelled by material necessity to work for wages. For successive governments, land settlements have been the basis for quelling rebellion and winning votes. For Jamaica's left, "returning the land to the people" has been suggested as the solution to the "land problem" and the hardships of people in the countryside. While pursuing these various facets of the "land question" in Jamaica, it became apparent to me that there was little discussion of the actual <u>use</u> of land. The politics of land has been an issue of "taking away land" and "giving land" but the virtue of who owns land with respect to its use has largely

remained unexplored. It was this recognition that led to the present study.

The limited effort to understand the use of land in Jamaica explains the lack of attention not only to "minor export crops" (Handler 1971:46-47) and to "domestic crops" (Edwards 1965:34-35), but to fuel plants, shade trees, ornamentals and (to some extent) medicinals. As I investigated these factors, I realized that the link between Jamaicans and plants could not be fully expressed by restricting my attention to cultivation in yards and fields. I became increasingly interested in the way in which the distribution of plants in settled areas was conditioned by social life. These were the plants with which Jamaicans were in regular contact and upon which they depended. Although I was primarily concerned with yards and fields, the necessity of this wider perspective became especially evident when I began to realize the role botanic gardens have played in distributing plants of all kinds to farmers and non-farmers alike. From the Spanish discovery and settlement of the island, Jamaica's history has been part of the making of what Wallerstein (1974) has called "The Modern World System." It is in this context that botanic gardens were created and plants were introduced to the island from many parts of the world. A large portion of these plants have become established as a part of Jamaica's settlement vegetation and their distribution reflects in

part the economic, political and cultural history of the island.

As I began to explore the use of land in Jamaica, especially the activities of small cultivators, I became increasingly interested in intercropping. It occurred to me that intercropping was not simply the fact that farmers simultaneously grow two or more species of plants on the same land, but it was the means whereby they were able to grow two or more species on small pieces of land.

I have argued in this thesis that the value of growing two or more species of plants together which is the traditional practice of most Jamaican farmers is that it achieves several objectives simultaneously. The first is to produce a diversity of products for household use, for gift-giving and for sale on as continuous a basis as possible by growing different species and varieties of wild and domesticated vines, herbs, shrubs and trees. The second is to do this in the most efficient way with respect to labor, time, money and the intensive use of available resources. The third is--by the efficiency of inter-planting--to achieve a relatively independent way of life free from exploitative relations and from dependence on charity and state welfare.

In this thesis I have focused on the last of the three objectives presented above. Given Jamaica's history as a "plantation society," I have argued that in addition

to natural conditions of soil and climate, various kinds of risks, fluctuating market demands, labor efficiency and agricultural intensification, class is an important determinant of intercropping. The extent to which small farmers grow trees is one basic way in which class relations affects intercropping. In their efforts to secure and control workers, Jamaica's ruling classes have found it necessary (at various points in the history of the island) to destroy fruit trees, restrict access to land and prevent tenants from planting trees. There are indications that this has also occurred elsewhere in the Caribbean and in Latin America (Jacoby 1971). For large numbers of Jamaicans, small farming based on intercropping is one way of escaping the need for complete dependence on estate wage labor. To the extent that estate labor is regarded as demeaning, the ownership of land and the cultivation of trees are associated with dignity and independence.

The way in which the problems of Jamaica's agriculture are defined determines the kinds of solutions which are proposed. If the basic factors limiting agricultural progress are unfavorable climate, poor soil, lack of irrigation, pests, disease, poor roads and the absence of farm credit, then these are the problems to be solved in efforts towards advancing agriculture. Agronomists in recent years, for example, have made serious efforts towards an understanding of intercropping. They have been

chiefly concerned with experimental cultivation as a way of determining and increasing the productivity of different systems of intercropping. This entails a concern with the productivity of different crop combinations, the biological stability of these systems, plant density and spacing, plant competition, weed control, root-system interaction, fertilizers, canopy types, the control of pests and disease, the effects of varying planting time and breeding new cultivars for intercropping. For a more complete understanding of problems to be solved in advancing Jamaica's agriculture, however, we must consider the social as well as the agronomic determinants of intercropping.

It is here that anthropology has a great deal to contribute. We need to know the ideal physical requirements for the most successful cultivation of plants, but we must also understand the social relations within which decisions are made to grow or not to grow certain plants. That this latter point is not clearly understood is evident in the fact that the P.N.P. identified its land reform program as "Land Lease." The program's intentions were good; the P.N.P. sought to make land available to farmers for the immediate production of food crops and to safeguard it from the manipulations of land speculators who were not interested in farming. Where the program failed, however, was that it did not leave farmers with

the idea that something new was being created in the relation between people and land in Jamaica. Rather, the P.N.P. land reform program was tenancy as usual with the primary difference being the state was the new landlord. It was business as usual. Seaga and the J.L.P. hammered away at this point during the 1976 election. Throughout the island they told people that what Jamaicans need and what they want was not "lease-land" but "own-land," land on which they could build and that they could "leave for the next generation."

There is a tradition to small farming in Jamaica but this tradition will never be understood as long as small farmers are stereotyped as poor, ignorant, simple-minded dirt-scratchers. Efforts to help Jamaica's small cultivators are often aimed at caricatures of farmers. While politicians (of both the "left" and the "right"), agricultural experts, extension officers and researchers have had much to say about improving the island's agriculture, few have found it necessary to explain the traditional practices they seek to affect. Jamaica's small farmers have a lot to say in accounting for their choice of plants and the way in which they are cultivated. They should be heard and what they have to say must form the basis for any serious effort to advance the island's agriculture.

Ignorance of the small farming tradition of Jamaica is only an aspect of the general contempt the island's elite

express towards small cultivators. Historically, Jamaica's small farmers have had to seek independence from large estates in the context of an indifferent and often hostile state. Beckford (1971), Stone (1974) and others have attempted to show that the state has consistently served the interest of large estates and has sought to conserve the general relations of property by land settlements to quiet rebellion and to forestall open struggle. At the same time, the P.N.P. sought, for example, to make land available to small farmers, they found it necessary to forcefully evict not "squatters" but "capturers" of estate land. "Capture" (as this term is used in Jamaica) is an open challenge to property relations. It is not simply the illegal occupation of unused land but a deliberate effort to take control of such land. The P.N.P. was forced to make it clear that this popular effort toward a direct solution to the "land problem" was unacceptable.

A vital part of agricultural progress in Jamaica will have to be a systematic effort to extend the market for tropical fruits. Because of Jamaica's position as a part of the British empire at a time when plant science was an important imperial activity, the creation of the island's settlement vegetation represents a unique resource capable of being greatly improved in the interest of national development. Dr. Aubrey Jacobs who has been a keen observer of Jamaica's natural and social history

once described the island to me as "a country of samples." You can taste everything, but there is never enough for sale. Bigelow (1851:151) recognized the potential commercial value of Jamaica's settlement vegetation as early as the mid-nineteenth century and since that time the conditions for realizing this potential has greatly improved. He wrote: "The rarest kinds of fruits grow wild, and rot under the trees that produce them, which might be delivered in a sound and healthy condition along the whole seaboard of the United States...without a particle of difficulty. There is no good reason why the New York fruit market...should not abound with every tropical fruit in absolute perfection."

Botanic gardens will have to be an important part of improving small farming in Jamaica. Ultimately, advancing the island's agriculture by improving intercropping should be a part of restoring the island's botanic gardens to their former status as scientific institutions of national cultural significance. In addition to their recreational value, botanic gardens have a crucial role to play in furthering economic growth through research, through the introduction, maintenance and distribution of new plants and through their educational and extension work. At a time when increasing population and the spread of human settlement brings more and more species and varities of plants closer to extinction (Howard 1977,

Woodwell 1977) botanic gardens will also have to serve as repositories for endangered tropical plants and plants which are of potential value in meeting the present and future requirements of Jamaica's small farmers and farmers in other tropical areas in our increasingly small and interdependent world.

This thesis has dealt with the relationship between people and plants in Jamaica. It represents a first step towards showing in some detail the precise ways in which people utilize intercropping in their efforts to achieve an independent way of life. It is well to remember, however, that we have only dealt with one aspect of Jamaican society in abstraction from a wider social context. It is important to consider intercropping in this wider social context shaped by the political economy of the island, especially its continued dependence on external markets. What this thesis has shown is peoples' adaptation to the limitations placed upon them by the development of Jamaica as a society which has always been tied to the world market. How the island's small farmers manage land illustrates their ingenuity in dealing with the limitations under which they must operate. These limitations spring not only from the limited capital resources and the nature of the land they control, but also from the forces emanating from the global system. Thus the relation of people to sources of subsistence which we have considered in this thesis will have to be understood in dialectical relation to the larger

world in which they must operate.

The work for this thesis was done during the period when the P.N.P. was in power and actively persued a policy of self-reliance based on the development of the agricultural sector and local industry. Since the time this research was conducted a change of government has brought to power the J.L.P., a party which has established an entirely different set of priorities. Nevertheless, the problems dealt with in this thesis are perennial and will no doubt remain just as real for the J.L.P. as they have been for the P.N.P. In the foreseeable future one of the best resources for the development of Jamaica is its magnificent food forest and it will require a population with improved skills to make the fullest use of it.

APPENDIX 1

Plants sent to and from Hope Garden for the period from the first of October 1889 to the thirty-first of March 1891 are presented in the tables below. They are from the Report of the Director of Public Gardens and Plantations, Jamaica (1891).

Parish	Area	Sender	Plants
St. Elizabeth	Lacovia	R.K. Tomlinson	191 various Jamaica Orchids and roots of Nelumbium Luteum. 20 pkts. of various seeds.
St. Elizabeth	Balaclava	Rev. E. Bassett Key (St. Mary's College)	Foresteronia floribunda, Aristolochia sp. and 3 ferns.
Trelawny	--------	Mr. C.P. Dewar	1 barrel of kangaroo grass roots. (Seeds of "Greenheart.")
St. Ann	Oracabessa	Mr. A.C. Bancroft	1 plant, Apocynacea.
Manchester	Mandeville	Mr. Wynne	5 banana suckers ("choice kinds.")
Kingston	--------	Dr. Plaxton	Seeds of Stephanotis.
Kingston	--------	Mr. John Parry	Seeds of Ipomoea Horsialliae.
Kingston	--------	Mr. L. F. Mac Kinnon	Seeds of Alfalfa (Medicago sativa).
Kingston	--------	Mr. H. B. Malliett	Seeds of Bergamot Orange.
Kingston	Constant Spring	Mr. Arambarry	Soap berry seeds.
Kingston	--------	A. C. Mais	Seeds of senna.
Kingston	--------	Major Knollys	Seeds of Jacaranda sp. (Queensland)
Kingston	Barbican	Mr. P.C. Cork	Seeds of Sunflower, imported, and native grown.
--------	--------	E.L. Frank through Hon. W. B. Espeut	4 Olives (2 "Mission" and 2 "Polymorpa"), 4 Pear, 4 German Prunes, 4 Apricots, 6 Peacan nut plants.

Table 22

Plants Sent by Individuals and Companies in Jamaica to Hope Garden

Garden	Location	Plants
Castleton	St. Mary	Palms (1,210), Crotons (272), Roses (3,052), Various Plants (4,502), 71 parcels of palms and other seeds.
Parade Garden	Kingston	9 pkts. cocoa, palm seeds, 14 suckers of sisal hemp, 21 Fleus Lucida.
Hill Garden	Chinchona	68 pkts. of various seeds, "285 various plants," 13 bundles of geranium cuttings, 9 Schomburgia Lyonsil.

Table 23

Plants Sent to Hope From Botanic Gardens in Jamaica

GARDEN	LOCATION	SOURCE	PLANTS
Guyana	Demerara	--------	24 bulbs of Hippeastrum solandriflorum, 22 various Orchids.
Malaya	Singapore	Dir. of the Botanic Gardens	A wardian case containing 15 various plants, 8 of which were dead when they arrived.
England	Kew	--------	57 pkts. of various seeds.
Trinidad		--------	5 pkts. seeds.
Guyana	Demerara	--------	14 pkts. seeds, 120 seeds of Attalea speciosa, and 220 seeds of Maximiliana sp.
	Saharunpur	--------	13 pkts. seeds.
S. Australia	Adelaide	--------	10 pkts. seeds.

Table 24

Plants Sent to Hope From Botanic Gardens in Other Countries

Country	Individual or Company	Plants
Cyamans	Mr. Thos. Kemp	7 young coconut palms, and 57 various Orchids.
Barbados	Mr. J.R. Bovell	6 Adiantum Farleyense.
England	Wm. Paul & Son	(purchased) - 166 Roses, and 50 roots of Spiraea, &c., also 827 various bulbs, 131 of which were kept at Hope and 697 sent to Hill Garden at Cinchona.
United States	Rear-Admiral Ammen, U. S. Navy	10 plants of Durian (Durio Sibethinus).
Bermuda	Mr. W.P. James	102 Lily bulbs, and 36 Gladiolus. The majority of these were transferred to the Hill Garden.
Bermuda	Mr. W.MacCullum	144 Lily bulbs, transferred to the Hill Garden.
England	Messrs. Sutton & Sons, Reading	1,086 various bulbs, &c., (purchased for exhibition grounds).
England	Messrs. J. Veitch & Son, London	35 various Orchids.
Holland	E.H. Krelage & Son, Haarlem	6,000 Gladiolus and Ixias (purchased for Exhibition Grounds) and 162 Hyacinths, Tulips, &c., presented.
United States	Messrs. Reasoner Bros., Florida	14 pkts. seeds
India	Madras	20 pkts. various seeds.
Grenada	---------	3,000 Nutmeg seeds (purchased) and Luffa.
Australia	Mr. Henry Sewell, through Director	14 pkts. of various seeds.

(continued)

--------	Assistant Bishop Bouet	Seeds of Cinnamon.
Honolulu	Mr. A. Jaeger	3 pkts. of seeds, various.
	Mr. J. Stephens Radnor	1 pkt. White Queen Onion seeds.
England	Messrs. Sutton & Sons, Reading, Messrs. Jas. Carter & Co., London	Seeds of Ipomae, Convolvulus, Mignonette, Godetia and various other flower seeds, also collections of vegetable seeds.
United States	Messrs. W. Atlee Burpee & Co., Philadelphia	Tomatoes
United States	Messrs. Johnson & Stokes, Phila.	Tomatoes
United States	Messrs. D. Landreth & Son, Phila.	Tomatoes
United States	Messrs. Peter Henderson & Co., New York	Tomatoes

Table 25

Plants Sent to Hope by Individuals
And Companies in Other Countries

Many of the places from which plants were sent to Jamaica also received plants from Jamaica. The botanic gardens of Jamaica distributed plants in three ways: sale, exchange and free grants. Fawcett (1895:15) reported:

> In five years, from 1880 to 1884, inclusive, the Department distributed nearly 5,000 packets of seeds and more than two million economic plants (Report of the Director, 1885, p. 2). The plants alone taken at the nominal sum of three pence each would reach a total value of £25,000. This would be more than the whole cost of the Department during the same period. Hence, if we regard merely the nursery work done by the Botanic Gardens, they have more than paid their way in the plants distributed by them.

From October 1889 to March 1891, the total number of plants distributed from Hope Botanic Gardens (both within the island and abroad) was 52,787. The garden also distributed hundreds of seeds.

Destination	Individual or Institution	Plants
Grounds of the Victoria Institute	Mr. A.C. Sinclair	120 various.
Roman Catholic Cemetery, Kingston	Right Rev. Bishop Gordon	32 Palms, 54 shrubs, 64 shade trees.
Turks Islands	His Honour The Commissioner	16 Crotons, 15 shrubs and 24 Roses.
May Pen	Mr. R.S. Spalding	85 Crotons, Palms, Fruit Trees, Roses, &c.
Spanish Town	Lepers' Home	84 Roses, Palms, Crotons and Hibiscus.
Kingston	Dr. Ogilvie	1 doxen Roses in exchange for plants presented for exhibition.
Port Royal	Commodore Lloyd	50 Casuarinas.
Alpha Cottage Industrial School, Kingston	Right Rev. Bishop Gordon	762 Economic and ornamental plants.
Kingston	Mr. G.J.DeCordova	30 shrubs in exchange for plants presented for exhibition.
Kingston	Parade Garden	102 ornamental plants.

(continued)

Castleton Gardens	--------	250 Nutmeg plants, and several bundles of Rose cuttings for propagating.
King's House Gardens		3,118 various ornamental plants.
Exhibition Grounds		10,977 plants of a useful and ornamental character.
		Total number of plants distributed free, 15, 898.

Table 26

Plants Distributed Free From Hope

Nutmegs	2,140
Cinnamon	71
Mangoes	608
Oranges	1,701
Liberian Coffee	25
Cocoa	480
Kola Nut	407
Sugar Cane	4,234
Miscellaneous Fruit and Economic Plants	1,609
	11,275

Palms	2,218
Ferns	373
Orchids	301
Roses	3,068
Crotons	2,318
Miscellaneous trees and shrubs	5,073
	13,351

Table 27

Plants Sold From Hope Gardens

APPENDIX 2

FAMILY	SCIENTIFIC NAME	COMMON NAME
ANACARDIACEAE	Anacardium occidentale L.	Cashew
	Mangifera indica L.	Mango
	Spondias Monbin L.	Hog Plum
ANNONACEAE	Annona muricata L.	Soursop
	Annona reticulata L.	Custard Apple
	Annona squamosa L.	Sweetsop
BIGNONIACEAE	Crescentia cujete L.	Calabash
CEASALPINIOIDEAE	Haematoxylum campechianum L.	(Campeachy) Logwood
	Tamarindus indica L.	Tamarind
CARICACEAE	Carica papaya L.	Pawpaw
LAURACEAE	Cinnamomum zeylanicum Breyn.	Cinnamon
	Persea americana Mill.	Avocado or Alligator Pear
MELIACEAE	Swietenia mahogoni Jacq.	Mahogany
MORACEAE	Artocarpus incisa L.	Breadfruit
	Cecropia peltata L.	Trumpet Tree, Snake Wood
MYRISTICACEAE	Myristica fragrans Houtt.	Nutmeg
MYRTACEAE	Pimenta officinalis Lindl.	Pimento, Allspice
PALMAE	Cocos nucifera L.	Coconut
PAPILIONATEAE	Andira inermis H.B.K.	Cabbage Bark Tree, Cabbage Tree, Bastard Cabbage, Worm Wood, Angeleen Tree
RUTACEAE	Citrus aurantifolia Swingle	Lime
	Citrus aurantium L.	Sweet Orange
	Citrus vulgaris Risso.	Seville, Bitter, Sour or Bigarade Orange
SAPOTACEAE	Sapota acharas Mill.	Naseberry, Sapodilla
SIMARUBACEAE	Picraena excelsa Lindl.	Jamaica Quassia, Bitter Wood, Bitter Ash
SAPINDACEAE	Blighia sapida Koenig	Akee
	Picramnia antidesma Sw.	Majoe Bitters, [etc.]

(continued)

STERCULIACEAE	Cola acuminata Schott and Endl.	Cola (Kola, Bissy (Bichy, Busy) Nut
	Helicteres Jamaicensis Jacq.	Corkscrew, Screw Tree
ZYGOPHYLLACHEAE	Guaiacum officinale L.	Lignum Vitae, Pockwood Tree
BURSERACEAE	Bursera simaruba Sarg.	Red or West Indian Birch, Turpentime Tree, Mastic Tree, Incense Tree
CAESALPINOIDEAE	Cassia fistula L.	Indian Laburnum, Cassia Stick Tree, Purging Cassia
CANELLACEAE	Canella winterana Gaertin. (= C. alba Sw.)	Wild Cinnamon, White Cinnamon, Whitewood Bark, Canella, False Winter's Bark
GRAMINEAE	Bambusa vulgaris Schrad.	Bamboo
LAURACEAE	Cinnamomum camphora Nees.	Camphor Tree
LYTHRACEAE	Punica granatum L.	Pomegranate
MORINGACEAE	Moringa oleifera Lamb.	Horseradish Tree, Ben Nut Tree, Moringa (Maranga)
MYRTACEAE	Amomis Caryophyllata Kr. and Urb. var. citrifolia	Lemon-scented Pimento
	Eucalyptus spp.	Eucalyptus, Gum Tree
PAPILIONATEAE	Gliricidia sepium Steud.	Quick Stick, Grow Stake, Grow Stick, Growing Stake, Maranga
	Piscidia piscipula L.	Jamaica Dogwood
STERCULIACEAE	Guazuma ulmifolia Lam.	Bastard Cedar, West Indian Elm

Table 28

Trees That Provide Medicinal Products

Source: Asprey and Thornton (1953, 1954, 1955a, 1955b)

APPENDIX 3

Common Name	Scientific Name
	Acacia tortuosa
Almond, Tropical	Terminalia Catappa, Linn.
Akee	Blighia sapida, Koen.
Alligator Wood, or musk wood	Guarea Trichillioides, Linn.
Bastard Cabbage-bark or Angelin	Andira inermis, H.B.K.
Bastard Cedar	Guazuma tomentosa H.B.K.
Bitter Dan, B. Dansom, Stavewood	Simuruba officinalis
Blind eye or Yucca	Sapium cuneatum, Griseb.
Blood Wood, or Iron Wood	Haemocharis haematoxylon, Choisy
Boxwood, Fiddle Wood	Vitex umbrosa, Sw.
Braziletto	Peltophorum brasiliense, (Sw), Urb.
Breadfruit	Artocarpus incisa, Linn.
Bread-nut	Brosimum Alicastrum, Sw.
Broad-leaf	Terminalia latifolia, Sw.
Bullet or Bully Tree	Dipholis montana, Gr.
Button Wood	Conocarpus erecta, Linn.
Calabash	Crescentia Cujete, Linn.
Cashaw	Prosopis juliflora, DC.
Cashew	Anacardium occidentale, Linn.
Cedar, Juniper	Juniperus barbadensis, Linn.
Cedar, West Indian	Cedrela odorata, Linn.
Clammy Cherry	Cordia Collococca, Linn.
Coby-wood or Cromanty	Matayba apetala, Radik.
Coco-nut	Cocos nucifera, Linn.
Cogwood, or Greenheart	Zizyphus Chloroxylon, Olv.

(continued)

Cro-cro	Tecoma Brittonii, Urb.
Divi-divi	Caesalpinia coriaria, Willd.
Dogwood	Piscidia Erythrina, Linn.
Down Tree or Cork Wood	Ochroma Lagopus, Sw.
Ebony or Cocus Wood	Brya ebenus, DC.
Fiddle Wood	Petitia domingnensis, Jacq.
Fustic	Chlorophora tinctoria, Gaud.
Ginep	Melicocca biguga, Linn.
Greenheart or Break-axe	Sloanea jamaicensis, Hook.
Gru-gru Palm	Acrocomia lasiospatha, Mart.
Guango, or Saman	Pithecolobium Saman, Benth.
Gutter-wood	Strempeliopsis arborea, Urb.
Hog Gum	Symphonia globulifera, Linn. f.
Hog Plum	Spondias lutea, Linn.
Horse-wood	Pithecolobium latifolium, Benth.
	Ilex obcordata, Sw.
Indian Tulip Tree	Thespesia populnea, Corr.
Jack Fruit	Artocorpus integrifolia, Linn.
Lancewood, Black	Bocagea virgata, B. & H.
Lancewood, White	Bocagea laurifolia, B. & H.
Lignum Dorum	Ocotea staminea, Mez.
Lignum-vitae	Guaiacum officinale, Linn.
Locust Tree	Hymenaea Courbaril, Linn.
Locust-berry, or Hog-berry	Brysontma crassifolia, H.B.K.
Logwood	Hae matoxylon campechianum, Linn.
Mahoe, Blue or Mountain	Hibiscus elatus, Sw.
Mahoe, Sea-side	Hibiscus tiliaceus, Linn.
Mahogany	Swietenia Mahogoni, Linn.
Maiden Plum	Camocladia integrifolia, Jacq.
Maiden Plum	Comocladia velutina, Britton
Mammee Apple	Mammea americana, Linn.
Mammee Sapota	Calocarpum mammosum, Pierre
Mango	Mangifera indica, Linn.

(continued)

Mangrove, Black	Avicennia nitida, Jac
Mangrove, Red	Rhizophora Mangle, Linn.
Mangrove White	Laguncularia racemosa, Gaertn.
Mosquito Wood	Mosquitoxylum jamaicense, Kr.et Urb.
Mountain Guava	Psidium montanum, Sw.
Naseberry	Achras Sapota, Linn.
Naseberry Bullet or Bully Tree	Mimusops Siderozylon, Pierre
Nickel, or Bead Tree	Ormosia jamaicensis, Urb.
Park-nut	Acacia macracantha, Humb. & Bonpl.
Pigeon-wood	Diospyros tetrasperma, Sw.
Pimento	Pimenta officinalis, Lindl.
Prickly Yellow	Fagara Martinicensis, Lam.
Prune	Prunus occidentalis, Sw.
Ramoon	Trophis americana, Linn.
Red, or Cherry Bully Tree or Galimenta	Diphollis nigra, Griseb.
Red-bead Tree	Adenanthera pavonina, Linn.
Rose-wood or Torch-wood	Amyris balsamifera, Linn.
Rose-wood	Drypetes ilicifolia, Kr. et Urb.
Rose-wood	Fagara rhodoxylon, Urb.
Santa Maria	Calophyllum Calaba, Jacq.
Sapodilla	Mimusops excisa, Urb.
Satin-Wood	Fagara flava, Kr. et Urb.
Seaside Grape	Coccoloba uvifera, Jacq.
Tamarind Shad-bark	Pithecolobium Alexandri, Urb.
Tamarind Shad-bark	P. Alexandri, Urb., var. intermedium, Urb.
Shad-bark	P. Alexandri, Urb., var. Troyanum Urb.
Silk-cotton Tree, or Ceiba	Eriodendron anfractuosum, DC.

(continued)

Slug-wood	Beilschmiedia pendula, B. & H.
Soap Berry	Sapindus Saponaria, Linn.
Soap Wood	Clethra tinifolia, Sw.
Spanish Elm	Cordia gerascanthoides, H.B.K.
Star Apple	Chrysophyllum Cainito, Linn.
Sumach, Hog Doctor, Poison Wood, Boar Wood	Metopium Brownei, Urb.
Sweet-wood, Loblolly	Octea Leucoxylon, B. & H.
Sweet-wood, Timber	Nectandra exaltata, Griseb.
Sweet-wood, Yellow	Nectandra Antillana, Meissn.
Tamarind	Tamarindus indica, Linn.
	Tetrorchidium rubrivenium, Poepp. and Endl., var. integrifolium, Muell, Arg.
Torch-wood or Flambeau	Tecoma stans, Juss.
West Indian Birch, or Mastic	Terebiuthus Simaruba (L.) Wight.
White-wood	Tecoma leucoxylon, Mart.
Wild Cassada	Turpinia occidentalis, Don.
Wild Juniper	Lyonia jamaicensis, Don., and L. octandra, Griseb.
Wild Orange	Esenbeckia pentaphylla, Griseb.
Wild Tamarind	Pithecolobium arboreum, Urb.
Women's Tongue, or East Indian Walnut	Albizzia Lebbek, Benth.
Yacca, Blue Mountain	Podooarpus Urbanii, Pilger.
Yacca, St. Ann's	Podocarpus Purdieanus, Hook.
Yellow Candle-wood	Cassia emarginata, Linn.
Yellow Sanders, Wild Olive, Negresse	Terminalia capitata, B. & H.
Yoke-wood, Mast Wood, French Oak, Spanish Oak	Catalpa longissima, Sims.
Zebra Wood, Satin Wood	Eugenia fragrans, Willd.

Table 29

Timber Trees of Jamaica
Source: Harris (1909:10-39)

APPENDIX 4

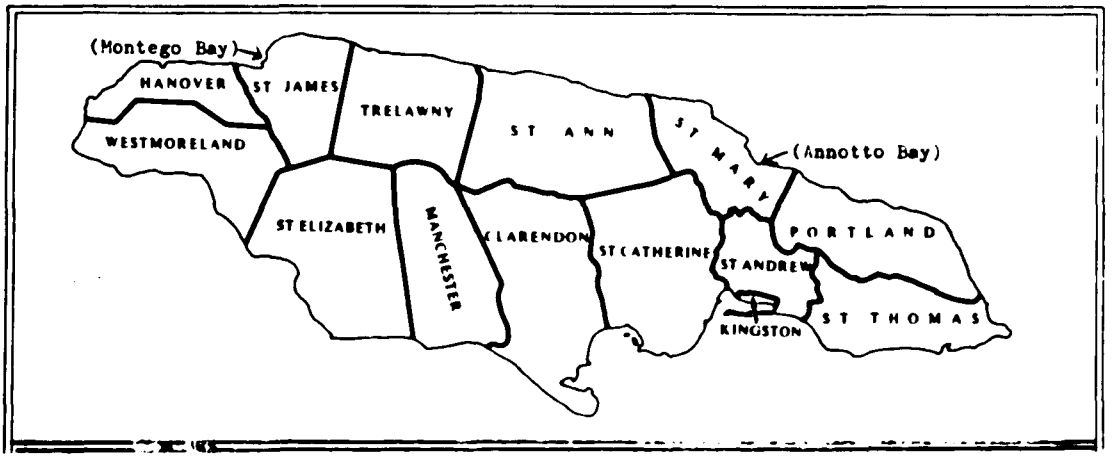
Cultivated Trees	Wild Trees
coconut	trumpet tree
banana	hog apple
growstake	bamboo

Other Cultivated Plants	Other Wild Plants
yams	hogmeat
peas	Spanish needle
sugarcane	wild mint
coco	marigold
potato slips	milk weed
leafy part of vegetables	Devil's horsewhip
	broom weed
	corn grass
	Guinea grass
	aw moon
	pudding wiss

Table 30

Plants Which Are The Source of Animal Feed

APPENDIX 5



Map 3

The Parishes of Jamaica and the
Location of Montego Bay and Annotto Bay

Source: Clarke (1974:23)

APPENDIX 6

Map 4

Eastern Jamaica Settlements of Portland and St. Thomas. Adapted from the Jamaica Tourist Board's "Jamaica: Road Map" (1972)

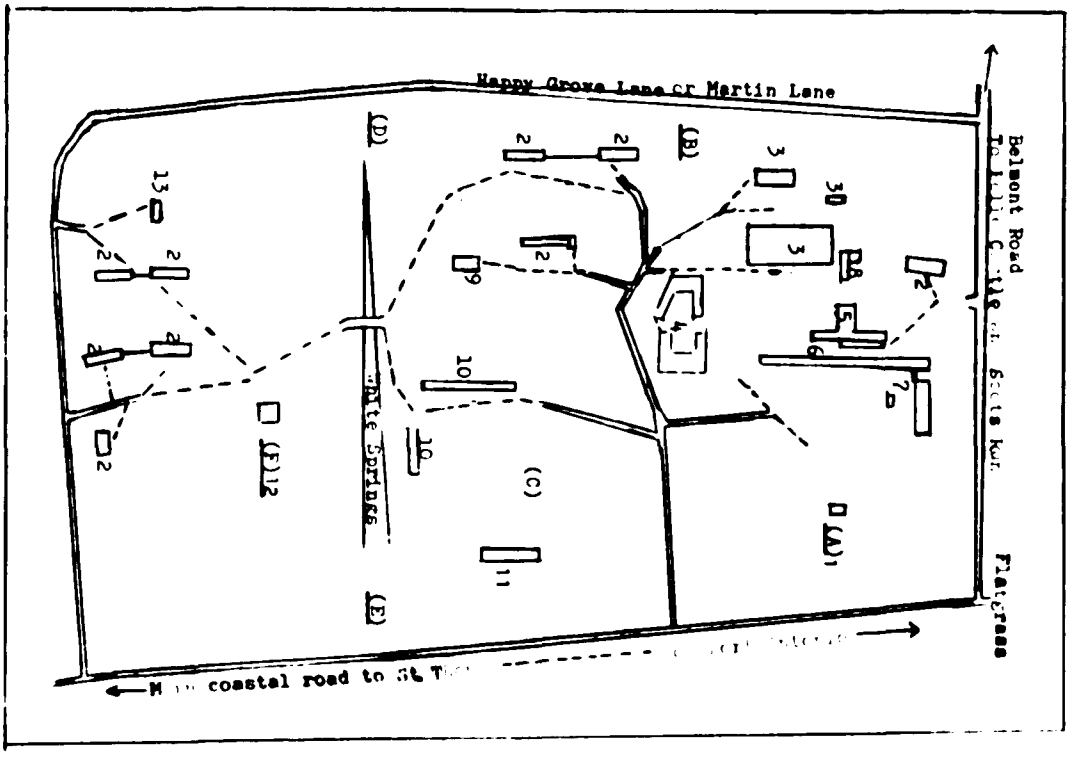
APPENDIX 7

Map 5

The Parishes of Jamaica in
the Eighteenth Century

Source: Kapp (1968:22)

APPENDIX 8



Map 6

A Sketch of Happy Grove's Campus Divided
Into Its Six Major Areas (A, B, C, D, E, F)

(See following page)

(A) 1. Seaside Church.

(B) Main Campus.
2. Teachers' residence.
3. Headmaster's residence including garage and kitchen garden.
4. Administrative Building including library, classrooms, music rooms and auditorium.
5. Harvey Hall opened 1923. Now classrooms, tuck shop and dining room.
6. Ruined foundation of Buxton Hall built 1914-15 as a boys' dormitory.
7. Classrooms.
8. Workshop of the maintenance staff.
9. Misson House. This was originally the residence of the Pastor of Seaside Church. In 1949 it was used as the Headmaster's cottage. It is now a teachers' residence.

(C) Seaside
10. Seaside Primary School. Classrooms.
11. Ruins of the Headmaster's residence of Seaside Primary School which was destroyed by hurricane in 1903.

(D) Upper Gully.

(E) Lower Gully.

(F) 12. Andrews Hall or East Campus. Ruins of Andrews Hall, the old estate Great-House.
13. Residence of the Assistant Headmaster of Happy Grove School.

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GLOSSARY

This Glossary is based on the works of Cassidy (1961), Cassidy and LePage (1967) and Louise Bennett (1966).

aneda, anoda -- another

anywhe -- anywhere

Barkra -- European, white man, privileged person, person in authority.

bes -- best

bodda -- bother

bredda -- brother

bruck -- break

bruck pimento -- To gather or harvest pimento (Cassidy and LePage 1967:71).

brush, build -- To keep an area cleared by cutting away vegetation.

chocolate -- cocoa

dan -- than

das -- that's

dat -- that

de -- the

deh -- they, there

dem -- them

dere -- there, there is

deeze -- these

dis -- this

doze -- those

eida -- either

fe -- to, for

haffe -- have to

han -- hand

inna -- during or in that time, inside.

kerchiev -- handkerchief

leggo -- Set free, let go. In the content in which it is used in the text it means plant.

massi -- mercy

meck -- make

mus -- must

na -- not

nonbody -- nobody

nuff -- enough, plenty

nuh -- Cassidy and LePage (1967:322) give the following meanings:

1. Following a statement or remark and inviting agreement or assent: Isn't that so? Don't you

agree? (Not fully interrogative, as an answer is not necessarily expected: assent may be tacit.) 2. Following an order or request and (impatiently, pleading, etc.) inviting compliance: Won't you? (A response in terms not of words but of action is expected.)

nuting -- nothing

odda -- other

oddawise -- otherwise

oonoo -- you (plural), all of you here

pon -- upon, on

save -- To protect the seedlings of wild trees in the locations where they spring up.

seh -- say, said

tek -- take

ting -- thing

tink -- think

tru -- through

waan -- want

wey -- way or away

wha -- what

whe -- where, for which

wid -- with

ya -- here

yuh -- you

The common and scientific names provided in the following pages have been determined in relation to the works of Terrell (1977) and Adams (1972). I have also relied on the works of Hawkes (1974) and Asprey and Thornton (1953, 1954, 1955a, 1955b).

Ackee (Akee) -- Blighia sapida

African Oil Palm -- Elaeis guineensis

African Tulip Tree (Spathodea) -- Spathodea campanulata

Allamanda -- Allamanda cathartica

Allspice (or Jamaica pepper, Pimento) -- Pimenta dioica

Almond (Tropical almond) -- Terminalia catappa

Aloes -- Aloe spp.

Amherstia (Pride of Burma, Orchid Flower) -- Amherstia nobilis

Annatto -- Bixa orellana

Arrowroot -- Maranta arundinacea

Artichoke -- Cynara scolymus

Assam Tea -- Camellia sinensis (var. assamica)

Australian Pine (Willow, Casuarina) -- Casuarina equisetifolia

Avocado (Pear) -- Persea americana

Azalea -- Rhododendron calendulaceum

Baazli (Basil, Barsley) -- Ocimum basilicum

Ba'Cedar (Bastard Cedar) -- Guazuma ulmifolia

Bachelor's Button -- Gomphrena globosa

Badoo (Tannia, Taya) -- Xanthosoma spp.

Balsam -- Impatients balsamina

Bamboo -- Bambusa vulgaris

Banana -- Musa spp.

Baobab -- Adansonia digitata

Barbados Cherry (Cherry, Garden Cherry, West Indian Cherry) -- Malpighia punicifolia

Barge (Bimbling, Bilimbi, Long Jimbelin) -- Averrhoa bilimbi

Barley -- Hordeum spp.

Barringtonia (Duppy Coconut) -- Barringtonia asiatica

Barsley -- Ocimum micranthum

Basil (Barsley, Baazli) -- Ocimum spp.

Basil (Sweet Basil) -- Ocimum basilicum

Bastard Cabbage (Cabbage Bark Tree) -- Andira inermis

Bastard Cedar -- Guazuma ulmifolia

Bauhinia -- Bauhinia purpurea

Bay Tree -- Laurus nobilis

Beetroot -- Beta vulgaris

Bhel Tree (Bael Tree, Indian Bael) -- Aegle marmelos

Bimbling (Barge) -- Averrhoa bilimbi

Bird-of-Paradise -- Strelitzia reginae

Bird Pepper -- Capsicum frutescens

Bissy (Bichy, Cola, Kola) -- Cola acuminata

Bitter Damsel (Bitter Dan, Bitter Damson, Damsil) -- Simarouba glauca

Bitter Orange (see Sour Orange) -- Citrus aurantium

Blackeye Peas (Cow Peas, Marrow Fat Feas) -- Vigna unguiculata

Black Mangrove -- Avicennia germinans

Black Pepper -- Piper nigrum

Black Torch Wood (Candle Wood, Torch Wood, Mountain Torch Wood) -- Amyris spp.

Bleeding Heart -- Antigonon leptopus

Blood-Wood (Ironwood) -- Laplacea hematoxylon

Blue Mahoe (Mahoe) -- Hibiscus elatus

Bon-ace (Burn-nose Bark, Noseburn) -- Daphnopsis tinifolia

Bonavist Bean (Bonavis, Bonabis, Broke-Pot, Lablab Bean) -- Dolichos lablab

Bougainvillea -- Bougainvillea spectabilis

Brazil-nut -- Bertholletia excelsa

Breadfruit -- Artocarpus altilis

Brindonne -- Garcinia indica

Broad Bean (Lima or White Bean) -- Phaseolus lunatus

Broomweed -- Sida spp.

Bulletwood (Bullet, Bully Tree) -- Dipholis montana

Bur Bark -- Triumfetta spp.

Cabbage -- Brassica oleracea

Cabbage (Cabbage Bark Tree, Bastard Cabbage) -- Andriria inermis

Cacao (Chocolate) -- Theobroma cacao

Cacoon (Antidote, Antidote Cacoon, Mafootoo Withe or Wis) -- Fevillea cordifolia

Calabash (Paki) -- Crescentia cujete

Calaloo -- Amaranthus spp.

Camellia -- Camellia japonica

Camphor -- Dryobalanops aromatica

Camphor-tree -- Cinnamomum camphora

Candle Wood (Torch Wood, Mountain Torch Wood, Black Torch Wood) -- Amyris spp.

Wild Canna -- Canna coccinea

Cardamon -- Elettaria cardamomum

Caribbean Pine - Pinus caribaea

Carob -- Ceratonia siliqua

Carrot -- Daucus carota

Cashew-apple (Cashew) -- Anacardium occidentale

Cassava (Manioc) -- Manihot esculenta

Cassia -- Cassia siamea

Castor-oil -- Ricinus communis

Casuarina (Australian Pine, Willow) -- Casuarina equisetifolia

Cedar -- Cedrela odorata

Cerasee -- Momordica charantia

Chenille -- Acalypha hispida

Cherimoya (Cherimoyer) -- Annona cherimola

Cherry (Clammy Cherry) -- Cordia collococca

Cherry Bully Tree (Red Cherry Tree)-- Dipholis nigra

Cherry (See Barbados Cherry) -- Malpighia punicifolia

Chinese Ackee (Cat's Claw, Bread-and-Cheese) -- Pithecolobium unguis-cati

Cho-cho -- Sechium edule

Chocolate (Cacao) -- Theobroma cacao

Christmas Candlestick -- Leonotis nepetifolia

Christmas Pea (see Asprey and Thornton (1955:157)), Gungo or Gungu Pea, Angola Pea, Seven-year Pea -- Cajanus cajan

Cinchona -- Cinchona spp.

Cinnamon -- Cinnamomum verum

Citron -- Citrus medica

Clammy Cherry (Cherry) -- Cordia collococca

Clove -- Syzygium aromaticum

Cochineal Cactus (Roast Pork) -- Opuntia cochenillifera

Cockroach Poison (Duppy Tomato) -- Solanum ciliatum

Coco (Cocoyam, Dasheen) -- Colocasia esculenta

Cocoa -- Theobroma cacao

Coconut -- Cocos nucifera

Coffee -- Coffea arabica

Cola (Bissy) -- Cola acuminata

Coleus -- Coleus blumei

Coolie Plum (Crab Apple, Jujube) -- Ziziphus mauritiana

Coratoe (Century Plant, Maypole) -- Agave spp.

Cork Oak -- Quercus suber

Corn -- Zea mays

Corn Grass -- Setaria barbata

Cotton -- Gossypium spp.

Cotton Tree (Silk Cotton, Kapok Tree) -- Ceiba pentandra

Cowpea (Blackeye Pea, Marrow Fat Peas) -- Vigna unguiculata

Crab apple (See Coolie plum) -- Ziziphus mauritiana

Crab-eye (Johncrow Bead, Johncrow Eye) -- Abrus precatorius

Croton -- Codiaeum variegatum

Crown-of-thorns -- Euphorbia milii Desmoulins

Cucumber -- Cucumis sativus

Custard Apple -- Annona reticulata

Cypress -- Taxodium distichum

Dasheen (Coco, Cocoyam) -- Colocasia esculenta

Damsel (Bitter Damsel, Damsil, Bitter Dan, Bitter Damson) -- Simarouba glauca

Date Palm -- Phoenix Dactylifera

Devil's Horsewhip (Hug-Me-Close) -- Achryanthes indica

Dildo (Dildo Pear, Torch-Wood, Torch-Thistle, Torch-Cactus) -- Stenocereus hystrix

Dogwood (Jamaica Dogwood) -- Piscidia piscipula

Down Tree (Balsa, Bombast Mahoe, Corkwood) -- Ochroma pyramidale

Dragon's Blood (Cordyline, Dracaena) -- Cordyline terminalis

Duck Apple (see Hog Apple) -- Morinda citrifolia

Duppy Calaloo - Amaranthus spinosus

Duppy Cap (Duppy Cup, Duppy Umbrella) -- Fungi

Duppy Cherry (Clammy Cherry) -- Cordia collococca, Ehretia tinifolia

Duppy Cherry -- Cordia alba

Duppy Cho-Cho (see Hog Apple) -- Morinda citrifolia

Duppy Coconut -- Barringtonia asiatica

Duppy Cotton (French Cotton) -- Calotropis procera

Duppy Cucumber -- Cucumis anguria

Duppy Fee-fee -- Centrosema virginianum, Pedilanthus thithymaloides

Duppy Fly-Trap (John-crow Nose, Poison Hog-meat) -- Aristolochia grandiflora

Duppy Gun -- Ruellia tuberosa

Duppy Melon -- Cionosicys pomiformis

Duppy Needle (Duppy Darning Needle, Spanish Needle) -- Bidens spp.

Duppy Peas (Duppy Rattle) -- Crotalaria verrucosa, Crotalaria retusa

Duppy Pindar -- Rhynchosia minima

Duppy Poison -- Morinda royoc

Duppy Pumpkin -- Cucurbitac spp.

Duppy Pumpkin -- Passiflora sexflora

Duppy Rattle (Duppy Peas) -- Crotalaria retusa, Crotalaria verrucosa

Duppy Soursop (Wild Soursop) -- Annona montana

Duppy Tomato (Cockroach Poison) -- Solanum ciliatum

Durian -- Durio zibethinus

Dwarf Poinciana (Pride-of-Barbados) -- Caesalpinia pulcherrima

Ebony (American Ebony, Black Heart, Green Heart) -- Brya ebenus

Egg-Plant -- Solanum melongena

Escallion (Skellion) -- Allium fistulosum

Eucalyptus -- Eucalyptus spp.

Fig -- Ficus spp.

Flamboyant (Flame Tree) -- Delonix regia

Flame Tree (Flamboyant) -- Delonix regia

Foot-leaved Arum -- Arum pedatum

Frangipani -- Plumeria rubra (Plumeria alba)

French Cotton (Duppy Cotton) -- Calotropis procera

Fustic -- Chlorophora tinctoria

Ganja (Marijuana, Herbs, Weed, Smoke) -- Cannabis sativa

Garden Cherry (see Barbados Cherry) -- Malpighia punicifolia

Garlic -- Allium sativum

Geranium -- Geranium spp.

Ginger -- Zingiber officinale

Godbush (Scorn-the-Earth, Mistletoe) -- Oryctanthus occidentalis

Golden Amaryllis -- Amaryllis aurea

Golden Shower (Purging Cassia, Cassia) -- Cassia fistula

Granadilla -- Passiflora ligularis

Grape -- Vitis vinifera

Grapefruit -- Citrus paradisi

Gray Nickernut (Nicker, Nickal, Nickol, Wari) -- Caesalpinia bonduc

Groundnut (Pindal Nut, Pindar Nut, Peanut) -- Arachis hypogaea

Growstake (Growing-Stake, Maranga, Quick Stick, Grow Stick) -- Gliricidia sepium

Guango -- Samanea saman

Guava -- Psidium guajava

Guinea Grass -- Panicum maximum

Guinep (Genip) -- Melicoccus bijugatus

Gungu Peas (Pigeon Peas, Pigeon Pea, Angola Pea, Congo Pea) -- Cajanus cajan

Heliconia (Lobster Claw) -- Heliconia humilis

Hibiscus -- Hibiscus rosa-sinensis

Hog Apple (Duck Apple, Hog Berry, Indian Mulberry, Jumby Cho-Cho, Duppy Cho-Cho, Monkey Berry, Pig's Apple)-- *Morinda citrifolia*

Hog Berry (see Hog Apple) -- *Morinda citrifolia*

Hogmeat (Hogweed) -- *Boerhavia diffusa*

Hog Plum -- *Spondias mombin*

Honeysuckle (Cape Honeysuckle) -- *Tecomaria capensis*

Horse Bean (see Overlook Bean) -- *Canavalia ensiformis*

Horse Nickar -- *Caesalpinia* spp.

Horseradish -- *Armoracia rusticana*

Immortelle -- *Erythrina* spp.

Impatiens -- *Impatiens balsamina*

Indian Kale -- *Xanthosoma sagittifolium*

Indian Mulberry (see Hog Apple) -- *Morinda citrifolia*

Indigo -- *Indigofera tinctoria*

Irish Potato -- *Solanum tuberosum*

Ironwood (White Rosewood) -- *Linociera domingensis*

Ixora -- *Ixora coccinea*

Jack Bean (see Overlook Bean) -- *Canavalia ensiformis*

Jackfruit -- *Artocarpus heterophyllus*

Jalap -- *Impomoea purga*

(Jamaican) Marigold -- Wendelia trilobata

Jamaica pepper (Allspice or Pimento) -- Pimento dioica

Jamaica Plum (Sweet Plum, Yellow-coat Plum) -- Spondias purpurea

Jasmine (Jessamine, Jessamy) -- Cestrum nocturnum and Jasminum spp.

Jerusalem Thorn -- Parkinsonia aculeata

Jessamine (Jasmine, Jessamy) -- Jasminum spp.

Jessamy (Jessamine, Jasmine) -- Jasminum spp.

Jew Plum (June Plum) -- Spondias dulcis

Jimbling (Otaheite Gooseberry Tree, Indian Gooseberry) -- Phyllanthus acidus

John Charlie -- Hyptis verticullata

Johncrow Bead (Johncrow Eye, Crab-eye) -- Abrus precatorius

Joseph's Coat -- Coleus spp.

Jujube (see Coolie Plum) -- Ziziphus mauritiana

Jumby Cho-Cho (see Hog Apple) -- Morinda citrifolia

June Plum (Jew Plum) -- Spondias dulcis

June Rose -- Lagerstroemia indica

Kapok Tree (Cotton Tree, Silk Cotton) -- Ceiba pentandra

Lady/Queen-of-the-Night (Jasmine, Jessamy) -- Cestrum nocturnum

Lagetto (Lagetto Bark, Lace Bark) -- Lagetta lagetto

Leaf of Life -- Bryophyllum pinnatum

Lemon -- Citrus limon

Lettuce -- Lactuca sativa

Lignum Vitae -- Guaiacum officinale

Lilac (Hoop-Tree) -- Syringa spp.

Lima Bean (Broad Bean, White Bean) -- Phaseolus lunatus

Lime -- Citrus aurantifolia

Litchi -- Litchi chinensis

Logwood -- Haematoxylum campechianum

Love Bush -- Cuscuta spp.

Macca Calaloo (Duppy Calaloo) -- Amaranthus spinosus

Magnolia -- Magnolia spp.

Mahoe (Blue Mahoe) -- Hibiscus elatus

Mahogany -- Swietenia mahagoni

Mammee (Mammy) Apple -- Mammea americana

Mammee Sapota -- Pouteria sapota

Manchineel -- Hippomane mancinella

Mandarin -- Citrus reticulata

Mango -- Mangifera indica

Mangosteen -- Garcinia mangostana

Mangrove -- Avicennia germinans, Rhizophora mangle

Manioc (Cassava) -- Manihot esculenta

Marigold (Jamaican) -- Wendelia trilobata

Marrow Fat Peas (Cow Peas, Blackeye Peas) -- Vigna unguiculata

Maypole (Coratoe, Century Plant) -- Agave spp.

Melon (Water Melon) -- Citrullus lanatus

Milk Weed -- Euphorbia spp. (See Asprey and Thornton 1954)

Millett -- Eleusine coracana, Pennisetum typhoideum, Eragrostis abyssinica

Mint -- Mentha spp.

Monkey Berry (see Hog Apple) -- Morinda citrifolia

Monkey Fiddle (Duppy Fee-fee) -- Pedilanthus tithymaloides

Mountain Cabbage -- Roystonea altissima

Mountain Ebony (Orchid Tree) -- Bauhinia spp.

Mountain Torch Wood (Candle Wood, Black Torch Wood, Torchwood) -- Amyris spp.

Mulberry (Paper Mulberry-Tree) -- Morus papyrifera

Musk Rose -- Rosa moschata

Napier Grass -- Pennisetum purpureum

Naseberry -- Manilkara sapota

Nasturtium -- Tropaeolum majus

New Zealand Flax -- Phormium tenax

Nicker (Nickal, Nickol, Wari) -- Caesalpinia spp.

Nutmeg -- Myristica fragrans

Oat -- Avena spp.

Okra (Okro, Ochra, Ochrow) -- Abelmoschus esculentus

Old Man's Beard -- Tillandsia usneoides

Oleander -- Nerium oleander

Olive -- Olea europaea

Onion -- Allium cepa

Orris -- Iris X germanica

Otaheite Apple (Titi Apple) -- Syzygium malaccense

Overlook Bean (Horse Bean, Jack Bean) -- Canavalia ensiformis

Painted Arum -- Arum bicolor

Paki (Calabash) -- Crescentia cujete

Palmetto Palm -- Sabal palmetto

Palmetto Thatch (Thatch Palm) -- Thrinax parviflora

Panchallon (Spanish Elm, Spanish Oak) -- Cordia gerascanthus

Papaya (Pawpaw) -- Carica papaya

Peach -- Prunus persica

Peanut (Pindal Nut, Pindar Nut, Groundnut) -- Arachis hypogaea

Pear (Avocado) -- Persea americana

Pearl Millet -- Pennisetum americanum

Penguin (Pinguin, Ping Wing, Ping Wing Macca) -- Bromelia pinguin

Pepper Elder -- Piper spp.

Peppermint -- Mentha X piperita

Periwinkle -- Catharanthus roseus

Philodendron -- Philodendron scandens

Physic Nut -- Jatropha curcas

Piaba -- Hyptis capitata

Pig's Apple (see Hog Apple) -- Morinda citrifolia

Pimento (Allspice, Jamaica Pepper) -- Pimenta dioica

Pindal Nut (Pindar Nut, Peanut, Groundnut) -- Arachis hypogaea

Pineapple -- Ananas comosus

Ping Wing (Ping Wing Macca, Penguin, Pinguin) -- Bromelia pinguin

Pitch Pine -- Pinus rigida

Plantain -- Musa spp.

Poinciana (Flamboyant, Flame Tree) -- Delonix regia

Poinsettia -- Euphorbia pulcherrima

Pomegranate -- Punica granatum

Prickly Pear (Opuntia, Flat Hand Dildo) -- Opuntia spp.

Prickly Yellow Wood -- Fagara Martinicensis

Pride-of-Barbados (Dwarf Poinciana) -- Caesalpinia pulcherrima

Proan (Praum) -- Prunus occidentalis

Pudding Wiss -- Cissus sicyoides

Pumpkin -- Cucurbita spp.

Purging Cassia (Cassia, Golden Shower) -- Cassia fistula

Queen Flower (Pride of India, Crepe Myrtle) -- Lagerstroemia speciosa

Quinine -- Cinchona spp.

Ramie -- Boehmeria nivea

Raw Moon (Ramoon) -- Trophis americana

Red-coat Plum (Spanish Plum, Yellow-coat Plum, Jamaica Plum, Mobin, Red/Yellow Mobin) -- Spondias purpurea

Red Ginger -- Alpinia purpurata

Red Mangrove - Rhizophora mangle

Red Peas -- Phaseolus vulgaris

Red Zinnia -- Zinnia multiflora

Rhododendron -- Rhododendron spp.

Rice -- Oryza sativa

Roast Pork -- Euphorbia lactea

Rodwood -- Eugenia spp.

Rose -- Rosa spp.

Rose Apple -- Syzgium jambos

Royal Palm -- Roystonea regia

Royal Poinciana (Flame-tree, Flamboyant, Flamboyant-tree) -- Delonix regia

Rubber -- Hevea braziliensis (Castilloa elastica, Manihot glaziovii, other spp.)

Rye -- Secale cereale

Santa Maria -- Calophyllum spp.

Sarsaparilla -- Smilax aristolochiifolia

Scratch Coco (Wild Coco) -- Colocasia spp.

Screw Pine -- Pandanus Odoratissimus

Seagrape -- Coccoloba uvifera

Sea Thatch (Wild Thatch) -- Thrinax multiflora

Sesame -- Sesamum indicum

Seville Orange (Sour Orange, Bitter Orange) -- Citrus aurantium

Seymour Grass -- Andropogon pertusus

Shaddock -- Citrus grandis

Shame-Shame-Darling (Shamy, Shame-me-Darling) -- Mimosa pundica

Silk Cotton (Cotton, Cotton tree) -- Ceiba pentandra

Silk Grass -- Stipa comata

Skellion (Escallion) -- Allium fistulosum

Sorghum -- Sorghum vulgare

Sorrel -- Hibiscus sabdariffa

Sosuma (Susumba, Susumber, Gully Bean) -- Solanum Torvum

Sour Orange (Seville orange, Bitter orange) -- Citrus aurantium

Spanish Elm (Panchallon, Spanish Oak) -- Cordia gerascanthus

Spanish Gooseberry -- Pereskia aculeata

Spanish Machette (Cutlass Flower) -- Erythrina velutina

Spanish Needle (Duppy Needle, Duppy Darning Needle) -- Bidens spp.

Spanish Oak (Spanish Elm) -- Cordia gerascanthoides

Spanish Plum (Brazilian Plum, Red-coat Plum) -- Spondias purpurea

Spathodea (African Tulip Tree) -- Spathodea campanulata

Spearmint -- Mentha spicata

Star Apple -- Chrysophyllum cainito

String Beans -- Phaseolus vulgaris

Strong Back -- Cuphea parsonia

Sugar cane -- Saccharum officinarum

Susumba (Susumber, Sosuma, Gully Bean) -- Solanum torvum

Sweet Basil (Basil) -- Ocimum basilicum

Sweet Orange -- Citrus sinensis

Sweet Potato -- Ipomoea batatas

Sweet Scabious -- Scabiosa atropurpurea

Sweetsop -- Annona squamosa

Sweetwood - Nectandra spp.

Sweet Violet -- Viola odorata

Sword Tree (Coral Tree) -- Erythrina corallodendron

Tamarind -- Tamarindus indica

Tangerine -- Citrus reticulata

Tannia (Taya, Badoo) -- Xanthosoma spp.

Tea -- Camellia sinensis

Teak -- Tectona grandis

Thatch Palm -- Thrinax parviflora

Thunbergia -- Thunbergia grandiflora

Thyme -- Thymus vulgaris

Tobacco -- Nicotiana tabacum

Tomato -- Lycopersicon esculentum

Torch-Wood (Torch-Thistle, Torch-Cactus, Dildo, Dildo Pear) -- Stenocereus hystrix

Torchwood -- Tecoma stans

Tree-Tomato -- Cyphomandra betacea

Tropical Almond (Almond) -- Terminalia catappa

Trumpet-flower -- Tecoma stans

Trumpet Tree -- Cecropia peltata

Tuna (Prickly Pear, Opuntia, Flat Hand Dildo) -- Opuntia spp.

Tuna -- Nopalea coccinellifer

Turnip -- Brassica rapa

Vanilla -- Vanilla planifolia

Vervain (Porterweed) -- Stachytarpheta jamaicensis

Wandering Jew -- Setcreasea purpurea

Watercress -- Nasturtium officinale

West Indian Cherry (see Barbados Cherry) -- Malpighia punicifolia

Wheat -- Triticum spp.

White Bean (Lima Bean, Broad Bean) -- Phaseolus lunatus

White Pine -- Pinus strobus

White Yam -- Dioscorea rotundata

Wild Canna (Canna) -- Canna coccinea

Wild Coco (Junction Root) -- Anthurium grandifolium

Wild Coffee -- Cassia occidentalis, Casearia hirsuta, Faramea occidentalis

Wild Jasmine -- Cestrum diurnum

Wild Mint -- Salvia occidentalis

Wild Soursop (Duppy Soursop) -- Annona montana

Wild Tamarind -- Pithecolobium arboreum

Wild Thatch (Sea Thatch) -- Thrinax multiflora

Willow (Casuarina, Australian Pine) -- Casuarina equisetifolia

Wire Grass -- Paspalum filiforme

Woman's Tongue -- Albizia lebbeck

Yampi -- Dioscorea trifida

Yellow Candle Wood (Stinking Peas) -- Cassia emarginata

Yellow Nickernut (Nicker, Nickal, Nickol, Wari) -- Caesalpinia major

Yellow Yam (Affoo) -- Dioscorea cayenensis

Abelmoschus esculentus -- Okra

Abrus precatorius -- Johncrow Bead (Johncrow Eye, Crab-eye)

Acalypha hispida -- Chenille

Achryanthes indica -- Devil's Horsewhip (Hug-Me-Close)

Adansonia digitata -- Baobab

Aegle marmelos -- Bhel Tree (Bael Tree, Indian Bael)

Agave spp. -- Maypole (Coratoe, Century Plant)

Albizia lebbeck -- Woman's Tongue

Allamanda cathartica -- Allamanda

Allium cepa -- Onion

Allium fistulosum -- Escallion (Skellion)

Allium sativum -- Garlic

Aloe spp. -- Aloes

Alpinia purpurata -- Red Ginger

Amaranthus spinosus -- Duppy Calaloo (Macca Calaloo)

Amaranthus spp. -- Calaloo

Amaryllis aurea -- Golden Amaryllis

Amherstia nobilis -- Amherstia (Pride of Burma, Orchid Flower)

Amyris spp. -- Candle Wood (Torch Wood, Mountain Torch Wood, Black Torch Wood)

Anacardium occidentale -- Cashew-apple (Cashew)

Ananas comosus -- Pineapple (Pine)

Andiria inermis -- Cabbage (Cabbage Bark Tree, Bastard Cabbage)

Andropogon pertusus -- Seymour Grass

Annona cherimola -- Cherimoya (Cherimoyer)

Annona montana -- Duppy Soursop (Wild Soursop)

Annona reticulata -- Custard Apple

Annona squamosa -- Sweetsop

Anthurium grandifolium -- Wild Coco (Junction Root)

Antigonon leptopus -- Bleeding Heart

Arachis hypogaea -- Peanut (Pindal Nut, Pindar Nut, Groundnut)

Aristolochia grandiflora -- Duppy Fly-Trap (John-Crow Nose, Poison Hog-meat)

Armoracia rusticana -- Horseradish

Artocarpus altilis -- Breadfruit

Artocarpus heterophyllus -- Jackfruit

Arum bicolor -- Painted Arum

Arum pedatum -- Foot-leaved Arum

Avena spp. -- Oat

Averrhoa bilimbi -- Barge (Bimbling, Bilimbi, Long Jimbelin)

Avicennia germinans -- Black Mangrove

Bambusa vulgaris -- Bamboo

Barringtonia asiatica -- Barringtonia

Barringtonia asiatica -- Duppy Coconut

Bauhinia purpurea -- Bauhinia

Bauhinia spp. -- Mountain Ebony (Orchid Tree)

Bertholletia excelsa -- Brazil-nut

Beta vulgaris -- Beetroot

Bidens spp. -- Duppy Needle (Duppy Darning Needle, Spanish Needle)

Bixa orellana -- Annatto

Blighia sapida -- Ackee (Akee)

Boehmeria nivea -- Ramie

Boerhavia diffusa -- Hogmeat (Hogweed)

Bougainvillea spp. -- Bougainvillea

Brassica oleracea -- Cabbage

Brassica rapa -- Turnip

Bromelia pinguin -- Ping Wing (Ping Wing Macca, Penguin, Pinguin)

Brya ebenus -- Ebony (American Ebony, Black Heart, Green Heart)

Bryophyllum pinnatum -- Leaf of Life

Caesalpinia bonduc -- Gray Nickernut (Nicker, Nickal, Nickol, Wari)

Caesalpinia major -- Yellow Nickernut (Nicker, Nickal, Nickol, Wari)

Caesalpinia pulcherrima -- Dwarf Poinciana (Pride-of-Barbados)

Cajanus cajan -- Gungu Peas (Pigeon Peas)

Calophyllum calaba -- Santa Maria

Calophyllum jacquinii -- Santa Maria

Calotropis procera -- Duppy Cotton (French cotton)

Camellia japonica -- Camellia

Camellia sinensis -- Tea

Canavalia ensiformis -- Overlook Bean (Horse Bean, Jack Bean)

Cannabis sativa -- Ganja (Marijuana, Herbs, Weed, Smoke)

Canna coccinea -- Canna (Wild Canna)

Capsicum annuum -- Pepper

Capsicum frutescens -- Bird Pepper

Carica papaya -- Papaya (Pawpaw)

Casearia hirsuta -- Wild Coffee

Cassia emarginata -- Yellow Candle Wood (Stinking Peas)

Cassia fistula -- Golden Shower (Purging Cassia, Cassia)

Cassia occidentalis -- Wild Coffee

Cassia siamea -- Cassia (Common Cassia)

Casuarina equisetifolia -- Willow (Australian Pine, Casuarina)

Catharanthus roseus -- Periwinkle

Cecropia peltata -- Trumpet Tree

Cedrela odorata -- Cedar (West-Indian Cedar)

Ceiba pentandra -- Silk Cotton (Cotton, Cotton tree)

Centrosema virginianum -- Duppy Fee-fee

Ceratonia siliqua -- Carob

Cestrum diurnum - Wild Jasmine

Cestrum nocturnum -- Lady/Queen-of-the-Night (Jasmine, Jessamy)

Chlorophora tinctoria -- Fustic

Chrysophyllum cainito -- Star Apple

Cinchona spp. -- Cinchona (Quinine)

Cinnamomum camphora -- Camphor-tree

Cinnamomum verum -- Cinnamon

Cionosicys pomiformis -- Duppy Melon

Cissus sicyoides -- Pudding Wiss

Citrullus lanatus -- Melon (Water Melon)

Citrus aurantiifolia -- Lime

Citrus aurantium -- Sour Orange (Seville Orange, Bitter Orange)

Citrus grandis -- Shaddock

Citrus limon -- Lemon

Citrus medica -- Citron

Citrus paradisi -- Grapefruit

Citrus reticulata -- Tangerine (Mandarin)

Citrus sinensis -- Sweet Orange

Citrus vulgaris -- Sour Orange (Seville Orange)

Coccoloba uvifera -- Seagrape

Cocos nucifera -- Coconut

Codiaeum variegatum -- Croton

Coffea arabica -- Coffee

Cola acuminata -- Bissy (Bichy, Cola, Kola)

Coleus spp. -- Joseph's Coat

Colocasia esculenta -- Dasheen (Coco, Cocoyam)

Colocasia spp. -- Wild Coco (Scratch Coco)

Cordia alba -- Duppy Cherry

Cordia collococca -- Duppy Cherry (Clammy Cherry)

Cordia gerascanthoides -- Spanish Elm

Cordyline terminalis -- Dragon's Blood (Cordyline, Dracaena)

Crescentia cujete -- Paki (Calabash)

Crotalaria retusa -- Duppy Rattle, Duppy Peas

Crotalaria verrucosa -- Duppy Rattle, Duppy Peas

Cucumis anguria - Duppy Cucumber

Cucumis sativus -- Cucumber

Cucurbita spp. -- Pumpkin

Cuphea parsonia -- Strong Back

Cuscuta spp. -- Love Bush

Cynara scolymus -- Artichoke

Cyphomandra betacea -- Tree-Tomato

Daphnopsis tinifolia -- Bon-ace (Burn-nose Bark, Noseburn)

Daucus carota -- Carrot

Delonix regia -- Flame Tree (Flamboyant)

Diervilla lonicera -- Honeysuckle

Dioscorea cayenensis -- Yellow Yam (Affoo)

Dioscorea rotundata -- White Yam

Dioscorea trifida -- Yampie (Indian Yam)

Dipholis montana -- Bulletwood (Bullet, Bully Tree)

Dipholis nigra -- Cherry Bully Tree (Red Cherry Tree)

Dolichos lablab -- Bonavist Bean

Dryobalanops aromatica -- Camphor

Durio zibethinus -- Durian

Ehretia tinifolia -- Duppy Cherry (Clammy Cherry)

Elaeis guineensis -- African Oil Palm

Elettaria cardamomum -- Cardamon

Eleusine coracana -- Finger Millet

Eragrostis abyssinica -- Teff

Erythrina corallodendron -- Sword Tree (Coral Tree)

Erythrina spp. -- Immortelle

Erythrina velutina -- Spanish Machette (Cutlass Flower)

Eucalyptus spp. -- Eucalyptus

Eugenia spp. -- Rodwood

Euphorbia lactea -- Roast Pork

Euphorbia milii Desmoulins -- Crown-of-thorns

Euphorbia pulcherrima -- Poinsettia

Euphorbia spp. (see Asprey and Thornton 1953) -- Milk Weed

Fagara martinicensis -- Prickly Yellow Wood

Faramea occidentalis -- Wild Coffee

Fevillea cordifolia -- Cacoon (Antidote, Antidote Caccoon, Mafootoo Withe or Wis)

Ficus spp. -- Fig

Garcinia indica -- Brindonne

Garcinia mangostana -- Mangosteen

Genipa americana -- Guinep

Geranium spp. -- Geranium

Gliricidia sepium -- Grow stake (Growing Stake, Maranga, Quick Stick, Grow Stick)

Gomphrena globosa -- Bachelor's Button

Gossypium spp. -- Cotton

Guaiacum officinale -- Lignum Vitae

Guazuma ulmifolia -- Bastard Cedar

Haematoxylum campechianum -- Logwood

Heliconia brevispatha -- Bird of Paradise

Heliconia humilis -- Heliconia (Lobster Claw)

Hevea braziliensis -- Rubber

Hibiscus elatus -- Mahoe (Blue Mahoe)

Hibiscus rosa-sinensis -- Hibiscus

Hibiscus sabdariffa -- Sorrel

Hippomane mancinella -- Manchineel

Hyptis capitata -- Piaba

Hyptis verticillata -- John Carlie

Impatiens balsamina -- Impatiens

Indigofera tinctoria -- Indigo

Ipomoea batatas -- Sweet Potato

Ipomoea purga -- Jalap

Iris X germanica -- Orris

Ixora coccinea -- Ixora

Jasminum spp. -- Jessamine (Jasmine, Jessamy)

Jatropha curcas -- Physic Nut

Lablab purpureus -- Bonavist (Bonavis, Lablab Bean)

Lactuca sativa -- Lettuce

Lagerstroemia indica -- June Rose

Lagerstroemia speciosa -- Queen Flower (Pride of India, Crepe Myrtle

Lagetta lagetto -- Lagetto (Lagetto Bark, Lace Bark)

Laplacea hematoxylon -- Blood-Wood (Ironwood)

Laurus nohilis -- Bay Tree

Leonotis nepetifolia -- Christmas Candlestick

Linociera domingensis -- Ironwood (White Rosewood)

Litchi chinensis -- Litchi

Lonicera tartarica -- Honeysuckle (Tartarian Honeysuckle)

Lycopersicon esculentum -- Tomato

Magnolia spp. -- Magnolia

Malpighia punicifolia -- Barbados Cherry, (Cherry, Garden Cherry and West Indian Cherry)

Malva Neglecta -- Common Mallow

Mammea americana -- Mammee (Mammy apple)

Mangifera indica -- Mango

Manihot esculenta -- Cassava (Manioc)

Manilkara sapota -- Naseberry

Maranta arundinacea -- Arrowroot

Melicoccus bijugatus -- Guinep (genip)

Mentha X piperita -- Peppermint

Mentha spicata -- Spearmint

Mimosa pundica -- Shame-Shame-Darling (Shamy, Shame-me-Darling)

Momordica charantia -- Cerasee

Morinda citrifolia -- Hog Apple (Duck Apple, Hog Berry, Indian Mulberry, Jumby Cho-cho, Monkey Berry, Pig's Apple, Duppy Cho-cho)

Morinda royoc -- Duppy Poison

Morus papyrifera -- Mulberry (Paper Mulberry-Tree)

Musa spp. -- Banana (Plantain)

Myristica frangrans -- Nutmeg

Nasturtium officinale -- Watercress

Nectandra spp. -- Sweetwood

Nerium oleander -- Oleander

Nicotiana tabacum -- Tobacco

Nopalea coccinellifer -- Tuna

Ochroma pyramidale -- Down Tree (Balsa, Bombast, Mahoe, Corkwood)

Ocimum basilicum -- Basil (Sweet Basil)

Ocimum micranthum -- Barsley

Ocimum spp. -- Basil (Barsley, Baazli)

Olea europaea -- Olive

Opuntia cochenillifera -- Cochineal Cactus (Roast Pork)

Opuntia spp. -- Prickly Pear (Opuntia, Flat Hand Dildo)

Oryctanthus occidentalis -- Godbush (Scorn-the-Earth, Mistletoe)

Oryza sativa -- Rice

Pandanus Odoratissimus -- Screw Pine

Panicum maximum -- Guinea Grass

Parkinsonia aculeata -- Jerusalem Thorn

Paspalum filiforme -- Wire Grass

Passiflora ligularis -- Granadilla

Passiflora sexflora -- Duppy Pumpkin

Pedilanthus tithymaloides -- Duppy Fee-fee (Monkey Fiddle)

Pennisetum americanum -- Pearl Millet

Pennisetum purpureum -- Napier Grass

Peperomia pellucida -- Pepper Elder

Pereskia aculeata -- Spanish Gooseberry

Persea americana -- Pear (Avocado)

Phaseolus lunatus -- Lima Bean, White Bean, Broad Bean

Phaseolus vulgaris -- Red Peas (String Bean)

Philodendron scandens -- Philodendron

Phoenix dactylifera -- Date Palm

Phormium tenax -- New Zealand Flax

Phyllanthus acidus -- Jimbling (Otaheite Gooseberry Tree, Indian Gooseberry)

Pimenta dioica -- Allspice (Jamaica pepper, Pimento)

Pinus caribaea -- Caribbean Pine

Pinus rigida -- Pitch Pine

Pinus strobus -- White Pine

Piper nigrum -- Black Pepper

Piper spp. -- Pepper Elder

Piscidia piscipula -- Dogwood (Jamaica Dogwood)

Pithecolobium arboreum -- Wild Tamarind

Pithecolobium unguis-cati -- Chinese Ackee (Cat's Claw, Bread-and-Cheese)

Plumeria rubra (Plumeria alba) -- Frangipani

Pouteria sapota -- Mammee Sapota

Prunus occidentalis -- Proan (Praum)

Prunus persica -- Peach

Psidium guajava -- Guava

Pulmeria rubra -- Frangipani

Punica granatum -- Pomegranate

Quercus suber -- Cork Oak

Reticulata blanco -- Tangerine

Rhizophora mangle -- Red Mangrove

Rhododendron calendulaceum -- Azalea

Rhododendron spp. -- Rhododendron

Rhynchosia minima -- Duppy Pindar

Ricinus communis -- Castor-oil

Rosa moschata -- Musk Rose

Rosa spp. -- Rose

Roystonea altissima -- Mountain Cabbage

Roystonea regia -- Royal Palm

Ruellia tuberosa -- Duppy Gun

Rumex acetosa -- Sorrel

Sabal palmetto -- Palmetto Palm

Saccharum officinarum -- Sugar cane

Salvia occidentalis -- Wild Mint

Samanea saman -- Guango (Rain-tree, Saman)

Scabiosa atropurpurea -- Sweet Scabious

Secale cereale -- Rye

Sechium edule -- Cho-cho

Sesamum indicum -- Sesame

Setaria barbata -- Corn Grass

Setcreasea purpurea -- Wandering Jew

Sida spp. -- Broomweed

Simarouba glauca -- Bitter Damsil (Bitter Dan, Bitter Damson)

Smilax aristolochiifolia -- Sarsaparilla

Solanum ciliatum -- Duppy Tomato (Cockroach Poison)

Solanum melongena -- Egg-Plant

Solanum torvum -- Susumba (Susumber, Sosuma, Gully Bean)

Solanum tuberosum -- Irish Potato

Sorghum vulgare -- Sorghum

Spathodea campanulata -- Spathodea (African Tulip Tree)

Spondias dulcis -- June Plum (Jew Plum)

Spondias mombin -- Hog Plum

Spondias purpurea -- Red-coat Plum (Yellow-coat Plum, Spanish Plum, Jamaica Plum, Mobin, Red/Yellow Mobin)

Stachytarpheta jamaicensis -- Vervain (Porterweed)

Stenocereus hystrix -- Dildo (Dildo Pear, Torch-Wood, Torch-Thistle, Torch-Cactus)

Stipa comata -- Silk Grass

Strelitzia reginae -- Bird-of-Paradise

Swietenia mahagoni -- Mahogany

Syringa spp. -- Lilac (Hoop-Tree)

Syzgium jambos -- Rose Apple

Syzygium malaccense -- Otaheite Apple (Titi Apple)

Syzygium aromaticum -- Clove

Tamarindus indica -- Tamarind

Taxodium distichum -- Cypress

Tecoma stans -- Torch-Wood

Tecomaria capensis -- Honeysuckle (Cape Honeysuckle)

Tectona grandis -- Teak

Terminalia catappa -- Almond (Tropical Almond, Indian Almond)

Theobroma cacao -- Cocoa

Thrinax multiflora -- Sea Thatch (Wild Thatch)

Thrinax parviflora -- Thatch Palm

Thunbergia grandiflora -- Thunbergia

Thumus vulgaris -- Thyme

Tillandsia usneoides -- Old Man's Beard

Triticum spp. -- Wheat

Triumfetta spp. -- Bur Bark

Tropacolum majus -- Nasturtium

Trophis americana -- Raw Moon (Ramoon)

Vanilla planifolia -- Vanilla

Vigna unguiculata -- Cow Peas (Blackeye Peas, Marrow Fat Peas)

Viola odorata -- Sweet Violet

Vitis vinifera -- Grape

Wedelia trilobata -- (Jamaican) Marigold

Xanthosoma sagittifolium -- Tannia (Taya, Badoo, also Indian Kale)

Zea mays -- Corn

Zingiber officinale -- Ginger

Zinnia multiflora -- Red Zinnia

Ziziphus mauritiana -- Jujube (Coolie plum)