

Evidence of Seasonal Hunger in the Oral Traditions of Jamaicans

An Ethnobiological Perspective

J. Rashford

Scholars of the Caribbean have not focused on seasonal hunger as important in its own right, yet the subject comes up in significant ways in their discussion of a variety of other topics. Consider the British doctor Harold Scott (1916, 1917), who came to Jamaica in the early 20th century as “government bacteriologist” and “pathologist to the public general hospital” in Kingston. He argued that seasonal hunger, from mid-autumn in November to the start of spring in March,¹ caused the “poorer classes” to ignore the wisdom of their own folk traditions and eat poisonous ackees (*Blighia sapida* Koenig). Some scholars whose focus is the Caribbean’s history as slave-based plantation colonies give the impression seasonal hunger is simply the result of the sugarcane being out of season (Hicks 1972). Higman notes, for example, “West Indian [Africans] . . . certainly did suffer from seasonal nutritional stress . . . the minimum period of food supply occurred in the out-of-crop season, which Barbadian[s] called the ‘hungry-time’ or ‘hard-time’” (1984:215). The anthropologist Robert Dirks presents this view (1975, 1978, 1987), but as a cultural ecologist for whom resource seasonality was of central importance, he offered a more critical perspective. Dirks reports between 1650 and 1843, African Caribbean resistance to plantation slavery was less intense from July to November because fall-planting left them exhausted, diseased and hungry—sugarcane was off, other local crops were scarce, and food imports were reduced when shipping slowed because of hurricanes. And that the great increase in food following this period of seasonal hunger explains why African resistance intensified around the Christmas holidays.

Despite the importance of seasonal hunger in their arguments, neither Scott nor Dirks made an effort to determine what Caribbean people think about seasonal hunger. This paper shows that the Jamaican consciousness of seasonal

hunger is recorded in their oral traditions, and the nature and timing of seasonal hunger in oral traditions differ from the views presented by Scott and Dirks.

Evidence of seasonal hunger is found in popular expressions, names, proverbs and stories that are associated with plants and animals, and the most important plant is the tamarind tree (*Tamarindus indica* L.),² a marker for the annual crop-scarcity hungry time of spring and early summer. A legume and the only species of its genus, the tamarind is a large, long-lived evergreen readily distinguished by its height of 10 m or more, and its dense round crown of drooping branches bearing feathery pinnate leaves. It produces small, red-veined yellow flowers from the end of spring through autumn, and from these develop plump pea-pods, 5 to 10 cm long, slightly curved, and markedly segmented into two to ten parts (Hernandez-Unzon and Lakshminarayana 1982). A soft, sticky, brown pulp that is sweetly acidic in taste surrounds the large, flat seeds in each segment. Although both its common and scientific names identify the tree and its much-loved fruit as the “date of India,”³ i.e., *tamar-u’l-hind*, the tamarind is now generally regarded as a native of tropical Africa where it has long been intimately associated with human settlements (Dalziel 1937). The tamarind was introduced into Jamaica⁴ during the Spanish colonial period, probably in the 16th century. Because it grows readily from planted or discarded seeds, and tolerates a wide variety of growing conditions, it is now one of the most familiar trees in Jamaica, especially along roadsides (Sloane 1725:45-46).

The popular expression ‘tamarind season is hard times’ indicates that for Jamaicans, the period of ripening tamarinds (from winter’s end in March, through early summer in July) is a taste-marker signalling the annual scarcity of crops—the sour time of the year called ‘hard times’ or ‘the hungry season’ (Cassidy 1961; Cassidy and Le Page 1980).⁵ In the *Dictionary of Caribbean English Usage*, Allsopp identifies the phrase ‘tamarind season’ as a Jamaican expression equivalent to “hard-guava days” in Guyana, “guava-days” in Guyana and Grenada, and “guava time” in Montserrat. These expressions mean: “Hard times (i.e., when it may be necessary to eat even hard green guavas, or tamarinds, as the only easily available food)” (1996:284). The guava has two peak seasons a year (Potts 1880; Skeete 1996:66). Flowering occurs around the spring and autumn rains, and fruits ripen from the end of the summer dry season through early autumn and from the end of the winter dry season through spring. Although tree crops and cultivated herbaceous crops are reduced toward the end of spring and the end of autumn, it is especially the green guava from the spring flowering that is associated with the crop-scarcity hard times of tamarind season.⁶ Various publications dealing with livestock and crops support this position.

Considering the timing of livestock sales in Jamaica, bearing in mind the sale of liquid assets, especially livestock, is an important strategy used by "households" worldwide to cope with "seasonal food shortage" (Thomas and Leatherman 1990). In Jamaica's southeastern parish of St. Thomas, Dankerlin (1990:81) reports the value of livestock as income, savings and investment. He records a glut-producing sale of livestock "around September" for "educational expenses and purchasing farm inputs," and another large sale in December to get "cash for Christmas." Of other times when sales increased, Dankerlin writes: "In areas plagued by drought during the months of July and August, the sale of livestock provides cash needed to purchase food, which may be in short supply. Livestock is also sold during other drought months such as March" (1990:81). Although drought is Dankerlin's explanation, the increased sales in March, as well as those in July and August, could be viewed as a response to the crop-based scarcity of tamarind season.

References to crops also point to the end of winter through early summer as the hard times of tamarind season. Although Blaut et al. (1973:49) were not concerned with tamarind season in their study of small farming, erosion, and soil conservation in Jamaica's Blue Mountains, they reported high unemployment in summer and "a shortage of subsistence crops." The *Jamaica Almanac 1879-80* by Potts (1880) is especially relevant since its information on the annual scheduling of productive activities in relationship to climate (and its influence on the growth and reproduction of plants and animals) was intended to be of practical value to planters, pen-keepers, small farmers and gardeners. Potts (1880:13, 15, 16) reported that the tamarind was in season in January. He did not mention it for February, but for March he wrote: "Limes are very scarce and out of season, and so are all other fruits except tamarinds." For April he states only: "Tamarinds still in season." For April also he notes: "Yams and cocoas [*Colocasia esculenta* and *Xanthosoma sagittifolium*] are scarce and dear." And for June: "Ground provisions are scarce and dear, except sweet potatoes, cassava, [and] cocoas."⁸ The shortage of yams and tree crops during tamarind season deserves further consideration.

Jamaicans have traditionally depended on ground provisions. These include yam, cassava, sweet potato, coco (*Xanthosoma sagittifolium*), dasheen (*Colocasia esculenta*), and Irish potato. The most important component has been six species of yams from around the world belonging to the genus *Dioscorea*, some of which have several important cultivars (Beckwith 1969:15).⁹ From Africa, *D. rotundata* (varieties: Negro, mozella, taw, Lucea) and *D. cayenensis* (yellow, afou, round leaf); from Asia, *D. alata* (Guinea, renta, St. Vincent, white, sweet, hard) and *D. esculenta* (Chinese); from the "Old World tropics" (Adams 1972:67) there is *D. bulbifera*; and from tropical America there is *D. trifida* (yampie, also called

cush cush). Because of the genetic diversity underlying its adaptability to a wide range of soils and microclimates, its different rates of maturation, its resistance to diseases and predation, its potential for staggered planting and delayed harvesting, and its suitability for storage, the yam produces in abundance for most of the year.

The effort to produce a year-round harvest is one significant factor that has governed the way Jamaican small farmers have traditionally cultivated the yam, but they have never been completely successful. *D. rotundata* cultivars come in from mid-summer in August through early autumn in October; *D. cayenensis* cultivars from early autumn in October through the start of spring in March; *D. trifida* from the end of autumn in December through mid-winter in February; and *D. alata* cultivars from mid-winter in February through the beginning of spring in March.¹⁰ This means yams are generally off during tamarind season from the early spring in April through early summer in July (see Harris 1906; Jamaica Agricultural Society 1954; Wilson et al. 1992; Norman et al. 1995). According to Jekyll (1907:122-123):

('Hard times' refers to the) months of June and July when provisions are scarce. The old yams are done and the new ones are not in yet. Subsistence has to be eked out with a few sweet potatoes and the mangoes, which are abundant in these months, and go on till the October rains bring back a season of plenty.¹¹

Jekyll is right about hard times, but mistaken about the October rains bringing "back a season of plenty." He fails to recognize the summer harvest of spring-planted herbaceous crops, the main harvest of tree crops from mid-summer in August through early autumn in October,¹² and the start of the new yam season in August. New yams come in when crops are again plentiful, thus we can understand why the yam festival of the past was timed for the end of summer or early autumn (Patterson 1967:242-243). Dirks (1987:147) writes:

The festivities took place about the end of September, when the first crop of the year reached maturity. Then, as [an African Jamaican] . . . stated, 'it is customary for us all to have our friends about us' (Report 1824:17). Two and three generations gathered at the burial place of a common ancestor and sacrificed a cock or goat. After they poured the animal's blood on the grave, each household head made his or her own separate sacrifice. This was followed by a great feast and dancing in the village [See Gardner (1873:185)].

The March-to-July tamarind season is when yams are scarce, and it could be argued that the reduced supply at this time of the year is a major contribu-

tor to the occurrence of seasonal hunger in Jamaica (Jekyll 1907; Kerr 1963:19). It is also noteworthy that identifying tamarind season as principally a yam-based period of seasonal hunger offers insight into the cultural significance of some of these yams. For example, St. Vincent is a popular cultivar of *Dioscorea alata* whose members are generally in season from mid-winter in February until the start of spring in March. Beckwith's (1969:16) informant called it 'come-here-we-help-we' because, in addition to being a delicious yam, a heavy bearer, and growing almost wild (i.e., without stakes), "it keeps so long in the earth and propagates itself by seed, so that one planting will sometimes perpetuate itself for fifteen years and serve the people in hard times." Most yams in Jamaica do not store well (JAS 1954:444).¹³ Among the exceptions are the white yam and renta, which are also cultivars of *D. alata*. Both are known to "keep for months (i.e., for the months of hard times) if 'cured' just after reaping" (JAS 1954:444). The white yam is "considered the best of the yam family" in Jamaica, and the renta is described as "very palatable when well-cured," and as growing "on soils poorer than that which any other yam requires, and with less care" (JAS 1954:444-445).

There is also *Dioscorea bulbifera* L., a native to the Old World tropics (Adams 1972:67) which has the English common name potato yam. In Jamaica it is called *akam* (an African name spelled in a variety of ways, e.g., *acom*, *accom*, *aham*). While tubers might be absent, or small, hard and bitter, the bulbils produced on the vine are edible and are widely considered useful during hard times (Cassidy 1961:340). According to Cassidy and Le Page (1980:6) and Hall-Alleyne (1996:9), they are only "eaten (in Jamaica) when other food is scarce."

Like yams, tree crops merit further attention because their scarcity or absence is a significant contributor to the hard times of tamarind season from winter's end through early summer. In addition to the tamarind and year-round crops like the coconut, plantain and banana, springtime tree crops include the star apple (*Chrysophyllum cainito* L.), naseberry (*Manilkara zapota* L.), otaheite apple (*Syzygium malaccense* L.), rose apple (*Syzygium jambos* L.), stinking toe (*Hymenaea courbaril* L.),¹⁴ custard apple (*Annona reticulata* L.), soursop (*Annona muricata* L.), maccafaf (*Acrocomia spinosa* Mill.), red coat plum (*Spondias purpurea* L.), golden apple (*Passiflora laurifolia* L.), litchi (*Litchi chinensis* Sonn.), cashew (*Anacardium occidentale* L.), jimbling (*Phyllanthus acidus* L.), Suriname cherry (*Eugenia uniflora* L.), Barbados cherry (*Malpighia puniceifolia* L.), baobab (*Adansonia digitata* L.),¹⁵ cocoa (*Theobroma cacao* L.), guava (*Psidium guajava* L.), and strawberry guava (*Psidium cattleianum* Sabine).¹⁶

Although many crops are available in spring, scarcity during the hard times season results from the reduced harvest of yams, fall-planted herbaceous crops, and important food trees.¹⁷ The avocado (*Persea americana* Mill.) is off, the mi-

nor winter peak harvests of breadfruit (*Artocarpus altilis* Parkins.) and ackee (*Blighia sapida* Koen.) are over by April, and the mango only comes in towards the end of mid-spring in May (see Skeete 1996:68).¹⁸ One informant specifically identified the crop scarcity of tamarind season as "the absence of food trees," and gave the breadfruit and mango as examples. I asked if she knew when these trees were in season and she said no. She only knew that during tamarind season these crops were scarce.

In addition to the spring reduction in tree crops, the nature of Jamaica's 'hard times' is also revealed in the folklore of trees. Although publications commonly identify Jamaica's seasonal year only in terms of climate, and describe the annual alternation between dry and wet seasons as its chief manifestation, what has traditionally concerned Jamaicans—what is recorded in their oral traditions—is the impact of this change on the availability of food through the year. Dirks identified a December turning point from autumn's scarcity to winter's abundance as the cause of the major increase in African Caribbean resistance at Christmas. Judging from their oral traditions, Jamaicans also identify a turning point, but it is the turn from spring's scarcity to summer's abundance that is significant. Jamaicans read their seasonal fortunes in the flowering and fruiting of trees, which they use to symbolize this seasonally alternating process. According to folk beliefs, the extent to which mango trees flower in the winter predicts the severity of 'hard times.'¹⁹ As we have seen, ripening tamarinds reveal the presence of this hard times, and ripening mangoes—i.e., 'mango time'—represent the return of the good times of summer.

'Mango time' starts in mid-spring in May, and reaches its height from the end of spring in June through mid-summer in August. This valuable Asian tree was introduced into Jamaica in 1782. By 1837, James Wiles (the official botanist on Captain Bligh's Pacific breadfruit expedition to the West Indies) described it as "the most valuable tree" introduced in recent times, noting that it "has spread with great rapidity, and is now found in every part of the island; the fruit, which it produces in very great abundance, forms a dessert for the whites and food for the Negroes, as well as for cattle, horses, and hogs" (see Powell 1972:16). Seventy-five years later, Harris (1912:170) describes the mango as "pre-eminently the fruit of the masses in Jamaica," and points out that "during the season everyone, from babies in arms to tottering old men and women, eats mangoes. It is practically impossible to get away from the sight and smell of the fruit, which is largely the food of the people during this period." Based on Wiles and Harris, one would believe Jamaicans eat a lot of mangoes merely because they love the fruit. This impression is also fostered by Jamaican proverbs, folksongs and sayings where 'mango time' means one can wash their pots and turn them down because there is no need to cook. In actuality however,

'mango time' is the annual turning point in the food supply when things start getting better, but are not yet at their best. Consider Huggins (1953:104), who was specifically concerned with the seasonality of employment in Jamaica. He states that mangoes ripen during "the island's [May-December] employment off-season," and

... the effect on the food supply situation is appreciable. Coming on the market in abundance from May to August when many of the staple foods are at the end of their main seasons, the mango plays an important part in keeping a check on the tendency of other food crops to rise in price during this period of shortest supplies.

It is because mango season marks the beginning of the end of 'hard times' that the fruit has such rich cultural significance in Jamaica. The transition from spring to summer, i.e., from 'tamarind season' to 'mango time' marks the transition from the sour to the sweet time of the year.

While on the topic of trees and seasonal hunger, it is notable that locating the hard times of tamarind season from winter's end through early summer provides a better understanding of Jamaican folk traditions which appear to have nothing to do with the seasons. An excellent example is the star apple (*Chrysophyllum cainito* L.). The "meanness" attributed to this familiar dooryard tree results from the fact that its highly valued fruits ripen during tamarind season. But instead of falling when ripe, they stay on the tree—a difficult and dangerous tree to climb—long after they have dried to become hard, black and inedible (Rashford 1991a).

The meaning of the expression 'tamarind season,' especially in relationship to the seasonality of yams and tree crops, identifies the end of winter through early summer as the time of seasonal hunger in Jamaica, and proverbial thought supports this view. Consider the proverb "Young bud no know hungry time" (Anderson and Cundall 1927:19; Beckwith 1925:126, Morris-Brown 1993:123), also expressed as "Lib-well smaddy no know hard time" (1993:12), and more generally as "Rock stone a ribber bottom nebber feel sun hot" (Baxter 1970:171). On the simplest level, we learn that young birds are fortunate to have good parents that protect them from hardship. But the proverb has deeper significance when set in its seasonal context. In his breeding calendar for Jamaica, Jeffrey-Smith (1972:116) reports that while a small number of birds nest in autumn and winter, the majority nest from spring through summer when flowering, leaf-replacement and rainfall produce a flush of insects and other sources of food. This means many birds nest during the hard times of tamarind season, yet unlike people, their children do not know "hungry time."

Beckwith (1925:126) misses this key point when she reports the proverb and translates it to mean "Young birds don't know hunger?" Dropping "time" from the end of the proverb and the question mark indicate her uncertainty about the proverb's meaning, but for Jamaicans, the linking of "hunger" and "time" is important. A period of the year is identified as a "time" or "season" (Cassidy and Le Page 1980:445). Hence the proverb is concerned not simply with hunger, as Beckwith has interpreted it, but with the annually recurring period of hunger, i.e., the 'hungry time,' which Cassidy and Le Page (1980:233) identify as a "season or period during which food is scarce."

The relevance of the seasonal interpretation is supported by another proverb regarded by Morris-Brown (1993:123) as having a similar meaning: "Young bud [birds] no know storm." They don't know storms because they are young in spring, when the worst storms for Jamaicans are hurricanes, which occur from early summer through, mid-autumn.

The March-to-July timing for the hard times of tamarind season is also supported by other proverbs. After the summer, autumn and winter yam harvests, it is in the spring planting season that "Trubble mek man cut yam head two time" (Watson 1991:134).²⁰ Times must really be hard, for as Minnis (1991:233) indicates: "Seed stock saved for future planting is clearly a famine food of last resort for farmers because of the long-term consequences of this action."²¹ The proverb "Yung nyaam cyaan mek soop" (Morris-Brown 1993:123) points to the desperation that precedes the start of the yam harvest in August as the seasonal hunger of spring and early summer approaches its end. In his account of the nature, origins, cultivation and utilization of yams worldwide, Coursey (1967:11) identified two reasons why:

it is common practice to take an early harvest, in addition to the main crop . . . firstly, the desire for new yams as early as possible in the year, after the period of food shortage which often occurs in tropical countries in the early part of the rainy season; and secondly, the need to obtain seed tubers for the following year from species which normally form only a single tuber.

Understanding seasonal hunger in oral traditions should also include evidence of how Jamaicans cope with it. Both Cassidy (1961:192) and Cassidy and Le Page (1980:264) report that *kongkonte* in Jamaica is an African word (*cungoteh*, *kongkote*) which they identify as yam, cassava, plantain or banana cut in pieces, dried, pounded, and sifted to a flour for making porridge or dumplings. Curiously, they did associate *kongkonte* with seasonal hard times. In her Gleaner newspaper article of January 27, 1980, Patmos gives an account of *kongkonte* in relationship to 'tamarind season':

'Con-contech' is the peeled, coarsely sliced, sun dried tuber—potato, coco, yam, cassava, or green banana or plantain—whatever happened to grow abundantly in the district. Great House owner, and even 'capture lan' people, planted special crops for 'con-contech' making. Thus was tamarrind season prepared against: except by the feckless who were despised for not possessing 'con-contech.'

The nature of seasonal hunger presented in Jamaica's oral traditions contradicts the views of Scott and Dirks. Scott failed to correlate the seasonal availability of the ackee with the seasonal occurrence of what was then called "vomiting sickness." He also failed in his argument that crop scarcity from November to March was the reason the "poorer classes" knowingly ate "unwholesome" (i.e., "unripe") ackees which caused "vomiting sickness" (Rashford 1999).

It is noteworthy that reviewers of Dirks' *The Black Saturnalia* (1987) criticized the "reductionism" of his brand of materialism and cultural ecology, but they did not take issue with his understanding of Caribbean seasonality, especially with regards to the nature and timing of seasonal hunger (See Hill 1988; Schuler 1989; Littlewood 1989; Williams 1989; Higman 1989). As with Scott, Dirks' conception of seasonal hunger in the Caribbean, and in Jamaica in particular, is also the most important weakness undermining his explanation for (what he and others have described as) the significant December increase in African Caribbean resistance. Dirks argued this increase was not the result of African Caribbean consciousness (i.e., thinking, ideas, ideology, politics, plans, intent) or holiday license, but was due simply to the physiological effect of the annual surge in food availability that came in late December following the summer and autumn hunger seasons. He reasoned that the seasonal environment shaped the scheduling of agricultural activities, and these activities in turn influenced the availability of food through the year. The effect of these two factors was to divide the year into a rainy period from July to November, associated with planting, seasonal hunger and disease, and a dry period from December to June, associated with harvesting, seasonal abundance and improved health.

The fundamental limitation of Dirks' approach is that to make this argument, he adopted a rigid dualistic approach to the annual cycle. His acceptance of a dry/wet division of the year corresponding to the on/off sugar cycle of December-June/July-November obscures the nature of Jamaica's two growing seasons. This view reduces to a "minor" status the summer-fall harvest of yams, tree crops,²² and spring-planted herbaceous crops (in contrast to the winter-spring harvest which he characterizes as a harvest of "staples") and distorts the nature of the availability of crops in winter. For example, Dirks argued that

the December upsurge in food was related to the fact that "canes were nearly ripened, as were numerous other species of local cultigens. Maize, yams, plantains, bananas, sweet potatoes, and several other fruits and vegetables matured during the months of December and January" (1978:163). Maize and sweet potatoes are planted with the spring and autumn rains, and are therefore in season twice a year, and the idea of plantains and bananas as seasonal crops does not inspire confidence in Dirks' analysis.

Although scholars of the Caribbean have neglected the importance of seasonal hunger in its own right, the subject is of growing interest to researchers in various disciplines who are concerned with a wide range of issues (Ogbu 1973; Chambers et al. 1981; de Garine and Harrison 1988; Huss-Ashmore 1988; Sahn 1989; Thomas and Leatherman 1990; Ulijaszek and Strickland 1993; Hladik et al. 1993). It is noteworthy that the view of seasonal hunger presented in Jamaica's oral traditions is consistent with much of this literature. The late winter, spring and early summer is the time of the year frequently associated with seasonal scarcity in many parts of the tropics, especially in Africa (Rashford 1987b).

In his influential 1961 article "Seasonal Hunger: A Vague Concept and Unexplored Problem," Miracle argued that the often reported existence of seasonal hunger in Africa did not in fact occur. For Miracle, seasonal hunger defined in biological terms, occurred only when peoples' diet included fewer calories than needed at a particular time of the annual cycle even though their overall yearly intake was adequate. I support Miracle's politics because he sought to defend Africans from the charge that they did not prepare for hard times. But I am in full agreement with Ogbu (1973:317):

Miracle's argument is useful in drawing attention to our lack of information on what is a nutritionally adequate diet in various areas of Africa, but it has nothing to do with the existence of 'hunger periods' as described by many observers. Few nutritionists have yet worked long enough in rural Africa to provide detailed data on actual diets as opposed to hypothetical possible diets. Most of our evidence comes from anthropologists or others with close acquaintance with particular rural populations. These were neither trained in nutrition nor capable of calculating the daily calorie intake of the people they worked among. What they did report is that people said they were usually hungry during certain periods of the year and that observation at these seasons bore out the fact that since they ate less food, shifted to food they disliked, they became querulous, showed other signs of stress, and appeared to lose weight. . . . '[H]unger season' therefore is taken to refer to a period when the resources available do not

permit people to satisfy their hunger in the way prescribed by their culture. . . . There is an abundant literature attesting to the fact that rural people in many parts of Africa are not able to meet their own nutritional standards throughout the year.²³

Today there is a growing interest in understanding the way people cope with seasonal constraints (Huss-Ashmore 1988; Thomas and Leatherman 1990; Hladik et al. 1993). In fact, Chambers (1981) has emphasized the importance of knowing the seasonal dimension of rural poverty as a requirement for making meaningful changes in the material conditions of peoples' lives. This paper is intended to be a contribution to this literature. Evidence for seasonal hunger is not only in what researchers experience or what people report: it is also recorded in oral traditions.

NOTES

1. The terms used to describe seasonality in this paper are based on the following standardization. The seasons are marked off astronomically by the solstices and equinoxes. The months in which these occur, i.e., December, March, June and September are transition months where one season ends and another begins. For example, the vernal equinox on March 21st until the end of March is the beginning of spring. April is early spring, May is mid-spring, and June up to the summer solstice on the 21st is the end of spring. The same format applies to the other seasons.

2. The tamarind marks a variety of things. For example, many other plants are named—and thereby made known—by being identified as kinds of tamarinds. These include leguminous species of the genera *Acacia*, *Albizia*, *Enterolobium*, *Inga*, *Leucaena*, *Pithecellobium* and *Samanea*, which (in addition to other common names) are variously called cow tamarind, wild tamarind, bastard tamarind and monkey tamarind. The one noticeable exception is *Adansonia digitata* L., one of the monkey tamarinds. Its similarity to the true tamarind (*Tamarindus indica* L.) is not in appearance, but in the taste of its fruit (Rashford 1987a, 1991b, 1997).

3. Yule and Burnell suggest the original form was not *tamar*, but *thamar*, which would mean, not "date," but "fruit of India" (See Popenoe 1920:434). *

4. Jamaicans value the tamarind's beauty and shade (Phillippo 1843:49; Harris 1912:179), as well as its hard wood for timber, firewood and charcoal (Harris 1909:73; Fawcett and Rendle 1920:119; Beckwith 1969:10); its strong flexible green branches for whip and broom (Long 1774:860; Senior 1983:160; Allsopp 1996:547); its leaves for poultice, medicinal tea and bath (Steggerda 1929:433; Asprey and Thornton 1955:73; Storer 1958:64; Lowe 1972:22; Campbell 1974:63; Robertson 1982:10); its flower for the tree's beauty in summer; and its fruit for food (fresh, or in drinks, sweets and sauces), medicine, income and seasonal marker (Browne 1756:125; Fawcett 1891:74-75). Anderson and Cundall (1972:118) report the proverb: "Ooman tongue, was'-was' [wasps], an' tamarind tree [whip] de three was [worst] ting."

5. There are conflicting accounts of the timing of tamarind season partly because ripe fruits "hang on the tree for several months" (Everett 1982:3254). Morton (1958, 1987) reports six; Barrett (1956:197) states "almost a year after flowering," and Hawkes (1968) claims "for as long as 12 months." Tamarind season extends from October to June according to Popenoe (1937), Bailey (1938:426), Adams (1972:329) and Senior (1983:159-160). It is a winter fruit for Wright (1911:171), Wilcox (1916:124), Bailey (1938:426), Cassidy (1961:109), MacMillan (1962:362), Cassidy and Le Page (1980:437), and Duke and duCellier (1993). And it is an early winter through spring crop for Little and Wadsworth (1964:186), Shubert (1979:76), and Bose and Chowdury (1991:79). Other works which are consistent with my own field observations identify tamarind season as being March to July (Long 1774: 729; Lunan 1814: 224; Wright 1828: 238; Standley 1930: 289; Morton 1958: 293, 1987: 116; Jamaica Agricultural Society 1957: 358; Weir et al. 1982: 148).

6. "Tamarind season" has four distinct meanings in Jamaica today. The first is crop-scarcity *hard times* in spring and early summer. The second is crop-scarcity *hard times* in winter. The third is the winter shortage of money and other resources, especially around the Christmas-New Year holidays (McIntosh 1996; Williams 1954:33), and the fourth and most general meaning is any *hard times*.

7. I think the crop scarcity of summer would be early rather than late summer, because from mid-summer to early autumn, there would be the harvest of spring-planted herbaceous crops, the start of the new yam season, and the harvest from the most important fruit trees.

8. According to The Farmer's Guide published by the Jamaica Agricultural Society 1954: 433-448), cassava can be harvested eight to twelve months after planting, and can be left in the ground for another six months depending on intended use. Sweet potato can be harvested five to nine months after planting. When these crops are planted with the main October rains of the autumn planting season, they are available during the hard times of spring and early summer.

9. The authorities for the scientific names of the yams mentioned in this text are: *D. rotundata* (Poir.), *D. Cayenensis* (Lam.), *D. alata* (L.), *D. esculenta* (Lour.) and *D. trifida* (L.). The identification of other cultivars of these species is presented by Jamaica's Agricultural Information Service (AIS 1976).

10. In a study of the wholesale seasonal price variation of selected crops in Coronation, the island's central market in the capital of Kingston, Grant (1994:4) reports that the prices of tubers (coco, *Xanthosoma sagittifolium* L., and dasheen, *Colocasia esculenta* L.) "are fairly constant throughout the year," and that the "main exception to this seasonal trend is yellow yam. Prices for this yam are at its highest in the summer months [when it is off] and at its lowest, in the Christmas months [when it is in peak season]."

11. Okere's *The Anthropology of Food in Rural Igboland, Nigeria* (1983), reveals the fundamental relationship between yam cultivation and the "hungry season" which he identifies as "the pre-harvest shortage period." He writes (1983: 243): "The scarcity of yam increases from the end of March and cassava consumption increases markedly. By April . . . cassava consumption peaks. A steady decline in cassava consumption follows thereafter as more cocoyams are eaten in June and subsequently when new yams become available in August."

12. With regards to the breadfruit, for example, Huggins (1953: 104) notes that "its supply in the July-September period is an important factor in the food price relationships; being relatively widespread and available it plays a part in meeting the carbohydrate needs at a time when most of the other competing items are in shorter supply."

13. The Jamaica Agricultural Society (1954:444) describes curing as "rubbing into all cut surfaces a handful of sifted ash or lime and exposing to the sun for a day or two."

14. *Hymenaea courbaril* L. is called stinking toe in Jamaica, a reference to the smell of the fruit. The common name that appears frequently in publications is West Indian locust.

15. The baobab is a rare tree in Jamaica called monkey tamarind (see footnote 2).

16. The spring harvest includes crops like the cocoa and guava which are in season twice a year: from as early as mid-winter in February through early spring in April, and from mid-summer in August through mid-autumn in October (or later). The soursop and Barbados cherry are also twice a year with peaks from April to June and September to February. There are also spring crops that start towards the end of spring and are in full season for part or all of summer. These include the litchi, rose apple, custard apple, red coat plum, cashew, jimbling, custard apple and mango.

17. Although spring's tree crops are not considered among the most important food trees, their fruits are eaten in large quantities when available. Moreover, many have good market value, and can be a source of money for store-bought food.

18. When considering the seasonality of crop scarcity in Jamaica, we must remember that up to the up to 1770s, "there was no breadfruit, no mango crop, not even a sizable banana crop, but mainly plantains, maize and ground provisions" (Powell 1973:8; see also Powell 1972).

19. Mangoes flowered profusely in February, 1777, and its significance as a predictor of hard times was a topic of frequent conversation.

20. The translations of these proverbs are: *Young yams can't make soup, and trouble makes a man cut his yam head two times*. After yams are harvested, "yam head" identifies the portion of the yam that is saved for replanting.

21. Minnis (1991:233) writes: "Plantain saplings, for example, are a famine food in parts of Bangladesh (Alamgir 1980) as were maize seeds among the Hopi (Beaglehole 1937)." For the use of plants as famine food see also Turner and Davis (1993).

22. With respect to tree crops, for example, he completely ignored the influence of the avocado crop in summer and autumn.

23. Current research (including nutrition studies) support Ogbu's perspective.

LITERATURE CITED

- Adams, C. D. 1972. Flowering Plants of Jamaica. University of the West Indies, Mona, Jamaica.
- AIS (Agricultural Information Service). 1976. Roots Crops are 'Roots' Food. Ministry of Agriculture, Kingston.

- Alamgir, M. 1980. Famine in South Asia: Political Economy of Mass Starvation. Oelgeschlager, Gunn, and Hann, Cambridge, Massachusetts.
- Allsopp, R. 1996. Dictionary of Caribbean English Usage. Oxford University Press, Oxford.
- Anderson, I. and F. Cundall. 1927(2nd ed. 1972). Jamaica Negro Proverbs and Sayings. Institute of Jamaica, Kingston.
- Asprey, G. F., and P. Thornton. 1955. Medicinal plants of Jamaica. West Indian Medical Journal 4(2):69-82.
- Bailey, L. H. 1938. Manual of Cultivated Plants: A Flora for the Identification of the Most Common or Significant Species of Plants Grown in the Continental United States and Canada, for Food, Ornament, Utility, and General Interest, Both in the Open and Under Glass. Macmillan & Co., London.
- Barrett, M. F. 1956. Common Exotic Trees of South Florida. University of Florida Press, Gainesville.
- Baxter, I. 1970. The Arts of an Island. The Scarecrow Press, Metuchen, New Jersey.
- Beaglehole, E. 1937. Notes on Hopi Economic Life. Yale University, Publications in Anthropology No. 15.
- Beckwith, M. W. 1925. Jamaica Proverbs. The Negro Universities Press, New York.
- . 1969. Black Roadways: A Study of Jamaican Folk Life. Negro Universities Press, New York.
- Blaut, J. M., and R. P. Blaut, N. Harman, and M. Moerman. 1973. A study of the cultural determinants of soil erosion and conservation in the Blue Mountains of Jamaica. Pp. 39-65 in Work and Family Life: West Indian Perspectives, Lambros Comitas and David Lowenthal (editors). Anchor Books, New York.
- Bose, T. K., and B. Chowdhury. 1991. Tropical Garden Plants in Color. Horticulture and Allied Publishers, Calcutta, India.
- Browne, P. 1756. The Civil and Natural History of Jamaica. Reprinted 1969. Arno Press, New York.
- Campbell, S. 1974. Bush teas: A cure-all. Jamaica Journal 8(2 & 3):60-65.
- Cassidy, F. G. 1961. Jamaica Talk. MacMillan & Co., New York.
- Cassidy, F. G., and R. B. Le Page. 1980. Dictionary of Jamaican English. University Press, Cambridge.
- Chambers, R., R. Longhurst, and A. Pacey (editors). 1981. Seasonal Dimensions to Rural Poverty. Frances Pinter, London.
- Coursey, D. G. 1967. Yams: An Account of the Nature, Origins, Cultivation and Utilization of the Useful Members of the Dioscoreaceae. Longmans, London.
- Dalziel, J. M. 1937. The Useful Plants of West Tropical Africa. Crown Agents for Oversea Governments and Administrations, London.
- Dankerlin, L. R. 1990. Seasonal Migration, the Farm Household Economy and Nutrition in Rural Jamaica. Dissertation. Department of Urban Studies and Planning, Massachusetts Institute of Technology.
- De Garine, I., and G. A. Harrison (editors). 1988. Coping with Uncertainty in Food Supply. Clarendon Press, Oxford.

- Dirks, R. 1975. Slaves' holiday. *Natural History* 84(10): 82-90.
- . 1978. Resource fluctuations and competitive: Transformations in West Indian slave societies. In *Extinction and Survival in Human Populations*, C. D. Laughlin and Brady (editors). Columbia University Press, New York.
- . 1987. The Saturnalia: Conflict and its Ritual expression on British West Indian Slave Plantation. University of Florida Press, Gainesville.
- Duke, J. A., and J. L. Du Cellier. 1993. *CRC Handbook of Alternative Cash Crops*. CRC Press, Boca Raton.
- Everett, T. H. 1982. *The New York Botanical Garden Illustrated Encyclopedia of Horticulture*. Garland Publishing, Inc., New York.
- Fawcett, W. 1891. *An Index to Economic Products of the Vegetable Kingdom in Jamaica*. Government Printing Establishment, Kingston.
- Fawcett, W. and A. Rendle. 1920. *Flora of Jamaica*. British Museum, London.
- Gardner, W. J. 1873. *A History of Jamaica*. Elliot Stock, London.
- Grant, A. S. 1994. Wholesale Seasonal Price Variation for the Coronation Market. Ministry of Agriculture, Kingston.
- Hall-Alleyne, B. 1996. An ethnolinguistic approach to Jamaican botany. In *African Continuities in the Linguistic Heritage of Jamaica*, Maureen Warner-Lewis (editor). African Caribbean Institute of Jamaica, Kingston.
- Harris, W. 1906. Yams. *Bulletin of the Department of Agriculture* IV(1):3-6.
- . 1909. The timbers of Jamaica. *Bulletin of the Department of Agriculture* 1(1):10-26.
- . 1912. Notes on fruits in Jamaica. *Bulletin of the Department of Agriculture* 2(6):159-180.
- Hawkes, A. D. 1968. Spice cardamom, tamarind and cassias. *The Gleaner newspaper*, July 4, 1968.
- Hernandez-Unzon, H. Y. and S. Lakshminarayana. 1982. Developmental physiology of tamarind fruit (*Tamarindus indica* L.). *HortScience* 17(6): 938-940.
- Hicks, F. 1972. Making a living during the dead season in sugar-producing regions of the Caribbean. *Human Organization* 31(1):73-81.
- Higman, B. W. 1984. *Slave Populations of the British Caribbean, 1807-1834*. Johns Hopkins University Press, Baltimore.
- . 1989. Review of "The saturnalia: Conflict and its ritual expression on British West Indian slave plantations." *American Historical Review* 94(2): 556-557.
- Hill, D. R. 1988. Review of "The saturnalia: Conflict and its ritual expression on British West Indian slave plantations." *Ethnohistory* 35(4): 403-405.
- Hladik, C. M., and A. Hladik, O. F. Linares, H. Pagezy, A. Semple and M. Hadley (editors). 1993. *Tropical Forests, People and Food: Biocultural Interactions and Applications to Development*. Parthenon Publishing Group, New York.
- Huggins, H. D. 1953. Seasonal variation and employment in Jamaica. *Social and Economic Studies* 1:84-115.
- Huss-Ashmore, R. 1988. Coping with seasonal constraints. In *MASCA Research Papers in Science and Archaeology*, R. Huss-Ashmore (editor). Vol. 5. University Museum, Philadelphia.

- Jamaica Agricultural Society. 1954. *The Farmer's Guide*. University Press, Glasgow, Scotland.
- . 1957. *The Farmer's Food Manual*. University Press, Glasgow, Scotland.
- Jekyll, W. 1907. (Reprinted 1966). *Jamaica Song and Story*. Dover, New York.
- Jeffrey-Smith, M. 1972. *Bird-watching in Jamaica*. Bolivar Press, Kingston.
- Kerr, M. 1963. *Personality and Conflict in Jamaica*. Collins, London.
- Little, E. L., and F. H. Wadsworth. 1964. *Common Trees of Puerto Rico and the Virgin Islands*. (Agriculture. Handbook No. 249). Washington: U.S. Department of Agriculture, Forest Service.
- Littlewood, R. 1989. Review of "The black saturnalia: Conflict and its ritual expression on British West Indian slave plantations." *Man* 23(2): 384.
- Long, E. 1774 (Reprinted 1972). *The History of Jamaica; A General Survey of the Ancient and Modern State of that Island with Reflections on its Situation, Settlements, Inhabitants, Climate, Product, Commerce, Laws, and Government*. Arno Press, New York.
- Lowe, H. I. C. 1972. Jamaican folk medicine. *Jamaica Journal* 6(2): 20-24.
- Lunan, J. 1814. *Hortus Jamaicaensis*. Vol 1. Office of the St. Jago de la Vega Gazette, Spanish Town, Jamaica.
- Macmillan, H. F. 1962. *Tropical Planting and Gardening*. Macmillan & Co., Ltd., London.
- Mcintosh, M. 1996. Life's seasons. *Gleaner Sunday Magazine*, October 13, 1996.
- Minnis, P. E. 1991. Famine foods of the northern American desert borderlands in historical context. *Journal of Ethnobiology* 11(2):231-257.
- Morris-Brown, V. 1993. *The Jamaica Handbook of Proverbs*. Island Heart Publishers, Kingston.
- Morton, J. F. 1958. The tamarind (*Tamarindus indica* L.): Its food, medicinal and industrial uses. *Proceedings of the Florida State Horticultural Society* 71: 29-31.
- . 1987. *Fruits of Warm Climates*. Julia F. Morton, Miami.
- Norman, M. J. T., C. J. Pearson, and P. G. E. Searle. 1995. *The Ecology of Tropical Food Crops*. University Press, Cambridge.
- Ogbu, J.U. 1973. Seasonal hunger in tropical Africa as a cultural phenomenon. *Africa* 4:317-332.
- Okere, L. C. 1983. *The Anthropology of Food in Rural Igboland, Nigeria*. University Press of America, New York.
- Patterson, O. 1967. *The Sociology of Slavery*. South Brunswick, Fairleigh Dickinson University Press, New Jersey.
- Phillippo, J. 1843. Reprinted 1969. *Jamaica: Its Past and Present State*. Dwasons of Pall Mall, London.
- Popenoe, W. 1920. *Manual of Tropical and Subtropical Fruits*. Hafner Press, New York.
- . 1937. *Tamarindus*. Pp. 3306-3307 in *The Standard Cyclopedia of Horticulture*, L. H. Bailey (editor). The Macmillan Company, New York.
- Potts, J. 1880 (Reprinted 1986). A Jamaican almanac 100 years ago. *Jamaica Journal* 19(1):13-21.
- Powell, D. 1972. *The Botanic Garden, Liguanea (with a Revision of Hortus Eastensis)*. Institute of Jamaica, Kingston.

- . 1973. *The Voyage of the Plant Nursery* H. M. S. Providence 1792-1793. Institute of Jamaica, Kingston.
- Rashford, J. 1987a. The search for Africa's baobab tree in Jamaica. *Jamaica Journal* 20(2): 2-11.
- . 1987b. The baobab tree and seasonal hunger in Africa: The Case of the San. *Botswana Notes and Records* 19:57-68.
- . 1991a. The star apple: A symbol of meanness in Jamaica. *Jamaica Journal* 24(3):49-53.
- . 1991b. The Grove Place baobab tree. *Virgin Islands Agriculture and Food Fair Bulletin* Number 5:65-69.
- . 1997. An explanation for tamarind and baobab trees growing together in Africa and the Caribbean: The Case of St. Croix. *Virgin Islands Agriculture and Food Fair Bulletin* Number 11:22-26.
- . 1999. A critique of Scott's theory of the relationship between ackee seasonality and ackee poisoning. *Proceedings of the 35th Annual Meeting of the Caribbean Food Crops Society*, July 25-31, 1999.
- Report 1824. Report of the trial of 14 Negroes . . . on a charge of rebellious conspiracy. 1824. Montego Bay [Exact reference given by Dirks (1987:219)].
- Robertson, J. 1982. *Jamaican Herbs: Nutritional and Medicinal Values*. Jamaica Herbs, Kingston.
- Sahn, D. 1989. *Seasonal Variability in Third World Agriculture: The Consequences for Food Security*. Johns Hopkins University Press, Baltimore.
- Schubert, T. H. 1979. *Trees for Urban Use in Puerto Rico and the Virgin Islands*. Southern Forest Experiment Station, Southern Region, National Forest System, and Forest Service, U.S. Department of Agriculture.
- Schuler, M. 1989. Review of "The black saturnalia: Conflict and its ritual expression on British West Indian slave plantations." *The Americas* 46(2): 248-250.
- Scott, H. H. 1916. On the 'vomiting sickness' of Jamaica. *Annals of Tropical Medicine and Parasitology* 10:1-78.
- . 1917. The vomiting sickness of Jamaica. *Transactions of the Society of Tropical Medicine and Hygiene* 10(47):47-66.
- Senior, O. 1983. *A-Z of Jamaican Heritage*. The Gleaner Co., Ltd., and Heinemann Educational Books (Caribbean) Ltd., Kingston.
- Skeete, S. E. 1996. The phenological behaviour of fruit crops in Barbados. Pp. 62-73 in *Proceedings of the 31st Annual Meeting of the Caribbean Food Crops Society* (10-14 July, 1995).
- Sloane, H. 1725. *A Voyage to the Islands of Madera, Barbadoes, Nieves, St. Christophers, and Jamaica; with the Natural History of the Herbs, and Trees, Four-footed Beasts, Fishes, Birds, Insects, Reptiles, etc.*, Vol 11. The Author, London.
- Standley, P. C. 1930. *Flora of Yucatan*. Field Museum of Natural History, Chicago.
- Steggerda, M. 1929. Plants of Jamaica used by natives for medicinal purposes. *American Anthropologist* 31:431-434.
- Storer, D.P. 1958. *Familiar Trees and Cultivated Plants of Jamaica*. Macmillan & Co Ltd., London.

- Thomas, R. B. and T. L. Leatherman. 1990. Household coping strategies and contradictions in response to seasonal food shortage. *European Journal of Clinical Nutrition*. 44(1): 103-111.
- Turner, N. J. and A. Davis. 1993. "When everything was scarce": The role of plants as famine foods in northwestern North America. *Journal of Ethnobiology* 13(2):171-201.
- Ulijaszek, S. J. and S. S. Strickland (editors). 1993. *Seasonality and Human Ecology*. University Press, Cambridge.
- Watson, G. L. 1991. *Jamaican Sayings*. Florida A & M University Press, Tallahassee.
- Weir, C., and E. Tai and C. Weir. 1982. *Fruit Tree Crop Production in the Caribbean Region*. Caribbean Development Bank, Barbados.
- Wilcox, E. V. 1916. *Tropical Agriculture*. D. Appleton and Company, New York.
- Williams, B. F. 1989. Review of "The saturnalia: conflict and its ritual expression on British West Indian slave plantations." *American Ethnologist* 16(2): 406-407.
- Williams, C. 1954. *Report on Vomiting Sickness in Jamaica*. The Government Printer, Kingston.
- Wilson, L. A., and L. B. Rankine, T. U. Ferguson, N. Ahmad, S. Griffith and L. Roberts-Nkrumah. 1992. Mixed root-crop systems in the Caribbean. *In Field Crop Ecosystems*, C. J. Pearson (editor). Elsevier, New York.
- Wright, R. P. 1911. *The Standard Cyclopedia of Modern Agriculture and Rural Economy*. The Gresham Publishing Company, London.
- Wright, W. 1828. *Memoir of the Late William Wright*. Edinburgh and London.

Published by the International Society of Ethnobiology

© 2002 by the International Society of Ethnobiology

All rights reserved

Distributed by the University of Georgia Press

Athens, Georgia 30602

Printed and bound by McNaughton & Gunn

The paper in this book meets the guidelines for permanence
and durability of the Committee on Production Guidelines for
Book Longevity of the Council on Library Resources.

Printed in the United States of America

06 05 04 03 02 P 5 4 3 2 1

Library of Congress Cataloging-in-Publication Data

International Congress of Ethnobiology (7th : 2000 : Athens, Ga.)

Ethnobiology and biocultural diversity : proceedings of the

Seventh International Congress of Ethnobiology / edited by

John R. Stepp, Felice S. Wyndham, and Rebecca K. Zarger with

assistance from Mika Cohen and Sarah Lee.

p. cm.

Includes bibliographical references.

ISBN 0-8203-2349-7 (alk. paper)

1. Ethnobiology—Congresses. 2. Biological diversity—Congresses. 3.

Multiculturalism—Congresses. 4. Biological diversity conservation—

Congresses. I. Stepp, John R. II. Wyndham, Felice S.

III. Zarger, Rebecca K. IV. Title.

GN476.7 .I68 2000

306.4'5—dc21 2001041333

British Library Cataloging-in-Publication Data available

To Darrell Addison Posey (1947–2001)

Ethnobiology and Biocultural Diversity

*Proceedings of the Seventh International
Congress of Ethnobiology*

EDITED BY

John R. Stepp, Felice S. Wyndham, and Rebecca K. Zarger
with assistance from Mika Cohen and Sarah Lee

With a foreword by Elois Ann Berlin and Brent Berlin

THE INTERNATIONAL SOCIETY OF ETHNOBIOLOGY