Palms in the Everyday Life of West Indonesia

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Indonesia is too vast and varied a nation to be discussed in a short article, so here I shall indicate the great range of uses to which palms are put in the everyday life of West Indonesia—that is, the area west of Wallace's Line. There is already an extensive literature on palm uses in Heyne's "De Nuttige Planten" and in Burkill's "Economic Dictionary," but what will be considered here is based on my own observations during four years spent in Indonesia.

Palms have probably been one of the major bases of livelihood for the people of Indonesia for an extremely long time; one can, in fact, imagine that Solo man may have depended quite heavily on wild Javanese palms. At any rate, by the time of the building of the temple of Borobodur, people of Central Java probably utilized palms more or less in the same way as many poor village people in remote parts of Java do today; among other economic plants to be seen on the temple reliefs (Fig. 1) are coconuts (*Cocos nucifera*), lontar (*Borassus sundaicus*), sugar palm (*Arenga pinnata*), and betel palm (*Areca catechu*). In highly cultivated present-day Java and Bali, the palms which enter everyday life are usually few in number and, especially in economically depressed areas, villagers may make very intensive use of one or two species. The coconut, sugar palm, lontar, and gebang (*Corypha elata*) are prime examples. In East Madura for example, the lontar or siwalan (*Borassus sundaicus*) is the most important local plant used for food, thatch, buckets, writing material, and many other purposes, and further east in the drier parts of the archipelago there is an almost complete dependence on these four palms for nearly every necessity of life.

The sugar palm, *Arenga pinnata*, was discussed at length by Miller (1964). This palm has an extraordinary range of uses from food (sago, sugar, wine, vinegar, and spirits) to cigarette papers, brooms, thatch, and tinder. Because of over-exploitation of sago at the present day, the sugar palm appears to be decreasing in West Java. Here is a palm of enormous potential which could be planted on a much larger scale, perhaps on the derelict "lalang" fields on hills in West Java. The gebang (*Corypha elata*) is also used for sago, thatching, raincoats, and a fine matting which is also exported as a wall covering, but because it is generally rather rare in Java, it does not enter into the lives of village people in the way that *Arenga* does.

In the moister, less cultivated areas of West Indonesia, such as Kalimantan and Sumatra, remote communities at the edge of the forest (Fig. 2) also rely heavily on palms, but the number of species involved is much higher. In one small Dayak community in the mountains of South Kalimantan, a use was ascribed to nearly every palm I found. Generally

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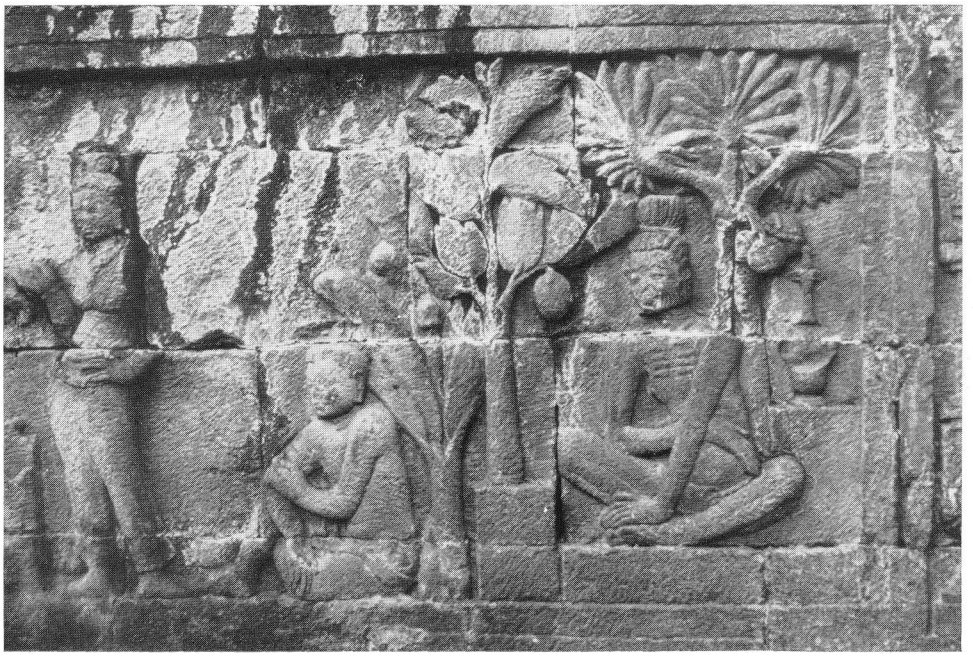
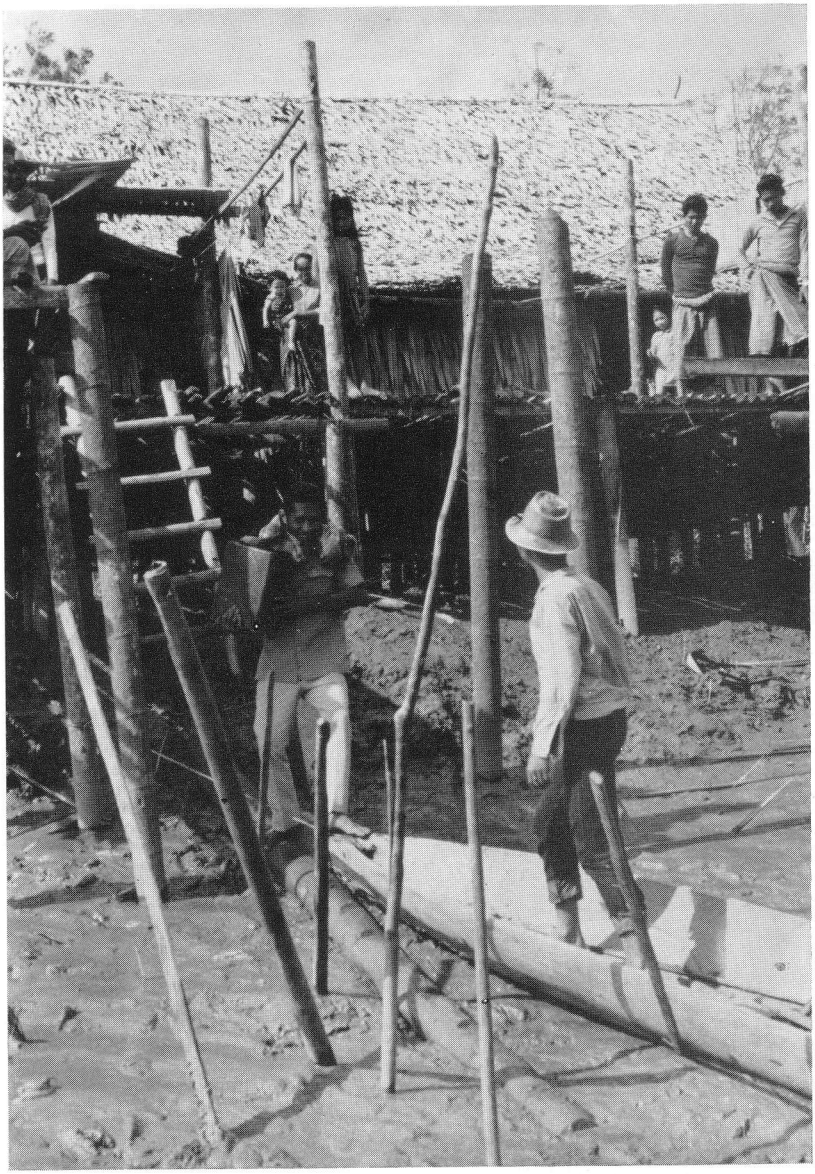


1. Early use of palms—on the extreme right a tree of *Borassus sundaicus* with a banana and a breadfruit on the temple reliefs at Borobodur, Central Java.

2. Dayak village in the Meratus Mountains of South Borneo. Sugar palms and coconuts are by the houses. In the forest behind occur many palms all of which are used in some way.



3. Sumatran East Coast village with houses built almost entirely of palm products—piles of *Oncosperma*, flooring of *Oncosperma* or *Cyrtostachys*, walls and thatch of *Nypa* and *Pinanga patula*.

it is these pioneer communities at the forest edge who make most use of native palms. In Java, even where there are communities living at the forest edge, as on the Jampang plateau in West Java, palms are not nearly so important as bamboos, at least for construction purposes.

For construction purposes, certain palms are much sought after. For example in villages near to muddy coastal mangrove forest, *Nypa fruticans* and

4. Floating shop at Banjermasin in South Borneo—fishtraps, mats, baskets, rope, and brooms are made largely of palm products.

Oncosperma tigillarium, which occur in abundance in coastal forest, form the main building components (Fig. 3), though occasionally supplemented by timber from *Melaleuca* and *Avicennia*. *Oncosperma* trunks, with the stem spines removed, form piles and pillars (often beautifully polished by rubbing); the walls and roof may be made from "attaps" of *Nypa* leaflets folded over either a split *Nypa* petiole or a split stem of *Pinanga patula*, and secured with threaded split rattan to form a gigantic "thatch tile;" the floor is made from split and despined *Oncosperma* trunks. In other areas coconut, *Arenga*, *Borassus*, or even *Cyrtostachys lakka* stems may be used for pillars and flooring.

Thatching material also varies considerably and depends on the local flora. For simple temporary shelters in the forest any entire or broad-leafleted palm is used. The far-famed *Johannesteijsmannia* makes the best temporary shelters. In Indonesia it is only known from the area around Medan in North Sumatra —here it is used for roofing, either as whole leaves, or else sewn into "attaps" with split rattan. *Licuala valida*, an acaulescent undergrowth species from Borneo, is extensively used by the Dayaks of South Kalimantan for thatching; likewise the magnificent *Arenga brevipes* furnishes excellent thatch when the leaflets are woven into each other, producing a delightful variegated dark green and grey "attap". Entire-leaved *Iguanura* species and *Pinanga* species, and in fact almost any palm leaves, are used for temporary shelters. For more permanent housing, *Metroxylon* and *Livistona* leaves are used in some areas, and in the Batak Highlands and the Minangkabau areas of Sumatra, and in

5. Two stages in making a fisherman's basket from two interwoven leaves of *Corypha elata* (Ujung Kulon, West Java).

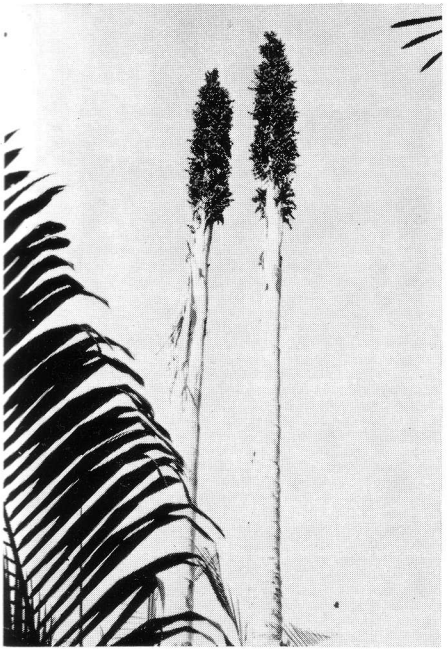
6. An ingenious coconut grater made from the spiny petioles of *Calamus burckianus* in Bali.

remote areas of Java, leaf-sheath fibre of the sugar palm is used. This last so-called "ijuk" is supposedly much more durable then the unpleasant corrugated iron which is almost everywhere replacing it.

Among the forest palms of West Indonesia, the rattans are some of the most important, being almost universally sought after by villagers. Their uses are legion. In size they range from giants such as *Calamus manan*, "rotan manau" one of the most important furniture rattans, and *Plectocomia elongata*, large but more or less useless as it splits too easily, to the slender rattans such as *Calamus javensis* which, in extreme forms, may be as slender as 2 mm. in diameter. They are almost all very spiny and difficult to collect—the spiny petioles are sometimes used tied to fruit trees to stop thieves from raiding the fruits, or tied to rafters to prevent bats

7. Carrying basket made from rattans, Kerinci, Central Sumatra.

and swiftlets from roosting. Some rattans reach vast lengths well in excess of 100 m.; others, even at maturity, barely exceed 1 m. in length. Generally speaking, the terminal-flowering genera such as *Plectocomia* and *Plectocomiopsis* are not very useful as the cane splits easily, but *Korthalsia* species furnish a very hard tough reddish cane known as "rotan merah" which is useful in the construction of fish traps, baskets, and cheap furniture. Split rattan is universally useful as twine. Village stores sell rattan and other palm products and are a delight to explore (Fig. 4). Here may



8. The dead stems and inflorescences of the wild Bornean sago palm, *Eugeissona utilis*, after flowering.

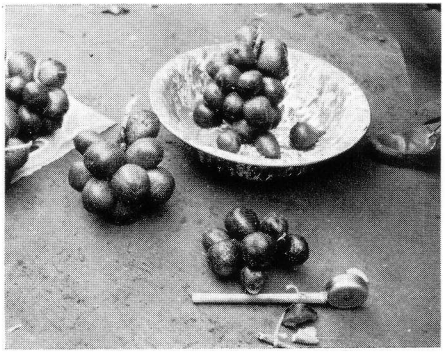
be found hats, fish traps, pestles from hard palm wood, coconut-shell spoons, wash buckets from *Areca* sheaths, strainers, baskets (Fig. 5), winnowing trays, shovel handles, walking sticks, rope, twine, cigarette papers from coconut, *Arenga*, *Nypa*, or rattan leaflets, and mats, nearly all made from palm products, often sewn together with rattan twine, and hung up for display on a loop of split rattan. Once I even saw a neat coconut grater made from two spiny petioles of the rattan *Calamus burckianus* bound together being used by a food seller in Bali (Fig. 6). Rattan basketry is of particular interest and beauty; in areas remote from cities, most carrying baskets are made from split rattan, but bamboo and plastics are taking over as rattan decreases in abundance. For example, in the Kerinci valley of Central Sumatra, four types of carrying basket (Fig. 7) are in constant use—large and small close-weave baskets, open-weave

9. Coconut oil being pressed from fried endosperm through a coconut-leaf-sheath sieve with two planks of *Borassus* wood.

10. A salak orchard near Bangkalan, Madura.

baskets, and small shoulder baskets. They are made entirely from rattan except for the wooden support on the base, and the shoulder straps are made from *Hibiscus tiliaceus* bark. The large rattan used for the framework and mouth is usually *Calamus manan* and split *Calamus opacus* is used for the woven sides, both species being abundant in the nearby mountain forests. It is of particular interest to note that the form of the Kerinci baskets closely resembles that of similar carrying baskets in South Kalimantan, whereas those of the Bengkulu district further to the south are quite different, and to the north in the Padang district, big carrying baskets are largely absent—here is an interesting field for further study.

Commercial exploitation of wild rattans also enters into everyday village life



11. Madurese salak ready for peeling and eating.

as a source of cash, especially during periods of low agricultural activity. Only in Central Kalimantan are rattans cultivated on a vast scale—here whole villages depend heavily on rattan cultivation for their livelihood. The rattan species cultivated are *Calamus caesius* and *C. trachycoleus,* two relatively slender species with stems ca. 1–2 cm. diameter. For the big furniture rattans, only wild-growing sources are available and these appear to be fast diminishing.

Sago can be collected from several species of palm in times of rice shortage —for example from *Corypha elata, Metroxylon sagu, Caryota mitis,* and *Arenga pinnata.* Some of the forest nomads of Borneo, however, use sago from *Eugeissona utilis* as a staple. Palm apices are occasionally used for vegetables, *Oncosperma horridum* being very highly esteemed and so widely sought after by forest folk that mature stems of this species are often hard to find. *Arenga, Caryota, Borassodendron,* and *Licuala* apices are all delicious but *Orania sylvicola* is reputedly deadly poisonous. Apices of *Daemonorops melanochaetes* in Central Java were regarded as food specially reserved for visitors to the palaces (Kratons) of Solo and Jogjakarta; one can often buy apices of the related *D. hallierana* and *D. fissa*

in South Borneo, where they are normally cooked with coconut cream, salt fish, turmeric, chillies, garlic, onions, and other spices. The extraordinary flowers of *Eugeissona utilis* (Fig. 8) produce great amounts of pollen which according to Beccari (1904) is used as food by the Bornean forest folk. Further food uses include oil from *Cocos* (Fig. 9) and sugar, wine, and spirits, regularly made from *Arenga, Cocos, Borassus,* and *Nypa.* Rattan fruits are often eaten but are nearly always fearfully sour.

The finest local palm fruit, however, is that provided by cultivated *Salacca edulis*; this highly spiny acaulescent palm (Fig. 10) is cultivated in several widely dispersed areas of Indonesia—near Medan and Padang Sidempuan in Sumatra, Pasar Minggu and Tasik Malaia in West Java, Seleman in Central Java, Pasuruan in East Java, Bangkalan in Madura, in one area of North Celebes, and near Karangasem in Bali. Salac from Bali surpasses all others. Much remains to be clarified about the biology of this excellent fruit (Fig. 11), especially the Balinese variety, male plants of which are unknown.

Young endosperms of *Arenga pinnata,* coconut, *Borassus, Eugeissona,* and *Nypa* are made into sweetmeats and mature endosperms of some of the wild species of *Pinanga* and *Areca* are used as substitutes for *Areca catechu* endosperms in betel-chewing.

Palms enter many local cures and superstitions. *Actinorrhytis calapparia,* a common but not native palm in West Indonesian villages, is sometimes planted when a placenta is buried at childbirth, and thereafter the palm has mystical significance to the child. Sterile female salac trees in Bali are worshipped to ensure heavy cropping of the fertile trees, and the exquisite *Areca latiloba* is often planted at the head of graves in South Sumatra, the tree, gay with bright red fruit, making a fine headstone long after the wooden markers have rotted.

Finally palms are used in recreation—petioles of rattans and many other palms are used in the construction of toys, and the gigantic kites of Madura are made from split bamboo lashed with rattan, with a piece of split rattan stretched tightly across a bow to vibrate angrily in the wind as the kites soar at the ends of hundreds of meters of *Corypha* petiole-fibre cord.

It is hoped that this account, however incomplete, will give some indication of the enormous and often curious and ingenious uses to which palms are put in West Indonesia. It is further to be hoped that some work at least can be carried out in Indonesia by Indonesians on the role palms play before the onslaught of plastics is complete.

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