The Swamp-Sago Industry in West Malaysia

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The Swamp-Sago Industry in West Malaysia

a study of the Sungei Batu Pahat Floodplain

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TAN Koonlin, PhD
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THE PEDIGREE, ECOLOGY AND BIOLOGY OF THE SAGOPALM

Historical Role

Palms constitute one of the oldest family of plants on earth, with ancestors that appear to have been the precursors of the monocotyledons. Partial to warmer climes, they are most numerous in the intertropical zones. The few species that linger in temperate latitudes mark the borders of an extensive realm that had flourished in warmer epochs. Their domain lies in Asia, particularly Malaya, while parts of Amazonia possibly shelter another nucleus. More than any other, the palm heartland has survived virtually intact since the Cretaceous era, for it occupies that part of the earth least subjected to global climatic changes - the equatorial belt.

Until the ascendancy of the Graminae family, to which the cereals belong, palms probably were the most bounteous, reliable sources of food to man and beast. Described as the "Princes" of the Vegetable Kingdom (Seeman 1856), their usefulness in lands where they were endemic was noted before cereals became geographically invasive and dietetically dominant. These perennials, when cropped, yield a bounty in shelter, food and drink that has given rise to subsistence strategies which differ markedly from those based on the better-known annuals, i.e. the cereals and tubers. Some yielded important commodities in colonial commerce, especially the oleaginous palms.

Several cultures have developed a largely selfsufficient domestic economy centred round palm arboriculture, e.g. swamp Amerindians of the Amazon-Orinoco on the moriche, Mauritia flexuosa, the Arabs of sub-Sahara on the datepalm, Phoenix

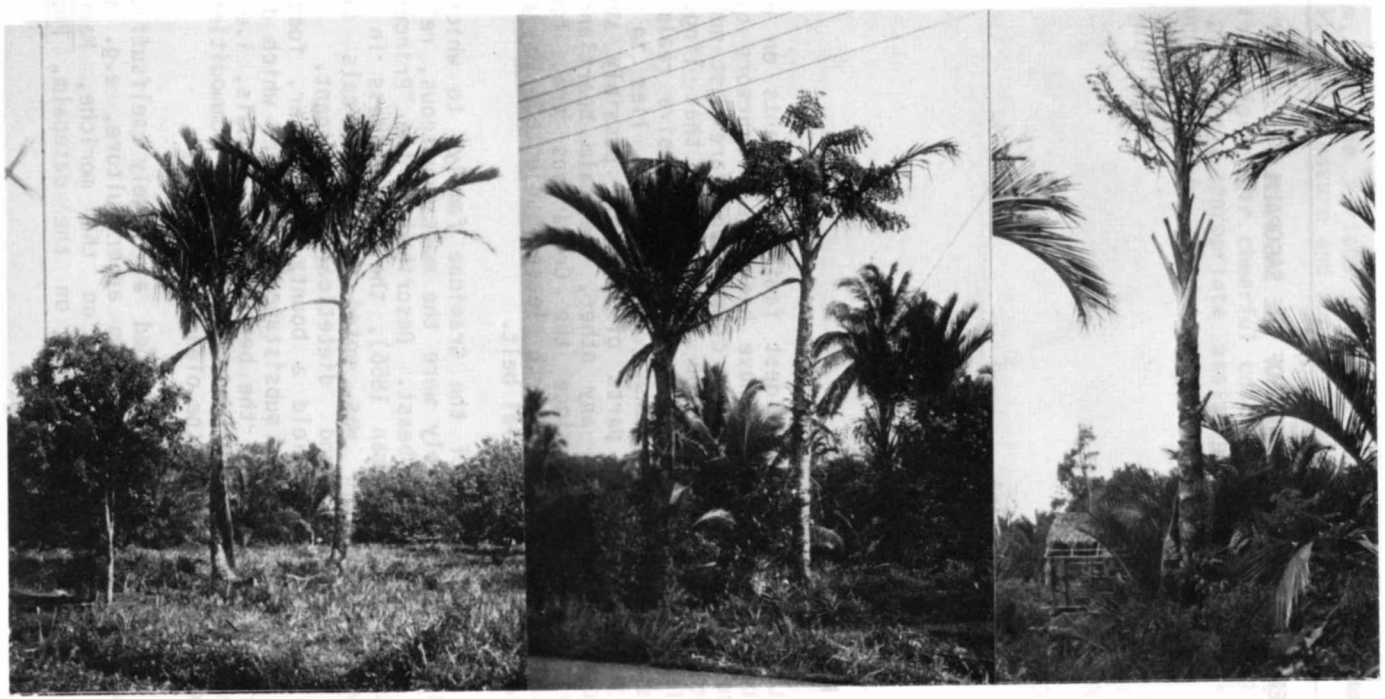

PLATE A

The Sagopalm: Florescent, Fructescent, Senescent

dactylifera, the South Indians on the palmyra, Borassus flabellifer, the noneating Roti Islanders of Indonesia on the lontar, B. sundaicus (Fox 1977), the Indo-Pacific islanders on the coconut, Cocos nucifera, the West Africans on the oilpalm, Elaeis guineensis, and the Papuans and Moluccans on the sagopalm, Metroxylon sagu Rottboll, and its wild kin, M. rumphii Martius.

The sagopalm (Plate A) is a Malesian domesticate originating from Maluku-New Guinea; wild species proliferate on islands further east into the Melanesian foreland (Corner 1966). Several other starch palms favouring drier or hillier habitats, notably species of Arenga, Borassus, Caryota, Corypha and Eugeissona, were used in like manner but, culturally and commercially, they pale in productiveness, extent, significance and sophistication beside the swamp palm. Its selfsustaining ecosystem and ability to manufacture an enormous silo of starch in its stem nurtured planters and gatherers more efficiently, in terms of crop productivity and population capacity, than the environments inhabited by contemporaneous jungle hunter-foragers, swidden and rootcrop cultivators (notably Dioscorea and Colocasia spp), and other arboriculturalists (pandan, Pandanus spp; breadfruit, Artocarpus spp; and banana, Musa spp).

Over the centuries, the inexorable shift from vegetative cropping towards seed planting eastwards in Southeast Asia has left conspicuous vestiges only among the easternmost practitioners (Spencer 1966). But while the ubi (Malay = yam) complexes could be delineated, the sago remains hazy. Pre-Columbian Melaka and the earlier northern East Coast cultures of the Malay Peninsula were flourishing emporia sustained by the produce of swamp or river sago. Colonised by the northwesterly wet-rice culture - whose technology is derived largely from mainland civilisations yet manifests some peculiarly vegetative techniques of cultivation - scions of the truly native sago culture sheltered in the marginal, remote lowlands of the farflung archipelago. By early this century it had become extinct in many peripheral islands, such as Fiji and the New Hebrides. With the expansion of the more prestigious cereal culture in the early 19th century, sago acquired disrepute as food for the poor even in parts of its stronghold.

"Sago is most abundant in the islands most distinguished for the production of clove and nutmeg and the geographical distribution seems co-extensive with that of these palms" (Crawfurd 1820). Few modern studies on forest resources consider the Metroxylon palm as such, or that logging the humid forest for a staple food or locally processed industrial commodity could be even more substantial than lumbering and the collection of famous palm products such as gums and rattans, that had only incidental or fractional value for its inhabitants. Because of the

importance of sago in the export economy, especially in Sarawak during its first 50 years of European rule, the north Borneo sultanates were obliged to relinquish much of their territories to British ambitions in the region.

In its cultural ecology, the sagopalm resembles the wild oilpalm in Africa more than 70 years earlier. The semiwild African palmeries were also gathered to supply a cheap vegetable oil to Europe, giving rise to the most outstanding gathered-crop export economy ever to flourish in West Africa until plantations were established. Large areas of otherwise inhospitable coast in the Malay Archipelago became habitable because of the sagopalm. Some areas were productive enough to trade in a grain made from its flour, landang, the only notable food of vegetable origin in the precolonial commerce of the Orient. The Sulu traders supplied "sago of the best kind" from a territory that stretched from northeast Borneo to Mindanao (Moor 1837).

The sago complex manifests an impressive spectrum of technical skills required to fell large trees and mill their pithy stems for a staple food that belies its image of cultural primitiveness. Sago is the meal within the stem which either is pounded and sifted or is leached via kneading or trampling to yield the starch which is made into flour, pearl, biscuit and bread; these may be nutritively enhanced via a preparatory fermentation or fortified with meat, rice bran, nuts, coconut, etc. Toasted bread, roti papua or sagu maruku, and other dry products keep for years. These once victualled ships of the region, were even fed to the Papuan slave cargo, antedating the similar role of the tapioca in the Negro trade of the New World. So intrigued was Wallace (1898) by the sago food technology in the easterly Indonesian islands, that he digressed from his epic zoological pursuits there to describe in curious detail the art of sago breadmaking in east Seram in 1860. The starchy diet is enriched with other swamp resources, e.g. fish, crustacea and wild pig, and maggoty palms provide a living larder of fat when slashed to encourage a weevil to lay in rotting pith, the "microcow" of this aboriginal diet (Stanton 1972). Sugar and wine come from the nipa, thriving in more brackish fringes.

Sago is still the staple of many pre-Malay populations in the huge eastern swamps of the region. Mindanao, Maluku, Sulawesi, Borneo and Sumatra contain dwindling numbers of sago eaters; Borneo was long famed for its sago, hence its native appellation, "Pulau Kalimantan" or "island of raw sago". Basically an efficient food acquisition system, the sago diet has been found to be superior to the cereal on occasions. In New Guinea "population density ... per square mile of 100 to 250 is largely due to a great reliance on sago and/or fishing for subsistence. In the hills and mountains there is a more general