Palms and Religion in the Northwest Amazon

RICHARD EVANS SCHULTES*

Botanical Museum, Harvard University, Cambridge, Mass. 02138

The palms have justly been termed the "Princes of the Plant Kingdom." This place of royalty is due undoubtedly to the grandness and majesty of many of the species.

There can be no doubt, however, that the palms also occupy a position of primacy as economic plants: they are a prime source of man's food; in fact, one of the twelve plants basic to human nutrition is a palm—the well known coconut palm. Literally hundreds of species give man edible fruits; many yield nutritious oils; several provide starch and sugar. The betel palm is a strong stimulant used by millions of people in Asia. Valuable varnishes, such as "dragon's blood," as well as gums come from the palms. Sundry strong fibers are among the most outstanding useful products of the family. Fats and oils for the soap and cosmetic industries are derived from many species. The palms yield hard waxes. And three genera are the source of vegetable ivory from which buttons and similar objects are fashioned. Palms supply a diversity of other economic products such as thatches, mats and rattans, musical instruments, folk medicines, poisons and alcoholic beverages.

Even though it has not been so conspicuous and easily recognized, the role of palms in religion may perhaps be more fascinating to ponder than the very many practical uses in daily life to which the palms contribute. The significance of the "Princes of the Plant Kingdom" is found not only in the great religions of the world but even more so where it enters into primitive religions in aboriginal societies.

Palms are important in Christianity, Judaism, Mohammedanism, Hinduism, Buddhism, and other major religions. We need only to recall the role of the date palm, *Phoenix dactylifera*, in the Near East. The ancient Greeks dedicated it to Apollo, god of manly beauty, youth, poetry, music and wisdom. It was the sacred tree of the Arabs, revered by all peoples in Asia Minor since antiquity, and it later became the symbol of Islam. The writings of the classical period compared the date palm to the sun. In Islamic tradition, Mohammed created the palm tree himself, commanding it to spring forth from the earth. Among the Jews, it epitomized grace and elegance and became symbolic of Jerusalem, the religious center of Judaism. The use of palm leaves in processions dates back at least to the restoration of the temple by Judas Maccabaeus, and the custom persists among the Jews at the Feast of the Tabernacle and among the Christians on Palm Sunday.

Sacred writing on leaves of the palmyra palm (*Borassus flabellifer*) and of the talipot palm (*Corypha umbraculifera*) began, according to Hindu tradi-

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tion, with the author Panniny-rishee, who lived about 4300 years ago. The holiness of these palm leaves in India is attested still by their use in making the gigantic processional constructions for sacred rituals.

I am convinced that when we have delved fully into the ethnobotanical lore of primitive societies, we shall find that the palms are deeply rooted in many magico-religious beliefs and practices in the tropics. Initial and superficial observations among Indians of the Amazon basin indicate that this is indeed true of South America and most certainly merits further and basic investigation.

The many Indian tribes inhabiting the northwest Amazon have a rather vague religion with no gods but a host of anthropomorphic beings or spirits—usually forest monsters—many of them represented by animals and often by plants. Most of these spirits are supernatural ancestor-beings with extraordinary powers, able to act against or in conjunction with other evil forces. There is no real worship, but the medicine men —and sometimes even ordinary men—approach them through magic and ceremony to communicate with them in order to get results of a real and practical nature: to cure or cause illness, to ensure success in warfare, or to safeguard a harvest, for example.

It is customary for us to think only of the hallucinogenic narcotics, which are thought to put man into communication with the spirit world, as the sacred plants *par excellence*. Probably they do represent to the native the most important plants in which supernatural forces reside or which are incarnations of the spirits. It is true that these drugs, with their unearthly power to change the body and mind in such bizarre ways, are looked upon as residences of spirits or divinities, as sacred mediators between man and the gods. But there are also many plants with no psychoactive effects whatsoever that enter into religious beliefs or symbolism or into magical rites, and which, consequently, are directly or tangentially connected with the powers that rule the affairs of men.

Some of these plants are palms. Why should palms be so closely associated in the mind of the Amazon natives with the supernatural? This question, of course, cannot yet be answered, but I hope that the few brief and superficial notes that follow may encourage ethnologists to delve more deeply into the problem. I shall discuss only a few of these curious associations with the supernatural world which, either from my own ethnobotanical observations or from the literature, we know to exist among the natives of the northwest Amazon. There are undoubtedly very many more. It is noteworthy that oftentimes food plants—including many palms—are associated with supernatural beings.

The extraordinary palm *Jessenia bataua*, known in the Colombian Amazon as *seje* or *milpesos*, in Brazil as *patauá*, yields an unbelievable abundance of edible, oil-rich drupaceous fruits eagerly sought by all Indians during the season of harvest. The Makunas of the Piraparaná River look upon *Jessenia bataua* as a generalized incarnation of the spirits of female ancestors who continue to feed the living with the milk of their breasts, the palm fruit.

It was the "Daughter of the Sun" who first taught the Desanos of the Vaupés River to eat the fruit of two palms: *më-ë*, *Socratea exorrhiza* and *nyumú*, *Oenocarpus bacaba*. To this day, they are sought after and preferred in tribal festivals over all other wild fruits of the forest.

Perhaps one of the most interesting

1. Staminate inflorescence and spathe of *Parascheelea anchistropetala*, Cerro Circasia, Vaupés, Colombia.

2. Indian loading bundles of fibers from *Leopoldinia piassaba* for transport to a trading post, Río Guainía, Vaupés, Colombia.

beliefs that I have met concerning palms pertains to the anomalous *Parascheelea anchistropetala* (Fig. 1) of the Colombian Vaupés which has a gigantic, basal, woody spathe hooding very fragrant inflorescences. The Kubeo Indians are convinced that this spathe houses tiny spirit men who hide in it during the day but who venture forth at night. Since these miniature beings represent the souls of children of medicine men of the past, they have inherited certain of the malevolent powers of their fathers and may use them when occasion arises. Consequently, Kubeos who want to camp out on their trips will carefully avoid the comfortable, lightly forested sandy area of Circasia, the type locality where this palm abounds, preferring to camp in less habitable dense forests nearby where the plant does not grow.

A rather similar belief linking palms

3. Large communal Makuna house or *maloca*, Río Piraparaná, Vaupés, Colombia. The roof is thatched with leaves of *Lepidocaryum tenue*. The tall palms around the *maloca* are specimens of *Bactris gasipaes*.

with forest spirits exists among the Kuripako Indians of the Guainía River, an area representing the northern limit of the curious *Leopoldinia piassaba*. This twenty- to thirty-foot tree grows in abundance in inhospitable swamps along so-called black water rivers in the Rio Negro basin of Brazil, Colombia, and Venezuela. Called *piassaba* in Brazil, *chiquichiqui* in Venezuela, it is the source of an unusual coarse brown fiber formed by the frayed and rotting petioles, an article of commerce exported from the area and useful for manufacturing ropes, cables and brooms (Fig. 2). *Piassaba* gatherers are often bitten by poisonous snakes that infest the thick clumps of hanging fiber—a danger which probably underlies in part the natives' belief that the evil spirit, the *curupira*, inhabits *piassaba* groves and wanders around at night. The Indians have a mortal fear of encountering this shaggy-haired monster—such a fear that they never remain in *piassaba* groves at night and, even during the day, they never work alone but in groups of six or more.

The connection between palms and forest spirits is ever present in the minds of the Indians of the northwest Amazon. Although most Indians in the Rio Negro basin consider the leaves of the diminutive palm *Lepidocaryum tenue* the best thatch for their *malocas* (Fig. 3), they often employ other materials of shorter durability, even in regions where this palm abounds. The reason for their occasional reluctance to gather *Lepidocaryum* lies in the elaborate rituals by

4. Trunk of *Astrocaryum vulgare*, Río Apaporis, Vaupés, Colombia.

the witch doctor which are necessary before the young men go into the gloomy parts of the jungle to disturb the palm. These rituals are performed to prevent the *curupira* from harming those who gather the thatch, for in the forests where *Lepidocaryum tenue* grows, the *curupira*, usually a huge monster, customarily makes himself small, only a few feet in height, and often assumes the form of the palm itself.

Witoto medicine men believe that the heavy spines on the trunk (Fig. 4) of the *chambira* palm, *Astrocaryum vulgare*, are the favorite and most potent darts shot into the human body by malevolent spirits to cause sickness and misfortune. When the medicine men must treat a disease or unfortunate happening caused by these spines, they often have to fast on the previous day, drinking only a beverage prepared from the fruits of the *miritĺ* palm, *Mauritia flexuosa*, which is said to permit the medicine man's magic to counteract the evil wrought by the darts.

The *chambira* palm (Fig. 5) yields the strongest fiber known in the Ama-

5. Crown of *Astrocaryum vulgare*, Río Apaporis, Vaupés, Colombia.

zon, employed in making hammocks, fish nets, bow strings and the like (Fig. 6). The Yukuna Indians of the Miriti-paraná River believe that this tree represents a spirit that came with the first people—a dwarf who taught the art of weaving—and that he turned into an *Astrocaryum* tree in order to continue living with the Yukunas.

Another palm with deep magico-religious significance in the northwestern Amazon is *Socratea exorrhiza*, *paxiúba* (in Brazil) or *buxpú* of the Tukanoan Indians of the Vaupés. This palm of sixty feet in height has the soft pithy center of the trunk encased in a very tough, hard exterior which is easily split and employed for floors of elevated houses and similar uses (Fig. 7). The trunks are utilized in the manufacture of the sacred trumpets or *yuruparís* that figure so prominently in the adolescent ritual for boys on the Vaupés River. The British botanist Richard Spruce,

6. Indian stripping fiber of *chambira* from leaf segments of *Astrocaryum vulgare*, Río Apaporis, Vaupés, Colombia.

who explored the northwest Amazon one hundred and twenty years ago, sent specimens of these trumpets to Kew, where they still may be seen in the Economic Museum. He remarked: "The . . . instruments are portions of the trunk of the Paxiúba . . . with a square hole near the upper extremity. When about to be used, this end is nearly closed by a piece of clay, and a piece of Uaruma-leaf [*Cecropia* sp.] is tied on above the square hole, so as to form a monster flageolet. The smaller ones consist of a tube of Paxiúba, wrapped in a long strip of the tough bark of the Jebarú (a Caesalpineous tree, with handsome red monopetelous flowers, apparently the *Parivoa grandiflora*. . .), which descends in widening folds to some distance below the tube, thus forming a sort of trumpet, which is simply blown into at the upper end." The trumpets are always played in pairs: a male and a female instrument.

Alfred Russel Wallace, who travelled in the Vaupés River at the same time, commented in greater detail about these holy palm instruments: "One evening, there was a *caxiré*-drinking; and a little before dark a sound as of trombones and bassoons was heard coming on the river towards the village, and presently appeared eight Indians, each playing on a great bassoon-looking instrument. They had four pairs, of different sizes, and produced a wild and pleasing sound:

7. Wall of Barasana *maloca* made of the outer trunk of *Socratea exorrhiza*, Río Kuduyarí, Vaupés, Colombia.

They blew them all together, tolerably in concert, to a simple tune . . . In the evening, I went to the malocca, and found two old men playing on the largest of the instruments; they waved them about in a singular manner, vertically and sideways, accompanied by corresponding distortions of the body, and played a long while in a regular tune, accompanying each other very correctly. From the moment the music was first heard, not a female, old or young, was to be seen; for it is one of the strangest superstitions of the Uaupés Indians, that they consider it so dangerous for a woman ever to see one of these instruments, that having done so is punished with death, generally by poison; even should the view be perfectly accidental, or should there be only a suspicion that the proscribed articles have been seen, no mercy is shown; and it is said that fathers have been the executioners of their own daughters, and husbands of their wives, when such has been the case."

Wallace's report dates from the early 1850's, but the absolute sacredness of the *yurupari* horns still is as unbroken as it was then. There have recently been reported the deaths of women following the *Yurupari* Ceremony, with the suspicion that they were due to inadvertent viewing of one of these trumpets. The instrument, when not in use, is kept hidden buried in the mud along a river

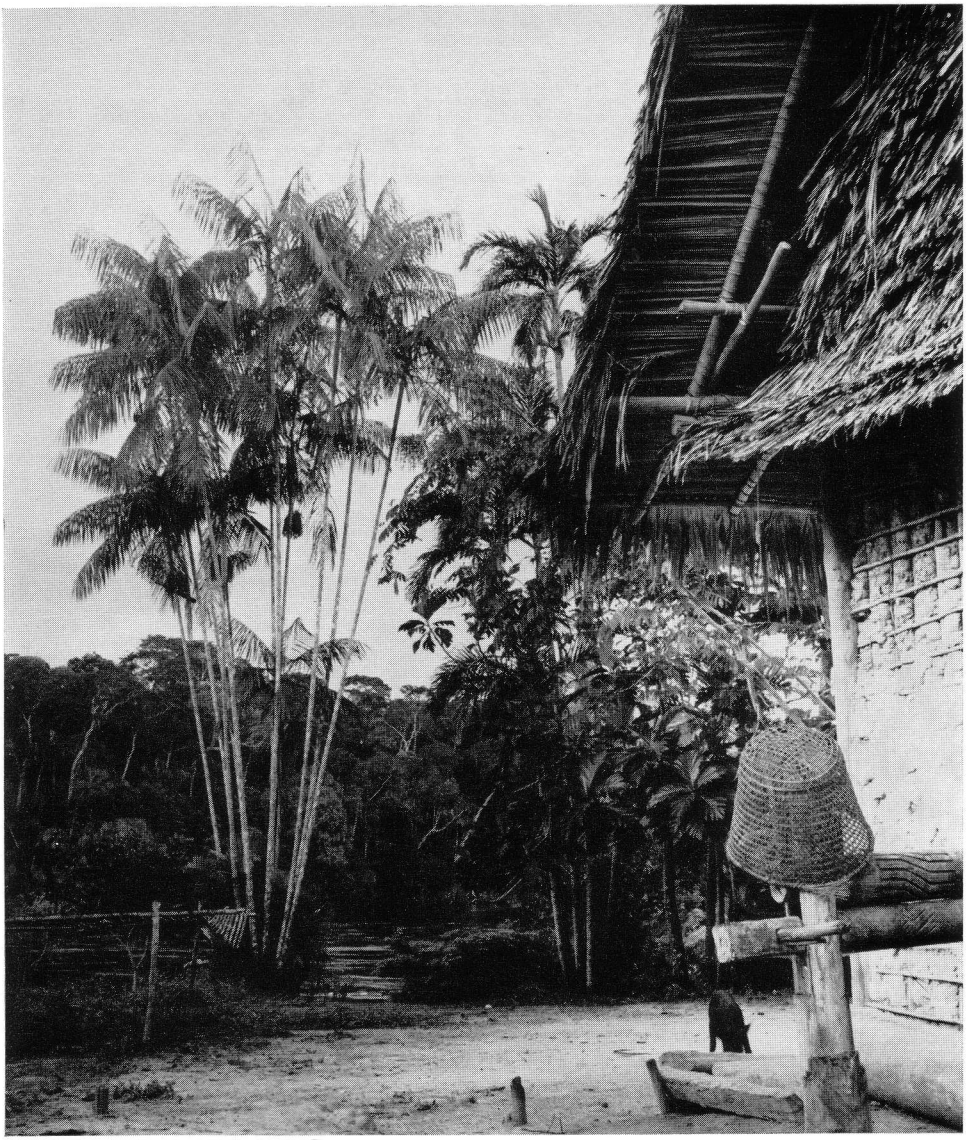
8. *Mauritiella cataractarum*, Río Piraparaná, Vaupés, Colombia.

bank in order to keep it from female eyes.

The low buzzing and humming sounds of the *yuruparí* horn are voices warning of dangers from incest and that preach the conservation of sexual energy.

Along the Apaporis River, by the side of the many rapids and waterfalls, thrive thick clumps of delicately swaying *Mauritiella cataractarum* trees (Fig. 8). The crowns are graceful and, as one looks up through the leaves from a canoe, resemble gigantic spider webs. Legend among the Makuna Indians says that localities where this palm is abundant represent places where the "Spirit of the Sun" threw fishing nets (the spider web) from the sky over the land to force the first Makunas to settle and build their malocas. It is curiously true that most Makuna settlements are found near rapids. The Makuna name of the tree, *bö-pö-ma*, means "tree of the spider web," because of this mythological association.

The majestic *Maximiliana martiana* or *inajá* has gigantic leaves and an unusually large, woody spathe. The Indians may use the spathe for carrying fruits and tapioca meal or even for heating water for cooking meat. The Kuripako Indians of the Guainía River



9. A cluster of *Euterpe*, Río Guainía, Vaupés, Colombia.

believe that the *curupira*, the evil spirit of the forest, oftentimes with feet that point backwards and which thus confound hunters with reverse footprints, may often utilize the spathe of *inajá* as a canoe.

Among the Kubeos of the Kuduyarí River, *inajá* has a very different significance in their magic practices. They believe that the sprinkling on the body by a medicine man of a decoction of the flacourtiaceous *Mayna toxica*, which is known in Kubeo as *dee-yaw-ka*, will cause slow death, a wasting away of the body. The only antidote for this supernaturally powerful poison is dust-

10. The pupunha palm (*Bactris gasipaes*) planted around a rubber tapper's house, Río Vaupés, Vaupés, Colombia. The trees in the right foreground are rubber (*Hevea guianensis*).

ing with ashes prepared from the leaves of the *inajá* palm.

In the training and indoctrination of Desano *payés* or medicine men on the Vaupés River, splinters of the *macana* palm, *Bactris* (*Pyrenoglyphis*) sp., play an important role. After ritualistic bathing, painting of the body, use of narcotics and other necessary ceremony, the elder *payés* transmit their supernatural power to young initiants by putting a number of splinters of macana on the pupil's forearm and pressing them firmly with the magic quartz crystal, pretending to introduce them into the flesh. These splinters are the magic darts by means of which medicine men can send sickness and death to all who have broken the moral code or to far off enemies.

The *assaí* or *guasaí*, *Euterpe oleracea* and *E. precatoria* (Fig. 9), represents palms dear to the heart of all Amazonian people. A flavorful brownish drink is prepared from the bluish-black fruits, and nowadays, in the cities of the Brazilian Amazon, one of the most esteemed ice creams is *assaí*. This drink is oftentimes allowed to ferment to provide Indians with a *chicha*. The palm is a graceful tree, sometimes one hundred feet in height, growing often in dense stands along banks just at the edge of the highest water level. According to the Witoto and Bora Indians on the Igaraparaná River, *assaí*, known as *milpesillos* by Colombians, was the gift of the spirit or god of rain, for which reason it is taken as a drink in ceremonies celebrated during the rainy season. There are very intricate associations of this palm with the Witoto spirit world, but I was unable to learn much about the connections beyond an appreciation of the sense of the deference with which these Indians treat the tree and the products of its fruits.

Many tribes of the western Amazon employ the nutritious fruits of *Bactris gasipaes* (*Guilielma gasipaes*) (Fig. 10) in religious rituals and festivals. This palm, a cultigen not known in the wild state, is found in a great variety of races differing in habit, in fruit, and in many morphological characteristics.

The Boras and Witotos, who live on the Karaparaná and Igaraparaná Rivers in Colombia, have masked dances celebrating with religious overtones the harvest of this palm, known in English as the peach palm.

Kubeo Indians on the Kuduyarí River in the Colombian Vaupés have associated the peach palm, *Bactris gasipaes*—known in the region as *cachipay* in Spanish or *pupunha* in Portuguese—with mourning the dead. Their weeping or mourning ceremony, called *oyne*, is held nearly a year after the death during the season of harvest of the peach palm fruit. There is a belief that the soul of the departed individual harvests sufficient fruit of the palm during this *oyne* to prepare enough of the nutritious meal from them for all eternity. At one point in the ceremony, the men attack the roof of the house by pelting it with fruit of the peach palm to frighten the women with the noise, but this aspect of the ceremony seems actually to represent an offering to the women and has its origin undoubtedly in fertility symbolism. During the Kubeo ancestral whipping ceremony, the fruit is thought to be showered down upon the roofs by ancestral spirits.

Perhaps the most elaborate ritual that I have witnessed in the northwest Amazon is the *Kai-ya-ree* Festival of the Yukunas who live on the Miritiparaná River in Colombia: a dance of several days' duration during early April when the *pupunha palm* is in full fruit. The basic drink of the festival is fermented *chicha* or beer of the *pupunha* fruit, and cakes made of the meal of the fruit pulp of this palm are consumed along with tapioca bread.

There are many legends connected with this dance. The most interesting one which I heard and noted down implies an association between the palm *Bactris gasipaes* and the euphorbiaceous forest tree *Micrandra spruceana*. This tree, known in Yukuna as *yĕ'-cha*, is related to the *Hevea* rubber tree. Its seeds, when boiled to remove the poison, are edible, and its fruit is egg-shaped, in size and shape rather similar to the fruit of the palm. Both of these trees are associated in Yukuna mythology with the boa constrictor: both the land boa and the anaconda. While the dance is concerned mainly with the *yĕ'-cha*

tree, the connection with the peach palm is significant.

There are many legends concerned with this dance. They are extraordinarily complicated and related to the mythological origin of the Yukuna people. The *pupunha* palm, is associated with the land boa, an animal closely allied to origin myths of the tribe, the the *yĕ'-cha* with the anaconda. Just as the pulp of the *pupunha* palm fruit has an oil-rich edible pulp, so the oil-rich starchy endosperm of the seeds of the *Micrandra*, once boiled to remove a poisonous glycoside, are highly nutritious and provide the main food for another dance celebrating the origin and evolution of the tribe.

The *Kai-ya-ree* Festival basically celebrates the harvest of the *pupunha* palm which was given to the first Yukuna people by the "Sister of the Sun" as one of their major cultivated foods. The festival, however, actually commemorates the evolution of this little known tribe and, because of the central importance of the palm, assumes deep significance when we consider the association of palms with mythology and religion in the northwest Amazon.

In view of the importance of the *Kai-ya-ree* Festival and of the *pupunha* palm, it may be of value to append a detailed consideration of the ceremony and of these people which, to the best of my knowledge, has not hitherto been published. The following notes are taken from my field notes written in the Miritiparaná River in 1951.

The Yukunas dwell in the unmeasured forests of the upper reaches of the Miritiparaná River. So little known that they are not mentioned in our latest anthropological handbooks, this Arawak-speaking tribe, once large and warlike, now numbers probably fewer than 400 individuals. Yet they are a proud and good race and have kept their ancient tribal ceremonies and legends remarkably intact. Of the tribes with which I lived during my twelve years in the Amazon, I found the Yukunas perhaps the most virile and congenial. Together with them live a few remaining members of the dying Matapies; and on neighboring rivers we find the home of the remnants of the related Tanimukas.

Every year, these peoples come together for several tribal dance ceremonies, but the major one seems to be the *Kai-ya-ree*. Held after the harvest of the *pupunha* or peach palm fruit (*Bactris gasipaes*), the *Kai-ya-ree* occurs usually during the first week of April, the rainiest part of the wet season.

The dance, to which normally come upwards of 150 Indians, takes place in the typical huge, round, peaked-gabled houses or *malocas*. These communal houses, the home of six or seven families, fairly bulge with the throng, even though most of them measure from seventy to ninety feet in diameter. Preparations for the festival begin months before and are in charge of the head of the house in which it will be held. The intensive preparations, however, are carried out during the three weeks immediately before the dance. Every available man and older boy goes out to hunt deer and tapir and to fish. The meat and fish are smoked so that they will keep for the throng that will come to the dance. The younger children must cut down the racemes of fruit from the *pupunha* palms which are planted in a circle around each *maloca*, at once an adornment and a source of nutritious food. *Pupunha* bears abundantly, and its large peach-like orange or reddish fruits, rich in an oily meal, may be prepared in a number of ways. When boiled or roasted, they are especially delicious; and some

natives prepare from them a dry meal which is kept for use throughout the year.

For the *Kai-ya-ree*, however, the womenfolk grind the mealy portion of the *pupunha* fruit, knead it into water and bury the mass for several weeks in the wet ground, firmly packed in baskets. This meal, slightly fermented, is dug up just before the gathering of the tribe and from it are made dugout canoe-loads of *chicha*, a thick, nutritious beer. This is the mainstay of the festival, and no Indian will venture to start for his own *maloca* until every drop of the vast supply of *chicha* has been consumed. It falls also to the women to prepare huge basketfuls of fresh *fariña*, a dry meal from the *yuca* or tapioca plant (*Manihot esculenta*), and just before and during the dance *casabe* cakes are baked from this *fariña*. No guest at the *Kai-ya-ree* ever goes hungry.

The older men who do not go out hunting prepare the large supplies of coca and tobacco snuff, the two narcotics employed in all Yukuna tribal get-togethers. Leaves stripped from the coca bush (*Erythroxylon coca*) are toasted on a hot clay plate and are pounded to a powder in a huge, hollowed trunk. Next, leaves from the *guarumo* tree (*Cecropia* spp.) are burned and the ashes are mixed, half and half, with the coca powder. The resulting greyish-green powder is then finely sifted through a pounded bark cloth. It is used constantly throughout the dance and in vast amounts: packed up and around the gums, it slowly dissolves and passes to the stomach, affording the user a feeling of euphoria. Tobacco is not smoked during the *Kai-ya-ree*, but great gourdfuls of snuff are made. The older men dry and pulverize finely the tenderest leaves of tobacco (*Nicotiana tabacum*) and mix with the powder equal amounts of the leaf ashes of the yam (*Dioscorea* spp.); the resulting snuff is a greyish-white powder which is administered in teaspoonful doses through hollow bird-bone snuffing tubes. The Yukunas are excessive snuffers, just as they are extraordinary consumers of coca. It is an honor to be offered a snuffing by a friend who fills the tube with snuff, inserts one end in his mouth, the other end in the recipient's nostril, and gives a strong but quick puff.

The "owner" of the *Kai-ya-ree*—he in whose *maloca* the dance will be held —sends out emissaries about a fortnight before convocation. They travel by canoe and afoot through the thickest jungle. From all around come the Yukunas, Matapies, and Tanimukas—sometimes from five or six days' distance—loaded down with hammocks, babies, dogs, and oftentimes other domestic animals. They do not arrive immediately at the owner's *maloca* but stop in houses within a day's walk from it. When the owner is ready, he sounds the two hollowed tree trunks or signal drums, beating out the message that all is in readiness. So keen is the Indian's ear that he can hear these thumped messages and understand them at a distance of some six or eight hours' hard walk through the forest and even at greater distances along the rivers and streams. All then converge, and it is a festive time indeed. Each arrival must be welcomed by the chief of the dance with the age-old monotonous chant of half an hour that recites all the happenings of the year just passed. And the bowl of coca is passed freely around, while snuffing goes on continually.

The *Kai-ya-ree* begins at about midnight and lasts until dawn two and one-half days later. Dancing is never interrupted, various groups taking part, while

11. Devil mask, made of pitch from a species of *Symphonia* or from *Moronobia*, for part of the *Kai-ya-ree* Dance celebrating the harvest of fruits of the *pupunha* palm, *Bactris gasipaes*, among the Yukuna Indians, Río Miritiparaná, Amazonas, Colombia.

others eat, sleep or hold tribal conferences. The *Kai-ya-ree* is actually a long series of individual dances, each one dedicated to an animal. As the dances are seriously ceremonial in nature, only the men take part. The purpose of the dance is to honor or placate animal spirits or the forces of good and evil. Each dance has its own intricate step, its own special vocal music sung by the dancers themselves; no instruments are employed. Many of the dances are beautiful in the extreme, often mimicking a characteristic movement of the animal being honored. Some of the songs, chantlike and mostly in minor key, would be worthy of musical study for their deeply religious seriousness.

No less absorbingly interesting is the great variety of masks prepared annually for this festival. But I should describe the dress before I detail some of the masks. Each dancer wears, throughout the ceremony, a dress of two parts: a shirt with full-length sleeves of a coarse brown cloth hammered from the inner bark of the *llanchama* tree (*Olmedia aspera*); an ankle-length skirt prepared from strips of the inner bark of an annonaceous tree. When this bark skirt is freshly made, it is rolled tightly and its lowermost six or eight inches are immersed in a watery arcillaceous clay common in swales in this most moist of regions. A chemical reaction between the clay and some constituent in the bark must take place, for the immersed portion is indelibly dyed black. The long flexible strips of bark in this "grass skirt" swirl in some of the faster dances and add much to the grace and beauty of the steps. A bracelet of empty seeds (*Cayaponia kathematophora*) is wound around one ankle to provide a castanet-like noise marking out the rhythm of the dance steps.

The masks are truly ingenious (Fig. 11). All but two are elaborated with pitch from the *brea* tree (*Symphonia* spp. and *Moronobea* spp.) spread upon a head-covering hood of *llanchama* bark cloth. These pitch masks are all black with yellow and white designs painted on the pitch with earth paints. The pitch, when extracted from the trees, is yellowish, but it must be boiled for several hours to assume a consistency which will permit it to harden quickly to a brittle, nonsticky substance, and it is during this cooking process that it becomes black. The two masks which are not of pitch are fabricated from balsa wood which is painted.

The *Kai-ya-ree* begins with a kind of main theme-dance, the *Cha-vee-nai-yo*, which is repeated sundry times throughout the two and one-half days of the whole ceremony. Sixteen men in four groups wind in and out around each other, working up to a pitch of extreme intricacy and finally ending on a note of such simplicity—a straight line—that the very contrast is startling.

To the Yukunas, there are many animal spirits that influence human affairs, but there are two forces—spirits, if you will—which they place above all the others in potency. Although the Yukunas, I found, were rather vague about these two omnipotent forces and their definition, it is clear that one, which we might for simplification call the "Spirit of Good," is somehow embodied in and associated with light and the sun. The other they hold to be connected with darkness, night, and evil; this we could term the "Spirit of Evil," realizing in so doing that we are guilty of gross oversimplification. Both of these great spirits are in constant struggle, and, since the Yukunas are caught between them, they must honor and glorify the one and assuage and placate the other. The *Cha-vee-nai-yo* placates the "Spirit of Evil."

The mask for the *Cha-vee-nai-yo* dance

is weird: a human face fashioned of blackened pitch painted with yellow and white geometric designs, with eye-holes through which the dancer peers, a wedge-shaped wooden nose and a leering, toothless mouth. The eerie sight of so many hideously unreal devil masks and the weirdly monotonous minor chant with its far-off, hollow sound, as it is sung through the mask and hood, had an almost hypnotic effect upon me as I watched the dance. And, as I took part in this dance and joined in the chant myself, it was not hard for me to imagine that such an unearthly ritual must be placating some unearthly force. The chant is short, but the dancers repeat it untold times, thus heightening its effectiveness with the Indians:

Cha-vee-nai-yo
Cha-vee-nai-yo-o
Hey-hey-hey-ya, hey, hey, hey
Ya-wee-nai-yo
Ya-wee-nai-yo
Ya-wee-nai-yo
Ya-wee-nai-yo
Ee-ya-ree-ya ka-ba-a
Ee-ya-ka
Cha-vee-nai-yo-o
Hey-hey-hey
Ee-ya-ka
Cha-vee-nai-yo-o
Hey-hey-hey-ya-hey-hey-hey

Then follows in a rigidly set order the dances in honor of sundry animals. The young boys, those from eight to twelve years of age, dressed in the typical shirt and skirt but with the head covered with a hammered bark hood upon which the facial features of a monkey have been delineated, begin with the Monkey Dance. It is a quick, lithe dance mimicking the nervous jumping of monkeys from branch to branch; and the boys carry leafy branches which they wave rhythmically while chanting in high-pitched voices, very suggestive of the chattering of monkeys in the tree tops.

There are too many animal dances for me to detail them all, and indeed, it would require a detailed study to outline the content and meaning of the whole *Kai-ya-ree*. Some, however, either because the Indians performed them exceedingly well or because they seemed to me to have more grace and beauty, stand out in my mind as more important than others. The Jaguar Dance, with characteristic stealthy half steps interrupted on occasion with pounces and a whining, snarling catlike chant, is performed by only the nimblest and most experienced of dancers. The mask is a superb creation: a replica in black pitch of a jaguar head, replete with eyes flashing with tiny pieces of mirror, whiskers, and a snarling mouth set with wooden teeth.

The Tapir Dance, slow and lumbering, has a fanciful tapir-head mask, and the Anteater Dance mask stands out among all the others because of its realistic, long, curved snout. In the Deer Dance, the movements are graceful and rapid in the extreme, consisting mostly of intricately interweaving in a running, darting step performed with an unbelievable mimicry of the deer's nervous and frightened manner. A low, sustained buzzing chant accompanies the Wild Bee Dance, and a similar song honors another insect in the Wasp Dance; the masks for both are most ingeniously fashioned with tufts of tree cotton or kapok to simulate the hairiness of the insect. The most unexpected beauty attends the Dance of the Bats, the masks for which are strikingly representative of the bat and the chants for which are squeaky and shrill to mimic the bat's voice.

Bactris gasipaes and its fruit are somehow intricately associated in mythology with all of the dances in the *Kai-*

ya-ree Festival and with the evolution of the Yukuna people. Much deeper studies by competent anthropologists will be needed to piece together the complicated whole, but this superficial sketch will serve to indicate at least one good example of how deep is the association of palms with origin myths and belief in the supernatural in the northwest Amazon.

THE EDITOR'S CORNER

Dr. Schultes' article on preceding pages was read by Dr. T. Lockwood for Dr. Schultes during the course of a day-long symposium on "The Natural History and Utilization of Palms" held in Ithaca, N. Y. as part of the annual meeting of the Society for Economic Botany on June 14, 1973. Each session included four papers.

Those of the morning were "Palms—Variations on Simple Themes" by Harold E. Moore, Jr., adapted from "The Major Groups of Palms and Their Distribution" which appeared in *Gentes Herbarum* 11: 27–141, 1973, and as a separately paged reprint; "Protection of Flowers in Palms" by Natalie W. Uhl, based on "The Protection of Pollen and Ovules in Palms" published in *Principes* 17: 111–149, 1973; "Some Aspects of Pollination Biology in Palms" by Frederick B. Essig, elaborated from his articles "Pollination in Some New Guinea Palms" in *Principes* 17: 75–83, 1973, and "Observations on Pollination in *Bactris*" in *Principes* 15: 20–24, 35, 1971; and "Response of Palms to the Environment" by Robert W. Read, to appear in a future issue of PRINCIPES.

The afternoon program included four papers which also are to appear in the pages of PRINCIPES. These were "Palms in the Everyday Life of Indonesia" by John Dransfield; "Palms and Religion in the Northwest Amazon" by Richard E. Schultes, published herein; "The Oil Palms" by Walter H. Hodge; and "Commercial Palm Products Other Than Oils" by Dennis V. Johnson and Eugene D. Kitzke.

PALM LITERATURE

POPENOE, PAUL. 1973. The Date Palm. 247 pp., Field Research Projects, Box 585, Coconut Grove, Florida 33133. $16.00 paperback, $20.00 clothbound.

This monograph was completed in 1924, but remained unpublished for nearly 50 years. The book is divided into two parts: Part I, the history, cultivation, and uses of the date palm; Part II, varieties of the date palm. A foreword, preface, introduction, bibliography, and two appendices complete the work. Although not brought up to date, the text is still eminently useful.

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