



22. Coconut palms at Henry Kaiser's Hawaiian Village. Practically all palms look well in drifts or groves.

Whatever the size or project, palms are the most potent landscape material available. If they are used wisely and

well, the future appearance of the community or home can be impressive.

The Philological Origin of Areca and Catechu

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Apropos H. E. Moore's note in *Principes* 3:47, 1959, on the correct name for the betel palm, the following might be of some interest to historians or philologists.

When the early Portuguese came to India, their first contacts were with the people of Calicut and Cochin on the Malabar coast of India, in a state now known as Kerala. As a result of these

contacts many words were adopted by the Portuguese from the Malayalam language (spoken commonly by the people of these regions) rather than from the Kanarese language (spoken in the regions lying to the northern frontier of Kerala) or from the Tamil (spoken in the regions lying to the east of it) — words which later travelled eastwards to Europe and westwards to Malacca. Curi-

ously enough the Portuguese called the people of the Malabar and the Konkan coast of India as Kanarese (*Canarim*), though this term was more often applied indiscriminately to the Christian converts of the West Coast of India.

Now *adeka* or *adaka* is a Malayalam name for the betel nut, a name still used in the country and also mentioned in the old dictionaries (e.g. Balfour, *Cyclopaedia of India*, ed. 2, 1, 1871; Watt's *A Dictionary of the Economic Products of India* 1, 1889). One of the earliest references to *Areca* is in the letter written by the King of Cochin in 1510 to Alphonso de Albuquerque recommending him to send ships to Choromandel and Malacca to bring *harequa*, a word which later in 1513 is spelt as *areca* (plural *arecas*), (Albuquerque, *Cartas* 4:43. 1884). Varthema, an Italian who had visited Malabar in 1510, wrote "When they eat the said leaves [betel], they eat with them a certain fruit which is called *coffolo* and the tree of the said *coffolo* is *Arecha* . . ." (*The Travels of Ludovico di Varthema* 144, Hakluyt Society, 1863). Obviously Varthema's informant was an Arab trader who would call the fruit *faufel* or *faufel* (= *coffolo*) which was supplied by the natives of Malabar as *areca*. Since *h* after *c* is used in Italian to give *c* a hard sound like *k* and since *c* is always hard when followed by the vowel *a*, *o* or *u*, the *h* in *arecha* is superfluous and the word should have been written *areca*.

In 1516 Duarte Barbosa (*Livro* p. 347) mentions that there is "a fruit of the size of the nut which they call *Areca* and eat together with the betel leaf." In his *Coloquios* XXII (1563) Garcia da Orta states that "in Malabar they call it *pac*, and the Naires, who are the knights [living in Kerala], call it *areca* whence the Portuguese have taken the name,

being the land first known to us, and where it abounds."

It may be noted that certain syllables in Indian languages are difficult to write phonetically with the Latin alphabet. Among these are those which have consonants pronounced half way between *d* and *r* and so it is the early Portuguese who wrote *areca* where the modern philologists might have written *adaka*, *adeka*, *addeka*, *addaka*, *adakka*, etc. There is no need therefore to go to the Kanarese *adeki*, *adike*, etc. when the word was directly taken from Malayalam language.

There seems to be some confusion about the meaning of the word *adeka*, a fruit much used in the Hinduist liturgy, and in social intercourse. I have not been able to find exactly what it means. Cooke (in Yule & Burnell, *Hobson-Jobson*, ed. 2, 1903) quotes Caldwell who derives it from the Tamil *adai* (closely packed in cluster) and *kay* (fruit) but this does not seem to agree with the various stages of fruit development given by Rheede (*Hortus Indicus Malabaricus* 1: 9-10. 1678). According to this *Hortus*, the Malayalees (the people of Malabar who speak the Malayalam language) distinguished five stages in the development of the fruit of the *caunga* (*Areca* palm). In the first stage the seed consists of a good deal of soft astringent pulp and some water (*tannipaina*), in the second all the water has been replaced by soft pulp (*schalemba paina*), in the third the pulp is slightly hardened and has a whitish core, (*aria decca* [*ari-adecca*]), in the fourth the seed pulp is harder (*adecca*) and finally the seed is very hard and its husk is golden yellow outside (*paleca*). This would suggest that *ecca* or *ca* has something to do with the seed that is eaten as a masticatory. *Ari-adecca* actually

means "small *adecca*". Could it be that *adecca* is again a combination of *ari-ecca* or *ari-ca* meaning "small or half-ripe *ecca* or *ca*" that is commonly found on the market, while *pal-ecca* or *pale-ca* is a fully ripe *ecca* or *ca* used for sowing?

Now Gowda quoted by Moore seems to have confused some explanations given by Garcia da Orta and others, for actually *Nair*, and not *adeka*, means "a knight, cavalier, or leader" corresponding to the word *nayaka* or *nayake* in the neo-Aryan languages like Konkani and Ceylonese (Singhalese).

As to the origin of the word *catechu*, literature available is rather confusing. In *Useful Plants of India* 7, 1873, Drury derives the word from *cate*, tree, and *chu*, juice, without indicating the language. In *The Commercial Products of India* 8-14, 1908, Watt holds the view that the word has been compounded from the Tamil *kati*, extract, romanized by Garcia da Orta (1563) into *cate*, and *chuana*, to distil. Markham (Garcia da Orta's *Colloquies*, 194, 1913), states that *catechu* and *cutch* are corruptions of the Indian name *katha-kekkal* for *Acacia Catechu*, *katha* meaning "strong." Dalgado (*Glossario Luso-Asiatico* 1, 1919) makes *catechu* a compound formed of *cate* and *cacho*, the two words used by the Portuguese of the 16th century in the East to indicate the extract of *Acacia Catechu*. Going to the root of these words, he states the Sanskrit *kvatha*, extract, gave the Konkani-Marathi form *kat* and the Dravidian and the Malay *kachu*, from which the Portuguese lusitanized the two above-mentioned words. In *Verklarend Woordenboek* (1936) Backer revives the discarded view (Watts, *op. cit.* 39, 1889) that makes *catechu* a corrupted compound of the Cochinchinese words *cay*

cao. He does not state when or by whom the transformation was made; his suggestion is based apparently on the mistaken belief that *catechu* was first employed to name *Areca Catechu*, for the Indochinese floristic works mention *cay cao* or *cay cau* as the common vernacular name of *Areca Catechu*. The probable reason why early writers were inclined to associate *catechu* with Cochinchina appears to lie in the evolution of the word Cochinchina itself. Annam's capital was known formerly as *Keche* or *Kechu*. Owing to many variations in the pronunciation of this word among the traders of the times, the early Portuguese wrote it as *Cacho*, *Cauchi*, *Coche*, *Cochi*, *Cochin* and *Cochim*. Later in order to distinguish it from Cochin in India, the Portuguese named it Cochin-China, meaning Cochin near China. But long before the Portuguese became commercially acquainted with this country, they knew the *cacho* and *cate* extracted in India.

On the other hand the Portuguese writers of the early 16th century stated that the drug *cacho* came from Cambaya and from the neighboring regions, and was a very valuable article of traffic in Malacca and China as well as in Arabia, Persia and Ormuz (cf. Duarte Barbosa, 1516; Castanheda, 1552; etc.). The name adopted for the drug must have been widely current in trade and in all probability originated in places near Cambaya where the Gujerati language is spoken. Later the Portuguese used also the word *cate*, which is actually the neo-Aryan word widely used in India for the finer quality of *cacho* eaten with betel leaves; and Garcia da Orta in his *Coloquios* (1563) states that the word *cate* is also widely used in Arabia, India and elsewhere, though in Malacca the

form *cato* is employed (the last *o* being a short *u* as usual).

Obviously the early Portuguese pronounced the *ch* in *cacho* in the old way retained in many a Portuguese patois in the East and until recently also in Goa. *Ch* then is equivalent not to *sh* but to *tch* in English and *tj* in Dutch. Further, the final *o* would be a short *u*. This would make the Portuguese *cacho* almost equivalent to the English *cutch*, a name usually given as the Gujerati name for catechu (cf. Balfour *op. cit.*) and perhaps the name "Gulf of Cutch" in Gujerat, India, points to the original source of the name and the extract *cacho* of commerce. Actually Balfour (1871) and Watt (1889) give *catch* as the Portuguese name for cutch, but obviously this is only their phonetic rendering in English of the Portuguese word *cacho* which they do not mention. This also confirms the view that the Portuguese in the East were in the habit of pronouncing *cacho* as if it had the letter *t* before the last syllable and as if the last *o* was semi-silent or equivalent to a short *u*.

Many lexicons and commentators give *kachu*, *kassu*, and other variations as the Dravidian names of catechu, but it is necessary to verify whether these names, like those of many other articles of the olden days commerce, have not been introduced in the Tamil, the Kanarese and the Malayalam languages through the Portuguese influence in Malabar. The early Portuguese writers did not mention the drug as being an important article of trade in Malabar; and the fact that the Portuguese lusitanized the neo-Aryan word *kat* (of which *kutch* is a Gujerati form and *kati* the Tamil one) into *cate* and *cato* for the catechu used in the social intercourse in India and Malacca respectively (cf. Garcia da

Orta) suggests that *cate* had no other special word in the common (Dravidian) languages of Malabar where the Portuguese were for some years, before they made their headquarters in the Aryan language country of Goa.

Early Portuguese writers were quite definite that *cate* or *cacho* was a plant product from the regions of Gujerat in North-West of India, and it was an imported article in Arabia, China and Malacca. Later attempts to find a cheaper substitute brought the Malaysian gambir into commerce. However the so-called Bombay catechu mentioned by some writers (cf. *Wealth of India*, 1, 1948) is actually an extract (often called *kossa*) that remains when preparing betel nuts for chewing, but apparently this has never been an article of commerce and was not called cutch in the olden days. It is used also in flavouring and colouring inferior *Areca* nuts (Watt, 89. 1908), and is preserved for the following year's boiling (*Wealth of India*, 1: 112. 1948).

However since the Portuguese pharmacists did not introduce the drug into Europe (cf. also Garcia da Orta for reasons), *cacho* did not become known to the European pharmacists except nearly a century after Garcia da Orta, when it began to be imported as a mineral from Japan. According to Flückiger and Handbury (*Pharmacographia* ed. 2: 241. 1879), catechu was mentioned in about 1641 "in several tariffs of German towns, being included in the simples of mineral origin." Though gambir may have also been taken to Europe, what was then imported into Europe from the Far East was the drug *cacho*, not its finer form *cat* eaten with betel leaves. Now, though *cacho* in the old Portuguese and cutch

in English would give the Germans *katchu* to be latinised into *catechu*, it is more probable that the Germans latinised as *catechu* the name given to the drug by the Japanese. Since in Japanese all consonants excepting *n* have to be followed by a vowel and all the alien words with a final consonant that is not an *n* have to end with *u* when rendered phonetically in Japanese, it follows that *cacho* as pronounced *catch* or *catchu* (the name widely employed in the East for the drug in trade) would become *catechu* in Japanese. In some languages of Latin origin the *catch* or *catchu* might have been romanized as *catichu* or *catuchu*, but such renderings would have distorted wholly the name in the Japanese language where *ti* and *tu* sounds become *chi* and *tzu* respectively. This Japanese influence in the latinization of the word by the Germans of the 17th century cannot be disregarded since the Germans were not acquainted with the previous literature on the subject and imported it as a mineral native of Japan obviously under the name given to it by the Japanese.

Apparently Johannes Schröder was the first person to coin *terra japonica* as an alternative name to *catechu*. In the earlier edition of the above-cited work (1874 ed. 1) Flückiger and Handbury had referred to Schröder's *Pharmacopoeia Medico-Chymica*, Lyons, ed. 4, 1654, as the earliest reference to *Catechu seu Terra japonica*; but in the second edition of their work (ed. 2: 241. 1879), they referred to the German tariffs of about 1641 and to Schröder's *Pharmacopoeia Medico-Physica*, Ulmae, lib. iii: 516, 1649 (with a Preface dated Frankfurt A.D. 1641). It might be useful to requote Schröder's passage:—

“Est et genus terrae exoticae, colore purpureum, punctulis albis intertextum,

ac si situm contraxisset, sapore austeriusculum, masticatum liquescens, subdulcemque post se reliquens saporum, *Catechu* vocant, seu *Terram japonicam* . . . Particulam hujus obtinui a Pharmacopoeo nostrate curiosissimo Dn. Matthia Bansa.”

According to Watt (1889 & 1908) both gambir and catechu were imported into Europe indiscriminately as *terra japonica*, but Cleyer exploded the mineral notion of these substances by republishing in 1685 Garcia da Orta's account of the preparation of the extract from plants. Cleyer also tried to classify the different kinds of catechu. Though it is possible that betel nut chips prepared for chewing might have also been introduced into Europe mistakenly as catechu, there is no evidence that any extract of betel nuts was ever an article of trade in the seventeenth and eighteenth centuries.

It might be recorded here that in his translation of *Coloquios* (1563) of Garcia da Orta, Markham (*Colloquies* 194. 1913) makes the author as the first person to use the word *catechu*; but this is obviously a *lapsus calami* for *areca*, which is found in the place in the *Coloquios* edited by Conde Ficalho (1891 p. 327).

Since Linnaeus followed the belief that catechu was derived from the betel nut, he coined the binomial *Areca Catechu*. Pointing out the error regarding the source of catechu, Loureiro (*Flora Cochinchinensis* 568. 1790) considered the specific epithet inappropriate and misleading (“non solum improprium sed erroneum”) for the plant and so he suggested what he considered a more distinctive substitute name, *Areca hortensis*, which of course has no status

under the International Code of Botanical Nomenclature. But these remarks of Loureiro should be sufficient also to show that *catechu* is not derived from the Cochinchinese words *cay-cao*, the common name of the *Areca* palm, for Loureiro had made a deep study of the Cochinchinese language and economic products so as to compile a dictionary of the language (Merrill, A Commentary on Loureiro's "Flora Cochinchinensis," in *Transactions of the American Philosophical Society* 24: 2. 1935).

PALM LITERATURE

Cadogan, L. *The Eternal Pindó Palm and Other Plants in Mbya-Guaraní Myth and Legend*. Mexico, 1958.

Leon Cadogan is a well known explorer of the myths and legends of the Paraguayan tribes of the Guaraní. His pamphlet about the *pindó* palm (*Arecastrum Romanzoffianum*) would certainly be of interest for the readers of PRINCIPES.

The *pindó* palm is the most prominent tree in Mbya-Guaraní. In the Creation Myth, five *pindó* palms uphold the universe, there being a *pindovy* (eternal palm) under Yvy Mbyté (the center of the earth); another under Karáí Ambé (the abode of Karáí the god of fire, the East); another under Tupa Ambo (the abode of Tupa, the god of rains, the West); one at Yvytú Ymá Rapytá (the origin of the primitive wind, the South) and another at Yvytú Porá Rapytá (the origin of the good wind, the North).

In the Myth of the Deluge, the hero Taparí creates a *pindó* palm with two leaves, one for himself and one for his aunt with whom he had sinned. It towers above the waters and enables the pair to enter the Elysian Fields of the Guaraní mythology.

The prominent place occupied by the *pindó* palm in Mbyá-Guaraní mythology is but natural. *Pindó* leaves are used for thatching the Mbyá's dwellings; the tender tops provide him with an excellent vegetable; the fruit, pounded and mixed with water, provide him a nutritious beverage; the kernel is edible; the roots are used in medicine as a styptic; the trunk serves as a breeding ground for edible larvae, a source of fat and oil.

Life for the Mbyá would be inconceivable without the *pindó* palm. It is therefore but natural that the Universe should rest upon the eternal *pindovy* and that an eternal *pindó* should tower above the fountain at Yvy Mbyté where the father of the Mbyá race was miraculously begotten.

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Palm Fruits As Bird Food

The fact that palm fruits serve as food for wild life is well known at the Fairchild Tropical Garden in Coral Gables, Florida, where squirrels and other rodents thrive on them. Macaws which fly over from the nearby Parrot Jungle also feast on the palm fruits in the garden. Other birds, as shown in recent literature, also enjoy the fruits of palms.

The palm-nut vulture (*Gypohierax angolensis*) of West Africa prefers the fruits of the oil palm (*Elaeis guineensis*) over all other forms of food. A definite relationship between the distribution of the oil palm and that of the palm-nut vulture has been shown. This bird knows just how to pull the fruits from the cluster and, holding the fruit with one foot, to strip the flesh from the kernel. It is this brightly colored flesh which the bird eats. In one location where no oil palms occur, the bird lives on the