FOLK PLANT NOMENCLATURE IN POLYNESIA

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This article reviews Polynesian linguistics as it relates to folk names of plants. Before the seventeenth century and over a period of about two thousand years, almost all of the inhabitable islands of the vast area defined as Polynesia were colonized and then became virtually isolated from each other, resulting in the development of twenty-eight recognizable languages. The Polynesian colonists carried with them many of their cultural plants, and they recognized identical or similar species in their new homes. The names for these plants now vary from each other, but their differences are often predictable using linguistic tools. The regular name changes and other irregular name changes resulting from a variety of factors are discussed and tables are provided. Tables of widespread folk names and their cognates are also provided, as well as ones comparing related Micronesian and Fijian names.

THE PACIFIC OCEAN is the largest feature on the face of the earth. Across this vast expanse of water are numerous small tropical islands that are divided into three cultural and geographical regions: Melanesia, which comprises most of the islands from Indonesia to Fiji; Micronesia, which comprises several archipelagoes, including the Marianas and the Carolines, mostly north of the Equator; and Polynesia, which comprises the islands within the triangle whose corners lie at Hawaii, Easter Island, and New Zealand. Polynesia is sometimes further divided into western Polynesia, comprising mostly Tonga, Samoa, Tokelau, Tuvalu, Wallis and Futuna, and Niue; and eastern Polynesia, comprising all of the other islands to the east (as far as Easter Island), north (Hawai'i), and south (New Zealand).

The inhabitants of Polynesia, who are now collectively known as Polynesians, share a cultural and linguistic heritage that dates back to antiquity.

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They originated somewhere in South Asia, and during a sporadic migration over centuries of time, they eventually reached Polynesia. During these migrations through Melanesia, they interacted with previously established Melanesian cultures but managed to maintain their cultural, genetic, and linguistic identity, although they undoubtedly added Melanesian elements of all of them to their distinctive character.

The first landfall (presumably Tonga) for these seafaring people (probably sailing from Fiji) occurred more than three thousand years ago, and over the next two thousand years the Polynesians discovered and colonized virtually every inhabitable island east of Fiji. After the initial colonization from one archipelago or island to another, and until the arrival of the firs Europeans in 1596, the Polynesians were living in nearly complete isolation from the rest of the world. An exception was in Samoa and Tonga, which had periodic contact up until the European era. Tonga apparently conquered and occupied Samoa for several hundred years and supplied mercenary soldiers to endless Fijian civil wars until after European contact. The Lau Islands of Fiji today show the linguistic and physical signs of these ancient interactions.

Like people of all other cultures, the Polynesian explorers had their own traditional plant folklore comprising the names and uses of plants found on their islands. However, the homogeneous nature of the folklore of the earliest Polynesians underwent a diversification as the distant islands were discovered, colonized, and subsequently lost contact with each other.

The native plants of the newly discovered islands were usually very similar to those of the homeland of the colonists (except in Hawai‘i, which has a very high rate of endemic species and genera, and in New Zealand, which has an entirely different, temperate flora). The traditional plant folklore enabled the colonists to use the similar and identical plants in their new home in the ways to which they were accustomed. However, many of the plants the colonists encountered were new to them, and many of the useful plants important to their culture and even critical to their survival were absent. The majority of the most useful plants, including virtually all the staple food crops, such as taro, breadfruit, yams, and sweet potatoes, are not native to the region and had to be carried by canoe from island to island across the Pacific. Of the approximately seventy-two plants intentionally introduced to western Polynesia (Samoa and Tonga) before the European era, only about twenty-eight successfully reached Hawai‘i on the eastern side of the region (Whistler 1991b:44).

The new plants the colonists encountered, at least the notable or useful ones, were nameless and had to be given names. A general rule of folk plant nomenclature (the system of naming things) is that plants with uses or

remarkable characteristics acquire names, whereas those without either usually remain nameless. The useless or unremarkable plants are often lumped into broad categories such as “vine,” “grass,” “weed,” or “fern,” if they are recognized at all.

Compiling Local Plant Names

The study of ethnobotany involves not only describing uses of plants, but also the recording and compiling of local plant names. Local or vernacular names are useful for ethnobotanists, medical researchers, anthropologists, agriculture specialists, and other scientists working in the field. If, for example, a potentially useful medicinal plant has been identified only by its local name, the easiest way for a medicinal researcher to determine its scientific name would be to look it up on an already existing list (and later verify it with a voucher specimen). The list from one Polynesian archipelago can also be useful in other archipelagoes. Many names that vary between islands differ in predictable ways, and by comparing the name of an unidentified plant in one archipelago with the names from another, it is sometimes possible to come up with a correct identification. Such names that are similar in two languages and share a common origin are known as cognates. The comparison of plant names in two languages works only with cognates.

A second reason for studying local plant names is that they are useful to linguists who are compiling dictionaries or doing historical and comparative studies. A third reason is that the preservation of plant folklore is important for cultural reasons, and the use of vernacular names rather than English or scientific names can facilitate these studies in non-English-speaking cultures.

Of the two basic methods of compiling plant names, the most obvious is to go into an area and elicit information from inhabitants. This may be done just for plant names, as is practiced in ethnobotanical or medicinal plant studies, or it may be done by linguists preparing vocabularies or dictionaries. However, if the researcher is not a botanist and does not collect voucher specimens, the information obtained may be vague or inaccurate.

The second method is to compile names from previous literature in the field, and the best sources for this are often dictionaries or anthropological studies. Some of the dictionaries upon which the plant names in the following text are based are Milner (1966) for Samoa, Churchward (1959) for Tonga, Rensch (1984) for Wallis Island, Rensch (1986) for the Home Islands, Savage ([1962] 1980) for the Cook Islands, Davies (1851) for Tahiti, and Pukui and Elbert (1971) for Hawai‘i. Anthropological studies often include many plant names and uses; the most useful of these studies include

those, such as Hiroa's (1930) for Samoa, published by the Bernice P. Bishop Museum during the middle part of this century.

Other valuable sources include books, letters, and ships' logs written by early visitors to the islands. One of the most useful of these other sources is the account of the Cook expeditions based on the logs of Captain Cook and his officers (Beaglehole 1961, 1967). Another useful method of gathering plant names is to look at local floras to see if any vernacular names are listed. However, most floras do not include names with cited voucher specimens, which can mean that the authors of the floras were simply repeating names given in the previous literature. One way to get around this is to search herbarium collections to see if the botanists recorded the names on the specimens. The Bishop Museum is particularly useful for this purpose, since it has the best Polynesian collections of any herbarium.

The most accurate way to conduct ethnobotanical studies is to combine a literature review with fieldwork and herbarium studies, a method I have been employing over the last decade. This has resulted in publications on plant names and uses in Samoa (Whistler 1984), Tokelau (Whistler 1988), the Cook Islands (Whistler 1990), and Tonga (Whistler 1991a).

The Polynesian Languages

The Polynesian languages are part of a broad linguistic group known as the Austronesian language family. It is believed that all Polynesian languages are derived from an ancestral, now extinct language known as "Proto-Polynesian" that was spoken by the first settlers of Tonga (Bellwood 1978). The number of Polynesian languages currently recognized is about twenty-eight (Figure 1). What was once a single language proliferated into many related languages over the last three thousand years because of the geographical isolation of the various islands that were settled in the Pacific; all of the major islands of Polynesia have been inhabited for over a thousand years.

Differences between the various Polynesian languages are also reflected in changes in plant names. The most important changes in plant names (as well as in other words in the languages) are (1) phonological changes, (2) coining new names for new plants, and (3) coining new names for old plants.

Linguistic Changes

Two major phonological changes contribute to the variation of Polynesian plant names: losses of sounds and changes in sounds (i.e., changes in pronunciation). Changes in sound show up today in differences in spelling, but one has to keep in mind that the Polynesian languages were not written until

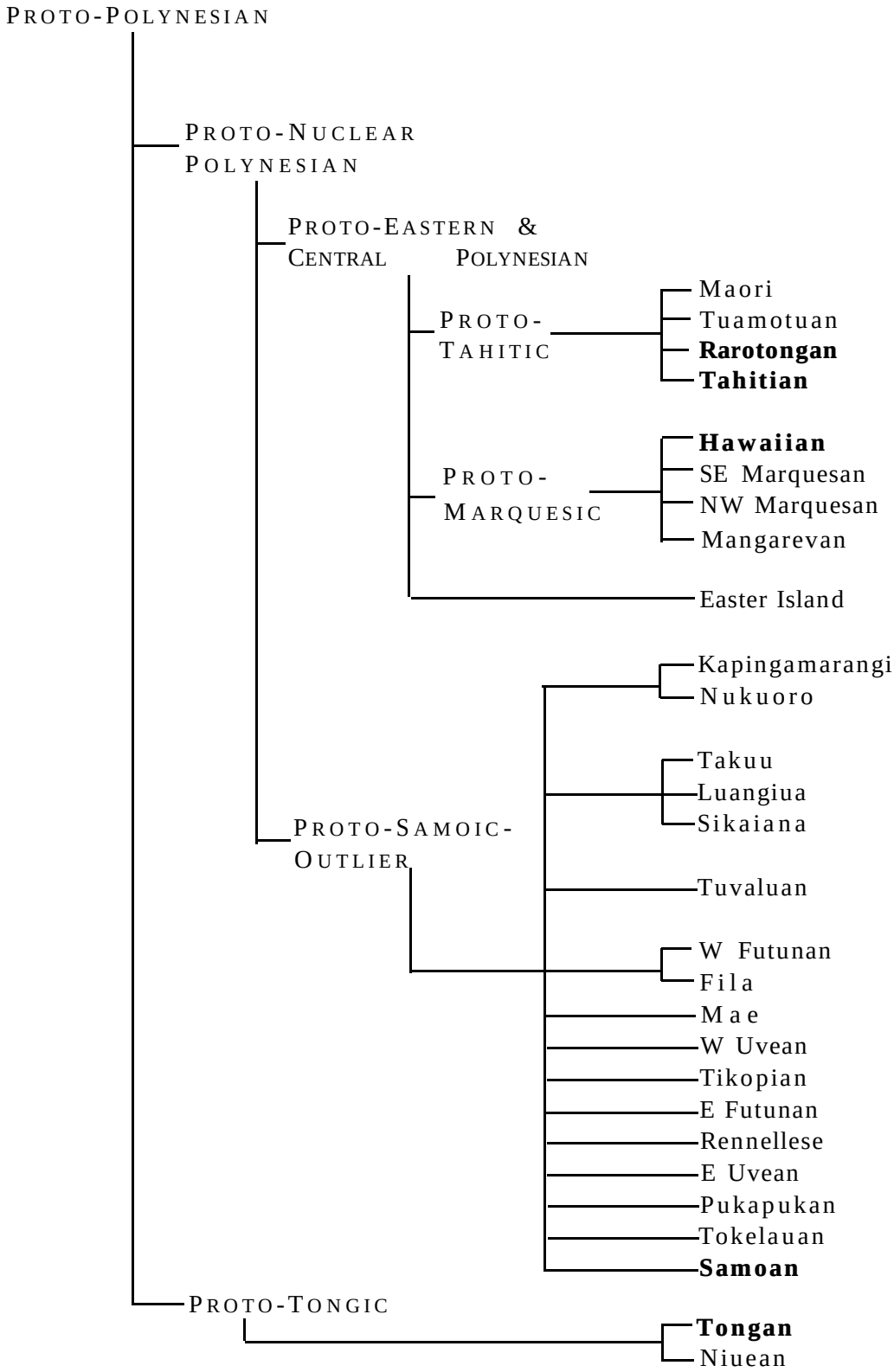

FIGURE 1. **A family tree of Polynesian languages, with those emphasized in this article shown in boldface.** (Adapted from Bellwood 1978:127)

the arrival of the first European and American missionaries less than two hundred years ago.

Regular changes in sounds resulted when the various Polynesian populations became geographically isolated. For example, some Polynesian languages have an / l / sound, which corresponds to an / r / in others. In some languages the / ŋ / sound (phonetically a velar nasal as in the *ng* in "song") is present along with an / n /, but in others, such as Hawaiian, the / ig / has fused with the / n / so that only one sound exists where previously there were two. Interestingly enough, the opposite change is currently taking place in Samoan: the / n / is now usually pronounced as an / ŋ /. At the same time, the Samoan / t / is usually replaced by / k /, a change that has already occurred in Hawai'i.

The other phonological change that contributes to the variation in Polynesian plant names occurs when a sound is dropped from a language. The Hawaiian name *'awapuhi* (but pronounced *'avapuhi*), for example, is a cognate of the Samoan name *'avapui* (*Zingiber zerumbet,* the shampoo ginger). In this case, the / h / sound is entirely lost, but in most cases it is converted to what is called a "glottal stop." (To the layperson this looks just like the loss of a sound, but to a linguist it is the change from one sound to another. The original sound is represented by a letter in our alphabet, the changed sound is a glottal stop, for which our alphabet has no symbol, but which is nowadays written as a reverse apostrophe.) Thus, in one Polynesian language breadfruit is called *kuru* (in Rarotongan, for example), while in another where / k / has changed to a glottal stop, it is called *'ulu* (as in Samoan). The presence of the glottal stop is more noticeable to the lay ear when it occurs within rather than at the beginning of a word. A word like *fa'i* ("banana" in Samoan), pronounced "f a-ee," is entirely unrelated to *fai* ("to make" in Samoan), which is pronounced to rhyme with "by."

Even the glottal stop can be lost, as shown by certain Samoan words that are identical to Tongan words except for the absence of the glottal stop, such as the Tongan name *feta'u (Calophyllum inophyllum),* which is a cognate of the Samoan name *fetau.* When the glottal stop is between two identical vowels, the vowels merge and are pronounced as a long vowel. In Polynesian-language words, the stress is usually on the penultimate syllable. Thus the Tongan plant name *mahoa'a* (Polynesian arrowroot, *Tacca leontopetaloides)* is a cognate of the Samoan name for the plant, *masoa,* which has a stress on the final vowel. Glottal stops are critical to the pronunciation of Polynesian words, but unfortunately they are often not written, even by the Polynesians themselves, who are raised speaking the language and find no need to note them.

Spelling may also vary between Polynesian languages, because the differ-

TABLE 1. **Sound Correspondence in Five Polynesian Languages**

	Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i
Total	17	15	14	13	15
	a	**a**	**a**	**a**	**a**
	e	**e**	**e**	**e**	**e**
	f	f	f / h	‘	h
	ng	ng (g)	n	n	n
	h	s	h	‘	h
	i	**i**	**i**	**i**	**i**
	k	‘	‘	k	‘
	l	l	r	r	l
	m	**m**	**m**	**m**	**m**
	n	**n**	**n**	**n**	**n**
	o	**o**	**o**	**o**	**o**
	p	**p**	**p**	**p**	**p**
	t / s	t	t	t	k
	u	**u**	**u**	**u**	**u**
	v	v	v	v	w / v
	‘	‘	‘	‘	‘

Sources: For this and following tables, Churchward 1959; Milner 1966; Davies 1851; Savage (1962) 1980; Pukui and Elbert 1971; Whistler 1984, 1988, 1990, 1991a, 1991b.

Note: Letters in **boldface** represent phonemes that are constant throughout Polynesia.

ent missionary groups who established the various written Polynesian languages did not all use the same conventions. For example, in the Tongan language the velar nasal / ig / is written as *ng,* while in Samoan it is written simply as *g.*

A comparative summary of five of the major Polynesian alphabets--Tongan, Samoan, Rarotongan, Tahitian, and Hawaiian--is shown in Table 1. This table shows sound correspondences between the languages. The immutable consonants are *m, n,* and *p; v* might also be included here except that in Hawaiian it is sometimes pronounced (and always spelled) as a *w,* as in “Waikiki.” Unlike consonants, vowels are quite constant throughout Polynesia. Vowel changes in plant names from one island to the next are unusual. An exception is the name for *Morinda citrifolia,* the Indian mulberry, which in western Polynesia is *nonu,* in Tahiti and the Cook Islands is *nono,* and in Hawai‘i and the Marquesas is *noni.*

A comparison of each of the variable consonants--*f, g, h/s, k, l/r,* and *t*--in the same five Polynesian languages is shown in Tables 2 to 7. The words listed in these tables are all examples of cognates of ancient or original plant names. Cells with dashes are those where no word at all could be found. The letters in boldface are the consonants combined with the five vowels in each

TABLE 2. **The Proto-Polynesian *F***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
fa	**f**ala	**f**ara	**‘**ara	**h**ala	pandanus
kof**e**	‘of**e**	‘of**e**	ko**‘e**	‘o**he**	bamboo
‘u**fi**	u**fi**	u**fi**/u**hi**	u**‘i**	u**hi**	yam
foe	**fo**e	**ho**e	**‘o**e	**ho**e	paddle
fue	**fu**e	**hu**e	**‘u**e	**hu**e	vine

TABLE 3. **The Proto-Polynesian *G (= Ng)***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
hi**nga**no	si**ga**no	hi**na**no	i**na**no	hi**na**no	pandanus fl.
ngatae	**g**atae	**‘a**tae	**nga**tae	—	*Erythrina*
e**nga**	le**g**a	re**‘a**	re**nga**	‘ole**na**	turmeric
‘olo **nga**	so**g a**	ro**‘a i**	‘oro**nga**	‘olo**na**	*Pipturus*
—	—	—	—	—	
ngi**ngi**e	—	‘a**‘i**e	nga**ngi**e	—	*Pemphis*
la**g i**	la**gi**	ra**‘ i**	ra**ngi**	l a**n i**	sky
ngongo	**gogo**	—	**ngo**io	**no**i o	noddy
ngutu	**gu**tu	**‘u** t u	**ngu**tu	**nu**ku	village

TABLE 4. **The Proto-Polynesian *H***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
ma**ha**me	ma**sa**me	ma**ha**me	ma**‘ a**me	me**ha**me	*Glochidion*
—	na**se**	na**he**	‘ana**‘e**	—	*Asplenium*
hingano	**si**gano	**hi**nano	**‘i**nano	**hi**nano	pandanus fl.
a**hi**	a**si**	a**hi**	a**’i**	ilia**hi**	sandalwood
hoi	**so**i	**ho**i	**‘o**i	**ho**i	bitter yam
ka**ho**	‘a**so**	a‘e**ho**	kaka**‘o**	‘a**ho**	a reed
i**hu**	i**su**	i **hu**	—	i **hu**	nose

TABLE 5. **The Proto-Polynesian *K***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
ka**k**ute	**‘**a**k**ute	**‘**a**k**ute	**k**a**k**ute	—	hibiscus
ka**l**a**k**a	**‘**a**l**a‘**a**	—	**k**a**r**a**k**a	**‘**a**l**a‘**a**	*Planchonella*
ka**v**a	**‘** a**v**a	**‘**a**v**a	**k**a**v**a	**‘** a**w**a	kava
ke**l**e**k**e**l**e	**‘**e**l**e‘**e**le	**‘**e**r**e‘**e**re	**k**e**r**e**k**e**r**e	**‘**e**l**e‘**e**le	dirt
ki**e** **k**i**e**	**‘**i**e**‘**i**e	**‘**i**e**‘**i**e	**k**i**e** **k**i**e**	**‘** i**e**‘**i**e	*Freycinetia*
ko**f**e	**‘**o**f**e	**‘**o**f**e	**k**o‘e	**‘** o**h**e	bamboo
tō	**to**lo	**tō**	**tb**	**k o**	sugarcane
ku**m**ala	**‘**u**m**ala	**‘**u**m**ara	**k**u**m**ara	**‘**u**a**la	sweet potato

TABLE 6. **The Proto-Polynesian *R***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
la**l**u	**l**a**l**u	**r**a**r**u	**r**a**r**u	**l**a**l**u	leaf
mai**l**e	lau mai**l**e	mai**r**e	mai**r**e	mai**l**e	*Alyxia*
enga	**l**e**l**ga	**r**e‘ a	**r**e**r**nga	**‘oil**e**l**na	turmeric
le**l**va	**l**e**l**va	**r**e**r**va	**r**e**r**va	—	*Cerbera*
‘u**l**i	u**l**i	u**r**i	u**r**i	u**l**i	black
po**l**o	p o**l**o	‘opo**r**o	po**r**o**r**o	popo**l**o	*Solanum*
ua	**l**u**l**a	**r**u**r**a	**r**u**r**a	**l**u**l**a	two

TABLE 7. **The Proto-Polynesian *T***

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
ta**t**lo	**t**a**t**lo	**t**a**t**ro	**t**a**t**ro	**k**a**k**lo	taro
ta**t**manu	**t**a**t**manu	**t**a**t**manu	**t**a**t**manu	**k**a**k**mani	*Calophyllum*
kau**t**e	‘au**t**e	‘au**t**e	kau**t**e	—	hibiscus
si	**t**i	**t**i	**t**i	**k**i	ti plant
si**t**ale	**t**i**t**ale	**t**i**t**are	**t**i**t**are	—	gardenia
ma**s**i	ma**t**i	ma**t**i	ma**t**i	—	fig
to**t**a	**t**o**t**a	**t**o**t**a	**t**o**t**a	**k**o**k**a	ironwood
to**t**u	**t**o**t**u	**t**o**t**u	**t**o**t**u	**k**o**k**u	*Cordia*
tu**t**i**t**u**t**i	**t**u**t**i**t**u**t**i	**t**u**t**i**t**u**t**i	**t**u**t**u**t**i	**k**u**k**u**k**i	candlenut

TABLE 8. **Traditional Plant Names Widespread in Polynesia, by Island Group**

Species	Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i
Alyxia spp.	maile	laumaile	maire	maire	maile
Angiopteris evecta	—	nase	nahe	‘āna‘e	—
Amorphophallus paeoniifolius	teve	teve	teve	teve	—
Barringtonia asiatica	futu	futu	hutu / hotu	‘utu	—
Bischofia javanica	koka	‘o‘a	koka	koka	—
Cananga odorata	mohokoi	moso‘oi	moto‘i	mata‘oi	—
Casuarina equisetifolia	toa	toa	toa	toa	koa[1]
Colocasia esculenta	talo	talo	taro	taro	kalo
Cordyline fruticosa	sī	ti	ti	ti	ki
Cucumis melo	‘atiu	‘atiu	‘atiu	—	—
Dendrocnide spp.	salato	salato	halato[1]	—	—
Dioscorea alata	‘ufi	ufi	u‘i	ufi / uhi	uhi
Dioscorea bulbifera	hoi	soi	hoi	o‘i	hoi
Eugenia rariflora	unuoi	unuoi?	nioi?	ni‘oi	nioi
Fagraea berteroana	pua	pua lulu	pua	pua	—
Ficus tinctoria	mati	mati	mati	mati	—
Gossypium hirsutum	vavae	vavae	vavai	—	—
Ipomoea batatas	kumala	‘umala	‘umara	kumara	‘uala
Macropiper spp.	kavakava ‘ulie	‘ava‘ava aitu	kavakava i ra‘i	kavakava atua	—
Morinda citrifolia	nonu	nonu	nono	nono	noni
Piper methysticum	kava	‘ava	‘ava	kava	‘awa
Pipturus argenteus	‘olongā	soga	ro‘ā	‘orongā	‘olona[1]
Pisonia grandis	puka	pu‘a vai	pu‘a tea	puka tea	—
Planchonella spp.	kalaka	‘ala‘a	—	karaka[1]	‘ala‘a
Premna serratifolia	volovalo	aloalo	‘avaro	—	—
Santalum spp.	ahi	asi[1]	ahi	a‘i	iliahi
Schizostachyum glaucifolium	kofe	‘ofe	‘ofe / ‘ohe	ko‘e	‘ohe
Solanum americanum	polo	polo	‘oporo	poroporo	popolo
Spondias dulcis	vi	vi	vi	vi	wi
Syzygium malaccense	fekika	fi‘afi‘a	ka‘ika	ka‘ika	‘ahi‘a
Tournefortia argentea	touhuni	tausuni	tahinu	tau‘unu	—

[1] Name applied to a different genus.

of the five island groups. A list of traditional plant names that have cognates extending throughout most of Polynesia is shown in Table 8.

The formation of cognates, that is, the change of a plant name into a similar but nonidentical form in another archipelago, has occurred naturally over the three thousand or so years of Polynesian history, aided by the isolation of the islands from each other. However, a few names that resemble

TABLE 9. **Polynesian Plant Names Derived from English Names**

Tonga	Samoa	Tahiti	Rarotonga	Hawai‘i	English
‘apele	‘apu	‘apara	‘apara	‘apala	apple
‘avoka	‘avoka	‘avota	‘avota	**pea**	avocado
kapisi	kapisi	**pota**	kapati	kapiki	cabbage
manioke	manioka	maniota	maniota	manioka	manihot (cassava)
kofi	kofe	taofe	kaope	kope	coffee
koane	**saga**	**tb papa‘a**	koni	kulina	corn
kiukamapa	kukama	totoma?	kukama	ka‘ukama	cucumber
kuava	ku‘ava	tuava	tuava	kuawa	guava
lemani	—	raimene?	remeni	lemi	lemon
lile	lili	riri	riri	lilia	lily
mango	mango	**ve popa‘a**	vi mango	manako	mango
meleni	meleni	mereni	mereni	**ipu**	melon
onioni	aniani	oniani	‘oniani	**‘aka‘akai**	onion
pasiole	patiale	—	patiore	—	patchouli
piini	pi	pipi	pi	pi	pea
pinati	pinati	**aratita**	**‘aratita**	pineki	peanut
fala	**fala**	painapo	**‘ara**	**hala kahiki**	pineapple
pateta	pateta	putete	pitete	**‘uala kahiki**	potato
hina	mauteni	mauteni	motini	**pala‘ai**	melon
tamaline	tamalini	tamareni	tamereni	**wi ‘awa‘awa**	tamarind
temata	tomato	tomati	tomati	kamako	tomato

Note: Names in **boldface** are not cognates and have a different origin.

original cognates have been formed recently, in a single stroke of the pen, based on borrowings from non-Polynesian languages (usually English) when new plants are introduced from other countries. Linguistically, these derived names are not actually cognates and do not indicate any similarity between the two languages. The fact that the Tongan *pulukamu* is derived from the English name “blue-gum” *(Eucalyptus)* does not indicate similarity between the two languages.

Derived names may occasionally be taken from other Polynesian or Melanesian names: the *bele* of Fiji has become the *pele* (*Hibiscus manihot*, spinach tree) of Tonga and Samoa. There is at least one documented case of a Polynesian name being derived prehistorically from a South American language. The name for the sweet potato *(Ipomoea batatas)* throughout Polynesia is *kumara* and its cognates, and these appear to be derived from its name in an American Indian dialect of Peru or Ecuador. A list of Polynesian plant names that are derived from English names is shown in Table 9.

An interesting variation of cognates are plants that are called by one name or its cognates in eastern Polynesia and by another name or set of cog-

nates in western Polynesia. Few plant examples are found that extend across the whole region, but one is *Guettarda speciosa,* which is called by cognates of *puapua* throughout western Polynesia, but by cognates of *tafano* throughout eastern Polynesia. Another example is *Cassytha filiformis,* which is called by cognates of *fetai* in western Polynesia, but by cognates of *taino'a* in eastern Polynesia.

For most of these plants with different sets of cognates in western and eastern Polynesia, the western Polynesian names are considered to be closer to the names in Proto-Polynesian. These names were apparently taken to eastern Polynesia, where they were replaced by another name before being carried to other islands of the region. An exception is *Tacca leontopetaloides* (Polynesian arrowroot). Its eastern Polynesian name *pia* appears to have been the original one, since it is a cognate of the Fijian name for the plant, *yabia.* Apparently the name changed on one island of western Polynesia, and this change somehow spread to the other islands of this area.

Another interesting variation in Polynesian plant names is intrageneric name change. There are a few examples of Polynesian genera where the name of one species in western Polynesia is applied instead to another species of the same genus in eastern Polynesia. In western Polynesia, the forest tree *Calophyllum neo-ebudicum* is called *tamanu,* but the species is not present in eastern Polynesia. However, the name is present there, applied instead to a different species of the genus, *C. inophyllum.* In western Polynesia, this latter tree is called *fetau* or *feta'u,* a plant name apparently without cognates in eastern Polynesia.

A second example involves the genus *Cordia.* In western Polynesia *C. aspera,* a rare forest tree, is called *tou,* but the species is not found in eastern Polynesia. However, the name is present in eastern Polynesia, where it is applied to the widespread littoral tree *C. subcordata,* which is called *kanava* and its cognates in western Polynesia.

The comparison of cognates is a useful tool for determining the geographical source of a plant. For example, the rare Polynesian melon *Cucumis melo* is (or was) called *'atiu* in Samoa, *'atiu* in Tahiti, and *katiu* in the Marquesas. The presence of the *k* in the Marquesas name is to be expected because the / k / sound has been preserved in Marquesan, and the glottal stop in Samoan and Tahitian is consistent with these two languages that lack a *k.* What is not expected is the now all-but-forgotten Tongan name *'atiu,* which would be expected to be *katiu* in Tongan, which like Marquesan, has preserved the *k.* The Tongan name may indicate a more recent introduction of the melon, along with its name, to Tonga from Samoa, after Samoan had already lost its *k.* Rensch similarly explored the origins of the sweet potato in Polynesia (1991).

Coining New Names for New Plants

The second source of variation in plant names in Polynesia is the coining of new names for new plants. When Polynesian voyagers discovered and settled uninhabited lands, the notable plants that were new to them required new names. If a plant was unique to the island or archipelago, then its name would likely remain only there and would not be spread to new areas discovered (unless it was applied to another species reminiscent of the first one). These locally derived names do not have cognates in other Polynesian languages. The determination that a name is local may sometimes be misleading, however, because some names that appear to be restricted to one island or archipelago may have been lost elsewhere or may not yet have been recorded from related languages.

An interesting case of a locally coined name is illustrated in the genus *Diospyros*. In western Polynesia, the two most common species, *D. samoensis* and *D. elliptica*, are called *ʻauʻauli* (Samoan) or *tutuna* (Tongan) and *ʻanume* (Samoan) or *kanume* (Tongan), respectively. In Hawaiʻi, however, the two native species of the genus are called *lama*, a local name with no cognates elsewhere in Polynesia (although *rama* is used for an unrelated species in the Northern Cooks). Because the genus is absent between Niue and Hawaiʻi, the western Polynesian names were long forgotten before Hawaiʻi was discovered.

The case of *Myoporum* in Hawaiʻi is a contrasting example. Since the genus is absent from the two archipelagoes believed to have contributed to the settlement of Hawaiʻi (i.e., the Society Islands and the Marquesas), a newly coined local name is to be expected. However, the Hawaiian name for *M. sandwicense* is *naio*, which is a cognate of *ngaio* that is applied to the genus in the Cook Islands, the Austral Islands, and New Zealand. Perhaps there were some immigrant Cook Islanders on the voyage of discovery from Tahiti to Hawaiʻi, or perhaps the tree was recognized from some traditional Tahitian chant, but both of these suggestions are just speculation. (Another possibility is that the tree once grew in the Society or Marquesas Islands and then become extinct, but this is unlikely.)

Coining New Names for Old Plants

The third source of the variety of plant names in Polynesia is the coining of new names for old plants. The utility of making up new names for well-known plants and the mechanisms involved are not readily apparent. One likely cause occurs when a plant name (or other word) is similar to the name or title of a person who has become sacred or prestigious; in such a case, the person’s name or title is taboo and a new name is chosen for the plant.

TABLE 10. **Polynesian Plant Names with Local Changes, by Island Group**

Species	Tonga	Samoa	Tahiti	Rarotonga	Hawai'i
Acrostichum aureum	hakato	sa'ato	**'aoa,** pi ha'ato	pia hakato	—
Aleurites moluccana	tuitui	**lama**	**ti'airi**	tuitui	kukui
Alocasia macrorrhiza	kape	**ta'amu**	'ape	kape	'ape
Caesalpinia spp.	talatala-'amoa	**'anaoso**	tataramoa	tataramoa	kakalaioa
Calophyllum inophyllum	tamanu	tamanu	**'ati**	tamanu	kamani
Cocos nucifera	niu	niu	**ha'ari**	nu	niu
Cyathea spp.	ponga	**olioli**	**mama'u**	panga	—
Cyrtosperma chamissonis	**via**	pula'a	**ma'ota**	puraka	—
Dioscorea pentaphylla	**lena**	pilita	**patara**	pirita	pi'a
Erythrina spp.	ngatae	gatae	'atae	ngatae, 'oviriviri?	**wiliwili**
Ficus prolixa	**'ovava**	aoa	**'ora'a,** 'aoa	aoa, **ava**	—
Glochidion spp.	**malolo**	masame	ma'ame	mahame	mehame[1]
Hernandia nymphaeifolia	**fotulona**	pu'a	**ti'anina**	puka	—
Hibiscus tiliaceus	fau	fau	**purau**	'au, **purau**	hau
Inocarpus fagifer	ifi	ifi	**mape**	i'i	—
Oxalis corniculata	kihikihi	'ii	**patoa**	koki'i	'ihi
Scaevola taccada	ngahu	**to'ito'i**	naupata	nga'u	naupaka
Thespesia populnea	milo	milo	**'amae**	miro	milo
Vitex trifolia	lalatahi	**namulega**	—	rara	—
Zingiber zerumbet	**angoango**	'avapui	**re'a moeruru**	**kopi 'enua**	'awapuhi

Note: Names in **boldface** are the new names.

[1] This name applies to a similar related genus, since *Glochidion* is not found in Hawai'i.

In Tahiti, the word for water, *vai,* was changed to *pape* when a person of high rank took on the name Vaira'atoa (and consequently the capital of the Society Islands is now Pape'ete instead of Vai'ete). Tahitian names such as *ha'ari* (coconut, called *niu* in most of the rest of Polynesia) and *aito* (iron-wood, called *toa* elsewhere) may also have originated in this way. However, a cognate of *ha'ari* in the Cook Islands, *'akari,* refers to coconut oil. A list of examples of local names changed from their widespread cognates is shown in Table 10.

Other, Minor Causes of Variation

The vast majority of the variation in plant names between different islands of Polynesia can be attributed to the three causes already discussed. However, there are a few causes of minor importance that should be mentioned. One example is on the island of Niuafo‘ou, where the name for *Laportea interrupta* is not *hongohongo* as in the rest of Tonga, but *ngohongoho,* which is formed by a reversal of syllables. Other examples of plants with a similar change, called “metathesis” by linguists, are hard to come by in Polynesia.

Another interesting example is the regular change in vowels. In Tonga, and apparently nowhere else in Polynesia, plant names (and other words) that normally would contain two *a*’s often have the first one changed to an *o.* This shows up best in names involving reduplication, a doubling of syllables; the Samoan plant names *puapua, aloalo, nu‘anu‘a,* and *fu‘afu‘a* are in Tongan *puopua, volovalo, nukonuka,* and *fukofuka,* respectively.

A third minor cause of variation in Polynesian plant names is the misapplication of names. Sometimes for reasons that are not always readily apparent, a plant is called by a name that should be applied to another plant present. In the Cook Islands, *karaka* is applied to *Elaeocarpus tonganus.* Elsewhere in Polynesia this name and its cognates usually apply to the genus *Planchonella,* which is also present in the Cooks. In most of Polynesia, the name *olongā* applies to *Pipturus argenteus,* whose bark is used to make fishing lines and nets. In Hawai‘i, however, the name *‘olona* is applied to the genus *Touchardia,* and the native species of *Pipturus* are called *mamaki.* In this case, the fibers of *Touchardia* are better for making cordage than *Pipturus,* so the name change is based on plant usage rather than appearance.

This change of name based on ethnobotanical use is not unique. The name in western Polynesia for turmeric *(Curcuma longa)* is *ago (ango),* but in eastern Polynesia it is *lega* and its cognates. The latter name is derived from the Proto-Polynesian word for “yellow,” which is the color of the dye obtained from turmeric. The general Polynesian name for the candlenut tree *(Aleurites moluccana)* is *tuitui* and its cognates, but in Samoa it is *lama* and in the Marquesas it is *‘ama.* The latter two names mean “torch,” a use to which the nuts of the tree are put.

Classification of Polynesian Plant Names

Polynesian plant names can be put into categories in a number of ways other than distinguishing ancient versus modern names and cognates versus local names as described above. Another way is to categorize them into proper names and descriptive names. Proper names are used almost exclusively for

a certain plant, rather than being words with other meanings. Descriptive names are typically based on some characteristic of the plant, such as place of origin, uses, habitat, and so forth.

Most proper names are ancient in origin, but descriptive names are often applied to introduced plants. Many descriptive names are modified, and if they are not, then the reference to the plant is obvious by the context of the sentence. The existence of a plant name that also refers to something else usually indicates that the object and the plant so named have something in common.

The use of modifiers points out another way to categorize plant names, a distinction based on complexity; names are either simple (unmodified) or compound (with modifiers). Unlike in English, Polynesian modifiers follow the word they modify. The modifiers most commonly used in Polynesia indicate: colors, uses, habitat or distribution, physical characteristics (taste, smell, texture), similarity to other plants, country of origin, source of introduction, commemorative quality, and comparison to animals.

Color is one of the most widely used methods of modifying Polynesian plant names. The most common color modifiers are "black," "red," "white," and "silver." *Vao ʻuli* in Samoan, for example, means "black weed," *mataʻura* in Tahitian means "red eye," and *talo tea* in Tongan means "white taro." The cognates *sina* and *hina* are widely used to describe plants shiny white or silver in color.

Plant name modifiers based on the uses of the plant are less common than colors. Examples include the Samoan name *fanamanu (Canna indica),* which means "to shoot birds" (the seeds are used for pea shooters), and the Hawaiian *ʻohiʻa ʻai (Syzygium malaccense),* which means "edible *Syzygium* species."

Some of the most common plant name modifiers deal with whether the plant is found on the shore *(tai, tahi, taʻatai, kahakai),* inland *(ʻuta, uta, mauka),* or in the "bush" *(vao)* rather than in cultivated areas. These modifiers are usually applied to groups of related plants that are distinguished mainly by where they grow. Plant names are often modified based on physical characteristics, most commonly the texture of the leaves, their smell, or their taste. Sedges with sharp-edged leaves, for example, are called *selesele* ("cut-cut") in Samoa and *ʻotiʻoti* (same meaning) in the Cooks, while the red chili pepper is called *polo fifisi* in Tonga and *polo feu* in Samoa, both of which mean "hot" *polo* (herbs related to tomatoes).

Some plants that have a resemblance to others are called by names that have the name of the other plant as a modifier. Large leafed grasses (typically *Oplismenus compositus*) are called *mohuku laukofe* in Tonga, *koʻekoʻe* in Rarotonga, and *ʻoheʻohe* in Tahiti, based on their similarity to the Polyne-

sian bamboo (called *kofe, koʻe,* and *ʻohe* in the three, respectively). Also, sometimes the plant is given an unmodified descriptive name based on some other plant that is known, but does not occur, in the country, such as *oke* and *paina* for oaklike and pinelike plants in Tonga and Hawaiʻi, respectively. Most of the plants named in this way are introduced species.

The country of supposed origin is a commonly used modifier, and this obviously applies to introduced plants. Perhaps the most common modifiers distinguish between plants that are local in origin and similar ones that are introduced. For plants designated as "local," the modifiers are usually the name of the local country, such as the Tongan *(siale Tonga)* and Samoan names *(pua Samoa)* for the Tahitian gardenia. In Tahiti and the Cook Islands, the modifier is usually the name for the local people, such as the Rarotongan name *tiare maori* or the Tahitian name *ʻaute maohi.* The Rarotongan modifier *ʻenua* ("of the land") is used in the same sense. The opposite to these modifiers, meaning the introduced or European type, is *palagi* or *papala(n)gi* in Samoan or Tongan (which uses an *ng* instead of a *g*), *popaʻa* in Tahitian, *papaʻa* in Rarotongan, and *haole* in Hawaiian. "China" or "Chinese" is also a popular modifier, *tinito* in Tahitian, *taina* in Rarotongan, *saina* in Samoan, and *siaina* in Tongan.

A few plant names are modified by the names of individuals who are thought to have introduced the plant to the island (as we do in English with names like "Koster's curse"). These names may be simple as well--by just using the person's name for the plant. In Samoa and Tonga, the ladyfinger banana is named after the missionaries who apparently introduced the plant--*misiluki* (Missionary Luke) and *misipeka* (Missionary Baker), respectively.

Names in the commemorative category are coined because of some perceived similarity of the plant to some historical or mythological character. *Matamoso* and *matamoho,* for example, mean "the eyes of Moso" (Samoa) or Moho (Tonga), a Polynesian demigod. Sometimes the names are taken out of the Bible, such as the Rarotongan palm *nu tamara,* named after the biblical character Tamara.

Animal names or animal products are also commonly used modifiers. For example, *fulu lupe* (pigeon's feathers) is a plant name in Tonga; the unmodified Samoan name *mamoe* (sheep) is applied to *Celosia argentea* because of similarity in looks to sheep. The modifiers often take the form of the local word for excrement, indicating that the plant is of little use. This is particularly common in Tonga, where *teʻe* (excrement) is modified by *hoosi* (horse), *lango* (fly), *pulu* (bull), *manu* (bird), and *kosi* (goat), and the resulting names are applied to various weeds. The Samoan *tae,* the Rarotongan and Tahitian *tutae,* and the Hawaiian *kukae* are used similarly. Sometimes

TABLE 11. **Fijian Cognates of Polynesian Plant Names**

Species	Fiji	Tonga	Samoa
Alphitonia zizyphoides	**ndoi**[1]	**toi**	**toi**
Alpinia spp.	**tevunga**	**tevunga**	teuila?
Balaka spp.	**niuniu**	—	**maniuniu**
Bambusa vulgaris	**mbitu**	**pitu**	‘ofe
Barringtonia asiatica	**vutu**	**futu**	**futu**
Benincasa hispida	**vango**	**fagu**	**fagu**
Bischofia javanica	**koka**	**koka**	**‘o‘a**
Calophyllum neo-ebudicum	**ndamanu**	**tamanu**	**tamanu**
Cananga odorata	**makasoi**	**mohokoi**	**moso‘oi**
Centella asiatica	**totondro**	**tono**	**togotogo**
Cerbera spp.	**rewa**	toto	**leva**
Citrus spp.	**moli**	**moli**	**moli**
Cocos nucifera	**niu**	**niu**	**niu**
Colocasia esculenta	**ndalo**	**talo**	**talo**
Cordia aspera	**tou**	**tou**	**tou**
Cordia subcordata	**nawanawa**	**puataukanave**	**tauanave**
Curcuma longa	**thango**	**ango**	**ago**
Cycas rumphii	**longolongo**	**longolongo**	lau pama
Decaspermum spp.	**nunganunga**	**nukonuka**	**nu‘anu‘a**
Dendrocnide harveyi	**salato**	**salato**	**salato**
Dendrolobium umbellatum	**ndrala**	**lala**	**lala**
Dioscorea alata	**uvi**	**‘ufi**	**ufi**
Diospyros maba	**mamba**	**mapa**	—
Diospyros samoensis	**kaukau loa**	tutuna	**‘au‘auli**
Eleocharis dulcis	**kuta**	**kuta**	**‘utu**
Entada phaseoloides	**walai**	**valai**	fue inu
Epipremnum pinnatum	**yalu**	**alu**	fue laufao
Erianthus maximus	**vitho**	—	**fiso**
Euodea hortensis	**uthi**	**uhi**	**usi**
Fagraea berteroana	**mbua**	**pua**	**pua lulu**
Gardenia taitensis	**mbua**	siale	**pua**
Geophila repens	**totondro**	**tono**	**tono**
Gossypium spp.	**vauvau**	**vavae**	**vavae**
Guettarda speciosa	**mbuambua**	**puopua**	**puapua**
Gyrocarpus americanus	**wiriwiri**	**pukovili**	**vilivili**
Hernandia moerenhoutiana	**pipi**	**pipi**	**pipi**
Hibiscus tiliaceus	**vau**	**fau**	**fau**
Inocarpus fagifer	**ivi**	**ifi**	**ifi**
Intsia bijuga	**vesi**	**fehi**	ifilele
Ipomoea batatas	**kumala**	**kumala**	**‘umala**
Lumnitzera littorea	**sangali**	**hangale**	—
Metrosideros collina	**vunga**	**vunga**	(no name)
Musa paradisiaca	**vundi**	**fusi**	fa‘i
Musa troglodytarum	**soanga**	—	**soa‘a**

(continued)

TABLE 11. **Continued**

Species	Fiji	Tonga	Samoa
Neisosperma oppositifolium	**vaoko**	**fao**	**fao**
Pandanus spp. (weaving kinds)	**kiekie**	**kie**	**lau'ie**
Parinari insularum	**sea**	**hea**	**sea**
Pemphis acidula	**ngingie**	**ngingia**	—
Phaleria disperma	**sinu**	**huni**	**suni**
Pipturus argenteus	**rongā**	**olonga**	**soga**
Pisonia grandis	**mbuko**	**puko**	**pu'avai**
Planchonella grayana	**ngalaka**	**kalaka**	**'ala'a**
Polyscias spp.	**ndanindani**	**tanetane**	**tagitagi**
Premna serratifolia	**yaro**	**volovalo**	**aloalo**
Pritchardia pacifica	**viu**	**piu**	**piu**
Pueraria lobata	**yaka**	**aka**	**a'a**
Rhizophora spp.	**ngongo**	**tongo**	**togo**
Santalum yasi	**yasi**	**asi**	—
Sesbania coccinea	**vaivai**	**'ohai**	—
Solanum spp.	**mboro**	**polo**	**polo**
Syzygium malaccense	**kavika**	**fekika kai**	**nonu fi'afi'a**
Syzygium spp.	**yasiyasi**	fekika	**asi**
Tacca leontopetaloides	**yambia**	**(pia)**[2]	**(pia)**[2]
Thespesia populnea	**mulomulo**	**milo**	**milo**
Trichospermum spp.	**mako**	—	**ma'o ui?**
Veitchia joannis	**niusawa**	**niukula**	—
Vigna marina	**ndrautolu**	**lautolu**	fue sina

Source: Names from Fiji were taken from Smith 1979-1991; for Samoa, Whistler 1984; for Tonga, Whistler 1991a.

Notes: Names in **boldface** are cognates. A dash indicates the plant is not present there.

[1] The *nd, mb,* and *ng* of Fiji are pronounced this way but are usually written as *d* and *b,* respectively.

[2] The *pia* in Tonga and Samoa is the old name for *Tacca leontopetaloides.*

the modifier "rat's" or "pig's" is used in a similar fashion to denote a useless plant.

Comparison to Other Pacific Languages

The utility of comparing Polynesian plant names also applies to other non-Polynesian Pacific languages, particularly Fijian, especially when compared with Tongan names. A list of cognates shared by Polynesian languages (Tongan and Samoan) and Fijian is shown in Table 11. The Fijian names were taken from Smith (1979-1991).

However, farther from Polynesia the usefulness of plant name comparisons decreases. There is much less similarity between Micronesian and

TABLE 12. **Micronesian (Kiribati) Plant Name Cognates**

Species	Kiribati	Tonga	Samoa
Alocasia macrorrhiza	**kabe**	**kape**	ta‘amu
Artocarpus altilis	**mai**	**mei**	‘ulu
Colocasia esculenta	**taororo**	**talo**	**talo**
Cordia subcordata	**kanawa**	**puataukanave**	**tauanave**
Cordyline fruticosa	**rau ti**	**lau ti**	**lau ti**
Curcuma longa?	**renga**	**ango enga**	ago
Gardenia taitensis	**tiare**	**siale**	pua
Hibiscus tiliaceus	**rao, rau**	**fau**	**fau**
Inocarpus fagifer?	**ibi**	**ifi**	**ifi**
Ipomoea batatas	**kumara**	**kumala**	**‘umala**
Morinda citrifolia	**non**	**nonu**	**nonu**
Neisosperma oppositifolium?	**bao**	**fao**	**fao**
Pemphis acidula	**ngea**	**ngingie**	(no name)
Pisonia grandis	**buka**	**puka**	**pu‘avai**
Rhizophora spp.	**tongo**	**tongo**	**togo**
Solanum viride	**boro**	**polo**	**polo**

Source: Thaman 1987.

Notes: Cognates are in **boldface,** Scientific names followed by question marks are not certain, but the Kiribati name is a cognate.

Polynesian names, for two major reasons. The most important reason is probably that most of Micronesia comprises atolls with impoverished floras. Because many fewer species are present, there are fewer plants to share names. The other reason is that historically there was relatively little contact between Polynesia and Micronesia, except at their interface, that is, between Kiribati (formerly called the Gilbert Islands) and Tuvalu (formerly called the Ellice Islands). A list of cognates between Kiribati (Thaman 1987) and Polynesia is shown in Table 12.

One other name should be mentioned, the Samoan *ifilele (Intsia bijuga).* Its names in Fiji and Tonga are different (*vesi* and *fehi,* respectively), but the Guamanian name *ifil* is a cognate. Few if any other Samoan names show this kind of affinity with Micronesia rather than similarity to the rest of Polynesia.

The comparison of plant names to support theories of colonization in Polynesia is sometimes possible, but it often produces contradictory evidence and is thus considered beyond the scope of this article.

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