A Note on Palauan Food Categories: *Odóim* versus *Ongráol*

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INTRODUCTION

The Palau Islands chain extends northeast to southwest, with a long axis of some 100 miles. The islands lie southwest of Guam, north of New Guinea and due east of Mindanao. The Palau Islands form the major group of Palau District, Trust Territory of the Pacific Islands. They are located about 180 miles from the southwestern outer islands of the same District, such as Tobi, Sonsorol, and Pulo Anna (Figure 1).

Palau consists of more than 300 islands that range in size from massive volcanic islands to tiny reefs and islets. Four types are included in the group; reef and atoll islands, platform islands, high limestone islands, and volcanic islands. The first three types are of coral origin. Babeldaob or Babelthuap, Arakabesan, Koror, Malakal, Auluptagel are volcanic; Urukthapel, Eil Malk, and other mushroom-shaped tiny islets at Iwayama Bay are high limestone islands; and Angaur and Peleliu are platform islands in the southern part of the group. The only inhabited atoll is Kayangel, the northernmost outlier of the Palau Islands.

In terms of human subsistence there are marked distinctions between volcanic and coral islands. Broadly speaking, volcanic islands are high in elevation, and have rich soils and a varied wild vegetation, thus providing a variety of food resources. In contrast, coral islands, especially atolls, are less productive owing to their smaller size, less fertile soils and poorer vegetation. Raised limestone islands are, in this sense, intermediate between the two [YEN 1973]. "The terrestrial fauna on [volcanic and coral]...islands is less distinct" [OWEN 1977]. Where large lagoons exist, there is an abundant and diverse aquatic fauna.

Based on the topographic and biological characteristics of the islands, the potential use of the natural resources differs, although faunal distinction is less clear. In addition, micro-environmental variables such as rainfall, wind direction, current flow, and local geography may also affect or actually modify resource allocation. Where not isolated, areas exploited by the islanders sometimes include the neighboring islands and reefs, which constitute a fundamental part of the supporting ecosystem. Thus "the degree of isolation of a coral island

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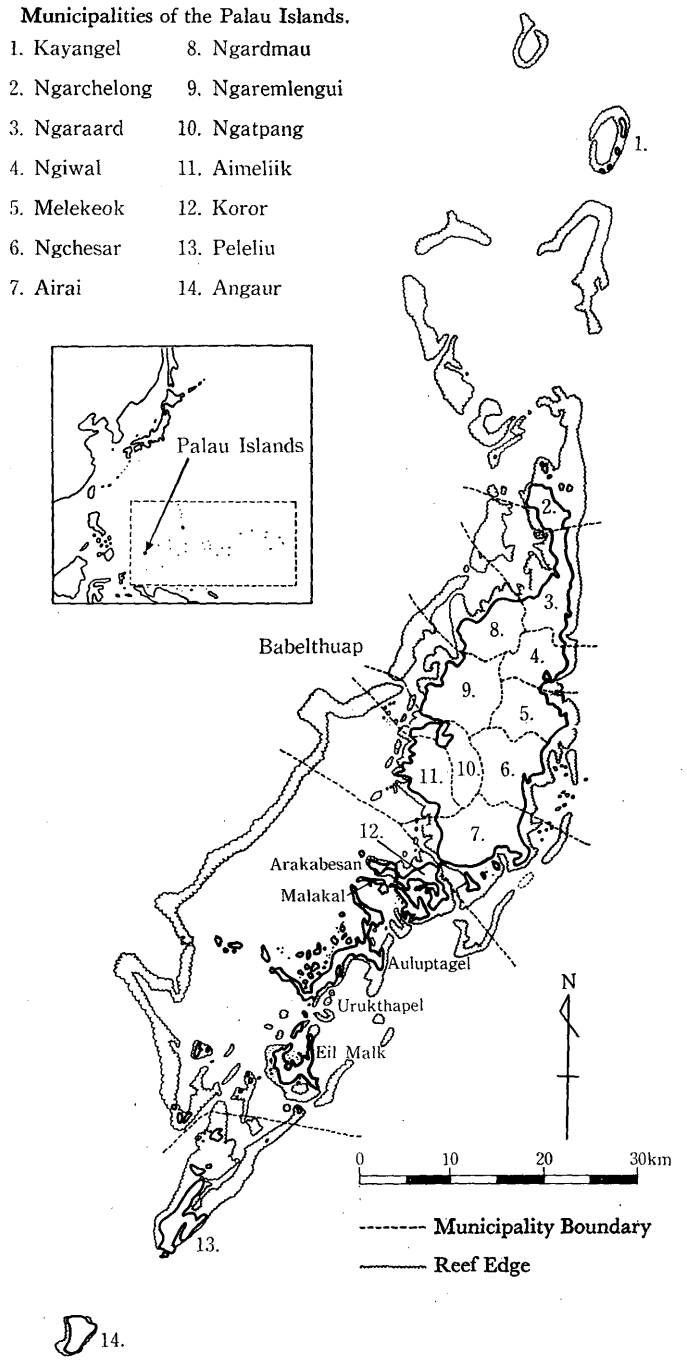

Figure 1. The Palau Islands.

very directly defines the total ecosystem" [ALKIRE 1978].

Palau Archipelago, as Alkire assumes, forms the volcanic "mainland" versus the "fringing reef island" structure; Babelthuap corresponds to the former, and Kayangel, Peleliu, Angaur and other neighboring islands and reefs to the latter. That being the case, cultural patterns between the two groups are the same, and the people share of the same resources under the same linguistic and political conditions [ALKIRE 1978]. This is not, however, intelligible if the perception and use of given resource system is quite identical, and if the people make decisions in a same manner; then questions arise as to the extent of uniformity.

This paper examines homogeneity and heterogeneity of resource perception and use by the Palauans [RUDDLE 1979]. The first objective is to provide a basic understanding of the diversity of the local ecosystems, aquatic and terrestrial, which are perceived and used by the people in their subsistence pursuits. The second aim is to document a variety of staple food resources, known locally as *odóim* and *ongrâol*, and their distribution among the different ecological settings. Finally, the ecological and cultural implications of food resources in the Palauan culture are discussed.

Fieldwork was conducted from December, 1978 to February, 1979 on Ngaremlengui municipality in Babelthuap, Kayangel, Peleliu, Koror, and Arakabesan. Despite my short stay in each area, I was able to obtain comparative information on the food resources of the Palau Islands.

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The orthography used here follows that of the "Palauan-English Dictionary" [MCMANUS 1977]. Glottal stop is expressed by *ch*, and stress by an acute accent (′), as in *dâob*, for example.

ENVIRONMENT AND RESOURCE AREAS IN PALAU

The biological and physical environments of three parts in the Palau group, Babelthuap, Peleliu, and Kayangel, are indicated in Figure 2. Characteristics of topography, vegetation, and resources in these three areas are described here, with special reference to the local perception of the environment.

Forests (*chereómel*) are found both in Babelthuap and Peleliu, although the vegetation is much poorer on the latter. *Chereómel* consists primarily of secondary forest, and even of rain forest, in which large trees of various families and palms,

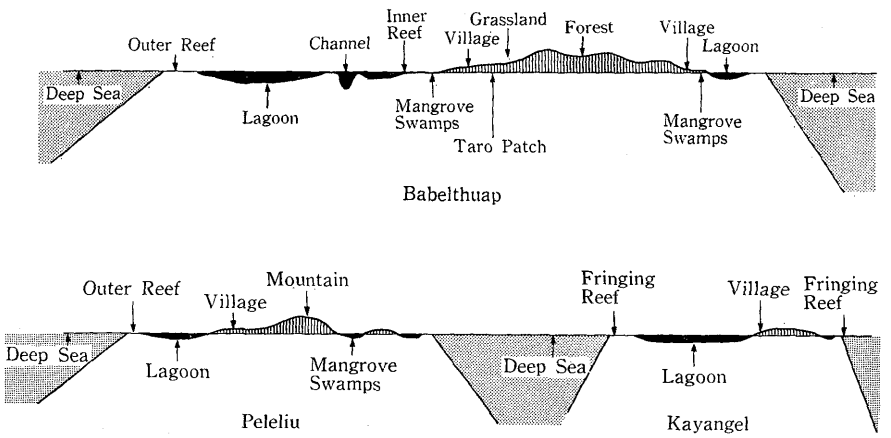

Figure 2. Schematic Cross-Section of Three Islands in Palau.

shrubs, and ferns occur. The associated terrestrial fauna consists of such animals as wild pig, wild chicken, and other birds. According to the local inhabitants, *chereómel* does not occur in Kayangel. However, both extremities of the island are wooded (*chullebóngel*, lit. "the edge of the village") where, *inter alia*, coconuts (*sīobra līus*), breadfruit, and large trees thrive.

Savanna or grassland (*ked*) occurs only on Babelthuap, with extensive tracts distributed throughout the island. There the flora is meager and is dominated by grasses and shrubs, and scattered pandanus, bamboo, and other small trees. Certain avifauna and wild pig are a supplementary food resource.

Locally, agricultural lands are divided broadly into *sers* and *meséi*. *Sers* is an upland garden for cassava, sweet potato, banana, and other crops; and *meséi* is a swampy field devoted to taro cultivation. Two main varieties of taro are cultivated; wet taro (*kukāu, Colocasia esculenta*) and giant taro (*brak, Cyrtosperma chamissonis*). Other kinds of aroid, such as *bīsech ra ruk* (*Xanthosoma sagittifolium*) and *bīsech* (*Alocasia macrorrhiza*), are cultivated elsewhere. Both *sers* and *meséi* are located in or near villages.

Belúu denotes a village or residential area. It sometimes indicates the area covered by both the village and its surrounding taro patch and gardens, and the term is also used to mean an island or land, when seen from the sea. Common crops in *belúu* are banana, mango, coconut, and other edible trees and shrubs. Taro is also common.

Rocky upland areas (*róis*) appear as limestone outcrops such as those on Urukthapel and Eil Malk, and the low hills in Peleliu where limestone formations are exposed. Despite its large size and a maximum elevation of 240 m, Babelthuap lacks *róis*. Areas of *róis* yield little in the way of food resources, except wild yam (*bellói, Dioscorea bulbifera*), used in periods of food shortage.

Mangrove swamp (*kebúrs*) lines the coasts of Babelthuap and the eastern coast

of Peleliu. It does not occur in Kayangel atoll. The main food resources obtained from *kebúrs* are mangrove crab (*chemâng*) and mangrove clams (*ngdúul, chedúib*). Formerly, mangrove seeds (*dénges*) were used as emergency food.

Rivers or streams (*omoâchel*) occur only on Babelthuap. River mouths mostly support mangroves, and brackish water species are sometimes caught there.

Not uncommonly in the tropics the marine environment is divided by a reef into a lagoon area and the open sea, thus forming two distinct ecosystems. In Palau, sea, which is generally called *dâob* or *chéi*, comprises the lagoon (*uét*) and the open sea (*ngoâol*). *Uét* literally denotes the sea area where there is seawater at all times, even at ebbing tide. Areas which become quite shallow during the ebbing phase but are submerged at high tide are referred to as *kerekér* at low tide and *dâob* at high tide. *Rrînges* is a sandy place which dries-up at ebb tide. A sandy beach is termed *chelechól*, and the coral areas, *merângd*. Here and there the reef is traversed by relatively deep or water channels (*toâchel*). The rocky border between the shallow sea and the channel is known as *rsâol*, and *medalmerângd* is the edge between *merângd* and *toâchel*. A raised place in the channel where reef fishes congregate is referred to as *molkosókl*. The zone of surf break is called *chelmóll*, the outer and the inner margin of which are termed *ikrél* and *debeâlt*, respectively. Areas inside the reef containing larger coral rocks that shelter fish are called *chis*.

Lagoons contain an abundance of coral fishes of many taxa. Indeed, about 500 fish species are listed for Palau [ABE 1939], more than 300 of which are locally identified by the Palauans [HELFMAN and RANDALL 1973]. Shallow waters like *kerekér* and *rrînges* are rich in marine invertebrates such as crabs, trepangs, sea-urchins, and shellfishes. Boundaries between the shallower lagoon and the reef channel or the open sea are the zones frequented by diurnal and nocturnal fish species. Outside of the reefs, tuna, bonito, wahoo, and the like are common.

In western and southern Babelthuap the lagoon is extensive and topographically varied, whereas on the east coast it is narrow and relatively uniform. Such geographical features are also observed in an atoll ecosystem; namely, windward and leeward. Most municipalities in Babelthuap are located either windward (east coast) or leeward (west coast), except Ngarchelong and Ailai, which are located at the two extremes of the island. On Kayangel and Peleliu both the windward and the leeward coasts are exploited for marine resources. On the other hand, Angaur, a typical raised limestone island, has a fringing reef and lacks a lagoon.

To an extent diversity in the biological and physical environment is, of course, correlated with the cognitive and behavioral aspects of the Palauan resource system. Spatial and temporal variations of fauna and flora become, for instance, good indicators of time-reckoning of the Palauans [KLEE 1976], and also generate the resource allocation in terms of time and space [WATANABE 1977].

A large variety of food resources are used mainly for subsistence. In general, technological levels are simple and low. Tools employed in agriculture are typical of slash-and-burn systems; knives and spade-like sticks supplemented by hands and feet, are used for clearing, digging, cutting, and harvesting. Cash crop plantations have low yields, except coconuts, which are used for copra-making. Fishing, too, is practised on a small-scale. Hooks, lines, spears, small nets and similar equipment are used from motor boats, and occasionally bamboo rafts, in shallow waters, mangrove swamps and river mouths. Though small in scale, milkfish (*Chanos chanos*) aquaculture is practiced in the mangrove areas of Peleliu.

Contemporary development of coastal fisheries in Palau has, however, encouraged commercial fishing. Fish products are supplied from neighboring areas to Koror, the urban center of Palau. More remote villages, however, lack adequate refrigeration and transportation facilities, and so are at a disadvantage. Even in Ngaremlengui municipality of west-central Babelthuap, a medium-sized box packed with ice is used for keeping fish fresh for a couple of days until they are transported by motor boat to Koror. Although a bonito fishery based on Palau holds great potential. Van Camp at Malakal island, has storage and processing facilities for large quantities of bonito. Frozen fish are air-freighted to Guam.

In the following sections the problems of resource diversities are discussed through the analysis of Palauan staple foodstuffs.

FOOD CATEGORIES

Based on Palauan concepts, a set of named categories of food resources is described below.

Kall is a general category of food, consisting of four major components: *ongrâol*, *odóim*, *klióu*, and *ilúmel*. *Ongrâol* is the term used for crops such as taro, breadfruit, cassava, sweet potato and imported rice. Most are starchy and are harvested from agricultural lands. In contrast to *ongrâol*, *odóim* of many varieties includes animal foodstuffs such as fish, shellfish, pig, bird, egg, crab, trepang, other marine invertebrates, and even tinned meat like corned beef. These are harvested from the seas and rivers, and occasionally captured in the forests and savannas. Also, they are purchased. Sometimes, coconut, banana, taro, and papaya are also added to this list. *Klióu* is possibly analogous to the western concept of dessert, and includes a variety of fruits; papaya, mango, jackfruits, orange and banana. Such plant foods as cassava, breadfruit, and introduced articles like cake, biscuit and candy are also included. Items for *klióu* are mostly cultivated in or near villages, and sometimes grow wild in the forest. Otherwise, they are purchased from stores and local markets. *Ilúmel* is a general term for beverages such as coconut milk, imported whisky, beer or canned juice.

Among the food resources certain crops are considered *klióu* as well as *ongrâol*,

but on the other hand no animal food is thought of as either *ongrâol* or *klióu*. The crops enumerated as *odóim* and/or *klióu* are described as follows (see Table 1-b, 1-c).

(a) as *odóim*

Demók: Edible leaves and stems of *Colocasia esculenta* are boiled with coconut cream, often mixed with fish or crab meat, and thus served as *odóim*.
Lîus: Ripe meat of coconut is eaten raw or grated.
Chisîl a túu: Banana blossoms, the inner part of which are chopped-up and squeezed in seawater and then freshwater, are eaten raw, like salad, or grilled with fish meat, crab, or shellfish.
Bóbai: Young fruit of papaya, diced and served as *odóim* after boiling.
Chemúti: Leaves and tubers of sweet potato boiled in water and then eaten flavored with coconut cream.
Kalbâsang: Young sprouts of pumpkin, after mixing with fish or crab meat, are eaten as *odóim*.

(b) as *klióu*

Túu: Ripe banana is eaten raw as *klióu*. Varieties served as *ongrâol* are either "cooking banana" or those not yet mature.
Diokang: Bitter cassava is first grated and washed to remove the acidic principle. It is then mixed with hot water and sugar, and eaten. The leftovers are mixed with coconut milk and water and made into dumplings (*dângo*). They are eaten as *ongrâol*.
Others: Rice and breadfruit are often fried, after being boiled and molded.

Crops listed above are used as *ongrâol*. The starch extracted from Polynesian arrowroot (*sebóseb*, *Tacca leontopetaloides*) is an exception, being eaten as *klióu* and not as *ongrâol*. It should be noted that *ongrâol* is starchy whereas *odóim* and *klióu* are mostly non-starchy.

Hence, crops categorized as either *odóim* or *klióu* are related partly to methods of cooking and processing, and partly to the part of the plant used, their stage of maturity and taste, and other factors. Coconut is considered merely as *odóim*. Palauan food categories are thus conceptualized with reference to local food habits rather than being based on simple distinctions of the biological domain, such as plant and animal.

Another important notion in the Palauan food categories is the binary pairing between *odóim* and *ongrâol*. Foods from these groups are usually paired to make-up a meal. This occurs in ordinary dishes as well as those eaten on ceremonial and ritual occasions, for which a plate with *odóim* and *ongrâol*, often accompanied by *klióu* and *ilúmel*, is prepared. *Klióu* and *ilúmel* are considered to be of minor importance since they are supplementary to the subsistence needs and to meals as well. But both *odóim* and *ongrâol* are the primary sources of food, the obtaining and preparation of which demands considerable time and energy.

Nevertheless, *ongrâol* seems to be a more reliable resource than *odóim* in terms of availability and dependability.

Other aspects of the binary opposition between *odóim* and *ongrâol* also exist. Major items for *odóim* are of aquatic origin, as is termed *odóim ra chéi* (*chéi*: sea). Probably this is a result of the meager terrestrial fauna. *Ongrâol* is exploited exclusively in or near villages. *Odóim* is mainly acquired by men through fishing and hunting, although sometimes it is gathered by women, whereas *ongrâol* and *klióu* are obtained exclusively by women. Articles for *odóim* are mostly of wild origin, with the exception of some domesticated animals such as pig and chicken. Those for *ongrâol* are all obtained from cultivated plants (*dellómel*). Wild plants (*dubechechútem*) are used chiefly for *klióu*.

Lastly, the term "to cook" is differentiated according to the *odóim* and *ongrâol* distinction; to cook *odóim* (*melengóes*) and to cook *ongrâol* (*melióng*). The only exception is for rice, for which the term *melengóes* is used.

RESOURCE DIVERSITIES AMONG THE MUNICIPALITIES

The large variety of food resources is not distributed equally among the islands and villages, nor is it utilized in a same manner by all the islanders. To illustrate the range and the content of the variable food resources in the group, data are presented here to show how these are differently perceived and used by the Palauans under similar cultural conditions. The distribution of food staples among different parts in the Palau Islands, taking into account of the native concepts on food ("food of the village" or *kelél a ikél belúu*), is described below.

Kelél a ikél belúu refers to a particular item of *odóim* and/or the combination of both *odóim* and *ongrâol*, rather than to a complete list of available food resources of a given village. The Palau Islands consist administratively of 14 chartered municipalities, each of which is further divided into several villages (*belúu*).

Each food resource is accounted for according to local concepts to show which is relatively more abundant and dependable than other resources. It is expected that each village of a given municipality has quite different items of *odóim* and *ongrâol*. However, no quantitative data are available at present for all the villages of the group. The main concern here is to examine food resources from various parts of Palau, thus inter-village differences are only mentioned occasionally. Comparisons are made at the municipality level. The present data were collected to present an understanding of food diversities, based on the cognitive realms of the Palauans.

Table 1-a presents data on the distribution of both *odóim* and *ongrâol* for the 14 municipalities. There is a marked tendency for various articles of *odóim* to be specific to each municipality, and no overlapping occurs. Most items are derived

Table 1-a. Distribution of *Odôim* and *Ongrâol* in Palau.

Municipality	*Odôim*	*Ongrâol*
Kayangel	*ngimr* (peanut worm)	*túu* (banana)
Ngarchelong	*kim* (giant clam)	*kukâu* (taro), *brak* (taro)
Ngaraard	*irechíil* (conch shell)	*kukâu*
Ngiwal	*demók* (cooked taro)	*kukâu*
Melekeok	*mud* (damselfish)	*kukâu*
Ngchesar	*chum* (hermit crab)	*kukâu, diokang* (cassava)
Airai	*meás* (rabbitfish), *sang* (spider shell)	*diokang*
Ngardmau	*sénges* (crab)	*kukâu, brak*
Ngaremlengui	*cheremrúm* (trepang)	*kukâu, diokang*
Ngatpang	*chemâng* (mangrove crab)	*diokang*
Aimeliik	*kmâi* (crab), *môlech* (trepang)	*diokang*
Koror	*tiuách* (hammerhead oyster)	*kukâu*
Peleliu	*kelât* (mullet)	*brak, telíb* (fermented breadfruit)
Angaur	*chechui* (Chiton shell)	*brak*

Table 1-b. Major Items of Plant Food and their Use by Food Category.

Scientific Name	Local Name	Category as Food		
		Ongrâol	*Odôim*	*Kliôu*
Cocos nucifera	*líus*		*	
Colocasia esculenta	*kukâu*	*	*	
Cyrtosperma chamissonis	*brak*	*		
Artocarpus spp.	*medúu*	*		*
Musa spp.	*túu*		*	*
Ipomoea batatas	*chemúti*	*	*	
Manihot spp.	*diokang*	*		*
Alocasia macrorrhiza	*bísech*♯	*		
Xanthosoma spp.	*bísech ra ruk*♯	*		
Carica papaya	*bôbai*		*	*
Tacca leontopetaloides	*sebôseb*			*
Dioscorea alata	*telngót*♯	*		
Dioscorea bulbifera	*bellói*♯	*		
Bruguiera gymnorhiza	*dénges*♯	*		
Inocarpus edulis	*keám*♯	*		
Terminalia catappa	*míich*			*
Eugenia spp.	*rebótel, kidel*			*
Ananas comosus	*ongorngebárd*			*
Mangifera indica	*iédel*			*

♯ : Items in a period of food shortage, * : Associated food categories.

Table 1-c. List of *Odóim* and their Scientific Identification.

Scientific Name	English Name	Local Name
Sipuncula		
Sipunculus nudud LINNÉ	peanut worm	*ngimr*
Echinodermata		
Holothuria axiologa, H. scabra	trepang	*mólech*
H. lecanora var.	trepang	*cheremrúm*
Mollusca		
Tridacnidae spp.	giant clam	*kim*
Gibberulus gibberulus gibbosus (RÖDING)	conch shell	*irechíil*
Lambis lambis (LINNÉ)	spider shell	*sang*
Malleus spp.	hammerhead oyster	*tiuách*
Chiton spp.	Chiton shell	*chechúi*
Pisces		
Siganus canaliculatus (PARK)	rabbitfish	*meás*
Pomacentrus spp.	damselfish	*mud*
Crenimugil crenilabis (FORSKÅL)	mullet	*kelât*
Crustacea		
Paguridae spp.	hermit crab	*chum*
Scylla serrata (FORSKÅL)	mangrove crab	*chemáng*
Portunus pelagicus (LINNÉ)	sea crab	*kmái*
Cardisoma spp.	land crab	*rekúng*
?	saltswasserkrebs*	*sénges*

* : Krämer [1929]

from the sea, particularly from mangrove, littoral and reef zones. Trepangs (*cheremrúm, mólech*), crabs (*kmâi, chemâng, sénges, chum*), shellfish (*chechúi, tiuách, kim, sang, irechîil*), reef fishes (*mud, meâs, kelât*) among other items, are listed. Such benthic animals as trepang, shellfish and crab are, in general, termed *cheléd*, and are distinguished from fish domains (*ngîkel*) in the Palauan folk classification system.

Unlike the distribution of *odóim*, that of *ongrâol* can be discerned clearly. Taro (*kukâu*) and cassava are predominant in most municipalities of Babelthuap, and no differences between the eastern and the western municipalities are found in their distribution. *Brak* is likely to be common in Peleliu, Angaur, and some municipalities in Babelthuap. Fermented breadfruit (*telîb*) is designated only in Peleliu. More specifically, the seeded variety of breadfruit (*medulióu, Artocarpus mariennensis*) [BARRAU 1958], the most ancient breadfruit in Palau, is not common on Babelthuap, but occurs in Peleliu, Angaur, and Kayangel [MCKNIGHT 1960]. In Kayangel atoll, *túu* banana is regarded as major item for *ongrâol*, instead of taro or breadfruit. The taro patch is in the central part of the island where *brak* is

preferably planted. *Kukâu* is not common there. It was not until the German administration that taro was introduced to Kayangel. Before that time the islanders relied on banana and nut-bearing trees like *keâm* (Polynesian chestnut) and *mīich* (tropical almond).

Apparently, varieties of *ongrâol* differ between high (Babelthuap) and low (Peleliu, Angaur, and Kayangel) islands. This might be related to the soil type and other environmental factors. A data profile described by Vessel and Simonson [1958] supports the local designation (Table 2).

As has been shown, the distribution of *odóim* is very localized among the municipalities, and is more varied in species than is *ongrâol*.

Here, inter-village variation in *odóim* and *ongrâol* can be illustrated by the example of Peleliu island. Villages on Peleliu now center on the northwest coast. Formerly they were dispersed. At least before the World War II five villages existed in the island. Notably, each village had, according to the islanders, its own item of *odóim*: Ngedelolk for *kelât* (mullet), Ngesias for *malk* (or *malkureómel*: wild chicken), Ngercol for *irechîil* (conch shell), Ngerkeinkl for *uâsech* (fish soup), and Teliu for *rekúng* (land crab). Some are obtained from the sea and others from the land. I was unable to ascertain the closeness of the relationship between each village site and the associated food resources in terms of accessibility. My informant, however, explained that Ngedelolk was the highest ranked village and the chief of Peleliu island resided there. *Kelât* is still highly esteemed as a food fish, and is imbued with a certain cultural value, being regarded as the food of chiefs. It is quite probable that *kelât* served as *odóim* both of Ngedelolk village and all other villages.

Table 2. Distribution of Soils and Agricultural Crops in Palau.
A. J. Vessel and R. W. Simonson [1958]

Soil Type	Percentage of the total land area (%)	Distribution	Main Crops
Latosol/Latosolic	60.0<	Babelthuap	taro, cassava
Shioya Sand	1.5	Peleliu, Angaur	coconut, lemon, banana, papaya, breadfruit
Alluvial Soils	2.3	stream, upland drainageways	taro, cassava, banana, coconut, pineapple
Muck and Peat (Organic Soils)	1.0>	NE-coast of Babelthuap, Peleliu, Angaur	taro
Smooth Stony Land	1.4	Peleliu, Angaur	cassava, sweet potato, banana, papaya
Mangrove Swamps	8.0	Babelthuap	—
Limestone Outcrops	13.7	Urukthapel, Eil Malk, Peleliu, Angaur	—
Lithosols from Volcanic Rocks	4.0	Babelthuap	—

On the other hand, on Peleliu *ongrâol* does not seem to be specifically distributed among five villages. *Brak, kukâu, diokang, medúu* are regarded as common sources for vegetable staples, among which *brak* and *medúu* (*telīb*) are most reliable. It is reasonable to consider that vegetables are, more or less, equally utilized in the villages, and that no particular item received any special cultural attribute.

The total food resource base of Palau still remains to be ascertained. It is useful to mention here certain miscellaneous items of information on the products of the different municipalities.

(a) Kayangel: *Ngimr* and *tekúu* are listed as *odóim*, and *túu* and *medúu* as *ongrâol*. *Tekúu* (yellowfin tuna) was once caught in great numbers when moving toward the coast, but nowdays catches are generally small in quantity.

(b) Ngarchelong: It is said that fishes are most abundant here among all the municipalities of Babelthuap.

(c) Ngarard: Beside *irechūil, demók* is also listed as *odóim*.

(d) Ngiwal: Shortage of *odóim* is constant throughout the year. The tiny lagoon off the coast affords small fishes and small sea crabs (*chebéi*). For reasons that I could not discern, sedimentation by coral sands has destroyed the lagoon fishery so that the villagers are obliged to fish outside the reef.

(e) Melekeok: A small bivalve shell (*chesochól*) is served as *odóim*, besides *mud* (damselfish).

(f) Ngesar: Reef fish species such as *kesúu, klsebúul, búdech, chitótech, dech, bang, butîliang, modéchel, chesáll, ulói* and others used as *odóim*. However, the catch is small.

(g) Airai: The mangrove clam (*ngdúul*) is also listed in addition to *meâs* and *sang*.

(h) Ngaradmau: Besides *sénges, cheremrúm* is said to be abundant, together with *kim* (giant clam) and varieties of fish.

(i) Ngatpang: A kind of jack (*terekrîk*) is said to be abundant.

(j) Aimeliik: *Kmâi* and *mólech* are abundant, but in the period of westerly wind even these animals can hardly be taken owing to the rough sea.

(k) Koror: Various kinds of trepangs are taken such as *mólech, bad el cheléd, temetámer*. These are partly for domestic consumption and partly for sale in Koror. Other fishes taken in adjacent seas, especially around Iwayama Bay, include *kelât, ulúu, meâs, klsebúul, bebâel, kotîko, chum, kedesâu*, and *suld*. Invertebrates available as *odóim* include *kesuár, reréek, ksull, ketât, rekúng* (crabs), and *chīud* (shellfish).

(l) Peleliu: Fishes abundant in Peleliu include *kotîko, chulúu, kelât*.

Information on other municipalities are unavailable.

LOCALIZATION AND FLUCTUATION OF FOOD RESOURCES

In general the harvest of food resources fluctuates, even in a so-called "affluent

society" like the Northwest Coast Indians [SUTTLES 1968]. Of the 14 municipalities of Palau, the "perceived" resource distribution is by no means uniform. Certain environmental factors relevant to resource diversities are the fluctuations of natural phenomena.

In Palauan society the year is divided into two periods according to the prevailing wind directions: *rekīl ongós* and *rekīl ngebárd*. The former is the period of easterly winds, and the latter of westerly winds. Twelve lunar months correspond to the wind shifts both in wind direction and in the position of the Palauan God, *Rak* [KLEE 1976]. During *rekīl ongós* the east coast is on the windward and the west coast is to the leeward, thus fishing is more productive on the latter, owing to the favorable sea conditions. During *rekīl ngebárd*, the situation is reversed. Another notion of seasonality derives from the growing season of fruit-bearing trees. *Remús*, belonging to *rekīl ongós* (November-April), produces the least fruit, and is known as *kesái a kall* ("little food"). *Sim*, which belongs to *rekīl ngebárd* (May-October), is the second growing season, and is also called *betók a kall* ("much food") [MCKNIGHT and OBAK 1960; KLEE 1976]. Seasonal changes of the resource availability are typically found in the growing of breadfruit. *Sim* is the growing season of breadfruit and no fruit is harvested during *remús* season. I observed varietal difference in the time lag of the growing season of breadfruit even during harvesting times, in Satawal, Central Caroline Islands (author's fieldnote 1980).

Another example is found in Ailai municipality, located in the southern part of Babelthuap. There, *meás* (rabbitfish, *Siganus* spp.) are caught only when they migrate to the coast. When schools of *meás* come inshore for spawning (February-May) a large catch is expected at any time [JOHANNES 1978]. In Kayangel atoll, spearing of *ngimr* (peanut worm) is practiced on sandy areas of the lagoon floor exposed at ebb tide, when *ngimr* hide underground. Spearing is most successful during those months when big ebb tides are expected. According to my observation, in January, 1979, one fisherman took about 40 *ngimr* in two hours. He was obliged to stop spearing since the tide was rising. But had he been able to continue, he could have speared some 200 peanut worms. Spawning of fish is seasonal, and there are correlations between precipitation, the phase of the moon, and the laying eggs by fish such as *meás*, *kelát*, and *kotīko* [KLEE 1976; JOHANNES 1978].

Occurence of animal populations is thus seasonal, nevertheless most of the items listed in Table 1-c appear to be non-seasonal and possibly exhibit no marked fluctuations. Harvests of trepangs and shellfishes depend on natural conditions like wind direction, tidal fluctuation, otherwise they are obtained relatively constantly.

Distribution of *odóim* is not located evenly, as is shown in the variety of *odóim* from Peleliu island. Even the distribution of marine life of the genera or family differs according to micro-environment. Distribution of trepangs for instance,

differs by variety. Many tropical varieties of trepangs are recorded in the seas adjacent to Palau. Twenty-three varieties are distinguished by the Palauans. According to prewar ecological surveys, *cheremrúm* (*Holothuria lecanora*) was particularly abundant in the lagoon areas of west Babelthuap. They are harvested in large quantities by the villagers of Ngaremlengui and Ngardmau [YAMAUCHI 1938]. In addition, the distribution of trepangs is classified into three types according to habitat (Table 3):

(A) Barrier Reef Type. These species (Type-A) require the clear and saline waters of the outermost barrier reef. They occasionally inhabit sandy exposures within the lagoon, the bottom grounds of the reef flat and the reef channel. They are tolerant to wave action, but are weakened if exposed to sun or rain;

(B) Lagoon Type. These varieties (Type-B) inhabit sandy exposures in the lagoon or between the lagoon and the reef channel. They are less tolerant to wind and wave action than those of Type-A; and

(C) Fringing Reef and Coastal Type. These species (Type-C) inhabit areas close inshore where seagrass (*Zostera* spp.) grows. They are tolerant of exposure to sunlight and rainfall, but are affected badly by waves.

Table 3. Distribution of Holothurians in Palau by Habitat. [YAMAUCHI 1941]

Scientific Name	Local Name
Type-A	
Holothuria mauritiana	?
H. nobilis	*bad el cheléd*
H. axiologa	*môlech*
Stichopus chloronotus	?
Thelenota ananas	*temetâmel*
Type-B	
Holothuria bivittata	*chesôbel*
H. vitiensis	*meremaréch*
H. argus	*bibak médal*
H. scabra	*môlech*
H. flavo-maculuta	*sekesáker*
H. miliaris	?
Stichopus variegatus	*blaól*
S. chloronotus	?
Type-C	
Holothuria atra, H. edulis	*chôas*
H. lecanora var.	*cheremrúm*
H. sp.	*ngellâu*
Stichopus variengatus	*ngîmes*

It is noteworthy that among the edible species of trepangs, those included in Type-C do not occur in Kayangel atoll, whereas Type-A and Type-B abound, according to the informants in Kayangel. Localization of food resources is also apparent among fish. In general, coral reef communities have the most complex interrelationships among species where various type of fish occur according to the habitats [LOWE-MCCONNELL 1977].

A wide range of aquatic resource areas are exploited by the fishermen of Ngaremlengui municipality, where more than 40 different fishing grounds within the territory correspond to particular fish species [KLEE 1976]. (I also presented data on the selective use of the fishing spots within the reefs utilized by the Lau fishermen of Malaita, Solomon Islands [AKIMICHI 1978]).

Local abundance of specific animal resources does not indicate that such items are always designated as *odóim* by a given village. For an example, *ngimr* is not found specifically in Kayangel, but also occurs in other parts of Palau. In Peleliu, *ngimr* is very common on sandy beaches. However, the islanders do not use it as food, but rather as a bait for various kinds of fish.

Thus it can be seen that the distribution of food resources, particularly of *odóim*, correlates to some degree with such environmental factors as wind direction, tidal cycle and the nature of the bottom.

CULTURAL SIGNIFICANCE OF FOOD CATEGORIES

Not only does the distribution of both *odóim* and *ongráol* show an ecological diversity of food resources in the Palauan ecosystem, but it illustrates also certain cultural distinctions in Palauan society. When asking informants to list items for *odóim* and *ongráol* I realized that the questions asked were often rude, or at least discourteous. For example, *chechúi* shell (*Chiton* spp.) is used as *odóim* of Angaur. Indeed, the limestone-fringed coast is rich in such rock-dwelling shellfish as *chechúi*, *delsángel* (*Nerita* spp.), and the like. Nevertheless, *ménga chechúi* (*chechúi*-eater) is a term of contempt. In other words, *chechúi*-eater implies that the people depend on such poor resources as *chechúi*, owing to the absence of good fishing grounds.

Nevertheless, one informant from Angaur gave a negative judgement, saying that *odóim* in Angaur is not *chechúi*, but *desúi* (rainbow runner), one of the good commercial fishes of Palau. *Odóim* is therefore designated in an alternative way: a poor resource versus a good one. It is suggested that *desúi* is an excuse offered by the people of Angaur, and that the words *ménga chechúi* are a sign of stigmatizing. In fact, such expressions are used daily among people when complaining about or quarrelling with people from a different municipality or village. Similarly, *ménga telīb* (*telīb*-eater) arouses anger, although it is said that in olden times various *telīb* were brought at a high price by a local titled-elder for distribution as gifts throughout the village clan [MCKNIGHT 1960].

The reason why the informant in Kayangel listed both *ngimr* and *tekúu* might be relevant to the case of Angaur, e.g., *chechúi* and *ngimr* as poor *odóim*; *desuîi* and *tekúu* as good *odóim*. Designation both of *odóim* and *ongrâol* thus involves two extremes of cultural norms; poor and rich, unpalatable and delicious. This may well represent Palauan perception and attitude to food resources. Delicious food is, of course, much appreciated and the local abundance of such resources are a mark of superiority, for which subsistence efforts are, to considerable degrees, devoted. On the other hand a sort of discrimination is practised against the people of municipalities with only poor resources, at least when seen from outside.

Gift of food is broadly practiced in the Palauan social and ritual system [BARNETT 1949]. Among the many food resources a few have primary importance. *Kukâu* is considered as a gift from a wife to a husband, and special attention is devoted to their cultivation and processing. *Kukâu* is also an indispensable item for such ritual occasions as prebirth, birth, marriage, and funerals [MCKNIGHT and OBAK 1960]. On the other hand, the greasy meat of wrasse fish (*maml*) and of wild pigeon (*láib*) is of great importance as a food gift to a higher clan or title holders [SMITH 1977].

In Palauan society, food-money exchange is universal. It is generally called *ochrâol*, and is based on the mutual help between kin groups in favor of brother-sister relationships. On the various occasions when money is collected, such as for building a house, purchasing a boat, initiation ceremony, weddings or house and work completion, food packed in a plate or in a package is prepared. Food is also served as payment for work in the community and in house building. It is noteworthy that a set of *odóim* and *ongrâol*, very often with *klióu* and *ilúmel*, comprises the food gift.

When the people visit another village, and when a bride enters her husbands kin group, a certain kind of *odóim*, which distinguishes the native place of the person concerned, is taken as a gift. Ultimately, *odóim* and *ongrâol* as discussed so far are characteristic of each village or municipality.

SUMMARY

The problems of Palauan food categories have been discussed from an ecological and cultural perspective. A range of environments in the Palau Islands enable the inhabitants to exploit a wide variety of food resources. Both *odóim* and *ongrâol* comprise the basic categories and the bulk of the food consumed in the Palauan society. The occurence of vegetables, taro, breadfruit, cassava, and banana, the common staples in the Pacific, varies according to the physical type of the islands. Variation in the range of animal foods, on the other hand, especially those of aquatic origin, is less noticeable among the islands, compared on a broad geographical basis, but is more closely related to the micro-environmental

features. The distribution of *odóim* and *ongrâol* is distinguished in *kelél a ikél belúu* ("food of the village"). Furthermore, both *odóim* and *ongrâol* bear certain cultural codes that are used by the islanders in communication and boasting and which permit distinctions to be made among the people of the island. Special accounts related to rituals and social exchange are invested in this dichotomy.

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