



Figure 1: Map of the Solomon Islands showing the West Nggela region

What's in a name? An analysis of the West Nggela (Solomon Islands) fish taxonomy.

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Introduction

Accurate knowledge about the behaviour, biology and ecology of organisms comprising marine fisheries is a vital prerequisite for their management. Before beginning any study on local knowledge of marine fauna, a working knowledge of their local names must be obtained. Moreover, a great deal of local knowledge can often emerge in the very process of obtaining names (Ruddle, 1994). A detailed treatment of the local naming system of West Nggela marine fauna is given in this paper.

Methods

Local names of fish were collected by asking people to provide the Nggela names for fishes from photographs in books featuring most of the common Indo-Pacific species (Randall *et al.*, 1990 and Myers, 1991). Most identifications were cross-checked with at least five people before being included in the list. This could still, however, sometimes be an unreliable way of obtaining the correct name (Bulmer, 1969; Diamond, 1989, 1991).

Occasionally the photograph might have been of an individual whose colour variation did not quite match that of the population that occurs at Nggela (even though it was still the same species), or the colour balance of the photograph might have been a bit unnatural, or the fish was not easy to recognise for some other reason. Occasionally, people would create names for fishes, based on their appearance in photographs, even if the fish did not occur in the Nggela region. With this in mind, I tried to obtain names of living, or freshly-caught specimens whenever possible.

For some groups of fish this was difficult, or impossible. I depended heavily or entirely on photographs for Nggela identifications of species in 22 of the 86 scientific families of cartilaginous and bony fishes listed in Appendix 1. They were: Pseudochromidae, Kuhlidae, Priacanthidae,

Lobotidae, Gerreidae, Sparidae, Ephippidae, Chaetodontidae, Pomacentridae, Cirhitidae, Polynemidae, Labridae, Opistognathidae, Trichonotidae, Pinguipedidae, Blenniidae, Gobiidae, Microdesmidae, Zanclidae, Bothidae, Pleuronectidae, and Soleidae.

The English names of many species of fish vary quite a bit, even within one country such as Australia. For most of the species listed in Appendix 1, I have used the English names given by Randall *et al.* (1990). For species not included in Randall *et al.* (1990), names from Kailola (1987a, b, 1991) were used.

Results

Appendix 1 contains 350 unique Nggela folk taxa for cartilaginous and bony fishes, together with the scientific (Linnean) taxa they correspond to and, where available, a brief note describing an aspect of local knowledge about the taxon. Wherever possible, an etymology was provided for the Nggela taxon (in many cases, the Nggela dictionary compiled by Fox, 1955 was used). Similar data are also presented for marine mammals, reptiles, commonly-used invertebrates, and some important plants. The list includes a small number of Nggela taxa that I was unable to identify.

Some scientific species correspond to more than one folk taxon. In some cases these folk taxa could be regarded as sub-taxa, since they were usually acknowledged to simply be different growth stages of the same Nggela 'species'. The most notable example of this is for the small carangid, *Selaroides leptolepis* (Smooth-tailed trevally), which is most usually referred to as **Malaboro**, but which can also be referred to by four other names, depending on its size (see Appendix 1). In other cases, however, usually where species (such as many scarids) show strong sexual dimorphism, the Nggela taxa are not necessarily regarded as being related. In general, splitting of taxa was more common for species that were commonly

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used, whereas fish that were of relatively little economic importance tended to be 'lumped' together.

Semantically speaking, the Nggela taxa can be divided into primary and secondary lexemes (Berlin *et al.*, 1973; Hooper, 1991). The former usually comprise one word, such as **Kara** ('trevally'), while the latter are typically binomials, such as **Kara mera** (Blue-spot trevally, *Caranx melampygus*), comprising a primary, 'generic' term and a descriptive qualifier (**mera** = blue). In a few cases this descriptive qualifier comprises two words, which in most cases can be treated as one lexeme (e.g. **Bagea papala vohe** {Scalloped hammerhead shark}: **Bagea** = shark generic; **papala** = handle; **vohe** = paddle; thus: 'paddle-handle shark'). However, several names do not fit well with this model (e.g. **Kuli tuguru ni tahi**, **Tauna na sori**, **Malole ngongora rurugu**—see etymologies in Appendix 1). While Nggela primary lexemes sometimes roughly correspond to scientific genera, and secondary lexemes to scientific species, this is certainly not the rule. Many primary lexemes correspond directly to scientific species (e.g. **Keпо** = *Herklotsichthys quadrimaculatus*). However, a larger number of West Nggela fish taxa correspond to more than one scientific species. Mostly these multiple correspondences are limited to similar looking fish within one scientific family, but ten West Nggela taxa correspond to two or more species which belong to different scientific families.

Etymologies of Nggela folk taxa are categorised in Table 1 according to the type of information they reveal about the animal. Many primary lexemes have no translation (e.g. **Kavala**, **Anго**) and are classified as such. The largest category of taxa comprises names that simply describe the external appearance of the fish. Some of these include a generic referent (e.g. **Atu livoga** {Dogtooth tuna}: **Atu** = tuna generic; **livo** = tooth), and some don't (e.g. **Igu koni** {Yellow-tailed emperor}: **Igu** = tail; **koni** = yellow). Other names refer to the fish's habitat (e.g. **Kukupi horara** {Spotted oceanic triggerfish}: **Kukupi** = large triggerfish generic; **horara** = open sea) or some aspect of its behaviour (e.g. **Vulovatu** {White damsel, or Farmerfish}: **Vulo** = to clean or brush; **vatu** = stone, or dead coral—this refers to the grazing behaviour of pomacentrid 'farmer fishes' which appear to clean the seabed within their small territories). These dominant categories suggest that

the Nggela fish-naming system is predominantly constructed around the linguistic representation of fish and their environment as they are observed visually. Hence there must inevitably be some correspondence between the Nggela and Linnean systems, since the latter is usually based on morphological criteria, which are often (though not always) betrayed by the animal's external appearance.

Some taxa combine a term connoting behaviour or appearance or habitat with another term (e.g. **Hangguvia ni horara** {Rockmover wrasse and various Razorfishes}: **Hangguvia** = to blow off, as a strong wind blows off a roof—refers to the mode of feeding of these fishes {behaviour}; **ni horara** = of the open sea {habitat}). A small number of taxa describe the smell or taste of the fish (e.g. **Vurusinge** {Black-banded seaperch}: **Vuru** = smells {like}; **singe** = *Convolvulus* {a plant}). The second-last category in Table 1 includes names which describe something about the ecology of the fish (e.g. **Puhuduki** {Archerfish}: **puhu** = to spout, gush; **duki** = a species of ant which the Archerfish preys on by knocking it off mangrove roots with jets of water), or its interaction with certain types of fishing gear. The etymologies of 13 taxa did not appear to fit into any of these categories. Overall, most of the etymological categories listed in Table 1 portray fishes as they are experienced by fishers, so that local knowledge about them, as reflected in their names, is constructed principally in terms of human interaction with the marine environment.

Table 1: Categories of etymological information in West Nggela fish names

Etymological category	No. of taxa
Untranslatable primary lexeme	110
Descriptive only	136
Habitat only	30
Behaviour only	10
Descriptive + other	15
Habitat + other	15
Behaviour + other	15
Taste or smell	4
Ecology/fishing	18
Other	13

Note that owing to the overlapping nature of some categories the total does not equal 350.

Taxonomic structure

The West Nggela fish taxonomy appears to be relatively shallow, unlike the scientific system, which employs seven basic levels of classification from species through to kingdom. The next level of Nggela classification above 'generic' (e.g. **Kara**) is **Iga**, which equates roughly to 'fish', including bony and cartilaginous fishes. **Iga** fits the criteria for the category of 'Life-form' used by Berlin *et al.* (1973) and Clark (1981).

Answers to some survey questions indicated that whales, dolphins, dugongs, turtles and crocodiles may also be classified, at least occasionally, under **Iga** (see also Clark, 1991). However, **Iga** is also used as a generic for many taxa, including one species of shark (**Iga tao**, the Tassled wobbecong). In addition to its status as a generic, **Bagea** is almost certainly used as an 'intermediate' (Berlin *et al.*, 1973), between generic and life form, since most sharks are referred to as **Bagea** prior to being properly identified.

The specific Nggela name for *Trochus niloticus* is **Lala**. Its next level of classification, probably equating to 'life-form' (Clark, 1981), is **Vanguda**, which most commonly means 'shelled mollusc' and includes bivalves, but may also include other groups of (usually edible) invertebrates, such as echinoderms and crustaceans (see also Clark, 1991).

Discussion

There are many aspects of the West Nggela marine fauna taxonomy that warrant discussion, particularly in a comparative context, but which are beyond the scope of this paper. Some local knowledge is immediately available from etymologies (Appendix 1), and this was often supplemented with more detailed information which emerged in the course of my discussions and fishing activities with West Nggela fishers. Some of this information became the subject of more thorough investigations which have been published or submitted for publication elsewhere (Foale, 1997, in review a, b; Foale & Day, in press).

The lack of Nggela names for most of the deep-sea snappers (the Solomon pidgin term, **Siliva pis** (= 'Silver fish'), is used for most species of *Etelis*, *Pristipomoides* and *Aphareus*) indicates that these species have not been an important feature of the Nggela subsistence economy in the past. This is not the case for many Polynesian societies, where a tradition of deep-sea fishing clearly existed prior to colonisation (Nordhoff, 1930; Hooper, 1990, 1991). However, recent surveys by the Solomon Islands Fisheries Division indicated that sizeable stocks of several species of deep-sea snappers exist in the Sandfly area (Michael Batty, pers. comm.). During the last 3 months of 1995, the infrastructure for a deep-sea

snapper fishery was in fact installed at Semege Sub-station on Sandfly Island, and fishing had commenced by March 1996.

On the other hand, the complexity of the naming system for more commonly exploited fishes, such as *Selaroides leptolepis* (Smooth-tailed trevally) and *Selar crumenophthalmus* (Purse-eyed scad), belies a much greater depth of experience with such species. Concerted questioning about these fishes (and observations of fishing practices) would very likely reveal detailed local knowledge of their biology and behaviour.

It is important to note that while relatively little of the information gleaned from the etymologies and folklore presented here could be considered as being directly applicable to contemporary stock management issues (i.e. maximising and sustaining yields), the information nevertheless has considerable worth in its own right.

Moreover, given the linguistic and cultural handicaps faced by the cross-cultural worker in an investigation of such limited duration, the data should be regarded as far from comprehensive; a great deal more information would surely come to light if more time were available for fieldwork. The data presented here are clearly also a necessary starting point for any concerted investigations into indigenous knowledge about more fisheries-relevant aspects of natural history such as growth, natural mortality, and recruitment.

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Appendix 1

Nggela marine fauna taxonomy

Notes on pronunciation

Vowels: *a* as in far, *e* as in end, *i* as in tin, *o* as in or, *u* as in put. *G* is the Melanesian *g*, a velar fricative, sounded as the old English *gh*, with the back of the tongue articulating with but not touching the back of the palate. *Ng* as in singer, *ngg* as in finger. *D* is always pronounced *nd* (daro = ndaro) and *b* always *mb* (bosa = mbosa). The accent is always on the penultimate syllable.

Iga: Cartilaginous and bony fishes

Sharks

Stegostomidae – Leopard sharks

Bagea oneone: *Stegostoma fasciatum* (Leopard shark). Etymology: **oneone** = black sand. Name probably refers to the black spotted pattern of this shark.

Ginglymostomatidae – Nurse sharks

Bagea (ro)rodo: *Nebrius ferrugineus* (Tawny nurse shark). Etymology: **(ro)rodo** = blind. Name may connote the small eye of this species or it's sedentary habit. In pijin it is called 'sleeping shark'.

Carcharhinidae – Whaler sharks or Requiem sharks

Bagea mara: *Carcharhinus albimarginatus* (Silvertip shark). Etymology: **Mara** = bright, colourful. May refer to the silver markings on the fins.

Bagea totoho: *Carcharhinus amblyrhynchos* (Grey reef shark).

Bakebake: *Carcharhinus melanopterus* (Blacktip reef shark).

Hemigaleidae – Weasel sharks

Eno-eno: *Triaenodon obesus* (White-tip reef shark).

Sphyrnidae – Hammerhead sharks

Bagea papala vohe: *Sphyrna lewini* (Scalloped hammerhead). Etymology: **papala** = handle. **vohe** = paddle. The name describes the paddle-handle shape of the lateral extensions on the head of this species.

Rhincodontidae – Whale sharks

Bagea ni oka: *Rhincodon typus* (Whale shark). Etymology: **Oka** = open, broad, far reaching (a synonym of **horara** = open ocean).

Orectolobidae – Wobbegongs

Iga tao: *Eucrossorhinus dasypogon* (Tassled wobbegong). Etymology: **tao** = lying flat, flat on face. Connates the sedentary habit of this species.

Rays

Dasyatidae – Stingrays

Vali: *Dasyatis kuhlii* (Kuhl's stingray), *Taeniura lymna* (Blue-spotted stingray) and *T. melanospila* (Black-blotched stingray).

Vali sagalea: *Urogymnus africanus* (Thorny ray). Etymology: **sagalea** = sand, beach.

Myliobatidae – Eagle rays

Vali lovo: *Aetobatus narinari* (Spotted eagle ray). Etymology: **lovo** = to fly.

Mobulidae – Devil or Manta rays

Vali lovo: *Manta birostris* (Manta ray) and *Mobula tarapacana* (Devil ray). Etymology: **lovo** = to fly.

Fishes

Albulidae – Bonefishes

Oaa: *Albula neoguinaica* (Pacific bonefish). Note: the milkfish, *Chanos chanos*, is also called Oaa.

Muraenidae – Moray eels

Daununu: *Gymnothorax javanicus* (Giant moray) and other large *Gymnothorax* spp.

Poli ni tahi: *Gymnothorax* spp. (smaller) + remaining Muraenid genera. Etymology: **Poli** = snake; **tahi** = sea.

Posau: *Gymnothorax nudivomer* (Yellowmouth moray), *G. meleagris* (Whitemouth moray) and *Echidna nebulosa* (Starry moray)

Eels from various other families

Poli ni tahi: *Moringua ferruginea* (Slender worm eel) (Moringuidae – Worm eels),

Kaupichthys hyoprroides (Grey reef eel)

(Chlopsidae – False morays),

Leiuranus semicinctus (Culverin) (Ophichthidae – Snake eels).

Etymology: **Poli** = snake; **tahi** = sea.

Posali: *Conger cinerius* (Black-edged conger) (Congridae – Conger eels).

Sia kale: *Myrichthys maculosis* (Spotted snake eel) (Ophichthidae). Etymology: **Sia** = flower of sugar cane, reed or bamboo; **kale** = to strike, hit. May connote the fine spotted pattern of this species.

Toitokiri: *Myrichthys colubrinus* (Harlequin snake eel) (Ophichthidae).

Clupeidae – Herrings and sardines

Kepo: *Herklotsichthys quadrimaculatus* (Four spot herring). Note: This species usually mills around in large schools under wharves or along sandy beaches in protected bays. It usually goes into deep water at night. **Kepo** is an important food species to the Nggela people and is usually parcelled in leaves and baked in a motu oven if large numbers are netted. According to some fishers, **Kepo** populations do not recover quite as quickly as other species of baitfish after heavy fishing.

Chanidae – Milkfishes

Oaa: *Chanos chanos* (Milkfish).

Plotosidae and Ophidiidae – Catfishes

Iga bola: *Plotosus lineatus* (Striped catfish) (Plotosidae – Eeltail catfishes) and *Brotula multibar-bata* (Bearded brotula) (Ophidiidae – Brotulas).

Etymology: **bola** = 1. a pigeon; 2. a constellation, Southern Cross.

Carapidae – Pearlfishes

Iga ni opaopa: *Onuxodon margaritifer* (Bivalve pearlfish). Etymology: This species is commonly found in a species of bivalve called **opaopa**.

Synodontidae – Lizardfishes

Koisogavu: *Saurida gracilis* (Slender lizardfish), *Synodus* spp. (various lizardfishes) and *Trachinocephalus myops* (Snakefish).

Stonefishes, scorpionfishes, toadfishes, frogfishes and gurnards

Novu: 1. All species of the family Scorpaenidae (Scorpionfishes) except for *Dendrochirus* spp. and *Pterois* spp. This includes: *Ablabys taenianotus* (Cockatoo waspfish), *Inimicus caledonicus* (Caledonian stinger), *Scorpaenoides* spp., *Scorpaenopsis* spp., *Sebastapistes* spp. (Scorpionfishes), *Synanceia* spp. (Stonefishes), and *Taenianotus triacanthus* (Leaf scorpionfish).

Novu: 2. *Antennarius* spp. (Antennariidae – Frogfishes or anglerfishes).

Novu lovo: *Dendrochirus* spp. and *Pterois* spp. (Lionfishes, firefishes), *Histrio histrio* (Sargassumfish) (Antennariidae – Frogfishes or anglerfishes), *Dactyloptena orientalis* (Flying gurnard) (Dactylopteridae: Flying gurnards).

Etymology: **lovo** = to fly. So named because the fishes appear to have wings.

Novu tonikama: *Halophryne diamensis* (Banded frogfish) (Batrachoididae – Toadfishes). Etymology: **tonikama** = old woman, or old man. Local knowledge: Stings from the spines of fishes in the **Novu** group can be treated with the leaves of the **Dirigi** tree (no identification).

Exocetidae – Flyingfishes

Kidu: *Cypselurus* spp. (and other common genera of flyingfishes).

Hemiramphidae – Halfbeaks

Kelo: *Hemiramphus* spp. and *Hyporamphus* spp.

Totoro: *Zenarchopterus dispar* (Estuarine halfbeak).

Note: **Totoro** occurs mainly in shallow water around mangroves in sheltered bays.

Belonidae – Longtoms and needlefishes

Malole: (Belonidae {generic}) and possibly also the larger individuals of *Tylosurus crocodilus crocodilus* (Crocodile longtom) which are found some distance seaward of the edge of reefs.

Malole golpoto (No identification).

Malole legolego (No identification—this may be the pelagic belonid, *Ablennes hians*, which is a highly laterally-compressed species). Etymology: **Legolego** = flat, laterally compressed, as in some species of trevallies.

Malole ngongora: either smaller *Strongylura incisa* (Reef needlefish) or *S. leiura* (Slender longtom) or *Platybelone platyura* (Keeled needlefish). Etymology: **Ngora** = a young girl. The name refers to the relatively small size of this variety of **Malole**.

Malole ngongora rurugu (no identification)

Etymology: **Ngora** = a young girl; **Rurugu** = under, below, a space under a tree.

Malole poli (No identification). Etymology: **Poli** = snake.

Malole sobolonga: *Tylosurus crocodilus crocodilus* (Crocodile longtom). Etymology: **Sobo** = to float; **Longa** = shorewards. Medium-sized and small individuals of this species are supposed to occur close to the shore, generally around fringing reefs. This is either the largest or second largest (after **Malole**) type of **Malole**.

Malole vaivaripapa: *Strongylura incisa* (Reef needlefish). Etymology: **Vaivari** = a reciprocal prefix with some verbs. **Papa** = to carry on one's back, piggyback. The name probably refers to this species' habit of going in pairs or small groups.

Malole valala: *Tylosurus acus melanotus* (Keel-jawed or Black-finned longtom).

Note: Has a compressed horny appendage under chin and occurs in open sea or around deep reefs. Is often preyed up on by dolphins. Etymology: **Valala** = right angle, right angled, possessing a cross-handle, as a small adze. This name obviously refers to the horny appendage under the chin of this species. It should be noted that juveniles of several species of belonids may have a barbel or bony tab on the tip of the bottom jaw. Consequently this taxon may also correspond to the juvenile form of some of the other taxa listed here.

Local knowledge:

1. Some types of **Malole** are reproductive when the **Habaga** tree (*Alstonia scholaris* or 'Milky pine') flowers and fruits. This is usually in June/July.
2. Larger **Malole** are caught traditionally with sago palm leaf kites and spiderweb lures (**Dala** on Nggela). They can also be caught by trolling (**Ariari**), or with a technique called

Koikoito, which comprises a baited hook on a short line (1–2 fathoms) which is tied to the dried fruit of the Barringtonia tree and left to float off the edge of the reef for a while, before being picked up by the fisherman in his canoe.

3. A very commonly told story in the Sandfly region describes a bizarre interaction (which many people profess to have witnessed) between any of the above types of **Malole** and a land snake called **Torokoe** (*Denrelaphus caligastra*). The snake usually jumps into the sea from a mangrove, **koilo** (*Calophyllum inophyllum*) or coconut tree and swims to a waiting **Malole**. The snake then coils its body around the fish, which makes no attempt to escape, and appears to mate with it. The snake then uncoils from the fish and swims back to the shore.

Atherinidae – Hardyheads or silversides

Sipu: *Hypoatherina* sp. (Hardyhead). Note: As **Sipu** gets bigger, it becomes **Gohi**, then **Kodove**. These names may equate to other species, which may be in other families. **Sipu** is a preferred bait for some types of trolling.

Holocentridae – Soldierfishes and squirrelfishes

Sori beta: *Plectropops lima* (Cardinal soldierfish).

Etymology: **beta** = breadfruit tree, or its fruit.

Sori gau: *Neoniphon* spp. and some *Sargocentron* spp. Etymology: **gau** = knife.

Sori tubu mata: *Myripristes adusta* (Shadowfin soldierfish) and *M. bernrdti* (Bigscale soldierfish).

Etymology: **Tubu** = to swell, expand. **Mata** = eye.

Sori: *Myripristes* spp. (Soldierfishes {generic}). Note: **Sori** are commonly fished using a small hook baited with cotton wool (or any small bright piece of cloth or feather), which is tied to a short line on a bamboo pole and dragged across the surface on moonlit nights.

Talaa: *Sargocentron spiniferum* (Spinecheek squirrelfish). Local knowledge: The red flowers of the **Rara** tree (*Erythrina indica* – the Coral or Flame tree), usually around August, mark the time when the flesh of **Talaa** is greasiest.

Fistulariidae – Flutemouths

Konga: *Fistularia commersoni* (Smooth flutemouth).

Local knowledge: **Ulu ni Konga** (**Ulu** = head) is a metaphor for stupidity and refers to the thick bony structure of the head region of this species.

Aulostomidae – Trumpetfishes

Iga veoveo: *Aulostomus chinensis* (Trumpetfish).

Etymology: **Veoveo** = hole in net or fence. Refers to the long thin shape of the fish.

Aeoliscidae – Razorfishes

Iga tuguru: *Aeoliscus strigatus* (Razorfish).

Etymology: **Tuguru** = stand up, standing.

Syngnathidae – Pipefishes

Hinapi ni vua: *Corythoichthys* spp. and *Doryrhamphus* spp. (Pipefishes). Etymology: **Hinapi** = lime-stick (used to transfer powdered lime, for chewing with betelnut, from its container to the mouth). **Vua** = crocodile

Iga ni kuli: *Halicampus nitidus* (Glittering pipefish). Etymology: **Kuli** = seagrass

Kuli tuguru ni tahi: *Hippocampus kuda* (Spotted seahorse). Etymology: **Kuli** = seagrass; **Tuguru** = standing (Standing seagrass (fish) of the sea).

Platycephalidae – Flatheads

Usa vero: *Thysanophrys otaitensis* and *T. chiltonae* (Flatheads). Etymology: **Vero** = erect penis. Maybe that's what it looks like!

Vugovugo sadana: *Thysanophrys arenicola* (Sand flathead). Etymology: **Vugo** = net; **Sada** = 1. woman's skirt of banana leaves, 2. to tie the thatch in beginning a roof.

Serranidae – Rockcods or groupers

Subfamily Anthiinae:

Vare: *Pseudanthias* spp. and related genera.

Subfamily Epinephelinae:

Angora gere: *Cephalopholis sexmaculata* (Six-spotted rockcod). Etymology: **gere** = writing.

Iga koleo: *Aethaloperca rogaa* (Redmouth rockcod). Etymology: **Koleo** = Megapode bird.

Karamalabo: *Plectropomus* spp. (Coral trouts).

Includes *P. areolatus*, *P. laevis*, *P. leopardus*, *P. maculatus*, and *P. oligacanthus* (the latter is also sometimes called **Taburara**, **Sili taburara** and **Gaumare**).

Kobili: *Epinephelus* sp. (unidentified rockcod).

Kohoa: *Epinephelus lanceolatus* (Queensland grouper). Also called **Bangabanga**.

Etymology: **Kohoa** = carried, using stick shouldered by two people (Verb, transitive: **Kali koho**). Bangabanga is a slang term connoting extreme gluttony. This is the largest Indo-Pacific reef fish, and can attain weights of over 400 kg.

Kuli patu: *Epinephelus polyphkadion* (Camouflage rockcod). Etymology: **Kuli** = seagrass; **Patu** = joint in bamboo, knot.

Kusele: *Epinephelus corallicula* (Coral rockcod), *E. hexagonatus* (Hexagon rockcod), *E. howlandii* (Blacksaddle rockcod), *E. macrospilos* (Snubnose rockcod), *E. merra* (Dwarf-spotted rockcod).

Kusele geregere: *Epinephelus quoyanus* (Longfin rockcod). Etymology: **Geregere** = to write.

Kuva: *Cephalopholis argus* (Peacock rockcod).

Mankovava: *E. fuscoguttatus* (Flowery cod).

Polo: *Cephalopholis cyanostigmata* (Blue-spotted rockcod), *C. miniata* (Coral cod) (sometimes also called **Sivari baba**), *Epinephelus malabaricus* (Malabar grouper). Etymology: **Polo** = hide; **Baba** = hole/cave.

Sivari: *Variola albimarginata* (Lyre-tail trout), *V. louti* (Coronation trout) (latter sometimes also called **Sivari baba**). Etymology: **Baba** = hole/cave.

Sogilo ni kolo: *Cromileptes altivelis* (Baramundi cod) (Sometimes called **Demara** and **Iga Piu**).

Etymology: **Kolo** = strait; **Piu** = a species of bird.

Tagulu pohaha: *Epinephelus areolatus* (Areolate rockcod). Etymology: **Pohaha** = mottled grey and white smudges as a banana leaf.

Vualia: *Epinephelus tukula* (Potato cod).

Subfamily Grammistinae:

Tubuna vua: *Lioproma susumi* (Meteor perch),

Rainfordia opercularis (Flathead perch). Etymology: **Tubu** = Sister's child or mother's brother; **Vua** = crocodile.
Iga poipoi: *Diplonion bifasciatum* (Barred soapfish), *Gramistops ocellata* (Ocellated podge).

Pseudochromidae – Dottybacks and eel blennies

Iga lade: *Congorogadus subducens* (Carpet eel blenny), Dottybacks (generic). Etymology: **Lade** = coral.

Terapotidae – Grunters

Kaboa: *Terapon jarbua* (Crescent grunter). Note: This species is commonly referred to as 'Harbour master' in pijin, due to its scavenging habit, and common occurrence near toilet beaches.

Kuhliidae – Flagtails

Valuado: *Kuhlia mugil* (Fiveband flagtail). Etymology: **Valu** = a species of tree; **Ado** = to think, understand.

Priacanthidae – Bigeyes

Kaulau ni horara: *Heteropriacanthus* spp. and *Priacanthus* spp. (Glasseyes {generic}). Etymology: **Kaulau** = Archerfish (*Toxotes* sp.); **Horara** = Open sea.

Apogonidae – Cardinalfishes

Vivihi: Apogonidae (generic).

Malacanthidae – Sandtile fishes

Iga kuikui: *Malacanthus latovittatus* (Blue blunquillo). Etymology: **Kuikui** = lizard.

Echeneididae – Remoras:

Raorago bagea: *Echeneis naucrates* (Slender suckerfish). Etymology: **Rago** = to join two ends together; **Bagea** = shark. Connotes the common association this fish has with sharks.

Carangidae – Trevallies

Andiandi: *Megalaspis cordyla* (Finny scad). Note: Also called **Kai iguga** (**iguga** = possessing a tail) and **Panggapangati** (**Pangga** = ten pigs, birds, or fish).

Babalatu: *Trachinotus bailloni* (Black-spotted dart) and *Trachinotus blochii* (Snub-nosed dart).

Etymology: **Baba** = hole or cave. **Latu** = going on forever, unending.

Buma: *Selar crumenophthalmus* (Purse-eyed scad).

Note: Juveniles are called **Papa**. **Buma** are an important subsistence species at Nggela (along with **Malaboro**—and they often school together) and are caught with a variety of techniques, including **Soga**, **Unggalu** and **Ariari**.

Doa: *Atule mate* (Fringe-finned trevally) and *Caranx bucculentis* (Blue-spotted trevally).

Ili koni: *Coryphaena hippurus* (Common dolphinfish). Etymology: **Koni** = yellow.

Kai daro: *Decapterus russelli* (Russell's mackerel scad). Etymology: **Daro** = long.

Kai vala daro: *Scomberoides commersonianus* (Talang queenfish). Etymology: **Vala** = shoulder, collarbone. **Daro** = long.

Kara: (Trevallies {generic}), *Carangoides fulvoguttatus* (Gold-spotted trevally) and *Caranx papuensis* (Brassy trevally).

Kara gabutogo: *Caranx melampygus* (Blue-fin trevally). Etymology: **Gabu** = blood. **Togo** = to spear. Note: also called **Kara mera** (**mera** = blue). Feeding schools of this and other types of Kara are called **Vangavanga**.

Kara iguga: *Carangoides gymnostethus* (Bludger trevally). Etymology: **Iguga** = possessing a tail.

Kara kara: *Carangoides uii* (Japanese trevally).

Kara koni: *Gnathanodon speciosus* (Golden trevally). Etymology: **koni** = yellow.

Kara legolego: *Carangoides caeruleopinnatus* (Onion trevally). Etymology: **legolego** = flat.

Kara nadi: *Caranx para* (Banded scad). Etymology: **nadi** = hard.

Kara pura: *Carangoides chrysophrys* (Club-nosed trevally). Etymology: **pura** = white.

Kara uluga: *Caranx tille* (Tille trevally).

Etymology: **uluga** = possessing a head—refers to the steep forehead of this species.

Kara vali: *Parastromateus niger* (Black pomfret). Etymology: **vali** = stingray.

Kara voramua: *Caranx sexfasciatus* (Bigeye trevally). Etymology: **vora** = to open eyes wide. **mua** = yet, still.

Refers to the very large staring eye of this species.

Kavala: *Scomberoides tala* (Barred queenfish).

Lailahi: *Scomberoides lysan* (Double-spotted queenfish). Note: this name is also commonly used as a generic term for *Scomberoides* spp.

Lailahi kaekalea: *Scomberoides tol* (Needleskin queenfish). Etymology: **kaekale** = needle, spine.

Malaboro: *Selaroides leptolepis* (Smooth-tailed trevally). Note: **Malaboro** sub-taxa as follows, in order of increasing size: **Tata poipoi** (smallest), **Malaboro**, **Malaboro tutura**, **Puri**, **Pailori** (biggest). Malaboro are a very important subsistence species at Nggela and are caught with a variety of techniques, including **Soga**, **Unggalu** and **Ariari**. Etymology: **Mala** = 1. occupation, rank; 2. as, like; **boro** = bottom, inside,

keel of a canoe (so the name **Malaboro** may refer to the fact that the species, because it is small, usually gravitates to the bottom of the canoe, i.e. under all the other fish); **Tata** = to shiver, tremble; **poi** = foam, spray; **tutura** = a string with anything strung on it.

Malaboro mala: *Decapterus macrosoma* (Long-bodied scad). Etymology: **Mala** = 1. occupation, rank; 2. as, like.

Malahau koni igu: *Seriola lalandi* (Yellowtail kingfish). Etymology: **Mala** = 1. occupation, rank; 2. as, like; **hau** = 1. far, old; 2. to stretch, raise up; **Koni** = yellow; **Igu** = tail.

Malahau ni horara: *Seriola rivoliana* (Almaco jack). Etymology: **Mala** = 1. occupation, rank; 2. as, like; **hau** = 1. far, old; 2. to stretch, raise up; **Horara** = open sea.

Malahau tunutunua: *Seriolina nigrofasciata* (Black-banded kingfish). Etymology: **Mala** = 1. occupation, rank; 2. as, like; **hau** = 1. far, old; 2. to stretch, raise up; **tunutunua** = spotted.

Maroho: *Elagatis bipinnulata* (Rainbow runner). Note: This name appeared to be falling into disuse at the time of fieldwork. The species is more commonly referred to by its market (Solomon Pidgin) name of 'Rainbow' by most people these days.

Oaa vaivine: *Trachinotus botla* (Common dart).

Etymology: **vaivine** = girl, female.

Raerave: *Naucrates ductor* (Pilot fish) and *Carangoides ferdau* (Barred trevally).

Rora: *Alectes ciliaris* (Pennantfish).

Taligu mane: *Caranx ignobilis* (Giant trevally). Note: also sometimes called **Kara uluga** (**uluga** = possessing a head).

Teutevu niu: *Seriola dumerili* (Amberjack).

Etymology: **Niu** = coconut (tree or mature fruit).

Tutupa: *Caranx lugubris* (Black trevally).

Vaivalihiga: *Absalom radiosus* (Fringe-finned trevally) and *Carangoides hedlandensis* (Bump-nosed trevally).

Lutjanidae – Snappers

Ango: *Lutjanus rivulatus* (Maori seaperch) and *Symphorus nematophorus* (Chinaman fish).

Ango gautago: *Symphorichthys spilurus* (Sailfin snapper). Etymology: **gau** = knife; **tago** = to fish, go fishing.

Ango ni bongi: *Macolor macularis* (Midnight seaperch). Etymology: **bongi** = night.

Ango ni horara: *Macolor niger* (Black and white seaperch). Etymology: **horara** = open sea. Note: Juveniles of both *Macolor* species are called **Iga kuikui** ('Lizard fish').

Bulobulo geregere: *Lutjanus decussatus* (Checkered seaperch). Etymology: **geregere** = write.

Bulobulo horara: *Lutjanus kasmira* (Bluestripe seaperch). Etymology: **horara** = open sea.

Bulobulo koni: *Lutjanus fulviflamma* (Blackspot snapper). Etymology: **koni** = yellow.

Bulobulo ni kolo: *Lutjanus quinquelineatus* (Five-lined seaperch). Etymology: **kolo** = strait.

Bulobulo ni toke: *Lutjanus monostigma* (Onespot perch). Etymology: **toke** = point of a reef.

Bulobulo pura: *Lutjanus lemniscatus* (Dark-tailed seaperch) and *Lutjanus russelli* (Moses perch).

Etymology: **pura** = white.

Bulobulo tubumata: *Lutjanus lutjanus* (Bigeye seaperch). Etymology: **tubu** = to swell, expand; **mata** = eye.

Gaumare: *Lutjanus biguttatus* (Two-spot snapper). Etymology: **gau** = knife; **mare** = shape, image, appearance.

Iga mona or 'Curry Fish': *Lutjanus bouton*. Note: commonly caught using strikeline and **kura**, in sheltered areas over sandy or rubble bottoms deeper than 20 m.

Koukoru: *Lutjanus bohar* (Red bass). Etymology: **koru** = fat. This is a highly prized table fish.

Labiango: *Aphareus furca* (Small-toothed jobfish).

Livo gau: *Lutjanus carponatus* (Spanish flag) and *Lutjanus vitta* (Brownstripe seaperch). Etymology:

Livo = tooth; **gau** = knife.

Mahi: *Lutjanus argentimaculatus* (Mangrove jack).

Sagasaga: *Lutjanus fulvus* (Yellow-margined seaperch).

Siliva pis: *Etelis* spp. (*coruscans*, *carbunculus* and *others*) (Deepwater snappers / jobfish). Note: There is no Nggela name for these species, as it would appear they were not commonly fished until recent times.

Susi, or Susi ni horara: *Aprion virescens* (Green jobfish). Etymology: **horara** = open sea.

Uvoro: *Lutjanus gibbus* (Paddletail).

Uvoro horara: *Lutjanus adetti* (Hussar) and *Lutjanus sebae* (Red emperor). Etymology: **horara** = open sea.

Vurusinge: *Lutjanus semicinctus* (Black-banded seaperch). Etymology: **Vuru** = smell; **singe** = a plant (*Convolvulus* spp., known in Nggela as **Mandala** and **Momona**).

Caesionidae – Fusiliers

Toatoa pote: *Caesio caerulaurea* (Gold-banded fusilier). Etymology: **pote** = to fill, bulge, swollen, expanded.

Igu saga: *Caesio cuning* (Red-bellied fusilier).

Etymology: **Igu** = tail; **saga** = to wither.

Igu saga mane: *Caesio lunaris* (Lunar fusilier).

Etymology: **Igu** = tail; **saga** = to wither; **mane** = man, male.

Igu saga ni horara: *Caesio teres* (Blue and gold fusilier). Etymology: **Igu** = tail; **Saga** = to wither, **horara** = open sea.

Toatoa: *Pteracaesio marri* (Marr's fusilier)

Toatoa ni lade: *Pteracaesio tile* (Neon fusilier).

Etymology: **lade** = coral.

Toatoa ni tuvi: *Pteracaesio trilineata* (Three-lined fusilier). Etymology: **tuvi** = the flat, shallow part of a reef near the edge.

Lobotidae – Tripletails

Kohoa dale: *Lobotes surinamensis* (Tripletail).

Etymology: **Kohoa** = *Epinephelus lanceolatus* (Queensland grouper); **dale** = child, offspring.

Gerreidae – Silver biddies

Pabeta: *Gerres oyena* (Oceanic silver biddy).

Haemulidae – Sweetlips

Gaumare: *Plectorhinchus chaetodontoides* (Many-spotted sweetlips) and *P. flavomaculatus* (Netted sweetlips). Etymology: **Gau** = knife; **mare** = shape, image, appearance.

Kaboa mane: *Plectorhinchus celebicus* (Celebes sweetlips). Etymology: **mane** = male, man.

Kaboa ni bongi: *Plectorhinchus diagrammus* (Striped sweetlips) and *P. goldmani* (Diagonal-banded sweetlips). Etymology: **bongi** = night.

Kometulu: *Plectorhinchus gibbosus* (Brown sweetlips), *P. obscurus* (Giant sweetlips) and *P. schotaf* (Somber sweetlips). Etymology: **Kome** = a gastropod (*Strombus canarium*); **tulu** = to wade, or float.

Tauna na kometulu: *Plectorhinchus picus* (Dotted sweetlips). Etymology: **Tauna** = wife/husband of.

Tiakoko: *Diagramma pictum* (Painted sweetlips).

Sparidae – Sea breams

Daivula ni horara: *Chrysophrys auratus* (Snapper).

Etymology: **horara** = open sea.

Lethrinidae – Emperors

Asu: *Gnathodentex aurolineatus* (Gold-lined sea bream).

Daivula: *Monotaxis grandoculis* (Big-eye bream).

Note: juveniles are called: **Mata buru** (**Mata** = eye; **buru** = to throng).

Dami popolo: *Lethrinus erythropterus* (Masked emperor). Etymology: **Dami** = to chew betelnut; **polo** = to hide. The name refers to the red colour inside this fish's mouth, implying that it chews betelnut covertly.

Esa-esa: *Lethrinus miniatus* (Sweetlip emperor), *L. rubrioperculatus* (Red-eared emperor), and *L. xanthochilus* (Yellow-lip emperor).

Goluhahi: *Lethrinus erythracanthus* (Yellow-spotted emperor). Etymology: **Goli** = to scrape out flesh of a coconut with a bivalve (**Tue**) shell; **hihi** = to scoop out the flesh of a coconut.

Huru: *Lethrinus harak* (Thumbprint emperor) and *L. obsoletus* (Orange-striped emperor). Note: *L. harak* is also known as **Mangatata**—both names appear to be accepted by most people as valid for this species.

Iga meresin: *Gymnocranius grandoculis* (Robinson's sea bream). Etymology: **Meresin** is the pijin pronunciation of medicine; the name refers to the strange taste and smell of this species.

Igu koni: *Lethrinus atkinsoni* (Yellow-tailed emperor). Etymology: **Igu** = tail; **koni** = yellow.

Labiango: *Lethrinus variegatus* (Variegated emperor).

Mangatata *Gymnocranius euanus* (Japanese sea bream) and *L. harak* (Thumbprint emperor). Note: *L. harak* is also called **Huru**. Etymology: **Manga** = mouth; **tata** = to shiver, tremble.

Paere (or **Papaere**): *Lethrinus genivittatus* (Lancer), *L. laticaudis* (Grass emperor), *L. lentjan* (Pink-eared emperor) and *L. ornatus* (Yellow-striped emperor).

Piho: *Lethrinus olivaceus* (Long-nosed emperor) and *L. nebulosus* (Spangled emperor).

Nemipteridae – Coral breams

Asu ni horara: *Pentapodus* spp. (Butterfishes).

Etymology: **Asu** = *Gnathodentex aurolineatus* (Gold-lined sea-bream); **horara** = open sea.

Bubukele: *Scolopsis affinis* (Pale monocle bream).

Etymology: **Bubu** = to stare at; **kele** = a woman's private parts.

Susi pile: *Scolopsis* spp. (Monocle breams).

Etymology: **Susi** = *Aprion virescens* (Green jobfish); **pile** = small.

Mullidae – Goatfishes

Mahavi: *Parupeneus cyclostomus* (Goldsaddle goatfish).

Mala bulua: *Parupeneus bifasciatus* (Doublebar goatfish). Etymology: **Mala** = 1. position, rank; 2. like, as. **bulu** = to light with a lamp or torch. This species is commonly taken by gleaning over the top of the reef at low tide at night (usually around new moon in the wet season) using a lamp or torch. The name connotes either this fishing technique or the reddish colour that the animal assumes at night, which might be likened to a lamp or torch.

Ngingi: *Parupeneus flavolineatus* (Yellowstripe goatfish), *P. heptacanthus* (Cinnabar goatfish), *P. indicus* (Indian goatfish), *P. multifasciatus* (Manybar goatfish) and *P. pleurostigma* (Sidespot goatfish).

Ngingi bagea: *Upeneus tragula* (Freckled goatfish). Etymology: **Bagea** = shark.

Ngingi horara: *Parupeneus ciliatus* (Cardinal goat-

fish). Etymology: **horara** = open sea.

Ngingi sisi: *Parupeneus spilurus* (Blackspot goatfish). Etymology: **sisi** = red.

Noma: *Mulloidides vanicolensis* (Yellowfin goatfish).

Tio: *Parupeneus barberinoides* (Bicolour goatfish) and *P. barberinus* (Dash-dot goatfish).

Pempheridae – Sweepers

Tauna na sori: *Pempheris* spp. (Sweepers).

Etymology: **Tauna** = wife/husband of; **sori** = soldierfishes (generic).

Kyphosidae – Drummers

Langui: *Kyphosus cinerascens* (Topsail drummer) and *K. vaigiensis* (Long-finned drummer). Note: Both species are called **Simasima** as juveniles and **Leoleko** when they reach very large size.

Ephippidae – Batfishes

Koito vao: *Platax pinnatus* (Pinnate batfish) *P. orbicularis* (Circular batfish) *P. teira* (Longfin batfish, adult). Etymology: **Koito** = a style of fishing; **vaovao** = 1. a shrub with very large leaves, 2. a very big ear.

Iga raurau: *Platax teira* (Longfin batfish, juvenile). Etymology: **Rau** = leaf.

Chaetodontidae – Butterflyfishes

Arulole: *Chaetodon ulietensis* (Pacific double-saddled butterflyfish). Etymology: **Aru** = a species of tree (*Casuarina*); **lole** = to scrape clean a yam, a stick.

Gautago: *Heniochus* spp. (Bannerfishes). Etymology: **Gau** = knife; **tago** = to fish, fishing (= **taotago**).

Iga vila: *Hemituarichthys polylepis* (Pyramid butterflyfish) and *Heniochus varius* (Humphead bannerfish). Etymology: **vila** = to flash, flashing. Name refers to the striking colours and patterns of these fishes.

Sigo vugo: *Chaetodon* spp. (Butterflyfishes {generic}). Etymology: **Sigo** = to move silently, stealthily; **vugo** = net. **Sigo vugo** refers to the habit of these fishes of 'checking' the net, or following the net, but never getting caught.

Pomacanthidae – Angelfishes

Belava: *Genicanthus* spp. (Angelfishes gen., except for those listed below).

Iga vila: *Pomacanthus* and *Centropyge* spp. (Angelfishes {generic}). Etymology: **Vila** = to flash, flashing. Name refers to the striking colours and patterns of these fishes (NB: this name is also used for some butterflyfishes, above).

Sigo vugo: *Pygoplites diacanthus* (Regal angelfish). Etymology: **Sigo** = to move silently, stealthily; **vugo** = net. **Sigo vugo** refers to the habit of these fishes of 'checking' the net, or following the net, but never getting caught (NB: this name is also used for some butterflyfishes, above).

Pomacentridae – Damsel-fishes

Gegela: *Abudefduf vaigiensis* and *A. sexfasciatus* (Sergeants).

Guali: *Chrysiptera unimaculata*, *Chromis agilis*, *Stegastes* spp.

Iga ni bubula: *Premnas biaculeatus* (Spine-cheek

anemonefish) and *Amphiprion melanopus* (Red and black anemonefish). Etymology: **bubula** is the name of the anemone (*Entactmaea quadricolor*) with which these species are associated.

Iga ni gavoro *Amphiprion perideraion* (Pink anemonefish). Etymology: **gavoro** is the name of the anemone (*Heteractis magnifica*) with which this fish is often associated.

Iga ni lade *Chromis* spp. (small damselfishes closely associated with corals). Etymology: **lade** = coral.

Iga ni raerade: *Amphiprion chrysopterus* (Orange-fin anemonefish) and *A. clarkii* (Clark's anemonefish). Etymology: **Raerade** is the name of the anemone (*Stichodactyla mertensii*) to which these fishes are commonly but not exclusively associated.

Maumanu ni masao: *Amphiprion percula* (Clown anemonefish). Etymology: **Maumanu** = 1. flying insect; 2. spark; 3. animal; **masao** = the anemone, *Stichodactyla gigantea*, with which this fish is sometimes associated (it is also associated with other anemones, including *Heteractis magnifica*).

Poto: Several species, in several genera, including *Amblyglyphidodon*, *Acanthochromis*, *Chromis*, *Chrysiptera*, *Hemiglyphidodon*, *Neopomacentrus*, *Neoglyphidodon*, *Plectroglyphidodon* and *Pomacentrus* spp.

Poto koni: *Pomacentrus moluccensis* (Lemon damsel). Etymology: **koni** = yellow.

Poto sagalea *Pomacentrus lepidogenys* (Scaly damsel), *P. nagasakiensis* (Sandy damsel). Etymology: **sagalea** = sand, beach, sandy place. The name refers to the typically shallow, sandy habitat of these species.

Sao: *Abudefduf bengalensis*, *A. septemfasciatus* and *A. sordidus* (Sergeants).

Vulovatu: *Distichodus perspicillatus* (White damsel, or farmerfish) and *D. melanotus* (Black-vent damsel). Etymology: **Vulo** = to clean, brush away; **vatu** = stone. The name refers to the habit of these 'Farmer fishes' of grazing the algae on a small territory which they defend from other herbivores.

Cirrhitidae – Hawkfishes

Tavilade: (Hawkfishes, gen.). Etymology: **Tavi** = to slip, stumble, turn suddenly. **lade** = coral.

Koni mata: *Paracirrhites arcatus* (Arc-eye hawkfish). Etymology: **Koni** = yellow. **mata** = eye.

Iga totoho: *Oxycirrhites typus* (Longnose hawkfish). Etymology: **Totogo** = to put one thing on another, strata, series one on another. May refer to the cross-hatched pattern of the fish.

Mugilidae – Mullet

Galua: *Crenimugil crenilabis* (Warty-lipped mullet).

Geru, Kuli binu: *Liza vaigiensis* (Diamond-scaled mullet). Etymology: **Kuli** = ear; **binumbinu** = to line an oven with leaves. The name may connote the black colour of the pectoral fin ('ear') in smaller individuals of this species, which might be likened to the blackened leaves lining an oven.

Sphyraenidae – Barracudas

Alu: *Sphyraena putnamiae* (Chevron barracuda).

Note: This species usually occurs in groups, and sometimes in large stationary schools during the day.

Gavi koburu (no identification made). Etymology: **koburu** = the westerly monsoonal trade wind.

Gori: *Sphyraena helleri* (Heller's barracuda) and/or *Sphyraena forsteri*

Ngganggasu: *Sphyraena flavicauda* (Yellowtail barracuda) and/or *S. novaehollandiae* (Arrow barracuda).

Ono: *Sphyraena barracuda* (Great barracuda). Local knowledge: This species is usually solitary but is reported by some Nggela fishermen to occur in groups around new and full moons at certain places around Sandfly Island.

Polynemidae – Threadfins

Bou na pana: *Polydactylus sexfilis* (Six-fingered threadfin). Etymology: **Bou** = hard, seasoned; **pana** = the common tuber crop eaten as a starch staple at Nggela.

Labridae – Wrasses

Gatuvu: *Choerodon anchorago* (Anchor tuskfish), *C. cephalotes* (Grass tuskfish).

Hanguvia: *Novaculichthys taeniourus* (Rockmover wrasse). Etymology: **Hangu** = to blow off, as a strong wind blows off a roof. **Via** is a transitive marker. The name probably refers to the ability of this species to overturn large rocks in search of food.

Hanguvia ni horara: *Xyrichtys pavo* (Pavo razorfish), *X. aneitensis* (Whitepatch razorfish), *X. pentadactylus* (Fivefinger razorfish). Etymology: **Hanguvia** (see above); **horara** = open sea. These fish may have been likened to the Rockmover wrasse through similarity of appearance.

Iga piu: *Gomphosus varius* (Bird wrasse), *Bodianus diana* (Diana's hogfish). Etymology: **piu** = a species of small bird.

Iga raorago: *Labroides dimidiatus* and *Labroides* spp. (Cleaner wrasses). Etymology: **rago** = to join two ends together. Probably connotes the association of these cleaners with larger (host) fishes.

Kama kaluha: *Halichoeres chloropterus* (Pastel-green wrasse) *H. hortulanus* (Checkerboard wrasse). Etymology: **Kama** = great big, very, a king; **kaluha** = a species of bivalve mollusc. Note: these fishes both inhabit shallow, sandy/rubble areas.

Kaumavi: *Thalassoma amblycephalum* (Bluntheaded wrasse), *T. lunare* (Moon wrasse). Etymology: **Kau** = to stick fast; **mavi** (abbreviated from mavitu) = all together, in a body. The name connotes its densely aggregating behaviour.

Koilauko: *Anampses* spp., *Coris aygula* (Clown coris), *C. dorsomaculata* (Pale-barred coris), *C. gaimard* (Yellowtail coris), *C. schroederi* (Schroeder's coris), *Halichoeres melanurus* (Tailspot wrasse), *H. melasmapomus* (Ocellated wrasse), *Thalassoma quinquevittatum*.

Koleo: *Epibulus insidiator* (Slingjaw wrasse).

Kolodau: *Thalassoma hardwicke* (Sixbar wrasse).

Etymology: **Kolo** = strait, **dau** = to seize, swoop on, snatch.

Malaraurabu: *Halichoeres miniatus* (Circle-cheek wrasse). Etymology: **Mala** = 1. position, rank; 2. as, like;

rau = leaf; **rabu** = a species of tree.

Nggalangari: *Choerodon jordani*, *C. schoeleinii*, *Cirrhitilabrus* spp. and *Thalassoma janseni*. Etymology: **Nggala** = a hand net; **ganggari** = a traditional method of catching fish with a hand net. It is likely that these species are no doubt traditionally caught with this method.

Peopeo talia: *Cheilinus diagrammus* (Cheeklined maori wrasse), *C. unifasciatus* (Ringtail maori wrasse). Etymology: **Peopeo** = a species of gastropod mollusc, *Cypraea rufa* (helmet shell), the shell of which is used as a trumpet; **talia** = *C. fasciatus* (see below).

Pulupulu sui: *Chelinus fasciatus* (Redbreasted maori wrasse). Etymology: **Pulupulu** = 1. to wrap up; 2. to put on clothes; **sui** = a species of red parakeet.

Roso taranggau / Iga taranggau: *Bodianus perditio*, *Cheilinus chlorourus*, *C. oxycephalus*, *C. trilobatus*. Etymology: **Roso** = young fruit of coconut, with soft meat, commonly used for drinking; **taranggau** is the Nggela name for a fish-eating bird of prey (probably the Osprey, *Pandion haliaetus*). The name may refer to the soft flesh of these fishes, which may also be a favourite prey item for the **taranggau**.

Talia: *Cheilinus undulatus* (Humphead Maori wrasse).

Veoveo koni: *Chelio inermis* (Cigar wrasse). Etymology: **Veoveo** = a hole in a net or fence; **koni** = yellow.

Scaridae – Parrotfishes

Note: TP = Terminal Phase; IP = Initial Phase.

Boila: *Bolbometopon muricatum* (Humphead parrotfish).

Mala boila: *Scarus microrhinos* (Steephead parrotfish). Etymology: **Mala** = like, as; **boila** = *B. muricatum*. Name connotes the similarities in appearance of the two species.

Mara: *Scarus* spp. (Parrotfish TP gen.). Etymology: **Maramara** = bright, colourful. Refers to the bright colours of many Terminal Phase scarids.

Mara kiritā: *Scarus frenatus* (Bridled parrotfish) and *S. psittacus* (Palenose parrotfish, TP).

Mara papauga: *Scarus niger* (Swarthy parrotfish). Etymology: **papauga** = a variety of **Ngali** nut (*Canarium indicum*) with very black skin.

Mui: *Cetoscarus bicolor* (Bicolour parrotfish, IP).

Sapa viviha: *Scarus altipinnis* (Minifin parrotfish).

Etymology: **Sapa** = to go out, seawards, away from the shore; **viviha** = thunder. May connote the noise made by these fish as they feed in very large aggregations over the reef.

Taroa: *Cetoscarus bicolor* (Bicolour parrotfish, TP).

Ulavi: *Hipposcarus longiceps* (Pacific longnose parrotfish).

Uvu raungali: Initial phases of *Scarus oviceps* (Egghead parrotfish), *S. psittacus* (Palenose parrotfish), *S. pyrrhurus* (Redtail parrotfish), *S. dimidiatus* (Yellowbarred parrotfish), *S. globiceps* (Globehead parrotfish) and *Calotomus carolinus* (Stareye parrotfish). Etymology: **Uvu** = sandy soil; **raungali** = leaf of **ngali** tree (*Canarium indicum*).

Vanga udu: *Scarus rubroviolaceus* (Ember parrotfish) and *S. rivulatus* (Surf parrotfish). Etymology:

Vanga = to eat; **Udu** = together, in company (these species usually feed in aggregations).

Opistognathidae – Jawfishes or Smilers

Iga tao: *Opistognathus* spp. (Jawfishes gen.).

Etymology: **tao** = face down, flat on belly.

Trichonotidae – Sand-divers

Iga huhu: *Trichonotus* spp. (Sand-divers).

Etymology: **hu** = to dive.

Pinguipedidae – Sandperches

Koesonggavu: *Parapercis* spp. (Sandperches gen.).

Blenniidae – Blennies

Iga kuikui: *Aspidontus taeniatus* (Mimic blenny) and *Plagiotremus rhinorhynchus* (Bluestriped fangblenny). Etymology: **kuikui** = lizard.

Kakau pilo: Blennies (generic) including, and especially, *Istiblennius* spp. (Rockskippers).

Etymology: **Kakau** = crab; **pilo** = to wave about.

Gobiidae – Gobies

Bili gere tuguru: *Eviota bifasciata* (Doublebar goby). Etymology: **Bili** = black; **gere** = write, writing; **tuguru** = stand up, standing up.

Iga beto *Valenciennea* spp., *Vanderhorstia* spp., *Yongeichthys nebulosus*. Etymology: **beto** = quiet.

Iga bili vuna: *Bryaninops ampulus* (Large whip goby).

Etymology: **bili** = black; **vuna** = to throw, lob.

Iga daro geregere: *Valenciennea longipinnis* (Longfinned goby). Etymology: **daro** = long; **geregere** = write, writing.

Iga gere tuguru: *Amblygobius rainfordi* (Old glory). Etymology: **gere** = write, writing; **tuguru** = stand up, standing up.

Iga kukulu mana: *Periophthalmus argentilineatus* (Silverlined mudskipper). Etymology: **kukulu** = short; **mana** = 1. quicksand, bog; 2. worthy, fitting.

Iga ni kolo *Trimma* spp. Etymology: **kolo** = strait.

Iga ni pari: *Priolepis cincta* (Girdled goby).

Etymology: **pari** = ground, earth, soil.

Iga pile matana: *Gobiodon micropus* (Small-eyed goby) and *Paragobiodon xanthosomus* (Yellowskin goby). Etymology: **pile** = small; **mata** = eye (**Matana** = its eye).

Iga pohaha: *Ctenogobiops tangaroae* (Masted shrimp goby). Etymology: **pohaha** = spotted, blotched, grey and white, as a banana leaf.

Iga sagalea: *Fusigobius neophytus* (Sand goby).

Etymology: **sagalea** = beach, sand.

Iga tao tana sagalea: *Istiogobius decoratus* (Decorated goby). Etymology: **tao** = face down, flat on belly; **tana sagalea** = on the beach, sand.

Iga taotao: *Amblyeleotris wheeleri* (Wheeler's shrimp goby). Etymology: **taotao** = face down, flat on belly.

Iga tubumata: *Cryptocentrus cinctus* (Yellow shrimp goby). Etymology: **tubu** = to swell, expand; **mata** = eye.

Iga tunutunua: *Gobiodon histrio* (Broad-barred goby). Etymology: **tunutunua** = spotted.

Iga tunutunua bili: *Fusigobius* spp. (Blotched sand goby). Etymology: **tunutunua** = spotted; **bili** = black.

Pomo: *Amblygobius sphyinx* (Sphynx goby). Note:

Pomo appears to be a generic term for gobies.

Pomo bili: *Callogobius sclateri* (Tripleband goby).

Etymology: **bili** = black.

Pomo ni tahi: *Bathygobius fuscus* (Common goby).

Etymology: **tahi** = sea.

Pomo vuruga: *Callogobius maculipinnis* (Ostrich goby). Etymology: **vuruga** = possessing scales.

Sisi mata *Bryaninops erythroops* (Erythroops goby) and *B. natans* (Redeye goby). Etymology: **Sisi** = red; **mata** = eye.

Tagulu pohaha: *Ctenogobiops pomastictus* (Spotfin shrimp goby). Etymology: **pohaha** = spotted, blotched, grey and white, as a banana leaf.

Tavi lade: *Gobiodon citrinus* (Fourbar goby) and *G. okinawae* (Okinawa goby). Etymology: **Tavi** = to slip, stumble, turn suddenly; **lade** = coral.

Microdesmidae – Wormfishes and dartfishes

Iga daro geregere: *Nemateleotris decora* (Elegant firefish) and *N. magnifica* (Fire dartfish). Etymology: **daro** = long, **geregere** = write, writing.

Iga hinapi: *Gunnellichthys* spp. (Wormfishes, gen.). Etymology: **hinapi** = lime stick.

Iga labe: *Gunnellichthys curiosus* (Curious wormfish). Etymology: **labe** = weak.

Iga sigere: *Ptereleotris* spp. (Dartfishes, gen.). Etymology: **sigere** = skinny, thin.

Acanthuridae – Surgeonfishes

Bagata: *Acanthurus mata* (Elongate surgeonfish), *A. blochii* (Ringtail surgeonfish), and *A. dussumieri* (Eyestripe surgeonfish).

Bagata ni horara: *Acanthurus albipectoralis* (Whitefin surgeonfish).

Bobona: *Acanthurus nigrofuscus* (Brown surgeonfish), *Acanthurus pyroferus* (Mimic surgeonfish), *Ctenochaetus striatus* (Lined bristletooth), *Ctenochaetus strigosus* (Goldring bristletooth), and *Zebrasoma scopas* (Brushtail tang). Etymology:

Bobona = wet, damp.

Bobona pura igu: *Acanthurus grammoptilus* (Finelined surgeonfish). Etymology: **pura** = white; **igu** = tail.

Bolobolo: *Ctenochaetus binotatus* (Twospot bristletooth). Etymology: **Bolo** = 1. pig, 2. meat of any sort, 3. epilepsy, 4. to foam from the mouth.

Gule: *Acanthurus triostegus* (Convict surgeonfish).

Havalago: *Naso lituratis* (Orangespine unicornfish).

Iga balo: *Acanthurus guttatus* (White-spotted surgeonfish). Etymology: **Balobalo** = to fish at dusk.

Iga bili: *Acanthurus bariene* (Roundspot surgeonfish). Etymology: **bili** = black. Note: Sometimes also called **Bagata**.

Iga bili igu pura: *Acanthurus nigricauda* (Blackstreak surgeonfish) and *A. thompsoni* (Thompson's surgeonfish).

Iga vila: *Zebrasoma veliferum* (Sailfin tang).

Etymology: **vila** = flash, flashing. Refers to the striking, striped pattern of this fish.

Igu pura: *Acanthurus auranticavus* (Orange-socket

surgeonfish) and *A. nigroris* (Bluelined surgeonfish). Etymology: **Igu** = tail; **pura** = white.

Kavaga: *Naso annulatus* (Whitemargin unicornfish), *N. brachycentron* (Humpback unicornfish), *N. brevirostris* (Spotted unicornfish), *N. lopezi* (Elongate unicornfish), *N. thorpei* (Thorpe's unicornfish), *N. unicornis* (Bluespine unicornfish) and *N. hexacanthus* (Sleek unicornfish).

Kavaga boila: *Naso tuberosis* (Humnose unicornfish). Etymology: **boila** = *Bolbometapon muricatum*. The name refers to the bulbous head of *N. tuberosus*, which is similar to that of *B. muricatum*.

Kura korade: *Acanthurus lineatus* (Striped surgeonfish). Etymology: **Kura** = the 'pepper' leaf usually chewed with betelnut (Bua); **Kura korade** = a darker variety of **Kura**. Local knowledge: Wounds from the caudal 'scalpel' of this species are particularly painful.

Maluli: *Naso vlamingi* (Vlaming's unicornfish). Note: this species is often referred to as **Bagata**, and sometimes as **Iga ni vane** (**Vane** = large ripples made by a fish underwater. Probably connotes the high dorsal fin of this species).

Moemole: *Acanthurus olivaceus* (Orangeband surgeonfish).

Seliseli: *Acanthurus nigricans* (Whitecheek surgeonfish) and *A. xanthopterus* (Yellowfin surgeonfish).

Simusimu: *Paracanthurus hepatus* (Palette surgeonfish). Etymology: **Simusimu** = to twinkle, as a star; a cluster of small stars. Connotes the brilliant contrasting colours of this fish, which usually occurs in aggregations in clear water.

Zanclidae – Moorish idol

Iga gautago: *Zanclus cornutus* (Moorish Idol).

Etymology: **gau** = knife; **tago** = to fish, go fishing.

Siganidae – Rabbitfishes

Borode: *Siganus punctatissimus* (Finespotted rabbitfish), and *S. punctatus* (Goldspotted rabbitfish).

Ginava: *Siganus corallinus* (Coral rabbitfish), *S. doliatus* (Barred rabbitfish), *Siganus javus* (Java rabbitfish), and *S. puellus* (Bluelined rabbitfish).

Iga piu: *Siganus vulpinus* (Foxface). Etymology: **piu** = a species of small bird. The name refers to the elongate, beak-like mouth of the fish.

Kaekale: *Siganus argenteus* (Forktail rabbitfish), *S. fuscescens* (Dusky rabbitfish) and *S. vermiculatus* (Vermiculate rabbitfish). Etymology: **Kaekale** = spine.

The name refers to the venomous spines in the dorsal, anal and pelvic fins of these fishes which can inflict very painful wounds. Note: *S. argenteus* is commonly taken by the traditional leaf sweep technique known as **Kwarao**. It is also commonly taken by hand spear at night on the reef flat where it sleeps.

Kaekale can be regarded as the generic term for rabbitfishes.

Local knowledge: Stings from the spines of fishes in the **Kaekale** group can be treated with the leaves of the **Dirigi** tree (no identification).

Kaekale pile *Siganus spinus* (Spiny rabbitfish).

Etymology: **pile** = small.

Olana: *Siganus lineatus* (Goldlined rabbitfish)

Scombridae – Tunas and mackerels

Atu: *Katsuwonus pelamis* (Skipjack tuna). Note: Atu can be regarded as the generic term for this group. Note: Traditional tuna fishing is known as **Daoli**. **Daoli** is no longer practiced on Nggela and has been replaced by trolling from outboard-powered fibreglass canoes (and sometimes paddle-powered dugout canoes), using modern hooks with various types of lures.

Atu igu mera: *Thunnus albacares* (Yellowfin tuna) and *T. obesus* (Bigeye tuna). Etymology: **Igu** = tail; **mera** = blue.

Atu livoga: *Gymnosarda unicolor* (Dogtooth tuna). Etymology: **livo** = tooth, teeth; **livoga** = having teeth.

Atu pari longa: *Euthynnus affinis* (Mackerel tuna, Island bonito). Etymology: **pari** = ground, earth; **longa** = shoreward, inland. The name could broadly be translated as 'shore tuna', as it is rarely found far out to sea. This species is commonly taken by trolling light gear from paddle-powered dugout canoes.

Ili: *Acanthocybium solandri* (Wahoo). Note: This species is commonly called Malahau, due to its similarity to *Scomberomorus commerson*.

Kai: *Grammatocygnus bilineatus* (Double-lined mackerel). This species is also known as **Iga vuruvuru** (**vuruvuru** = smelly) due to the strong smell of its flesh. It is a popular bait fish for this reason. Juveniles are known as **Siubu**.

Malahau: *Scomberomorus commerson* (Spanish mackerel). Etymology: **Mala** = 1. occupation, rank; 2. as, like; **hau** = 1. far, old; 2. to stretch, raise up.

Rumaga: *Rastrelliger kanagurta* (Long-jawed mackerel, Indian mackerel). Note: Until the late 1980s, **Rumaga** were often fished using 'dynamite', but this practice has been banned, and is never seen anymore at Nggela. **Rumaga** can still be caught using nets, and juveniles are often caught at certain spots in protected bays (at around 40 m or more) using strikeline.

Viluvilu: *Istiophorus platypterus* (Indo-Pacific sailfish). Etymology: **Vilu** = a species of palm with umbrella-like leaves. The name connotes the palm-leaf like appearance of the dorsal fin of this species.

Note: Nggela names were not obtained for the swordfish (*Xiphias gladius*) or the marlins (*Makaira* spp.).

Paepangge pana – Flounders and soles**Paepangge pana:**

(Bothidae - Lefteye flounders): *Bothus mancus* (Flowery flounder) and *B. pantherinus* (Panther flounder);

(Pleuronectidae – Righteye flounders): *Samariscus triocellatus* (Threespot flounder);

(Soleidae – Soles): *Paradachirus pavoninus* (Peacock sole).

Etymology: **pangge** = to skin, skin of (yam or pana); **pana** = the yam, *Dioscorea esculenta*.

Balistidae – Triggerfishes

Barubaru: *Balistoides conspicillum* (Clown triggerfish). Etymology: **Baru** = shell inlay on traditional carvings. The name connotes the white spotted pattern on this fish.

Bibigo: *Rhinecanthus aculeatus* (Whitebanded triggerfish), *Rhinecanthus lunula* (Halfmoon triggerfish), *R. rectangularis* (Wedgetail triggerfish) and *R. verrucosa* (Blackpatch triggerfish). Etymology: **bigo** = to crush shellfish for cooking—probably refers to the feeding behaviour of these species; their diet includes small molluscs and other benthic invertebrates.

Buli vau: *Sufflamen chrysopterus* (Flagtail triggerfish), *Sufflamen fraenatus* (Bridled triggerfish).

Etymology: **Buli** = generic term for cowries; **vau** = to weave, plait, as a mat or basket. Latter part of the name may refer to the woven appearance of the scale pattern of these fishes.

Igu pura: *Melichthys vidua* (Pinktail triggerfish).

Etymology: **Igu** = tail; **pura** = white.

Kukupi *Balistoides viridescens* (Titan triggerfish) and *Pseudobalistes flavimarginatus* (Yellowmargin triggerfish). Etymology: **Kukupi** = thick lips.

Kukupi horara: *Canthidermis maculatus* (Spotted oceanic triggerfish). Etymology: **Kukupi** = thick lips; **horara** = open sea. This species only occurs around floating objects in the open ocean or near current swept points of small islands. It nests around the new moon.

Logeloge: *Odontus niger* (Redtooth triggerfish) and *Xanthichthys auromarginatus* (Gilded triggerfish).

Mumuku: *Abalistes stellatus* (Starry triggerfish) and juvenile *Balistapus undulatus* (Orange-lined triggerfish). Local knowledge: **Mumuku** are notorious for stealing bait from hooks.

Mumuku horara: *Sufflamen bursa* (Scimitar triggerfish) and *Pseudobalistes fuscus* (Yellow-spotted triggerfish). Etymology: **horara** = open sea.

Toetole: *Balistapus undulatus* (Orange-lined triggerfish). Etymology: **Tole, toletole** = stains of chewing betelnut on face and body. Name refers to orange striped pattern of this fish. Note: Juveniles of this species are called **Mumuku**.

Monacanthidae – Leatherjackets**Iga kamau / Iga kakamau:** generic

Monacanthidae. Etymology: **kamau** = a species of tree with large leaves which are eaten.

Ostraciidae – Boxfishes

Pava: generic Ostraciidae.

Tetraodontidae – Puffers

Boebote: generic Tetraodontidae. Note: This whole family is widely regarded as poisonous to eat and is not eaten on Nggela.

Diodontidae – Pocupinefishes

Kaku: generic Diodontidae. Note: **Nggani** when small.

Toxotidae – Archerfishes

Puhuduki / Kaulau: *Toxotes jaculatrix* (Archerfish).

Etymology: **Puhu** = to blow, spout, shoot (a jet of water); **duki** = a common species of ant, yellow in colour, which the archerfish commonly preys upon by knocking them off mangrove roots with a jet of water.

Chirocentridae – Wolf Herrings

Sego: *Chirocentrus dorab* (Wolf Herring). Note: This species is often caught by trolling with light gear from dugout canoes, near mangroves, especially after rain. It is very bony and usually fed to pigs. It is edible if baked very dry.

Mauvo: (Freshwater eels {generic})

Other baitfishes

Soba: (No identification).

Meme: (small Soba).

Kuaba: (No identification).

Belea: (No identification).

Marumo: (No identification; described as being like small **Kepo**).

Iga mela: A fish commonly caught by droplining in water deeper than about 60 metres. (No identification—may be a Lutjanid). Etymology: **Mela** = red spittle from betelnut chewing. Name refers to the colour of the fish.

Mammals

Puhu: (Whales {generic}). Etymology: **Puhu** = to blow, spout.

Sausau: (Dolphins {generic}), e.g. *Delphinus delphis* (Common dolphin). Etymology: **Sau** = to wash.

Vena: *Dugong dugon* (Dugong).

Reptiles

Kolage: *Varanus* sp. (Green monitor lizard, 'Iguana'). Note: These beautiful green arboreal lizards are usually found in mangroves, but also can be found inland. Their preferred food appears to be fish. They are regularly caught and sold to wildlife dealers who sell them overseas. This trade represents an important source of cash for many people at West Nggela. No studies have been done on the population of this species, but it appears to be in decline.

Bokili mola: (Seasnakes {generic}).

Rombiu: *Dermochelys coriacea* (Leatherback turtle).

Vonu: (Turtle {generic}). Includes *Eretmochelys imbricata* (Hawksbill turtle) and *Chelonia mydas* (Green turtle).

Vua: *Crocodilus porosus* (Salt-water crocodile).

Invertebrates**Cnidaria**

Bubula: *Entacmaea quadricolor* (Bubble-tentacle sea anemone).

Gavoro: *Heteractis magnifica* (Magnificent sea anemone).

Masao: *Stichodactyla gigantea* (Gigantic sea anemone).

Raerade: *Stichodactyla mertensii* (Mertens' sea anemone).

Lade: Corals (generic).

Kova: Plate coral (generic).

Sisiri: Jellyfishes (generic). Etymology: **Sisiri** also means

to sting, a sting from something.

Lumaluma: *Linuche unguiculata* (Thimble jelly).

Note: This jellyfish forms large and dense aggregations or 'blooms' near the surface of the sea every year around September. The blooms always precede the emergence of **Palolo** worms (**Odu**) which usually happens in October. Many species of fish (and especially **Rumaga** (*Rastrelliger kanagurta*)) feed on **Lumaluma** when it blooms, and Nggela people say that the flesh of these fish always stinks of the jellyfish at this time. Small **Lumaluma** are called **Niro** or **Niroa**.

Polychaeta

Odu: *Eunice viridis* (Palolo worm). Note: **Odu** usually emerges in large numbers from its burrows in the reef, about one hour after dark, on the first or second night after full moon (**Galaga pungihia**) in October or November. If they do not emerge in abundance in October, that means they will be abundant in November. The Nggela name for the month of October is **Odu Lade** (**Lade** = coral) and the name for November is **Odu Tina** (**Tina** = mother). Swarming of **Odu** is usually preceded by swarms of another, smaller and non-edible species called **Rau ni Aru** (**Rau** = leaf, **Aru** = *Casuarina equisetifolia*—the name connotes the similarity of the worms to the *Casuarina* needles). NB: What is known as **Odu** is actually the reproductive 'epitoke' of the worm, which breaks off to swim up into the plankton, disintegrate and liberate its sperm or eggs for external fertilisation. The head and front end of the worm remain in the burrow. In recent years the abundance of **Odu** at Ravu Sodikosi Village on Sandfly seems to have declined, but it is hard to know what might be the reason for this.

Mollusca**Cephalopoda**

Gilio: *Nautilus scrobiculatus* (Nautilus {shell}).

Kiko/ Iroiro: *Nautilus pompilius* (Nautilus {shell}).

Mananggi: *Sepia* spp. (Cuttlefish {generic}).

Nuho: *Sepioteuthis* spp. (Reef squids {generic}).

Sipiu: *Octopus cyanea*, *Octopus* spp. (Octopus {generic}).

Gastropoda

Areho: *Nerita albicilla* (Periwinkle)

Boru: *Potamididae* (Mud whelks {generic}) and *Terebralia palustris* (a commonly harvested whelk).

Eo: *Tectus pyramis* (Trochidae).

Gombu: *Strombus* sp. (a stromb shell, smaller than **Ngau**).

Kalulu pale: *Haliotis asinina* (Reef abalone).

Kome: *Strombus canarium*.

Lage (vi)vindi: *Conus geographus* (Geographic cone).

Lala: *Trochus niloticus* (Trochus). Note: **Lala** can be most easily found during the period of '**Dantega**', which is between two and four days after full moon. Etymology: **Dani** = daytime; **tega** = to perch, perched. This term refers to the fact that the moon can be seen 'perched' above the horizon early in the day. Trochus are often subjected to fishing prohibitions or restrictions, by placing a '**tambu**' over the reef, until the reef

owner considers the **Lala** population has had enough time to build up and can be harvested.

Lili: *Turbo* spp. (Turban shells {generic}).

Lili taringa: *Turbo petholatus*.

Lili tinoni: *Turbo crassus*.

Lili vangavanga: *Turbo argyrostomus*.

Mbei mbei: *Terebra maculata*.

Mbuli: *Cypraea* spp. (Cowrie {generic}).

Mbuli siwa: *Cypraea mauritiana*.

Mbuli vuare: *Cypraea tigris* (Tiger cowrie).

Meko: *Strombus canarium*.

Ngau: *Strombidae* (Strombs {gen.}) & *Lambis crocata*.

Ngau dalesamu: *Strombus scorpius*. Etymology: **dale-samu** = orphan. Refers to the fact that this shell is usually solitary, in contrast with many other strombs which are found in groups.

Peo-peo: *Charonia tritonis* (Triton shell).

Sagu: *Neritidae* (Nerites {generic}) and *Nerita polita*.

Note: *N. polita* is sometimes harvested by women at night during spring tides when the tide is half out.

Sura: *Strombus luhuanus*.

Tadugu: (Chiton {generic}).

Tanggih pou: *Lunella cinerea* (a turban shell).

Tangi vagale: *Oliviidae* (Olive shells).

Tavuli: *Cassis cornutus* (Helmet shell).

Vanguda: ('Shellfish' {generic}). Note: this term may include crustaceans and echinoderms but is usually only used with reference to molluscs.

Giant clams

Gima: *Tridacna gigas*.

Hihi: *Tridacna derasa*. Note: also called **Boroboro** or **Kamumu** by some people.

Kunungga: *Tridacna crocea*.

Masiravu: *Hippopus hippopus*.

Pukumau: *Tridacna maxima*

Talinga: *Tridacna squamosa*.

Other bivalves

Aro: *Pinctada margaritifera* (Black-lip pearl-shell).

Ihu: *Crassostrea* sp. (Common oyster)

Kaluha: (No identification).

Karaguna: (No identification).

Kuta: (No identification).

Lombio: *Teredo* sp. ('Shipworm'). Note: Can be harvested from the wood of some types of mangroves. There are traditional restrictions on the consumption of this animal in some parts of West Nggela.

Opaopa: (No identification). Note: This shell is known to harbour a species of pearlshell (**Iga ni Opaopa**).

Tue: *Batissa* sp. (perhaps *B. unioniformis*). A small, commonly harvested bivalve. Note: The shell of this bivalve has traditionally been used at Nggela to scrape the meat of coconuts for cooking.

Crustacea

Kakau vulu: (*Carpilus maculatus*).

Lingamo: *Scylla serrata* (Mud crab).

Mapa: (Slipper lobster {generic}) (*Parribaculus antarcticus*).

Pouporu: *Hippa pacifica* (Pacific mole crab). Note:

These animals can be abundant around the waterline on sandy beaches, and are harvested by small children who thread them onto coconut leaf midribs and roast them.

Tarika: Squillidae, Harposquillidae, Lysiosquillidae (Mantis shrimps {generic}).

Ura: *Panulirus* spp. (Crayfish {generic})

Urepa: *Birgus latro* (Coconut crab).

Land crabs

Kakau tina: *Cardisoma hirtipes* (Common black land crab). Etymology: **Kakau** = generic for crabs; **tina** = mother. Note: This crab is harvested in large numbers when it migrates to the shore to 'wash' ('**Sapa toga**'—usually starting an hour or so after dusk, from about three days to one week after the full moon during the early wet season (October to January)) prior to mating and ovulation in the females. The harvesting is usually done by women using torches made from bundles of dried coconut leaves (**Pahu**). The crabs can also be dug up at other times. The berried females go down to the sea to spawn ('**Sau lami**'—**Sau** = wash; **Lami** = land crab eggs) either around dawn or shortly after sunset during the three days preceding full moon. The start of the **Kakau tina** breeding season is signalled by the flowering of the **Bobolo** tree (*Euodia elleryana*). The Nggela name for the month of December is **Kakau**.

Koba: several genera (Hermit crab {generic}). Note: Hermit crabs are a very reliable source of bait when no fish is available. Local knowledge: Around full moon, some of the larger varieties of koba can be seen in large numbers coming out onto beaches. The females have eggs at this time.

Tubala: *Cardisoma carnifex* ('White' land crab). Note: This species does not appear to display the spectacular synchronised spawning or 'washing' migrations that **Kakau tina** does, but is still commonly harvested for food, though it usually has to be dug up.

Echinodermata

Veitugu: (Starfish {generic}). Etymology: **Veitugu** = star.

Vula: (Cushion starfishes {generic}). Etymology: **Vula** = moon.

Uta mela: *Acanthaster planci* (Crown of thorns starfish). Etymology: **Mela** = red spittle from betelnut chewing. Refers to the reddish colour of many individuals of this species.

Aloalo vilua: (Brittle stars {generic}). Etymology: **Aloalo** = the vine of a yam; **vilu** = a species of palm with umbrella-like leaves. The writhing arms of brittle stars do indeed resemble yam vines.

Baraso: (Spiny urchins {generic}).

Konola: (Short-spined urchins—edible {generic}).

Gila sou: (Slate pencil urchins {generic}). Etymology: **Gila** = 1. to know, 2. a stone adze; **sou** = 1. a species of heron, 2. jagged.

Pou: (Beche-de-mer {generic}).

Pou luluhi: (Beche-de-mer that eject civerian tubules {generic}). Etymology: **luluhi**: to squeeze milk from a woman's breasts.

Poli titivi: *Synapta maculata* (Spotted Sea Cucumber). Etymology: **tivi** = 1. a sling for carrying a baby;

2. clothing. Name probably connotes the long, bending appearance of this soft-fleshed sea cucumber.

Plants

Ahoaho: *Premna corymbosa* (Family Verbanaceae). A beach-side tree, the leaves and small branches of which are often taken by women on long canoe trips to ward off sea-devils (**Asi**).

Alite: *Terminalia catapa*. Also called **Tahile** and **Lengga**. A calendar plant. The presence of red leaves on this semi-deciduous species (usually twice a year—around June and December) indicate a time when 'red fish' aggregate and/or have oily flesh (**mona**). This might include holocentrids (**Sori**, **Talaa**, etc.), serranids (**Sivari**, **Taburara**, etc.) and lutjanids (**Koukoru**, **Uvoro**, etc.).

Buburupoto: *Oplismenus compositus* (A grass which is common in disturbed areas, such as the fringes of gardens). A calendar plant. The presence of the sticky seeds of this species (March, April, May) indicate a bad time for fishing. Etymology: **Buburu** = grass; **poto** = generic for some types of Damselfishes. The name connotes the sticky, clinging nature of the seeds of this grass, which is likened to the pugnacious behaviour of **Poto**.

Koga: a species of mangrove (No identification)

Kulikuli: (Seagrass {generic}).

Busu: a type of green alga preferred by hawksbill turtles (possibly *Chlorodesmus chloroticus*).

Tongo: (Mangrove {generic}).

Tongo bua: a species of mangrove (No identification).

Tingale: a species of mangrove with small leaves.

The use of optimal foraging theory to assess the fishing strategies of Pacific Island artisanal fishers: A methodological review

by Shankar Aswani¹

In this paper, foraging theory and its methodology are presented as a complementary framework to the study of Pacific Island artisanal fisheries. It is expected that such inclusion will allow for the development of a clearer anthropological model describing the relationship between human foraging and fishery management.

Introduction

Artisanal fisheries play a major role in the social, cultural, and economic life of most Pacific Islanders, particularly in rural communities where people are highly dependent on marine resources for subsistence and commercial purposes. Yet, marine resources are being threatened by pressure from exploding human populations and the increasing commercialisation of the subsistence fishery—circumstances which are now forcing researchers to find novel ways to examine issues of coastal management and marine resource conservation. Among the most recent approaches to coastal management has been to study marine ecological processes in conjunction with those of the contiguous shoreline and upland habitats, or what has been termed Integrated Coastal Zone Management (ICZM).

From the standpoint of maritime anthropology, any comprehensive study of the integration of marine and terrestrial biotic components requires the parallel consideration of human activities, including existing property regimes, resource access and distribution rules, and resource exploitation strategies. Although numerous studies have concentrated on the social aspects of Pacific Island artisanal fisheries (e.g. Johannes, 1981; Hviding, 1996; Lieber, 1994), few have dealt explicitly with the micro-ecology of daily human-marine interactions (see Aswani, 1997; Bird & Bird, 1997). Such neglect has hampered attempts to fully integrate studies of environmental coastal processes with those of human activities.

In this paper, I examine the utility of optimal foraging theory and its methodology, as applied to the study of Pacific Island artisanal fishers. The inclusion of foraging theory can contribute to

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