

Ancestral fishing techniques and rites on 'Anaa Atoll, Tuamotu Islands, French Polynesia

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Introduction

The Tuamotu Islands comprise the world's largest concentration of coral islands. They include 76 (of which 42 are inhabited) of the 84 atolls within French Polynesia. 'Anaa (Ganā) Atoll, located in the western Tuamotus, is about 30 km long and 6 km wide. It is slightly elevated (+ 6 m) and has a terrestrial area of some 37 km². 'Anaa's shallow lagoon, which has an area of 89 km², lacks passes, but is linked to the sea by channels (*hoa*).

This article — which does not claim to be comprehensive — aims to contribute to the environmental knowledge and fishing techniques of traditional societies on Polynesian atolls, which today are seriously endangered by increasingly Westernised lifestyles. A few of the fishing techniques used by the community on 'Anaa before the evangelisation of the Tuamotu Islands are described, based on a body of traditional knowledge shared by Paea-a-Avehe and Teave-a-Karaga, the last two holders of 'Anaa's pre-Christian traditional knowledge (*vanaga*). These unusually rich ethnographic materials were collected by the linguist Frank Stimson during extensive expeditions conducted by the Bishop Museum between 1924 and 1934. Of the thousands of pages in vernacular language², which provide an insider's view of traditional life on a Polynesian atoll, only a few items are mentioned that relate to fishing. In ancient times, in the Tuamotus and elsewhere, subsistence activities were based on a careful balance between a system of beliefs and symbolic values designed to control resource abundance through rites and prohibitions and a hierarchical power system that ensured the redistribution of resources. This delicate balance was maintained by the chiefs who had ritual control over the resources. Traditionally in ancient Polynesia, culture was not seen as being in opposition to nature, but rather as a genealogical continuum that tied the invisible spiritual world to the elements of the tangible world

(mineral and biological), in which humans were simply one part of a whole. In this holistic vision of the environment all marine organisms were considered to be descendants of Tangaroa, the god of the original ocean deeps (Torrente 2012). Large marine species hold an important position in Pacific Islanders' thinking, given that they are seen as incarnations of the divine beings of the deep-sea world, or as protecting ancestors and messengers. Paea-a-Avehe's list of vernacular terminology mentions for 'Anaa Atoll, 14 varieties of shark, 181 big fish (*paru toreureu*), five varieties of sea turtles, 15 varieties of moray eels and a very detailed list of all the island's molluscs and crustaceans (Torrente 2012). The goal of traditional taxonomies was not only to classify species for food purposes, as is often claimed, but also to categorise those that were dangerous for humans (myths concerning which abound, with varying degrees of detail) or else to categorise certain species of symbolic or religious importance. It should be noted that in the same way as fish, marine mammals are part of the semantic category *ika*, marine creatures that swim (Malm 2010) or *paru*, "inhabitants of the deeps" (Hooper 1991); the same is true for turtles (*tifai* or *honu*), with the latter representing the perfect sacrificial offering, called by extension *te ika nui* (Conte 1885, 1888; Emory 1947, 1975; Stimson and Marshall 1964; Torrente 2012). Shellfish and crustaceans are placed in the category of marine organisms that move by crawling: *te haga paru e torotoro* (literally, "marine creatures that crawl"), probably corresponding to the term *figota* that continues to exist only in western Polynesia. Harvesting them (*fangota*) was done mainly by women and children (Malm 2010). The importance of giant clams (*Tridacna maxima*, *T. squamosa*) in this island group will be dealt with in another paper.

Ancient fishing techniques on 'Anaa

In the Tuamotu Islands, the terms *tautai* or *ravakai* cover the action of fishing and everything related to

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² Only part of this work was translated and forms the basis for the ethnographic materials of a doctoral thesis entitled "Ethnohistoire de l'atoll de 'Anaa, archipel des Tuamotu" presented by the author in 2010 and edited by Jean Guiart (Torrente 2012). These documents are part of the microfilms of the unpublished notes of Frank Stimson held at Peabody Essex Museum of Salem (copy in the "Fonds Polynésien" at the University of French Polynesia), parts of which was re-transcribed and translated into French.

it. In his manuscript, Paea-a-Avehe uses the generic term *ravakai* (or *ravagai*) which means “to get food for oneself”. The definition of the term given by Stimson and Marshall (1964) includes three meanings: 1) one used throughout the Tuamotus, “to go fishing or to look for food such as turtles, fish, birds or any other edible marine creature”; 2) “the act or method of obtaining or looking for live food”; and 3) “to fish, fishing trip”, the synonym of which is *tautai* (Stimson and Marshall 1964). It is with the latter meaning that the term *rava'ai* is used in Tahiti.

Unless otherwise noted, the list of ancestral fishing methods explained here is based on the same semantic categories that appear in Paea-a-Avehe's body of work (in Stimson and Marshall 1964). They supplement the fragmented information provided by Montiton (1874), Seurat (1904), Danielsson (1956), Ottino (1965), Emory (1947, 1975) and Conte (1985, 1988). Some of these techniques are no longer used or they have been transformed by the introduction of European artefacts (e.g. iron hooks, spear guns, synthetic nets, fish cages made of wire fencing). The ancient *pa'umotu*³ rarely went anywhere on the island without their spears (*oka paru*). Fish were “stabbed” right on the reef (*fātau*) or else while diving (*okaoka*).

Hook-and-line fishing (*kānehu*)

Fishing with a single weighted line and hook (*tate, matau*) on the seaward edge of the reef was called *kānehu*. Fishing with a baited hook and line in holes in the reef that contained abundant fish was called *titomo*. Crabs were also caught in the same way with baited lines (*pātekatēka*). Hooks were carved from wood, bone or the shells of pearl oysters (*Pinctada margaritifera*).

Pole-and-line fishing on the reef (*matira*)

Generally, fishing was done at night in a break in the reef (*gutu kohae*) with a hook attached to a short line on a pole (*matira*). According to Paea-a-Avehe, the following species were caught in this way: *ruhi* (*Caranx lugubris*), *hokahoka* (*Variola louti*), *tarefa* (*Aprion virescens*), *kokiri* (*Balistoides* spp.), *meko* (*Lethrinus obsoletus*), *tamure* (*Lutjanus fulvus*), *mu* (*Monotaxis grandoculis*), and *taea* (*Lutjanus gibbus*). In pole-and-line fishing for black jack (*ruhi*), fishers would approach a spot by canoe while slapping the surface of the water or skimming flat stones across it.

Catching flying fish (*tupe maroto*)

Flying fish (*Cheilopogon pitcaimensis*, *C. spilonopterus*), called *maroto* on 'Anaa and/or *marara* on the

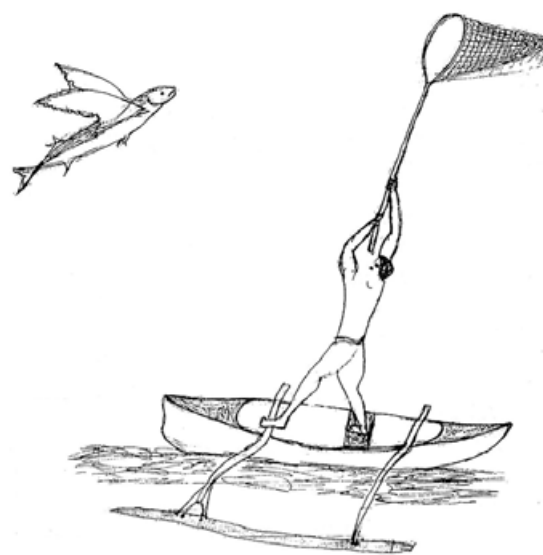


Figure 1. *Maroto* (flying fish) fishing, according to Paea-a-Avehe (in Stimson, unpublished manuscript).

other atolls, were caught in the following way: on very dark nights, canoes would go to sea, normally with two fishers; they used torches (*rama*) to attract the *maroto*, which would begin flying towards the light and then were caught with dip nets, *tupe maroto*. This technique required considerable dexterity and speed by both the person handling the *tupe* and the person steering the canoe (Fig. 1).

Moray eel fishing (here *kamia*)

The generic name for moray eels used in Paea-a-Avehe's list of terms is *tāvere* (which comes from its undulating movement), although that seems to apply more precisely to the Javanese moray eel, *hamorega* (*Gymnothorax javanicus*, Bleeker, 1859) as Stimson and Marshall have indicated in their dictionary (1964). Paea-a-Avehe's list mentions seven identified species: *koiro* for the longfin African conger (*Conger cinereus*, Ruppell, 1828); *kuiru* for the snowflake moray (*Echidna nebulosa*, Ahl, 1789) and the paint spotted moray (*Gymnothorax pictus*, Ahl, 1789); *kiari* for the vagrant eel (*Gymnothorax buroensis*, Bleeker, 1857) and the undulated moray (*Gymnothorax undulatus*, Lacepède, 1803); *makiki* for the whiteface moray (*Echidna leucotaenia*, Schultz, 1943) and the longfang moray (*Enchelynassa canina*, Quoy and Gaimard, 1824); and *kakakuru* for the zebra moray (*Gymnomuraena zebra*, Shaw, 1797). Other names cited could not be identified: *revareva*, *gute*,

³ *Pa'umotu*: Indigenous people of the Tuamotu Islands

houhougaere, *kivakevake*, *kohinahina* and *mamea*. The moray eel harvest was quite important on 'Anaa because in addition to the food it supplied, congers' jaws (*niho kamia*) were used as the part of warriors' attire designed to shred the skin of their adversaries during combat (Torrente 2012) or as a kind of saw called *kamia* or *oreore* (Emory 1975). The first technique for snaring morays (*here kamia*) consisted of luring them from their holes with bait (*tanoka*), which was usually consisted of small octopuses (or balls of ground fish meat) attached to the end of a stick that was inserted into the hole. The eel was then caught by a snare (*here*) made of a rope of braided fibres attached to the end of another stick. The second technique called *reke* used a hook baited with crushed fish (*paru tukituki*).

Fishing on *karena* (coral heads)

Karena or *kanaparu*, coral heads that rise to the surface of the lagoon, were well known to *pa'umotu* fishers, because large numbers of fish, giant clam and turtle species gathered there (Conte 1985, 1988). Seen as veritable cornucopia, in part owing to the invisible presence of a spirit called *kanaparua*, these *karena* were owned by island family units and carried names designed to transfer ownership to succeeding generations. A technique called *here paru* consisted of trapping fish in the holes because the animals could then be caught either by hand or speared.

Fishing in reef crevices

On 'Anaa, the technique of grabbing fish with bare hands in reef crevices was called *tinaonao*. The fisher would make sure there were no dangerous animals in the hole such as moray eels (*koiro*, *Conger cinereus*), urchins (*vana*) or scorpion fish (*tatara-i-hau*, *Pterois antennata*, Bloch, 1787). The fish was grabbed (*tago*) by its stomach, and the index and middle fingers were sometimes inserted into its gills (*kamikami*) to carry it to the basket. Rock lobsters (*komaga*) were seized from behind. When a stick was used to force the animals out of their holes, that technique was called *eneene* (Emory 1975).

Catching octopus

While octopus was caught with specific shell lures throughout ancient Polynesia, in the Tuamotu

Islands they were also pulled directly from their holes. On 'Anaa, the technique *tārena kanoe* consisted of pulling an octopus (*kanoe* or *heke*, *Octopus* sp.) directly out of its nest using a stick. The fisher would kill the octopus immediately by biting it between the eyes (Emory 1975). Octopuses were then put out to dry, usually stretched out on *gagie* (*Pemphis acidula*) branches or on drying racks, known as *hokirikiri*.

Net fishing

A technique called *takope* made it possible to trap fish in small narrow channels using coconut palm nets (*gaofe*), both sides of which were attached to stakes at either end of the bottleneck. The fish were chased into the trap. Another technique consisted of using a small deep-set net (*kope*) placed on the outer side of the fringing reef where ocean waters foam, to catch the fish when the waves retreated. The net could also be put at the end of a stone trap (*kaua paru*) in shallow water. The best time for using the technique was at nightfall, when the sea was rough and the fish were returning to deeper waters (Emory 1975). Finally, the technique known as *keke* consisted of setting a long circular net in reef crevices (*koropih*) that the fish rushed into.

Group fish drives

Fishers worked in a group to drive (*tuehi*) schools of fish either towards the shore or to the back of a bay, using draglines or garlands of foliage that the men pushed, or by scaring the fish from canoes that formed a semi-circle. Such group fishing took place particularly before a great feast, in order to gather enough fish for the rituals and festivities, or when hosting high-ranking visitors. The group fishing technique used on 'Anaa was called *taugaru*: "Many fishermen each take one coconut leaf; forming a line floating on the sea, facing shoreward, they dive, holding the leaf vertically, base downwards, and thump on the bottom, driving the fish towards the shore; when they reach shallow water, the leaves are held horizontally forming a barrier to drive the fish on shore" (Paea-a-Avehe, in Stimson and Marshall 1964). Several types of drag net were used. One called *rona* (Figure 2) was made of 40–60 coconut fronds attached to a line that could reach up to 30 m long. The ends of the rope (*gogo*)

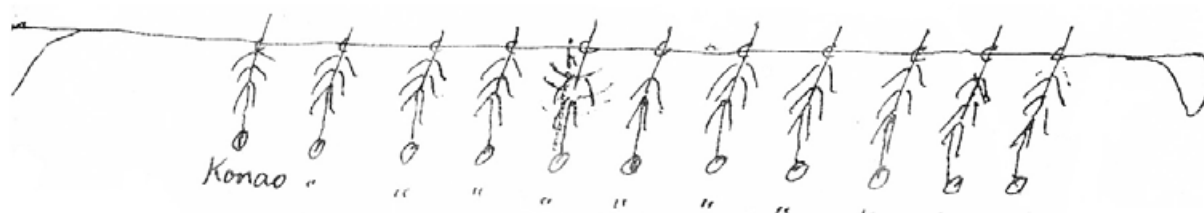


Figure 2. Line of coconut fronds (*gaofe*) weighted with stones (from Stimson, unpublished manuscript).

were looped and placed around the waists of two men who held the line that drove the fish forward. Entire schools of tropical halfbeaks, *fanea* (*Hyporhamphus affinis*, Günther, 1866), were baited with pieces of *gora kegokego* (spoiled coconut) spread out over the selected zone. The dragline was then drawn tight to drive the fish towards shallow water, where people on the shoreline simply had to grab many fish (Paea-a-Avehe, in Stimson and Marshall 1964). This group fishing method, for *fanea*, was used in the two deep bays located on the ocean side of the southern part of the island. Large quantities of *fanea* fish were cooked in special earthen ovens (*kopihe fanea*), memorialised in the area's place names (Torrente 2012).

Driving fish by slapping the water

On 'Anaa, the *hakakopakopa* method consisted of slapping the surface of the water with the hands to drive fish towards the beach and shallow water. The following fish were caught in this way: *paruku* (*Caranx lugubris*), *maraia* (*Cheilinus undulatus*), *hami* (*Archanturus* sp.), *takire* (*Parupeneus* sp.), *magumagu* (*Lutjanus fulvus*, Forster, 1801), *tero* (*Lutjanus monostigma*, Cuvier, 1828) and *tatihi* (*Naso brevirostris*). This technique could be used also outside the reef, with swimmers using the waves to force the fish over the reef (Emory 1975).

Driving fish in canoes (tuehi)

Another technique used on 'Anaa was to drive schools of fish using a fleet of canoes that formed a semi-circle. The fishers would strike the surface of the water in front of the canoe with a stone attached to a rope, one end of which was attached to a coconut frond. This type of fishing began in water 4–7 m deep; the fish were then driven into shallower water and caught by nets (*takope*). This method was used to catch *kiokio* (*Albula glossodonta*, Forsskal, 1775), *tegatega* (*Chlorurus microrhinos*, Bleeker, 1854), *komene* (*Selar crumenophthalmus*, Bloch, 1793), *vete* (*Mulloidichtys mimicus*, Randall and Guézé, 1980), *kanae* (*Crenimugil crenilabis*, Forsskal, 1775), *kukina*

(*Scarus ghobban*, Forsskal, 1775), *kutu* (*Gomphosus varius*, Lacepède, 1801) and *kōperu* (*Decapterus macrostoma*, Bleeker, 1851).

Fishing with poison (hora)

The *hora* technique consisted of using stupeficient plants so that fish would be easier to catch. On 'Anaa, fishermen used either *nau* or *horahora* (*Lepidium bidentatum*), or *hora* or *nono* (*Morinda citrifolia*) to knock out the fish. The fruit of the *hutu* (*Barringtonia* spp.) was also used for this purpose, but it can now only be found on Makatea Atoll (Butaud 2009). According to Teneehiva-a-Horoi, on 'Anaa fishermen also used sun-dried sea cucumbers (*rori*), which were grated and spread over the fishing grounds (Torrente 2012).

Lure fishing

In a type of fishing called *ravakai taoga*, live lures were used: a live fish was attached by its tail to a line linked to a fishing weight. Fish that came near the lure were then speared. Sometimes a dead fish could be put directly on the end of a spear as a lure. When the fish got close, it would be speared with a single thrust.

Mullet fishing

On 'Anaa people caught squaretail mullet, *hōpiro* (*Ellochelon vaigiensis*, Quoy and Gaimard, 1825), using very thin lines made of *miro* (*Thespesia populnea*) bark known as *kuei*, together with pieces of *gatae* (*Pisonia grandis*) or coconut wood that served as floats (*uto*). Several baited hooks were hung from it. The line was pulled behind the canoe and shaken from time to time (Fig. 3). This method, called *uto hopiro*, was still used in the 1930s (Paea-a-Avehe, in Stimson and Marshall 1964).

Stone structures

One special feature of 'Anaa is its shallow lagoon with about 50 channels that extend into the sea. Fish

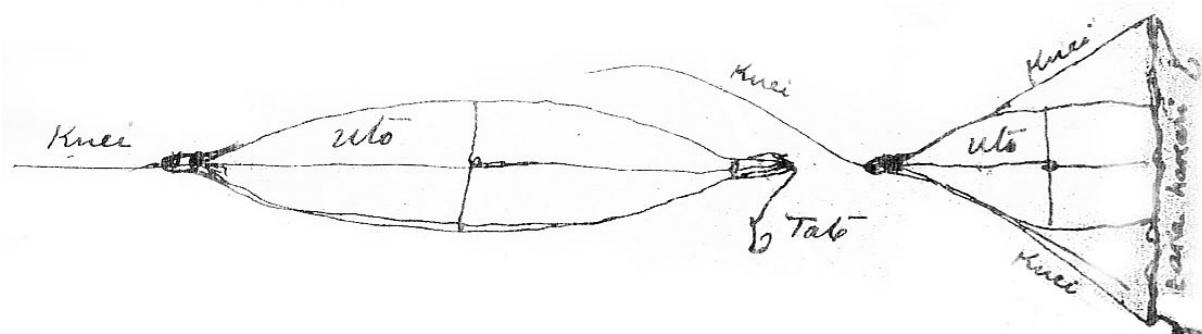


Figure 3. *Uto hopiro* floating device (from Stimson, unpublished manuscript).

were trapped by using the current in fixed durable structures called *kaua paru*, enclosures made of coral rock. These pens belonged to extended families (*kai*) who lived scattered around the island. Their use was strictly private and the structures carried specific names. Fishing in these enclosures was called *tavai kaua*, literally “waiting in the coral compound”. Their complexity in terms of architecture ranged from simple coral walls, *kaua takeke*, that converged towards a narrow bottleneck with a net at the end, all the way to several traps with openings on both the ocean and lagoon sides. Fish were corralled by means of a seine net made of plant materials and then caught with a dip net, *kope* (Emory 1934, 1975). *Tipua* (fish ponds) were stone enclosures or poles erected to demarcate the boundaries of an area where live fish were kept and raised. Some traditions mention turtle farming (*fagai tifa*) reserved for *pa’umotu* chiefs, such as the one for Honohonotai, the chief of Raraka Atoll, who had a *tipua tifa* for that purpose (Paea-a-avehe).

Shark and marine mammal harvests

Fishing for lagoon or reef sharks involved specific wooden hooks (Lavondès 1971; Emory 1975). Some species were snared by canoe in the open ocean, a common practice throughout the Pacific Islands (Conte 1987; Bataille-Benguigui 2003). Hunts for large marine mammals (*parāoa*) were important events in the atolls because they provided large amounts of meat for the community. Traditions on Makemo Atoll talk about the famous *kapea*, Whale Master, who could call whales and lead them into a certain part of the lagoon (*roto parāoa*) where they were slaughtered (Torrente 2012). On the atoll of Faaite, Tetumu described the technique for hunting porpoises, dolphins and whales in fleets of canoes by drumming on the hulls to attract them (Emory 1975). On ‘Anaa, Paea-a-Avehe described the use of a specialist (*tahuga*) to draw whales, dolphins and related species into shallow water. He would direct the community during the hunt (*tauahi parāoa*) and could even ride on the back of one of the animals to guide it to shore, where its head was cut off and the meat cut into pieces (Emory 1975).

Catching turtles

Turtles, called *tifai* or *honu* (*Chelonia mydas*), were the most prized animals in the Tuamotu Islands. They carried the name *ika nui*, (i.e. one of the greatest sacrifices for the god Tangaroa, son of the god Atea, the island group’s creator) (Torrente 2012). So, turtles were subject to very specific rituals in terms of catching and eating them. ‘Anaa’s myths explain turtles’ sacred origins: “The original couple of turtles *takero* (male) and *matariki* (female) lived in the ‘belly of Atea’ in the depths of Havaiki, in a place called Raga-titi” (Paea-a-Avehe, in Stimson and Marshall 1964).

The male turtle is linked to Orion’s belt (*Takero*) and the female to the Pleiades (*Matariki*), whose appearance corresponded to the sign in the star calendar (*tuakaveiga*) indicating that female turtles would be coming to lay their eggs on land.

In Paea-a-Avehe’s list of terms, the names for turtles referred to either their appearance or size: *tifai hekaheka*, species with a brownish yellow shell; *tifai marega*, loggerhead turtle (*Caretta caretta*), voracious species with a big head and long bill; *tifai moko*, falcon-bill turtle; *honu kea*, hawksbill turtle (*Eretmochelys imbricata*) with a curved bill and yellowish fat; *honu tari* or *tifai raparapa*, variety with a hexagonal shell; *tifai konao*, “this rare variety lifts its shell clear from the sand, as it ‘walks’ rather than crawls”. Again according to Paea-a-Avehe, the turtle’s growth stages were very well defined: new-born turtle *tororiro*, small-sized turtle *torearea*, medium-sized turtle *kopue* and finally adult *tifai-noa* (Stimson and Marshall 1964).

Turtle (*Chelonia mydas*) fishing techniques on ‘Anaa

1. *Tāvai nekēga* is the name of a method for catching turtles on land. In early November, when females emerge from the water to lay their eggs on the beach at night, men would wait in certain spots hidden by rocks to closely watch their arrival (Emory 1975). On ‘Anaa, the place called Fakaokao (which means “observe, watch closely”) is well known for turtle watching. On the first night, female turtles come out of the ocean and crawl on the land (*ragamimi*) simply to find a good place to lay their eggs (*touo*). On moonlit nights, they are easy to spot because of the bright light that reflects off their shells. The following night, they then come out to lay their eggs (*hanau*) on the beach. According to Paea-a-Avehe, the elders could determine a turtle’s size by counting the number of eggs laid on the beach. They were counted by pairs of 10 (i.e. 20): *ha-takau* “4 twenty eggs indicate a very big and fat turtle named *apo*. Tū-takau et peka-takau 7 or 8 twenty eggs indicate a more little (*sic*) turtle” (Paea-a-Avehe, in Stimson and Marshall 1964). The hunter would wait until the turtle had dug a hole, laid its eggs and carefully covered the hole with sand to hide them. He would then mark the spot with a stone. The turtle would then be caught when it tried to go back out to sea and simply turned over or else tied up and brought back up onto the beach.
2. *Tago tifa*: during the breeding season, when turtles came together to mate, fishers would swim behind the animals and grab them right with their bare hands (*tago*). If the turtle continued to swim, the swimmer would violently strike the

water making a loud sound that would cause it to stop swimming. It was then seized by one of its fins, which the fisher would twist to force it back up to the surface. In the event that the turtle dived down more than 18 m from the surface, the fisher would then use a hook.

3. *Tūagera tifai*: during the breeding season, before sunset, divers would take their spears and hooks and go out to coral heads (*karena*) that broke the surface of the lagoon. If a hunter was close enough, the turtle was speared directly; otherwise he would dive down and use his hook, as in the above technique.

Ritual aspects of ancient fishing practices on 'Anaa

These practices, both individual and in groups, sometimes mobilising an entire bloodline, could be implemented only in continuity with the invisible realm, through sacrificial rites designed to ensure abundance and following a calendar (Table 1) that was well

known, at least by certain experts in that area. This ritual control of resources was backed up by a social control system that instituted temporary bans (*rāhui*) on given species, depending on the yearly cycle. Large-sized species, such as whales, dolphins or turtles, were surrounded by sacrificial rites at specially designated *marae* — communal or sacred places that serve religious and social purposes. The chief had the right to impose resource restrictions (*rāhui*), whether that involved certain *tapu*⁴ species of fish (trevallies, skipjack, certain sharks) or turtles, which were supposed to be eaten ritually by the elders. On 'Anaa, the rite of *tiorega* consisted of offering the first pieces to the gods and the spirits of the ancestors in a sacred area called the *marae tiorehaga katiga* (*marae* of the first food; Fig. 4). These first food items could then be offered to a high-ranking person (*ariki*, *tahuga*, *kaito*), who would himself offer them to his gods. This ritual allowed the ban to be lifted so that the community could eat the food. Fish remains were kept in stone structures called *pāfata* or in hanging woven baskets but were never thrown back into the sea, for fear of permanently frightening the species away.

Table 1. Fishing calendar for 'Anaa Atoll — *No te mau kavake e horo haga ika* (moonlit nights when fish run) (Paea-a-Avehe, in Stimson and Marshall 1964).

Lunar cycle / Month	<i>Te paru</i> (fish)
Higaia (June)	<i>Kukina</i> (<i>Scarus ghobban</i>), bluebarred parrotfish <i>Homohomo</i> (<i>Scarus psittacus</i>), common parrotfish <i>Pitika</i> (<i>Chlorurus sordidus</i>), daisy parrotfish <i>Kakavere</i> (<i>Tylosurus crocodilus</i>), crocodile longtom <i>Korai pakeke</i> (<i>Chaetodon lineolatus</i>), lined butterflyfish <i>Korai gutu keo</i> (<i>Forcipiger longirostris</i>), longnose butterflyfish
Napea (July)	<i>Tatihi</i> (<i>Naso brevirostris</i>), spotten unicornfish <i>Herepoti</i> = <i>Tatihi</i> <i>Kokiri</i> (<i>Balistapus undulatus</i>), triggerfish <i>Karaua</i> (<i>Naso vlamingii</i>), bignose unicornfish <i>Kuripo</i> (<i>Naso exacanthus</i>), sleek unicornfish <i>Kanae</i> (<i>Crenimugil crenilabis</i>), mullet <i>Paruku</i> (<i>Carangoides ferdau</i>), banded trevally <i>Kautea</i> (<i>Caranx papuensis</i>), trevally <i>Nohi nimo</i> (<i>Alectis cylaris</i>), trevally <i>Tapiro</i> , <i>Maraia</i> (<i>Cheilinus undulatus</i>), humphead wrasse <i>Kito</i> (<i>Epinephelus polyphekadion</i>), tiger grouper <i>Marava</i> = <i>Kimo</i> (?)
Kauhune (August)	Abundance of all species
Kametika (September)	Fish lay their eggs
Herehu (October)	The eggs grow
Fakahu (November)	Month when the weather is hot, fish begin to lay their eggs
Piripiri tau ai manu (December)	Birds come on land and make nests in the trees Fish begin to scatter their eggs It's the end of abundance and the beginning of the difficult months (<i>paroro</i>)

⁴ The Proto-Polynesian term *tapu* designates that which is "sacred, prohibited or under ritual restriction" (Kirch and Green 2001). But other meanings have been noted for the Tuamotu Islands by Stimson: "a sign, token..., which is considered a portent of future events" (which is why the term *tapu-fakahira* is used for rainbows on 'Anaa). The concept "*noa*" meant that which is not considered *tapu*, thereby forming an antonym that translates that which is secular and free from restrictions.

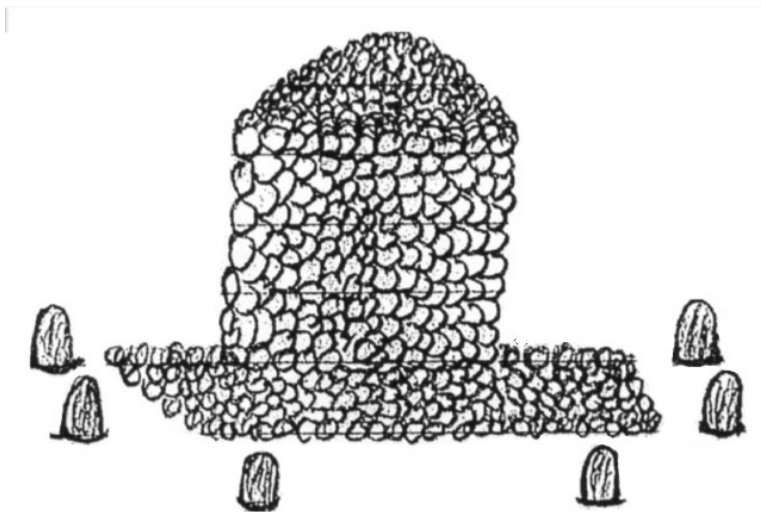


Figure 4. *Marae tiorehaga katiga*, *Marae* for offering the first food items on 'Anaa; drawing based on Paea-a-Avehe (in Stimson, unpublished manuscript).

In reference to sacrifices in the *marae*, Montiton (1874) mentioned that:

"the victims were generally turtles, sea-breems, skipjack, etc. On both the day of the sacrifice and on the one that preceded it, everyone who was supposed to take part in it observed abstinence. They usually slept next to their canoes so as to be able to go out at the break of day in search of a turtle, skipjack or any other large fish. The fisher who caught it would remove the shiniest scale and offer it to the god whose image was on the prow of the canoe."

Stones of plenty and talismans

Besides the control exercised by numerous marine divinities who received sacrificial offerings so as to ensure, in return, an abundance of species (*kau-hune*), there were other means designed to influence fishing. Fish-shaped stones, called *puna-ika* (literally "source-fish"), were used to promote that species' natural reproduction (Babadzan 1993). After being filled with *mana* in the *marae* and pointed in a certain direction, they were supposed to attract the species towards land or to inside the lagoon.

Different kinds of fish-talismans, which were wrapped up and tied in a ball (*pōpō*), were also used. According to Stimson and Marshall (1964),

"After been sun-dried it is taken to a *marae* and subjected to rites and incantations by the *tāura*. It is then sewed into a small plaited pandanus receptacle and is ready to be taken on a voyage to another land, and is believed to draw all the fish of the same species to the new land. = *popoika*, *polo-i-fano*, *take-kāoa*."

Ritual turtle eating

On 'Anaa, when a chief wanted to eat turtle, the religious expert *tahuga* carried out the *Huki no Matariki e Takero*⁵ rite, a ceremony where conciliatory incantations were made to Matariki (the Pleiades, associated with female turtles) and to Takero (Orion's belt, associated with male turtles). The priest and his men would go to the designated spot at the end of the day just before dark. Each one had a ceremonial spear (*rakau huki*) about a metre long and decorated with red feathers (*kura*). The day following the ceremony, a turtle was supposed to appear on the shore. If the spear had been pointed towards Takero, it would be a male turtle, if it had been pointed towards Matariki, it would be a female turtle. Following the ceremony, a prayer (*pure no te honu i te moana*) was recited before the fishermen went out to sea, while at the same time passing the upturned hull through the heat of a torch (Stimson and Marshall 1964). Catching a turtle was always a big event in the Tuamotus and brought about a series of protocols that made it impossible to describe in detail here (Emory 1947; Conte 1988).

⁵ The *huki* was a chant or an incantation designed to make a turtle appear during a ceremony where ceremonial spears were pointed at Takero and Matariki; as on 'Anaa *huki* means "to point the finger or a stick at" (Stimson and Marshall 1964).

Conclusion

The ancestral fishing techniques of the ancient *pa'umotu* were the result of adapting centuries of empirical observation of the biodiversity to the atoll environment, which then allowed them to establish very precise terminology. However, this “science of the concrete” as described by Levi-Strauss (1962) cannot be separated from the symbolic and religious context in which it evolved. We were able to provide an overview of how the ancient *pa'umotu* of 'Anaa used their marine resources, with the help of the outstanding information from Paea-a-Avehe that Stimson collected in the 1930s. Other resources not mentioned here, such as shells (particularly giant clam), crustaceans, and certain edible seaweeds, were also important as additional food items on these coral islands.

While in the Tuamotu Islands, changes related to evangelisation and colonisation took effect more slowly than in the other island groups, thereby allowing very precise knowledge about fishing to be preserved, but that knowledge is now endangered. The goal of this article is to keep such knowledge from gradually disappearing from our collective memory.

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