

Amerika Samoa Lunar Calendar

January 22, 2023 - February 9, 2024



Western Pacific Regional
Fishery Management Council

WPCOUNCIL.ORG



Photo: WPRFMC

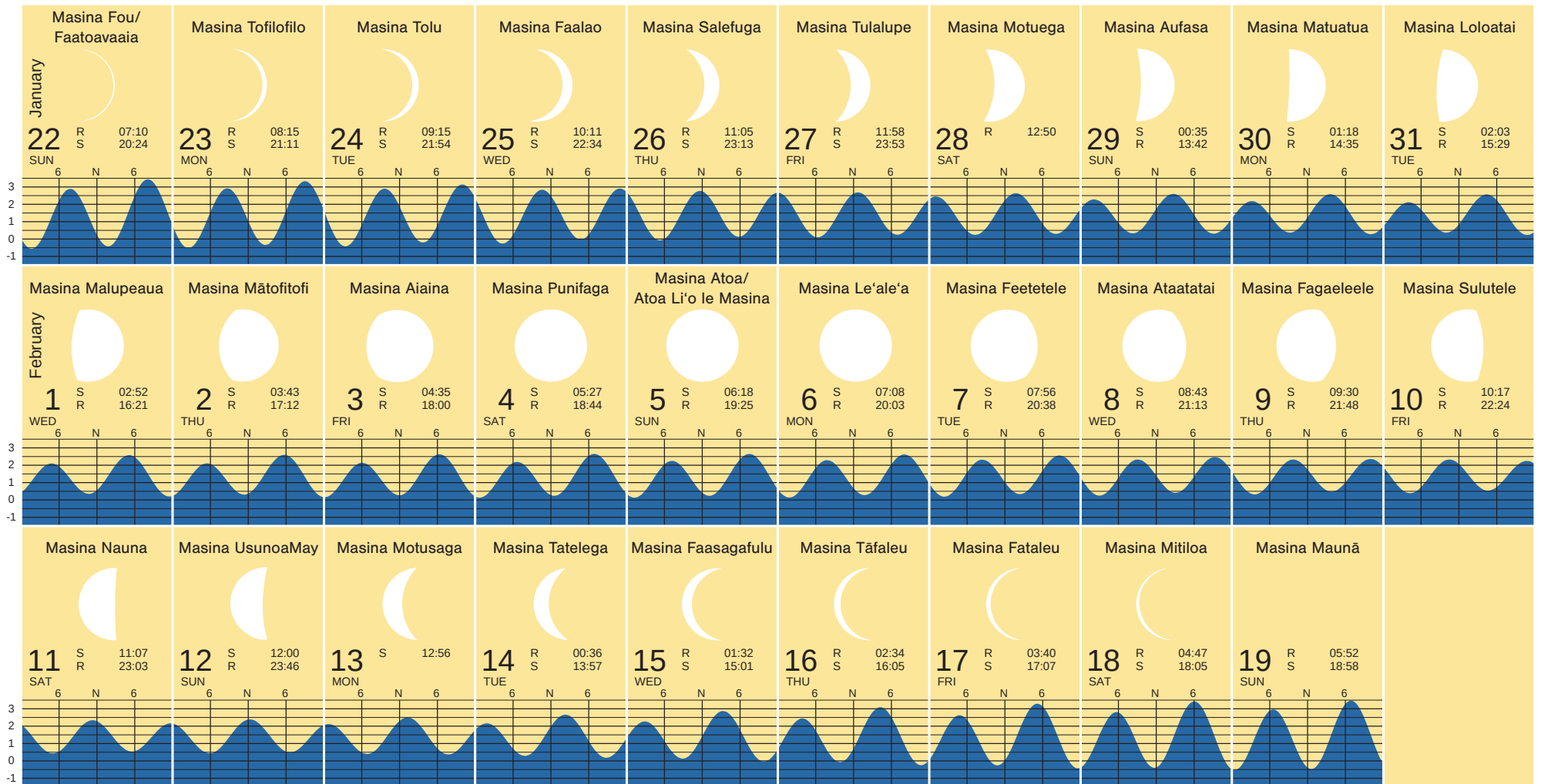
Yellowfin Tuna

Asiasi (yellowfin tuna) is a local favorite at the restaurants in American Samoa. It is used as a modern substitute in traditional Samoan dishes such as *oka* (raw fish in coconut milk), which historically used smaller reef fish. Small recreational and *‘alia* (double-hulled catamaran) fishermen and larger longline vessels provide *asiasi* to local markets. Local fishermen—from both large- and small-boat fisheries—commonly provide *asiasi* for *fa‘alavelave* (family, church or community events such as weddings or funerals). Photo: Shutterstock

Utuvāmua

January 22 - February 19, 2023

Ianuari 22 - Fepuari 19, 2023



MOON-RELATED OBSERVATIONS AND ACTIVITIES



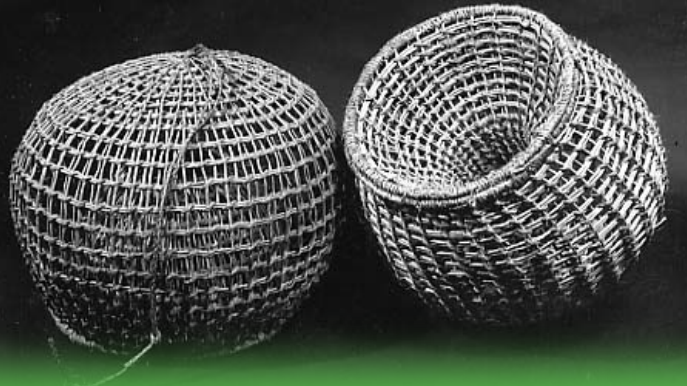
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Photo: John E. Randall



Photo: NPS



Two 'enu, traditional fish trap woven with sennit.

Photo: Polynesian Photo Archives (PH-M-08)

Goatfish

Historically, *i'asina* (juvenile goatfish) runs in American Samoa occur between the start of *palolo* (marine worm) season in October through the appearance of large schools of *lo* (rabbitfish) in April. Large catches of *i'asina* are shared among residents of the village and used in cultural ceremonies as gifts.

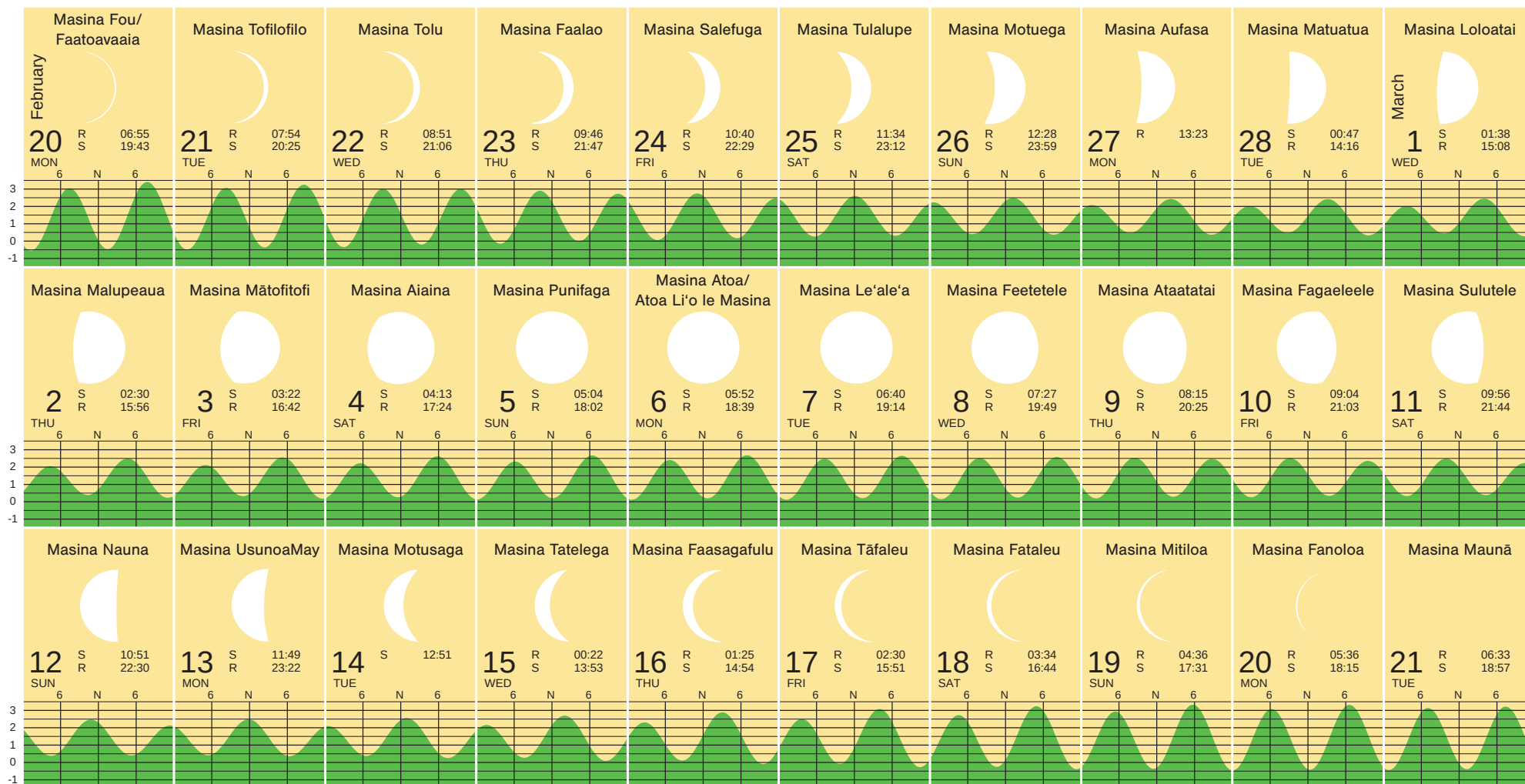
One way *i'asina* are caught is by herding them with *lau* (coconut fronds) from the reef to shallower waters where groups of villagers collect them with *alagamea* (hand nets). Another traditional fishing method for *i'asina* still practiced in Manu'a is using a handwoven funnel trap called 'enu.

I'asina are small fish (about 3.5 inches) that have just completed their pelagic existence as eggs and larvae in offshore waters and are now returning to the reefs to live for the remainder of their lives.

Fa'aafu

February 20 - March 21, 2023

Fepuari 19 - Mati 21, 2023



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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Photo: Polynesian Photo Archives (PH-140-19), circa 1945



A traditional method of catching *fe'e* uses *mataife'e* (cowrie shell lures) that resemble the *isumu* (rat).

Photos: NPS



Octopus

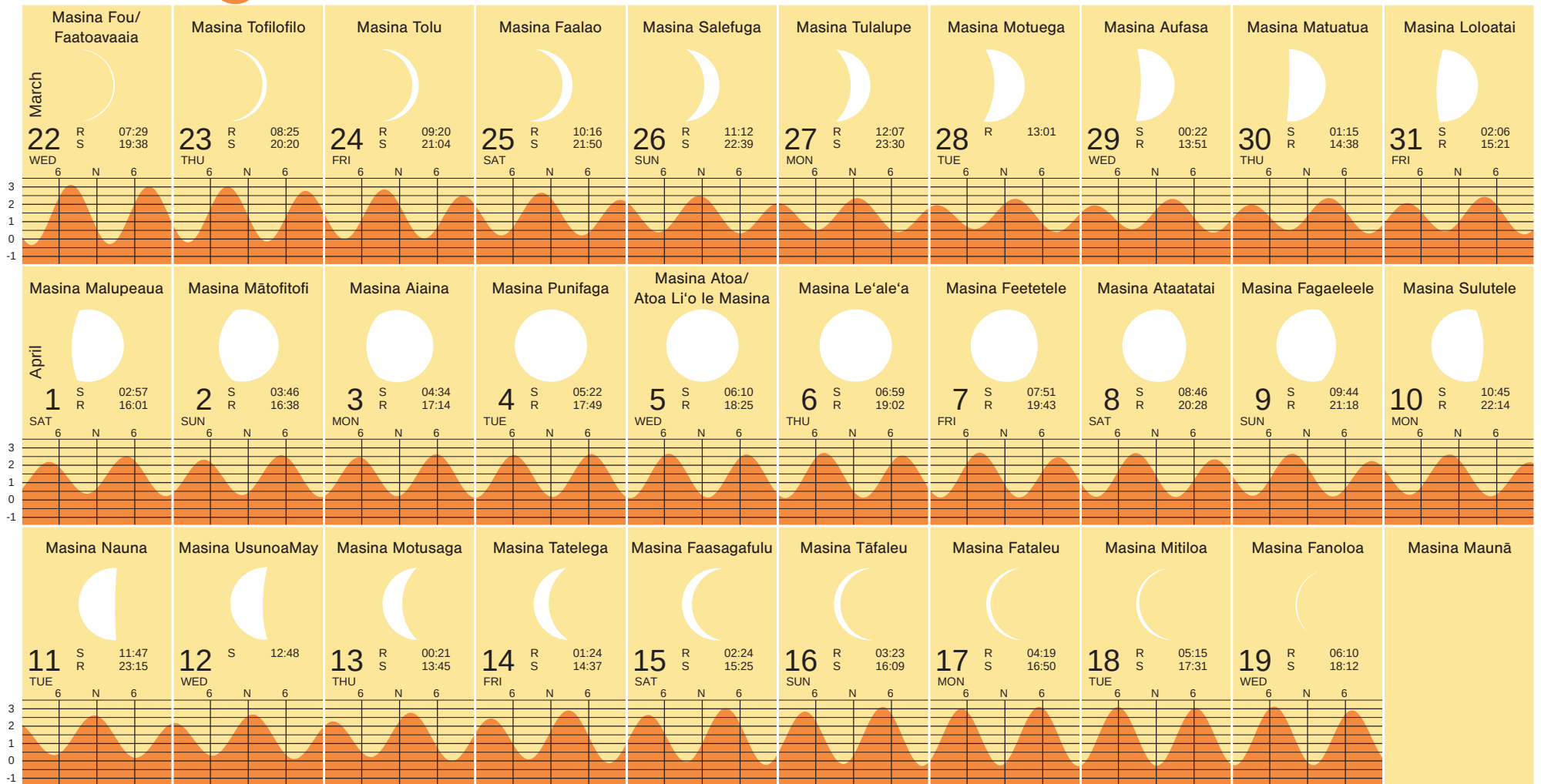
Fe'e (octopus) has significant cultural value. The month of May was sacred because of the *fe'e*, and certain coastal villages decreed a *sā* (forbidden activity) on fishing during that time. *Taife'e* (octopus season) in American Samoa takes place mainly in March and April.

Historically, *fe'e* were caught by women at low tide using a stick to poke in the holes in the reef. But men used lures inside the reef when the tide was in. Using a small *paopao* canoe, a man paddled backwards and forwards in the parts of the lagoon where he was likely to find a *fe'e*. While paddling, he managed the line of the lure. The lure was lowered to just above the bottom and kept in motion by constant jiggling. This motion was said to look like a rat, and when the shells click the stone, it was said to sound like the squeaks of a rat (this method is still used). The *fe'e* was attracted to the lure and held onto it firmly with its tentacles. The fisherman drew it out of the water and bit it between the eyes to kill it.

Fānoga

March 22 - April 19, 2023

Mati 22 - Aperila 19, 2023



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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Skipjack Tuna

Bonito (skipjack tuna, *atu*) are important in Samoan culture - a village could gain enviable social status for its rich taro gardens, the skill of its bonito fishermen, or the skill of its canoe builders. Bonito canoes (*va'aalo*) were made of planks very neatly joined together, and typically manned by two or three men. Every person of high status had one. Bonito fishing required great strength and endurance in the crew.

When the boats and barbless hooks were ready, the bonito boats left shore and went outside the reef as a fleet under the command of the *tautai* (master fisherman). He decided on the movements at sea, usually leaving shore at midnight or four o'clock in the morning. Beyond the reef, the man sitting in the bow looked for schools of bonito or for flocks of sea birds which pursue schools of small fish, with bonito not far behind. When the crew saw the bonito, they dropped the hook from the back of the boat and rowed quickly through the school of fish. When the *tautai* at the back of the boat caught a fish, he yelled and swung the fish from the right side into the middle of the canoe. A skillful fisherman could flip the rod so that the hook jerked free in the air while the fish landed in the canoe.

Upon their return, the catch was divided up between the *maitaisbonit* (chiefs), fishermen and *tui atua* (people who had not been fishing) according to custom.



Historical sources say there were three seasons in the year for catching bonito, and they corresponded to the breadfruit seasons at the beginning (January and February), middle (May to July), and end of the year (October, November, and part of December).

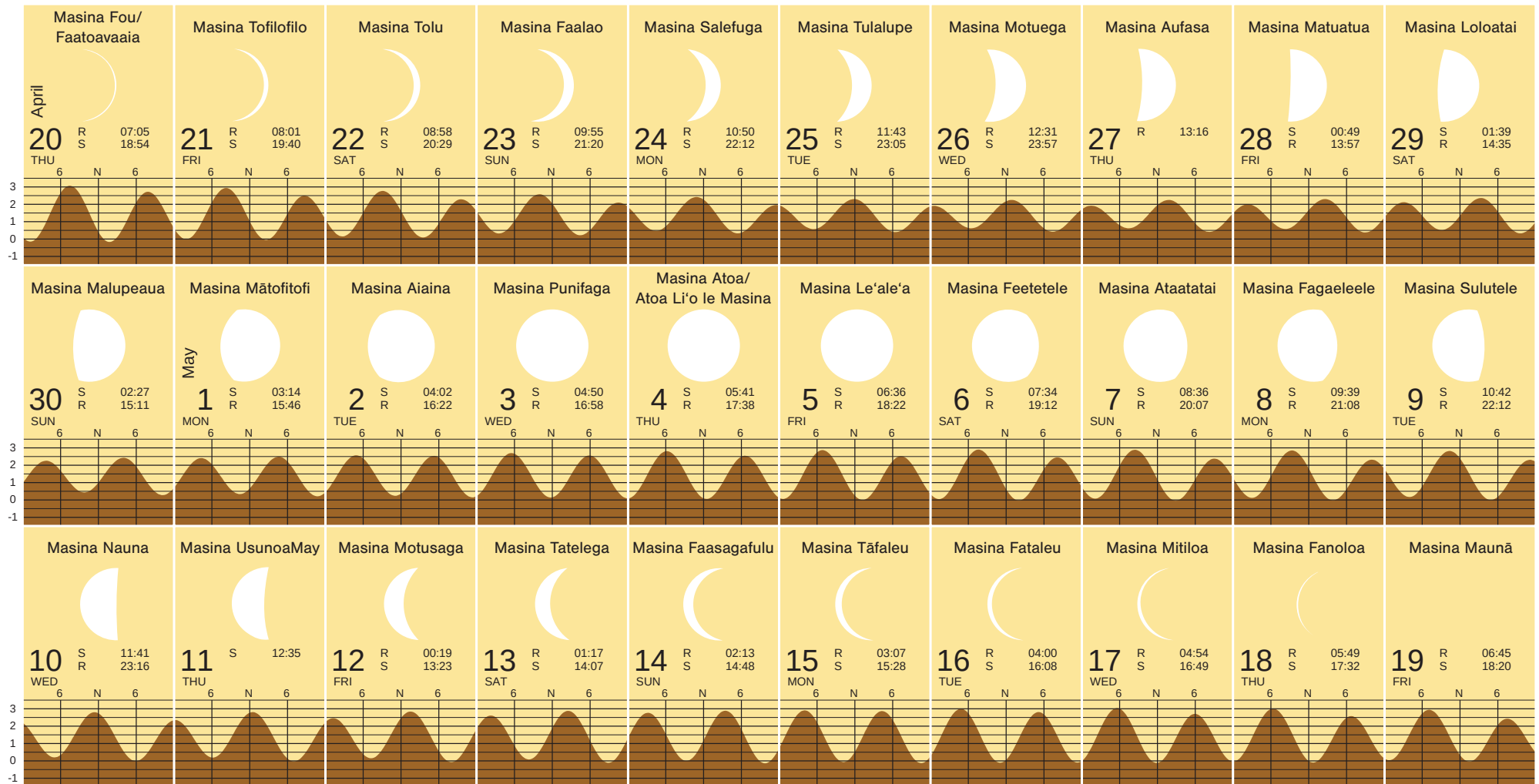
Photo: Abi Jacob

Photos (top left): Clinton Duffy, some rights reserved (CC-BY-NC-SA) / inaturalist.org,
(bottom left): Kava Drinking Ceremonies Among the Samoans And A Boat Voyage round 'Upolu Island, Samoa, S. Percy Smith

Aununu

April 20 - May 19, 2023

Aperila 20 - Me 19, 2023



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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Giant Clams

Faisua (giant clams) are a Samoan delicacy. Like corals, *faisua* have plant-like cells (zooxanthellae) that live in their tissues and produce free food for the clams. When a clam opens its shell and spreads out its mantle, the zooxanthellae can make food from the sun, like a plant unfolding its leaves. At the same time, *faisua* also get some food by drawing water through its siphon and filtering out any tiny food particles (zooplankton).

American Samoa has two native species of *faisua*: *Tridacna maxima* and *T. squamosa*. More recently, the local government has introduced *T. gigas* and *T. derasa* and re-introduced *Hippopus hippopus* to reefs around the territory.

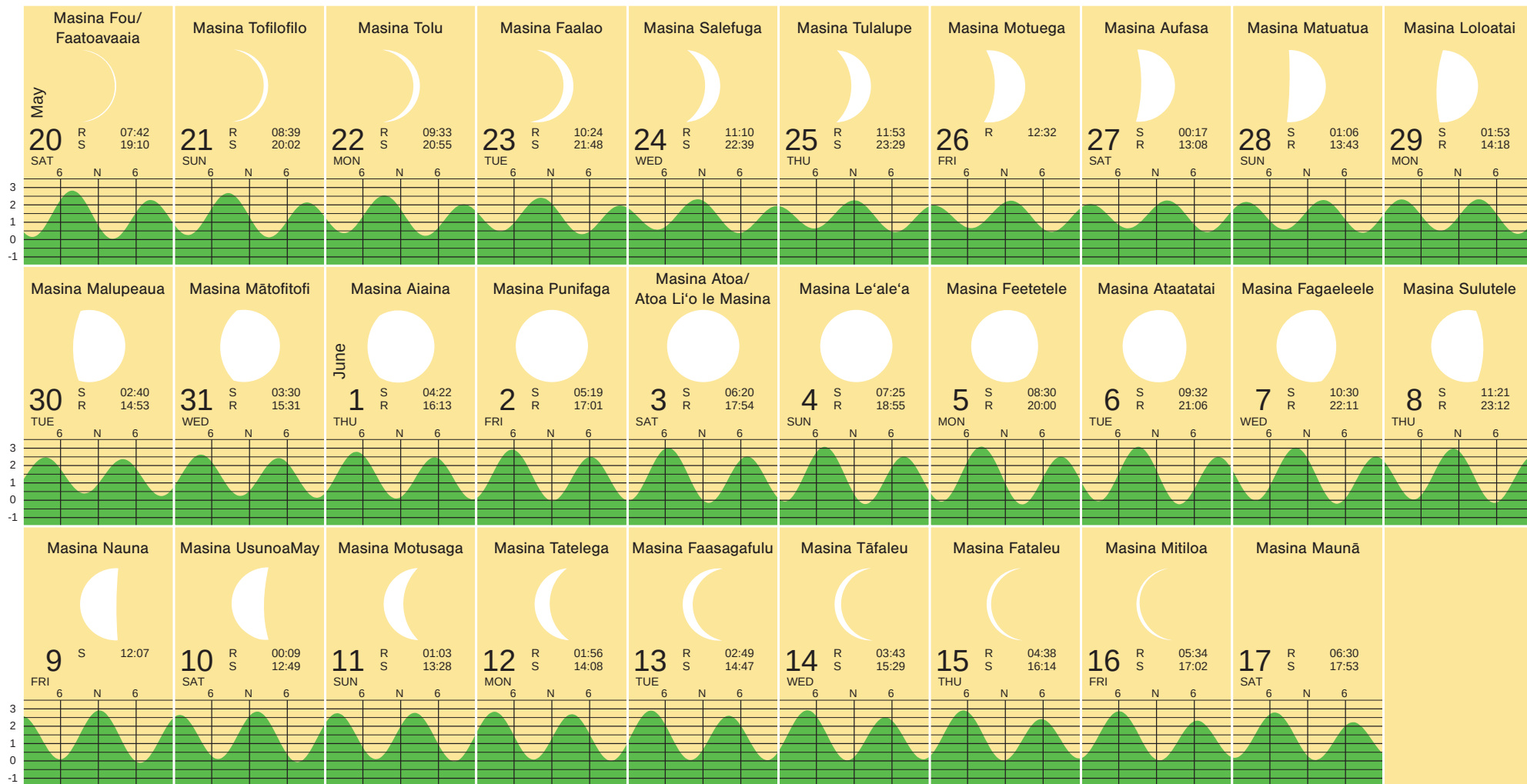
Larger *faisua* found in deeper water beyond the reef's edge were traditionally harvested by men of the village who would dive on the reef at the break of dawn. A stick was wedged into the mouth of the *faisua*, and then the clam was dislodged from the reef rocks. The *faisua* was also one of the reef species harvested by women engaged in *figota* (reef gleaning).

Photos: NPS

Oloāmanu

May 20 - June 17, 2023

Me 20 - Iuni 17, 2023



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Sharks

The *malie* (sharks) living in our nearshore waters are generally not dangerous to swimmers or divers but they may swim close by to see who's in their area. The most common species are the blacktip reef shark (*Carcharhinus melanopterus*) and the whitetip reef shark (*Triaenodon obesus*). *Malie* are traditionally used in ceremonial events and divided in a specific way—usually with the shark's head given to the *aumaga* (untitled males of the village). There were special words for parts of the shark, for example, *tulāgogo* (dorsal fin), which is called “resting place for seagulls.”

In American Samoa, *lepaga* (shark fishing) was done by various methods. One traditional harvest method called *sele* involved the use of smelly bait (such as fish chum and pig innards) and a long noose to snare the shark once it surfaced alongside a fishing vessel. A traditional bait float was used for this method of shark fishing. These wooden floats were lightweight and used with nets and lures. A second method of shark fishing used a 50- by 20-foot net called '*upega malie*. Special floats from '*ulu* (breadfruit) trees and *ma'ā* (stones) served as sinkers. The nets were baited with fish to attract sharks.

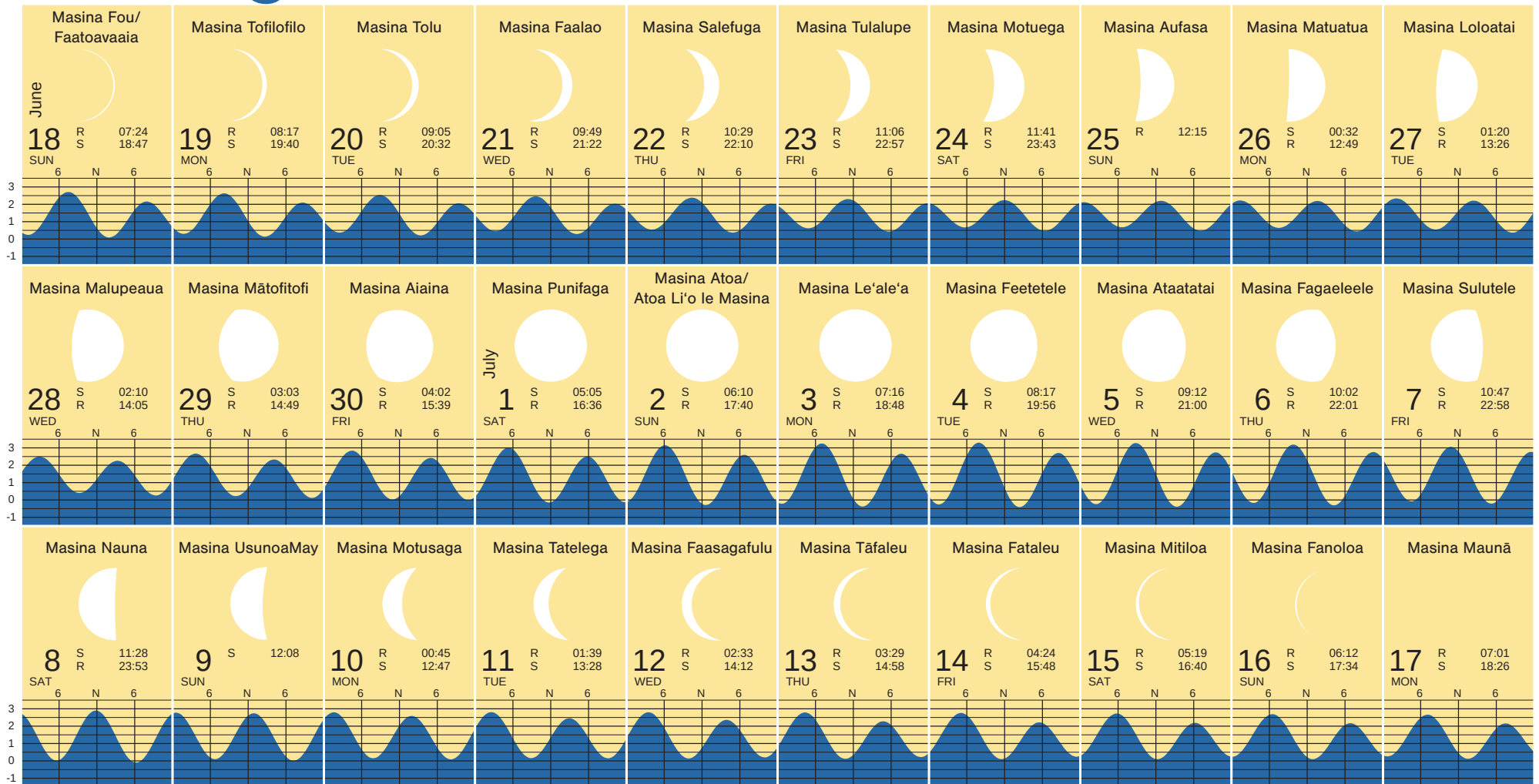
Although fishermen catch sharks incidentally today, they are not frequently targeted.

Blacktip reef shark. Photo: flickr.com/Pacificklau Photography (CC BY-NC 2.0)

Lotuaga

June 18 - July 17, 2023

luni 18 - Iulai 17, 2023



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High Talking Chief (HTC) Tua Faima (sitting with bottle), Left to Right: HTC Atuatasi Talosaga, High Chief Alo Su'esu'emanogi W. Steffany, and HTC Mata'u Auvasa; washing of atule rocks in front of Faletalimalo of Mata'u at Fagatele, Fagasa, Tutuila Island, American Samoa.

Photo: Polynesian Photo Archives (PH-137-C)



Photo: NPS

Atule

Fishing for *atule* (bigeye scad) has been a sacred tradition throughout many villages in American Samoa such as Fagasa Village, Tutuila Island, Ofu Village, Ofu Island, and Ta'u Village, Ta'u Island. Fishermen carried knowledge of fish movements and seasonality through the years and were able to determine and predict the return of the *atule*, especially in the months of April, May and October.

Though rituals and practices vary from village to village, some aspects of harvesting *atule* remain the same. Women weave baskets and traps made out of coconut leaves that are connected together to form a barrier, a fishing method called *lau atule* or *lauoa*. Chiefs and skilled fishermen position themselves around the bay to keep track of the location of the school. When the school gets close enough to shore, the high talking chief instructs the *aumaga* (untitled men) and villagers to surround the school and herd the fish to shore with the woven coconut leaves.

Many thousands of *atule* can be caught with this method. They were distributed equally to all the village families who participated in the fishing, and when there was a large catch, they were given as gifts to family and friends in other villages. Outside of large gatherings, fishermen use hook-and-line to let the species recover.



Leone Village, May 2021.

Photo: Natasha Ripley



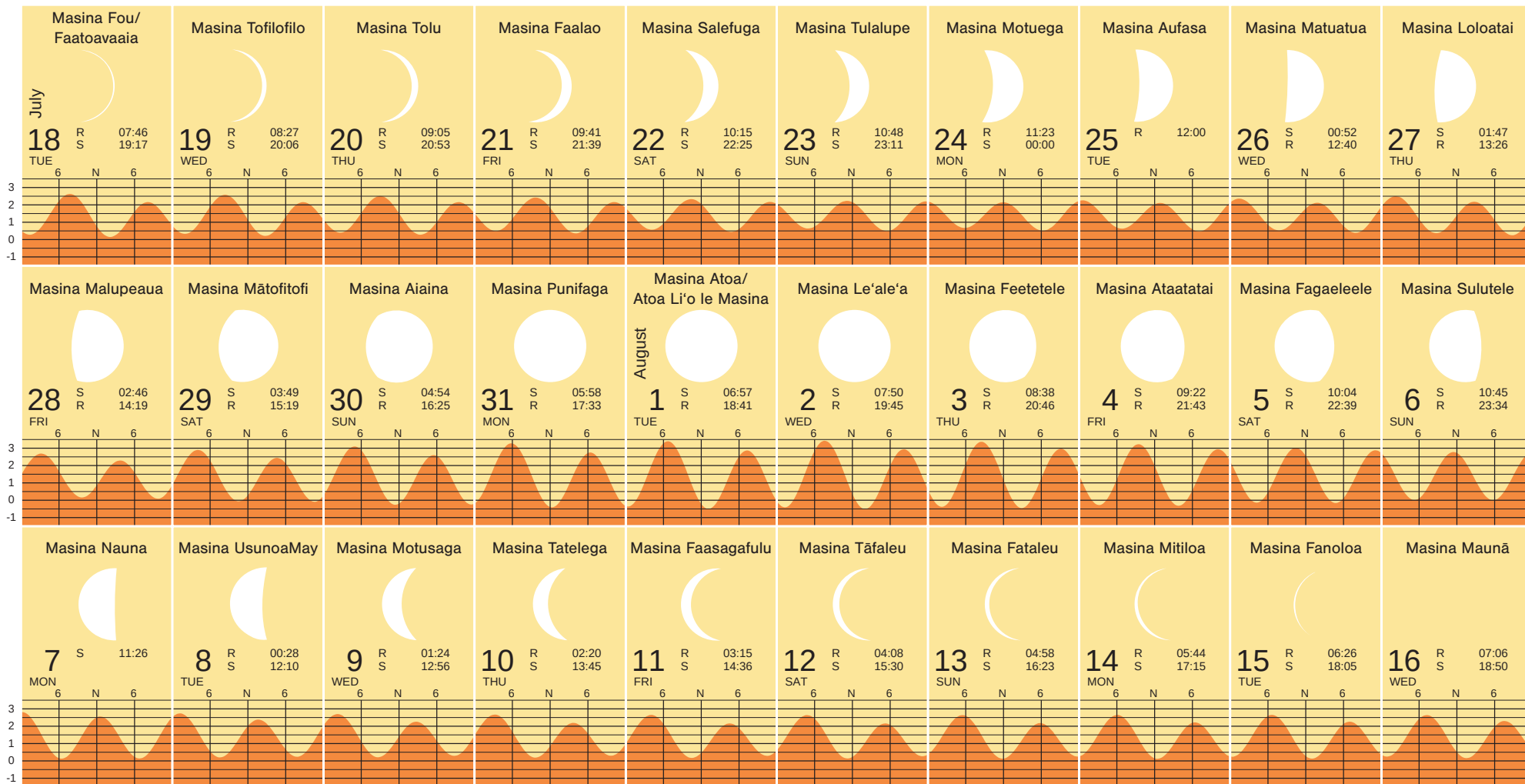
The *atule* rocks relate to a legend associated with the origin of the fish and their continued abundance. The rocks are still in existence

and the traditions and ceremonies associated with them, as well as historically known fishing techniques, are still practiced by the Fagasa villagers. Photo: Polynesian Photo Archives (PH-137-A)

Tu'iefu

July 18 - August 16, 2023

Iulai 18 - Aukuso 16, 2023



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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Purse seiner hauling net (left) and in Pago Pago Harbor, American Samoa (below). Photos: WPRFMC



Tuna for the Cannery

Atu (skipjack tuna) and *apakoa* (albacore tuna) are the two most important fish to the economy of American Samoa. They account for the bulk of the fish delivered to the local StarKist cannery, the territory's largest private sector employer. COVID-19-related travel restrictions prevented international workers from returning to American Samoa, and the longline fleet had issues with recruiting fishing crews. In spite of these issues and other difficulties associated with increased air freight costs, StarKist Samoa continued to operate throughout 2020.

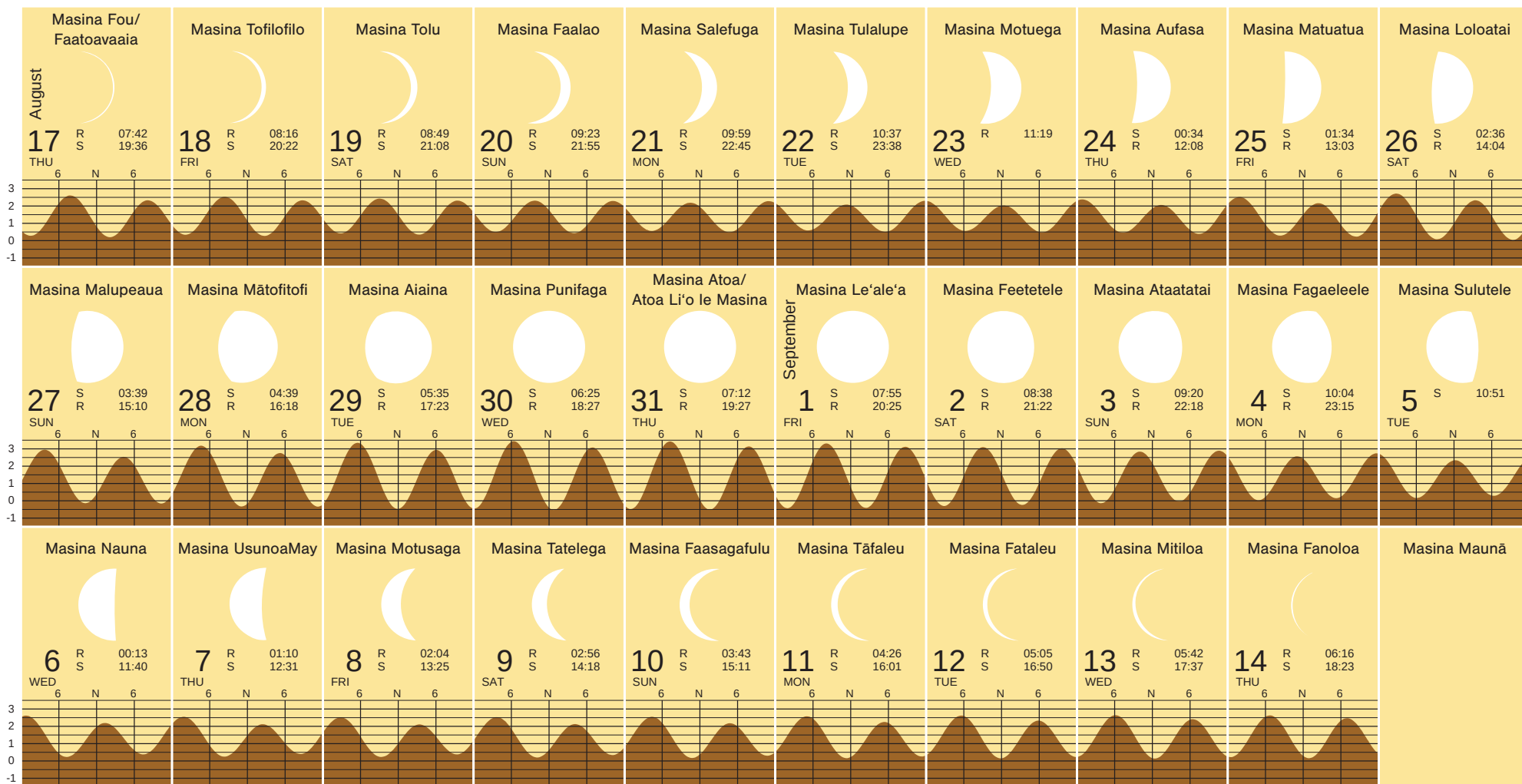
Apakoa was not traditionally targeted by Samoan fishermen as it is generally caught in depths of 100 to 400 feet. Approximately 100,000 metric tons of tuna are offloaded in Pago Pago each year, of which the majority are provided by U.S.-flagged purse seine vessels. The port of Pago Pago is ranked fifth in the United States in terms of value of fish landed in 2020 (\$108 million), and seventh in terms of commercial fishery landings (170 million pounds).*

*Source: National Marine Fisheries Service (2022). Fisheries of the United States, 2020. U.S. Department of Commerce, NOAA Current Fishery Statistics No. 2020. Available at: <https://www.fisheries.noaa.gov/national/sustainable-fisheries/fisheries-united-states>

Mulifā

August 17 - September 14, 2023

Aukuso 17 - Setema 14, 2023



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Palolo is often referred to as “Samoan caviar.” Pictured here is the brown (males) and bluish-green (female) tails of palolo worms and juvenile fish caught in a *ka palolo* net.

Photo: WPRFMC



Photo: WPRFMC

The *palolo* rising is preceded by the flowering of the *moso’oi* tree and Samoans traditionally make leis to greet this gift from the sea.

Photos: NPS



Palolo

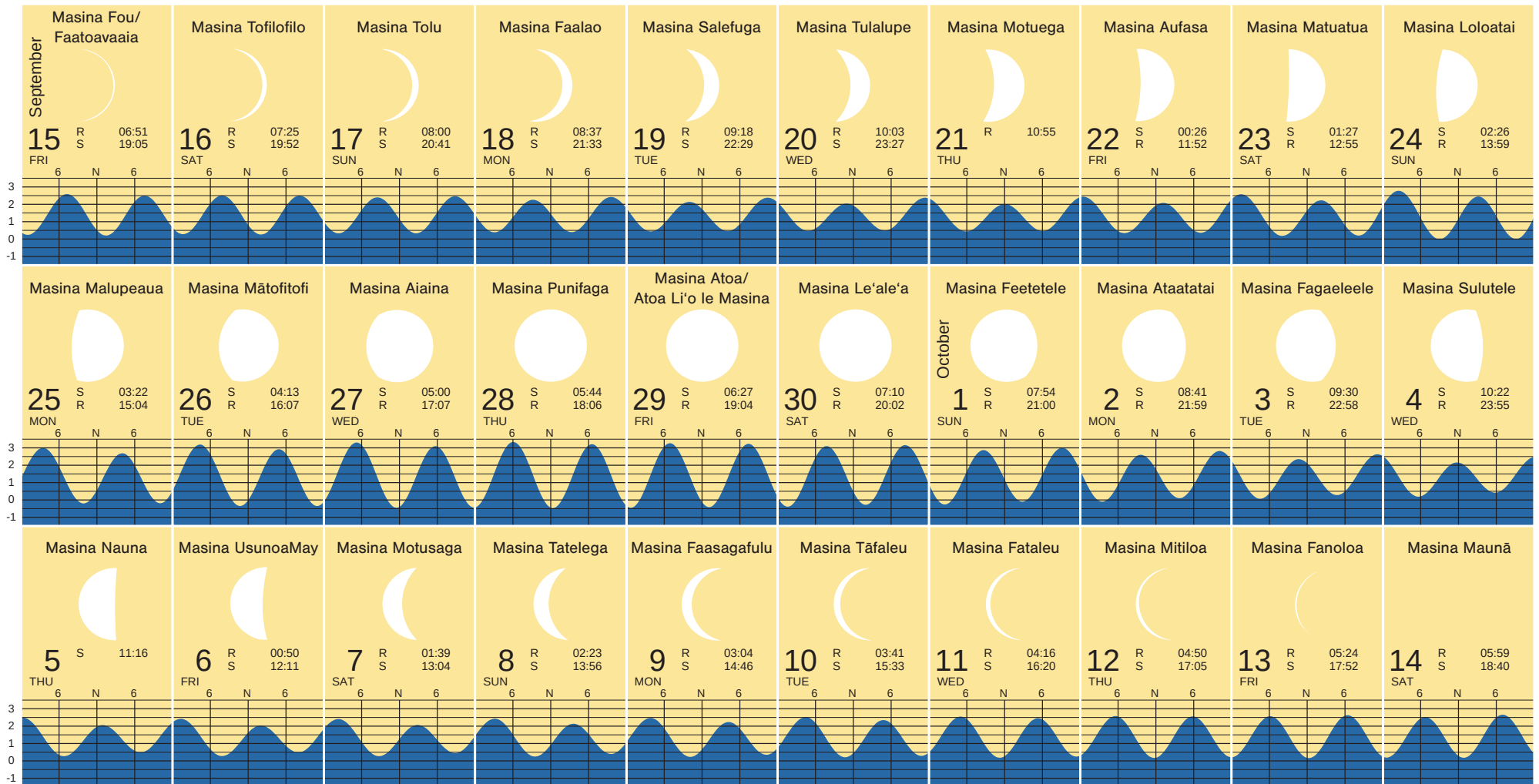
Once or twice a year, Samoans eagerly wait along the shoreline for *palolo* to rise to the ocean surface, ready to scoop them up in nets. *Palolo* is the tail section (epitoke) with reproductive cells of a polychaete worm (*Eunice viridis*) that is found throughout the south central Pacific. The worm releases the epitoke section that swims to the surface each year around one week after the full moon in October and/or November in a mass spawning event, typically associated with high surf, irregular rainfall and strong winds. For Samoans, other natural cues include the closing of the *palulu* flower (morning glory), brown foam from coral spawn, toxins in fish and customarily, the flowering of the *moso’oi* tree. Samoans say that it is when the *moso’oi* flower is the most fragrant that invites *palolo* to spawn. Historically, the appearance of the *palolo* is connected with the season of plenty for marine resources.

To the unexperienced, *palolo* is merely a worm. To Samoans, *palolo* is a delicacy to be enjoyed once a year. *Ka palolo* (harvesting *palolo*) is done late at night before the sun comes up. Participants check for the rise over the course of two to four days.

Pālalomua

September 15 - October 14, 2023

Setema 15 - Oketopa 14, 2023



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Photo: NPS



Photo: David Burdick / Wikipedia

Rabbitfish

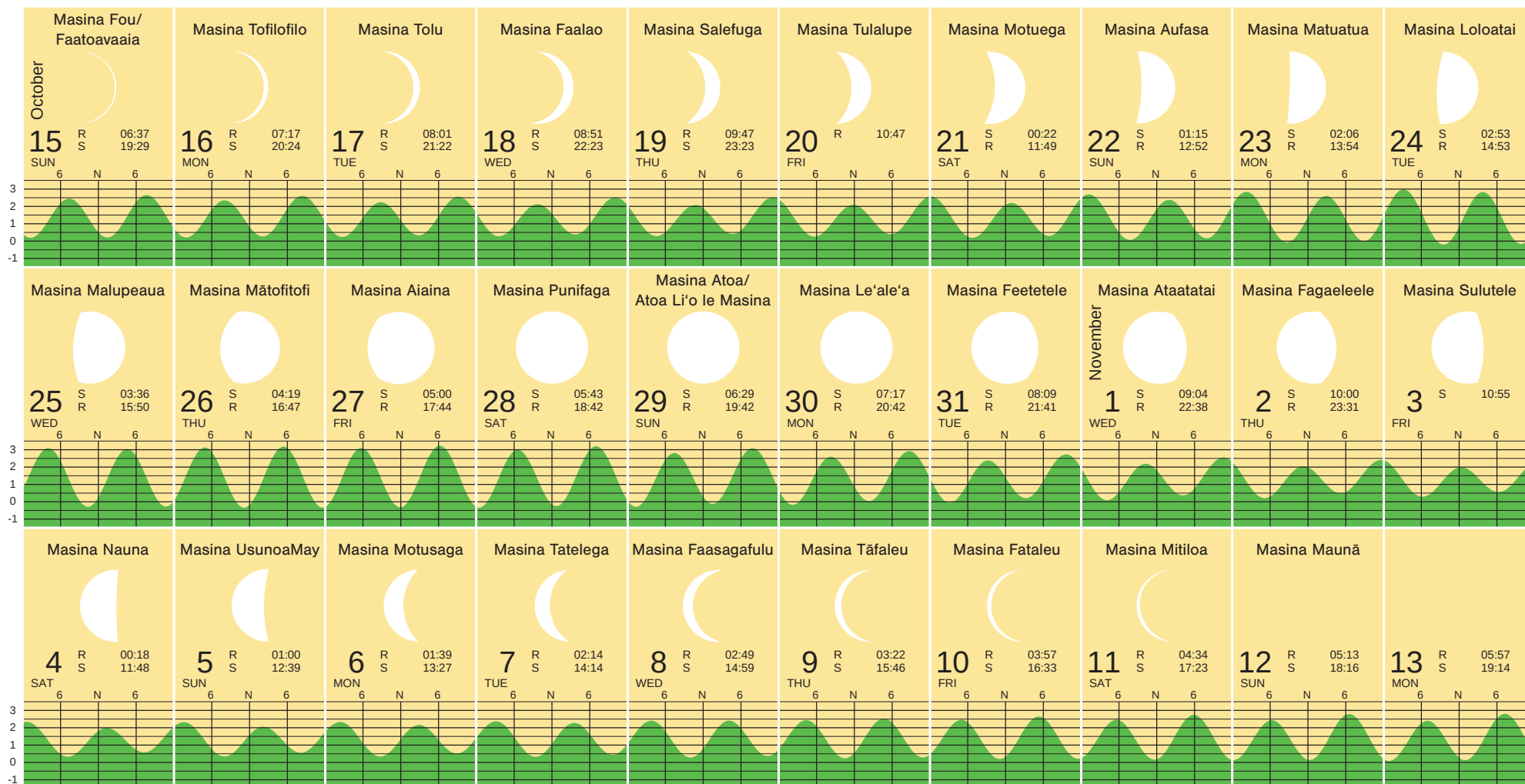
Rabbitfish are called by different names, such as *loloa*, *‘ofe‘ofe* and *malava*. The name used when referring to large schools of juvenile rabbitfish is *lō*. While rabbitfish are caught year-round, they are most prevalent in the late spring. In certain villages, the month of April is given the Samoan name *Lō* as this is when rabbitfish are plentiful around American Samoa.

Fishing for *lō* is a team effort by members of the village. Coconut fronds are braided into long sections to herd the schools of *lō* into the shallow areas where they are scooped up using *alagamea* (hand nets). A successful catch is shared with everyone in the village and neighboring villages. Like *atule* (bigeye scad) and *‘anae* (mullet), *lō* is also an important bait fish to catch larger fish utilizing *‘upega* (handwoven nets).

Pālalomuli

October 15 - November 13, 2023

Oketopa 15 - Novema 13, 2023



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Mullet

'Ane (family Mugilidae) are commonly fished in the coastal waters around the islands of American Samoa. 'Ane are also important as a bait to catch larger pelagic fish such as atu (skipjack tuna). In American Samoa the season for ia'eva (red-lipped mullet) runs from October through December. The afomatua (grey mullet) are considered a sacred fish. They are commonly presented as ceremonial exchanges with such items as siapo (tapa cloth) and fala (fine mats) as reciprocal gifts.

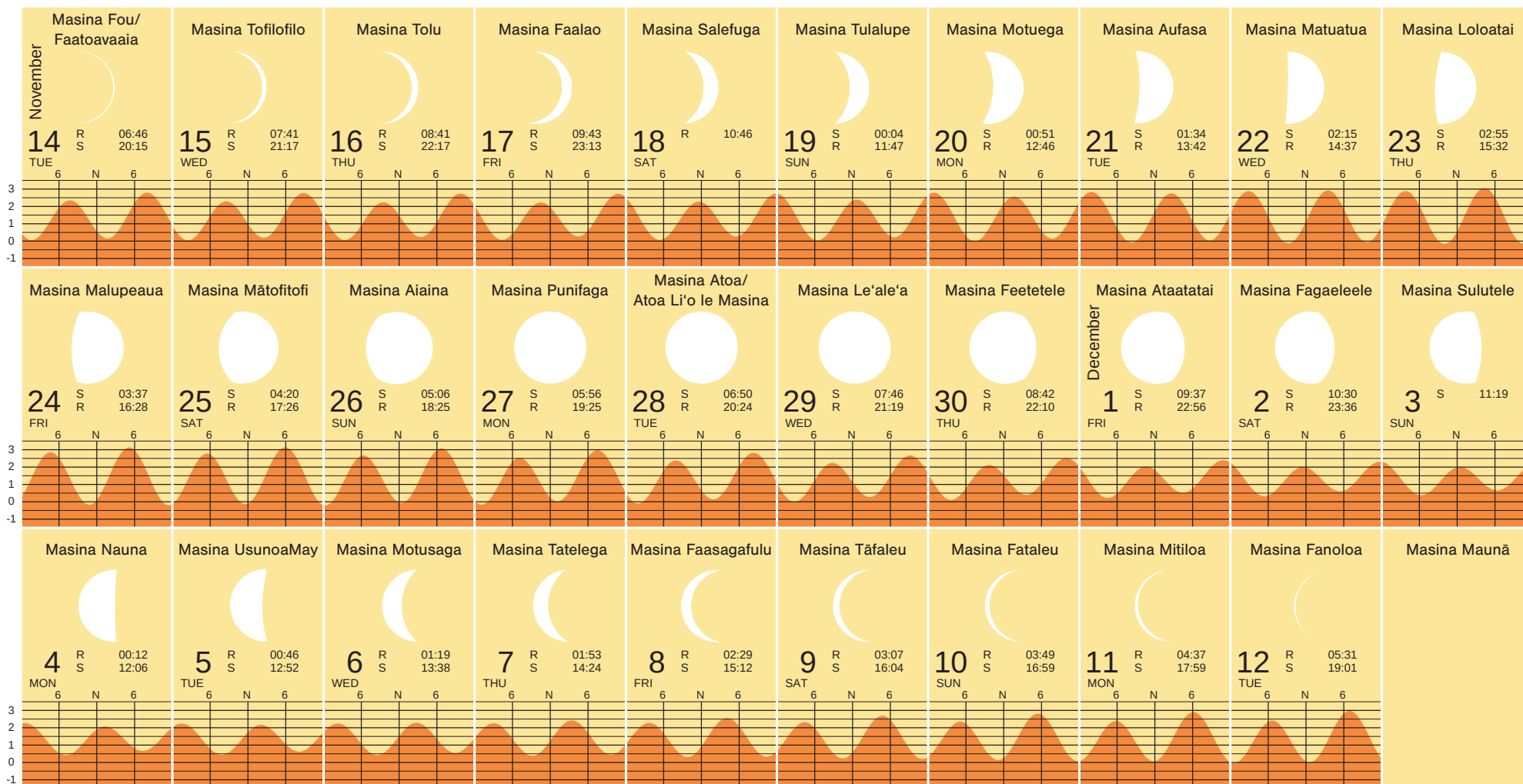
The afomatua was historically a favorite of Samoan chiefs because of their tendency to jump out of the water when chased. Because they were often caught in mid-air with alagamea (hand nets), the chiefs likened this to seuga lupe (pigeon hunting), a pastime reserved exclusively for chiefly individuals. Today, mullet are mainly caught with kili (thrownets).

Photos (top left): WPRFMC, (middle): ddavis4um, some rights reserved (CC-BY-NC-SA) / inaturalist.org, (right): Sue, all rights reserved (CC-BY-NC-SA) / inaturalist.org

Taumafamua

November 14 - December 12, 2023

Novema 14 - Tesema 12, 2023



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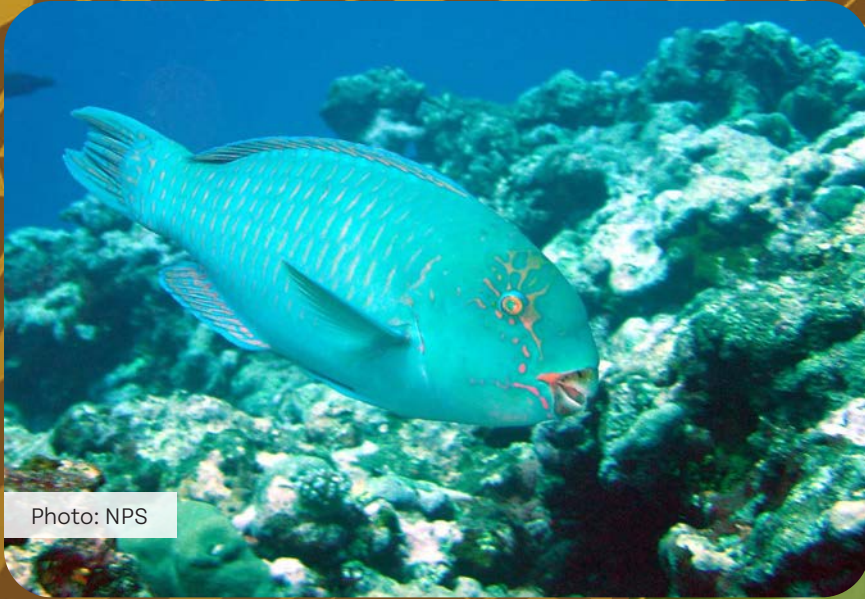


Photo: NPS



Photo:
Joshua DeMello

A favorite parrotfish dish of American Samoa is prepared by cooking *laea* wrapped in banana leaf in the *umu* (traditional hot rock oven). Photo: WPRFMC



Parrotfish

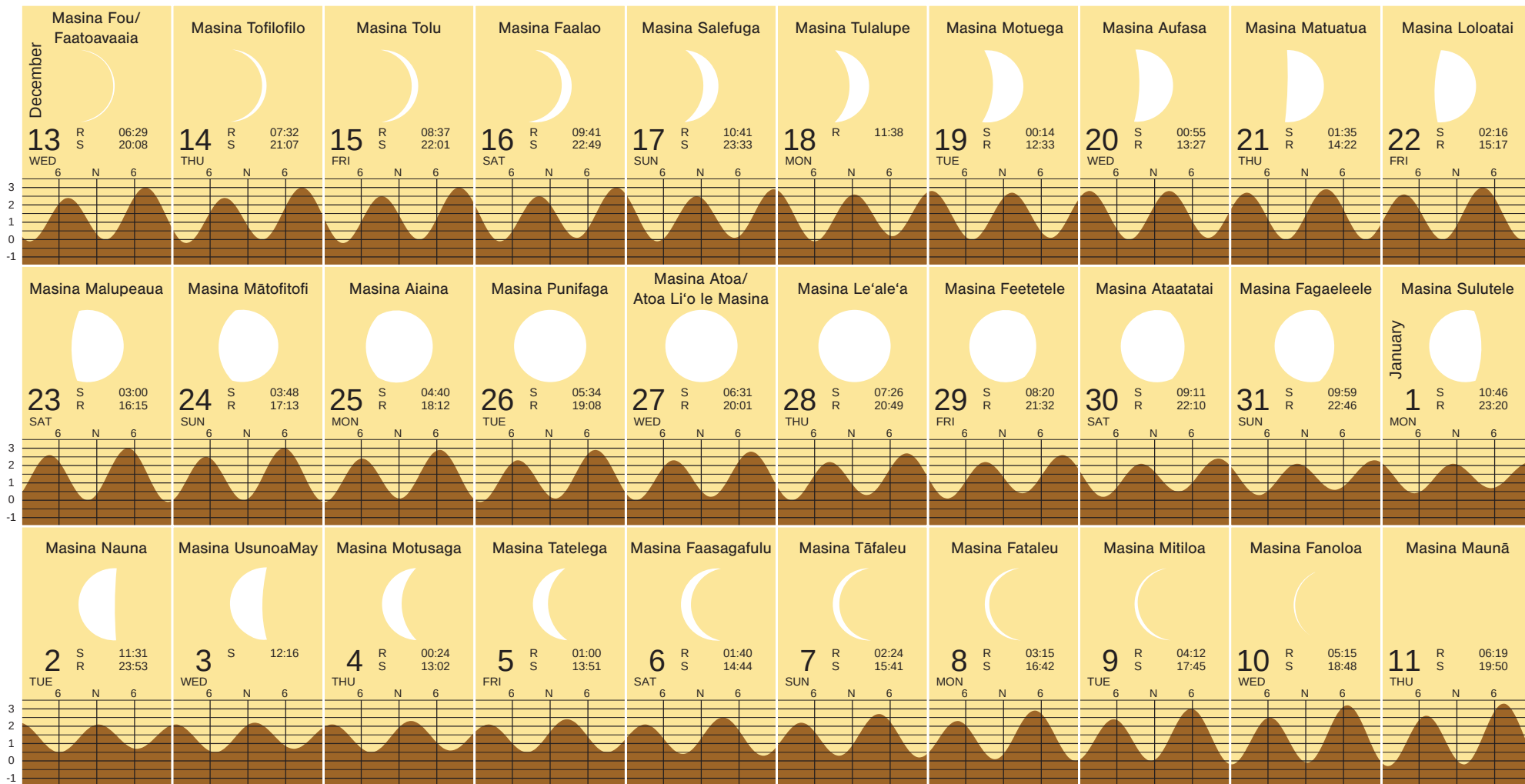
Samoan names for parrotfish are associated with their size. Generally, they are called *fuga* when less than 10 inches and *laea* when 10 to 15 inches (~1 ft long). Young parrotfish recruit to reefs between October and April.

Fuga and *laea* are important food fish for American Samoa communities and a favorite at local markets. American Samoa spearfishermen seek these coral grazers at night as they cannot be caught by hook-and-line.

Parrotfish are caught by methods practiced traditionally by women of the villages. In the *tutui* or *tuinga* method, women working in pairs use sticks to drive *fuga* and *laea* from rocks and coral into shallower water to be collected in baskets. Two other methods practiced by women of American Samoa are *sasa'e*, using bare hands to collect fish into baskets, and *safunua*, where a group of women form a semi-circle and move in formation to chase reef fish close to the shore where they are scooped up in *alagamea* (hand nets).

Toetaumafa

December 13, 2023 - January 11, 2024
Tesema 13, 2023 - Ianuari 11, 2024



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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Photo: flickr.com/Francois Libert
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Photo: Joshua DeMello

Surgeonfish

Alogo (*Acanthurus lineatus*) are territorial, typically living on and defending a particular patch of reef and feeding on a thin film of algae that covers the reef. Young *alogo* recruit to reefs between October and April.

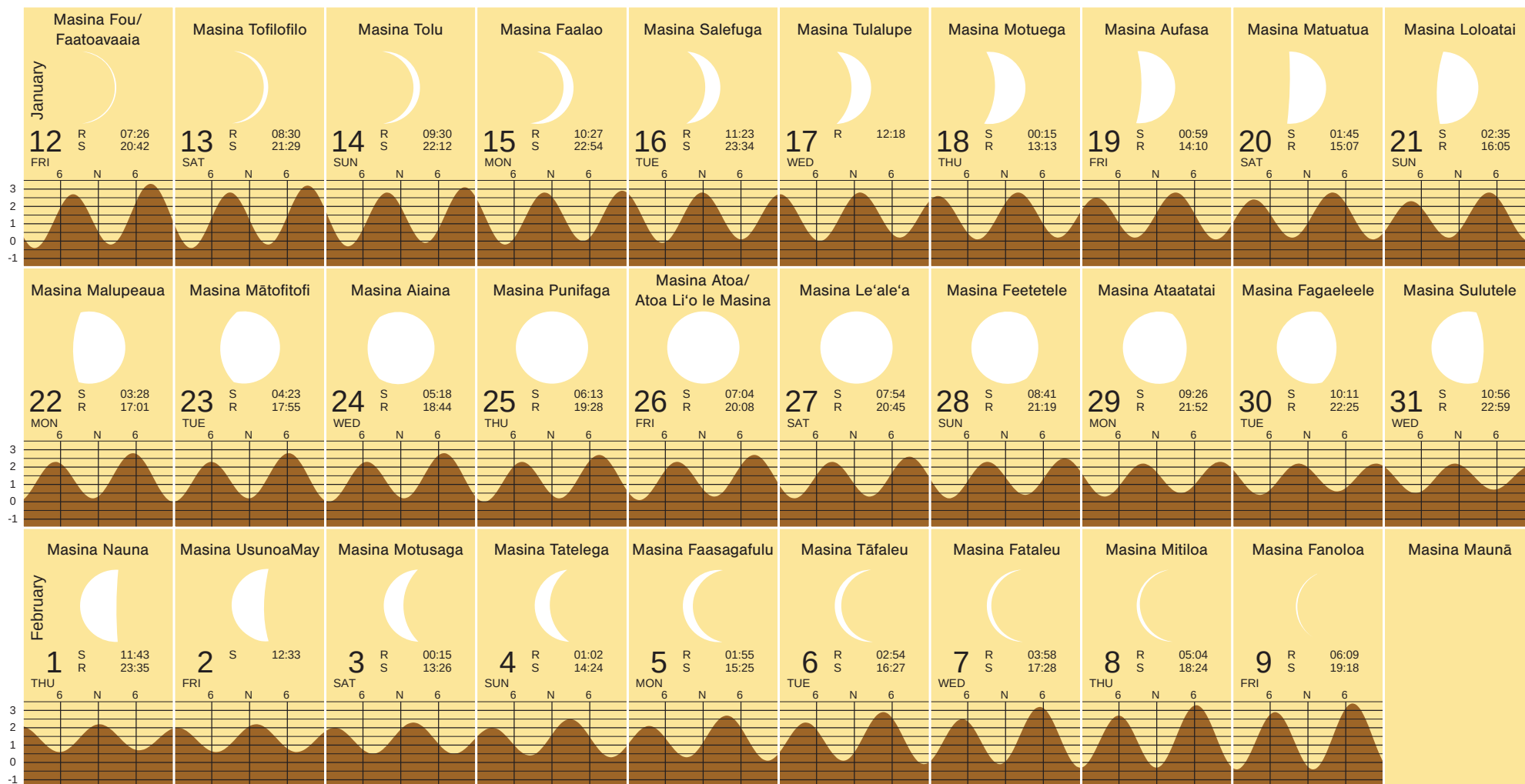
Alogo are also known as the blue-lined or blue-banded surgeonfish because of its knife-like blade located near its tail. The blade is usually not visible because it is folded away into a groove in the fish's skin.

The *alogo* is a popular Samoan food fish. Most are caught by spearfishermen, particularly at night when the fish are sleeping in reef crevices.

Utuvāmua

January 12 - February 9, 2024

Ianuari 12 - Fepuari 9, 2024



MOON-RELATED OBSERVATIONS AND ACTIVITIES



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About This Calendar

The **Western Pacific Regional Fishery Management Council** has produced traditional lunar calendars for American Samoa since 2007. These calendars follow the traditional Samoan calendar months and are designed to be a resource for the community to learn about the moon phases and their relationship with the tides.

In addition to sharing traditional and cultural knowledge about fishing, the 2023 *Amerika Samoa Lunar Calendar* provides information about fishery monitoring and seasonality for a different species each month. The lunar months, moon phases, and traditional calendar months are given in Samoan. The moon phases in this calendar are for Pago Pago Harbor as calculated by the HM Nautical Almanac (astro.ukho.gov.uk/websurf). The tide charts with moon rise and set times were provided by OceanFun Publishing, NZ.

A special *fa'afetai tele* lava to Domingo Ochavillo, American Samoa Department of Marine and Wildlife Services, for his guidance and editing, and to the National Park Service (NPS) and others noted in this calendar for their photo contributions. Sources of information found in the calendar include *Historic Fishing Methods in American Samoa* by David Herdrich, MA, and Karen Armstrong, PhD, 2008 (American Samoa Historic Preservation Office); *Natural History Guide to American Samoa*, 3rd Edition, edited by Peter Craig, 2009; Polynesian Photo Archives.

For an electronic version of this calendar, go to www.wpcouncil.org/educational-resources/lunar-calendars.

Send us an email at info@wpcouncil.org to let us know how you use our calendar!

Front cover photo: The village of Leone on Tutuila Island harvests a big *atule* (bigeye scad) run in 2021, combining the traditional use of woven coconut fronds with modern *kili* (thrownets) closer to shore. Photo: (left) Wikipedia.com, (top right) Natasha Ripley, (bottom right) WPRFMC.

About the Council

The **Western Pacific Regional Fishery Management Council** was established by Congress in 1976 to manage fisheries in the offshore waters surrounding Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, Hawai'i and the U.S. Pacific Remote Island Areas. The fisheries in federal waters surrounding American Samoa are managed under the American Samoa Archipelago and Pacific Pelagic Fishery Ecosystem Plans. Traditional knowledge and wide community involvement are integral parts of the ecosystem-based approach to fishery management.

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