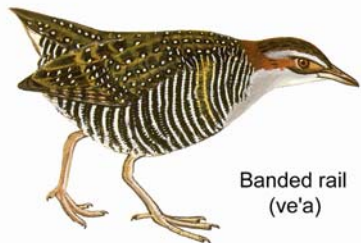


## 42. Familiar and mysterious birds -- the rails

The *ve'a*, or “roadrunner”, is one of Samoa's most recognizable birds. It is a familiar sight tiptoeing out of the grass or running crazily across the road, its neck stretched out and its big feet trying to keep up. And its loud, screeching voice is a familiar sound, seeming to complain at the disturbance as we walk to the taro patch. However, for all its abundance, the *ve'a* is still a little-known bird, quickly disappearing from view when disturbed and impossible to follow in the thick grass it favors. What's more, the *ve'a* has two even more mysterious cousins in American Samoa, and another in western Samoa that, as we will see, is the most mysterious Samoan bird of all.



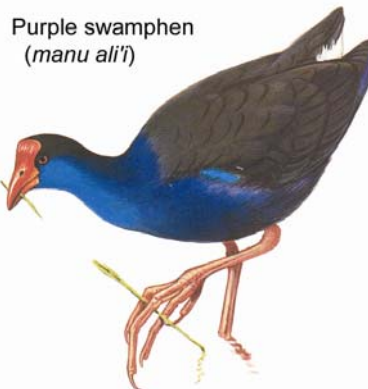
Banded rail  
(*ve'a*)

The *ve'a* and its cousins belong to the family of birds known as the rails (named from an old English word meaning to screech -- many of these birds have loud, harsh voices). The *ve'a* is called the Banded Rail, because of the black and white bands on its sides and underparts. It is found all across the Pacific from the Philippines and Indonesia to Samoa, Tonga, Fiji, and on to Australia and New Zealand. It is usually common wherever it occurs, with the exception of Fiji. On Fiji this formerly abundant bird has been exterminated on

the large islands of Vanua Levu and Viti Levu by an introduced predator, the mongoose. This shows how important it is to keep Samoa free from such destructive introduced animals.

The *ve'a* is a very useful bird, eating many insects that can harm crops. In fact, it will eat almost anything, including fruit, worms, snails, mice, and even toads squashed flat on the roads. It sometimes can be seen deep in the forest, but prefers open areas with dense grass. Therefore, taro and banana plantations are some of its favorite places. The nest of the *ve'a* is very hard to find, being built on the ground well-hidden in thick grass. The *ve'a* lays 4 to 6 eggs. Like young chickens, young *ve'a* can run around almost as soon as they hatch, and they leave the nest immediately. It is common to see one or two fuzzy, dark gray chicks being led into the grass by their watchful parents.

The other Samoan rail that most people know is the *manu ali'i*, known as the Purple Swamphen. This large and beautiful bird is a dark purple, with a bright red beak that extends up over the forehead. It is even more widely distributed than the *ve'a*, occurring from southern Europe through Africa and all the way to Australia and New Zealand. It is much less common than the *ve'a* in American Samoa, but occurs in low numbers almost everywhere, especially in more remote plantation areas. This bird is more often heard than seen; it gives a loud screech with an echoing, honking quality.



Purple swamphen  
(*manu ali'i*)

Like the *ve'a*, the *manu ali'i* prefers areas with thick undergrowth rather than true forest. It has a very wide diet, including many insects and much plant material. It sometimes gets into trouble with farmers because of its fondness for green bananas and taro tops. However, usually it does little damage, and repays it by eating soldier worms and other crop pests. In former times, the *manu ali'i* was sometimes hunted, and this may be why it is so shy, usually running or flying off with loud screams as soon as it sees you. Like the *ve'a*, it nests in thick vegetation, either on the ground or in a low bush. It lays 3 or 4 eggs, and the young leave the nest to follow their parents as soon as they hatch.

Our third kind of rail is a real mystery bird, as shown by the fact that it has no Samoan name. In English it is called the Spotless Crake. Although its wide range in the Pacific is very similar to the *ve'a*, in American Samoa it has only been sighted on the island of Ta'u. The Spotless Crake is very small, only about half the size of a *ve'a*, and is all dark gray except for red legs and eyes. It lives in dense grass, almost never flies, and is active at dawn and dusk. All this makes it a very hard bird to find. In fact, only a single bird was seen by biologists in 1986, and another was sighted in 2001.



There is one more kind of rail to mention, and this is the most mysterious Samoan bird of all. It is the *puna'e*, or Samoan Woodhen. This bird was first described by scientists in 1874, and last seen in 1908. In the whole world, only 11 preserved specimens of it exist. It apparently occurred only on Savai'i in western Samoa.

Old stories tell that the *puna'e* lived in burrows in the mountain forests, and that it was formerly so abundant that it was hunted with nets and dogs specially trained to tell which burrows were occupied. If these stories are true, the *puna'e* was a very special bird indeed, since no other rails live in burrows. In the last ten years, there has been an unconfirmed report of the *puna'e* being seen in the mountains of Savai'i. These remote forests have been rarely visited by biologists, and we can hope that this unique bird may yet survive in the depths of that misty wilderness.

Pepper Trail, DMWR



Pola Island, Tutuila

### 43. Our strange winter visitor, the Cuckoo (*aleva*)

The *aleva* or Long-tailed Cuckoo is a very odd bird, no doubt about it. For one thing, when the weather starts to get cold in its summer home, the *aleva* migrates north for the winter. For another, it has a highly unusual home life: it doesn't build its own nest or care for its own young, but abandons its eggs in the nests of other birds, to be raised not only by strangers, but by completely different kinds of birds. The *aleva* lives and breeds in New Zealand for half of the year. But when winter approaches, around March or April, the *aleva* leaves its chilly home islands, and flies north into sunny Polynesia. In fact, it is the only land bird to migrate north to spend the winter with us (although a few *aleva* may be found here year-round).

The *aleva's* winter range extends all the way from Palau on the west to Pitcairn Island on the east, but the largest numbers winter in Fiji, Samoa, and Tonga. Here it can be found on any island, from the mountainous interiors of the largest high islands to the coastal vegetation of tiny atolls. Wherever it ends up, the *aleva* feeds mostly on large insects, including caterpillars and stick insects, but also small lizards.



The *aleva* is a hard bird to see, usually creeping without a sound through dense foliage. In fact, we most often see *aleva* because they are being chased by other birds, especially the *iao* (Wattled Honeyeater). *Iao* seem to hate *aleva*, and chase them vigorously, with loud scolding cries. It is very interesting to try to figure out why they do this. There are at least three possibilities. It may be that *aleva* will eat eggs if they get the chance; however, this has never been observed. Second, in flight the *aleva* looks much like a hawk, with its pointed wings and long tail. Perhaps *iao* mistake the *aleva* for a hawk, and think they are chasing a dangerous predator away. But there are no hawks in Samoa. Therefore, this explanation would mean that *iao* still have an instinctive fear of hawk-like birds thousands of years after they last saw a hawk (which was probably when the ancestors of our *iao* came here from Fiji). The last explanation seems even more far-fetched. This is that the *iao* chases the *aleva* because it is afraid that the cuckoo will lay its eggs in the *iao's* nest. To understand this possibility, we must discuss the strange breeding behavior of the *aleva*.

Like many other members of the cuckoo family, the *aleva* is a nest parasite. This means that it secretly lays its eggs in other birds' nests. The unlucky host birds think that the cuckoo egg is their own, and raise it alongside their own babies. Usually the baby cuckoo is much larger than the babies of its hosts, who are unable to compete and starve to death. Many New Zealand birds, including honeyeaters related to the *iao*, recognize the *aleva* and chase it away. This makes a lot of sense in New Zealand, where the *aleva* breeds. But the *aleva* never breeds on its wintering grounds in Polynesia. Therefore, the *iao* has no reason to fear that the *aleva* will lay eggs in its nest. Could there be an instinctive hatred of cuckoos in all members of the honeyeater family? Like many questions in biology, this one would be hard to answer, but it's still fun to think about.

Many older Samoans say that *aleva* used to be much more common than they are today. The *aleva* is now a rare sight on Tutuila. It's hard to know just how rare the bird really is because of its secretive habits. If you see one, consider yourself lucky, and take a moment to think about the many mysteries in the life of this strange visitor to our shores.

#### 44. Barn owls (*lulu*) -- spirit of the night

The barn owl or *lulu* is a highly beneficial bird in American Samoa, but some people fear it because they associate it with ghosts or *aitu*. Its ghostly white appearance and its preference for flying at night enhance its reputation as a mysterious bird. It is not uncommon when driving around Tutuila at night to see one perched on a telephone pole or gliding across the road. Its eerie screech pierces the night and can be frightening if you are not expecting it.



Owls are carnivores that usually swallow their prey whole. A few hours after swallowing a rat (*isumu*) or some other prey, owls regurgitate or spit out a pellet of indigestible bones and hair about two inches long and one inch in diameter. By examining these pellets, we can determine what the *lulu* eats. In the remains of 482 meals, rats made up most (81%) of those meals, followed by mice (9%), geckos (7%), and bones of a few birds (2%), which consisted of White Terns (*manu sina*), Wattled Honeyeaters (*iao*), mynas, and Samoan Starlings (*fuiia*).

No chicken remains were found, but this was not unexpected because owls do not generally attack large prey. Chickens and fruit bats (*pe'a*) are too heavy for an owl to carry and too large to swallow whole.

Instead, they would typically eat the meat and viscera at the site of the kill. Soft tissues such as these would be totally digested and not be found in pellets. We have other evidence that one flying fox was killed and partially eaten by an owl.

Even though *lulu* occasionally take a bird, bat or even a chicken, their value in controlling rat populations is tremendous. One pair of owls may catch 2-4 rats per day. Without owls, Tutuila and Manu'a would probably be over-run with rats. A *lulu* seen flying through a village should not be feared or hated but welcomed, because it will probably mean one less rat near your *fale*.

Gilbert S. Grant  
DMWR





## 45. Birds of wetland and reef: Gray Duck and Reef Heron

Two very different birds depend on Samoa's shallow water habitats. One is the familiar *matu'u*, or Pacific Reef-Heron, a bird that is seen nearly every day by anyone visiting Samoa's shoreline. The other is Samoa's only duck, the *toloa* or Gray Duck, a bird that is so rare that most young Samoans have probably never seen one.

It comes as a surprise to some people that we don't have more kinds of ducks in Polynesia. After all, ducks like water, and we've got plenty of that, right? Well, we've got plenty of salt water, but very few lakes, marshes, or large streams of fresh water. Almost all ducks prefer fresh water, and even the few kinds of "sea ducks" eat mostly seagrass and other plants that aren't found around Samoa's coral reefs. Therefore, there aren't many suitable homes for *toloa* in American Samoa. These suitable homes are the fresh and brackish (fresh/saltwater mix) water wetlands.



"Wetlands" is a word that we've been hearing a lot lately. It refers to areas of land that are permanently or periodically flooded or submerged in shallow water. So much wetland habitat has been lost in the United States, primarily through draining and filling, that strict federal laws have been passed protecting wetlands. Locally, the Coastal Zone Management Program is responsible for protecting our remaining wetlands, which serve vital roles as nurseries for fish and crabs, natural water purification and recharge areas, sites for taro production, and homes for rare plants and wildlife. There used to be extensive mangrove (*togo*) swamps bordering Pago Pago Bay, but these were filled in long ago, before the negative environmental consequences of such activities were understood. The largest remaining wetland areas here are the *pala* lagoons in Nu'uuli and Leone and the marshes and Pala Lake on Aunu'u Island. There are also many other small but important wetlands remaining in both Tutuila and Manu'a.



Gray Duck  
(*toloa*)

All of these areas were once home to *toloa*. However, as wetlands were filled in and as shotguns became available, this once-popular game bird became rarer and rarer. During a major survey of Samoan birds in 1986, not a single *toloa* was seen, leading to the concern that this bird might be extinct in American Samoa. Happily, this is not the case. A few *toloa* still live in the territory, mostly on Aunu'u, where the village leaders have taken an active role in protecting their ducks. This bird, and the wetlands it depends upon, need our continued protection if it is ever to recover to healthy population levels.

The *toloa* is a "dabbling duck". This means that it doesn't dive under the water to feed, but rather tips down, with its tail in the air and its neck stretching under the water, to reach the plants and small insects and snails that it feeds on. Although it sometimes swims in the sea, it does not feed there, and, like most ducks, it does not eat fish.

One interesting thing about the *toloa* is that it doesn't always nest near the water. It may build its nest in tall dense grass, or place it in a low tree hollow. Five to ten pale green eggs are laid. The journey of the young ducks from the nest to the safety of the water is a dangerous one, and usually only one or two ducklings make it.

The *toloa* is a great wanderer. The bird is found across a huge geographic area, extending from Indonesia to French Polynesia, and south to New Zealand and Australia. The *toloa* is a strong, fast flier, and commonly flies between islands. It seems likely that the small population on Aunu'u, which was apparently absent in the late 1980's, may have recolonized American Samoa from western Samoa, where the duck is slightly more common. This gives us reason to hope that the *toloa* may return to areas that it formerly used, if the wetlands are preserved, and the duck is protected from hunting. So ... if you see a *toloa*, consider yourself lucky, and please don't disturb it. Perhaps one day Samoa's special duck will once again be a common sight.

The *matu'u*, or Pacific Reef-Heron, is a common sight today. With its long legs and long neck, often curved in an S-shape, the *matu'u* is one of Samoa's most recognizable birds. One interesting fact about the *matu'u* is that it comes in two color forms, either dark gray or pure white, although almost all the *matu'u* in Samoa are dark gray. In other areas, particularly atolls like Swains Island or Rose Atoll, almost all the *matu'u* are white. It seems that in Polynesia the dark forms are found on volcanic islands, with dark lava rocks, while the white birds occur on atolls with white sandy shorelines. In many other parts of its range, however, including Fiji, both white and gray forms occur commonly in the same area. The reason for the *matu'u*'s two color forms remains unclear.



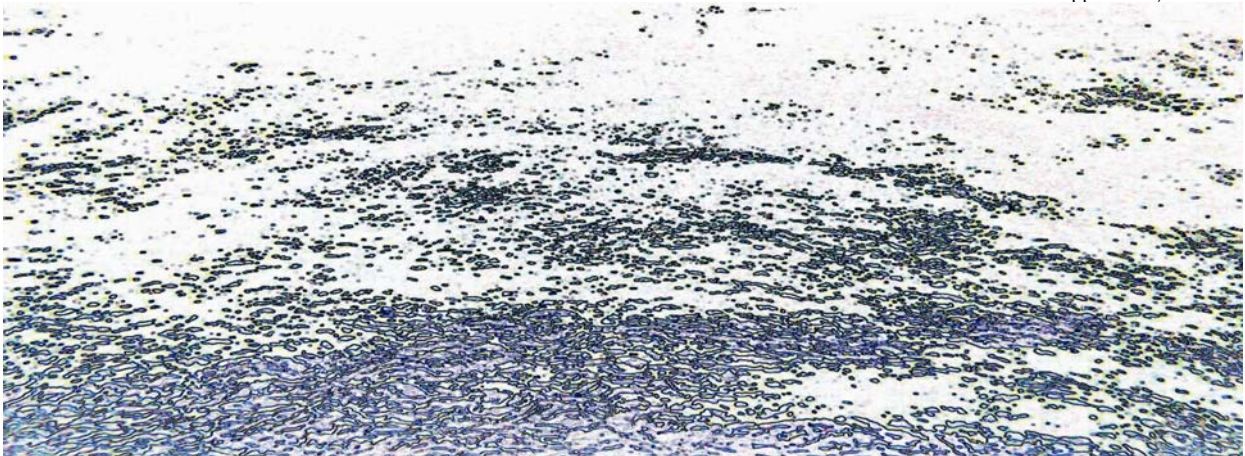
Reef Heron  
(*matu'u*)

The *matu'u* is the master spear fisherman of the bird world. It stalks slowly across the reef flat, scanning for the slightest movement, and then throws its long neck forward as fast as lightning, catching its prey with its long sharp beak. It feeds on a wide variety of reef creatures, including fish, crabs, and snails.

Although the *matu'u* usually makes its living feeding on the coral reef, it also uses the freshwater wetlands of Samoa. Mangrove areas like the Nu'uuli Pala are frequent feeding sites, and the birds will also hunt for food in freshwater streams. These rainforest stream valleys are the *matu'u*'s favored nesting areas, where the herons build their large nests high in the trees. Some *matu'u* also nest on offshore islets, and have even been reported to nest on ledges in caves. Usually three pale green eggs are laid.

Strict protection of Samoa's wetlands is essential if the *toloa* is to regain its place among our familiar native birds and if the *matu'u* is to continue to be a common resident of our shoreline villages. Please help spread the message that landfills kill a very important part of Samoa's natural environment -- our wetlands.

Pepper Trail, DMWR



## 46. Shorebirds (o *tuli*): incredible voyagers

April/May is the time of year when some familiar visitors leave American Samoa and begin an incredible and perilous journey home. These visitors are the shorebirds, or *tuli*. Three different kinds of *tuli* are common visitors here between the months of September and April: the Pacific Golden Plover, the Wandering Tattler, and the Ruddy Turnstone.

During the northern summer, all three *tuli* nest in Alaska and northern Canada. The plover and the turnstone nest in the tundra, where their neighbors are caribou and grizzly bears. The tattlers nest by icy mountain streams, sharing their world with mountain sheep and golden eagles. But when the northern days grow shorter and colder, the birds probably begin to dream of the beaches and reefs of Polynesia, for they set out on one of the greatest of all animal journeys. From gathering places on the coasts of Alaska, the *tuli* take off to fly non-stop over 3,000 miles of open ocean to the Hawaiian Islands. These birds cannot land on the water and take a rest -- their feathers are not waterproof, so if they land in the water, they drown. Not only is this flight an amazing physical feat, but it requires tremendous navigational abilities to find tiny specks of land lost in the featureless sea. After a well-earned rest in Hawaii, the *tuli* take off again for another flight over thousands of miles of ocean to reach Samoa.

Here, each kind of *tuli* takes up a slightly different lifestyle. The Golden Plover is often seen on the beaches, but even more commonly can be found searching for food on the short grass of *malae*, parks, the golf course, and the airport. We can only hope it will not be harmed from competing with the many myna birds that now occupy these areas.

Although this plover is plain brown during most of its stay in American Samoa, it gets a beautiful new set of feathers just before it heads north: a golden-spangled back and jet black underparts. The plover is the commonest *tuli* in Samoa, and it features in many myths and legends. *Tuli* the Messenger is one manifestation of Tagaloa, the supreme god of the ancient Samoans, and in one version of the Samoan creation story, Tagaloa created the first dry land as a resting place for *tuli*.

The Wandering Tattler is a beachcomber. It is almost always seen on beaches or the reef, using its long beak to pry small crabs, worms, and other delicacies out of the sand or coral. It is a solitary bird, soberly dressed in gray. When disturbed, the tattler's loud cries explain how it got its name.

The turnstone was named for its way of feeding. These small, energetic, sociable birds like to vigorously flip over small stones, bits of seaweed, or debris in search of food hiding beneath. They can be seen either on the beach or in grassy areas. The turnstone has a beautiful pattern of black and white patches on its back when it flies, and in breeding plumage, it is a handsome bird with orange-brown, black, and white patterning.



Golden Plover



Wandering Tattler

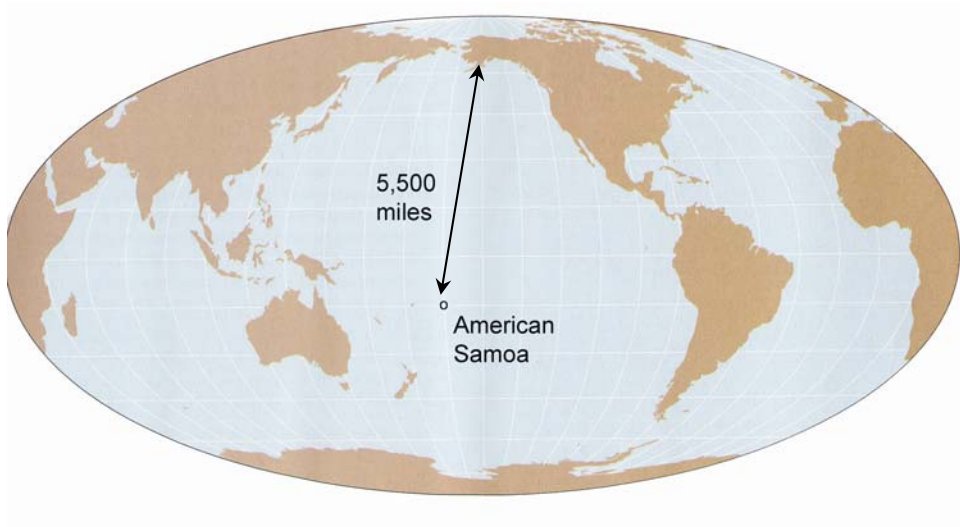


Ruddy Turnstone



All these *tuli* can usually be seen in such places as Sliding Rock and Pala Lagoon from September to April. But in April/May, all but a few stragglers will have left Samoa to take their long, long trip back to Alaska. So, the next time you see some *tuli*, wish them a safe journey and try to imagine, maybe with a little envy, their great adventure.

Pepper Trail  
DMWR



Incredible flight of shorebirds (*tuli*) from American Samoa to Alaska and Canada, with a stopover in Hawaii.





## 47. Samoa's seabirds: *tava'e*, *gogo* and *manu sina*

The islands of Samoa are true oceanic islands: they are not riders on the skirts of any continent, but are the tops of huge mountains, rising up through the great ocean depths. Surrounded as they are by thousands of square miles of ocean, it is not surprising that the Samoan Islands have more kinds of seabirds than any other type of native wildlife. In all, 20 species of seabirds are known to nest in Samoa (and many more can be seen passing through our area), compared to 18 kinds of resident landbirds and only three kinds of mammals (all bat species).

Our seabirds are a diverse group. Some, such as shearwaters and petrels (*ta'i'o*), are rarely seen, but nest in burrows on the tops of mountains like Lata and Pioa. Their eerie calls can be heard at night in places such as Afono Pass. Others like frigatebirds (*atafa*) and boobies (*fua'o*) are seen flying around our coasts, but nest on the high cliffs of Pola or in trees on the remote north side of Tutuila. The tern family has many different looking birds living here, including the solid black and brown noddies (*gogo*), the beautiful blue-grey noddy (*laia*), the white tern (*manu sina*), and the grey-backed tern (*gogo sina*). Here we will discuss the three most common and conspicuous seabirds of Tutuila: the *tava'e*, *manu sina*, and *gogo*.



The *tava'e* (*tava'esina*), or White-tailed Tropicbird, is one of Samoa's most beautiful creatures. The sight of a *tava'e* soaring overhead is unforgettable, as its gleaming white feathers and graceful tail streamers blaze against the deep indigo of the Polynesian sky. Happily, it is also a familiar sight, as these birds are common all around Tutuila.

The *tava'e*, so graceful in the air, is comical and awkward on land, so much so that Samoan legends describe the bird as lazy or dim-witted. In fact, *tava'e* are probably as industrious and intelligent as your average bird. Their awkwardness results from the fact that their legs and feet are tiny for the size of the bird, and are placed far back on the body. Thus, all *tava'e* can do on land is to shuffle along, bumping their powerful chest muscles on the ground. Luckily for them, *tava'e* spend little time on land.

They typically nest high in rainforest trees, preferring protected sites such as large hollows or clumps of ferns or other plant material. Here they lay a single large egg. At hatching, the young tropicbird is one of the cutest of all baby birds -- a completely round ball of silvery fluff. As they grow, they molt into their juvenile plumage, with black and white barred feathers across their back. This is their appearance when they leave the nest on their first flight toward the sea, often a mile or more away. The fledglings often seem to have problems with this flight, based on the number of young *tava'e* that are brought in to our office, unable to fly. These youngsters are usually very gentle, and with several days of feeding with sardines or other fish, they often regain their strength and are able to fly away.

*Tava'e* are master fishermen, making plunging dives for squid and a variety of small fish. One of their favorites are flying fish -- I've often wondered whether they catch the flying fish in the air or while they're swimming. The *tava'e* is well known to Samoan fishermen, who watch its behavior at sea to help them locate schools of *masimasi* and other fish. The *tava'e* is important to human fishermen for another reason: its feathers are prized for fishing lures. The gleaming white breast feathers are tied to hooks and used to attract *malau* (squirrelfish) and other fish. It is a traditional belief that only feathers from living birds stay dry and shiny after repeated use, and it was a badge of honor for a Samoan youth to climb a *tava'e* nesting tree and pluck out the plumes. This supplied a lure while causing no harm to the birds.

The *tava'e* has a close relative, the Red-tailed Tropicbird, or *tava'e'ula*, that nests on Rose Atoll. This bird is larger and heavier than the *tava'e*, with shining pinkish-white feathers and red tail plumes. It typically nests on the ground among rocks, roots, or logs. In former times, this bird apparently nested on Tutuila, but it no longer does so. The reason may be the abundance of introduced animals such as rats, cats, and dogs that attack ground-nesting birds on Tutuila.

Our next seabird, the *manu sina* or *manusina* (also called the white tern or common fairy tern) is perhaps Samoa's most familiar bird. At almost any time of day you can lift your eyes to the mountains and see these pure white birds circling effortlessly over the green forest. I recommend contemplation of this lovely sight to anyone feeling burned out by the noise and ugliness that sometimes surround us at eye level. It's always a nice reminder of the beauty of the natural Samoan environment.



White Tern  
(*manu sina*)

The *manu sina* is found throughout the tropical oceans of the world and seems able to adapt to human-altered landscapes better than do many seabirds. Those of you familiar with Honolulu may have noticed *manu sina* fluttering in the trees along Kalakaua Avenue, where they actually nest in the middle of Waikiki.

The nesting behavior of *manu sina* is remarkable indeed. In fact, “nesting” is being a bit generous, since *manu sina* make no nest at all. Instead, they balance their large single egg in a knothole, stub, or other more or less precarious perch in a tree. They will even accept man-made structures like rooftops and ledges. It is amazing to see a *manu sina* stubbornly sitting on its egg as a strong tropical storm swings its branch wildly. Risky though it seems to us, this nesting strategy certainly works, as the White Tern is a common and widespread bird.

*Manu sina* feed on a variety of small ocean fish, which they pluck from the surface. Unlike all the other seabirds of Samoa, the *manu sina* carries fish back to its chick in its beak, rather than swallowing them first. In fact, they have the incredible ability to capture several tiny fish in a row, shift them crosswise in their bill, and carry them back home, without dropping a one. How do they do it?

The final seabird to be discussed is the *gogo*, or Brown Noddy. Like the *manu sina*, this bird is a member of the tern family, but these two cousins are different in many ways. For starters, the *gogo* is as dark as the *manu sina* is light. It is dark chocolate brown all over, except for the top of the head, which is a whitish-gray cap. It is also more sociable than the *manu sina*, usually nesting in loose groups, or colonies. The *gogo* is very flexible in its nesting behavior. On Tutuila, *gogo* usually nest high in trees in forested stream valleys, building bulky nests of dead leaves and other plant material. They also sometimes nest on cliffs, for example at Fagatele Bay. On Rose Island and other atolls, *gogo* are happy to lay their eggs on the ground, making only a small scrape in the coral rubble, which they often decorate with empty seashells and even bones. Like other tropical seabirds, the *gogo* typically lays only a single egg.



Noddy  
(*gogo*)

There is another *gogo* here, the Black Noddy, which is smaller and blacker than the Brown Noddy, and has a different way of flying. In good light they are separated from Brown Noddies that have a distinct

brown and black pattern on the wings. Black Noddies are more often seen feeding in flocks with *manu sina* than are Brown Noddies. The diet of the *gogo* is apparently similar to that of the *manu sina*, since both birds feed on small fish and squid captured near the surface. How do different birds with such similar food habits coexist? Maybe each catches just a particular kind or size of fish, or dives to a certain depth.

One of the most interesting sights in American Samoa is a foraging flock of seabirds. These groups can have from five or ten to hundreds of birds. They are a great chance to see the many different ways seabirds catch fish: *laia* flutter above the waves, sometimes dangling their feet into the water, *gogo* swoop low over the water, *fua'o* dive into the water with a huge splash, and *atafa* wait until a *fua'o* catches some fish, then chase it and take the fish from it. The birds you see in such a flock are a good indication of which fish are below the water, something Samoan fishermen use to locate schools of fish. A flock of small birds like White Terns and Black Noddies usually indicates skipjack or small tuna, while large flocks of *fua'o* indicate larger fish.

As fishing partners or simply as beautiful neighbors on our islands, Samoa's seabirds are a special part of our wild heritage.

Pepper Trail  
DMWR



Sooty terns at Rose Atoll