island survivor

TEXT & PHOTOGRAPHS **PETER RYAN**

The Tristan Thrush or Starchy *Turdus eremita* is the only land bird that survived human colonisation of the main island of Tristan da Cunha. As a result, it is the only land bird at the Tristan archipelago that is not listed as threatened. Peter Ryan considers the traits that allowed this supreme generalist to persist where other land birds went extinct.

Tristan da Cunha, home to the world's most isolated human community, lies almost half way between Cape Town and Buenos Aires. Access is only by ship and typically takes five to seven days from the Cape. Although often referred to as the 'lonely island', Tristan is an archipelago of three islands. The main island of Tristan, where some 250 people live, is an active volcano, rising more than 2000 metres above the Atlantic Ocean. It last erupted in 1961, resulting in the entire community being exiled to the UK for two years.

Tristan lies 30 kilometres north of two smaller, older volcanic islands, Nightingale and Inaccessible, which are uninhabited. Gough Island, 380 kilometres farther south, is the only other island in the vicinity and it is sometimes included in the Tristan group, although it is distinctly cooler. Gough shares no land birds with Tristan and is home to three seabirds not found at the more northern islands: Blue Petrel *Halobaena caerulea*, MacGillivray's Prion *Pachyptila macgillivrayi* and Grey-backed Storm Petrel *Garrodia nereis*.

The Tristan archipelago was discovered by the Portuguese in 1506, but few early mariners landed on the islands due to the lack of safe anchorages. This spared the islands from the wave of extinctions that occurred at islands such as Mauritius and St Helena shortly after they were discovered at about the same time. However, early visitors to Tristan described the islands as teeming with wildlife and by 1790 teams of sealers spent up to nine months ashore, killing seals and penguins for oil and skins, while whalers operated offshore. Goats and pigs were released on Tristan and Inaccessible to provide food in the event of a shipwreck, and house mice were introduced accidentally at Tristan's main island and Gough Island during this era. >

right *Nightingale Island is the oldest island in the archipelago. It no longer resembles a volcanic peak, unlike the much younger main island of Tristan, visible in the distance.*

opposite *The Tristan Thrush was placed in its own genus,* Nesocichla, *but genetic evidence shows it evolved fairly recently from South American* Turdus *ancestors.*

Starchies only lay two eggs on Tristan and Inaccessible, but half of the clutches on Nightingale contain three eggs (above). Breeding is well synchronised, with the first juveniles appearing in November (top).

Tristan was first settled in 1811, but the current community dates back to 1816, when the British sent a garrison to Tristan to prevent the French from using the islands as a base to liberate Napoleon from exile on St Helena, some 2400 kilometres to the north. The settlers converted the few coastal lowlands into pastures and croplands and introduced a host of animals, including cattle, sheep, dogs, cats and poultry. The endemic flightless Tristan Moorhen *Gallinula nesiotis* and the local population of Tristan Bunting *Nesospiza acunhae* probably went extinct before black rats reached Tristan from a wreck in 1882. Quite what caused these birds' demise remains unclear, although hunting, predation by introduced animals and even poultry diseases may all have played a role.

Hunting might seem an unlikely threat, but as is the case on many oceanic islands, the birds on Tristan have little fear of people and the Tristan Thrush is the most bold in this regard. The origin of Starchy, the Tristan name for the thrush, is not known, but it suits its cocky nature. Yngvar Hagen, ornithologist on the Norwegian Scientific Expedition to Tristan in 1937/38, aptly described the birds' behaviour as 'enormously inquisitive' and noted that 'they immediately fly to meet every new thing'.

Such familiarity did not always end well for the Starchies. When Henry Moseley, ornithologist on the *Challenger* expedition, visited Inaccessible Island in 1873, he reported how the Starchies were easily killed by hitting them with a stick, despite the fact that the Stoltenhoff brothers, two Germans marooned on the island, had killed them for food in this way for two years. He did note, however, that the Starchies were 'not quite so tame in Tristan Island', presumably because they had been subjected to similar hunting for more than 50 years.

Indeed, the thrush was thought to be extinct on Tristan when the *Quest* expedition visited in 1922, and the Reverend Rogers, who arranged the collection of the first two skins of the Inaccessible Island Rail *Atlantisia rogersi* also failed to record it in the 1920s. However, Hagen found Starchies in small numbers on the island's coastal slopes and higher plateau or 'base' in 1937. The thrushes on Tristan are smaller and paler than the birds on Nightingale and Inaccessible and are recognised as a distinct subspecies. Compared to the thrushes on the two uninhabited islands, they are unusual in not foraging along the shoreline, possibly because of the large numbers of rats in this habitat. Even today, after more than 40 years of protection, most are confined to elevations above 300 metres, although a few pairs have colonised the gullies behind the settlement plain and in recent years the occasional bird has even visited the settlement.

To really appreciate Starchies, you need to visit Nightingale or Inaccessible island. Shortly after you step ashore, a thrush will arrive to announce your presence with a querulous '*tseeep*' call. This serves to gather the troops and within minutes you will be surrounded by a beady-eyed posse, eager to test whether you or any of your possessions are edible. Rounded objects are particularly attractive – perhaps because they resemble birds' eggs. Pots, cans and mist-net poles receive vicious pecks, time and time again, and if you go barefoot around camp you can expect to receive a similar attack on your toes.

Like other thrushes, Starchies are omnivores, eating fruits of the berry bush *Empetrum rubrum* and fowl berry *Nertera* species, as well as insects and other invertebrates such as introduced earthworms. They use their strong legs to pull apart vegetation and flick over clods of earth with their bills, even picking up larger items to expose any prey hidden underneath. But they are best known for their predatory habits on bird eggs and chicks.

Their tongues are fringed to aid lapping up egg contents and they are able to break into the eggs of virtually all the bird species that breed on the islands. Piercing the egg of an albatross might take the attention of several Starchies for a few minutes, but the eggs of smaller birds are dispatched in seconds. This makes it hazardous to disturb incubating birds from their eggs. During a recent visit to Inaccessible Island, I inadvertently disturbed a Common Noddy *Anous stolidus* from its nest on the ground under an apple copse (the first such nest I have seen on the island – they usually nest in trees or on cliff ledges). Before I could react, a thrush darted in and broke open the egg with a single blow.

Starchies can break open eggs as large as those of Atlantic Yellow-nosed Albatrosses (above), and lap up the contents with their specially adapted tongues.

The thrushes are also not averse to venturing into burrows in search of food. Surface-nesting albatrosses and penguins incubate continuously and then brood their chicks for a few weeks until they are large enough to look after themselves. By comparison, burrowing petrels sometimes abandon their eggs for a few hours and usually leave their chicks alone within days of hatching because their nests are sheltered from predators and extremes of wind, rain and heat. However, if a Starchy can reach the nest chamber, the petrel eggs and small chicks are at risk of being eaten. I've seen Starchies killing petrel chicks weighing 75 grams, close to their own weight.

Even adult storm petrels are at risk. I first recorded Starchies killing storm petrels on Inaccessible Island in 1989.

After dragging a petrel from its burrow either through the burrow entrance or an excavated hole, the thrush uses its superior weight to hold it down and then pecks at the poor petrel's head until the skin is torn away. It then eats the eyes and works its way down the neck to the breast. This leaves a carcass that is quite distinct from those killed by Brown Skuas *Catharacta antarctica*, which usually swallow storm petrels whole. Oddly, this behaviour has only been observed on the eastern plateau of Inaccessible Island and prior to 2004 only *Fregetta* storm petrels were >

CLIFF DORSE

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above and top *Starchies lack the tools to kill storm petrels quickly and they resort to repeatedly pecking the petrels' heads with their powerful bills. Some storm petrels escape if their captor is distracted by other thrushes trying to steal their prey, but most eventually succumb.*

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killed. Since then, however, White-faced Storm Petrels *Pelagodroma marina* have been killed and in recent years Starchy-killed storm petrels have also been found on Nightingale Island.

It is a gruesome way to die and it takes several minutes before a storm petrel is incapacitated. The struggle soon attracts a crowd of thrush onlookers, triggering a series of confrontations. Once again, Hagen relates this perfectly when describing Starchies competing for the bodies of birds he skinned: 'they fought each other with all the signs of jealousy, the strongest indefatigably driving off all competitors, satisfied with having no less than a whole penguin or albatross-carcass quite alone'. During the ensuing mêlée, some petrels escape, fluttering away to hopefully elude any patrolling skuas and reach the safety of the sea.

The Starchies' inquisitive nature confounds estimates of their population size, because it's hard to know the radius over which birds are attracted to investigate people. To overcome this challenge, in 2018 Ben Dilley and I individually colour-banded Starchies along the west coast of Inaccessible Island. We concentrated our effort at a small bay, which we visited regularly to re-sight marked birds. This showed that while some birds were largely resident, others came and went, and a surprisingly large proportion were seen only once. This suggests that the population on Inaccessible Island is appreciably larger than the current estimate of 850 pairs.

The study also revealed that some thrushes – probably mostly immature birds – specialise in feeding along the shoreline. They eat mainly amphipods and isopods, small crustaceans that they glean from the low shore or from stranded kelp on the high shore. They also scavenge goose barnacles from debris that washes ashore and one was seen to eat a number of by-the-wind sailors *Velella velella*, in what is seemingly only the second record of a passerine eating a jellyfish.

Passerines seldom feed in the intertidal zone because they lack salt glands, the specialised supra-orbital glands that most birds use to offload excess sodium and chloride ions. As a result, Starchies cannot readily excrete the high salt concentrations found in marine invertebrates. At Inaccessible Island, they obviate this problem by regularly drinking from the many freshwater springs that emerge near the coast, but this is not an option at Nightingale Island, where there is little, if any, fresh water. It would be interesting to compare the renal structure of Starchies feeding in different habitats on the two islands.

In Tristan's depauperate land bird community, the thrush occupies a range of niches that on the mainland would be filled by a host of different species. Its ability to innovate allows it to exploit a wide range of feeding opportunities, which doubtless helped it to persist on the main island. However, I can't help but feel that its pugnacious, never-say-die attitude to life also played a key role in its survival. ◆

above *One of our colour-ringed thrushes eating a large isopod on the shore at Inaccessible Island.*

top *Starchies are always on the lookout for food. The main challenge at a campsite is to keep them off your food before you have chance to eat it.*