

Jumping for joy

A busy fairy tern nesting season along Western Australia's coastline has been a delight for bird watchers and researchers alike. And, with the help of dedicated citizen scientists, it's hoped new conservation efforts will boost numbers.

by Claire Greenwell and Kendall O'Connor





Despite being one of Australia's smallest and rarest seabirds, weighing in at around 70 grams (about one and a half golf balls) and measuring less than 250 millimetres from their bill to tail-tip, the much-loved fairy tern bursts with personality. The tiny bird features a trademark dark black head cap, and bright orange bill and legs.

Each year in late spring, up to one third of Australia's fairy tern population migrates to the south-west of Western Australia, seeking suitable sites to lay eggs and raise chicks. Like most seabirds, fairy terns nest in groups or colonies, which can have up to several hundred breeding pairs.

Their preferred habitats are sand spits and wide, sandy beaches in sheltered lagoons, near estuary mouths and on shallow continental islands. Colony sites are surrounded by clear, productive waters, where small baitfish are abundant. Their nest consists of a simple scrape in the sand, 20 to 30 millimetres deep, and small stones and shells are often incorporated to increase cryptis.

The eggs and chicks of fairy terns are mottled in appearance, which allows them to blend in with their surroundings and reduce detection by predators. However, their precarious beach-nesting lifestyle, combined with a range of human-induced pressures, has negatively impacted breeding success.

Expanding coastal development has reduced habitat availability, and many historically important sites are now too heavily disturbed to support breeding. Cats and foxes pose a significant threat to colonies on the mainland, while unnaturally high numbers of silver gulls



and Australian ravens can threaten birds nesting on nearshore islands.

CITIZEN SCIENTISTS BANDING TOGETHER

In 2016, the Western Australian Fairy Tern Network (WAFTN) was established to facilitate a holistic approach to conservation of the species and a citizen science program was launched. WAFTN provides a platform for communication and the coordination of conservation actions among researchers, land and wildlife managers, non-government organisations and citizen scientists.

Fairy terns have a wide distribution that spans across 2500 kilometres of coastline managed by multiple stakeholder groups. This presents a number of challenges for conservation but thanks to adaptive management, education and strong, proactive community support the number of chicks hatched at known breeding sites is on the rise.

As part of the WAFTN citizen science program, the birds are given a unique eight-digit metal band, which they carry for life. Adults are also colour banded, with each colour designating a different breeding location.

Over the past few years, citizen scientists have been resighting and reporting banded birds, and gathering

important data about the fairy tern population. The banding project has revealed a wealth of new information about how fairy terns utilise the coastline and their population demographics. In November 2019, a bird almost 23 years of age set a new longevity record when it was sighted on Garden Island.

A GREAT TERN OUT

Claire Greenwell, a PhD candidate from Murdoch University and convener of the WAFTN, is investigating the lives, behaviour and foraging ecology of fairy terns in south-western Australia. This research is being used to inform management and guide future conservation efforts for this threatened species.

Over the 2019–20 summer, Claire investigated the diet of fairy terns breeding at Point Walter in the Swan-Canning Estuary and on Penguin

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Main Fairy terns now have a bright future thanks to citizen scientists and dedicated conservation strategies.

Above Australia's rarest and smallest seabird bursts with personality.
Photos – Claire Greenwell

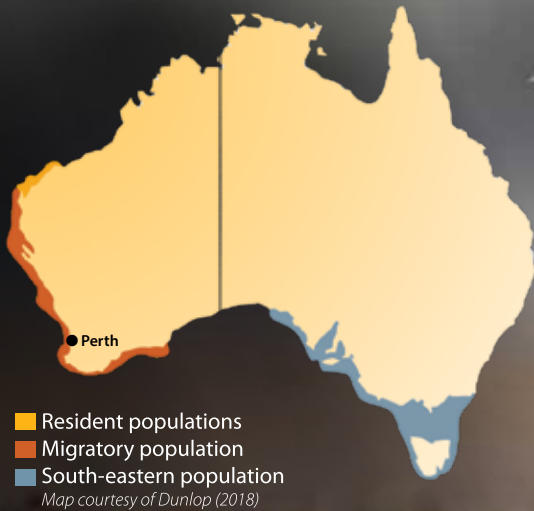


Hear more about the fairy terns

Scan this QR code or visit Parks and Wildlife Service's *LANDSCOPE* playlist on YouTube.



Distribution of fairy terns



“Fairy terns have a wide distribution that spans across 2500 kilometres of coastline... thanks to adaptive management, education and strong, proactive community support the number of chicks hatched at known breeding sites is on the rise.”

Island, a nearshore coastal system. This work is expected to reveal important new information into the use of food resources within these productive ecosystems and the potential for fairy terns to adapt their diet to a warming ocean.

Over the same period, DBCA's Parks and Wildlife Service staff from the Frankland District, South West Region, Metropolitan Marine and Riverparks Unit, Moora District and Exmouth District as well as Rottnest Island worked hard to record population numbers of breeding

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Above Every year fairy terns migrate to the south-west of WA, seeking suitable sites to lay eggs and hatch their chicks.

Right and above right WA Fairy Tern Network investigates lives, behaviour and ecology of these birds.

Photos – Simon Blears

colonies and number of chicks hatched and fledged along the WA coast.

The largest colony was recorded at Green Islets on the mid-west coast with approximately 250 pairs estimated. In the metropolitan area, successful colonies included Carnac, Penguin, Garden and Rottnest islands. At Point Walter, the number of nests doubled from around 70 pairs in 2018–19 to 135 pairs in 2019–20 and a record number of chicks fledged.

PROTECTING BREEDING GROUNDS

To provide fairy terns the best protection from threats and minimise disturbance, potential breeding sites are identified, and temporary fencing is erected to protect the colony from human encroachment.

Identifying the sites can be a challenge because the birds do not tend to commit to one site year-in-year-out, but they do offer some hints when they are deciding where to settle. During the day, the birds





Above An unnaturally high number of silver gulls can pose a threat to the nesting of fairy terns on nearby onshore islands.

Photo – Jiri Lochman

Right The eggs and chicks of the fairy tern are mottled in appearance, allowing them to blend in with their environment and not be detected easily by their predators.

Photo – Claire Greenwell

form ‘clubs’ where they fly and hover over potential nesting spots. They also undertake courtship displays to attract potential mates, which involves the carrying of prized fish by male suitors.

Once nesting sites are found or the birds are seen to be engaged in nesting activity, conservation officers only have a small window of time to set up the fence in order to minimise disturbance to the birds.

Temporary signage is used when nesting is taking place to alert beach goers to keep clear of certain areas and the site is routinely monitored.

Fairy terns are extremely sensitive to disturbance but by working together there’s hope that the seabirds can have a bright future.

How you can help

Unfortunately, several small colonies on the mid-west coast of WA appear to have been disrupted by foxes and a colony of around 180 pairs in Bunbury failed in December, likely due to cat or fox predation.

Members of the public can help protect beach-nesting birds like fairy terns by taking a few simple steps while utilising the coastline.

- Share the space and be respectful of signage and fencing. These temporary measures are deployed to give the birds a chance of success and they only need the area for a little while.
- Keep dogs leashed and away from known breeding areas to help protect small chicks that cannot easily escape and keep cats indoors.
- If a bird nesting on the beach is spotted, report it to the Parks and Wildlife Service or local rangers and maintain your distance.



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