

SHORT NOTE

Contributions of volunteers and the New Zealand Fairy Tern Charitable Trust to conservation of the New Zealand fairy tern / tara iti

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Volunteer groups have worked with the Department of Conservation (and before that the Wildlife Service) to protect the endangered New Zealand fairy tern/tara iti (*Sternula nereis davisae*) since the mid-1980s. In 2008, these volunteer groups were encouraged by the Department of Conservation (DOC) to set up the New Zealand Fairy Tern Charitable Trust (NZFTCT).

The NZFTCT's aim is: "To help the New Zealand fairy tern survive and prosper in the fairy tern habitats of New Zealand for the benefit of present and future generations of New Zealanders." The conservation strategies in its constitution include raising awareness, education and advocacy; collaborating on tara iti management; pest control

and seeking funding (NZFTCT constitution, 2008). These strategies reflect the priorities in DOC's fairy tern recovery plans: habitat protection, predator control, and volunteer support (Parrish & Honnor 1997; Hansen 2005).

The contribution of volunteers and NZFTCT to fairy tern conservation is under-documented. This paper sets out to show the scale, longevity and diversity of volunteer effort. The history and activities of volunteer groups are described, followed by accounts of NZFTCT's work in predator control, public engagement and advocacy.

There has been a range of groups involved with fairy tern conservation at east coast breeding sites north of Auckland, from Waipū through Mangawhai and Te Ārai to Pākiri. In the early 1980s the editor of the local *Mangawhai Memo*, Joanna Roberts, set up a volunteer group to assist the Wildlife Service with education, advice, and to carry out summer patrols

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on the harbour shoreline and Mangawhai sandspit (Joanna Roberts, *pers. comm.*). Ornithological Society New Zealand (OSNZ) volunteers assisted DOC wardens at Waipū, Mangawhai and, later, Pākiri when fairy terns began breeding there. With the establishment of Mangawhai About Tern in 2005, a small group of volunteers began regular trips across to Mangawhai sandspit to support DOC staff monitoring fairy terns during the breeding season. Waipū About Tern was also established at this time. All volunteers work as directed by DOC, which is responsible for the management of fairy terns / tara iti.

Mangawhai About Tern volunteers have spent an annual average of 207 hours observing tara iti during each breeding season, a total of 3,716 hours over 18 years from 2007 to 2025 (data for the other volunteer groups are not available). During the years 2007 until 2019, volunteers spent longer hours monitoring chick pecking, laying pindone poison and monitoring the first nest at Te Ārai. As DOC increased the number of rangers working with fairy terns, both on-site and with background logistical and scientific advice, volunteers were increasingly encouraged to work in areas of public engagement and to monitor and collect data about other shorebirds on Mangawhai sandspit.

In addition to monitoring tara iti during the breeding season, volunteer activities not included in the above totals have included: putting up and removing fences around the breeding areas; monitoring and trapping at Te Ārai when no DOC ranger was present; and looking for nests on Mangawhai sandspit when no DOC ranger was present (all 2007–2019); assisting with the fish study initiated by Ian Southey; weeding and assisting with planting on Mangawhai sandspit; administration, public engagement, management of court actions, and predator control (all ongoing).

Mangawhai About Tern volunteers are supported by the NZFTCT through provision of a boat for transporting them across to Mangawhai sandspit, and with other essential equipment such as telescopes and binoculars. Traps and cameras are supplied to Waipū volunteers, and NZFTCT subsidises travel expenses for all east coast volunteers.

In order to raise public awareness of tara iti / fairy tern, NZFTCT has actively engaged with the public through displays at local markets and galas. School visits with NZFTCT's taxidermied predators engage and educate young people, while NZFTCT publications keep people informed and foster support for tara iti (Table 1).

A decade of year-round predator control on Mangawhai sandspit 2013–2023 resulted in no recorded losses of fairy tern due to introduced predators. In 2012, Mangawhai DOC warden Rangi

Zimmermann enlisted the aid of Reg Whale, who had been doing volunteer trapping in the Te Ārai – Mangawhai area since 2005. He helped her with cat traps and advice: "...having a specialised trapper on hand was invaluable" (Zimmermann, R. 2013; New Zealand fairy tern monitoring report, Mangawhai Wildlife Refuge 2012–2013 breeding season; unpubl. report, Whangārei, Department of Conservation). From 2013, NZFTCT secured funding for a year-round predator control programme on and around Mangawhai Wildlife Refuge. The programme involved intensive trapping during the breeding season and maintenance trapping for the rest of the year (predator control and monitoring were undertaken by authorised personnel under relevant permits and in accordance with applicable legislation and best-practice guidelines). The trapping covered the southern boundary of the Mangawhai Wildlife Refuge and some south-western interiors of the refuge. The intention was to intercept predators from the south before they reached the refuge. DOC seasonal rangers trapped for predators during the breeding season but only in the immediate vicinity of the nest sites. Since 2023, DOC have taken on responsibility for all-year round trapping for the entire Mangawhai Wildlife Refuge area. NZFTCT trapper Reg Whale has continued to trap on a neighbouring property, providing a valuable buffer zone.

Total NZFTCT trap records for catches over the period November 2013 to June 2025 on Mangawhai sandspit were: 1,329 rats (*Rattus* spp), 687 hedgehogs (*Erinaceus europaeus*), 209 swamp harriers (*Circus approximans*), 180 cats (*Felis catus*), 176 rabbits (*Oryctolagus cuniculus*), 132 stoats (*Mustela erminea*), 111 weasels (*M. nivalis*), 33 brushtail possums (*Trichosurus vulpecula*), 21 pigs (*Sus scrofa*), 5 ferrets (*M. furo*), and 1 hare (*Lepus europaeus*).

Analysis of fairy tern breeding data revealed the benefit of predator control:

Another notable change that can be seen in the data set is an improvement in the number of successful nests since 2012 when a specialised hunter was employed to carry out predator control.... There has been more than a doubling of the proportion of successful nests from 2012 to 2019 compared to 1995–2011, from 26% to 61% and the difference is statistically significant ($p = 0.007$)... In these eight years the five highest rates of nest success in the last 25 years have been recorded (Southey 2020).

Year-round predator control on Mangawhai sandspit undertaken by NZFTCT undoubtedly contributed to this breeding success.

The NZFTCT has also been involved in a series of environment court cases since 2012, all intended to protect fairy tern habitat from actual or potential threats (Table 2). Gains achieved through the court cases have included the removal of the Te Ārai dam

Table 1. Examples of New Zealand Fairy Tern Charitable Trust public engagement.

Activity type	Audience	Frequency/dates	Detail
Public Displays	General public	Annually 2018–25 except during Covid Annually 2009–19 Annually 2015–19 2011, 2016, 2017	Mangawhai markets Mangawhai Gala Waipu Games/Cove Gala Kowhai Festival
School visits	School children	Annually 2010–25 except during Covid	Lower Northland and North Auckland schools
Publications	Trust members and supporters – 272 on circulation list Supporters and public – 300 sold each time Public – 1500 printed	Quarterly 2010, 2019, 2021, 2023 2025	Newsletter Calendars Picture book
Signage	Public approaching Waipū, Mangawhai, Pākirī. Mangawhai Harbour environs – walkers, cyclists, boaties Mangawhai kiteboarders	Installed 2020–24 Installed 2019 and 2025 Installed 2012	“Welcome to Fairy Tern Territory” Bird information signs Kiteboarder information
Business support	Visitors to Mangawhai Online and nationwide	2008–25	Bennetts – fairy tern cards, donations, information board

Table 2. Court actions undertaken by the New Zealand Fairy Tern Charitable Trust.

Date	Issue	Site(s)	Threat	Conservation outcome(s)	Reference
2012	Mangrove removal, dredging	Mangawhai Harbour	Disturbance to foraging	No capital dredging; Limited mangrove removal	Environment Court (2012)
2017 to 2023	Northern Regional Council Plan (mangroves, bird protection)	Northland - particularly Waipū and Mangawhai	Disturbance to bird breeding, roosting, foraging	Bird breeding period Aug –Mar- no disturbance. Roosting protected. Critical bird habitats protected	Environment Court (2022a) Environment Court (2023a&b)
2018 to 2020	Wharf construction	Mangawhai Harbour	Disturbance to foraging, roosting	Consent declined. Foraging and roosting protected	Northern Regional Council (2020)
2022	PC 78 Development adjacent to harbour	Mangawhai	Adverse effects on water quality, foraging, disturbance	Explicit protections for fairy tern written into plan.	Environment Court (2022b)
2014	Housing development, golf course adjacent to Mangawhai sandspit	Te Ārai	Disturbance to breeding, predators	Housing numbers limited, no pets, monitoring water take from Te Ārai Stream.	Environment Court (2014)
2019	Illegal dam	Te Ārai Stream	Fairy tern foraging – dam impeded fish passage upstream for breeding	Dam removed 2020. Te Ārai Stream mouth captive rearing site since 2020–2021 season.	Environment Court (2019)
2021 to 2023	Sandmining	Pākirī-Mangawhai embayment	Fairy tern breeding sites, foraging	Application declined in Environment Court	

in order to provide a healthy population of fish for captive-reared fairy terns in the lagoon at the Te Ārai stream mouth, and limits to mangrove (*Avicennia marina*) removal in the Northern Regional Plan. NZFTCT has the advantage of local knowledge and, being independent, it can take on cases that may be politically difficult for a government body such as DOC.

Since its establishment in 2008, the NZFTCT has largely achieved its constitutional aims: support for volunteers engaged in fairy tern monitoring and management, public engagement, predator control, fundraising, and advocacy through court proceedings have all been instigated. The ability to source funding outside of DOC, and business support have enabled the NZFTCT to plan and initiate actions whenever a need has been identified.

Threats to fairy tern habitat are likely to continue. Proposed suburban developments could increase sedimentation of Mangawhai Harbour, and offshore sand mining proposed under the Fast Track legislation could impact foraging areas. The New Zealand Fairy Tern Charitable Trust will continue to collaborate with DOC and other like-minded groups, volunteers, and individuals to ensure the survival of fairy tern / tara iti into the future.

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