

## Seabird surveys of predator-free islands in Northland

Between September and December 2018, we conducted surveys of several of Northland's predator-free islands. In northern North Island up-to-date knowledge of population size for most species, or even the main colony sites of commonly observed breeding species, has been lacking despite the proximity of seabird colonies to New Zealand's largest city. For example, pakahā fluttering shearwaters are extremely abundant in northern North Island and are often seen in huge flocks throughout the year, feeding in association with fish schools, flying swiftly between foraging grounds, or in very large dense rafts. While confirmed breeding on a good number of islands, the main populations of fluttering shearwaters had not been located and historical breeding sites had not been resurveyed. Fairy prions are also seen in vast flocks in northern waters, however, while known to be breeding on the Poor Knights Islands, the numbers previously recorded did not appear to correspond to numbers seen at sea. Finding these sites were key goals of our surveys of these islands, as well as recording other species found.

### Islands visited

We visited Tawhiti Rahi (Poor Knights Islands) - 18-22 September, Taranga Hen Island - 28 September-2 October, Muriwhenua Island, Pupuha Island, Motu Muka/Lady Alice Island, Whatupuke Island, Coppermine Island (all in the Marotere/Chickens Islands) - 2-5 October, 27-29 October and Mauitaha (Bream Islands) - 2 October, 13 December. Surveys were a mix of ground searches, simultaneous night counts (based on calls), and the use of acoustic recorders, trail cameras, camera-playback traps and thermal imaging. Our population survey of Tawhiti Rahi builds on our previous for Rako Buller's shearwater, on the two main islands of the Poor Knights Islands.

### Pakahā fluttering shearwater

Historical reports included 'thousands' of fluttering shearwaters breeding on Tawhiti Rahi, 'several thousand' on Muriwhenua, and their presence recorded for all the other islands by various observers. On Tawhiti Rahi very few fluttering shearwaters (10) were heard over four nights during our nocturnal surveys along the length of the island, either in the evening or pre-dawn when other shearwaters, prions and diving petrels were particularly vocal. None were seen flying or



*Fluttering shearwaters by Edin Whitehead*

found on the ground. On Muriwhenua we found concentrated populations of kuaka northern diving petrels and fluttering shearwaters however, 'several thousand' would be a generous estimate but certainly they are breeding there in high numbers. While we did locate fluttering shearwaters breeding in forest areas on Taranga and on three of the Marotere/Chickens Islands, most were found steep scrubby slopes and headlands on all islands. On small islands, such as Muriwhenua, Pupuha and Bream Islands, they were in dense scrub.

Our findings suggest that Taranga and the Marotere/Chickens Islands (including Muriwhenua) are the stronghold for fluttering shearwaters for the outer Hauraki Gulf/East Northland. The apparent loss of the large numbers of fluttering shearwaters from Tawhiti Rahi is a mystery, and while competition with Buller's shearwater is a possible cause, that does not take account of the large areas of the island unoccupied by burrowing seabirds. In a recent survey on Tawhiti Rahi (September 2019) we heard more fluttering shearwaters than in the previous year, and one burrow was found, however they remain uncommon and are vastly outnumbered by Buller's shearwaters, fairy prions, common diving petrels and little shearwaters.

### Titī wainui fairy prion

Another highlight of the surveys was the discovery of a huge colony of titī wainui fairy prions on the north face of the ravine at the head of Rock Lily Inlet, and subsequent establishment of a study site for tracking and physiological research into this species. We found fairy prions cohabitating with Buller's shearwaters and diving petrels, with nests mainly tucked into narrow crevices amongst the rock outcrops.

### Little shearwater

All these islands, together with the Poor Knights Islands are also a stronghold for little shearwaters, although in general active burrows we found on all islands were scattered. Where we found clusters, they were not in large numbers. But the overall large population was a surprise as little shearwaters are not commonly seen foraging within the Hauraki Gulf (especially when compared to fluttering shearwaters) reinforcing the belief that they forage further offshore. Little and fluttering shearwaters (along with fairy prions) are the subject of Edin Whitehead's (University of Auckland) PhD research project started this year.

### Kororā little penguin

Many kororā little penguins were observed landing on South Cove beach, Lady Alice Island after dusk, leading to Kerry Lukies (University of Auckland) including this site on her Masters' thesis project on penguin physiology and tracking. Little penguins were also seen coming ashore at West Bay, Lady Alice Island, on Muriwhenua Island and in Landing Bay, Tawhiti Rahi. Mauitaha, Bream Islands appears to have a large population of little penguins going by trail camera images, and the density of guano splashes amongst the boulders leading to burrows and under the dense scrubby fringe of the interior.

### Other species

Oi grey-faced petrels were recorded on all islands, with substantial populations on Lady Alice Island and Taranga, however, remarkably uncommon on the Poor Knights Islands. It's likely that with the overlap in breeding seasons, they are displaced by Buller's shearwaters. Toanui flesh-footed shearwaters were seen on Lady Alice Island from mid-October and in recordings on Whatupuke but have been well-surveyed as the subjects of a long-term monitoring project. A titī sooty shearwater was seen in the lights over Muriwhenua, with short-tailed shearwaters and a black noddy seen feeding in association with fish school activity near Tara Rocks and Whatupuke (Marotere/Chickens islands).

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Chris Gaskin, Northern NZ Seabird Trust,  
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Fairy Prion by Edin Whitehead