

Pārekareka foraging biology

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Pārekareka, spotted shags (*Phalacrocorax punctatus*), historically bred widely in the Auckland region on both the West and East coasts. However, in the last three decades the species has declined and is today restricted to just one main breeding site in the Firth of Thames (Tarahiki Island at the eastern end of Waiheke Island) with a population of approximately 300 breeding pairs.

Concerns for Auckland's pārekareka population were eased by the knowledge that the species is abundant in the South Island. However, recent research indicates that Hauraki Gulf pārekareka are genetically distinct from birds breeding elsewhere in New Zealand adding urgency to preserving the population in the region in order maintain the species genetic potential.

At the birds predominately breed on predator free Tarahiki Island, impacts in the marine environment are considered a likely primary cause of recent population declines. Unfortunately, there are currently no data detailing the at-sea foraging ecology of Hauraki Gulf pārekareka, though such data are essential to assess potential marine threats.

This study will use recent advances in light weight GPS tracking technology to provide an understanding of the movement ecology of pārekareka in the Hauraki Gulf. Birds captured at the Tarahiki Island colony will be fitted with solar-powered GPS loggers during the breeding season to collect long term (1 year +) data on animal distribution and habitat use. The study will be complemented by other funded research looking at diet and diving behaviour. Together this program of work will provide an indication of potential at-sea impacts on pārekareka in the Hauraki Gulf as well as data for informed conservation management strategies.



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