

Developing a plan for Pacific rat eradication on Henderson Island (PIT401 & 501)

An OTEP-funded project to undertake conservation research on Henderson Island, in the Pitcairn Group, recently supported a successful expedition to Henderson to carry out fieldwork aimed at removing the last remaining obstacles prior to the planned eradication of Polynesian rats. Team members were Henderson Island and seabird expert Mike Brooke (Cambridge University, UK), Pawl Warren and Sue O'Keefe (Pitcairn Island), rodent eradication specialist Nick Torr (New Zealand), Alve Henrikson (Sweden) and Richard Cuthbert (RSPB, UK). The expedition sailed from Mangareva in French Polynesia in early August, visiting Pitcairn to meet and brief islanders on the expedition's objectives, to receive essential supplies and pick up Pawl and Sue. A further day's sailing and two days of fine weather saw the team safely ashore and installed in a field camp on Henderson's North Beach.



Mike Brooke measuring and weighing one of the captive Henderson rails.

Photo: Nick Torr

Predation by Polynesian rats on breeding seabirds, particularly those of the endemic Henderson petrel, are driving large-scale population declines, and will lead to their eventual extinction without an eradication. A previous, OTEP-funded feasibility study and draft operational plan for the eradication of rats (PIT401) highlighted three main areas of concern that needed to be addressed. These were: the potential competition for bait between rats and hermit crabs that occur at high densities in vegetation behind the island's beaches, the risk

to the Henderson rail as a non-target species during an aerial bait drop, and the possible impact of bait on Henderson's endemic land snails. Over the six weeks of fieldwork, the expedition team tested different densities of non-toxic dyed bait and established that, despite high crab densities (>1000 crabs per hectare), all rats were able to access and feed on bait pellets. After testing different catching techniques, the team captured 20 Henderson rails and successfully held these birds for four weeks in captivity, paving the way for a similar approach to be adopted during an actual eradication. Trials with toxic bait pellets and endemic snails revealed no significant



Sue O'Keefe, from Pitcairn Island, setting a live-trap to capture Polynesian rats. Photo: Pawl Warren

snail mortalities, indicating that this group of animals is not at risk from an eradication. These positive results have removed the last remaining obstacles for an eradication, and the challenge now is to raise the necessary funds to carry out this priority eradication operation.

Our thanks go to Pitcairn Island for supporting this conservation work on Henderson, to the crews of the *Braveheart* and *Claymore* for their help in getting to and from Henderson, to the New Zealand Department of Conservation and Landcare for lending equipment and valuable advice, and to OTEP for funding.

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Ascension Island Endemic Plant Project Update (ASC 503)

The Ascension Island Conservation Department are working in collaboration with the Royal Botanic Gardens, Kew on an OTEP-funded Endemic Plants project. Experts from the UK Overseas Territories Team at Kew advise on propagation techniques, *ex-situ* cultivation and the re-introduction of endangered species. Horticultural protocols for each species are to be outlined, these will be used to improve local collections and further develop *ex-situ* plant collections. Stedson Stroud, AIG Conservation Officer, has already successfully cultivated in large numbers three of the endemic species, *Pteris adscensionis*, *Euphorbia origanoides* and *Sporobolus caespitosus*. The aim is to establish collections of all endemics, including *Marattia purpurascens*, *Xiphopteris ascensionense* and *Asplenium ascensionis*. The cultivation of these species will involve a series of trial-and-error propagation trials, recording the results and producing horticultural protocols. The clearing of invasive species on Green Mountain has resulted in the creation of a restoration site for the reintroduction of endemic species on the mountain. The project work will now focus on the mixed planting of the endemic and native species in the Green Mountain restoration area. The collection of a DNA library and accompanying herbarium specimens for all endemic species will take place over the next few months. In addition, the annual plant census of the endemics will be completed by the end of the year. There is currently ongoing work to establish a seed bank of the endemic *Sporobolus* and *Euphorbia*, and a spore bank of the endemic ferns, both on Ascension and at the Millennium Seed Bank, UK.



Restoration site on Green Mountain. Photo: Ascension Island Conservation Department

