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Left ***The pale-eyed Sacred Ibis of Aldabra: taxonomic status uncertain.***

Below ***Aldabra's rail – the last surviving flightless bird in the tropical Indian Ocean.***

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BIRDS OF A SUNKEN OCEANIC VOLCANO

Oceanic islands are natural laboratories for biologists. Isolated by large tracts of water, they have been fundamental to our understanding of how species evolve as well as to predicting the effects of habitat fragmentation on the mainland. They are also extremely vulnerable to the impacts of man: habitat change, exploitation and introductions of alien species have all contributed to a disproportionately high rate of species extinctions on islands. Ninety per cent of the bird species that have become extinct in the past 400 years were island endemics, as are more than 50 per cent of the species currently classified as critically endangered.

Recent advances in molecular techniques are repeatedly revealing that we have underestimated the global number of bird species – the new larks described from South Africa in recent years exemplify this. It seems very possible, therefore, that numbers of island endemics have also been underestimated.

Island endemism and bird rarity are the focus of a new project at the Fitztitute. Aldabra Atoll is a World Heritage Site in the western Indian Ocean. Lying some 500 kilometres north-west of Madagascar and 700 kilometres east of the African coast, Aldabra is the largest coral atoll in the world, forming a ring of coral islands perched on the lip of a huge sunken volcano. It is also home to at least two endemic bird species, the Aldabra Drongo and the Aldabra Warbler. The latter has not been seen for more than a decade and is feared extinct. However, all the other breeding land birds of the atoll, with the exception of the Pied Crow, are currently classified as endemic at the subspecies level and it seems highly likely that some of these taxa may be full species. If, as we suspect, this is the case, Aldabra is an even more important centre of endemism than is currently thought.

Part of the project involves determining the taxonomic status of the atoll's land birds. This will require comparisons with other, closely related taxa, especially from Madagascar, the Comores and the granitic Seychelles to the east. Morphology, voice and molecular analyses will all contribute to this part of the project.

The study will also target one bird in particular. The flightless rail of Aldabra is currently classified as a subspecies of the White-throated Rail of Madagascar. Similar flightless, or near-flightless rails occurred on the satellite islands of Astove, Assumption and Cosmoledo, between 90 and 200 kilometres from Aldabra, but all three of these populations are now extinct. The surviving rails on Aldabra represent the only population of flightless birds in the tropical Indian Ocean, and these birds breed on only three islands in the atoll.

The rail population on Malabar Island seems healthy, with no evidence of a population reduction in the past 20 years. This suggests that Malabar may be at carrying capacity for rails, and our study will investigate the feasibility of translocating a subpopulation of the birds to adjacent Picard Island. A single rail does survive on Picard Island (and rails occurred there historically), but it appears that birds from Malabar are unable to disperse across even the small stretch of water between the islands and thus cannot recolonize the island. Cats, now removed from Picard, probably caused the original extinction. Establishing an additional population on Picard would slightly spread the risk of a catastrophe, such as disease, occurring on Malabar, but would not be effective in averting a catastrophe that affected the whole of Aldabra. □

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