

**LOCAL FAIRY TERN CONSERVATION STRATEGY
FOR THE HOUTMAN ABROLHOS SYSTEM**

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1. SPATIAL DEFINITION

The Abrolhos Islands are an archipelago consisting of 192 islands (including rocks), distributed as three groups (Pelsaert, Easter and Wallabi) and North Island. The archipelago is perched on the edge of the continental shelf between 28°20'S and 29° south latitude and sits directly in the path of the tropical Leeuwin Current. The islands are between 56 and 112 km from the port of Geraldton. The Abrolhos is vested in the Minister for Fisheries for conservation, tourism and purposes ancillary to the fishing industry. The marine environment circumscribing the island is managed as a Fish Habitat Protection Area by the WA Department of Fisheries.

Historically the islands were the centre of the Western Rock Lobster fishery with settlements of 'lobster camps' on 22 islands. Recreational fishing and boating are popular activities and an increase in commercial tourism and the construction of residential tourism infrastructure are currently proposed. Fairy Terns breeding at the Abrolhos have probably been subject to relatively little disturbance when compared with the inshore and mainland areas utilized by the migratory sub-population.

2. NUMBERS, RECENT BREEDING HISTORY AND OBSERVATIONS FROM THE 2015 SURVEILLANCE

The most recent seabird census of the entire Houtman Abrolhos was conducted in December 2006 (Surman & Nichollson 2009). This found 547 pairs of Fairy Terns nesting on 13 islands with the largest colonies on West Wallabi (162 pairs) on the Wallabi group, Pelsaert Is (160 pairs) in the southern group and Sandy (71 pairs) and Leo Islands (41 pairs) in the Easter Group. As some of the Fairy Terns will have nested earlier or later than December this was likely to have been an under-estimate. Smaller colonies on other islands are often mixed with Roseate Terns (e.g. on Wooded Island).

Rat Island in the Easter Group appears to have become an important focus for Fairy Terns since the eradication of Black Rats and feral cats from this extensively guano-mined island in the 1990s (Dunlop *et al.* 2015). A colony of 21 nests was observed on the northern beach in November 1999, 300 pairs in 2007 and 750 pairs in December 2008 (the largest Fairy Tern colony ever recorded). A night roost usually of 200-400 individuals occupied the Rat Island airstrip from November to February in 2013/14 and 2014/15 but not in 2015/16. A larger flock of 600 - 1000+ individuals was present on the Rat Island airstrip at night in late March / early April 2015 and 2016. This may have represented the pre-migration staging of Abrolhos breeding Fairy Terns or even of birds already on migration from further south. A runner banded at the Rous Head colony in North Fremantle on 5 January 2016 was recaptured in the Rat Island night roost on 31 March 2016. This record is consistent with the predicted migration route and with the Abrolhos night roost being a staging location for terns from colonies further south.

3. LOCAL CONSERVATION OBJECTIVE

The numbers of Fairy Terns breeding in the Abrolhos system is currently uncertain. Recent observations suggests that maintaining a average breeding population of 600 pairs would be a conservative, interim conservation target.

4. KEY FUNCTIONAL AREAS

Important Breeding Islands

Fairy Tern colonies have been observed on many islands over the years but the major breeding sites appear to be the sandy shores of West Wallabi, Pelsaert, Sandy and Leo Islands and more recently the narrow beaches and mined out, planar limestone areas on Rat Island.

Rat Island Night-roost

The Rat Island airstrip including the apron and sandy margins functions as significant night-roost and as as a staging location during the annual, northward, post-breeding migration. Other night roosts may occur in the Wallabi and Pelsaert Groups but have not been observed.

5. CURRENT CONDITION OF EACH FUNCTIONAL AREA AND EXISTING PRESSURES

Current levels of disturbance on the uninhabited islands are probably minimal at present. Adverse interactions with people or with aircraft could occur on Rat Island without some management intervention.

6. CONSERVATION STRATEGY

1.Surveillance & Monitoring Program

Government agencies (including DPaW & DoF) generally have insufficient trained staff to conduct consistent wildlife surveillance operations, and this is certainly the case at the Abrolhos. This may not be a serious issue with the current human pressures but may become so if the tourist industry is developed. In the absence of resident communities (and conservation volunteers) at the Abrolhos the tourism industry itself could be harnessed to undertake or resource Fairy Tern surveillance and monitoring.

It may be possible to organise an annual (November/ December) survey of the five most important Islands by the mid-west bird group of BirdLife WA, with transport assistance from DoF or the Batavia Coast Marine Institute.

2. Research Program

A cohort colour banding project (J.N. Dunlop - Conservation Council WA) is continuing at several locations to improve our understanding of the structure of the migratory sub-population. Rat Island in the Easter Group is one of the research sites for banding operations. On 9 February a Fairy Tern colour-banded on Rat Island in February or March 2015 was observed at Nairns in Peel Inlet, 468 km south of the Abrolhos. This tern was in immature (1+) plumage indicating that it was one of six fledglings banded on Rat Island in the previous season. Movements of this distance may suggest that the migratory population is connected on a very large spatial scale, especially if philopatry (returning to the natal area to breed) is low. Another tern banded as a runner at North Fremantle at the beginning of January 2016 was recaptured at the night roost on Rat Island on 31 March. This further indicates the migratory passage of Fairy Terns through the Abrolhos Islands, at least on the northward movement.

Feather material is also being collected for DNA finger-printing approaches to understanding population structure.

3. Nesting habitat management

Some areas of mined out limestone on Rat Island could be enhanced to prevent the terns nesting near or across the airstrip.

It would be prudent to change the appearance of the limestone apron at the airstrip to prevent terns settling to nest on it. Spraying patches with bitumen or another binder would suffice.

4. Protecting Colonies from Encroachment

Designated paths for visitor access may need to be in place ahead of major tourism developments on or near the important breeding islands.

5. Protecting Breeding Colonies from Predators

No significant issues with native or introduced predators have been identified at the Abrolhos.

6. Colony Facilitation

Substrate in the mined out areas of Rat Island could be made more attractive by adding shell material from Pacific Gull middens. Decoys could be used to divert pre-breeding adults to sites away from the Rat Island airstrip and its approaches.

6. SUMMARY OF CONSERVATION STRATEGY

- Conduct a community-based survey of the number of Fairy Terns breeding at colonies on West Wallaby, Pelsaert, Rat, Leo and Sandy Islands each year in November / December (mid-west Bird Group, BCMI and DoF).
- Continue to use the Rat Island Night Roost for research and monitoring wider Fairy Tern population (particularly in late March / early April).
- Use habitat modification and social facilitation methods to attract nesting terns to areas away from the Rat Island airstrip and its approaches. Modify the appearance of the limestone apron at the airstrip to make it unattractive to nesting terns.
- Ensure public access to the main breeding islands is restricted to designated locations and trails as visitor pressure increases with any increase in tourism.