Survey of the breeding status of seabirds at the Houtman Abrolhos, Western Australia. 2006/07

Interim Report

Halfmoon Biosciences
January 2007



Survey of the breeding status of seabirds at the Houtman Abrolhos, Western Australia, December 2007
Interim Report.

Prepared by C.A. Surman & L.W. Nicholson, Halfmoon Biosciences, Hilton, W.A.

Background

The Geraldton Regional Office of the Department of Environment and Conservation commissioned Halfmoon Biosciences to undertake a survey to assess the status of breeding seabirds at the Houtman Abrolhos. One hundred and eighty two (182) islands and islets were surveyed in the three main island groups over a 21 day period in December 2006. Seabirds were observed breeding on most islands, with Pelsaert Island and West Wallabi having the most significant breeding colonies in terms of biomass.

Anomalies

Preliminary assessment of the data collected has shown that there have been several unusual observations of activity at the Houtman Abrolhos.

The Australasian Gannet has been observed in large numbers in waters adjacent to the Houtman Abrolhos, particularly the Geelvink Channel. In previous years occasional sightings of one or two birds are made. Numbers of Australasian Gannets observed by wetline fisherman and the authors during a preliminary trip in October indicate that there have been far more adult and sub-adult Australasian Gannets in Abrolhos waters that usual. Interestingly, gannets were still observed foraging in the area during December, when they would be expected to be foraging closer to breeding grounds in S.E. Australia.

During previous surveys conducted by A. Burbidge and P.J. Fuller, a large Caspian Tern colony was recorded on Leo's Island. We found several Caspian Tern Colonies; Pelsaert Island (> 5 pairs), Leo's Island (> 14 nests) and West Wallabi Island (> 17 nests).

We observed a White Tern *Gygis alba* on Wooded Island, the second record for the Abrolhos, the first observed by the authors at Pelsaert Island in 2001. The nearest breeding station for this species would be Norfolk Island and the Seychelles.

There were very few Bridled Terns in attendance on islands at a time of year that many should be on eggs. On many islands this species was behaving in a manner similar to that usually observed during early November, when it returns to the Houtman Abrolhos and re-established pair bonds before laying a single egg.

Numbers of both Silver Gulls and Pacific Gulls appear to have increased significantly on some islands. We observed unusually large colonies of Pacific Gulls on some of the numbered islands in the Pelsaert Group, and on Pelsaert Island itself. Silver Gull numbers have apparently increased, particularly the autumn breeding component of the population due to the discarding of rock-lobster fishing baits and food scraps during the fishing season. More careful management of fish and food scrap waste control at the Houtman Abrolhos should be under taken prior to any Silver Gull control measures being given consideration.

The Threatened Lesser Noddy has recolonised areas of mangroves not used since 1991 on Pelsaert Island. Since 1991, the colony has been orientated around mangrove areas adjacent to the Lesser Noddy Lakes. Several thousand birds are now nesting in areas adjacent to the Big Lagoon, and satellite patches of mangroves to the north of Big Lagoon. There has been significant areas of die-off observed in mangroves both on Pelsaert Island and Morley Island. Aerial images of colony areas and dead mangroves will be submitted in the final report. Halfmoon Biosciences has submitted a tender to undertake further assessment of mangrove health and noddy nesting areas in 2007 through the Department of Environment and Heritage.

Logistics.

Over 500 hours of labour was consumed during the 21 day survey, not including preparation prior to the journey or reporting time after. We covered over 600 km's whilst surveying the 182 islands, islets and rocks. We managed to reduce the fuel consumption dramatically by employing a 4-stroke engine on the survey vessel, using approximately 180 litres of fuel over three weeks and over 50 hours engine running time. This is approximately half the fuel used by the previous vessel utilised by Halfmoon Biosciences.

North Island was not surveyed during this survey.

Improvements in estimations.

We established permanent four 100 x 5m transects to assess Wedge-tailed Shearwater breeding participation on Pelsaert (2) and West Wallabi (2) Islands across representative habitats. Contents of burrows were assessed utilising an electronic "burrow scope", a miniature video camera attached to a 1.5m flexible steel tube and connected to virtual reality goggles. In this way we are able to estimate actual breeding effort as opposed to burrow numbers.

We estimated the nesting density of Brown Noddies (55 quadrats), Lesser Noddies (12 Transects – 98 quadrats), Sooty Terns (28 quadrats), Little Shearwaters and White-faced Storm-petrels by counting nests or burrows in randomly placed 5 x 5m quadrats. In addition, permanently marked nest sites of the Threatened Lesser Noddy were monitored for comparison to previous year's success and occupancy.

Wherever possible, nests of Pacific Gulls, Silver Gulls, White-breasted Sea Eagles and Osprey, as well as nesting areas of vulnerable ground nesting species (i.e. Fairy Terns and Roseate Terns) were marked on high resolution aerial photographs for future reference. In addition, areas of significant migratory waterbird use were recorded.

Final Report

A final report, with detailed population estimates and locations of breeding seabirds will be furnished to the DEC as soon as the analysis of the data set is completed. In addition, colour imagery of nesting areas of the Threatened Lesser Noddy will be included, as well as other important breeding seabird species.