Anniversary Fact Sheets

the SHORT-TAILED SHEARWATER

Celebrating 50 Years of Montague Island Shearwater Research 2009

The Short-tailed Shearwater
Ardenna tenuirostris

A trans-equatorial migratory, pelagic seabird found in temperate to cool waters. The Short-tailed Shearwater travels the Pacific Ocean, in a spectacular migration that takes it to the Bering Sea each year during the non-breeding period. During the breeding season it can be found from southern Western Australia, to the west coast of New Zealand and down to the Antarctic Pack ice.

The Short-tailed Shearwater is the shearwater species most often seen washed up on beaches along the eastern coastline of Australia. These casualties almost always occur following the return flight from their northern Pacific Ocean non-breeding feeding grounds. Beach washed birds sometimes occur also along the shoreline of Japan following the northwards migration to the Arctic.

The Short-tailed Shearwater is one of a group of large dark shearwaters that can be difficult to identify. However, features to look for include the short dark grey bill that appears to be stubbier than the bills of other large shearwaters; short rounded tail and wings held straight and stiff in flight with a shallow, rapid wing beat. The central underwing coverts often appearing slightly lighter than the rest of the underwing. In the hand the chicks have black toe nails unlike the diagnostic white nails of Wedge-tailed shearwater chicks.

The Short-tailed Shearwater can be confused with the Sooty Shearwater (Ardenna grisea), which has also been found breeding in very low numbers on Montagu Island. The Sooty Shearwater is distinctly larger, and has a proportionally and absolutely longer bill and is even paler on underwing than the Short-tailed Shearwater. The calls of both of these shearwaters are similar but easily distinguished one from the other but are unlike any other species. Described as “hysterical, rapidly repeated, wailing notes that are often given in duet”. The Sooty Shearwater call is deeper and more sonorous and is given at a slower rate than that of the Short-tailed Shearwater. The ecology and breeding biology of the Sooty Shearwater is very similar to that of the Short-tailed Shearwater although the Sooty breeds in cooler more southerly locations in New Zealand and nearby sub-antarctic Islands in addition to islands in the region of Tierra del Fuego and southern Chile. It also breeds at the Falkland Islands in the South Atlantic. Spectacular yearly migration to the northern hemisphere and back matches that of the movements of the Short-tailed Shearwater but many Sooty Shearwater also perform an annual migration into the far North Atlantic.

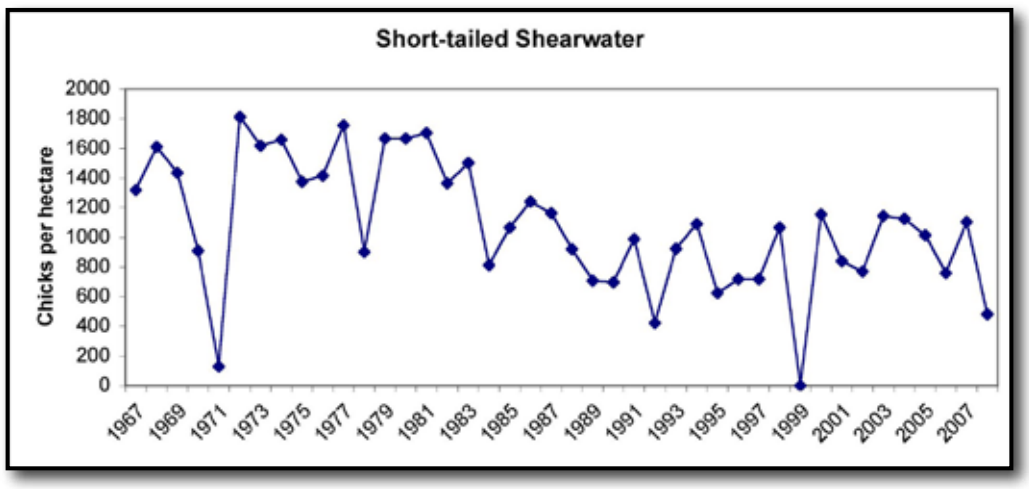
Diet of the Short-tailed Shearwater is mainly small fish, cephalopods (squid) but mostly Euphausiid krill is the predominant food source from cooler waters. Most items are taken from on or near the surface or by diving under water. Like many other seabirds this species has a well developed sense of smell that helps it locate food resources at sea.

The species breeds only along southern and eastern shores of Australia from south-eastern Western Australia (Figure of Eight Island), round Tasmania, through Bass Strait and to as far north as Mutton Bird Island, off Coffs Harbour in NSW. Breeding occurs mostly on off-shore islands (or occasionally on promontories) and occur especially where soft sandy soils are most suitable for the digging of burrows. Adults form long-lasting monogamous pair bonds, possibly life-long with some birds living for 15 to 20 years. On Montagu Island birds return for breeding from late September. Age at first breeding is about 7 years. Experienced birds generally arriving back to the same spot where they have nested in previous years. They renew or establish new pair bonds, and dig or clean out potential nesting burrows. Burrows can be up to 2 m in length, and on Montagu Island are almost always under Spiny-headed Mat-rush Lomandra longifolia.

Birds then depart to feeding grounds in the neighbouring sea areas or probably for most of them to the rich Antarctica seas to build up body condition before the rigors of egg laying, incubation and raising the young. Birds return to the Island after an absence of approximately 3 weeks when the female lays a single egg, which is then invariably incubated by the male for the first shift. Egg laying occurs remarkably synchronously across all colonies throughout the breed range. Almost all eggs are laid during the last week of November. No replacement eggs are laid by breeding pairs should they fail.

The pair take turns at incubating in periods lasting anything up to three weeks. There are usually five shifts. The newly hatched chick is brooded for a few days (usually by the female) then it is left on its own in the burrow while both adults head to sea to collect and return repeatedly with food. Early on these provisioning trips occur almost daily but later they become much more infrequent but the quantity of food delivered is much greater. These latter provisioning trips can take the adults to as far south as the edge of the Antarctic pack-ice and a system of short distance foraging (1-3 days) by each adult alternating with a long distant (9-17 days) forage typically occurs. An adult can be away for up to three weeks on these longer foraging trips which may take them for distances of up to 15 000 km or more for a single round trip.

On the Island the birds are mainly active at night, arriving in the early evening and departing early morning with birds landing near the nesting burrows and then scrambling amongst the Mat-rush tussocks to the burrow entrance to feed their chick.
By mid-March, feeding frequency of chicks is much reduced. The adult birds depart from early April to migrate to their over-wintering grounds. The chicks depart once fully fledged, approximately two weeks later.



Numbers of chicks/ha produced from three study areas on Montagu Island 1967-2008. Counts from 1960-66 have been excluded because during those years the study methods were under development. Methods became strictly standardized from 1967 onwards.

The Short-tailed Shearwater could face threats to successful breeding from changes in the availability of food resources at sea or from adverse conditions on the Island. Montagu Island has no predators (e.g. snakes, rats) that might at present influence breeding success. However, heavy rains over the breeding period can very occasionally cause flooding, and very dry conditions could lead to the collapse of burrows during critical periods of the breeding season.

Further reading

Handbook of Australian, New Zealand and Antarctic Birds. Vol 1, part A. Eds S. Marchant and P.J. Higgins (1990). Oxford University Press, Melbourne.
Albatrosses and Petrels across the World. Michael Brooke (2004). Oxford University Press, Oxford.

The Petrels: Their Ecology and Breeding Systems. John Warham (1990) Academic Press, London.

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