NSW SCIENTIFIC COMMITTEE

Sooty Oystercatcher *Haematopus fuliginosus*

Review of Current Information in NSW

May 2008

Current status:

The Sooty Oystercatcher *Haematopus fuliginosus* is currently listed as Near Threatened in Victoria (Advisory List only), Rare in South Australia under the *National Parks and Wildlife Act* 1972 (NPW Act), Rare in Queensland under the *Nature Conservation Act* 1992 (NC Act), but is not listed under Commonwealth legislation. The NSW Scientific Committee recently determined that the Sooty Oystercatcher meets criteria for listing as Vulnerable in NSW under the *Threatened Species Conservation Act* 1995 (TSC Act), based on information contained in this report and other information available for the species.

Species description:

The Sooty Oystercatcher is a medium-sized (45 cm in length), sturdy black shorebird with a long orange-red bill, red eyes and stout red-pink legs. It has distinctive loud, piping calls. The Pied Oystercatcher *Haematopus longirostris* is black and white, with similarly red bill, eyes and legs.

Taxonomy:

Haematopus fuliginosus Gould 1845 is an Australian endemic species in a cosmopolitan genus. The subspecies in NSW and elsewhere around southern Australian coasts, north to about 25°S, is the nominate *H. f. fuliginosus*. *Haematopus fuliginosus. opthalmicus* Castelneau & Ramsay 1877 occurs around the tropical coasts, and intergrades with the nominate subspecies where they come into contact.

Distribution and number of populations:

In NSW the Sooty Oystercatcher occupies rocky headlands, reefs and offshore islands along the entire coast, apparently as a single continuous population. It occurs and breeds around the Australian and Tasmanian coastlines, where it is vulnerable to human disturbance (Marchant & Higgins 1993; expert advice).

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Figure 1: Records since 1980 of the Sooty Oystercatcher (NSW Wildlife Atlas)

Ecology:

The ecology of the Sooty Oystercatcher is moderately well understood following recent studies (Marchant & Higgins 1993; Lauro & Nol 1995a, b; Harrison in prep.).

Key habitat requirements

The Sooty Oystercatcher inhabits marine littoral habitats, including islands, within 50 m of the shoreline. The species typically occupies rocky intertidal shorelines, *e.g.* at the base of cliffs and headlands, rock platforms, reefs, outcrops, rock stacks; also sandy beaches near intertidal mudflats or rocks; and occasionally estuaries. Habitat is frequently disturbed by human activities around beaches, headlands and islands.

Breeding biology

The Sooty Oystercatcher's nest is typically a scrape in sand, gravel, shingle or among rocks above the tideline, usually in bare areas though sometimes amongst wrack. Nests are lined with gravel, pebbles, plant fibres or shells and can be built on offshore islands and stacks near rocky coast, or sometimes on remote headlands, points, outcrops or steep beaches,. Pairs have a traditional, small nesting territory which they occupy for many years and in which they will repeatedly attempt to nest during a breeding season. There are usually two eggs in a clutch, laid in late winter to spring, with multiple attempts in a season. Limited information is available on the breeding biology of the species, although the incubation period is probably four weeks. Downy chicks are precocial, able to run soon after hatching, and probably fly when two months old (by analogy with the Pied Oystercatcher). The post-hatching dependence period lasts three to five months. Nests and chicks on mainland beaches are vulnerable to disturbance by humans and dogs. However, breeding success in northern coastal NSW was 0.83-1.0 young per pair per year in 2003-05, higher than for the Pied Oystercatcher (expert advice). Generation length is estimated as five years for the northern subspecies (Garnett & Crowley 2000).

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The Sooty Oystercatcher occurs solitarily, in pairs, in family groups of adults and dependent young during the post-fledging period, or in small flocks. Disturbed adults are likely to leave chicks unguarded until disturbance has ceased (as for the Pied Oystercatcher), thus exposing them to predation.

Diet

The Sooty Oystercatcher forages in the intertidal zone mostly for marine invertebrates, especially molluscs, crustaceans and other hard-shelled animals, and above the tideline (on beaches, around stranded seaweed) for other invertebrates at high tide.

Territoriality/home range

Sooty Oystercatchers breed as solitary pairs that defend small territories immediately around their nest sites. Neighbouring nests are 30-100 m apart, depending on whether neighbours can see each other or topography provides visual seclusion (Tasmanian data: Marchant & Higgins 1993). The specie's foraging range extends up to 500 m from the nest.

Ability to disperse/susceptibility to population fragmentation

The Sooty Oystercatcher is mobile, capable of dispersing more than 200 km, though most juveniles disperse about 50 km (Marchant & Higgins 1993).

Number of mature individuals:

Various estimates of population size are available for this species, all of which suggest that the number of mature individuals in NSW is less than 2 500 birds. Around 1990, there were 172 birds in 350 km of coastline between Newcastle and Batemans Bay, and 50-60 birds, including at least 12 breeding pairs, in the Illawarra section (about 100 km; Marchant & Higgins 1993). The state population was estimated at 200 birds in 1991 (Watkins 1993).

In recent years (1996-2000), surveys have found only 173-240 birds on the entire NSW coast (expert advice). In 2003, there were 74 breeding pairs on 13 islands in the Illawarra and South Coast (representing about one-third of the NSW coastline; NSW Field Ornithologists Club data). There were 113 birds in 186 km of coastline between Ballina and Sawtell in 2003-05, although only 10% of these were part of breeding pairs (*i.e.* 12 birds, six pairs) (expert advice). By extrapolation, there may be 600-800 birds in the 1200 km of NSW coastline, of which less than 200 would be breeding.

The national population of the nominate subspecies is estimated at 4000 birds (Geering *et al.* 2007), of which one-eighth or about 500 would be in NSW on the basis of proportional extent of coastline [although densities are higher in the south (Victoria, Tasmania) than the north of the taxon's range in south-eastern Australia (Marchant & Higgins 1993; Barrett *et al.* 2003; expert advice)]. On the basis of one young per pair per year (or one-third of the population juveniles) and at least two years of immaturity before breeding (Marchant & Higgins 1993; Geering *et al.* 2007), but allowing for some pre-adult mortality, about 50% of the population may be mature adults. The maximum number of mature adults in NSW is therefore about 400.

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Threats:

The occurrence of Sooty Oystercatchers in any one location is predicted based on the presence of islands (as refuges), history of use by people, and marine park zoning (expert advice). Therefore, human disturbance (by beachgoers, dogs and fishermen, including boats landing on offshore islands) is inferred to be the main threat to this species.

Sea-level rise, as a consequence of 'Anthropogenic Climate Change' (a Key Threatening Process listed in NSW under the TSC Act), is predicted to cause loss of secure nesting sites on islands (expert advice), which may force birds to nest on less secure and more disturbed mainland sites.

Extreme fluctuations:

There is no evidence of extreme fluctuations in the population size or habitat of the Sooty Oystercatcher.

Population reduction and continuing declines:

Populations of the Sooty Oystercatcher declined by 32-44% around Hobart over about 15 years (three generations) between 1965-68 and 1981-82 (Marchant & Higgins 1993). Similar local declines might be expected to have occurred around major coastal cities in NSW (Sydney, Wollongong, Newcastle), and probably other large coastal cities such as Port Macquarie, Coffs Harbour and Tweed Heads. However, current information suggests that, overall the species has not declined in NSW (Barrett *et al.* 2007).

Extent of Occurrence (EOO) & Area of Occupancy (AOO):

The Sooty Oystercatcher occurs and breeds in linear coastal habitat over the entire distance of eastern NSW. The calculated Extent of Occurrence (EOO) for the population is 600 km^2 (under the liberal assumption that the species occurs up to 0.5 km inland from the littoral zone). The calculated area that is used for breeding is about 50 km^2 assuming an average of around 0.5 km^2 per each of 100 breeding pairs (as for the Pied Oystercatcher). However, based on occupancy of 2 x 2 km grid cells (IUCN 2008), gives an AOO of 400 km^2 for breeding pairs alone. A conservative addition of 100 grid cells for the other 200 mature adults estimated to be in the NSW population doubles this AOO.

Severe fragmentation:

This species' littoral habitat is fragmented by coastal development, but its population is not severely fragmented because individuals readily disperse tens to hundreds of kilometres.

References:

Barrett G, Silcocks A, Barry S, Cunningham R, Poulter R (2003) 'The new atlas of Australian birds.' (RAOU: Melbourne)

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Barrett GW, Silcocks AF, Cunningham R, Oliver DL, Weston MA, Baker J (2007) Comparison of atlas data to determine the conservation status of bird species in New South Wales, with an emphasis on woodland-dependent species. *Australian Zoologist* **34**, 37-77.

Garnett S, Crowley G (Eds) (2000) 'The action plan for Australian birds 2000.' (Environment Australia: Canberra)

Geering A, Agnew L, Harding S (2007) 'Shorebirds of Australia.' (CSIRO: Melbourne)

Harrison, A (in prep.) The ecology and impact of threatening processes on two threatened shorebirds (*Haematopus longirostris* and *H. fuliginosus*) in northern NSW, Australia: Implications for conservation and management. Draft PhD thesis, University of New England, Armidale.

IUCN (2008) 'Guidelines for using the IUCN Red List Categories and Criteria. Version 7.0.' (Standards and Petitions Working Group of the IUCN Species Survival Commission Biodiversity Assessments Sub-committee: Switzerland). (http://intranet.iucn.org/webfiles/doc/SSC/RedList/RedListGuidelines.pdf).

Lauro B, Nol E (1995a) Feeding behavior, prey selection and bill size of Pied and Sooty Oystercatchers in Australia. *Wilson Bulletin* **107**, 629-640.

Lauro B, Nol E (1995b) Patterns of habitat use for Pied and Sooty Oystercatchers nesting at the Furneaux Islands, Australia. *Condor* **97**, 920-934.

Marchant S, Higgins PJ, (Eds) (1993) 'Handbook of Australian, New Zealand and Antarctic birds (Vol. 2).' (Oxford University Press: Melbourne)

NSW Field Ornithologists Club (1988-2007) NSW annual bird reports, published annually in *Australian Birds*.

Watkins D (1993) 'A national plan for shorebird conservation in Australia.' RAOU Report No. 90, Australasian Wader Studies Group, RAOU, Melbourne.

Explanatory note

Between 2007 and 2009 the NSW Scientific Committee undertook a systematic review of the conservation status of a selection of plant and animal species listed under the Threatened Species Conservation Act. This species summary report provides a review of the information gathered on this species at the time the Review was undertaken.

The Scientific Committee's report on the Review of Schedules project and final determinations relating to species that were either delisted or had a change in conservation status can be found on the following website: www.environment.nsw.gov.au .

The Committee gratefully acknowledges the past and present Committee members and project officers who ably assisted the Committee in undertaking the Review of Schedules Project. Information on the people involved in the project can be found in the Acknowledgement section of the project report entitled "Review of the Schedules of the Threatened Species Conservation Act 1995. A summary report on the review of selected species" which is available on the abovementioned website.

This species summary report may be cited as:

NSW Scientific Committee (2008) Sooty Oystercatcher *Haematopus fuliginosus*. Review of current information in NSW. May 2008. Unpublished report arising from the Review of the Schedules of the Threatened Species Conservation Act 1995. NSW Scientific Committee, Hurstville.

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