

NSW SCIENTIFIC COMMITTEE

Pied Oystercatcher *Haematopus longirostris*

Review of Current Information in NSW

May 2008

Current status:

The Pied Oystercatcher *Haematopus longirostris* is currently listed as Rare in South Australia under the *National Parks and Wildlife Act 1972* (NPW Act), but is not listed under Commonwealth legislation. The NSW Scientific Committee recently determined that the Pied Oystercatcher meets criteria for listing as Endangered 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 Pied Oystercatcher is a medium-sized (45 cm), sturdy, strikingly black and white shorebird with a long orange-red bill, red eyes and stout red-pink legs. It has distinctive loud, piping calls. A similar species, the Sooty Oystercatcher *Haematopus fuliginosus*, has the same red bill, eyes and legs but is wholly black.

Taxonomy:

Haematopus longirostris Vieillot 1817, is monotypic (*i.e.* no subspecies) and an Australasian endemic species in a cosmopolitan genus.

Distribution and number of populations:

In NSW the Pied Oystercatcher occupies beaches and inlets along the entire coast, the northern and southern populations having possible interchange with the Queensland and Victorian populations, respectively. It occurs and breeds around the Australian and Tasmanian coastlines, but has declined throughout much of its range and is of conservation concern in south-eastern Australia because it is vulnerable to habitat destruction and human disturbance (Marchant & Higgins 1993).



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

ESTABLISHED UNDER THE THREATENED SPECIES CONSERVATION ACT 1995

NSW SCIENTIFIC COMMITTEE

Ecology:

The ecology of the Pied Oystercatcher is generally well understood following recent studies (Marchant & Higgins 1993; Lauro & Nol 1993, 1995a,b; Owner & Rohweder 2003; Newman 2008; Harrison in prep.).

Key habitat requirements

The Pied Oystercatcher inhabits marine littoral habitats, including islands. It occupies muddy, sandy, stony or rocky estuaries, inlets and beaches, particularly intertidal mudflats and sandbanks in large marine bays. The habitat of this species is frequently disturbed by human activities on beaches.

Breeding biology

The Pied Oystercatcher's nest is typically a scrape in sand, soil, shingle or shellgrit above the tideline, on a beach, lagoon shore, sandbank or sand island in an estuary, between high-water mark and dunes, amongst vegetation or wrack (*e.g.* seaweed, driftwood) or under a shrub, and lined with plant fibres or shells. 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 spring to early summer, with multiple attempts in a season. The incubation period is four weeks; downy chicks are precocial and can run soon after hatching, and fly well when two months old. Nests and chicks are frequently disturbed by humans and dogs, leading to poor breeding success in NSW. For example, only 24 young were raised on the entire Illawarra and South Coast in 2003 (NSW Field Ornithologists Club annual bird report), and productivity was only 0.6 fledgling per pair annually in northern NSW (expert advice 2008). On the North Coast of NSW the species' finite rate of increase is negative and thus the population is likely to be unsustainable (expert advice 2008). The generation length of the Pied Oystercatcher is inferred to be similar to that of the closely related Sooty Oystercatcher, which is estimated as five years (Garnett & Crowley 2000).

The species occurs solitarily, in pairs, in family groups of adults and dependent young during the post-fledging period, or in small flocks. Adults are easily disturbed and leave chicks unguarded until disturbance has ceased, thus exposing them to predation.

Diet

The Pied Oystercatcher forages in the intertidal and wave-wash zone mostly for marine invertebrates, especially bivalve molluscs. A key prey species, the pipi *Donax deltoides*, has undergone a severe long-term decline as a result of commercial over-harvesting (expert advice 2008). The Pied Oystercatcher's food supply (beach macroinvertebrates) is also adversely affected by other human impacts such as four-wheel-drive vehicles (Schlacher *et al.* 2008a; b).

NSW SCIENTIFIC COMMITTEE

Territoriality/home range

Pied Oystercatchers breed as solitary pairs that defend small territories immediately around their nest sites; the foraging range is about 400 m of beach per pair, on average (Tasmania data: Marchant & Higgins 1993).

Ability to disperse/susceptibility to population fragmentation

The Pied Oystercatcher is mobile and capable of dispersing hundreds of kilometres (Marchant & Higgins 1993).

Number of mature individuals:

In October 1998, a survey recorded only 232 Pied Oystercatchers in the state (NSW Wader Studies Group data, cited by Owner & Rohweder 2003). About half of these (119 birds) occurred on the far North Coast between the Queensland border and the Clarence River. A more extended survey in 1996-1997, between the Queensland border and the Clarence River, found highest densities south of the Richmond River (Owner & Rohweder 2003). In 2005, between the Richmond and Clarence Rivers, there were 23 breeding pairs and 30-70 non-breeding birds (expert advice Dec 2005), or approximately 100 birds. A survey in 2003 found 129 birds between Ballina and Sawtell, of which 70% were non-breeders. A repeat census of the same area in 2005 found 112 birds (expert advice May 2008). Concurrently, fewer than 40 breeding pairs were estimated to exist south of Sydney and fewer than 200 breeding pairs in NSW (expert advice 2007).

Threats:

Historically, much littoral and estuarine habitat in NSW was destroyed by coastal development and engineering works. The remaining habitat of the Pied Oystercatcher is at risk of disturbance by human recreational activities (including 4WD beach drivers), dogs, harvesting of pipis (bivalve molluscs *Donax deltoides*) and hydrological changes to estuaries and lagoons (Harrison 2005 and in prep.).

Other threats to the species include nest or chick predation by foxes, feral pigs and artificially high Silver Gull populations. 'Predation by the Feral Cat *Felis catus*' and 'Predation, habitat degradation, competition and disease transmission by Feral Pigs, *Sus scrofa*' are listed as Key Threatening Processes under the TSC Act in NSW.

Threats are described as 'active' (expert advice 2007) and many, such as recreational use of beaches, are increasing (Harrison 2005).

Extreme fluctuations:

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

NSW SCIENTIFIC COMMITTEE

Population reduction and continuing declines:

The species is considered to have declined throughout much of its range (Marchant & Higgins 1993). The population on the NSW North Coast, between Ballina and Sawtell, has declined since the 1990s, with a 17% decline in breeding pairs, a 5% decline in non-breeding territory holders, and a 33% decline in non-breeding birds (expert advice 2008).

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

The Pied Oystercatcher occurs and breeds in linear coastal habitat over the entire distance of eastern NSW. However, occupation is patchy (Owner & Rohweder 2003). The calculated EOO (IUCN 2008) for the breeding population is 2 400 km² (under the liberal assumption that the species occurs up to 2 km inland from the littoral zone). The calculated AOO (IUCN 2008) is 100 km² (assuming an average of about 0.5 km² per pair in occupied breeding areas: Marchant & Higgins 1993). If based on 2 x 2 km grids, the AOO would be less than 800 km².

Severe fragmentation:

The remaining littoral habitat of the Pied Oystercatcher is now severely fragmented as a result of coastal development, however the population of the species is not severely fragmented because individuals readily disperse tens to hundreds of kilometres.

References:

- Garnett S, Crowley G (Eds) (2000) 'The Action Plan for Australian Birds 2000'. (Environment Australia: Canberra)
- Harrison A (2005) 'The impact of recreation on shorebirds at South Ballina Beach, spring 2005.' Report by National Marine Science Centre, Coffs Harbour, for NSW Department of Lands North Coast Region.
- 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 (1993) The effect of wind direction and tidal flooding on the reproductive success of the Pied Oystercatcher *Haematopus longirostris*. *Emu* **93**, 199-202.
- Lauro B, Nol E (1995a) Feeding behaviour, prey selection and bill size of Pied and Sooty Oystercatchers in Australia. *Wilson Bulletin* **107**, 629-640.

NSW SCIENTIFIC COMMITTEE

- 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)
- Newman M (2008) Australian Pied Oystercatcher breeding at Mortimer Bay, Tasmania, Australia 1977-2000. *Stilt* **54**, 51-53.
- NSW Field Ornithologists Club (1988-2007) NSW annual bird reports, published annually in *Australian Birds*.
- Owner D, Rohweder DA (2003) Distribution and habitat of Pied Oystercatchers (*Haematopus longirostris*) inhabiting ocean beaches in northern New South Wales. *Emu* **103**, 163-169.
- Schlacher TA, Thompson LMC, Walker SJ (2008a) Mortalities caused by off-road vehicles (ORVs) to a key member of sandy beach assemblages, the surf clam *Donax deltoides*. *Hydrobiologia* **610**, 345-350.
- Schlacher TA, Richardson D, McLean I (2008b) Impacts of off-road vehicles (ORVs) on macrobenthic assemblages on sandy beaches. *Environmental Management* **41**, 878-892.

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) Pied Oystercatcher *Haematopus longirostris*. 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.