

NSW SCIENTIFIC COMMITTEE

Hooded Plover *Thinornis rubricollis*

Review of Current Information in NSW

April 2008

Current status:

The Hooded Plover *Thinornis rubricollis* is currently listed as Threatened in Victoria under the *Flora & Fauna Guarantee Act 1988* (FFG Act), and as Vulnerable in South Australia under the *National Parks and Wildlife Act 1972* (NPW Act). The species is not listed under Commonwealth legislation. The NSW Scientific Committee recently determined that the Hooded Plover meets criteria for listing as Critically 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 Hooded Plover is a small (21 cm in length) grey-brown shorebird having a black head, white collar and underparts, red bill and eye-ring, and orange legs. A white wing-bar and white tail with a black centre are visible in flight. Similar species include the smaller Black-fronted Dotterel *Euseyornis melanops*, differentiated by a black V-shaped band on the breast, and the dumpier and long-legged Red-kneed Dotterel *Eythrogonys cinctus*, which has a broad black breast-band. The juvenile Hooded Plover is similar to many other small grey-brown shorebirds, especially the *Charadrius* plovers, but has a broad white collar on the hindneck.

Taxonomy:

Species: *Thinornis rubricollis* (Gmelin 1789), an Australian endemic species in an endemic Australasian genus with one other species in New Zealand. The population in NSW belongs to the nominate eastern subspecies *T. r. rubricollis*, inhabiting the marine littoral zone; it is considered nationally Vulnerable (Garnett & Crowley 2000). The Western Australian subspecies *T. r. tregellasi* Mathews 1912 extends from the marine littoral zone to the shores of inland salt lakes and is considered Near Threatened (Garnett & Crowley 2000). The other species in the genus; the Shore Plover *T. novaeseelandiae*, is considered Endangered through most of its range, though on the main NZ islands is now extinct (Marchant & Higgins 1993).

Distribution and number of populations:

In NSW the Hooded Plover is now confined to beaches and inlets on the South Coast from the Illawarra region to the Victorian border, although it formerly occurred north to the Sydney region and dispersing juveniles occasionally reach south-east Queensland. Its current northern breeding limit is around Shoalhaven Heads. NSW birds constitute a single population, having possible interchange with the Victorian population.

ESTABLISHED UNDER THE THREATENED SPECIES CONSERVATION ACT 1995

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Figure 1: Records of the Hooded Plover since 1980 (NSW Wildlife Atlas)

Ecology:

The ecology of the Hooded Plover is generally well understood, especially of the eastern subspecies, following recent studies (Marchant & Higgins 1993; Dowling & Weston 1999; Garnett & Crowley 2000; Baird & Dann 2003; Weston & Elgar 2005a, b; Dennis & Masters 2006).

Key habitat requirements

The Hooded Plover inhabits marine littoral habitats, particularly wide sandy beaches with beachcast seaweed, and inlets and lagoons with large sand flats and storm wrack, backed by sparsely vegetated dunes. This species also inhabits the margins of near-coastal saline and freshwater lakes and lagoons (*e.g.* saltmarsh). Its habitat is frequently disturbed by humans.

Breeding biology

The Hooded Plover's nest is typically a scrape in sand above the tideline, on a beach, sandbank or sand island in an estuary, between the high-water mark and dunes, amongst storm or tide wrack (*e.g.* seaweed, driftwood), and lined with seaweed, shells or pebbles. Two or three eggs form a clutch, which is laid from late winter to early autumn, with multiple attempts in a season. The incubation period is one month. Downy chicks are precocial and can run soon after hatching and fly well when one month old. Nests and chicks are frequently disturbed by humans and dogs, leading to poor breeding success in NSW. Breeding productivity in highly disturbed areas is below a sustainable level. Adults leave chicks unguarded when disturbed and do not return until disturbance has ceased, thus exposing the chicks to predation. This leads to population decline (Baird & Dann 2003; Dennis & Masters 2006). The generation length of the Hooded Plover is estimated as five years (Garnett & Crowley 2000). The Hooded Plover occurs solitarily, in pairs, in family groups of adults and dependent young during the post-fledging period, or in small flocks.

Diet

The Hooded Plover forages in the intertidal and wave-wash zone, among flotsam, for marine and littoral invertebrates, seeds and water plants. The Plover's food supply (beach invertebrates) is adversely affected by human impacts such as four-wheel-drive vehicles and removal of wrack (McLachlan 1985; Lavery *et al.* 1999; Schlacher *et al.* 2008).

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Territoriality/home range

Hooded Plovers breed as solitary pairs that defend small territories immediately around their nest sites. The home range of the species is up to 1.5 km of beach (Marchant & Higgins 1993).

Ability to disperse/susceptibility to population fragmentation

The Hooded Plover is mobile, and juveniles are capable of dispersing hundreds of kilometres (Cameron & Weston 1999; Garnett & Crowley 2000).

Number of mature individuals:

In 2003-2004, the NSW population of Hooded Plovers was estimated as 19-25 pairs, or not more than 50 birds (NSW Field Ornithologists Club annual bird reports). A more recent estimate placed this population at fewer than 20 breeding pairs (*i.e.* fewer than 40 birds) in NSW (expert advice 2007).

Threats:

Much of the Hooded Plover's littoral and estuarine habitat in NSW has been, and continues to be, destroyed or degraded by coastal development, engineering works and human population increase. Remaining habitat is at risk of disturbance by human recreational activities (including 4WD beach drivers), dogs, and artificial opening of sandbars across estuaries and lagoons. Other threats include nest or chick predation by foxes and artificially high Silver Gull *Larus novaehollandiae* populations; weed invasion (*e.g.* *Chrysanthemoides monilifera* ssp. *rotundata* (Bitou Bush), *Ammophila arenaria* (Marram Grass)); oil spills; kelp harvesting; and trampling by livestock. 'Predation by the European Red Fox *Vulpes vulpes*', 'Invasion of native plant communities by *Chrysanthemoides monilifera*' and 'Invasion of native plant communities by exotic perennial grasses' are listed as Key Threatening Processes under the TSC Act in NSW. Threats are described as 'very active' (expert advice 2007).

Extreme fluctuations:

There is no evidence of extreme fluctuations in the population size or habitat of the Hooded Plover.

Population reduction and continuing declines:

Historically in NSW, the Hooded Plover occurred north to at least the Sydney region and possibly to Port Stephens. The species had become rare around Sydney by 1900, with the last records in the 1940s. It is now confined to the NSW South Coast, south of Wollongong, with only occasional vagrants north to the Central Coast and (rarely) south-east Queensland. The NSW population was estimated at 62 birds in 1988, 19-25 pairs (or a maximum of 50 birds) in 2003-2004 (NSW FOC annual bird reports), and fewer than 20 pairs by 2007 (expert advice).

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

This species occurs in linear coastal habitat, with breeding from the Victorian border to the Shoalhaven River, over a distance of about 350 km (at a map scale of 1: 1 600 000). However, occupation is patchy, with birds recorded at 11 South Coast beaches in 2000 (NSW FOC bird report). The calculated EOO (IUCN 2008) for the core breeding population is 350 km² (assuming the species occurs up to 1 km inland from the littoral zone), and the calculated AOO (IUCN 2008) is 20 km² (assuming 1 km² per breeding pair, given that breeding pairs occupy 0.5 to 1.5 km of beach: Marchant & Higgins 1993). If based on 2 x 2 km grids, AOO would be less than 80 km².

Severe fragmentation:

The remaining littoral habitat of the Hooded Plover is now severely fragmented as a result of coastal development. However, the population may not be severely fragmented because individuals still disperse as far north as the Central Coast and, occasionally to, the Queensland border.

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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) Hooded Plover *Thinornis rubricollis*. Review of current information in NSW. April 2008. Unpublished report arising from the Review of the Schedules of the Threatened Species Conservation Act 1995. NSW Scientific Committee, Hurstville.