



Robbins Passage/Boullanger Bay

Birds Tasmania submission to the Tasmanian Land Conservancy
Prepared by Eric Woehler, October 2006

Overview

This report provides a précis of key information on the Robbins Passage/Boullanger Bay wetlands (hereafter 'the wetlands') under three broad headings (see below) as supporting information for the formulation of a Draft Management Plan (DMP) for the wetlands. The DMP is being prepared for the Cradle-Coast NRM by a consortium comprising representatives of the Tasmanian Land Conservancy (TLC), Community Solutions, the Tasmanian Department of Primary Industry and Water (DPIW) and Birds Tasmania.

1. Review of current status of knowledge of shorebirds and their habitats

The review will present synopses of existing data and related information for the following:

- (a) resident species
- (b) migratory species
- (c) roosting sites
- (d) feeding sites
- (e) data gaps

(a) resident species

The wetlands are used for feeding and roosting for migratory and resident species, and for breeding by resident species. The breeding species community is comprised of pied and sooty oystercatchers, and hooded and red-capped plovers. In addition, masked lapwings ("spur-winged plovers") and black-fronted dotterels may also breed within the wetlands or in the coastal fringes. Little and fairy terns have been recorded breeding in the wetlands in the past, and while not shorebirds *per se*, they breed on the same habitats as do the resident shorebirds, and are listed here for completeness.

Of the breeding species listed above, all but sooty oystercatchers and black-fronted dotterels breed on sandy and shell-grit beaches. Breeding birds construct shallow depressions in the sand/grit into which they lay 2 or 3 eggs. Sooty oystercatchers typically nest on rocky foreshores on offshore islands rather than on sandy beaches, while black-fronted dotterels breed adjacent to areas of water such as farm dams. Surveys conducted in October 2006 located nests of pied oystercatchers, hooded and red-capped plovers on Perkins I and on Anthony Beach (Figure 1). No nests of sooty oystercatchers were found in these areas during October 2006. No surveys for nesting species have been conducted of Robbins I during 2006.

All species of resident shorebirds have been recorded in the wetlands throughout the year (ie outside summer breeding season) and these species are year-round residents. They also use the wetlands for feeding and roosting throughout the year.

(b) migratory species

The migrant species community comprises between 10 and 20 species that use the wetlands for feeding and roosting. The number of migratory species recorded in the wetlands varies inter-annually. All but one of the migratory shorebird species are Northern Hemisphere breeders, typically breeding in northern Asia and the arctic regions of Asia and North America. Individuals of these species fly between 12,000 and 15,000km each year on migration to the wetlands. These birds use the wetlands to restore body reserves of fat in preparation for the return migration to northern breeding sites and the next breeding season. The sole shorebird species that uses the wetlands that is not from the Northern Hemisphere is the double-banded plover, which migrates between its breeding areas in New Zealand and southeast Australia.

The wetlands have been the focus of surveys for both resident and migratory species of shorebirds for more than 20 years. Early visits in the 1980s obtained preliminary data on species diversity, abundances and key roost sites within the wetlands. Since 1996, concerted efforts have been made to undertake simultaneous high-tide counts of all currently-known roost sites within the wetlands. Coordinated biannual counts are undertaken by members of Birds Tasmania and of the local community, with logistic assistance from land-holders to access remote sites. Concerted efforts are made to obtain simultaneous counts from all roosts during these counts, but some sites are occasionally missed due to a number of reasons (such as insufficient counters, especially for the winter count).

(c) roosting sites

As of October 2006, 8 primary roost sites have been identified (Figure 2). A number of smaller roost sites are known within the wetlands and it is likely that a low number of other, currently unknown roost sites occur within the wetlands. This premise is based on several observations of large flocks flying from roost sites during coordinated counts that are not reported elsewhere during the same count, and of birds known to be in the area before and/or after a coordinated count that were not observed during the coordinated counts.

A total of 6 complete summer counts and 3 complete winter counts have been made for the wetlands since 1996 (Figure 3). Based on these counts, with supplementary counts and surveys of the area by members of Birds Tasmania, it is presently believed that the wetlands regularly holds approximately 25,000 resident and migratory shorebirds during the summer months (October to March inclusive) and approximately 4,000 to 5,000 resident and migratory shorebirds during winter months. These numbers vary inter-annually as different species' populations migrate to the wetlands or elsewhere in southeast Australia including Tasmania.

Within the context of other long term shorebird surveys elsewhere in Tasmania, the wetlands are now recognised as the most important area for shorebirds in Tasmania, with more shorebirds of more species

present at any time of the year in the wetlands than in the rest of Tasmania combined.

Surveys over more than 40 years in the southeast of Tasmania and over 30 years in the northeast suggest a combined total of approximately 5,000 shorebirds in the summer and approximately 3,000 in the winter months for the southeast and northeast, respectively. Despite the absence of contemporary survey data from the Flinders group and from King Island, both believed to hold substantial numbers of shorebirds, shorebird populations from these islands will not combine to exceed those recorded from the northwest.

Based on existing survey data, it is clear that the wetlands continue to meet criteria for nominating the wetlands for Ramsar listing. The high number of migratory species, species with conservation status, and large populations of shorebirds using the wetlands all easily satisfy Ramsar criteria. A similar assessment of the wetlands indicates that the wetlands meet Important Bird Area (IBA) criteria. These criteria are broadly similar to the criteria for assessing wetlands for Ramsar listing, but are applied to non-wetland species. The wetlands were nominated as a Tasmanian IBA within the joint Birds Australia - BirdLife International project in October 2006. The wetlands were also listed on the Tasmanian Inventory of Nationally Important Shorebird Sites in 2006.

(d) feeding sites

As of October 2006, two primary feeding sites have been identified in the wetlands: the west coasts of Robbins Island and Perkins Island. Additional feeding sites are known from outside the wetlands (eg East Inlet, east of Stanley) and it is likely that other feeding sites, including primary sites, occur within the wetlands. Until now, little effort has been made to identify feeding sites (compared to roost sites), and thus it is premature to consider that all feeding sites within the wetlands are known. Other feeding sites within the wetlands that may be primary sites include Welcome Inlet, areas to the west of Walker Island and Mosquito Inlet.

(e) data gaps

As of October 2006, only incomplete and patchy knowledge of the shorebird's use of the wetlands exist - reasonable information on shorebird roosts have been compiled, preliminary studies are currently underway on shorebird prey distribution, and only two sandy beaches have been surveyed for nesting shorebirds. The use by shorebirds of Mosquito Inlet for feeding is presently unknown, as is the location(s) of any roost sites west of Kangaroo Island. Such major data gaps preclude efforts to rank sites against various criteria for values, risk analyses or assessments (see below).

Based on previous observations, it is believed that additional roost and feeding sites exist within the wetlands, and searches are planned for 2006/07 to visit and survey previously unsurveyed areas within the wetlands. A Doctoral study is expected to be completed by the end of 2007 which examines the distribution, abundance and community composition of benthic invertebrates in selected areas of the wetlands. Once completed, the study will generate several publications in peer-reviewed journals reporting on the results of the study.

2. Ranking of important shorebird sites

While it may be highly tempting to rank individual sites within the wetlands in an effort to identify the “most important” roost or feeding or nesting sites etc, it is in fact inappropriate to do so. Individual sites could be ranked by the number of birds recorded during a count, the species diversity at a roost site or numbers breeding along a stretch of beach, or even the numbers of birds feeding in an area, however all such approaches ignore the biological reality of the wetlands, and the shorebirds’ uses of them.

It is critical to view the wetlands holistically, in that the wetlands comprise an inter-connected network of feeding, roosting (and for some species, nesting) sites among which the birds move in response to changes in tides, weather, wind speeds and direction, time of day and night, time of year and other factors such as disturbance. It is incorrect to treat each site in isolation, and ranking sites effectively treats each site independently of all others.

The shorebirds need and use all of the coastal sites within the wetlands, and the loss of any site presently used for feeding, roosting or breeding will have an impact to the shorebird community as a whole.

Network - can not/must not consider sites as independent of each other, birds move between/among sites depending on tide, winds, weather, disturbance, time of day, time of year etc.

3. Summary of threats to the important sites within the wetlands

As with ranking sites, it is more appropriate to initially assess threats to the wetlands in a holistic manner, rather than a site by site inventory of threats. Every threatening process in operation within the wetlands is contributing to the cumulative impact of all threats to all sites within the wetlands, not just the shorebird sites. A table summarising the known and presumed/unknown threats to known shorebird roosting, feeding and nesting sites within the wetlands is presented below. At the moment, no reports have been received of sea spurge on the Wallaby Islets or from Kangaroo Island; these sites would be expected to be susceptible to sea spurge.

	Habitat loss and fragmentation	Human disturbance, including vehicles	Introduced species as predators (dogs, cats)	Invasive species (eg sea spurge and rice grass)
Nesting sites:				
Anthony Beach	X	X	X	X
Perkins I coast	X	X	X	X
Feeding sites:				
West coast, Perkins I	X	X	X	
West coast, Robbins I	X	X	X	
Roosting sites:				
East end, Anthony Beach	X	X	X	X
West end, Anthony Beach	X	X	X	X
Shipwreck Point	X	X	X	X
Wallaby Islets	X		X	?
Five Islets/Knot Point	X	X	X	X
Bird Point	X	X	X	X
Kangaroo I	X		X	?

Table summarising known and presumed threats to known roosting, feeding and nesting sites of shorebirds within the wetlands. A ? indicates insufficient information to determine if identified threat is occurring at the site.

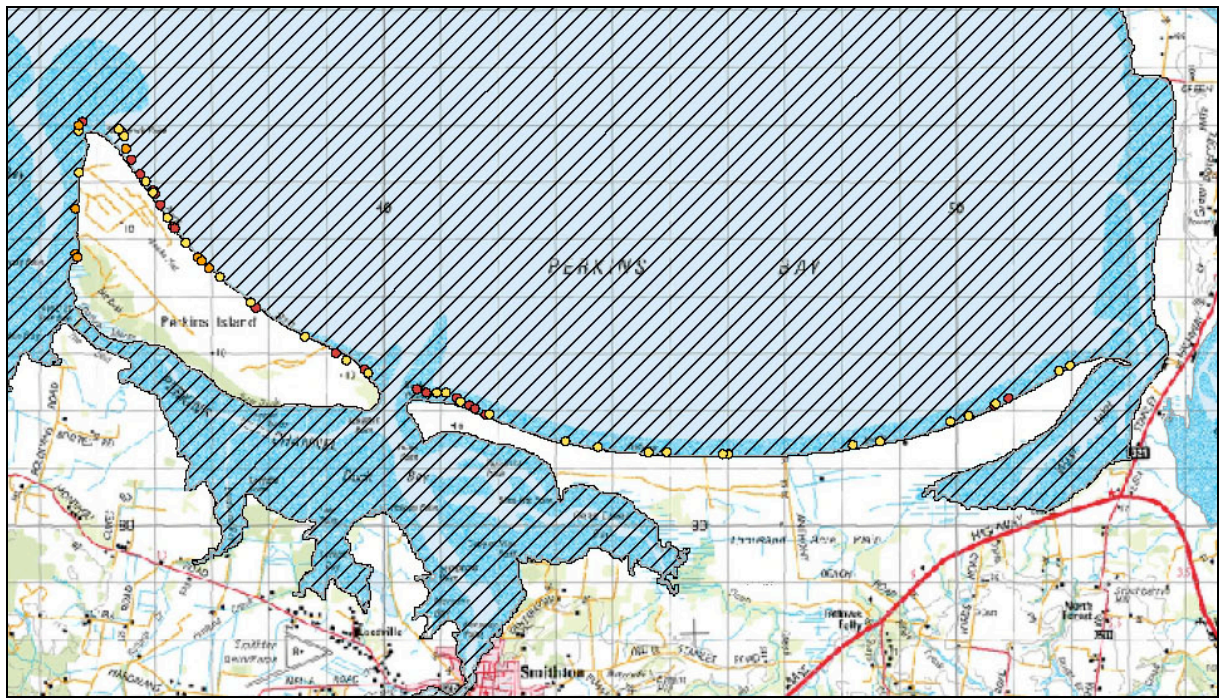


Figure 1. Map of breeding territories of hooded plovers (red circles), red-capped plovers (orange circles) and pied oystercatchers (yellow circles) on Perkins I and on Anthony Beach located during beach surveys in October 2006. Data were obtained by a Garmin 12XL GPS.

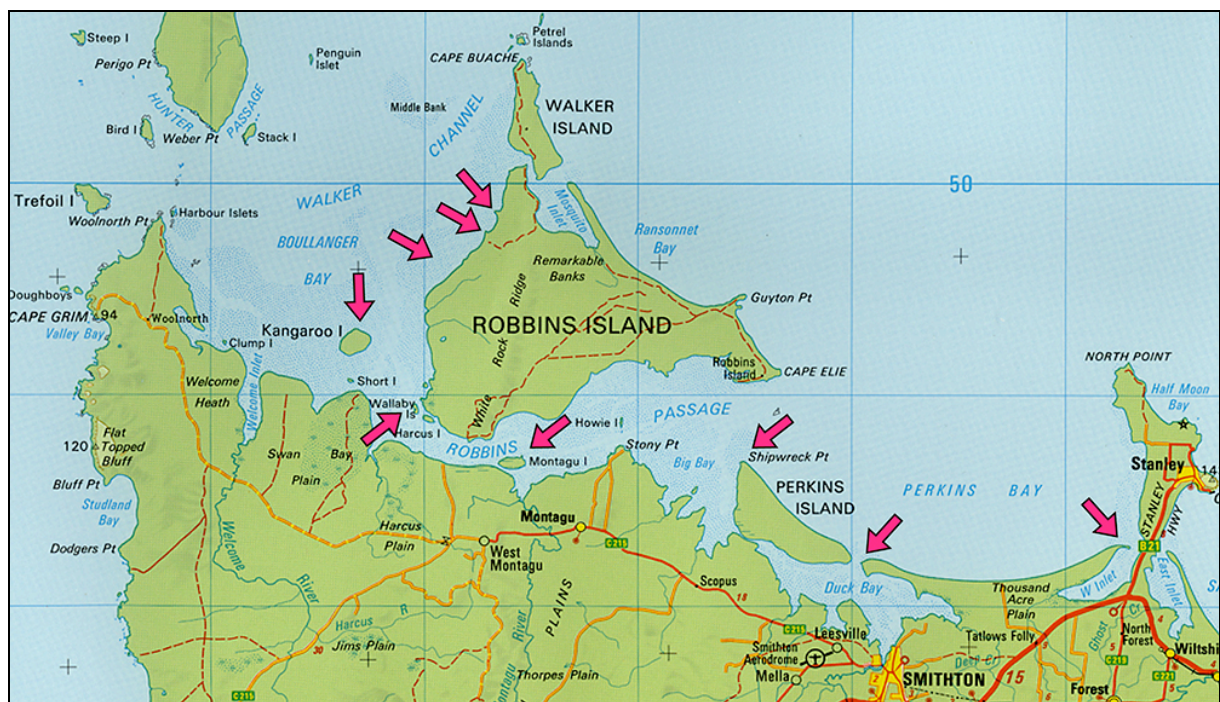


Figure 2. Map of known shorebird roosts in the wetlands (as of October 2006). Montagu Island is not a primary roost, and the two southern roosts on the west coast of Robbins I (Five Islets and Knot Point) may be submerged during very high tides.

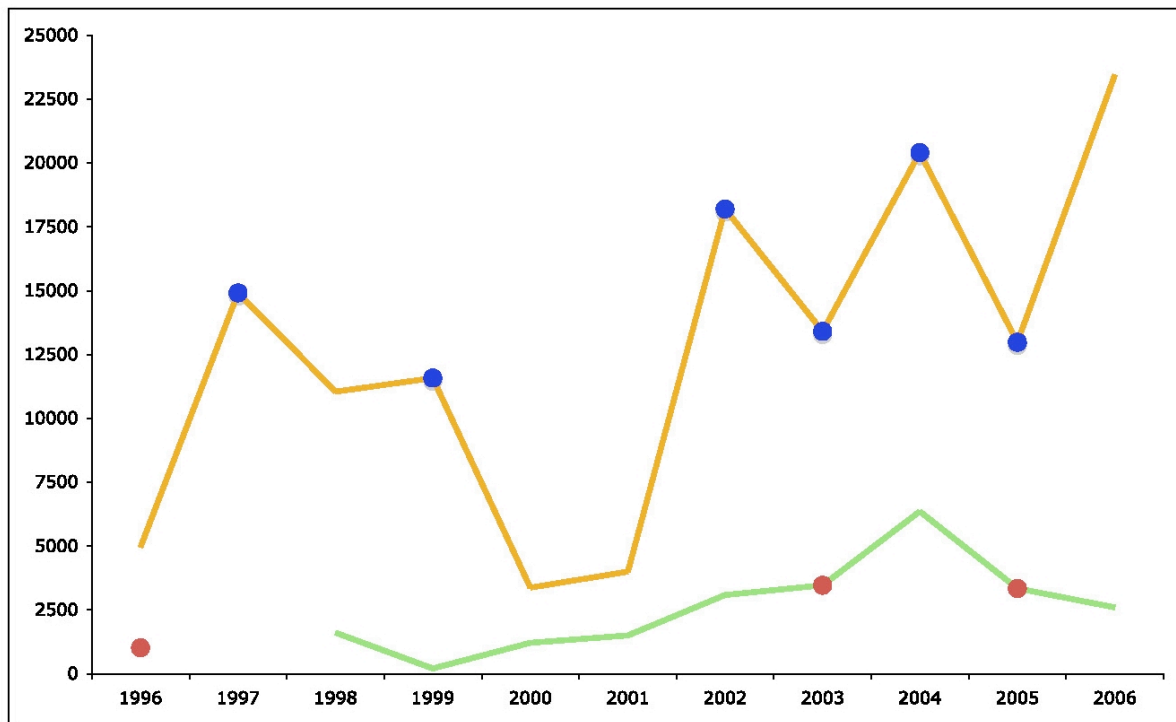


Figure 3. Plot of counts of resident and migratory species of shorebirds in the Robbins Passage/Boullanger Bay wetlands 1996 - 2006. The yellow line indicates summer count totals (blue circles indicate the 6 years with complete coverage of all known primary roosts) and the green line indicates winter count totals (red circles indicate the 3 years with complete coverage).