

MANNING ESTUARY POPULATION COUNTS 2008-2013

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INTRODUCTION

The estuary of the Manning River is one of approximately 20 sites in New South Wales regularly counted by the Australasian Wader Studies Group, coordinated by Shorebirds 2020 (BirdLife Australia). The Manning Estuary, with a waterways area of around 25 km² (D. Williams, *pers. comm.*), is located on the central coast between Forster and Port Macquarie, and has two main high tide roost sites for shorebirds (Figure 1). At the river's southern entrance, near Old Bar, shorebirds roost at Mudbishops Point and on sandy islands (formed from dredge spoil) in the adjoining lagoon. Much of the lagoon is shallow and most of the roosting shorebirds feed there when the tide drops. At Harrington, the northern entrance to Manning River, shorebirds originally roosted in sand dunes on a spit near Manning Point and on small sandbanks in the river. However, those sites were destroyed by successive severe storms and flooding events in June 2010 and January 2011. A large sandbank directly opposite the Harrington breakwater subsequently formed and this is now the main roost site for the Harrington shorebirds (which disperse through the estuary at low tide).

Prior to 2008, the only documented information about birds in the Manning Estuary related to threatened beach-nesting species (Beach Stone-curlew *Esacus giganteus*, Australian Pied Oystercatcher *Haematopus longirostris* and Little Tern *Sternula albifrons*). These species have been monitored since

the 1996 / 1997 austral summer season, in regular surveys organised by local National Parks and Wildlife Service staff (Fawcett & Thomas 2012). A pair of Beach Stone-curlew has been resident at Old Bar since the mid-1990s and until 2012 was the southernmost breeding pair in New South Wales. Their breeding success has been high in the past decade (Fawcett & Thomas 2012). Several pairs of Australian Pied Oystercatchers also breed in and near the Manning Estuary each year. The maximum recorded was 17 breeding pairs, during the 2011 / 2012 season, although 5-10 pairs is more typical in other years (Fawcett & Thomas 2012). More than 100 pairs of Little Terns also breed in the Manning Estuary most years (Fawcett & Thomas 2012).

Aside from the above species, the only other knowledge of local shorebird populations in the Manning Estuary prior to 2008 came from opportunistic visits by birdwatchers. Such visits were made exclusively during the summer months, did not generate reliable counts of the actual numbers of shorebirds present and for the most part were not submitted to any database (Stuart 2008).

This report summarises the results of six years of monthly monitoring of the Manning Estuary. Average and maximum counts for the periods November to February ("summer") and May to July ("winter") are reported for each species. Data from these surveys in July 2009 and January 2010 were also published in Scholten *et al.* (2012).

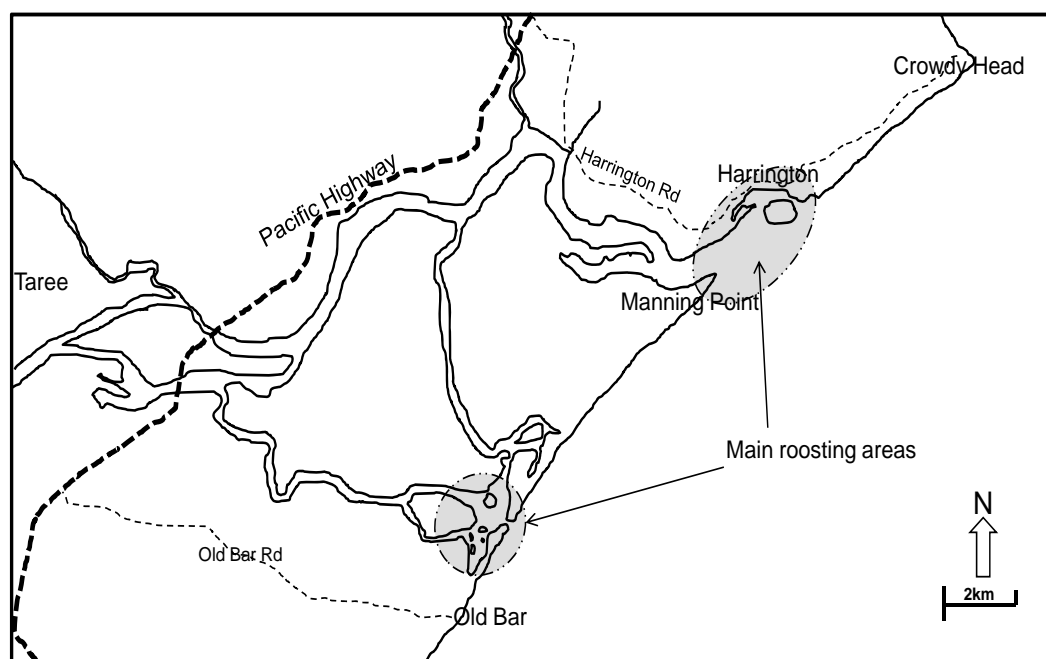


Figure 1. Main shorebird roosting sites in the Manning Estuary, on the central coast of New South Wales.

METHODS

Although the main high-tide roost sites in the estuary are only a few kilometres apart, it is an approximately 45 km journey by road between them and hence it is not possible for one person to survey both sites during the same high tide event. With a few exceptions, the sites have been surveyed on consecutive days, once per month. From 2008-2010, this was done exclusively from land. Since early 2011, the roost site near Old Bar has been surveyed partly by foot and partly by kayak (visiting the various sandy islands within the lagoon). At Harrington, some birds were visible from a breakwater opposite the sandbank and the remainder were counted by walking a circuit around the sandbank. Prior to the June 2010 storm event, a circuit was also walked through the sand dunes near Manning Point.

RESULTS

The Manning Estuary was surveyed in 70 out of 72 months between January 2008 and December 2013. Severe weather conditions in June 2010 prevented access to the sites, and there were also no surveys in April 2012. Overall, 23 shorebird species were recorded, with 22 species in the summer period and 16 species in winter (Tables 1 & 2). On average, 409 shorebirds were present in the Manning Estuary during summer, with a peak count of 722 birds, and 171 birds in winter, with a peak count of 232 birds.

In summer, the main species present were Bar-tailed Godwit *Limosa lapponica*, Pacific Golden Plover *Pluvialis fulva*, Eastern Curlew *Numenius madagascariensis*, Red-capped Plover *Charadrius ruficapillus* (with several pairs breeding each year) and Red-necked Stint *Calidris ruficollis*. Typically,

Table 1. Details of shorebird counts in Manning Estuary, New South Wales, between 2008-2013.

Species	Nov-Feb		May-Jul	
	Mean	Maximum	Mean	Maximum
Beach Stone-curlew <i>Esacus giganteus</i>	1	3	2	3
Australian Pied Oystercatcher <i>Haematopus longirostris</i>	14	26	10	18
Sooty Oystercatcher <i>Haematopus fuliginosus</i>	1	7	0	4
Red-necked Avocet <i>Recurvirostra novaehollandiae</i>	0	0	0	3
Pacific Golden Plover <i>Pluvialis fulva</i>	87	181	3	21
Grey Plover <i>Pluvialis squatarola</i>	0	1	0	0
Red-capped Plover <i>Charadrius ruficapillus</i>	21	49	23	52
Double-banded Plover <i>Charadrius bicinctus</i>	1	27	65	123
Lesser Sand Plover <i>Charadrius mongolus</i>	0	2	0	0
Black-fronted Dotterel <i>Elseyaornis melanops</i>	0	1	0	5
Masked Lapwing <i>Vanellus miles</i>	3	10	4	20
Bar-tailed Godwit <i>Limosa lapponica</i>	156	295	51	99
Whimbrel <i>Numenius phaeopus</i>	7	29	0	4
Eastern Curlew <i>Numenius madagascariensis</i>	31	49	6	24
Common Sandpiper <i>Actitis hypoleucos</i>	0	1	0	0
Grey-tailed Tattler <i>Tringa brevipes</i>	1	8	0	1
Ruddy Turnstone <i>Arenaria interpres</i>	1	5	0	0
Great Knot <i>Calidris tenuirostris</i>	0	2	0	0
Red Knot <i>Calidris canutus</i>	1	12	0	0
Sanderling <i>Calidris alba</i>	13	40	0	1
Red-necked Stint <i>Calidris ruficollis</i>	70	268	10	55
Sharp-tailed Sandpiper <i>Calidris acuminata</i>	0	10	0	0
Curlew Sandpiper <i>Calidris ferruginea</i>	0	2	0	1

Table 2. A summary of shorebird numbers in Manning Estuary between 2008-2013.

	Mean	SD	Maximum
Nov-Feb all shorebirds	409	122	722
Nov-Feb migratory shorebirds	369	114	670
May-July all shorebirds	171	36	232
May-July migratory shorebirds	132	31	188

40-50 Red-necked Stints are present in summer; however, in early 2008 when the lagoon near Old Bar was much silted up, their numbers were substantially higher (with a peak of 331 birds present in March 2008). After the lagoon was dredged in late 2009 (when the river mouth was also re-opened), there was a considerable reduction in the numbers of Red-necked Stints in the Manning Estuary.

Although Sanderlings *Calidris alba* are quite uncommon in New South Wales and on the eastern seaboard more generally (Bamford *et al.* 2008, Scholten *et al.* 2012), Manning Estuary has been a reliable location for them in summer. Between 10 and 20 Sanderlings have usually been present in summer, with a peak count of 40 birds. In winter, the main species on Manning Estuary are Double-banded Plover *Charadrius bicinctus* and Red-capped Plover. Moderate numbers of immature Bar-tailed Godwits and Eastern Curlews are also present each winter with the occasional appearance of Red-necked Stints.

DISCUSSION

The Manning Estuary consistently hosts moderate numbers of shorebirds, with summer numbers of 400-700+ birds and winter number of 171-230 birds. It is an important breeding location for Beach Stone-

curlews, which are classified as Critically Endangered in NSW under the *Threatened Species Conservation Act 1995*, and for Australian Pied Oystercatchers, which are classified as Endangered under the same law. No shorebird species in the Manning Estuary was recorded at 1% of their East Asian-Australasian Flyway population levels (Bamford *et al.* 2008). Eastern Curlews and Sanderlings were often present in summer at $\geq 0.1\%$ of their Flyway population levels, as were Red-necked Stints in March 2008.

REFERENCES

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