Notornis, 2025, Vol. 72: 175–177, https://doi.org/565338hqjxnq
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SHORT NOTE

Second successful breeding of Australian gull-billed tern (*Gelochelidon nilotica macrotarsa*) in New Zealand

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Australian gull-billed tern *Gelochelidon nilotica macrotarsa* has previously been recorded nesting in Southland, New Zealand in 2019 (unsuccessful) and 2021 (successful) (Jacques 2021; Jacques *et al.* 2023). Here we report the second successful breeding of Australian gull-billed tern [hereafter Australian tern] in New Zealand.

DSM visited the Bell Island shellbank, Waimea Inlet, Tasman District on 10 Oct 2024 and observed two adult Australian terns associating with about 25 Caspian terns (*Hydroprogne caspia*), four of which appeared to be incubating. A third Australian tern was also present that appeared to be an immature, with only a partial black cap. The Australian terns were identified by their relatively large size compared with Caspian tern and very pale grey upperparts – the Asian subspecies of gull-billed tern (*G. n. affinis*), of which there is only one New Zealand record [Unusual Bird Report 2023/007], being noticeably darker above and proportionately smaller (Mees 1982; Schodde 1991; Rogers *et al*. 2005; Lilleyman & Hensen 2014; Menkhorst *et al.* 2017; Anon. 2025).

All birds were located on a low-lying gravel bar (41.2948° S, 173.1816° E). A quick examination of the site resulted in finding 3 Caspian tern nests, each with a single egg, and a nest where the Australian terns had been present, also with a single egg that was noticeably smaller than those of the Caspian terns. The nest was a shallow scrape in an area with shells, small pieces of flotsam and glasswort *Salicornia quinqueflora* (Fig. 1). DSM and WAC returned the following day and measured the egg: 60.0 mm x 36.9 mm. Its size was at the upper end of the ranges for Australian tern (Bourke *et al.* 1973; Higgins & Davies 1996), but smaller than those of Caspian tern given by Higgins & Davies (1996). The egg was an elongated oval, similar to that of a Caspian tern (Fig. 2). In contrast, eggs of nominate gull-billed terns are described as sub-elliptical, being more rounded (Harrison 1975; Cramp 1985; Guzman & Fasola 2002).

Received 9 January 2025; accepted 23 July 2025
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Figure 1. Nest of Australian tern, 11 Oct 2024. Photograph D.S. Melville.

WAC visited the site again on 15 Oct 2024 when no Australian or Caspian terns were seen on the gravel bar and no eggs were present. The tide series was rising, and it is possible that the eggs had been washed out. Alternatively, the eggs may have been depredated. A weka (*Gallirallus australis*) had been seen some 200 m from the nest on 11 October and over 100 Southern black-backed gulls (*Larus dominicanus*) also were present in the area, although in many years of observation by WAC at this site gulls have never been recorded depredating Caspian tern eggs. It is not uncommon for a small number of early breeding Caspian terns to initially attempt nesting on this gravel bar, but every year when they have done so they have been washed out, or possibly depredated, following which the birds then move to a predominantly sandy, but higher elevation site some 230 m WNW on the main Bell Island shellbank.

DSM and WAC visited Bell Island again on 24 October when 64 Caspian terns were present with six birds apparently incubating at the main shellbank site. Two adult Australian terns were also present, but not apparently incubating. From this time on, most observations were made from a site about 70 m from the colony across a shallow tidal channel.

On 22 November one pair of Australian terns was present on the periphery of the Caspian tern colony, together with a third bird that was associating with the tern colony but appeared to a singleton. Additionally, some 250 white-fronted terns (*Sterna striata*) had started nesting on the edge of the Caspian tern colony and most were incubating. The Australian terns flew overhead calling persistently and behaving as if they had a nest, but no attempt was made to look for it as this would have resulted in excessive disturbance. Between flights, the terns returned to the same location on the shellbank suggesting that a nest was present, but this could not be confirmed as the site was screened by a beached tree trunk and vegetation.

On 28 November the pair of Australian terns was present, one of which was standing holding its wings partly open in a manner that suggested it was shading young chicks. Two small chicks, apparently only a few days old, were subsequently seen.

Figure 2. Comparison of Caspian tern egg (left) and Australian tern egg (right) 11 Oct 2024. Photograph D.S. Melville.

We do not know when the eggs were laid. The incubation period for Australian tern is 'said to be 16 days' (Higgins & Davies 1996), based on North (1913-1914, p. 306), who quoted Dr W. Macgillivray, of Broken Hill who reported: 'Several of these young birds were about a week old, which shewed [sic] us the birds must have commenced to lay as soon as the flood waters had receded from the bank, three weeks previously, giving a period of incubation of very little over a fortnight, probably about sixteen days…' Mlodinow (2023) follows Higgins & Davies (1996) stating that eggs 'hatch after approximately 16 days'. The suggested incubation period of Australian tern is about a week less than that of nominate gull-billed terns in Europe: 22-23 days (Witherby *et al*. 1941; Cramp 1985). It seems very unlikely that there would be such a difference as the eggs of the two species are of generally similar size (Cramp 1985; Higgins & Davies 1996), but further study is required to determine this.

The pair and two chicks were seen again on 30 Nov 2025, when a singleton Australian tern was again also present. On 7 December three chicks were photographed, together with the two adults (Fig. 3). The Australian tern chicks could be distinguished from Caspian tern chicks by the down plumage on the back which was more spotty (Fjeldså 1977; Higgins & Davies 1996). On 16 December an adult and one chick were seen.

On 22 December, three adults were present and two chicks were seen. A third chick was found freshly dead *c*. 20 m from the colony in a sparsely vegetated area near several nests of southern black-backed gulls. The bird had a puncture wound in the pectoral muscle, suggesting that it might have been 'stabbed' by another bird. It seems

Figure 3. Two adult Australian terns and three chicks, 7 Dec 2024. The spotted down plumage of the upperparts distinguishes them from Caspian tern chicks that are more uniformly pale coloured. Photograph R. Jones.

Figure 4. Two juvenile Australian terns together with red-billed gulls *Chroicocephalus novaehollandiae*, 25 Dec 2024. On 26 December they both could fly. Photograph J.K. Melville

Figure 5. Juvenile Australian tern, 30 Dec 2024. The bird was able to fly, but note the short primaries, only as long as the tail, and presumably still growing. Photograph S. Wood.

more likely that this might have been inflicted by an adult Caspian tern, e.g. if the Australian tern had got too close to a bird guarding a chick, rather than by a gull which would have been more likely to peck, rather than lunge. Molina *et al*. (2023) report such fatal attacks on chicks of gull-billed terns elsewhere. The specimen was collected and has been passed to Te Papa (registration number OR.0 31497). On 25 December two adults and two chicks were present.

On 26 December both chicks flew. This is 34 days after the chicks were first seen being brooded by an adult when it was thought that they were a day or two old. This conforms with the reported fledging period (28–35 days) of gull-billed terns in Europe (Cramp 1985; Møller 1975; Guzman & Fasola 2002). Three adult terns and two young were present on 30 Dec 2024 (SW pers. obs.). Although capable of flight, the primaries of the young birds were apparently still growing, being of similar length to the tail (Fig. 5), whereas in full-grown birds the primaries extend well beyond the tail. No birds were seen on 1 Jan 2025.

Higgins & Davies (1996) state that young Australian terns are 'able to fly at nearly 3 months old', which must be an error and apparently relates to the period when young birds may become independent of adults (Guzman & Fasola 2002).

Two juvenile Australian terns 'incessantly begging' from adults were seen at Motueka sandspit, *c.* 22 km from Bell Island, on 27 Apr 2025 (Daryl Eason, eBird), and an immature was seen there with two adults on 14 Jul 2025 (SW pers. obs.). It seems likely that these records are of the Bell Island family.

As with the previous Southland breeding records (Jacques 2021; Jacques *et al*. 2023) the birds nested in a coastal location in association with both Caspian and white-fronted terns. New Zealand generally lacks the shallow, often ephemeral, wetlands favoured as breeding locations in Australia and it is anticipated that future breeding attempts are likely to be associated with coastal Caspian tern colonies.

We thank Peter Frost and an anonymous reviewer for helpful comments on the draft.

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Keywords: Australian tern, coloniser, specimen, Nelson, Waimea Inlet