

66th ANNUAL ASSESSMENT OF SHEARWATER BREEDING SUCCESS ON MONTAGU ISLAND, 25 MARCH – 3 APRIL 2025

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A study of the breeding productivity of shearwaters co-existing on Montagu Island has continued annually since 1960. It had long been thought that only one species of shearwater, the Wedge-tailed Shearwater *Ardenna pacifica*, bred on the island, but in 1960, Short-tailed Shearwaters *A. tenuirostris* were also found breeding, and in 1962 two Sooty Shearwater *A. grisea* chicks were found there (Robinson 1962, 1964). This stimulated ongoing interest in the dynamics of this unique mixed breeding colony.

In this long-term study we measure breeding productivity each year by counting the total number of chicks of each species within three fixed-area study plots. This is completed in late March towards the end of the breeding season. This avoids disturbance to breeding adults and their eggs, and minimizes impacts on maturing chicks while still providing robust estimates of chick production.

Montagu Island (82 ha), also known by its Aboriginal name of Barunguba, is located about 9 km ESE of the township of Narooma, New South Wales. It is divided into two parts by a steep gulch (the gut) and a beach that is passable at all tides. We refer to these two portions as north island and south island. Replanting of the western side of south island with taller vegetation, using plants known to have been on the island in the past, has been undertaken by NPWS following systematic control of Kikuyu Grass *Cenchrus clandestinus*. This discontinued program, aimed at restoring seabird nesting habitat, was undertaken progressively between 2001 and 2014.

Of the three shearwater colony study plots, one is on north island and two are on south island. The north island plot (NISA, 293 m²) is at the south-east corner of north island; the two south island plots (SISA, 428 m² and THISA, 293 m²) are both at the far northern end of south island. The exact location of each plot is shown in Fullagar & Heyligers (2006). The vegetation on each plot is mapped annually as part of the survey.

Over the 66-year period the surveys have been conducted, only three have been missed: in 1961 and 1966 before annual regularity was established, and in 2020 when cancelled due to COVID-19 pandemic restrictions.

Survey results have been published annually since 1998. Until 2021 these were published in *Nature in Eurobodalla* (e.g., Crowley *et al.* 2021). Since the discontinuation of this printed publication, reports are accessible on the Eurobodalla Natural History Society website <http://enhs.org.au/articles/>. The format and abbreviations used are consistent across these reports, however, the release from page and printing constraints allows photographs to be included in more recent reports.

General observations of birds and other fauna are also made during the time we are on the island. Bird records for the island up to 1989 were reviewed by Fullagar (1989), and since 1998 our observations have been recorded in these annual reports. Bird names and taxonomic order follow the latest available IOC World Bird List (Gill *et al.* 2025). Names for other vertebrates follow the Australian Faunal Directory (AFD); butterflies follow Braby (2016); and plants follow NSW Flora online (PlantNet).

Survey Team

This year's team comprised Peter Fullagar, Chris Davey, David Priddel, Vanessa Place, Penny Beaver and Harvey Perkins (MIPartners), Andrew Garnett, Nicholas Carlile and Lesley Priddel (Figure 1).

Weather and Habitat Conditions

With the exception of January, the period between August and February was unusually dry (Table 1). For the first time in memory the well at the old garden was completely dry when we arrived. The vegetation on all study sites was less dense and less lush compared to recent years, presumably due to the drier conditions. Low rainfall was also reflected in highly friable soils and poor stability of burrows.

Table 1. Monthly rainfall figures (mm) for March 2024 to March 2025.

Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
66.6	77.8	134.8	73.6	68.2	6.2	46.2	9.8	16.2	22.4	122.6	34.2	101.8

The weather had a major impact on our activities and time on the island this year. The first three days were mild (max 22–25°C) and mostly calm with partly cloudy skies. This enabled us to complete the shearwater surveys in good time (see under Coverage, below). Thereafter the weather was predicted to deteriorate significantly, so half the team opted to leave the island pre-emptively on the morning of 28 March. The next day saw the onset of wild, windy, wet weather and a surging ocean, which restricted the rest of us to the light station for 2–3 days. Despite continuing heavy seas, 2 April was a calm, sunny day. We departed the island the next morning in moderate seas.

Kikuyu Grass has not only consolidated along the extensive network of pathways on the island, but has continued to spread alarmingly throughout the island. Many pathways are no longer mown and, contrary to previous planning decisions, there is no evidence of any action to restrict kikuyu to the pathways. Consequently, it is rapidly spreading laterally into the surrounding vegetation. In 2021, kikuyu was present on 49% of the SISA study plot; this year it was 86%. To date, kikuyu has not spread to THISA or NISA.

Scarlet Runner *Kennedia rubicunda* continues to thrive on all sites: over the last three years it occurred on approximately 54% of SISA; this has now increased to 64%. Coastal Morning Glory *Ipomoea cairica* has also continued to increase dramatically in many areas, often smothering other vegetation or covering formerly exposed rock surfaces, but as yet is not present on any of the study plots. Coastal Saltbush *Rhagodia candolleana*, which in the past has varied between 36% and 50%, this year had decreased to just 8%. There has also been some attrition of scrubby vegetation; in particular, Coastal Wattle *Acacia longifolia sophorae* has died or is senescing in many places on the island.

Coverage

We departed Narooma in two boat trips starting 0745 on 25 March, with all participants arriving on the island before 1100. However, due to the vegetation being wet from overnight rain the survey of THISA was delayed until 1335, but completed by 1600. The following day

work on NISA was completed between 0830 and 1250 in good conditions. SISA was completed on 27 March between 0845 and 1330.

Survey Results

The results of this year’s shearwater survey, with reference to those for 2024, are summarised in Table 2.

Table 2. Number of shearwater chicks and burrows in each of the three study plots in March 2025. Data from 2024 are in brackets.

	NISA	THISA	SISA	Total 2025	Total 2024
Wedge-tailed Shearwater	28 (41)	19 (22)	45 (32)	91	95
Short-tailed Shearwater	12 (16)	9 (23)	9 (16)	30	55
Sooty Shearwater	1 (0)	0 (1)	0 (0)	1	1
All three species	41 (57)	28 (46)	54 (48)	122	151
Number of burrows	185 (157)	130 (128)	171 (138)	485	423
Occupied burrows (%)	22% (36%)	22% (36%)	32% (35%)	25%	36%

The overall density of chicks in 2025, combining data from the three study plots, was 1,213 chicks per hectare; lower than the corresponding figure for 2024—1,489 chicks per hectare.

Wedge-tailed Shearwaters comprised 68% of chicks on NISA, 68% on THISA and 83% on SISA, giving an overall figure of 75%, which is higher than last year—63%. This, together with the low number of Short-tailed Shearwater chicks present on the plots, reflects an unusually poor year for this species.

The average weight of Wedge-tailed Shearwater chicks in 2025 was 494 g (range 308–686 g), compared to an average of 466 g in 2024. The average weight of Short-tailed Shearwater chicks in 2025 was 685 g (range 483–943 g), compared to 750 g in 2024.

General observations of other fauna

Observations this year were very much influenced by the weather. There were reasonable opportunities for short explorations over the first four days only, but rain and wind persisted for the next four days. It was not until the ninth day (2 April) that longer walks, around south island and the perimeter of north island, were possible.

Birds

Thirty-nine species of birds were recorded this year (inclusive of the three shearwaters). Six eBird lists were submitted.

Brown Quail *Synoicus ypsilophorus*. Reasonably common on south island, mainly along tracks around the light station precinct, but also flushed in *Lomandra longifolia* (Lomandra) and other scrub. A few also flushed on north island. Covey size was relatively small this year and no obviously young birds were recorded.

Bar-shouldered Dove *Geopelia humeralis*. Up to six birds seen fairly regularly, generally in scrubby or denser vegetation surrounding the light station; possibly the same birds moving about.

Buff-banded Rail *Hypotaenidia philippensis*. 1–4 birds seen regularly most days, generally about the light station and along the grassy tracks.

Sooty Oystercatcher *Haematopus fuliginosus*. No systematic survey was possible, but three pairs were present in the usual spots on south island. None were seen during the circumnavigation of north island on 2 April.

Caspian Tern *Hydroprogne caspia*. A single bird seen on 2 April.

Greater Crested Tern *Thalasseus bergii*. Two birds were fishing in jetty bay on our arrival on 25 March, but not seen again until a single bird recorded on both 1 and 2 April.

Silver Gull *Chroicocephalus novaehollandiae*. Seen in loafing groups of up to 18 on rocks on several days, and small numbers occasionally seen foraging or resting offshore.

White-faced Storm-Petrel *Pelagodroma marina*. No surveys were conducted this breeding season. Birds generally leave the island in February.

Shy Albatross *Thalassarche cauta*. At least three birds foraging off the eastern shore during rough weather on 30 March, and a single bird seen again on 2 April.

Black-browed Albatross *Thalassarche melanophris*. A single bird seen off the eastern shore during rough weather on 31 March.

Gould's Petrel *Pterodroma leucoptera*. A few birds were heard from the light station on several nights, circling over the eastern shoreline. Two surveys during the incubation period (November and December 2024) located 47 active nests sites, the second highest number of pairs since monitoring began in 2017. A survey of fledglings in March 2025 found 27 well-developed chicks; a breeding success of 57%.

Wedge-tailed Shearwater *Ardenna pacifica*, **Sooty Shearwater** *Ardenna grisea* and **Short-tailed Shearwater** *Ardenna tenuirostris*. Small numbers seen over the ocean to the east some days. Several shearwaters also seen on the crossing to the island on the 25 March and a single bird on the return trip on 3 April. See Table 2 for this year's chick count.

Fluttering or Huttons Shearwater *Puffinus gavia* or *P. huttoni*. A single bird seen to the east of the island flying rapidly north on 27 March.

Australasian Gannet *Morus serrator*. Small numbers, both immature and adult, seen offshore most days, including on the crossing to the island and during wild weather on 30 March. A higher count of 10 birds recorded on 2 April.

Little Black Cormorant *Phalacrocorax sulcirostris*. A group of six seen flying to the rocks near jetty bay on 28 March.

Great Cormorant *Phalacrocorax carbo*. Four seen on rocks near jetty bay on our arrival on 25 March, but not seen again for the duration of our stay.

White-faced Heron *Egretta novaehollandiae*. One or two birds seen on offshore rocks some days. A flock of 12 seen taking off from rocks south of the jetty on our departure on 3 April.

- Osprey** *Pandion haliaetus cristatus*. A single bird seen briefly at south jetty bay on 27 March.
- Black-shouldered Kite** *Elanus axillaris*. A single bird seen regularly over the first three days (25–27 March). Seen again on 2 April when the weather had improved considerably. It is not known if it sheltered on the island during the gale force winds or sought refuge on the mainland. This is the first time since 2014 that this species has been recorded during our late-March surveys.
- Brown Goshawk** *Tachypiza fasciata*. A single bird seen on 26, 27 and 28 March. Often in conflict with other birds, including bothering a White-bellied Sea Eagle over north island on 26 March, and pursuing and being pursued by a pair of Australian Ravens through the wooded area west of the light station on 29 March. Seen again in improving weather conditions on 1 April.
- Swamp Harrier** *Circus approximans*. A single bird seen over both south and north islands the first two days, and a pair seen west of the gut on 27 March. Not seen again until 2 April, after the weather had improved.
- White-bellied Sea Eagle** *Ichthyophaga leucogaster*. Seen most days (weather permitting). At least three birds (one immature and two adults) seen at various times.
- Sacred Kingfisher** *Todiramphus sanctus*. A single bird seen near south jetty on 26 March, and near the main jetty on 29 March.
- Peregrine Falcon** *Falco peregrinus*. One bird seen briefly over north island on 27 March. The only time both birds of the resident pair were seen was when we disturbed them at their home gulch during a circumnavigation of north island on 2 April.
- Galah** *Eolophus roseicapilla*. Three birds seen briefly near the main jetty on 28 March.
- New Holland Honeyeater** *Phylidonyris novaehollandiae*. Common in scrub and wooded areas surrounding the light station and throughout the vegetated belt along the south-west part of south island. Seen all days when the weather permitted. Current island-wide population thought to be well in excess of 50 birds.
- Yellow-faced Honeyeater** *Caligavis chrysops*. Common on south island, mainly in thick scrub and wooded areas. Groups of 8–10 birds not unusual; island-wide population thought to be in excess of 50 birds.
- Spotted Pardalote** *Pardalotus punctatus*. A single bird heard and seen in the wooded area between the light station and south jetty. To our knowledge, this is the first record of this species for the island.
- White-throated Gerygone** *Gerygone olivacea*. A single immature bird seen briefly in eucalypt woodland at the top of the old garden track on 29 March. This species has been recorded previously in 2001, 2002 and 2014.
- Black-faced Cuckoo-shrike** *Coracina novaehollandiae*. A single bird seen to the south-west of the light station on 27 March and again on 1 April.
- Australian Golden Whistler** *Pachycephala pectoralis*. A single male seen at the southern end of the western wooded area on 27 March. Possibly the same bird heard but not seen during late afternoon of 28 March at the same location, with an adult female also seen a little further north 10 minutes later. This is the first time we have recorded this species since 2019.
- Grey Fantail** *Rhipidura albiscapa*. A single bird seen in scrubby vegetation to the east of the light station on 25 March, and in the upper wooded section along jetty track on 28 March and 1 April.

Australian Raven *Corvus coronoides*. One or two birds seen most days. A nest in a tree in woodland near jetty bay is assumed to belong to this pair, which may now be resident. A NPWS employee saw at least three birds earlier in the year, suggesting successful breeding and, presumably, subsequent dispersal of young.

Scarlet Robin *Petroica boodang*. A single male seen in a eucalypt copse near the junction of jetty track and western track on 26 and 28 March. This is the first confirmed record since 2015.

Welcome Swallow *Hirundo neoxena*. Seen daily around the light station. Also seen regularly in groups of up to six over much of south island, and over NISA on north island on 26 March. Seven birds recorded during the circumnavigation of north island on 2 April. Estimated island-wide population likely in excess of 30 birds.

Little Grassbird *Poodytes gramineus*. Comparatively scarce and not seen or heard at any of the study plots, though 1–2 birds heard or seen on 27 and 28 March, and again on 1 April, to the south of the light station.

Golden-headed Cisticola *Cisticola exilis*. None seen or heard this year. This is the first time since 2001 that the species has not been recorded during these surveys.

Silvereye *Zosterops lateralis*. Several large restless flocks of up to 30 or more birds obvious during the first two days (25–26 March). A record of just one bird heard on 27 March suggests they left the island overnight on migration. Numbers increased again over the next couple of days with groups of 6–8 seen in vegetated areas on 29 March before the weather deteriorated. Up to 6 birds again seen when the weather improved on 1 April.

Red-browed Finch *Neochmia temporalis*. Large groups of up to 25 or more birds present in several parts of south island, including around the light station and the old garden, and in the vicinity of the south jetty. This represents a significant and rapid build-up of numbers over three years since they were first recorded in 2023, presumably due to good breeding success. Some birds in immature plumage were this season's young.

Mammals

Seals. Both Australian Fur Seals *Arctocephalus pusillus doriferus* and Long-nosed Fur Seals *Arctocephalus forsteri* occur on and around the island. There were good numbers on rocks around jetty bay, and a crèche of about a dozen young pups (presumed to be long-nosed) in the quiet enclosed waters at south jetty. Isolated individuals were also seen on rocks at the south-east end of south island. A count of fur seals on north island on 2 April provided an estimate of 263, though a breakdown into species was not attempted.

Reptiles

Green Sea Turtle *Chelonia mydas*. A single individual seen at the old jetty site on 27 March.

Pale-flecked Garden Sunskink *Lampropholis guichenoti*. Several seen in Lomandra vegetation enroute to, and during, shearwater surveys.

White's Skink *Liopholis whitii*. Generally scarce on south island this year with only a few seen, including one in Lomandra at the SISA study plot, and one on a rock slab along the track to south jetty. Conversely, good numbers were seen on granite slabs at the north-eastern corner of north island on 2 April, adding to the single one seen in Lomandra during the survey of NISA on 26 March.

Frogs

Striped Marsh Frog *Limnodynastes peronii*. The well at the old gardens was completely dry for the first half of our visit (the only time we have seen the well without water), with no sign of any frog activity. A single adult frog was located on 27 March under a piece of timber behind the garage at the light station. However, on 1 April, following two days of heavy rain (29 and 50 mm), the well was again full and at least ten frogs were visible, some in amplexus, some males jousting, and already a few spawn masses had been laid. The next day, rockpools just inland from the splash zone on the north-east corner of north island, where frogs and tadpoles have been recorded previously, were resounding with the calls of numerous frogs. More than 40 individuals were calling, and at least four spawn masses were seen.

Butterflies

Dingy Grass Skipper *Toxidia peron*. Seen in comparatively low numbers some days when weather was conducive. Continues a significant decline in numbers from several years ago.

Cabbage White *Pieris rapae*. Just a single individual seen to the east of the light station in sunny conditions on 2 April.

Yellow Admiral *Vanessa itea*. A single individual seen along western track on 26 March.

Tailed Emperor *Charaxes sempronius*. One seen flying over NISA study plot during the survey on 26 March. None seen in more likely vegetated areas over subsequent days.

Common Brown *Heteronympha merope*. Several females seen along tracks whenever weather and opportunities allowed, but not numerous.

Long-tailed Pea-Blue *Lampides boeticus*. Scarce again, for the second consecutive year: just one individual seen on south island on 26 March, and one on north island on 2 April.

Common Grass-blue *Zizina otis labradus*. A single individual seen on south island on 28 March, and one on north island on 2 April.

Other arthropods

Arthropod diversity and abundance were markedly low this year. It is possible that the dry conditions throughout spring had a significant impact not only on vegetation but also on the invertebrate fauna dependent on it. Some species that are normally abundant and conspicuous, such as the Milkvine Bug *Oncopeltus sordidus*, were not recorded at all this year. Grasshoppers and katydids were noticeably scarce, and only a single Tiger Spider *Trichonephila plumipes* and two Leaf-curling Spiders *Phonognatha graeffei* were seen along the tracks. Very little came to the bright daylight and UV lights set up at the light station most nights for the purpose; the few moths that did show up at the buildings appeared to be simply seeking shelter from the wild weather.

Even so, several arthropod species not previously recorded (many of them small and possibly overlooked on previous trips) were added to the growing list for the island, including:

Spiders

False Black Widow *Steatoda grossa* Theridiidae

Moths

Syntozyga anconia Tortricidae-Olethreutinae-Olethreutini

A knot-horn moth (sp. indet.)
Metasia dicealis (TBC)
Pome Looper *Pasiphilodes testulata*
Insigillated Pug *Sigilliclystis insigillata*
Tigrioides alterna (TBC)

Pyralidae-Phycitinae-Phycitini
Crambidae-Spilomelinae-Steniini
Geometridae-Larentiinae-Eupitheciini
Geometridae-Larentiinae-Eupitheciini
Erebidae-Arctiinae-Lithosiini

Other insects

A Braconid wasp *Phanerotoma* sp. (TBC)
An ant *Camponotus* sp.
A tiny weevil (sp. indet.)
A kelp fly (sp. indet.)

Braconidae-Cheloninae-Phanerotomini
Formicidae-Formicinae-Camponotini
Curculionidae- Cryptorhynchinae
Coelopidae

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Figure 1. Survey team of 2025

