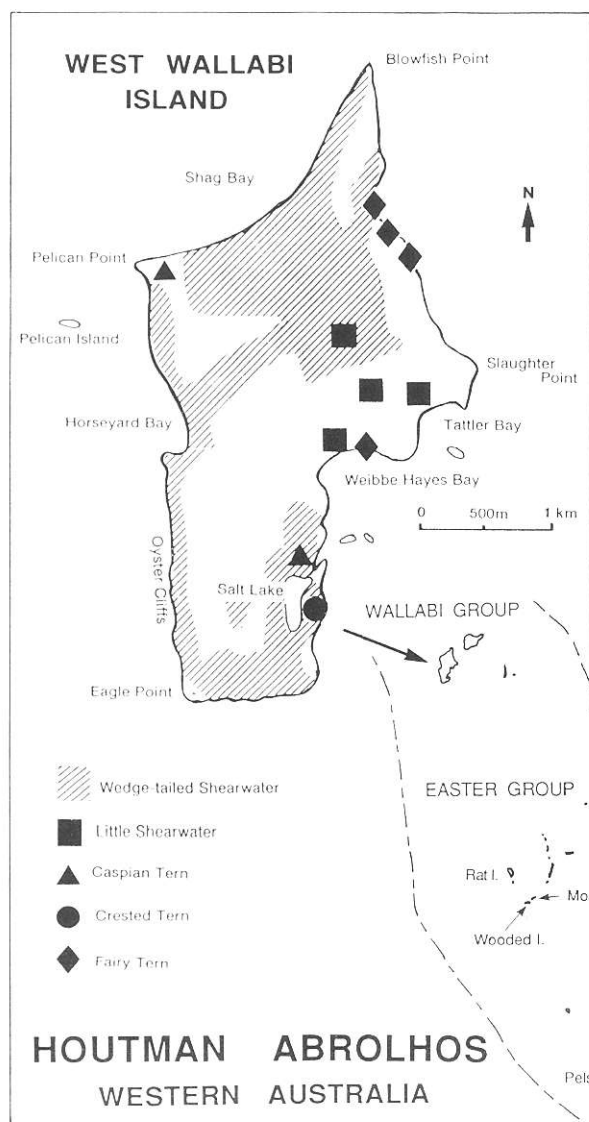


## SEABIRD ISLANDS

No. 224

## West Wallabi Island, Houtman Abrolhos, Western Australia



**Location:** 28°29'S, 123°41'E; 90 kilometres north-west of Geraldton, Western Australia.

**Status:** Class "A" Reserve for the purpose of 'Conservation of flora and fauna, tourism and purposes associated with the fishing industry', vested in the Minister for Fisheries.

**Description:** 600 ha; 5 kilometres long by 2.3 kilometres wide and 15 m high on the central west coast. It is a continental island that was separated from the mainland by rising sea-level about 8 000 years ago, and is the largest of the Abrolhos islands. Much of the island consists of an old reef platform overlain by beds of younger limestone 1–3 m thick which has cracked to form irregular slabs or pavement. This pavement limestone occupies a large area in the south-west and along the north-eastern side between Blowfish and Slaughter Points. There is a large shell grit flat at the northern end of the island interrupted by narrow banks of guano-rich soil usually running NE–SW. A sandy beach backed by unconsolidated dunes runs from the southern end of Shag Bay to the top of Horseyard Bay and some consolidated dunes occur in the south-western

corner. There is also another and smaller break in the pavement limestone at a small salt lake near the south-eastern corner that, at high tide, is connected to the sea by a small creek.

Coastal dunes above the beaches are vegetated with *Spinifex longifolius* and scattered *Atriplex cinerea*, *Salsola kali*, *Senecio lautus* and *Poa* sp.; shrubs include *Olearia axillaris*, *Acanthocarpus preissii* and *Myoporum insulare* but much of the ground is bare. The shell grit flat is vegetated with low *Atriplex paludosa* (dominant) that is replaced in low lying areas by the samphire *Halosarcia halocnemoides*; other plants include *Threlkeldia diffusa*, *Senecio lautus*, *Frankenia pauciflora* and stunted shrubs of *Olearia axillaris*. There is a narrow ecotone between the shell grit and the pavement limestone where the vegetation becomes sparse and virtually restricted to *Frankenia*. The pavement limestone, despite the lack of soil, supports a fairly rich vegetation. Shrubs 1–3 m tall are the dominant plants including *Pittosporum phylliraeoides*, *Diplolaena dampieri*, *Grevillea argyrophylla*, *Spyridium globulosum*, *Exocarpus aphyllus*, *Capparis spinosa*, *Pimelea microcephala*, *Sarcostemma australe*, *Olearia axillaris* and *Beyeria viscosa*. Also present here are *Dianella revoluta*, *Acanthocarpus preissii* and *Hibbertia subvaginata*. All plants found in the pavement limestone can also be found in the consolidated dunes; however, large areas of these dunes are overrun by *Nitraria billardierei* and the introduced succulent *Mesembryanthemum crystallinum* carpets much of the ground.

**Landing:** On to a sandy beach on the north-western side or by wading across the reef flat on the eastern side.

**Ornithological History:** Knowledge of the avifauna began with the collections of HMS *Beagle* in 1840. John Gilbert<sup>7</sup>, visited the island in January–March 1843 and published an account of his trip in a Perth newspaper, most of which was reprinted by H. M. Whittell<sup>17</sup> along with extracts from Gilbert's letters to John Gould. Other notes from the trip were published by Gould<sup>8</sup>. Unfortunately, along with the *Beagle*, no record was kept of the islands from which Gilbert's specimens were collected. A. J. Campbell<sup>2</sup> visited the island in December 1889. Then came visits by C. P. Conigrave<sup>4</sup> in 1897 and presumably also in 1915 with Prof. W. J. Dakin; O. Lipfert in 1894; R.

Helms<sup>10</sup> in 1898; R. Hall<sup>9</sup> on 18–23 October 1889; C. G. Gibson<sup>6</sup> in November 1907. The Percy Sladen Trust Expedition to the Abrolhos in 1913 and October–November 1915 under the leadership of Prof Dakin<sup>5</sup> produced the first detailed accounts of the island and its fauna. W. B. Alexander<sup>1</sup> wrote up the vertebrate fauna collected and observed on the expedition although he only took part in the November 1913 visit. Next were visits by V. N. Serventy<sup>13</sup> in December–January 1940–41 and 1941–42; G. M. Storr<sup>14,15</sup> on 16–22 April, 21–25 June and 5–12 September 1959 and 22–27 April 1960; and the Aquinas College expedition in August 1964 and 1965 published by O'Loughlin<sup>11,12</sup>.

In addition to the above published accounts R. E. Johnstone has unpublished data on the following visits: D. L. Serventy in November 1944; V. N. Serventy, G. Pizzey and A. G. Mathews in December 1963; T. E. Bush in August 1965; T. C. Allen in August 1976; G. E. Lodge in August 1964; N. Kolichis in July 1974 and August 1976; G. J. Roberts in June–July 1980; R. E. Johnstone in October 1981 and August 1983; B. Goodale in March 1988; K. Coate in December 1989; and A. A. Burbidge, P. J. Fuller, G. Leanman and R. Owens in December 1992.



• Part of the pavement limestone at the south-western end of Wallabi Island.

Photo: G. M. Storr

### Breeding Seabirds and Status

*Puffinus pacificus* Wedge-tailed Shearwater — About one million breeding pairs (A. A. Burbidge and P. J. Fuller, pers. comm.). The highest densities of burrows are in the large shell grit flat vegetated mainly with *Atriplex* and in northern and central parts of the island; also in semi-consolidated dunes with *Nitraria* and *Spinifex* and lowest densities are in the limestone pavement areas. This species is absent from the Abrolhos in mid-winter. They return in the second half of August and begin to re-excavate their burrows, arriving at dusk and leaving before dawn. This activity continues throughout September and October with pairs often "moaning" inside the burrows at night and single birds sometimes squatting silently outside the burrow. At this stage some birds remain in their burrows by day. Seven freshly excavated burrows were checked on 7 October 1981; four were empty and a pair of birds was found in each of the other three. In early November the birds cease to visit the island at night but by mid-November they begin to return again and make final preparations to the burrow and egg chamber. Egg laying begins in mid-November and is completed by the end of the month. Presumably the eggs hatch in January for by mid-April the young are large but still downy. On 16 April 1959, Storr observed large downy young sitting at the entrances of most burrows and there was continual cheeping as he walked through the colony. On 23 April 1960, he recorded large downy young whose parents were still returning at night. By early May many chicks are still downy but most are wholly or partly fledged. Young birds enter the sea in mid to late May.

*Puffinus assimilis* Little Shearwater — About 5 000–10 000 pairs breed mainly in guano banks and sand in north-eastern and central parts of the island. The burrows are about 50–100 cm long and the egg chamber is lined with dried stalks of annual plants. Little Shearwaters begin to return to the island in early April and by the third week of April their burrows are re-excavated. At this time birds are often found on the surface during the day and they are silent at night. In early May many pairs are calling quietly in their burrows. By late June the colonies are very active with noisy caterwauling and crooning coming from burrows by day and by night. Egg laying begins in early July and continues to late

August. Fresh eggs were collected by T. C. Allen on 5 August 1976. On 12 August 1983 four burrows were checked; two were empty, one contained a pair of birds and one contained a single adult on a partly incubated egg. Eggs hatch in September and at that time the colony is quiet. Storr observed only one bird on the surface on 9 September 1959. Young fledge in November or December judging from a very fat immature female (length 278 mm) unable to fly, found at sea near West Wallabi Island on 7 December. The latest record of an adult on the island is 9 December.

*Pelagodroma marina* White-faced Storm-Petrel — Formerly breeding in small numbers. Storr<sup>15</sup> found a few burrows among those of the Little Shearwater on a guano bank in the centre of the island on 17 April 1959. The burrows were empty as expected, with the breeding season in the rest of the Abrolhos being August to February. There are no subsequent records.

*Pelecanus conspicillatus* Australian Pelican — Formerly breeding on or near West Wallabi. In November 1907 Gibson<sup>6</sup> was informed that small numbers were breeding on the 'west end' of West Wallabi Island (possibly Pelican Island) in the company of Pied Cormorants, some of whose nests they had taken over. A fisherman, J. Akerstrom, observed two birds near West Wallabi in the summer of 1932–1933 but there are no subsequent records.

*Phalacrocorax varius* Pied Cormorant — Common resident. Breeds in small numbers from 20–100 pairs in mid-August to November. Alexander<sup>1</sup> found nests with fresh eggs in a colony that also contained Caspian and Crested Terns, and Silver and Pacific Gulls in November 1913. Old nests were found on tops of bushes near the old guano jetty on 21 April 1959.

*Egretta sacra* Eastern Reef Egret — This species is a moderately common resident in the Abrolhos Islands and breeding is recorded from late July to November. A. J. Campbell<sup>2</sup> reported breeding in November but it is uncertain to which island this referred.

*Haematopus longirostris* Pied Oystercatcher — Common. Usually in ones or in twos, occasionally in small parties. Sandy beaches are favoured. Breeding occurs in July–August. Most nests are unlined scrapes 15 cm in diameter and 2–3 cm deep in sand or in loose coral just above high-water mark.

*Haematopus fuliginosus* Sooty Oystercatcher — Uncommon resident, not as numerous as the Pied Oystercatcher. Usually in ones and twos, favouring beaches, reef flats and around lagoons. A nest with two eggs was found on 5 August 1976.

*Larus novaehollandiae* Silver Gull — Common, about 150 pairs. In November 1913 Alexander<sup>1</sup> found them nesting in small colonies; most of the eggs had hatched and the young were in all stages of development. On 12 August 1983 several pairs were preparing nest sites among low *Atriplex* and samphire near a small lake on the south-eastern end of the island.

*Larus pacificus* Pacific Gull — Scarce or uncommon resident, usually observed in ones or twos. Alexander<sup>1</sup> recorded young birds in November.

*Hydroprogne caspia* Caspian Tern — Moderately common, up to 80 pairs. Breeds singly or colonially. On 20 October 1899 Hall<sup>9</sup> found a colony of 13 pairs sitting on well incubated eggs on the western end. Some nest scrapes were lined with twigs from nearby saltbushes. In November 1913 Alexander<sup>1</sup> found eggs and young. In early January 1942 V. N. Serventy<sup>13</sup> found a colony of 80 pairs with eggs and large young, behind sandhills fringing the beach. On 10–11 December 1963 V. N. Serventy found 25 nests with eggs and runners. On 7 October 1981 R. E. Johnstone found 50 pairs breeding between the creek and the beach on the south-eastern end of the island. The breeding area measured 60 m by 50 m and was vegetated with 30 cm high *Atriplex*. Nests were large, well made scrapes in the ground 20–25 cm in diameter and 1–2 cm deep, placed 2–4 m apart. Thirty-five nests were checked; 11 were ready for eggs; seven contained 1 egg, 16 contained 2 eggs and one contained 2 downy young.

*Sterna dougalli* Roseate Tern — Common resident. In December–January 1941–1942 V. N. Serventy<sup>13</sup> found about 150 birds breeding with Fairy Terns; 17 nests were counted in an area of about 4 square metres.

*Sterna nereis* Fairy Tern — In November 1913 Alexander<sup>1</sup> observed several hundreds on the eastern side of the island, sitting on 1–3 fresh or slightly incubated eggs. Storr was informed by E. Holly that these birds nested on sea-weedy beaches on the eastern side of the island about a kilometre south of Blowfish Point. On 10

December 1963 V. N. Serventy and A. G. Mathews found six nests with single eggs on a sandy beach, but on 11 December they noted that Silver Gulls had taken all the eggs and the terns had deserted the area. On 7 December 1989 K. Coate found 60 pairs on eggs on the eastern side of the island.

*Sterna bergii* Crested Tern — Common resident, about 100 breeding pairs. In November 1913 Alexander<sup>1</sup> found young birds almost fully fledged and noted that they were more numerous than eggs on West Wallabi and one of the Pigeon Islands. In early June 1941 V. N. Serventy<sup>13</sup> observed a few juveniles still unable to fly. On 4 September 1959 Storr<sup>15</sup> found about 100 nests, each with one egg, in an area between the saltlake and the sea. These nest scrapes were placed among dwarf shrubs of *Atriplex cinerea*; *Frankenia pauciflora* and *Threlkeldia diffusa*; immediately above high-water mark. On 12 August 1965 T. E. Bush found about 100 pairs commencing to nest on the coast; 30 eggs were present.

### Factors Affecting Status

In 1629 forty survivors of the *Batavia* under the leadership of Wiebbe Hayes spent three months on West Wallabi Island. They survived largely on seabirds and their eggs. Guano was mined on the island between 1884 and World War I. Before removing the guano all plants were stripped from the area, the stones laid to one side, and the soil shovelled with hoes and swept with heavy brooms into heaps.<sup>10</sup> Apart from the remains of a jetty, tramline and horseyard, and some unnatural hollows and piles of stones there is little evidence of the mining. No doubt the breeding seabirds would have been subjected to considerable disturbance. However, there is very little human interference at present. A small number of rock lobster fishers are present on the island from 15 March to 30 June annually. About 10 pairs of White-bellied Sea-Eagles *Haliaeetus leucogaster* nest throughout the island and capture many resting and nesting seabirds including Wedge-tailed Shearwaters and Roseate Terns. Ospreys *Pandion haliaetus* also take some seabirds including White-faced Storm-Petrels. The skink *Egernia kingii* probably takes some seabird eggs, and the Carpet Python *Python spilotes* preys on some seabirds, including the Little Shearwater.

## OTHER VERTEBRATES

Two species of mammal, the Tammar *Macropus eugenii* and the Southern Bush Rat *Rattus fuscipes* and 18 species of reptile occur on the island, namely: the geckoes *Crenadactylus ocellatus*, *Diplodactylus spinigerus*, *Gehyra variegata*, *Heteronotia binoei*, *Phyllodactylus marmoratus*, *Underwoodisaurus milii*; the legless lizard *Lialis burtonis*; the dragon lizard *Pogona minor*; the skinks *Cryptoblepharus carnabyi*, *Ctenotus fallens*, *Egernia kingii*, *E. stokesii*, *Lerista elegans*, *L. lineopunctulata*, *L. praepedita*, *Morethia lineoocellata*; and the snakes *Python spilotos* and *Vermicella littoralis*. The turtle *Chelonia mydas* has also been recorded on and near the island.

## Other Seabirds Recorded

|                                |                                   |
|--------------------------------|-----------------------------------|
| <i>Diomedea chlororhynchus</i> | Yellow-nosed Albatross (derelict) |
| <i>Macronectes giganteus</i>   | Southern Giant Petrel             |
| <i>Phalacrocorax carbo</i>     | Great Cormorant                   |
| <i>Anous tenuirostris</i>      | Lesser Noddy                      |

## Banding

December 1963 only.

*Hydroprogne caspia* — 9 runners.

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