Corella, 1998, 22(4): 118–122

SEABIRD ISLANDS No. 241

Montebello Islands, Pilbara Region, Western Australia

Location: 20°21'30" to 20°31'55"S, 115°29'55" to 115°36'30"E; off the Pilbara coast of Western Australia, about 20 km north of the northern tip of Barrow Island and 80 km north-west of Cape Preston on the adjacent mainland. The closest port is Dampier, about 120 km to the east.

Status: All islands are within Class A Reserve No. 42196, Conservation Park; the land between high and low water is Class C Reserve 42197, Conservation Park. Both reserves are vested in the Western Australian National Parks and Nature Conservation Authority and managed by the Department of Conservation and Land Management. Some of the bays are leased under Pearling Act by Faraday Pearls and oyster rafts are moored in many sheltered bays and inlets. Unofficial island names, currently under consideration as official names, are given in quotation marks.

Other Names: Monte Bello Islands.

Description: An archipelago of about 180 islands, islets and rocks varying in size from Hermite Island (1 022 ha) and Trimouille Island (522 ha) to rocks of a few square metres. Most of the western islands are composed of limestone with low coastal cliffs and occasional pale orange-brown alluvial sand plains. There are moderately high cliffs on the west coast of Hermite Island, in the southern parts of Trimouille Island and surrounding Karangi Island. The northern islands (North West, Trimouille, South East) and the southernmost substantial island (Ah Chong) have extensive white sand plains and low dunes and beaches between limestone headlands. There are some areas of mangrove, mainly *Avicennia marina* with some *Rhizophora stylosa*, especially on Hermite Island. A fringing coral reef lies to the west and the waters adjacent to the islands have many reefs, shoals and sandbanks.

The vegetation of the islands has been described by Hill[8] and Burbidge[2].

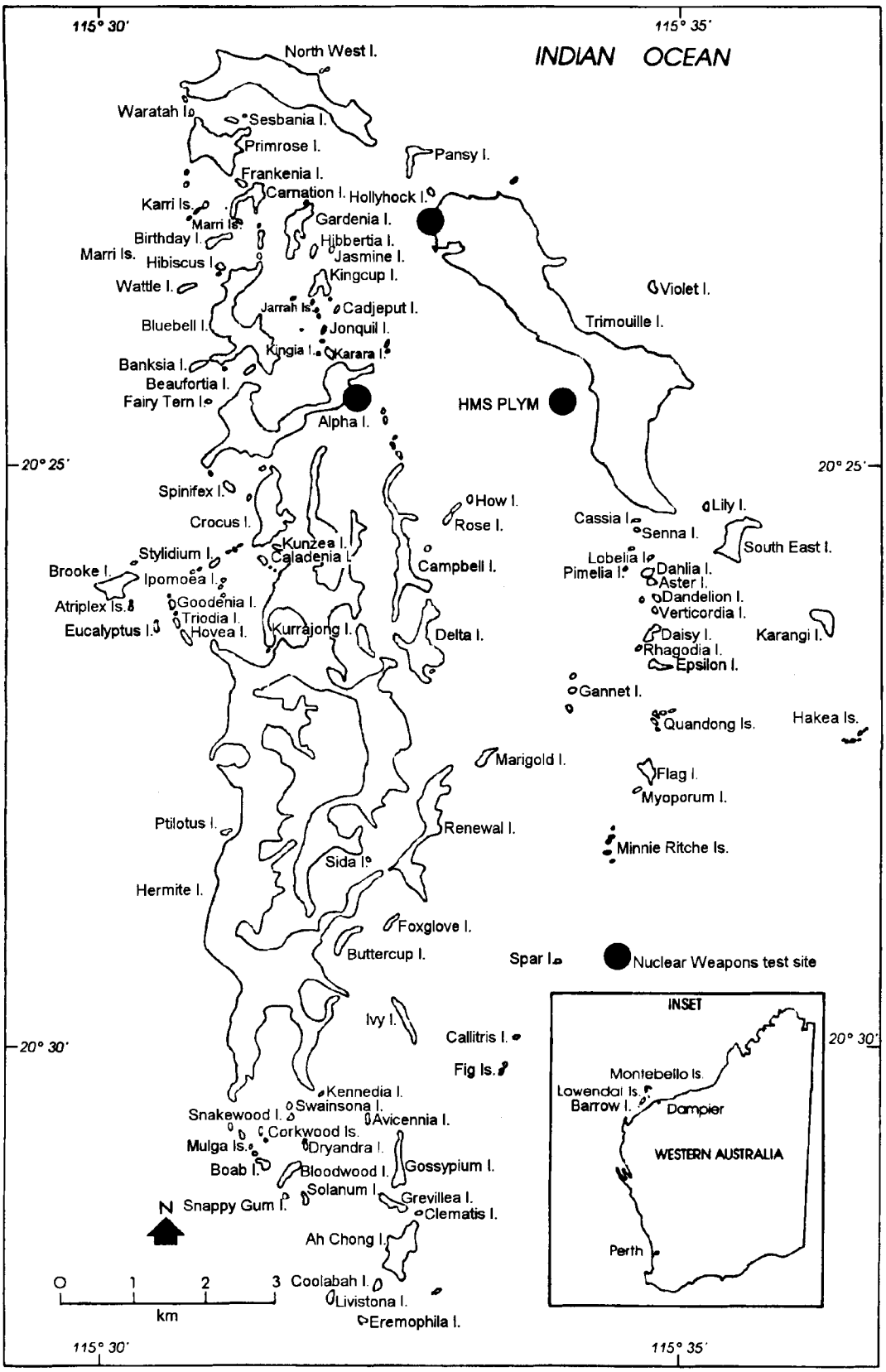
Landing: A central lagoon and the fringing coral reef makes landing on most islands from small boats fairly simple, depending on wind speed and direction and on the state of the tide. Landing on the west coasts of Hermite and other islands that run in a chain northwards from it is not usually possible, except on occasional beaches in calm weather. Landing on the outer islands, e.g. Karangi, is difficult at all times. On Trimouille and Alpha Islands there is residual, low level radiation from atomic weapons tests conducted by the British in 1952[6] and 1956. Landings on these islands should be restricted to one hour, there should be no soil disturbance and no metal objects should be handled or removed. Signs are erected providing information about radiation, but may be missing after cyclones. Further information on radiation hazards can be obtained from the Department of Conservation and Land Management, P.O. Box 835, Karratha, Western Australia 6714, telephone (08) 9143 1488.

Ornithological history: There was no Aboriginal occupation after the islands became separated from the mainland about 7 000 years BP. The first European visitors were Thomas Bright and the survivors of the *Tryal*, wrecked on Tryal Rocks in May 1622. The outer islands were named by Baudin[1] in 1801. Phillip Parker King visited in HMC *Mermaid* in 1818[9] and J. Lort Stokes in HMS *Beagle,* who carried out hydrographic surveys in 1840, also made some natural history observations[13]. Thomas Haynes lived on the islands from 1884 and experimented with pearl oyster cultivation, and in his spare time gathered samples of the flora and fauna, which were sent to the British Museum[6].

The first detailed biological survey was carried out in 1912 by Montague[10]. There was then a large gap in visits, the next being by Sheard in 1950[12]. The atomic weapons tests then took place in 1952 and 1956, with the islands being officially a prohibited area until 1992. Hill, who was part of the support party for the first weapon test[6], published natural history notes made in 1952[8]. Serventy and Marshall[11] visited in 1958 to resurvey the natural history following the nuclear explosions. Butler[5] made some observations in 1966 when an exploratory oil well was drilled on Trimouille Island. Burbidge[2] reported on some biological survey work in 1970 and 1971 conducted by the then Department of Fisheries and Fauna, the 1971 trip being in association with W. H. Butler and West Australian Petroleum.

During the 1980s and 1990s there were several visits by State government personnel and reports from some of these visits can be found on Department of Conservation and Land Management files. In 1994 and 1995 extensive fauna trapping and studies were made as a precursor to *Montebello Renewal*, the rat eradication phase of which was carried out in 1996[3], when every island was visited. Follow up surveys were then made in 1997. Some seabird breeding records are from the Department of Conservation and Land Management Seabird Breeding Island Database (CALM SBID) [4].

MONTEBELLO ISLANDS
PILBARA REGION, WESTERN AUSTRALIA



Breeding Seabirds and Status

Puffinus pacificus Wedge-tailed Shearwater — Breeds on Ah Chong (c. 1 000 burrows), Alpha (10 burrows, 1983, K. D. Morris in CALM SBID), 'Beaufortia' (5 burrows), Brooke (c. 200 burrows), Gardenia (300–500 burrows), 'Gossypium' (100–150 burrows), Kingcup (50–100 burrows), Flag (200–300 burrows), Pansy (100–500 burrows) and South East (c. 1 700 burrows). Birds arrived at Gardenia and Ah Chong to commence cleaning out burrows between 5 and 13 July 1996. Birds had commenced burrow cleaning on Ah Chong and 'Gossypium' on 26 July, on Gardenia on 27 July and on Brooke on 28 July 1997. Several islands visited in August 1994 had burrow maintenance underway or complete.

Phalacrocorax varius Pied Cormorant — Common. A colony of 10 to 20 nests with eggs on one of the 'Karri Islands' on 26 June 1996.

Egretta sacra Eastern Reef Egret — Common. A single nest on 'Bloodwood' on 14 August 1996 had two eggs. On Buttercup Island three currently unused nests were located in August 1996.

Esacus neglectus Beach Stone-curlew — About 12 to 15 pairs resident in archipelago. Storr[14] reported breeding on Trimouille Island but provided no details. We found a scrape ready for eggs on one of the 'Marri Islands' on 15 August 1996.

Haematopus longirostris Pied Oystercatcher — Common. Apparently an autumn and spring breeder. Breeding recorded on Alpha Island on 26 May 1983 (non-flying young) (K. D. Morris in CALM SBID), on 'Renewal Island' on 22 August 1995 (two eggs) and on Hollyhock Island (two eggs) on 23 August 1995.

Haematopus fuliginosus Sooty Oystercatcher — Common. Breeding recorded on Bluebell Island (single egg on 15 August 1996) and on Flag Island (two eggs on 21 August 1996).

Larus novaehollandiae Silver Gull — Common; a late summer and autumn breeder. Breeding on Brooke (old hatched eggs and nests on 25 May 1994 and c. 200 fledging chicks on 16 March 1997), 'Birthday' (4 old nests 25 May 1994), Gardenia (broken eggs on 31 May 1994), 'Renewal' (single fledgling, 4 June 1994), and South East (1 000–1 500 birds, three nests with eggs located, 28 May 1994).

Sterna caspia Caspian Tern — Common breeding resident. Breeding recorded on Ah Chong, Alpha, Bluebell, Dandelion, Flag, Foxglove, Gardenia, Islet to south of Hermite, Ivy, 'Kunzea', Marri Islands, Primrose, 'Renewal' and Trimouille. Breeding protracted with eggs recorded between late April and August.

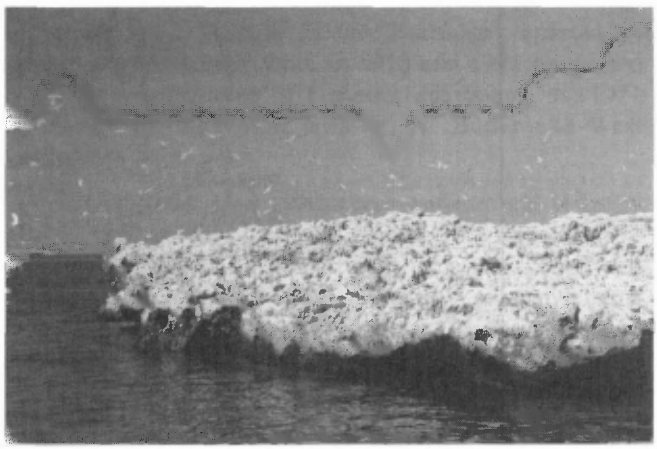
Sterna bengalensis Lesser Crested Tern — Several pairs observed among a large colony of Crested Terns on Daisy and Epsilon Islands in May 1994 may have been breeding. Because of the presence of many large runners, this colony could not be examined closely.

Sterna bergii Crested Tern — Common; breeds in some years. Breeding recorded on an islet to the north west of Bluebell[6] (30 pairs, no date), 'Birthday' (70 pairs, 29 May 1994, breeding completed, few addled eggs and hatched eggs present), and on Daisy (5 000–6 000 pairs), and Epsilon (c. 3 500 pairs) on 28 May 1994. In August 1995 the remains of a large colony (estimated to have been about 1 500 pairs) was located on Flag Island. Many mummified, partly buried, nearly fledged chicks were seen. This colony was presumably wiped out by Cyclone Bobby which passed near the Montebellos on 24 February 1995. As the eye of the cyclone was unusually slow moving, the severe winds persisted for a much longer period than normal (Bureau of Meteorology, Perth, personal communication). No breeding recorded in 1996 or 1997.

Sterna dougallii Roseate Tern — Common breeding resident with many thousands of birds present in 1994, 1995, 1996 and 1997. Autumn — winter breeder. Breeding recorded on Dahlia, Dandelion, 'Pimelia', 'Myoporum', Gannet, islet to the north of Gannet, 'Fig Islands', and 'Bloodwood'. Colonies from 6 pairs (Dandelion) to more than 2 000 ('Bloodwood'). Eggs recorded in May. The colony on 'Bloodwood' Island in 1996 was abandoned by the adults and many dead chicks were found that had been eaten by rats. No breeding colonies located in 1997.

Sterna nereis Fairy Tern — Common breeding resident. A colony of 315 nests with eggs and six small chicks on 'Fairy Tern Island' on 15 August 1996. In 1997 we located a colony of c. 102 pairs (new scrapes, eggs, small chicks) on 'Hibbertia' Island on 27 July and a colony of 3 nests on Fairy Tern Island on 28 July.

Sterna anaethetus Bridled Tern — Presumably a summer breeder. Evidence of breeding (broken eggs, dead runners, stunted non-flying fledged bird) found during winter trips on Dahlia, 'Gossypium', and South East. Juveniles present on rocky islets south of Hermite on 4 April 1971[2]. Storr[14] reported breeding but provided no additional information.



• *Roseate Terns nesting.*

Photo: A. A. Burbidge

Factors Affecting Status

Three or four pairs of White-bellied Sea-Eagles *Haliaeetus leucogaster* nest in the archipelago (breeding recorded on four islands between 1994 and 1996) and take seabirds. On 28 July 1997, a feeding platform on Brooke Island contained remains of Wedge-tailed Shearwaters and Crested Terns. Bungarras (Sand Monitor) *Varanus gouldii* occur on many of the larger islands, while the Spiny-tailed Monitor *V. acanthurus* and Stimson's Python *Morelia stimsoni* occur on Hermite Island; these predators would be capable of taking chicks.

Feral cats *Felis catus* occur on Hermite Island and occurred on Trimouille Island in the past. Black Rats *Rattus rattus* occurred on almost every island until 1996, when the rat eradication phase of *Montebello Renewal*, a feral animal eradication project conducted by the Western Australian Department of Conservation and Land Management, was carried out. Both feral species are believed to have established in the late 1800s, probably from shipwrecks[10] or, perhaps more likely, from careening pearling vessels. The rats apparently caused the abandonment of a large breeding colony of Roseate Terns on 'Bloodwood Island' in 1996 (see above).

The atomic weapons tests in 1952 and 1956 would have greatly affected most if not all species of breeding seabirds. The lack of detailed surveys before the 1950s precludes accurate measurements of effects. It is tempting to suggest that the lack of Wedge-tailed Shearwater colonies on North West and Trimouille Islands may be due to the blasts and radioactive fallout. However, a colony exists on Pansy Island, between Trimouille and North West Islands, only 1 km from the ground zero of one of the 1956 tests.

Tropical cyclones occur frequently in the area and presumably have a significant effect on summer and autumn breeding species, as was the case with the Crested Tern colony on Flag Island in 1995 (see above). The eye of Category Four (very severe) Cyclone Olivia passed over the Montebellos in February 1996.

OTHER VERTEBRATES

Spectacled Hare-wallabies *Lagorchestes conspicillatus* and Golden Bandicoots *Isoodon auratus* formerly occurred on Hermite Island[10], and possibly on Trimouille Island[13], but became extinct after the establishment of feral cats[2]. Rakali (Water-rats) *Hydromys chrysogaster* were recorded in the 1960s[5] and 1970s[2] but are now believed locally extinct. Several reptile species occur on the islands and sea turtles nest on some of the beaches. Ospreys *Pandion haliaetus* are common and 18 nests were reported in use during 1996. Two species of land birds, Spinifex-bird *Eremiornis carteri* and Black-and-white Fairy-Wren *Malurus leucopterus leucopterus* have become extinct since 1950[12,2], presumably because of predation by Feral Cats and Black Rats, but possibly due to the atomic weapons tests.

Other Seabirds Recorded

Sula leucogaster	Brown Booby
Pelecanus conspicillatus	Australian Pelican
Anous stolidus	Common Noddy

Banding

Nil.

ACKNOWLEDGMENTS

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APPENDIX 1

The official and proposed names of the Montebello Islands.

A. *Officially named islands*

Ah Chong	Daisy	Hollyhock	North West
Alpha	Dandelion	How	Pansy
Aster	Delta	Ivy	Primrose
Brooke	Epsilon	Jonquil	Rose
Buttercup	Flag	Karangi	South East
Campbell	Foxglove	Kingcup	Spar
Carnation	Gannet	Lily	Trimouille
Crocus	Gardenia	Marigold	Violet
Dahlia	Hermite		

B. *Proposed names for some of the un-named islands*

Atriplex	Dryandra	Karara	Quandong
Avicennia	Eremophila	Karri	Renewal
Banksia	Eucalyptus	Kennedia	Rhagodia
Beaufortia	Euphorbia	Kingia	Senna
Birthday	Fairy Tern	Kunzea	Sesbania
Bloodwood	Fig	Kurrajong	Sida
Bluebell	Frankenia	Lechenaultia	Snakewood
Boab	Goodenia	Livistona	Snappy Gum
Cadjeput	Gossypium	Lobelia	Solanum
Caladenia	Grevillea	Marri	Spinifex
Callitris	Hakea	Melaleuca	Stylidium
Capparis	Hibbertia	Minnieritchie	Swainsona
Cassia	Hibiscus	Mistletoe	Triodia
Clematis	Hovea	Mulga	Verticordia
Coolabah	Ipomoea	Myoporum	Waratah
Corkwood	Jarrah	Pimelia	Wattle
Drosera	Jasmin	Ptilotus	