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DEPARTMENT OF
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WESTERN AUSTRALIA

REPORT No. 44



The Birds of Pelsart Island Western Australia

by
Phillip J. Fuller
and
Andrew A. Burbidge
with photographs by
A. G. Wells

PERTH
WESTERN AUSTRALIA

1981

Department of Fisheries and Wildlife

108 Adelaide Terrace

PERTH

R E P O R T

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CONTENTS

	Page
ABSTRACT	7
I INTRODUCTION	7
II ANNOTATED LIST	8
III DISCUSSION	35
IV ACKNOWLEDGEMENTS	40
V REFERENCES	41

FIGURES

1. Location of Pelsart Island and the Houtman Abrolhos.	6
2. Wedge-tailed Shearwater breeding sites 1977-1981.	19
3. White-faced Storm-petrel breeding sites 1977-1981.	19
4. White-breasted Sea-eagle and Osprey nests 1981.	... 19
5. Silver Gull breeding colonies 1977-1981.	... 25
6. Common Noddy breeding colony 1977-1981.	... 25
7. Lesser Noddy breeding colonies 1977-1981.	... 25
8. Crested Tern breeding colonies 1977-1981.	... 27
9. Roseate Tern breeding colonies 1978-1981.	... 27

	Page
10. Bridled Tern breeding colonies 1978-1981.	27
11. Sooty Tern breeding colonies 1977-1981.	29
12. Fairy Tern breeding colonies 1977-1981. ...	29
13. Southern end of Pelsart Island showing location of seabird breeding colonies 1980-81.	38

TABLES

1. Breeding sea birds of Pelsart Island 1977-81.	36
---------------------------------------------------------	----

PLATES

Cover. Lesser Noddy on nest in mangroves. ... Also	15
1. Two kilometres from southern end of Pelsart Island, looking east.	15
2. Low vegetation on shallow sand near north end of Pelsart Island.	16
3. Low sand hills near north end of island ...	16
4. Near centre of island showing coral shingle. Note narrowness of island.	16
5. White Mangrove (<u>Avicennia marina</u>).	17
6. Salt water lagoon near old jetty.	17
7. Coral shingle 1.5 km north of Wreck Point.	17
8. Salt marsh area in Common Noddy colony. ...	18
9. Wedge-tailed Shearwater at entrance of breeding burrow.	18
10. Red-tailed Tropic-bird.	18
11. White-faced Heron.	20
12. Mountain Duck.	20
13. Grey Teal	20

	Page
14. White-breasted Sea-eagle and chick. ...	20
15. Spotless Crake. ...	21
16. Pied Oystercatcher. ...	21
17. Red-capped Plover. ...	21
18. Greenshank. ...	22
19. Red-necked Stint. ...	22
20. Sharp-tailed Sandpiper. ...	22
21. Curlew Sandpiper. ...	22
22. Black-winged Stilt. ...	23
23. Red-necked Avocet. ...	23
24. Pacific Gull. ...	23
25. Flock of Common Noddies with a few Sooty Terns ...	23
26. Common Noddies. ...	24
27. Common Noddies prior to breeding ...	24
28. Common Noddy with egg. ...	24
29. Lesser Noddy with chick. ...	26
30. Caspian Tern on eggs. ...	26
31. Breeding colony of Crested Terns. ...	26
32. Bridled Tern. ...	28
33. Flock of Common Noddies and Sooty Terns.	28
34. Sooty Tern. ...	28
35. Sooty Tern displaying. ...	28
36. Fairy Tern on nest. ...	30
37. Australian Sea Lion, (<u>Neophoca cinerea</u>) an occasional visitor to Pelsart Island. ...	30
38. King Skink (<u>Egernia kingii</u>), a predator of bird eggs and chicks. ...	30

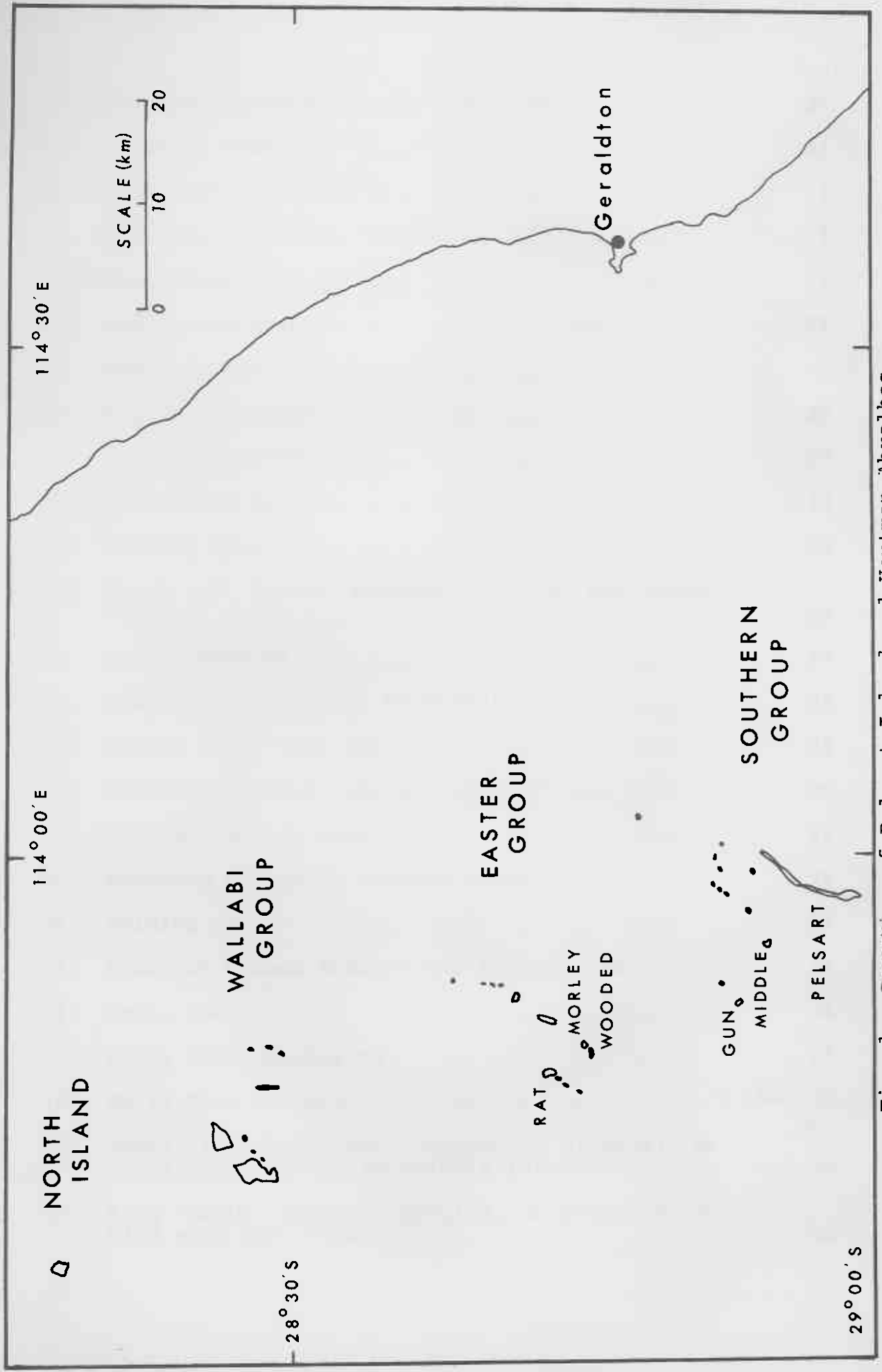


Fig. 1. Location of Pelsart Island and Houtman Abrolhos.

THE BIRDS OF PELSART ISLAND, WESTERN AUSTRALIA

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ABSTRACT

Between 1977 and 1981, 58 species of birds were recorded at Pelsart Island. Fifteen sea birds and one land bird were recorded breeding.

Pelsart Island is one of the most important sea bird breeding islands in Australia and the World. Birds of special significance which breed there include the Lesser Noddy Anous tenuirostris, the Common Noddy Anous stolidus, the Sooty Tern Sterna fuscata, the Osprey Pandion haliaetus and the White-breasted Sea-eagle Haliaeetus leucogaster. The Lesser Noddy colony disappeared between 1899 and 1907 during a period of intense guano mining. It re-established sometime between 1913 and 1936 and since 1954 it has expanded to include almost all mangrove areas on the island. There are seventeen Osprey and Sea-eagle nests on Pelsart and in 1977 there were 7 breeding pairs of Osprey and two of Sea-eagle.

Because of its high nature conservation values Pelsart Island should be afforded the greatest protection from interference.

I INTRODUCTION

Pelsart Island is the largest island in the southern group of the Houtman Abrolhos which lies off the coast of Western Australia between latitudes 28° and 29° (Fig. 1). The island is 12 km long and varies between 0.5 km and less than 50 m wide. Its long axis is at 30° - 210° and it is centred at 28°56'S, 113°58'30"E.

Pelsart Island is low, rising only a few metres above high water mark (Plate 1). It is composed of coral boulders and shingle, limestone and sand. The vegetation has not been studied in detail. Areas composed of coral shingle are virtually bare (Plates 4,7) or have very low perennial and

annual herbs and grasses (Plate 2). On deeper soils, especially near the southern end, is a dense low heath of shrubs (Plates 25,33), especially Nitraria schoberi and Atriplex cinerea. Samphire (Halosarcia spp.) is found in salt marsh areas (Plates 8,26), while the white mangrove (Avicennia marina) forms dense low forests along sheltered parts of the northern shore, around salt lakes and in some moist low lying areas (Plate 5).

Pelsart Island has long been renowned as one of the most important sea bird breeding places in Australia. Between 1977 and 1981 the authors visited Pelsart Island while accompanying research teams from the Department of Microbiology, University of Western Australia, who were studying influenza viruses and bacteria in bird populations and while reporting on the effects of possible developments to the Department of Fisheries and Wildlife. During these visits data were collected on the birds present on the island. During the last (1981) visit sea bird colonies were plotted on large scale (1:7920) air photographs supplied by the Department of Lands and Surveys.

Dates of visits were as follows:

1. 26-30 October 1977 (P.J.F.)
2. 14-17 February 1978 (P.J.F.)
3. 6-9 February 1979 (P.J.F.)
4. 27 November 1980 (A.A.B.)
5. 9-12 February 1981 (P.J.F.).

Data from a visit by A.A.B. on 20-21 March 1973 are also incorporated where relevant.

II ANNOTATED LIST

Information is presented in the following order:
Scientific name, vernacular name, status, habitat (where relevant), breeding data, notes.

When describing status we are making a judgement based on our experience with each species here and elsewhere in Western Australia. Scientific and common names follow Storr and Johnstone (1979).

By breeding we mean the period between egg-laying and the time when the young can fly.

Diomedea chlororhynchos Yellow-nosed Albatross

Single dead bird found on beach, 1978.

Ocean offshore.

Macronectes giganteus Southern Giant Petrel

Single dead birds found on beach, 1977, 1978.

Distribution and appearance suggest this species rather than M. halli.

Puffinus pacificus

Wedge-tailed Shearwater

Plate 9.

Common.

All areas of deep soil, ocean offshore.

Breeding recorded all visits, nests in burrows in all areas of deep soil, except sand dunes near northern end (Plate 3). Very large colony at southern end of island (Figs. 2 and 13). Burrows are re-excavated in September and October and eggs are laid in November. In February the chicks are about half grown and would fly about April. The birds leave the island in May.

During the 1981 visit 150 adults were banded.

Puffinus assimilis

Little Shearwater

Not recorded.

Reported breeding in "Pelsart Group" by Hall (1902). If it breeds on Pelsart Island we could have missed it since it is a winter breeder.

Oceanites marinus

White-faced Storm-petrel

Common.

Deep soil areas.

Breeding recorded 1977 and 1980, nests in burrows. Colonies located at three places (Fig. 3). Probably also nests among Wedge-tailed Shearwater burrows at southern end of island. Breeding commences in October and continues until February.

Breeding not recorded by Warham (1956) although previously reported by Hall (1902).

Phaethon rubricauda

Red-tailed Tropic-bird

Plate 10.

Moderately common.

Southern end of island.

Breeding not recorded. Bred on Pelsart Island in the past, the last record being by Warham (1956). Breeding may occur in any month but most is in spring and summer.

- Pelecanus conspicillatus Australian Pelican
 Uncommon, 2 birds seen in 1978.
 Salt lakes.
- Sula bassana Gannet
 Single bird, 1977.
 At sea to north of Pelsart Island.
- Phalacrocorax varius Pied Cormorant
 Common.
 Roosting, spits and rocks, ocean offshore.
 Breeding not recorded. Sandland (1937) reported a colony of about 40 pairs on one of the small islets off the northern tip of Pelsart Island.
 Up to 160 birds in one flock.
- Phalacrocorax melanoleucos Little Pied Cormorant
 Single bird, 1981.
 Sand spit.
 With flock of Pied Cormorant, probably a vagrant.
- Ardea novaehollandiae White-faced Heron
 Plate 11.
 Two birds, 1978.
 Salt lake.
- Egretta sacra Eastern Reef Heron
 Moderately common.
 Rocky shores, mangroves.
 Breeding recorded. Recently used nest found in 1981 under limestone ledge. Breeding commences in spring and continues until early summer.
 All birds seen were of grey phase.
- Tadorna tadornoides Mountain Duck
 Plate 12.
 Flock of three birds, 1978.
 Salt lake.

Anas gibberifrons

Grey Teal

Plate 13.

Uncommon, small flocks of up to 10 birds.

Salt lakes.

Haliaeetus leucogaster

White-breasted Sea-eagle

Plate 14.

Moderately common.

Throughout island.

Breeding recorded 1977. Nests on low stick platform on ground. Breeding commences in July and continues until November.

Counts suggest that two to three pairs are resident and breeding.

Circus aeruginosus

Marsh Harrier

Single bird, 1979.

South end of island.

Pandion haliaetus

Osprey

Common.

Throughout island.

Breeding recorded 1977. Nests consisting of large piles of sticks, coral and flotsam are scattered throughout island (Fig. 4).

In 1981 a systematic search located seventeen nests, some of which had not been used for some time, and two of which were being used by White-breasted Sea-eagles. In 1977 six nests contained fledged young and one contained 2 eggs. Breeding commences in July and continues until October.

Previous estimates of Osprey numbers have been:
Sandland (1937) "25 or more nests of Osprey or Sea-eagle on Pelsart Island but only about a third had been used" (p.148),
Tarr (1949) "Many of these birds' nests but I only noted 4 pairs of birds" (p.282),
Warham (1956) "Five nests of this species were noted on the island" (p. 92).

Falco cenchroides

Australian Kestrel

Single bird, 1981.

In flight over small area of sand dunes at northern end of island.

Coturnix sp.

Quail

Large quail were flushed in 1978. The most likely species is the Stubble Quail (Coturnix novaezelandiae).

Gallirallus philippensis

Banded Land Rail

Uncommon.

Mangroves.

Difficult to observe, probably moderately common.

Porzana tabuensis

Spotless Crake

Plate 15.

Common.

Well vegetated areas, including mangroves and samphire.

Well established resident population, probably breeds on Pelsart Island. Tarr (1949) noted "two dappled juvenile birds" on Pelsart in 1948 (p.276).

Haematopus longirostris

Pied Oystercatcher

Plate 16.

Common.

Throughout open areas of island, shores.

Breeding not confirmed. In 1977 several pairs were holding territory and probably had chicks. Tarr (1949) reported breeding.

Haematopus fuliginosus

Sooty Oystercatcher

Moderately common.

Shores.

Not as abundant as the Pied Oystercatcher.

Pluvialis squatarola

Grey Plover

Moderately common.

Tidal flats, beaches, rocky shores.

- Pluvialis dominica Eastern Golden Plover
 Single bird, 1981.
 Sandy beach.
 With Grey Plover.
- Charadrius cucullatus Hooded Plover
 Single bird, 1980, 1981.
 Tidal flats, beaches.
- Charadrius ruficapillus Red-capped Plover
 Plate 17.
 Common.
 Tidal flats, sandy beaches and rocky shores.
 Breeding not recorded. Probably breeds on Pelsart Island. Our visits did not coincide with nesting.
- Charadrius mongolus Mongolian Sand Plover
 Uncommon, 1978 only.
 Beaches.
- Charadrius leschenaultii Large Sand Plover
 Uncommon.
 Beaches and tidal flats.
 Bird observed in 1981 was in nuptial plumage.
- Numenius phaeopus Whimbrel
 Uncommon.
 Rocky shores and salt lakes.
- Numenius madagascariensis Eastern Curlew
 Single bird, 1981.
 Tidal flat.

Limosa limosa

Uncommon.

Tidal flats.

Accompanying Bar-tailed Godwits.

Black-tailed Godwit

Limosa lapponica

Common.

Tidal flats, beaches.

Up to 40 birds observed in a single flock.

Bar-tailed Godwit

Tringa nebularia

Plate 18.

Moderately common.

Salt lakes, beaches.

Greenshank

Tringa terek

Single bird, 1979.

Salt lake.

Intermingled with other waders.

Terek Sandpiper

Tringa hypoleucos

Uncommon.

Tidal flats.

Common Sandpiper

Tringa brevipes

Moderately common.

Tidal flats, beaches.

Specimen collected 1979.

Grey-tailed Tattler

Arenaria interpres

Common.

Throughout island, including well-vegetated areas.

Most flocks of 6 to 10, flock of 100 in 1979.

Ruddy Turnstone



▲ *Frontispiece*: Lesser Noddy on nest in mangroves. (Photo: A. A. Burbidge)

▼ *Plate 1*: Two kilometres from southern end of Pelsart Island, looking east. (Photo: A. G. Wells).



Plate 2: Low vegetation on shallow sand near north end of Pelsart Island. (Photo: A. A. Burbidge).



Plate 3: Low sand hills near north end of island. (Photo: A. A. Burbidge).

Plate 4: Near centre of island showing coral shingle. Note narrowness of island. (Photo: A. A. Burbidge).





◀ *Plate 5: White Mangrove (Avicennia marina).* (Photo: A. G. Wells)

Plate 6: Salt water lagoon near old jetty. (Photo: A. G. Wells)



◀ *Plate 7: Coral shingle 1.5 km north of Wreck Point.* (Photo: A. A. Burbidge)

▶ *Plate 8:* Salt marsh area in Common Noddy colony. (Photo: A. G. Wells).



◀ *Plate 9:* Wedge-tailed Shearwater at entrance of breeding burrow. (Photo: A. G. Wells).

▶ *Plate 10:* Red-tailed Tropic-bird. (Photo: A. G. Wells).



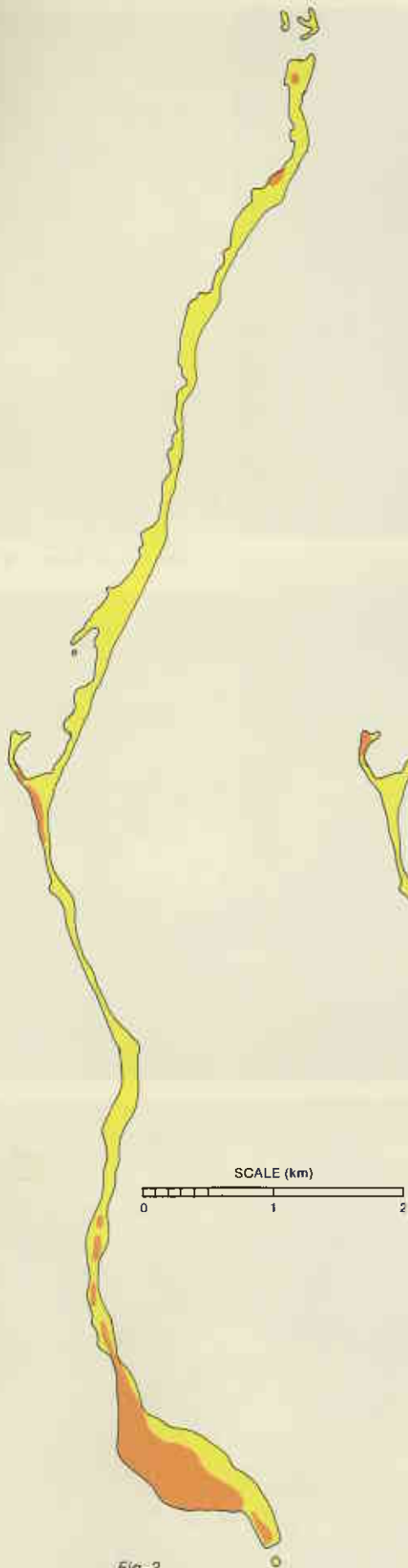


Fig. 2
Wedge-tailed Shearwater
Breeding Colonies
1977-81



Fig. 3
White-faced Storm-petrel
Breeding Colonies
1977-81

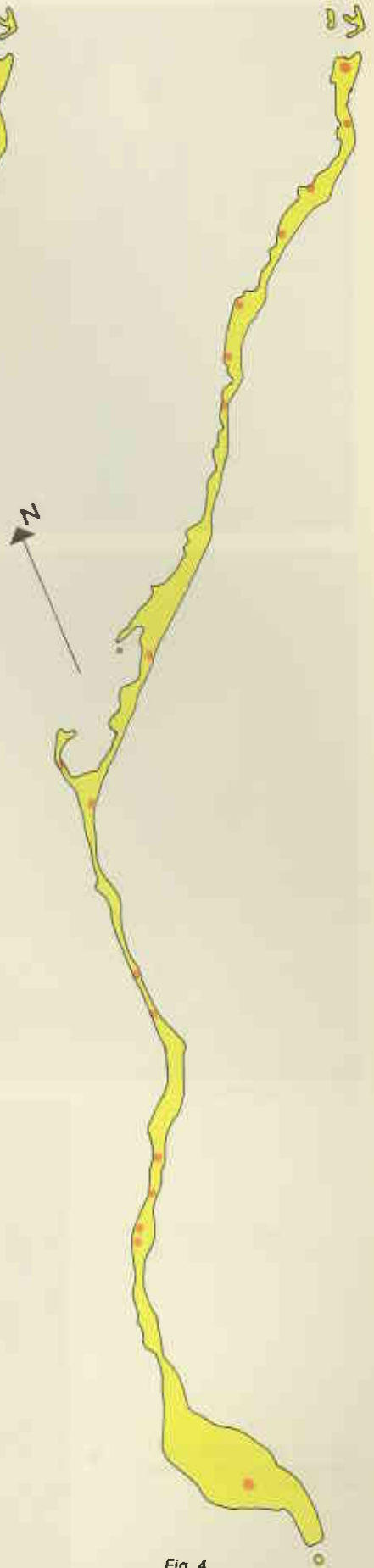


Fig. 4
White-breasted
Sea-eagle and Osprey
Nests 1981



◀ *Plate 11: White-faced Heron* (Photo: A. G. Wells).



▲ *Plate 12: Mountain Duck* (Photo: A. G. Wells)



Plate 13: Grey Teal (Photo: A. G. Wells). ▼



Plate 14: White-breasted Sea-eagle and chick (Photo: A. G. Wells). ▶



◀ *Plate 15: Spotless Crake.*
(Photo: A. G. Wells).

Plate 16: Pied Oystercatcher. (Photo: A. G. Wells). ▶



▶ *Plate 17: Red-capped Plover.* (Photo: A. G. Wells).



◀ *Plate 18: Greenshank.*
(Photo: A. G. Wells).



Plate 19: Red-necked Stint. ▶
(Photo: A. G. Wells).



◀ *Plate 20: Sharp-tailed Sandpiper.* (Photo: A. G. Wells).



Plate 21: Curlew Sandpiper. ▶
(Photo: A. G. Wells).



◀ *Plate 22: Black-winged Stilt. (Photo: A. G. Wells).*



▲ *Plate 23: Red-necked Avocet. (Photo: A. G. Wells).*



Plate 24: Pacific Gull. (Photo: A. G. Wells). ▼



Plate 25: Flock of Common Noddies with a few Sooty Terns. (Photo: A. G. Wells). ▶

Plate 26: Common Noddies. (Photo: A. G. Wells).



Plate 27: Common Noddies prior to breeding. (Photo: P. J. Fuller).

Plate 28: Common Noddy with egg. (Photo: A. G. Wells).



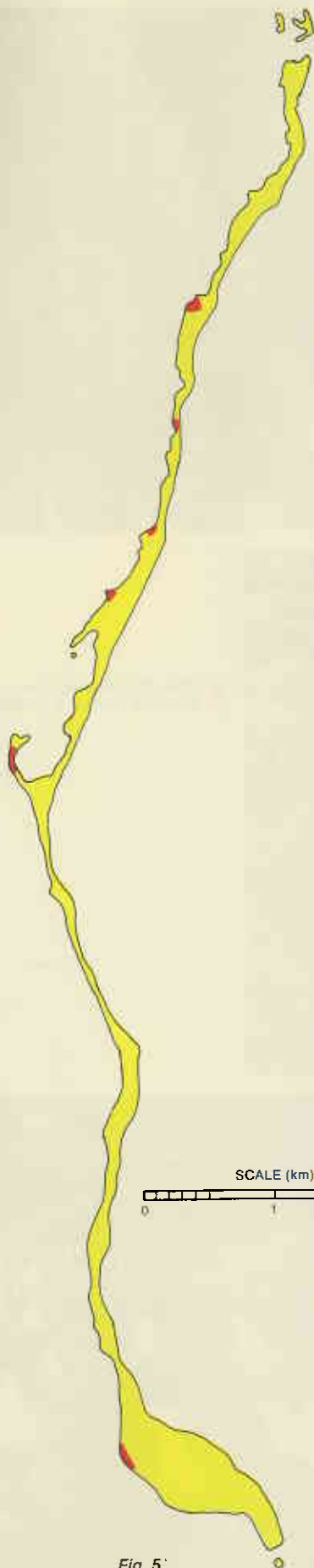


Fig. 5
Silver Gull
Breeding Colonies
1977-81



Fig. 6
Common Noddy
Breeding Colonies
1977-81

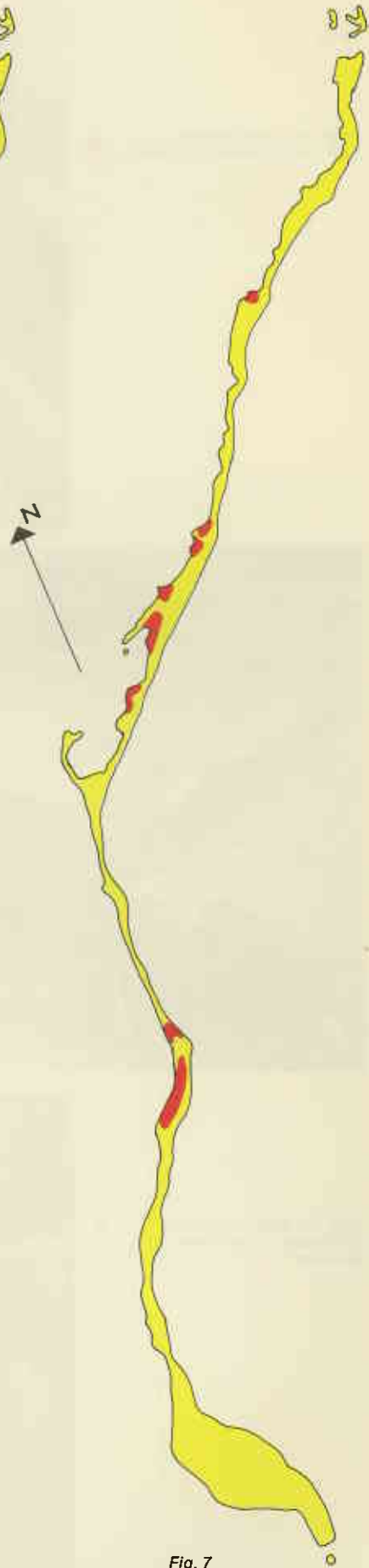


Fig. 7
Lesser Noddy
Breeding Colonies
1977-81

Plate 29. Lesser Noddy with chick. (Photo: A. G. Wells).



Plate 30: Caspian Tern on eggs. (Photo: A. G. Wells).

Plate 31: Breeding colony of Crested Terns. (Photo: A. A. Burbidge).





Fig. 8
Crested Tern
Breeding Colonies
1977-81



Fig. 9
Roseate Tern
Breeding Colonies
1978-81



Fig. 10
Bridled Tern
Breeding Colonies
1978-81

Plate 32: Bridled Tern
(Photo: A. G. Wells)



Plate 33: Flock of
Common Noddies and Sooty
Terns. (Photo: A. G. Wells)



Plate 35: Sooty Tern
displaying (Photo: A. G. Wells).

Plate 34: Sooty Tern.
(Photo: A. G. Wells).

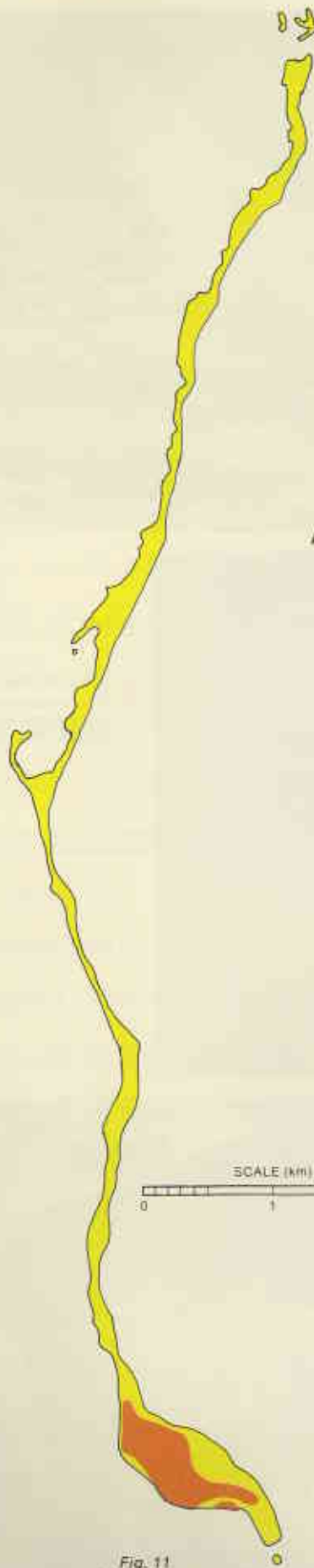


Fig. 11
Sooty Tern
Breeding Colonies
1977-81



Fig. 12
Fairy Tern
Breeding Colonies
1977-81



Plate 36: Fairy Tern on nest. (Photo: A. G. Wells).



Plate 37: Australian Sea Lion, (*Neophoca cinerea*), an occasional visitor to Pelsart Island. (Photo: A. A. Burbidge).

Plate 38: King Skink (*Egernia kingii*), a predator of bird eggs and chicks. (Photo: A. G. Wells)



- Calidris tenuirostris Great Knot
 Moderately common.
 Tidal flats, rocky shores.
- Calidris alba Sanderling
 Uncommon, seen only in 1977.
 Tidal flats.
- Calidris ruficollis Red-necked Stint
 Plate 19.
 Shores, tidal flats.
 Up to 40 birds in a single flock.
- Calidris acuminata Sharp-tailed Sandpiper
 Plate 20.
 Uncommon.
 Tidal flats, lake areas.
- Calidris ferruginea Curlew Sandpiper
 Plate 21.
 Moderately common.
 Tidal flats.
- Himantopus himantopus Black-winged Stilt
 Plate 22.
 Not observed.
 Recorded in March 1973.
- Recurvirostra novaehollandiae Red-necked Avocet
 Plate 23.
 Flock of six, 1977.
 Beach, northern end of island.
- Glareola maldivarum Oriental Pratincole
 Single bird, 1977.
 Beach, vicinity of old jetty.

Larus novaehollandiae

Silver Gull

Moderately common.

Throughout island.

Breeding recorded 1977 and 1981, nests among vegetation on coral and sand. Colonies of up to 10 pairs scattered throughout island (Fig. 5). Breeding commences in autumn and continues until early summer with peaks in autumn and spring.

Larus pacificus

Pacific Gull

Plate 24.

Common.

Northern two-thirds of island.

Breeding recorded 1977, 1980. Nests among grass and herbs on low ridges. Odd pairs of birds breed in scattered localities north of the old jetty. Breeding commences in August and continues until November.

One flock of 26 birds noted in 1977.

Anous stolidus

Common Noddy

Plates 8, 25, 26, 27, 28, 33.

Common.

South end of island, ocean offshore.

Breeding recorded all visits, nests constructed in low shrubs, often very close to ground. Very large colony at southern end of island (Figs. 6, 13), partly overlapping colonies of Sooty Terns and Wedge-tailed Shearwaters. Breeding commences in late October or November and continues until late February or March.

Anous tenuirostris

Lesser Noddy

Frontispiece, Plate 29.

Common.

Mangroves and adjacent ocean.

Breeding recorded 1978, 1979, 1980, 1981, nests in mangrove trees. Colonies of from 50 nests to several tens of thousands of nests in all mangrove patches except the smallest ones near the northern end of the island (Fig. 7). Nesting commencement varies from year to year. Egg laying had not commenced during the late-October visit of 1977 and was underway on 27

November 1980. Breeding would have continued until March in the years of our visits. Tarr (1949) found half-grown chicks in late September and early October 1948 so egg-laying in that year must have taken place in late August.

The numbers of birds breeding on Pelsart Island has varied over the years. Two large colonies were noted by J. Lort Stokes in 1840 (Stokes 1846) and by other visitors up to 1899. These were 3.6 km north of Wreck Point and at the north end of the large lagoon 6.8 km north of Wreck Point. In 1907 Gibson (1908) reported that these areas had been abandoned for several years and this was also the situation in 1913 (Alexander 1922). However, by 1936 the 3.6 km colony had re-established and was flourishing (Sandland 1937) and a similar situation was reported by later visitors up to and including Warham in 1954 (Warham 1956). Since then additional areas have been colonised, not only the old colony at 6.8 km, but also further areas northward from it (Fig. 7). The northernmost colony was first noted in 1980.

Serventy and Whittell (1976) refer to a census of the 3.6 km colony in January 1947 giving an approximate count of 27,000 nests. We have made no estimates but there are clearly now many more nests on the island.

Sterna caspia

Caspian Tern

Plate 30.

Common.

Throughout island, ocean offshore.

Breeding recorded 1977. Egg-laying usually takes place during August and October and breeding continues until December or January. Evidence of breeding would have disappeared by the time of our February visits. It is probable that many pairs nest on Pelsart Island.

Sterna bergii

Crested Tern

Plate 31.

Common.

Throughout island, ocean offshore.

Breeding recorded 1977 and 1980. Nests in large colonies in open sandy areas. Breeding commences in October and continues until January.

In 1977 a colony of ca. 700 pairs nested near the northern tip of the island and a smaller colony bred on a point south of the ruined jetty. In 1980 breeding occurred at several sites including the above (Fig. 8).

Sterna dougallii

Roseate Tern

Common.

Throughout island, ocean offshore.

Breeding recorded 1978, 1979, 1981. Nests on ground in open, usually on coral rock or limestone. Colonies vary in size from less than 50 to several hundred pairs, scattered throughout island (Fig. 9). Serventy and White (1951) reported a colony of 2 656 nests in 1946/47. Breeding commences in November or December and continues until February or March.

Autumn-winter breeding has been recorded in the Wallabi Group (Storr 1965), and may occur also on Pelsart Island.

Sterna anaethetus

Bridled Tern

Plate 32.

Common.

Throughout island, ocean offshore.

Breeding recorded 1978, 1979, 1981. Nests under rocks and shrubs. Colonies of 40 to 60 pairs scattered throughout northern two-thirds of Island (Fig. 10). Breeding commences in November and continues until April.

Sterna fuscata

Sooty Tern

Plates 33, 34, 35.

Common.

Southern end of island, ocean offshore.

Breeding recorded all visits. Nests under shrubs. Very large colony at southern end of island (Fig. 11). in close association with Common Noddy and Wedge-tailed Shearwater. Breeding commences in October and continues until February or March.

Sterna nereis

Fairy Tern

Plate 36.

Common.

Throughout island.

Breeding recorded all visits. Nests on bare coral shingle. Colonies of from 2 to 50 pairs scattered throughout northern two-thirds of island (Fig. 12). Breeding commences in late October and continues until April.

Hirundo neoxena

Welcome Swallow

Common.

Throughout island.

Breeding recorded 1977. Nest in a shallow cave in cliff on western shore.

Megalurus gramineus

Little Grassbird

Single bird, 1978.

Southern area of mangroves in vicinity of main Lesser Noddy colony.

Probably a vagrant.

Cincloramphus mathewsi

Rufous Songlark

Single bird, 1978.

Low coral ridge midway along island.

Probably a vagrant.

Zosterops lateralis

Grey-breasted White-eye

Common.

Mangroves and scrub.

Breeding not recorded. Tarr (1949) and Warham (1956) have reported breeding. Well established population on island which probably breeds most years.

III DISCUSSION

We recorded 58 species of birds at Pelsart Island between 1977 and 1981 and one additional species in 1973. Of these 21 were sea birds, 23 were shore birds, 8 were water birds with a widespread distribution and 7 were land birds.

Seventeen of the 21 sea birds have been reported breeding on Pelsart. We recorded 15 breeding species (Table 1); two species, Red-tailed Tropic-bird and Pied Cormorant, do not seem to have bred on Pelsart for some years. One additional

TABLE 1 : BREEDING SEABIRDS OF PELSART ISLAND - 1977-1981

Species	Nesting Site	Breeding Season*	Fixation of Breeding Site
Wedge-tailed Shearwater	Burrow	Nov. - Apr.	Yes ✓✓
White-faced Storm-petrel	Burrow	Oct. - Feb.	Yes ✓✓
Eastern Reef Heron	Under ledge, in mangroves	Sep. - Jan.	No ✓
White-breasted Sea-eagle	On ground	Jul. - Nov.	No ✓
Osprey	On ground	Jul. - Nov.	No
Silver Gull	On ground, among vegetation	May - Jan.	Yes
Pacific Gull	On ground, among vegetation	Aug. - Nov.	No
Common Noddy	On low shrubs	Oct. - Mar.	Yes.
Lesser Noddy	On mangrove branches	Aug. - Mar.	Yes.
Caspian Tern	On ground, among vegetation	Aug. - Jan.	No
Crested Tern	On ground, among vegetation	Oct. - Jan.	No
Roseate Tern	On bare ground, coral rock, limestone	Nov. - Mar.	No ✓
Bridled Tern	On ground, among vegetation and under limestone	Nov. - Apr.	Yes
Sooty Tern	On ground, under shrubs	Oct. - Mar.	Yes ✓
Fairy Tern	On bare ground, coral rock, limestone	Oct. - Apr.	No ✓

*By breeding season we mean the time from egg laying to the young being able to fly.

sea bird, the Little Shearwater, was reported breeding in "Pelsart Group" by Hall (1902), but it is possible that the record was from another island in Southern Group, e.g. Middle or Gun. A winter-spring visit would be needed to locate this species.

One species of land bird was found breeding on Pelsart Island - the Welcome Swallow - bringing the total number of confirmed breeding records in 1977-81 to sixteen. Previous workers have recorded the Grey-breasted White-eye (or Silvereye) (Tarr 1949, Warham 1956), the Spotless Crake and Pied Oystercatcher (Tarr 1949) breeding on the island. Further work would doubtless extend the list of breeding species to include, for example, the Red-capped Plover and Banded Land Rail.

Pelsart Island is one of the most important sea bird breeding places in Australia and the world. More species of sea bird breed on Pelsart than on any other island off the Western Australian coast. The next most important islands in terms of breeding species are Sandland and Buller, each with 10. Both these islands are quite small.

Pelsart Island is the breeding place of some particularly important species of sea bird.

Lesser Noddy. The colony is one of only two in Australia - the other is 27 km to the north-west on Wooded Island and Morley Island, both in the Easter Group of the Abrolhos (Fig. 1). Elsewhere the Lesser Noddy breeds only in the Seychelle Islands. Because of its extremely restricted breeding range the Lesser Noddy has been placed on the Australian Official List of Endangered Species and is specially protected under Western Australian legislation. As mentioned in the Annotated List the colonies have suffered marked fluctuations in numbers and the species did not breed on Pelsart for many years in the early part of this century. Fortunately, the mangroves on Pelsart were recolonised sometime between 1913 and 1936, presumably from Wooded Island, which for some time would have held the only breeding colony of this rare species in Australia. The mangroves, on which breeding depends, are of limited extent and any disturbance leading to death of mangroves would have a disastrous effect on the Lesser Noddy.

Common Noddy. Whilst more widespread than the Lesser, the Common Noddy has few other breeding stations in Western Australia. The closest to Pelsart is Bedout Island, off the northern Pilbara, and the only other colony in this State is in the Lacepede Islands, near Broome.

Red-tailed Tropic-bird. This species has been declared to be "rare or likely to become extinct or in need of special protection" under the Western Australian Wildlife Conservation Act. As far as is known it has only one breeding place in Western Australia, at Sugarloaf Rock, near Cape Naturaliste. Nests have not been found on

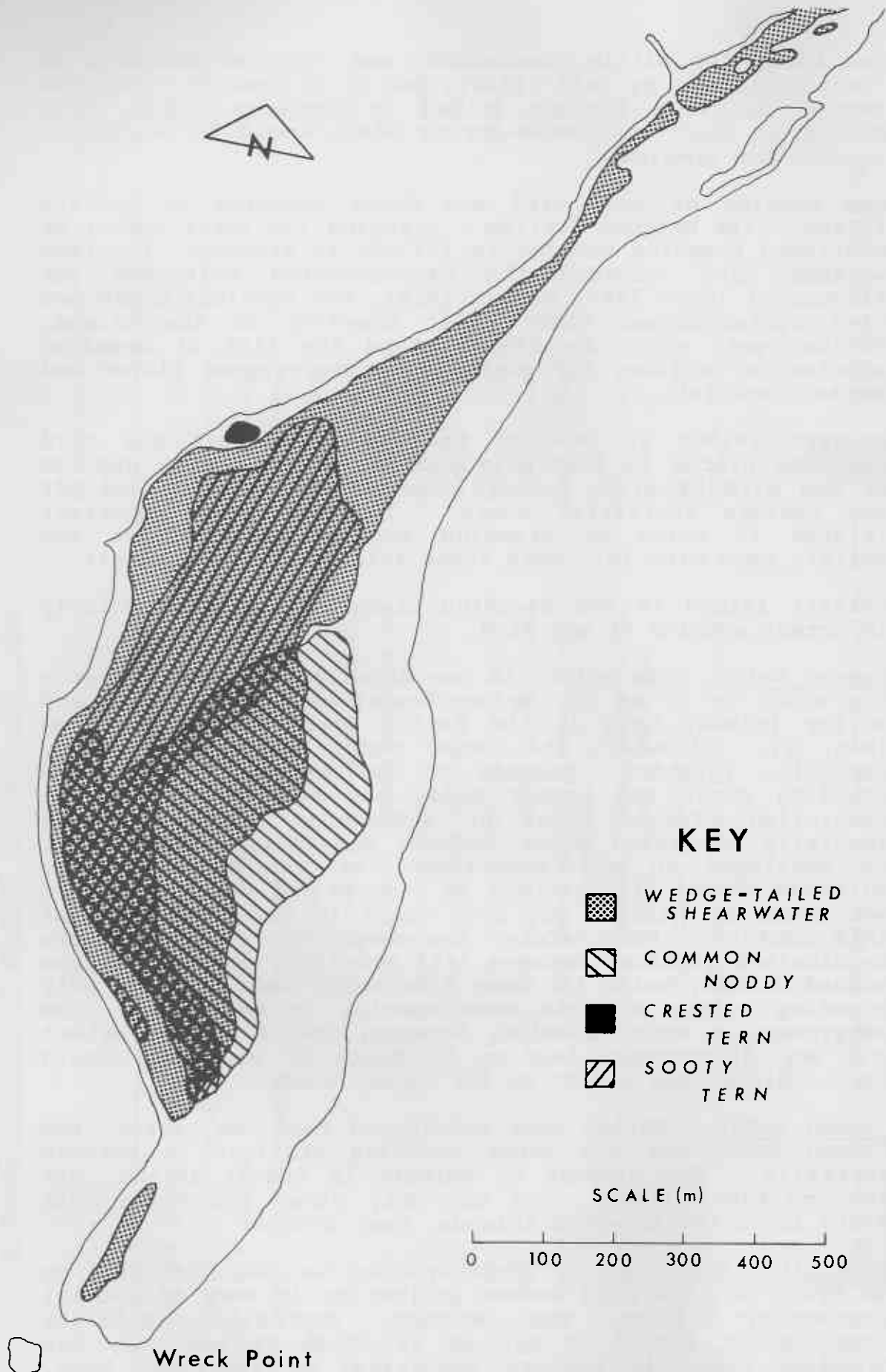


Fig. 13. Southern end of Pelsart Island showing location of sea bird breeding colonies 1980-81.

Pelsart for several years. Tropic-birds are moderately common at Pelsart and there seems to be no reason why breeding cannot occur in the future. Red-tailed Tropic-birds have a widespread tropical distribution but there are few breeding colonies.

Sooty Tern. This species also has a wide tropical distribution but it has few Western Australian breeding places. It has bred on Wooded Island in Easter Group but the closest major colony to the Abrolhos is Bedout Island.

Osprey. Pelsart is a stronghold for the Osprey. There were seven breeding pairs in 1977 as well as a number of unoccupied nests. This is the greatest concentration of Ospreys south of Shark Bay.

White-breasted Sea-eagle. At least two pairs of Sea-eagles breed on Pelsart most years and the species is common there. Outside the Abrolhos, Sea-eagles are scarce south of Shark Bay.

There are many examples of seabird colonies being adversely affected by man's activities, both direct and indirect. The best known local example of this is the extinction of the enormous colonies of Wedge-tailed Shearwater, Common Noddy and Sooty Tern which formerly occurred on Rat Island in Easter Group. In 1907 Gibson (1908) reported that Sooty Terns "were breeding in countless numbers" and Common Noddies "were laying in hundreds of thousands". Campbell (1890) estimated that in 1889 the Common Noddy colony occupied 300 acres and averaged at least one bird per square yard or 1,452,000 birds. The last time the colonies were seen and reported by an ornithologist was 1913 (Alexander 1922) but there is evidence they lingered on until the 1930s (Serventy and Whittell 1976). Their disappearance has been attributed to human depredation, particularly the taking of eggs (Serventy and Whittell 1976). However, there must be considerable doubt that this was the main cause since there were very few fishermen in the Abrolhos until the 1950s. Rat Island suffered major disturbance from guano mining, which ended in 1915, and was left as a barren rocky area almost devoid of the vegetation required by the Common Noddy and Sooty Tern as nesting sites and the soil required by Wedge-tailed Shearwaters. Added to this disturbance was the presence of Rats (Rattus rattus), first noted by Stokes in 1840, and cats (Felis catus) which were present during Alexander's 1913 visit.

In this context it is notable that the disappearance of the Lesser Noddy from Pelsart Island also coincided with the peak of guano mining there. Although the guano mining would not have affected many mangrove areas directly it is likely that there were indirect effects. John Gilbert, during his 1843 visit (Whittell 1942) stated "As an article of food it was the favourite, several hundred being killed almost daily during our stay on the island." (p. 291).

Whittell believes that the Lesser Noddy shifted its breeding ground from Pelsart to Wooded Island as a result of the activities of the guano miners. However, there is no information as to whether the Lesser Noddy bred on Wooded Island prior to the commencement of the major guano mining period, although a reading of Campbell (1900) implies that Pelsart contained the only colony at the time of his 1889 visit.

Guano mining commenced in the Abrolhos in 1847, shortly after Stokes reported on his 1840 visit. However, it did not reach any magnitude until 1885 and ended in 1915 after 56 000 tons (56 900 tonnes) had been shipped. Mining recommenced in 1943 and ceased again in 1946 after a further 10,700 tons (10,900 tonnes) had been extracted (Serventy et al. 1971). Guano mining has had major impact on several islands in the Abrolhos, including Rat, Gun, West Wallaby and several islets. On Pelsart, although the soil of some areas has been removed, there still remain extensive sand deposits which support the major colonies of Wedge-tailed Shearwater, Common Noddy and Sooty Tern.

A small tourist camp operated near the southern end of Pelsart Island between about 1946 and 1953. It used the buildings left by the guano diggers which were located just behind the beach on the western side of the island 1.0 km north of Wreck Point. The buildings were located among burrows of the Wedge-tailed Shearwater and nests of the Sooty Tern. Tourists walking near the camp could not avoid collapsing the breeding burrows of the Shearwaters (N.E. McLaughlan, pers. comm.).

The most important areas of Pelsart for sea bird conservation are the mangroves and the sandy southern four kilometres or so. The mangroves provide nesting sites for the Lesser Noddy and the large colonies of Common Noddy, Sooty Tern and Wedge-tailed Shearwater overlap in the southern area (Fig. 13). No area of the island could be said to be not used by sea birds for breeding because many species, e.g. Roseate Tern, Crested Tern, Fairy Tern, Osprey, Pacific Gull, do not have fixed breeding sites and may move their breeding place each year (Table 1).

Because of its high nature conservation values Pelsart Island should be afforded the greatest protection from interference.

IV ACKNOWLEDGEMENTS

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