

Barragup Island

Twinlock
Crystalfile



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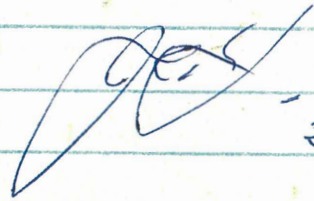
Great

Please give to AAB

on R. Boswell if AAB away
for any period

together with correspondence requests
survey etc.

Good work



25/11

The island is a tributary of the Serpentine River which makes it convenient to describe the vegetation in two parts, East and West.

The Eastern Portion:

This portion of the island comprises mostly samphire heath interspersed by stands of Casuarina obesa over an understorey of samphire, Juncus and mixed grasses.

The Casuarina occurs mostly along the banks of several shallow watercourses which can be seen in the oblique photograph 84:2. Along the Serpentine River banks the Casuarina predominates over a thick understorey of Juncus and introduced grasses (Hordeum sp., Lolium sp., Bromus sp., Briza minor, B. maxima, et al.)

At the northern extremity a section of higher ground (low sand dune) supports open woodland of Eucalypt (E. rudis) and Melaleuca (M. raphiophylla and M. cuticularis) with a thick understorey of introduced grasses and endemic sedges.

The banks at the Serpentine River are well protected from erosion by the healthy growth of Casuarina obesa and Melelauca raphiophylla over the dense sedge understorey.

cont'd...

MR LANE

Re: BARRAGUP ISLAND (SERPENTINE RIVER)

A survey of the island was conducted to make an assessment of the status of the vegetation and birdlife. The dates of inspections were September 30, 1980 and October 20, 1980.

Barragup Island is approximately 56 ha in area and comprises parts of Lots 143 and 144 which are part of Cockburn Sound Location 16. A portion at the northern end of the island of approximately 8 ha is controlled by the Department of Lands and Surveys and extends along the south-eastern shore for the length of the island.

Following is a description of the dominant vegetation types and a list of avifauna observed on the survey.

VEGETATION

The island is densely vegetated with samphire heath interspersed with low woodland of Melaleuca and Casuarina. Low sand dunes support woodlands of Eucalypt and Melaleuca over an understorey of Hakea, Melaleuca and Juncus. The river banks are very densely vegetated with Casuarina and Melaleuca over understoreys of Juncus and endemic and introduced grasses.

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cont'd...



Plate 4

26:6

Casuarina obesa woodland over sedge understorey forms secure barrier against erosion along Serpentine River.

Several watercourses across the Eastern end of the island support healthy Juncus samphire communities and provide invertebrate food supplies for wading birds. A freshwater plant Ruppia sp. was found in the pool marked 2B on the attached plan.

The Western Portion:

The dominant topographical feature of this part of the island is a low sand dune running almost the width of the island from north to south (see oblique photo 84:3). The dune supports a healthy stand of Eucalypt-Melaleuca woodland over an understorey of Hakea, Melaleuca and Juncus. The vegetation is relatively undisturbed and reflects typical woodland for the Barragup-Yunderup locality.

To the west of the sand dune is a low area of samphire heath containing ephemeral pools of brackish water and a variety of sedges and samphire species. The heath is interspersed with Melaleuca cuticularis and rises to a fringe of M. viminifera and M. hamulosa along the southern and parts of the northern banks of the Serpentine River. Casuarina obesa predominates over an understorey of samphire and endemic sedges along the western bank and much of the northern bank.



P 5

27:10

Healthy woodland of Eucalypt (E. rudis) and Melaleuca (M. preissiana) over understorey of Hakea, Melaleuca and Juncas.



P 6

27:6

Melaleuca cuticularis in flower - present in dense thickets at the western end providing habitat for several bird species.

AVIFAUNA

The following species of birds were recorded during the survey:

- Grey Teal (A. gibberifrons) - frequently observed around the island perimeter and on ephemeral pools and creeks. 3 broods observed.
- Pacific Black Duck
(A. superciliosa) - Observed on pools and creeks and in Serpentine river. 1 brood observed inhabiting fringing vegetation.
- Australian Shelduck
(T. tadornoides) - ephemeral pools. (3)
- White Faced Heron
(A. novaehollandiae) - samphire heath
- Common Sandpiper
(T. hypoleucos) - river bank
- Greenshank
(T. nebularia) - 1 - ephemeral pools
- Little Black Cormorant
(P. sulicrostris) - common - fringing woodland
- Australian Darter
(A. novaehollandiae) - common - fringing woodland
- Kingfisher
(Halcyone sp.) - Casuarina woodland (1)
- Magpie Lark
(G. cyanoleuca) - Melaleuca woodland
- Black-faced Cuckoo-Shrike
(C. novaehollandiae) - Eucalypt woodland
- Wagtail
(R. leucophrys) - Melaleuca woodland
- Silver Eye
(Z. gouldii) - frequently observed over most of samphire and melaleuca woodland
- Splendid Wren
(M. splendens) - numerous throughout Casuarina - melaleuca woodland and samphire heath
- Whistling Kite
(H. sphenurus) - 1 - overhead



Plate 2

26.10

Ephemeral pool surrounded by Samphire Heath with Casuarina obesa woodland in the background.



Plate 3

26:6A

Casuarina obesa over grassland sedge community.

CONCLUSION

Barragup Island represents a balance of natural vegetation typical for its locality. Apart from minor grazing by sheep at the northern end it has suffered very little disturbance and no development.

The quality of vegetation, particularly the samphire heath and Melaleuca shrublands, is of a high order and illustrated by the rich avifauna observed during the survey.

Most importantly Barragup Island provides an excellent opportunity to preserve a representative section of healthy natural riverbank vegetation and adjacent communities.

A handwritten signature in blue ink that reads "G.B. Pearson." The signature is written in a cursive style with a period at the end.

G.B. PEARSON
Technical Officer
Waterbird Research.

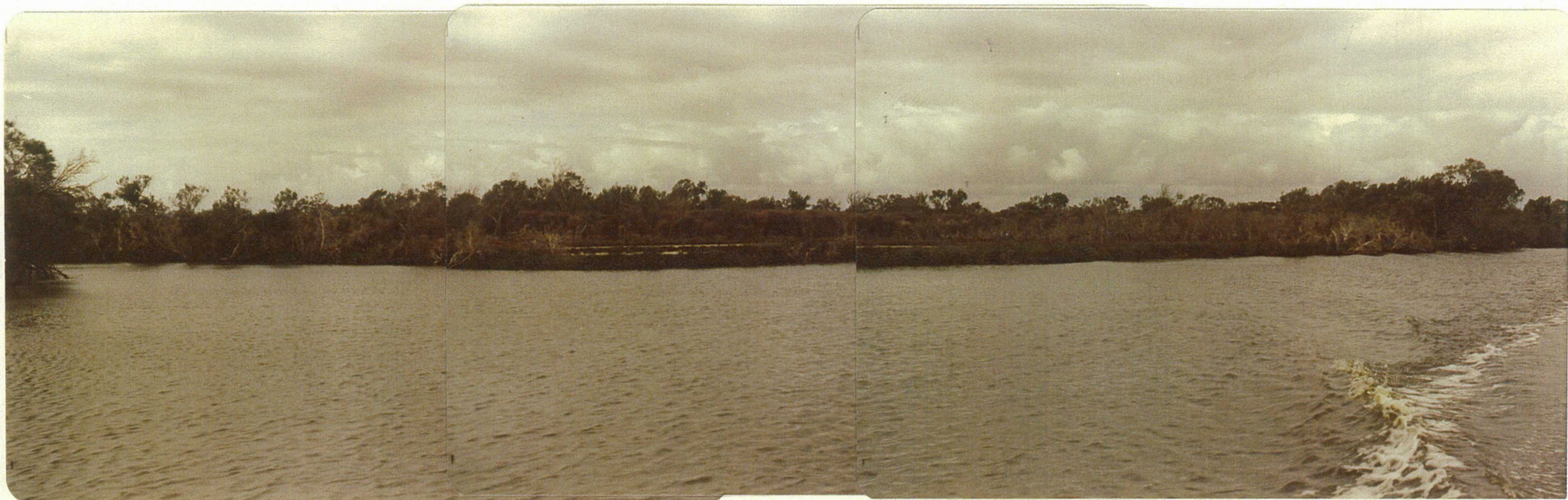
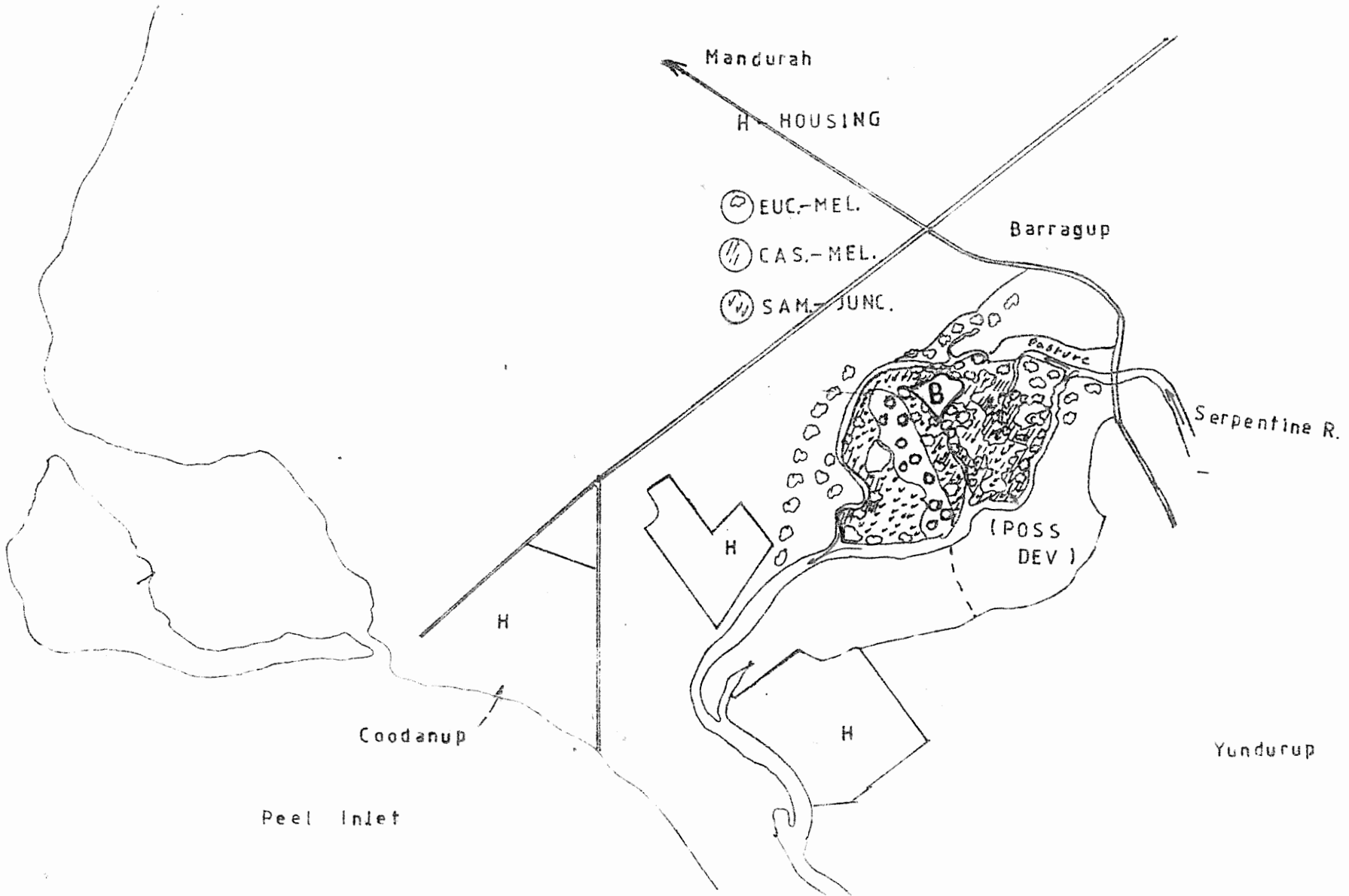


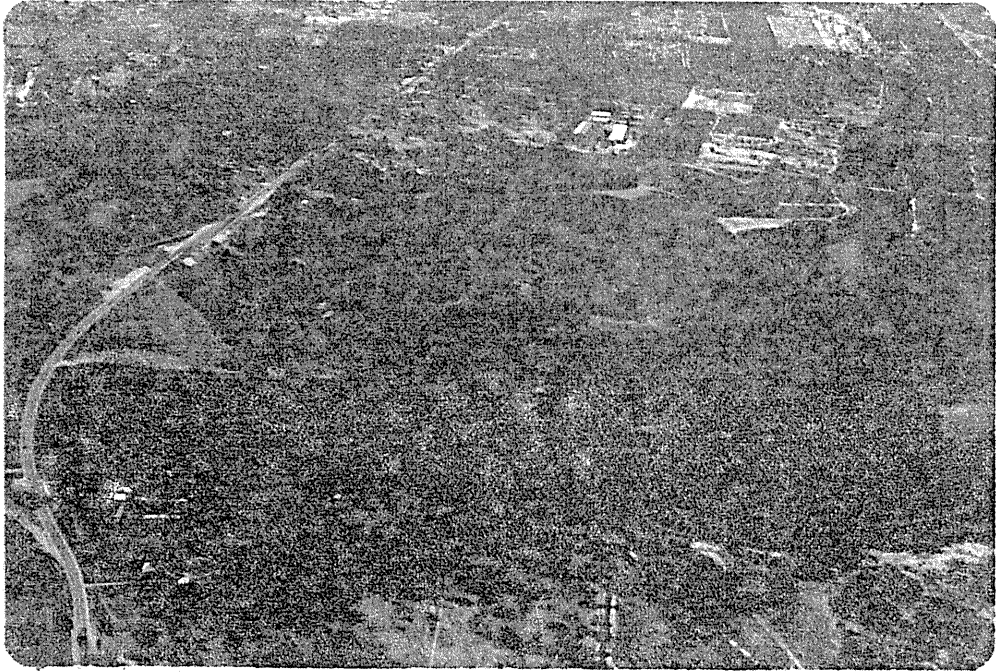
Plate 1

BARRAGUP ISLAND Looking North East.
Showing Casuarina obesa - Melaleuca spp. woodlands
over samphire heath Juncus communities.

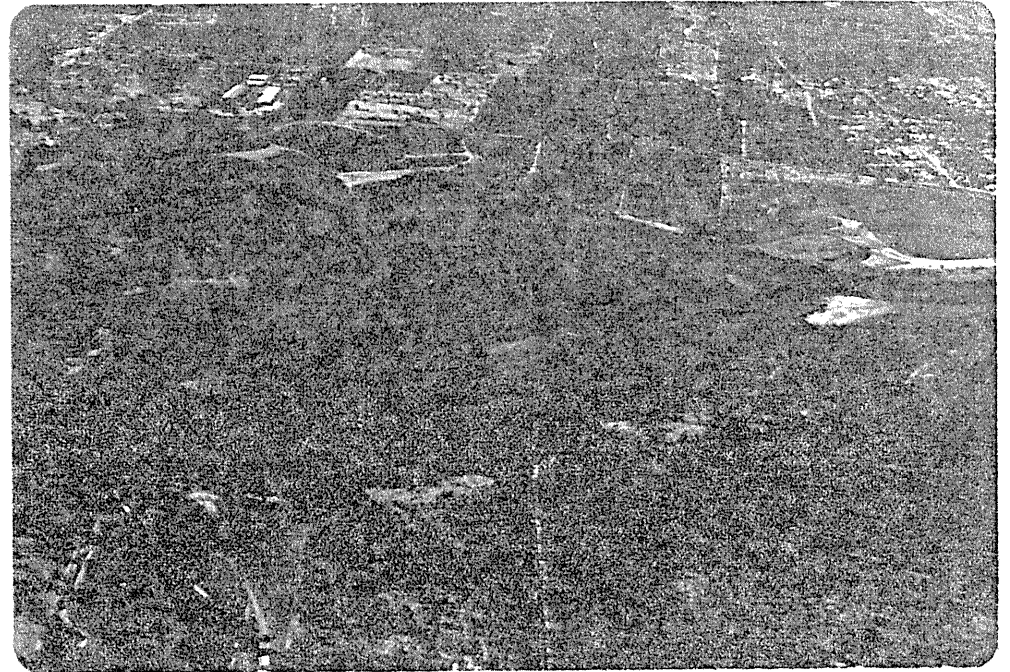
28: 18 19 20

BARRAGUP ISLAND





84:2



84:3

Barragup Island Serpentine River - April 30, 1980.

MR LANE

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Following is a description of the dominant vegetation types and a list of avifauna observed on the survey.

VEGETATION

The island is densely vegetated with low woodland of Melaleuca and Casuarina. Low sand dunes support woodlands of Elymus and Melaleuca over an understorey of Hakea, Melaleuca and Casuarina. The river banks are very densely vegetated with Casuarina, Melaleuca over understoreys of Juncus and endemic and introduced grasses.

The island is almost bisected by the Serpentine River which makes it consist of two parts, East and West.

The Eastern Portion:

This portion of the island is mostly samphire heath interspersed by stands of Melaleuca and Casuarina. The understorey consists of samphire, Juncus and Melaleuca.

The Casuarina occurs along the banks of several shallow watercourses which are shown in the oblique photograph 84:2. Along the Serpentine River Casuarina predominates over a thick understorey of introduced grasses (Hordeum sp., Lolium sp., Briza minor, B. maxima, et al.)

At the northern extremity of the island, higher ground (low sand dune) supports open woodland of Elymus (E. rudis) and Melaleuca (M. melaleuca) with a thick understorey of introduced grasses.

The banks at the Serpentine River are well protected from erosion by the heath of Casuarina (Casuarina obesa) and Melaleuca (Melaleuca) over an understorey.

cont'd...



Plate 4

26:6

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Several watercourses support healthy Juncus and invertebrate food supply. plant Ruppia sp. was found attached plan.

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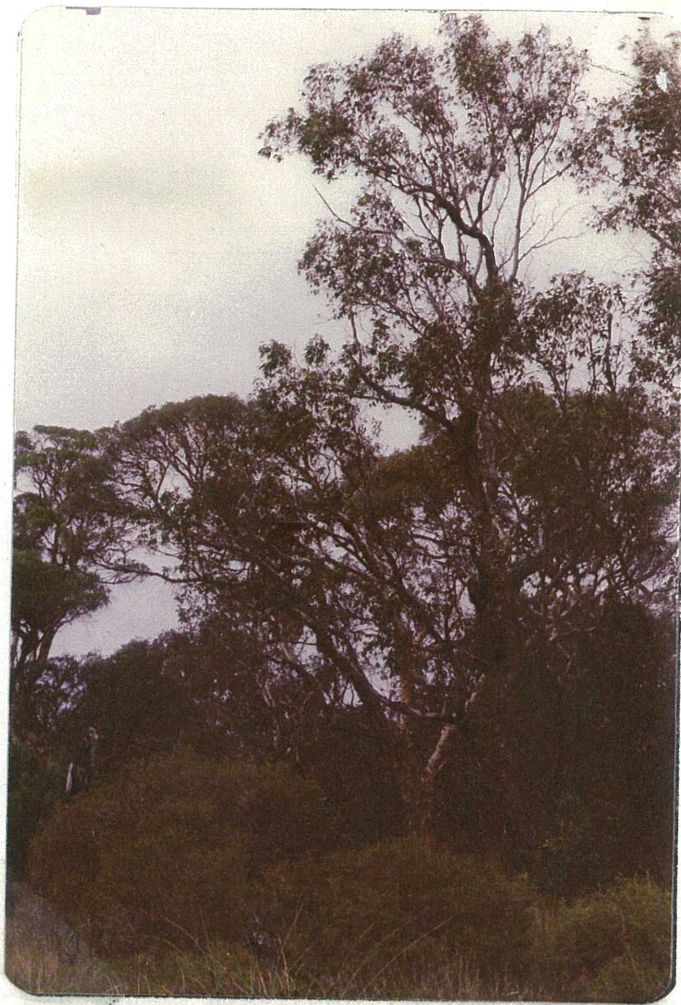
The Western Portion:

The dominant topography of island is a low sand dune supports a heath over an understorey vegetation is relatively woodland for the

To the west of the containing ephemeral sedges and samphire: Melaleuca cuticularis and M. hamulosa along banks of the Serpentine over an understorey western bank and

re of this part of the almost the width of the (oblique photo 84:3). The Eucalypt-Melaleuca woodland Melaleuca and Juncus. The wooded and reflects typical up locality.

a low area of samphire heath brackish water and a variety of The heath is interspersed with to a fringe of M. viminifera fern and parts of the northern Casuarina obesa predominates and endemic sedges along the northern bank.



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27:10

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- Pacific Black Duck
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- Australian Shelduck
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G.B. PEARSON
Technical Officer
Waterbird Research.



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Showing Casuarina obesa - Melaleuca spp. woodlands
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28: 18 19 20

Plate 7

BARRAGUP ISLAND



Mandurah

H HOUSING

⊙ EUC.-MEL.

⊙ CAS.-MEL.

⊙ SAM.-JUNC.

Barragup

Serpentine R.

(POSS
DEV)

H

H

H

Coodanup

Yundurup

Peel Inlet

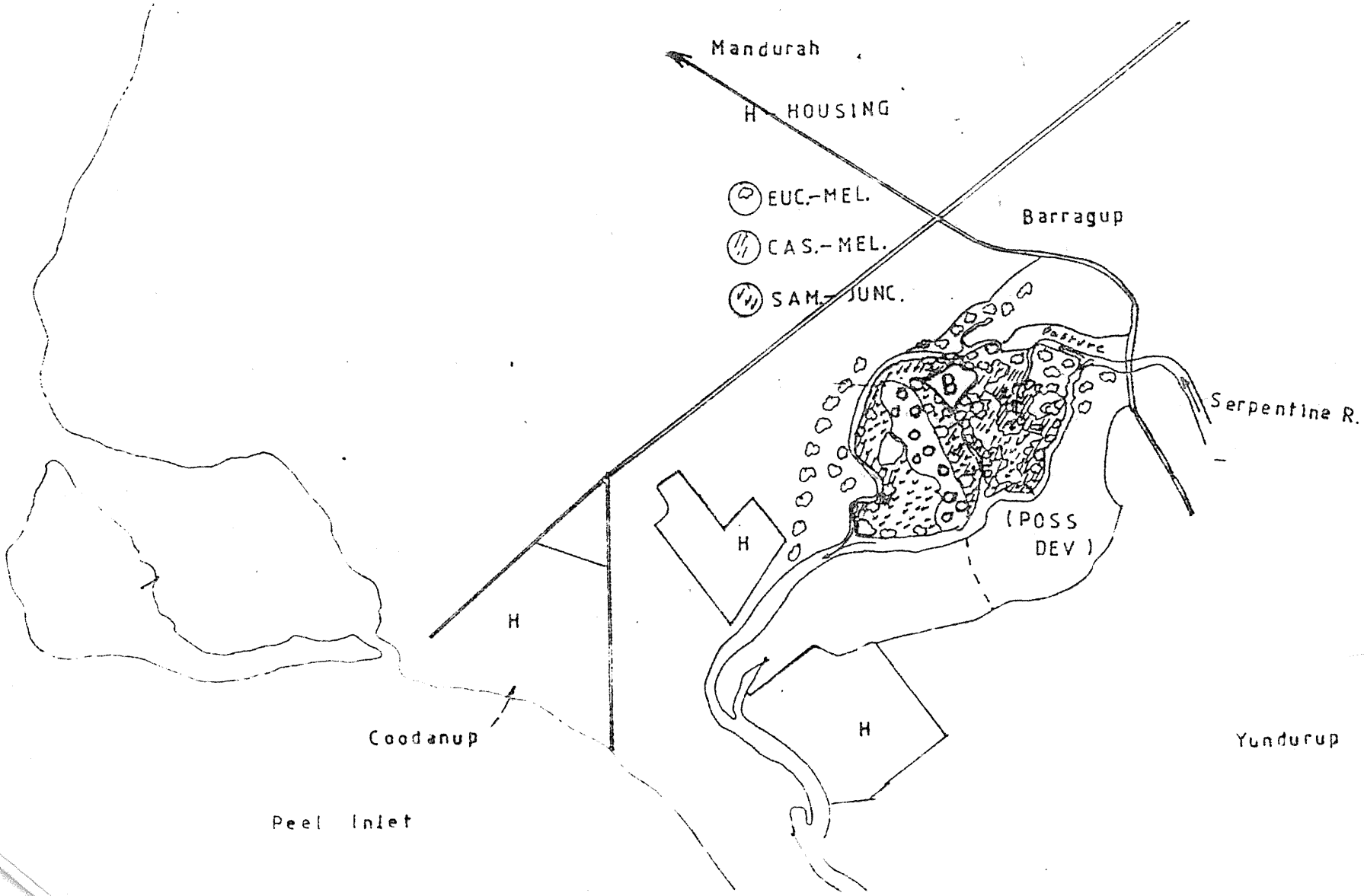


Plate 8

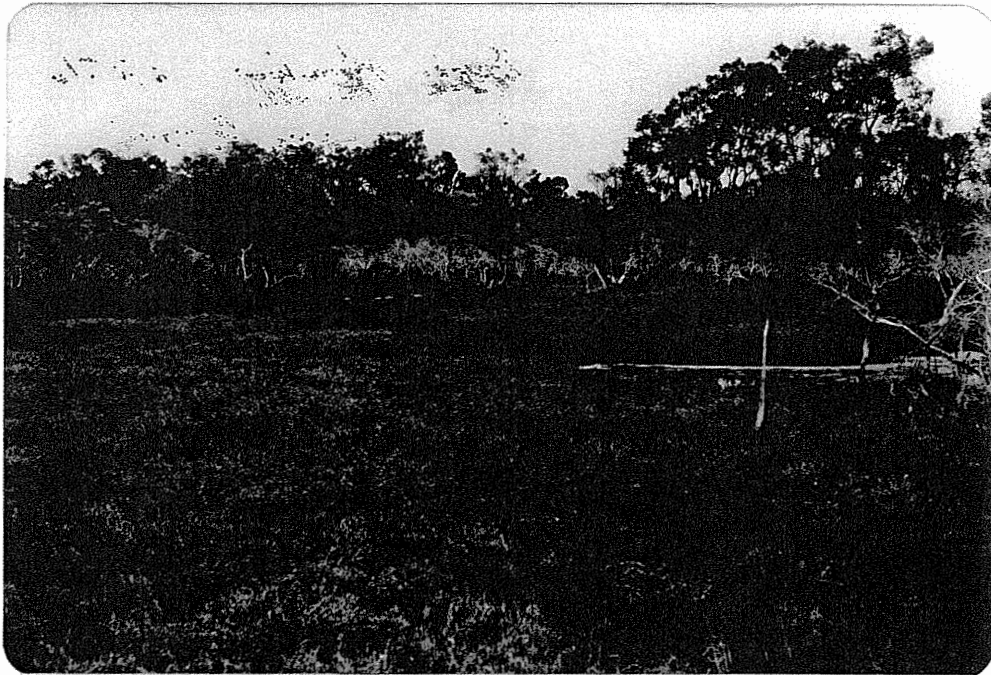


84:2



84:3

Barragup Island Serpentine River - April 30, 1980.



Healthy and dead pockets of M. cuticularis 27:8

To the west of the sand dune is a low area of samphire heath containing ephemeral pools of brackish water and a wide variety of sedges and samphire species.

parachuting? The heath is interspersed with M. cuticularis and rises to the belts of M. hamulosa, M. viminea and on the western and northern banks Casuarina obesa.

Conclusion As a whole the island represents a unique balance of undisturbed natural vegetation typical for its locality but now under considerable threat by rapidly expanding development.

Avifauna

The following species of birds were recorded during survey
 Following is a bird list compiled during the survey.

Species

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DEPARTMENT OF FISHERIES AND WILDLIFE

RESERVE/PROPOSED RESERVE INSPECTION REPORT

DIRECTIONS

NAME: Fill in if area has accepted name or local name.

REASON FOR SURVEY: e.g. Compliance with instructions, own initiative, etc.

AREA: In hectares. 1 ha = 2.47 acres. 1 acre = 0.4047 ha.

ADJOINING PROPERTIES: State whether cleared or uncleared, or whether under crop. State whether boundary is fenced or not and give brief description e.g. 5 plain wires, ringlock and 2 barbs.

DAMAGE OR DEGRADATION: Either state none or list, e.g. "small portion in south-east corner cleared about 20 years ago but regenerating" or "considerable invasion by wild oats", "gravel pits as shown on map" etc.

FIRE: State whether recently burnt-if so approx when (ask local residents). If part burnt only draw map. This is especially important with recent fires - the map doesn't have to be very accurate but it will assist interpretation of air photographs by research or management staff.

"IMPROVEMENTS" e.g. windmills, fences, tracks, buildings.

SOILS: Basic types are as follows:

- sand (yellow, brown, red, grey, white)
- loam (red, grey, brown)
- gravel (fine (approx 1-5 mm), medium (5-10 mm), coarse (10-25 mm or greater))
- swampy soils (peat), salt pans, etc.
- rock outcrops (granite, ironstone, limestone, etc.)

PLANT FORMATIONS: Use table as follows:

STRUCTURAL FORMATIONS IN AUSTRALIA

Life form and height of tallest stratum*	Projective foliage cover of tallest stratum*			
	Dense (70-100%)	Mid-dense (30-70%)	Sparse (10-30%)	Very sparse† (< 10%)
Trees > 30 m ‡	Tall closed-forest*	Tall open-forest	Tall woodland	Tall open-woodland
Trees 10-30 m ‡	Closed-forest*	Open-forest	Woodland	Open-woodland
Trees 5-10 m ‡	Low closed-forest*	Low open-forest	Low woodland	Low open-woodland
Shrubs 2-8 m ‡	Closed scrub	Open-scrub	Tall shrubland	Tall open-shrubland
Shrubs 0-2 m ‡	Closed-heath	Open-heath	Low shrubland	Low open-shrubland
Hummock grasses 0-2 m	-	-	Hummock grassland	Open-hummock grassland
Herbs (including moss, ferns, hemi-cryptophytes, geophytes, therophytes, hydrophytes, helophytes)	Closed-herbland § (1) Closed-tussock grassland (2) Closed-grassland (3) Closed-herbfield (4) Closed-sedgeland (5) Closed-fermland (6) Closed-mossland	Herbland § (1) Tussock grassland (2) Grassland (3) Herbfield (4) Sedgeland (5) Fermland (6) Mossland	Open-herbland § (1) Open-tussock grassland (2) Open-grassland (3) Open-herbfield (4) Open-sedgeland (5) Open-fermland (6) Open-mossland	Ephemeral herbland

* Isolated trees (emergents) may project from the canopy of some communities. In some closed-forests, emergent *Araucaria*, *Acacia*, or *Eucalyptus* species may be so frequent that the resultant structural form may be classified better as an open-forest.

† Some ecologists prefer to ignore scattered trees and shrubs, equivalent to emergents in a predominantly grassland, heath, or shrubland formation.

‡ A tree is defined as a woody plant more than 5 m tall, usually with a single stem. A shrub is a woody plant less than 8 m tall, frequently with many stems arising at or near the base.

§ Appropriate names for the community will depend on the nature of the dominant herb.

When writing descriptions describe each layer of the vegetation e.g. "Woodland of Powder Bark (Eucalyptus accedens) over open heath of Dryandra spp., no ground cover".

"Open woodland of Salmon Gum (Eucalyptus salmonophloia) over low open shrubland of Broom bush (Melaleuca uncinata), over an open-grassland".

Where you can't identify a dominant, press it and forward it to the Wildlife Research Centre. Each specimen must be labelled clearly with collector's name or initials, locality, date and specimen number. Write duplicate of this information in your diary. Thus description could read:

"Open scrub of species AAB 25/77, AAB 26/77 and AAB 27/77."

It is of little value sending specimens unless they contain flowers or fruits. If they are Eucalypts, buds and fruits will suffice.

FAUNA: Use both direct evidence, i.e. sightings of birds, and indirect evidence, e.g. Kangaroo pads, rabbit warrens, possum scratches on trees. If possible conduct spotlight or head torch surveys at dusk and after dark. Collect skulls or other skeletal remains if unsure of identification and send to the Wildlife Research Centre. Any reptiles or frogs collected should be preserved or frozen before sending to the Wildlife Research Centre. Normally mammal and bird records will suffice. Information on the fauna can be obtained from local people.

RECOMMENDATIONS: Bear in mind that you are dealing with important and responsible matters and treat your report and recommendation accordingly. Give reasons for your recommendations.

MAPS: A sketch map, drawn to scale, MUST be attached to the report. Show boundaries, features such as lakes, rock outcrops, tracks, gravel pits and, if possible, approximate distribution of plant formations.

PHOTOGRAPHS: Take colour Polaroid photos to illustrate major plant formations and any other important features, e.g. a new gravel pit. Write caption for each photo giving location and plant formations.

REMEMBER: You don't need a job sheet to do a survey - use your own initiative. Nature Reserves are the basis of nature conservation.

DEPARTMENT OF FISHERIES AND WILDLIFE
RESERVE/PROPOSED RESERVE INSPECTION REPORT

NAME

REASON FOR SURVEY

RESERVE NO LAND DISTRICT

LOCATION NO(S) LITHO

AREA (ha)

PERSONNEL

METHOD DATE TIME

TEMPERATURE (°C) WIND DIRECTION SPEED (km/h)...

CLOUD

ADJOINING LAND:

NORTH FENCE

WEST FENCE

SOUTH FENCE

EAST FENCE

DAMAGE OR DEGRADATION

.....

.....

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.....

.....

"IMPROVEMENTS"

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REPTILES AND FROGS

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RECOMMENDATION

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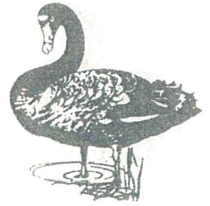
MAP ATTACHED? YES/NO If not, why not?

PHOTOGRAPHS ATTACHED? YES/NO If not, why not?

IF INSUFFICIENT ROOM ATTACH EXTRA SHEETS.

.....

SIGNATURE



DEPARTMENT OF FISHERIES AND WILDLIFE

Western Australian Wildlife Research Centre

Mullaloo Drive, Woodvale, W.A. 6026. P.O. BOX 51, Wanneroo, Western Australia 6065. Phone 405 1555 Area Code 09

IMPROVING FARM DAMS TO PROVIDE BREEDING HABITAT FOR
SELECTED WATERBIRD SPECIES

1. CAUSES OF LOSS OF HABITAT

- a) Drainage - So protect existing wetlands
- b) Salting - Remedies - Provide Nest Sites

2. TYPES OF DAMS FOR CONSIDERATION

- a) Dammed Creeks - islands, nestboxes
- b) Turkey Nest - Raft Nestboxes
- c) Creeks and watercourses - flood areas - islands
nestboxes

3. REQUIREMENTS OF WATERBIRDS

- a) Food Supply - insect larvae invertebrates
- b) Cover - Vegetation - predator protection

4. NEST BOX REQUIREMENTS

- a) Porch
- b) Access hole of correct diameter
- c) Ramp
- d) Shavings
- e) Cover

5. ISLAND - Vegetation

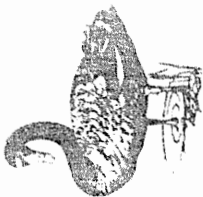
- Raft - construction vegetation Ramp



DEPARTMENT OF FISHERIES AND WILDLIFE

Western Australian Wildlife Research Centre

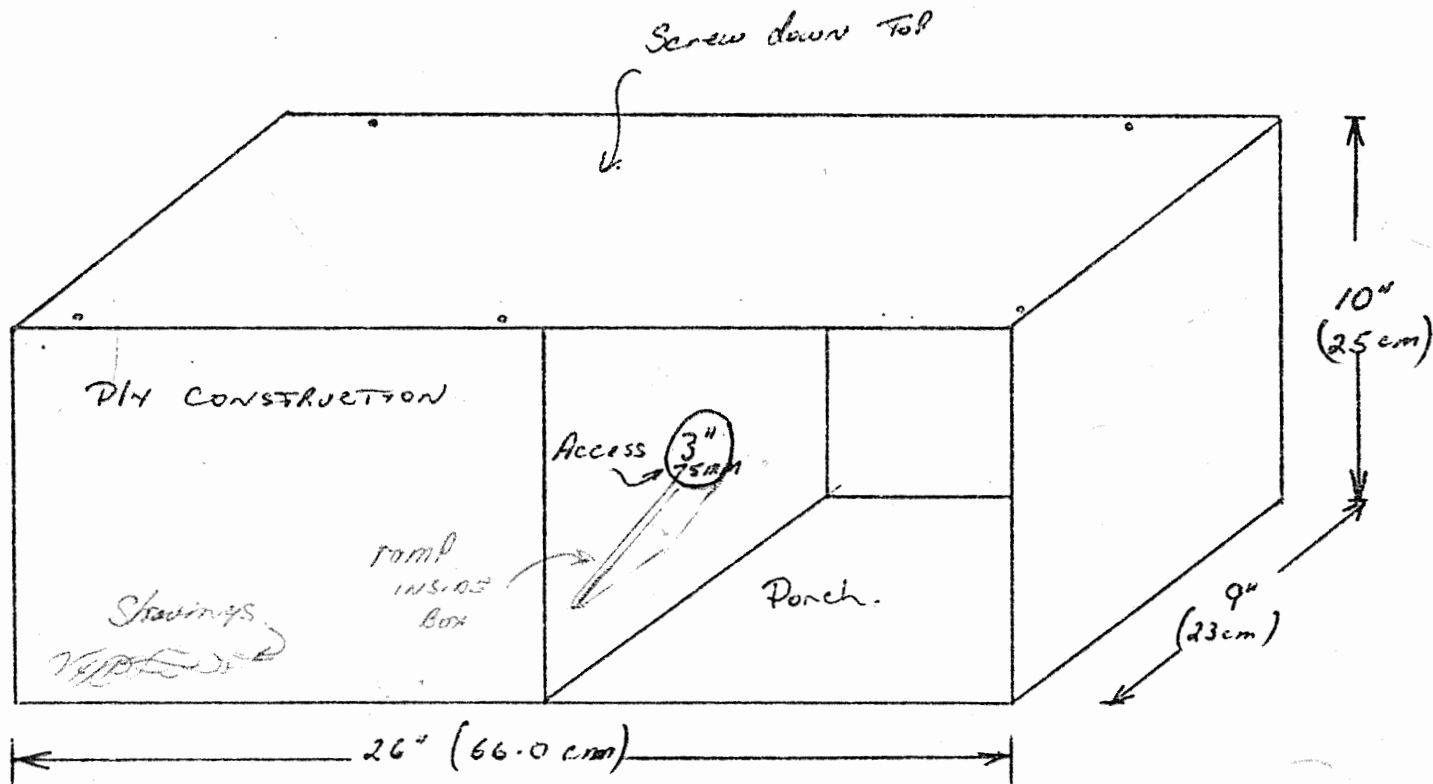
Mullaloo Drive, Woodvale, W.A. 6026. P.O. BOX 51, Wanneroo, Western Australia 6065. Phone 405 1555 Area Code 09



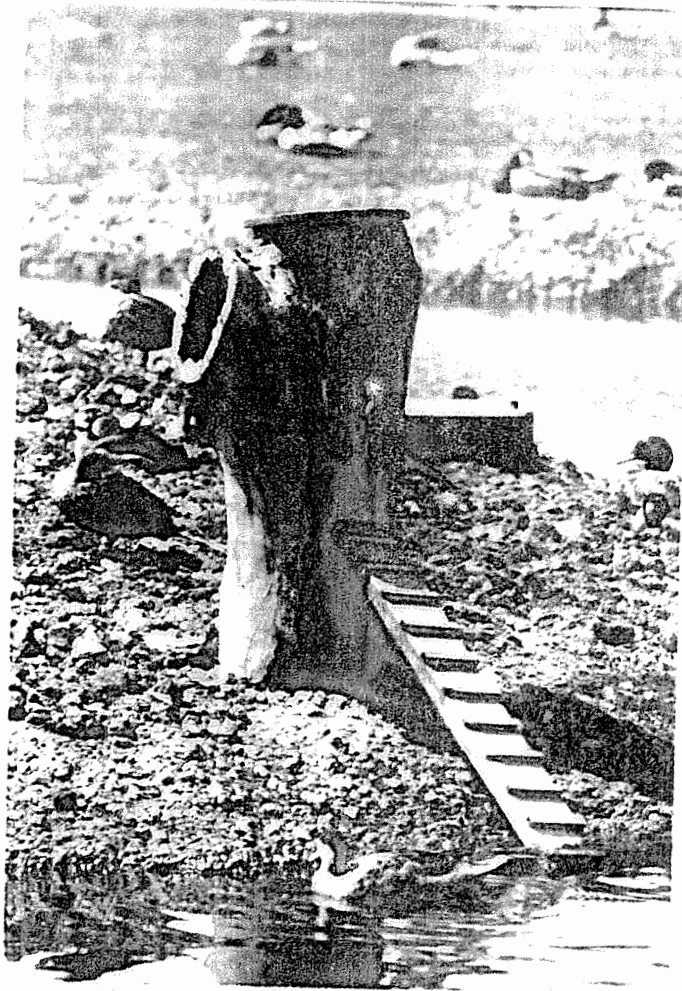
Ground Box

09: GRAY TEAL

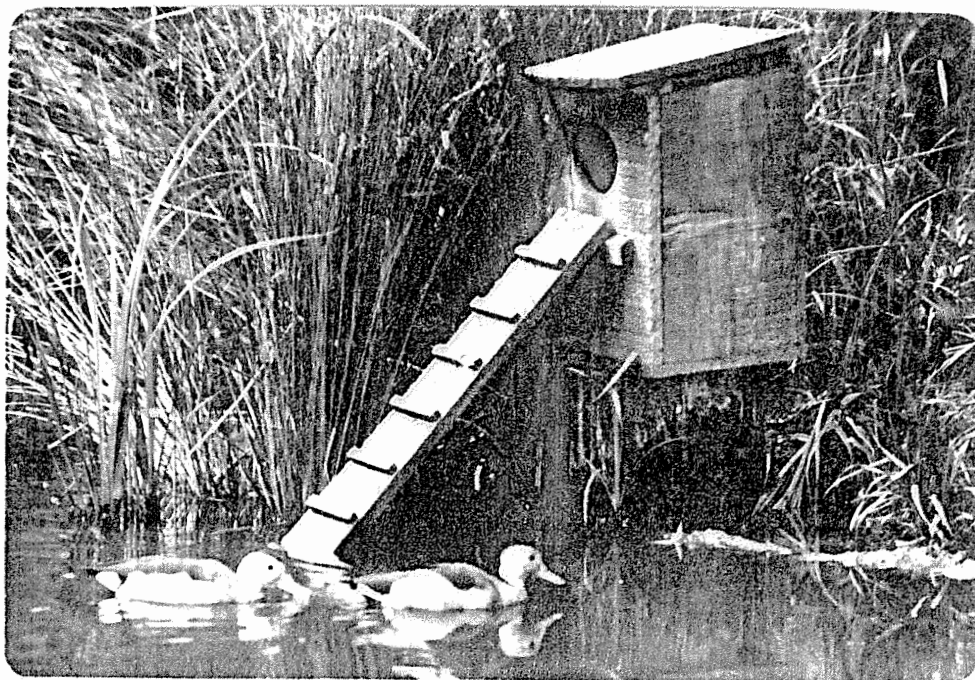
PINK EARED PUCK



MOUNT ON POST or RAFT



Hollow Tree Nest. (Grey Teal Pink-eared Duck)



Post Nest with Ramp
(Grey Teal Pink-eared Duck)