

BAYSWATER

BAYSWATER RESERVE

GNOWANGEKUP

BEAUFORT RIVER

GIN GIN

BEERMULLAH

Twinlock
Crystalfile



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and Display Systems.

14. Sanderson S
Embleton 6062
26.4.78

Dr Stephen Davies
Wild Life Research Station
Clayton Rd
Helena Valley

Dear Dr Davies,

I am taking the opportunity to impose on your limited time to write to you about our little Bird Sanctuary in King William Street, Bayswater. I have been working with the Bayswater Shire on this reserve for some time and have been recommended as Honorary Warden.

One thing is very noticeable, we have no sick birds, and as the wet area is about $3\frac{1}{2}$ hectares there is a good variety of waterfowl. At my request the shire are maintaining the water level with bore water, and possibly this is the reason we have good health in the birds.

I think another is the presence of predatory birds, particularly a pair of Whistling Eagles. Also Peregrine Falcons, Black shouldered Kites and Little Falcon are frequently seen. I think these birds would prey on any unfit birds and the eagles certainly are eating Black Duck, and so would cull the birds effectively. Generally, overall numbers are low compared

with other lakes in the metropolitan area, but the variety is very good. 8 species of ducks, 3 herons 2 Ibis 2 of Egrets and this month 2 pairs of Spoonbills. It is noticeable that Black Ducks are scarcer than usual, but many more shoveller ducks and teal are there, with shoveller ducks predominating. Last year teal shoveller and white eyed duck bred, and of course Black Duck. They appeared to be short of nesting sites, so this year I am trying putting in some 4 gallon drums as nesting boxes and see if I can persuade some more birds to nest in the area. I have not done any feeding as I am trying to maintain a natural balance of numbers as I think it is better to try and keep the individual number stable and have a good variety of species. I am enclosing a list of birds recorded in this reserve.

Yours faithfully,

Eric Singleton

Bird list Hong William St Sanctuary.

Ducks

Black Duck

Chestnut Teal

Grey Teal

White eyed

Blue Billed

Blue winged Shoveller

Mountains

Herons

White faced

White necked

Nankian Night Heron

Large egret

Little egret

Staw Necked Ibis

White Ibis

Yellow Billed Spoonbill

Pied Still

Black Fronted Dotterel

Black Swan

Pelican

Little Pied Cormorant

" Black "

Large Pied "

Large Black "

Little Grebe

Western Swamphen

) Coot

Osprey

Whistling Eagle

Peregrine Falcon

Little Falcon

Black ~~White~~ Shouldered Kite

Nankian Kestrel

Bee eater

Black-faced Cuckoo Shrike

Pipit

Red Warbler

Yellow Rumped Thornbill

Silvereye

Brown Honeyeater

Singing Honeyeater

Magpie

Magpie Lark

Crow

Silver Gull

White Wagtail

Little Wattler

Kookaburra

BIRD LIST - KING WILLIAM STREET SANCTUARY

Ducks

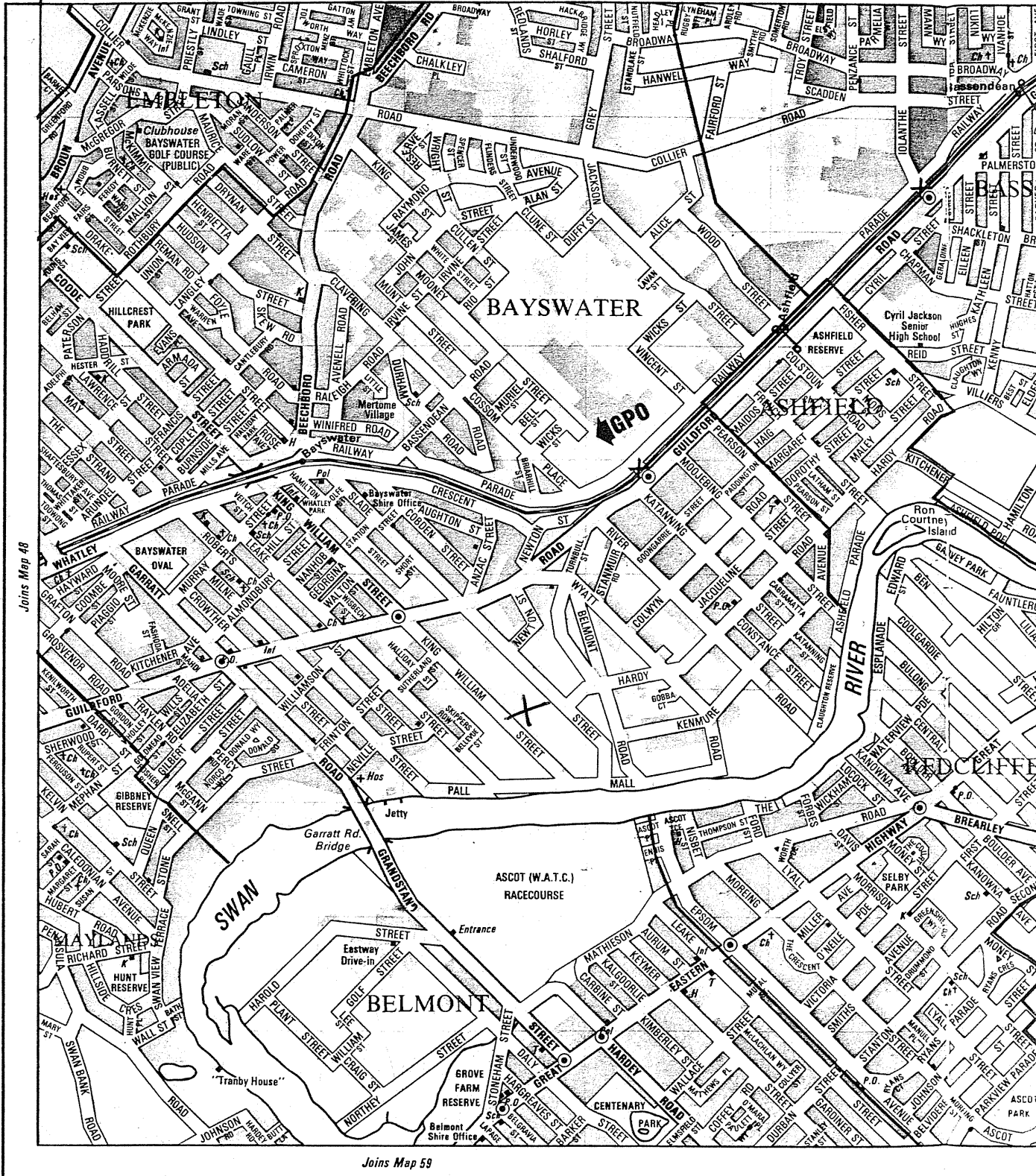
Black Duck
Chestnut Teal
Grey Teal
White-eyed Duck
Blue-billed Duck
Blue-winged Shoveller
Mountain Duck

Herons

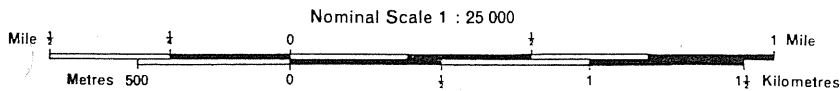
White-faced Heron
White-necked Heron
Nankeen Night Heron

Large Egret
Little Egret
Straw-necked Ibis
White Ibis
Yellow-billed Spoonbill
Pied Stilt
Black-fronted Dotterel
Black Swan
Pelican
Little Pied Cormorant
Little Black Cormorant
Large Pied Cormorant
Large Black Cormorant
Little Grebe
Western Swamphen
Coot
Osprey
Whistling Eagle

Peregrine Falcon
Little Falcon
Black-shouldered Kite
Nankeen Kestrel
Bee-eater
Black-faced Cuckoo Shrike
Pipit
Reed Warbler
Yellow-rumped Thornbill
Silvereye
Brown Honeyeater
Singing Honeyeater
Magpie
Magpie Lark
Crow
Silver Gull
Willie Wagtail
Little Wattlebird
Kookaburra



Joins Map 48



*Bird Sanctuary owned by Shire of Bayswater.
 Incorporates lots 12, 9, 8, Pt 13.*

Bird Sanctuary, King
William St., Bayswater.

Mr Lane

You may care
to note these papers.

R Powell
17.5.79

Noted L.H. - paper file. 23/5/79

2 Tucked duck reported to
w/o G Hanley by Eric
Singleton on or about 17/8/79.

ER 2/8

Baywater Swamp. 1983/84.

Eric Singleton advised by phone today 7/1/85.

1. Several clutches of Pink-ear ducks produced from nest boxes - estimates each pair has reared at least three clutches
2. Three nests have just been occupied again last week and contain 7, 8 & 9 eggs each (Pink ear)
3. Blue Bill ducks utilized the floating nest late 1983 - 12 ducklings hatched from 14 eggs a fortnight ago (approx 29/11/84)
Note 2 ♀ seen and incubated.
4. Both ♀ Blue bill have commenced laying again - 8 eggs at 6/1/85. Males attending females.

Clumsy 7/1/85.

CRMO ^{7/1} noted thanks to note.

Research file.

① Get some more photos of the birds
to show - see the notes

186

② What is fledging success - see notes on how
to do it

WEST AUSTRALIAN FIELD AND GAME ASSOCIATION (INC)

CONSERVATION AND RESEARCH SECTION

Done + Grant
to note
+ action
30/11



Noted CP 2/12
Noted. The 1/14

INITIAL REPORT OF BAYSWATER SANCTUARY

UP TO EARLY 1982
PRIOR 1982 BREEDING SEASON

INCORPORATES WAFGA'S FIRST SUCCESSFUL NEST BOX PROGRAMMES

Compiled by: Eric & Peter Singleton
Ray Motteram

JUNE 1982

① Get Shire to publish as example
to other. — James will liaise?

186

② What is feeding success as opposed to having
success.

WEST AUSTRALIAN FIELD AND GAME ASSOCIATION (INC)

CONSERVATION AND RESEARCH SECTION

Don + Grant
to note
+ return

30/11



Noted CP 2/12
Metcalf. 1/14

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1. INTRODUCTION

As a child Eric Singleton grew up in England and Western Australia. In his early years his family raised various fowl, including ducks. He once hunted, but has not done so for many years. Later he, his wife Beryl and their son Peter bred ducks at Jandakot, subsequently learning a great deal about these fowl in the domestic state. More recently the family moved to the Embleton area. It was not long before both Eric and Peter were visiting the Bayswater Sanctuary. It began an interesting and excellent observation period which had been brought about by the circumstances of their lives. Peter is confined to a wheelchair and cannot write freely. This failed to stop him becoming university qualified and his studies are continuing. Because of that, Eric, Peter and Beryl have been some of the few who specialize in small locations which allow greater understanding in restricted areas.

In 1977 Eric and Peter began to take photographs and make rough observations of the area so that comparisons could be made from year to year. It was some time later that I started to work with the Singletons because, as a duck shooter-conservationist, my interest in wildlife management, spurred by the Wildlife Management Field and Game Congress, was growing. It took only a short time for the WAFGA to realize the importance of the work being done at Bayswater so we have, since 1980, included the Singleton reports in our general research. This is its introduction in the written form and from now reports will add to this initial paper.

I have taken space in this report to relate my interpretation of the development because I believe it gives insight into the way people like the Singletons can be used by interested bodies such as Shires, WAFGA, RAOU and Fisheries and Wildlife.

I state here that I am proud to be able to assist and I also congratulate the Singletons for their efforts in bringing this information into the Research Section of the WAFGA.

R.W. Motteram
VICE PRESIDENT FIELD & GAME FEDERATION OF AUSTRALIA
RESEARCH CO-ORDINATOR WAFGA

NOTE

Eric refers to me as WAFGA President. Since then I have stood down in favour of F. Dart-Kelly. I had finished my maximum three year term.

2. LOCATION

River end of King William Street
Latitude 31°55"S., Longitude 115°15"E.
Area: 4 hectares officially, extending to 10 hectares, including
some private land.

3. TOPOGRAPHY

Riverling swamp, comprising grassy mudflats with tea-trees over water. Open water 1-1½ metres deep, with Paperbarks over water and on margins; also area of Cumbungi.

4. HISTORY

The Bayswater Shire Council developed a rubbish tip alongside the present swamp, on the bank of the Swan River and had filled in a considerable area upstream of Garratt Road Bridge. As it became obvious that this area would lose its natural character and its wealth of wetland wildlife, some far-sighted Shire members decided to preserve some of the remaining swamp alongside King William Street. The end of King William Street was closed to vehicles and a compacted clay wall was built to enclose the dump and prevent pollution of the water. A sign was erected in January 1978, although the area had been mooted as early as 1977.

Eric Singleton became involved about this time, having written a letter to the Shire requesting that some action be taken to exclude trail bikes. Messrs Tony Cooper (Assistant Shire Clerk), Ken Parkes (Health Inspector) and A. Patterson combined to make a video tape of the area.

Water from a bore was introduced by the Shire in April 1978 to keep up the water level, as the area normally dries up in late summer. Paperbark trees were planted around the edge of the wet area.

A list of birds was compiled, maintained and up-dated by weekly visits, and Peter Singleton gave valuable assistance in compiling a selection of colour slides and in typing regular reports for the Shire, as well as assisting the Bird Lists for the CSIRO Bird Atlas project.

5. NEST BOX PROGRAMME

In 1978 3 drum nests were positioned in trees over the water, these being 5-gallon drums, open half way at either end, placed horizontally in the forks of paperbark trees over open water, and about 1 metre above high-water mark. Straw was provided, and in October 1978, 8 Grey Teal eggs were laid in one nest; subsequently, 8 healthy youngsters hatched, thus proving the practicality of such nests.

Mr Ray Motteram of the WAFGA, their President and a keen bird man as well as an enthusiastic conservationist, became interested and has assisted greatly in the programme, with a good deal of encouragement from other club members.

In 1979 the number of drum nests was increased to 12. As these nests were installed late in the season, only two were used; one contained 8 Black Duck and 1 Blue Bill egg, all of which hatched.

In 1980 laying commenced in July, by Black Duck and Grey Teal. Seven drums were used, including one black plastic drum which Ray Motteram obtained from the Fisheries and Wildlife Department; results from it were nine Black Duck eggs laid and hatched. Overall, a 96 per cent success rate of hatchlings to eggs laid was achieved.

During 1981 the first Black Duck clutch was disturbed by an unknown predator. Six nests were used, but two clutches were destroyed by vandals in canoes. One nest of Black Duck contained 12 eggs, all hatched; and one nest used three times by Grey Teal, laying 11, 10 and 7 and hatching 9, 8 and 7.

Other hatches; Black Duck, 9, 8, 9. As this was a wet year, birds were able to use other areas, therefore numbers at King William Street were lower, but a high proportion of ducklings were seen. It is interesting to note that egg numbers were higher in 1981, and birds (particularly Teal) were laying at random, as several clutches were abandoned late in November, with only a few eggs having been laid. Coots and Moorhens were breeding profusely. One nest hatched 16 chicks.

6. ALTERNATIVE NESTS

Ray Motteram has been working on alternative nests in co-operation with other WAFGA members.

These are various types of floating nests, either a platform of Styrofoam with drum anchored to it so as to allow for rise and fall of water, or a complete block of Styrofoam with a hole cut into it for the nest. These were intended for use on open water and would not need to be moved in flood times. As these nests were not put in place until late, no use has yet been made of them and, of course, the birds had ample use of the more familiar drums.

7. SUMMARY

7.1 Why use artificial nests?

Artificial nests were used because of -

- (a) lack of suitable sites, such as hollow trees, stumps, holes in rocks, etc
- (b) the vulnerability of natural nests to cats, dogs, etc in the absence of islands, which meant that natural nests had to be in the grass on the wetland margins
- (c) artificial nests facilitated a closer study of the health of the birds eggs, numbers, shell quality, hatchability and number of clutches laid by individual birds.

So far, it would seem the initial idea of drums open at either end has paid off, but the metal drums are not as long-lasting as the plastic. Advantages of this drum over the plastic are

- (a) cooler, and
- (b) allows easy escape when nest is checked by observer, or attacked by predator.

Vertical plastic drum nests with a hole in the side are

- (a) darker, which may make them more acceptable to shy birds
- (b) better sheltered from wind and rain.

Their disadvantages include

- (a) hotter in late seasons, and
- (b) no easy escape

NB: An obvious disadvantage of all artificial nests is that they are all fairly obvious to vandals and predators.

Floating nests: no conclusions yet have been made as they have not been in place long enough.

Predators

Stray cats are common, but do not appear to have any marked effect on bird numbers, but trapping would be an advantage.

7.2 Natural predators

A pair of Whistling Eagles is generally in this area and take an occasional duck, but more frequently White-faced Heron are the choice. As these birds are natural scavengers, their presence is welcomed; they are very valuable in removing any dead or sick birds, thus preventing the spread of disease.

Other hawks are occasionally sighted but are only part of the natural environment, and valuable as such.

7.3 Vandalism

The worst example was the shooting of several shags and the puncturing of some nest drums by some idiot with a shotgun, the dead birds being left to pollute the water. This year, two teenage no-hopers in a canoe took two clutches of Grey Teal eggs and broke them. Co-operation by local police and Shire officers has hopefully stopped this.

Public access to area

The sanctuary is bounded by a gravel road which is not

accessible to vehicles, and provides an excellent view of the wet area, at the same time being separated from the sanctuary by a wide drain. Birds can be observed easily without being disturbed.

7.4 Value of area

We have at King William Street an excellent opportunity to try out various nest boxes; the small area involved and the accessibility for observation provides an opportunity for concentrated study of a wide variety of waterfowl. Lessons learned here can be applied in other, more remote areas. An example of this is the work of Mr Bob Burking and the members of the WAFGA in placing nest boxes in lakes at Wannamal and Yealering and other lakes with considerable success.

(It is important to note that in five years, I have yet to see a sick bird in this area).

E. Singleton

8. CREDITS

Bayswater Shire Council - particularly Mr T. Cooper, Assistant Shire Clerk
- Mr K. Parkes

Mr Ray Motteram, who has worked with me for some four years

Messrs Jim Lane and Don Munro of the Fisheries and Wildlife Department
for valuable advice

Members of the West Australian Field and Game Association

Mr Peter Singleton, for photography, typing and observation

APPENDIX 1

PHOTOGRAPHIC DISPLAY

Prior to the co-ordinated nest box programme being initiated by Bob Burking of WAFGA Research, Eric Singleton, with permission of the Bayswater Shire, had experimented on a reasonably limited scale at the Sanctuary. Below shows some of the natural and artificial breeding.

Of note, although substantial breeding of ducks occurs naturally, no natural nests have been observed, with the odd exception of a Blue Bill Duck laying in a Coot/Moorhen's nest.



This Coot nest contained 16 eggs. Success breeding 100%. Normal for Coot in this area 8-9 eggs.

Baby Coot held by Eric Singleton. Very common sight. Note: All Coot breeding is in natural nests - exception a floating half of a foam surfboard was used one year



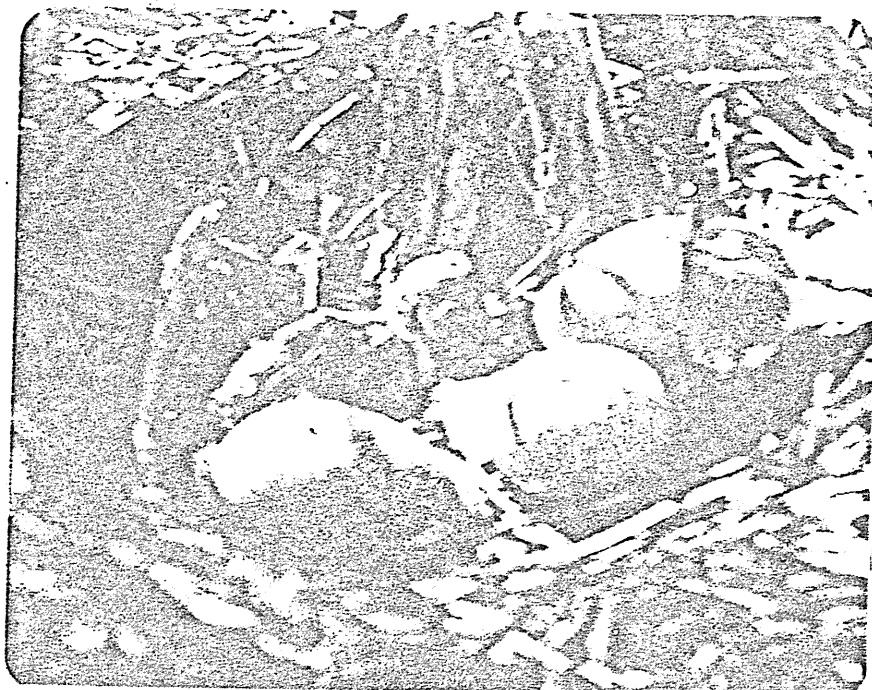


Joy to 'Papa Eric'. This nest successful in 1980. Even more so in 1981, when two black duck clutches left this nest. Eight eggs in the first breeding.

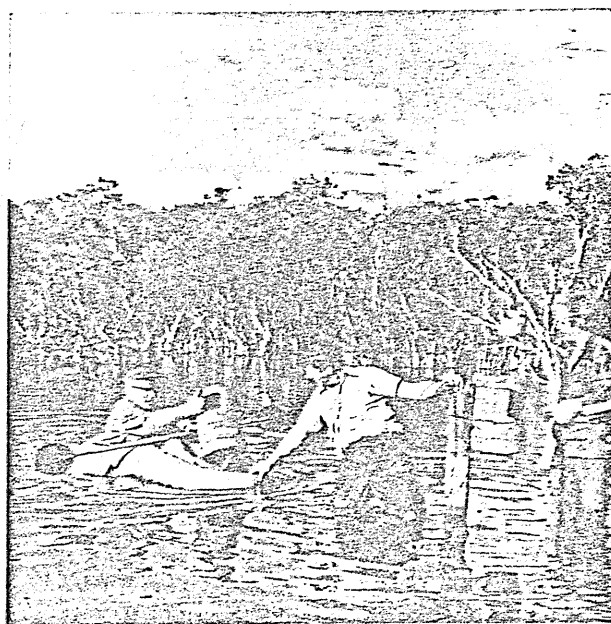
NOTE: After the 1982 January rains a dead baby blackie was found in later months. Parent abandonment.



These eggs 1981 breeding season, were part of the third clutch. After a teal then blackie success 7 and 8 respectively. Careful observation shows the top egg to be .5cm longer indicating different laying ducks. Of note, this was a Riggert box (Hard Plastic Drum)



Hatching of a baby coot



Eric in a boat comes in for closer inspection after the two rookies Garry Davies and Noel Plowman. This is the first modified Riggert tried (two holes and inverted). It is in open conditions (not a usual Eric placement). The box Eric is holding shows Bayswater No. 6 WAFGA. The white thing in the tree is a paint tin with hammer and nails in.



Peter Singleton has a good collection of photos of birds from this area, a competent photographer and a keen observer

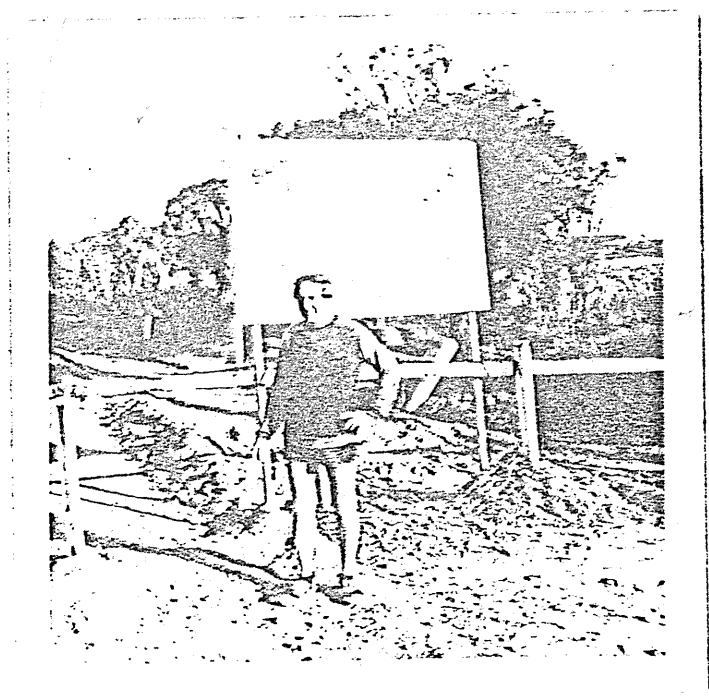


Garry Davies showing an inverted modified Riggert. This photo shows the wire to support - also nailed through the lid

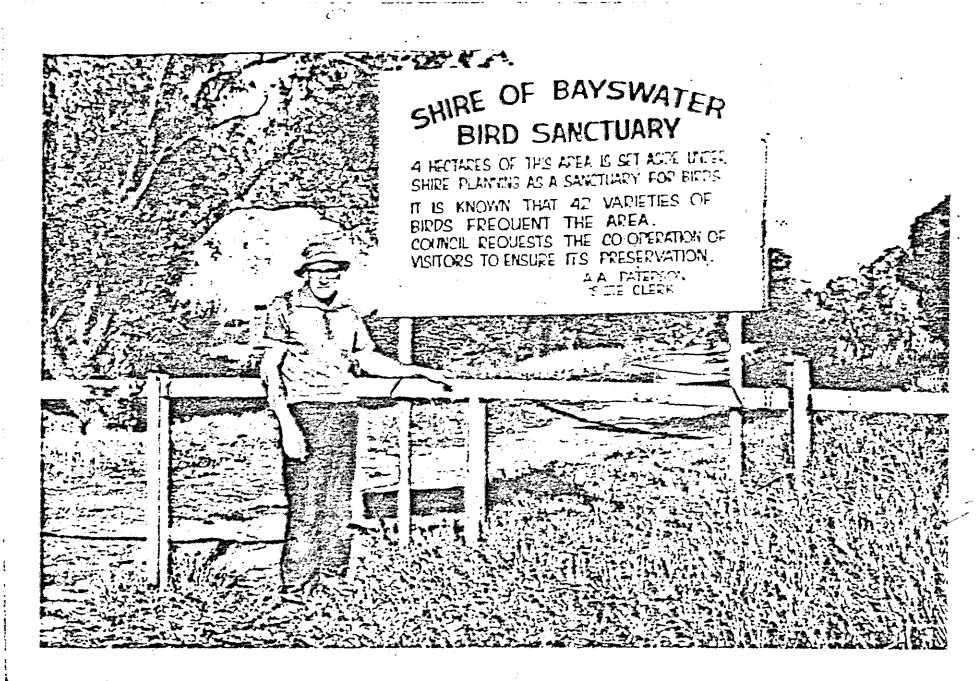


The then WAFGA President 1981, Ray Motteram, with Paper-bark strips and a bit of localised weed for the bottom of the Singleton to his right.

These photographs also give a concept of the types of vegetation. Some, although slowly drowing, are still alive,



Ray Motteram (Sen.) at the entrance showing the sign depicting the Sanctuary and the number of birds frequenting the area. Both sign and details need updating as further number of types noted and breeding details would be nice.



Eric and an earlier readable sign. Our study area is behind Eric's right shoulder

TYPES OF BOXES



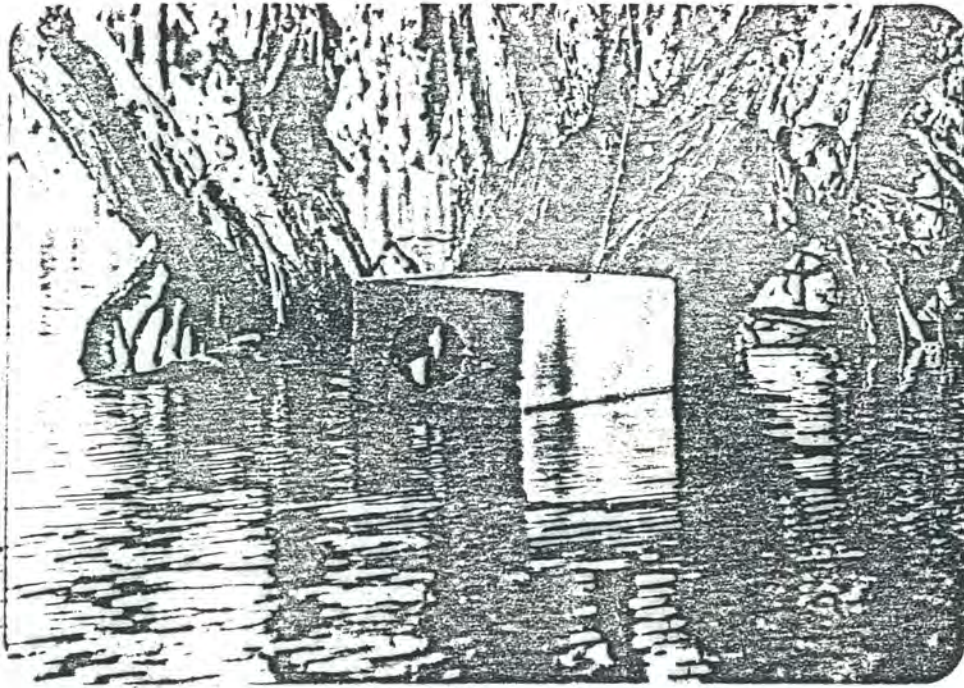
Success occurred with Singleton 4-gallon drum with an end or two ends cut as shown. Usually wedged as shown nailed and tied.

NOTE: . Easily accessible to the birds. Predators do not appear to be a problem to the eggs, in spite of the presence of crows, sea gulls and Western Swamp hens. Only recorded egg destructions have been by people

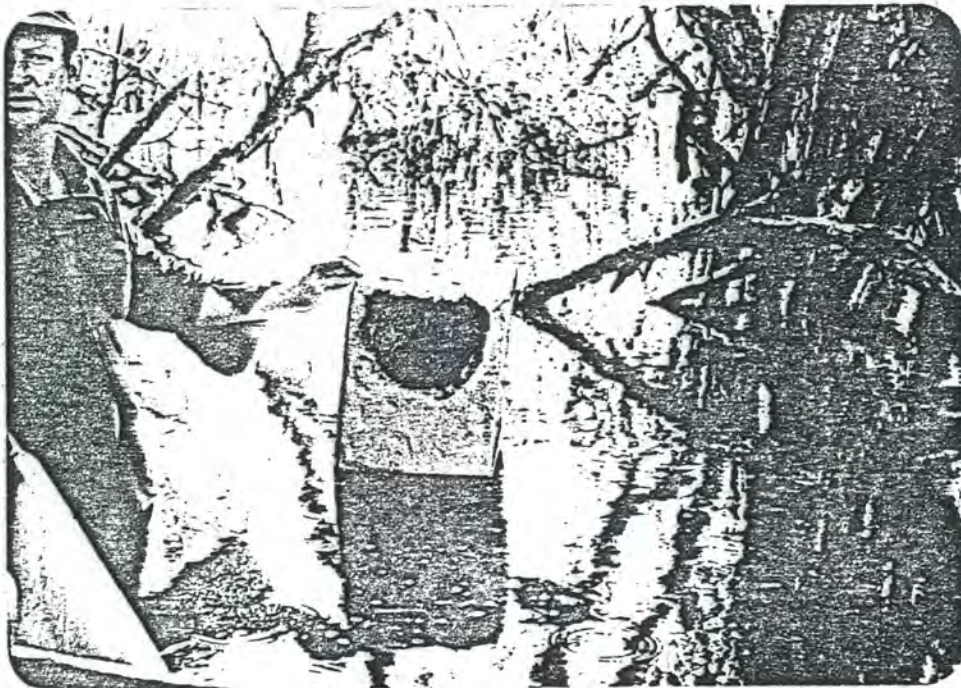


This photo comes from an alternate area but shows the modified riggert clearly

Experimental types - with foam plastic. Floating types



Eric's floater - bottom very close to water and a brick with wire going to a branch supports it

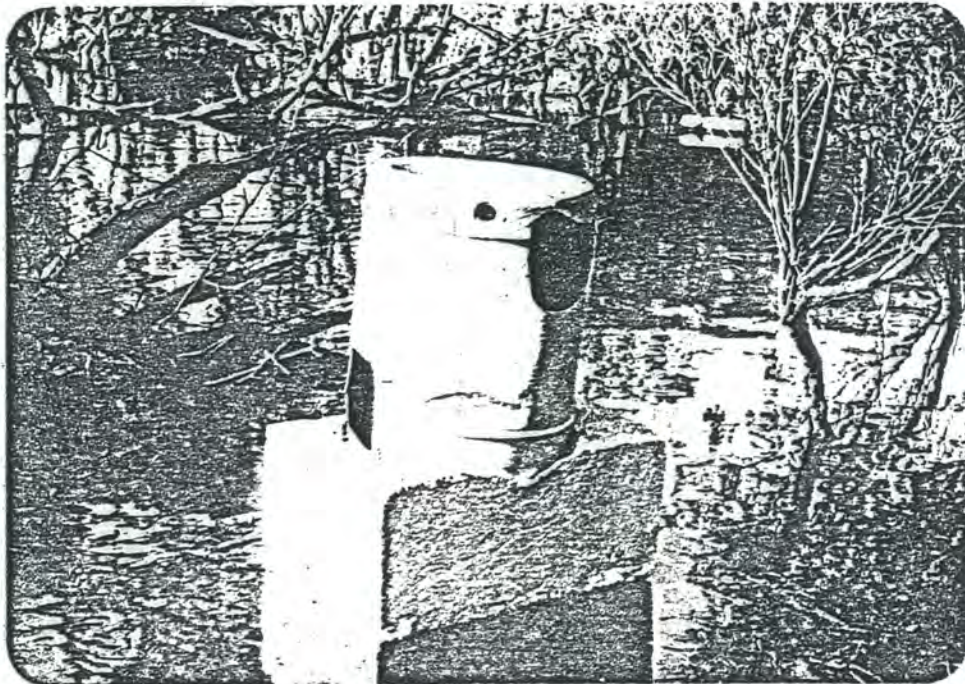


A variation to the above, slightly higher above the water level. Support - tied to a branch horizontally with a stake through the box into the swamp floor

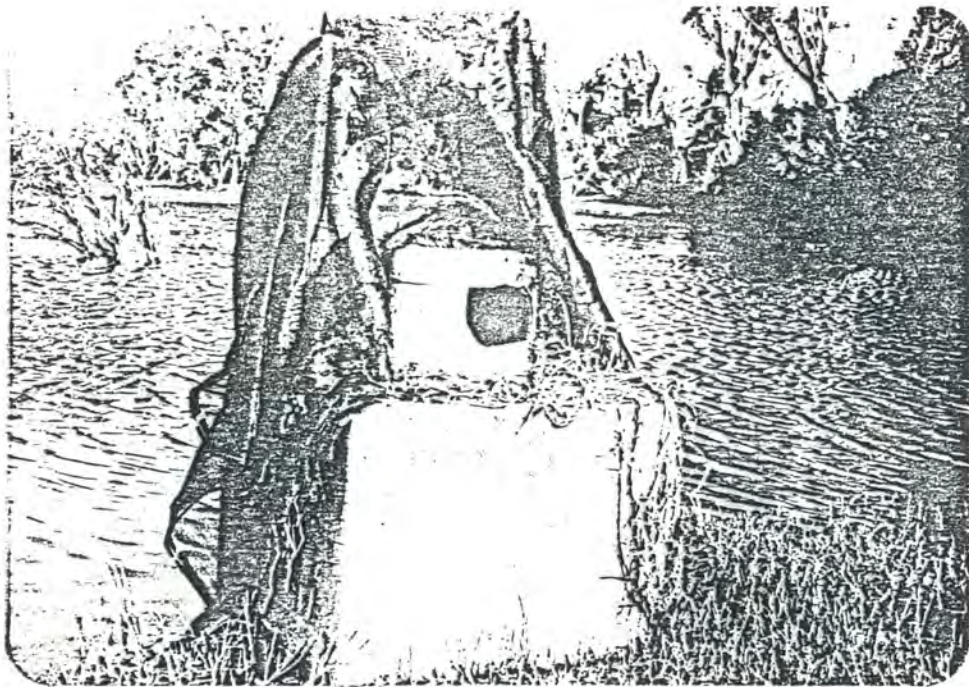


A very solid lump of concrete forms the base for the two pipes which slide through the box. You can see the PVC pipe which is in the foam and will prevent wear due to movement.

A raft at this moment, an open box will go upon it for trial



This floating box has a stake through the foam into the swamp floor. This system uses a box we know works and it is in a dry position. It can move quite freely so an interesting trial



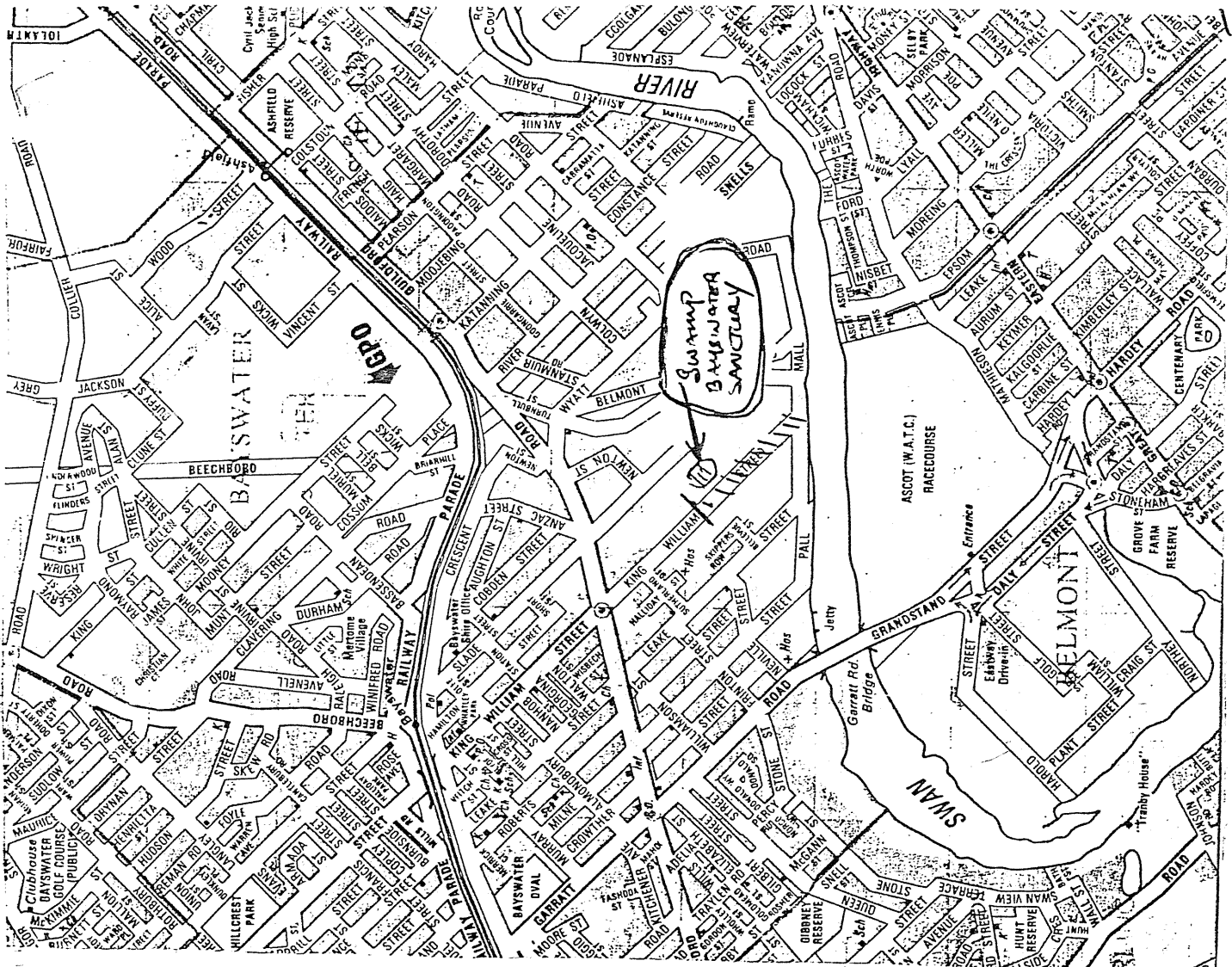
The Floating Monster - originally chained through the base to a 4-gallon block of cement, base came apart and is now wedged in trees.

High from water, has its own cover and grass is growing on the top. Reasonable movement but not as much as previous ones

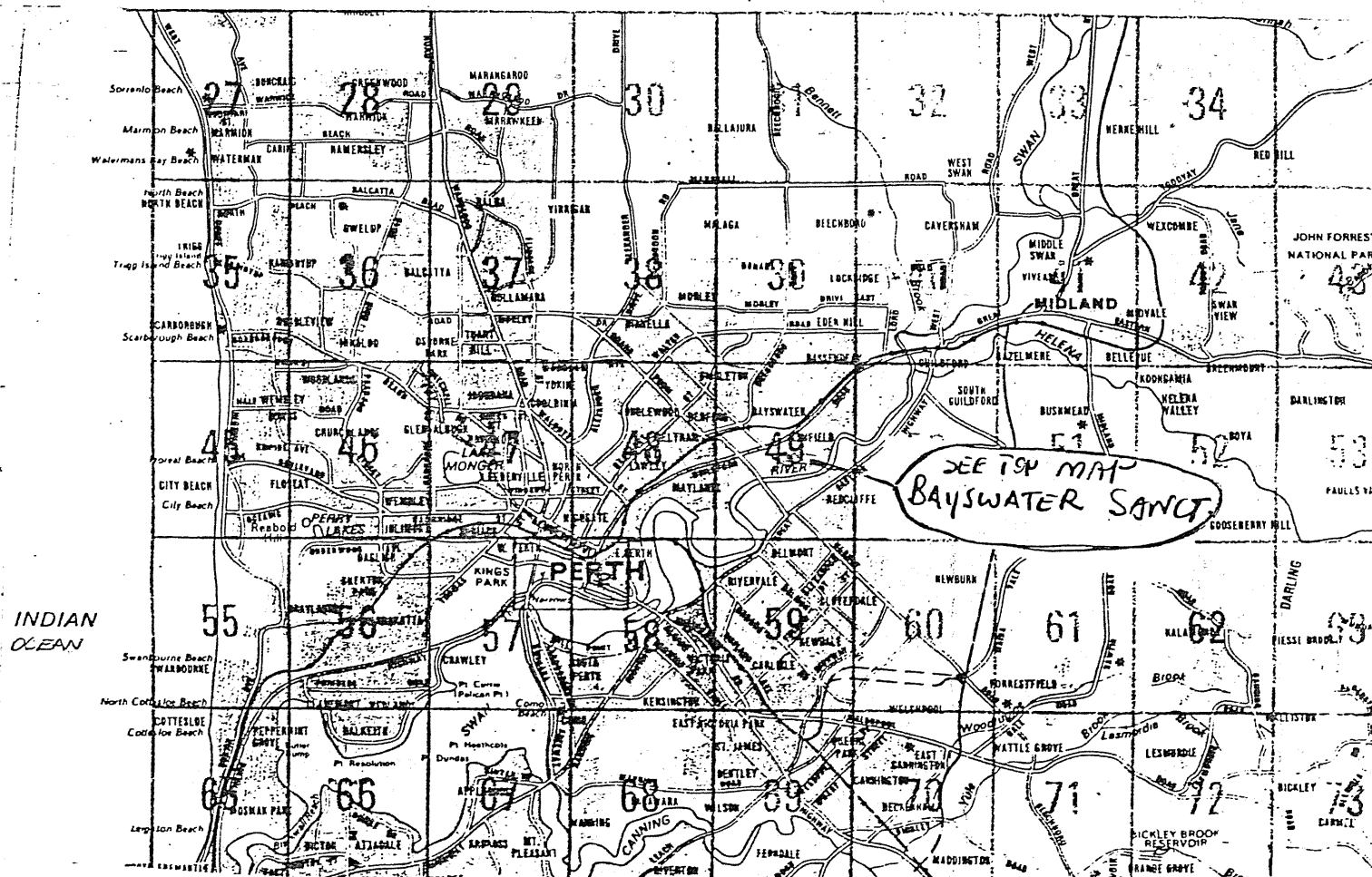
NOTE:

The floating nest boxes are being tried in spite of the high cost of material to see if floating boxes will be used. This is being tried because of the condition of numerous swamps in WA.

Due to clearing and development, low lying areas are becoming swamps. This eventually drowns the trees along with salinity killing them, leaving an open swamp. Open swamps are useless for bird breeding so a successful floating system may in future increase the breeding areas.



APPENDIX 2 MAPS



APPENDIX 3

KING WILLIAM STREET BIRD SANCTUARY, BAYSWATER

BIRD LIST TO OCTOBER, 1981

(a) Ducks

<u>Species Name</u>	<u>Common Name</u>	<u>Notes</u>
Anas superciliosa	Black Duck	Breeding each year
" gibberifrons	Grey Teal	Breeding each year
" rhynchotis	Blue-winged Shoveller	Occasionally breeding, first sighted June 1977
Aythya australis	White-eyed Duck, Hard Head	Breeding occasionally, present from July to December
Malacorhynchus membranaceus	Pink-eared Duck	Not common, yet to breed
Stricktonetta naevosa	Freckled Duck	One sighting
Oxyura australis	Blue-billed Duck	Breeds occasionally
Tadorna tadornoides	Mountain Duck	Periodic visits
Biziura lobata	Musk Duck	Rare

(b) Other Waterbirds

Cygnus atratus	Black Swan	Visitor only*
Fulica atra	Coot	Prolific breeder
Gallinula tenebrosa	Dusky Moorhen	" "
Porphyrio porphyrio (bellus)	Western Swamphen	" "
Podiceps poliocephalus	Hoary-headed Grebe	
Podiceps novaehollandiae	Little Grebe	
Phalacrocoracidae sulcirostris	Little Black Cormorant	Roosting, evenings only
P. carbo	Large Black Cormorant	" " "
P. melanoleucos	Little Pied Cormorant	
P. varius	Large Pied Cormorant	
Anhinga melanogaster	Darter	Occasionally seen

*Note: A pair of Black Swans nested for the first time in July, 1982. Six eggs were laid in a nest built in water c. ½ metre deep.

ERIC SINGTON

PETER.

BERYL.

OUT of NW
1979



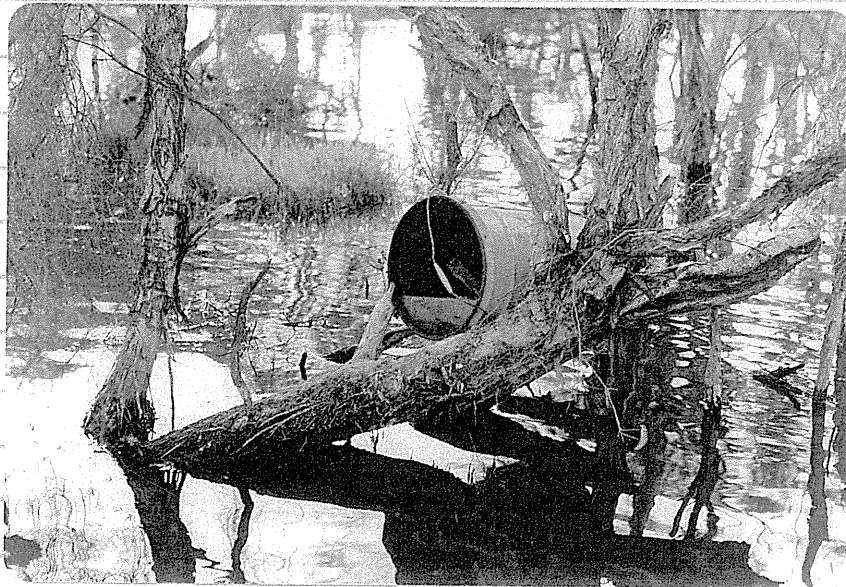
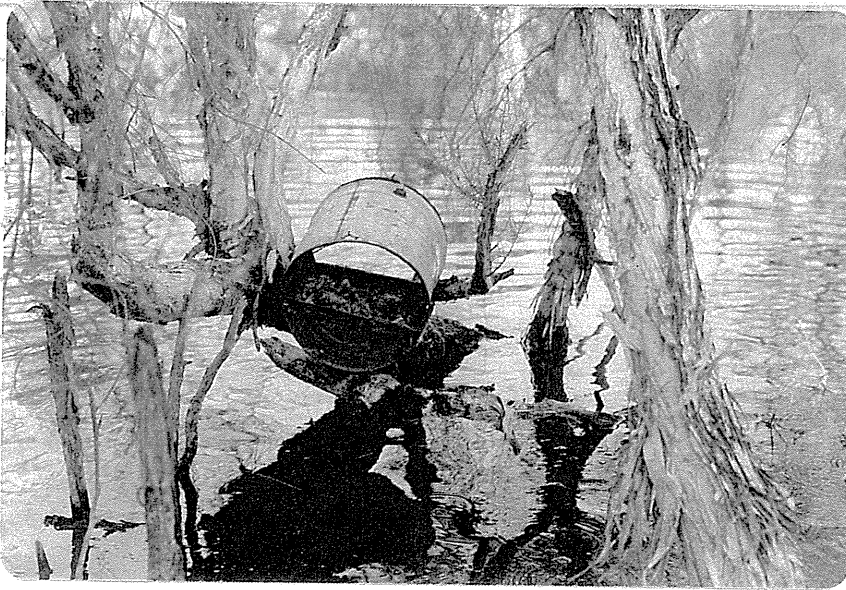
Bayou de l'Esperance (Singleton's)



OCT 20-21
1979



Baywater Reserve (Singleton's)





1/9/80.

Bayreuther Reserve

Eric Singleton phoned to say that five of the nest boxes (including the one P.V.C. down) have been used.

Of the five clutches laid to date;

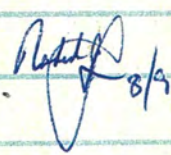
1 has hatched

1 was robbed, and

3 are still incubating.

Both Black duck and Grey teal have nested.

Rh.

We have  8/9

7

BAYSWATER RESERVE. - 31/10/79.

No Cl. 2.2%

Notes.

3 broods Grey teal 10 to 40 deep sd.

Approx. 30 Grey teal
8 White-eye duck.

Ureca Kikewye? grass heavily grazed
on areas of new growth

Jan has detailed notes on breeding
and other species.

Dr.

KING WILLIAM ST. RESERVE. - BAYSWATER