

Department of Fisheries and Wildlife
Western Australia

ANNUAL WETLAND AND WATERFOWL REVIEW

NOVEMBER 1979

Compiled by Wildlife Research Officer J.A.K. Lane
and Senior Technical Officer D.R. Munro for submission
to the W.A.W.A. Bird Committee on 26th November 1979.

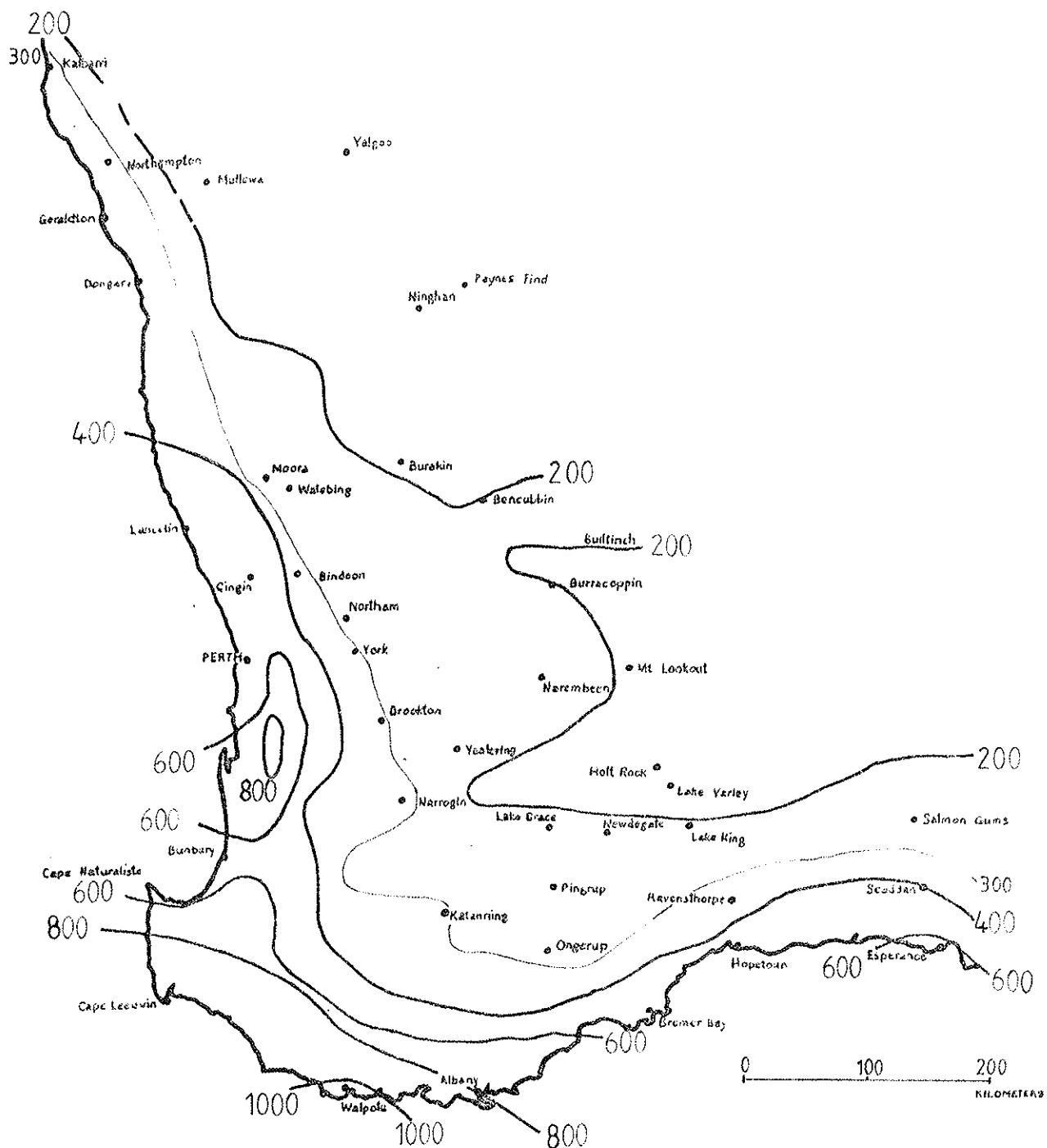


FIGURE 1. Total rainfall (mm): January to October, 1979.

DECILE
RANGE DESCRIPTION

	1	VERY MUCH BELOW AVERAGE
	2-3	MUCH BELOW AVERAGE - BELOW AVERAGE
	4-7	AVERAGE
	8-9	ABOVE AVERAGE - MUCH ABOVE AVERAGE
	10	VERY MUCH ABOVE AVERAGE

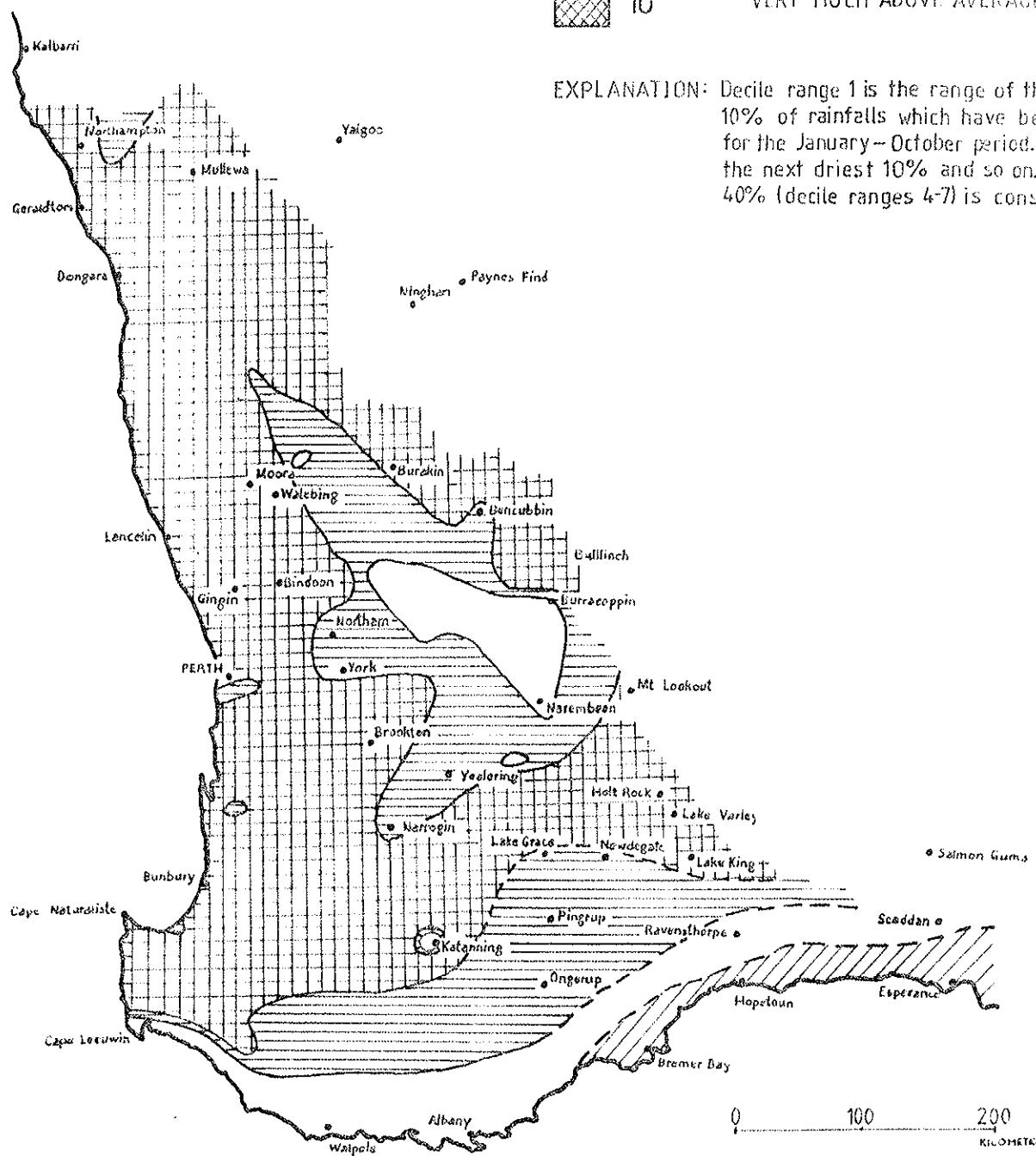


FIGURE 2. Distribution of Decile Range Numbers of Rainfall: January to October, 1979.

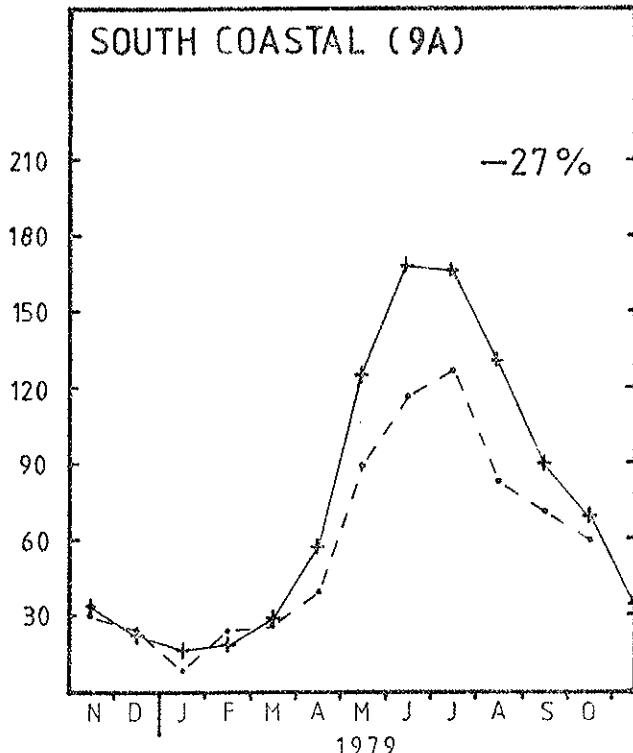
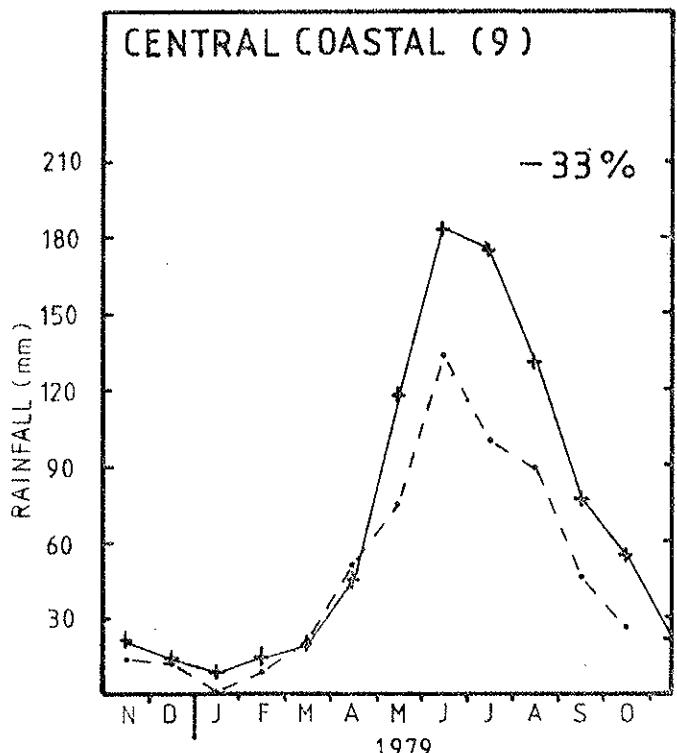
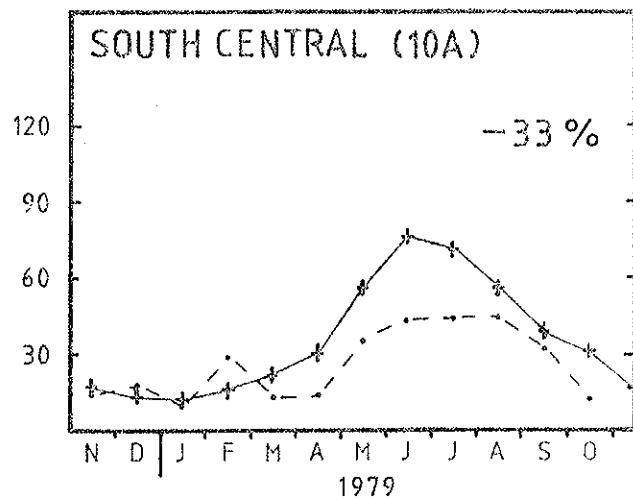
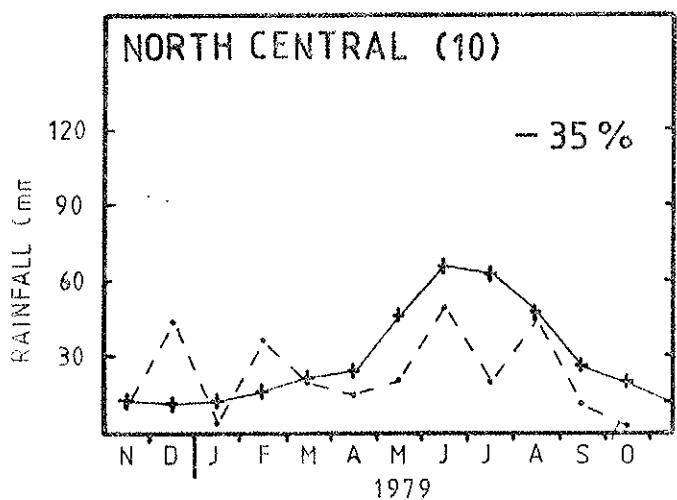
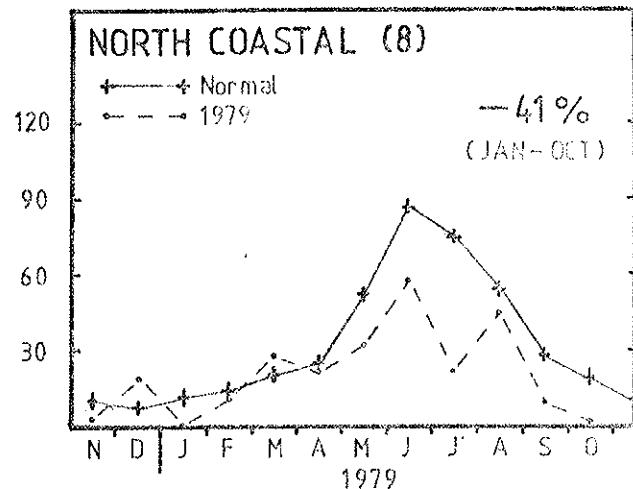
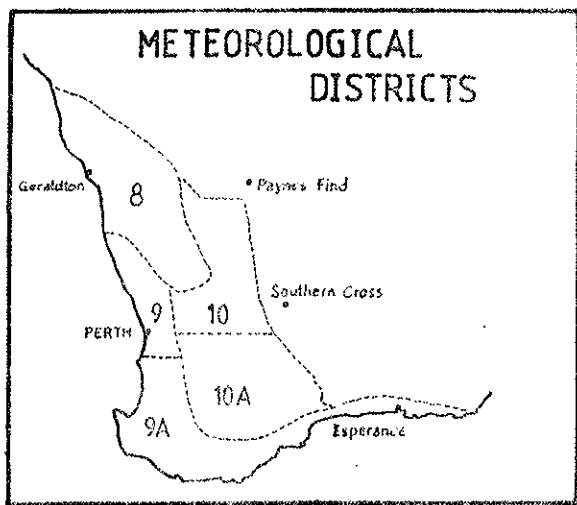


FIGURE 3. Monthly Rainfall Patterns : November 1978 to October 1979

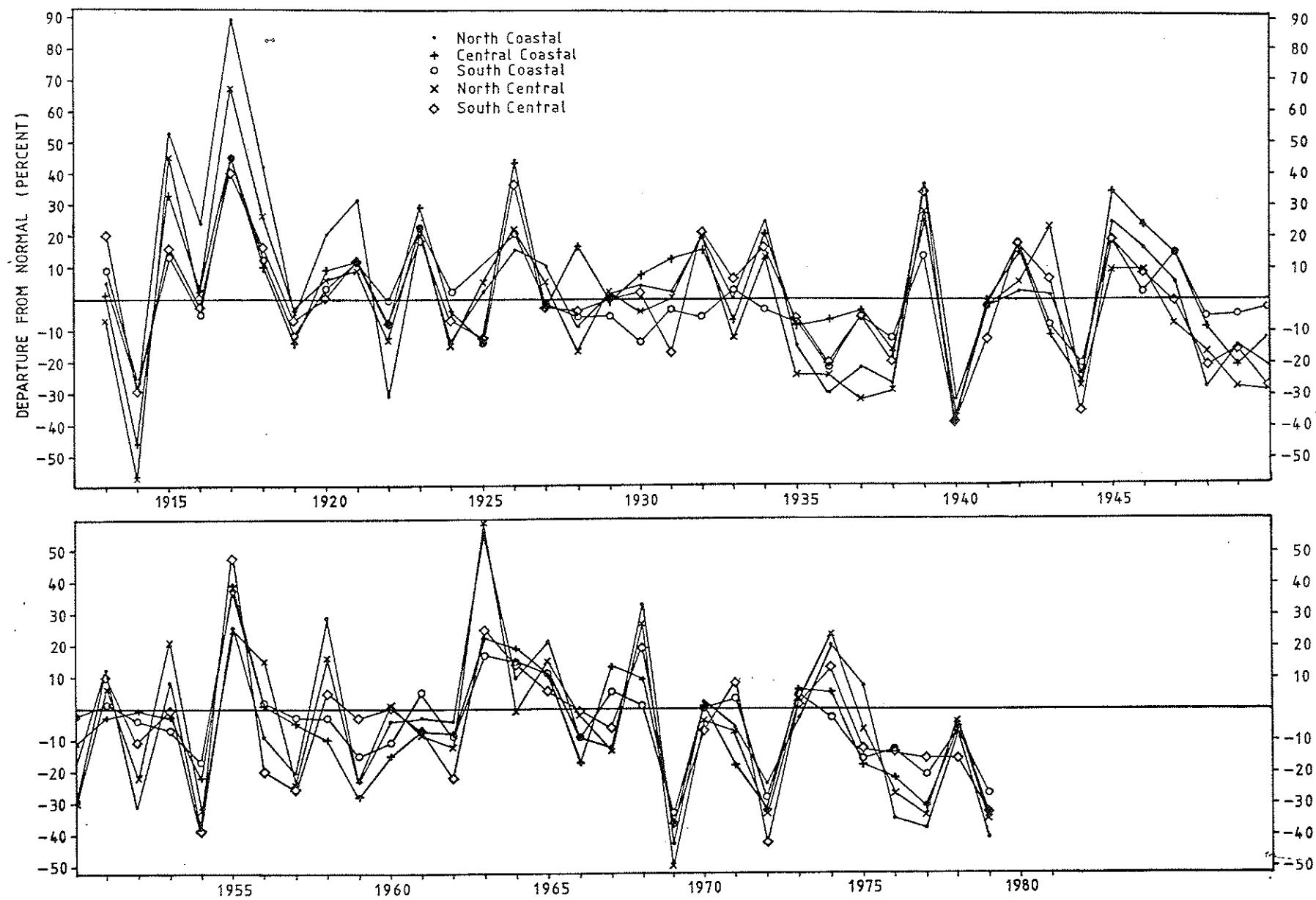


FIGURE 4. Annual District Rainfall (Percent Departure from Normal) : 1913 - 1979

NOTE : Percent departures from normal for 1979 are based on January - October rainfall,
Normal rainfalls for this period are 93 ~ 96 % of annual totals.

1935-38

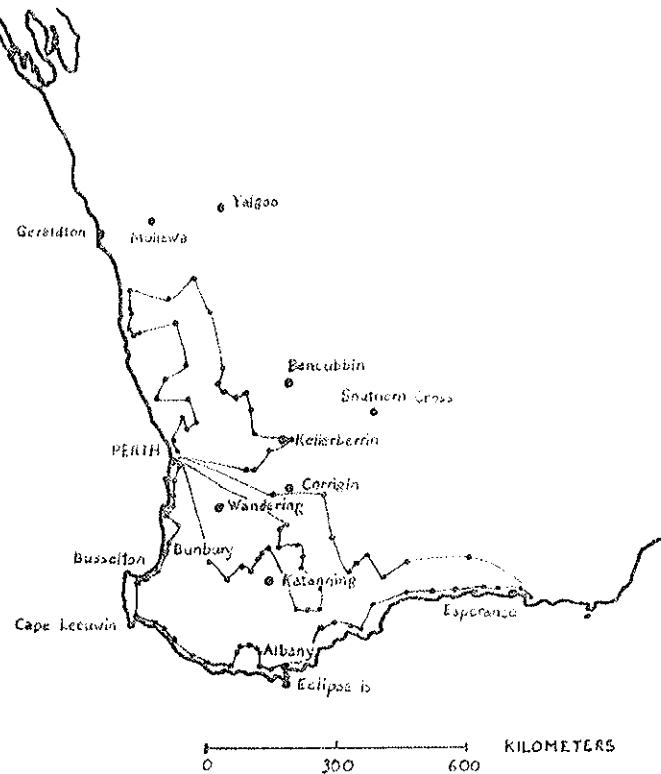


FIGURE 5. Location and survey route of 127 lakes surveyed by air at the end of October 1977, 1978 and 1979.

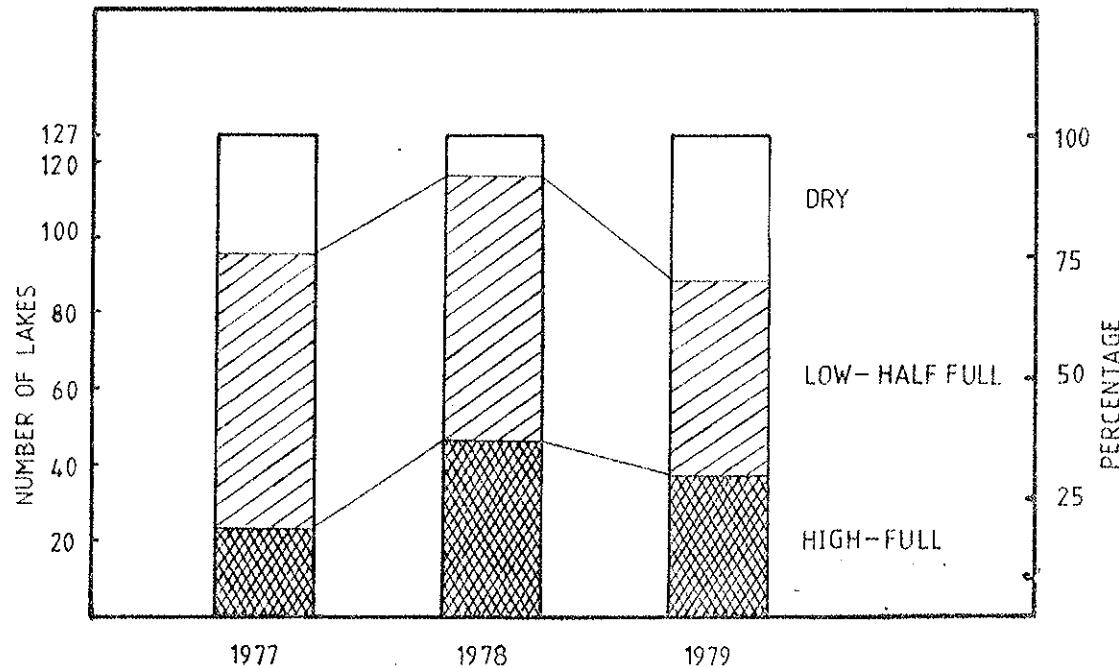
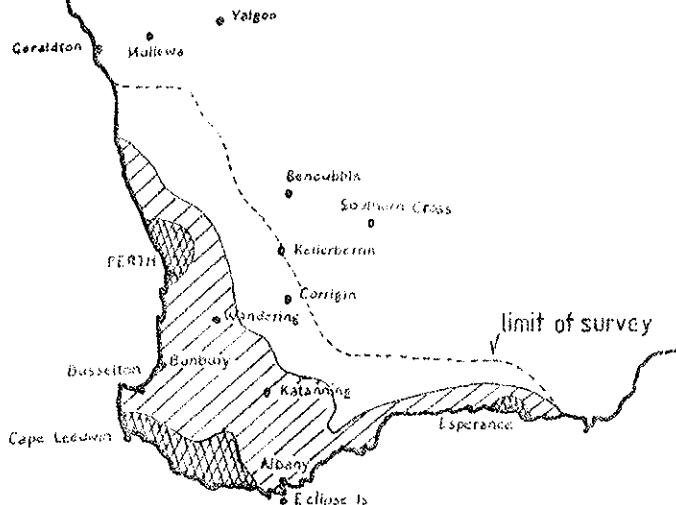


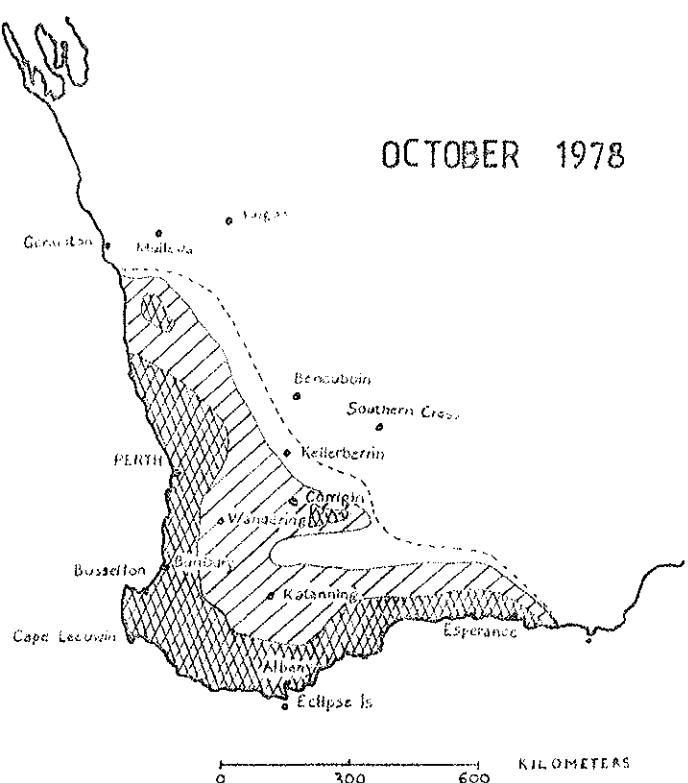
FIGURE 6. Condition of lakes surveyed by air.

OCTOBER 1977

WETLAND CONDITION



OCTOBER 1978



OCTOBER 1979

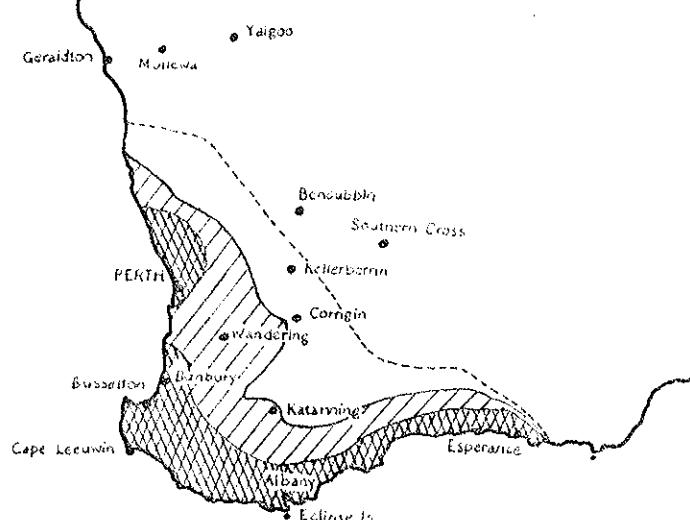


FIGURE 7. Condition of wetlands of the south-west at the end of October 1977, 1978 and 1979.

DECILE
RANGE DESCRIPTION

	1	VERY MUCH BELOW AVERAGE
	2-3	MUCH BELOW AVERAGE - BELOW AVERAGE
	4-7	AVERAGE
	8-9	ABOVE AVERAGE - MUCH ABOVE AVERAGE
	10	VERY MUCH ABOVE AVERAGE

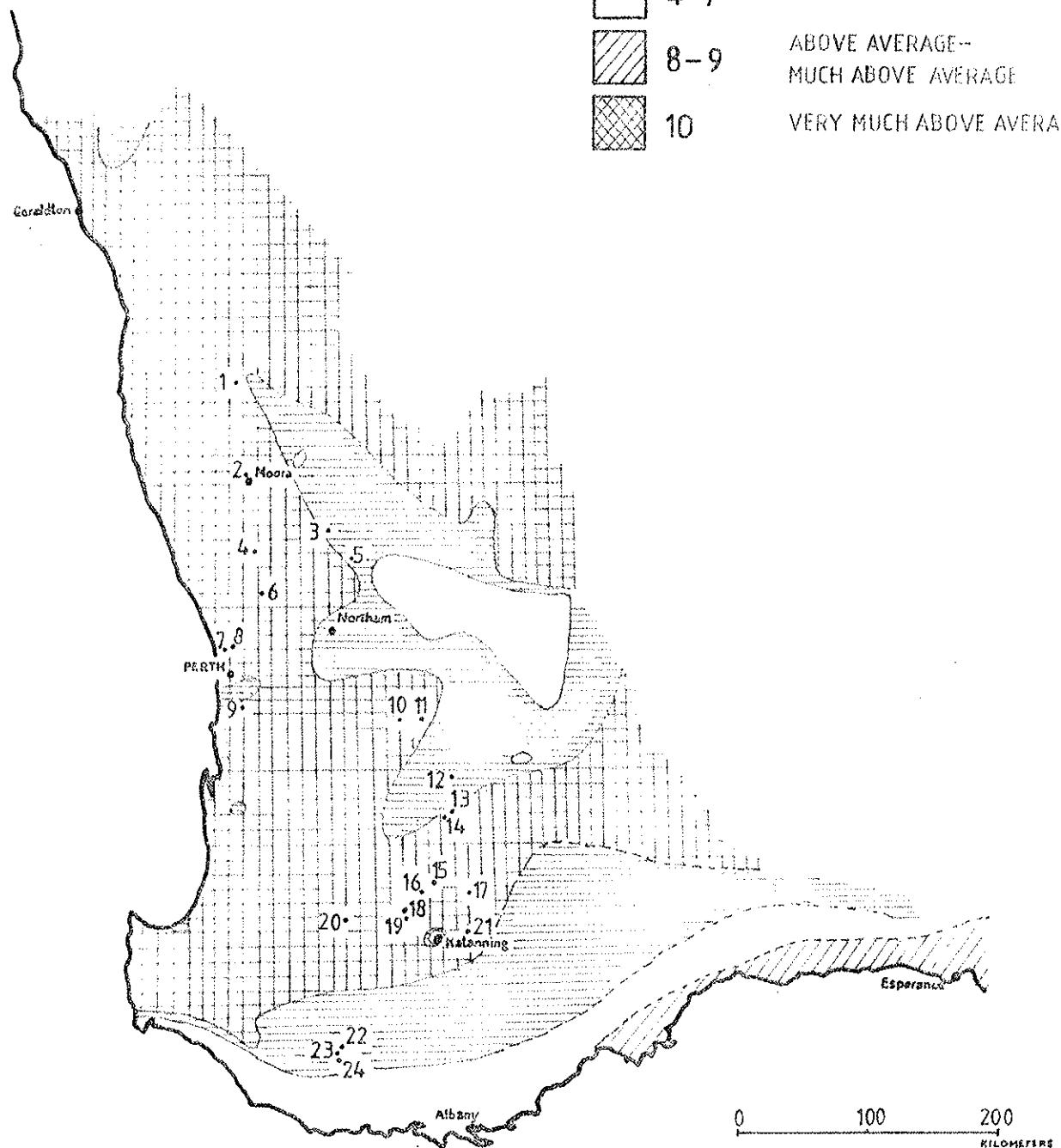


FIGURE 8. Location of gauged lakes in relation to distribution of rainfall.

See Table 1 and Figure 9 for Depth and Salinity fluctuations.

No.	LAKE NAME	DEPTH (m)		VARIATION
		NOV. 1978	NOV. 1979	
1	Eganu	2.18	0.60	-72%
2	Streets	0.04	DRY	-100%
3	Ninan	0.25	0.23	-8%
4	Wannamal	1.14	1.15	+1%
5	Walyormouring	0.03	0.03	0%
6	Chittering	1.39	1.38	-1%
7	Joondalup	3.01	2.87	-5%
8	Jandabup	1.35	1.25	-7%
9	Forrestdale	0.92	0.30	-67%
10	Beverley	1.65	0.63	-62%
11	Mears	1.74	0.72	-59%
12	Yealering	1.67	0.56	-66%
13	Toolibin	DRY	DRY	-
14	Taarblin	DRY	DRY	-
15	Gundaring	0.82	0.48	-41%
16	Parkeyerring	0.49	DRY	-100%
17	Coomelberrup	0.53	DRY	-100%
18	Queerrearup	0.34	DRY	-100%
19	Wardering	0.82	0.24	-71%
20	Towerinning	1.69	0.81	-52%
21	Casuarina	DRY	DRY	-
22	Byenup	2.40	2.27	-5%
23	Tordit-Garrup	3.15	2.91	-8%
24	Poorginup	0.55	0.53	-4%

TABLE 1 Variation in depth of gauged lakes from November 1978 to November 1979.

See Figure 5 for locations.

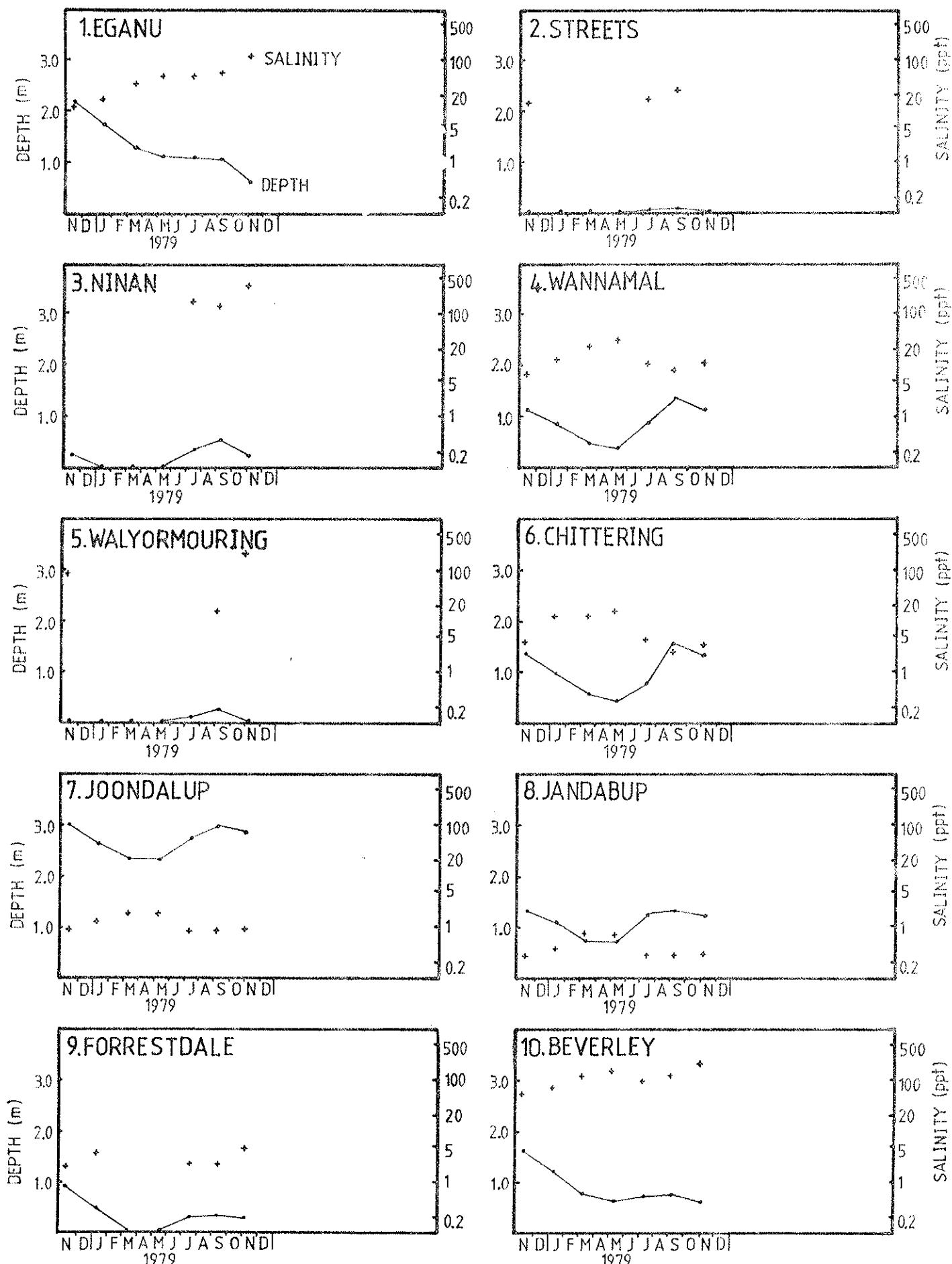


FIGURE 9. Depth and salinity fluctuations of gauged lakes.
Numbers refer to location map (Figure 8).

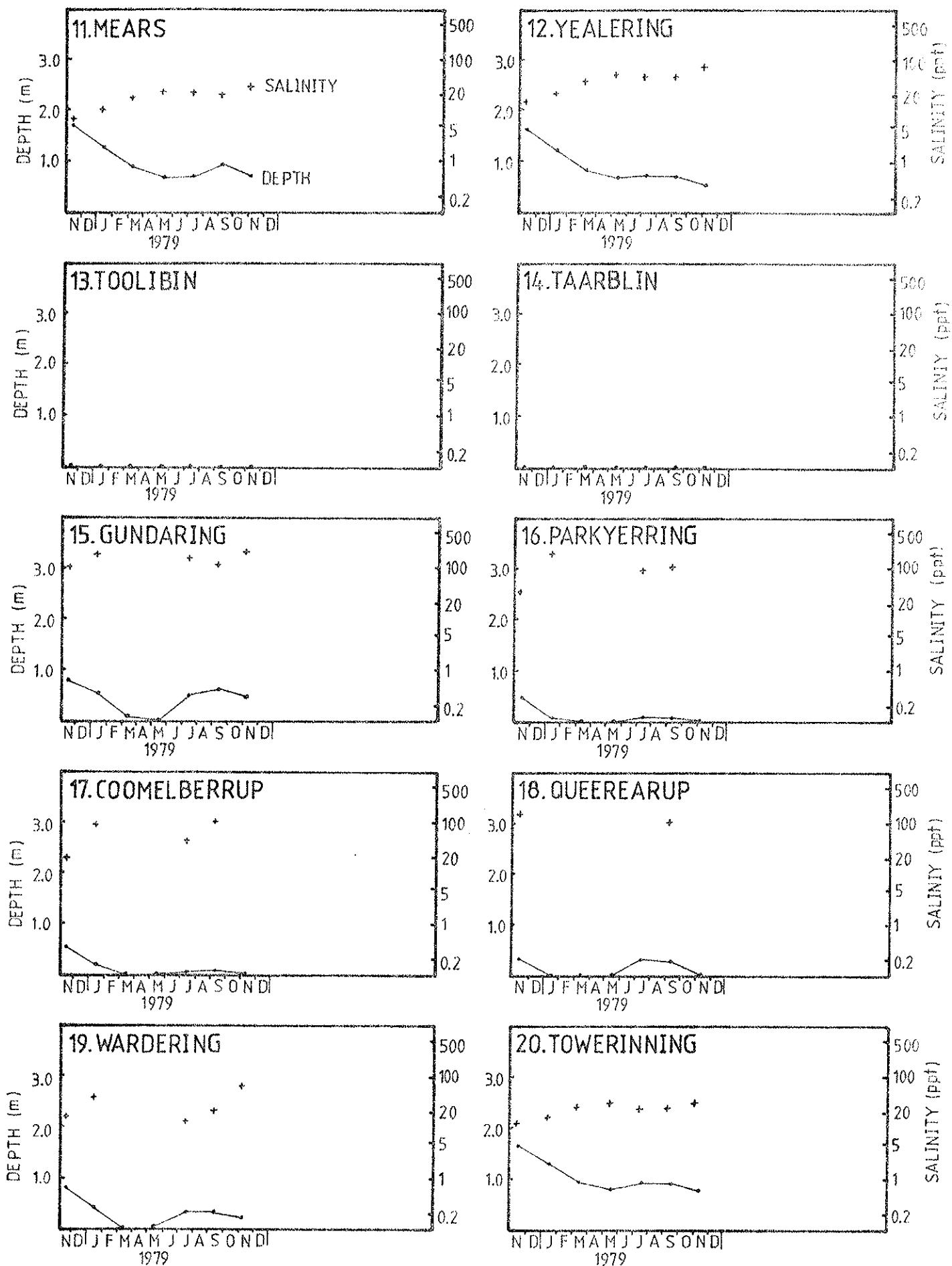


FIGURE 9. Contd.

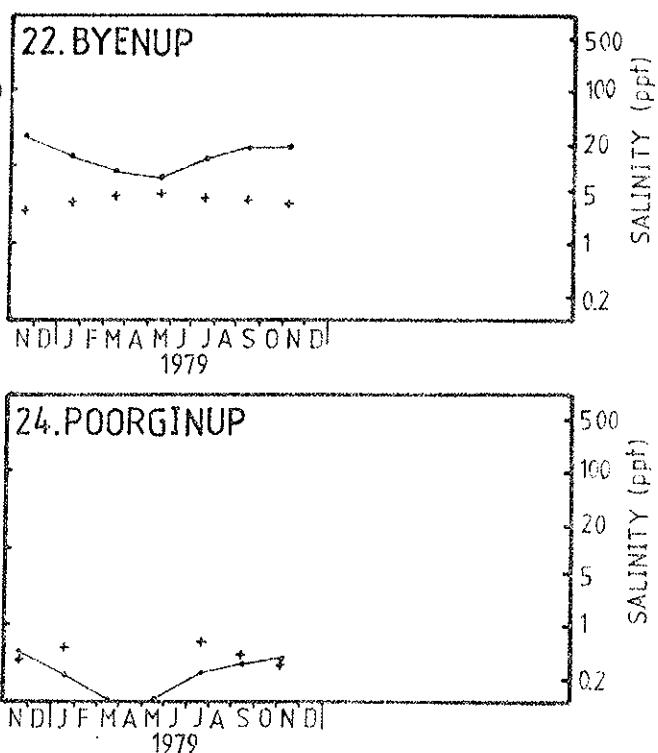
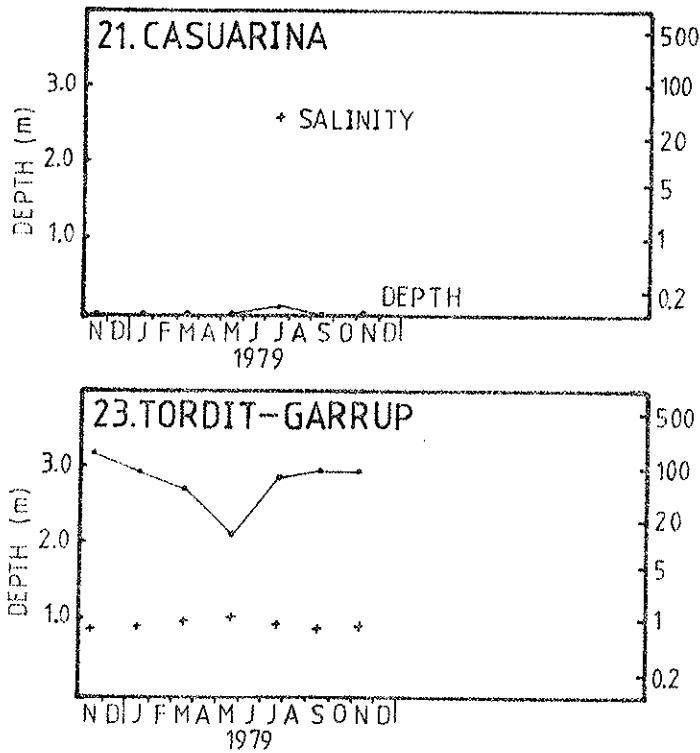


FIGURE 9. Confd.

SUMMARY AND RECOMMENDATION

RAINFALL: Rainfall over most of the south-west during 1979 was very much below average (See Figures 1 and 2). The only areas to receive average or above average rainfalls were a narrow strip along the south-coast and a restricted area of the central wheatbelt. Some stations (Canna, Jurien Bay, Collie, Marradong, Wialki and Holt Rock) received their lowest-ever recorded rainfalls for the January-October period.

January to October rainfalls in the North Coastal, Central Coastal, South Coastal, North Central and South Central Meteorological Districts were 41%, 33%, 27%, 35% and 33% below normal, respectively (Figures 3 and 4). These are the lowest values which have been recorded since 1972.

1979 was the fourth consecutive year of below normal rainfall in all five meteorological districts of the south-west. A comparable period of below normal rainfall has not occurred since 1935-1938 (Figure 4)

WETLANDS: Low rainfall during 1979 has resulted in a substantial decline in the condition (depth and salinity) of wetlands throughout most of the south-west. Wetlands of inland areas of the south-west (ie. the wheatbelt) are now in worse condition than they were in the drought year of 1977. The only areas where wetlands are in good condition are the south coast and a small area to the north of Perth (Figures 6 and 7).

Winter runoff into many important waterfowl sites (e.g. Eganu, Yealering, Parkyerring, Dumbleyung, Coomelberrup, Queearup, Wardering, Cogreup, Kwobrup, and Towerinning) barely managed to keep pace with evaporation (Figure 9). Some important wetlands (e.g. Toolibin) remained dry throughout the winter.

Lower water levels have resulted in higher salinities. Eganu, for example, was 10 ppt in November 1978 and 104 ppt in November 1979. Similar trends were recorded for Beverley (57 ppt and 215 ppt), Mears (7ppt and 28 ppt), Yealering (16 ppt and 77 ppt), Wardering (17ppt and 72 ppt) and Towerinning (14ppt and 33 ppt).

WATERFOWL: Our assessment of the waterfowl situation for 1979/80 is as follows.

1. Due to exceptionally low rainfall, breeding conditions for waterfowl were particularly poor throughout most of the south-west this season. Duck production this year has therefore been negligible.
2. Following four consecutive years of below average rainfall, there appears to have been a substantial decline in the abundance of waterfowl in the south-west.
3. By January 1980 almost all wetlands of inland areas of the south-west will be dry. The only areas which will hold water through the summer will be narrow strips along the lower west coast and the south coast. Waterfowl populations will therefore be confined to the coast throughout the summer.

4. If declared, a duck-shooting season this summer would be very damaging to waterfowl populations since

- i) A large kill would result, due to over-concentration of ducks and shooters into coastal areas.
- ii) Most of the birds taken would be breeding stock rather than first year surplus birds.

RECOMMENDATION: We therefore recommend that no duck-season be declared in the South-West and Eucla Land Divisions for 1979/80.

J.A.K. Lane.

D.R. Munro

November 23, 1979

HON. MINISTER FOR FISHERIES AND WILDLIFE

WATERFOWL HUNTING - SOUTH WEST AND EUCLA LAND DIVISIONS

I seek your agreement to establish Guidelines for the Duck Shooting Season in the South West and Eucla Land Divisions.

You are aware that in past years there have been problems with the acceptance by shooters of the conditions of the Duck Shooting Open Season. There have been no set standard long term guidelines available to the public and organisations involved with duck shooting and waterfowl and wetland management.

It appeared that it would be more satisfactory if the conditions of the open season could be stabilised at least for a period of review of some years rather than on an annual basis with short term aims.

After considering this philosophy, Departmental officers entered into discussions with the Western Australian Field and Game Association to submit a proposal for future seasons which was in general accord with Departmental views. These were, in the main, acceptable to the Bird Committee and the Western Australian Wildlife Authority.

	Western Australian Field and Game Association		Department of Fisheries and Wildlife and Bird Committee		Western Australian Wildlife Authority	
Season*	Full	Restricted	Full	Restricted	Full	Restricted
Opening Date	2nd Weekend January	2nd Weekend January	2nd Weekend January	2nd Weekend January	2nd Weekend January	2nd Weekend January
Opening Day	Saturday	Sunday	Saturday	Sunday	Saturday	Sunday
Opening Time	6.00 pm	6.00 am	6.00 pm	6.00 am	6.00 pm	6.00 am
Season Length	10 weeks	5 weeks	8 weeks	4 weeks (4½ weekends)	10 weeks	4 weeks (4 weekends)
Bag Limit	10 birds of any game species	5 birds of any game species	10 birds of any game species	5 birds of any game species	10 birds of any game species	5 birds of any game species
Game Species	Existing Species		Existing Species		Existing Species	

*There was acceptance that as Western Australia is a dry region, at times there would be no duck shooting season.

The acceptance of the Authority's recommended guidelines (see Schedule A) means that the only matter for debate would be the determination of the season - Full, Restricted or No Season. This determination would continue to be based on an assessment of the rainfall pattern, wetland condition, waterfowl numbers and breeding. As stated by the Departmental research officers, "The assessment of the bird numbers and breeding will continue to be a fairly subjective process. Assessment of the wetland condition - the primary factor affecting breeding activity and success - will become an objective process by mid 1980 following completion of the Department's wetland depth-gauging programme."

The Department is involving the Western Australian Field and Game Association in the reading of the depth gauges. The wetland situation is reviewed annually by Departmental officers carrying out surveys by ground inspection and aerial flights in October and November.

The Authority, noting that enforcement officers have problems identifying duck carcasses shot during the season, has recommended in principle that the following condition be included in open season notices.

"No person shall possess or transport a duck unless at least one fully feathered wing was attached to the bird and that the wing and plumage may be removed from the duck when -

- (a) the bird was prepared for immediate cooking, and
- (b) after the bird was taken to the residence of its owner for preservation."

I have attached -

- (a) Schedule A - the Western Australian Wildlife Authority's recommended guidelines for future duck shooting seasons,
- (b) Schedule B - standard conditions of an open season notice and future duck shooting seasons, and
- (c) suggested letter to the Western Australian Field and Game Association.

B. K. Brown
DIRECTOR

September 18, 1979

Att.

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SCHEDULE "A"

GUIDELINES TO DUCK SHOOTING SEASONS

	<u>Full</u>	<u>Restricted</u>	<u>No Season</u>
Opening Date	Second Weekend in January	Second Weekend in January	-
Opening Day	Saturday	Sunday	-
Opening Time	6.00 pm	6.00 am	-
Season Length	10 weeks	4 weeks (4½ weekends)	-
Bag Limit	10 birds of any game species	5 birds of any game species	-

Game Species

Whistling Tree Duck	<i>Dendrocygna arcuata</i>
Plumed Tree Duck	<i>Dendrocygna eytoni</i>
Black Duck	<i>Anas superciliosa</i>
Chestnut Teal	<i>Anas castanea</i>
Blue-winged Shoveler	<i>Anas rhynchos</i>
White-eyed Duck	<i>Aythya australis</i>
Mountain Duck	<i>Tadorna tadornoides</i>
Wood Duck or Maned Goose	<i>Chenonetta jubata</i>
Grey Teal	<i>Anas gibberifrons</i>

SCHEDULE "B"

STANDARD CONDITIONS OF OPEN SEASON NOTICE

New

Carcass Identification

No person shall possess or transport a duck unless one fully feathered wing is attached to the bird, unless it is immediately prior to cooking or at its owner's residence for preservation purposes.

Existing

- (1) Must be a license holder.
- (2) Wild ducks shall not be held in captivity.
- (3) Sale of wild ducks is forbidden.
- (4) Shotgun calibre not less than thirty-one fortieths of an inch internal diameter.
- (5) Motor vehicles, power boats, aircraft or other devices cannot be used to drive wild ducks over or in front of shooters.
- (6) Eggs of wild ducks cannot be taken.

The Wildlife Conservation Regulations also stipulate requirements to be met by duck shooters, whether on game reserves or elsewhere.

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Mr. R.W. Motteram,
President,
The West Australian Field & Game
Association Inc.,
G.P.O. Box T. 1718,
PERTH, W.A. 6001.

Dear Mr. Motteram,

re: Duck Shooting Season

You will recall that considerable concern was expressed last year by your Association following the announcement of the duck shooting season. At that time I said that there would be greater consultation between officers of the Department of Fisheries and Wildlife and members of your Association.

I have been pleased to learn from the Director of the Department that substantial agreement has been reached between the Association and the Western Australian Wildlife Authority on the basic elements of a duck shooting season. In fact the only point on which there was a differing view was that of the length of a restricted season. The Association urged the acceptance of 5 weeks whereas the Wildlife Authority recommends the adoption of 4 weeks. However, the Authority did accept the period of 10 weeks for a full season as recommended by your Association.

I now have pleasure in approving the Guidelines for duck shooting seasons as set out in Schedule A attached. The only remaining matter for debate is whether there will be a full or restricted season or no season at all. A decision on this will be based on an assessment of rainfall pattern, wetland conditions, waterfowl numbers and breeding. I understand that the W.A. Field and Game Association is also involved in these studies.

Finally, I am advised that enforcement officers have had difficulty in positively identifying duck carcasses shot during the season. I have, therefore, approved the following condition to be included in the open season notices:-

-2-

"No person shall possess or transport a duck unless at least one fully feathered wing was attached to the bird and that the wing and plumage may be removed from the duck when -

- (a) the bird was prepared for immediate cooking, and
- (b) after the bird was taken to the residence of its owner for preservation."

I believe that the above agreement as a result of discussions between your Association and officers of the Department, is in accordance with my assurance earlier this year that your Association would be involved to a greater extent in decision-making re the rules for duck shooting. I would be pleased if you could confirm this at your convenience. The decision as to whether or not there will be a season is a matter for the Minister after consideration of advice from the Bird Committee of the Western Australian Wildlife Authority.

Yours sincerely,

fwj

(R.J. O'Connor)
MINISTER FOR FISHERIES AND WILDLIFE

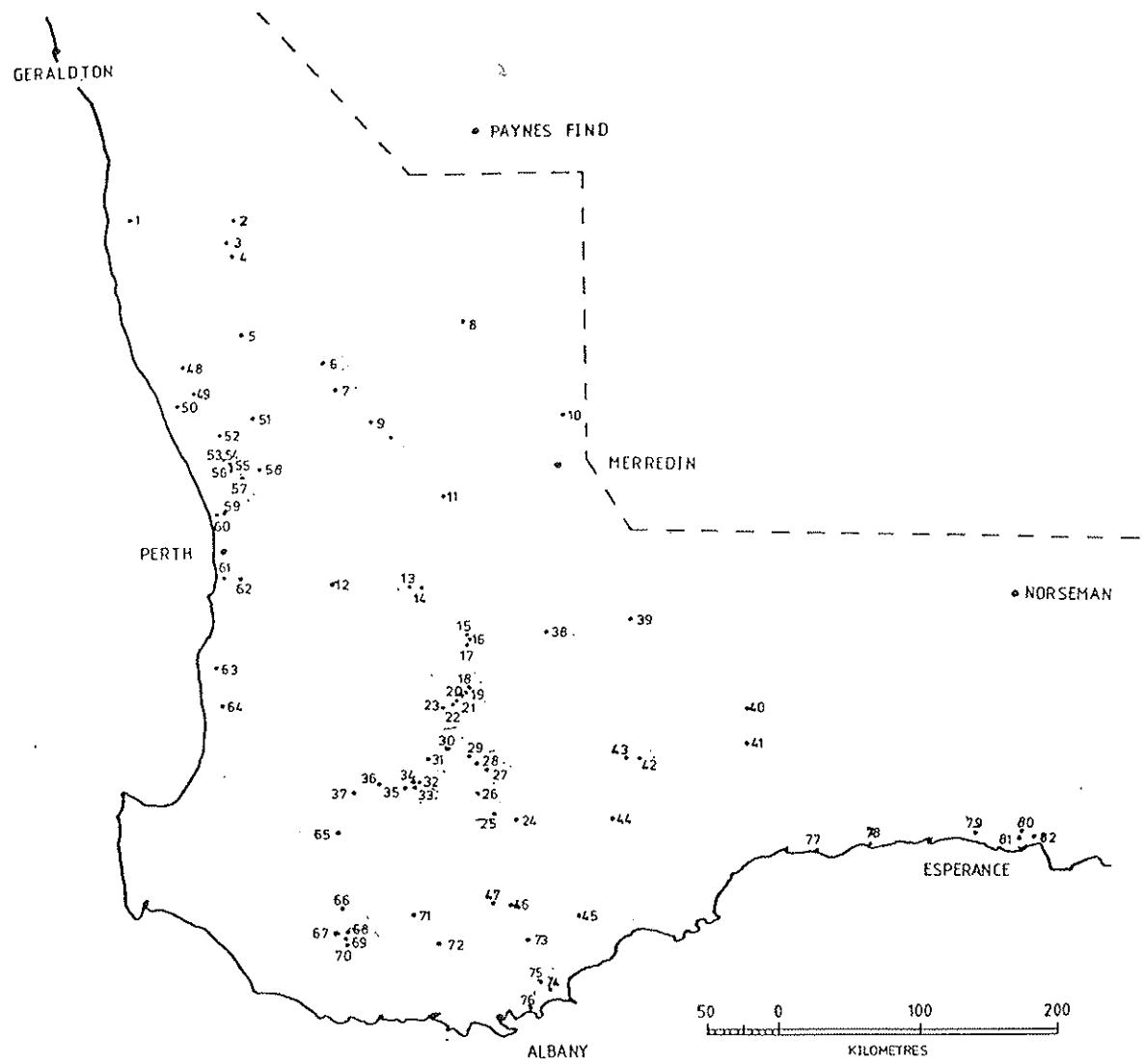


FIGURE 8. Location of Gauged Lakes.