

WETLANDS OF WESTERN AUSTRALIA

The Department has just published a pilot study of the Wetlands of Western Australia by Fauna Research Officer T.L. Riggert, B.Sc (Hons.).

The study is confined to the Wetlands of the Swan Coastal Plain with particular reference to their use by waterfowl.

The pilot area extends from 31°30' to 34°30'S, with a mean longitude of about 116°00'E and is bounded on the east by the Darling Fault, on the north by Yanchep Park and on the south by the Collie-Naturaliste Scarp, encompassing approximately 3,000 square miles of coastal land. The area is divided in three zones, which are approximately as shown -

- Zone A - Yanchep Park to Rockingham
- Zone B - Rockingham to southern extremity of Lake Preston.
- Zone C - Lake Preston to Dunsborough.

Hereunder is the summary contained in Mr. Riggert's study.

"A two-year research programme has enabled the following :-

1. the location of existing and reclaimed wetlands;
2. the field evaluation of wetlands, and
3. the classification by a nation-wide system developed by the United States Fish and Wildlife Service.

Of the nineteen wetland types described by the U.S. Fish and Wildlife Service, twelve are present in the study area.

During the dry summer months 67% of all wetland habitat on the study area is lost by evaporation. This evaporation of surface water is so great that areas such as in Zone C (the most southern) are left with little or no surface water. Zone B can withstand these drought periods much better than the other zones because of its deep permanent lakes. These considerations emphasize the importance of areas of winter flooding as well as permanent wetlands for the production of waterfowl. With the tremendous loss of surface water during the summer many waterfowl utilize wetland areas that are not entirely suitable.

Since 1955 there has been a severe reduction of wetlands due to extensive drainage.

A system of wetland classification based on waterfowl usage was established with values from fair to excellent.

The use made by waterfowl of an area depends on the quality and quantity of water and vegetation present. The permanency of wetlands fall into three categories, summer, winter and year-round. Very few wetland areas in Western Australia are listed as year-round areas.

Wetland types 3 (1" - 6" throughout year), 4 (6" - 3' throughout year) and 5 (less than 10' deep) are utilized the most by waterfowl and are of the highest priority for wildlife preservation. Types 3 and 4 have been subjected to the most elaborate drainage programmes as they are desirable for agricultural development. Only 13,471 acres of wetlands are considered excellent wetland areas.

The second portion of the investigation dealt with non-drainable wetlands, such as reservoirs, rivers and flooded agricultural land. Those are considered to be of less value than the drainable types, but with proper management techniques excellent areas can be produced.

Because of the immediate contact that the Public Works Department (Irrigation and Drainage Branch) has with the people seeking draining, it would be to the advantage of the Fisheries and Fauna Department to work in close co-operation with that Department. I am sure that if our views of wildlife habitat preservation were put forth on a sound and practical basis to the Public Works Department (Irrigation and Drainage) and landowners, needless destruction of wetlands could be avoided.

The need for improving the existing wetland areas in Western Australia is quite apparent. These improvements can be accomplished by several techniques which are quite effective, but relatively low in cost.

The effectiveness that a programme of preservation will have in this State depends on the following points :-

1. A good educational programme emphasizing the value of wetlands for enjoyment and profit to landowners.
2. A better land use programme to stop excessive drainage of new wetland areas before old areas are fully developed, and
3. A definite wetland management programme to work in close co-ordination with the State and Commonwealth Departments and other interested bodies to preserve and develop our wetland areas to their fullest capacity.

It has not been the aim of this report to de-emphasize the importance of other wildlife depending on wetlands for their existence. We have utilized waterfowl as a basis for this study for two reasons. Firstly, because waterfowl are more affected by wetland losses than are populations of any other species, and secondly, use of wetlands by waterfowl is easy to assess. The lack of waterfowl on a wetland area truly reflects the deterioration of the total community (including passerine birds, mammals, amphibians, reptiles, fish, shell fish, aquatic insects and other invertebrate life), which we are trying to conserve. The key to preservation of wildlife in Western Australia is the preservation of wetland habitat."