

AUSTRALIAN WATERFOWL COMMITTEE  
INAUGURAL MEETING

Meeting No 1.

MELBOURNE 18-25<sup>TH</sup> FEB. 1960.

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MR. B.K. BOWEN



Report of the first meeting of the Australian  
Waterfowl Committee at Melbourne.

22-24th February, 1960.

Officially opened by the Hon. L. H. S. Thompson, M.L.C.,  
Assistant Chief Secretary-Victoria.

Delegates present:-

Chairman. Mr. M. C. Downes,	Superintendent of Game Management, Fisheries and Game Department, Victoria.
Dr. E. R. Guiler,	Chairman, Animals and Birds Protection Board, Tasmania.
Mr. A. C. Bogg,	Director, Fisheries and Game Department, South Australia.
Mr. H. J. Frith,	Principal Research Officer, Wildlife Survey, C.S.I.R.O., Canberra.
Mr. A. E. Newsome,	Field Biologist, Northern Territory Administration.
Mr. B. K. Bowen,	Research Officer, Fisheries Department, Western Australia.
Mr. F. Hersey,	Field Officer, Fauna Protection Panel, New South Wales.

Committee Procedure

It was resolved that:

1. That the Committee be known as the Australian Waterfowl Advisory Committee.

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2. That it meet annually or more frequently if necessary.
3. That a permanent secretariate be established in the one locality.
4. That the Victorian authority be asked to provide facilities for this secretariate, to act as a clearing house for information. *Agreed by Victoria*
5. That a report of this inaugural meeting be tabled at the Biennial Interstate Fauna Conference, to be held in Brisbane in September 1960.
6. That the work of the Committee be to provide technical advice to the authorities concerned with waterfowl conservation and also to provide publicity for waterfowl conservation which might be required on an all-states basis.

#### Agenda item 1. Programme Summaries

It was resolved that summaries of duck research and management programmes be prepared by each delegate and circulated to the Committee via the Secretary.

#### Agenda item 2. Waterfowl Habitat

For the purposes of Committee discussion it was convenient to divide habitat into three groups.

Breeding habitat. (Habitat for concentrated and intensive breeding.)

Non breeding habitat. (The remainder of waterfowl habitat).

Drought refuge areas. (During prolonged and severe dry spells).



### Breeding Habitat

From the evidence before the Committee the most important single breeding area containing similar conditions and most often producing the greatest number of birds, was the Murray Drainage system. It was evident that river control projects in this basin, carried on without any provision for the side effects on waterfowl habitat, could be one of the more important factors influencing the breeding of waterfowl in the future.

The need was recognised for a concise statement and map showing the distribution of breeding habitat, to enable the facts and a recommendation regarding action to safeguard the breeding area, to be presented to the Biennial Interstate Fauna Conference.

It was resolved that a statement be prepared showing the present and future distribution of waterfowl breeding habitat in Australia with suggestions for its preservation.

It was agreed that the statement be prepared by Mr. Frith, distributed to Committee delegates via the Secretary, and presented to the Biennial Interstate Fauna Conference in September, 1960.

### Non Breeding Habitat

Though breeding occurs within this habitat and to a greater extent in some species than in others, the provision of breeding facilities was considered secondary to the more obvious function of providing living space for waterfowl away from the breeding areas.

It was evident that the most important task of the Committee at this stage was to attempt to bring some order into the diversity of reserves and other areas of waterfowl habitat over which the various states have some control or responsibility.

Each state was asked to provide a list of the types of reserve containing waterfowl habitat, and a definition of each with regard to such characters as ownership, management, enforcement of regulations, control of shooting, vermin control, protection of habitat, protection of birds from disturbance etc.

A statement of the number of reserves of each type and an indication of the amount of waterfowl habitat contained should follow.



In order to arrive at the degree of control of waterfowl habitat within these reserves and an indication of its future preservation, a statement was required of the number of reserves together with the approximate size within each of the following classes: -

Class I	Crown land managed specifically for waterfowl: -	a. Shooting in season. b. Shooting prohibited.
Class II	Crown land with waterfowl as an important but unmanaged by-product: -	a. Shooting in season. b. Shooting prohibited.
Class III	Private land managed specifically for waterfowl: -	a. Shooting in season. b. Shooting prohibited.
Class IV	Private land with waterfowl as an important but unmanaged by-product -	a. Shooting in season. b. Shooting prohibited.

#### Drought Refuge Areas

Because of the importance of certain districts to waterfowl during prolonged dry spells over large areas of Australia consideration should be given to defining certain non-breeding zones as being of particular importance. Lakes near the Murray River mouth and the Coorong in South Australia, the Western District and coastal Gippsland in Victoria probably contain very important swamplands which receive particular emphasis in a reservation programme.

#### Item 4. Duck Shooting Regulations

A considerable time was spent in discussion of the various basis for shooting regulations. It was soon obvious that there was insufficient biological data available to recommend for or against many regulations now in force. The need is very great for a fact-finding programme within each state to determine the regulations applicable to the differing needs of various regions. Without this basis most regulations would remain a matter of opinion and very much a matter for argument. Throughout the discussion the Committee was very much aware that considerations other than purely zoological



ones, for instance sociological factors, could influence the effectiveness or efficiency of regulations controlling hunting.

It was generally agreed that a future agenda item for the Committee should be the definition of a basis of the fact-finding program to obtain the necessary information.

#### Item 5. Duck Banding and Trapping

In the interest of obtaining a coordinated scheme for duck trapping and banding throughout Australia it was resolved.

- a. that the minimum information to be obtained from each duck should include date, sex and age of males.
- b. that the Committee make available literature to ensure efficient trapping and banding and the standardization of sexing and ageing procedures.
- c. that trapping be carried out in each of the following localities in order to cover each major region.

#### Regular Banding Stations existing at: -

Victoria,	various stations through the state.
Griffith,	N.S.W.,
Scone,	N.S.W.
Canberra,	A.C.T.
Perth,	W.A.
?	Queensland.

#### Desirable banding localities: -

N.S.W.	:	Wentworth (Victoria could band here if notified when ducks are present).
		Menindie
		Narran



6.

Newcastle. Hunter River

Richmond River

South Australia : Naracoorte (Small station but  
requires stepping up).

Western  
Australia : in the Gascoyne District near  
Carnarvon.

Queensland : Cunnamulla

Mitchell River Cape York Peninsula  
Tip of Cape York Peninsula

Tasmania : North coast

Northern  
Territory : Adelaide River  
Alice Springs

Item 6. Duck Banding Records

It was resolved that this Committee is in full agreement on the need for a depository of waterfowl banding information, including complete copies of banding schedules and band recoveries, in one central archive where the information will be available for further study subsequently to the original work.

It was resolved that owing to the differing requirements in the duck banding schemes within the various states it was not possible for all states to use the Australian Bird Banding Scheme at this stage.

Item 8. Other Matters

Swans:

It was resolved that swans be banded in a limited experimental project by cooperation between Victoria, Tasmania and South Australia and the C.S.I.R.O.



The need for this project had arisen because of the lack of migration and other biological data for the black swan. Swans have been a consistent agricultural pest in Victoria and South Australia for some years and it may be necessary to reduce their numbers. In Tasmania after two short open seasons, swans were reported to be the scarcest for many years.

#### Cooperation between states

It was resolved that due to the acute shortage of manpower and equipment for many essential fact-finding projects in waterfowl research, this Committee considers it essential that in certain projects, the effort and cost be distributed between various interested states in order to increase efficiency and reduce duplication.

It was envisaged, for example, that the swan project was such an example. C.S.I.R.O. might make available the specialized rocket nets, plus a trained operator to net swans; Victoria could provide a banding team and handlers, etc. In the hunting pressure studies, Victoria could provide the services of the X-ray fluoroscope and operator, as it would appear unnecessary for this equipment to be duplicated at this stage.

M. C. DOWNES  
Chairman,  
Australian Waterfowl Advisory Committ



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Rational English

AUSTRALIAN WATERFOWL COMMITTEE

Inaugural Meeting to be held at the Victorian Department of Fisheries and Game in Melbourne, 18th-25th February 1960.

\_\_\_\_\_. the Hon L. H. S. Thompson M.L.C.

1. PURPOSES AND FUNCTIONS OF THE COMMITTEE

The need for cooperation and mutual assistance between the authorities concerned with the conservation of waterfowl in Australia has been highlighted by the widespread recoveries from the various duck banding schemes. These have shown that most ducks range widely over the continent and sometimes beyond it. Changes in waterfowl habitat or in the regulations controlling duck hunting in any part of Australia, could have significant effects on the duck populations in the various states.

A committee, representing most parts of Australia, and meeting regularly to correlate the available information on the various technical aspects of waterfowl conservation, could build up an Australia wide picture of the duck situation.

In time, as the available information grows and the Committee's findings reflect the overall situation more truly, recommendations could be made to the various authorities which would be of considerable value in the planning of research, management, and the design of hunting regulations.

2.

Sufficient information now exists to enable the Committee to make a start on the assessment of the present day duck situation and to indicate important gaps in our knowledge which call for attention.

2. TIME TABLE - 1960 CONFERENCE.

18 February	Delegates arrive in Melbourne.
19 February - 9 a.m.	Travel to country district-inspect potential Game Reserves at Kerang.
20 February - 5 a.m.	Opening of duck season at Kerang.
21 February	Return to Melbourne.
22 February	Conference Session.
23 February	Conference Session.
24 February	Conference Session.
25 February	Inspect 'Serendip' Research station. Possible visit to Lake Goldsmith Beaufort or to Reedy Lake Geelong - under consideration as Game Reserves.

*7/ Duck shooting reg. were discussed & each  
representation found that he was impression. did not  
it was discovered that there was a lack of sufficient  
hydrological evidence on which to base firm ideas on reg.*



3.

3. AGENDA.

1. Summary of Current Programmes in each State & C.S.I.R.O.
2. Survey of Waterfowl Habitat in Australia
  - (a) classification.
  - (b) distribution.
  - (c) status.
  - (d) reservation.
3. Habitat Management
  - (a) feeding.
  - (b) breeding.
  - etc.
4. Duck Shooting Regulations
  - (a) basis for determination of game species, dates, limits, sanctuaries, etc.
  - (b) relative effectiveness of various controls.
  - (c) control of total shooting pressure.
  - (d) coordination between states.
5. Duck Banding and Trapping
  - (a) overall plan for Australia.
  - (b) regional requirements.
  - (c) methods and equipment.
6. Analysis of Duck Banding Records
  - (a) short description of existing systems.
  - (b) coordination and standardisation.
  - (c) future requirements.

*Analysis*

7. Effective Public Participation in a Conservation Programme.

- (a) the game shooter.
- (b) the protectionist.
- (c) the general public.
- (d) industry.

Man is a factor in the environment.

8. Other Matters.

- (a) administrative.
- (b) research.
- (c) management.



FISHERIES & GAME DEPARTMENT  
Victoria

PR 0/7  
22/2/60

Please use today in one  
of your news columns or  
broadcasts.

#### FIRST MEETING OF AUSTRALIAN WATERFOWL COMMITTEE

The inaugural meeting of this Committee was formally opened at the Fisheries and Game Department by the Assistant Chief Secretary, the Hon.L.H.S.Thompson, M.L.C., this morning.

The Committee was formed last year, and delegates are here from New South Wales, Tasmania, South Australia, Western Australia, Northern Territory and the C.S.I.R.O. to discuss and correlate their work and consider game laws and regulations for the states of the Commonwealth.

Research and banding has proved that waterfowl move freely across the continent according to conditions. Any destruction of feeding and breeding areas in any part of Australia, therefore could significantly affect the waterfowl population.

IN WELCOMING THE DELEGATES AND DECLARING THE CONFERENCE OPEN, MR.THOMPSON SAID THAT HE HOPED THAT THE WORK OF THE COMMITTEE WOULD ULTIMATELY RESULT IN A UNIFORM PLAN FOR CONSERVATION AND MANAGEMENT OF WATERFOWL FOR THE COMMONWEALTH OF AUSTRALIA.

Some of the delegates arrived before the week-end, and inspected areas which the Fisheries and Game Department hope to manage as Game Reserves. They also attended the opening of the duck season at Kerang to gain experience of Victorian duck shooting conditions.

FISHERIES AND GAME DEPARTMENT  
Victoria

PR 0/8  
22.2.1960

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in one of your news columns  
or broadcasts.

#### FUTURE OF AUSTRALIA'S WATERFOWL

At the first meeting of the Australian Waterfowl Committee being held at the Fisheries and Game Department at present, delegates expressed deep concern at the threat to the breeding of waterfowl which could result by the proposed river control within the great Murray/Darling basin.

Though such works are proceeding all over Australia, research by C.S.I.R.O. over the past 10 years has proved that this area is the main breeding ground of the Australian ducks.

How the breeding places of the ducks could be safeguarded by co-operation with authorities responsible for land and water use for this and other areas, was one of the main items discussed today.

Delegates who are present from all states and the C.S.I.R.O. will discuss these and other problems over the next few days.



FISHERIES & GAME DEPARTMENT  
Victoria

PR.0/9  
24.2.60.

Please use as soon as possible  
in one of your news columns or  
broadcasts.

The Australian Waterfowl Advisory Committee finished  
its first meeting yesterday.

Representatives from Tasmania, New South Wales,  
South Australia, Western Australia, Northern Territory, Victoria  
and C.S.I.R.O. have been meeting at the Fisheries and Game  
Department to discuss common problems of research, management,  
and conservation of waterfowl.

Discussions held over the last few days have  
underlined the need, already evident in several states, for  
taking into account the needs of waterfowl when planning land  
and water use in any part of Australia, as banding had shown that  
ducks range throughout the continent.

This first meeting of the Committee has been devoted  
mainly to deciding methods of procedure, and has been extremely  
useful for planning means of closer co-operation in the future,  
and for the more rapid exchange of information affecting the  
work on waterfowl being carried out in various parts of the  
Commonwealth.

## STATE WILDLIFE RESERVES INVESTIGATION COMMITTEE

The Government has appointed the State Wildlife Reserves Investigation Committee to consider the reservation of certain areas of land in the State as Wildlife Reserves.

Initially it is proposed that the areas to be placed before the Committee will be swamplands concerned with the conservation and management of wild duck and other waterfowl. Areas concerned with other forms of wildlife will be raised for consideration at a later date.

In the accompanying statement by the Honorable A. G. Rylah, M.L.A., reference is made to the position of State Game Reserves within the Game Development programme of the Fisheries and Game Department (last paragraph page 1).

### The Wildlife Concerned.

About 50 species of wildfowl live on the swamps and lakes of Victoria.

These include game birds such as wild duck and snipe, agriculturally important species such as the ibis and plover, and unique Australian species such as the egrets, herons, swans, and geese.

### The Land Concerned.

Certain key swamps are of primary importance for the migration and feeding of these wildfowl. These are shallow impermanent waters, capable of growing extensive stands of special food and cover plants. Drainage or other interference has threatened all these swamps. (Reservoirs and permanent lakes are of much less importance to these birds).

### The System.

The State Waterfowl Management System envisages the management of a chain of swamps along the flight lanes of the birds.

Without the increased wildlife carrying capacity which will become available through the proper development of this system, the rapid development of the State will leave little living space for game birds and other wildlife.



### Control of Swamps within the System.

Many of the key waterfowl swamps are situated within lands managed primarily for important products other than wildlife. With these particular swamps, management for wildlife could be regarded as a profitable secondary product if the controlling authority so agreed. (Cooperative State Game Management Projects).

In other cases, where wildlife production and recreation through duck shooting is demonstrably the most important use, consideration might be given to reserving these primarily for wildlife management by the Fisheries and Game Department (State Game Reserves). Certain of these will be sanctuaries (State Sanctuaries, as distinct from private property sanctuaries).

### Proposed Uses of the Reserves.

Extensive management and control of habitat within reserves will be required to provide optimum breeding and feeding conditions for wildfowl. Levee banks to control water level, ponds for intensive cultivation of food and the planting of cover bushes will be essential.

All State Game Reserves will be open for duck shooting during the normal season. Access to shooting places becomes increasingly difficult in Victoria. To our knowledge no duck shooting swamps are available to the public in those municipalities proclaimed under the Police Offences (Trespass to farms) Act 1956 without special permission. This now applies to the greater part of Victoria. The State Game Reserve will be an answer to this problem. It is considered that adequate game regulations can be formulated to protect non-game species of wildlife produced on the Reserves, and to limit any excessive shooting pressure during the season.

### Function of the Reserves.

The State Game Reserves will parallel in function both the State Forests and the National Parks. Wildlife and game will be produced and fed by habitat management on these Reserves, for use elsewhere in the State. This parallels the production of timber in State Forests. Use of the Reserves both by the general public during the ten month closed season, and by shooters in the

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two month duck season will give these areas considerable recreational value. In this way the Reserves will resemble one aspect of the National Parks.

Fisheries & Game Department.  
Victoria.

June, 1959.

G.B. 4.



## THE STATE WATERFOWL MANAGEMENT SYSTEM OF VICTORIA

This system envisages the management of a chain of key swamps along the flight lanes of the waterfowl throughout the State.

### WHAT IS SWAMP MANAGEMENT?

Management of the swamps for waterfowl production will entail:

(a) their protection from drainage, overgrazing, deterioration of food supply, and other forms of habitat destruction;

(b) the control of water levels, planting and cultivation of food, cover etc., to increase the carrying capacity for wildlife.

### WHICH ARE THE KEY SWAMPS?

The attached preliminary list of key swamps includes mainly Crown land under the control of various Government Department and some private land of special significance. The areas have been chosen because of their value to waterfowl and as those most likely to be available for use in the System.

### WHAT IS THE IMMEDIATE REQUIREMENT?

The main requirement at this stage, for many swamps where wildlife is demonstrably the most important product, would appear to be reservation. This would protect it against unnecessary drainage, burning etc., (see (a) above). More detailed habitat management of most of the swamps ( (b) above), will not be required until a later stage of the programme.

In cases where wildlife is not demonstrably the main product of the area a Cooperative State Game Project is suggested. These are mainly forest lands, reservoirs, etc.

### WHAT ARE THE NEEDS OF WATERFOWL?

In considering whether a particular swamp should be reserved for waterfowl, attention would need to be given to the following points dealing with wildlife needs, along with the present land usages and community requirements.

- i. Its present carrying capacity for wildlife or its potential under management; having regard to the size, type of habitat and food content.

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- ii. The availability of this type of habitat remaining in the district and in Victoria.
- iii. Location with respect to the migration flight lanes of waterfowl.
- iv. The influence of present land use on waterfowl production and necessity for moderating or removing harmful activities.
- v. Its present or potential value as a recreation area for duck shooting, wildlife conservation etc.

#### APPENDIX

##### Suggested list of key waterfowl swamps for the State Game Management System

List A. contains major areas of equivalent and very considerable importance, since these are likely to have a considerable influence over large numbers of wild duck and other birds. These suffer in varying degrees from habitat destruction.

List B. contains smaller areas, but not necessarily less important being stepping stones between the major reserves.

Any one swamp from the list is of little importance by itself except locally to the district. Its contribution is as part of a system of swamps forming the Victorian habitat for migratory waterfowl.

The lists are not complete as much work remains to be done especially in the Western District and the Wimmera.



## List A.

List B.

\* The Marsh Kerang  
 \* Lake Buloke Donald  
 \* Winton Swamp Benalla  
 \* Lake Reeves Gippsland  
 \* Barmah Forest Swamps  
  
 Lake Goldsmith Beaufort  
 Reedy Lake Etc. Geelong  
 Ewings Morass East Gippsland  
 Long Swamp Nelson  
 Lake Walla Walla Millewa  
 Lake Wau Wauka )  
 ) Mallacoota  
 and Barracouta )  
 Lake Curlip and Sandy flat Orbost  
 Gaynors )  
 )  
 Salt Swamp ) Corop  
 )  
 Wallanjoe Sw. etc.)  
 McLennan Straits Swamps  
 Bryants Sw. )  
 ) Hamilton  
 Lake Muirhead ) district.  
 )  
 Brady Sw. )  
 Lake Lalbert Lalbert

Loch Garry Shepparton  
McDonald Sw. )  
                  ) Kerang  
McPhails Sw. )  
McLeods Morass Bairnsdale  
Dowds Morass Sale  
Moodies Sw. St. James  
Dowdles Sw. Boomahnoomoonah  
Reedy Sw. )  
              )  
Hirds Sw. )  
              )  
Johnsons Sw. )  
              ) Kerang  
Bengwell Sw. )  
              )  
Gutteram Sw. )  
              )  
The Sheepwash)  
Kow Swamp Gunbower  
Goose Lagoon Port Fairy  
Heart Morass Sale  
Darlots Sw. Horsham  
Lake Moodemere Rutherglen  
Lake Corringale )  
                  ) Orbost  
Lake Wat Watt )

\* Crucial Swamps.

Fisheries &amp; Game Department

June, 1959.

G.B. 5.

Fisheries and Game Department  
Victoria, 1959.

G.B. 10.

#### GAME DEVELOPMENT PROGRAMME

The Honorable A. G. Rylah, M.L.A., Acting Premier of Victoria, made the following statement on the Game Development Programme in a broadcast on Sunday, 3rd May, 1959.

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The Fisheries & Game Department, with the backing of the Government has embarked on a programme of game management which it is hoped will halt the decline in the numbers of game birds in this State.

The revenue derived from the recently introduced Game Licence will be used by the Fisheries & Game Department for waterfowl management. Early steps are being taken to appoint field staff who will carry out breeding and feeding improvement projects on wild duck swamps. Certain projects of a short-term nature will require assistance from shooters' organisations. Such projects include clearing useless weed from feeding swamps; planting of duck food and application of fertilizer to swamp mud; planting of cover around swamps; providing roosting banks and feeding areas for ducks; erecting nesting boxes and controlling run off of water from swamps by means of banks.

The shortage of wild duck will not be overcome without certain long range projects. Consideration is being given to setting up a series of State Game Reserves. These are special areas of particularly valuable swampland which could be set aside, and the special conditions existing on them managed, to breed and feed waterfowl. These areas would not be sanctuaries, but would be available for shooting during the open season. The works necessary to breed and feed more wild duck would also improve the swamps as shooting places. Other important waterfowl such as ibis, herons, egrets, etc. would also be bred on these Reserves.

Another important project is the re-establishment of the Black Duck as the premier sporting bird of Victoria. In many localities it is now particularly scarce or practically non-existent. The Department proposes to establish a research station on a large swamp to determine methods of breeding and restocking areas with Black Duck. Such a station would be well equipped to investigate the possibility of starting off breeding colonies of ibis in various parts of the State where they are now scarce.



It is evident that the present decline in game is due to factors which have been operating over the past fifty years of land development in Victoria. A swamp survey by the Department has shown that deterioration of conditions for duck in the swamps is proceeding at an ever increasing rate. Certain swamps are particularly valuable to waterfowl and should be preserved from drainage and spoilage of their food conditions.

The study of duck migration through trapping and banding and the examination of shooting pressure on wild duck by the X-ray of trapped birds for lead pellets are projects important to the understanding of the variations which occur in duck seasons. These scientific investigations should continue if the Department is to understand and manage the wild duck as an important natural resource.

The Fisheries and Game Department does not expect to obtain immediate and spectacular results from the game management development programme but it expects that the apparent decline in the species of game birds will be halted. There is every expectation, however that as the programme proceeds, the status of all game bird species will be raised.

Report prepared by the  
Fisheries & Game Department, Victoria  
for the Koroit Borough Council.

### Tower Hill as a State Game Reserve

The question of the future of Tower Hill has been discussed many times in the past twelve months. The Borough Council of Koroit has requested, both by letter and a personal visit by the Mayor and the Town Clerk, that the Department "discuss game reserves with them; and more particularly, the desirability or otherwise of proclaiming the Tower Hill National Park, the authority of which is vested in the Council, to be a game reserve."

This study was not initiated by the Fisheries & Game Department, but since it is the authority responsible for the establishment and control of State Game Reserves in Victoria, it must of necessity put forward the case for Game Reserves. It does this without reflecting in any way on alternative views which may have been expressed.

The report will not deal with specific ways nor means of finance, nor how soon the development outlined can proceed. It is considered that there are too many preceding questions which must be considered in an undertaking of this nature.

. . . . .

In deciding whether a particular lake or swamp should be reserved as a State Game Reserve it is necessary to consider the background leading to the setting up of State Game Reserves in Victoria and the purpose and function of such Reserves.

#### Why are Game Reserves needed in Victoria?

This Department has for the past five years studied the problem of preserving waterfowl in Victoria. These are the wild duck, ibis, egrets, and thirty other species of birds dependent on special water conditions for their food. By duck trapping and banding, by swamp survey throughout the State, the migration flyways and the seasonal fluctuations of the waterfowl have been followed. Man's direct effect in shooting the birds has been studied by means of the X-ray fluoroscope and the results of the bands returned by shooters.



This study has shown beyond reasonable doubt that it will not be possible to preserve the waterfowl in this rapidly developing State merely by preventing or severely limiting shooting. In fact this Department considers that unless sufficient remnants of habitat along the flight lanes are reserved and increased in carrying capacity for ducks, ibis and the rest, these birds will become a relic of the past. Only by managing certain lakes and swamps so that they can feed and breed a far greater number of birds, can the continued deterioration of wildlife habitat throughout the remainder of Victoria be counteracted.

In forming this conclusion, the available habitat in existing reserves and parks, and likely to be included in future reservations, was considered and found to be totally inadequate. This applies both to the amount of habitat and the methods of management.

#### What is a State Game Reserve?

A State Game Reserve is an area of public land set aside for wildlife conservation. In it the special conditions, required by waterfowl and all other desirable species of wildlife, will be managed to feed and breed the maximum harvest of wildlife. It is believed that true conservation, whether applied to wildlife or any other natural resource, means the wise use of that resource without impairing its future productivity. That use can be hunting, eating or just enjoying the sight of wildlife in the bush, which so many people do on their holidays. If the conservation programme is wise, all these different uses of the various species can be enjoyed at the one locality at the appropriate times of the year and without destroying the future of the species.

#### How will a Game Reserve be managed?

In some areas the wisest conservation will consist only of preventing the destruction of the special living conditions required by wildlife. This almost negative approach, the isolation of a small section of habitat, will work only with some species. With the highly migratory waterfowl it is totally inadequate. In other words the development of Victoria has left no alternative but to carry out large scale habitat management - by the planting of trees, by encouraging the growth of low bushy cover, by sowing and cultivating wildlife food.



Why is a Game Reserve necessary in this district?

The backbone of the proposed system for Victoria is a chain of specially managed large waters, each being not more than 50 miles apart and spaced along the migration paths of the waterfowl. Smaller waters will be located between these major reserves. Survey would indicate that there is little suitable swampland available for this special project in the area between Long Swamp at Nelson and the Lake Corangamite district, a distance of 130 miles as the duck flies. Yet this is on the main east-west flight lane for waterfowl moving across Victoria.

The need is very great for a water, such as Tower Hill, to be managed for waterfowl, both from the state point of view and the local point of view, if this district is to participate in the comprehensive plans for waterfowl conservation.

The unique features of Tower Hill make it an ideal Game Reserve.

Each of the characters and possible projects listed below emphasize the unique character of Tower Hill and underline the need to manage this area to achieve the maximum benefit to wildlife and consequently to the people.

1. It is ideally situated with respect to the other proposed reserves within the State system designed to cater for the migratory habits of the birds.

2. The existing wildlife is poor both in numbers and species present. However it is an area which would undoubtedly respond with obvious effect to a scientifically designed habitat management programme.

By using natural conservation methods on sufficiently large a scale, the existing unattractive vegetation could be replaced with a mixture of trees, protective bushy cover and food plants. This would attract and hold wildlife, particularly waterfowl, but also a greater variety of desirable land birds. Wildlife food crops would be planted in various localities on the island and around the outer edge. These would build up the soil fertility, replacing the vermin, bracken and snakes at present predominating in the area.

The Government has recently approved the appointment of special personnel, agricultural scientists and others, for the Fisheries and Game Department to begin the specific task



of managing habitat for wildlife. The necessary technical skill will become available, but it is only as a Game Reserve that Tower Hill can be developed to the extent described since only this system has the facilities and the charter for such work.

3. The isolation of the island by water and of the outer shore line by the steep sides with which the reserve is bounded present an opportunity unique in wildlife management. Too often the protection of works being carried out for habitat improvement cost more than the works themselves. At Tower Hill entry can be limited to a few points. Access to the island could be limited to the levee banks used for water control. Tracks would be required for efficient management of the area but their location would be limited and control easy.

In this way the reserve would become almost a perfect outdoor laboratory for wildlife management with predators, vermin, and other interfering factors more easily controlled than in any other known areas. The principles of repopulating wildlife, studied in this laboratory, would assist in bringing wildlife back to many other parts of Victoria.

4. Initially emphasis would logically be placed on waterfowl management in the Reserve. Aquatic food plants would be encouraged by water level control using levee banks, and other control methods. Also sowing and cultivation of desirable wildlife foods would be carried out in the water and around the edges. The aim would be to produce a maximum of controllable shallow areas of water, varying from a few inches to four feet, to feed and hold large numbers of waterfowl. Unique opportunities for doing this appear practicable on the eastern side of the lake by using levee banks from the island to the outer edge.

Even if, as seems likely from the past history of the lake, we must look forward to a time when the water level will drop due to drier climatic conditions, this will only improve conditions for the water birds.

The possibilities of such favourable control for waterfowl management are not realized on the majority of proposed Game Reserves elsewhere in the State.

5. Tower Hill has always been a hunting locality. The white man shooting wild duck only continues the use made of Tower Hill by the aborigine in his time. To my knowledge, duck shooting has never been prohibited in the time Tower Hill has been a reserve.



Two fundamental considerations lie behind the Department's view that it is unnecessary to prohibit shooting on the lake. Firstly shooting has not driven wildlife away from this reserve. The destruction of their natural conditions has destroyed and driven away the wildlife as man has used the crater lake for his own purposes. Secondly only wild duck and quail amongst the important wildlife may be shot on the Reserve during a restricted open season. All other wildlife in declining numbers is already fully protected and will continue to be so on all Game Reserves throughout the whole year.

As regards the necessity of protecting duck the Department considers that existing regulations governing duck seasons, limits etc., are the only effective way of limiting the shooting at the present time. Sanctuaries are useful and necessary for conservation, - if they fit the broad plan of waterfowl migration. As single isolated non-shooting areas they afford little if any return for conservation. Prohibiting the shooting of duck on Tower Hill will not save ducks under the existing conditions of duck migration. Wild duck are highly migratory, and individual birds stay little more than a week on this lake though there may be many birds seen there at one time.

6. Further reference must be made to the unique character of Tower Hill because of its geological and scenic attractions. Any proposal for the use of the reserve must make their preservation and presentation to the people one of its primary aims.

Concentrated use of the Reserve by wildlife and management of the habitat in the way described previously is not inconsistent with greater enjoyment of people interested in its scenic qualities. The plantings, the greater availability of wildlife, the access tracks necessary to carry out the wildlife programme, in fact all those features which will make it a good Game Reserve will also attract more people. All the problems which such development entails can be adequately met by this Department. Conservation of the resources of the Game Reserves as a whole will be the guiding policy.

More people attracted to the Reserve will lead to greater problems of protecting the wildlife. But without public interest the reserves cannot function. The facility with which Tower Hill can be protected has been mentioned. The increase in trained personnel attending the area for the management programmes will lead to more effective policing of regulations.



In summary it is suggested that a State Game Reserve is the best way of developing the unique wildlife management potential of Tower Hill. This development could not be achieved under any other system. At the same time the scenic and geological character of the crater lake would be fully preserved and developed.

From a wildlife aspect it is unnecessary to prohibit shooting on the lake since this will achieve no conservation purpose, yet considerably restrict public use of the reserve.

Fisheries & Game Department  
Victoria.

GB 16

7th October, 1959.

Prepared for submission to

The Wildlife Reserves Investigation Committee.

Notes on Lakes Barracoota & Wau Wauka.

IN GENERAL

In deciding whether a particular swampland should be reserved as a Game Reserve, it is necessary to consider the purpose and function of the system as a whole.

Waterfowl banding and habitat survey by this Department have indicated a rapidly moving population of birds, the numbers of which in any one district depend on the conditions of the swamp. It has been shown that conservation of waterfowl in this rapidly developing State will not be possible, unless sufficient remnants of habitat along the flight lines are reserved and increased in 'carrying capacity'. Only in this way can the despoliation and destruction of waterfowl habitat on the greater proportion of land in Victoria be counteracted.

In coming to this conclusion, the available habitat in existing reserves and parks, and likely to be included in future reservations, was considered and found to be totally inadequate. This applies both to size and to the methods of management.

EAST GIPPSLAND

No swamps suitable or available for reservation have been located between those in the vicinity of Orbost and the N.S.W. border, except the Barracoota and Wau Wauka Lakes. None of the inlets or creeks can be managed or cater for the particular requirements of a Game Reserve.

There is no questioning the fact that the area east of Mallacoota is particularly important from a wildlife aspect and should be reserved. The question revolves on whether management to increase its breeding potential can be adequately given if the area is not a Game Reserve. It has been suggested that such management would be contrary to the concept of its use as a National Park, the only other suitable form of reservation.



It should be clearly understood that, although Game Reserves are selected for their importance to waterfowl management, adequate protection will be provided for all other forms of wildlife and wildlife habitats. In fact, conservation in the sense of wise use of all natural resources is the prime purpose and function of all Game Reserves. All the problems this entails can be adequately met by this Department.

Another matter which, though perhaps of secondary importance to the foregoing discussion, will be of considerable local and practical importance, is the provision of adequate shooting areas. This should be thought of in terms of not only the present position but also the future.

With Mallacoota, Barracoota and Wau Wauka Lakes closed to shooting, a district which is regarded as one of the finest tourist areas of Victoria can not cater for shooters. Quite apart from whether this is desirable or undesirable there may be public objection since this area has provided shooting in the past.

#### POSSIBLE SOLUTIONS

Two alternatives are available.

1. The area be reserved as a Wildlife Reserve except Lakes Barracoota and Wau Wauka which would be Game Reserves having access from the east side of Mallacoota Lake. All except the shooting lakes could be a sanctuary.
2. A strip along the coast and including the lakes be reserved as a Game Reserve, while the remainder is made a National Park.

There is no conflict in having these areas adjacent, since the conservation of natural resources is the prime aim of each of the reserves.

Comments on the National Parks Association pamphlet are as follows:-

1. "The lakes are unimportant for breeding ducks"  
This comment does not affect the question. The whole of Gippsland is unimportant for breeding ducks. It is one of the main functions of a Game Reserve to overcome this lack of breeding areas.

3.

2. "Every purpose of a Game Reserve, other than shooting, will be achieved by including them in the National Park".  
The reverse holds equally true.
3. The controls exercised on a Game Reserve will ensure that all protected fauna will be fully protected.
4. Lakes Barracoota and Wau Wauka do carry large numbers of ducks when ducks are in the districts. They are situated on the coastal flight lane of migratory ducks.
5. The opinion is held that far more people have shot over these lakes in the past than have visited them for scenic or natural history purposes.
6. The duck shooting lakes listed are more than 100 miles distant and cannot possibly cater for tourist or local duck shooters from the Mallacoota district.
7. The Genoa River, Morgans Lake, Maramigo Creek, and Walagaraugh River have river shooting areas and though they cater for a small number of shooters now, the number of shooters who can be accommodated is severely limited.

Fisheries & Game Department.

October, 1959.



Interim statement on the necessity for

GB/18

Wildlife Reserves

Submitted to the Wildlife Reserves Investigation  
Committee, 15 December 1959.

THE FUNCTION  
&  
MANAGEMENT OF  
THE RESERVES.

In any developing country it should be accepted that where man himself has changed the natural countryside, man himself should be prepared to help to re-create some of the conditions in the natural world which he himself has destroyed.

THE PROTECTION AND DEVELOPMENT OF  
LIVING SPACE FOR WILDLIFE WILL BE  
THE MAIN PURPOSE OF THE RESERVES.

In the Game Reserves, the special conditions for breeding and feeding the waterbirds will be provided. In some areas in which the basic requirements remain, and for a few species, the wisest conservation will consist only of preventing the destruction of the special living conditions, for example by preventing drainage, over-grazing by cattle etc.

With highly migratory waterfowl, this purely protective form of management is totally inadequate. The development of Victoria has left no alternative but to carry out large scale habitat management - by the planting of trees, by encouraging the growth of low bushy cover, by sowing and cultivating wildlife food, and controlling the water levels to give the best conditions for wildlife.

CHAIN OF  
GAME RESERVES  
NECESSARY.

One of the main reasons for the establishment of these Reserves is to improve and encourage the ducks to stay and breed in the state. For a number of years, the Fisheries and Game Department has been carrying out large scale duck banding projects. As a result of this work, the waterfowl flight lanes within the state have been plotted. A swamp survey has shown where the valuable swamps are situated. To be of any significance the management of these swamps will have to be on a large scale.

This will take, time and money. 'Key swamps' have been chosen to cover the main flight lanes throughout the state. These will be developed first; they are shallow impermanent waters, capable of growing extensive stands of food and cover plants, and are the areas currently most subject to deterioration for wildlife in Victoria.

In recommending any particular swamp for management as a Game Reserve, attention will be given to its value to the birds, its location with respect to the migration pattern, the availability of other swamps in the area, and to its suitability for management.

FOUR TYPES  
OF RESERVES  
PLANNED.

The overall plan for wildlife conservation calls for four types of Wildlife Reserves.

1. State Game Reserves.

Areas of land set aside and managed by the Department primarily for wildlife conservation. In these areas because legal duck shooting during the open season is not detrimental to the management of the area, this activity will continue as in the past.

At this stage of the programme most attention is being given to swamps for the conservation of waterfowl. This is the sphere of greatest urgency.

The flying Black Duck has been chosen as the sign to be used on all State Game Reserves.

2. State Sanctuaries are used for the same purpose as Game Reserves but shooting will be prohibited at all times.

This is necessary because of some special functions of these particular reserves such as refuges for ducks during the open season, or for the particular protection of large ibis rookeries. The ibis has been chosen as the sign to indicate the State Sanctuaries.

3. General Wildlife Reserves.

Areas of wildlife habitat set aside for wildlife such as koalas, penguins and other species which are protected throughout the year. The appropriate title and symbol will be used.



3.

4. Cooperative State Game or Wildlife  
Management Projects.

Where other wildlife areas requiring special management for wildlife are already being used for some other important economic product, the value of which is greater than that of wildlife, for example a red gum forest, reservoirs and watersheds etc., a cooperative project is suggested to the authority primarily responsible. In this way the necessary recognition can be given to the importance of the secondary by-product - wildlife, and consequently to its proper management, without unduly interfering with the primary land use.

It is suggested that reserves where wildlife is the only product of importance should not become cooperative projects. In such cooperative projects the production of wildlife can never become a maximum because it will always be subsidiary to the needs of the other uses to which the land is put. Intensive management for wildlife will not be easy and under this divided control the reserve will not achieve its potential.

Fisheries and Game Department,  
Victoria.

OFFICE OF THE DIRECTOR OF  
**FISHERIES AND GAME**

All communications should be  
addressed to the

DIRECTOR OF FISHERIES  
AND GAME  
Melbourne, C.3.

505 FLINDERS STREET EXTENSION

Melbourne, C.3

ONE SUBJECT ONLY should be  
dealt with in each letter to the  
Department.

Tel.: MU 4387  
MU 2811  
MB 2580

D.B.3.

Dear Sir,

Thank you for returning the duck band to us.

Your band, number .....

came from a .....

banded at .....

on .....

This is one of the 30,000 ducks banded by the  
Department in the last few years. By your action in sending  
in this band, you are helping us to build up a picture of  
where the ducks move to, across - and even beyond - the  
Continent.

However, the information you sent in was not quite  
sufficient. We would be grateful if you would fill in the  
details marked on the enclosed sheet. Without these full  
and accurate details the recovery loses much of its value.  
A reply-paid envelope is enclosed for your convenience.

The article attached explains why this information  
is required, and how it can be used to provide more ducks.

Your co-operation is very much appreciated.

Yours faithfully,



(A. DUNBAVIN BUTCHER)  
Director.



1	2	4	LARA	ARINGA	NANNEELA	CORNELIA CREEK	SMALL STATIONS	BLACK DUCK	GREY TEAL	WOOD DUCK	CHESTNUT TEAL	MOUNTAIN DUCK	COOT	MALE	FEMALE	ADULT	JUVENILE	
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S. & McD. Pty. Ltd. "Invicta" Sorter Cards Pat. No. 4150.

RECORD OF DUCKS TAKEN  
DURING OPEN SEASON 1960

DATE	No. of Guns	Locality	Species	No. taken

The Fauna Protection Panel seeks your co-operation in recording some estimation of duck shooting pressure, during the 1960 Open Season for Ducks. Consequently, would you be good enough to record known Duck Shoots in your area and return the completed form at the end of the Season, to the undermentioned address.

The information collected will be of considerable value in continuing the principle of an Annual Open Season for Ducks and in implementing a duck conservation programme now being formulated.

Allen A. Strom  
Chief Guardian of Fauna.

Fauna Protection Panel  
Chief Secretary's Dept.  
Box 30, G.P.O.  
SYDNEY.



## D U C K                      S H O O T E R S

### PLEASE NOTE!

The 1960 Season opens at 5 a.m. on February 20th  
CLOSES at midnight on April 30th.

#### DON'T SHOOT -

1. On Sanctuaries,  
State Forests  
or Timber Reserves.
2. On private property  
without permission.
3. On Sundays.

#### YOU MAY TAKE -

1. Black, Grey Teal,  
Wood and White-  
eyed Duck.
2. Up to a total of  
ten birds per day.
3. Ducks ONLY with a  
firearm.

---

Help the Wild Duck Conservation Programme.  
Observe the rules, refrain from shooting out of  
season and deter the law-breaker.

---

Fauna Protection Panel, Chief Secretary's Depart-  
ment, Sydney.





Fisheries and Game Department

GAME MANAGEMENT

# BULLETIN

No. 1

January, 1960

## GAME RESERVES — THE PLAN AND THE ACTION

### What the Duck Shooter will get for his £1

**T**HE introduction of the game shooting licence in the 1959 duck season, opened up the prospect of a new era in Victoria for the organised scientific management of native waterfowl, and for the improvement of a traditional Australian sport.

Now the way is clear for a programme which will not only save the State's finest game birds from virtual extinction but which will also, by providing the optimum conditions for their feeding and breeding, ensure a permanent increase in their numbers.

A question that Victoria's 35,000 duck-shooters are entitled to ask is: How is the money we pay for our game licences being spent to ensure the achievement of these objectives?

To appreciate the answer to the question, it is necessary to understand something of the background to the Game Reserves programme. This was not just a matter of deciding that such a programme was necessary and immediately reserving swamps and growing food and cover for ducks.

Firstly, the Department had to find out where the migratory waterfowl of Victoria were coming from, the places where they went to breed and feed, and the flight lanes they followed. This called for a carefully-planned, sustained effort which started over five years ago and which must continue. During this time, by the recovery of banded birds, the flight lanes have been plotted, followed by an extensive survey to determine the number and location of the most important waterfowl swamps throughout the State.

Analysis of the results of this work showed some extremely disturbing aspects, all of which pointed to the fact that the swamps on which the waterfowl of Victoria depended for their existence were disappearing more rapidly than had been thought and that this was the central factor in the disastrous decline of the duck population.

The Government, realising the urgency of the problem, set up the Wildlife Reserves Investigation Committee to determine which of the most important swamp areas could be reserved.

Over the past year, an intensive investigation has been carried out on individual swamps throughout the State before their proclamation as State Game Reserves.

Already, two reserves have been proclaimed — Jack Smith's Lake, near Woodside, Gippsland, and Lake Coleman, near Dutton, also in Gippsland, and conservation work is in hand in both these areas. Other areas are expected to be proclaimed before the next duck-shooting season.

It is one thing to proclaim Game Reserves. It is another to manage them so that waterfowl will increase. To do this requires scientifically-trained staff.

It has been suggested by some shooters that money paid for game licences should be used for game management projects — not for paying salaries of game managers. What this opinion does not take into account is that without game managers there could be no game management projects.

Let's put it this way: A hospital cannot be run without doctors. No one suggests that doctors' salaries should not be paid out of funds available to hospitals. In the same way, you cannot rehabilitate the wildlife of Victoria without recruiting — and paying — specialists for the job.

Twelve new positions have been approved by the Government for the following sections of the game management programme:

1. **Swamp Management Section:** A game manager (with Agricultural Science degree) and two game management officers have been appointed to develop waterfowl breeding and feeding conditions.
2. **Swamp Drainage Section:** Surveys the destruction of duck habitat by drainage and recommend preservation methods.
3. **Game Investigation:** Collecting specimens, trapping, banding and x-raying.
4. **Laboratory Section:** Analysing results of investigation section's work, compile statistics which will allow more progressive shooting regulations to be framed.

Of the 12 staff already appointed, eight are field workers, actively concerned with the betterment of food and breeding conditions for duck within swamps. It is considered essential that most of their work be carried out in game reserves where it will be secure for the future.

Game licence funds have also contributed towards the purchase of capital items such as vehicles and game management equipment.

An important project, which was financed by the Government in addition to game licence funds, has been the establishment of the 630 acre Wildlife Research Station at Serendip, Lara. As well as general wildlife work on other fauna, the Department is developing the area for waterfowl with the specific objective of demonstrating how game birds can be grown on farm properties along with other farming activities.

## THE 1960 SEASON

The 1960 duck season opens at 5 a.m. **SATURDAY, FEBRUARY 20**. The season closes on **APRIL 30**.

**Four species of duck**, formerly protected, are now on the list of game ducks.

**They are** the Pink-eared, the Blue-winged Shoveller, the Chestnut Teal and the Monkey (or Freckled) Duck.

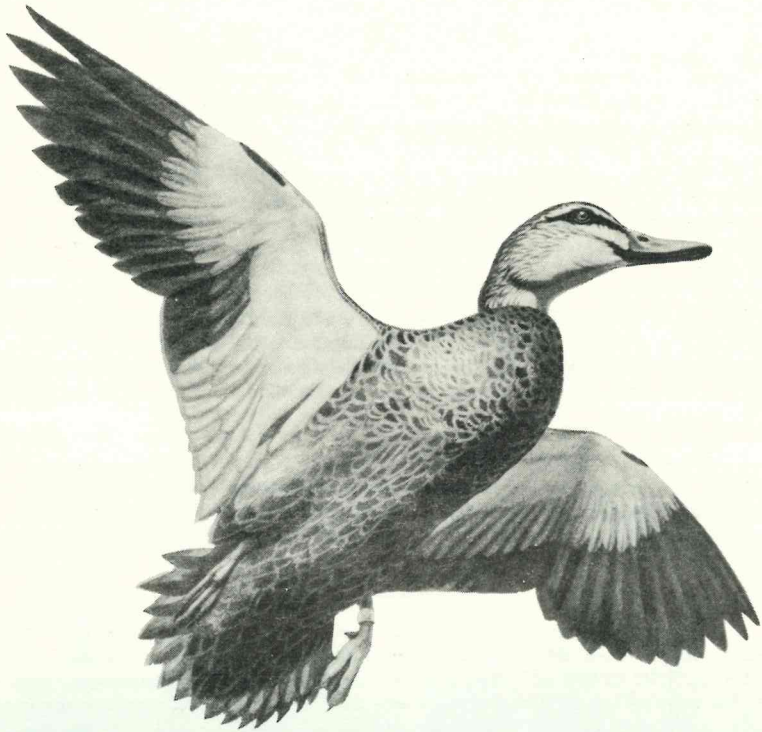
**Bag Limit:** 20 on opening day, 10 on subsequent days.

Within this total limit, there must be not more than 10 Black Duck or 10 Grey Teal, nor more than 5 ducks of any of the other species.

**The prohibition on the use of unplugged automatic shotguns has been lifted.**



# LIVING SPACE FOR WILDFOWL



Issued by  
THE FISHERIES AND GAME DEPARTMENT OF VICTORIA  
in co-operation with

IMPERIAL CHEMICAL INDUSTRIES  
OF AUSTRALIA AND NEW ZEALAND LIMITED

## LIVING SPACE FOR WILDFOWL

### Fisheries & Game Department of Victoria

Writing over 100 years ago, an old bushman described the decline in the duck populations around the young city of Melbourne even in the few years the new colony had been in existence. The reasons he gave for it then, are the same ones which explain the further decrease in the duck population over the remainder of Victoria in our own time -- the great increase in shooters together with drainage and spoilage of duck feeding swamps.

#### Decrease in numbers - why?

The decrease in numbers is not all due to heavy shooting over the years. Ducks are good breeders when conditions are right, but as settlement advances the conditions in swamps deteriorate for feeding and breeding ducks.

The appearance of large flocks in several districts in recent seasons is due to the extensive breeding which has taken place on the inland river systems. Duck banding has shown that these birds migrate into Victoria after the breeding season, from places as far apart as Charters Towers, Queensland; Hobart, Tasmania; Kalgoorlie, Western Australia, and Darwin, Northern Territory.

There is little breeding in Victoria and the local populations are becoming smaller every year. In 1955, when most of the ducks returned to their home States, we saw just how few wild ducks Victoria could claim as its own. In 1956 when the breeding in outback N. S. W. was prolific, Victoria had the benefit of the overflow, and a very good duck season was enjoyed.

But what of the years to come, with more shooters and greater opening up of the country? It is evident that we must plan for the future of our waterfowl, so that we can bring the birds back, and ensure that they will remain despite the rapid development which is taking place in Victoria.

#### Needs of Wildfowl

Ducks are a crop taken from the soil as are cattle or poultry. Though used for different purposes, like these domestic animals they need food and a place to grow. But they cannot be confined to any one district and no one can claim ownership. While many people enjoy the harvesting of these birds there are few helping to produce the crop.

There are two ways to produce more wildfowl. Firstly, prevent the shooting of breeding birds by close seasons, and secondly, provide good breeding conditions and suitable feed in the swamps. One is of no value without the other. The second method will provide their requirements in food, and their nesting or roosting quarters, where they spend the winter. In other words, ensure that they get what we call the necessities of life.

Three words sum up our investigation into the needs of wild duck: Water, Food and Cover! All are essential, and the absence of one or other factor is causing the scarcity of wild ducks in most areas throughout Victoria.

#### WATER

In many cases it is lack of water which has driven the ducks away. Swamps and marshes have been drained for crops or grazing. Where this is successful, generally there is no argument, but often the cutting of drains will not rid the low lying areas of all the water. Then the only effect is to make the swamp less permanent. It is still full in winter, but dries out in early summer. Through lack of permanency, the area neither grows good pasture



for stock nor good water plants for wild life.

Often there is plenty of water, but it is too deep. Reservoirs, dams and canals will not replace marshes and lagoons as duck country. The muddy bottom and plant growth is too deep down to provide food for all types of ducks.

#### FOOD.

This brings us to the second big item in a duck's life - food. If the water is too shallow, or dries out, the water-life dies and duck food is destroyed. Here, again, spasmodic drainage of swamp lands has destroyed the value of certain waters for wild ducks. To get these areas back into water fowl production, again there must be control of water level by earthen banks across the drains. In many cases a few simple operations would restore these valuable areas.

#### COVER.

Loss of natural cover, our third important factor, exposes the wild ducks to many dangers. If nesting cover is not available the eggs are eaten by crows. (At one place a box was placed in a ti-tree fork and covered with branches. Days later, it was found to contain the eggs of three different kinds of ducks. Imagine the competition that went on over this nest. One can almost see the ducks queueing up because of the acute housing shortage!)

If the route from nest to the water is not protected by reeds or thick bushes, feral cats and hawks may destroy the young ducklings. With nest boxes over the swamp there could be more than the usual one or two of a clutch to reach the flying stage. If feeding areas are too exposed and no cover is available along the edge of lagoons, numerous enemies, among them man and his gun, will drive the ducks to more suitable districts.

This then is the urgent need of the water fowl. To make available as suitable habitat the thousands of acres of swamp land and marshes in Victoria useless for crops and pastures. With only a few exceptions, it is a fact that all over Victoria there are swamps not producing ducks because of one or other of the factors outlined above. These could be controlled. Counteract the factors which prevent the production of ducklings, or cause their early death, and there would be no need to worry about the future of our wild duck.

#### What can be done

NEED	FACTORS CAUSING LOSS	REMEDY
WATER	Drainage of wetlands	Manage swamps for the birds. Control water by use of drain-blocks etc.
FOOD	Water too deep. Water plants, insect life destroyed through drainage or unsuitable water level.	Control water levels and plant desirable duck foods.
COVER	No cover or suitable sites for nests. No cover for chicks to reach water from nest. Exposure to natural enemies and man.	Nesting boxes. Leave margins uncleared.  Prevent stock trampling and eating down ground cover, (if necessary for cattle to water at area, fence off part for cover.

## THE ANSWER TO THE PROBLEM

Most important of all we need land specifically set aside and managed for the production of waterfowl. At present the production of wild ducks is incidental to farming, forestry and other activities. For that reason more and more duck living space is being lost each year. The water often will be there but it just isn't suitable, the activities carried out around it are driving away birds more slowly and less spectacularly, but just as surely, as the punt guns of years gone by.

At the present time in Victoria there are no areas set aside and managed to produce wild duck and other water birds.

After a three year swamp survey in Victoria the Game Bird Research section can now recommend certain duck swamps as key centres which should be reserved for the use of wild duck. In these the special conditions required by water birds can be cultivated and managed to promote optimum use by the birds. These would have to make up for the disappearance of swamps elsewhere.

The areas reserved for wild duck would still be open to hunting during the proper season and could, in fact be vastly improved by levee banks and islands both for the birds and as public hunting areas.

Local organizations of sportsmen, birdwatchers and civic bodies could support this programme for the reservation of marshes in their districts. These groups, realizing the value of waterfowl can provide the impetus needed to move the plans for the future of our waterfowl from the paper stage into practical realities (by influence, manpower and interest). It will cost money, but with help from birdwatcher, shooter and holiday-maker the work could be done.

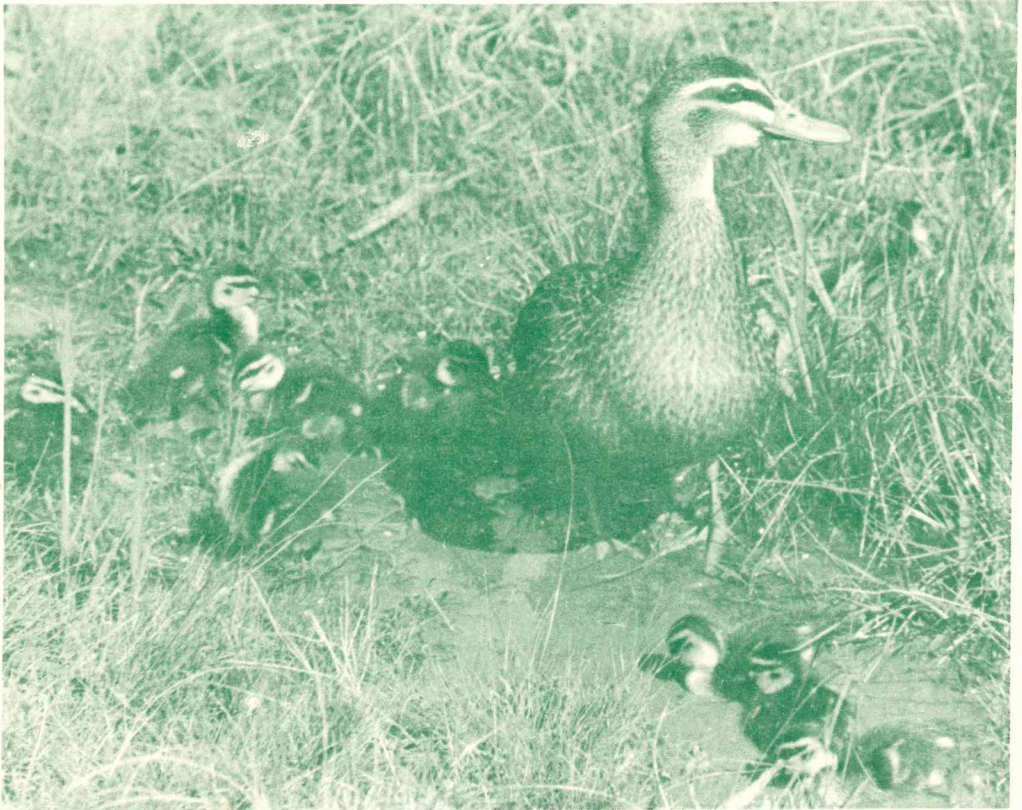
What is the value of a wild life swamp to the community? In terms of money it is the thousands of pounds spent annually on the enjoyment of wild life by all classes of people. It is the thousands of hours recreation the bush gives to these people. Many farmers are now realizing the value of a permanent swamp or marshy area to the well-being of individual farms. Among other things, it can provide much valuable green fodder at certain times when other feed is scarce. These swamps could be of great value in farm land drainage or irrigation schemes, in flood protection and other ways.

### How you can help

If you are interested in this work, and have any suggestions to offer regarding waterfowl, or particular swamps which may help our programme, then write to the Director, Fisheries & Game Department, Melbourne. He would be happy to consider and acknowledge any suggestions made.



# **WATERFOWL CONSERVATION IN VICTORIA**



ISSUED BY ICIANZ LTD.  
IN CO-OPERATION WITH  
THE FISHERIES AND GAME DEPARTMENT OF VICTORIA

## WATERFOWL CONSERVATION IN VICTORIA

Australian sportsmen are fortunate to have access to some of the finest wildfowl shooting in the world.

Victorian shooters are particularly lucky that their interests for both present and future generations are looked after by an active and progressive Department of Fisheries and Game.

The increasing population of this State, besides adding to the number of shooters, brings other factors which are reducing Victoria's wildfowl population day by day. Even though some good seasons occur occasionally, these are due mainly to dry conditions in other parts of Australia. However, the overall future picture is one of a declining duck population and poorer shooting.

With the present rapid development of certain agricultural and other land-use programmes, a great increase in the "cleaning-up" of marshes, farm water-holes and swamps has reduced the usable duck habitat to a dangerously low level. Conservation, then, must take on a broader meaning than mere non-shooting of the birds. It means the saving of their natural habitat, and the management of their food, cover and water requirements by the same methods as are used for other live products of the land. Such measures, carried out on a State-wide scale, could mean such an overall increase in the wild ducks that ready enjoyment would be available to all interested in wildlife.

The loss of a suitable habitat threatens other States of Australia in varying degrees. One matter in particular is obvious. The same wild ducks range over vast areas of Australia, regardless of State boundaries. So what is happening in Victoria concerns other States also. First, because, for example, lack of feed in Victoria could mean poor results in breeding when the ducks return to the North in New South Wales or Queensland. Secondly, because the same land-use tendencies are proceeding at varying rates all over Australia. Lack of habitat in Victoria may indicate the shape of things to come elsewhere - if no attempt is made to provide a rational plan for the saving of our waterfowl.

### How can this Decline be Arrested?

In Victoria, there has been a great decline in the wild duck populations over the last 20 to 40 years. This decline may be arrested if the Department's present programme is augmented in all areas of Victoria.



This programme consists of :-

- (a) Regulations proclaiming the close season and bag limit, both scientifically adapted so that the population is safeguarded whilst a reasonable harvest is allowed.
- (b) Full-time Wildlife Officers to police game regulations and carry out management projects.
- (c) Breeding, feeding and resting sanctuaries logically distributed throughout the State.
- (d) Improvements of existing, and creation of new, duck habitats, by management projects.
- (e) Education of shooters, bird watchers and the general public to appreciate the value of waterfowl, both to themselves and to the community.
- (f) Further detailed research into the life histories of waterfowl so that all conservation, management and harvesting of these birds will be conducted on principles derived from a knowledge of the birds themselves and what they require to continue in this rapidly developing country, as a healthy productive natural resource.

At present nobody knows how many ducks are shot each year, and it will be a long while before the exact figure is known. Meanwhile, the question becomes increasingly important as Victoria is developed and the growing population of hunters goes further in its search for ducks.

In recent years, the Victorian Fisheries and Game Department has banded the legs of 30,000 wild duck, then released them. Vital information on the breeding, migration and other habits of ducks is obtained, if shooters return the bands found on any ducks they bag during the shooting season.

The Game Bird Research section of the Department is at present working on a new method of measuring hunting pressure in conjunction with its duck trapping and banding programme. Within recent months, an apparatus has been set up at Lara for the X-ray examination of each wild duck which is banded. Its purpose is to discover how many of the duck flying around in the bush carry shot pellets, the result of "near-misses" by shooters.

Both the number of ducks carrying the evidence of "near-misses" and the number of ducks killed by the shooting will be proportional

to the number of ducks fired at. As it happens, the only factor of these three which can be easily measured at the present time, is the percentage of "near-misses", the ducks carrying a few spent pellets in their bodies. This gives an indication of the shooting pressure.

As this investigation is developed, the results should greatly assist the scientific formulation of game laws. Unnecessary restrictions can be avoided while the need for any new duck regulations might be convincingly demonstrated. Hunting pressure is only one of many ways in which a duck can die, and an investigation of this kind could do much to assist in formulating a constructive game management programme. This will mean more ducks and more frequent good shooting seasons.

How does ICIANZ Ltd. assist the Department?

ICIANZ Ltd. has been able to contribute to the work of the Department in various ways:-

- (a) By financing and reproducing attractive posters asking for the return of duck bands. These posters have been widely distributed among local sports stores, schools, etc.
- (b) By commissioning paintings of ducks which have been used in advertising and also to educate the sporting public to recognise protected ducks.
- (c) By filming research work showing Departmental activities at the trapping and banding stations, and in assisting in the publicity work of the Department.
- (d) By creating an inducement for shooters to return leg bands to the Department taken from ducks bagged during the season. ICIANZ Ltd. has agreed to make available cartridges to the value of £1,000, which will be awarded to shooters returning any one of a number of "lucky" bands selected by the Department.

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ICIANZ Ltd. is proud to be associated with such a programme, designed to protect the interests of the sportsmen of today and tomorrow.

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