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# CALM BRIEFING PAPER 2/86

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## DUCK SHOOTING

### INTRODUCTION

Native ducks are protected fauna and the Department is responsible for their conservation. The shooting of ducks for sporting or recreational purposes is, on the other hand, a long-established activity which the Department is required to manage. Legislation in Western Australia has both provided for and imposed controls upon duck shooting for over 100 years. Duck-shooting seasons are determined on an annual basis.

There are different views within the community as to whether the shooting of ducks, or any wildlife, for sport is an acceptable activity. Community debate will continue and is likely to increase and there will be criticism of the Department and the Minister from some quarters if duck shooting continues, and from other quarters if it ceases.

The key factor in waterfowl<sup>\*</sup> conservation is the conservation of wetland habitat. Duck shooting is believed to have little ultimate effect on waterfowl populations because of the overriding importance of variations in habitat condition. Nevertheless, while duck shooting is an accepted practice, regulation of it is necessary.

### LEGISLATION

The Wildlife Conservation Act and Regulations provide for the declaration of open seasons for the taking of fauna, and for the declaration of any species of wild duck and goose (as well as quail) as game species. The Act and Regulations also provided for Nature Reserves to be classified as shooting or hunting areas and to be known as Game Reserves, but the relevant provision has been repealed. However, the CALM Act provides for continuation of such classifications which were in force at the time of the repeal.

The provisions governing duck shooting (including game and non-game species, open and closed areas) may be varied from year to year as required, and full details are included in the open season Gazettal notices and the Duck Shooters' Guide published by the Department. In 1986 the declared game species are:

\* i.e. ducks, swans and geese.

Wandering Whistling-Duck	<u>Dendrocygna arcuata</u>
Plumed Whistling-Duck	<u>Dendrocygna eytoni</u>
Australian Shelduck	
(Mountain Duck)	<u>Tadorna tadornoides</u>
Pacific Black Duck	<u>Anas superciliosa</u>
Grey Teal	<u>Anas gibberifrons</u>
Chestnut Teal *	<u>Anas castanea</u>
Australasian Shoveler	<u>Anas rhynchotis</u>
Pink-eared Duck	<u>Malacorhynchus</u>
	<u>membranaceus</u>
Hardhead	
(White-eyed Duck)	<u>Aythya australis</u>
Maned Duck (Wood Duck)	<u>Chenonetta jubata</u>

The following species are fully protected:

Cape Barren Goose	<u>Cereopsis</u>
	<u>novaehollandiae</u>
Black Swan	<u>Cygnus atratus</u>
White Swan (Mute Swan)	<u>Cygnus olor</u>
Freckled Duck	<u>Stictonetta naevosa</u>
Blue-billed Duck	<u>Oxyura australis</u>
Musk Duck	<u>Biziura lobata</u>
Green Pigmy Goose	<u>Nettapus pulchellus</u>
White Pigmy Goose	<u>Nettapus coromandelianus</u>
Burdekin Duck	<u>Tadorna radjah</u>
Pied or Magpie Goose	<u>Anseranas semipalmata</u>

- \* Declared game species in the South West and Eucla Land Divisions only.

## BIOLOGICAL PRINCIPLES

### Rainfall, Wetlands and Waterfowl Breeding

Rainfall in the south-west of WA is markedly seasonal. On average, approximately 70% of the total annual rainfall occurs during the months May to September, with 35% being recorded during June and July. As a consequence the wetlands (swamps, lakes, rivers, etc.) of the south-west show marked seasonal variations in water area and depth, with water levels rising during the wetter months of winter and spring and then falling during summer and autumn when little rain occurs and evaporation rates are high.

Waterfowl breed when conditions are most favourable, that is, when food and water are most abundant. In the south-west this occurs during spring and early summer, when water levels reach their peak and warm weather accelerates the growth of aquatic plants and animals.

Nest construction and egg-laying may commence as early as June and continue until November or even December. For most species, however, peak nesting activity occurs during August and September. Broods of ducklings are most commonly seen from September to November and the great majority of young birds are flying by January. Waterfowl numbers are thus at a peak early in the New Year. This is when duck-shooting seasons are held.

#### Duck-Shooting Seasons

Duck-shooting seasons are confined to January-March each year in order to minimise their impact on duck populations. At the end of each successful breeding season, duck numbers are increased by the addition of new birds. As the summer-autumn dry season progresses, and conditions for waterfowl deteriorate, many birds die due to a variety of causes such as lack of food or water, predation and disease. By holding the shooting season early in the year, the impact on duck populations is minimised because a significant proportion of the ducks killed are birds which would normally die from other causes before the next breeding season. Thus shooter-induced mortality is timed to replace that mortality, rather than add to it. It follows that, upon completion of breeding, the sooner the shooting season is held, the less the effect on the number of birds surviving to the following breeding season. The later the season, or the longer it extends, the greater the effect on numbers surviving to breed.

Annual rainfall variation affects the availability of water for breeding purposes. Thus in years of average or better-than-average rainfall, conditions for waterfowl breeding are usually good and the number of young produced is high. In years of exceptionally low rainfall, little surface water is available and production is greatly reduced.

Recommendations concerning duck-shooting seasons are based on consideration of biological principles, rainfall statistics and an assessment of the condition (water level) of a sample of south-west wetlands. In the South West and Eucla Land Divisions the existing practice is to declare FULL SEASONS when conditions for breeding have been average or better-than-average, RESTRICTED SEASONS when conditions have been poor, and NO SEASONS when conditions have been particularly poor for a number of years. The principal objective of this system is to ensure that shooting does not cause a serious reduction in the size of the breeding population during dry years or periods of prolonged drought. Specifications for FULL, RESTRICTED and NO SEASONS were standardised in 1979 as follows:

	FULL SEASON	RESTRICTED SEASON	NO SEASON
Opening Date	2nd Weekend in January	2nd Weekend in January	-
Opening Day	Saturday	Sunday	-
Opening Time	6.00 <u>PM</u>	6.00 <u>AM</u>	-
Season Length	10 Weeks	4 Weeks	-
Bag Limit	10 Birds of any Game Species	5 Birds of any Game Species	-

#### Assessment of Waterfowl Breeding Conditions

Prior to 1978 conditions for waterfowl breeding were assessed each year through ground and aerial surveys of important waterfowl sites. Water levels were recorded as dry, low, half-full, high or full. Notes were also made of waterfowl numbers and, where possible, waterfowl breeding activity.

In 1977 it was decided that a more precise system of evaluation was required and a program of installation of depth gauges on selected wetlands was commenced.

Gauges have been installed on more than 120 wetlands distributed throughout the south-west and 79 of these are now monitored in September and November each year. Most are wetland Nature Reserves (including Game Reserves) managed by the Department. The depth gauges permit precise monitoring of water levels and thus allow more meaningful comparisons of conditions to be made from one season to another. The gauges also make it possible to determine rates of water loss during the annual dry season and thus enable the forecast of "dry-out" dates for individual wetlands or groups of wetlands each year.

#### Remainder of the State

The above considerations relate to the south-west of the State, that is, the South West and Eucla Land Divisions. A continuous open season applies in the remainder of the State due to the vast areas and very small number of inhabitants involved and to the difficulty of access to most breeding areas following rain.

## RELATED ISSUES

The considerations outlined above in relation to the determination of duck-shooting seasons, together with patrolling and law enforcement activities by Departmental staff, particularly Wildlife Officers, are aimed at ensuring that the conservation status of ducks is not threatened by shooting. Recreational hunting, if managed properly, is not incompatible with nature conservation objectives in terms of conservation of duck populations and their habitats.

However, the community debate about duck shooting encompasses a range of issues in addition to the conservation status of ducks, e.g.:

(1) Taking of non-game species:

Non-game birds of a variety of species are shot either by accident or deliberately. It is an offence to shoot any bird which cannot be positively identified as a game bird and the requirement to positively identify a duck as a game species is emphasised in information provided to shooters and through inspections by Wildlife Officers.

(2) Taking of rare species:

Comment (1) above applies. Particular concern is often expressed about the Freckled Duck. Measures taken to provide added protection to the Freckled Duck during duck-shooting seasons include advance publicity of the whereabouts of Freckled Duck on opening day, closure of certain favoured areas, increased law enforcement activity, distribution of Freckled Duck identification pamphlets and the banning of night and twilight shooting in some areas.

(3) Cruelty of shooting, particularly where ducks are wounded or crippled and not retrieved:

Surveys elsewhere in Australia show that the ratio of crippling and loss of ducks can be in the vicinity of 20% (i.e. for every five birds retrieved, one is not). No data are available for Western Australia. The onus is on shooters to act responsibly in this area, and the Wildlife Conservation Regulations specify that a shooter shall not attempt to shoot any duck in a Game Reserve unless he may reasonably expect to recover it if it is killed or wounded.

(4) Lead shot poisoning:

Overseas studies have shown that there can be significant mortality amongst some waterbird species resulting from ingestion of lead shot on wetlands which are heavily used by shooters. Recently there have been indications that this problem exists in at least one locality in eastern Australia. The Department plans to conduct a pilot study in Western Australia, based initially on the collection of samples from birds shot during the next open season.

(5) Loss of wetland habitats:

Waterfowl populations generally are suffering as a result of past loss of wetlands (e.g. on the Swan Coastal Plain) and continuing loss and degradation (e.g. through increasing salinity) of remaining wetlands, and it is argued that duck shooting compounds this problem. The Department gives high priority to acquisition and management of wetland habitat for conservation purposes. It is considered, however, that if there is sufficient wetland habitat to support sizeable duck populations, and shooting is properly controlled, then duck shooting is not compounding the problem. The Department has recently initiated a broad-scale program for annual monitoring of the abundance and distribution of waterfowl populations.

(6) Philosophical and ethical aspects:

Some opponents of duck shooting argue on philosophical and ethical grounds that it is wrong to kill wildlife for sport.

(7) Use of Nature Reserves for duck shooting:

Some opponents of duck shooting argue that it is wrong to have Nature Reserves declared as Game Reserves so that shooting can take place. On the other hand, most Game Reserves had a long tradition of duck shooting at the time of acquisition. They were acquired to protect habitat and on the understanding that they would remain open for shooting. Game Reserves also facilitate the enforcement of duck-shooting regulations by Departmental officers. The future of the Game Reserve classification is being considered in the context of a review of land classifications under the CALM Act.



(8) Other impacts of duck shooting:

Wetland and fringing habitats are affected by the provision and use of access tracks for shooters' vehicles, by camping and by the general activities of shooters.

PRESENT ADMINISTRATION

- (1) A Ministerial announcement about duck shooting seasons is normally made in December, notices are published in the Government Gazette and a revised Duck Shooters' Guide is published by the Department for issue with all Duck Shooters' Licences and distribution to others who are interested.
- (2) The Government increased the fee for Duck Shooters' Licences from \$5 to \$15 on 1 July 1986. It had been \$5 since 1979. Fees received are credited to the Nature Conservation and National Parks Trust Account and are used to finance conservation projects relating to wetlands and waterbirds.
- (3) In recent years, approximately 4-5,000 licences were issued in years when an open season was declared. About 300 of these duck shooters are members of the WA Field and Game Association.