

1. INTRODUCTION

This paper documents the history of laws governing the hunting of wild duck in the State of Western Australia from first European settlement in 1826 to the present day.

The first such "duck law" was proclaimed in 1874. Since that time a large number of restrictions have been introduced concerning the methods and devices by which ducks may be taken, the times of year and day, the parts of the State, the species and the numbers per day.

It is useful for present day law-makers, administrators, duck shooters, and others with an interest in the conservation of duck populations, to be aware of these restrictions and of the reasons for their introduction, modification, and, in a few cases, subsequent repeal. It is for this purpose that the paper has been written.

The paper is based on information drawn from Western Australian Government files, from the Western Australian Government Gazette, Western Australian Parliamentary Debates, relevant Acts and Regulations, and from a small number of people who have been personally involved in the formulation and implementation of laws and policies in recent years.

The various restrictions which have been introduced over the years are grouped under nine headings - Closed and Open Seasons, Reserves for Native Game and Waterfowl Refuge Areas, Means and Devices, Licences, etc. - and re considered in order of their promulgation.

2.1. CLOSED AND OPEN SEASONS

The first legislation to provide any form of protection for wild duck in Western Australia was the Game Act of 1874. The purpose of this Act was inter alia to protect certain species of "native game" and "their progeny" during their breeding season. The Act thus prohibited the taking of wild ducks of any species, and their eggs, from "the first day of June to the thirtieth day of September each year" throughout the whole of the colony.¹ This Act came into force on 31st May 1875. The Act did not apply "to any aboriginal native or native of the half-blood of Australia killing or destroying native game for his own subsistence"².

In 1876 an Amendment Act³ changed the closed season for wild duck from June - September to July - November each year in the belief that the latter period coincided more closely with the breeding season.

In 1878 a second Amendment Act was passed⁴, giving the Governor power "from time to time by proclamation, to declare what shall be the period of prohibition ...within any part of the Colony ...applicable to any ...native game." This amendment was made because "it is found impracticable, owing to the large extent of the Colony, to fix on any period of the year as the breeding season for native game throughout the Colony..."⁵.

A Proclamation was then issued⁶ declaring the closed season for wild duck to be from the first day of August to the thirty-first day of October each year "within a radius of ten miles of the Post Offices of the following places - Northampton, Geraldton, Greenough, Dongarra, Newcastle (now Toodyay), Northam, York, Beverley, Guildford, Perth, Fremantle, Rockingham, Pinjarrah, Bunbury, Vasse, Albany -". The remainder of the Colony was re-opened to shooting at all times.

Later the same year⁷ the area to which the closed season proclamation applied was reduced to within a radius of five miles of the Post Offices of the above towns.

By 1885 it was "deemed expedient to extend the Close Season for certain birds within the Central Land District". This extension⁸ was both geographic and temporal. The area to which the provisions of the

closed season applied was extended to cover most of the south-west of the Colony as well as "a strip of land five miles wide along the south coast, and a block of land at Eucla measuring 20 miles along the coast by ten miles in depth". (See Figure 2). The period of the closed season was changed from August - October to July - October.

Four years later the "close time" was changed yet again⁹ to become July - November, the same period as had applied in 1877 and 1878. The Eucla block was omitted from this proclamation, however it was re-included in the gazettal notice of 1892¹⁰.

There have been many subsequent changes to both the timing and geographic extent of close and open seasons for the taking of wild duck in Western Australia. These are illustrated in Figures 1 and 2 and detailed in tabular form in Appendices 1-3.

Insofar as timing is concerned, the general trend in the south-west of the State (where most shooting occurs) has been to shorten the duration of the open season, both by opening the season later in the year and by closing it earlier. Six eras are apparent. The first, from 1829 to 1874, was a period in which there were no restrictions on the taking of native game and wild ducks could be taken all year round. The second, from 1875 to 1904, was a period of adjustment in which

numerous changes were made to the opening and closing dates in search of the "correct" close season. 1905 to 1944 was a period of stability in which seasons opened each year on 23rd December and closed at the end of June or, from 1917 onwards, May. The fourth period, 1948 to 1966, was one of "weekend before Christmas" openings, with closing at the end of May or, from 1958 onwards, April. The fifth period, 1967 to 1979, saw the advent of "biological" seasons, that is seasons which varied in timing and duration each year depending upon considerations of duck abundance, breeding activity and conditions likely to prevail during the summer period. 1967-79 also saw the advent of "no seasons" that is years in which no open season was declared due to drought conditions. The most recent period, 1980 to the present, has been one of "standardized" seasons, seasons which start on the second weekend of January and extend for 0, 4 or 10 weeks, depending upon conditions¹¹.

As well as changes in timing, there have also been changes in the geographic extent of the districts in which season restrictions have applied (see Figure 2). Again a number of "eras" are recognizable. From 1875 to 1877 a single close season applied to the whole of the Colony. By 1878 the difference in timing between breeding in the south-west and breeding in other areas of the Colony had been recognized and from then until 1900 close season restrictions applied only to the

south-west corner of the Colony, the principal area of settlement. In 1901 the South-West District was extended to include the Eastern Goldfields, an area whose population had increased dramatically during the goldrush years of the 1890s. During the fourth era, from 1917 to 1951, separate close seasons were declared in the west and then east Kimberley (i.e. Broome District and the East Kimberley Magisterial District). The author has been unable to discover why a close season was introduced in the Broome District however it would appear likely that it was associated with the large pearling fleet (reputed in 1910 to be the largest in the world) which operated from Broome in the early part of the century. The introduction of a close season in the East Kimberley Magisterial District was at the suggestion of the local Police Officer who reported that "wild geese and ducks ...are destroyed in large numbers during the breeding season...which, in this district commences in December and extends into April for all birds"¹². 1952-56 was a period of administrative readjustment to the provisions of the new Fauna Protection Act 1950 and during that time the close season of the south-west was again applied to the whole State. From 1957 until the present, close and open season restrictions have only applied to the South West and Eucla Land Divisions of the State, the remainder of the State being open to shooting at all times. It had been suggested that a ¹³"line extended eastwards of the Lake Grace Road District ... to the

South Australian border" should be adopted instead of the boundary of the Eucla Land Division however the latter boundary was adopted as it was "a more clearly defined area and was not unknown to the public, and maps showing its boundaries were obtainable"¹⁴.

At least one of the boundary changes which have occurred since 1875 has been rather curious. In 1901, the East Murchison Goldfield was included in the northward extension of the South-West District. It was exempted however from 1902 to 1951 and therefore remained open to shooting all year round during that period. The author has been unable to discover the reason for its exemption.

One of the most contentious issues regarding duck-shooting seasons is the time of opening. Over the years there have been numerous changes to both this and the time of closing. Since 1875 opening times have been 0000 hrs, 1730 hrs, 0400 hrs, 0500 hrs, 0600 hrs, 1600 hrs, 1800 hrs and 0100 hrs. Closing times have been 2400 hrs, 1900 hrs, 2000 hrs and 2359 hrs. Clearly there is no one time which suits everybody. In 1952 and 1954 to 1969 the "Capel" sub-district (see Figure 2) opened at 1800 hrs on the day preceding opening of the remainder of the South-West. This was primarily for the benefit of dairy farmers who, because of the demands of the industry in which they were engaged, found it difficult to attend the 0500 hrs

openings which applied at that time in the remainder of the south-west.

2.2 RESERVES FOR NATIVE GAME AND WATERFOWL REFUGE AREAS

The Game Act of 1982 gave the Governor power to declare by proclamation "any one or more portions of the Colony or any one or more localities to be respectively defined ...a reserve for native game or any particular native game." "Any bird or animal" was to be protected at all times in such areas. The maximum penalty for taking fauna from a Reserve for Native Game was set at *5, plus 10/- per animal or bird. The Governor did have the power however to issue licences to take any birds, animals or eggs from such reserves. This power appears to have been used to authorise the taking of kangaroos, not ducks, as food for early settlers.

In introducing the Bill for the 1892 Act the Premier (Hon. Sir J. Forrest) said "it is thought that the time had arrived when specified portions of the colony - Perth Water and the waters near Perth, for instance - should be altogether reserved for game. The necessity for doing this is obvious. At present, if a duck or swan happens to show itself on these waters, many persons start off at once with a gun determined to kill it"¹⁵.

CLOSED AREAS : 1985/86 Duck Shooting Guide

In addition to the General Areas closed

63 Waterfowl Refuge Areas are described.

Some of these are covered by the General Areas designated eg some are Nature Reserves, some National Parks, some within 32 km radius of Perth, at least one (Healey Catchment Area) includes State Forest.

Also, some of the 63 are contiguous.

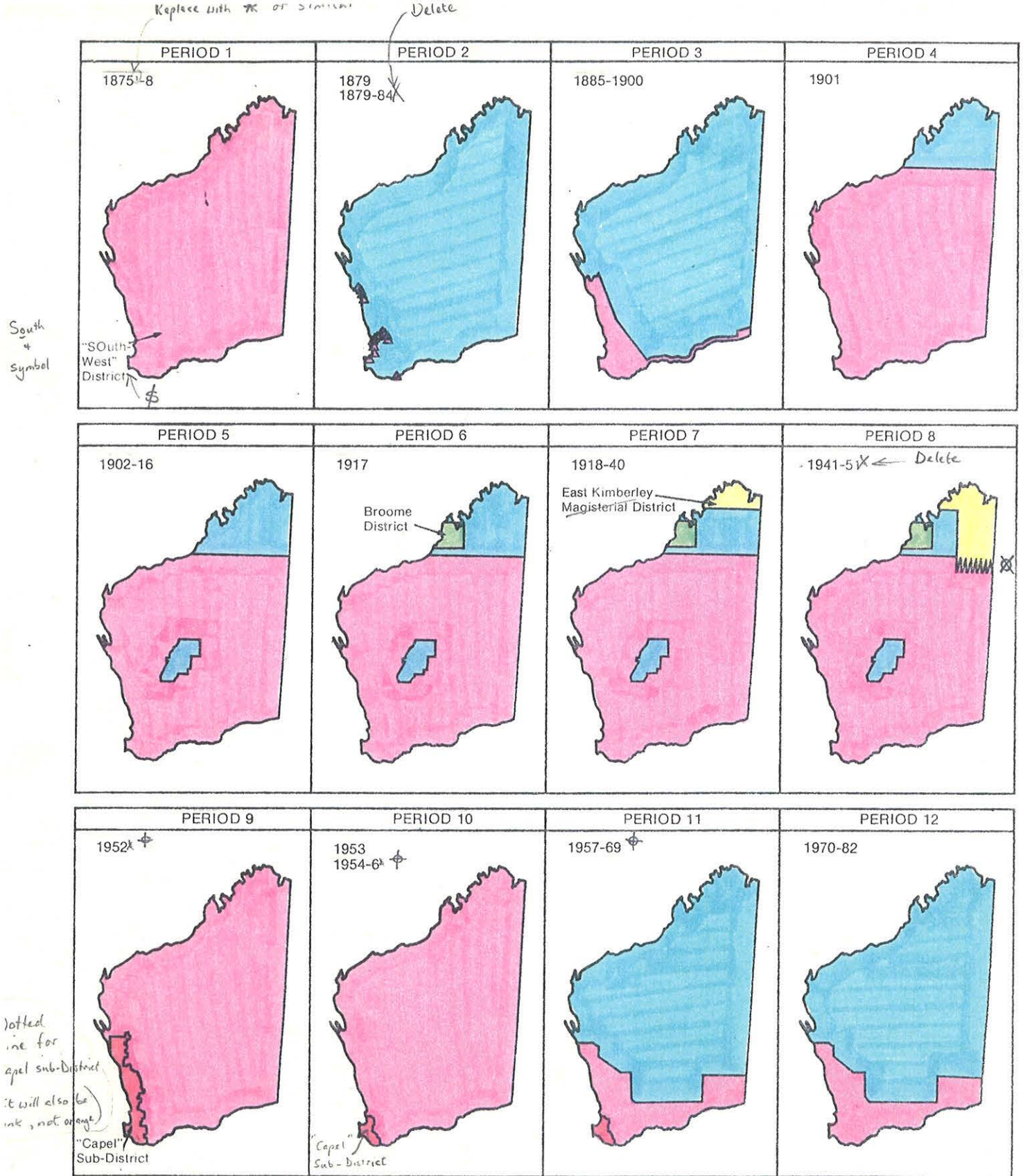
It would be a time consuming exercise (≥ 1 month) to work out how many wetlands (& what area) are closed by declaration (ie covered by General or specific closures). This would not include wetlands under other ownership - private, State or local Govt - which are closed. Nor would it take into account areas which are open to shooting but "unshootable" eg large expanses of water.

Viewed differently (see Lane, in prep)

1892 - 1st refuge declared.

1900 - 5 refs, 1920 - 24, 1940 - 47, 1960 - 47, 1980 - 83, 1985 - 91

See 3 pages on
for Policy



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CHANGES TO BOUNDARIES OF THE SOUTH-WEST, BROOME AND EAST KIMBERLEY DUCK-HUNTING DISTRICTS
FIGURE 2. DISTRICTS TO WHICH OPEN AND CLOSED SEASONS WERE APPLIED.

FOOTNOTES:

- * The whole of W.A. was continuously open prior to 1875.
- \$ The South-West District (so called because the closed period each year has related to the timing of breeding in the south-west of the State) has at times included the whole of the State.
- ⊗ The boundaries of Magisterial Districts were revised in 1941, and resulted in an overlap of the East Kimberley and South-West Shooting Districts. See Text.
- ⊕ In 1952 and 1954-69 the "Capel" Sub-District opened on the day preceding opening of the remainder of the South-West District. In 1953 there was one opening for the whole State.

KEY

- South-West District
- Broome District
- East Kimberley Magisterial District
- Remainder of State : Continuously Open.

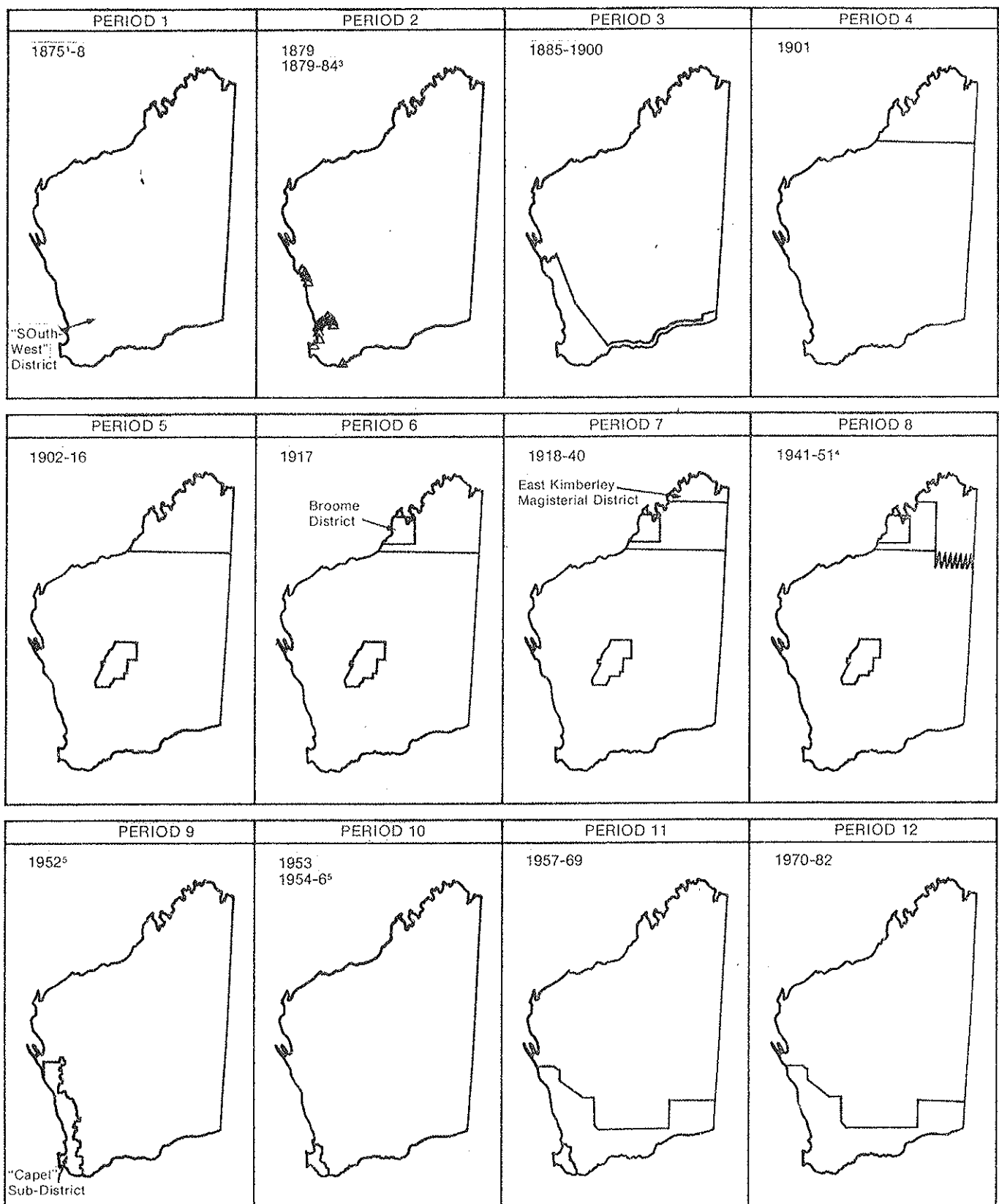
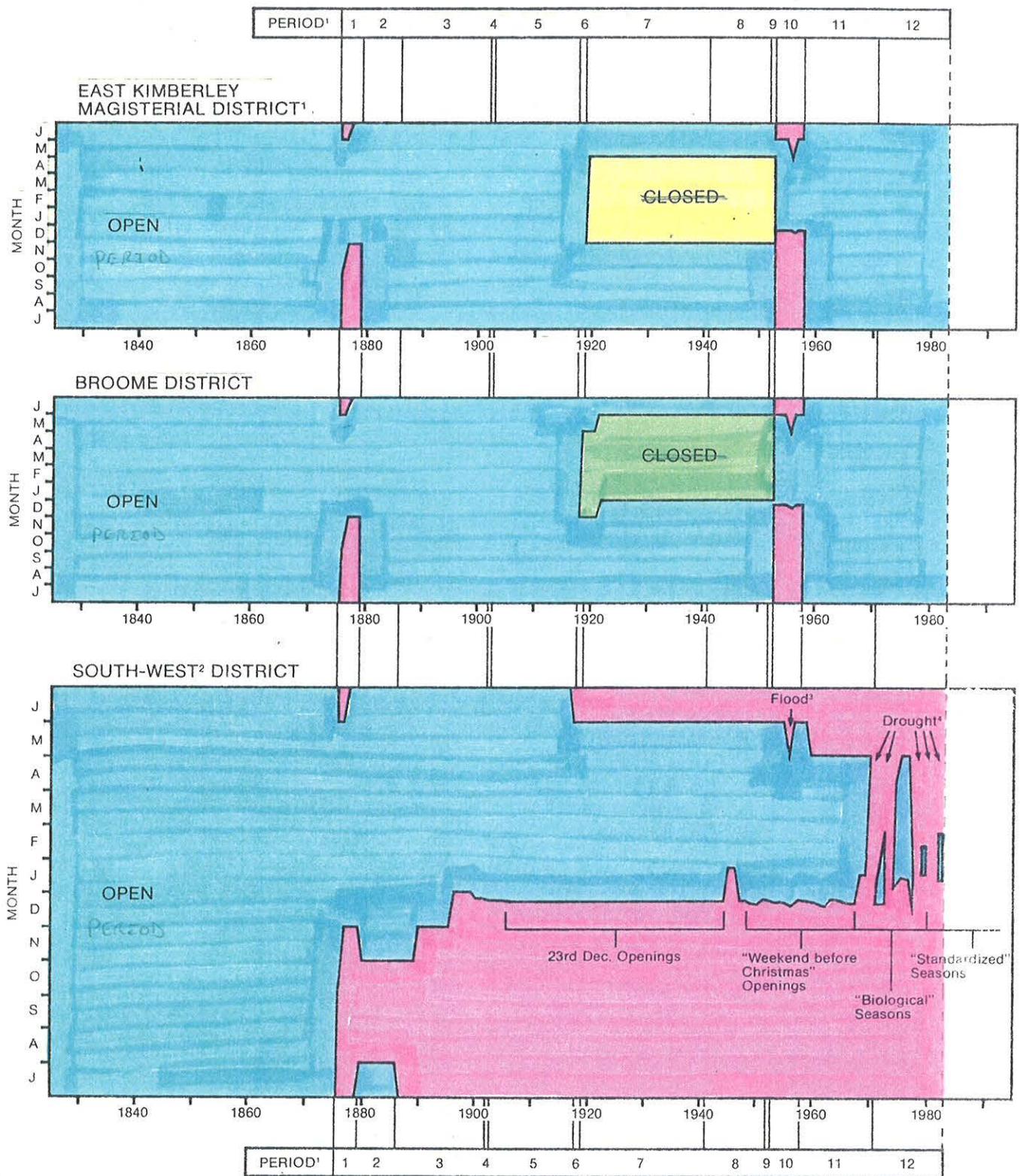


FIGURE 2. DISTRICTS TO WHICH OPEN AND CLOSED SEASONS WERE APPLIED.

FOOTNOTES:

1. The whole of W.A. was continuously open prior to 1875.
2. Areas not included in the Districts shown remained continuously open.
3. From 7th January to 20th October, 1879 season restrictions applied within a **10 mile** radius of the towns shown. From 21st October 1879 restrictions applied within a **5 mile** radius.
4. The boundaries of Magisterial Districts were revised in 1941.
5. In 1952 and 1954-69 the "Capel" Sub-District opened on the day preceding opening of the remainder of the South-West District. In 1953 there was one opening for the whole State.



← FIGURE 1. OPEN AND CLOSED SEASONS FOR DUCK HUNTING IN WESTERN AUSTRALIA, 1829-1982.

FOOTNOTES:

1. Districts and Periods are those of Figure 2. Periods do not correspond with "eras" of the text.
2. The boundaries of the South-West District have varied considerably since 1875, at times covering only a few towns and occasionally covering the whole State. The boundaries of the East Kimberley District changed once, and the Broome District remained constant in size.
3. In the Open Season closed one month early due to flooding in February and associated breeding activity.
4. No Open Seasons were declared in the South-West District in 1969 and subsequent drought years.



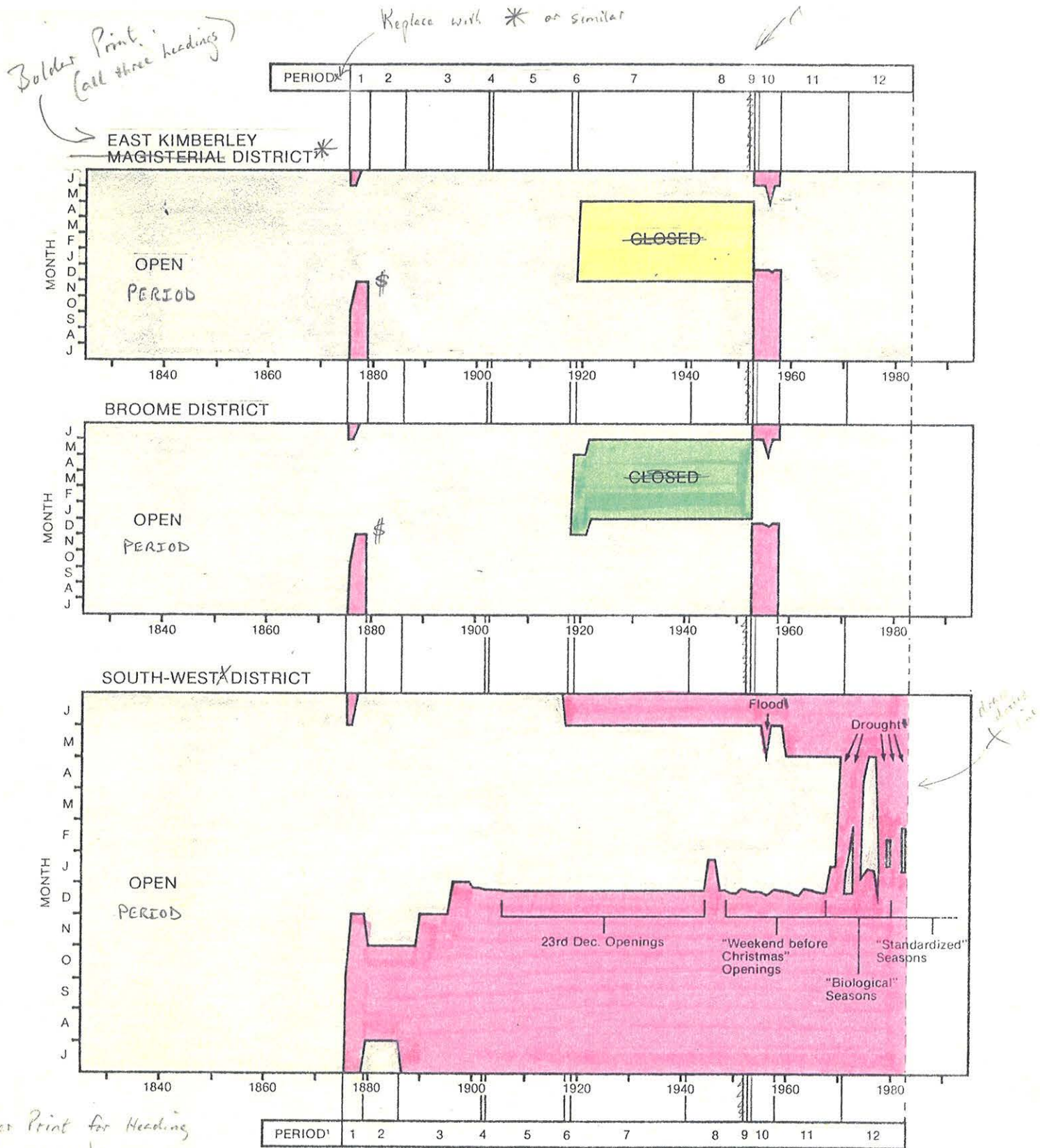


FIGURE 1. OPEN AND CLOSED SEASONS FOR DUCK HUNTING IN WESTERN AUSTRALIA, 1829-1982.

FOOTNOTES:

- * Districts and Periods are those of Figure 2. Periods do not correspond with "eras" of the text.
- # The South-West District has at times included the East Kimberley Magisterial and Broome Districts. See Periods 1, 9 and 10 of Figure 2, and refer to text.

OPEN PERIOD	CLOSED PERIOD	
		East Kimberley Magisterial District
		Broome District
		South-West District

KEY

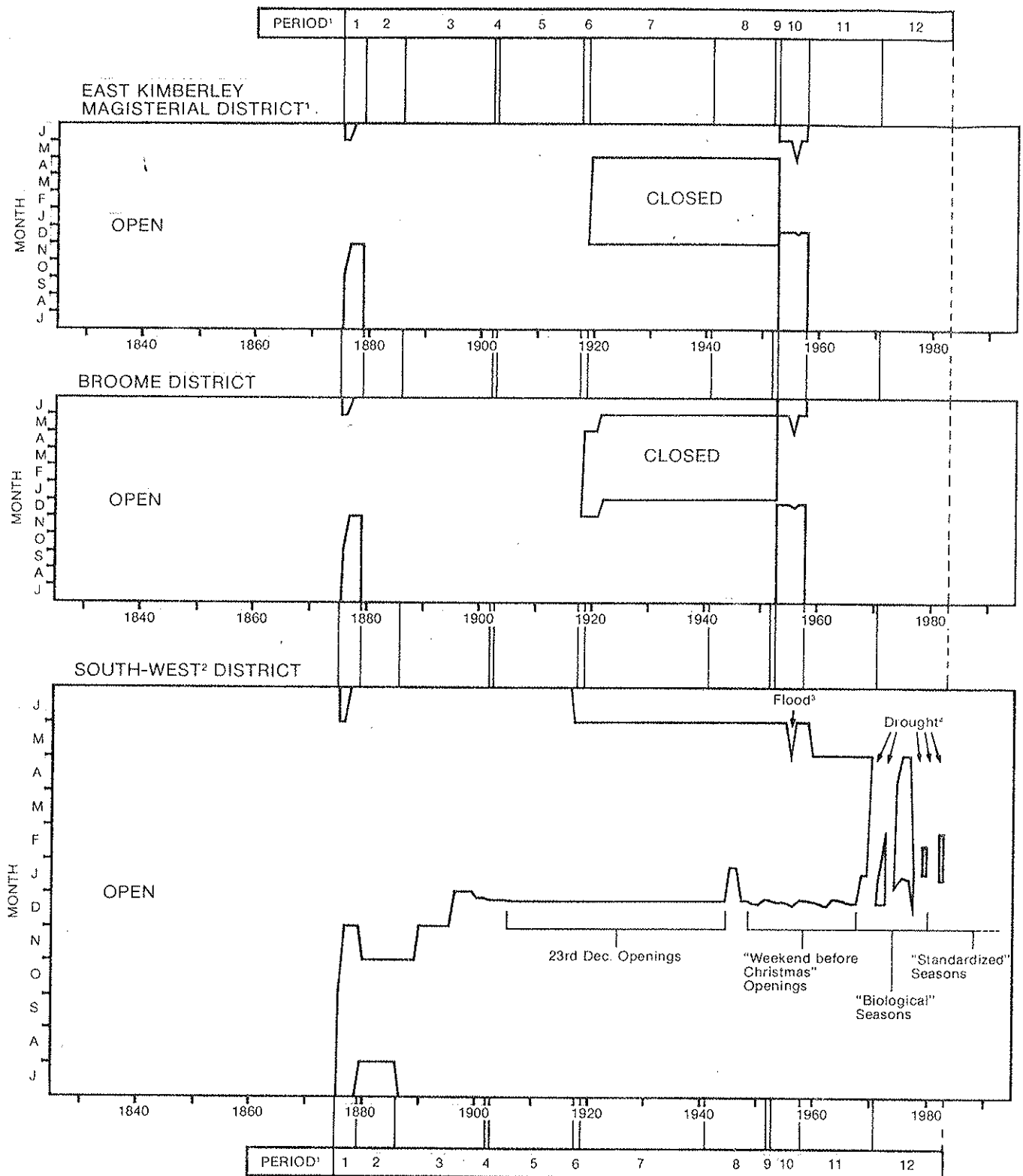


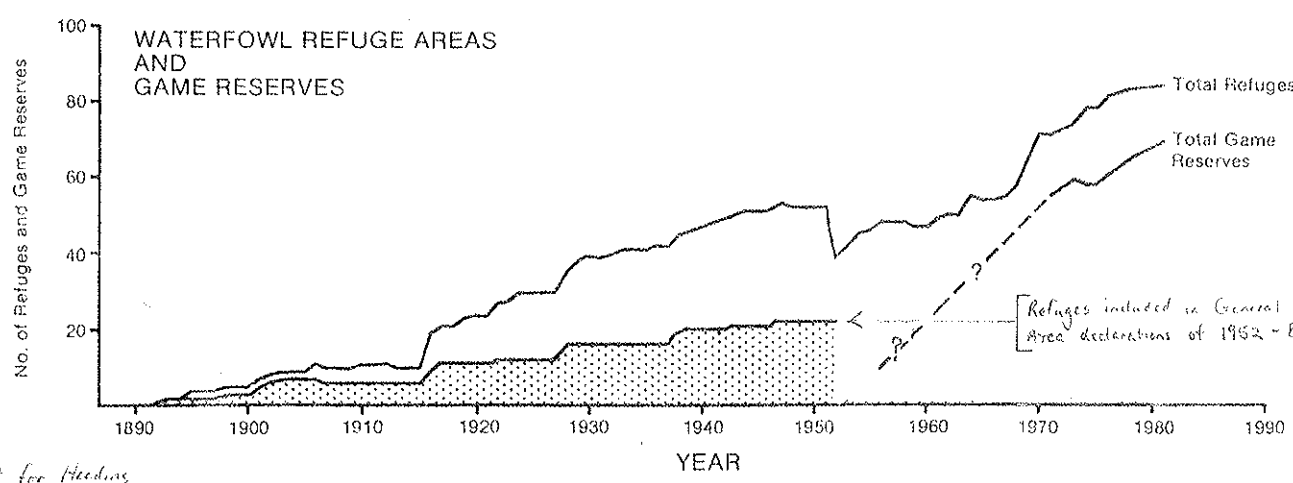
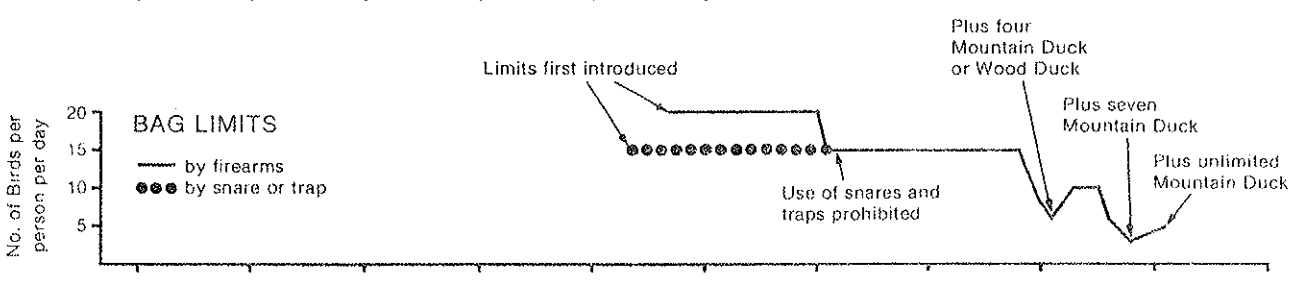
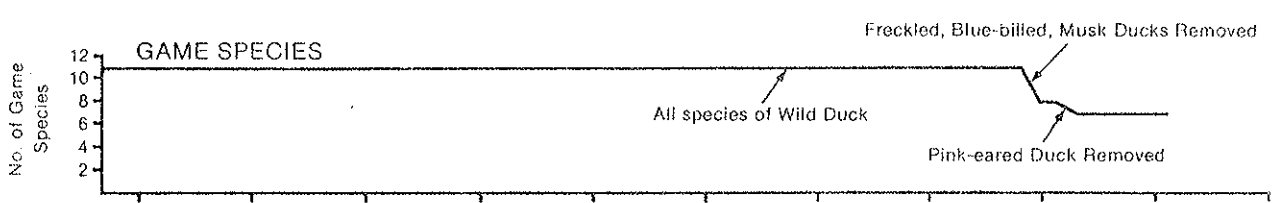
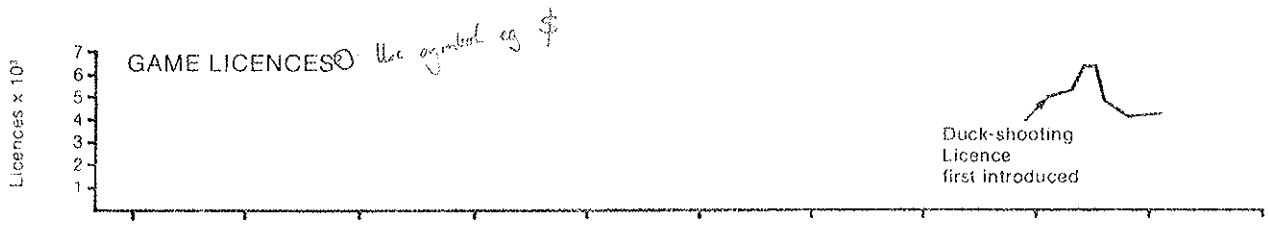
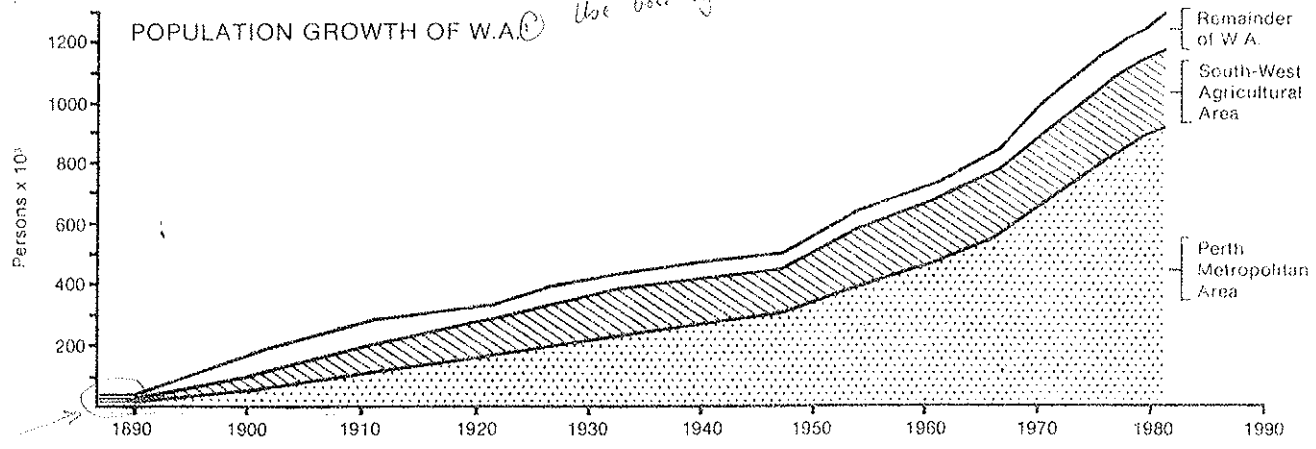
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OPEN PERIOD
CLOSED PERIOD

		East Kimberley Magisterial District
		Broome District
		South-West District



larger print for headings

FIGURE 3. POPULATION GROWTH OF W.A., AND CONTROLS ON HUNTING OF WILD DUCK IN THE SOUTH-WEST DISTRICT SINCE 1890.

FOOTNOTES:

- * 1. Data provided by Australian Bureau of Statistics. (Data to 1966 inclusive does not include full-blood Aborigines. *See text, 2.1*)
- \$ 2. This is the total number sold each year for the whole of W.A. It is estimated that 90-92% of these are for use in the South-West District only.
- X 3. General Areas ~~of 1952-82~~ were (a) 20 mile radius of Perth, (b) Rockingham Shire, (c) all Townsites. *declared closed each year from 1952 to 1982*

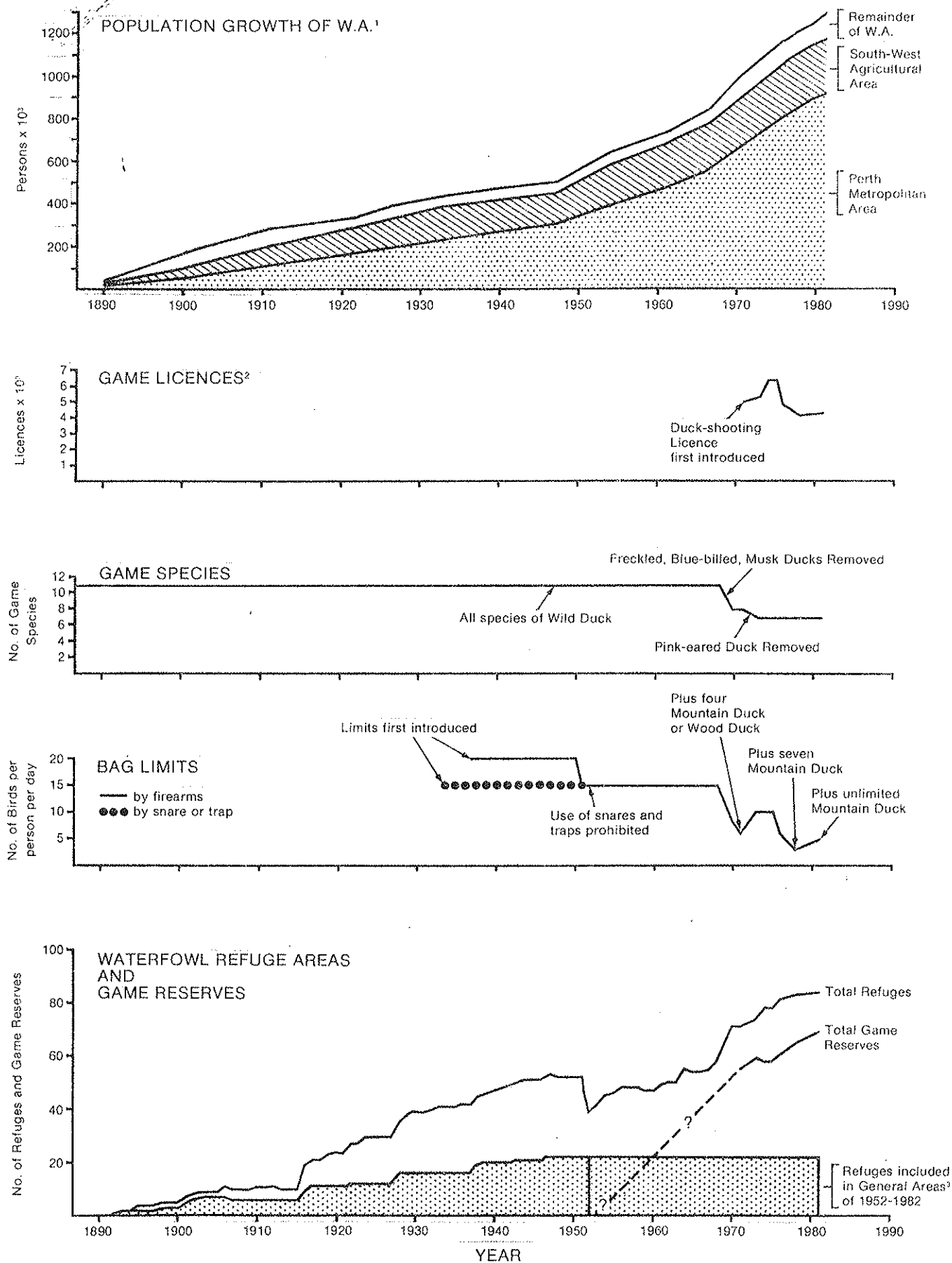


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3. General Areas of 1952-82 were (a) 20 mile radius of Perth, (b) Rockingham Shire, (c) all Townsites.

The Colonial Secretary (Hon. G. Shenton) also commented "...a general wish has long been expressed that all shooting on Perth water should be stopped, so that native game might settle there as it used to do years ago before it was driven away by the shooting. The Government propose to give effect to that wish ... in the hope that the wild game may come back again."¹⁶

The first area to be declared a Reserve for Native Game¹⁷ was "so much of the River Swan as lies between the Bunbury Railway Bridge, at Bishops Island, and the Narrows, at Mill Point." - the area known then and now as Perth Water.

The limits of the Swan River reserve were expanded in 1893¹⁸ and again in 1898^{18A} when they became the river mouth at Fremantle, the Midland Railway Bridge at Upper Swan, the Canning-Jarrah Timber Company's Bridge on the Helena River, and the South-Western Railway Bridge on the Canning River.

The success of these and other reserve declarations was attested to in 1913 by Hon. J. Mitchell. "It would be a step in the right direction if the Minister protected game within a radius of three miles of every township of 500 people or more. This would add to the natural beauty of the towns. We see this in Perth where, notwithstanding the immense traffic, the birds are increasing in the river."¹⁹

The second Reserve for Native Game to be declared was Leschenault Inlet at Bunbury in 1895. Since that time there has been a steady growth in the number of declared open-season refuge areas for ducks (see Figure 3 and Appendix 4). The term "Reserve for Native Game" was used until 1952 when it was replaced by the term "Waterfowl Refuge Area". At that time Reserves for Native Game which were not for waterfowl were abolished. The boundaries of Waterfowl Refuge Areas were described in annual duck-season proclamations and in the Duck-Shooters Guide.

This growth in the number of refuge areas has been due, in the main, to the concern of local people about the depletion of duck numbers in their immediate vicinity. Thus, until quite recently, most closures (i.e. refuge declarations) were of wetlands in the Perth metropolitan area of wetlands close to major country towns. Only since the early 1950s have we seen growing concern that, within each of the more popular shooting districts, whether close to an urban area or not, there should be at least one wetland where ducks can be assured or refuge from shooters. This belief has developed in response to the growing tendency for shooters, where mobility increased dramatically with the advent of high-speed roads and modern motor vehicles, to assemble in numbers on relatively isolated lake systems, such as those of the Arthur, Beaufort and Coblinine River, and the Lake Muir district.

Whereas there are now more than 60 waterfowl refuge areas in the South-West and Eucla Land Divisions of the State there are only seven such areas in the remainder of the State. These are Reserves 31967, 1058, 1059, 36136 and 30866 which encompass parts of the eastern arm of the Ord River and associated lagoons; Lake Argyle, and Lake Kununurra. The first of these areas to be closed to shooting was Reserve 1058, which incorporates Parry and Jogalong Lagoons and Police Hole, in 1968. Lakes Argyle and Kununurra were closed in 1974. Numerous other areas of varying importance to waterbirds are closed to shooting at all times however none of these have been considered of sufficient importance to warrant proclamation as Waterfowl Refuge Areas.

MEANS AND DEVICES

The first legislation to restrict the means by which wild ducks could be taken was the Game Act 1892, Amendment Act 1900. This Act prohibited the use "...a swivel gun or punt gun, or any gun other than one fired from the shoulder ..." The maximum penalty for infringement of this law was set at £5 plus forfeiture of the gun concerned.

A swivel gun is any gun weighing about twelve pounds or more which turns on a pivot or swivel. The term includes small cannon however in the context of duck shooting in 1900 it no doubt referred to blunderbuss-type weapons which scattered large quantities of shot at close-range^{* 20}.

1985/86 :

63 or 91 refuges
(specific) depending
on how you count
them
(guide indicates 63)

(c.f. 69 or 84 game reserves)

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blunderbuss-type weapons which scattered large quantities of shot at close-range²⁰.

A punt gun is "a fireman, usually single-barrelled, for firing charges of between 6 oz. and 1* lb of shot at parties of duck or geese sitting on, or near, the water. The gun is attached to a specially designed punt, or boat, by a breeching rope running through the stem block. The boat, therefore, takes the recoil, not infrequently moving backwards through the water"²¹. Such weapons are reputed to be capable of taking over 100 duck at a shot however the kill is usually much less, an excellent shot being forty duck and a good shot being twenty.

By 1907 concern was being voiced about the number of ducks being taken by the use of nets. Thus: "In the Arthur district I know of 20 camps, ... of strong and healthy mean??. They have shot nearly all the ducks in that river. ...I know that there are crates and crates of ducks sent away from the place; they are trapped by wire netting"²². "We also desire to protect ducks from being captured in nets. At the present time there is considerable trade caused by the netting of ducks, and it is desirable that this should be put a stop to."²³ The ensuing Act²⁴ gave power to prohibit by proclamation "the use of any instrument or means for the purpose of killing, destroying, or taking native game". This power was put into effect in March 1908 by

a proclamation prohibiting "throughout the State the use of any instrument or means, except for a gun fired from the shoulder, for the purpose of killing, destroying or taking wild duck of any species."²⁵. This proclamation was apparently never taken seriously for the capture of wild ducks by means other than guns was a common practice until the early 1950s. Large numbers of ducks were trapped for market on lakes in the Boyerine areas in the 1930s (see 2.4) and from 1934 until 1951 there was a bag limit for ducks taken "by means of any snare or traps". (See 2.7).

Further restrictions on the type of gun which could be used to take ducks (and other game) were introduced by the Game Act, 1912. This Act prohibited the use of "any gun having a barrel or barrels of a length exceeding forty-eight inches, or having a bore exceeding eight calibre..."²⁶. Concern had been expressed that "around Perth and in other parts there are men who ...sit out all night with big guns, and wait and fire into the brood, wounding far more than they ever get. They sell a few, but they do not get any decent living at it except, perhaps, for two or three months of the year."²⁷.

The Fauna Protection Act Regulations 1952 again banned the use of "traps or decoy-traps for the capture of ducks". These regulations also banned the use of a "spot-light, electric torch or lantern of any kind" and

the practice of driving ducks towards shooters by means of "motor vehicles, aircraft, powerboat or other means". The use of guns with silencing devices fitted was also specifically prohibited.

Under the Fauna Conservation Regulations 1970 it became illegal to use any means other than "a shotgun ...licensed pursuant to the Firearms and Guns Act, 1931, and having a calibre of less than thirtyone - fortieths of an inch in internal diameter (ten gauge) ...fired without other support ... from the shoulder" in the taking of wild duck. Thus the use of rifles was banned for the first time as was the use of eight calibre shotguns.

The 1970 Regulations also introduced a ban on the use of "any launch, boat, canoe, raft, or other type of boat of whatsoever kind ..." in the taking of ducks on any game reserve".²⁸. The use of any type of boat powered by any means other than by hand in the taking of wild duck anywhere in the State was banned by the 1968/69 duck-season proclamation and all subsequent season proclamations. The situation since 1970 has therefore been that only boats powered by hand may be used in the taking of wild duck, but these cannot be used on any game reserve.

The 1970 Regulations also made it illegal to shoot at any bird "which is not flying higher than 10 feet above

the water or ground level ... except as may be necessary to kill a wounded game bird." Again this restriction only applied to the taking of ducks on game reserves.

No subsequent changes have been made to the restrictions governing the means by which game ducks may be taken.

2.4. LICENCES TO TAKE WILD DUCK FOR SALE OR BARTER

The Game Act Amendment 1907 first gave the Governor the power to prohibit "the killing or taking for sale or barter of any prescribed native game, generally or in any defined portion of the State, by any person who is not the holder of a license granted under this Act".

The need for this new power was explained²⁹ as follows:

"it has been discovered that a great number of ducks in settled districts have lately been trapped by nets. It has been impossible to enforce the law against people destroying ducks in the native game reserves in a wholesale fashion, so provision is made in this Bill to enable convictions to be obtained against offenders. Licenses will be issued to hunters to kill, and will be issued principally to settlers and tillers of the soil. If licensed persons are convicted of killing ducks illegally, their licenses will be cancelled; therefore they will not be likely to infringe the law."

This power was not used, however, in relation to ducks (though it was used in relation to kangaroos) until 1912 when a new Act made it necessary for anyone wishing to sell ducks or to take ducks for sale to have a licence to do so. Thus the Game Act, 1912 stated

that "No person shall sell or take or kill for the purposes of selling any imported or native game or dispose thereof for gain or reward until he has taken out a license for that purpose and paid the prescribed fee therefor." This provision was again introduced "in order that some check may be kept on those people who are constantly infringing on the close seasons for the game birds sold in this State."³⁰ It had in fact been suggested to the Government that the sale of wild duck should be totally prohibited. Thus:

"If we are to keep wild duck here in reasonable numbers, we must copy the New Zealand Act and prohibit the sale of wild game. The committee will probably not agree with me, and it is unlikely that there would be the slightest chance of carrying the thing through Parliament: nevertheless I am firm in my conviction. Enormous numbers of ducks are destroyed by professional duck shooters. An instance came under my notice down at the Capel a few years ago. Along one of the back waters a man crawled through undergrowth and swamps and over logs to a secluded spot where he lay for a flock of ducks. He waited until they got within 25 yards of him when he fired both barrels into the midst of them. He was away only an hour, and he returned with 21 ducks, of which three-fourths were immature fledglings. That sort of thing is done every day, and it effectually

puts a stop to all legitimate sport. The professional duck shooter brings in hundreds of ducks, and wounds hundreds of others which he never gets. In New Zealand they have prohibited the sale of wild duck and, to a large extent, that has stopped the slaughter."³¹

The Government of the day, however, was apparently satisfied that licensing provisions would give adequate protection to duck populations and Dr Kelsall's proposed ban on the sale of wild ducks was not adopted.

In July 1913 Regulations implementing the licensing provisions of the 1912 Act were gazetted.³² The fees were set at *3 per annum for a licence "to take and kill native game for sale or barter", and *1 per annum for a licence "to sell native game".

Licences to take for sale could be obtained from the Chief Inspector of Fisheries, Perth, or from Resident Magistrates of any Magisterial District. Licences to sell could only be obtained from the Chief Inspector of Fisheries. There was no requirement for licence-holders to furnish returns of the species or numbers of ducks taken for sale or sold (unlike the situation with marsupials). There are therefore no Government records of the quantity of ducks which were taken or sold in W.A. Licences to sell and to take for

sale had to be renewed annually, the expiry date being 31st December each year.

In 1913 an Amendment Act³³ was also passed in which it was made clear that "any person may, without license, take or kill native game if not for the purpose of sale or the disposal thereof for gain or reward."

New Regulations were gazetted in 1914.³⁴ These reduced the fee for a license to take ducks "for selling" from *3 to *2 per annum, while a license to sell remained *1 per annum.

No further restrictions were introduced until 1939 when the sale of immature game, that is "game not fully fledged, or not able to stand, or not able to feed unaided" was banned.³⁵

(Although it was necessary from 1912 onwards for anyone wishing to export from W.A. any live native game to obtain the written consent of the Minister - a requirement introduced to keep some check on finch exports from the Kimberley - it was not until 1960³⁶ that a licence was required to export dead fauna as well as live.) Regulations proclaimed in 1952³⁷ required holders of licences "to take fauna other than marsupials for gain or reward" to furnish returns within one month of expiration of their licences "setting out in full detail the number of each species

of fauna taken during the term of the license and the locality where each species was taken, together with the particulars of disposal of such fauna." The licence fee remained *2 per annum. Licenses to "buy, sell, or in any other way deal in fauna" became *5 and licencees were also required to supply monthly, the details of species and numbers taken and the disposal therefore. Both types of licences were to be obtained from the Chief Warden of Fauna.

Although there has been no significant trade in wild duck in recent times the practice has never been banned by Act or Regulation. It is still possible, technically at least, to obtain licenses to take wild ducks for sale and to deal in wild ducks.³⁸ Note however that a game licence "does not authorize the holder to sell any game (ducks) or any other fauna."³⁹ and that present-day duck-season proclamations prohibit the sale of ducks.

The extent of trade in wild ducks in the last century and in the first half of this century has not been researched by the author however it is probable that it was considerable. Some indication is given by the following.

1. The evidence of Messrs. H.T. Kelsall & J.M. Drummond to the Select Committee of the Legislative Council on the Game Bill (1912), referred to earlier.

2. Departmental records show that from March to June 1933 and February to June 1934, 15 shipments totalling 13 647 wild duck were exported from Fremantle to Melbourne and Sydney. These were 11 414 Black Duck, 2 161 "Teal" and 72 Mountain Duck. All were apparently trapped during the open season for wild duck on lakes near Boyerine by licensed trappers L.R. Watson and J.P. Ramm and were railed to Perth where they were killed and frozen before shipping to the east.⁴⁰ (File 23/32). Records also show that in 1932 "five or six persons are licensed during the open season to shoot for sale"⁴¹ (23/32 folio 2)

3. p.156 of Serventy and Whittell's "Birds of Western Australia."⁴²

"Musk ducks are not usually regarded as edible and in any case are too difficult to shoot owing to their rapid diving - which is grebe-like in its instantaneousness. However, they often fall victims to fishermen's set nets and this method of capture was used in a curious little industry which used to flourish in the Mandurah district".

"Each winter large numbers used to be netted by the fishing community in the lake-like expansions of the Serpentine River. The birds were plucked by repeated immersions in boiling water, then dressed, split, dry-salted and smoked for use as food during the rest

of the year. Lake Goegrup, on the Serpentine, in August was a well-known locality for this "fishery", which ceased on any large scale after 1898 when fishing was prohibited in the rivers and lakes, but it was still continued in a small way by some of the older inhabitants. One year a local fish-canning factory tinned a sample of the birds, but the experiment proved a failure".

2.5 LICENCES TO TAKE WILD DUCK FOR PURPOSES OTHER THAN SALE OR BARTER

Though it was necessary as early as 1913 for people taking ducks for sale or barter to be licensed, the Government did not obtain the power to license people taking ducks for other purposes (i.e. home consumption or sport) until 1950.⁴³ Regulations to implement this power were not introduced however until 1970⁴⁴ and it was not until twelve months later that the power was actually utilized. Thus it first became necessary for duck-shooters to obtain a "License to take Game (Ducks)" in 1971, for the 1971/72 open season. Note that by this time the taking of ducks for sale or barter had ceased and was specifically banned by annual duck season proclamations. The licence fee was set at \$2.00 per annum, with no licence to exceed 12 months duration.

The 1970 Regulations also gave the power for the Chief Warden of Fauna to require licence-holders to furnish, within one month of expiration of the licence, returns "setting out the number of each species of game (ducks) taken during the term of the license, the part or parts of the State where such species were taken and such other details of the taking, condition, description and disposal of such fauna as the Chief Warden of Fauna, in writing, requires". This power to require licence-holders to supply details of ducks taken has not been used however the Department has obtained such information on a voluntary basis over a number of years.

The number of game (duck) licences which have been sold each year since 1970 are shown in Table 1 and Figure 3. Licence sales in years when no season has been declared in the South West and Eucla Land Divisions indicate that in years when seasons are declared in the south-west approx 90-98% of total licences sold are for use in this area and 2-10% are for use in the remainder of the State.

TABLE 1 : Numbers of Game (Duck) Licences Sold in Western Australia Each Year. No licence was required prior to 1971 and no open seasons were declared in the South-West and Eucla Land Divisions in 1972/73, 1977/78, 1979/80 and 1980/81.

YEAR	NUMBER OF LICENCES SOLD	LICENCE FEE
1971/72	c5000	\$2.00
1972/73	0 for S-W and Eucla Land Division c275 for remainder of State	"
1973/74	5302	"
1974/75	6254	"
1975/76	6255	"
1976/77	4703	"
1977/78	0 for S-W and Eucla 487 for remainder of State	"
1978/79	4022	\$5.00
1979/80	0 for S-W and Eucla 184 for remainder of State	"
1980/81	0 for S-W and Eucla 81 for remainder of State	"
1981/82	4217	"
1982/83	4489	"
1983/84	5684	"
1984/85	5715	"
1985/86	4416 (annual report) or 4394 (D. Munro ex HO.)	"

Money derived from licence fees goes into the Wildlife Conservation Trust Fund which was first created in 1967⁴⁵ and is used for "...all or any of the purposes of research relating to fauna and flora conservation and for any other purposes relating to the conservation of fauna and flora..."

2.6 DAMAGE LICENCES AND OPEN SEASONS ON SPECIES CAUSING DAMAGE

Two species of wild duck, Mountain Duck and Wood Duck, occasionally cause damage to property. The most common forms of damage are pollution of water supplies and grazing of germinating crops. During dry years large flocks of either species may congregate on farm dams, reservoirs and watering points, polluting the limited supplies of stock and domestic water. Algal blooms usually develop in the nutrient-enriched waters and these blooms may lead to scouring and other health problems for stock - mainly sheep and cattle. Most complaints of crop damage involve germinating lupins or barley however other crops, such as couch, maize, cucumber, tomatoes, cabbage, cauliflower, beans, watermelons etc, may also be attacked, principally by Wood Duck.

Complaints of damage have been dealt with in two ways - by the issue of "Damage Licences" and by the declaration of open seasons on species causing damage.

A Damage Licence empowers the holder to take protected fauna, in this case Mountain Duck or Wood Duck, causing damage to property in whatever numbers and over whatever period the licence stipulates. Such licences are issued to the property owner or manager and empower him and other nominated persons to take fauna only on

the property concerned. This power to issue damage licences was first provided by the Game Act, 1912, Section 21 of which read "The Minister may, in writing, authorise for a stated period any persons or the servants of any such person to kill and destroy any imported or native game found on his property and committing any damage or injury. Provided that the Minister is satisfied that such injury is likely to arise through the presence of such game". This power was introduced in anticipation of damage to crops or private property by imported game, particularly deer,⁴⁶ however in subsequent years it has been used to control damage by native fauna, primarily Kangaroos, but also ducks.

In 1952 it became necessary⁴⁷ for holders of damage-licences to "within one month of expiration of any such license... furnish to the Chief Warden of Fauna a return setting out in full detail the number of each species of fauna taken... and the locality where such species was taken...". Since 1970, however, the requirement for a return has been at the discretion of the Officer issuing the licence⁴⁸.

Figures prior to 1977 are not readily available however from January of that year to June 1981 12 licences for a total of 710 Mountain Duck (plus 4 licences for unspecified numbers) and 13 licences for 325 Wood Duck (plus 6 for unspecified numbers) were issued in the

ducks congregating on farm water supplies may be widespread. In recent years this situation has been dealt with by the declaration of open seasons on Mountain Duck and Wood Duck on private property only (i.e. not on Game Reserves or other public shooting areas). Such seasons have been declared in 1972/73 (from 22nd December 1972 to 30th April 1973) and in 1981/82 (from 13 November 1981 to 8 January 1982) and from 22 February 1982 to 31 December 1982. Note that in 1972/73 there was no "game" season due to the prevailing drought and in 1982 there was a restricted "game" season from 10th January to 21st February (see Table 1).

both species

1-8/1/83 and 21/2/83-31/12/83 (Shelducks only)
 1-13/1/84 and 24/3/84-31/12/84 (" "
 1-11/1/85 and 25/3/85-31/12/85 (" "

NATURE RESERVES AND GAME RESERVES

1-11/1/86 and 10/1/86-31/12/86. (Sheld. only)

Clause 8 of the Shelduck open season has been continuous in SW + Endeavour nor the power to declare lands. to be a protected since 13/11/81 and is current the Acclimatisation to 31/12/86. → 5 years. ia, and subject to such s may prescribed".

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Hon W. Kingsmill is clarified as follows:

"It is proposed in Clause 8 to provide what are known in Queensland as sanctuaries. These are places set aside wherein game, it may be of one species or of all species, is rigidly protected. It has been found that this had a good influence on the presence of game in States where it has been tried, as affording a safe breeding place,

south-west agricultural area. No licences were issued in the remainder of the State.

During drought periods the problems of large flocks of ducks congregating on farm water supplies may be widespread. In recent years this situation has been dealt with by the declaration of open seasons on Mountain Duck and Wood Duck on private property only (i.e. not on Game Reserves or other public shooting areas). Such seasons have been declared in 1972/73 (from 22nd December 1972 to 30th April 1973) and in 1981/82 (from 13 November 1981 to 8 January 1982 and from 22 February 1982 to 31 December 1982). Note that in 1972/73 there was no "game" season due to the prevailing drought and in 1982 there was a restricted "game" season from 10th January to 21st February (see Table 1). ???

2.7 NATURE RESERVES AND GAME RESERVES

Clause 8 of the Game Act 1912 gave the Governor the power to declare by proclamation "any Crown lands... to be a protected area under the control of the Acclimatisation Committee of Western Australia, and subject to such limitations and regulation as may be prescribed".

Hon W. Kingsmill explained the purpose of this clause as follows:

"It is proposed in Clause 8 to provide what are known in Queensland as sanctuaries. These are places set aside wherein game, it may be of one species or of all species, is rigidly protected. It has been found that this had a good influence on the presence of game in States where it has been tried, as affording a safe breeding place, where birds and beasts cannot be harassed, at any rate by the greatest of their enemies, man".⁴⁹

In a later debate on the Bill, Mr Kingsmill went on to say

"it behoves the Government or any Government to set aside as much spare land as they can, and to make that land a close sanctuary for the preservation of native and imported game... It has always been a matter of regret to me that the only area of any large extent which exists in this State for that particular purpose has been so largely encroached upon that its utility in this direction is practically destroyed".⁵⁰

Such sanctuaries were, he explained, to be public land. The Honorary Minister at the time, Hon J.S. Dodd, explained his thoughts on the matter as follows:

"what strikes me very forcibly is that although we may make laws to protect the bird and animal life

of the State we do not go far enough in provision of sanctuaries or refuges in which the birds and animals may live. We have some other obligation to the bird and animal life of the State than the mere making of laws to prevent the killing of them.

Surely of the enormous area we have in this country we might spare some portion in which the birds and animals might find sanctuary."⁵¹

Clause 8 of the 1912 Act was the first reference in game legislation to the setting aside of Crown land for the purpose of sanctuaries - now referred to by legislation as Nature Reserves. The Government already had this power (i.e. to set aside land specifically for the protection of flora and fauna) under the Land Act, 1898, however it is evident from the above extracts of debate that by 1912 little progress had been made in this regard.

It is important to recognise that sanctuaries were not the same as Reserves for Native Game. The latter could be declared over any locality or portion of the State - regardless of the ownership or use of the land or waters concerned - and were simply areas in which the taking of native game was prohibited (see 2.2). They did not involve preservation of the habitat.

Sanctuaries, on the other hand, were areas of Crown

land set aside for the protection of habitat and were not necessarily closed to the taking of game species (although in the early days at least, most were). This distinction between Reserves for Native Game (now termed Waterfowl Refuge Areas) and Sanctuaries (now Nature Reserves) still remains.

From 1912 to 1950 few important waterbird sites were made sanctuaries. In the early 1950s however, the Fauna Protection Advisory Committee (in whom sanctuaries were then vested) adopted a policy of "setting aside a system of lakes for each district where possible to ensure that future generations of duck shooters would have the opportunity to conduct their sport and that wetland duck habitats might be kept in perpetuity."⁵² The Committee was "concerned that the State should profit from experiences in the U.S.A. and more recently in Victoria of setting aside such reserves and protecting waterfowl habitat before they were alienated and despoiled and had to be re-purchased by the Crown."⁵³

This practice of reserving areas as sanctuaries and at the same time declaring them to be open to the taking of game species of ducks was a policy of the Committee from the early 1950s until the late 1960s when in 1967 it was formalized by the insertion of a new clause in the Fauna Conservation Act 1950, to allow "areas of land comprising the whole or part of a sanctuary" to be

classified "shooting or hunting areas". Such areas are now known as "game reserves".

Two of the first shooting areas to be made game reserves as a result of the Commity's policy were Lake Dumbleyung, in 19 , and Lake Gundaring, in 19 . Many more followed (see Figure 3) and by 1982 the total number of game reserves in the South West and Eucla Land Divisions was eighty-four. ??

Not all areas which were made sanctuaries were opened or kept open to shooting. Some important waterbird breeding sites (the most famous being Lake Toolibin) were subsequently closed to shooting in order to protect late-breeding species such as egrets, herons and spoonbills from disturbance, to protect rare species such as Freckled Duck from shooting, or to provide some refuge areas for game species such as Freckled Duck from shooting, or to provide refuge areas for game species during the shooting season.

Although there are eighty-four game reserves in the south-west of the State, there are only two in the remainder of the State. There are two contiguous reserves in the Shire of Boulder which encompass Rowles Lagoon (Reserve 4274) and Clear, Muddy and Carnage Lakes (Reserve 7634). The first was gazetted in 1956 and the second in 1981.

areas for game species during the shooting season.

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BAG LIMITS AND POSSESSION LIMITS

The power to declare a "bag-limit", that is, a limit to the "number of any species of imported or native game which may be taken or killed by any single person in any one day" was first provided by the Game Act, 1912. In giving evidence to the Select Committee on the Legislative Council on the Game Bill, John M. Drummond had commented

1985/86 !
69 or 84 game reserves depending on how you count them
(guide indicates 69)
(c.f. 63 or 81 refuges)

"Only a year or two ago they were trapping ducks at Wagin with wire netting and sending up crates of them alive. Thousands must have been taken in that way. This clause (i.e. the bag-limit clause) would stop that slaughter"⁵⁴. And during the second reading of the Bill in the Legislative Council, Hon. W. Kingsmill advised "It has been found in Victoria, more especially during the season devoted to shooting wild ducks, that a wanton destruction of these birds take place, and, with a view to checking this, the regulation (i.e. the bag-limit regulation) has been introduced there. It is working well and it is proposed that the same procedure shall be adopted

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Although the bag-limit clause was contained in the 1912 Act twelve years passed before the first bag-limits were actually proclaimed. Thus in 1934 the number of wild ducks which could be taken "by means of any snare

of trap" was limited⁵⁶ to fifteen per person per day, "in any part of the State." Three years later the bag-limit for wild ducks taken by means of firearms was set at twenty per person per day.⁵⁷

The limits remained in force until the open season of 1951/52 when the limit for birds taken by means of firearms was also reduced to 15. New Regulations in 1952⁵⁸ established the bag limit at 15 birds per person per day for wild duck taken "by any means whatsoever" and at the same time introduced a ban on the use of "traps and decoy traps". Unlike the ban on the use of devices other than firearms which was proclaimed back in 1913 (see 2.3), this 1952 prohibition was subsequently enforced.

The 15 bird limit remained in force until 1970 when new Regulations⁵⁹ gave the Government power to vary bag-limits by notice in the Government Gazette rather than by varying the Regulations as had been necessary since 1937. This change in procedure was to facilitate the variation of bag-limits on a yearly basis as was likely to occur under the new system of "biologically-based" shooting seasons in the south-west of the State.

Since 1970 the bag limit for ducks taken during open seasons in the South West and Eucla Land Divisions has changed many times (See Figure 3). There has also been

some changes in the "species composition" of the permitted bag. Thus drought conditions and consequent poor breeding by most species of duck have resulted in lower limits being set⁶⁰ and in added emphasis being placed on the taking of Mountain Duck (Tadorna tadornoides) and Wood Duck (Chenonetta jubata), two species which are least affected by dry conditions in the south-west of the State due to their ability to utilize farm dams for breeding purposes.

Bag limits in the remainder of the State have been more stable. In 1971 the limit was eight birds of any game species, the same as the limit for the south-west and since January 1st of the following year the limit has remained ten of any game species. Prior to 1971, of course, the one bag-limit applied to all parts of the State.

The power to declare a possession limit, that is, a limit on the number of ducks of any game species "that may be in the possession of any one person" was first introduced by the Fauna Protection Act 1950, Amendment Act 1967.⁶¹ Possession limits were first declared for the open season of 1970/71 (there was no season in the south-west in 1969/70) and were set in this and subsequent seasons, both in the south-west and the remainder of the State, at twice the daily bag limit. The possession limit on opening day is, of course, the same as the bag-limit.

In 1970 "possession" was redefined to include ducks kept "in any cool store or any freezing chamber or other premises at any one time."⁶²

The "pooling" of hunters' bags was first prohibited in 1970. It thus became necessary for each hunter to keep his bag separate from those of other hunters. This regulation applies only to hunters shooting on Game Reserves and bags may be pooled on leaving the Reserve.

2.9 SPECIES

From 1875 when the first laws governing the taking of wild duck in Western Australia came into effect, until 1968, all species of wild duck were "game". That is, all could be taken during declared open seasons.

The first species to be removed from the game list (on 1st January 1968) was the Green Pygmy Goose (Nettapus pulchellus), a species which, in Western Australia, is confined to the Kimberley. Twelve months later another Kimberley species, the Burdekin Duck (Tadorna radjah) was taken from the list. These two species thus became protected at all times.

In 1970 and 1971⁶³ the Freckled Duck (Stictonetta naevosa), Musk Duck (Biziura lobata) and Blue-billed Duck (Oxyura australis) were taken from the game list and these were followed three years later by the

Pink-eared Duck (Malacorhynchus membranaceus). There have been no subsequent deletions.

The Green Pygmy Goose, Burdekin duck and Freckled Duck were taken off the game list because of their rareness and, to some extent, their vulnerability to shooters. The latter two species were subsequently included in the list of fauna declared "rare or otherwise in need of special protection." Persons convicted of taking such fauna are liable to a fine of \$1 000. The only other species of Anatidae (swan, duck and goose family) to be so declared are the Cape Barren Goose (Cereopsis novaehollandiae) and the feral Mute Swan (Cygnus olor).

The Musk Duck and Blue-billed Duck were taken off the game list because

The Pink-eared Duck was also protected because of concern about its vulnerability to shooters.

There are currently nine species of wild duck which are "game species" in the South West and Eucla Land Divisions of the State. These are:

Mountain Duck (Tadorna tadornoides)

Black Duck (Anas superciliosa)

Grey Teal (A. gibberifrons)

Chestnut Teal (A. castanea)

Blue-winged Shoveler (A. rhynchotis)

White-eyed Duck (Aythya australis)

Wood Duck (Maned Goose) (Chenonetta jubata)

Whistling Tree-Duck (Dendrocygna arcuata)

Plumed Tree-Duck (D. eytoni)

The latter two can be disregarded however as they rarely occur in the south-west and have never been recorded in shooters bags.

The game list of the south-west also applies to the remainder of the State, except that the Chestnut Teal, which is generally confined to wetlands of the south coast, is not included.

It is difficult of course for a law-enforcement officer to identify to species a duck carcass which has been plucked and gutted and had its legs, wings, and head removed. For this reason a new restriction was introduced in December 1979 making it illegal to "possess or transport a duck unless at least one fully-feather wing is attached to the bird and that wing and plumage may only be removed from the duck when a) the bird is prepared for immediate cooking; or b) after the bird is taken to the residence of its owner for preservation"^{63A}. This restriction was modelled on a similar law which exists in Canada.

Whilst this paper concerns itself only with wild duck, it is of interest to record the changing legal status

of the three non-duck species of Anatidae which are native to Western Australia.

Western Australia's bird emblem, the Black Swan (Cygnus atratus), was protected by close-season declarations for a part of each year (the breeding season) from 1875 to 1913, when it became "at all times strictly preserved generally throughout the State."⁶⁴ The Cape Barren Goose was similarly protected by annual close season from 1875 to 1878 and from 1892 until 1938, when it too became fully protected throughout the State.⁶⁵ The Pied or Magpie Goose (Anseranas semipalmata), a Kimberley bird, was not deleted from the game list until January 1971.

2.10 OTHER CONTROLS

The Fauna Protection Act 1950 gave the Government power to make regulations "limiting the number of shooters in any one locality..." (Section 28b). This power has never been used either on game reserves or elsewhere.

Restrictions on the taking of ducks at night were first introduced during the duck-shooting season of 1973-74, when shooting was prohibited "between the hours of half-hour after sunset and half hour before sunrise" on Lake Wannamal, Coomelberrup and Toolibin and Benger Swamp. The aim of this restriction was to reduce the

likelihood of Freckled Duck (a protected species) being accidentally shot during hours of poor visibility.

Shortly prior to opening of the 1974/75 season Lake Toolibin was declared a waterfowl refuge area and thus closed completely to shooting.⁶⁶ During the following season (1975/76) the hours between which shooting was prohibited on Lakes Wannamal and Coomelberrup and Benger Swamp were 6.00 p.m. and 6.00 a.m. In 1976/77 and subsequent seasons they have been 7.00 p.m. and 5.00 a.m.

CONCLUSION

Since 1874 a large number of laws concerning the hunting of wild duck in Western Australia have been progressively introduced. Most have been introduced in order to reduce the impact of duck hunters on duck populations, either of hunting during breeding seasons, the prohibition of the use of devices which kill or capture large numbers of birds e.g. large-bore guns, nets and traps, the declaration of waterfowl refuge areas, the control and then phasing-out of the taking of ducks for sale, the imposition of limits on the number of ducks which may be taken each day or possessed, and the protection of the rarer or more vulnerable species. A few laws have been introduced for safety reasons - e.g. the ban on shooting at ducks which are less than ten feet above water level, and the prohibition of the use of rifles.

Three factors have been responsible for this gradual tightening-up.

The first was concern about increasing levels of exploitation for food and sport by a rapidly growing (see Figure 3) human population. This concern was responsible for the first legislation in 1874 and has continued until recent times.

The second factor has been concern about the adverse effect of agricultural development, particularly in the south-west of the State. Huge areas of land have been cleared for agriculture since the turn of the century, and this has resulted in salinisation of low parts of the landscape, particularly wetlands. Most of the lakes and streams of the wheat and sheep belt (i.e. the inland south-west) have turned salt during the past 50 years and it is widely accepted that this has adversely affected populations of most game species of ducks, particularly species such as Black Duck which have a strong preference for freshwater.

A substantial proportion of coastal freshwater wetlands has also been lost to waterbirds through drainage for agricultural use.⁶⁷

The third factor which has resulted in tighter controls in the south-west of the State has been the relatively dry period which is now being experienced and which began with the drought year of 1969.⁶⁸ Such dry periods dramatically

A substantial proportion of coastal freshwater wetlands has also been lost to waterbirds through drainage for agricultural use^{§ 67}

The third factor which has resulted in tighter controls in the south-west of the State has been the relatively dry period which is now being experienced and which began with the drought year of 1969^{§ 68}. Such dry periods dramatically reduce the availability of surface water for breeding and refuge purposes and so cause a substantial reduction in total duck populations.

Perhaps the most important point to emerge from this study of the history of controls on duck hunting in Western Australia is that the restrictions which have been imposed, from 1874 to the present day, have been imposed, not with the intention of phasing out the taking of wild ducks, but with the aim of ensuring that this harvestable resource will survive to be harvested in years to come. The active programme of reservation of traditional shooting areas "to ensure that future generations of duck shooters would have the opportunity to conduct their sport and that wetland duck habitats might be kept in perpetuity,"^{§ 69} which began in the early 1950s and continues to the present day bears witness to this fact.

It is to be hoped that the adverse affects of future agricultural, urban, industrial and mineral developments can be minimized to the extent that further tightening of controls on duck-hunting will not be required.

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It is to be hoped that the adverse affects of future agricultural, urban, industrial and mineral developments can be minimized to the extent that further tightening of controls on duck-hunting will not be required.

FOOTNOTES

1. Western Australia was a Colony until 1901 when it became one of the six federated States of the Commonwealth of Australia.
2. Aborigines remain partially exempted from the provisions of the Act today. Section 23(1) of the Wildlife Conservation Act, 1950-79 allows "a person of Aboriginal descent" to take fauna and flora from land other than nature reserves "sufficient only for food for himself and his family". Where the land is occupied, consent of the occupier is required. The exemption may also be suspended to prohibit any species from undue depletion. *N^o of Act*
3. The Game Act 1874, Amendment Act, 1876, assented to on 7 September 1876. Changed closed season was notified in the Western Australian Government Gazette (W.A.G.G.), 1876, p. 201.
4. The Game Act 1874, Amendment Act, 1878, assented to on 24 July 1878, and came into operation on 1 January 1879.
5. ibid.
6. *W.A.G.G. 7 January 1879, p 3.*
6. *W.A.G.G. 7 January 1879*

6. W.A.G.G., 7 January 1872, p. ^{p. 3. ↑}.
7. W.A.G.G., 21 October 1879, p. 263.
8. W.A.G.G., 15 October 1885, p. 491.
9. W.A.G.G., 31 October 1889, p. 639. Note that the block of land at Eucla was omitted from this notice.
10. W.A.G.G., 9 June 1892, p. 423.
11. Lane, J.A.R. and D.R. Munro, 1980 Review of Rainfall and Wetlands in the South-West of Western Australia. Dept. Fish. Wildl. West. Aust. Rept. No. 47, 1981, 1-23.
12. W.A. Department of Fisheries and Wildlife, File 49/48, Vol. 1, 22 May 1918.
13. Minutes of the Fauna Protection Advisory Committee, (F.P.A.C.), 21 October 1957.
14. Minutes of the F.P.A.C., 15 November 1957.
15. Western Australian Parliamentary Debates, (W.A.P.D.), 2 (New Series) Vol. , 15 December 1891, p. 83.
16. W.A.P.D., Vol. 2 (New Series), 7 January 1892, p. 194.
17. W.A.G.G., 9 June 1892, p. 423.
18. W.A.G.G., 6 July 1893, p. 695.
- 18A W.A.G.G., 12 August 1898, p. 2325.
19. W.A.P.D. Vol. 48 (New Series), 16 December 1913, pp. 3934-5.

18. W.A.P.D., Vol. , 16 December 1913, pp. 3934-5.

19. W.A.P.D. Vol 48 (New Series), 16 December 1913, pp 3934-5.

20. Peterson, H.L. (ed.), Encyclopaedia of Firearms,
(London), 19 , p. 314.

21. ibid., p. 250.

22. Hon. C.A. Piesse in W.A.P.D., Vol. ^{32 (New Series)} _A, 13 December
1907, pp. 1673-4.

23. Hon. J. Mitchell in W.A.P.D., Vol. ^{32 (New Series)} _A, 19 December
1907, p. 1918.

24. Game Act Amendment Act, 1907, assented to on 20
December 1907.

X 25. W.A.G.G., 13 March 1908, p. 746.

26. An "eight calibre" firearm has a bore diameter of
0.835 inches. "ten gauge" (calibre) is 0.775 inches
and "twelve gauge", the most commonly used shotgun for
taking wild duck nowadays, is 0.729 inches.

X (Peterson, H.L., op. cit., p. .)

27. J.M. Drummond in Report of the Select Committee on the
Game Bill (Legislative council, Western Australia),
1911, p. 5.

28. Note that a Game Reserve is a reserve on which
duck-shooting is permitted whereas a Reserve for
Native Game was a refuge area where ducks could not be
legally shot.

29. By the Colonial Secretary, Hon J.D. Connolly, in
29. By the Colonial Secretary, Hon J.D. Connolly, in

W.A.P.D., Vol. ^{32 (New Series)} A, 13 December 1907, p. 1673.

30. Hon. W. Kingsmill in W.A.P.D., Vol. ^{42 (New Series)} A, 7 August 1912, p. 898.

31. H.T. Kelsall in Report of the Select Committee on the Game Bill (L.S., W.A.), 1911, p. 12.

32. W.A.G.G., 11 July 1913, p. ²²⁶⁰⁻¹, with effect from 23 June 1913.

33. Game Act Amendment Act, 1913, assented to on 30 December 1913.

34. W.A.G.G., 20 March 1914, p. ¹⁴¹³⁻⁶, with affect from 1 April 1914.

35. W.A.G.G., 6 October 1939, p. ¹⁷⁴⁰.

36. W.A.G.G., 28 January 1960, p. ¹²⁰⁻².

37. Fauna Protection Act Regulations 1952, W.A.G.G., 13 June 1952, pp. ¹⁵⁰²⁻⁹

38. Wildlife Conservation Regulations, W.A.G.G., 8 March 1982, pp. , Regulations 11 and 13.

⁷⁴⁷⁻²⁰⁰

39. ibid., Regulation 21(7).

40. W.A. Department of Fisheries and Wildlife, File 23/32.

41. ibid., p. 2.

42. Serventy, D.L. and Whittell, H.M., Birds of Western Australia, (Perth), 1976, p. 156.
43. Fauna Protection Act, 1950, Section 28(b).
44. Fauna Conservation Regulations, W.A.G.G., 18 November 1970, pp. , Regulation 21(2).
3547 - 3585
45. Fauna Protection Act 1950, Amendment Act 1967.
46. Hon. W. Kingsmill in W.A.P.D., Vol. ^{42 (New Series)} A, 7 August 1912, p. 900.
47. Fauna Protection Act Regulations, 1952, W.A.G.G., 13 June 1952, pp. ^{1502 - 9} , Regulation 5.
48. Fauna Conservation Regulations, W.A.G.G., 18 November 1970, pp. ^{3547 - 85} , Regulation 5(4).
49. W.A.P.D., Vol. ^{42 (New Series)} A, 7 August 1912, p. 898.
50. W.A.P.D., Vol. ^{43 (New Series)} A, 28 August 1912, p. 1342.
51. W.A.P.D., Vol. ^{42 (New Series)} A, 13 August 1912, p. 1011.
52. Minutes of the F.P.A.C., 20 September 1957.
53. H.B. Shugg. W.A. Department of Fisheries and Wildlife, File 118/51, Vol. 2, p. 99, 29 December 1960.
54. Report of the Select Committee on the Game Bill (L.C.W.A.), 1911. D.5.

42 (New Series), 7 August 1912

55. W.A.P.D., Vol. K, 1911, p. 900.
56. W.A.G.G., 2 November 1934, p. 1656.
57. W.A.G.G., 17 December 1937, p. 2123.
58. Fauna Protection Act Regulations, 1952, W.A.G.G., 13 June 1952, pp. ¹⁵⁶²⁻⁴, Regulation 26.
59. Fauna Conservation Regulations, W.A.G.G., 18 November 1970, pp. ³⁵⁴⁷⁻⁸⁵.
60. See Lane, J.A.K. and D.R. Munro, op. cit., and Lane, J.A.K. and D.R. Munro, 1981 Review of Rainfall and Wetlands in the South-West of Western Australia.
Dept. Fish. Wildl. West. Aust. Rept. No. 56, 1982,
1- .
61. This Act came into force on 1 June 1968.
62. Fauna Conservation Regulations, W.A.G.G., 18 November 1970, pp. ³⁵⁴⁷⁻⁸⁵, Regulation 56(3).
63. 1970 in the South-West and Eucla Land Divisions, and 1 January 1971 in the remainder of the State.
- 63 a. W.A.G.G., 14 Dec 1979, p 3878-9.
64. W.A.G.G., 27 June 1913, p. ²¹¹⁰.
65. W.A.G.G., 14 April 1938, p. 520.
66. W.A.G.G., 3 January 1975, p. 7. The season opened on 11 January.

67. Riggert, T.L., A Study of the Wetlands of the Swan Coastal Plain, published by W.A. Department of Fisheries and Fauna, 1966.
68. Lane, J.A.K. and D.R. Munro, 1981, op. cit.
69. Minutes of the F.P.A.C., 20 September 1957.

APPENDIX 1. DATES, DAYS AND TIMES OF OPENING AND CLOSING OF DUCK-HUNTING
SEASONS IN THE SOUTH-WEST DISTRICT¹ OF WESTERN AUSTRALIA,
1926-1982.

YEAR OF OPENING	OPENING			CLOSING			REMARKS
	DATE	DAY	TIME	DATE	DAY	TIME	
1826-1874	CONTINUOUS OPEN SEASON						First Closed
1875	<u>1 Oct</u> ²	-	<u>0000</u> hrs	31 May	-	<u>2400</u> hrs	Season was
1876-77	<u>1 Dec</u>	-	"	30 <u>Jun</u>	-	"	Jun-Sep 1875
1878	"	-	"	31 <u>Jul</u>	-	"	
1878-84	<u>1 Nov</u>	-	"	"	-	"	
1885-88	"	-	"	30 <u>Jun</u>	-	"	
1889-94	<u>1 Dec</u>	-	"	"	-	"	
1896-99	<u>1 Jan</u>	-	"	"	-	"	
1899-1900	<u>26 Dec</u>	-	"	"	-	"	
1901-04	<u>24 Dec</u>	-	"	"	-	"	
1905-16	<u>23 Dec</u>	-	<u>1730</u> hrs	"	-	"	
1917-19	"	-	"	31 <u>May</u>	-	"	
1920	"	-	<u>0400</u> hrs	"	-	"	
1921-29	"	-	<u>0500</u> hrs	"	-	"	
1930-43 ³	"	-	<u>0600</u> hrs	"	-	"	
1945-46	<u>22 Jan</u>	-	"	"	-	"	
1946-47	<u>22 Dec</u>	-	<u>0500</u> hrs	"	-	"	Opening
1948-49	<u>19-18 Dec</u>	<u>Sun</u>	"	"	-	"	changed to
1950	23 Dec	Sat	"	"	-	"	weekend before
1951	22 Dec	Sat	"	"	-	"	Christmas
1952 ⁴ -55 ³	18-21 Dec	Sun	"	"	-	"	

YEAR OF		OPENING		CLOSING			REMARKS
OPENING	DATE	DAY	TIME	DATE	DAY	TIME	
1956 ⁴	22 Dec	Sat	"	"	-	"	
1957 ⁴	22 Dec	Sun	"	"	-	"	
1958-64 ⁴	17-23 Dec	"	"	30 Apr	-	"	"Biological"
1965-66 ⁴	19-18 Dec	"	"	"	-	<u>1900</u> hrs	seasons
<u>1967-68</u> ⁴	<u>14 Jan</u>	"	"	"	-	"	introduced in
1968-69 ⁴	12 Jan	"	"	"	-	"	1967
1969/70			NO SEASON				
1970/71	19 Dec	Sat	1800 hrs	<u>10 Jan</u>	<u>Sun</u>	<u>2000</u> hrs	
1971/72	18 Dec	"	"	13 Feb	"	<u>2400</u> hrs	
1972/73			NO SEASON				
1973/74	5 Jan	Sat	1800 hrs	31 Mar	"	"	
1974/75	11 Jan	"	"	30 Apr	-	"	
1975/76	10 Jan	"	"	"	-	"	
1976/77	18 Dec	"	"	16 Jan	Sun	<u>2000</u> hrs	
1977/78			NO SEASON				
1978/79	14 Jan	<u>Sun</u>	<u>0100</u> hrs	11 Feb	"	<u>2359</u> hrs	"Standardized"
<u>1979/80</u>			NO SEASON				seasons
1980/81			NO SEASON				introduced in
1981/82 ³	10 Jan	"	<u>0600</u> hrs	21 Feb	"	"	1979

FOOTNOTES:

1. The boundaries of the South-West District have varied considerably since 1874, at times

covering only a few towns in the south-west and occasionally covering the whole State.
(See Figure 2).

2. Changes which reflect a change in thinking or policy are underlined.
3. In 1939 the area east of the No. 1 rabbit-proof fence and south of 26° Latitude was closed on 17th March due to unseasonal floods and associated breeding. In 1955 the season for the entire South West associated breeding. In 19** the season for the entire South-West District was closed on 30th April due to unseasonal floods and breeding. In 1982 the season closed two weeks later than originally announced due to unseasonal floods and consequent inconvenience to shooters.
4. In 1952 and from 1954 to 1969 inclusive the "Capel" sub-District (see Figure 2) opened at 1800 hrs on the day preceding opening of the remainder of the South-West District.

YEAR OF OPENING	OPENING			CLOSING			REMARKS
	DATE	DAY	TIME	DATE	DAY	TIME	
1982/83	9 Jan	Sun	0600 hrs	20 Feb	Sun	2359	
1983/84	14 Jan	Sat	1900 hrs	25 Mar	Sun	2359	"Summer Time"
1984/85	12 Jan	Sat	1800 hrs	24 Mar	Sun	2359	
1985/86	12 Jan	Sun	0600 hrs	9 Feb	Sun	2359	
1986/87							

APPENDIX 2. DATES, DAYS AND TIMES OF OPENING AND CLOSING OF DUCK-HUNTING
SEASONS IN THE BROOME DISTRICT OF WESTERN AUSTRALIA, 1826-1982.

YEAR OF OPENING	OPENING			CLOSING			REMARKS
	DATE	DAY	TIME	DATE	DAY	TIME	
1826-1874			CONTINUOUS OPEN SEASON				Refer to
1875-78			PART OF SOUTH-WEST DISTRICT				Appendix 1
1879-1916			CONTINUOUS OPEN SEASON				for dates,
1917				30 Nov	-	2400 hrs	days and times
1918-20	1 May	-	0000 hrs	"	-	"	
1921	"	-	"	31 Dec	-	"	
1922-52	1 Jun	-	"	"	-	"	Refer to
1952-57			PART OF SOUTH-WEST DISTRICT				Appendix 1
1958-82			CONTINUOUS OPEN SEASON				for dates, days and times

APPENDIX 3. DATES, DAYS AND TIMES OF OPENING AND CLOSING OF DUCK-HUNTING SEASONS

IN THE EAST KIMBERLEY MAGISTERIAL DISTRICT OF WESTERN AUSTRALIA, 1826-1982.

YEAR OF OPENING	OPENING			CLOSING			REMARKS
	DATE	DAY	TIME	DATE	DAY	TIME	
1826-1874			CONTINUOUS OPEN SEASON				Refer to
1875-78			PART OF SOUTH-WEST DISTRICT				Appendix 1
1879-1917			CONTINUOUSLY OPEN				for dates,
1918				30 Nov	-	2400 hrs	days and times
1919-52	1 May	-	0000 hrs	"	-	"	Refer to
1952-57			PART OF SOUTH-WEST DISTRICT				Appendix 1
1958-82			CONTINUOUS OPEN SEASON				for dates, days and times

Heading & Footing

the General Areas of 1952
and subsequent years.APPENDIX 4. DECLARATION OF WATERFOWL REFUGE AREAS¹ IN THE SOUTH-WEST
AND EUCLA LAND DIVISIONS OF W.A.

FOOTNOTES:

from 1892 to

- NOTE: 1. These areas were known until 1952 as Reserves for Native Game.
2. Twenty-two refuge areas declared between 1892 and 1951 were ~~also~~ incorporated in
3. This was the first Reserve for Native Game to be declared in W.A.

For the purposes of this Appendix and Figure 3, refuge extensions are

4. When a reserve is expanded the additional area is considered to be ~~an~~ additional refuges.

5. Treated as two refuges because part of the Inlet was later re-opened to shooting.

YEAR OF GAZETTAL	CUMULATIVE NUMBER OF REFUGES (Cumulative)		REFUGE ADDITIONS, DELETIONS & MODIFICATIONS
	1952 General Areas ²	Total	
X 1892	1 ✓	1 ✓	Addition: Swan R. between Perth-Bunbury Railway Bridge and Narrows at Mill Point. ¹⁸⁹² 3 ✓ (See also 1893, 1899).
X 1893	2 ✓	2 ✓	Addition: Swan R. refuge ^{extended} expanded. Limits now river mouth, P-B Railway Bridge and Lower Canning Bridge. ¹⁸⁹⁵ 4 ✓
X 1895	2 ✓	4 ✓	Addition: Leschenault Inlet from head to entrance into sea. ¹⁸⁹⁵ 5 ✓ (See also 1913, 1914, 1929, 1948, 1952, 1959).
1898	3 ✓	5 ✓	Addition: Swan R. refuge further expanded. Limits now Midland Railway Bridge (Upper Swan), South-Western Railway Bridge (Canning R.), Canning Jarrah Timber Co. Railway Bridge (Helena R.)
1901	5 ✓	7 ✓	Addition: Mongers Lake (Leederville). Vasse R. and Estuary within Municipality of

APPENDIX 4. DECLARATION OF WATERFOWL REFUGE AREAS¹ IN THE SOUTH-WEST AND EUCLA LAND DIVISIONS OF W.A.

YEAR OF GAZETAL	CUMULATIVE NUMBER OF REFUGES		REFUGE ADDITIONS, DELETIONS & MODIFICATIONS
	1952 General Areas ²	Total	
1892	1	1	Addition: Swan R. between Perth-Bunbury Railway Bridge and Narrows at Mill Point. ³ (See also 1893, 1898).
1893	2	2	Addition: Swan R. refuge extended. ⁴ Limits now river mouth, P-B Railway Bridge and Lower Canning Bridge.
1895	2	4	Addition: Leschenault Inlet from head to entrance into sea. ⁵ (See also 1913, 1914, 1929, 1948, 1952, 1959).
1898	3	5	Addition: Swan R. refuge further expanded. Limits now Midland Railway Bridge (Upper Swan), South-Western Railway Bridge (Canning R.), Canning Jarrah Timber Co. Railway Bridge (Helena R.)
1901	5	7	Addition: Mongers Lake (Leederville). Vasse R. and Estuary within Municipality of Busselton. (See also 1922, 1930, 1947).
1902	6	8	Addition: Herdsman's Lake (Leederville). (See also 1907, 1913).
1903	7	9	Addition: Mundaring Weir (Res. 7294). (See also 1913).
1906	7	11	Addition: Areas at Boolan and Boolathanna. (See also 1952).
1907	6	10	Deletion: Herdsman's Lake refuge rescinded.
1910	6	11	Addition: Stirling Estate (Capel). (See also 1911, 1916, 1952).
1911	6	11	Deletion: Stirling Estate refuge rescinded. Addition: Wagin Lake (Res. 13279). (See also 1962, 1970).
1913	6	10	Addition: Herdsman's Lake regazetted. Deletion: Leschenault Inlet south of Mill Point, and Mundaring Weir not regazetted.
1914	6	10	Addition: Leschenault Inlet south of Mill Point. Deletion: Leschenault Inlet north of Mill Point.
1916	9	19	Addition: Capel R. between Capel and Causeway Bridges. Queen's Gardens. Hyde Park. Lake Seppings. Peel Inlet Channel including Channel and Green Islands. (See

including Channel and Creery Islands. (See -)

1917 11 21

1919 11 23

1920 11 24

1922 12 27

1923 12 28

1924 12 30

1928 16 35

1929 16 38

1930 16 39

1932 16 40

1933 16 41

1936 16 42

1938 19 45

1939 20 46

1940 20 47

1941 20 48

1942 20 49

1943 21 50

1944 21 51

1947 22 53

1948 22 52

1952 22 39

including Channel and Creery Islands. (See also 1919, 1929, 1948, 1952, 1954, 1970, 1971, 1973). Deep River Inlet. (See also 1952). Harvey R. extending 2 miles upstream from Harvey Weir. (See also 1933). Bibra Lake, Avon R. from Burlong Pool through Northam to Causeway at Katrine.

Addition: Rottnest Island. Shenton Park Reserve (Res. 8630).

Addition: Greenough R. at Nangcarrong Springs. (See also 1952). Avon R. near York, from Gwambygine to road crossing near Burges' Siding. (See also 1952).

Note: S. boundary of Peel Inlet Channel Res. redefined. Not a significant modification.

Addition: Walyormouring Lake (Res. 17186). (See also 1952).

Addition: Vasse R. between SW corner of Locn. 1 and S. boundary of Busselton Municipality. Avon R. within boundaries of Central Ward of Beverley Road District. (See also 1952). Coogee Lake.

Addition: Yealering Lake. (See also 1952, 1953).

Addition: Yanchep Caves Reserve. Lake Balicup. (See also 1952).

Addition: Jolimont Swamp. Oyster Harbour between Lower King and Lower Kalgan Bridges and a line drawn west from Swan Point. (See also 1952). Pardoorra and Coondaree Lagoons (Upper Swan). Lake Karrinyup Country Club.

Addition: Leschenault Inlet north of Mill Point, and tributaries of Leschenault Inlet. Lots 171 and 172 between the Murray and Serpentine Rivers.

Addition: Remainder of Vasse R., Vasse Estuary and Wonnerup Estuary. (Refuge now whole of Vasse R., Vasse Estuary and Wonnerup Estuary).

Addition: Balingup Pool. (See also 1952).

Addition: Harvey Catchment Area.

Addition: Nannerup Lake (Taylor's Inlet).

Addition: Lake Coolbellup (North Lake). Yangebup Lake. Thomsons (Yilbup) Lake.

Addition: White (Cooloongup) Lake.

Addition: Blackwood R. (portion at Bridgetown). (See also 1952).

Addition: Lakes Bambun, Yambung (Nambung) and Mungala.

Note: General Area within a radius of 15 miles from Perth G.P.O. declared closed to duck-hunting. (See also 1952).

Addition: Lake Leschenaultia.

Addition: Big Swamp (Bunbury).

Addition: Whole of Princess Royal Harbour.

Addition: Remainder of Municipality of Busselton. Avon R. from Sinclair Crossing at Dumbarton to crossing of Toodyay - Bolgart Rd. (See also 1952, 1954, 1956, 1970, 1973, 1976).

Addition: Radius of 2 miles from Mandurah Post Office.

Deletion: Leschenault Inlet north of Waterloo Head.

General Areas Declared Refuges

- a) The whole of the area within a radius of 20 miles of Perth G.P.O.
- b) All municipalities and townsites within the boundaries of the South West Land Division.
- c) The Whole of the Rockingham Road District.

Specific Areas Declared Refuges

Addition: Oyster Harbour south of a line drawn west from Swan Point. (Refuge now whole of Oyster Harbour.) King and Kalgan Rivers. Leschenault Inlet north of Waterloo Head.

Deletion: Collie R. and its tributaries. Boolan and Boodathanna. Capel R. between Capel and Causeway Bridges. Deep R. Inlet. Greenough R. (portion). Avon R. (portions at Northam, York, Beverley, Toodyay). Walyormouring Lake. Yealering Lake. Lake Balicup. Lots 171 and 172 (between Murray and Serpentine Rivers). Balingup Pool. Blackwood R. (portion at Bridgetown).

1953	42	<u>Addition:</u> Lake Yealering, Wardering Lake, Capel R. between Capel and Stirling Bridges.
1954	45	<u>Addition:</u> Avon R. from Dumbarton Bridge to Railway Bridge, north of Toodyay. Serpentine R. from south end of Goegrup Lake to Peel Inlet.
1955	46	<u>Addition:</u> Area within a 2 mile radius of Boyup Brook.
1956	48	<u>Addition:</u> Area within 1½ mile radius of Balingup. Avon R. from the N. boundary of Avon Locn. 3 to point opposite Road No. 2069.
1959	47	<u>Deletion:</u> Leschenault Inlet north of Waterloo Head. (Refuge now whole of Leschenault Inlet south of Waterloo Head).
1961	49	<u>Addition:</u> Coblinine R. from the bridge at Oxley Rd to its mouth. Caro Swamp.
1962	50	<u>Addition:</u> Broadwater (Busselton. Res. 3872 and 3876). (These reserves were amalgamated in 1963 to form Res. 27080). Wallering Swamp.
1964	55	<u>Deletion:</u> Wagin Lake <u>Addition:</u> Dumbleyung Lake. (Closed for Campbell's world water speed record attempt). (See also 1965). Beaufort R. and Estuary (See also 1965). Wellstead R. and Estuary. (See also 1965).
1965	54	<u>Addition:</u> Lake Muir (eastern portion). <u>Deletion:</u> Byenup Lake group. <u>Deletion:</u> Beaufort R. Wellstead R. Dumbleyung Lake.
1967	55	<u>Addition:</u> Res. 12899 and 12900 at Nambadilling.
1968	58	<u>Addition:</u> Wilson Inlet (part). Harvey Estuary (southern part). Lower Harvey R.
1970	71	<u>Addition:</u> Res. 27157 (Albany). Res. 15231 (Woody Lake). (See also 1971). Res. 23825 (Mullet Lake). (See also 1971). Benger Swamp (part). SE portion of Peel Inlet. Res. 2707 on Peel Inlet. Res. 28750 at Murchison R. Bridge. Res. 25194 (Anderson Lake). Wagin Lake. Nowergup Lake. Res. 22057 east side of Lake Preston. Little Murapin Lake. Avon R. from Road No. 26069 to ---

Murapin Lake on Avon R. from Road No. 26069 to ---

MURCHISON LAKE. AVON R. FROM ROAD NO. 20000 TO W. boundary of Locn. 3.

Note: All municipalities and townsites of Eucla Land Division added to General Areas declared closed to shooting.

1971 71

Addition: Remainder of Peel Inlet.

Remainder of Harvey Estuary.

Deletion: Res. 15231 (Woody Lake). Res. 23825 (Mullet Lake).

1973 74

Addition: 1½ mile radius of Serpentine and Murray R. mouths. Res. 24739 near Big Lake. Murray R. downstream from Ravenswood Bridge. Murchison R. from its mouth to Murchison House Homestead. Avon R. from Railway Bridge (Toodyay) to N. boundary of Avon Locn. 3.

Deletion: Peel Inlet and Harvey Estuary additions of 1971.

1974 78

Addition: Lake Powell. Northern portion of Wannamal Lake. (Lake Toolibin and the Collie R. from its junction with the Brunswick River to Wellington Location 424 were added Jan. 1975).

1976 81

Addition: Lake Towerinning. Avon R. from Northam Townsite to Dumbarton Bridge. (Refuge now Avon R. from Northam Townsite to W. boundary of Avon Locn. 3)

1978 83

Addition: Lakes Needoonga and Chittering.

1981 84

Addition: Lake Kurrenkutten.

1982 86

Addition: Portion of Res. 31188 (Sabina R.) from Jussell Hwy. to 400 metres from Vasse Estuary (previously declared; see 1970). Swan Loons. 2117 and 3155, 3km north of Lake Wannamal.

1983 87

Addition: Greengrass Lake.

1985 91

Addition: Devil's Pool (Greenough R.). Ellendata Pool (Greenough R.). Black Lake and adjacent areas. Western shore of Peel Inlet and Harvey Estuary.



FOOTNOTES