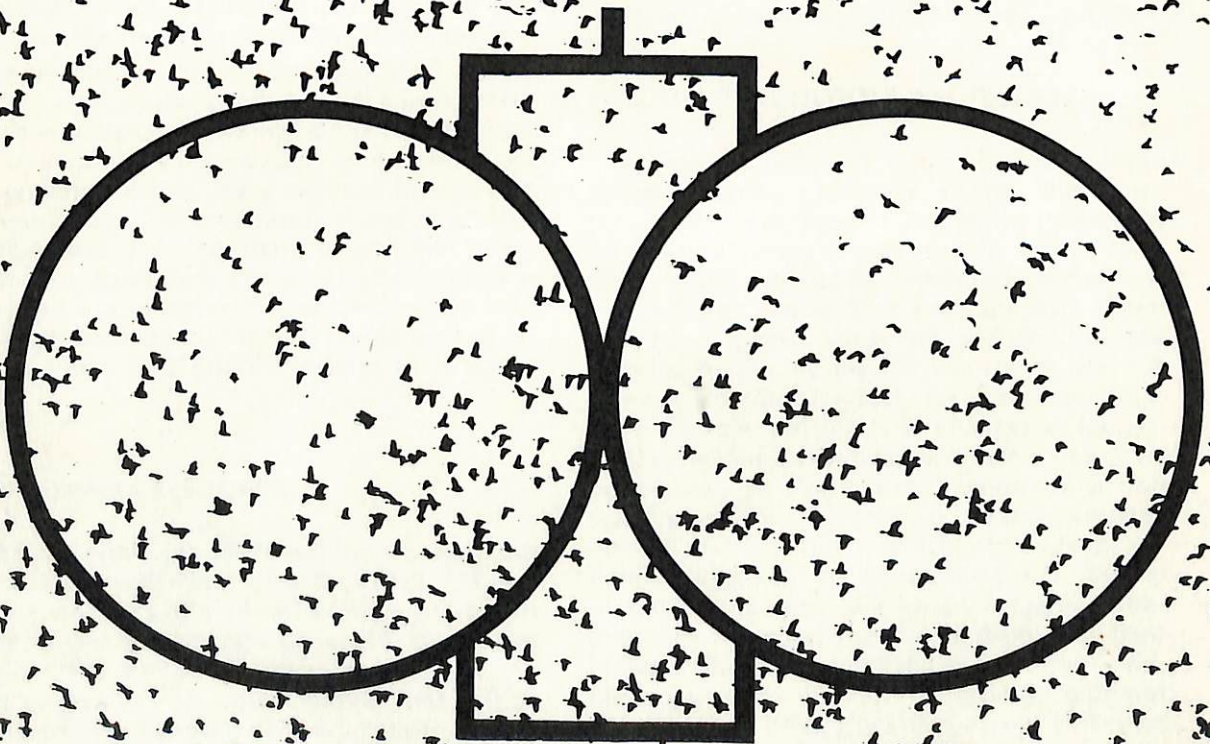


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# game hunting in n.s.w.





## game hunting in new south wales

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Few resources stir the emotional stability of people more than wildlife. There are many varied points of view about the value of wildlife, some of which are in direct conflict. One such conflict is that which regards hunting as a legitimate use of wildlife and the philosophy of preservation, which to some people offers the only hope for the perpetuation of the resource.

In an obvious attempt to avoid being placed in the centre of this conflict, I will approach the sensitive subject of hunting objectively, through the eyes of a wildlife manager responsible for a programme with primary concern for the perpetuation of wildlife as part of the total ecology of this State. It is important to add that in the context of this article conservation is viewed as the wise use of natural resources for the total good of mankind, but man is an element of his environment and not the master of it (Doig, 1971).

### A RENEWABLE RESOURCE

It is necessary to understand some basic truths if one is to assess objectively the effects of hunting on wildlife populations. Wildlife represents a renewable resource that cannot be stock piled for the enjoyment of future generations. All species produce an annual surplus that will be removed by predation, disease, parasites and, if allowed to exceed available food supplies, starvation. Many New South Wales waterfowl populations suffer annual mortality rates that may exceed 70%. These populations are sustained by a compensatingly high reproductive rate. Of a population of grey teal for instance, 60% will die in one year, 80% in the first two years and 96% by the end of three years. Juveniles are generally more vulnerable than adults. For example, 66% of juvenile grey teal die in the first year after banding, compared to 53% of the adults (Frith, 1967).



It is the physical, emotional and often spiritual rewards that make hunting attractive to many people.

photo: A. M. Fox.

### WILDLIFE POPULATIONS ARE FLEXIBLE

As wildlife becomes more abundant, some species become a nuisance to man: they compete with him for food or destroy the product of his labour. During winter months on the New South Wales tablelands, particularly in the New England area, wood duck compete with sheep for short, green, improved pastures. In the Riverina region, during the late spring, there is some competition by ducks for rice crops. Wildlife is flexible and reacts to changes in the environment. Since European settlement of N.S.W. populations of black swan, wood duck and stubble quail have increased because we have created more habitats which are suitable for them. Conversely the populations of a number of other birds have decreased because settlement has intruded upon and destroyed their habitats. The pressures that man applies to wildlife populations are not significantly different from those of other predators except in degree and there are also beneficial aspects of the predator-prey relationship. In Australia, though not in N.S.W., man represents the major harvester of adult populations of black swans and Cape Barren geese. Whilst there may be predators available to cull or take juvenile swans and geese—in addition to the toll taken by climatic conditions—there are no large species of wildlife in most places that would act as efficient predators of these two large birds; although dingoes have been known to take adult swans in moult.



It is not the meat alone that sustains the popularity of hunting. Rather it is the physical, emotional and often spiritual rewards that are associated with a good day outdoors that attracts many people and establishes hunting as a traditional recreational endeavour. Unless personally involved, few could appreciate the identity of a man with the land that occurs when a person enjoys a quiet place to hunt, and the natural habitat where game can thrive.

#### DUCK HUNTERS PAY THE BILLS

Duck and quail shooters throughout Australia, through the purchase of licences and permits, willingly finance programmes designed to protect and enhance the wildlife resource. Many other people enjoy the benefits of this. Waterfowl conservation in North America was begun primarily through the activities of duck hunters. In 1937 they formed an organisation called 'Ducks Unlimited', in an attempt to stabilise the wildfowl populations of North America which, at that time, were at a dangerously low

level because of over shooting in a period of severe drought. 'Ducks Unlimited' is the largest private enterprise scheme for wildfowl conservation anywhere in the world. The money for the project was first raised by duck hunters in the U.S.A. and then later by hunters from Canada and Mexico as well. The organisation has now spent well over U.S. \$11 million on restoring wildfowl breeding grounds in Canada. More than eight hundred dams have been constructed as well as a network of canals and sluices to bring back water to land which has become utterly barren. The length of the shores of the many lakes and swamps created equals that of the coastline of the U.S.A. Two million acres (810,000 h) of wetland are now controlled by 'Ducks Unlimited' and the target for the next ten years is another four and a half million acres (1,822,500 h), all financed by the duck hunters. In addition some six thousand hunters' clubs in the U.S.A. control and manage over three million acres (1,215,000 h) of wetland. On this wetland they have established at least one hundred and thirty thousand acres (52,650 h) of non-shooting reserves.

A rice crop that has been damaged by ducks. The ducks pull up each plant and eat the seed that still adheres to the plant.

photo: F. Hersey.



In Great Britain the Wildfowlers Association of Great Britain and Ireland (W.A.G.B.I.) is one of the cornerstones of waterfowl conservation in that country. It shares this task with the Nature Conservancy, the Wildfowl Trust and the Royal Society for the Protection of Birds. W.A.G.B.I. was among the first organisations to realise the value of conserving local reserves. These reserves have no connection with the State controlled reserves in Britain. They are established by private agreements between the landholders and the local wildfowler clubs, which are affiliated to W.A.G.B.I. The local reserves range in size from small pools of less than one acre, to far larger stretches of water. In all, over 80 reserves, covering some ten thousand acres (4,050 h) are now managed by wildfowlers in Great Britain. The majority of the reserves are gravel or clay pits, with saltings and fresh water marshes a close second. Other habitats include selected stretches of rivers, oxbow lakes, dammed up streams, even the moat of a ruined castle in Wales. Habitat improvement is carried out on these reserves; shore lines are lengthened by cutting bays deeper into the land, and artificial raft islands are constructed to supplement existing natural foods. Food and cover plants are established, and in some cases, artificial nesting sites are also provided. Hand-reared wildfowl are liberated on the reserves. The only shooting allowed is that required to control predators such as foxes, crows, magpies, mink and rats (Harrison, 1969).

In New South Wales the duck shooters provide \$42,000 for wildlife conservation programmes. Were it not for the sale of game licences to duck and quail shooters, the Service would be hard put to find the additional money needed for wildlife management projects and law enforcement activities. The major game shooting organisation in New South Wales is the Field and Game Association, which has considerable interest in waterfowl conservation and is a member of the Nature Conservation Council. Whilst duck and quail shooters may have intense and often narrow interests, they stand firmly behind any conservation programmes designed to increase and/or preserve waterbird populations throughout the State. It is easy to understand the restrictive nature of the hunters' interests when wildlife programmes have been and continued to be funded with moneys derived from the sale of hunting licences. However, this bias is gradually changing; most hunters are recognising the value of all wildlife and are supporting programmes that will benefit all species.



The freckled duck, the rarest of N.S.W. waterfowl, is completely protected throughout the year.

photo: E. Slater.

#### WATERFOWL MANAGEMENT IN AUSTRALIA

While some people believe that game hunting destroys wildlife populations, this is not the case. All the game birds in New South Wales are common, often locally abundant. Properly regulated hunting cannot lead to the extinction or even endangering of these species. The Service's waterfowl management team along with waterfowl managers in other States have formed an Australian Committee of Waterbirds, which is convened by the Fauna Authorities Conference. This committee meets each year to report on the findings of waterfowl research and to investigate ways and means to maintain waterbird populations. The Committee reviews problems of waterbird conservation and formulates programmes designed to ensure that the dates of open seasons, bag limits, species that can be hunted, and hunting regulations generally are not detrimental to the waterfowl populations.

Loss of wetland habitat through industrial development, and the draining of wetlands for irrigation or flood mitigation schemes, has caused declines in waterbird populations. Waterfowl managers of each state therefore are surveying their wetlands and are working with drainage and development authorities to ensure





Grey teal in flight over a Riverina swamp. Preservation of wetland habitats and adherence by shooters to hunting regulations will ensure that such flocks will survive.

photo: E. Slater.

that the waterbird values of wetlands are recognised and that these habitats are preserved wherever possible.

Management of waterfowl populations in Australia at the present time, includes such programmes as:—

1. Undertaking air surveys over major duck habitats in southeastern Australia prior to and after open seasons to evaluate the effects of the open season on the populations of the common game species. Aerial surveys can be used to locate feeding or roosting concentrations of waterfowl; to make reliable population counts of larger waterfowl such as black swans and Cape Barren geese; and to assess the relative importance of the different habitats used by large populations of waterfowl.
2. Surveying and mapping waterbird habitat, particularly habitat that is of prime non-breeding and drought refuge value. All coastal wetland habitats in N.S.W. have been located and classified by G. N. Goodrick, Waterfowl Research Officer of the Service. A start has been made on surveys of inland wetland habitats in N.S.W.
3. The establishment of a co-ordinated and managed refuge system for waterbirds in southeastern Australia. Much of southeastern Australia, including portions of the States of South Australia, New South Wales, Victoria

and Tasmania, encompasses the largest single area of prime waterfowl refuge and breeding habitat in Australia. The same region is subjected to the heaviest exploitation by shooters, and well managed refuge areas for waterfowl are necessary. Lake Brewster has been proclaimed a wildlife refuge and a nature reserve of 19,440 h (48,000 acres) has been established in the Macquarie Marshes. Both of these areas are important breeding and refuge areas. Lake Nearie, on the Ana Branch, a tributary of the Darling River, and the Menindee Lakes within Kinchega National Park are two other important waterbird refuges in western New South Wales, under the control of the Service. The Service is also seeking to become involved in the management of Lake Cowal, Lake Bathurst and some of the large wetland areas along the Murray River.

4. Surveys of hunters and of the numbers of ducks shot during an open season. These surveys are essential for effective management. The first survey of this kind was conducted on the opening day of the 1972 duck season. This will be repeated each year. 1,100 hunters in three States were interviewed on opening day regarding the number of ducks taken, number shot but not retrieved, species shot, distance travelled and town of origin of shooter.

5. Establishment of permanent banding stations in areas of high shooting pressure on ducks. Pre-season banding, together with a survey of hunters, can be used to measure both total and annual mortality and the proportion due to shooting. In the past, pre-season banding has been carried out in New South Wales by the Division of Wildlife Research, C.S.I.R.O. However the Service hopes to assist in such projects from now on.
6. Undertaking surveys to establish the effect of shooting during the open season on the populations of non-game birds. Many areas considered to be prime duck hunting swamps are also major breeding areas for other waterbirds. At present the duck season often commences when birds such as cormorants, ibis and spoonbills are still nesting, although it is usually the tail end of their breeding season. Disturbance by shooters can greatly affect these nesting birds. In addition many non-game waterbirds are often shot in error or deliberately during the duck season. A hunter education programme will be commenced as part of this programme.
7. Experiments with various techniques of waterfowl habitat management are now being carried out in other Australian States and the Service is seeking to gain experience in this field. A breakthrough recently achieved in N.S.W. was the decision by the Minister of Conservation to allow the cost of construction of small islands in farm dams as nesting and loafing sites for waterfowl, to be available for the farm dam subsidy given by the Government. At Buddah Lake near Trangie various embankments to retain water have been built and the Service purchases water annually from the adjoining Irrigation Trust to flood the wetlands for the waterfowl. A number of other schemes are being prepared to improve waterbird habitat on private game reserves and wildlife refuges in the Riverina. Duck nesting boxes are made available to landholders who believe they would be suitable for their waterbird habitat.

#### QUAIL HUNTING

Research on quail species has been carried out for the past six years in southeastern Australia by the Division of Wildlife Research of the C.S.I.R.O., with the co-operation of the States concerned. Results so far indicate that stubble quail populations have increased as a result of

the agricultural practices carried out at present in New South Wales. Stubble quail are very common on improved pastures, both on the coastal farmlands and inland, particularly in the Riverina region. They are also exceptionally common in cereal crops, especially oats and wheat. After the wheat has been harvested the birds remain in the stubble paddocks feeding on the fallen grain and the numbers are often exceptionally high. During good seasons in the western plains of New South Wales, stubble quail populations build up remarkably quickly and the bird is abundant. Conversely during drought the birds are absent from many parts of the State. Brown quail appear to have benefited less by the introduction of pastures and crops. However they are relatively common in lucerne paddocks and in stands of thick crops such as sorghum, oats, wheat and maize. They are also abundant on farmlands that have been allowed to revert to rank growth or regenerating timber. Both species have probably increased as a result of settlement in N.S.W. The practice of burning wheat stubbles shortly after harvesting causes considerable loss of chicks and possibly of nesting quail. Heavy grazing of stubble by stock also reduces the quail's food supply.

A Service officer examines the crop content of a stubble quail, part of a C.S.I.R.O. programme of quail research.

photo: A. M. Fox.





## SHOULD SNIPE BE HUNTED IN N.S.W.?

The Japanese snipe, *Gallinago hardwickii*, is classed as a game bird in all eastern Australian States except New South Wales. No open seasons for snipe have been held in N.S.W. since 1943 and the Service has resisted attempts to open the season until research can indicate whether or not the population can withstand hunting pressure.

Since 1970 the Service has been assisting the C.S.I.R.O. Division of Wildlife Research in a biological study of the Japanese snipe in south-east Australia. The study is still underway and any decision to open the season will be based on the findings of this research programme.

## GAME SEASONS IN NEW SOUTH WALES

### Duck Hunting

Open seasons are proclaimed annually for duck shooting, generally for a ten week period commencing the second last Saturday in Febru-

ary of each year. The 1974 season dates are, tentatively, 16th February to the 27th April. Generally eight species of wild duck can be hunted. However the number of species and the bag limit can change depending on the relative abundance of the ducks at any one time.

The game ducks that can normally be taken are:—

Black duck, *Anas superciliosa*.

Grey teal, *Anas gibberifrons*.

Chestnut teal, *Anas castanea*.

Wood duck, *Chenonetta jubata*.

Mountain duck, *Tadorna tadornoides*.

Hardhead, *Aythya australis*.

Australian shoveler, *Anas rhynchos*.

Pinkiear, *Malacorhynchus membranaceus*.

In good seasons the bag limit is 20 ducks per hunter on the opening day of the season and 10 ducks per day thereafter.

### Quail Hunting

Open seasons are proclaimed annually also for quail hunting, generally for a twelve week

period commencing the first Saturday in May. The 1974 dates are, tentatively, from the 4th May to the 27th July. Two species may be taken, brown quail *Synoicus ypsilophorus* and stubble quail *Coturnix pectoralis*. However the species and the bag limit vary according to the abundance of the quail in any one year. The bag limit during 1973 was 25 quail per day with a maximum of 50 in possession during the whole season.

### Game Licences

Game licences are required for duck and quail hunting (combined licences) and cost \$4. The licences go on sale in the first week of January each year and expire in December of the same year. Licences are available from Clerks of Petty Sessions at all court houses in New South Wales, or they can be purchased direct from the National Parks and Wildlife Service. It is also the practice to sell game licences at the N.S.W. Government Tourist Bureau in Melbourne and at the Victorian Government Tourist Bureau in Mildura (Vic.) for a two week period prior to the opening day of the duck season. This is to assist Victorian duck hunters wishing to hunt in N.S.W.

### Hunting Conditions

Certain duck and quail hunting conditions always apply. These are:—

1. No hunting in any national park, state park, historic site, Aboriginal area, nature reserve or wildlife refuge.
2. Only shotguns may be used to hunt game. Rifles are not allowed.
3. The consent of the landholder must first be obtained before shooting on private property.

### GAME RESERVES

During a declared open season, hunters will be permitted to visit State game reserves to shoot ducks. The National Parks and Wildlife Service will control the numbers visiting the area, the duration of each visit, and the conduct of hunters within the reserve. Control of hunting

in private game reserves is entirely the prerogative of the landholder, subject of course to the general regulations applying throughout the State, e.g. the requirement for a licence, bag limits, etc.

During the closed season, game reserves are used for wildlife conservation and for the study of waterfowl and their habitat. The proclaimed (State) game reserves at present (October 1972) are Llangothlin Lagoon, near Guyra (482 h or 1,192 acres) and Lake Innes, near Port Macquarie (2,025 h or 5,000 acres). Tuckean Swamp and Broadwater Swamp, both near Lismore (approx. 500 acres each), are awaiting proclamation. Twenty private game reserves also have been proclaimed, covering an area of approximately 162,000 h (400,000 acres).

For information about duck shooting in the Riverina area contact Mr. I. Robinson, 99 Binya Street, Griffith 2680.

For information about Llangothlin Reserve contact Ranger B. Vile, P.O. Box 387, Armidale 2350.

For information about Lake Innes Game Reserve contact Ranger J. Winter, P.O. Box 294, Taree 2430.

For information about the proposed Tuckean and Broadwater Game Reserves contact Ranger S. Heilbron, P.O. Box 39, Lismore 2480.

### FISHING LAWS

Enquiries concerning the laws governing fishing in N.S.W. should be addressed to the New South Wales State Fisheries, 211 Kent Street, Sydney 2000.

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- FRITH, H. J. (1967)—“Waterfowl in Australia”. (Angus & Robertson: Sydney).
- HARRISON, J. (1969)—*Birds of the World* 1: 214-217.

This coastal swamp at Seaham provides good feeding and breeding habitat for black ducks, and a drought refuge for grey teal. Unfortunately many similar swamps have been drained in recent years.

photo: A. M. Fox.







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