

Action Statement

Flora and Fauna Guarantee Act 1988

No. 105

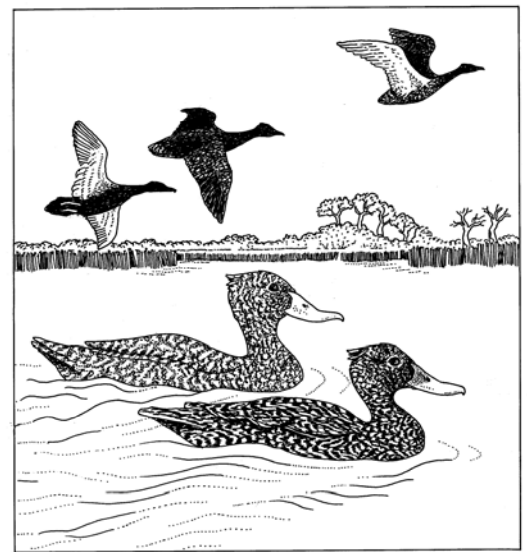
Freckled Duck *Stictonetta naevosa*

Description and distribution

Freckled Ducks are a medium-sized duck, similar in size to a Pacific Black Duck *Anas superciliosa*. They are heavy bodied and dark grey-brown in colour. Freckled Ducks have no distinctive wing patterns (unlike the eight waterfowl species declared to be game species in Victoria) and the underwings are pale. The whole body is speckled and vermiculated with off-white markings and the bill has a distinctive shape (dished with a heavy base) which, in breeding males, has a bright red base (Marchant and Higgins 1990). The female plumage is similar to the male but is generally lighter in colour (Frith 1982). The Freckled Duck is considered to be an ancestral species (Frith 1982) and is the only member of its genus.

Freckled Ducks are found mainly in south-eastern and south-western Australia and inland along the Diamantina River and Coopers Creek (Blakers et al. 1984; Parker et al. 1985; Marchant and Higgins 1990). In Victoria, Freckled Ducks have been recorded mainly from wetlands throughout the western part of the state (Marchant and Higgins 1990) and in the Gippsland area (NRE 2000a).

While Freckled Ducks have a widespread distribution and may be locally abundant at times, it is the least common of Australia's native duck species and may be one of the world's rarest ducks (Martindale 1986). Martindale (1983) estimated the total number of Freckled Ducks in eastern Australia to be between 8 000 and 19 000 - only 2% of the number of ducks of all species counted at that time. Flocks of up to 400 birds have been located during intensive searches for Freckled Duck in late summer in Victoria (Loyn and Timms 1991a).



Freckled Duck *Stictonetta naevosa*
(illustration of female and male by Alexis Beckett)



Distribution in Victoria
(source: NRE 2000a)

Parker *et al.* (1985) suggested that the dispersal pattern of Freckled Duck, which showed a cycle with 5-9 years periodicity, was more reminiscent of certain arid zone species whose distribution is centred on the Cooper, Diamantina and Georgina river-systems of the Eyre Basin, rather than on the swamps of the Lachlan and Murrumbidgee river-systems of New South Wales, as suggested by Frith (1982). They based this conclusion on the cycle of abundance of the Freckled Duck on wetlands in the southern districts of South Australia and compared the pattern of dispersal with that of species such as the Letter-winged Kite *Elanus scriptus*, whose distribution is centred on the Cooper, Diamantina and Georgina river-systems. Species such as the Hardhead *Aythya australis*, which have population strongholds in the Lachlan and Murrumbidgee swamps of New South Wales, show a different pattern of dispersal into southern South Australia. In addition, the drainages of the Eyre Basin have many Lignum swamps, a favoured habitat of Freckled Duck. The origin of Freckled Duck which disperse to Victoria is unknown.

Habitat

Frith (1965, 1982) suggested that permanent swamps or freshly flooded creeks containing Cumbungi and tangled Lignum were favoured inland breeding habitat while in coastal districts the densest tea-tree swamps (*Leptospermum* spp.) were the most favoured for breeding. Frith (1965) examined two Freckled Duck nests and found both were made of Lignum with some *Eleocharis* spp. Braithwaite (1976) reported on four Freckled Duck nesting sites and found that three of the four sites were in Lignum. Lowe and Lowe (1974) reported hundreds of Freckled Duck breeding on an area of Lignum flooded by the Avoca River, near Kerang, many years ago.

Martindale (1988) suggested that Freckled Duck may utilise different wetlands under different rainfall regimes. During dry periods or under drought conditions, Freckled Duck are forced from non-permanent breeding swamps and occupy large permanent open waters, particularly lakes and reservoirs larger than 100 hectares in size which may have salinity levels of up to 34 parts per thousand (Corrick 1980). In wet years, they are largely sedentary (Frith 1965).

Life history and ecology

Foraging in areas where they can reach the bottom or submerged vegetation, Freckled Duck are filter feeders (Frith 1982; Johnsgard 1965). Frith *et al.* (1969) found that plant material (94% by volume) made up most of the food in the gizzard compared to animal material (6% by volume) while Briggs (1982) found that invertebrates were an important part of the diet.

Records of Freckled Duck breeding in Victoria are rare. Breeding has been reported near Kiata by Cooper (1974), near Kerang by Lowe and Lowe (1974) and at Lake Buloke in 1990 (J. McKenzie *pers. comm.*). The paucity of breeding records in Victoria suggests either that Victoria is a minor breeding area for Freckled Duck and that the numbers counted during the annual Summer Waterfowl Count include immigrants from other states (Corrick 1982a; Norman and Norris 1982), or that Freckled Duck nests are difficult to find.

Current conservation status

The Freckled Duck has been listed as a threatened taxon on Schedule 2 of the **Flora and Fauna Guarantee Act 1988** in Victoria and has been classified as 'endangered' (NRE 2000b). It is listed as 'protected' in Queensland, 'vulnerable and rare' in New South Wales and South Australia and 'likely to become extinct, or is rare' in Western Australia. On a national basis, the species is listed as rare and threatened (Garnett 1992).

Decline and threats

There has been a decline in habitat availability across Victoria. Many of the wetlands which may be suitable for Freckled Duck in Victoria have been lost or modified since European settlement (Marchant and Higgins 1990, NRE 2000c). Freckled Duck have been most recorded on permanent open freshwater, deep freshwater marshes and saline wetlands in Victoria (NRE 2000c).

The number of deep freshwater marshes lost has varied across the state from 13 % (or 39 % of the original area) in the northern part of the state (NRE 2000c), 34% in the Snowy River and Gippsland Lakes catchment (Corrick and Norman 1980), 66% in the south-western part of Victoria (Corrick 1982b) and 95% of freshwater marshes from South Gippsland, most of which were probably deep freshwater marshes (Corrick 1981). Deep freshwater marshes are utilised by Freckled Duck in Victoria in late summer and a reduction in the number of this type of wetland reduces the availability for Freckled Duck.

While there has been an increase in the number and area of permanent open freshwater wetlands in some parts of the state, all of these are impoundments (including farm dams less than 5 hectares in size), many of which are not the preferred habitat of Freckled Duck.

There has also been a reduction in the area of permanent saline wetlands in parts of Victoria, another category of wetland extensively used by Freckled Duck. Corrick (1980) noted that wetlands having salinity levels of up to 34 parts per thousand may be utilised by Freckled Duck when breeding swamps are dry. While there has been a

slight decrease in the number of permanent saline wetlands in the northern part of Victoria, there has been a slight increase in the overall area of these wetlands since European settlement (NRE 2000c). In western Victoria, there has been a net loss of 6% of the area of permanent saline wetlands since European settlement (Corrick 1982b).

In addition, Corrick and Cowling (1975) recorded extensive clearing of Tangled Lignum *Muehlenbeckia florulenta* and Cumbungi *Typha angustifolia* from the wetland areas around Kerang since the 1880s. Braithwaite (1976), Frith (1965, 1982) and Lowe and Lowe (1974) have found Lignum particularly, but also Cumbungi, to be important as Freckled Duck breeding habitat in inland areas. The loss of such habitat from around the Kerang area may have caused a decline in Freckled Duck breeding in Victoria. Norman *et al.* 1994 suggested that occasional breeding of Freckled Duck may take place in Victoria but that, generally, habitat is now restricted or inappropriate, having been reduced or eliminated.

Freckled Duck are vulnerable to shooting (Lowe 1958; Green 1992, Grossek 1995) because flocks, when disturbed, are often reluctant to leave a favoured wetland (Loyn 1989) and because of misidentification. In fact, Loyn (1991) found that Freckled Duck appear to be at least as likely to be shot as game species when they are present on wetlands open to hunting. Estimates from surveys indicate that the percentage of Freckled Duck shot on samples of waters open to hunting during the opening weekend of the duck hunting season over three years varied from 33% in 1988 (Loyn *et al.* 1991) to 93% in 1989 (Loyn and Timms 1991a) and 10% in 1990 (Loyn and Timms 1991b).

The introduction of the Waterfowl Identification Test for duck hunters and hunter education programs by both NRE and hunting organisations have contributed to the protection of Freckled Duck by improving duck hunters' knowledge and ethics.

Existing conservation measures

- Open season not declared for Freckled Duck in 1976. No further open seasons have been declared for Freckled Duck since then.
- Wildlife Act (1975) amended in 1988 to give the Minister the authority to close wetlands to hunting during the duck season, including using emergency closures powers, with a minimum of twenty-four hours notice.
- Freckled Duck removed from the schedule of Victorian game species in 1989.
- Introduction of mandatory Waterfowl Identification Test for duck hunters in 1990.

- Penalties for taking protected wildlife, such as Freckled Duck, increased from a maximum of \$1 000 to a maximum of \$2 000 in 1992.
- Opening time of season moved forward to ensure adequate light when the season begins in 1994.
- Hunting Guide first posted to all holders of a Game Licence in 1995.

Conservation objectives

Long term objective

1. To ensure that the total Freckled Duck population is not threatened by duck hunting in Victoria.
2. To protect high value wetlands known to be utilised by Freckled Duck

Objectives of this Action Statement

1. To provide a strategy to ensure that duck hunting in Victoria does not impact on the overall population of Freckled Duck over the next five years.
2. To highlight gaps in our knowledge which could be investigated if funding is secured.

Intended management actions

Freckled Duck searches

1. Department of Natural Resources and Environment Regional staff will coordinate searches for Freckled Duck on wetlands that have supported this taxon previously throughout Victoria (with emphasis in the NRE North West and South West Regions). This will enable the Department to consider the best form of action and assist in the deployment of staff. NRE will continue to encourage interested persons and community groups such as Field and Game Australia, Birds Australia and the Bird Observers Club of Australia to report sightings of Freckled Duck for inclusion in the Departments Wildlife Atlas.

Wetland closures

2. Wetland closure provides the best protection for Freckled Duck but may not always be possible or practical depending on the wetland and the number of Freckled Duck present. Wetland closures will be coordinated by Parks, Flora and Fauna Division of NRE. Closures under section 86 of the **Wildlife Act 1975** will be considered after consultation with hunting organisations. Closures under section 86A will be referred to the Emergency Closures Advisory Committee. Once Freckled Duck are

detected, closure should be considered, taking into account the following factors:

- closures should only extend for the period of time that Freckled Duck are present on the wetland;
- protection of breeding Freckled Duck;
- partial closure should be considered, with appropriate buffer zones, should the size of the wetland and the locality of the Freckled Duck on the wetland permit it;
- the size of refuge area available in or near the wetland where birds can escape pressure from hunting;
- the number of hunters who normally use the wetland; and
- the potential significance to the Freckled Duck population of the proposed closure.

Regional staff will be responsible for enforcing any wetland closures.

Hunter education

3. Improving and refreshing hunter identification skills will be a key action. NRE Regional staff will provide Waterfowl Identification Tests for prospective duck hunters. The Game Management Unit will publish the Victorian Hunting Guide and distribute it to all hunters prior to the duck season each year to reinforce key messages. Regional staff will also with hunting organisations where possible seek to advise hunters of the presence of Freckled Duck where they are known to be present on wetlands open to hunting.

Enforcement and compliance

4. In determining priorities for deployment of staff during duck season, NRE Regional duck season coordinators should consider deploying extra staff on wetlands open to hunting and carrying Freckled Duck.

Other desirable actions

Research monitoring of Freckled Duck

5. A better understanding of Freckled Duck would assist in their management. It would be advantageous to undertake a study of movements of Freckled Duck in Victoria as well as examining variation in their numbers in Victoria throughout the year. This could be achieved by undertaking counts, particularly from September to February when Freckled Duck may be breeding to establish the extent of breeding of Freckled Duck in Victoria and monitoring any nests found.

Characteristics of Freckled Duck habitat

6. Determine the characteristics of wetlands utilised by Freckled Duck for possible enhancement or restoration works. In particular, surveys, research programs and habitat restoration should be concentrated on those wetlands that consistently hold Freckled Duck. Of the forty-five wetlands where Freckled Duck have been recorded at least twice since 1987, five have consistent recordings of Freckled Duck. These are Lakes Buloke, Muirhead, Murdeduke and Bael Bael and Cundare Pool /Lake Martin.

Other impacts of duck hunting

7. Consider varying the opening date of the duck season, to reduce the numbers shot over opening weekend, should it be determined that Freckled Duck consistently arrive in Victoria in Autumn.

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Further information can be obtained from Department of Sustainability and Environment Customer Service Centre on 136 186.

Flora and Fauna Guarantee Action Statements are available from the Department of Sustainability and Environment website: <http://www.dse.vic.gov.au>

This Action Statement was first published in 2000 and remains current. This version has been prepared for web publication. It retains the original text of the action statement, although contact information, the distribution map and the illustration may have been updated.

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