

# THE STATUS OF THE FERRUGINOUS DUCK IN POLAND

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## Introduction

The Ferruginous Duck was excluded from the Polish List of Hutable Wild Animals on 30 January 1955. It has been listed in the Polish Red Data Book for Animals since 2001 (Glowacinski, 2001). The Ferruginous Duck is a very scarce lowland breeding bird in Poland. Very few birds occur in winter and it is rare during spring and autumn migration (Tomialojc, 1990, *in press*).

## Breeding Distribution

In the 19<sup>th</sup> century and at the beginning of the 20<sup>th</sup> century, the Ferruginous Duck was one of the most common ducks in Poland. In the mid-20<sup>th</sup> century it was still common on large fishponds in southern Poland, and a dozen small breeding sites were known in the Mazury area (north-east Poland). In Pomorze (north-west Poland) it was less common.

In the 1970s and 1980s, the Ferruginous Duck was irregularly distributed in the country. The main concentration was in the Barycz Valley (south-west Poland) and Tarnobrzeg region (south-east Poland). It was also relatively common in the Leczynsko-Włodawskie Lakeland and Polesie (eastern Poland). In northern Poland, there were only two important breeding sites - the Notec Valley, near Bydgoszcz, and Druzno Lake. In the Biebrza and Narew Marshes only single pairs were recorded at the end of 1970s. On most other sites in Poland the Ferruginous Duck was scarce.

At the end of the 1970s, *ca.* 110 breeding and probable breeding sites were known (Tomialojc, 1990, *in press*). At the end of 1980s and the beginning of 1990s, the number of breeding and probable breed-



Male Ferruginous Duck. Photo: A. Habermaier

ing sites had declined to *ca.* 80, mainly concentrated south of the Notec and Biebrza Rivers. In the late 1990s, Polish Ornithological Atlas data confirmed a further decrease (Hagemeyer & Blair, 1997; Wieloch 1999) and recent studies confirm that the Ferruginous Duck now breeds at no more than 20 sites, mainly in the south of the country.

## Breeding Numbers

Once common in Poland, numbers of breeding Ferruginous Duck declined rapidly after the severe winter of 1962/1963. Subsequently, a slow but continuous decrease has occurred, with some fluctuations between years. This can be illustrated by data from Milicz Fish-ponds (south-west Poland). At the end of the 1950s, 150-200 pairs were present; declining to 52 by 1982; 43 by 1984; and less than 10 by 1994. Trends are similar on other sites, such as the Barycz Valley, which held 174-184 pairs in 1982-83, *ca.* 40 by 1994 and only 11-15 by 1997-2002 (Witkowski *et al.*, 1995; J. Witkowski & B. Orłowska, *pers. comm.*). At the end of the 1980s, the total breeding population in Poland was estimated to

be 400-500 pairs (Tucker & Heath, 1994), declining to 250-300 pairs by the beginning of the 1990s. By the late 1990s, only 40 pairs remained (Wieloch, 1999). Today there are probably 30-40 pairs left.

At some fishpond complexes in the Tarnobrzeg region, the Ferruginous Duck used to breed in large numbers in the 1960s and 1970s (e.g. 46 pairs - Stawy Janowskie and Radomysl; 52 pairs - Buda Stalowska and Grebowo; 24 pairs - Cieszanow). However, in the 1990s there were only single pairs at a few sites, and by 2000 only single pairs remained at two sites. In northern Poland during the 1970s, 20-26 pairs of Ferruginous Ducks were located at two sites (Ostrowek and Smogulec ponds in the Notec Valley and Druzno Lake). By the 1980s, 18-20 pairs remained. In 2001, only one pair was counted at Druzno Lake (Tomialojc, 1990, *in press*).

### Breeding Habitat

In Poland, the Ferruginous Duck nests mainly in fishponds with rich vegetation. Some birds used to breed also in lakes, ox-bows, reservoirs, rivers and marshes. In recent years, most (*ca.* 60%) Ferruginous Duck have bred on ponds, and to a lesser extent lakes (Fig. 1). Reservoirs and settler tanks represent new habitats for the species. The birds observed breeding on rivers were in gull

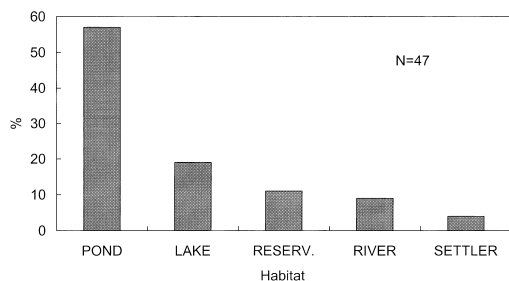


Fig.1: Habitat selection of the Ferruginous Duck during the breeding season in Poland, 1996-2002.

colonies. In the 1980s, at the most important breeding site (Milicz Fishponds, south-west Poland) Ferruginous Ducks nested in nettles and grass, mainly in Black-headed Gull *Larus ridibundus* colonies on artificial islands. On water bodies without islands they breed in rushes (Stawarczyk, 1995).

### Migration

During the migration period, the Ferruginous Duck has never been numerous in Poland. In northern Poland, at the northern edge of the species breeding range, it is rarely observed during spring and autumn (Tomialojc, 1990, *in press*).

In central and southern Poland, Ferruginous Duck are more common on spring and autumn migration than elsewhere in the country. Flocks, however, tend to be small - no more than 20 individuals and usually only 1-3 birds. Exceptionally, larger flocks have been observed, for example 300 birds at Luknajno Lake, north-east Poland, on 29 October 1982; 155 birds on a pond near Niemodlin, south-west Poland, on 6 June 1975; 150 in November 1976; 112 in September 1977 and 120 in September 1964. On fishponds in southern Poland, and on rivers and reservoirs in general, the Ferruginous Duck is very rare on migration (Tomialojc, 1990, *in press*). Today it is less common on migration in Poland than previously. A single bird was observed on 27 November 1999 on Odra River in Wroc3aw area (J. Udolf, *pers. comm.*).

During spring migration, Ferruginous Ducks arrive in south-east Poland in mid-March. In autumn, the last birds leave southern Poland at the end of November, or rarely in December (Tomialojc, 1990).

Of *ca.* 40 Ferruginous Duck ducklings ringed at Milicz Fishponds only one has been recovered - shot in the same year on autumn migration in Poland, south-

east of the ringing location. A bird ringed during spring migration in southern France (Tour du Valat) has been recovered in Poland after being shot during autumn migration in the Barlinek area (north-west Poland).

### Winter

The Ferruginous Duck is rare in Poland during winter. Most winter records are of single birds on warmer water bodies in central and southern Poland. In recent years, records have become even less frequent. A single male observed on the Odra River in Szczecin between 11 and 19 January 2001 stayed only one week (M. Solowiej & S. Guentzel, *pers. comm.*).

### Conservation Problems

It is difficult to attribute the decline in numbers of the Ferruginous Duck in Poland to any one factor. The first notable decrease was observed after the severe winter in 1962/62 (Witkowski *et al.*, 1995). The decline has been accompanied by an increase in the numbers and range of the Tufted Duck *Aythya fuligula* which prefers similar habitat. Some former breeding sites have been drained and fish farming has been intensified at some fishponds. At some sites, there has been a decline in the extent of floating vegetation, Black-headed Gull colonies have disappeared and there has been increased predation pressure from crows *Corvus* spp., Red Foxes *Vulpes vulpes*, Raccoon Dog *Nyctereutes procyonoides*, and American Mink *Mustela vison*. In some areas, groundwater abstraction has occurred leading to decreases in water levels, and it is likely that hunting pressure and recreational disturbance have contributed to the decline (Wieloch 1998).

Studies in the 1980s at Milicz Fishponds found no negative influence of brood parasitism on Ferruginous Duck (Stawarczyk, 1995), however in 1997 no

pure Ferruginous Duck nests were found (J. Witkowski & B. Orłowska, *pers. comm.*). All Ferruginous Duck productivity resulted from eggs laid parasitically in four Tufted Duck nests. Between 1982 and 1997, the numbers of Tufted Duck nests increased by over 20% increase, whilst the number of Ferruginous Duck nests declined by 8% (Fig. 2).

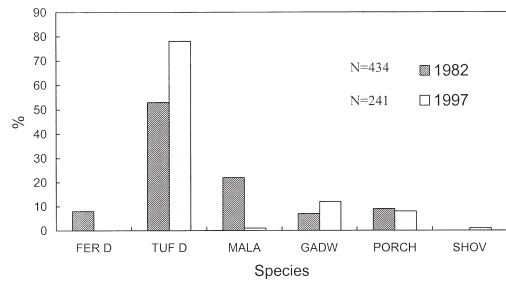


Fig. 2: Percentage of duck species in the duck community at Milicz Fishponds in 1982 and 1997 (after Stawarczyk, 1995 and J. Witkowski & B. Orłowska, *pers. comm.*).

Almost half of the Ferruginous Duck's breeding sites in Poland are protected in some way (Fig. 3). However, the level of protection varies - from nature reserves and national parks to protected landscape areas. Only the first two of these offer full protection. Some Ferruginous Duck breeding sites have also been recognised as Important Bird Areas (Gromadzki *et al.*, 1994).

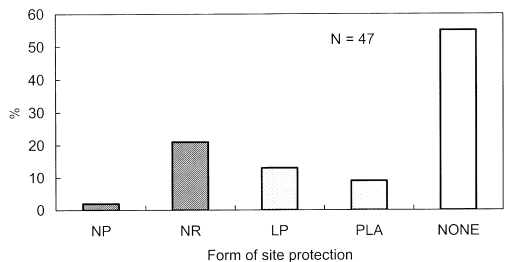


Fig. 3: Protected status of sites used by the Ferruginous Duck in Poland, 1996-2002. NP - National Park, NR - Nature Reserve, LP - Landscape Park, PLA - Protected Landscape Area, NONE - no protection.

## References

- Głowaciński, Z. 2001. Polish Red Data Book of Animals - Vertebrates. PWRiL. Warszawa (In Polish with English Summary).
- Gromadzki, M., Dyrz, A., Głowaciński, Z. & Wieloch, M. 1994. Important Bird Areas in Poland. OTOPI. Gdansk (In Polish).
- Hagemeijer, E.J.M. & Blair, M.J. 1997. The EBCC Atlas of European Breeding Birds: Their Distribution and Abundance. T. & A.D. Poyser, London.
- Stawarczyk, T. 1995. Reproductive strategy of ducks breeding at high densities in Milicz fishponds. Acta Univ. Wratisl. 1790. Pr. Zool. 31: 1-110 (In Polish with English Summary).
- Tomiałojc, L. 1990. Birds of Poland - distribution and numbers. PWN. Warszawa (In Polish with English Summary).
- Tomiałojc, L. *In press*. Birds of Poland - distribution and numbers. 3<sup>rd</sup> edition (In Polish with English Summary).
- Tucker, G.M. & Heath, M.F. 1994. Birds in Europe: their conservation status. BirdLife Conservation Series No. 3. BirdLife International, Cambridge.
- Wieloch, M. 1998. The status of the Ferruginous Duck in Poland. TWSG News 11: 19-22.
- Wieloch, M. 1999. Changes in the numbers of Ferruginous Duck *Aythya nyroca* in Poland. Vogelwelt 120. Suppl.: 305-306.
- Witkowski, J., Orłowska, B., Ranošzek, E. & Stawarczyk, T. 1995. The avifauna of the Barycz River valley. Not. Orn. 36 (1-2): 5-74 (In Polish with English Summary).