

# CURRENT STATUS AND CONSERVATION OF THE FERRUGINOUS DUCK IN AZERBAIJAN

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## Summary

In 1998, the five biggest lakes of Azerbaijan (Hajigabul, Sarysu, Makhmudchala, Varvara Water Reserve and Agzybir) were surveyed for Ferruginous Duck. This included 26 days in the breeding season (between 24 May and 22 July) and six days during the non-breeding season (between 6 and 29 November). These surveys suggested a total breeding population on the five lakes of 1 400-1 640 breeding pairs. The main limiting factors during the breeding season are disturbance by fishermen and fish harvesting, whilst during the winter hunting is the main limiting factor. Many hunted Ferruginous Ducks are sold along roads near Hajigabul Lake. The breeding population of Ferruginous Duck in Azerbaijan is, at least partly, sedentary. The size and origin of wintering birds are unclear and additional research is needed.

## Objectives

This investigation aimed to contribute to the conservation of the Ferruginous Duck in Azerbaijan by:

1. Estimating the number of breeding and non-breeding Ferruginous Duck at the studied wetlands;
2. Investigating the distribution, migration status and habitat requirements of Ferruginous Duck in Azerbaijan;
3. Identifying the main threats to the species;
4. Identifying Important Bird Areas by applying IBA criteria for the species;
5. Compiling data and recommendations to facilitate the creation of a conservation strategy and national species action plan;
6. Recommending the inclusion of this

species in Red Data Book of Azerbaijan;

7. Raising awareness about the species;
8. Focusing the attention of the media and the general public on the significance of Ferruginous Duck conservation.

## Status of the Ferruginous Duck in Azerbaijan

Data on Ferruginous Ducks is lacking for many important sites in Azerbaijan (Grimmett & Jones, 1991). At three sites (Agzybir, Aggyol, and Makhmudchala), the total number of breeding birds has been estimated at 1 500 individuals or 750 pairs. M. Patrikeyev (in Scott and Rose, 1996) suggested that 3-5 000 birds winter in Azerbaijan, however this was based on data from the 1960s. Scott and Rose (1996) suggested that Azerbaijan held 10% of the Caspian - north-east African flyway population (170 pairs) during the breeding season and 40% during the winter (2 000 individuals).

The current survey of Ferruginous Ducks on the five biggest lakes in Azerbaijan found a total of 61 breeding pairs and 327 individuals. Extrapolation suggested that individual lakes held 62 to 770 pairs (Table 1), ranging from 50-60 pairs at Agzybir Lake to 600-700 pairs at Sarysu and Makhmudchala Lakes. Extrapolation suggests a total of 1 400-1 640 pairs of Ferruginous Duck at these lakes (2 800 - 3 280 adults; see also Sultanov *et al.*, 1998). We did not observe any ducklings or broods in the period 24 May to 5 June so we suppose that ducklings hatch after June.

Significant numbers of Ferruginous Ducks probably also occur at other

Table 1. Numbers of breeding Ferruginous Ducks, Red-crested Pochard *Netta rufina*, and Marbled Teal *Marmaronetta angustirostris* on five lakes in Azerbaijan.

Site	Ferruginous Duck (pairs/10 ha and extrapolation)	Red-crested Pochard (individuals)	Marbled Teal (individuals)
Hajigabul	0,5 ( 52 )	6	18
Makhmudchala	1,6 ( 640 )	25	10
Sarysu	0,7 ( 770 )	3	7
Varvara	0,7 ( 150 )	108	-
Agzybir	0,4 ( 64 )	210	-

sites in Azerbaijan which hold important breeding concentrations of ducks (e.g. Aggyol Lake, Shorgyol Lake in the Shirvan Reserve, and the shallow waters of the Kyzyl-Agach Reserve). If these sites hold similar densities of Ferruginous Ducks to the lakes we studied, the actual breeding population of Ferruginous Duck in Azerbaijan may be over 3 000 pairs. The breeding population of Ferruginous Duck in Azerbaijan is believed to be at least partially sedentary.

There was a positive correlation between the number of Ferruginous Ducks in our surveys and the numbers of Marbled Teal *Marmaronetta angustirostris* and a negative correlation with Red-crested Pochard *Netta rufina* numbers (Table 1). High numbers of Marbled Teal and Ferruginous Duck were found at Hajigabul, Makhmudchala and to a less degree at Sarysu, but few birds were found at Varvara and Agzybir. In contrast, Varvara and Agzybir held large numbers of Red-crested Pochard, whilst the other



Agzybir Lake in Azerbaijan. Photo: E. Sultanov



Lake Sarysu in Azerbaijan. Photo: E. Sultanov

three lakes held very few.

The main limiting factor for the species during the breeding season in Azerbaijan is disturbance from fishing, especially on smaller sites. During the winter, when Ferruginous Ducks can be hunted legally, the main limiting factor is hunting. Many hunted Ferruginous Ducks are sold along roads near Hajigabul Lake. We estimate that 10-15% of the Ferruginous Ducks wintering at Lake Hajigabul are shot each year.

All five lakes studied have no protection status, but all hunting firms at the sites are registered. All of the lakes qualify as Important Bird Areas because they hold >1% of the south-west Asian / north-east African population of Ferruginous Ducks, with Sarysu and Makhmudchala holding the majority of breeding birds (84%).

### **Action Plan for the Ferruginous Duck in Azerbaijan**

#### **Threats and Limiting Factors**

1. The main limiting factors during the breeding season are disturbance by

fishermen, and habitat degradation (e.g. on fish ponds no. 3 and 4 at Hajigabul).

2. During the non-breeding season, legal and illegal hunting are the main threat.

#### **Aims and Objectives**

1. To increase the population of Ferruginous Duck in Azerbaijan through the prohibition of hunting, the inclusion of the Ferruginous Duck in Red Data Book of Azerbaijan and the preservation of its habitats.



Photo: N. Petkov

### **Species and Habitat Conservation**

1. Promote conservation at key sites, such as Sarysu, Mahmudchala, and Aggyol Lakes.
2. Prevent hunting mortality.
3. Limit disturbance from angling.
4. Prohibit sale of hunted Ferruginous Ducks.

### **Monitoring and Research**

1. Assess the status of the Ferruginous Duck throughout Azerbaijan.
2. Develop effective census techniques and monitor the population with the help of workers from hunting and fishing firms.
3. Promote and develop conservation research to investigate: a) the num-

bers and origins of wintering birds; b) the ecological characteristics of Ferruginous Ducks in Azerbaijan.

### **Public Awareness and Training**

1. Increase awareness amongst the media and general public of the need to conserve the Ferruginous Duck, especially just before the breeding and hunting seasons.
2. Develop and implement education programmes for hunters, fishermen and local people to facilitate the effective conservation of the Ferruginous Duck in Azerbaijan.
3. Produce interpretive materials to promote the conservation of the Ferruginous Duck and its habitats.

### **References**

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