

# On the Occurrence of White-headed Duck *Oxyura leucocephala* (SCOPOLI, 1769) in South-eastern Anatolia, Turkey

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**Abstract:** During their occasional observations at wetlands in the region spanning last two decades, the authors detected for first time small groups of White-headed Duck *Oxyura leucocephala* in a single day at two distinct dam reservoirs. As there was another single record previously, the scarcity of reports indicates that the species could be considered as a relatively rare migrant for SE Turkey, probably on their route between the breeding areas in northern parts of the country or other northern countries, and Middle East as wintering area. The appearance of birds and general properties of the habitat have been discussed.

**Key words:** White-headed Duck, *Oxyura leucocephala*, South-eastern Anatolia, Turkey

## Introduction

The White-headed Duck *Oxyura leucocephala* (SCOPOLI, 1769) is a globally-threatened species classified as Endangered mainly due to habitat loss and degradation, climate change and drought, hunting, and competition and hybridisation with *O. jamaicensis* (GMELIN, 1789, (TUCKER & HEATH 1994, BIRDLIFE INTERNATIONAL 2008, 2009). The monotypic species has a fragmented breeding distribution from Spain to Western China and from Iran to Southern Russia (GREEN & HUGHES 1996, SCOTT & ROSE 1996, HUGHES *et al.* 2006). In Western Eurasia, three populations are recognized which consisted of small and apparently resident populations: one in Spain and one in North Africa (Algeria and Tunisia), while a large population breeds especially from Turkey to Iran, Southern Russia and Kazakhstan, wintering mainly in Turkey, SE Bulgaria, Caspian region, and Middle East. In Bulgaria, Burgas Lake complex is a key area for the species, where it traditionally winters and migrates; there it occurs in large numbers during

spring migration (up to 2260 in 1999) (DIMITROV *et al.* 2005). Because of ringing data lack, the movements of populations are very poorly understood (SCOTT & ROSE 1996, HUGHES *et al.* 2006).

As one of the key countries, Turkey is sheltering a significant part of the world's breeding and wintering population, which has been estimated about 200-250 pairs in 2001, wintering or migrating individuals as nearly 1000 to 3000 in 1995-2002, however, the number indicates a reduction at least during this period (HUGHES *et al.* 2006). The species is described as local resident and partial migrant in Central Anatolia, adjacent areas of Mediterranean and East Anatolia (KIRWAN 1994, KIRWAN & MARTINS 1994). Breeding around Van Lake (E Turkey) was confirmed recently (KIRWAN *et al.* 2008). The spring migration of species in Turkey, including route and stopover areas, are very little known (KIRWAN 1994).

White-headed Duck has never been recorded in south-eastern part of Turkey until 2008; a compre-

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hensive search of reports indicated no sign about any existence of the species in the region. Although their considerable experience, the authors have also never detected it during any of their non-systematically but year-round observations at several wetlands in the region, for instance during the mid-winter waterfowl censuses in regional dam reservoirs. The species was met by the authors in early spring of 2010 as first time in the area mentioned.

## Material and Methods

South-eastern Anatolia is one of the main geographical regions in Turkey, with its dry terrestrial climate and characteristic landscape of lowlands and steppe areas. The region is surrounded by Syrian border in the south, and by South-eastern Taurus Mountain range in the north, which extends arc-shaped from W to E with an altitude of about 1400 to 1700 m. Several large and mid-sized dams on the two main river systems, Euphrates and Tigris, are the most extensive wetlands. In addition, a large number of smaller dams were constructed especially during last decades to supply water for agricultural requirements.

The material in this study comprises our own observation data on the registration and counting of White-headed Duck individuals. Trips have been performed in diverse wetlands of the region, mainly in dam reservoirs, continually but with irregular intervals, intensifying in spring times of the recent decade. Additionally, midwinter waterfowl censuses have been performed at almost complete dam reservoirs on Euphrates and Tigris (totally 13 dams and 11 natural lakes, all in strongly differing sizes) between 2002 and 2007 (ONMUŞ 2007). For field observations we used standard ornithological methodology (HEINZEL *et al.* 1998, MULLARNEY *et al.* 1999) aiming binoculars (10x50) and telescope (20-60x60) and a hand GPS. Records were evaluated for determination of distribution in south-eastern part of Turkey including migration phenology.

## Results and Discussion

As a first record in SE Turkey, Atahan has observed and photographed a juvenile or female White-headed Duck in the reservoir of Hancağız dam (36° 57' N, 37° 52' E, 420 m a.s.l., 10 km SE of Nizip, Gaziantep

province) on 12th October 2008.

We detected a group consisting of four individuals at Karahan reservoir (37° 49' 30" N, 39° 57' 30" E, 935 m, 25 km W of Diyarbakır) on 13th March 2010 noon time. The quite small sized dam with 22.7 ha surface area and 15 m maximal depth is located on the NE slope of Karacadağ, an extinct volcano. All coasts of the reservoir were covered mainly by basalt stones, with poor soil patches and very scarce vegetation. The water table was quite wavy due to the wind (*ca.* 15 km/h from W). The group was at a location in the mid of the surface nearly 200 m away from the creek entrance (total span of the reservoir surface was *ca.* 600 m). Proportioning the reservoir dimensions, we estimated the water depth on that spot as 4-5 m. The group of White-headed Ducks consisted of two males and two females/juveniles. One male was in almost full breeding plumage with obvious whitish head and blue bill, while the other one had only pale head and grey-bluish bill. Three of Pochards (*Aythya ferina*) accompanying the group were only other waterfowl in the area.

We visited another small dam reservoir in same day late afternoon. Kabaklı dam (37° 55' 20" N, 40° 17' 40" E, 685 m, 6 km E of Diyarbakır) is larger in size with its 23.0 ha actual surface but quite shallower than the previous one (6 m maximal depth). The dam area was mainly alluvial brown clayish soil, and only few plants were coasts around. Eight White-headed Ducks were observed at a spot in the reservoir nearly 150 m off the dam body (total span was about 700 m), on the surface of an estimated water depth of 3-4 m. All birds were in non-breeding plumage and extremely uniform in their appearance and behaviour. They were not notably active, floating turned always to the same direction. Other Anatids (23 individuals in total), Coots (*Fulica atra*, 16 ind.) and Great Crested Grebes (*Podiceps cristatus*, 5 ind.) were existing close to the group.

We regularly visited ten of further small reservoirs with similar properties in Diyarbakır area during the period of January to March 2010, once a month each. No additional White-headed Ducks were detected. BİRİCİK (1996) had already focused on the birds in Kabaklı reservoir during a full two-year period between 1992 and 1994, not indicated however the species at the area.

Later, a group consisted of three blue-billed males and four females or young birds were observed by Mungan on 3rd April at a pond near Bismil (37° 51' 30" N, 40° 51' 30" E, 540 m, 56 km E of Diyarbakır). Here is a quite small (13.5 ha) puddle originating by accumulation of drained agricultural irrigation water, which is known to be somehow alkaline, and offers a good shelter for lots of birds because the land owners do not allow any hunting around. Thus, White-headed Duck group was observed floating with totally 340 individuals belonging to 14 additional waterfowl species at the area, though remarkably separated from them, but next to two Ferruginous Ducks (*Aythya nyroca*).

The evaluation of all findings shows that White-headed Duck is a scarce migrant for SE Turkey. Assuming the origin and destination of the observed groups, they could have wintered in Middle East, and their breeding grounds may probably be E Turkey, as already stated by GREEN & HUGHES (1996), or further northern and eastern countries. Winter censuses conducted between 1990 to 2002 showed that the species winter in Israel although in small and fluctuated number but regularly (as a max. 410 in 1990, and 274 in 2001) and in Syria (data available only for 1993 to 1995, ranging 30 to 140 individuals) as well (LI & MUNDKUR 2003). In Syria, despite of data deficiency, most important sites used by the species could be suggested to be Sabkhat al-Jabbul and some reservoirs on Euphrates (see the related map in SCOTT & ROSE, 1996).

It is already known that White-headed Duck, generally occurs on larger and deeper lakes and lagoons outside the breeding season, often with little emergent vegetation (SCOTT & ROSE 1996), typically having extensive area of 0.5-3 m depth (LI & MUNDKUR 2003). Last observations are consistent to these statements to some extent. Additionally, we could conclude that the birds in migration have pre-

ferred the relatively deeper locations of apparently oligotrophic lakelets, with a possibly large distance to the shores, which may especially reflect the avoidance to human.

The migration phenology could also be discussable. Central Asian populations are considered to be one of the last waterbirds to arrive, having been observed in passage between late April and early May, and in breeding sites from mid-May; in Pakistan, the birds leave by the end of March, the main spring passage in Kazakhstan occurs from the end of April by mid-May (LI & MUNDKUR 2003). Thus, the passage of spring migrants mid-March in SE Anatolia seems to be occurring earlier than the eastern populations, at least in this case.

Of twelve individuals totally observed, two males were already more or less in breeding form (plumages of females were not clear). This is simply understood by the facts that in *Oxyura leucocephala*, a flightless moult occurs twice a year, during the post-breeding season and in late winter (SCOTT & ROSE 1996), and in *O. jamaicensis*, a complete moult takes place in March-April (BAKER 1993). Birds arrive on Russian breeding grounds already paired (LI & MUNDKUR 2003).

Illegal hunting is still a big problem for conservation of wildlife in Turkey. Hunters are often active at wetland areas in particular, also outside the permitted hunting period for waterfowl, which usually ends by the third week of February. Specifically for the conservation of White-headed Duck in passage regions, GREEN & HUGHES (1996) recommended an improved enforcement of hunting legislation and education programmes in order to raise the awareness among hunters. The detailed surveys to identify important passage sites are also necessary.

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