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**LULUKDAN: ANOTHER IMPORTANT WETLAND AS MARBLED TEAL
MARMARONETTA ANGUSTIROSTRIS BREEDING SITE, BALOCHISTAN,
IRAN AND PAKISTAN**

ALEEM AHMED KHAN

Ornithological Society of Pakistan, Near Fawara Chowk Block "D" Dera Ghazi Khan-32200, Pakistan.

ABSTRACT: Lulukdan, an important wetland of Pakistan and Iran in this area, was encountered in August, 1993. It is the second major breeding site for Marbled Teal (*Marmaronetta angustirostris*) and White-tailed Plover *Vanellus leucurus* in Balochistan. The Lake is situated almost 25 kilometers, southeast of the town of Tuftan within the zero line between Pakistan and Iranian territory. The wetland is saline to brackish, mainly emerged through a spring, oozing from the Iranian side and hence making the Lulukdan a perennial waterbody. Seasonal floods enhance the catchment area of the wetland.

The area is an important refuge for migratory and resident waterfowl. During the survey period a sum of 20 species of resident birds including globally threatened Marbled Teal are found breeding in the area. Since the main phase of breeding period was almost over yet the presence of juveniles and young birds was observed for a number of times and considered as over 50 individuals, flushed during my brief stay in the area. However, the presence of adults in the flocks observed, information from locals and the size of the wetland lead to an estimation that at least, 20 pairs of Marbled Teal are breeding regularly at Lulukdan. The area reflects as an excellent breeding, feeding and wintering site for many other threatened species including, White-headed Duck, Ferruginous Pochard, Purple gallinule, egrets, Purple Heron, Black-winged Stilt, raptors and other waterfowl. Additionally, the area is nationally important due to its unique and fragile habitat (Chagai Desert) still intact in its natural form. The presence of Hoopoe Lark *Alaemon alaudipes* and its confirmation from locals as breeder further enhances the importance of habitat. Recent status of the land tenure of Lulukdan is mainly an international border and belongs to the governments of Islamic Republics of Iran and Pakistan. Lulukdan is facing some minor multidimensional threats, which are on the constant increase, hence call for urgent conservation of this internationally important wetland, from both the neighbouring countries.

Key words: Lulukdan, Marbled Teal, Wetland, Balochistan, Iran, Pakistan.

INTRODUCTION

Wetlands are the unique and most fragile ecosystems of the world. They have played an important role in bringing harmony and respect for the natural resources and their use by the people. This dynamism and respect further enhances where water is an endangered resource, i.e., in the deserted lands.

In Pakistan the total area of inland wetland water has been estimated as 78,000 Km². This includes 40,000 Km² of waterlogged areas, seasonally flooded planes and saline marshes (Naik, 1986). The Chagai desert plateau is an aridland where annual rainfall is less than 100 mm with main showers in winter. About 850,000 ducks and coots are estimated to visit the Indus flyway. This is an important wintering area for a large number of migrants breeding north of the Himalayas (Koning, 1987). Also a great number of migrants from central Asian states and Pamirs enter Pakistan from the western and northwestern fly routes. The western fly-route is exclusively arid and the prolonged political disturbance in Afghanistan further makes this fly-route vulnerable. In this regard, the wetlands scattered in the Balochistan (Iran and Pakistan) and Seistan (Iran) play a major role in catering the long distant migrant and

resident birds. Since Balochistan is predominantly an arid country with very few rainfed and perennial water bodies or wetlands, the need for conservation of such ecosystems further intensify. Chagai desert encompasses a wide area of south and southwestern part of Pakistan's Balochistan, bordering to Afghanistan and Iran. It comprises a number of seasonal and perennial wetlands in the shape of vast planes and natural lagoon depressions made by the loose sand of the desert. These lagoons not only provide a source of sustenance to the nomadic Baloch tribes but emerge as a dynamic and fragile ecosystem for other biota, where life heavily assembles to start its further chain linkage.

These lagoons and flood planes are providing essential food and refuge to most of the migratory and resident birds transiting, breeding or wintering the area. In these bird species a variety of waterfowl, cranes, waders, raptor, passerines and other non-passerines invade these important wetlands for food, fecundity and refueling. Marbled Teal (*Marmaronetta angustirostris*) is one of the globally endangered duck with a wintering world total population of 33,000 individuals (Green and Hughes, 1996).

METHODS

The data on breeding population is rather sketchy, hence further enhances the need to study the breeding population of the species. Marbled Teal has since long been breeding at Lake Zangi Nawar in Chagai District and there were a few breeding records of the species from other parts of the country (Khan and Shah, 1993; Khan *et al.* 1996). This made us to further study the Marbled Teal's other potential breeding habitats in the area and a reconnaissance survey was carried out during August - September, 1993.

The objectives of this study were:

- to survey other potential breeding and wintering sites of Marbled Teal in Balochistan province.
- to identify the actual status of breeding population of Marbled Teal.
- to identify the grass root problems or threats to the species.

RESULTS AND DISCUSSION

Lulukdan, an important wetland of Pakistan and Iran in this area, was encountered in August, 1993. It is the second major breeding site for Marbled Teal (*Marmaronetta angustirostris*) and White-tailed Plover *Vanellus leucurus* in Balochistan. The Lake is situated almost 25 kilometers, southeast of the town of Tuftan within the zero line between Pakistan and Iranian territory. The wetland is saline to brackish, mainly emerged through a spring, oozing from the Iranian side and hence making the Lulukdan a perennial waterbody. Seasonal floods enhance the catchment area of the wetland.

The area is an important refuge for migratory and resident waterfowl. During the survey period a sum of 20 species of resident birds including globally threatened Marbled Teal are found breeding in the area. Since the main phase of breeding period was almost over yet the presence of juveniles and young birds was observed for a number of times and considered as over 50 individuals, flushed during my brief stay in the area. However, the presence of adults in the flocks observed, information from locals and the size of the wetland lead to an estimation that at least, 20 pairs of Marbled Teal are breeding regularly at Lulukdan. The area reflects as an excellent breeding, feeding and wintering site for many other threatened species including, White-headed Duck, Ferruginous Pochard, Purple gallinule, egrets, Purple Heron, Black-winged Stilt, raptors and other waterfowl. Additionally, the area is nationally important due to its unique and fragile habitat (Chagai Desert) still intact in its natural

form. The presence of Hoopoe Lark *Alaemon alaudipes* and its confirmation from locals as breeder further enhances the importance of habitat. Recent status of the land tenure of Lulukdan is mainly an international border and belongs to the governments of Islamic Republics of Iran and Pakistan. Lulukdan is facing some minor multidimensional threats, which are on the constant increase, hence call for urgent conservation of this internationally important wetland, from both the neighbouring countries.

Most of the water bodies found in the Chagai Desert are shallow, brackish lakes surrounded by high and embryo, wind blown sand dunes, which constantly remain in motion. Owing to flash floods, mostly generating from northern Balochistan and the nearby Afghan area and their consistent flow towards Chagai desert in the south are the main source of emergence of these water bodies in the area. When floods access water overflows the sand bound depressions and consequently could not escape when the water recedes, also helps in developing such water bodies.

However, Lulukdan's perennial source of water is from the nearby spring, while the flash floods from nearby Tuftan hills contribute as a partial source of its maintenance. There are dense clumps of *Phragmites*, *Typha* and *Tamarix* spp. in close vicinity of the lake and the sand dunes support sparsely scattered clumps of xerophytic grasses. The wetlands provide a substantial amount of fodder for grazing livestock in a deserted area and hence are subject to heavy biotic pressure.

Local community of the area belongs to nomadic, agro-based and extremely ignored rural dwelling. They rely mostly on their livestock for sustenance. Since Lulukdan is situated in desert and that is why it attracts as the main source of green fodder for domestic and the nomadic livestock. People also cut reeds, typha and other macrophytes for multiple purpose usage such as roofing, matting, baskets, wells lining etc. They sell their produce in the markets to cope with their socioeconomic constraints.

People are not aware of the importance of avifauna and particularly threatened species and are shooting wildfowl including Marbled Teal regularly. Since Marbled Teal is the notable species found in the area, people are well aware about its presence and call it "Siah Chushm" in Iran and Pakistan.

Constraints

- a) Continuous increase in hunting pressure from locals.
- b) Lack of range land management and suitable fodder resource according to the carrying capacity of the ecosystem
- c) Over cutting of tamarix and reeds at the area and removal of main cover.
- d) Extensive livestock activity, especially when nomads with large herds of camels come to the area.
- e) Egg collection by the locals including the eggs of Marbled Teal. It may result as long term threat for ex-manuevering and considerable decline of the species.
- f) Extreme form of poverty and lack of environmental awareness.

Recommendations

- I. For the sustainable and wise use of the available resources it is further required that scientific research may be initiated for conservation point of view, at the area and a community based International wetland management plan should be established with the help of Iranian counterparts. There is need to urge the matter with the Ministry of Environment of Iran, hunting pressure is more severe from Iranian side.
- II. Lulukdan should be declared an international conservation site and concrete measures should be chalked out at governmental and departmental level to safeguard the area.
- III. Mass awareness for conservation may be initiated and in this regard, signboards may be installed immediately, for awareness and information.

- IV. By the active involvement of the local Chief, the whole of the area may locally and officially protected with special reference to the threatened species.
- V. Local trees may be planted in all conceivable sites near the lake.
- VI. Range/pastures management may be introduced in the area.
- VII. There is need to develop close liaison with hunters and local people for better conservation of the sites.

CONCLUSION

Lulukdan should be declared as protected area and concrete steps should urgently be taken to actively safeguard the area and a community based international management plan may be chalked out, in order to sustain the local natural resources and to develop the local communities.

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