Bull. Iraq Nat. Hist. Mus.
(2014) 13 (2): 113-120

THE STATUS AND CONSERVATION OF THE VULNERABLE MARBLED TEAL *MARMARONETTA ANGUSTIROSTRIS*, MENETRIS (AVES-ANSERIFORMES) IN AL-DALMAJ WETLANDS, IRAQ.

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ABSTRACT

This study is considered the first effort of its kind in Iraq and in the Middle East towards studying the Marbled Teal *Marmaronetta angustirostris* that was carried on in Hor Al-Dalmaj, southern Iraq. The findings of this effort illustrate its importance as it paves the way for further study and observation for the bird and this important wetland itself. This study tackles the all possible aspects of the ecological and biological statuses of Marbled Teal (Threatened – Vulnerable bird species – IUCN Redlist) by means of field surveys and systematic monitoring that were conducted along the four seasons over the years 2013-2014 in one of the ecologically important and prominent and poorly-known wetlands in the Middle Euphrates, that is Hor Al-Dalmaj, as a highly important wetland on the national, regional and global levels that holds Key Biodiversity Areas (KBA), Important Bird Areas (IBA), and Important Plant Areas (IPA).
Keywords: Marbled Teal, Marbled Duck, Iraq, Waterfowl conservation, Dalmaj, Wetlands.

INTRODUCTION

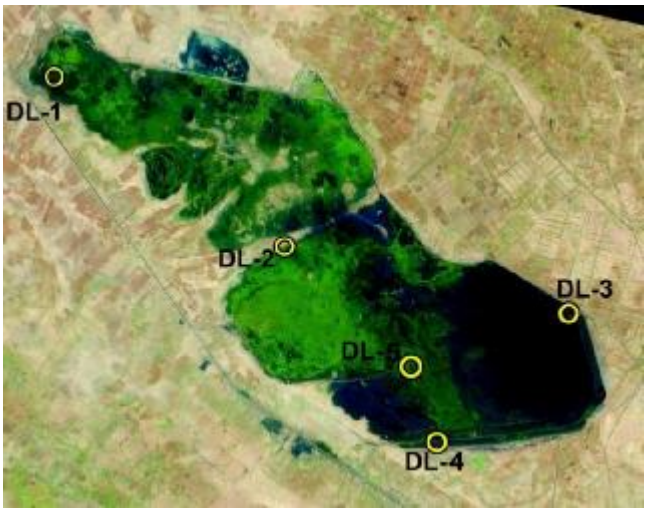
Marbled Teal was discovered by (Menetris, 1832) and was referd to the genus Anas, but recent this genus divide to angustirostris put with genus Marmaronetta. The Marbled Teal *Marmaronitta angustirostris* is a globally threatened species that undergoing a rapid population decline (Green 1993, 1996; Collar *et. al*.,1994). In Iraq, the species is a resident breeder and wintering in different wetlands in Iraq over the two lower thirds of the country (Salim, 2012).

Hor Al-Dalmaj contains suitable habitat for this bird species on the national and regional (Middle East) levels. The results of the current study approved that this wetland provides Marbled Teal good feeding ground and breeding shelter as well; nevertheless, the bird faces different threats. The area demonstrates good factors for the species in case it get managed in the proper way.

Al-Dalmaj wetlands are vast wetlands at the Middle Euphrates area. The northern part of Dalmaj is located around 120 km southeast to Baghdad City, 40 km northwest of kut city, and 40 north east to Diwaniya city (Direct distances). It consists of relatively deep-water lake with vast marshland habitat of dense and scattered reed beds (Salim, 2010). The wetlands of Dalmaj include considerable diversity in the fauna species including the richness in the Waterfowl species during winter as well as the existence of many threatened and endemic bird species that made it eligible to be considered as a Key Biodiversity area (KBA) and Important Bird Area (IBA) (IMoE & Nature Iraq, 2014).

METHDOLOGY

Five field observation sites have been chosen based on specific criteria of which mostly that they represent different wetlands habitat landscapes in order to have as through idea as possible about the status of the bird in Hor Al-Dalmaj and the identification of the environmental parameters favored by the bird, like water quality and vegetation cover, etc. field observation were including "area-count methodology" in each of these selected sites, and it includes using 12X45mm binoculars and, wherever required, 40X field-telescope. 4x4 field-truck was used in order to secure better observation over the five sites. A Garmin GPS was used in locating the sites, and also a 1:100,000 scale maps were used.



Recent satellite image shows the five sampling sites in Al-Dalmaj wetlands

RESULTS AND DISCUSSION

Marbled Teal status in DL-1:

Based on the field observation over the period of the survey that covered twelve months, generally seems that DL-1 area provide good habitat for the occurrence and distribution of the Marbled Teal in Dalmaj wetlands. The bird was found over all the survey time, it was not absent in any of these twelve months. It also observed that there is noticeable variation in the population of Marbled Teal over the twelve months. The highest number was found in October, as 134 individuals were found in the area, followed by 72 individuals in November (figure1). October and November observation represent the peak of the Marbled Teal occurrence in DL-1 and this might be due to suitability of this part of the marsh for the bird in addition to the arriving of the wintering populations to Iraq in general and to Dalmaj and this area specifically (Scott & Carp, 1982).

It is also noticed that, away of October and November, the population of Marbled Teal takes comparatively lower grade of the rest of the months of the period January-September; the highest population that was recorded in DL-1 was 21 individuals (in June), while the lowest count in this period was recorded in August – 2 individuals. In December the count was 33 individuals (Figure 1).

The summer observations represent the lowest in the occurrence of the individual birds, and this examples the fact that was described by Salim being the poorest season in the occurrence of the Marbled Teal in the Wetlands of Iraq (Salim, 2010).

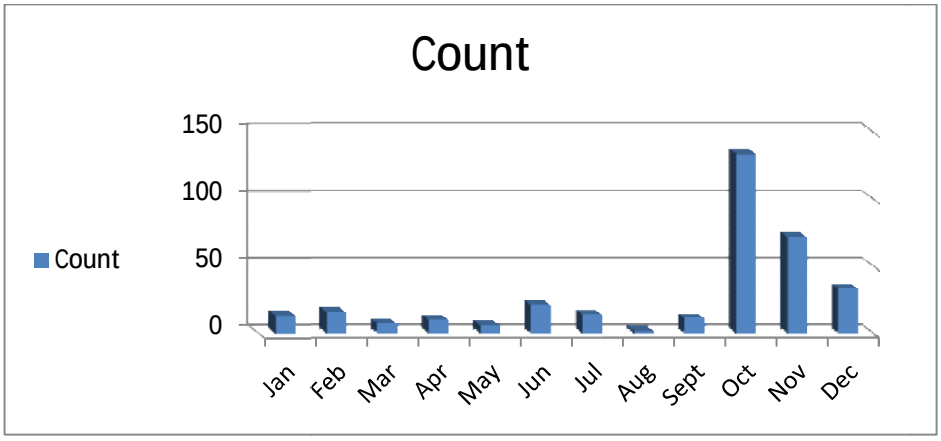


Figure-1 : The counts of Marbled Teal in DL-1

Marbled Teal status in DL-2:

Field observation over the period of the survey that covered twelve months in this site, generally show that DL-2 area provide a good habitat for the occurrence and distribution of Marbled Teal as well. The bird was found over all the survey period, and it was not absent in any of these twelve months. It also observed that there is noticeable variation in the population of Marbled Teal over the twelve months. The highest number was found in November, as 94 individuals were found in the area, followed by 71 individuals in September. October and November observations represent the peak of the Marbled Teal occurrence in DL-2 and this could be due to suitability of this part of the marsh for the bird in addition to the arriving of the wintering populations to Iraq in general and to this area in particular.

It was also noticed that the population of Marbled Teal takes comparatively lower grade in the rest of the months of the period as the highest population that was recorded in DL-2 was 65 individuals (in October), while the lowest count in this period was recorded in August – 18 individuals.

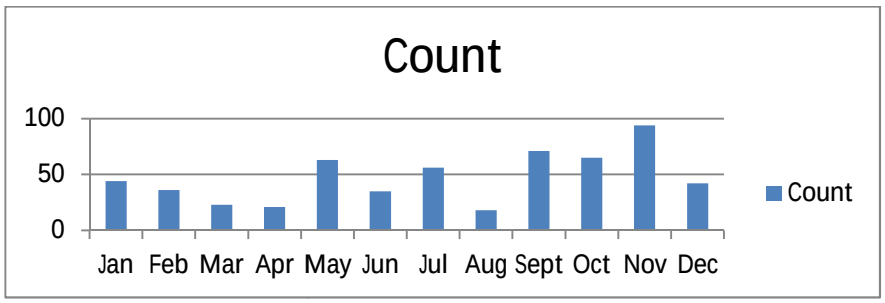


Figure-2 : The counts of Marbled Teal in DL-2

Marbled Teal status in DL-3:

Field observations over the period of the survey that covered twelve months, generally suggest that DL-3 area provide a humble habitat for the occurrence and distribution of Marbled Teal. It also observed that there is noticeable variation in the population of Marbled Teal over that period. The highest number was found in June as 30 individuals were found in the area, followed by 22 individuals in May (figure 3). June and May observations represent the peak of the Marbled Teal occurrence in DL-3 and this might be due to suitability of this part of the marsh for the bird.

It is noteworthy that the population of Marbled Teal is comparatively low in DL-3 as it was only 10 individuals found in July, while the lowest count in this period was recorded in January, December, August and September – 0 individuals. The summer observations represent the highest in the occurrence of the individual birds, and this might be due to the suitability of this area for the birds in this time of the year.

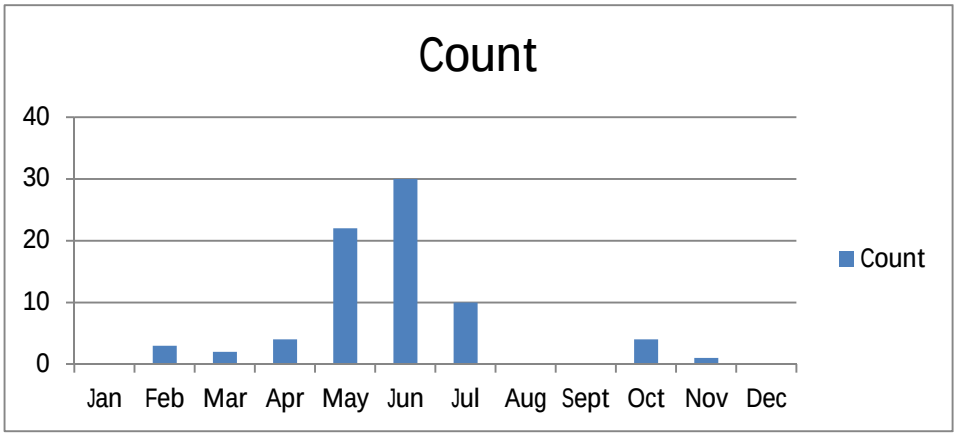


Figure-3 : The counts of Marbled Teal in DL-3

Marbled Teal status DL-4:

It generally seems from the field observations over the period of the survey that covered twelve months, that DL-4 area provide a humble habitat for the occurrence and distribution of Marbled Teal. The bird was found through eight months of the total survey time, it was absent in February, August, October and December. It also observed that there is noticeable variation in the population of Marbled Teal over the survey period. The highest number (25 individuals) was found in June, followed by 19 individuals in May (figure 4). May and June observations represent the peak of the Marbled Teal occurrence in DL-4.

It is also noticed that the population of Marbled Teal takes comparatively lower grade in January, March, April, September and November. the highest population, aside from May/June counts, that was recorded in DL-4 was 11 individuals in July, while the lowest count in this period was recorded in January – 1 individual.

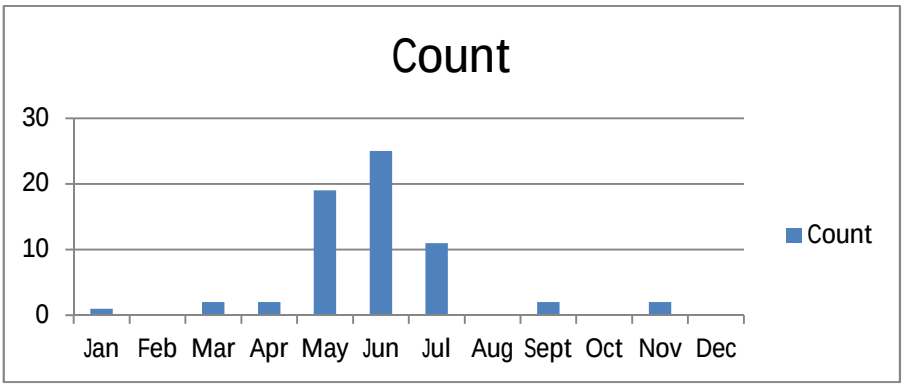


Figure-4 : The counts of Marbled Teal in DL-4

Marbled Teal status in DL-5

DL-5 area in general provides good habitat for the occurrence and distribution of the Marbled Teal. The bird was found over all the survey time, it was not absent in any of these twelve months. It also observed that there is noticeable variation in the population of Marbled Teal over the twelve months. The highest number (120 individuals) was found in February, followed by 72 individuals in January (figure 5). The observations of these two months represent the peak of the Marbled Teal occurrence in DL-5 and this might be due to suitability of this part of the marsh for the bird in addition to the arriving of the wintering populations to Iraq in general and to this area specifically (IMOE & Nature Iraq, 2014, Salim, 2011).

The population of Marbled Teal takes comparatively lower grade of the rest of the months of the period (March through December). The highest population that was recorded in DL-5 was 64 individuals (in December), while the lowest count in this period was recorded in August – 5 individuals.

The summer observations represent the lowest in the occurrence of the individual birds, and this is consistent with the fact that was described by Salim in (2010) as summer being the poorest season in the occurrence of Marbled Teal in the Wetlands of Iraq.

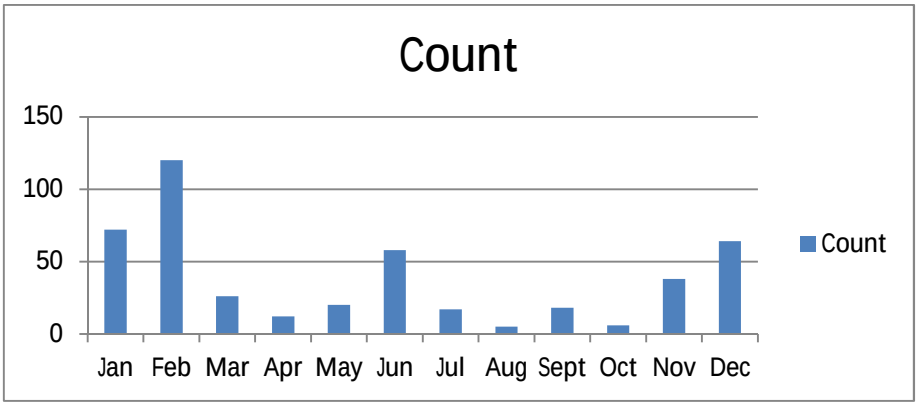


Figure-5 : The counts of Marbled Teal in DL-5

The data of the figures DL-1, DL-2, DL-3, DL-4, DL-5 shows the reduction in teals population in Feb. Mar. Apr., Because of the breeding season, each couples separate from the covey for building the nest in between the dens bushes. The exception is in figure -2 and figure-5. The young will grow, the juvenile of two or more nest make a new covey in July, August, September and November

GENERAL STATEMENT

Generally, and based on the one-year surveys in Dalmaj area, it seems that this area is important area for biodiversity, and this means the richness in the species and the abundance in the numbers of these species that the vast are of this key wetland provides. The Marbled Teal in Dalmaj is doing very well in terms of their life circle in breeding, movements, and wintering unless it being disturbed (seriously in some places) and this disturbance affects their natural life circle in the area. Definitely, the numbers shown above does not represent the actual population in this area because the sampling sites were only five with a total surveying/observations are that does not exceeds 5% of the entire area of Dalmaj waterbody; so, there definitely very much numbers higher than the counts. We think that is would be of benefit that some of the locals and hunters that "*sometime the numbers became up to more than 20,000 individuals especially during winter*", and this is not impossible as other team (KBAs team) have recorded up to 12,000 individuals in the Central Marshes, Southern Iraq (IMoE, 2014).

CONSERVATION OF MARBLED TEAL IN DELMAJ WETLANDS

In spite of the ecological importance of Hor Al-Dalmaj, it is under different kinds of pressures and threats like the unstable of the hydrological scheme, agricultural expansion and intensification, pollution, disturbance, and over-hunting (clap-nets, shotguns). These threats are interchanging in their impacts as they affect Marbled Teal and its life in Hor Al-Dalmaj, so the wetland and species both suffer the impacts of these pressures.

The area is characterized by many features that make it unique from the ecological and recreational perspectives. Hence, it is recommended to establish a management plan that covers the hydrological, ecological and developmental preservation for Hor Al-Dalmaj and the diversity of flora and fauna it nourishes. This can go side by side with certain activities on the part of the authorities like the enforcement of the Iraq environmental legislations and the application of the international and regional convention, especially those related to the establishment and sustaining of protected areas.

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الوضع الراهن وحالة الصون لطائر الحذف المعرق *Marmaronetta angustirostris* المهدد في منطقة هور الدلمج، العراق

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الخلاصة

تعد هذه الدراسة هي أول جهد من نوعه في العراق والشرق الأوسط لطائر الحذف المعرق *Marmaronetta angustirostris* في منطقة هور الدلمج جنوبي العراق. وتستمد أهمية هذا الجهد لكونه يمهد الطريق لمزيد من الدراسة والمراقبة للطيور والمنطقة. تعرض هذه الدراسة كل الظروف البيئية والأحيائية لطائر الحذف المعرق (من الأنواع المهددة والمعرضة للخطر) بواسطة المسح الحقلي والمراقبة المنتظمة طوال الفصول الاربعة في سنه ٢٠١٣-٢٠١٤. أجري المسح في واحد من اهم وابرز الأراضي الرطبة التي لم تأخذ حقها من الدراسات الكافية الا وهو هور الدلمج والذي يعتبر من اهم المسطحات المائية على مستوى العراق والمنطقة والعالم وفقا لمعايير مناطق التنوع الأحيائي الرئيسية والمناطق المهمة للطيور والمناطق المهمة للنبات. يوفر هور الدلمج موطن طبيعي ومناسب لهذا الطائر على مستوى العراق والشرق الأوسط لكلا المجتمعين: المفرخة والمهاجرة. نتائج الدراسة الحالية توافق وتؤيد بأن هذه المسطحات المائية تزود طائر الحذف المعرق البيئة المثالية لإستمرارية الفعاليات الطبيعية كالتغذية والتكاثر، على الرغم من أن الطيور تواجه أنواع مختلفة من التهديدات، كذلك تم اقتراح جملة من التوصيات نحو إدارة جيدة لمنطقة هور الدلمج في المستقبل.