

10-31-2019

A Preliminary Study on Population of Some Passeriformes at Marala Head

Zahid Bhatti

Center for Bioresource Research (CBR), Islamabad, Pakistan

Fakhra Nazir

Capital University of Science and Technology, Islamabad, Pakistan, fakhra.979.nazir@gmail.com

Asad Ghufuran

International Islamic University, Islamabad, Pakistan

Follow this and additional works at: <https://corescholar.libraries.wright.edu/jbm>



Part of the [Biodiversity Commons](#), and the [Ornithology Commons](#)

Recommended Citation

Bhatti, Z., Nazir, F., & Ghufuran, A. (2019). A Preliminary Study on Population of Some Passeriformes at Marala Head, *Journal of Bioresource Management*, 6 (4).

DOI: <https://doi.org/10.35691/JBM.9102.0114>

This Article is brought to you for free and open access by CORE Scholar. It has been accepted for inclusion in *Journal of Bioresource Management* by an authorized editor of CORE Scholar. For more information, please contact library-corescholar@wright.edu.

A PRELIMINARY STUDY ON POPULATION OF SOME PASSERIFORMES AT MARALA HEAD

ZAHID BHATTI¹, FAKHRA NAZIR^{2*} AND ASAD GHUFRAN³

¹Center for Bioresource Research (CBR), Islamabad, Pakistan

²Capital University of Science and Technology, Islamabad, Pakistan

³International Islamic University, Islamabad, Pakistan

* Corresponding author: fakhra.979.nazir@gmail.com

ABSTRACT

Passerines are perching birds of order Passeriformes representing half of the diversity of birds (Sibley and Monroe, 1990). There are total 6,600 species identified under 140 families declaring Passeriformes as the largest order of birds. Three hundred and thirteen species of Passeriformes were reported by Roberts (1992) from Pakistan but according to check list of birds of Pakistan there are more than 400 species of Passeriformes in Pakistan (Clements, 2019). They have significant ecological importance in an ecosystem and are mostly omnivores except the shrikes which are carnivorous. This study was done to form a preliminary checklist of Passeriformes at Marala Wetlands from October 2000 to September 2001. Census of the passeriformes was conducted on monthly basis by physically exploring the starting points from the three rivers (Kikar post, Kalyal and Rangpur Kuri) to Marala Head. Four families (Dicruridae, Passeridae, Ploceidae and Sylviidae) belonging to the order of Passeriformes were observed. Only one species was observed from each family.

Keywords: Passeriformes, sparrow, warbler, ornithology, river head

INTRODUCTION

Passerines are perching birds of order Passeriformes representing half of the diversity of birds (Sibley and Monroe, 1990). There are total 6,600 species identified under 140 families declaring Passeriformes as the largest order of birds. They have a cosmopolitan nature and worldwide distribution, with highest diversity in the tropical region and are present on all continents except Antarctica (Edwards, 2013). They have a specific arrangement of toes i.e. three toes pointing forward and one back, a character which differentiates them from other orders of the clade of birds (Frank and David, 2009). Passerines are further divided into three suborders i.e. New Zealand wrens, suboscines and oscines (Acanthisitti, Tyranni, Passeri) respectively (Barker et al.,

2002; Ericson et al., 2002). The body length of Passerines ranges from small (7.5 cm) to medium-sized (117 cm) birds.

They have significant ecological importance in an ecosystem and are mostly omnivores except the shrikes which are carnivorous. They consume different types of foods i.e. fruits, grains, insects, invertebrates, amphibians, reptiles and even small mammals and also act as food for other higher animals in an ecosystem. They act as pollinators and through migration help grow plants in habitats where normally it is not possible for the seeds to reach (Austin, 2018).

Three hundred and thirteen species of Passeriformes were reported by Roberts (1992) from Pakistan but according to check list of birds of Pakistan there are more than 400 species of Passeriformes in Pakistan (Clements, 2019). This study was done to form a preliminary checklist of Passeriformes

at Marala Wetlands from October 2000 to September 2001. Passeriformes are a significant part of a wetland's ecosystem. Hence, further studies are needed to determine the current population trend of this family and what may be done to conserve it.

MATERIALS AND METHODS

Marala wetlands is a protected area situated adjacent Sialkot, Punjab. The observations were made during October 2000

to September 2001. Census of the passeriformes was conducted on monthly basis by physically exploring the starting points from the three rivers (Kikar post, Kalyal and Rangpur Kuri) to Marala Head. Binoculars (8 x 30 mm), spotting scopes (15 – 60 x 60 mm zoom) and a counter were used. The observations were taken preferably from concealed, raised and faraway positions such as river banks, in order to broaden the vision without disturbing the birds.

RESULTS

Table 1. Number of some passeriformes observed at head Marala wetland during different months (Oct. 2000 TO Sep. 2001)

Family / Common Name	Scientific Name	Months											
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
DICRURIDAE													
Black Drongo	<i>Dicrurus adsimilis</i>	7	12	40	14	11	17	11	-	5	7	9	7
PASSERIDAE													
House Sparrow	<i>Passer domesticus</i>	24	25	23	17	27	40	44	60	25	35	50	70
PLOCEIDAE													
Streaked Weaver Bird	<i>Ploceus manyar</i>	37	41	32	35	25	27	39	35	30	25	20	30
SYLVIIDAE													
Great Reed Warbler	<i>Acrocephalus arundinaceus</i>	14	27	18	19	17	23	21	25	14	13	17	19



Figure 1. Passerines observed at Marala Head (a) *Dicrurus adsimilis* (b) *Passer domesticus* (c) *Ploceus manyar* (d) *Acrocephalus arundinaceus* (Retrieved from: <https://www.hbw.com/ibc/1025502>)

DISCUSSION

Four families belonging to the order of Passeriformes were observed. The highest population observed was of House sparrow (70) in September. Black Drongo was not observed at all in May. Higher populations of House Sparrow, Streaked Weaver Bird and Great Reed Warbler were observed from May to September. Whereas a greater number of Black Drongos were observed during winter.

Dicrurus adsimilis and *Passer domesticus* are non-migratory. *Dicrurus adsimilis* had a stable population trend. *Passer domesticus* had a decreasing population trend. *Acrocephalus arundinaceus* is a full migrant with a decreasing population trend.

A total of 130 individuals of Black Drongo have been reported from different areas of Pakistan (Ali and Akhtar, 2005). They cite the presence of twelve individuals of this species from Rawal lake, five from Khabbaki lake, twelve from Kallar Kahar lake, ten from Uchalli lake, thirteen from Jahler lake, two from Nammal lake, eight from Shahpur, twelve from Rangpur marsh area, twelve from Mianwali, twelve from Hafizabad, one from Chailanwala marsh area, twelve from Sialkot, six from Jassar, two from Khangarh, eleven from Bahawalnagar and none from Kharar lake.

Thirty-five percent of Passerines were observed out of all birds observed at Chotiari Reservoir, Sindh during 2006 to 2009; where *Passer domesticus* and *Dicrurus adsimilis* were abundant residents, *Ploceus*

manyar was a common resident and *Acrocephalus arundinaceus* was not observed (Rais et al., 2011). Qureshi et al. (2011) reported *Passer domesticus* from Khunjerab National Park, Pakistan; May-June 2006.

CONCLUSION

Four families belonging to the order of Passeriformes were observed. The greatest population of observed passeriformes was of House sparrow, seventy individuals, during September. The least population recorded was that of Black Drongo. Only one species was observed from each family. Even though most of the species present had a common presence, the numbers of Black drongo were less compared to the others. Especially since this species is non-migratory, the reasons for its low population at the study site is worth looking into for future conservation studies.

REFERENCES

- Ali Z, Akhtar M (2005). Bird surveys at wetlands in Punjab, Pakistan, with special reference to the present status of White-headed Duck *Oxyura leucocephala*. *Forktail*, 21: 43-50.
- Austin OL, Heimerdinger M, Gill CF (2018). Passeriform. Retrieved from: <https://www.britannica.com/animal/passeriform/Ecological-importance>.
- Barker FK, Barrowclough GF, Groth JG (2002). A phylogenetic hypothesis for passerine birds: Taxonomic and biogeographic implications of an analysis of nuclear DNA sequence data. *Proceedings of the Royal Society of London. Series B: Biological Sciences.* 269 (1488): 295–308.
- Clements JF, Schulenberg TS, Iliff MJ, Billerman SM, Fredericks TA, Sullivan BL, Wood CL (2019). The eBird/Clements Checklist of Birds of the World: v2019. Retrieved from: <http://www.birds.cornell.edu/clementschecklist/download/>
- Edwards SV, Harshman J (2013). Passeriformes. Perching Birds, Passerine Birds. Version 06 February 2013 (under construction). In: The Tree of Life Web Project. Retrieved from: <http://tolweb.org/Passeriformes/15868/2013.02.06>.
- Ericson PG, Christidis L, Cooper A, Irestedt M, Jackson J, Johansson US, Norman JA (2002). A Gondwanan origin of passerine birds supported by DNA sequences of the endemic New Zealand wrens. *Proceedings of the Royal Society B.* 269 (1488): 235–241. doi:10.1098/rspb.2001.1877.
- Frank G, David D, eds. (2019). Family Index. World Bird List Version 9.2. International Ornithologists' Union.
- Qureshi R, Khan WA, Bhatti GR, Khan B, Iqbal S, Ahmad MS, Abid M, Yaqub A (2011). First report on the biodiversity of Khunjerab National Park, Pakistan. *Pak J Bot.*, 43(2): 849-861.
- Rais M, Khan MZ, Abbass D, Akber G, Nawaz R, Islam SU (2011). A Qualitative Study on Wildlife of Chotiari Reservoir, Sanghar, Sindh, Pakistan. *Pakistan J Zool.*, 43(2): 237-247.
- Roberts TJ (1993). *The Birds of Pakistan.* Oxford University Press Karachi, Pakistan, Vol. 2: 598 pp.
- Sibley CG, Monroe BL (1990). *Distribution and taxonomy of the birds of the world.* New Haven: Yale University Press.