



# IJRASET

International Journal For Research in  
Applied Science and Engineering Technology



---

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

---

**Volume:** 11    **Issue:** XII    **Month of publication:** December 2023

**DOI:** <https://doi.org/10.22214/ijraset.2023.57808>

[www.ijraset.com](http://www.ijraset.com)

Call:  08813907089

E-mail ID: [ijraset@gmail.com](mailto:ijraset@gmail.com)

# Avifaunal Diversity of Katwal Tukum Lake of Chandrapur District (MS), India

Harney N.V.

Department of Zoology, Nilkanthrao Shinde Science & Arts College, Bhadrawati, Dist., Chandrapur - 442902

**Abstract:** *Birds are important to continue ecologic circle, especially in food chain. For the last three centuries, industrial developments and anthropological effects have degraded habitats and caused the natural balance to deteriorate. Approximately 200 bird species had been affected directly or indirectly from these negative changes. The present investigation was carried out to document the avifauna in and around the Katwal tukum lake located 42 km form Chandrapur head quarter of Maharashtra State from June 2022 to May 2023 in which 45 species of birds were recorded of 10 different orders and 25 families during the study. Among the recorded species 28 were resident, 9 were resident migrant and 8 were winter visitor.*

**Keywords:** *Avifauna, Katwal tukum lake, Avifaunal diversity.*

## I. INTRODUCTION

Birds are crucial to maintaining the balance of many ecosystems by providing various ecological services. Diversity of avifauna is very important ecological indicator to evaluate the quality of habitats. Birds are a diverse group and their bright colors, distinct songs calls, and showy displays add enjoyment to our lives. Birds are very visible, quite common, and offer easy opportunities to observe their diverse plumage and behaviors. Because of this, birds are popular to many who pursue wildlife watching and monitoring activities. Some birds transport a variety of things through the environment. For example, birds serve to spread seeds of various plants, thereby helping in plant dispersal. The Katwal tukum lake is fresh water body located within Chandrapur district of Maharashtra state and situated 42 km from Chandrapur head quarter and is at about 235 m. above mean sea level and is at 20° 16' 08.73" N latitude and 79° 16' 11.09" E longitude. It receives the water from the surrounding catchment areas during the monsoon period. The area of Nagrala lake is spread over 76.74 acres. The depth of water is 29 feet during the monsoon and 7 feet during the summer season. The water of this lake is primary used for washing, bathing, agriculture, fishing activities and other domestic purposes but now it is at a transitional state with respect to degradation. During the last few decades considerable studies on avifauna diversity from different water bodies of India have been carried out by many researchers, like Singh (1929), Ali (1932), Ghazi (1962), Kannon (1980), Davidar (1985), Jhingran (1988), Ghoshal (1995) and Yardi (2004). However very little information is available about avifauna of India. This work has therefore undertaken of document the avifauna of Katwal tukum lake in Chandrapur district. The pond harbor a large number of fauna which attract the resident, winter migratory and resident migratory birds shown that the entire pond basin is greatly productive and conducive to all kinds of birds. This lake is harbors a number of aquatic weeds in the submerged as well as floating state on which thrive a large number of organisms. Due to rich food available throughout the year in this lake in the form of aquatic molluscs, crustaceans, insects, etc. the lake always attracts a large number of birds throughout year.

## II. MATERIAL AND METHODS

Avian fauna including resident as well as resident migratory and winter visitors birds were recorded during the period of present study. The observation were usually undertaken early in the morning between 6 a.m. to 8 a.m. and in the evening between 5 p.m. to 7 p.m. Birds were observed with the help of a Binocular (10×15 magnification) and photographed using Nikon Camera (model no. D-70). Identification of avian fauna was done according to the keys given by Woodcock (1980), Ali, S. and Ripley, S.D. (1995).

## III. RESULTS AND DISCUSSION

In the present study, 45 species of birds were recorded from 10 different orders and 25 families among which order Passariformes was dominant by contributing 13 followed by order Ciconiformes with 9 species, order Ansiriformes and Coraciformes represented by 5 species each, order Charadriiformes represented by 4 species, order Galliformes represented by 3 species and order Pelacaniformes and Psittaciformes represented by 2 species each and order Columbiformes and Falconiformes represented by 1 species each.

Among the families recorded species of birds, 6 species belongs to Anatidae and 4 species belongs to Ardeidae, 3 species each belongs to Ciconidae, Gruidae and Sturnidae, 2 species each belongs to family Recurvirostridae, Threskiornithidae, Alcedinidae, Corvidae and Motacillidae, 1 species each belongs of family Charadriidae, Scolopacidae, Columbidae, Coraciidae, Meropidae, Upupidae, Necatarinidae, Passeridae, Muscicapidae, Pycnonotidae, Dicruidae and Hirudinidae. Out of total 45 species, 28 were resident, 9 were resident migrant and 8 were winter visitor.

Ali (1939) published a list of 278 species of birds from central India. Newton, *et.al.*, (1986) have listed the birds of Kanha Tiger Reserve (M.P.), Ghosal (1995) have listed the birds of Kanha Tiger Reserve (M.P.), Wadatkar and Kasambe (2002) reported 171 species of birds at Pohara Malkhed forest reservoir of Amravati district (M.S.), Kedar and Patil (2005) reported 60 bird species from Rishi lake, Karanja Lad, (M.S.), Kulkarni and Kanwate (2006) observed 18 species of birds 10 as resident, 2 migratory and 6 as residential migratory from Dongarkheda irrigation tank of District Hingoli (M.S.), Kurhade (2010) reported 208 species of birds in Jaikwadi reservoirs near Ahmadnagar (M.S.), Kukade, *et.al.*, (2011) recorded 68 birds species of Chhatri lake of Amravati district (M.S.), Harney, N.V. *et.al.*, (2012) recorded 37 species of birds from Kanhala pond of Bhadrawati of District Chandrapur (M.S.), Joshi and Shrivastava (2012) reported 64 species of birds in Tawa reservoir of Hoshangabad District (M.P.), Harney, N.V. *et.al.*, (2013) recorded 37 species of birds from Kanhala pond with preference to feeding habits of Bhadrawati of District Chandrapur (M.S.) and Natarajan Mariappan *et.al.*, (2013) recorded 92 species of birds from different Habitats of Agricultural Ecosystem of Pollachi (Tamilnadu), Manjunath, *et.al.*, (2014) recorded the occurrence of 26 species of birds belonging to 8 orders of 13 families in Shri Sharanabasaveshwara lake of Gulbarga District, Karnataka. Harney, N.V., A.A. Dhamani and R.J. Andrew (2011) Studies on avifaunal diversity of three water bodies near Bhadrawati, Distt. Chandrapur (MS), Harney, N.V., K.B. Bhute (2014) Diversity of avifauna in and around Chalbardi (Rai) lake near Bhadrawati, Distt. Chandrapur (M.S.), India, Harney, N.V. (2014) Avifaunal diversity of Ghotnimbala lake near Bhadrawati, Distt. Chandrapur (MS), India, Harney N.V. (2015) Avifaunal diversity of Junona lake near Chandrapur (M.S.), India. *Asian J. Multi. Stu.*, Vol. 3(1): 45-51, Harney N.V. (2015) Avifaunal diversity of Moharli lake near Chandrapur (M.S.), India. *IJGSR*. Vol.2(4): 255-264, Mahajan, V.S. and Harney, N.V. (2016) Avifaunal diversity of Mohabala lake near Bhadrawati, District- Chandrapur (M.S.), India, Shelekar, A.L. and Harney, N.V. (2017) Avifaunal diversity of Gorja lake near Bhadrawati, District- Chandrapur (M.S.), India, Bhute, K.B. and Harney, N.V. (2018) Avifaunal diversity of Nagrala lake of Bhadrawati tehsil in Chandrapur District, Maharashtra State, India, Khaparde, P.I. and Harney, N.V. (2018) Avifaunal diversity of Ghodpeth lake of Bhadrawati tehsil in Chandrapur District, M.S., India, Harney, N.V. (2020) Avifaunal diversity of Asolamendha dam of Chandrapur (MS), India, Shelekar, A. L. and Harney, N.V. (2020) Avifaunal diversity of Jutpani lake of Dharni (Melghat), District- Amravati (M.S.), India, Bansod, MA and Harney, NV (2021) Avifaunal diversity of Ghotnimbala lake near Bhadrawati, Chandrapur (MS), India, Harney, N.V. (2022) Avifaunal Diversity of Fly Ash Pond of Chandrapur (MS), India.

This lake is somewhat affected by various human activities but still avifauna of Katwal tukum lake is diverse.

Table No. 1: Birds species in Katwal tukum lake during 2022-23

Sr. No.	Order/Family	Scientific name	Common name	Habit
1	Ansiriformes Anatidae	<i>Anas poecilorhyncha</i>	Spot Bill Duck	WV
2	Ansiriformes Anatidae	<i>Tadorna ferruginea</i>	Brahminy Shelduck	WV
3	Ansiriformes Anatidae	<i>Anas clypeata</i>	Northern Pintail	WV
4	Ansiriformes Anatidae	<i>Sarkidiornis Melanotos</i>	Comb Duck	WV
5	Ansiriformes Anatidae	<i>Nettapus coromandelianus</i>	Cotton Teal	R
6	Charadriiformes Charadriidae	<i>Vanellus indicus</i>	Red wattled Lapwing	R
7	Charadriiformes Recurvirostridae	<i>Himantopus himantopus</i>	Black Winged Stilt	R
8	Charadriiformes	<i>Actitishypo leucos</i>	Common Sandpiper	RM

Sr. No.	Order/Family	Scientific name	Common name	Habit
	Scolopacidae			
9	Charadriiformes Recurvirostridae	<i>Himantopus himantopus</i>	Black winged Stilt	R
10	Ciconiiformes Ardeidae	<i>Bubulcus ibis</i>	Cattle Egret	RM
11	Ciconiiformes Ardeidae	<i>Ardea cinerea</i>	Grey Heron	RM
12	Ciconiiformes Ciconidae	<i>Ephippiorhyrchos asiaticus</i>	Black Naked Stork	WV
13	Ciconiiformes Ardeidae	<i>Casmerodius albus</i>	Large Egret	RM
14	Ciconiiformes Ciconidae	<i>Anastomus osciatus</i>	Asian Open Bill Stork	R
15	Ciconiiformes Ciconidae	<i>Mycteria leucocephala</i>	Painted Stork	WV
16	Ciconiiformes Threskiornithidae	<i>Pseudibis papillosa</i>	Black Ibis	RM
17	Ciconiiformes Threskiornithidae	<i>Pseudibis papillosa</i>	Black headed Ibis	RM
18	Ciconiiformes Ardeidae	<i>Aredeola grayii</i>	Indian Pond Heron	R
19	Columbiformes Columbidae	<i>Strepto peliachinensis</i>	Spotted Dove	R
20	Coraciformes Alcedinidae	<i>Halycons myrnesis</i>	White Breasted Kingfisher	R
21	Coraciformes Alcedinidae	<i>Alcedo atthis</i>	Small Blue Kingfisher	RM
22	Coraciformes Coraciidae	<i>Coracias benghalensis</i>	Indian Roller	RM
23	Coraciformes Meropidae	<i>Merops orientalis</i>	Small Green Bee Eater	R
24	Coraciformes Upupidae	<i>Upupa epops</i>	Common Hoopoe	R
25	Falconiformes Anatidae	<i>Milvus migrans</i>	Black Kite	R
26	Galliformes Gruidae	<i>Amauromis phoenicurus</i>	White-Breasted Water Hen	R
27	Galliformes Gruidae	<i>Porphyrio porphyrio</i>	Purple Swamphea	R
28	Galliformes Gruidae	<i>Fulica atra</i>	Common Coot	RM
29	Passeriformes Necatarinidae	<i>Cinnyris asiaticus</i>	Purple Sunbird	R
30	Passeriformes Passeridae	<i>Hydrophasianus chirurgus</i>	Pheasant Tailed Jacana	R

Sr. No.	Order/Family	Scientific name	Common name	Habit
31	Passeriformes Muscicapidae	<i>Saxicolodius fulvicatus</i>	Indian Robin	R
32	Passeriformes Sturnidae	<i>Acridothera stritistis</i>	Common Myna	R
33	Passeriformes Pycnonotidae	<i>Pycnonotus cafer</i>	Red Vented Bulbul	R
34	Passeriformes Dicruidae	<i>Dicrurus macrocercus</i>	Black Drongo	R
35	Passeriformes Sturnidae	<i>Sturnia pagodarum</i>	Brahminy Starling	R
36	Passeriformes Hirudinidae	<i>Hirundo rustica</i>	Common Swallow	R
37	Passeriformes Corvidae	<i>Corvus macrorhynchos</i>	Jungal Crow	R
38	Passeriformes Motacillinae	<i>Motacilla alba</i>	White Wagtail	WV
39	Passeriformes Motacillinae	<i>Motacillacinerea</i>	Grey Wagtail	WV
40	Passeriformes Sturnidae	<i>Sturnus contra</i>	Pied Myna	R
41	Passeriformes Corvidae	<i>Corvus splendens</i>	House Crow	R
42	Pelecaniformes Phalacrocoracidae	<i>Phalacrocoraxniger</i>	Little Cormorant	R
43	Pelecaniformes Phalacrocoracidae	<i>Phalacro coraxfuscicollis</i>	Indian Cormorant	R
44	Psittaciformes Cuculidae	<i>Eudynamys scolopaceus</i>	Asian Koel	R
45	Psittaciformes Cuculidae	<i>Centropus sinensis</i>	Greater Coucul	R

R= Residential

WV=Winter Visitor

RM= Residential Migratory

### REFERENCES

- [1] Ali, S. Flowers birds and birds flower in India. J. Bom. Nat. Hist. Soc. Vol. (35): 573-605. 1932
- [2] Ali, S. The birds of central India, Part-I. J. Bom. Nat. Hist. Soc. Vol. 4(1): 82-106. 1939
- [3] Ali, S. and Ripley, S.D. A pictorial guide to the birds of the Indian subcontinent. Bombay Natural history society, Mumbai. 1995
- [4] Davidar, P. Ecological interactions between the mistletoes and their avian pollinators in south India. J. Bom. Nat. Hist. Soc. Vol. (82): 45-60. 1985
- [5] Ghazi, H.K. Piscivorous birds of Madras, Madras. J. of fisheries. Vol. 1(1): 106-107. 196
- [6] Ghosal, D.N. Avifauna of conservation areas, No. 7, Fauna of Kanha Tiger Reserve. Zoological survey of India (ZSI), pp. 63-91. 1995
- [7] Harney, N.V., A.A. Dhamani and R.J. Andrew () Avifaunal diversity in and around Kanhala lake near Bhadrawati, Dist-Chandrapur (MS), India. Bionano Frontier Vol. 5(2-I): 30-33. 2012
- [8] Harney, N.V., A.A. Dhamani and R.J. Andrew Avifaunal diversity of Kanhala lake near Bhadrawati, Dist-Chandrapur (MS), with reference to food preference and feeding habits. India. ISRJ Special Issue, pp.57-59. 2013
- [9] Harney, N.V., A.A. Dhamani and R.J. Andrew Studies on avifaunal diversity of three water bodies near Bhadrawati, Distt. Chandrapur (MS) Vol.1(6):216-218. ISRJ (Printed Journal -July month). ISSN No. 2230-7850. 2011
- [10] Harney, N.V., K.B. Bhute Diversity of avifauna in and around Chalbardhi (Rai) lake near Bhadrawati, Distt. Chandrapur (M.S.), India. J.Glo.Bios., Vol. 3(2): 399-405 (Online Journal-13 March month) ISSN No. 2320-1355. 2014
- [11] Harney, N.V. Avifaunal diversity of Ghotimbala lake near Bhadrawati, Distt. Chandrapur (MS), India Int. J. of Life Sciences. Vol.2(1): 79-83. (Online Journal - 30 March 2014). ISSN No. 2320-7817, e ISSN: 2320-964X. 2014

- [12] Harney N.V. Avifaunal diversity of Junona lake near Chandrapur (M.S.), India. Asian J. Multi. Stu., Vol. 3(1): 45-51. Online Journal- 1 January 2015) ISSN No. 2321- 8819. 2015
- [13] Harney N.V. Avifaunal diversity of Moharli lake near Chandrapur (M.S.), India. IJGSR. Vol.2(4): 255-264. (Online Journal – October-2015) ISSN No. 2348-8344. 2015
- [14] Mahajan, V.S. and Harney, N.V. Avifaunal diversity of Mohabala lake near Bhadrawati, District- Chandrapur (M.S.), India. Online International Interdisciplinary Research Journal Vol.6: 75-83. (January 2016) ISSN No. 2249-9598. 2016
- [15] Shelekar, A.L. and Harney, N.V. Avifaunal diversity of Gorja lake near Bhadrawati, District- Chandrapur(M.S.), India. International Journal of Scientific Research. Vol. 6(8):471-473. (August-2017) ISSN No. 2277-8179. 2017
- [16] Bhute, K.B. and Harney, N.V. Avifaunal diversity of Nagrala lake of Bhadrawati tehsil in Chandrapur District, Maharashtra State, India. Online International Interdisciplinary Research Journal. Vol. 8(2): 14 - 20. (January 2018 ISSN No. 2249- 9598.2018
- [17] Khaparde, P.I. and Harney, N.V. Avifaunal diversity of Ghodpeth lake of Bhadrawati tehsil in Chandrapur District, M.S., India. Online International Interdisciplinary Research Journal. Vol.8: 36 - 41.(March 2018) ISSN No. 2249- 9598. 2018
- [18] Harney, N.V. Avifaunal diversity of Asolamendha dam of Chandrapur (MS), India
- [19] Int. Res. J. of Science and Engineering Special Issue A7: 459-466. (February 2020) ISSN No.2322-0015. 2020
- [20] Shelekar, A. L. and Harney, N. V. Avifaunal diversity of Jutpani lake of Dharni (Melghat), District- Amravati (M.S.), India Int. Res. J. of Science and Engineering Special Issue A7: 423-428. (February 2020) ISSN No. 2322-0015. 2020
- [21] Bansod, MA and Harney, NV(2021) Avifaunal diversity of Ghotnimbala lake near Bhadrawati, Chandrapur(MS), India International Journal of Life Sciences., Vol.9(1): 119-123. (March 2021) ISSN No. 2320-7817
- [22] Harney, N.V. Avifaunal Diversity of Fly Ash Pond of Chandrapur (MS), India. International Journal of Advance research in Science and Engineering. Vol.11(8) : 67- 76. August 2022 ISSN No. 2319-8354. 2022
- [23] Hippargi, R.V., P.M. Bolde, S.V. Manthen and S.R. Aland Population and breeding status of avifauna in a highly fragmented grassland patch near Solapur, Maharashtra. Avishkar Solapur University Research Journal, Vol. (2): 22-30. 201
- [24] Jhingran, V.G. Fish an fisheries of India. Hindustan Publishing cooperation, New Delhi. pp.1-664. 198
- [25] Joshi, Pragati and Vinoy K. Shrivastava Avifaunal diversity of Tawa reservoir and its surrounding area of Hoshangabad district (M.P.). International Journal of Plant, Animal and Environmental Sciences. Vol. 2(1): 46-51.2012
- [26] Jayanta, Mistry Avifaunal diversity in and around Berhampore, Murshidabad district, West Bengal. IndiaInternational Journal of Fauna and Biological Studies, Vol. 2(4): 06-10.2015
- [27] Kannan, P. Nector feeding adaptation of flower birds. J. Bom. Nat. Hist. Soc. Vol. (75): 1036-1050.1980
- [28] Kedar, G.T. and Patil, G.P. Avifaunal diversity of Rishi lake, Karanja (Lad), Maharashtra with reference to food preference and feeding habits. J. Aqua. Biol. Vol .20(1): 35-38.2005
- [29] Kukade, R.J., Warhekar, S.R., Tippat, S.K. and Dudhey, N.S. Avifaunal diversity of Chatri lake, Amravati, Maharashtra. Proceedings of UGC sponsored National level conference on “Environmental Biology and Biodiversity” NCEBB, 2011.
- [30] Kulkarni, A.N. and Kanwate, V.S. Piscivorous birds of Dongarkheda irrigation tank, Dist. Hingoli, Maharashtra, J. Aqua. Biol. Vol. 21(1): 86-87. 2006
- [31] Kulkarni, A.N. and Kanwate, V.S. Avifauna of forest Jaldhara, Kinwat, District Nanded, Maharashtra, J. Aqua. Biol. Vol. 21(1): 46-51. 200
- [32] Kurhade, Sudhakar Status and diversity of avifauna in Jaikwadi reservoirs, Maharashtra. J. Aqua. Biol. Vol. 25(1): 32-40. 2010
- [33] Mujumdar, N. On a collection of birds from Bastar district, M.P. Record Zoological survey of India, Occasional pp.59-54. 1984
- [34] Manjunath Pratima Mathad, Pavitra, B., Sundar, M. and Ziyayoddin, M. Aquatic avifauna of Shri Sharanabasaveshwara Lake, Gulbarga District, Karnataka. Vol. 2(1): 183-188. 2014
- [35] Natarajan Mariappan, B.K. Ahamed Kalfan and Srinivasagam Krishnakumar Assessment of bird population in different habitats of agricultural ecosystem. JSRES. Vol. 1(11): 306-316. 2013
- [36] Newton, P.N., Brudin, S. and Guy, J. The birds of Kanha Tiger Reserve Madhya Pradesh, India. J. Bom. Nat. Hist. Society. Vol.83 (3): 977-998. 198
- [37] Patel, K.B., S.B. Patel and Nikunj Bhatt Avian diversity of Mahi canal site of Nadiad, Gujrat. Life Science Leaflets. Vol. 4: 12-19. 2012
- [38] Patil, Alaka A. (2015) Biodiversity of Bhambarde Reservoir of Sangli, Maharashtra, India. Research Journal of Recent Sciences Vol. 4(ISC-2014): 209-215.
- [39] Singh, T.C.N. A note of the pollination of Erythring Indica by birds. J. Bom. Nat. Hist.Soc. Vol. 33: 960-462. 1929
- [40] Wadatkar, J.S. and Kasambe, R. Checklist of birds from Pohara-Malkhed reserve forest, Dist. Amravati, Maharashtra. Zoos. Print Journal. Vol. 17(66): 807-811. 2002
- [41] Woodcock, M. Collins Handguide to the Birds of Indian subcontinent. 2nd Edn. Collins, London. 1980



10.22214/IJRASET



45.98



IMPACT FACTOR:  
7.129



IMPACT FACTOR:  
7.429



# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089  (24\*7 Support on Whatsapp)