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Avifaunal Diversity of Jutpani Lake of Dharni (Melghat), District Amravati (M.S.), India.

Shelekar AL[1] and Harney NV[2]

[1]Department of Zoology, Shri Shivaji Arts Commerce and Science College, Akot, District Akola (M.S.), India.
[2]Post Graduate Department of Zoology, Nilkanthrao Shinde Science and Arts College, Bhadrawati, District – Chandrapur(M.S.), India
Email- amarshelekar123@gmail.com

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ABSTRACT

Birds are of great economic importance of the man and they play an important role in controlling population of different pests. Birds are scavengers and pollinating agents and also help's in dispersal of seeds and also birds are provided rich food for mankind and are known to man since ages[23]. Salim Ali, laid the foundation of economic ornithology. Birds are very significant component of biodiversity and are the most important indicators the balanced and living ecosystem. Population of birds in a particular ecosystem is depending on the composition of the ecosystem, environmental condition and seasonal variation[24]. The present investigation was carried out to the avifaunal and around the Jutpani Lake near Dharni Tahsil was studied from Jan 2019 to Dec 2019 during which total 65 species of birds were recorded from 14 different orders and 32 families among which 47 were resident, 9 were resident migrant and 9 were winter visitor.

Keywords: Jutpani lake, Avifaunal diversity, Dharni tahsil, Seasons and Distribution.

. INTRODUCTION

Diversity of avifauna is very important ecological indicator to evaluate the quality of habitats. Birds are a diverse group and their bright colour, distinct songs calls and show displays add enjoyment to the lives and birds are very visible, quite common and offer easy opportunities to observe their diverse plumage and behaviours.

Because, birds are popular to many who pursue wildlife watching and monitoring activities. Some birds are easily migrate, transport a variety of things through the environment.For example, birds serve to spread seeds of various plants, thereby helping in plant dispersal [25].

The Jutpani Lake is principal fresh water body located in Jutpani village of Dharni tahsil in Amravati district of Maharashtra state. Dharni is a tahsil place and it is 148 km north west side of Amravati and 80 km east side from Burhanpur Madhya Pradesh It is situated at about 500 m above the mean sea level.

Jutpani lake is 8 km south east side from Dharni Tahsil at about 500 m above mean sea level and is at 77°11'50''E longitude and 21°26'45'' N latitude. Jutpani Lake receives the water from the surrounding catchment areas during the monsoon period. The area of Jutpani Lake is spread over 400 acres. The depth of water is 37 feet during the monsoon and 14 feet during the summer season. The water of this lake is primary used for washing, bathing, fishing activities, agriculture and other domestic purpose but now it is at a transitional state with respect to degradation.

The lake harbor a large number of aquatic weeds in the submerged as well as floting state on which the large number of organisms survive in lake. Due to much food availability throughout in year in the form of aquatic insects, crustaceans molluscus, fishes ect. The lake always attracts a large number of birds such as migratory and non migratory birds throughout year. Therefore the present study the avifaunal diversity in around and located Jutpani lake near Dharni tahsil, district Amravati.

METHODOLOGY

Avian fauna including resident and migratory birds were recorded during the period of present study. The observation were usual 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 observe with the help of Binocular and photographs using Nikon Camera model No. D – 70. Identification of avian fauna was done according to the keys given by woodcock [1] Salim Ali [2].

RESULTS AND DISCUSSION

In the present study 65 species of birds were recorded from 14 different orders and 32 families among which order Passeriformes was dominant followed by contributing 20 species (eighteen residential species and 2 winter visitor species) followed by order Ciconiformes with 9 species (five are residential migratory, two are residential and two are winter visitor), order Ansiriformes represented by 6 species (five species are winter visitor and one is residential), order Coraciformes also represents by 6 species (four species are residentially and two are residential migratory), order Charadiformes represented by 5 species (four species are residential and one is residential migratory), order Psittaciformes re presented by 5 residential species, order Strigiformes and Galliformes represented by 3 residential species, order Gruiformes represented by 2 species (one is residential other one is residentially migratory) Columbiormes, Falconiformes, and Peleconiformes represented by two residential species, order Apodiformes, and order Podicipediformes are represented by one residential species.

Among the families recorded species of birds 8 species belongs to Anatidae and 4 species belongs to Ardeidae, 3 species belongs to Ciconidae, Alcedinidae, Strunidae, Motacillidae, Psittacidae, Strigidae, 2 species belongs to Recurvirostridae, Threskiornithidae, Cloumbidae, Phalcrocoracidae, Cuculidae, Necatarinidae, Muscicapidae, Laniidae, Corvidae, Gruidae, Phasinidae and 1 species belong to Apodae, Charadridae, Scolopacidae, Jacanidae, Coraciidae, Meropidae, Upupidae, Policipedidae, Passeridae, Pycnonotidae, Dicrudidae, Hirudinidae and Rallidae fimilies out of total 47 were residential, 9 were residential migratory and 9 were winter visitor.

Birds are depending on scientific classification over 9000 birds species and more than 1250 in India, with almost 150 having become extinct after the arrival of Humans. Ali, [2] has published a list of 278 species of birds from central India. Newton, *et al.* [3] reported the listed birds of Kanha Tiger Reserve (M.P.), Ghosal

[4] they noted the birds of Kanha Tiger Reserve (M.P.). Wadatkar and Kasambe [5] observed 171 species of birds at Pohara Malkhed forest reservoir of Amravati district (M.S.). Patil *et al*. [6] recorded 134 species of birds from Ajanti Dam area of Hinganghat (Wardha), Central India. Kedar and Patil 7] founded 60 bird species from Rishi lake, Karanja Lad, (M.S.). Kulkarni, *et al.* [8] observed and recorded 93 species of birds from Shikhachi wadi reservoir of Nanded District (M.S.). Kulkarni and Kanwate [9] also noted 18 species of birds 10 as resident, 2 migratory and 6 as residential migratory from Dongarkheda irrigation tank of District Hingoli (M.S.).

Table 1 Distribution of birds forms of Jutpani lake during Jan 2019 Dec 2019

Sr.No.	Scientific Name	Common Name	Order/Family	Habit
1	*Anas poecilorhyncha*	Spot Bill Duck	Ansiriformes Anatidae	WV
2	*Tadorma ferruginea*	Brahminy Shelduck	Ansiriformes Anatidae	WV
3	*Anas clypeata*	Northern Pintail	Ansiriformes Anatidae	WV
4	*Anas clypeata*	Northern Shoveller	Ansiriformes Anatidae	WV
5	*Anas platyrhynchos*	Domestic Duck	Ansiriformes Anatidae	WV
6	*Nettapus coromandelians*	Cotton Teal	Ansiriformes Anatidae	R
7	*Apus affinis*	House swift	Apodiformes Apodiae	R
8	*Vanellus indicus*	Red wattled Lapwing	Charadriformes Charadridae	R
9	*Himantopus himantopus*	Black Winged Stilt	Charadriformes Recurvirostridae	R
10	*Actitis hypoleucos*	Common Sandpiper	Charadriformes Scolopacidae	RM
11	*Metopidius indicus*	Bronze-Winged Jacana	Charadriformes Jacanidae	R
12	*Vanellus duvaucelli*	River Lapwing	Charadriformes Recurvirostridae	R
13	*Bubulcus ibis*	Cattle Egret	Ciconiformes Ardeidae	RM
14	*Mesophosyx intermedia*	Median Egret	Ciconiformes Ardeidae	RM
15	*Ephippiorhyrichos asiaticus*	Black Nacked Stork	Ciconiformes Ciconidae	WV
16	*Casmerodius albus*	Large Egret	Ciconiformes Ardeidae	RM
17	*Anastomus osciatans*	Asian Open Bill Stork	Ciconiformes Ciconidae	R
18	*Mycteria leucocephala*	Painted Stork	Ciconiformes Ciconidae	WV
19	*Pseudibis papillosa*	Black Ibis	Ciconiformes Threskiornithidae	RM
20	*Pseudibis papillosa*	Black headed Ibis	Ciconiformes Threskiornithidae	RM
21	*Aredeola grayii*	Indian Pond Heron	Ciconiformes Ardeidae	R
22	*Stigmatopelia senegalensis*	Little Brown Dove	Columbiformes Columbidae	R
23	*Streptopelia chinensis*	Spotted Dove	Columbiformes Columbidae	R
24	*Halycon smyrnensis*	White Breasted Kingfisher	Coraciformes Alcedinidae	R
25	*Alcedo atthis*	Small Blue Kingfisher	Coraciformes Alcedinidae	RM
26	*Coracias benghalensis*	Indian Roller	Coraciformes Coraciidae	RM
27	*Merops orientalis*	Small Green Bee Eater	Coraciformes Meropidae	R
28	*Upupa epops*	Common Hoopoe	Coraciformes Upupidae	R
29	*Ceryle rudis*	Lasser pied Kingfisher	Coraciformes Alcedinidae	R
30	*Milvus migrans*	Black Kite	Falconiformes Anatidae	R
31	*Elanus caeruleus*	Black Winged Kite	Falconiformes Anatidae	R
32	*Fracolinus pondicerianus*	Grey Francolin	Galliformes Phasinidae	R
33	*Pavo Cristatus*	Indian Peafowl	Galliformes Phasinidae	R
34	*Amaurornis phoenicurus*	White - Breasted Water Hen	Gruiformes Rallidae	R

35	*Porphyrio porphyrio*	Purple Swamphcae	Galliformes Gruidae	R
36	*Fulica atrica*	Common Coot	Gruiformes Gruidae	RM
37	*Cinnyris asiaticus*	Purple Sunbird	Passeriformes Necatarinidae	R
38	*Turdoides striat*	Jungal Babbler	Passeriformes Muscicapidae	R
39	*Hydrophasianus chirurgus*	Pheasant Tailed Jacana	Passeriformes Passeridae	R
40	*Saxicolodies fulicatus*	Indian Robin	Passeriformes Mucicapidae	R
41	*Lanius schach*	Rufousbacked Shrike	Passeriformes Laindae	R
42	*Acridotheres tristis*	Common Myna	Paseriformes Sturnidae	R
43	*Pycnonotus cafer*	Red Vented Bulbul	Passeriformes Pycnonotidae	R
44	*Dicrurus macrocercus*	Balck Drongo	Passeriformes Dicrudidate	R
45	*Sturnia pagodarum*	Brahminy Starling	Passeriformes Sturnidae	R
46	*Hirundo rustica*	Common Swallow	Passeriformes Hirudinidae	R
47	*Nectarinia zeylonica*	Purple Rumped Sunbird	Passeriformes Necatarinidae	R
48	*Lanius vittatus*	Bay Backed Shrike	Passeriformes Laniidae	R
49	*Corvus macrorhynchos*	Jungal Crow	Passeriformes Corvidae	R
50	*Motacilla alba*	White Wagtail	Passeriformes Motacillinae	WV
51	*Motacilla cinerea*	Grey Wagtail	Passeriformes Motacillinae	WV
52	*Motacill maderaspatensis*	White Browed Wagtail	Passeriformes Motacillidae	R
53	*Sturnus contra*	Pied Myna	Passeriformes Sturnidae	R
54	*Corvus splendens*	House Crow	Passeriformes Corvidae	R
55	*Phalacrocorax niger*	Little Cormorant	Pelecaniformes Phalcrocoracidae	R
56	*Phalacrocorax fusicollis*	Indian Cormorant	Pelecaniformes Phalcrocoracidae	R
57	*Psittacula krameri*	Rose Ringed Parakeet	Psittaciformes Psittacidae	R
58	*Psittacula eupatria*	Alexandrine Parakeet	Psittaciformes Psittacidae	R
59	*Psittacula cyanocephala*	Plum Headed Parakeet	Psittaciformes Psittacidae	R
60	*Eudynamys scolopaceus*	Asian Koel	Psittaciformes Cuculidae	R
61	*Centropus sinensis*	Greater Concul	Psittaciformes Cuculidae	R
62	*Tachybaptus ruficollius*	Little grebe	Podicipediformes Podicipedidae	R
63	*Tyto alba*	Barn owl	Strigiformes Strigidae	R
64	*Strix ocellata*	Motted wood owl	Strigiformes Strigidae	R
65	*Athene brama*	Spotted owl	Strigiformes Strigidae	R

Kurhade [10] founded 208 species of birds in Jaikwadi reservoirs near Ahmadnagar (M.S.). Narwade and Fartade [11] observed and recorded 165 species of birds of Osmanabad district (M.S.). Rasal and Chavan [12] founded 61 species of birds in local ecosystem of Aurangabad (M.S.). Kukade, *et al.* [13] reported 68 birds species of Chhatri lake of Amravati district (M.S.). Harney *et al.* [14] observed 37 species of birds from Kanhala pond of Bhadrawati of District Chandrapur (M.S.). Joshi and Shrivastava, [15] observed 64 species of birds in Tawa reservoir of Hoshangabad District (M.P.). Harney, *et al.* [16] founded 37 species of birds from Kanhala pond with preference to feeding habits of Bhadrawati of District Chandrapur (M.S.) and Natarajan Mariappan, *et al*, [17] observed 92 species of birds from different Habitats of Agricultural Ecosystem of Pollachi (Tamilnadu). Harney and Bhute, [18] reported 65 birds species belonging to 15 different orders and 40 families were recordedfrom the Chalbardi (Rai) lake near Bhadrawati, District Chandrapur (M.S.), India. Manjunath, *et al.* [19] observed the occurrence of 26 species of birds belonging to 8 orders of 13 families in Shri Sharanabasaveshwara lake of Gulbarga District, Karnataka. Patil [20] reported 13 species at Bhambarde Sangli, (M.S.) and Mistry [21] observed 64 species of birds belonging to 34 families were reported and around Berhampore town, Murshidabad District,

West Bengal. Mahajan and Harney [22] observed 56 species of birds belonging to 11 different orders and 27 families in Mohabala lake of Bhadrawati, District Chandrapur (M.S.), India.

The birds in and around the Jutpani lake are affected by many factors such as organic pollutant, various human activities and lack of maintenance of lake. But still avifauna of Jurpni lake is diverse. So keeping in view the varied avifauna reported, steps should be taken to do proper maintenance and does not be more polluted in future.

CONCLUSION

In the present investigation during visits it was noticed that the few birds like Indian Peafowl are rarely seen. The traditional norms and the fear of forest which previously prevented people due to exploiting and general Jungle degradation. The above observations indicate that the lake supports large varieties and all the status of avian diversity. We help to enhance lake, forest birds diversity and protect the habitats.

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REFERENCES

1. Woodcock M. Collins Handguide to the Birds of Indian subcontinent. 1980, 2nd Edn. Collins, London.
2. Ali, Salim Birds of India and Pakistan, 2nd Edition. Ali, S. (1936) the birds of central India(1987), part-1. J. Bom. Nat. Hist. Soc.Vol. 41 (1): 82-106.
3. Newton PN, Brudin S and Guy J. The birds of Kanha Tiger Reserve Madhya Pradesh, India. *J. Bom. Nat. Hist. Society*. 1986, Vol.83 (3): 977-998.
4. Ghosal DN. Avifauna of conservation areas, No. 7, Fauna of Kanha Tiger Reserve(1995). *Zoological survey of India* (*ZSI*), pp. 63-91.
5. Wadatkar JS and Kasambe R. Checklist of birds from Pohara-Malkhed reserve forest, Dist. Amravati, Maharashtra. *Zoos. Print Journal.* 2002, Vol. 17 (66): 807-811.
6. Patil Kishor G, Bobade Sumedh L, Shende Virendra A, Pawar Santosh S, Chavhan Arvind B. Aves of Ajanti reservoir region of Wena River, Hinganghat (Wardha) Central India. *Int. Res. Journal of Science & Engineering,* 2018, 6 (2): 55-76.
7. Kedar GT and Patil GP. Avifaunal diversity of Rishi lake, Karanja (Lad), Maharashtra with reference to food preference and feeding habits. *J. Aqua. Biol*. 2005, Vol. 20 (1): 35-38.
8. Kulkarni AK, Kanwate VS and Deshpande VD. Check list of birds of Shikhachi wadi, Reserovir, Dist. Nanded, Maharashtra. *J. Aqua. Biol. 2006,* Vol. 21(1): 80 - 85.
9. Kulkarni AN and Kanwate VS. Avifauna of forest Jaldhara, Kinwat, District Nanded, Maharashtra, *J. Aqua. Biol*. 2006, Vol. 21 (1): 46-51.
10. Kurhade, Sudhakar, Status and diversity of avifauna in Jaikwadi reservoirs, Maharashtra. *J. Aqua. Biol*. 2010, Vol. 25 (1): 32-40.
11. Narwade, Sujit and Fartade, M. M. Birds of Osmanabad District of Maharashtra, India. *Journal of Thretened Taxa. 2011,*Vol. 3 (2): 1567-1576.
12. Rasal GB and Chavan BL. Diversity of birds in local ecosystem Aurangabad, Maharashtra, India. *Journal of Economic and Sustainable Development*. 2011, Vol. 2 (2): 68-71.
13. Kukade RJ, Warhekar SR, Tippat SK and Dudhey NS. Avifaunal diversity of Chatri lake, Amravati, Maharashtra. Proceedings of UGC sponsored National level conference on "Environmental Biology and Biodiversity" NCEBB, 2011.
14. Harney NV, Dhamani AA and Andrew RJ. Avifaunal diversity in and around Kanhala lake near Bhadrawati, Dist-Chandrapur (M.S.), India. *Bionano Frontier. 2012,* Vol. 5 (2-I): 30-33.
15. 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*. 2012, Vol. 2 (1): 46-51.
16. Harney NV, Dhamani AA and Andrew RJ, Avifaunal diversity of Kanhala lake near Bhadrawati, Dist-Chandrapur (M.S.), with reference to food preference and feeding habits. India. *International Journal of Scientific Research.2013,* Special Issue. pp.57-59.
17. Natarajan Mariappan, BK. Ahamed Kalfan and Srinivasagam Krishnakumar, Assessment of bird

population in different habitats of agricultural ecosystem. *InternationalJournal of Scientific Research in Environmental Sciences.* 2013, Vol. 1 (11): 306-316.
18. Harney NV and Bhute KB. Diversity of avifauna in and around Chalbardi (rai) lake near Bhadrawati, District Chandrapur (M.S.), India. *Journal of Global Biosciences.* 2014, Vol. 3 (2): 399-405.
19. Manjunath Pratima Mathad, Pavitra, B., Sundar, M. and Ziayoddin, M. Aquatic avifauna of Shri Sharanabasaveshwara lake, Gulbarga District, Karnataka(2014). *International Journal of Research in Applied.* Vol. 2 (1): 183-188.
20. Patil Alaka, A. Biodiversity of Bhambarde reservoir of Sangli, Maharashtra, India(2015). *Research Journal of Recent Sciences* Vol. 4 (ISC-2014): 209-215.
21. Jayanta Mistry, Avifaunal diversity in and around Berhampore, Murshidabad district, West Bengal, India, *International Journal of Fauna and Biological Studies.* 2015, Vol. 2 (4): 06-10.
22. Mahajan, VS and Harney NV. Avifaunal diversity of Mohabala lake near Bhadrawati, District-Chandrapur (M.S.), India. *Online International Interdisciplinary Research Journal*. 2016, Vol. 6 (Special Issue) : 75-83.
23. https://en.wikipedia.org/wiki/Bird
24. https://www.ck12.org/biology/bird-ecology/lesson/Importance-of-Birds-MS-LS/
25. **https://en.wikipedia.org/wiki/Seed_dispersal**