

Vol 5 Issue 6 March 2016

ISSN No : 2249-894X

*Monthly Multidisciplinary
Research Journal*

*Review Of
Research Journal*

Chief Editors

Ashok Yakkaldevi
A R Burla College, India

Flávio de São Pedro Filho
Federal University of Rondonia, Brazil

Ecaterina Patrascu
Spiru Haret University, Bucharest

Kamani Perera
Regional Centre For Strategic Studies,
Sri Lanka

Welcome to Review Of Research

RNI MAHMUL/2011/38595

ISSN No.2249-894X

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double-blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Regional Editor

Manichander Thammishetty
Ph.d Research Scholar, Faculty of Education IASE, Osmania University, Hyderabad.

Advisory Board

Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Delia Serbescu Spiru Haret University, Bucharest, Romania	Mabel Miao Center for China and Globalization, China
Ecaterina Patrascu Spiru Haret University, Bucharest	Xiaohua Yang University of San Francisco, San Francisco	Ruth Wolf University Walla, Israel
Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Karina Xavier Massachusetts Institute of Technology (MIT), USA	Jie Hao University of Sydney, Australia
Anna Maria Constantinovici AL. I. Cuza University, Romania	May Hongmei Gao Kennesaw State University, USA	Pei-Shan Kao Andrea University of Essex, United Kingdom
Romona Mihaila Spiru Haret University, Romania	Marc Fetscherin Rollins College, USA	Loredana Bosca Spiru Haret University, Romania
	Liu Chen Beijing Foreign Studies University, China	Ilie Pinte Spiru Haret University, Romania
Mahdi Moharrampour Islamic Azad University buinzahra Branch, Qazvin, Iran	Nimita Khanna Director, Isara Institute of Management, New Delhi	Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai
Titus Pop PhD, Partium Christian University, Oradea, Romania	Salve R. N. Department of Sociology, Shivaji University, Kolhapur	Sonal Singh Vikram University, Ujjain
J. K. VIJAYAKUMAR King Abdullah University of Science & Technology, Saudi Arabia.	P. Malyadri Government Degree College, Tandur, A.P.	Jayashree Patil-Dake MBA Department of Badruka College Commerce and Arts Post Graduate Centre (BCCAPGC), Kachiguda, Hyderabad
George - Calin SERITAN Postdoctoral Researcher Faculty of Philosophy and Socio-Political Sciences Al. I. Cuza University, Iasi	S. D. Sindkhedkar PSGVP Mandal's Arts, Science and Commerce College, Shahada [M.S.]	Maj. Dr. S. Bakhtiar Choudhary Director, Hyderabad AP India.
REZA KAFIPOUR Shiraz University of Medical Sciences Shiraz, Iran	Anurag Misra DBS College, Kanpur	AR. SARAVANAKUMARALAGAPPA UNIVERSITY, KARAIKUDI, TN
Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur	C. D. Balaji Panimalar Engineering College, Chennai	V.MAHALAKSHMI Dean, Panimalar Engineering College
	Bhavana vivek patole PhD, Elphinstone college mumbai-32	S.KANNAN Ph.D , Annamalai University
	Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust), Meerut (U.P.)	Kanwar Dinesh Singh Dept.English, Government Postgraduate College , solan

More.....

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.ror.isrj.org

Review of Research

International Online Multidisciplinary Journal

ISSN: 2249-894X

Impact Factor : 3.1402(UIF)

Volume - 5 | Issue - 6 | March - 2016



ABUNDANCE AND CONSERVATION OF AVIAN POPULATION FROM HINGANI DAM, BARSHI -TALUKA, DIST- SOLAPUR , (M.S)



Anil B. Devkar¹, P.S. Talwad² and K.R. Rao³

^{1,2,3}Department of Zoology, Walchand College of Arts and Science,
Solapur Maharashtra.

ABSTRACT:

Birds play an important role in aquatic ecosystem. A given ecosystem comprises flora and fauna. There is an interaction established between these two as the flora is food source of birds. Therefore, the energy is transferred between the plants and animals. Birds receive nectar from plants and carryout the process of pollination and seed dispersal hence the conservation of birds is in top priority for the ecologists. The present investigation has been carried out during 2015 -2016 season at Hingani Dam near Solapur to find out the species variations, abundance and distribution of avian population. The study revealed that total of 60 species belonging to 19 families, out of which 30 species were residential, 25 species were migratory and 5 species were occasional visitors. From our data it was noticed that most of the birds were commonly found during entire year. However, there is a demarcation of regular occurrence and appearance of various bird species. From our work it is quite evident that avian population, in a given site is specific and it will reflect the richness and importance of

the wetland which are very useful for transaction of migratory birds.

KEY WORDS: Wetland, Avian population, Conservation, Hingani Dam etc.

INTRODUCTION:

Wetlands are very important areas in the entire country as they used for recreation, conservation of flora and fauna, prevention of floods and educational purposes. They are also important for socio-economic identity of a given community (Sivaperuman and Jayson, 2000). Aquatic birds are very important components of dams, tanks, rivers and other aquatic ecosystem. They are very important representatives as they occupy at various trophic position of food chain. These birds include water fowls, shore birds, waders and other representatives. Various scientists studied avian diversity from different regions of India. Saxena (1975) studied the flora and fauna of Bharatpur bird sanctuary which greatly emphasize the bird life. Hussain et al., (1984) also studied the avian faunal diversity from world famous Chilka lakes from Odessa. Ishwara Bhat et al., (2009) studied avian faunal diversity from Ankere wetland, Karkala, Udappi district Karnataka. They have observed that Karkala wetland attracted 44 bird species including residential and migratory. Kachare et al., (2011) studied the avian population from the wetland of Kolhapur City (M.S). They have mainly stressed on natural disturbance, seasonal variation, rainfall and human interference during festival days and emphasized that the washing, bathing, recreation and other aspects affecting avian diversity and abundance from four various water bodies in Kolhapur City, Maharashtra. Narwade et al., (2012) studied the distribution and conservation of heronries in Southwest region of Deccan, Maharashtra. They have stated that habitat loss hunting and lack of public awareness are the major factors in conservation of threatened birds.

In the present investigation an attempt has been made to study the avian population and occurrence during 2015 -2016 from Hingani Dam near Barshi, District Solapur, Maharashtra. As this area comes under drought prone region, Hingani wetland is not explored so far extensively for the study of conservation of avian population, hence this endeavour is undertaken.

Materials And Methods:

Study Area :

Hingani Dam is located on Bhogawati river at 18°08'05"N and 75°05'12"E. It was established in 1977 as a source of water supply, for irrigation, drinking and other domestic purposes (Plate No. 1). It is also used for fish farming and commercial exploitation. It is surrounded by agricultural land, aquatic weeds and with barren area.



Plate :1- Hingani Dam in Solapur District(Google maps)

Survey Methodology:

Avian population survey was conducted every week in early morning 07:00 am to 10:00 am during 2015- 2016. Birds were observed using 10 x 50 binocular (Olympus) and identified with the help of standard field guides (Grimmet et al.,1999). The photographs (using NIKON P510) were also generated for head counting and identification. Population density was estimated by using point count method and data selected from various sites were recorded for analysis .During our study, we have not disturbed the native ecosystem and obeyed the biodiversity regulations and we have untouched the bird species for the conservation.

Results And Discussion

The results of present investigation are given in the Table: 1 and Plate :2

Table.1 Avian Population from Hingani Dam during 2015-2016

Sr. No.	Name of Family	No. of Species	Migratory	Residential	Visitors
1	Passeridae	6	4	2	0
2	Ciconidae	3	0	1	2
3	Threskiornithidae	4	1	2	1
4	Phoenicopteridae	2	2	0	0
5	Ardeidae	4	1	3	0
6	Podicipedidae	1	0	1	0
7	Phalacrocoracidae	3	0	3	0
8	Anatidae	15	11	2	2
9	Alcedinidae	1	0	1	0
10	Rallidae	4	0	4	0
11	Pteroclididae	1	0	1	0
12	Scolopacidae	5	5	0	0
13	Charadriidae	4	0	4	0
14	Jacaniidae	1	0	1	0
15	Burhinidae	1	0	1	0
16	Recurvirostridae	1	0	1	0
17	Glareolidae	1	0	1	0
18	Laridae	2	1	1	0
19	Accipitridae	1	0	1	0
	Total Families: 19	Total Species: 60	Total:25	Total:30	Total:5

Plate.2. Few bird representatives from Hingani Dam during the study





The present investigation revealed variations in avian fauna and relative abundance from Hingani Dam. From our study it was observed that the overall avian population noticed during 2015 - 2016 revealed that a total of 19 families were identified out of which Anatidae family represented with 15 species, which is followed by Passeridae represented with 6 species, Scolopacidae family represented 5 species, Threskiornithidae, Ardeidae, Rallidae and Charadriidae represented with 4 species, whereas Ciconidae and Phalacrocoracidae represented by 3 species, while Phoenicopteridae and Laridae represented by 2 species, whereas Recurvirostridae, Burhinidae, Jacanidae, Pteroclididae, Alcedinidae, Podicipedidae, Glareolidae and Accipitridae represented with 1 species. Therefore the total number of 60 species were found from Hingani Dam.

Narwade and Fartade (2012) studied bird diversity from Osmanabad district Maharashtra, India. They have covered Yedsi grassland, Terna Lake and Masla village from Solapur district. They further noticed that, a total of 165 bird species reported during their survey out of which 109 found to be residential, 41 species were found to be migratory and 8 species under threatened list. Studies were also carried out from Dudhale Lake Bhadravati district Chandrapur on diversity of avian fauna (Harney, 2014). The author observed that during October 2012 to September 2013, a total of 49 species of birds were recorded out of which 42 were residential, 6 resident migrant and 1 resident migrant common. He concluded that the bird species needs conservational strategies from pollution and disturbances of human activities. Gavhane and Babare (2013) studied the Piscivorous birds of Hingani – Pangaon reservoir during 2011. They have observed a total of 8 species, 4 representatives were residential, and 3 representatives were resident migrant; and only 1 representative of migratory behavior.

From our observation, in the present study, a total of 19 families represented by 60 species, out of which 25 species found to be migratory, 30 species were found to be residential and 5 species found to be occasional visitors. From this observation it is confirmed that the Hingani Dam has very rich diversity of avian population. On an average fifty percent of birds were residential and approximately more than forty percent of bird species were migratory and ten percent of bird species were occasional visitors. This study clearly indicates that these undisturbed wetlands are used by majority of birds including aquatic birds throughout year for fulfillment of their nutritive requirement and continues their reproductive cycle. Our study reveals that Hingani Dam also attracts substantial number of migratory birds (more than forty percent) this clearly sends a message for the conversationalist, that the flora and fauna of Hingani Dam has rich nutritional and edible value for water birds. Hence, the protection and management strategies have to be implemented for habitat diversity which will finally maintain the original heritage of avian diversity from this drought prone area. Further insight is necessary to study the interrelationship between the birds and other inhabitants of Hingani Dam.

ACKNOWLEDGMENT:

Authors are greatly acknowledge the support and initiation of carrying out this diversity study from the late Principal Dr. M.M Fartade, Shri Shivaji Mahavidyalaya Barshi whose inspiration is always a driving force for our research.

REFERENCES:

- 1. Sivaperuman,C. and E. A. Jayson (2000).** Birds of Kole wetland, Thrissur, Kerala, Zoos Print Journal, 15(10):344-349.
- 2. Ishwara Bhat, P, S.S. Cristopher and B.B. Hosetti. (2009)** Avifaunal diversity of Anekera Wetland, Karkala, Udipi district, Karnataka, India, Journal of Environmental Biology, 30(6) 1059-1062.
- 3. Hussain, S.A., K.K. Mohapatra and S.Ali (1984)** Avifaunal profile of Chilka Lake, A case for conservation, JBNHS. Bombay. Technical report-4.
- 4. Saxena, V.S.; (1975)** A study of floraand fauna of Bharatpur Bird Sanctuary, Dept. of tourism, Jaipur, Rajasthan.
- 5. Kachare V.S, R.S. Pawar and D.B. Panaskar(2011),** Disturbances on the living of birds and their population in Wetlands of Kolhapur City, Maharashtra (India), European Journal of Experimental Biology, Vol 1(1):43-50.
- 6. Sujit Narwade and M.M. Fartade. (2012)** Birds of Osmanabad distric of Maharashtra, India, Journal of Threatened taxa,3(2);1567-1576.
- 7. Grimmet, R., Inskipp, T., & Inskipp, C. (1999):** Birds of the Indian Subcontinent. Christopher Helm, London. 1-384pp
- 8. Harney,N.V.(2014),** Status and Diversity of Avifauna in Dudhala Lake, Bhadravati, Distt.Chandrapur (MS), India, Asian Journal of Multidisciplinary Studies,2(3);130-135 .
- 9. Gavhane, U.V and M.G.Babare (2013),** Piscivorus Birds of Hingani- Pangaon Reservoir, Barshi (M.S) INDIA, Research Front,1(1),91-94.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished Research Paper, Summary of Research Project, Theses, Books and Books Review for publication, you will be pleased to know that our journals are

Associated and Indexed, India

- ★ Directory Of Research Journal Indexing
- ★ International Scientific Journal Consortium Scientific
- ★ OPEN J-GATE

Associated and Indexed, USA

- DOAJ
- EBSCO
- Crossref DOI
- Index Copernicus
- Publication Index
- Academic Journal Database
- Contemporary Research Index
- Academic Paper Database
- Digital Journals Database
- Current Index to Scholarly Journals
- Elite Scientific Journal Archive
- Directory Of Academic Resources
- Scholar Journal Index
- Recent Science Index
- Scientific Resources Database

Review Of Research Journal
258/34 Raviwar Peth Solapur-413005, Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.ror.isrj.org