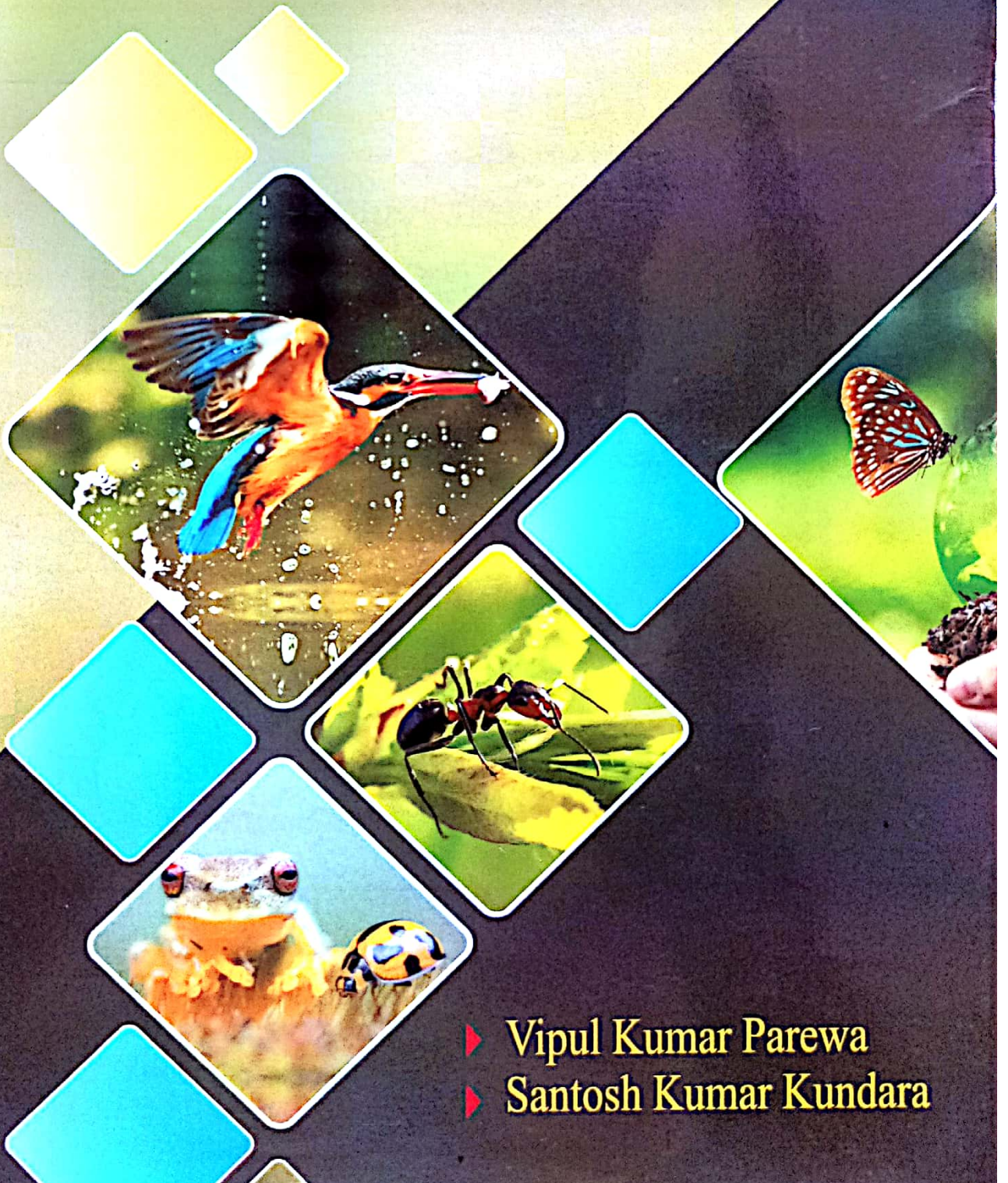




Biodiversity conservation



▶ Vipul Kumar Parewa
▶ Santosh Kumar Kundara



Vipul Kumar Parewa

Father : Sh. Gopal Lal Parewa
 Mother : Smt. Geeta Devi
 Education : M.Sc. from Zoology Department of Maharani Shri Jaya Government P. G. College, Bharatpur (Raj.)
 ◆ SLET In 2010 from Rajasthan Public Service Commission, Ajmer (Raj.)

Publication

1. कोरोना काल एवं मानव जीवन
2. वैश्विक परिदृश्य और कोरोना
3. कोरोना वायरस : एक वैश्विक महामारी
4. कोरोना काल: समसामयिक संदर्भ
5. आपदा एवं आपदा प्रबंधन
6. Challenges and Opportunities For Life During COVID-19
6. Paper presentation & Articles Published in various National and International seminars/conferences/journals and edited books.

Designation : Assistant Professor in Department of Zoology
 Sw. P.N.K.S. Govt. P.G. College, Dausa (Raj.)

Residence : Deshwalia Mahalla, Dausa, Rajasthan, 303303



Santosh Kumar Kundara

Father : Sh. Laxman Ram Bairawa
 Mother : Smt. Prem Devi Bairawa
 Education : M.Tech. (Solid State materials),
 ◆ Indian Institute of Technology Delhi (New Delhi), 2011
 ◆ M.Sc. (Physics), University of Rajasthan, Jaipur (Raj.), 2009
 ◆ CSIR-UGC NET (June 2009)

Publication

1. Optics- B.Sc. I Year
2. Mechanics- B.Sc. I Year
3. आपदा एवं आपदा प्रबंधन
4. Challenges and Opportunities For Life During COVID-19
5. Paper Presentation & Articles Published in various National and International seminars /conferences/ journals and edited books.

Designation : Assistant Professor in Department of Physics
 Sw. P.N.K.S. Govt. P.G. College, Dausa (Raj.)

Residence : Badri Vihar Colony, Near Petrol Pump, Khan Bhankari Road, Dausa-303303 (Raj.)

₹ 1495.00 \$ 24.95

ISBN 978-81-952691-9-8



9 788195 269198



LOTUS BOOKS

(House of Quality Publications)

319-A, Adarsh Nagar, Jaipur-302004

Mobile : 07597274664

SHREE

BIODIVERSITY CONSERVATION

Editor

Vipul Kumar Parewa

Assistant Professor in Zoology
Sw. P.N.K.S. Govt. P. G. College, Dausa

Co-editor

Santosh Kumar Kundara

Assistant Professor in Physics
Sw. P.N.K.S. Govt. P. G. College, Dausa



Lotus Books, Jaipur

Publisher:
Lotus Books
(House of Quality Publication)
44, Parnami Mandir, Govind Marg, Jaipur-302004
Cell : 07597939129
Email : lotusbooks123@gmail.com

BIODIVERSITY CONSERVATION

Editor
Vipul Kumar Parewa
Co- Editor
Santosh Kumar Kundara

© Subject to the content of the chapter

International Standard Book No. (ISBN)
978-81-952691-9-8
Edition : August 2021

Jurisdiction of book distribution : All India

*All rights reserved by the editor.
No part of this publication can be reproduced or
transmitted in any form or by means, without
written permission of the editor.*

*The responsibility of the facts stated, conclusions
and plagiarism, if any, in this book is entirely
that of the contributors (authors and co-authors).
And editor and publisher bear no responsibility
for them, whatsoever.*

Printed at
Trident Enterprises, Delhi

Contents

Sr. No.	Chapter Name	Page No.
1.	Biodiversity Threats And Conservation Dr. Punar Dutt Meena, Vipul Kumar Parewa	1
2.	Impacts of Biodiversity loss and Need of Sustainable Biodiversity to Restore Ecosystem Jitendra Kumar Bairwa, Santosh Kumar Kundara	11
3.	Loss of Biodiversity: The Value of Human Involvement Dr. C. P. Mahendra	18
4.	Challenges of Biodiversity : Conservation in Alwar (Rajasthan) Dr. R.K. Dhawan	32
5.	Life and Lessons from Biodiversity Conservationist: Charles Darwin Dr. Samar Vir Singh Rathore	42
6.	Biodiversity and Economic Importance of Forest Plants - A Case Study of Matsya Area Hills Dr. Ram Nath Khorwal	49
7.	Artificial intelligence: An advanced approach for conservation of wildlife biodiversity Dr. Seema Garg	56
8.	Aravalli : A Natural Habitat for Wild Life Abhishek Vashishtha	61
9.	Biodiversity : Need of Conservation and Importance (A study in the present context) Dr. Ajay Singh Kasana	68
10.	Biodiversity - An Overview Dr. Rita Gupta, Dr. Neelam Gupta	76

11.	Biodiversity conservation within the natural Habitat species Dr. Alka Yadav	86
12.	Contribution of Women in Biodiversity Conservation Dr. Chitra Shekhawat	97
13.	Challenges of Avian Biodiversity in Rajasthan Hans Raj Parihar	108
14.	Biodiversity and Its Conservation Rakesh Kumar Baser	112
15.	Medicinal Plants A Boon of Biodiversity Ankita Khorwal	118
16.	Challenges in Biodiversity Conservation Dr. Dipti Mathur, Dr. Abha Mathur	123
17.	Biodiversity: The Backbone of Human Life Om Prakash Meena	133
18.	Biodiversity conservation with special reference to Insects Rajmohan Meena	139
19.	Biodiversity Conservation in a Changing Climate Dr. Veerendra Kumar Joshi	151
20.	Bio Diversity and Ancient Indian Sanskrit Literature Dr. Sambodh Goswami	157
21.	Nilgai (Blue-Bull), Boselaphus tragocamelus: A Major Component of Biodiversity in Shekhawati Region of Thar Desert Dr. Rakesh Gautam	167
22.	Challenges of Biodiversity Conservation Sandeep Dewal	186
23.	Biodiversity Conservation and Human Rights Pratham Jindal, Kashvi Singh	194
24.	Biodiversity Losses and its Conservation Rahul Kumar Jonwal	200

Challenges of Avian Biodiversity in Rajasthan

Hans Raj Parihar*

Avian Biodiversity

Biodiversity is a term consisting of life and diversity which is related to the diversity of life on the Earth. In short, biodiversity is the biological variety and variability of life on the Earth. Avian biodiversity is related to the diversity of birds. Rajasthan is the largest state of India where biodiversity is considered to be very high. This colorful state is rich in many types of animals such as Mammals, Reptiles, insects and Birds. Avian Biodiversity of Rajasthan is also included in the rich category. Here, when many types of birds fly in the sky, a different view is created and sometimes when a flock of birds roam on the sandy dunes, the beauty here is at its peak. Birds are included in the Aves group. Flight is a very special character found in birds, which nature has given them. Most of the birds have very low weight which helps them in their flight mechanism. Many types of birds are found in Rajasthan, such as crows, doves, kites, great Indian bustard, vultures, peacock, parrot, cranes, pigeon, koels, house sparrow, tailor birds, and many others birds. Here many birds' species live around the grasslands, agricultural areas, national parks, sanctuary and urban populations.

Keoladeo Sanctuary located in Bharatpur is famous for birds, which is also known as Ghana Bird Sanctuary. Many migratory birds come here in the winter season. Apart from here, many migratory birds keep coming in their favorable environment in other places of Rajasthan also

Challenges of Avian Biodiversity

At present there are many challenges for the birds which endanger their life. Birds' lives are in danger because of these challenges. Due to this changed environment, many birds are being killed in the present time.

* Assistant Professor in Zoology, MJD Govt. College, Taranagar (Rajasthan)

There are many reasons and many challenges due to which the life of birds is in danger at present. Environment Pollution, Pesticides, Chemicals, Rising temperature of the earth, mobile tower, lack of water, cutting of forests, urbanization, means of transport etc. There are many such challenges which are very dangerous for avian biodiversity. In the face of these challenges, many birds are dying. There are many challenges to biodiversity at the present time; these challenges are as follows-

Insecticides- Rajasthan is an agriculture based state, So many crops are cultivated here. Pest control is also a big problem in agriculture sectors. These insects (Pest) are controlled by farmers through various insecticides. Insecticides are also becoming a major threat to birds. Many insecticide chemicals are being used to kill insects in agricultural fields by the farmers. Due to the spraying of these insecticides, the air and water become poisonous, due to which many birds die. Environmental pollution is increasing continuously due to these chemicals which are harmful for everyone.

Transportation - At present, motor vehicles have increased. Due to the increase in the economy, the number of vehicles is also increasing day by day. The vehicles on the roads move at a very high speed, due to which many birds die on the roads. Many times the feathers of birds can be seen scattered on the road and sometimes the birds are also lying on the road in injured condition.

Mobile Tower- Mobile revolution is another challenge, nowadays many mobile towers have been installed in every village and city, the radiation coming out of these towers is very dangerous for the birds. Many birds are getting sick from the radiation emitted from mobile towers. Mobile towers are very dangerous for avian biodiversity.

Agriculture- Rajasthan is mainly an agriculture based state where many people depend on agriculture and make their lifestyle through agricultural work. In some places, forest areas are cut for agricultural work, due to which the natural habitats are becoming limited. Therefore, when many trees are cut down for agricultural purposes, many challenges have to be faced related to feeding, habitat, nesting, breeding, etc., for the birds living there. Due to the decrease in the natural habitat and food, the number of birds is continuously decreasing which is a negative sign of avian biodiversity.

Along with deforestation, excessive amounts of insecticide chemicals are used in agricultural fields to control insects. These chemicals

used in agricultural fields are more lethal, due to which many birds die. Therefore, these chemicals are also a threat to avian biodiversity.

Urbanization- At present, urbanization is increasing everywhere at a very fast pace, due to urbanization, biodiversity is also highly affected. Many people are migrating from rural areas to big cities. Therefore, the work of development goes on at different levels in the cities. Due to increasing urbanization, the natural habitat of birds is getting destroyed. Therefore, along with development, it is also the duty of human civilization to save the natural habitat of birds.

Deforestation-Rajasthan comes in the category of a desert dry state where forest area is found in very less percentage. Even though the forest area is very less, trees are cut here due to many reasons. Due to urbanization, modernization, industrialization and other developmental purposes, trees are cut in many places which are dangerous for both environment and biodiversity. Many trees are cut while making roads, railway tracks, metros and bridges, which is harmful to the environment and biodiversity.

Global warming- Rajasthan is a hot state with extreme heat. Here in summer the temperature crosses 50 degrees. Earth's temperature also increases due to environmental pollution. Many birds have to lose their lives due to extreme heat. Many water bodies dry up due to extreme heat, so many birds die due to lack of water.

Environmental Pollution- Due to industrialization and modernization, there is a continuous increase in environmental pollution, which is dangerous for all of us. Due to increasing environmental pollution, air, water, soil etc. are all becoming poisonous. Surviving in this polluted environment is a challenge and danger for the birds. Many birds are dying in polluted environments which is harmful for avian biodiversity. Many birds die due to living in polluted air or due to consumption of polluted food and water.

Lack of water- Many geographical features are found in the state of Rajasthan. The Thar Desert is spread over a large area of Rajasthan and on the other side the Aravali hills are found here. Due to the presence of sandy soil in the desert area, rain water goes deep into the ground, due to which the water is not visible anywhere in the distance. In the rainy season, there is very little rain here, due to which the problem of water is faced in most places. In the summer season, the birds also have to face the lack of water, many birds die in summer due to lack of water.

Hunting- Many people also hunt many animals. Similarly many hunters hunt some birds. That is, some people kill birds and eat them. On the other hand, some people kill birds and sell their feathers and other parts at high prices. The feathers of some birds are very attractive, so some people also do the business of feathers which is illegal. Therefore, hunting of birds and trading of their body parts is also a big challenge for avian biodiversity.

Predators- There are some animals that kill and eat other animals, these animals are called predatory animals. Many birds also become prey to many predatory animals. Many predatory animals are found in nature, which kill and eat birds. In this way birds are eaten as food by carnivorous animals. Therefore, avian biodiversity is also lost by predation.

Diseases- In the present time, due to the changed environment, many types of diseases are also arising in birds. Medical facilities for birds are also negligible in the present time, so birds do not get medical facilities after getting injured or sick, in such a situation many birds have to lose their lives. Some time ago many birds died due to bird flu in Sambhar Lake, Jaipur.

References / Bibliography:-

1. Verma, ashok; Bird Diversity of Rajasthan Opportunities and Challenges, Himanshu Publications, 2016, print.
2. https://www.researchgate.net/publication/259844614_Status_Ecology_and_Conservation_of_Avian_Fauna_in_Jhunjhunu_District_Rajasthan
3. https://www.researchgate.net/publication/258110462_Assessment_of_Avifaunal_Diversity_of_Jhunjhunu_District_Rajasthan_including_Migratory_Species_in_Reference_to_their_Conservation_Perspective
4. <http://dlc.dlib.indiana.edu/dlc/bitstream/handle/10535/7254/116.pdf?sequence=1>
5. <https://www.threatenedtaxa.org/index.php/JoTT/article/view/1850/3151>
6. <https://www.indiatoday.in/india-today-insight/story/mass-bird-deaths-sambhar-lake-point-problem-within-1621186-2019-11-21>