

# Faunal Diversity in the Thar Desert

Gaps in Research



**A.K. Gosh**  
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## PREFACE

The term biodiversity includes : genetic diversity, species diversity and ecosystem diversity. Whereas genetic diversity is the sum of total of genetic information contained in the genes of individual plants, animals and microorganisms. Species diversity refers to the variety of habitats, biotic communities and ecological process in the biosphere.

Realising the rapid deterioration of the quality of the environment, the issues of species loss, reduction in the number of genes and genotypes in the agriculturally important species etc. has aroused great apprehension. During the Earth Summit held at Rio de Janeiro, Brazil in June, 1992, convention on biological diversity was signed by 171 countries. It recognises the national sovereignty over biological resources and calls for facilitation of access to genetic resources with "Prior Informed Consent" of the Country of origin. It also calls for transfer of technologies, including biotechnology on mutually agreed term from the developed to developing nations which are providens of the genetic resources. It is also urged that all countries should take every reasonable measure for long term conservation of the biological resources within their jurisdiction. It has, therefore, become essential to list all the biological species occurring in a country to claim intellectual property rights over them.

In the above context, the Desert Regional Station of the Zoological Survey of India, Jodhpur and the Local Chapter of Indian National Science Academy, New Delhi convened a meeting of experts to assess the status of faunal diversity in the Thar desert, gaps in research and the future lines of work for creating a data base. The Thar desert ecosystem offers a unique habitat in the hot sandy desert; its ecological scenario is fast changing which has a direct bearing on the biodiversity. The expansion of irrigated agriculture in Punjab, Haryana and northern Rajasthan has considerably altered the faunal abundance, replacing the native xeric elements by mesic forms. The escalation of human population in the past few decades has resulted into vast expansion of rain-fed cropping, thus shrinking the grazing area for wild herbivorous animals. The over-grazing carried out by the livestock animals, their number being much above the carrying capacity of aridland, has almost reversed the natural vegetational succession, leaving very little edible plants for the wild fauna. As a consequence, the number of larger

species is fast diminishing and that of smaller is increasing such as destructive rodents and insect pests.

The Meeting held in the premises of the Defence Laboratory, Jodhpur on 16 and 17 March, 1994 was attended by 50 delegates from all over the country who had the expertise on the faunal diversity of the Thar desert. The papers presented at this Meeting of Experts and a few additionally invited papers have been compiled in the present volume.

We hope that this compendium will provide the basic information about the faunal components of the Indian Thar desert. We are fully aware that, with all our efforts, a few faunal groups have not been covered in the endeavour. Attempts will be made to include them in a subsequent volume of this book.

Gratitude is expressed towards Dr. A.R. Reddy, Director and Dr. Ram Gopal, Joint Director, Defence Laboratory, Jodhpur for providing Seminar Hall and Guest House facilities during the Meeting of Experts. Thanks are due to Director, Arid Forestry Research Institute; Dy. Director, Botanical Survey of India, Jodhpur and Dy. Director, Anti-Locust Department, Jodhpur for sparing vehicles during the meeting. Grateful thanks are also due to all the staff members of Desert Regional Station, ZSI for performing hard duties to make Meeting of Experts a success.

All the participants and invited Scientists promptly submitted the manuscript of their chapters which has resulted into the fast publication of the book. Thanks are due to all the authors.

We are greatly helped by Dr. N.S. Rathore, Dr. R.N. Bhargava, Dr. Sanjeev Kumar, Dr. P.L. Kankane, Ms. Neena Tak, Ms. Padma Bohra and Dr. Partap Singh of DRS in correcting proofs of various chapters. All the secretarial work was performed by Shri V. Muraleedharan. Their timely services are appreciated and acknowledged. Dr. Harish Bohra of CAZRI and Shri A. Basit of DRS provided the colour transparencies for the dust cover. We are very thankful to them.

Jodhpur  
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