

Cataloguing Beetle Fauna (Insecta: Coleoptera) of India: Estimating Diversity, Distribution, and Taxonomic Challenges

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Abstract : Beetles, in the insect order Coleoptera are the most species-rich group on this planet today. They represent about 40% of the total insect diversity of the world. With a considerable range of landform types including significant mountain ranges, deserts, fertile irrigational plains, and hilly forested areas, India is one of the mega-diverse countries and includes more than 0.1 million faunal species. Despite having rich biodiversity, the efforts to catalogue the beetle diversity of the extant species/taxa reported from India have been less. Therefore, in this paper, the information on the beetle fauna of India is provided based on the data available with the museum collections of Zoological Survey of India and taxa extracted from zoological records and published literature. The species were listed with their valid names, synonyms, type localities, type depositories, and their distribution in states and biogeographic zones of India. The catalogue also incorporates the bibliography on Indian Coleoptera. The exhaustive species inventory, prepared by us include distributional records from Himalaya, Trans Himalaya, Desert, Semi-Arid, Western Ghats, Deccan Peninsula, Gangetic Plains, Northeast, Islands, and Coastal areas of the country. Our study concludes that many of the species are still known from their type localities only, so there is need to revisit and resurvey those collection localities for the taxonomic evaluation of those species. There are species which exhibit single locality records, and taxa-specific biodiversity assessments are required to be undertaken to understand the distributional range of such species. The primary challenge is taxonomic identifications of the species which were described before independence, and the type materials are present in overseas museums. For such species, taxonomic revisions of the different group of beetles are required to solve the problems of identification and classification.

Keywords : checklist, taxonomy, museum collections, biogeographic zones

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