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Carabid (Coleoptera) type collection at National Forest Insect Collection (NFIC), Forest Research Institute, Dehradun (India)

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Abstract

Members of family Carabidae (Insecta: Coleoptera) are a dominant group of terrestrial predators. National Forest Insect Collection (NFIC) of Forest Research Institute, Dehradun (India) has a good collection of carabids rich in type material. Here we report the details of the type specimens of 139 species included in 49 genera, 24 tribes and 14 subfamilies. Colour automontaged photographs of each type along with its original labels are also included.

Key words: Holotype, co-types, updation, digitization, Auto-montage 3-D imaging system

Introduction

National Forest Insect Collection (NFIC), Dehradun (India) is one of the richest and oldest (more than hundred years old) insect collections of India. It was conceptualized by none other than Prof. A. D. Imms, who served as head of the Forest Entomology Division. It is having a total of over three hundred thousand insects belonging to eighteen thousand authentically identified species. It is rich with holotypes and co-types of Indian subcontinent and holds over 1,800 insect types. A significant part of the type collection is composed by types of order Coleoptera with 1,244 species. Faisal *et al.* (2013) have updated and documented Buprestid type collection of NFIC.

The family Carabidae is one of the richest families of the order Coleoptera with more than 32,500 described species (Lorenz 2005a, b). Carabids are commonly known as ground beetles, inhabiting a wide variety of habitats and are a dominant group of terrestrial predators. Beetles vary in size (1/8 to 1 inch), shape and colour. NFIC holds 756 authentically identified carabid species including types of 139 species (7 holotypes and rest co-types). Types were mostly collected during 1912 to 1937 from various states of India, and one each from Iraq, Myanmar and Pakistan (pre-independence India). Collection was done by staff of the Forest Entomology Division of Forest Research Institute namely - GD Bhasin, HG Champion, Dr Cameron, BM Bhatia, CFC Beeson, AK Sharma, SN Chatterjee, RN Parker, GG Singh, M Bose, JCM Gardner, Balwant Singh, GD Pant, and EA Glennia during insect collection surveys conducted in length and breadth of the sub-continent. Other beetles were also collected from the southern states of India, mainly Karnataka and Tamil Nadu, in the project “Sandal Insect Survey”, which was aimed at finding the pests of sandal tree and to investigate the sandal spike disease. Some species were also collected by unknown trainees who studied at Indian Forest College, a part of then FRI under the headings “Forest Zoological Collection” and “Students’ Collection”.

NFIC is a rich and well maintained insect collection being frequently referred to for insect identification by the scholars and scientists of various research and educational institutions. Frequent handling of delicate pinned insect specimens exposes them to the risk of deformation and damage. In order to reduce the risk of damage to the specimens digital documentation of type specimens in NFIC was conducted. This would enable easy and fast identification and also help to conserve and protect the insect collection as a future resource.

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