Species Diversity and Role of Some Dominant Bumblebee Species in the Pollination Ecology of Kashmir Himalaya

ABSTRACT

The present study is based on approximately 3700 adult specimens of all castes (queens, workers and males) belonging to genus *Bombus* Latrielle covering 30 species distributed over ten subgenera of the family Apidae under subfamily Apinae from this region. Thirty five major and fifteen minor collection cum survey tours were conducted during 2007 to 2010. More than two hundred host plants of these insects have been put on record, out of which 160 host plants has been recorded for the first time from the study area. A workable key for both male and female of all the species, diagrammatic colour pattern along with coloured photographs, photographs of important food plants and also photographs of bumblebees while visiting the variety of food plants have been provided. Out of 30 species documented during the present work three species have been recorded for the first time from this region where as one species is being reported for the first time from India. Colony size, foraging range and visiting timing’s of some dominant species of *Bombus* have been provided for which direct observations and marking method was employed at different altitudes of Kashmir Himalaya. Studies have also been made with respect to food preference of different bumblebees. The present study not only demonstrates the importance of different habitats but also provide quantitative evidence in the form of species richness, evenness, and characterization of species diversity and abundance of common bumblebee species portraying their role in pollination. The present study was conducted to document the bumblebee fauna for the first time in Kashmir Himalaya so that necessary steps may be taken to ensure the survival of these fascinating creatures for future generations.

Submitted by
Sd/
Rifat H. Raina
Research Scholar
Department of Zoology & Environmental Sciences

Co-Supervisor
Sd/
Dr. Z.H. Khan
Associate Professor
SKUAST-K Srinagar

Supervisor
Sd/
Dr. M.S. Saini
Professor
Department of Zoology & Environmental Sciences