

Predatory threat to Himalayan bumblebees: *Vespa velutina auraria* and its impact on *Bombus albopleuralis*

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The study presents a newly observed predation of *Bombus albopleuralis*, a key pollinator in the Himalayan ecosystem, by an invasive Asian predatory hornet, *Vespa velutina auraria*. This unprecedented observation was recorded during a field study at the Jawaharlal Nehru Memorial Botanical Garden of the Kashmir valley, a site known for its rich diversity of indigenous bees and flowering plants. Numerous individuals of *B. albopleuralis* were observed foraging for nectar and pollen on loquat plants (*Eriobotrya japonica* Lindl.) when they were heavily attacked by a predatory hornet, a species known for its aggressive behaviour, which poses a substantial threat to the pollination of native pollinators. The hornets were observed to engage in rapid aerial pursuits and predatory behaviour on loquat plants, attempting to capture bumblebees during peak foraging hours (11:30 am–12:30 pm). A total of 32 specimens of predatory hornets were collected using an insect collection net during their active predation time. This marked a new instance of such predatory behaviour in the northwestern Himalayan region and raises concerns about the potential impact of invasive species on pollinator diversity. Field observations and photographic evidence indicate active predation and the possible establishment of the Asian predatory hornet in the study area. Given the ecological and agricultural importance of bumblebees in the pollination of both wild and cultivated crops in the mountain ecosystem, this emerging threat requires immediate monitoring and management strategies to mitigate the impact of invasive predators on native pollinators, pollination networks, and biodiversity conservation.

Keywords: Biodiversity, *Bombus albopleuralis*, *Eriobotrya japonica*, predation, *Vespa velutina auraria*