



First record of *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae) from South India

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ABSTRACT: The variegated ladybird, *Hippodamia variegata* (Goeze) (Coleoptera: Coccinellidae: Coccinellini), is reported for the first time from Karnataka in South India. The present distribution of the beetle and the implications of its further spread are discussed.

KEY WORDS: Coccinellidae, distribution, *Hippodamia variegata*, India

The variegated ladybird, *Hippodamia variegata* (Goeze) (= *Adonia variegata* (Goeze)) (Coleoptera: Coccinellidae), is of Palaearctic origin and widely distributed in the Afrotropical and Oriental regions. It has been recorded in Europe, South Africa, Kenya, China, India, Canada, USA, Chile, and Australia (Franzmann, 2002). In Australia, it is reported to be rapidly spreading, causing concern about its invasive potential and possible adverse non-target effects. It was first recorded in Australia in 2000, but within a year of its discovery, it had spread to a distance of 800 km north and south and 500 km west of the original collection point (Franzmann, 2002).

Hippodamia variegata was reported from India as far back as 1903 (Stebbing, 1903), mainly from the very cold climates of the Himalayan region. It is widely and commonly distributed in the colder climates of north, northwestern and northeastern regions and plains of north India and up to 14000-15000' altitudes in the Himalayas. It is also distributed in the neighbouring countries such as

Nepal, Bhutan, Pakistan, and Myanmar. It is a very effective predator of *Eriosoma lanigerum* (Hausmann), *Lipaphis erysimi* (Kaltenbach) and several other aphids in northern India. Kapur (1942) studied its bionomics and immature stages. From India, the author has examined several specimens from Arunachal Pradesh, Delhi, Himachal Pradesh, Jammu & Kashmir, Punjab, Uttar Pradesh, Utranchal, and West Bengal. Butani and Bharodia (1984) reported its occurrence in Gujarat in association with groundnut aphid. Of late, it has expanded its geographical range into western India, going by the large number of specimens received for identification from the states of Gujarat and Maharashtra.

Recently, a series of specimens collected on cauliflower from Belgaum, and two specimens from Dharwad, Karnataka, were received for identification. This is very interesting, as it constitutes the first recorded instance of its occurrence in the southern region of India. This record definitely indicates that *H. variegata* is

spreading southwards to hitherto undistributed areas in India as it has been doing in various other parts of the world (Elliott *et al.*, 1996; Wheeler and Stoops, 1996). Several species of lady beetles such as the Asian multicolored ladybird (*Harmonia axyridis* (Pallas)) and the seven-spotted ladybird (*Coccinella septempunctata* L.) have been definitely implicated as causing non-target effects, including adverse effects on the fauna of native lady beetles in North America. The rate of spread of *H. variegata* in North America has been reported to be slower than that of *C. septempunctata* and *H. axyridis* (Wheeler and Stoops, 1996; Krafsur *et al.*, 2005), which seems to be the case in India too. It would be worthwhile to monitor the further spread of *H. variegata* in southern states of India and the adverse effects, if any, on the composition of the local fauna of lady beetles.

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