



Record of brown lacewing, *Micromus australis* Hagen (Neuroptera: Hemerobiidae) from cotton and sorghum ecosystem

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ABSTRACT: Studies were made to explore the potentiality of *Micromus igorotus* for the management of aphids in cotton (*Aphis gossypii* G.), sorghum (*Melanaphis sacchari* Zehntner) and safflower (*Uroleucon carthami* Theo.) ecosystems during November 2004-December 2005 at main Agricultural Research Station, University of Agricultural Sciences, Dharwad, Karnataka, India. Post-release observations revealed the presence of a mixture of brown lacewing larvae distinctly different from that of *M. igorotus* in cotton and sorghum ecosystems. These were identified as *Micromus australis* Hagen and *Micromus timidus* Hagen occurrence of *M. australis* in cotton and sorghum ecosystems and on the prey aphids constitutes a new record.

KEY WORDS: Cotton, ecosystem, *Micromus australis*, sorghum

Hemerobiids, which are similar to chrysopids but relatively unfamiliar to most people, are widely distributed in the tropics and temperate regions barring a few species, which have a very limited distribution. At present, 575 species of hemerobiids are known under 27 genera. These have been reported on soft-bodied insects such as aphids, insect eggs and also on spider mites (McLeod and Stange, 2005; Oswald, 1994). Hemerobiids, commonly known as brown lacewings (BLW), are predominantly beneficial in nature. Recently, *Micromus igorotus* Banks has been identified as a potential predator of sugarcane woolly aphid (SWA), *Ceratovacuna lanigera* Zehntner (Homoptera: Aphididae), and is being deployed in the management of SWA (Lingappa *et al.*, 2004).

Efforts were made to explore the potentiality

of *M. igorotus* for the management of aphids in cotton, sorghum and safflower ecosystems during November 2004 - December 2005 at main Agricultural Research Station, University of Agricultural Sciences, Dharwad, Karnataka, India.

Intensive post-release observations revealed the presence of a mixture of BLW larvae distinctly different from that of *M. igorotus* in cotton and sorghum ecosystems. These larvae were collected and reared separately on cotton aphid, *Aphis gossypii* G. and sorghum aphid, *Melanaphis sacchari* (Zehntner). These were identified as *Micromus australis* Hagen and *Micromus timidus* Hagen. The occurrence of *M. australis* in cotton and sorghum ecosystems and on these prey aphids is reported for the first time. *Micromus timidus* has been reported on *Melanaphis* (as *Longiunguis*)

sacchari (Patnaik *et al.*, 1977); *Lipaphis erysimi* (Kalt.) (Raychaudhuri *et al.*, 1981); *Toxoptera aurantii* (Boyer de Fonscolombe), *Aphis craccivora* Koch (Radhakrishnan and Muraleedharan, 1989), *A. gossypii*, *A. spiraecola* Patch, *L. erysimi* and *Myzus persicae* (Sulzer) (Rao *et al.*, 1990 and Sunita Devi *et al.*, 2002) and *Myzus nicotianae* Blackman (Singh *et al.*, 1994). Detailed investigations have been initiated on the bioecology of these BLWs to explore their suitability as a component in pest suppression with special reference to aphids on cotton, sorghum, maize, ladies' finger, etc.

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