

Parasitoids of the Hop Aphid (Homoptera: Aphididae) on *Prunus* during the Spring in Washington State¹

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J. Agric. Urban Entomol. 18(3): 141-147 (July 2001)

ABSTRACT In 1999, 802 primary parasitoids and 1,448 hyperparasitoids were reared from 83 samples of hop aphids, *Phorodon humuli* (Schrank), collected from *Prunus* sp. at 47 sites in the hop-growing area of south central Washington. In 2000, we collected 94 primary parasitoids and 180 hyperparasitoids in 59 samples from 28 sites. Parasitoids (primary plus hyperparasitoids) were reared from over 86% of the samples in 1999 and 61% of the samples in 2000. *Lysiphlebus testaceipes* (Cresson) was the most abundant primary parasitoid, accounting for 81.6% of the primary parasitoids in 1999 and for 52.1% in 2000. *Praon unicum* Smith was second in abundance with 14.3% in 1999 and 37.2% in 2000. Other primary parasitoids were Aphelinidae (0.9% in 1999 and 4.3% in 2000), *Aphidius ervi* Haliday (1.0% in 1999 and 1.1% in 2000), *Diaeretiella rapae* (M'Intosh) (0.3% in 1999 and 0% in 2000), and *P. occidentale* Baker (0.4% in 1999 and 0% in 2000). Aphelinidae have not been reported previously from hop aphids. *D. rapae* and *P. occidentale* Baker are new records for the hop aphid on *Prunus*. Hyperparasitoids were in the genera *Alloxysta* (Charipidae), *Asaphes* and *Pachyneuron* (Pteromalidae), and *Dendrocerus* (Megaspilidae). This initial study indicates that the primary parasitoids have potential as biological control agents.

KEY WORDS Homoptera, Aphididae, *Phorodon humuli*, *Humulus lupulus*, hops, *Prunus*, parasitoids, *Lysiphlebus testaceipes*, *Brachycaudus helichrysi*, *Praon unicum*

¹Accepted for publication 20 September 2001.