

SCIENTIFIC NOTE

Two New Host Records for *Rhyncopalpus brunellus* Hampson (Lepidoptera:Arctiidae)

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Abstract. *Rhyncopalpus brunellus* Hampson (formerly known as either *Selca brunella* or *Nola brunella*), a leaf-skeletonizing caterpillar, was found causing obvious foliar damage to some roadside specimens of *Pterolepis glomerata* (Rottb.) Miq. and *Tibouchina longifolia* (Vahl) Baill. ex Cogn. (Melastomataceae) on the island of Hawaii. These constitute new host records for this moth, which was intentionally introduced for biological control of another melastome weed, *Melastoma septemnerium* Lour. (*M. malabathricum* sensu Hawaiian botanists, non L.).

Approximately 20 species of Melastomataceae have been introduced into Hawaii, and at least 15 have naturalized to some extent and can be considered weeds. Several are on the Hawaii Department of Agriculture Noxious Weeds List and some are problem weeds in forests and wetter agricultural lands. One of these species, *Melastoma septemnerium* Lour. (= *M. candidum* D. Don), was first collected in Hawaii in 1928. Its native range includes Southern China and islands of the Western Pacific (Wagner et al. 1990). It is now one of the dominant plants over large areas of the lower Puna district on the island of Hawaii and the *mauka* (upland) areas of the Lihue district on Kauai.

The Hawaii Department of Agriculture (HDOA) conducted a biological control program for *M. septemnerium* in 1957-1965 (Krauss 1965). Three species of Lepidoptera were released, two of which became established: *Bocchoris* (= *Ategumia*) *fatualis* (Lederer) (Pylalidae) and *Rhyncopalpus brunellus* Hampson (Noctuidae). Feeding tests conducted by the HDOA in 1965 found that larvae of *R. brunellus* fed on the only other two species of melastomes tested, *Tibouchina urvilleana* (DC) Cogn. (*T. semidecandra* sensu Hawaiian botanists, non (DC) Cogn.) and *Medinella magnifica* Lindl. Small numbers of the moth were reared to adults in quarantine on each of these hosts. Many other families of plants were tested, and results indicated that this moth was specific to Melastomataceae.

On November 12, 1998, while in the Waiakea Timber Management Area in the Waiakea Forest Reserve off of Stainback Highway, island of Hawaii, the authors noticed several *Pterolepis glomerata* (Rottb.) Miq. plants with extensive foliar damage that looked very similar to *R. brunellus* damage on nearby *M. septemnerium* plants. Cuttings were collected with larvae that appeared to be Arctiidae and taken back to the laboratory to rear the larvae to adults. Six adult *R. brunella* emerged by November 14, 1998. Overall foliar damage to the population of *P. glomerata* in the vicinity was only light, but heavy on certain plants. A few months later, on March 18, 1999 at this same site, similar heavy foliar damage was noticed on another naturalized melastome, *Tibouchina longifolia* (Vahl) Baill. ex Cogn. Again, cuttings were taken with nine similar larvae and held for emergence in the laboratory. Six *R. brunella* adults emerged from this material by April 23, 1999.

These new host records on melastomes are not surprising in light of the results of the host specificity tests done in 1965. Nonetheless, it is interesting to note that *T. urvilleana*, *T.*

longifolia, and *P. glomerata* are New World melastomes, unlike *M. septemnerium*. Specimens of the adults reared out were deposited in the collection of the Hawaii Department of Agriculture in Honolulu.

Literature Cited

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