



Review and key to Nearctic *Lathrolestes* Förster (Hymenoptera: Ichneumonidae), with special reference to species attacking leaf mining tenthrininid sawflies in *Betula* Linnaeus (Betulaceae)

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Abstract

All Holarctic members of the genus *Lathrolestes* Förster (Hymenoptera: Ichneumonidae) were reviewed. Five species are described as new: *L. syringe* Reshchikov **sp. nov.**, *L. barroni* Reshchikov **sp. nov.**, *L. fissus* Reshchikov **sp. nov.**, *L. thomsoni* Reshchikov **sp. nov.**, and *L. soperi* Reshchikov **sp. nov.** The last two species were reared from *Profenusa thomsoni* (Konow, 1886), an invasive European birch leafmining sawfly found in North America. *Lathrolestes nasoni* Davis, 1897 is synonymized with *L. caudatus* (Thomson, 1883); *L. scutellatus* (Ashmead, 1890) **stat. rev.** is reestablished as a valid species.

Key words: Ichneumon flies, Ctenopelmatinae, Perilissini, Tenthredinidae, birch, biocontrol

Introduction

The Nearctic species of the genus *Lathrolestes* Förster (Hymenoptera, Ichneumonidae) were last revised by Barron (1994). The Palearctic members of the genus have not been revised. *Lathrolestes* included previously 66 species worldwide, with 36 species from the Nearctic region, including 2 introduced Palearctic species; 25 species from the Palearctic region, 1 from the Ethiopian, 4 from the Neotropical and 2 from the Oriental (Yu and Horstmann 1997, Gauld *et al.* 1997) regions.

The original diagnosis of the genus *Lathrolestes* was given by Burks (1952) and later added by Townes (1970). However, these diagnoses do not provide an adequate separation of this genus from the genera *Priopoda* Holmgren, 1856 (Hymenoptera, Ichneumonidae) and *Perilissus* Förster, 1855 (Hymenoptera, Ichneumonidae). In his 1994 revision, J.R. Barron included within the genus *L. protenus* Barron, 1994, a species with occipital carina intercepting the hypostomal carina before the base of mandible, a character state shared by members of the genus *Perilissus*. However, Barron (1992) states that *L. protenus* has very short and broad parameres, a character that *Perilissus* doesn't share (Barron 1992). On the other hand, *Perilissus nudus* Barron, 1994 has occipital carina doesn't intercept the hypostomal carina before the base of mandible (Barron 1994). Townes (1970) noted that first metasomal tergum of members of the genus *Priopoda* is 2.0 times as long as wide; whereas in members of the genus *Lathrolestes*, the first metasomal tergum is only 1.65 times as long as wide.

Larvae of *Lathrolestes* species feed as koinobont endoparasitoids of sawfly larvae, mainly of the tribe Fenusini (Hymenoptera, Tenthredinidae), which feed on foliage of deciduous trees or shrubs (Pschorn-Walcher and Altenhofer 1989). Several species are parasitoids of other, non-leaf-mining Tenthredinidae e.g. *Lathrolestes luteolator* (Gravenhorst, 1829) attacks several species of *Caliroa*. There are species that are parasitoids of leafmining lepidopterans in the Eriocraniidae (Rohwer 1914, Heath 1961, Carlson 1979), *L. clypeatus* (Zetterstedt, 1838) and *L. mnemonicae* (Rohwer, 1914).