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Japanagromyza Sasakawa (Diptera: Agromyzidae) of Africa

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Abstract

The African *Japanagromyza* Sasakawa are revised, including a key and genitalic illustrations, and the limits of the genus are discussed. Nine species are recognized, which include four previously described species and four newly described species: *J. crinicolis* **spec. nov.**; *J. dolobrata* **spec. nov.**; *J. laureata* **spec. nov.**; *J. nesiota* **spec. nov.** The ninth species ("female 1") is described but not formally named as it is known only from females. *Japanagromyza salicifolii* is known from Palaearctic Africa on *Populus* and *Salix*. The remaining eight species are known from the Afrotropical Region; of these, only *Japanagromyza parvula* Spencer has a known host association [Fabaceae - *Crotalaria*].

Key words: Palaearctic, Afrotropics, new species, redefinition, description, key

Introduction

Originally described from Japan, *Japanagromyza* (type species: *Agromyza duchesneae* Sasakawa) contains approximately 80 species across in all biogeographic Regions excluding Antarctica that are primarily distributed in tropical and subtropical areas. Nine species are now known from the Afrotropics, four of which are described here as new: *J. crinicolis* **spec. nov.**; *J. dolobrata* **spec. nov.**; *J. laureata* **spec. nov.**; *J. nesiota* **spec. nov.** One additional new species known from a series of specimens from the Republic of South Africa is referred to here only as "female 1" because males are unknown. The actual diversity of this genus in Africa is likely much higher than that presented here—an artifact of its infrequent occurrence in natural history collections compared to other agromyzine genera—but this diversity will certainly increase with additional collecting in both temperate and tropical countries.

While often superficially uniform in external appearance, *Japanagromyza* species belong to a number of heterogenous lineages that are mostly revealed in details of the male genitalia, and together may not comprise a single natural unit. The higher phylogenetic relationships of *Japanagromyza* have never been thoroughly treated in the literature and are still uncertain, although the genus has historically been interpreted as an "intermediate" between *Agromyza* and the remaining agromyzine genera. Thus far, this relative position between the two groups has been supported in quantitative analyses by Dempewolf (2001) and Scheffer *et al.* (2007), although only single exemplars were used and more inclusive studies may reinterpret our understanding of the genus.

Japanagromyza was originally circumscribed by Sasakawa (1958, 1961) to include leaf-mining species with one pair of strong prescutellar acrostichal setae, as seen in *Agromyza*, two strong dorsocentral setae and a posteromedial seta on the fore tibia, which is seen in some *Melanagromyza*, as well as a restricted amount of dark pigment on the halter. Soon after Sasakawa's (1958, 1961) treatments of the genus, Spencer (1961a, 1961b, 1961c) expanded the concept of *Japanagromyza* to include species with an entirely pale or predominantly dark halter (either yellow apically or along the inner surface), as well as species that were lacking either the fore tibial seta or the prescutellar acrostichal. This led to the description of the African species *J. parvula* Spencer and *J. meridiana* Spencer.

Although these two African species were described without reference to male genitalic features, continued attention to these highly informative characters allowed for an additional shift in genus concept that supported the earlier inclusion of taxa missing either the fore tibial or prescutellar acrostichal seta. While both sets of setae never

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