

Redescription of *Vidalia impressifrons* Robineau-Desvoidy, the Type Species of *Vidalia* Robineau-Desvoidy (Diptera: Tephritidae), with Notes on Its Taxonomy and Phylogeny

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Ho-Yeon Han (2002) Redescription of *Vidalia impressifrons* Robineau-Desvoidy, the type species of *Vidalia* Robineau-Desvoidy (Diptera: Tephritidae), with notes on its taxonomy and phylogeny. *Zoological Studies* 41(2): 153-157. The taxonomic status of *Vidalia* Robineau-Desvoidy and the identity of its type species, *V. impressifrons* Robineau-Desvoidy, have been highly confused in the past. This problem was resolved by the designation of a neotype for *V. impressifrons* in 1999. To supplement this neotype designation, *V. impressifrons* is fully redescribed, illustrated, and distinguished from its congeners. Its phylogenetic position within *Vidalia* is also discussed based on a detailed examination of the male neotype, which is the only known specimen of this species. <http://www.sinica.edu.tw/zool/zoolstud/41.2/153.pdf>

Key words: Diptera, Tephritidae, *Vidalia impressifrons*, Neotype.

The genus *Vidalia* Robineau-Desvoidy currently includes 16 valid Oriental and Palaearctic fruit fly species (Han et al. 1994b, Han 1999, Norrbom et al. 1999). There has been a complex nomenclatural history of this genus, and the identity of the type species (*V. impressifrons* Robineau-Desvoidy) is crucial to understanding the generic concept and demarcation. Han (1999) provided the following summary regarding this matter:

There has been controversy about the name *Vidalia*, because the original description (Robineau-Desvoidy 1830) is inadequate, and the type specimen(s) from the East Indies (Indonesia) of the type species, *V. impressifrons* Robineau-Desvoidy, apparently has been lost (Munro 1938, Hardy 1987, Han et al. 1994b). Munro (1938) proposed *V. ceratophora* Bezzi as "neogenotype", but that was not a valid nomenclatural act. Since then, many tephritid species with enlarged male frontal setae have been placed in *Vidalia*. Han et al. (1993 1994a) removed a number of species to 3 other genera (*Paratrypeta*, *Cornutrypeta*, and *Stemonocera*), and later established a newly recognized monophyletic group under the resurrected name, *Pseudina* Malloch (Han et al. 1994b). However, Hancock and Drew (1995) synonymized *V. quadricornis* Meijere with *V. impressifrons*, res-

urrecting *Vidalia* for this taxon. Despite the fact that the original description of *V. impressifrons* is not adequate for positive identification, Hancock and Drew's treatment was followed by two recent major tephritid publications (Korneyev 1998, Norrbom et al. 1999). After e-mail discussion involving seven tephritid taxonomists (Freidberg, Han, Hancock, Korneyev, Merz, Norrbom, and White), we agreed to keep the long-used name *Vidalia* by designating a neotype for the sake of nomenclatural stability.

Based on the above decision, Han (1999) designated the holotype of *V. quadricornis* as the neotype of *V. impressifrons* to end this controversy. To supplement this neotype designation, I herein provide a full description of *V. impressifrons* including its genitalic structure, which contains critical information about its relationships to other members of the genus *Vidalia*. The male neotype is the only known specimen of *V. impressifrons*.

MATERIALS AND METHODS

The holotype male of *Vidalia quadricornis* (=