

***Eosmallota*, a new name for *Klossia* Curran, a genus of flower flies (Diptera: Syrphidae)**

BY F. CHRISTIAN THOMPSON, NIGEL WYATT & XIMO MENGUAL

FCT: *Department of Entomology, Smithsonian Institution, Washington, D.C., 20013-7012, U.S.A.;*
e-mail: thompsonf@si.edu

NW: *Department of Life Sciences, The Natural History Museum, Cromwell Road, London SW7 5BD,*
England; e-mail: N.Wyatt@nhm.ac.uk

XM: *Zoologisches Forschungsmuseum Alexander Koenig, Leibniz-Institut für Biodiversität der Tiere,*
Adenauerallee 160, D-53113 Bonn, Germany; e-mail: x.mengual@zfmk.de

Accepted: 4 October 2017; Published: 27 April 2018

ABSTRACT

A genus of flower flies, which is endemic to south-east Asia, is renamed *Eosmallota* Thompson, Wyatt & Mengual, new name for *Klossia* Curran, 1931. The one included species, *O. singularis* (Walker, 1857) comb. n., is diagnosed, illustrated and lectotype designated.

Keywords: Diptera, flower flies, hoverflies, Syrphidae, new name

INTRODUCTION

Flower flies as adults are common and critical pollinators (Ssymank *et al.* 2008; Ssymank & Kearns 2009; Inouye *et al.* 2015). The immatures have diverse habits (Rotheray 1993); those of *Eosmallota* are unknown at present. They are likely to be rat-tailed maggots found in various aquatic media, as are all other known larvae of Eristalini (Rotheray & Gilbert 1999), the group to which this genus belongs. The Oriental flower fly fauna is poorly documented, without any overview except for a species catalog (Knutson, Thompson & Vockeroth 1975). Regional faunas have been documented and that of the Malaysian subregion was covered by Curran (1928; 1931a; 1931b). Curran (1931b) created the genus *Klossia* for his new species *dimidiata*, which is now treated as a junior synonym of *Eristalis singularis* Walker, 1857. He based his new genus and species on a single female from Bettotan, near Sandakan (Sabah, Borneo Island, Malaysia). However, the name *Klossia* is unavailable as it is preoccupied by Schneider (1875): so it is now necessary to provide a replacement name.

MATERIAL AND METHODS

Morphological terminology follows Thompson (1999) and that used by all major Diptera manuals (Vockeroth & Thompson 1987; Thompson & Rotheray 1998; Thompson, Rotheray & Zumbado 2010). The classification followed is that of *Systema Dipteriorum* (Thompson & Pape 2013).

Genus *Eosmallota* nom. n.

Klossia Curran, 1931b: 370. Type-species, *dimidiata* Curran [= *singularis* Walker, 1857] by original designation. Preoccupied by Schneider (1875).

Eosmallota nom. n., new name for *Klossia* Curran.

Diagnosis: *Eosmallota* Thompson, Wyatt & Mengual belongs to the genus-group *Kertesziomyia* (subfamily Eristalinae, tribe Eristalini). Only females are currently known. They are mostly dull blackish, but with some shiny areas including the face and anterior half of the frons, some of the thoracic pleurae, the posterior margin of the scutellum and on the abdomen, mainly on the posterior tergites. Face tuberculate; antenna dark brown with arista bare; eye bare; head dichoptic, the frons distinctly narrowing towards vertex where its width is approximately one quarter that of the head; postpronotum pilose; thorax dull black dorsally with short black hairs but with some pale yellowish-brown hairs laterally immediately in front of suture, also with indistinct pair of paler greyish-brown central vittae, anepimeron with triangular portion bare; katepimeron bare; scutellum with weak emarginate rim, subscutellar fringe absent; abdomen with short dark hairs dorsally except with longer pale yellow hairs on anterior corners of tergite 2 and on entire dorsal surface of tergites 4 and 5; squamae dark brown, legs dark but with front and mid tibiae yellowish white basally, and hind femur and tibia both slightly swollen, with short thick dark hairing; postalar pile tuft present; wing dark brown on slightly more than basal half contrasting strongly with hyaline outer wing; wing venation generally similar to *Eristalis* with vein R_{4+5} strongly sinuate and crossvein r-m slightly basal to middle of discal cell, cell R_1 widely open. Body length: 9.5mm.

Remarks: *Klossia* has previously been considered a synonym of *Mallota* (Knutson Thompson & Vockeroth 1975: 354). *Mallota* Meigen, 1822, however, is now considered to be restricted to those species that have a mystax (= pilose clypeus), and the species that lack such are now placed in other genera. In any case, *singularis* Walker is generally much more similar in its appearance to some species of *Kertesziomyia* Shiraki, 1930, than it is to *Mallota*, in view of its relatively small size, the largely black coloration with some shiny areas on the head, thorax, and abdomen, and short 'hairing'. Additionally a postalar pile tuft is present in this species, a character that is typical of the *Kertesziomyia* group. Previously, Thompson (2003) synonymized *Klossia* with *Kertesziomyia*, but because of its distinctive habitus and wing coloration this species is here recognized as belonging to a distinct genus in this group. The wings of *singularis* have the cell R_1 widely open, this being generally considered typical of the tribe Helophilini, which includes *Mallota*, but in *Kertesziomyia* this character is variable, this cell being petiolate in some species and open in others.

Etymology: The name *Eosmallota* is an arbitrary combination of letters created to be similar to *Mallota* and with the prefix *Eos-* to indicate that the group is associated with the East (Oriental Region). The name is to be treated as feminine.

Eosmallota singularis (Walker, 1857) comb. n.
(Figs 1–2)

Eristalis singularis Walker, 1857: 17. Type-locality: Singapore (Lectotype, ♀, BMNH, here designated).

Klossia dimidiata Curran, 1931b: 370. Type-locality: Malaysia, Sabah, Bettotan, near Sandakan (Holotype, ♀, BMNH), synonymy by Knutson, Thompson & Vockeroth (1975).

Distribution: Malaysia (Borneo) and Singapore.

Type material: The type-species of Curran's new genus, *dimidiata* Curran, is a junior synonym of *Eristalis singularis* Walker. *Eristalis singularis* was described from an unspecified number of female specimens collected by A.R. Wallace in Singapore.

Today there remains a single specimen in collections at The Natural History Museum (BMNH, London, U.K.), and this specimen is herewith designated lectotype, thus avoiding the problem of the assumption of holotype (see Vane-Wright 1975; ICZN 1999: 74.6).



Figs 1–2. — *Klossia dimidiata* Curran (now *Eosmallota singularis* (Walker)), holotype, ♀, habitus: 1, dorsal view; 2, lateral view.

The lectotype of *singularis* Walker is in quite poor condition, being badly discolored and with some damage, especially to the thorax, though the distinctive wing pattern can still be seen. The holotype of *dimidiata* Curran is in fairly good condition and is illustrated in Figs 1 & 2). The species is apparently rare in nature as these two type specimens are the only ones known to date. The two localities from which it has been recorded are both at low altitudes near the coast in Peninsular Malaysia and Borneo, in areas where the natural forest has now been extensively lost due to urbanization or logging.

ACKNOWLEDGEMENTS

Images of the holotype of *Klossia dimidiata* Curran are copyright of The Trustees of The Natural History Museum, London.

REFERENCES

- Curran, C.H.** 1928. The Syrphidae of the Malay Peninsula. *Journal of the Federated Malay States Museum* **14**: 141–324, pls 3–4.
- 1931a. Additional records and descriptions of Syrphidae from the Malay Peninsula. *Journal of the Federated Malay States Museum* **16**: 290–338.
- 1931b. Records and descriptions of Syrphidae from North Borneo including Mt. Kinabalu. *Journal of the Federated Malay States Museums* **16**: 333–376.
- ICZN** (International Commission on Zoological Nomenclature) 1999. *International Code of Zoological Nomenclature* (Ed. 4). London.
- Inouye, D., Larson, B.M.H., Ssymank, A. & Kevan, P.G.** 2015. Flies and flowers III: Ecology of foraging and pollination. *Journal of Pollination Ecology* **16**: 115–133.
- Knutson, L.V., Thompson, F.C. & Vockeroth, J.R.** 1975. Family Syrphidae, pp. 306–374. In: Delfinado, M.D. & Hardy, D.E. (Eds) *A catalog of the Diptera of the Oriental Region. Volume II. Suborder Brachycera through Division Aschiza, Suborder Cyclorrhapha*. Honolulu: The University Press of Hawaii.
- Rotheray, G.E.** 1993. Colour Guide to Hoverfly Larvae (Diptera, Syrphidae) in Britain and Europe. England. *Dipterists Digest* **9**.
- Rotheray, G.E. & Gilbert, F.** 1999. Phylogeny of Palaearctic Syrphidae (Diptera): evidence from larval stages. *Zoological Journal of the Linnean Society* **127**: 1–112.
- Schneider, A.** 1875. Note sur la psorospermie oviforme du Poulpe. *Archives de Zoologie Expérimentale et Générale*, Paris (1)**4**: 40–45.
- Ssymank, A. & Kearns, C.** 2009. Flies – Pollinators on two wings, pp. 39–52. In: Ssymank, A., Hamm, A. & Vischer-Leopold, M. (Eds) *Caring for Pollinators – Safeguarding agro-biodiversity and wild plant diversity*. Bonn: Bundesamt für Naturschutz.
- Ssymank, A., Kearns, C.A., Pape, T. & Thompson, F.C.** 2008. Pollinating flies (Diptera): a major contribution to plant diversity and agricultural production. *Biodiversity* **9**: 86–89.
- Thompson, F.C.**, 1999. A key to the genera of the flower flies (Diptera: Syrphidae) of the Neotropical Region including descriptions of new genera and species and a glossary of taxonomic terms. *Contributions on Entomology, International* **3**: 321–378.
- 2003. *Austalis*, a new genus of flower flies (Diptera: Syrphidae) with revisionary notes on related genera. *Zootaxa* **246**: 1–19.
- Thompson, F.C. & Pape, T.** 2013. Syrphidae. *Systema Dipteroorum*, version 1.5, 13354 records. Available from: <http://www.diptera.org> [accessed 08 March 2017].
- Thompson, F.C. & Rotheray, G.E.** 1998. Family Syrphidae, pp. 81–139. In: Papp, L. & Darvas, B. (Eds) *Contributions to a Manual of Palaearctic Diptera, Vol. 3*. Budapest: Science Herald.
- Thompson, F.C., Rotheray, G.E. & Zumbado, M.** 2010. Family Syrphidae, pp. 763–792. In: Brown, B., Borkent, A., Cumming, J.M., Wood, D.M., Woodley, N.E. & Zumbado, M.A. (Eds) *Manual of Central American Diptera, Vol. 2*. Ottawa: NRC Press.
- Vane-Wright, R.I.** 1975. The butterflies named by J.F. Gmelin (Lepidoptera: Rhopalocera). *Bulletin of the British Museum (Natural History), Entomology* **32**: 17–64.

- Vockeroth, J. & Thompson, F.C.** 1987. Syrphidae, pp. 713–743. *In*: McAlpine, J.F. (Ed.) *Manual of the Nearctic Diptera*, Vol. 2. Ottawa: Research Branch, Agriculture Canada Monograph 28.
- Walker, F.** 1857. Catalogue of the dipterous insects collected in Singapore and Malacca by Mr A.R. Wallace, with descriptions of new species. *Journal of the Proceedings of the Linnean Society of London, Zoology* **1**: 4–39.