

On the identity of *Drosophila immatura* WALKER and *Drosophila remota* WALKER (Diptera, Drosophilidae)

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The types of two species of *Drosophila* described by WALKER in 1849 are revised and the following new synonymies are established: *Drosophila immatura* WALKER is a junior synonym of *Drosophila melanogaster* MEIGEN, and *Scaptomyza altissima* (FREY) is a junior synonym of *Scaptomyza remota* (WALKER), new comb.

INTRODUCTION

In his list of Diptera from the British Museum collections, WALKER (1849) described 6 species of drosophilids from different parts of the world. The status and affiliation of 3 of these species are well known whereas the identities of 3 of them, namely *Drosophila debilis*, *D. immatura* and *D. remota*, are still obscure probably due to their ambiguous descriptions or even because their type specimens have never been checked. While studying the type material of several species of Neotropical Drosophilidae deposited in the British Museum (VILELA & BÄCHLI 1990) we also took the opportunity to revise the types of *Drosophila immatura* and *Drosophila remota*. Both species are cited in the most recent catalog of species of Drosophilidae (WHEELER 1981) as species of uncertain affinity.

MATERIAL & METHODS

WALKER (1849) did not state the number of specimens on which he based the descriptions of *Drosophila immatura* and *D. remota* but the two extant type specimens, which are housed in the collections of the British Museum, were considered to be holotypes. Unless otherwise stated, the abbreviations, terminology and indices are used as mentioned by VILELA & BÄCHLI (1990), and the illustrations were drawn to the same scale.

Drosophila (*Sophophora*) *melanogaster* MEIGEN, 1830 (Figs. 1, 12)

Drosophila melanogaster MEIGEN, 1830:85.

Drosophila (*Sophophora*) *melanogaster* MEIGEN; WHEELER, 1981:61 (list of synonyms).

Drosophila immatura WALKER, 1849:1108. NEW SYNONYM.

Material examined. Holotype ♀ (dissected) of the junior synonym *Drosophila immatura*, labelled "TYPE/LOCALITY UNKNOWN/*Drosophila immatura* Walk./One of Walker's series so named EaW (sic)/*Drosophila melanogaster*

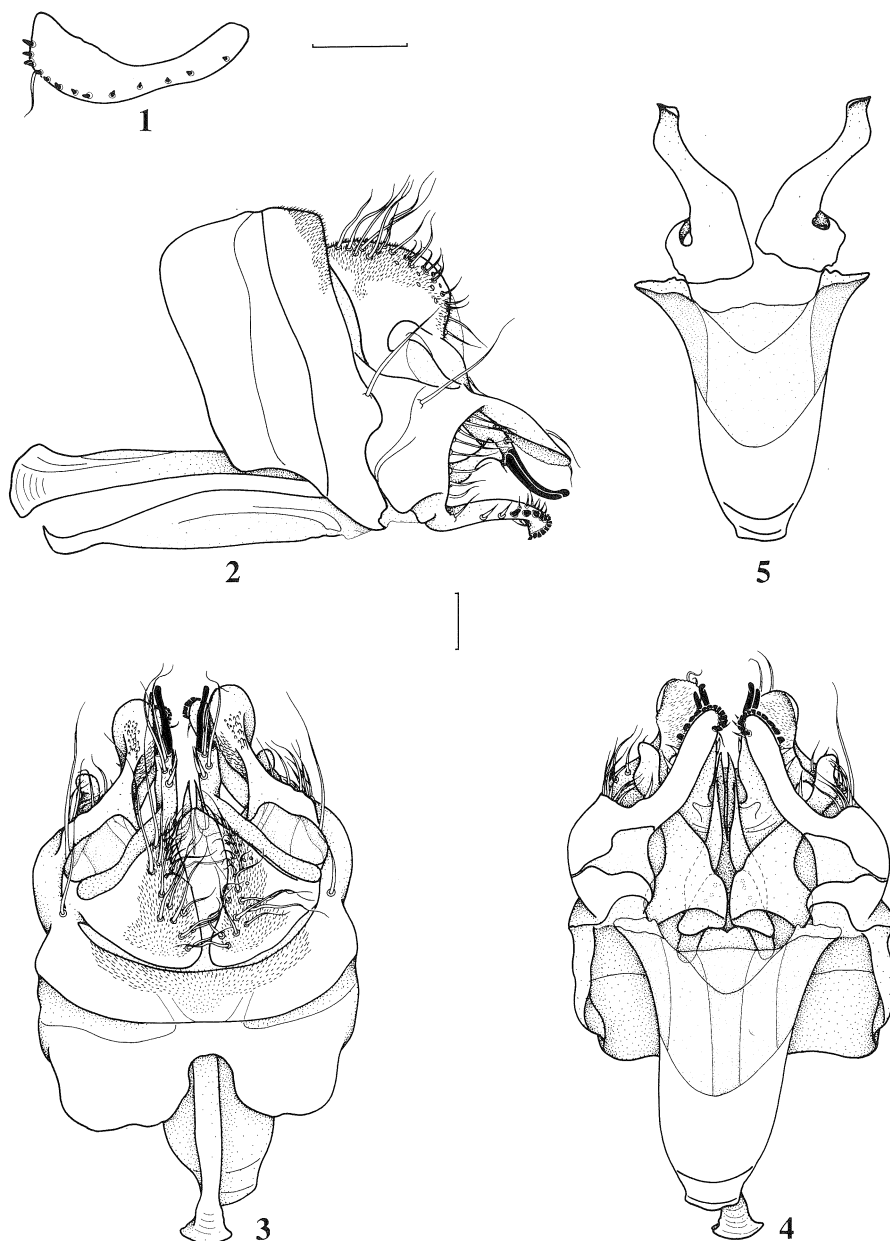
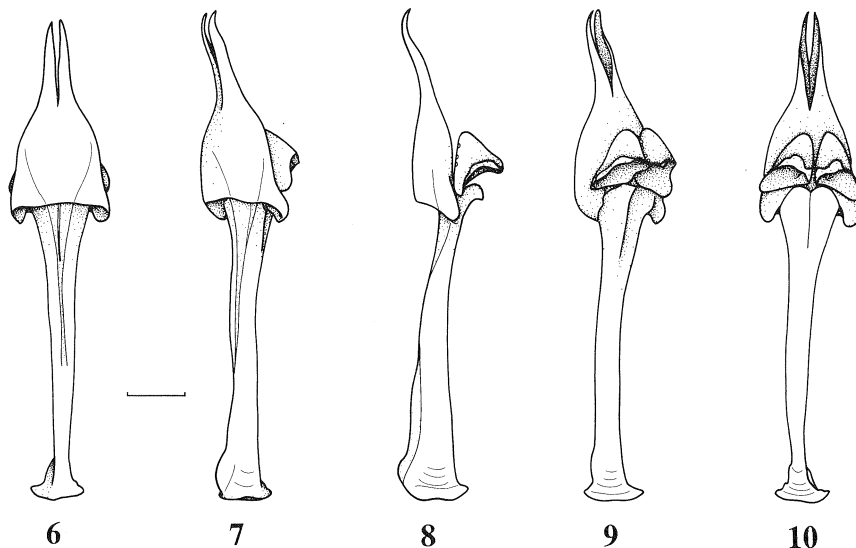


Fig. 1. *Drosophila melanogaster* (holotype ♀ of junior synonym *D. immatura* WALKER), right ovipositor plate. 2–5. *Scaptomyza remota* (WALKER), comb. nov., holotype ♂; 2, epandrium, hypandrium, aedeagus and associated structures, lateral view; 3, *idem*, dorsal view; 4, *idem*, ventral view; 5, hypandrium and gonopods, posterior view. Bars = 100 μ m (1 = horizontal; 2–5 = vertical).

ter Meig. Vilela & Bächli det. 1990", deposited in British Museum (Natural History).

Redescription. *Terminalia* ♀ (figs. 1, 12). Ovipositor plate apically rounded, with about 14 teeth. Spermatheca small, sclerotized, mushroom-shaped; duct medially invaginated.

Note. The type specimen is obviously a teneral female with faint coloration. The external morphology corresponds well with that of *D. melanogaster*, especially in having a cheek index of about 5. The shape of both ovipositor plates (fig. 1) and spermathecae (fig. 12) also agree with that of the latter species.



Figs. 6–10. *Scaptomyza remota* (WALKER), comb. nov., holotype ♂, aedeagus, aedeagal apodeme and parameres, several views (from dorsal through ventral). Bar = 100 μ m.

Scaptomyza (*Macroscaptomyza*) *remota* (WALKER, 1849), comb. nov. (Figs. 2–11)

Drosophila remota WALKER, 1849:1111.

Parascaptomyza (*Macroscaptomyza*) *altissima* FREY, 1954:27.

Scaptomyza (*Macroscaptomyza*) *altissima* (FREY); HACKMAN, 1959:12, 41 (proposed new combination). NEW SYNONYM.

Material examined. Holotype ♂ (dissected), labelled "Type/Tristram (sic) da Cunha/*Drosophila remota* Walk./One of Walker's series so named EaW (sic)/*Scaptomyza remota* (Walker) Bächli & Vilela det. 1990", deposited in British Museum (Natural History).

Redescription. Head mainly blackish brown. Frons with numerous, dense, interfrontal and lower orbital bristles; frontal length 0.5 mm, frontal index 0.91, top to bottom width ratio 1.33. Frontal triangle not very distinct, about 90% frontal length; ocellar triangle slightly shiny, about 40% frontal length. Frontorbital

plates relatively narrow, somewhat shiny, diverging from eye margin, about $\frac{3}{4}$ frontal length. Mid orbital near to anterior one, in a line, anterior orbital atypically reclined, weak, distance of posterior orbital to anterior one $\frac{5}{6}$ of that to inner vertical. Length ratio of anterior to posterior orbital 0.87, of mid to anterior orbital 0.77; postverticals 73%, oc 67% of frontal length. Face velvety black. Carina broad, flat, noselike. Cheek broad, with 3 irregular rows of orals, index about 5. Eye index 1.21. Occiput convex. Pedicel and flagellomere I black; length to width ratio 1.38. Arista with 3 upper and apically 1 lower, short branches. Palpi broad, black.

Thorax mainly blackish brown, length about 1.7 mm. Scutum pollinose; humeral index 3.7; 2 rows of relatively long acrostichals; 5 dorsocentral bristles, 2 of them anterior to the suture; scut position index about 0.8; sterno index 0.53; mid katepisternal about 90% of the anterior one. Halteres and legs yellow, coxae and femora brown, knees lighter.

Wing slightly brownish tinged along costal margin, costal section I with 5–6 long marginal and 2 strong terminal bristles; length 4.0 mm; length to width ratio 2.18. Indices: C, 4.0; ac, 2.63; hb, 0.38; 4c, 0.51; 4v, 1.12; 5x, 0.92; M, 0.27; prox. x, 0.44.

Abdomen subshiny blackish.



Fig. 11. *Scaptomyza remota* (WALKER), comb. nov., holotype ♂, aedeagus, aedeagal apodeme and parameres, left lateral view. 12. *Drosophila melanogaster* (holotype ♀ of junior synonym *D. immatura* WALKER), spermathecae. Bar = 200 μ m.

Terminalia ♂ (figs. 2–11). Epandrium with one median bristle, micropubescent at upper posterior region. Cerci slightly fused to epandrium, ventrally partially fused to a pair of paralobes (FREY, 1954:28; HACKMAN, 1959:29) which distally bear a pair of long, stout, blunt, heavily sclerotized, rod-shaped bristles, preceded by a pair of short bristles plus a pair of longer bristles. Surstylus not micropubescent, crescent-shaped, dorsally wrinkled, laterally bearing 1 long bristle on upper surface, medially with about 11 short bristles on distal margin, ventrally with about 12 stout, incisor-shaped teeth, plus about 8 marginal bristles.

Hypandrium as long as epandrium; bow absent; gonopod glabrous, slightly sinuous, proximally expanded laterally, distally pointed, linked to hypandrium by membranous tissue. Aedeagus dolphin-head-shaped, distally bifid. Aedegal apodeme longer than aedeagus, rod-shaped. Ventral rod as in fig. 8. Paramere triangle-shaped, with about 4 dorsal sensilla, linked to gonopod by membranous tissue.

Note. This species differs from *Scaptomyza helvola* (FREY, 1954), mainly by size and body color.

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Der diesjährige Band bringt wiederum Beiträge über zahlreiche Tiergruppen. Nur knapp die Hälfte des Umfangs betrifft Insekten, darin werden aber wieder einige neue Arten beschrieben: Behandelt werden Ephemeroptera (1 n. sp.), Hydrophilidae (2 n. sp.), Ptilidae (2 n. sp.), Cryptophagidae, Coccinellidae (2 n. sp.), Tenebrionidae (1 n. sp.), von den Sphecidae als Fortsetzung aus früheren Bänden die Gattungen *Bembix* (10 n. sp.), *Stizus* und *Stizoides* (1 n. sp.) (mit Bestimmungstabelle für alle Arten), Ceratopogonidae (8 n. sp., Bestimmungsschlüssel der medizinisch wichtigen *Culicoides*-Arten), Chironomidae (2 Arbeiten, 8 n. sp., Schlüssel). An weiteren Arthropoden werden Thomisidae (1 n. sp., Bestimmungstab. bis Art), Salticidae (10 n. sp.), Ixodidae und terrestrische Isopoda (2 n. sp.) behandelt. Ferner sind Arbeiten enthalten über marine Tubificidae, marine Mollusken (Chromodoridae, mit schönen Farbtafeln), Fische (Serranidae, 1 n. sp.; Fische des Jordantals, wenigstens des nicht israelischen Teils) und drei Beiträge über Reptilien (Biologie, 1 n. sp.) und einer über das Verhalten dreier Gazellenarten.

Über die Grenze der Tiergruppe hinaus von allgemeinerem Interesse erscheint die Arbeit von KLAUSEWITZ über die Entstehungsgeschichte und Zoogeographie der Fischfauna des Roten Meeres mit ihren zahlreichen Endemismen im Litoral wie im Bathyal. Die Klimaschwankungen während der Eiszeit haben auch die ökologischen Bedingungen im Roten Meer stark beeinflusst und die typischen Fischarten zum Ausweichen gezwungen. Das erfolgte gegen Süden, zum Teil bis hinaus in den Golf von Aden. Die Frage, ob und wie oft der Eingang ins Rote Meer dort während der Eiszeiten trocken gefallen ist, scheint noch nicht geklärt zu sein. Jedenfalls weist heute die Fischfauna des Roten Meeres einen hohen Grad von Eigenständigkeit auf, was den Autor veranlasst, das Rote Meer als eigene zoogeographische Provinz zu betrachten. Innerhalb des Roten Meeres scheint wiederum der Golf von Aqaba eine isolierte Entwicklung durchgemacht zu haben.

Mit diesem 10. Band hat die Serie eine runde Zahl erreicht. Sie beinhaltet inzwischen eine reiche Dokumentation über die Tierwelt Saudi-Arabiens und der Arabischen Halbinsel mit ihren Besonderheiten und ihrer oft unerwarteten Reichhaltigkeit. Man hätte sich für diesen Jubiläumsband eine übersichtliche, systematisch geordnete Zusammenfassung der bisher erschienenen Arbeiten gewünscht, was die Benützung der Serie erleichtern würde. Auf jeden Fall darf man die Herausgeber beglückwünschen. Die Vielfalt der Beiträge, die drucktechnisch hervorragende Qualität und die regelmässige Folge der einzelnen Bände ist bemerkenswert, und es ist zu hoffen, dass die Ereignisse in der Golfregion das Erscheinen weiterer Bände nicht behindern werden.

W. SAUTER