

THE IDENTITY AND SYNONYMY OF THE NEW ZEALAND TACHINID GENUS *BOTHROPHORA* SCHINER AND ITS TYPE-SPECIES (DIPTERA)

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Summary

The identity is established of the New Zealand genus *Bothrophora* Schiner (Tachinidae), and the generic name *Hystericina* Malloch is placed in new synonymy with *Bothrophora*. The name of the type-species of the genus, *B. zelebori* Schiner, is shown to be a new junior synonym of *Bothrophora lupina* (Swederus) **comb.n.**, and primary types are designated (lectotype for *zelebori*, neotype for *lupina*) for the specific names involved. A nomenclatural note is included on a species of the allied genus *Protohystericia* Malloch.

The original syntype material of *Bothrophora zelebori* Schiner was found in the collections of the Naturhistorisches Museum in Vienna by Dr D. M. Wood when he visited there in 1969, and one of the syntypes was (with the kind consent of Dr A. Kaltenbach of the Vienna Museum) then passed to me for study. It was obvious at once that *B. zelebori*, a name that has until now been rather enigmatic in New Zealand tachinidology, is the same species as *Hystericina lupina* (Swederus), a large, conspicuous and very distinctive New Zealand Tachinid which Dugdale (1969: 636) has recently placed in his tribe Occisorini, subfamily Tachininae. The object of the present short communication is to establish that *Bothrophora zelebori* Schiner is indubitably from New Zealand, and formally to establish the new generic and specific synonymies now known; a lectotype is designated for *zelebori* and a neotype for *lupina* so that the synonymy can be directly authenticated by comparison of primary types.

Bothrophora zelebori was described by Schiner (1868) in his account of the Diptera collected on the expedition of the frigate "Novara" and was recorded in the original description as from New Zealand ("Neuseeland"), but Hutton (1901) omitted the name from his list of New Zealand Diptera on the grounds (correct for some species) that there was doubt about the true provenance of the forms described by Schiner in this work; Miller (1950) recorded the name, but in a list of species recorded from, but either not or only doubtfully occurring in, New Zealand. The species was unknown to Malloch and is not recorded in this author's papers on New Zealand Tachinidae, though some of his works post-date the references

of Townsend, who saw the type-material (Townsend, 1932) and placed *Bothrophora* in his *Manual of Myiology* (Townsend, 1936: 158; 1939: 9). The latter work was disregarded by Miller (1950: 8) intentionally, though for reasons not explained, hence Miller still placed *B. zeleborei* in the list of species for which a New Zealand provenance was uncertain, though Townsend (who had seen the type-material) gave no indication that there was anything amiss with the published type-locality.

The conspecificity of *Bothrophora zeleborei* Schiner, type-species of *Bothrophora* Schiner, and *Musca lupina* Swederus, type-species of *Hystericina* Malloch implies that Schiner's generic name is taxonomically valid and has priority over Malloch's generic name, but that Schiner's specific name is taxonomically invalid and sinks as a junior synonym of Swederus' name. The new synonymies are shown below, together with the new combination resulting from the assignment of *lupina* to the genus *Bothrophora*.

Generic synonymy:

***Bothrophora* Schiner**

Bothrophora Schiner, 1868, Reise Novara, Zool. 2, Dipt.: 317. Type-species: *Bothrophora zeleborei* Schiner, 1868 [= *Musca lupina* Swederus, 1787], by original designation and monotypy.

Hystericina Malloch, 1932, Rec. Canterbury Mus. 3: 433. Type-species: *Musca lupina* Swederus, 1787, by original designation and monotypy. **New synonymy.**
[For diagnosis of the genus see Malloch's original description of *Hystericina*.]

Specific synonymy:

***Bothrophora lupina* (Swederus) new combination**

Musca lupina Swederus, 1787, K. svenska VetenskAkad. nya Handl. 8: 289. Neotype ♂, NEW ZEALAND: British Museum (Natural History), London.

Tachina zelica Walker, 1849, List Spec. dipt. Ins. Coll. Br. Mus. 4: 711. Holotype ♂, NEW ZEALAND: British Museum (Natural History), London.

Bothrophora zeleborei Schiner, 1868, Reise Novara, Zool. 2, Dipt.: 317. Lectotype ♀, NEW ZEALAND: Naturhistorisches Museum, Vienna. **New synonymy.**

Lectotype designation for *zeleborei*:

Bothrophora zeleborei was described from two specimens ("Zwei Stücke aus Neuseeland"). Both syntypes are females, both in the Naturhistorisches Museum in Vienna, and each similarly labelled. The lectotype specimen, here designated, bears a small rectangular white printed label with the words "Zelebore Novara" and another label reading "Zelebore Schin det. B.B.", the latter label having been affixed by Brauer & Bergenstamm; this was probably the specimen from which a lateral view of the head was figured by Brauer & Bergenstamm (1889: 116 and fig. 144, plate VII).

Townsend (1932: 40) referred to a "Female Ht [i.e. holotype] and female Pt [i.e. paratype] in Wien" and again (Townsend, 1939: 9) referred

to "Ht female" in Vienna, but as there are two original female syntypes (neither of which was labelled by Townsend) the citations of Townsend do not provide valid fixation of a lectotype; present designation of a lectotype is therefore necessary.

Neotype designation for *lupina*:

Musca lupina was described by Swederus from a specimen (or possibly more than one specimen, though this is unlikely) in the collection of Sir Joseph Banks, and he cited the depository as "Mus. Dom. BANKS." in the original description. The type or types no longer exist in the Banks collection (which is preserved in the British Museum (Natural History) in its own cabinet separate from the general collection) or in the British Museum collection, and the original material was already lost in 1905, when Austen noted as follows in the B.M. collection: "*N.B.*—According to the author [i.e. Swederus] the type of this species is in 'Mus. Dom. Banks.' but it is not to be found in the Banksian collection now.—E.E.A. 23.ii.05." This note, in pencil in Austen's hand, stands above the name *lupina* in the collection. There is no doubt that the original material of *Musca lupina* Swederus is lost or was destroyed, and in order to provide a type for this taxonomically valid name, senior synonym, and type-species of a generic name, the following specimen is here designated as neotype:

Musca lupina Swederus: neotype ♂, by present designation, NEW ZEALAND (Auckland District), in British Museum (Natural History).

The sex of the original specimen(s) is not known, but selection of a male specimen as neotype is considered desirable. The neotype can be made available on loan from the British Museum collection if required.

In case the original description is not readily available in New Zealand the following is the full text of Swederus' account:

"50) MUSCA LUPINA *antennis setariis pilosa, thorace cinereo lineis quatuor interruptis nigris: abdomine subtessellato lateribus diaphano.*

Hab. in nova Zeelandia. Mus. Dom. BANKS.

Descr. Corpus facie M. Ferae sed duplo fere majus, tomentosum setosumque setis rigidissimis nigris undique sparsum.

Caput albido-cinereum linea frontali nigra.

Proboscis subferruginea basi nigra apice subtomentosa.

Palpi flavi, subtomentosi.

Antennae fuscae seta nuda, nigra.

Thorax cinereus lineis quatuor interruptis, interioribus brevioribus, nigris.

Scutellum ferrugineum.

Abdomen ferrugineum nigro varium subtessellatum, lateribus diaphanum.

Alae fuscae, basi subtestaceae.

Pedes fusco-testacei, tarsi nigris, ungulis flavis.

Obs. Differt a *M. Fera* magnitudine, lineis thoracis &c."

Note on *Protohystricia orientalis* (Schiner):

The name *Hystricia orientalis* Schiner, 1868, is well established to be a synonym of *Tachina signata* Walker, 1849, and the species involved to belong to the genus *Protohystricia* Malloch. Miller (1950: 133–134) cites *Protohystricia signata* (Walker) as the valid name for this species, citing *orientalis* Schiner in the synonymy. However, as Townsend (1936: 166) has earlier pointed out, the name *Tachina signata* Walker, 1849, is a junior primary homonym of *Tachina signata* Meigen, 1824. The name *signata* cannot therefore be used for the species of *Protohystricia* (Article 59 (a) of *International Code of Zoological Nomenclature*, 1961), and the nomenclaturally correct name for the species is *Protohystricia orientalis* (Schiner), which is available as replacement name for the preoccupied *signata* Walker.

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