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The type-material of Oriental and Australasian Muscidae (Diptera) in the Zoological Museum, Amsterdam

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ABSTRACT

The type-material of Oriental und Australasian Muscidae in the University Zoological Museum, Amsterdam, is discussed. Of 131 species considered, the primary types of 112 are located in Amsterdam, and the location of the other types is also listed. 40 lectotypes are designated and 19 new combinations established. 7 new synonymies and 3 new names are proposed.

During a visit to Amsterdam in April 1968 I was able to examine the rich collections of Oriental and Australasian Muscidae (Diptera) in the Zoological Museum of the University, and in particular to study the numerous types preserved in that institute. The majority of these species was described by Stein and Malloch, but a small number was described by Van der Wulp, De Meijere and Townsend.

From published data, I had expected to find the type-series of 131 species in Amsterdam. Some of these are holotypes, others are syntypic series from which it was necessary to designate a lectotype. After lectotype designation, 112 primary types are in Amsterdam. Both Stein and Malloch retained duplicates from the material studied by them, and these are now in their personal collections in the Zoological Museum of the Humboldt University, Berlin, and the United States National Museum, Washington, respectively. In all cases it has been possible to check what type-material is now located in these collections, and the results are included below. Material that was not in Amsterdam was in several cases located in other institutes: primary types of 5 species are in Berlin, 2 in the Rijksmuseum van Natuurlijke Historie. Leiden, 1 in the British Museum (Natural History), London, and 1 in the Deutsches Entomologisches Institut, Eberswalde. For the remaining 10 species, no type-material has been located and it is presumed to be lost.

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Of the species discussed here, 80 were described by Stein, 42 by Malloch, 6 by Van der Wulp, 2 by De Meijere, and 1 by Townsend. For these, it has been necessary to designate 40 lectotypes and to establish 19 new combinations. 7 new synonymies and 3 new names are proposed.

In previous studies I have dealt with a number of these types, principally those from New Guinea, and those of the genus *Pygophora* Schiner have been revised by Crosskey (1962). Brief reference is made to these below, for the sake of completeness.

In the text below, all 131 species are listed and the location of the type-material discussed, whether in Amsterdam or not. After citation of the specific name and original reference, the material in Amsterdam is specified followed by the data of the type-specimen and any other discussion. Where no material is in Amsterdam, discussion immediately follows the original reference. In the data citations, a dash (——) indicates that one part of the data is not given on the label, either the date or the locality or even the collector. At the end of the paper, a list is given of the 10 lost types.

In the lists below, the following abbreviations are used for institutes that hold the material discussed:

Amsterdam — Zoölogisch Museum der Universiteit van Amsterdam.

BMNH — British Museum (Natural History), London.

DEI — Deutsches Entomologisches Institut, Eberswalde bei Berlin.

Leiden — Rijksmuseum van Natuurlijke Historie, Leiden.

USNM — United States National Museum, Washington.

ZMB — Zoologisches Museum der Humboldt-Universität zu Berlin.

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albiceps van der Wulp, 1881: 47 (Spilogaster)

The holotype Q of this species is in Leiden, and is in good condition. The species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia albiceps* (van der Wulp, 1881), comb. nov., is herewith established.

angustipalpis Stein, 1920b: 60 (Lispa)

Paralectotype ♀.

Lectotype designation: Stein described this species from two females, from Batavia and Wonosobo. The specimen from Batavia is in the ZMB, and is in fact a male and not a female as labelled and described by Stein. I have labelled it and designate it herewith as lectotype. The second syntype, from Wono-

sobo, is in Amsterdam and is a female. I have labelled it as paralectotype.

Both lectotype and paralectotype are in good condition, and each bears Stein's determination label. The species is correctly placed in the genus *Lispe* Latreille.

anipila Stein, 1909: 268 (Coenosia)

Lectotype σ , and 1 \circ paralectotype.

Lectotype data: JAVA, Tankoeban Prahoe, vi.1908 (E. Jacobson).

Lectotype designation: Stein described this species from one male and one female, with the data as above. Both syntypes are in Amsterdam. I have labelled and designate herewith the male as lectotype and the female as paralectotype.

The lectotype lacks left mid leg and right hind leg, but is otherwise in good condition. It bears Stein's determination label.

The species is correctly placed in the genus *Coenosia* Meigen as currently understood.

apicalis Stein, 1904: 103 (Spilogaster)

Holotype ♂

Holotype data: JAVA, —, — (Piepers).

I have previously studied the holotype of this species (Pont, 1969: 296), and have placed this species in the *rufescens*-group of the genus *Dichaetomyia* Malloch.

appropinguans Stein, 1909: 244 (Limnophora)

Lectotype 8, and 1 9 paralectotype.

Lectotype data: JAVA, S. Pantjar bij Buitenzorg, xi.1907 (E. Jacobson).

Lectotype designation: Stein described this species from a male and a female, and both syntypes are in Amsterdam. I have labelled and designate herewith the male as lectotype and the female as paralectotype. The lectotype is in good condition, and bears Stein's determination label.

The species belongs to the genus Limnophora Robineau-Desvoidy as at present understood.

approximatinervis Stein, 1919a: 139, and 1920b: 59 (Onychomyia)

Holotype ♂.

Holotype data: JAVA, Toentang, x.1910 (E. Jacobson).

The holotype is rather immature, but is otherwise in good condition. It belongs to the genus *Limnophora* Robineau-Desvoidy of which *Onychomyia* Stein is a junior synonym, and the combination *Limnophora approximatinervis* (Stein, 1919), **comb. nov.**, is herewith established.

Stein described the genus and species in his catalogue (1919a), and sub-

sequently repeated the description (1920b). In each case, the data given is the same except for the spelling of the locality "Toentang".

ardesiaca Stein, 1920b: 68 (Mydaea)

Holotype ♂.

Holotype data: SUMATRA, Piek v Kurintji, viii.1915 (E. Jacobson). This species belongs to the genus *Dichaetomyia* Malloch, and to the *polita*group as defined by me (Pont, 1969: 256). The combination *Dichaetomyia* ardesiaca (Stein, 1920), comb. nov., is herewith established.

armata Stein, 1918: 184, and 1919b: 203 (Mydaea)

Lectotype σ , and 1 σ paralectotype.

Lectotype data: NEW GUINEA, Zoutbron, 20—30.vi.1910 (Van Kampen). Stein originally included this species in a key without further data (1918), and subsequently published a formal description and type-series (1919b). The name naturally dates from 1918.

I have previously designated a lectotype for this species (1967: 632) and placed it in the *armata*-group of the genus *Dichaetomyia* (see Pont, 1969: 211).

atrifrons Stein, 1920b: 57 (Limnophora (Melanochelia))

Lectotype 3, and 1 3 2 9 paralectotypes.

Lectotype data: JAVA, Goenoeng Oengaran, xii.1909 (E. Jacobson).

Lectotype designation: Stein described this species from two pairs collected in copula, from Goenoeng Oengaran and Wonosobo. All four syntypes are in Amsterdam. I have labelled and designate herewith the male from Goenoeng as lectotype and the remaining three syntypes as paralectotypes.

The lectotype and a female paralectotype are labelled as caught in copula, and are on a single mount that also bears Stein's determination label. The lectotype lacks the right mid leg, but is otherwise in good condition.

The paralectotypes from Wonosobo are also labelled as caught in copula on leaves of shrubs and trees.

This species belongs to the genus Limnophora Robineau-Desvoidy as currently understood.

atripes Malloch, 1926: 340 (Graphomyia)

This species was described from a unique male (holotype) from SUMA-TRA, Wai Lima, 1921 (Karny & Siebers). I did not find the holotype in either Amsterdam or Leiden. It is neither in the USNM (letter from Dr. Gagné of 7 May 1968) nor in the ZMB (letter from Dr. Schumann of 19 August 1969). I presume that it is lost.

bimaculata Stein, 1920b: 62 (Coenosia)

Holotype ♂

Holotype data: JAVA, Nongkodjadjar, i.1911 (E. Jacobson).

The holotype has the head and right fore leg missing, and bears Stein's determination label. The head has evidently been lost since the original description, but unfortunately Stein did not describe the head bristling and it is very difficult to assign the species to a genus. I believe it to belong to Lispocephala Pokorny, and the combination Lispocephala bimaculata (Stein, 1920), comb. nov., is herewith established.

bipuncta Malloch, 1929: 394 (Lispocephala)

Holotype ♀.

Holotype data: BURU, Station 9, 10.v.1921 (L. J. Toxopeus).

The holotype, a unique, is in good condition and has been labelled as type by Malloch.

The species belongs to the genus Cephalispa Malloch, and the combination Cephalispa bipuncta (Malloch, 1929), comb. nov., is herewith established.

bistriata Malloch, 1928: 322 (Dichaetomyia)

Holotype ♂.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

Malloch described this species from the holotype and a male paratype. Only the holotype is in Amsterdam. It lacks the abdomen, but is otherwise in good condition. The paratype is in the USNM according to Dr. Gagné (letter of 30 September 1968).

The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

bivittata Malloch, 1929: 397 (Atherigona)

Holotype ♂.

Holotype data: BURU, Station 6, 11.iii.1922 (L. J. Toxopeus).

The holotype is in good condition, and bears Malloch's determination label.

bivittata Stein, 1909: 262 (Lispa)

Lectotype \mathcal{O} , and $1 \mathcal{O}$ 1 \mathcal{O} paralectotypes.

Lectotype data: JAVA, Semarang, i.1906 (E. Jacobson).

Lectotype designation: Stein described this species from 3 males and 3 females from Semarang, viii.1905 and i.1906. Three syntypes, all collected in i.1906, are in Amsterdam. I have labelled, and designate herewith, the male bearing Stein's determination label as lectotype and the remaining male and female as paralectotypes.

In the ZMB are two syntypes collected in i.1906, 1 male and 1 female. 1 have labelled them and designate them herewith as paralectotypes.

1 female syntype, viii.1905, cannot be accounted for.

The lectotype is in good condition. The species is correctly placed in the genus Lispe Latreille.

brunneipennis Malloch, 1929: 406 (Dichaetomyia)

Holotype ♀.

Holotype data: BURU, Station 13, 27.viii.1921 (L. J. Toxopeus).

This species was described from a single female. It is an entirely yellow species, belonging to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262). The left mid leg of the holotype is missing, and the whole fly is covered with mould.

buruensis Malloch, 1929: 402 (Dichaetomyia)

Holotype σ , and \circ allotype.

Holotype data: BURU, Station 9, 18.v.1921 (L. J. Toxopeus).

Malloch described this species from a male holotype, female allotype and 1 male paratype. Only the holotype and allotype are in Amsterdam. The holotype is rather mouldy but is otherwise in good condition. It is also labelled in Dutch "in marshy virgin forest on leaves". The male paratype is in the USNM (letter from Dr. Gagné of 30 September 1968).

This species belongs to the *polita*-group of *Dichaetomyia* Malloch (see Pont, 1969: 256).

caduca Stein, 1909: 247 (Limnophora)

Holotype ♂.

Holotype data: JAVA, Tandjong Priok, xii.1907 (E. Jacobson).

The holotype is in good condition but appears to be rather bleached. It bears Stein's determination label. L. caduca is correctly placed in the genus Limnophora Robineau-Desvoidy as currently understood.

centralis Malloch, 1929: 404 (Dichaetomyia)

Holotype σ , and $1 \sigma 2 \circ paratypes$.

Holotype data: BURU, Station 13, 27.viii.1921 (L. J. Toxopeus).

The entire type-series is in Amsterdam, except for the allotype female which is in the USNM (letter from Dr. Gagné, 30 September 1968).

ciliata Malloch, 1929: 393 (Lispocephala)

Holotype \eth , allotype Q and $1 \eth$ paratype.

Holotype data: BURU, Station 9, 17.v.1921 (L. J. Toxopeus).

Malloch described this species from a male holotype, female allotype, and 2 male paratypes. In addition to the holotype, the female allotype (date 4.vi. 1921) and one male paratype (data as holotype) are in Amsterdam. The second male paratype (date 18.v.1921) is in the USNM according to Dr. Gagné (letter of 4 March 1969).

This species belongs to the genus Parvisquama Malloch.

claripennis Malloch, 1929: 407 (Dichaetomyia)

Holotype ♀.

Holotype data: BURU, Station 1, flying presumable at night, 8.i.1922 (L. J. Toxopeus).

Malloch described this species from a single female, which is in good condition. It is an entirely yellow species of the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

cognata Stein, 1909: 241 (Mydaea)

Holotype ♂.

Holotype data: JAVA, Batavia, v.1908 (E. Jacobson).

The holotype is in excellent condition. The species belongs to the demensgroup of Dichaetomyia Malloch (see Pont, 1969: 259).

confluens Stein, 1920a: 42 (Graphomyia)

Holotype ♂.

Holotype data: WEST CERAM, —, iv-vi.1910 (Van Dedem).

For discussion of this name and the holotype, see under *rufiventris* in my earlier paper on Amsterdam types from New Guinea (Pont, 1968: 172).

confusa Malloch, 1928: 302 (Atherigona)

Holotype &, and 1 & paratype.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson). Malloch described this species from a male holotype and 2 male paratypes, all with the same data. In Amsterdam on a single mount are 2 males and 1 female, and the mount is labelled "confusa Type" by Malloch. The two males represent the holotype and paratype, but the female does not belong to the type-series. The second male paratype is in the USNM, and is labelled as paratype (letter from Dr. Gagné, 30 September 1968).

conica Stein, 1915: 30 (Limnophora)

4 ♂ 1 ♀ paralectotypes.

Lectotype designation: Stein listed his material of this species as "Drei
♂ of und zwei ♀♀ aus Chip-Chip III.1909, Tappani IV.1910 und Hoozan

I.1911. Die Beschreibung habe ich zum Teil nach Stücken angefertigt, welche dem Amsterdamer Museum gehören und aus Java stammen." Subsequently (1920b: 55) he listed the Javanese material as "1 & Pangerango X.'08 und mehrere Pärchen Nongkodjadjar I.II.11."

I am treating as syntypes material collected at these localities in Formosa and Java, and have studied material in the DEI and ZMB kindly lent by Drs. Morge and Schumann respectively, in addition to syntypes in Amsterdam.

In the DEI are the 5 syntypes from Formosa. I have labelled and designate herewith as lectotype a male from Chip-Chip, iii.1909. It is slightly mouldy, but is otherwise in good condition, and bears Stein's determination label. The remaining 4 syntypes I have labelled and designate herewith as paralectotypes. They are from Chip-Chip, iii.1909, 1 \circ ; Hoozan, 7.i.1911, 1 \circ 1 \circ ; Tappani, 7.iv.1910, 1 \circ .

The Javanese material is divided between Amsterdam and the ZMB. In Amsterdam are 5 syntypes, the male from Pangerango and 3 σ 1 \circ from Nongkodjadjar, i.1911. Two of these syntypes are labelled "Limnophora conica sp.n." by Stein. I have labelled them and designate them herewith as paralectotypes. In the ZMB there are four syntypes from Nongkodjadjar, 2 σ 1 \circ from ii.1911 and 1 σ from iii. 1911. I have labelled these and designate them herewith as paralectotypes.

All the syntypes that I have examined are conspecific. L. conica is correctly placed in the genus Limnophora Robineau-Desvoidy.

conica Stein, 1920b: 69 (Mydaea)

Lectotype σ , and 1 σ 4 \circ paralectotypes.

Lectotype data: SUMATRA, Ardjoeno Mts, 2000 m, on grass plain (Dammerman).

Lectotype designation: Stein described this species from 2 males and 4 females, and all six syntypes are in Amsterdam. I have labelled and designate herewith one of the males as lectotype and the remaining five syntypes as paralectotypes.

The species belongs to the genus *Helina* Robineau-Desvoidy, and the combination *Helina conica* (Stein, 1920), **comb. nov.**, is herewith established. The name is a senior synonym of *Helina floresana* Hennig, 1952 (syn. nov.).

cylindrica Stein, 1915: 39, and 1920b: 81 (Limnophora)

Holotype ♂.

Holotype data: WAIGEO IS., —, 29.xii.1909 (Mevr. de Beaufort).

L. cylindrica was included in Stein's key to Indo-Australasian Limnophora (1915), and the description was published five years later (1920b). I have previously studied the holotype (Pont, 1968: 169) and confirmed its position in the genus Limnophora Robineau-Desvoidy.

decipiens Stein, 1918: 185, and 1919b: 204 (Mydaea)

Lectotype ♀.

Lectotype data: NEW GUINEA, Noordrivier, ix.1909 (Lorentz).

I have previously discussed this species (Pont, 1968: 169): I designated a lectotype and placed the species in the genus *Papuaia* Malloch. The lectotype is the only remaining specimen from the syntypic series.

demens Stein, 1918: 184, and 1920b: 78 (Mydaea)

Holotype &.

Holotype data: WAIGEO IS., —, 1.i.1910 (Mevr. de Beaufort).

I have previously reported on the holotype of this species (Pont, 1968: 170), and have placed the species in the *demens*-group of the genus *Dichaetomyia* Malloch (see Pont, 1969: 259).

dimidiata Stein, 1904: 100 (Spilogaster)

Holotype &.

Holotype data: JAVA, —, — (Piepers).

This species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

distincta Stein, 1909: 251 (Limnophora)

Lectotype 3, and 5 3 1 9 paralectotypes.

Lectotype data: JAVA, Semarang, i.1906 (E. Jacobson).

Lectotype designation: Stein described this species from 12 males and 2 females from Semarang, i.1906, but only seven syntypes were located in Amsterdam: 1 male on a single mount, and 5 males and 1 female all pinned together on one mount. The male on its own is in good condition and bears Stein's determination label: I have labelled it and designate it herewith as lectotype. The remaining 6 specimens have been labelled as paralectotypes.

A further 5 syntypes, all males, are in the ZMB. I have labelled these, and designate them herewith, as paralectotypes.

This species belongs to the genus Gymnodia Robineau-Desvoidy, and was correctly interpreted by Emden (1965: 630).

distincta Stein, 1918: 182, and 1919b: 205 (Mydaea)

Holotype ♀.

Holotype data: NEW GUINEA, Heuvelbivak, 800 m, 15.x.1909 (Lorentz). I have previously reported on the holotype of this species (Pont, 1968: 170), and have placed it in the genus *Dichaetomyia* Malloch.

dolosa Stein, 1909: 235 (Mydaea)

Holotype ♀.

Holotype data: JAVA, Mt. Oengaran, Semarang, x.1905 (E. Jacobson).

The holotype lacks both mid legs, but is otherwise in good condition. It belongs to the genus *Eumyiospila* Malloch, and the combination *Eumyiospila* dolosa (Stein, 1909), comb. nov., is herewith established.

dorsovittata Malloch, 1928: 300 (Atherigona)

Holotype mount; holotype destroyed.

Holotype data: SUMATRA, Fort de Kock, 920 m, on decaying meat, 1925 (E. Jacobson).

Malloch described this species from 2 females, holotype and paratype. In Amsterdam there is a mount, lacking both specimen and specimen-pin, labelled as "type" by Malloch. It is presumed from this that the holotype has been destroyed.

The paratype female is in the USNM, according to Dr. Gagné (letter of 30 September 1968). It is not labelled as paratype, but the data is SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

dubia Stein, 1920b: 77 (Mydaea)

Holotype Q.

Holotype data: CERAM, —, 24.ii.1910 (Mevr. de Beaufort).

I have previously reported on the holotype of this species (Pont, 1968: 170), and have placed the species in the genus *Eumyiospila* Malloch.

exigua de Meijere, in Schat, 1903 : 17 (Haematobia)

Lectotype Q, and 1 Q paralectotype.

Lectotype data: JAVA, Pasoeroean, Proefstation, —— (——).

Lectotype designation: De Meijere described this species from females sent to him by Schat, and the description was included by Schat in a postscript to his paper written on 1st December 1902.

In Amsterdam there are seven specimens bearing indications that they are syntypes. One of these is a male, and cannot be a syntype. Four females are on a single mount, and were collected in 1903. They also cannot be syntypes. The last two specimens, both females, have the data given above, and I regard them as syntypes. I have labelled the female with all its legs intact, and designate it herewith, as lectotype. The second female lacks both hind legs, and has been labelled as paralectotype.

The lectotype is slightly damp, but the condition is otherwise good. The species is correctly interpreted by modern workers (e.g. van Emden, 1965: 176).

eximia Stein, 1919b: 199 (Graphomyia)

Lectotype σ , and 1 σ 67 \circ paralectotypes.

Lectotype data: NEW GUINEA, Regeneiland, 20.xii.1909 (Lorentz).

I have previously designated a lectotype for this species (Pont, 1968: 171). In addition to the Amsterdam material, 4 female paralectotypes are in the ZMB.

fallax Stein, 1920b: 72 (Limnophora maculosa var.)

Lectotype 3.

Lectotype data: SUMATRA, Air Njuruk, Dempu, 1400 m, viii.1916 (E. Jacobson).

Lectotype designation: Stein described this species from 2 males with the above data, and also remarked "Sie stimmen vollständig mit den aus Formosa stammenden Stücken [i.e. of *maculosa*] überein, die ich in den Suppl. ent. IV. 37. 42 (1915) erwähnt habe." I regard the 2 males from Sumatra and the 1 male and 4 females from Formosa as syntypes.

1 male syntype from Sumatra is in Amsterdam. I have labelled it and designate it herewith as lectotype. It lacks the left mid leg, but is otherwise in good condition.

There is no material of this species in the ZMB according to Dr. Schumann (letter of 19 August 1969), so the second male syntype from Sumatra is presumed lost.

The Formosan syntypes, 1 male and 4 females, are in the DEI. I have labelled them and designate them herewith as paralectotypes. Their data are: Kosempo, v.1912, 1 &, 2 \(\rightarrow; Sokutsu, ix.1912, 1 \(\rightarrow; Hoozan, 7.i.1911, 1 \(\rightarrow) (quoted as ii.1911 by Stein).

The species is correctly placed in the genus Limnophora Robineau-Des voidy as currently understood.

fascigera Stein, 1920b: 66 (Graphomyia)

Holotype Q.

Holotype data: SUMATRA, Air Njuruk, Dempu, 1400 m, viii.1916 (E. Jacobson).

Stein described this species from a single female. The left mid leg is missing, otherwise it is in good condition, and it bears Stein's determination label. The species is correctly placed in the genus *Graphomya* Robineau-Desvoidy.

ferruginea van der Wulp, 1891: 209 (Coenosia)

The holotype female was not found in either Amsterdam or Leiden, and is presumed to be lost.

flavicornis Stein, 1909: 260 (Lispa)

Holotype ♂.

Holotype data: JAVA, Tandjong Priok, iv.1908 (E. Jacobson).

The holotype is in excellent condition, and bears Stein's determination label. The species is correctly placed in the genus *Lispe* Latreille.

flavidipennis Stein, 1904: 104 (Spilogaster)

4 ♀ paralectotypes.

Stein described this species from 2 males and 5 females from Tosari. 1 male and 1 female syntypes are in the ZMB, and 4 female syntypes are in Amsterdam: 1 male syntype has apparently been lost. The male has been labelled and is herewith designated as lectotype, and the 5 females as paralectotypes. The lectotype is in excellent condition.

The species belongs to the genus *Helina* Robineau-Desvoidy, and the combination *Helina flavidipennis* (Stein, 1904), **comb. nov.**, is herewith established.

flavipalpis Malloch, 1928: 303 (Atherigona excisa var.)

Holotype &, and 2 & paratypes.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson). Malloch described this species from the type and 6 male paratypes. In Amsterdam I found the holotype and 2 paratypes, all of which have the data given above. The type is labelled as such by Malloch.

According to Dr. Gagné (letter of 30 September 1968) there are 3 males in the USNM labelled as paratypes: 2 were collected in 1925, but one was collected in 1926 and has therefore been erroneously labelled unless Malloch himself erred in quoting the data.

The remaining 1 or 2 male paratypes have not been located.

frontalis Stein, 1918: 182, and 1919b: 206 (Mydaea)

Lectotype &.

Lectotype data: NEW GUINEA, Regeneiland, 16.ii.1910 (Lorentz).

I have previously designated a lectotype for this species, on the only one of the three original syntypes now extant, and have placed the species in the genus *Dichaetomyia* Malloch (Pont, 1968: 171).

fuscana Malloch, 1928: 296 (Limnophora)

Described from a male holotype, female allotype, and 3 male paratypes, from SUMATRA, Gunung Singgalang, 1600 and 1800 m, 1925-6 (E. Jacobson).

None of these specimens is in Amsterdam, Leiden or the BMNH; nor is any material present in the USNM (letter from Dr. Gagné, 7 May 1968) or in the ZMB (letter from Dr. Schumann, 19 August 1969). The entire typeseries is therefore presumed to be lost.

geniseta Stein, 1909: 256 (Lispa)

Lectotype \mathcal{S} , and $1 \mathcal{S}$ 1 \mathcal{D} paralectotypes.

Lectotype data: JAVA, Batavia, iv.1908 (E. Jacobson).

Lectotype designation: Stein described this species from 3 males and 1 female from Batavia, xii.1907, iv.1908 and v.1908. Three of these four syntypes are in Amsterdam. I have labelled, and designate herewith, the male with the above data as lectotype. It is in good condition, and bears Stein's determination label.

A female, with data as for the holotype, and a male with the date v.1909, have been labelled and are herewith designated as paralectotypes.

A male syntype with the date xii.1907 is in the ZMB: I have labelled it and designate it herewith as paralectotype.

The species is correctly placed in the genus Lispe Latreille.

hirtitibia Stein, 1920b: 53 (Ophyra)

Lectotype ♂.

Lectotype data: JAVA, Goenoeng Gedeh, iii.1911 (E. Jacobson).

Lectotype designation: Stein described this species from 2 males from Goenoeng Gedeh. Only one syntype is in Amsterdam, in good condition and with Stein's determination label. I have labelled and designate herewith this male as lectotype.

The second male syntype is in the ZMB, and I have labelled it and designate it herewith as paralectotype.

impar Stein, 1909: 229 (Mydaea)

Lectotype ♀.

Lectotype data: JAVA, Moeara Antjol, Batavia, xii.1907 (E. Jacobson).

I have previously designated a lectotype for this species (Pont, 1969: 219): the lectotype is in Amsterdam and the paralectotype female in the ZMB. The species belongs to the *impar*-group of the genus *Dichaetomyia* Malloch (see Pont, 1.c.).

inferior Stein, 1909: 213 (Musca)

Lectotype &, and 2 9 paralectotypes.

Lectotype data: JAVA, Semarang, i.1906 (E. Jacobson).

Lectotype designation: Stein described this species from 2 males and 2 females from Semarang (i.1906), Buitenzorg (ix.1907) and Batavia (xii.1907).

Three of these syntypes are in Amsterdam. I have labelled and designate herewith as lectotype the male from Semarang, i.1906, which also bears Stein's determination label. It is in excellent condition. The remaining 2 syntypes, 1 female from Buitenzorg, ix.1907, and 1 female from Batavia, xii.1907, have been labelled and are herewith designated as paralectotypes.

The fourth, male, syntype is not in Amsterdam, nor in the ZMB according to Dr. Schumann (letter of 19 August 1969).

The species belongs to the subgenus *Ptilolepis* Bezzi of *Musca* Linnaeus, and has been correctly interpreted by van Emden (1965: 89).

innocua Malloch, 1928: 295 (Limnophora)

Described from a male holotype and female allotype from SUMATRA, Gunung Singgalang, 1800 m, 1925 (E. Jacobson); and 1 female from SUMATRA, Anei Kloof, 400 m, 1925 (E. Jacobson).

None of these specimens is in Amsterdam, Leiden or the BMNH; nor is any material present in the USNM (letter from Dr. Gagné, 7 May 1968) or in the ZMB (letter from Dr. Schumann, 19 August 1969). The entire typeseries is therefore presumed to be lost.

isolata Malloch, 1929: 398 (Helina)

Holotype ♀.

Holotype data: BURU, Station 12, 1300 m, 4.ii.1922 (L. J. Toxopeus).

Hennig (1952: 80) described a *Helina isolata* from Lombok Is., Indonesia. I propose the new name *Helina hennigi* nom. nov. for *Helina isolata* Hennig, 1952, nec Malloch, 1929.

jacobsoni Malloch, 1928: 297 (Atherigona)

Holotype ♂.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

Malloch described this species from a male holotype and female allotype, of which only the holotype is in Amsterdam. It is labelled as type by Malloch. The mount clearly bore two specimens originally, but one is now missing.

The allotype female is in the USNM according to Dr. Gagné (letter of 30 September 1968).

jacobsoni Malloch, 1928: 334 (Byomya)

Holotype ♂.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson). The holotype is in good condition, but Malloch's determination label reads "Biomyia jacobseni". The supra-squamal ridge is entirely bare on both sides, but apart from this the specimen is identical with *Musca (Eumusca) fletcheri* (Patton & Senior-White, 1924) of which I regard *jacobsoni* as a junior synonym (syn. nov.).

With this male is a female that does not bear Malloch's determination label though its data are as for the holotype. It also belongs to the subgenus *Eumusca* Townsend, and is probably Malloch's allotype.

There is no material of this species in the USNM according to Dr. Gagné (letter of 30 September 1968), but there is some unnamed *Musca* material with the same data as the type-series of this species.

jacobsoni Stein, 1919a: 129, and 1920b: 54 (Parahydrotaea)

Holotype ♂.

Holotype data: JAVA, Samarang, iv.1909 (E. Jacobson).

The holotype is in good condition, and the species has been correctly interpreted by van Emden (1965: 312).

laccata Stein, 1918: 179, and 1920b: 49 (Mydaea)

Lectotype σ , and 2 σ 1 \circ paralectotypes.

Lectotype data: JAVA, Gedeh, 1500—2000 m, vi.1911 (J. C. Koningsberger).

Lectotype designation: Stein described this species from "mehrere Pärchen" from Goenoeng Gedeh, iii and vi.1911. In Amsterdam there are 4 syntypes: Goenoeng Gedeh, iii.1911, 1 & (Jacobson), and Gedeh, vi.1911, 2 & 1 & (Koningsberger). One of these males from Gedeh (Koningsberger) is in excellent condition and bears Stein's determination label. I have labelled it and designate it herewith as lectotype. The remaining three syntypes, 2 males and 1 female, have been labelled as paralectotypes.

In the ZMB there are 3 syntypes, 2 males and 1 female, with the data Gooenoeng Gedeh, iii.1911 (Jacobson). I have labelled them and designate them herewith as paralectotypes.

This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia laccata* (Stein, 1918), **comb. nov.** is herewith established. It belongs to the *polita*-group (see Pont, 1969: 256).

lacustris Malloch, 1929: 404 (Dichaetomyia)

Holotype Q.

Holotype data: BURU, Station 9, 14.v.1921 (L. J. Toxopeus).

Malloch described this species from a single female, which is now rather mouldy. It belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

lateralis Stein, 1904: 105 (Spilogaster)

Holotype Q.

Holotype data: JAVA, Tosari, — (Kobus).

This species belongs to the genus *Helina* Robineau-Desvoidy, and the combination *Helina lateralis* (Stein, 1904), **comb. nov.**, is herewith established. *Mydaea coronata* Stein, 1915, is a new junior synonym of *lateralis* (syn. nov.).

latitarsis Stein, 1909: 232 (Mydaea)

Holotype ♀

Holotype data: JAVA, Poentjak bij Buitenzorg, 1906 (E. Jacobson).

The holotype is in good condition. The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262). *Dichaetomyia* albiceps (Wulp, 1881) is a senior synonym of *latitarsis* (syn. nov.).

lineata Stein, 1904: 102 (Spilogaster)

Lectotype &.

Lectotype data: JAVA, —, — (Piepers).

Lectotype designation: Only one of the two male syntypes is in Amsterdam: I have labelled it and designate it herewith as lectotype. The second male syntype is in the ZMB, and I have labelled it and designate it herewith as paralectotype.

This species belongs to the *quadrata*-group of *Dichaetomyia* Malloch (see Pont, 1969: 209), and is a junior synonym of *D. nubiana* ssp. *nubiana* (Bigot, 1885) as defined by Emden (1965: 357).

longicornis Stein, 1909: 221 (Muscina)

Lectotype Q, and 1 Q paralectotype.

Lectotype data: JAVA, Batavia, xi.1907 (E. Jacobson).

Lectotype designation: Stein described this species from 6 females from Batavia, xi.1907, but only two of these syntypes are in Amsterdam. One female, in perfect condition but lacking Stein's determination label, I have labelled and designate herewith as lectotype. The second female, lacking the left mid leg, has been labelled as paralectotype.

Two additional syntypes were located in the ZMB. They have been labelled and are designated herewith as paralectotypes.

Passeromyia longicornis (Stein, 1909) is preoccupied by Passeromyia longicornis (Macquart, 1951) from Australia. The new name Passeromyia steini nom. nov. is herewith proposed for P. longicornis (Stein, 1909) nec (Macquart, 1851).

maculigera Stein, 1920b: 85 (Coenosia)

Holotype ♂.

Holotype data: SAONEK IS., —, 23.i.1910 (Mevr. de Beaufort).

I have previously reported on this species (Pont, 1968: 172) which belongs to the genus *Pygophora* Schiner and was redescribed by Crosskey (1962: 440).

maculipennis Stein, 1909: 271 (Pygophora)

Lectotype &, and 1 & paralectotype.

Lectotype data: KRAKATAU, Verlaten Eiland, v.1908 (E. Jacobson).

Stein described this species from 3 males from Krakatau, v.1908. Two of these are in Amsterdam. One of these was designated as lectotype by Crosskey (1962: 428). The second male syntype in Amsterdam was not seen by Crosskey: I have labelled it as paralectotype. The lectotype is in good condition, and bears Stein's determination label.

The third male syntype is in the ZMB and has been designated as paralectotype by Crosskey (l.c.).

The species is correctly placed in the genus *Pygophora* Schiner, and has been redescribed by Crosskey (l.c.).

maculiventris Stein, 1909: 237 (Mydaea)

Holotype ♂.

Holotype data: JAVA, Batavia, iii.1908 (E. Jacobson).

The holotype lacks the left mid leg, but is otherwise in good condition. The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

megophthalma Malloch, 1928: 328 (Hebecnema)

Holotype \mathcal{O} , and 2 \mathcal{O} paratypes.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson). Malloch described this species from a male holotype, and 5 male paratypes, all with the above data. In addition to the holotype, there are 2 male paratypes in Amsterdam, one of which has the date 1920 and not 1925. The holotype lacks the left mid leg and is covered with some mould. It is labelled "type" by Malloch.

Of the remaining 3 paratypes, one is in the BMNH, one is in Leiden, and one is in the USNM according to Dr. Gagné (letter of 21 November 1968).

mellea Malloch, 1929: 406 (Dichaetomyia)

Holotype \mathcal{E} , allotype \mathcal{P} , and \mathcal{E} 1 \mathcal{P} paratypes.

Holotype data: BURU, Station 9, 18.v.1921 (L. J. Toxopeus).

The entire type-series is in Amsterdam. The holotype is mouldy but is otherwise in good condition. The species belongs to the *demens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 259).

mellina Stein, 1909: 207 (Graphomyia)

Holotype &.

Holotype data: JAVA, Semarang, i.1906 (E. Jacobson).

Stein described this species from a single male. It is in good condition, and bears Stein's determination label. The species is correctly placed in the genus *Graphomya* Robineau-Desvoidy.

mima Townnsend, 1926: 17 (Cypselopteryx)

Holotype ♀.

Holotype data: SUMATRA, Piek v Kurintji, viii.1915 (E. Jacobson).

The species was originally described as an aberrant Tachinid, but in fact belongs to the Muscid subfamily Eginiinae. Townsend subsequently changed the generic name to *Cypselodopteryx* and assigned the genus to the Anthomyiidae (1934: 20).

modesta de Meijere, 1904 : 106 (Musca)

Lectotype σ , and 8 σ 3 \circ paralectotypes.

Lectotype data: JAVA, Pasoeroean, 1903 (P. Schat).

Lectotype designation: De Meijere described this species from "mehrere Exemplare" collected by Schat at Pasuruan. 12 syntypes with this data were located in Amsterdam, and most of them bear de Meijere's determination label. I have labelled and designate herewith as lectotype a male in fair condition labelled by de Meijere as "Musca modesta 3" and by Stein (1919) as "Musca crassirostris Stein". The remaining 8 males and 3 females have been labelled as paralectotypes. 2 males are on one mount, and so are a further 3 males and 2 females.

This species belongs to the subgenus *Philaematomyia* Austen of the genus *Musca* Linnaeus as currently understood, and *modesta* is a junior synonym of crassirostris Stein, 1903.

modesta van der Wulp, 1881: 48 (Coenosia)

The holotype is in Leiden, and is a female and not a male as stated by van der Wulp in the original description. It is in very poor condition, and lacks the head. It is correctly placed in the genus *Coenosia* Meigen.

necessaria Stein, 1920a: 43 (Mydaea)

Lectotype 3, and 1 3 paralectotype.

Lectotype data: SIMALUR IS., Sinabang, ii.1913 (E. Jacobson).

Lectotype designation: Stein described this species from two males, from Sinabang and "Oerbosch" (no further data). Both syntypes are in Amsterdam. I have labelled and designate herewith the male from Sinabang as lectotype and the male from Oerbosch as paralectotype.

This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia necessaria* (Stein, 1920), **comb. nov.**, is herewith established. The species belongs to the *impar*-group (see Pont, 1969: 217).

nepenthincola Stein, 1909: 222 (Phaonia)

Lectotype \mathcal{O} , and 2 \mathcal{O} paralectotypes.

Lectotype data: JAVA, Buitenzorg, from Nepenthes pitchers, 1908 (Jensen).

Lectotype designation: Stein described this species from 1 male and 2 females. All three syntypes are in Amsterdam. I have labelled and designate herewith the male as lectotype and the two females as paralectotypes. The lectotype is shrivelled, and was apparently originally preserved in alcohol.

This species belongs to the genus *Phaonia* Robineau-Desvoidy in the sense of van Emden (1965: 217), and is very closely related to *glauca* Malloch, 1931, and *sumatrana* Malloch, 1928.

nervosa Stein, 1909: 240 (Mydaea)

Lectotype σ , and 1 σ 2 φ paralectotypes.

Lectotype data: JAVA, Batavia, v.1908 (E. Jacobson).

Lectotype designation: Stein described this species from 3 males and 2 females from Batavia (x and xi.1907, and v.1908). Four syntypes are in Amsterdam, collected in v.1908 (1 &), x.1907 (2 &) and xi.1907 (1 &). The male from v.1908 is in good condition and bears Stein's determination label. I have labelled it and designate it herewith as lectotype. The remaining 3 syntypes have been labelled as paralectotypes.

The fifth syntype, a male, is in the ZMB and has the date v.1908. I have labelled it and designate it herewith as paralectotype.

The species belongs to the genus *Helina* Robineau-Desvoidy, and has been correctly interpreted by van Emden (1965: 537).

nigripennis Stein, 1904: 108 (Limnophora)

Lectotype σ , and 1 \circ paralectotype.

Lectotype data: EAST JAVA, Tosari, —— (Kobus).

Lectotype designation: Stein described this species from 1 male and 1 female, both of which are in Amsterdam. I have labelled and designate herewith the male as lectotype and the female as paralectotype.

L. nigripennis is correctly placed in the genus Limnophora Robineau-Desvoidy.

nigripes Malloch, 1929: 404 (Dichaetomyia)

Holotype &.

Holotype data: BURU, Station 9, 6.vi.1921 (L. J. Toxopeus).

Malloch described this species from a single male, which is now mouldy. It belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

nigrisquama Malloch, 1928: 329 (Morellia)

Malloch described this species from a male holotype, female allotype, and 1 male and 6 female paratypes from SUMATRA, Gunung Singgalang; and

9 female paratypes from PAHANG.

A female in Amsterdam labelled "Type" by Malloch is from Anei Kloof, and cannot therefore be part of the type-series.

In the BMNH are located the male holotype and 5 female paratypes from Sumatra. There are also 9 females from Pahang, which are certainly the paratypes though not so labelled by Malloch.

The remaining specimens from the type-series, the female allotype and 1 male and 1 female paratypes, are in the USNM according to Dr. Gagné (letter of 30 September 1968).

nigrithorax Stein, 1909: 212 (Musca)

Lectotype σ , and 5 σ 5 φ paralectotypes.

Lectotype data: JAVA, Semarang, viii.1905 (E. Jacobson).

Lectotype designation: Stein described this species from 12 males and 8 females from Semarang (viii and x.1905, and i.1906) and Batavia (x.1907, and iv and v.1908). I was able to locate 11 undoubted syntypes in Amsterdam, and there are other specimens that may be syntypes but which for the present I am not considering as such. I have labelled and designate herewith as lectotype a male in good condition and with the data as given above. The remaining 5 male and 5 female syntypes have been labelled as paralectotypes: Semarang, viii.1905, 1 3, 2 9, and i.1906, 3 3, 2 9; Batavia, v.1908, 1 3, 1 9.

In the ZMB are 2 syntypes which I have labelled and designate herewith as paralectotypes: Semarang, i.1906, 1 &; Batavia, v.1908, 1 Q.

The species belongs to the subgenus Byomya Robineau-Desvoidy of Musca Linnaeus, and nigrithorax is a junior synonym of ventrosa Wiedemann, 1830.

nigriventris Stein, 1920b: 69 (Mydaea)

Lectotype σ , and 1 Ω paralectotype.

Lectotype data: SUMATRA, Piek v Kurintji, viii.1915 (E. Jacobson).

Lectotype designation: Stein described this species from a male and a female, from Piek v Kurintje, and both syntypes are in Amsterdam. I have labelled and designate herewith the male as lectotype and the female as paralectotype.

This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia nigriventris* (Stein, 1920), **comb. nov.**, is herewith established.

Malloch (1925: 331) has described a Dichaetomyia nigriventris, which is a junior homonym of Stein's name. I propose the new name Dichaetomyia russelli, nom. nov., for D. nigriventris Malloch, 1925, nec (Stein, 1920).

nitens Stein, 1909: 223 (Hebecnema)

Lectotype &, and 1 & paralectotype.

Lectotype data: JAVA, Depok, x.1907 (E. Jacobson).

Lectotype designation: Stein described this species from 3 males, collected by Jacobson at Depok. Two syntypes are in Amsterdam. I have labelled and designate herewith one of the males as lectotype and the other as paralectotype. The lectotype lacks the right hind leg, but is otherwise in good condition. It bears Stein's determination label.

The third syntype is in the ZMB, and I have labelled it and designate it herewith as paralectotype.

The species is correctly placed in the genus Hebecnema Schnabl.

nitidiventris Malloch, 1926: 341 (Hydrotaea)

Malloch described this species from a unique male (holotype) from SUMATRA, Wai Lima, xi-xii.1921 (Karny). This specimen is not in Amsterdam or Leiden, nor is it in the USNM according to Dr. Gagné (letter of 7 May 1968). It is therefore lost and probably destroyed.

nitidiventris Stein, 1909: 235 (Mydaea)

Holotype &.

Holotype data: JAVA, Depok, xii.1907 (E. Jacobson).

The holotype is in good condition, and bears Stein's determination label. This species belongs to the *polita*-group of *Dichaetomyia* Malloch (see Pont, 1969: 256). In van Emden's work (1965: 228) the footnote reference to *nitidiventris* should read *nigriventris*; the references to *nitidiventris* on pages 374—375 are correct.

nitidiventris Malloch, 1929: 396 (Pygophora)

Holotype ♀.

Holotype data: BURU, Station 9, 19.v.1921 (L. J. Toxopeus).

The holotype is rather squashed laterally, and the left mid leg is missing. The species has been redescribed recently by Crosskey (1962: 485).

niveipalpis Stein, 1904: 99 (Spilogaster)

Holotype Q.

Holotype data: JAVA, —, — (Piepers).

This species belongs to the genus Auria Malloch, and the combination Auria niveipalpis (Stein, 1904), comb. nov., is herewith established. Auria elegans Malloch, 1928, is a new junior synonym of this name (syn. nov.).

nudinervis Malloch, 1928: 321 (Dichaetomyia)

Holotype &.

Holotype data: SUMATRA, west coast, Gunung Singgalang, 1800 m, vii. 1925 (E. Jacobson).

Malloch described this species from a unique male. In his original description he erroneously gave the year of capture as 1926: the Amsterdam specimen, labelled type by Malloch, has the date as given above. The holotype has the abdomen missing, but is otherwise in good condition.

This species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

nudiseta van der Wulp, 1883 : 42 (Cyrtoneura)

The holotype Q was not found in either Amsterdam or Leiden, and is presumed to be lost.

orbitalis Malloch, 1928: 298 (Atherigona)

Holotype d.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

This species was described from a single male. In Amsterdam are 1 male and 1 female on the same mount. They are perhaps conspecific, but the male is the holotype and the female is not part of the type-series. The holotype is slightly greasy in part, but is otherwise in good condition, and is labelled "type" by Malloch.

pallitarsis Stein, 1920b: 63 (Coenosia)

Lectotype Q, and 1 Q paralectotype.

Lectotype data: JAVA, Moeara Angkee, Batavia, iv.1908 (E. Jacobson). Lectotype designation: Stein described this species from 2 females, both of which are in Amsterdam. I have labelled and designate herewith the female from Moeara Angkee as lectotype and the female from Nongkodjadjar as paralectotype. Both specimens are in good condition, and each bears Stein's determination label.

This species belongs to the genus *Pectiniseta* Stein, and is a junior synonym of *Pectiniseta pectinata* (Stein, 1900), syn. nov.

pallitarsis Stein, 1909: 259 (Lispa)

Lectotype 3, and 1 9 paralectotype.

Lectotype data: JAVA, Semarang, viii.1905 (E. Jacobson).

Lectotype designation: Stein described this species from 2 males and 1 female from Semarang, viii.1905. Two syntypes, a male a female, are in Amsterdam. I have labelled and designate herewith the male as lectotype and the female as paralectotype.

There is no material in the ZMB according to Dr. Schumann (letter of 19 August 1969), so the second male syntype is presumed lost.

The lectotype is in good condition and bears Stein's determination label. The species is correctly placed in the genus *Lispe* Latreille, and is a junior synonym of *kowarzi* Becker, 1903.

pallitarsis Stein, 1909: 236 (Mydaea)

Lectotype Q, and Q paralectotype.

Lectotype data: JAVA, Batavia, vii.1907 (E. Jacobson).

Lectotype designation: Stein described this species from 2 females from Batavia, both of which are in Amsterdam. I have labelled the female collected in vii.1907 and designate it herewith as lectotype. The second female has been labelled and is herewith designated as paralectotype. It was collected in xi.1907, and not x.1907 as stated by Stein.

This is a species of *Dichaetomyia* Malloch, and was correctly interpreted by van Emden (1965: 348).

pectinipes Stein, 1909: 230 (Mydaea)

Stein described this species from a single male, which is in the ZMB. The holotype is in good condition, and bears Stein's determination label. The full data are JAVA, G. Salak Tjomas bij Buitenzorg, xi.1907 (E. Jacobson). The species belongs to the *rufescens*-group of the genus *Dichaetomyia* Malloch (see Pont, 1969: 262).

pollinosa Stein, 1909: 211 (Musca)

Lectotype \mathcal{S} , and 8 \mathcal{S} 1 \mathcal{Q} paralectotypes.

Lectotype data: JAVA, Batavia, x.1907 (E. Jacobson).

Lectotype designation: Stein described this species from 13 males and 2 females from Batavia (x and xi.1907), Semarang (ix and x.1905, and i-iii. 1906) and Tandjong Priok (iv.1908). 10 syntypes were located in Amsterdam. I have labelled and designate herewith as lectotype a male in excellent condition with the data as above. The remaining 8 male and 1 female syntypes have been labelled as paralectotypes: Semarang, i.1906, 2 3, 1 9, and ix-x. 1905, 4 3; Batavia, x.1907, 1 3; Tandjong Priok, iv.1908, 1 3.

1 male and 1 female syntypes are in the ZMB, from Batavia, xi.1907. I have labelled them and designate them herewith as paralectotypes.

3 male syntypes have not been located.

The species belongs to the subgenus Byomya Robineau-Desvoidy of the genus Musca Linnaeus, and pollinosa is a junior synonym of planiceps Wiedemann, 1824: the lectotype and all the paralectotypes are conspecific, and possess a submedian posterior seta on fore tibia and a yellow tergite 1+2.

prominens Stein, 1904: 106 (Limnophora)

Lectotype \mathcal{O} , and 3 \mathcal{O} paralectotypes.

Lectotype data: EAST JAVA, Tosari, —— (Kobus).

Lectotype designation: Stein described this species from 2 males and 6 females. 1 male and 3 females are in Amsterdam. I have labelled, and

designate herewith, the male as lectotype and the 3 females as paralectotypes. The lectotype lacks the right mid leg, but is otherwise in good condition. It bears Stein's determination label.

2 female syntypes are in the ZMB. I have labelled them and designate them herewith as paralectotypes.

1 male and 1 female syntypes have not been located.

The species is correctly placed in the genus Limnophora Robineau-Desvoidy.

proxima Malloch, 1929: 393 (Lispocephala)

Holotype ♀.

Holotype data: BURU, Station 1, 13.xii.1921 (L. J. Toxopeus).

The holotype is in good condition, and is labelled by Malloch. It belongs to the genus *Pectiniseta* Stein, and is a junior synonym of *Pectiniseta pectinata* (Stein, 1900), syn. nov.

pruinosa van der Wulp, 1880: 176 (Cyrtoneura)

The 3 female syntypes were not found in either Amsterdam or Leiden, and are presumed to be lost.

quadristriata 1918: 185, and 1919b: 208 (Mydaea)

Holotype ♀.

Holotype data: NEW GUINEA, Hellwiggeb., 2000 m, 16.xi.1909 (Lorentz). I have previously reported on this species and have placed it in the genus *Papuaia* Malloch (Pont, 1968: 172).

ruficoxa Stein, 1909: 239 (Mydaea)

Holotype ♂.

Holotype data: JAVA, Batavia, v.1908 (E. Jacobson).

The holotype is in good condition and bears Stein's determination label. The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

rufitarsis Stein, 1920a: 40 (Cryptolucilia)

Holotype &

Holotype data: SIMALUR IS., Lasikin, iii.1913 (E. Jacobson).

The holotype is in good condition. The species belongs to the genus *Orthellia* Robineau-Desvoidy and has been correctly interpreted by van Emden (1965: 123).

rufitibia Stein, 1918: 147 (Graphomyia)

Stein described this species from Formosa. He also states that the male specimen from Java identified by him as *maculata* (Scopoli, 1763) in 1909 (Stein, 1909: 208) is also *rufitibia*. This male is in Amsterdam, but I have not considered it to be a syntype of *rufitibia*.

rufiventris Stein, 1919b : 201 (Graphomyia)

Holotype &.

Holotype data: WEST CERAM, —, iv-vi.1910 (Van Dedem).

I have previously studied the holotype of this species, and have discussed the names rufiventris and confluens (Pont, 1968: 172).

scutellaris Malloch, 1928: 325 (Dichaetomyia)

Holotype ♀.

Holotype data: SUMATRA, west coast, Gunung Singgalang, 1800 m, 1925 (E. Jacobson).

The holotype is not in good condition. This is the only Oriental species of the *armata*-group of *Dichaetomyia* Malloch with 3 post dc setae (see Pont, 1969: 211).

semidiaphana Stein, 1918: 185, and 1920b: 80 (Mydaea)

Holotype &.

Holotype data: SERAM IS., —, 26.ii.1910 (Mevr. de Beaufort).

I have previously reported on this species and have placed it in the genus *Eumyiospila* Malloch (Pont, 1968: 173).

semifumosa Malloch, 1929: 403 (Dichaetomyia)

Holotype Q.

Holotype data: BURU, Station 11, 120 m, 25.vi.1921 (L. J. Toxopeus). Malloch described this species from a single female, which is now mouldy. It belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

semipellucida Stein, 1918: 180, and 1920b: 51 (Mydaea)

Lectotype σ , and 1 \circ paralectotype.

Lectotype data: JAVA, Gedeh, 1625—2400 m, 31.v.1911 (J. C. Koningsberger).

Lectotype designation: Stein described this species from 1 male and 1 female from "Goenoeng Gedeh". His two syntypes are in Amsterdam, with the data as given above. I have labelled, and designate herewith, the male

as lectotype and the female as paralectotype.

This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia semipellucida* (Stein, 1918), **comb. nov.**, is herewith established. It belongs to the *rufescens*-group (see Pont, 1969: 262).

sericipalpis Stein, 1904: 110 (Lispa)

Lectotype \mathcal{S} , and 1 \mathcal{S} 3 \mathcal{P} 1? paralectotypes.

Lectotype data: JAVA, Tosari, — (Kobus).

Lectotype designation: Stein described this species from 4 males and 6 females from Tosari. In Amsterdam there are 6 syntypes: 2 males, 3 females, and 1 specimen lacking an abdomen and of indeterminate sex. I have labelled and designate herewith one of the males as lectotype and the remaining 5 syntypes as paralectotypes.

In the ZMB there are the remaining four syntypes, 3 males and 1 female. Species of *Lispe* are often difficult to sex, so that the discrepancy in the sex of the syntypes I have studied compared with Stein's data is not of great consequence. I have labelled these ZMB specimens and designate them herewith as paralectotypes.

The lectotype lacks the right hind leg, but is otherwise in good condition, and it bears Stein's determination label. The species is correctly placed in the genus *Lispe* Latreille.

setifemur Malloch, 1928: 321 (Dichaetomyia)

Holotype ♂.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

The holotype, a unique male, lacks the left mid and hind legs, and the right hind tarsi. It is labelled type by Malloch. The date on the collector's label is 1925, and not 1928 as stated by Malloch.

This species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

setitarsis Stein, 1919b: 211 (Pygophora)

Holotype ♂.

Holotype data: NEW GUINEA, Bivakeiland, ii.1910 (Lorentz).

I have previously reported on the holotype of this species (Pont, 1968: 173), which belongs to the genus *Pygophora* Schiner and has been redescribed by Crosskey (1962: 423).

setiventris Malloch, 1929: 394 (Pygophora)

Holotype 3.

Holotype data: BURU, Station 21, 10.i.1922 (L. J. Toxopeus).

The holotype is in good condition, and is labelled by Malloch. P. seti-

ventris is a junior synonym of *Pygophora maculigera* (Stein, 1920) under which name it has been redescribed by Crosskey (1962: 440).

Three of the four females doubtfully referred by Malloch to setiventris (op. cit.: 396) are in Amsterdam. I have studied these, and find that they belong to Pygophora simplex Hennig, 1952. The fourth female is in the USNM and was identified by Crosskey as simplex Hennig (Crosskey, 1962: 495).

setulinervis Stein, 1920a: 44 (Mydaea)

Lectotype 3, and 1 2 paralectotype.

Lectotype data: SIMALUR IS., Laut Tawar, viii.1913 (E. Jacobson).

Lectotype designation: Stein described this species from 1 male and 1 female, and both syntypes, with the data as above, are in Amsterdam. I have labelled, and designate herewith, the male as lectotype and the female as paralectotype. The lectotype is immature, but is otherwise in good condition. It bears Stein's determination label.

This species belongs to the genus Lasiopelta Malloch, and the combination Lasiopelta setulinervis (Stein, 1920), comb. nov., is herewith established.

setulipes Stein, 1918: 182, and 1920b: 51 (Mydaea)

The holotype of this species is in the ZMB. It is in good condition, and bears Stein's determination label. The full data are JAVA, Nongkodjadjar, i.1911 (E. Jacobson).

The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

submaculata van der Wulp, 1891 : 208 (Coenosia)

The holotype female was not found in either Amsterdam or Leiden, and is presumed to be lost.

subtilis Stein, 1909: 249 (Limnophora)

Lectotype \mathcal{O} , and 2 \mathcal{O} 2 \mathcal{O} paralectotypes.

Lectotype data: JAVA, Batavia, v. 1908 (E. Jacobson).

Lectotype designation: Stein described this species from 6 males and 5 females from Batavia (xi.1907 and v.1908) and Tankoeban Prahoe (vi.1908). I was able to locate 3 male and 2 female syntypes in Amsterdam. I am including as a syntype a male from Batavia, x.1907, labelled by Stein, and assume Stein's statement of xi.1907 as the date to be a lapsus in this case. I have labelled a male in good condition and bearing Stein's determination label, from Batavia, v.1908, and designate it herewith, as lectotype. The remaining 2 male and 2 female syntypes have been labelled as paralectotypes.

The remaining 6 syntypes, 3 males and 3 females, are in the ZMB. I have

labelled them and designate them herewith as paralectotypes. The data are Tankoeban Prahoe, vi.1908, 1 &; Batavia, xi.1907, 1 &, and v.1908, 1 &, 3 Q.

The species belongs to the genus *Gymnodia* Robineau-Desvoidy and has been correctly identified by van Emden (1965: 624).

suffusa Malloch, 1929: 406 (Dichaetomyia)

Holotype ♀.

Holotype data: BURU, Station 9, 26.v.1921 (L. J. Toxopeus).

Malloch described this species from a single female, which lacks the right mid leg and is mouldy. It belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

sumatrana Malloch, 1928: 318 (Dichaetomyia)

Holotype ♀.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

The holotype, a unique female, has the left side of the head and pleura destroyed by museum beetle, and the left fore leg and abdomen missing.

The species belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

sumatrana Malloch, 1928: 315 (Helina)

Holotype ♀.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson). The holotype is in good condition and is labelled type by Malloch. This is a species of *Helina* Robineau-Desvoidy very similar to *lateralis* (Stein, 1904).

sumatrana Malloch, 1928: 314 (Phaonia)

Holotype ♂.

Holotype data: SUMATRA, Westkust, Gunung Singgalang, 1000 m, vii. 1925 (E. Jacobson).

The holotype is in good condition, and has been labelled as type by Malloch. This is a species of *Phaonia* Robineau-Desvoidy closely related to glauca Malloch, 1931, and nepenthincola Stein, 1909.

sumatrensis Malloch, 1935: 234 (Xenosina)

Holotype Q.

Holotype data: SUMATRA, Westkust, Gunung Singgalang, 1000 m, vii. 1925 (E. Jacobson).

Malloch described this species from a female holotype and three female

paratypes. Only the holotype is in Amsterdam: it is in good condition, and is labelled type by Malloch.

Two of the paratypes are in the BMNH. The third paratype, with the altitude given as 1800 m but with the data otherwise identical, is in the USNM according to Dr. Gagné (letter of 21 November 1968). The altitude of the BMNH paratypes is poorly written and could be 1000 or 1800 m.

The species was described into *Xenosina* Malloch, 1925, which name is preoccupied by *Xenosina* Warren, 1900, and should therefore be replaced by the name *Lasiopelta* Malloch, 1928. The combination *Lasiopelta sumatrensis* (Malloch, 1935), comb. nov., is herewith established.

surgens Stein, 1909: 227 (Mydaea)

Lectotype σ , and 9 σ 4 \circ paralectotypes.

Lectotype data: JAVA, Batavia, v.1908 (E. Jacobson).

Lectotype designation: Stein described this species without any indication of the type-locality or the number of specimens involved. Both sexes were described. I have considered as syntypes all specimens collected in Java by Jacobson before 1909. There are 14 syntypes in Amsterdam, 10 males and 4 females, and three of the males are labelled "surgens sp.n." by Stein. I have labelled, and designate herewith as lectotype, a male with the data given above that bears Stein's determination label. The remaining 13 syntypes, 9 males and 4 females, have been labelled as paralectotypes. The data for these are as follows: JAVA, Batavia, x.1907, 1 &, 1 &; xi.1907, 5 &; xii.1907, 1 &; v.1908, 3 &, 2 & (all E. Jacobson).

In the ZMB there are 8 syntypes, 4 males and 4 females. I have labelled these and designate them herewith as paralectotypes. Their data are as follows: JAVA, Batavia, x.1907, 2 &, 1 Q; xi.1907, 1 Q; v.1908, 2 &, 2 Q (all E. Jacobson).

This species belongs to the genus Dichaetomyia Malloch.

tenuiventris Malloch, 1928: 293 (Limnophora)

Described from a male holotype, female allotype, and 2 male paratypes from SUMATRA, Gunung Singgalang, 1400—1800 m, 1925 (E. Jacobson); and from 4 male paratypes from JAVA, Tjibodas, Mt. Gede (Bryant & Palmer), stated to be in the USNM.

None of these 8 specimens has been located, and the entire type-series is presumed lost. There are no specimens in Amsterdam, Leiden, or the BMNH; nor was any material located in the USNM by Dr. Gagné (letter of 7 May 1968) or in the ZMB by Dr. Schumann (letter of 19 August 1969).

tibiseta Malloch, 1928: 334 (Byomya)

Described from a male holotype and 1 male paratype from SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

There is no material of this species in Amsterdam, Leiden or the BMNH. Nor was any located in the USNM according to Dr. Gagné (letter of 7 May 1968) or in the ZMB according to Dr. Schumann (letter of 19 August 1969). Both holotype and paratype are lost, presumed destroyed.

Byomya tibiseta Malloch, 1928, is a junior synonym of Musca (Eumusca) seniorwhitei Patton. 1922.

tonsa Stein, 1909: 245 (Limnophora)

Lectotype \mathcal{S} , and 1 \mathcal{S} paralectotype.

Lectotype data: JAVA, Tankoeban Prahoe, vi.1908 (E. Jacobson).

Lectotype designation: Stein described this species from 2 males, both of which are in Amsterdam. One of these is in perfect condition and bears Stein's determination label: I have labelled it and designate it herewith as lectotype. The second male, which lacks the right mid leg, has been labelled as paralectotype.

This species belongs to the genus Heliographa Malloch.

toxopei Malloch, 1929: 399 (Xenosina)

Holotype Q, and Q Q paratypes.

Holotype data: BURU, Station 12, 1200 m, 4.ii.1922 (L. J. Toxopeus).

Malloch described this species from a female holotype, with data as above, and an unspecified number of female paratypes, from Station 9, 9.vi.1921, and Station 13, 29.viii.1921. There are 2 female paratypes in Amsterdam, one from each of these localities. No further paratypes have been traced either in the BMNH, or in the USNM (letter from Dr. Gagné of 21 November 1968).

The holotype has the right hind leg missing, and is labelled type by Malloch. Malloch's label reads "toxopeus" and not "toxopei", but the name was published as "toxopei".

The species was described into *Xenosina* Malloch, 1925, which name is preoccupied by *Xenosina* Warren, 1900, and should be replaced by the name *Lasiopelta* Malloch, 1928. The combination *Lasiopelta toxopei* (Malloch, 1929), comb. nov., is herewith established.

tridens Malloch, 1928: 303 (Atherigona)

Holotype &.

Holotype data: SUMATRA, Westkust, Gunung Singgalang, 1800 m, vii. 1925 (E. Jacobson).

This species was described from a single male, which is in Amsterdam. The holotype lacks the right mid and hind legs, but is otherwise in good condition.

tuberculifacies Stein, 1909: 226 (Mydaea)

Stein described this species from 1 female from JAVA, Batavia, ii.1908 (E. Jacobson). The holotype is in the ZMB. The species belongs to the genus *Rhynchomydaea* Malloch, and is redescribed by me (Pont, in press).

tumidiventris Stein, 1904: 112 (Coenosia)

Holotype ♂.

Holotype data: JAVA, —, — (Piepers).

The holotype is in good condition, and the genitalia are mounted separately on a slide. The species belongs to the genus *Pygophora* Schiner, and has recently been redescribed by Crosskey (1962: 509).

unguicauda Malloch, 1928: 299 (Atherigona)

Holotype ♂.

Holotype data: SUMATRA, Fort de Kock, 920 m, 1925 (E. Jacobson).

This species was described from a single male, now in Amsterdam. The holotype is on the same mount as a female, which forms no part of the type-series. It is in good condition, and is labelled as type by Malloch.

ungulata Stein, 1909: 233 (Mydaea)

Lectotype \mathcal{S} , and 1 \mathcal{S} paralectotype.

Lectotype data: JAVA, Semarang, ix-x.1905 (E. Jacobson).

Lectotype designation: Stein described this species from a pair of specimens from Semarang, x.1905 and i.1906. Both syntypes are in Amsterdam. I have labelled, and designate herewith, the male as lectotype and the female as paralectotype. The lectotype lacks the left mid leg, several tarsal segments off other legs, and the antennae. It bears Stein's determination label.

M. ungulata Stein, 1909, is a junior synonym of Xenosia bina (Wiedemann, 1830), as was established by van Emden (1965: 432).

unicolor Stein, 1920b: 64 (Coenosia)

Holotype ♀.

Holotype data: JAVA, Wonosobo, iv.1909 (E. Jacobson).

The holotype lacks the right hind leg, but is otherwise in good condition, and it bears Stein's determination label. It belongs to the genus *Pygophora* Schiner, and has recently been redescribed by Crosskey (1962: 501).

uniformis Malloch, 1929: 407 (Dichaetomyia)

Holotype Q.

Holotype data: BURU, Station 13, 30.viii.1921 (L. J. Toxopeus).

Malloch described this species from a single female, which is now mouldy. It belongs to the *rufescens*-group of *Dichaetomyia* Malloch (see Pont, 1969: 262).

varicolor Stein, 1920b: 71 (Mydaea)

Holotype ♂.

Holotype data: SUMATRA, Muara Sako, x.1915 (E. Jacobson).

The holotype is rather dirty, and lacks the right mid leg and left hind leg. This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia varicolor* (Stein, 1920), **comb. nov.**, is herewith established. *D. varicolor* belongs to the *rufescens*-group (see Pont, 1969: 262).

veniseta Stein, 1915: 39, and 1920b: 56 (Limnophora)

Lectotype 3, and 7 3 19 9 paralectotypes.

Lectotype data: JAVA, Tjibodas, 5000—6000 feet, 1913 (J. C. Koningsberger).

Lectotype designation: Stein described this species as "ziemlich zahlreich, Tjibodas, 5—6000' (Koningsberger), Nongkodjadjar I.11, Gedeh VI.11". In Amsterdam there are 27 syntypes, 8 males and 19 females. I have labelled and designate herewith as lectotype a male in good condition and with the date as given above. I have labelled and designate the remaining syntypes as paralectotypes, 7 males and 19 females.

In the ZMB there are 6 syntypes, 2 males and 4 females. I have labelled them and designate them herewith as paralectotypes.

The data for these paralectotypes are as follows:

- JAVA, Tjibodas, 5000—6000 feet, 1913 (J. C. Koningsberger), 6 males and 14 females in Amsterdam, 2 males in ZMB.
- JAVA, Gedeh, 1500—2000 m, vi.1911 (J. C. Koningsberger), 1 male in Amsterdam.
- JAVA, Nongkodjadjar, i.1911 (E. Jacobson), 5 females in Amsterdam, 4 females in ZMB.

The aberrant male from Wonosobo discussed by Stein is in Amsterdam. L. veniseta is correctly placed in the genus Limnophora Robineau-Desvoidy.

vittata Stein, 1909: 206 (Graphomyia)

Holotype &.

Holotype data: JAVA, Moeara Angke, Batavia, iv.1908 (E. Jacobson).

Stein described this species from a single male. The left mid leg is missing, otherwise it is in good condition, and it bears Stein's determination label. The species is correctly placed in the genus *Graphomya* Robineau-Desvoidy.

vittipennis Stein, 1920b: 73 (Atherigona)

Lectotype \mathcal{O} , and 2 \mathcal{Q} paralectotypes.

Lectotype data: SUMATRA, Suban Ajam, vii.1916 (E. Jacobson).

Lectotype designation: Stein described this species from 3 syntypes, 1 male and 1 female from Suban Ajam and 1 female from Ceram, 26.ii.1910. All three are in Amsterdam. The two specimens from Suban Ajam are on a single mount. I have labelled, and designate herewith, the male as lectotype and the 2 females as paralectotypes. The lectotype is in good condition.

A. vittipennis belongs to the orientalis-group of Atherigona Rondani (subgenus Acritochaeta Grimshaw).

vittithorax Stein, 1918: 182, and 1920b: 52 (Mydaea)

Lectotype ♀.

Lectotype data: JAVA, Gedeh, 1500—2000 m, vi.1911 (J. C. Koningsberger).

Lectotype designation: Stein described this species from 2 females from Gedeh, vi.1911. One of these is in Amsterdam: I have labelled it and designate it herewith as lectotype. It bears Stein's determination label. The abdomen is crushed, otherwise it is in good condition.

A second female in Amsterdam has the date 31.v.1911 and the altitude 1625—2400 m. This is very probably the second syntype, but because of the discrepancies in the data (date and altitude) I have not labelled it as paralectotype.

There is no material of this species in the ZMB, according to Dr. Schumann (letter of 19 August 1969).

This species belongs to the genus *Dichaetomyia* Malloch, and the combination *Dichaetomyia vittithorax* (Stein, 1918), **comb. nov.**, is herewith established. It is provisionally placed in the *polita*-group (see Pont, 1969: 256), but is unique among Oriental *Dichaetomyia* in possessing long hairs on the posterior part of the infra-alar bulla.

LIST OF MISSING PRIMARY TYPES

Graphomyia atripes Malloch
Coenosia ferruginea van der Wulp
Limnophora fuscana Malloch
Limnophora innocua Malloch
Hydrotaea nitidiventris Malloch
Cyrtoneura nudiseta van der Wulp
Cyrtoneura pruinosa van der Wulp
Coenosia submaculata van der Wulp
Limnophora tenuiventris Malloch
Byomya tibiseta Malloch

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