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The Sciaroidea (Diptera) (excluding Sciaridae) of New Zealand. I. Genus *Aneura* Marshall

ALEXANDER I. ZAITZEV

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Zaitzev, A. I. 2001. The Sciaroidea (Diptera) (excluding Sciaridae) of New Zealand. I. Genus *Aneura* Marshall. *Int. J. Dipterol. Res.*, **12**(1): 33—42.

A review of New Zealand species of the genus *Aneura* Marshall with key to identification is given. *Aneura jaschhofi* and *A. tonnoiri* spp. n. are described.

A. I. Zaitzev, A. N. Severtzov Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow, 117071, Leninsky Prosp., 33, Russia.

Key words. Diptera, Mycetophilidae, *Aneura*, new species.

Introduction

About 250 species of Sciaroidea have previously been described from New Zealand. The only great monograph on regional fungus gnat fauna have been published by Tonnoir and Edwards (1927). It contains information on 23 species of Ditomyiidae, 48 species of Keroplatidae, 19 species of Sciaridae, 1 species of Manotinae, 3 species of Mycomyinae, 36 species of Sciophilinae, 8 species of Gnoristinae, 31 species of Leiinae, 98 species of Mycetophilinae. Only descriptions of several species from various taxons of Sciaroidea have been published later (Harrison, 1964). These data have been summarized by Matile (1989) in "Catalog of the Diptera of the Australian and Oceanian Region". The last revised web version of this Catalog appeared in 1996 (Matile, 1996).

The present study based upon the extensive material collected by Dr. M. Jaschhof (Germany) during his visit in New Zealand in December 1992 – January 1993. I am very grateful to Dr. Jaschhof for giving to me this collection.

The genus *Aneura* was established by Marshall (1896) for New Zealand species *A. boletinoides*

Marsh. On more species *A. fagi* (Marsh.) was transferred later from *Sciophila* Meig. Tonnoir and Edwards (1927) described another 9 species from New Zealand: *A. appendiculata* Tonn., *A. bispinosa* Edw., *A. defecta* Edw., *A. filiformis* Tonn., *A. fusca* Tonn., *A. longicauda* Tonn., *A. longipalpis* Tonn., *A. nitida* Tonn., *A. pallida* Edw. Through examination of extensive Edwards' Chilean and Patagonian collection of Mycetophilidae Freeman (1954) discovered 2 South American species of this genus: *A. basalis* Freem. and *A. longistila* Freem. In 1975 Duret published descriptions of two species from Chile and Argentina: *A. neuquina* Duret and *A. chileana* Duret. Later (Duret, 1984) *A. longistila* was founded on Cape Horn Archipelago. So the genus *Aneura* contains 11 New Zealand and 4 South American species. Australian (Johannsen, 1909) and Tasmanian (Freeman, 1954) records of *Aneura* need verification as in the Australasian and Oceanian Catalog (Matile, 1996) it is not given. A review of New Zealand species of *Aneura* with description of two new species is given in the present paper. All materials is stored in A. N. Severtzov Institute of Ecology and Evolution (Moscow).

Review of species of New Zealand fauna

Aneura appendiculata Tonn.

(Figs 2, 10)

appendiculata Tonnoir, in Tonnoir, Edwards, 1927: 808 (*Aneura*).

Material. New Zealand: 4 ♂, Waitomo Caves, 12 km southwest of Otorohanga, 14.XII.1992, Jaschhof leg.; 1 ♂, Tongariro National Park, 2 km east of Whakapapa Village, 16.XII.1992, Jaschhof leg.; 1 ♂, 1 ♀, Mount Egmont National Park, East Egmont, 9.I.1993, Jaschhof leg.; 2 ♀, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.; 1 ♀, Trounson Kauri Park, northwest of Dargaville, 31.XII.1992, Jaschhof leg.

Male. Head brown, clypeus yellow, palpi yellow or light brown, apical palpal segment 3.5 times as long as preapical segment; antennae brown, scape, pedicel and basal third of first flagellomere yellow, sixth flagellomere about 5 times as long as wide. Thorax two colored; mesonotum yellow with three thin brown stripes converging posteriorly; scutellum, mediotergite

and pleurotergite brown; pleurae yellow. Wing clear, wing length 3.6—3.7 mm; membrane bears both macro- and microtrichia; *R*₄ absent; *M* fork weak, stem of *M* fork 1.1 times as long as *M*₁; *Cu* fork under middle of stem of *M* fork. Halteres yellow. Legs yellow, fore tibia 1.6 times as long as fore basitarsus; fore tibia with 1 *p*; mid tibia with 2 *a*, 0—1 *d*, 2 *pd*, 2 *p*, 2 *v*; hind tibia with 6 *a*, 12 *d*, 15—20 *p*. Abdomen brown; tergites II—V with yellow hind margins. Genitalia yellow.

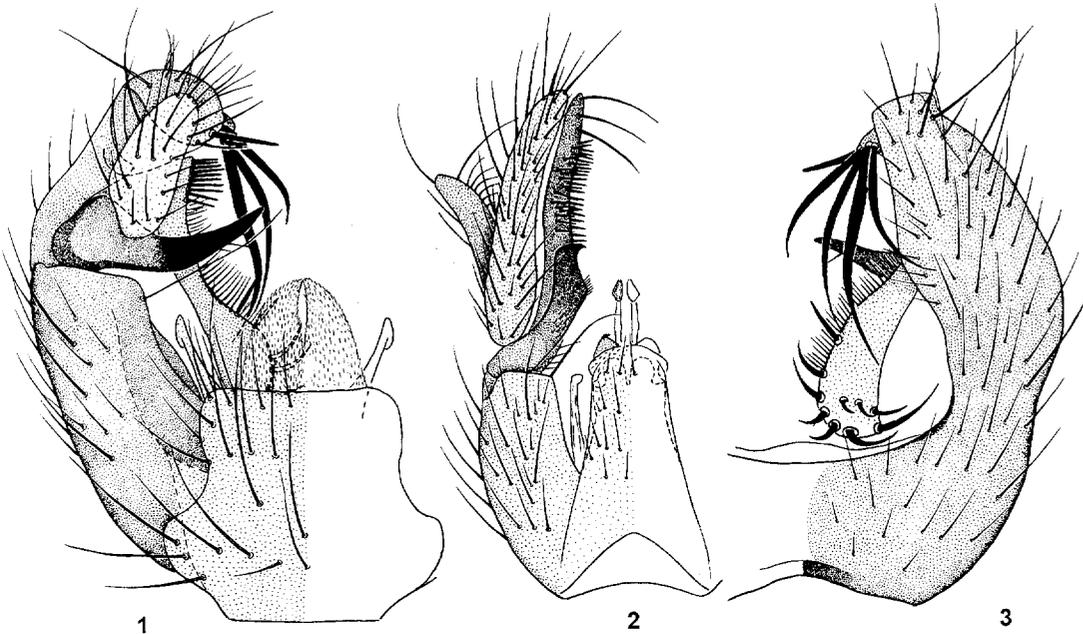
Female. Similar to male; II—VI abdominal tergites brown with yellow posterior margins. Ovipositor brown.

Aneura boletinoides Marsh.

(Figs 1, 3)

boletinoides Marshall, 1896: 288 (*Aneura*).

Material. New Zealand: 3 ♂, Waitomo Caves, 12 km southwest of Otorohanga, 14.XII.1992, 13.I.1993, Jaschhof leg.; 2 ♂, Mount Egmont National Park, East Egmont, 19.I.1993, Jaschhof leg.; 2 ♂,



Figs 1—3. *Aneura*.

1, 3, *A. boletinoides* Marsh.: 1, male genitalia, dorsal view; 3, male genitalia, ventral view. 2, *A. appendiculata* Tonn., male genitalia, dorsal view.



4, male g

Puketi Forest, Waipapa River V
Jaschhof leg.; 1 ♂, Tongariro
Historic Waihoonu Hut, 18.XII.
1 ♂, Waipoua Forest, 45 km nor
31.12.1992, Jaschhof leg.

Male. Head dark brown; cl
and palpi yellow, apical palp
as long as preapical segment
scape and pedicel yellow, sixt
5 times as long as wide. Tho
brown mediotergite. Wings
3.1—3.2 mm; membrane with
trichia; *R*₄ absent; *M* fork we
as long as *M*₁; base of *Cu* fo
middle of stem of *M* fork. Hal
yellow; fore basitarsus 1.2 tim
tibia; fore tibia without bristl
2—3 *a*; hind tibia with 3—
12—13 *p*. Abdomen yellowis
brown; tergites II—V yellowis
rior margins; tergite VI bro
brown.

Female. Tonnoir and Ed
signated one female from Ma
as type but did not give it's

s Aneura

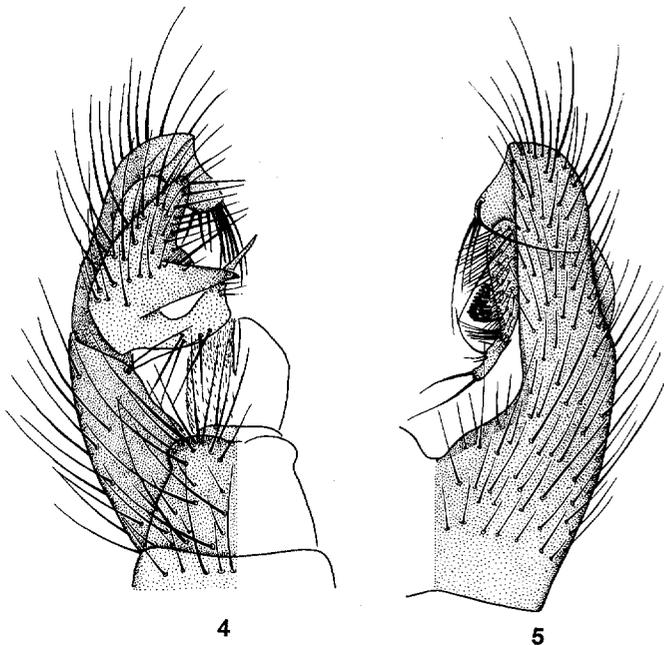
own; pleurae yellow. Wing
 5—3.7 mm; membrane bears
 rotrichia; R_4 absent; M fork
 k 1.1 times as long as M_1 ;
 of stem of M fork. Halteres
 fore tibia 1.6 times as long
 re tibia with 1 p ; mid tibia
 d , 2 p , 2 v ; hind tibia with
 Abdomen brown; tergites
 hind margins. Genitalia

o male; II—VI abdominal
 yellow posterior margins.

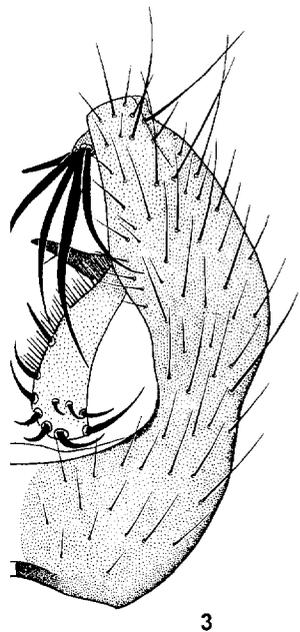
as Marsh.

1896: 288 (*Aneura*).

land: 3 ♂, Waitomo Caves,
 Otorohanga, 14.XII.1992,
 ; 2 ♂, Mount Egmont National
 0.I.1993, Jaschhof leg.; 2 ♂,



Figs 4, 5. *Aneura fagi* (Marsh.).
 4, male genitalia, dorsal view; 5, male genitalia, ventral view.



3

genitalia, ventral view. 2, A.

Puketiki Forest, Waipapa River Valley, 1—2.I.1993,
 Jaschhof leg.; 1 ♂, Tongariro National Park, near
 Historic Waihoon Hut, 18.XII.1992, Jaschhof leg.;
 1 ♂, Waipoua Forest, 45 km northwest of Dargaville,
 31.12.1992, Jaschhof leg.

Male. Head dark brown; clypeus, mouth parts
 and palpi yellow, apical palpal segment 2 times
 as long as preapical segment; antennae brown,
 scape and pedicel yellow, sixth flagellar segment
 5 times as long as wide. Thorax yellow except
 brown mediotergite. Wings clear; wing length
 3.1—3.2 mm; membrane with macro- and micro-
 trichia; R_4 absent; M fork weak, stem of M fork
 as long as M_1 ; base of Cu fork at the level of
 middle of stem of M fork. Halteres yellow. Legs
 yellow; fore basitarsus 1.2 times as long as fore
 tibia; fore tibia without bristles; mid tibia with
 2—3 a ; hind tibia with 3—5 a , 10—12 d ,
 12—13 p . Abdomen yellowish brown; tergite I
 brown; tergites II—V yellowish with dark poste-
 rior margins; tergite VI brownish. Genitalia
 brown.

Female. Tonnoir and Edwards (1927) de-
 signated one female from Marshall's collection
 as type but did not give it's description.

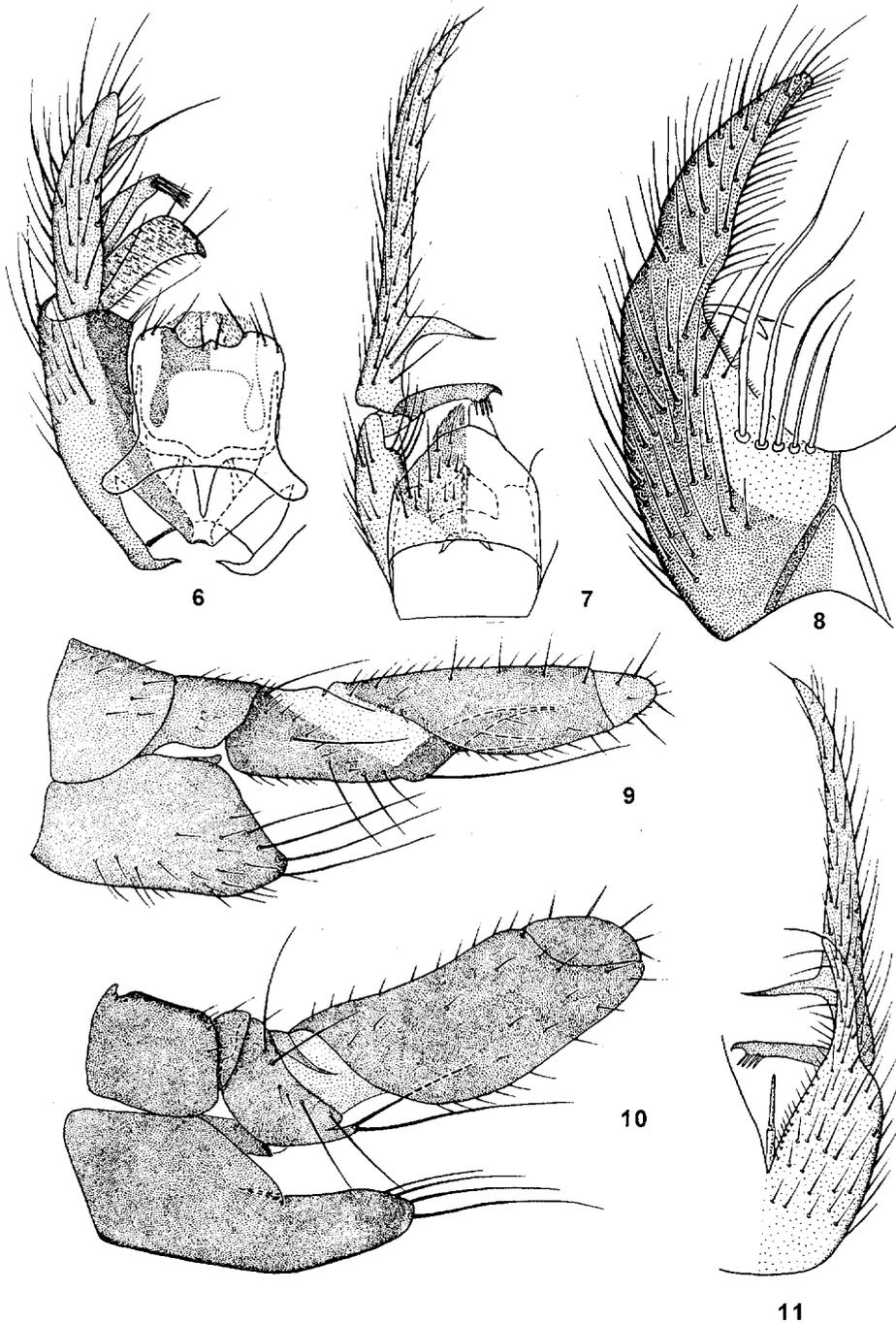
Aneura fagi (Marsh.)
 (Figs 4, 5)

fagi Marshall, 1896: 282 (*Sciophila*)

Material. New Zealand: 1 ♂, Hauhungaroa Range,
 5 km southwest of Tihoi, 21.XII.1992, leg. Jaschhof.

Male. Head dark brown; clypeus yellow, palpi
 brownish, apical palpal segment about 1.5 times
 as long as preapical segment; antennae brown;
 scape and pedicel yellow, sixth flagellar segmnet
 about 4 times as long as wide. Thorax two
 colored; mesonotum brownish with yellow lateral
 parts; mediotergite and pleurotergite brownish;
 pleurae yellow. Wing clear; wing length 3.2 mm;
 membrane with macro- and microtrichia; R_4
 present, small cell 4 times as long as wide; M
 fork distinct; base of Cu fork beyond middle of
 stem of M fork. Halteres yellow. Legs yellow,
 fore basitarsus about 1.1 times as long as fore
 tibia; fore tibia with 1 d , 0—1 p ; mid tibia with
 2 a , 3 d , 3 p , 3 v ; hind tibia with 5 ad , 10 d ,
 7 p . Abdomen brown, tergite II—V with yellow
 posterior margins. Genitalia yellowish brown.

Female unknown.

Figs 6—11. *Aneura*.

6, *A. jaschhofi* sp. n.: male genitalia, dorsal view. 7, 11, *A. filiformis*: 7, male genitalia, dorsal view; 11, male genitalia, ventral view. 8, 9, *A. fusca* Tonn.: 8, male genitalia, ventral view; 9, ovipositor, lateral view. 10, *A. appendiculata* Tonn.: ovipositor, lateral view.

Aneura filiformis Tonn.
(Figs 7, 11)

filiformis Tonnoir, in Tonnoir, 1927 (Aneura).

Material. New Zealand: 2 males, 5 km southwest of Tihoi, 21.IV.1992, Zaitzev leg.

Male. Head dark brown; thorax brown, apical palpal segment brown as preapical segment; antennae brown, pedicel and base of first flagellar segment brown, sixth flagellar segment about as long as wide. Thorax yellow. Wings clear; wing length 3.5—3.6 mm; membrane brown with microtrichia; R_4 absent; M fork shorter than M_1 ; Cu fork of stem of M fork. Legs yellow; fore tibia with 2 a , 5—5 a , 20—21 d , 10—12 p . Genitalia yellowish brown.

Female. Similar to male. Ovipositor dark brown; cerci of ovipositor dark brown (Tonnoir, 1927).

Aneura fusca Tonn.
(Figs 8, 9, 12)

fusca Tonnoir, in Tonnoir, 1927 (Aneura).

Material. New Zealand: 1 male, National Park, near Hahakopu, 18.XII.1992, Jaschhof leg.; 1 female, 45 km northwest of Dargaville, 1992, Zaitzev leg.

Male. Head dark brown; thorax brownish except yellow apical palpal segment about 5—6 times as long as wide. Thorax dark brown, dull. Wings clear; wing length 3.5—4.0 mm; membrane brown with macro- and microtrichia; R_4 absent; stem of M fork 1.1 times as long as wide; Cu fork well before middle. Halteres yellow. Legs yellowish brown; fore basitarsus about as long as wide; fore tibia with 2 a , 2 d , 2—3 p ; hind tibia with 3 a , 2 d , 1 p , 2 v ; hind

Aneura filiformis Tonn.

(Figs 7, 11)

filiformis Tonnoir, in Tonnoir, Edwards, 1927: 806 (*Aneura*).**Material. New Zealand:** 2 ♂, Hauhungaroa Range, 5 km southwest of Tihoi, 21.XII.1992, Jaschhof leg.

Male. Head dark brown; clypeus yellow, palpi brown, apical palpal segment 2 times as long as preapical segment; antennae brown, scape, pedicel and base of first flagellomere yellow, sixth flagellar segment about 5 times as long as wide. Thorax yellow. Wing clear, wing length 3.5–3.6 mm; membrane bears both macro- and microtrichia; R_4 absent; M fork weak; stem of M fork shorter than M_1 ; Cu fork beyond middle of stem of M fork. Legs yellow; fore basitarsus 1.3 times as long as fore tibia; fore tibia with 2 p ; mid tibia with 2 a , 5–6 p ; hind tibia with 5 a , 20–21 d , 10–12 p . Abdomen long dark brown. Genitalia yellowish brown.

Female. Similar to male; abdomen less slender; cerci of ovipositor dark (Tonnoir, Edwards, 1927).

Aneura fusca Tonn.

(Figs 8, 9, 12)

fusca Tonnoir, in Tonnoir, Edwards, 1927: 807 (*Aneura*).

Material. New Zealand: 1 ♂, 1 ♀, Tongariro National Park, near Historic Waihohonu Hut, 18.XII.1992, Jaschhof leg.; 1 ♂, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.

Male. Head dark brown; clypeus brown, palpi brownish except yellow apical segment, apical palpal segment about 5–6 times as long as preapical segment; antennae dark brown, pedicel yellow, sixth flagellar segment about 3 times as long as wide. Thorax dark brown, mesonotum dull. Wings clear; wing length 3.0 mm; membrane with macro- and microtrichia; R_4 present, small cell 5 times as long as wide; M fork distinct, stem of M fork 1.1 times as long as M_1 ; base of Cu fork well before middle of stem of M fork. Halteres yellow. Legs yellow; mid and hind coxae brown; fore basitarsus about as long as fore tibia; fore tibia with 2 a , 2 d , 2–3 p , 2 v ; mid tibia with 3 a , 2 d , 1 p , 2 v ; hind tibia with 5 a , 7 d ,

3 p . Abdomen yellowish brown; tergites II–IV with yellow posterior margins. Genitalia dark brown.

Female. Similar to male. Tergites II–VI with yellow posterior margins. Ovipositor brown.

Aneura jaschhofi sp. n.

(Figs 6, 13, 16)

Holotype. ♂, New Zealand, Waitomo Caves, 12 km southwest Otorohanga, 14.XII.1992, Jaschhof leg.

Paratypes. 3 ♂, same data; 2 ♂, New Zealand, Hauhungaroa Range, 5 km southwest of Tihoi, 24.XII.1992, Jaschhof leg.; 6 ♂, New Zealand, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.; 1 ♂, New Zealand, Mount Egmont National Park, East Egmont, 9.I.1993, Jaschhof leg.; 1 ♂, New Zealand, Waipoua Forest, 45 km northwest of Dargaville, 31.XI.1992, Jaschhof leg.

Description. **Male.** Head dark brown; clypeus and palpi yellow, apical palpal segment 3 times as long as preapical segment; antennae brown, scape and pedicel yellow, sixth flagellar segment 4 times as long as wide. Thorax yellow; mesonotum with three thin dark stripes converging posteriorly. Wings clear; wing length 2.8–3.0 mm; membrane with macro- and microtrichia; R_4 present, small cell 2 times as long as M_1 ; M fork weak, stem of M fork as long as M_1 ; base of Cu fork at the level of middle of stem of M fork. Halteres yellow. Legs yellow; fore tibia 1.8 times as long as fore basitarsus; fore tibia without bristles; mid tibia with 3 a , 1–2 d ; hind tibia with 2–3 a , 19–20 d , 15–17 p . Abdomen yellowish brown; tergites I–IV with dark posterior margins. Genitalia brownish.

Female. Similar to male. Ovipositor brown.

Remarks. *A. jaschhofi* is close to *A. longicauda* Tonn. but differs by the structure of dorsal lobe of gonostylus.

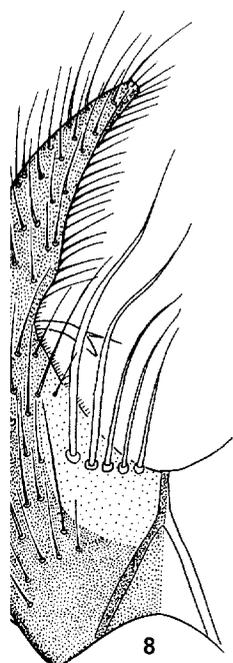
Aneura longipalpis Tonn.

(Figs 14, 15, 19)

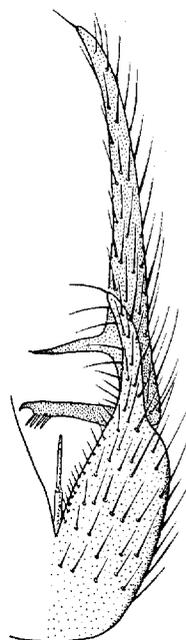
longipalpis Tonnoir, in Edwards, Tonnoir, 1927: 809 (*Aneura*).

Material. New Zealand: 10 ♂, 3 ♀, Hauhungaroa Range, 5 km southwest of Tihoi, 21.XII.1992,

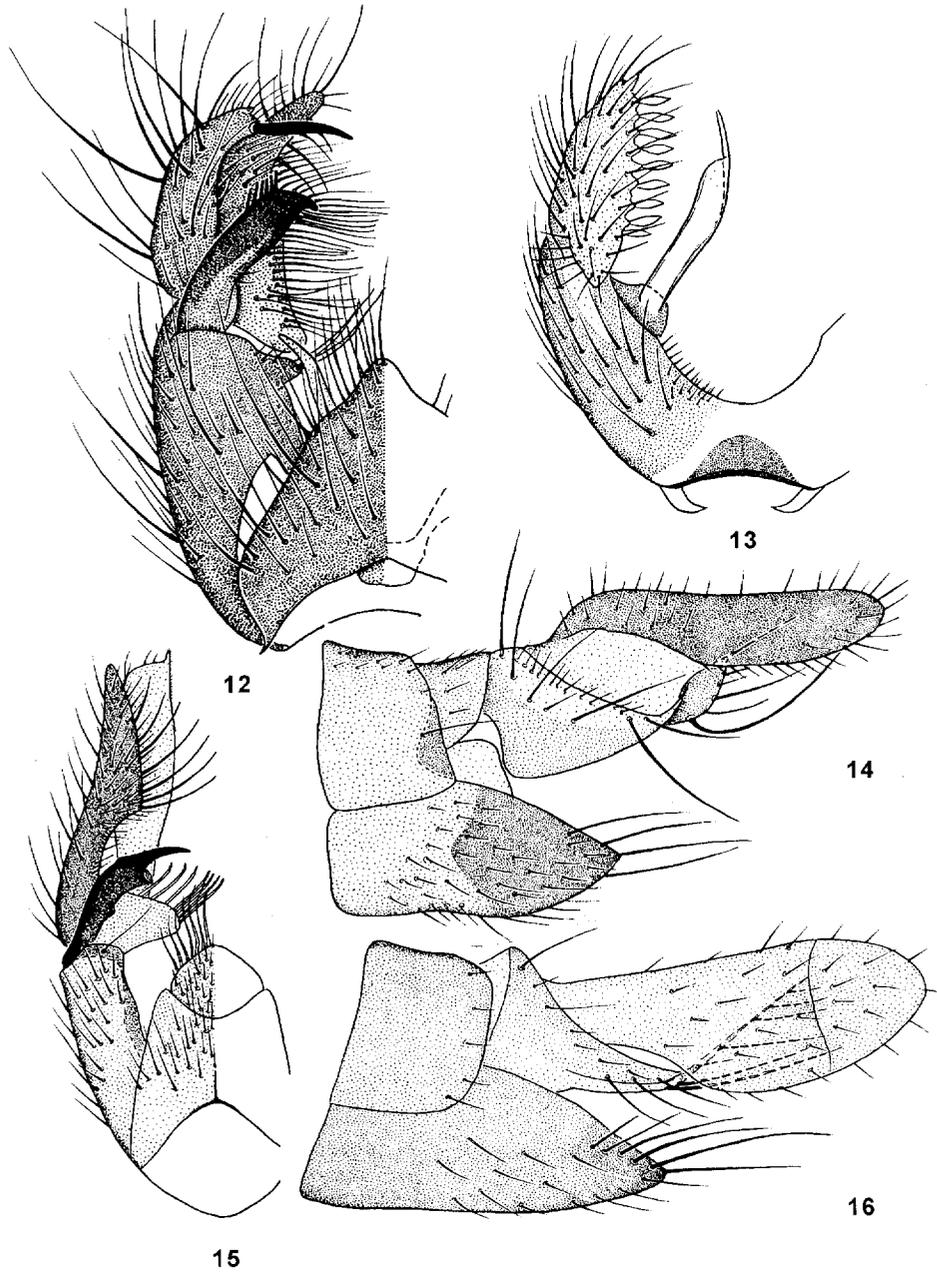
male genitalia, dorsal view; **11**, female genitalia, dorsal view; **9**, ovipositor, lateral view.



8



11



Figs 12—16. *Aneura*.

12, *A. fusca* Tonn.: male genitalia, dorsal view. 13, 16, *A. jaschhofi* sp. n.: 13, male genitalia, ventral view; 16, ovipositor, lateral view. 14, 15, *A. longipalpis* Tonn.: ovipositor, lateral view.

Jaschhof leg.; 1 ♂, Urewera Range 30 km southeast of M. Jaschhof leg.; 1 ♀, Parataik west of Dargaville, 31.XII. ♀, Waitomo Caves, 12 km so 14.XII.1992, Jaschhof leg.

Male. Head dark brown yellow, apical palpal segment as preapical segment; anterior pedicel yellow, sixth flagellomere as long as wide. Thorax and pleurotergite brownish; wing length 3.5—3.6 mm; membrane bears only macrotrichia, bears only macrotrichia; fork distinct; stem of *M* fork as *M*₁; *Cu* fork under middle. Halteres yellow. Legs yellow; as long as fore basitarsus 0—1 *v*; mid tibia with 2 *a*, 2 *d*; tibia with 6 *a*, 8—9 *d*, 6—7 *v*; tergites I—V with yellow hind margin brown.

Female. Similar to male. I—VI with yellow hind margin yellow; ovipositor brownish.

***Aneura nitida* Tonn.**
(Figs 17, 20, 21)

nitida Tonnoir, in Tonnoir (1933) (Aneura).

Material. New Zealand
Range, 45 km northwest of M. Jaschhof leg.; 2 ♂, 1 ♀, Kaimere 10 km southwest of Tauranga leg.; 2 ♂, Mount Egmont National Park 9.I.1993, Jaschhof leg.

Male. Head dark brown yellow; palpi yellow; apical palpal segment 5 times as long as preapical segment; brown; scape, pedicel and flagellomere yellow, sixth flagellomere as long as wide. Thorax mesonotum shining dark brown; mediotergite, pleurotergite and sternopleuron dark brown. Wing clear; wing length 3.5—4.0 mm; membrane bears macro- and microtrichia; stem of *M* fork 1.2 times as long as wide; fork well before middle.

Jaschhof leg.; 1 ♂, Urewera National Park, Huiarau Range 30 km southeast of Murupara, 23.XII.1992, Jaschhof leg.; 1 ♀, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.; 1 ♀, Waitomo Caves, 12 km southwest of Otorohanga, 14.XII.1992, Jaschhof leg.

Male. Head dark brown; clypeus and palpi yellow, apical palpal segment 6 times as long as preapical segment; antennae brown, scape and pedicel yellow, sixth flagellar segment 4 times as long as wide. Thorax yellow; mediotergite and pleurotergite brownish. Wing clear; wing length 3.5–3.6 mm; membrane without microtrichia, bears only macrotrichia; R_4 absent; M fork distinct; stem of M fork 1.1 times as long as M_1 ; Cu fork under middle of stem of M fork. Halteres yellow. Legs yellow; fore tibia 1.3 times as long as fore basitarsus; fore tibia with 1 p , 0–1 v ; mid tibia with 2 a , 2 d , 2 p , 3 v ; hind tibia with 6 a , 8–9 d , 6–7 p . Abdomen brown; tergites I–V with yellow hind margins; genitalia brown.

Female. Similar to male; abdominal tergites I–VI with yellow hind margins; tergite VII yellow; ovipositor brown.

Aneura nitida Tonn.

(Figs 17, 20, 21)

nitida Tonnoir, in Tonnoir, Edwards, 1927: 807 (*Aneura*).

Material. New Zealand: 5 ♂, 4 ♀, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.; 2 ♂, 1 ♀, Kaimai Range, Whakamarama 10 km southwest of Tauranga, 26.XII.1992, Jaschhof leg.; 2 ♂, Mount Egmont National Park, East Egmont, 9.I.1993, Jaschhof leg.

Male. Head dark brown; clypeus light brown, palpi yellow; apical palpal segment about 4–5 times as long as preapical segment; antennae brown; scape, pedicel and basal part of first flagellomere yellow, sixth flagellar segment 2 times as long as wide. Thorax two colored: mesonotum shining dark brown; scutellum, mediotergite, pleurotergite and lower part of sternopleuron dark brown, rest pleurae yellow. Wing clear; wing length 3.5 mm; membrane with macro- and microtrichia; R_4 present, small cell 3.5 times as long as wide; M fork distinct, stem of M fork 1.2 times as long as M_1 ; base of Cu fork well before middle of stem of M fork.

Halteres yellow, base of knob brownish. Legs yellow; fore tibia 1.6 times as long as fore basitarsus; fore tibia with 1 d , 2–4 p ; mid tibia with 2–3 a , 4 ad , 3–4 d , 1 p , 1 v ; hind tibia with 5–6 a , 8 d , 3–4 p . Abdomen two colored; tergites I–IV yellow with brown posterior margins; tergite V–VI brown. Genitalia brown.

Female. Similar to male, abdominal tergites I–VI yellow with dark brown posterior margins; tergite VII dark brown; sternite VIII brownish, cerci yellow.

Aneura pallida Edw.

(Figs 18, 22)

pallida Edwards, in Tonnoir, Edwards, 1927: 810 (*Aneura*).

Material. New Zealand: 1 ♂, Mount Egmont National Park, east Egmont, 9.I.1993, Jaschhof leg.; 1 ♂, Tongariro National Park, 2 km east of Whakapapa Village, 16.XII.1992, Jaschhof leg.

Male. Head brown; clypeus and mouth parts yellow, palpi brownish, apical palpal segment 2 times as long as preapical segment; antennae brown, scape, pedicel and base of first flagellomere yellow, sixth flagellomere about 5 times as long as wide. Thorax yellow except brownish mediotergite. Wing clear; wing length 3.2 mm; membrane with macro- and microtrichia; R_4 absent; M fork weak, stem of M fork as long as M_1 ; base of Cu fork before middle of stem of M fork. Halteres yellow. Legs yellow; fore basitarsus about 1.1 times as long as fore tibia; fore tibia without bristles; mid tibia with 4 a , 1–2 d ; hind tibia with 4–5 a , 6–8 d , 4 p . Abdomen brown, tergites II and III yellowish with dark posterior margins. Genitalia brownish.

Female unknown.

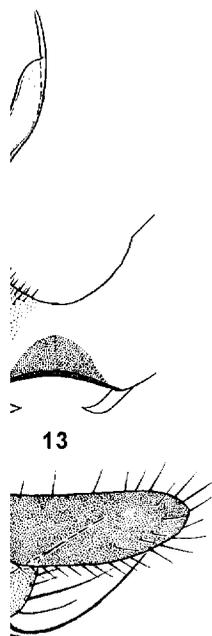
Aneura tonnoiri sp. n.

(Figs 23, 24)

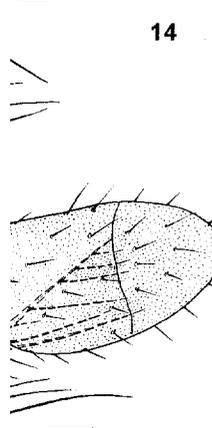
Holotype. 1 ♂, New Zealand, Mount Egmont National Park, East Egmont, 9.I.1993, Jaschhof leg.

Paratypes. 3 ♂, New Zealand, same data; 1 ♂, New Zealand, Hauhungaroa Range, 5 km southwest of Tihoi, 21.XII.1992, Jaschhof leg.; 1 ♂, New Zealand, Parataiko Range, 45 km northwest of Dargaville, 31.XII.1992, Jaschhof leg.

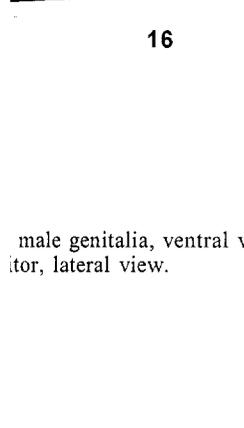
Int. J. Dipterological Research 12 2001



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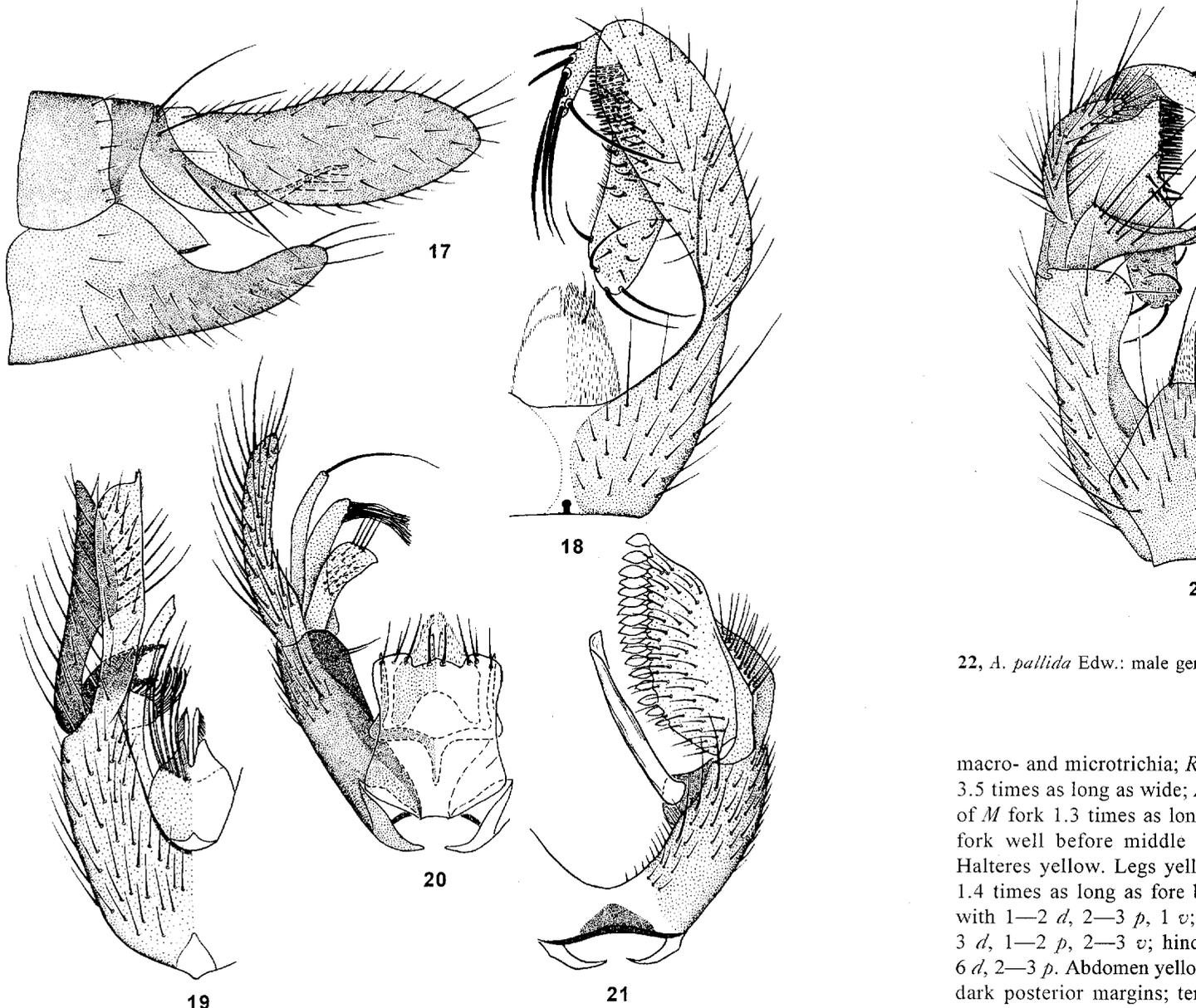


14



16

male genitalia, ventral view;
ovipositor, lateral view.



Figs 17—21. *Aneura*.

17, 20, 21, *A. nitida* Tonn.: 17, ovipositor, lateral view; 20, male genitalia, dorsal view; 21, male genitalia, ventral view. 18, *A. pallida* Edw.: male genitalia, ventral view. 19, *A. longipalpis* Tonn.: male genitalia, ventral view.

Description. Male. Head dark brown; clypeus brownish, palpi yellow; apical palpal segment 3 times as long as preapical segment; antennae brown, scape and pedicel yellow, sixth flagellomere about 4 times as long as wide. Thorax

two colored; mesonotum yellow with two dark stripes converging posteriorly and dark brown lateral margins; scutellum mediotergite and pleurotergite dark brown; pleurae yellow. Wing clear; wing length 3.2—3.3 mm; membrane with

22, *A. pallida* Edw.: male genitalia, ventral view.

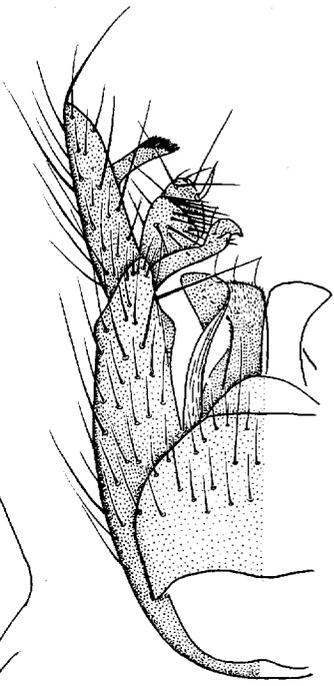
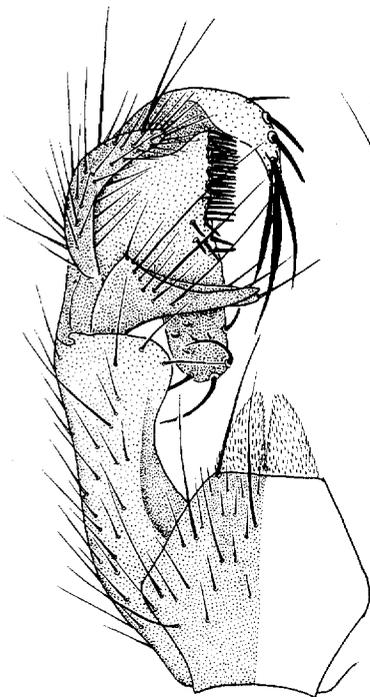
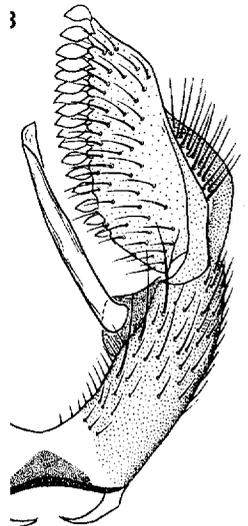
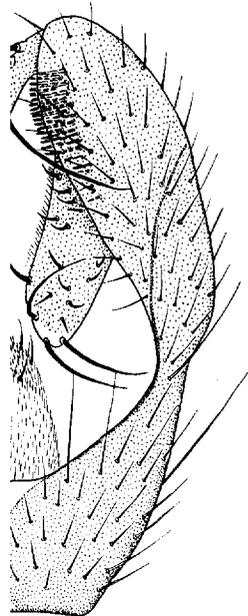
macro- and microtrichia; *R*₁ 3.5 times as long as wide; *M* fork 1.3 times as long as wide; *M* fork well before middle. Halteres yellow. Legs yellow. Fore femur 1.4 times as long as fore tibia. Wings with 1—2 *d*, 2—3 *p*, 1 *v*; hind wings with 3 *d*, 1—2 *p*, 2—3 *v*; hind wings with 6 *d*, 2—3 *p*. Abdomen yellow with dark posterior margins; terminalia brownish.

Female unknown.

Remarks. New species in the genus *A. nitida* but differs from it in the shape of the mesonotum and by the structure of the

Key to New Zealand species

1. Branches of *M* fork abbreviated to the wing margin



22

23

24

Figs 22—24. *Aneura*.

22, *A. pallida* Edw.: male genitalia, dorsal view; 23, 24, *A. tonnoiri* sp. n.: 23, male genitalia, dorsal view; 24, male genitalia, ventral view.

macro- and microtrichia; R_4 present, small cell 3.5 times as long as wide; M fork distinct, stem of M fork 1.3 times as long as M_1 ; base of Cu fork well before middle of stem of M fork. Halteres yellow. Legs yellow; fore tibia about 1.4 times as long as fore basitarsus; fore tibia with 1—2 d , 2—3 p , 1 v ; mid tibia with 3 a , 3 d , 1—2 p , 2—3 v ; hind tibia with 5—7 a , 6 d , 2—3 p . Abdomen yellow, tergites I—V with dark posterior margins; tergite VI brown. Genitalia brownish.

Female unknown.

Remarks. New species is close related to *A. nitida* but differs from it by the coloration of mesonotum and by the structure of gonostylus.

Key to New Zealand species of *Aneura*

- 1. Branches of M fork abbreviated, not reaching the wing margin *defecta* Edw.

- Branches of M fork, though faint, always distinctly reach the wing margin 2
- 2. Wing membrane bears both macro- and microtrichia 3
- Wing membrane bears only macrotrichia 12
- 3. R_4 present 4
- R_4 absent 9
- 4. Fore tibia longer than first basitarsus 5
- Fore tibia not longer than first basitarsus 8
- 5. Mesonotum shining black or brown. Male genitalia — Figs 20, 21; ovipositor — Fig. 17. *nitida* Tonn.
- Mesonotum yellow, usually with dark stripes 6
- 6. M fork distinct. Mesonotum with 2 dark stripes converging posteriorly and dark brown lateral margins. Male genitalia — Figs 23, 24. *tonnoiri* sp. n.
- M fork faint. Mesonotum uniformly yellow or with three thin dark stripes converging posteriorly 7

7. Palpi yellow. Stem of *M* fork as long as *M*₁. Male genitalia — Figs 6, 13; ovipositor — Fig. 16. *jaschhofi* sp. n.
— Palpi dark. Stem of *M* fork somewhat longer than *M*₁ *longicauda* Tonn.
8. Fore basitarsus slightly longer than the tibia. Male genitalia — Figs 4, 5 . . . *fagi* (Marsh.)
— Fore basitarsus as long as fore tibia. Male genitalia — Figs 8, 12; ovipositor — Fig. 9 *fusca* Tonn.
9. Fore tibia longer than fore basitarsus. Posterior margins of abdominal tergites pale. Male genitalia Fig. 2; ovipositor — Fig. 10 *appendiculata* Tonn.
— Fore tibia not longer than fore basitarsus. Posterior margins of abdominal tergites dark or abdomen entirely brown 10
10. Fore tibia with 2 *p*. Abdomen very thin and elongated. Male genitalia — Figs 7, 11 *filiformis* Tonn.
— Fore tibia without bristles. Abdomen normal 11
11. *Cu* fork under middle of stem of *M* fork. Male genitalia — Figs 1, 3 *boletinoides* Marsh.
— *Cu* fork before middle of stem of *M* fork. Male genitalia — figs. 18, 22. . . . *A. pallida* Edw.
12. Wing length 4.0—4.5 mm. Dorsal and mid lobes of gonostylus with stout spines *bispinosa* Edw.
— Wing length about 3.5 mm. Gonostylus without stout spines. Male genitalia — Figs 15, 19; ovipositor — Fig. 14 . . *longipalpis* Tonn.

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Review of mi
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of *Napomyza*

VLADIMIR V. ZLOBIN

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Introduction

A total of 53 species (including those described below) fall under the *Napomyza* generic concept as defined by Zlobin in a series of publications (Zlobin, 1993b, 1994a, 1994b, 1995). In this genus are internal borers of plants, feeding on leaf midribs, petioles, seed pods, etc. They are found on the plants families of Apocynaceae, Campanulaceae, Lamiaceae, etc. Until now the distribution of *Napomyza* species is restricted to the South-African region except the South-African region. All previous faunistic records of *Napomyza* from the Oriental region refer to species currently placed in the genus *Phytomyza* (Hardy, 1930). Hardy, *Phytomyza* Fallén and Zlobin, 1993b. Hendel (Tandon, 1970; Sasakawa, 1970). The type specimens of new species are deposited in the Zoological Museum of the Lund University (2 parts of the collection of the Zoological Museum of the University of Tübingen).