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Revision of the Neotropical Neurigoninae (Diptera: Dolichopodidae) I: *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON, and *Paracoeloglutus* gen. nov., with the definition the tribe Coeloglutini stat. nov.

[Revision der neotropischen Neurigoninae (Diptera: Dolichopodidae) I: *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON und *Paracoeloglutus* gen. nov., mit der Definition der Tribus Coeloglutini stat. nov.]

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Abstract The Neotropical species of the tribe Coeloglutini NEGROBOV **stat. nov.**, comprising the genera *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON and ***Paracoeloglutus* gen. nov.** (Diptera: Dolichopodidae) are revised. Diagnoses and a key to the genera are given. The species *Coeloglutus concavus* ALDRICH and *Neotonnoiria maculipennis* (VAN DUZEE) **comb. nov.** are redescribed, and ***Paracoeloglutus chilensis* spec. nov.** is described as new. The following species are placed in synonymy: *Coeloglutus sinuatus* (PARENT) **syn. nov.** and *Coeloglutus bicoloripes* VAN DUZEE **syn. nov.** with *Coeloglutus concavus* ALDRICH; *Neotonnoiria angustifacies* (PARENT) **syn. nov.** with *Neotonnoiria maculipennis* (VAN DUZEE). A phylogenetic analysis of the included genera and species is given. The tribe Coeloglutini forms a distinct monophyletic group. The new genus *Paracoeloglutus* is probably the most ancestral clade of the tribe.

Key words Dolichopodidae, Neurigoninae, *Coeloglutus*, *Neotonnoiria*, *Paracoeloglutus*, revision, new status, new genus, new species, Neotropical Region

Zusammenfassung Die neotropischen Arten der Tribus Coeloglutini NEGROBOV **stat. nov.**, welche die Gattungen *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON und ***Paracoeloglutus* gen. nov.** (Diptera: Dolichopodidae) beinhaltet, werden revidiert. Diagnosen und ein Schlüssel für die Gattungen werden gegeben. Die Arten *Coeloglutus concavus* ALDRICH und *Neotonnoiria maculipennis* (VAN DUZEE) **comb. nov.** werden wiederbeschrieben und ***Paracoeloglutus chilensis* spec. nov.** wird neu beschrieben. Die folgenden Arten werden synonymisiert: *Coeloglutus sinuatus* (PARENT) **syn. nov.**, und *Coeloglutus bicoloripes* VAN DUZEE **syn. nov.** mit *Coeloglutus concavus* ALDRICH und *Neotonnoiria angustifacies* (PARENT) **syn. nov.** mit *Neotonnoiria maculipennis* (VAN DUZEE). Eine phylogenetische Analyse der behandelten Gattungen und der beinhalteten Arten wird dargestellt. Die Tribus Coeloglutini bildet eine deutliche monophyletische Gruppe. Die neue Gattung *Paracoeloglutus* stellt eine mögliche ursprünglichere Gruppe innerhalb der Tribus dar.

Stichwörter Dolichopodidae, Neurigoninae, *Coeloglutus*, *Neotonnoiria*, *Paracoeloglutus*, Revision, neuer Status, neue Gattung, neue Art, Neotropische Region

Introduction

This is the first part of a planned revision of the Neotropical Neurigoninae, with the intention of providing a world review, and deals with the tribe Coeloglutini NEGROBOV stat. nov. The Neurigoninae is a distinct subfamily of the Dolichopodidae comprising 11 genera: *Arachnomyia* WHITE, *Argentinia* PARENT, *Coeloglutus* ALDRICH, *Dactylomyia* ALDRICH, *Halteriphorus* PARENT, *Neotonnoiria* ROBINSON, *Neurigona* RONDANI, *Notobothrus* PARENT, *Oncopygius* MIK, *Tenuopus* CURRAN, and *Paracoeloglutus* gen. nov. The genera *Notobothrus* and *Tenuopus* probably belong elsewhere as they show some striking characters which exclude them from the Neurigoninae as currently defined (femora with subapical setae in

Notobothrus; posterior slope of mesonotum not flattened in *Tenuopus*), but further study of these taxa is necessary. The subfamily contains 152 described species at present (Neotropical 26, Nearctic 46, Palaearctic 49, Afrotropical 14, Australian and Oceanian 9, Oriental 12), 122 of which belong to the cosmopolitan genus *Neurigona* alone. However, the subfamily shares several characters with the closely related subfamily Medeterinae (BICKEL 1985: 8), and a clear definition and separation of both subfamilies based on apomorphic characters on a global scale is pending. Revisionary work on the Neurigoninae has involved only the genus *Neurigona*, by VAN DUZEE (1913) for the Nearctic region, and by NEGROBOV (1987) and NEGROBOV & FURSOV (1988) for the Palaearctic region.

The Neotropical Neurigoninae comprise at present 7 genera: *Argentinia* PARENT, *Coeloglutus* ALDRICH, *Dactylomyia* ALDRICH, *Neotonnoiria* ROBINSON, *Neurigona* RONDANI, *Notobothrus* PARENT, and the new genus *Paracoeloglutus*. The genus *Coelinium* PARENT was recently placed in synonymy with *Dactylomyia* (BICKEL 1998). All genera are endemic to the Neotropics, except for *Neurigona* which is worldwide in distribution, and *Dactylomyia* which is also known from the Nearctic region and Hawaii. In total, these genera comprise 26 described species (ROBINSON 1970, 1975) including *Paracoeloglutus chilensis* spec. nov. All the species are restricted to the Neotropical region, except for *Neurigona viridis* VAN DUZEE which is also known from the Nearctic region. The tribe Coeloglutini, which is here newly defined and revised, includes the three endemic genera *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON and *Paracoeloglutus* gen. nov., and forms a distinct monophyletic group. Nothing is known so far about the biology of the Coeloglutini, but species of Neurigoninae and Medeterinae are known to be associated with tree trunks (BICKEL 1985, 1998).

Material and methods

This study is based on material from the following institutes: The American Museum of Natural History, New York (AMNH); The Natural History Museum, London (BMNH); California Academy of Sciences, San Francisco (CAS); Biosystematics Research Institute, Agriculture Canada, Ottawa (CNC); Deutsches Entomologisches Institut, Eberswalde (DEI); Essig Museum of Entomology, University of California, Berkeley (EMEC); Instituto Nacional de Biodiversidad, Costa Rica, (INBio); Instituto Nacional de Pesquisas da Amazonia, Manaus (INPA); Museum of Comparative Zoology, Harvard University, Massachusetts (MCZ); Martin-Luther-Universität, Halle a. S. (MLUH); Zoological Museum, University of Helsinki, Helsinki (MZHF); Museu de Zoologia, Universidade de São Paulo, São Paulo (MZSP); Naturhistorisches Museum, Vienna (NMW); Staatliches Museum für Tierkunde, Dresden (SMTD); Texas A & M University, College Station, Texas (TAMU); National Museum of Natural History, Smithsonian Institution, Washington D. C. (USNM); The James Entomological Collection, Washington State University, Pullman (WSU); Museum für Naturkunde der Humboldt-Universität, Berlin (ZMHB).

The type material of all the species discussed has been examined and redescribed, except for the types of *Coeloglutus sinuatus* (PARENT) from the Zoologisches Museum, Hamburg, which have been destroyed. The original label text of all the specimens examined is given, several labels are differentiated by a slash (/), and comments and additions are included in brackets [ ]. The following measurements are used and indicated in millimetres: Body length is measured from the base of the antennae to the tip of the sixth or seventh abdominal segment; thorax length from the prothorax to the posterior border of the postnotum; abdomen length from the base of segment 1 to the tip of segment 7; wing length from the wing base to the wing apex. The following ratios are used: length of ocellar setae to vertical setae; narrowest

distance between eyes on face to distance between ocellar setae; length of arista to length of first flagellomere; narrowest/greatest distance between eyes on frons (measured below ocellar tubercle and above base of antennae); narrowest/greatest distance between eyes on face; narrowest/greatest distance between eyes on clypeus; length of ac setae to distance between ac rows; length of lateral scutellar setae to medians; podomeres of femur, tibia, tarsomere 1/2/3/4/5; length of cross-vein (m-cu) to distance between R_{4+5} and M at wing margin; length of cross-vein (m-cu) to distal section of CuA (= CuAx ratio according to BICKEL 1998). The morphological terminology follows MC ALPINE (1981) and the terminology of male and female terminalia BICKEL (1998).

The following abbreviations are used: MSSC = male secondary sexual character; I = prothoracic leg; II = mesothoracic leg; III = metathoracic leg; ac = acrostichal setae; ad = anterodorsal; av = anteroventral; C = coxa; dc = dorsocentral setae; dv = dorsoventral; F = femur; hm = postpronotal setae; np = notopleural setae; pa = postalar setae; pd = posterodorsal; pm = presutural supra-alar setae; ppl = proepisternal setae; pv = posteroventral; sa = postsutural supra-alar setae; sr = presutural intra-alar setae; T = tibia; t = tarsus; t_1-t_5 = tarsomeres 1 to 5.

Systematic account

Tribe Coeloglutini NEGROBOV stat. nov.

Coelogluthinae NEGROBOV, 1986: 183.
Type genus: *Coeloglutus* ALDRICH, 1896: 338.

Definition: The tribe is defined by the following apomorphic characters (see Phylogenetic Analysis): arista subapical; vertex excavated dorsally between vertical seta and ocellar tubercle; thorax strongly elongated; male It_5 modified by a ventral comb of short spines (MSSC); abdomen about as long as thorax and dorsoventrally flattened; hypopygium partially hidden under segment 5 or 6 and semi-pedunculate (segment 7 forming a short peduncle attached to sternum 8); surstylus fused into a single lobe (not divided into dorsal and ventral lobes).

Included genera: *Coeloglutus* ALDRICH, 1896
Neotonnoiria ROBINSON, 1970
Paracoeloglutus gen. nov.

Systematic position: The three genera *Coeloglutus* ALDRICH, *Neotonnoiria* ROBINSON, and *Paracoeloglutus* gen. nov. form a distinct monophyletic group within the Neurigoninae. *Paracoeloglutus* is probably the more ancestral genus of the tribe as it lacks some of the strongly apomorphic characters of *Coeloglutus* and *Neotonnoiria* (see Phylogenetic Analysis). It should be noted that many characters of the tribe Coeloglutini are also shared with the subfamily Medeterinae (BICKEL pers. comm.), but, until a clear definition and separation of the two subfamilies Neurigoninae and Medeterinae has been undertaken, I propose to keep the Coeloglutini in the subfamily Neurigoninae and regard the Coeloglutini as the more derived clade. In Tab. 1 a provisional list of the characters differentiating *Neurigona* and *Medetera* is given, and this could be useful for a future separation of the two subfamilies Neurigoninae and Medeterinae.

Remarks: NEGROBOV (1986) first recognised the special taxonomic position of the genera *Coeloglutus* and *Neotonnoiria* and established a new subfamily Coelogluthinae. BICKEL (1998) regarded that subfamily as premature. I propose to include these two genera together with the newly described genus *Paracoeloglutus* in the Neurigoninae, and to establish the tribe Coeloglutini NEGROBOV stat. nov. for them. DYTE (1959) noted that *Coeloglutus concavus* has

Tab.1: Characters differentiating the genera *Medetera* and *Neurigona*

Neurigona	*Medetera*
Eyes with short hairs	Eyes bare
Face narrow or contiguous	Face distinctly separated
Face with dense pruinosity	Face without pruinosity
Frontoclypeal suture not evident	Frontoclypeal suture distinct
Arista dorsal	Arista apical
Abdominal segment 5 sometimes with ventral projection	Abdominal segment 5 normal
Hypopygium semi-pedunculate (segment 7 forming a short peduncle)	Hypopygium distinctly pedunculate (segment 7 forming an expanded peduncle)
Epandrium globose	Epandrium elongated and subrectangular
Surstylus divided into two separate overlapping lobes	Surstylus fused into a single lobe at least basally
Body colour usually yellow	Body colour usually dark brown or grey

similar female terminalia to the medeterine plant mining genus *Thrypticus*, which has a sclerotized oviscapt for oviposition. But my examination of the female terminalia of *Coeloglutus*, *Neotonnoiria*, and *Paracoeloglutus* (Figs. 1f, 2d, 3h-i) shows that Coeloglutini species have a weakly sclerotized setose oviscapt similar to the genus *Neurigona*, in contrast to the heavily sclerotized bare oviscapt in *Thrypticus*.

Key to genera of Coeloglutini

1 Thorax strongly elongated (Figs. 1c, 3a, 3c); abdomen about as long as thorax and dorsoventrally flattened; vertex excavated dorsally between vertical seta and ocellar tubercle; male It_5 usually with a ventral comb of short blunt spines (Fig. 3d); arista subapical (Fig. 1b); hypopygium partially hidden under segment 5 or 6; surstylus fused into a single lobe (Fig. 1e, 2c, 3g) ..... **Coeloglutini 2**

– Thorax not elongated; abdomen usually longer than thorax and cylindrical; vertex not excavated; male fore tarsomeres not or otherwise modified; arista usually dorsal; hypopygium external; surstylus divided into dorsal and ventral lobes .... **other Neurigoninae**

2 Dc consisting of 3 strong setae and 2-4 smaller setae anteriad, restricted posteriad of mesonotal suture (Fig. 1c); wing vein M bent toward R_{4+5}; cross-vein m-cu distinctly shorter than distal section of CuA (Fig. 1d); ac rows distinct **3**

– Dc consisting of 6 strong setae, extended anteriad of mesonotal suture (Fig. 3c); wing vein M straight and subparallel with R_{4+5}; cross-vein m-cu about as long as distal section of CuA (Fig. 3e); ac rows very short and greatly reduced in males .... ***Paracoeloglutus* gen. nov.**

3 Pedicel intruding into first flagellomere on median side (Fig. 1a); first flagellomere subtriangular; epandrium moderately compressed basolaterally ..... ***Coeloglutus***

– Pedicel truncate with first flagellomere; first flagellomere rounded apically (Fig. 2a); epandrium strongly compressed basolaterally ..... ***Neotonnoiria***

Genus *Coeloglutus* Aldrich

Coeloglutus Aldrich, 1896: 338.
Type species: *Coeloglutus concavus* Aldrich, 1896: 338 (monotypy).

Diagnosis

Head: Face narrow, but distinctly separated on face, female face distinctly broader. Antennal scape short and bare; pedicel short, intruding into first flagellomere on median side; first flagellomere short and subtriangular; arista subapical and inserted more on lateral side. Vertex strongly excavated dorsally between vertical seta and ocellar tubercle; dorsal postcranium concave; postocular setae uniseriate; postvertical setae not present; ventral postcranium with long setae.
Thorax: Posterior slope of mesonotum flattened and occupying posterior half; ac with 2 rows; dc consisting of 3 strong setae and 2-3 reduced small setae anteriad, restricted posteriad of mesonotal suture; hm reduced to a small hair. Median scutellar setae long, laterals reduced to a short hair. Proepisternum with 2 strong lower and 1 small upper setae. **Legs:** All legs mostly yellow; male It_{4-5} flattened dorsoventrally; It_5 with a pv comb of short blunt spines, posterior claw enlarged and curved (all MSSC). **Wing:** Hyaline, with brownish area on anterior half; M distinctly bent toward R_{4+5}; cross-vein m-cu about 1/3 length of distal section of CuA.
Abdomen: About as long as thorax, broad and dorsoventrally flattened; segment 7 retracted under segment 6 and forming a short peduncle attached to sternum 8; hypopygium partially hidden under segment 6. Epandrium globose; hypandrium fused with epandrium; epandrial lobe straight and elongate, with a dorsal thumb-like lobe; surstylus ovate; cercus short and rounded.

Remarks: The genus was transferred by Robinson (1970) from the Medeterinae to the Neurigoninae because of the narrow pruinose face. It is closely related to *Neotonnoiria* and differs mainly by the pedicel intruding into first flagellomere on median side.

Coeloglutus concavus Aldrich, 1896

(Figs 1a-f)

Coeloglutus concavus Aldrich, 1896: 338.
Medetera sinuata Parent, 1928: 159, **syn. nov.**
Coeloglutus bicoloripes Van Duzee, 1933: 15, **syn. nov.**

Material: Holotype *C. concavus* female: WEST INDIES: Type [round label with red border] / Coeloglutus concavus Ald. M.S / St. Vincent W. I., H. H. Smith / W. Indies, 1907-66. [BMNH]. **Holotype** *C. bicoloripes* male: GUATEMALA: Moca, Guatalon, 1.000 m., Mar. Apr. 31 / Guatemala, J. Bequaert / Coeloglutus bicoloripes, Holotype, Van Duzee. **Paratype** *C. bicoloripes* male: Guatalon, 1.000 m., Mar. Apr. 31 / Sa. Adelaida, Guatemala, J. Bequaert / Coeloglutus bicoloripes, Paratype, Van Duzee / Gen. Prep., No. SN2000-1, Jan. 2000, St. Naglis. [both AMNH]. **Additional material:** WEST INDIES: 1 male: Fond Figues River, Dominica BWI, March 16, 1964, D. L. Bray. 1 female: Dominica, Pont Casse, XI 22 1964, P. J. Spangler / Bredin-Archbold-Smithsonian Bio. Surv. Dominica. PUERTO RICO: 1 male: El Yunque P. R., Mar. 20-22 1954 / J. Maldonado, S. Medina Colls. EL SALVADOR: 1 female: No. 739, 4.8.57, Chal-Chuapa, Col. PAB / Gen. Prep., No. SN2000-16, May 2000, St. Naglis. ECUADOR: 1 male: Ecuador, Pich., Santo Domingo, (47 Km S), 29 July 1976, Jeffrey Cohen / Rio Palenque, Bio. Station, 750' elevation / Collected in malaise traps / Ecuador – Peace, Corps – Smithsonian Institution Aquatic Insect Survey / Gen. Prep., No. SN2000-17, May 2000, St. Naglis. [all USNM]. COSTA RICA: 2 females: Est. Pitilla, 9 km S. Santa Cecilia, Prov. Guana, Costa Rica, 700 m, SET 1994, P. Rios, L N 330200_380200 #3206. 1 male: same data, but June 1994, #2996 [abdomen broken off]. 1 female: same data, but 6-17 Set 1993, C. Moraga, #2344. 1 female: Tierras Morenas, Prov. Guana, Costa Rica, 650 m, 8-10. Feb. 1994, Z. Fuentes, LS 283950_424500 #2616. 1 female: Costa Rica, Hitoy Cerere, A.C. Amistad, Prov. Limon, 100-200 m, 5.x.-7.xi.1993, L N 184600_643400 #2437, malaise, G. Carbello. 1 male: R. Gongora, 400 m, 6 km NE de Queb. Grande de Liberia, Prov. Guanacaste, Costa Rica, III curso Parataxon., Feb. 1992, L N 319700,376250 [all INBio]. VENEZUELA: 1 female: Venezuela, Amazonas, Rio Mavaca Camp. 65o 6' W 2o2' N, 150

m, 16-27.III.89 / Phipps Fudeci Expedition, by Amer. Mus. Nat. Hist., D. A. GRIMALDI coll. [AMNH]. BOLIVIA: Dept. Beni, Rio Itenez, at mouth of Rio Baures, X-10. 1964 / J. K. BOUSEMAN Collector. [BMNH]. PANAMA: 1 female: Panama, E.C. BROADHEAD B M. 1991-30 / Lentrea tree 2, Panama Mar 78. [AMNH]. PERU: 2 males, 2 females: Quincemil Cuzco, Peru, 13-31.VIII. 62, L. PENA, 780 m. 1 male, 1 female: Avispas, Madre de Dios, Peru, 10-20.IX.1962, L. PENA, 400 m [all CNC]. All specimens (except the holotype of *C. concavus*) have an additional label: Coeloglutus concavus ALDRICH, St. NAGLIS det. 2000.

Redescription: The male redescription is based on the types of *Coeloglutus bicoloripes* and the redescription of the female on the holotype of *Coeloglutus concavus*.

Male. Length (Holotype): Body length 3.9 mm, wing length 3.9 mm; mesonotum 1.8 mm, abdomen (segment 1-6) 1.8 mm. Paratype: Body length 3.5 mm, wing length 3.3 mm; mesonotum 1.6 mm, abdomen (segment 1-6) 1.5 mm. Additional material: body length 2.5-4.6 mm.

Head: Frons broad, with dense greyish pruinosity, metallic green ground-colour barely visible; eye margins on frons parallel toward base of antenna; occiput concave; a pair of black vertical setae, a pair of long black diverging ocellar setae, 1.8 times as long as verticals, and no postvertical setae present. Postocular setae uniseriate, yellow, first seta near vertex slightly longer than remaining setae, ventral postcranium with strong yellow setae; vertex strongly excavated dorsally between vertical seta and ocellar tubercle. Eyes separated, narrowest distance on face about half distance between ocellar setae. Face and clypeus with dense greyish pruinosity. Palpi short and rounded, yellowish-brown, with a brown apical seta and brown hairs; proboscis brownish-black, with brown hairs. Antenna (Fig. 1a, b): Scape yellow, short and bare; pedicel yellow, wider than long, projecting into first flagellomere on median side, with a circlet of short setae, dorsal setae brown and longer, ventral setae yellow; first flagellomere entirely dark brown or basal half yellowish (variable), short and subtriangular, about as long as wide, with short pubescence; arista subapical and bare, about 4.5 times as long as first flagellomere, inserted not exactly on dorsum but more on lateral side. Ratio narrowest/greatest distance between eyes on frons: 33/35; ratio narrowest/greatest distance between eyes on face: 3/12; ratio narrowest/greatest distance between eyes on clypeus: 13/13.

Thorax: (Fig. 1c) Mesonotum strongly elongated, posterior slope of mesonotum flattened and slightly concave. Mesonotum and scutellum metallic blue-green, with blue and violet reflections, and with greyish-yellowish pruinosity; a broad longitudinal dark stripe along area of dc. Pleura dark metallic blue-green with greyish-yellowish pruinosity, two longitudinal lateral stripes of yellow pruinosity behind anterior spiracle. Ac with 2 rows of 15-17 short black setulae, posterior 3 pairs on mesonotal depression diverging, length about equal to distance between rows; dc comprising 3 strong black setae, and 2-3 shorter black converging setae anteriad, restricted posteriad of mesonotal suture (Fig. 1c); a field of short black irregular setulae anderiad of dc and anterolaterad of mesonotum present. Additional strong black setae include: 1 pa, 2 sa (anterior smaller), 2 np, 1 hm reduced to a small hair, and 1 pm. Scutellum with 2 strong black median scutellars and laterals as small black hairs. Proepisternum with 2 strong pale lower and 1 small upper ppl (I have examined a male with 3 strong lower ppl!). **Legs:** All legs mainly yellow, brown from about middle of tibia (see under Variation); IC yellow, IIC and IIIC including trochanters brownish with partially metallic green reflections; all setae on legs and coxae black, except as noted. I: IC with black anterior setae; IF with short av setae and a small posterior subapical seta; IT with a small pd seta at 1/4; It_{4+5} flattened dorsoventrally; It_4 with 2 strong pv setae, posterior hook-like; It_5 with pv comb of 4-5 short blunt brown curved spines, followed by a long posterior seta, 4-5 long brown apicodorsal setae, ventral area with pale felt-like pubescence, and with 2 long

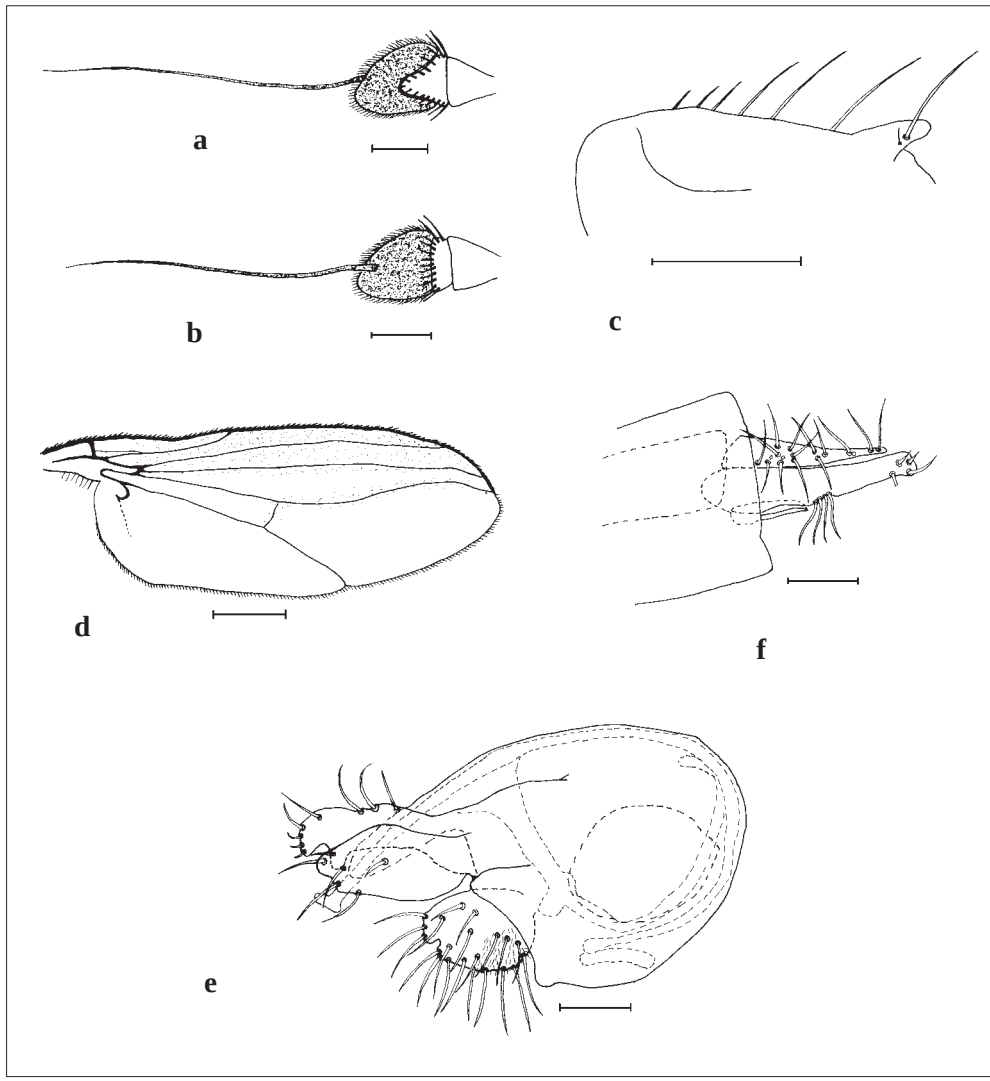

Fig. 1a-f: C*oeloglutus concavus* ALDRICH. – **a:** male antenna, median; – **b:** male antenna, lateral; – **c:** male thorax, left lateral; – **d:** male wing, dorsal; – **e:** male hypopygium, left lateral; – **f:** female oviscapt, left lateral. Scale bars: Fig. c, d = 0.5 mm; others = 0.1 mm.

pale setae anteriad; posterior claw broadened, elongated, and curved rectangular (all MSSC). II: IIC with a strong apical and 2 strong anterolateral setae in addition to the smaller setae; IIF with a short but distinct posterior subapical seta; IIT with strong ad setae at 1/5 and 1/2, a strong pd seta at 1/5, and several short ventral setae, 4 apical setae present; IIt_1 with an irregular ventral row of small setulae. III: IIIC with a strong black or yellow (see under Variation) lateral seta at 1/4 from base; IIIF with a row of short dorsal setae on basal half, and a small but distinct posterior subapical seta; IIIT with an irregular row of short dorsal and ventral setae. Relative podomere ratios (femur, tibia, tarsomere 1/2/3/4/5): I: 55, 58, 37/24/12/6/6; II: 67, 72, 39/20/12/5/5; III: 64, 84, 21/24/13/5/5. **Wing:** (Fig. 1d) Elongate and

narrow; hyaline, more or less infuscated on anterior part between R_1 and R_{4+5} (variable); R_{2+3} and R_{4+5} subparallel in distal half; M with gentle curve toward R_{4+5} at 1/3 from cross-vein m-cu; R_{4+5} and M slightly converging towards wing margin, both veins gently curved posteriad near wing margin; R_{4+5} and M joining costa anteriad of apex; cross-vein m-cu slightly bowed, about 2.5 times as long as distance between R_{4+5} and M at wing margin, and 0.35 times as long as distal section of CuA; vein A weak, present only as a fold and not reaching wing margin. Lower calypter pale yellow, with fan of yellow setae; haltere yellow.

Abdomen: Short, about as long as thorax, dorsoventrally flattened; terga 1-6 metallic blue-green, with whitish pruinosity, and with long black marginal and white lateral setae; segment 7 and hypopygium brownish-black. Segment 5 without ventral projection; segment 7 forming a short peduncle attached to sternum 8, mostly retracted under segment 6. Hypopygium (Fig. 1e): Partially hidden under segment 6; epandrium short and globose, hypandrium fused with epandrium and elongated apically; epandrial lobe straight, elongated apically, with a short thumb-like dorsal lobe, bearing ventral setae; surstylus ovate, partially covering epandrial lobe, bearing apical setae; cercus rounded, with long setae.

Female. Similar to male but lacking MSSC and as noted: Face distinctly wider, about equal to distance between ocellar setae. Relative podomere ratios (femur, tibia, tarsomere 1/2/3/4/5): I: 52, 60, 39/21/11/6/5; II: 69, 76, 42/22/14/6/5; III: 72, 84, 14/25/14/6/6. Postabdomen (Fig. 1f): Terga 9+10 narrow and elongated-triangular, shorter than cercus, with several setae; sternum 8 as a spoon-like ventral projection; cercus basally fused with terga 9+10, narrow and elongated, with 4 long ventral and short apical setae.

Distribution: Guatemala, Ecuador, El Salvador, Lesser Antilles (Dominica, St. Vincent), Puerto Rico, Costa Rica, Venezuela, Bolivia, Panama, Peru.

Variation: The species shows distinct variation in size and in colour. I give here the range of variation in the following format: 'Character: variation from/variation to'. Body length: 2.5/4.6 mm; wing length: 2.4/4.4 mm; first flagellomere: entirely black/basal half yellow; coxae: IC-IIIC brownish/IC yellow and IIC-IIIC brownish-yellow; lateral seta of IIIC: black/yellow (I have examined a female with seta on left side yellow and on right side black!); tibiae: distal 3/4 brown/distal 1/5 slightly infuscated; vein M: ending at apex/ending anteriad of apex.

Remarks: ROBINSON (1970) transferred *Medetera sinuata* PARENT to the genus *Coeloglutus* and synonymized *Coeloglutus bicoloripes* VAN DUZEE with *C. sinuata*. Since the collection of Zoologisches Museum der Universität Hamburg was destroyed by fire in 1943 (R. ABRAHAM, pers. comm.), the types of *Medetera sinuata* PARENT must be treated as lost. VAN DUZEE (1933) described his new species *C. bicoloripes* with the following differences from *C. concavus*: smaller size, all coxae yellow, middle tibia yellow with black tip, hind tibia yellow with apical 1/4 black, wing-apex pointed and vein M ending at apex. I have examined the female holotype of *C. concavus* and the male holotype and paratype of *C. bicoloripes* as well as additional determined and undetermined material. The species shows a high degree of variation in size and in colour (see under Variation), as is known in other Neurigoninae, e.g. *Dactylomyia vockerothi* BICKEL (1998). Since I could not find clear species-specific characters to separate these two species, and considering the high degree of variability, I regard both species as conspecific.

Genus *Neotonnoiria* Robinson

Tonnoiria Parent, 1929: 184.
Neotonnoiria Robinson, 1970: 40.17, new name for *Tonnoiria* Parent (preocc. Malloch, 1929).

Type species: *Tonnoiria angustifacies* Parent, 1929: 185 (monotypy) [= *maculipennis* Van Duzee, 1929].

Diagnosis

Head: Male face very narrow, eyes almost contiguous, female face slightly broader. Antennal scape short and bare; pedicel short and truncate with first flagellomere; first flagellomere short and rounded; arista subapical. Vertex strongly excavated dorsally between vertical seta and ocellar tubercle; dorsal postcranium concave; postocular setae uniseriate; postvertical setae present; ventral postcranium with long setae.
Thorax: Posterior slope of mesonotum flattened and occupying posterior half; ac with 2 rows; dc consisting of 3 strong setae and 2-3 reduced small setae anteriad, restricted posteriad of mesonotal suture. Median scutellar setae long, laterals reduced to short hairs. Proepisternum with 2 strong lower and 1 small upper setae. **Legs:** All legs mostly yellow; male It_{4-5} flattened dorsoventrally, It_5 with pv comb of short blunt spines, posterior claw enlarged and curved (all MSSC). **Wing:** Hyaline, with brownish area on distal half anteriorly; M distinctly bent towards R_{4+5}; cross-vein m-cu about half length of distal section of CuA.
Abdomen: About as long as thorax, broad and dorsoventrally flattened; hypopygium partially hidden under segment 6; segment 7 semi-pedunculate. Epandrium globose, strongly compressed basolaterally; hypandrium fused to epandrium; epandrial lobe straight and short, with a dorsal thumb-like lobe; surstylus ovate; cercus short and rounded.

Remarks: The genus is closely related to *Coeloglutus* and differs mainly by the pedicel truncate with first flagellomere.

Neotonnoiria maculipennis (Van Duzee, 1929) comb. nov.

(Figs 2a-d)

Neurigona maculipennis Van Duzee, 1929: 31. Lectotype here designated.
Tonnoiria angustifacies Parent, 1929: 185, **syn. nov.**

Material: Lectotype male: PANAMA: Paraiso CZ, Pan 2.2.11, August Busck / [red label] Type No. 41046 U.S.N.M. / Neurigona maculipennis Holotype Van Duzee / [red label] Lectotype, Neotonnoiria maculipennis Van Duzee, St. Naglis det. 7.2000. **Paratype** male: Paraiso CZ, Pan 2.2.11, August Busck / [red label:] Paratype No. 41046, U.S.N.M / maculipennis Paratype Van Duzee / Gen. Prep., No. SN2000-18, May 2000, St. Naglis. [both USNM]. **Holotype** *Tonnoiria angustifacies* male: BRAZIL: Itaitupa Amazon / v. Röder / [red label] Type / Zool. Inst. Halle-S. Tonnoiria angustifacies n. sp. Type det. O. Parent / MLU Halle WB Zoologie S.-Nr. 414121 T.-Nr. [MLUH]. [Note: Postabdomen of type specimen missing]. **Additional material:** BRAZIL: 1 male: Brasil, Amazonas, Manaus, E.V.A., 25-5-82, Latorre L.R. / Gen. Prep., No. SN2000-7, Mar. 2000, St. Naglis. [INPA]. PANAMA: 1 male: Panama, Canal Zone, Barro Colorado Is., 20 April 1978, Silberglied/Aiello, On Barbour HS. 1 female: [same locality], 19 June 1978, Silberglied/Aiello Shannon / Malaise trap / Gen. Prep., No. SN2000-8, Mar. 2000, St. Naglis. [USNM]. 1 female: Panama, Canal Zone, Colon, Humid forest, Canopy fogging, 2-14.vii.1979, E. Broadhead et. al., B.M. 1979-125. 1 male: Panama, E. C. Broadhead BM. 1991-30 / Lentrea tree 2 Panama Mar 78. [BMNH]. COSTA RICA: 1 female: Sector Colonia Palmarena, Prov. Alaju, Costa Rica, 700 m, ABR 1995, G. Carballo, L_N_245900_475900#5455. [INBio]. Costa Rica, La Selva 50m, Feb. 1980, W. Mason, Mal.tr. [CNC]. PERU:8 males, 9 females: Avispas Madre de Dios, Peru, 20-30.IX.1962/10-20.IX.1962/1-15.X.1962, L. Pena, 400 m. [all CNC]. All specimens have an additional label: Neotonnoiria maculipennis Van Duzee, St. Naglis det. 2000.

Redescription

Male. Length: holotype: body length 3.6 mm, wing length 3.4 mm; thorax 1.73 mm, abdomen 1.75 mm. Additional material: body length 3.9-6.5 mm.

Head: Frons broad, metallic blue-green, with violet reflections, and with slightly greyish pruinosity laterally at eye margins and above antennae; eye margins on frons parallel towards base of antennae; occiput concave; a pair of short black vertical setae, a pair of long black diverging ocellar setae, 2.4 times as long as verticals, and a pair of short black postvertical setae present. Postocular setae uniseriate, pale whitish, uppermost 3-4 setae near vertex black and short; ventral postcranium with some long pale setae; vertex slightly excavated between ocellar tubercle and eye margin; vertical seta arising from a weak mound. Eyes practically contiguous on face, which remains as a microscopic stripe. Face and clypeus with dense greyish-white pruinosity, bronze ground-colour partially visible, especially on frontoclypeal suture and clypeus. Palpi short and rounded, dark brown, with two small brown apical setae and brown hairs; proboscis brownish-black, with brown hairs. Antenna (Fig. 2a): Scape yellow and bare; pedicel yellow, wider than long, truncate with first flagellomere, with a circlet of short brown setae; first flagellomere yellow, anterior half slightly infuscated (variable), short and rounded, with a short apical incision, 1.4 times as wide as long, with short yellow pubescence; arista dark brown, subapical and bare, about 7.5 times as long as first flagellomere. Ratio narrowest/greatest distance between eyes on frons: 42/45; ratio narrowest/greatest distance between eyes on face: 1/22; ratio narrowest/greatest distance between eyes on clypeus: 12/20. **Thorax:** Mesonotum strongly elongated, posterior slope of mesonotum flattened and slightly concave, occupying posterior half. Mesonotum and scutellum dark metallic blue-green, with bronze-golden reflections, especially on mesonotal depression, and more light metallic green on area of ac setae and on scutellum, and with weak greyish pruinosity, more densely on mesonotal depression. Pleura dark metallic blue-green with greyish pruinosity, with bronze-golden and violet reflections. Thoracic setae black except as noted: Ac with 2 rows of 15-18 short setulae ending at mesonotal depression, posterior 3 pairs diverging, length about equal to distance between rows; dc consisting of 3 strong setae bordering mesonotal depression, and 2-3 shorter setae anteriad, restricted to posterior half of mesonotum, a field of short brown irregular setulae anderiad of dc and anterolaterad of mesonotum present. Additional strong black setae include: 1 pa, 2 sa, 2 np, 1 small hm, and 1 pm. Scutellum with 2 strong black median scutellars, and laterals present as very small black hairs. Lower proepisternum with 2 strong pale ppl. **Legs:** IC yellow, IIC and IIIC dark brown. All legs mainly yellow, except It_5, apical 1/10 of IIT, IIt_5 and IIIT to $IIIt_5$ slightly infuscated or dark brown (variable); all setae on legs and coxae black, except as noted. I: IC with anterior setae, including 2-4 pale apical setae; IF with a weak posterior subapical seta; It_4 and It_5 slightly broadened, It_5 with a pv comb of 5-6 very short blunt spines, posterior claw broadened, elongated and curved subrectangular, and with 4-5 long pale dorsal setae (all MSSC). II: IIC with several anterior setae, including 1-2 pale apical and 2 strong black anterolateral setae; trochanter with 1 strong seta; IIF with a weak posterior subapical seta; IIT with strong ad setae at 1/3 and 2/3, 4-5 short pv setae, and 2-3 stronger av setae, 4 strong apical setae present; tarsomeres with short ventral setae. III: IIIC with pale apical setae, and with a strong black lateral seta at 1/5 from base; IIIF with a row of short dorsal setae on basal half, with short pale ventral setae, and a small but distinct posterior subapical seta; IIIT with an irregular row of short dorsal and ventral setae; $IIIt_1$ with a strong basal pv seta and additional shorter ventral setae; Relative podomere ratios (femur, tibia, tarsomere 1/2/3/4/5): I: 65, 69, 34/24/13/7/6; II: 75, 75, 56/28/15/7/5; III: 74, 88, 22/34/17/7/5. **Wing:** (Fig. 2b) Hyaline, with a brownish area on distal half anteriorly from costa and M to wing apex, and on area of posterior cross-vein m-cu; R_{2+3} and R_{4+5} slightly diverging; R_{4+5} slightly curved posteriad toward M; M with gentle curve before middle from cross-vein m-cu and converging in a straight line towards R_{4+5}; R_{4+5} and M joining costa anteriad of apex;

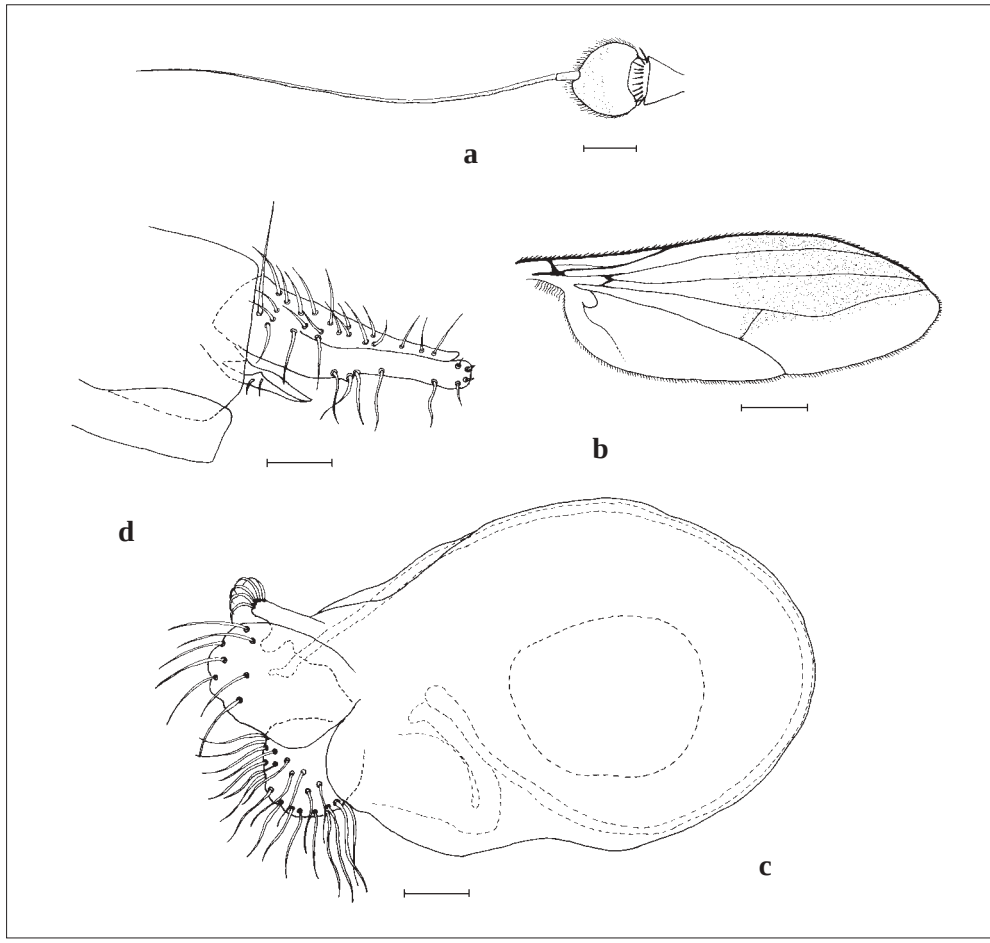

Fig. 2a-d: *Neotonnoiria maculipennis* (VAN DUZEE). – **a:** male antenna, lateral; – **b:** male wing, dorsal; – **c:** male hypopygium, left lateral; – **d:** female oviscapt, left lateral. Scale bars: Fig. b = 0.5 mm; others = 0.1 mm.

cross-vein m-cu straight, about 3.5 times as long as distance between R_{4+5} and M at wing margin, and 0.6 times as long as distal section of CuA; A weak, present only as a fold, but long and almost reaching wing margin. Lower calypter pale yellow, with fan of brown setae; haltere yellow with a brown dorsal spot.

Abdomen: Slightly longer than thorax, dorsoventrally flattened; dark metallic blue-green with bronze reflections; setae dorsally black, ventrally white; terga 2 to 5 with a black posterolateral band, with purple reflections; tergum 6 entirely black with bronze reflections; sternum 8 black with long brown setae. Hypopygium (Fig. 2c): Semi-pedunculate (segment 7 forming a short peduncle attached to sternum 8), but partially hidden under segment 6; epandrium short and globose, brownish-black, strongly compressed basolaterally; hypandrium fused with epandrium and elongated apically; epandrial lobe straight, elongated apically, with short thumb-like dorsal lobe, bearing curved apical setae; surstylus brownish-black, ovate, partially covering epandrial lobe, bearing long apical setae; cerci brownish-yellow, rounded and bearing long sinuous yellow setae.

Female. Similar to male but lacking MSSC and as noted: face slightly wider if at all; podomere ratios as: I: 56, 60, 29/22/13/7/6; II: 67, 71, 47/26/14/7/5; III: 69, 83, 18/29/16/7/5. Postabdomen (Fig. 2d): Terga 9+10 narrow and elongated-triangular, about as long as cercus, with several setae, one very long seta basally; sternum 8 as a spoon-like ventral projection, with short ventral setae; cercus fused with terga 9+10, narrow and elongated, with some long ventral and short apical setae.

Distribution: Brazil, Panama, Costa-Rica, Peru.

Variation: The species shows a high degree of variation in size, in colouration, and in the length of the surstylus in male genitalia. Range of colour variation: first flagellomere: yellow/dark brown; legs: yellow/dark brown; setae on lower proepisternum: yellow/black.

Remarks: The type-species of the genus, *Tonnoiria angustifacies*, was described by PARENT (1929) from the Amazonas. In the same year, VAN DUZEE (1929) described *Neurigona maculipennis* from Panama. Examination of both types revealed that these species are conspecific. As the issue date of VAN DUZEE'S publication, 9th February 1929, is earlier than that of PARENT'S, which was 20th April 1929, *angustifacies* PARENT must be regarded as a junior synonym of *maculipennis* VAN DUZEE. As no holotype was listed by VAN DUZEE in his description, I have designated a lectotype.

Genus *Paracoeloglutus* gen. nov.

Type species: *Paracoeloglutus chilensis* spec. nov. (here designated)

Diagnosis

Head: Male face very narrow, eyes almost contiguous, female face distinctly broader. Antennal scape short and bare; pedicel short and truncate on first flagellomere; first flagellomere short and subtriangular; arista subapical and inserted more on lateral side. Vertex slightly excavated dorsally between vertical seta and ocellar tubercle; dorsal postcranium slightly concave; postocular setae uniseriate; small postvertical setae present; ventral postcranium with long setae. **Thorax:** Posterior slope of mesonotum flattened and occupying posterior half; ac with 2 rows, very short in male, slightly longer in female; 6 distinct dc, extending anteriad of mesonotal suture. Median scutellars long, laterals distinct but short, about 1/4 of medians. Proepisternum with 2 strong lower and 1 small upper setae. **Legs:** All legs mostly yellow; male It_{4-5} flattened dorsoventrally, It_5 with a pv comb of short blunt spines, posterior claw enlarged and curved; IIT slightly flattened dorsoventrally (all MSSC). **Wing:** Hyaline, with brownish tinge; costa slightly swollen at junction with R_1 (in males and females); M straight and subparallel with R_{4+5}; cross-vein m-cu about as long as distal section of CuA.
Abdomen: About as long as thorax, broad and dorsoventrally flattened; segments 6 and 7 mostly retracted under segment 5; hypopygium partially hidden; segment 7 forming a short peduncle attached to sternum 8. Epandrium globose; hypandrium fused to epandrium; epandrial lobe straight and elongate, with a dorsal thumb-like lobe; surstylus elongate subrectangular; cercus short and rounded.

Etymology: *Paracoeloglutus* is a combination of the Greek word 'para', meaning 'near', and 'coeloglutus'. The gender is masculine.

Remarks: The genus resembles *Coeloglutus* in external characters, and differs mainly by the presence of 6 strong dc and the pedicel truncate with first flagellomere.

Paracoeloglutus chilensis spec. nov.

(Figs 3a-i)

Material: Holotype male: CHILE: Dalcahue, Isla Chiloe, Chiloe, Chile, 17.-22.1.62, PENA. [CNC]. **Paratypes** CHILE: same locality: 1 male: 17.-22.1.62 / Gen. Prep., No. SN2000-14, May 2000, St. NAGLIS. 1 male: same locality: 17.-31.1.62. 2 males: same locality: 1.-8.11.62. 1 male: Coihaique, Rio Simpson, Aysen, Chile, 23.-24.1.61, PENA. 1 male: Chile, Cautin, Los Coigues, L. Villarcia.N., 16.-25.1.65, PENA / Neurigona det. D.J. BICKEL, 198[?]. 1 female: Ensenada, Chile, Llanquihue, 13.-15.1.62, PENA / Gen. Prep., No. SN2000-15, May 2000, St. NAGLIS. [all CNC]. All specimens have an additional label: Holotype/Paratype, Paracoeloglutus n. gen., chilensis n. sp., St. NAGLIS det. 5.2000.

Male. Length: holotype: body length 4.5 mm, wing length 5.1 mm; mesonotum 1.95 mm, abdomen (segment 1-6) 2.16 mm.

Head: Frons broad, dark metallic bronze with dense greyish pruinosity; eye margins on frons slightly converging toward base of antenna; occiput concave, dark metallic bronze with slightly greyish pruinosity; a pair of short black vertical setae, a pair of black diverging ocellar setae 1.5 times as long as vertical setae, and short black postvertical setae present. Postocular setae uniseriate, uppermost 7-8 setae near vertex black, remaining setae below white; ventral postcranium with long white setae; vertex slightly excavated dorsally between vertical seta and ocellar triangle. Eyes very close on face, almost contiguous, narrowest distance equal to diameter of adjacent anterior facets. Face and clypeus with dense greyish pruinosity, metallic bronze ground-colour on clypeus visible. Palpi ovate and yellow, with two apical brown setae and brown hairs; proboscis brown with pale hairs, and with a short pale basolateral seta on each side. Antenna (Fig. 3b): scape yellow and bare; pedicel yellow, wider than long and truncate with first flagellomere, with a circlet of short black setulae; first flagellomere black, subtriangular, about as long as wide, with distinct pubescence; arista subapical, bare, about 6.5 times as long as first flagellomere, inserted not exactly on dorsum but more on lateral side. Ratio narrowest/greatest distance between eyes on frons: 47/65; ratio narrowest/greatest distance between eyes on face: 2/30; ratio narrowest/greatest distance between eyes on clypeus: 16/21.

Thorax: Mesonotum strongly elongated (Fig. 3a, c), posterior slope of mesonotum flattened and slightly concave. Mesonotum and scutellum dark metallic bronze-green, with bronze reflections, with greyish and ochreous pruinosity, and with a dark longitudinal stripe along area of dc and ac setae. Pleura dark brown, with greyish pruinosity and with two longitudinal lateral stripes of yellow pruinosity behind anterior spiracle. Ac with 2 rows of 18-20 very short brown setulae, which seem almost reduced, ending at mesonotal depression, length about half distance between rows; dc comprising 6 strong black setae, 3 setae bordering mesonotal depression and 3 setae anteriad, anteriormost seta slightly shorter and closer (Fig. 3c); a field of short brown irregular setulae present anteriad of dc and anterolaterad of mesonotum. Additional strong black setae include: 1 pa, 2 sa, 1 sr, 2 np, 1 hm, and 1 pm; 4 small setulae below hm present; proepisternum with 2 pale strong lower and 1 pale small upper ppl. Scutellum with 2 strong black median scutellars and laterals 1/4 length of medians.

Legs: All legs mainly yellow, but It_5, extreme apex of IIT, and apical 1/4 of IIIT including IIIt infuscated; IC yellow, IIC and IIIC including trochanters dark brown; all setae on legs and coxae black, except as noted. I: IC with white anterior hairs and white apical setae; It_{4+5} dorsoventrally flattened; It_4 with 3-4 longer pale apicodorsal setae; It_5 with pv comb of 6-8 short blunt black curved spines, with outermost spine of row distinctly longer, followed by a long posterior seta, and 4-5 long brown apicodorsal setae, ventral area with pale felt-like pubescence, posterior claw slightly broadened, elongated, and curved rectangular (all MSSC)

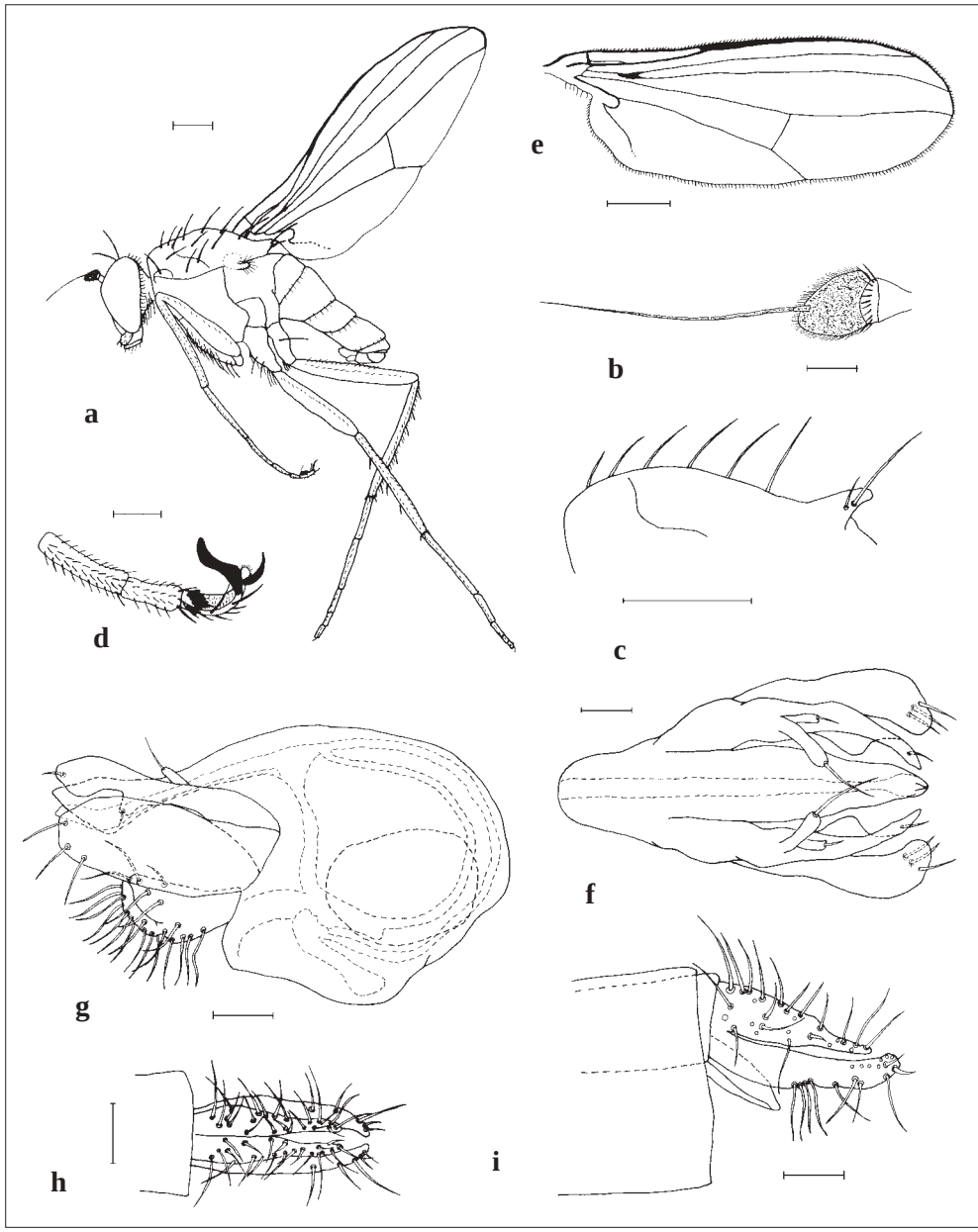

Fig. 3a-i: *Paracoeloglutus chilensis* spec. nov. **– a:** male habitus, left lateral (left wing removed); **– b:** male antenna, lateral; **– c:** male thorax, left lateral; **– d:** male left fore tarsomeres 3-5, posterior; **– e:** male wing, dorsal; **– f:** male hypopygium, ventral; **– g:** male hypopygium, left lateral; **– h:** female oviscapt, dorsal; **– i:** female oviscapt, left lateral. Scale bars: Fig. a, c, e = 0.5 mm; others = 0.1 mm.

(Fig. 3d). II: IIC with white hairs, 2 strong white anterolateral and 1 strong white apical setae; trochanter with a fine brown seta; IIF with a short but distinct posterior subapical seta; IIT slightly flattened dorsoventrally (MSSC), with short ad setae at 1/5, 2/5 and 3/5 (one seta sometimes lacking), one small av seta at 4/5, 2-4 pv setae in one row, and 3-4 short apical

setae; IIt with short ventral setulae. III: IIIC with a strong pale yellow lateral seta at 1/4 from base; IIIF with a row of short pale dorsal setae on basal half; IIIT with an irregular row of short dorsal and ventral setae and 4 apical setae; IIIt with short ventral setulae. Relative podomere ratios (femur, tibia, tarsomere 1/2/3/4/5): I: 62, 64, 42/25/11/5/9; II: 67, 78, 49/22/12/6/6; III: 72, 99, 26/30/13/7/5. **Wing:** (Fig. 3e) Elongate and narrow; hyaline, with a brownish tinge; costa slightly swollen at junction with R_1; R_{2+3} and R_{4+5} diverging; R_{4+5} practically straight, curved posteriad near wing margin and joining wing margin anteriad of apex; M practically straight, curved posteriad near wing margin, subparallel with R_{4+5} and joining wing margin posteriad of apex; cross-vein (m-cu) straight, about 1.5 times as long as distance between R_{4+5} and M at wing apex, and 1.0 times as long as distal section of CuA; A weak, present only as a fold, not reaching wing margin. Lower calypter pale yellow, with a fan of pale yellow setae; haltere yellow.
Abdomen: Short and broad, dorsoventrally flattened, about as long as thorax; terga 1-5 metallic bronze on dorsum, laterally metallic green, with a dark bronze posterolateral band, and whitish pruinosity; hairs and setae black dorsally and white laterally and ventrally. Segment 5 without ventral projection; segments 6 and 7 mostly retracted under segment 5. Hypopygium (Fig. 3f, g): semi-pedunculate (segment 7 forming a short peduncle attached to sternum 8); epandrium brownish-black, partially hidden under segment 5, short and globose; hypandrium fused with epandrium and elongated apically; epandrial lobe straight and elongate, with a short thumb-like dorsal lobe, bearing an apical and 2 dorsal setae; surstylus elongated and subrectangular, partially covering epandrial lobe, bearing three apical setae; cercus short and rounded, with long setae.

Female. Similar to male but lacking MSSC and as noted: Face distinctly wider, about as wide as distance between ocellar setae. Ac setae slightly longer and more distinct. Relative podomere ratios (femur, tibia, tarsomere 1/2/3/4/5): I: 72, 73, 44/26/15/8/8; II: 77, 90, 55/24/15/7/7; III: 82, 112, 31/33/18/9/7. Postabdomen (Fig. 3h, i): Terga 9+10 narrow and elongated-triangular, shorter than cercus, with several dorsal setae; sternum 8 as a spoon-like ventral projection; cercus basally fused with terga 9+10, narrow and elongated, with 4 long ventral and short apical setae.

Distribution: Central Chile.

Etymology: The name is derived from Chile, the country where the type specimens were collected.

Remarks: PHILIPPI (1865: 776) described the species *Dolichopus lamprostethus* based on a female from Chile. His description is too vague for precise identification, but it shares some characters with *P. chilensis* except for the thoracic chaetotaxy and the colour of female terminalia. Since PHILIPPI's types could not be located, the status of this species remains doubtful.

Phylogenetic analysis

The tribe Coeloglutini includes the genera *Coeloglutus*, *Neotonnoiria* and *Paracoeloglutus*, and forms a distinct monophyletic group. It shares the following characters with the other Neurigoninae: posterior slope of mesonotum flattened or slightly concave; face narrow and often contiguous, with dense pruinosity; frontoclypeal suture not evident; antennal scape bare on dorsum; arista dorsal to subapical; dorsal postcranium flat or concave; legs elongate; femora without anterior subapical seta; hind coxa with one strong lateral seta; lower

proepisternum with strong setae; acrostichal setae (ac) biseriate; dorsocentral setae (dc) consisting of 6 pairs, sometimes reduced anteriad; wing vein M unbranched; wing vein A present, even if only as a fold on membrane; male fore tarsomeres sometimes modified (MSSC); hypopygium globose and at least partially exposed; hypopygium semi-pedunculate and segment 7 forming a short peduncle attached to sternum 8.

Character states used for phylogenetic analysis and their polarity for the Coeloglutini

The following list includes the apomorphic character states used for the phylogenetic analysis of the tribe Coeloglutini. The plesiomorphic character states are used to define a hypothetical ancestral ground-plan of the Neurigoninae.

Characters are defined in the following format: n) character: plesiomorphic (ancestral) state / **apomorphic (derived) state**

Head:

1) vertex: straight dorsally / **excavated dorsally between vertical seta and ocellar tubercle**
2) eye margins on frons: converging toward antennae / **subparallel toward antennae**
3) postvertical setae: present / **reduced or lost**
4) arista: dorsal / **subapical**
5) first flagellomere: subtriangular apically, as long as wide / **rounded apically, wider than long**
6) pedicel: truncate with first flagellomere / **intruding into first flagellomere on median side**

Thorax:

7) thorax shape: not obviously elongated / **strongly elongated**
8) acrostichal setae (ac): distinct / **strongly reduced** (males)
9) dorsocentral setae (dc): consisting of 6 strong pairs, extended anteriad of mesonotal suture / **consisting of 3 strong pairs and 2-4 reduced small pairs anteriad, restricted posteriad of mesonotal suture**
10) presutural intra-alar (sr): present / **reduced or lost**
11) postpronotal seta (hm): strong / **reduced to small hair**

Legs:

12) male It_5: unmodified / **with ventral comb of short spines** (MSSC)
13) male IIT: unmodified / **dorsoventrally flattened** (MSSC)

Wing:

14) vein M: straight to wing margin / **gently curved**
15) vein R_{4+5} and M: subparallel / **converging**
16) costa: unmodified / **slightly swollen at junction with R_1**
17) cross-vein (m-cu): distinctly shorter than distal section of CuA / **as long as distal section of CuA**

Abdomen:

18) abdomen shape: distinctly longer than thorax and cylindrical / **about as long as thorax and dorsoventrally flattened**
19) hypopygium: exposed / **partially hidden under segment 5 or 6**
20) surstylus: divided into dorsal and ventral lobes / **fused into a single lobe**
21) epandrium: moderately compressed basolaterally / **strongly compressed basolaterally**

Discussion

A cladogram of the tribe Coeloglutini is given in Fig. 4. The tribe forms a distinct monophyletic group and is considered here as derived from a hypothetical phylogenetic ground-plan of the Neurigoninae. The characters 1) 2) 4) 7) 12) 18) 19) and 20) are apomorphic conditions of the Coeloglutini which establish the monophyly of the tribe. Character states 4) and 20) are also present in the Medeterinae and could therefore justify the transfer of the tribe to the

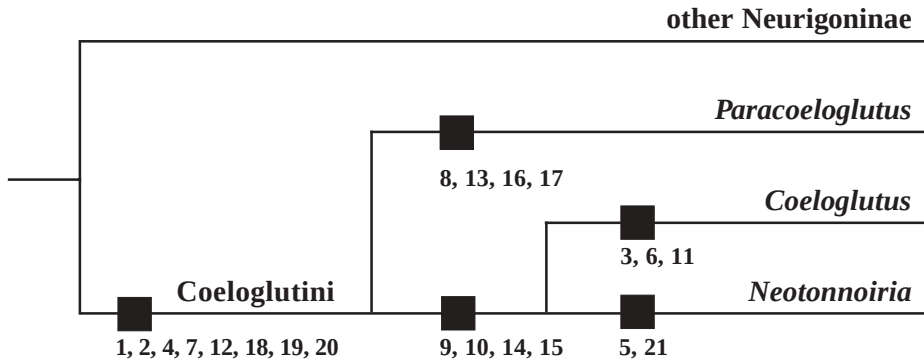

Fig. 4: Cladogram of the tribe Coeloglutini. The numbers refer to the apomorphic character states in the Phylogenetic Analysis.

Medeterinae. On the other hand, character state 19) excludes the tribe from the Medeterinae as they have a prominent pedunculate hypopygium. The genera *Coeloglutus* and *Neotonnoiria* are closely related by the synapomorphies 9), 10), 14) and 15), and probably have a sister-group relationship. *Paracoeloglutus* lacks these synapomorphies and is probably the more ancestral clade. *Coeloglutus* is defined by the autapomorphies 3), 6) and 11), of which 6) can also be found in other subfamilies (Sympycninae, Diaphorinae) and represents a homoplasy. *Neotonnoiria* has autapomorphies 5) and 21) and is here regarded as the most derived clade. *Paracoeloglutus* lacks the synapomorphic characters 9), 10), 14), 15) and is therefore regarded as the more ancestral genus of the tribe, but it is defined by the autapomorphies 8), 13), 16) and 17). The apomorphic character state 9), the reduction of the anterior dc setae, in the two closely related genera *Coeloglutus* and *Neotonnoiria* has also evolved independently in other neurigonine genera, for example *Dactylomyia* ALDRICH. However, *Dactylomyia* lacks the other synapomorphies that define the tribe Coeloglutini, and this condition is therefore regarded as homoplastic.

Summary of new taxa and taxonomic changes

Coeloglutini NEGROBOV stat. nov.
Paracoeloglutus gen. nov.
Paracoeloglutus chilensis spec. nov.
Medetera sinuata PARENT, 1928 syn. nov. of *Coeloglutus concavus* ALDRICH, 1896
Coeloglutus bicoloripes VAN DUZEE, 1933 syn. nov. of *Coeloglutus concavus* ALDRICH, 1896
Neotonnoiria maculipennis (VAN DUZEE, 1929) comb. nov. (*Neurigona*)
Tonnoiria angustifacies PARENT, 1929 syn. nov. of *Neotonnoiria maculipennis* (VAN DUZEE, 1929)

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