



## Revision of the stiletto fly genus *Neodialineura* Mann (Diptera: Therevidae): an empirical example of cybertaxonomy

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## Abstract

The endemic Australian genus *Neodialineura* Mann is revised to include 13 species. Three species are previously described: *N. nitens* (White) and *N. saxatilis* (White) from southern mainland Australia and Tasmania, and *N. striatithorax* Mann from eastern Australia. Ten species are described as new, including *N. ataxia* **sp. nov.**, *N. atmis* **sp. nov.**, *N. bagdad* **sp. nov.**, *N. bifaria* **sp. nov.**, *N. litura* **sp. nov.**, *N. polygramma* **sp. nov.**, *N. signum* **sp. nov.**, *N. spinosa* **sp. nov.**, *N. tessella* **sp. nov.** and *N. trichidion* **sp. nov.** This revision serves as an empirical example for modernising the process of documenting global biodiversity by making taxonomic description and key development more efficient by avoiding redundancy in data handling and using digital media. Complete taxonomic descriptions were generated using online specimen and image databases, and a character matrix in Structured Descriptive Data (SDD) format developed in Lucid Builder to simultaneously generate natural language descriptions and an interactive key. Numerous web resources are provided with taxonomic descriptions throughout the document including: a) links to archived images of all species on Morphbank, b) registration of authors, publications, taxon names and other nomenclatural acts in Zoobank, with assignment of Life Science Identifiers (LSIDs) for each, c) links to Genbank accession records for DNA sequences, and d) assignment of LSIDs to specimen records with links to respective records in an online Therevidae specimen database. Colour images of male and female specimens of all *Neodialineura* species are included, along with a traditional dichotomous key to species.

**Keywords:** Asiloidea, natural language description, cybertaxonomy, Life Science Identifier, Lucid.

## Introduction

Stiletto flies (Diptera: Asiloidea: Therevidae) are a moderately sized group of lower brachyceran flies that along with Scenopinidae (window flies), Apsilocephalidae and Evocoidae, comprise the therevoid clade. The Australasian region contains the greatest number of stiletto fly species of any biogeographical region, with an estimated 700+ described and undescribed species. This represents over 40% of the world stiletto fly fauna. Therevidae of Australasian are completely endemic at the genus level except for *Irwiniella* Lyneborg, a single Old World genus with representatives in the Papuan and Indonesian archipelago. Australasian Therevidae comprises only two of the recognised subfamilies: the cosmopolitan Therevinae (represented by three genera), and the largely endemic Agapophytinae (represented by approximately 25 genera). The latter subfamily is represented outside this biogeographical region only by three genera found in South America (Winterton 2006). Winterton (2006, 2007) recently proposed an expanded concept of Agapophytinae to also include all members of the poorly defined and likely paraphyletic *Taenogera* Kröber genus-group, an informal grouping in which *Neodialineura* Mann was previously placed by Winterton *et al.* (1999).

*Neodialineura* was originally described for a single, highly distinctive species (*N. striatithorax* Mann) (Fig. 1) with a swollen antennal scape and enlarged frons with a glossy callus laterally (Mann 1928). Based on these distinctive but highly autapomorphic characters, Mann (1928) incorrectly related the genus to therevine genera *Tabuda* Walker and *Dialineura* Rondani. White (1915) described two species of *Psilocephala* Zetterstedt (*P. saxatilis* White and *P. nitens* White (Fig. 2)) from Tasmania that Irwin & Lyneborg (1989) subsequently listed as unplaced within Therevidae. In their revision of *Psilocephala*, Metz *et al.* (2003) transferred both species to *Neodialineura*, increasing the total number of species to three. In this revision of *Neodialineura*, all three previously described species are treated, with an additional ten new species described for the first time. A dichotomous key to species is provided and photographic images are presented for both sexes (where known) of all species, with links to corresponding Morphbank images.

The process of traditional taxonomic description has many time-consuming aspects, with numerous instances of redundancy in data handling (e.g. character and specimen metadata) so that today descriptions are still manually crafted in a word processor. The result is that we have described only a small fraction of the estimated global biodiversity. What is needed to revitalise this process is a dramatic paradigm shift in methodology used to describe species from tedious traditional methods to rapid, semi-automated ones that also utilise the numerous web resources available in online databases. In the online edition of their seminal



**FIGURE 1.** *Neodialineura striatithorax* Mann, female, Brisbane, Queensland [[Morphbank](#)]. Body length= 6.5 mm. (Photo: Anthony O'Toole, University of Queensland).



**FIGURE 2.** *Neodialineura nitens* (White), male, Warrumbungle National Park, New South Wales [[Morphbank](#)]. Body length= 5.0 mm. (Photo: S.L. Winterton).

paper describing new species of *Chromis* Cuvier, Pyle *et al.* (2008) included extensive usage of hypertext links to electronic content either within the paper (i.e. internal) or external content available on the Internet. Corresponding to current guidelines of the Taxonomic Database Working Group (TDWG), external hypertext links were represented as Life Science Identifiers (LSID) enclosed within a HTTP proxy (see Pyle *et al.* 2008). In the same year, Johnson *et al.* (2008) and Deans & Kawada (2008) published papers describing new species of wasps (Hymenoptera) with online editions similarly enhanced with web resources, heralding the beginning of a new era in methodology for taxonomic description. Following these authors, hypertext links to web resources utilising LSIDs are frequently used throughout the text to enhance the online version of this paper, including registration of names in [Zoobank](#)<sup>1</sup> as per the recent proposed amendment of the International Code of Zoological Nomenclature (ICZN 2008). Furthermore, this paper extends this taxonomic method towards cybertaxonomy by using natural language species descriptions parsed

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1. <http://www.zoobank.org/>

from matrix based character data generated using Lucid Builder software. It is hoped that this paper will represent an empirical example of how using digital tools for taxonomic description can significantly speed the process of documenting biodiversity through rapid generation of natural language descriptions in a highly standardised format that is atomised and thus available for wider use in distributed morphological ontologies.



**FIGURE 3.** *Neodialineura spinosa* sp. nov., male, Yanchep, Western Australia [[Morphbank](#)]. Body length= 5.5 mm. (Photo: S.L. Winterton).

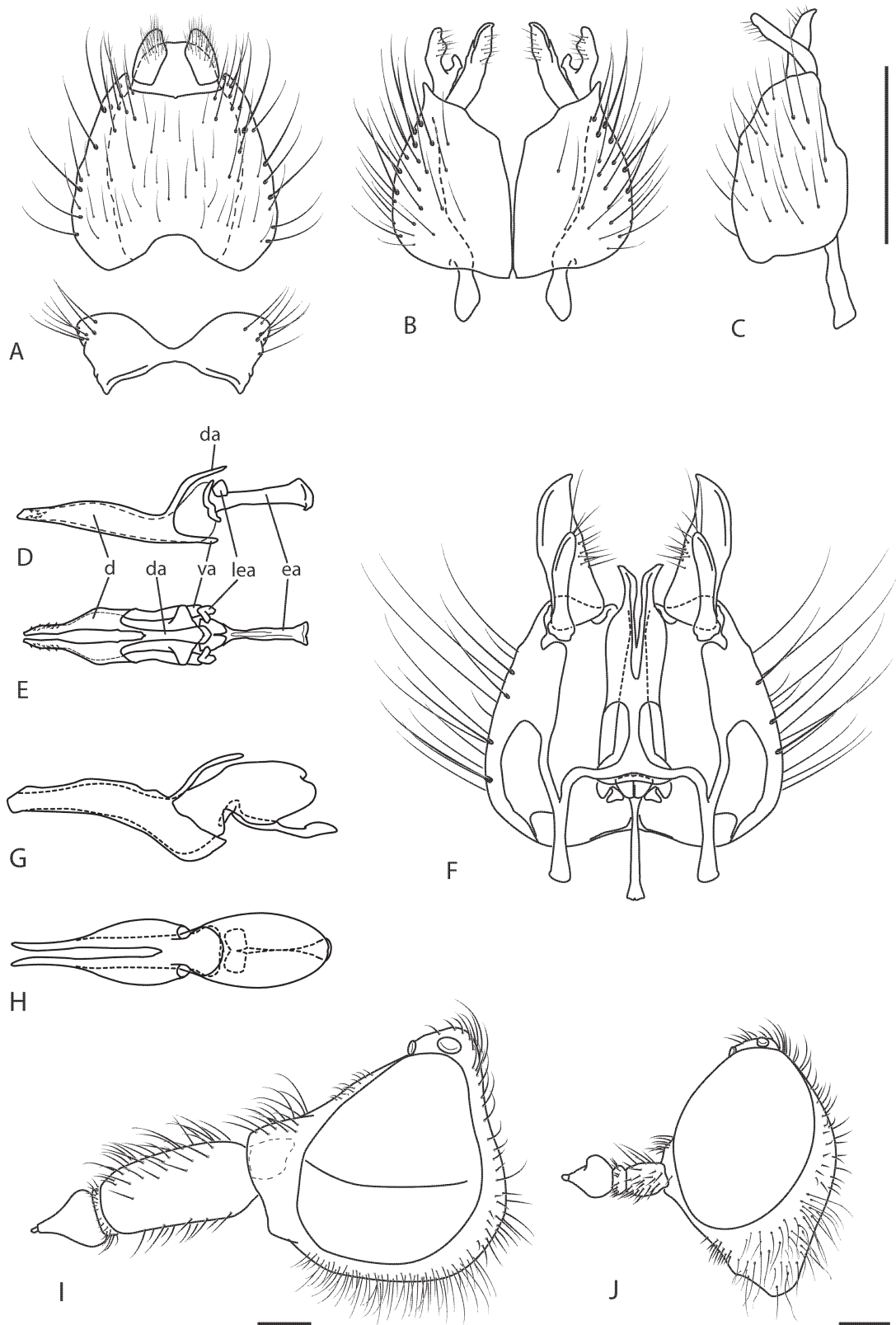


**FIGURE 4.** *Neodialineura spinosa* sp. nov., female, Yanchep, Western Australia [[Morphbank](#)]. Body length= 7.0 mm. (Photo: S.L. Winterton).

### Materials and methods

Adult morphological terminology follows McAlpine *et al.* (1981) with genitalic morphology as modified by Winterton *et al.* (1999) and Winterton (2006). Genitalia were macerated in 10% KOH at room temperature for one day to remove soft tissue, then rinsed in distilled water and dilute glacial acetic acid, and dissected in 80% ethanol. Genitalia preparations were placed in glycerine in a genitalia vial mounted on the pin beneath the specimen.





**FIGURE 5.** *Neodialineura* spp. *N. litura* **sp. nov.**: A, epandrium and tergite 8; B, gonocoxites, ventral; C, same, lateral; D, aedeagus, lateral; E, same, dorsal; *N. saxatilis* (White): F, gonocoxites and aedeagus with epandrium removed, dorsal; *N. bifaria* **sp. nov.**: G, aedeagus lateral; H, same, dorsal; *N. striatithorax* Mann: I, male head, lateral; *N. trichidion* **sp. nov.**: J, male head, lateral. Scale lines: 0.2 mm.

Types are deposited in the Queensland Museum (Brisbane, Australia) ([QM](#)), Australian Museum (Sydney, Australia) ([AMS](#)), Australian National Insect Collection ([ANIC](#)) (Canberra, Australia), Natural History Museum, (London, United Kingdom) ([BMNH](#)) and Harvard Museum of Comparative Biology (Cambridge, USA) ([MCZ](#)). Other collection acronyms from which material was examined include: University of Queensland Insect Collection (Brisbane, Australia) ([UQIC](#)), New South Wales Department of Primary Industries Collection (Orange, Australia) ([NDAA](#)), California Academy of Sciences (San Francisco, USA) ([CAS](#)), University of California, Davis, Bohart Museum, (Davis, USA) ([UCDC](#)), Western Australian Museum (Perth Australia) ([WAM](#)), Michael E. Irwin private collection [to be ultimately housed in the California Academy of Sciences] ([MEIC/CAS](#)), Greg Daniels private collection [to be ultimately housed in the Australian Museum] ([GDCB/AMS](#)). Numbers quoted with individual specimens as MEI000000 are unique identifiers in the therevid database MANDALA and are attached to each specimen as a yellow or white label (Kampmeier *et al.* 2004). Material examined lists were exported from MANDALA. All specimen numbers cited in material examined lists have Life Science Identifiers (LSID) are enclosed within a HTTP proxy linking this information to the actual specimen records in the MANDALA Therevidae specimen database. Descriptions were constructed using Lucid Builder 3.4, using a matrix database of character states, which were then exported using a natural language function into XML and a text document. A link is provided in the text to [Genbank](#)<sup>2</sup> accession records for DNA sequences (28S ribosomal DNA and elongation factor one alpha) of *Neodialineura striatithorax*. Specimen images were taken using a digital camera with a series of images montaged using Helicon Focus (©HeliconSoft). Images were deposited into [Morphbank](#)<sup>3</sup> with embedded URL links within the document between descriptions and Morphbank images. In an effort to avoid the inherent redundancy of providing both diagnoses and descriptions, only detailed diagnoses are provided, with notable and additional distinguishing features discussed further in the comments section for each species. Diagnosis is aided by the provision of embedded links in the document to high-resolution digital images of males and females of all species in Morphbank. All nomenclatural acts, authors and literature are registered in Zoobank as per the recent proposed amendment to the International Code of Zoological nomenclature for a universal register for animal names (Polaszek *et al.* 2005a,b; Pyle *et al.* 2008; ICZN 2008).

## Taxonomy

### *Neodialineura* Mann [[Zoobank](#)]

*Neodialineura* Mann, 1928: 171; Irwin & Lyneborg 1989: 357 [catalogue]; Winterton *et al.* 1999 [key].  
Type species: *Neodialineura striatithorax* Mann, 1928: 172, original designation.

**Diagnosis.** Antennae positioned on middle to lower part of head; antennal length variable, usually shorter than head, rarely equal length; flagellum acutely turbinate; scape short and cylindrical, or rarely slightly elongate and bulbous; antennal vestiture frequently as sparsely distributed, strong setae; frons flat or slightly rounded, rarely greatly swollen with glabrous bilobed antennal callus; male frons much narrower than female; eyes usually contiguous, frons at narrowest point rarely wider than anterior ocellus; male occiput concave, one row (rarely more) of postocular setae in male immediately laterad of ocellar tubercle; parafacial setae usually absent; prosternal pile absent in medial furrow; pleuron with grey pubescence; postspiracular pile absent; scutum sometimes with stripes and tessellate patterning, or setal bases darkened against a lighter background colouration; wing hyaline or fumose, often with dark mottling; cell  $m_3$  open; vein  $M_3$  rarely incomplete; mid coxa without setae on posterior surface (except *N. atmis* **sp. nov.**); femora with uniform short setae, not appressed; fore and hind femora without velutum patches; hind femur without subapical

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2. <http://www.ncbi.nlm.nih.gov/>

3. <http://www.morphbank.net/>

anteroventral macrosetae; abdomen yellow with dark markings medially, sometimes overlain with silver velutum in male; terminalia (Fig. 5) sparsely covered with relatively few elongate setae; medial atrium absent; hypandrium reduced or absent; aedeagus simple; ventral apodeme forked widely; lateral ejaculatory apodeme small; articulated inner gonocoxal process present; anterior process of female tergite 8 broad; A1 and A2 acanthophorite spines present; three spermathecae; spermathecal sac present; spermathecal ducts joined to spermathecal duct.

#### Included species

*Neodialineura ataxia* sp. nov., *N. atmis* sp. nov., *N. bagdad* sp. nov., *N. bifaria* sp. nov., *N. litura* sp. nov., *N. nitens* (White), *N. polygramma* sp. nov., *N. saxatilis* (White), *N. signum* sp. nov., *N. spinosa* sp. nov., *N. striatithorax* Mann, *N. tessella* sp. nov., and *N. trichidion* sp. nov.

#### Comments

This genus is distributed throughout all Australian states. *Neodialineura* was originally described by Mann (1928) to accommodate a sole autapomorphic species, *N. striatithorax*. Metz *et al.* (2003) subsequently transferred *N. nitens* and *N. saxatilis* from *Psilocephala* to *Neodialineura*, both of which lack the enormously enlarged scape and antennal calli. Diagnostic characters identifying this genus include velutum patches lacking on the fore and hind femora, wing cell  $m_3$  open, subapical anteroventral macrosetae on hind femur absent, aedeagus with apodemes of parameral sheath reduced, gonocoxites lacking ventromedial velutum patch and hypandrium absent or barely evident. Male genitalia are conserved and show limited variation in structure between species. Some species show considerable sexual dimorphism in vestiture and colouration (e.g. *N. nitens*, *N. trichidion* sp. nov., *N. spinosa* sp. nov., *N. bifaria* sp. nov.). The phylogenetic position of this genus is difficult to determine although *Neodialineura* appears to be closely related to *Manestella* Metz. The posteromedial region of abdominal tergite 2 of both sexes of *Neodialineura* is adorned with a patch of modified setae. This patch of modified setae is present in other genera of Australian Therevidae but usually only present in the female and rarely found in all species of any genus (Winterton *et al.* 2001). The function of these setae is unknown, but their location may indicate that they are sensory.

#### Key to *Neodialineura* species

As well as frequent divergent sexual dimorphism, species in this genus can be quite variable in colouration and extent of markings. Care should be taken when using the key and comparisons with descriptions is recommended. Females are unknown for *N. signum* sp. nov., and *N. tessella* sp. nov., while males are unknown for *N. atmis* sp. nov. and *N. bagdad* sp. nov.

1. Antennal length nearing length of head; flagellum length equal to or slightly shorter than scape (Figs 5I, 32, 38, 44); scape and lower frons often with numerous strong dark setae ..... 2
  - Antennae much shorter than head; flagellum longer than scape (Figs 5J, 26, 28, 46); scape short and cylindrical; scape and frons usually sparsely covered with slender, short setae ..... 7
2. Scutum with irregularly striped and tessellate pattern of dark brown on tan or blue-grey (e.g. Fig. 31); wing mottled (Figs 32, 42) (south-eastern Australia) ..... 3
  - Scutum uniform tan-grey to orange pubescent, rarely with distinctive markings and if present then not extensive, usually restricted to dark setal bases (Figs 11, 15, 37, 47); wing hyaline or suffused with orange anteriorly (western Australia) ..... 4
3. Scape greatly elongate; lower frons and face bulbous with glossy patches dorsally; wing uniformly mottled .....
  - ..... *N. striatithorax* Mann (Figs 1, 41–44)
  - Scape only slightly longer than flagellum; lower frons and face slightly protruding anteriorly, but without glabrous patches dorsally; wing mottled with costal margin darker infusate (Figs 31–34) ..... *N. saxatilis* (White)
4. Scutum with two supra-alar macrosetae; pale setae present on posterior surface of mid coxa .....
  - ..... *N. atmis* sp. nov. (Figs 11–12)
  - Scutum with one supra-alar seta; posterior surface of mid coxa bare ..... 5

5. Head with dark setae laterad of antennal base, extending ventrally along parafacia to gena; male occiput with scattered setae immediately laterad of ocellar tubercle, not restricted to postocular ridge..... *N. spinosa* **sp. nov.** (Figs 3–4, 37–40)
  - Head sometimes with dark setae laterad of antennal base but setae not continuous along parafacia to gena; sometimes a patch of dark setae on gena; male occiput with single row of setae immediately laterad of ocellar tubercle (e.g. Fig. 15)..... 6
6. Head and thorax pubescence suffuse orange; legs and major wing veins orange; two pairs of scutellar setae; postocular setae sometimes a mixture of pale and dark macrosetae; female abdominal tergite 2 usually yellow, sometimes with brown medial spot ..... *N. bifaria* **sp. nov.** (Figs 15–18)
  - Head and thorax pubescence greyish-tan; legs and major wing veins pale yellow; single pair of scutellar setae, rarely a second pair of weaker setae laterad; postocular setae dark; female abdominal tergite 2 yellow with variable brown markings, but never brown spot medially ..... *N. trichidion* **sp. nov.** (Figs 47–50)
7. Male frons width at narrowest point slightly wider than median ocellus; scutum grey pubescent with diffuse brown markings, setal bases dark; abdomen dark brown (with some dark yellow laterally in female) with pale intersegmental membranes; male abdominal velutum absent; wing hyaline to very slight infusate (South Australia) ..... *N. litura* **sp. nov.** (Figs 19–22)
  - Male frons width at narrowest point narrower than median ocellus (e.g. Fig. 23); scutum tan or grey-blue pubescent with irregularly tessellate to striped markings or varying intensity; abdomen colour variable, sometimes with silver velutum in male; wing hyaline or mottled ..... 8
8. Wing mostly hyaline, lightly darker wing venation in female..... 9
  - Wing slightly to strongly mottled ..... 10
9. Male head and thorax covered with blue-silver velutum pubescence, scutal markings blue-grey velutum, not brown; antennae orange; female scutum pattern (Fig. 25)..... *N. nitens* (White) (Figs 2, 23–26)
  - Male head and thorax grey-silver pubescent, scutal markings brown; body covered with tan pubescence with darker markings; antennae yellow; female scutum pattern (Fig. 8)..... *N. ataxia* **sp. nov.** (Figs 6–10)
10. Coxae pale yellow, overlain with sparse silver pubescence; male abdomen without silver velutum dorsally (e.g. Fig. 27) ..... 11
  - Coxae brown, overlain with dense silver pubescence; male abdomen with dense silver velutum..... *N. signum* **sp. nov.** (Figs 35–36)
12. Scutal stripes complete anteriorly ..... *N. polygramma* **sp. nov.** (Figs 27–30)
  - Scutal stripes incomplete anteriorly, often irregularly tessellate (Figs 13, 45)..... 13
13. Wing mottled ..... *N. bagdad* **sp. nov.** (Figs 13–14)
  - Wing only faintly mottled ..... *N. tessella* **sp. nov.** (Figs 45–46)

*Neodialineura ataxia* **sp. nov.** [[Zoobank](#)]

(Figs 6–10)

*Psilocephala lutea* White 1915: 49, *sensu* Mann (1933: 330).

**Holotype male**, AUSTRALIA: South Australia: Kangaroo Island, Flinders Chase, 3.xii.1977, D.K. McAlpine and M.A. Schneider [-35.972, 136.729] ([MEI165156](#)) (AMS).

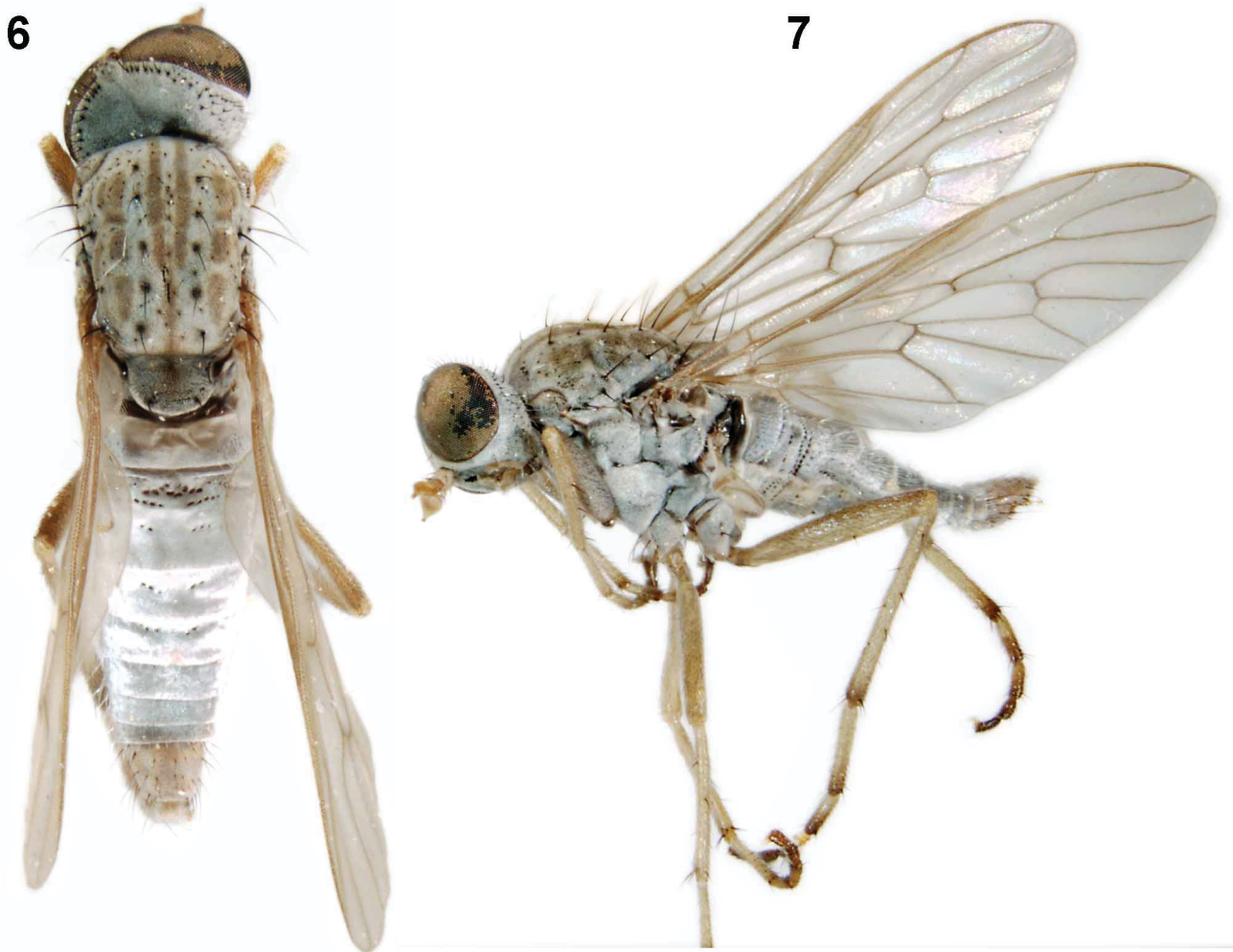
**Paratypes**. AUSTRALIA: South Australia: 4 males, same data as Holotype ([MEI165153](#), [165154](#), [165155](#), [165159](#)) (AMS); 4 females, Dunes, Seal Bay, 2–4.xii.1977, D.K. McAlpine and M.A. Schneider [-35.991, 137.363] ([MEI165151](#), [165158](#), [165160](#), [165161](#)) (AMS); female, Dudley Con[servation] Park, 5.xii.1977, D.K. McAlpine and M.A. Schneider [-35.811, 137.876] ([MEI165152](#)) (AMS). Western Australia: Margaret River, 28.xii.1970, G.A. Holloway [-33.950, 115.070] ([MEI165157](#)) (AMS).

**Other material examined**: ‘Allotype *Psilocephala lutea*’ male AUSTRALIA: Tasmania: King Island, A.M. Lea, [-39.833, 144.000] ([MEI024210](#)) (QM).

**Diagnosis**. *Head*. Frons and occiput pubescence silver-grey with dark brown markings; frons in profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae, female frontal vestiture with short to moderate length setae; male frons width at narrowest point contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical, scape vestiture sparsely covered with short, dark setae; flagellum orange-yellow, terminus dark or brownish orange, darker distally. *Thorax*. Scutum



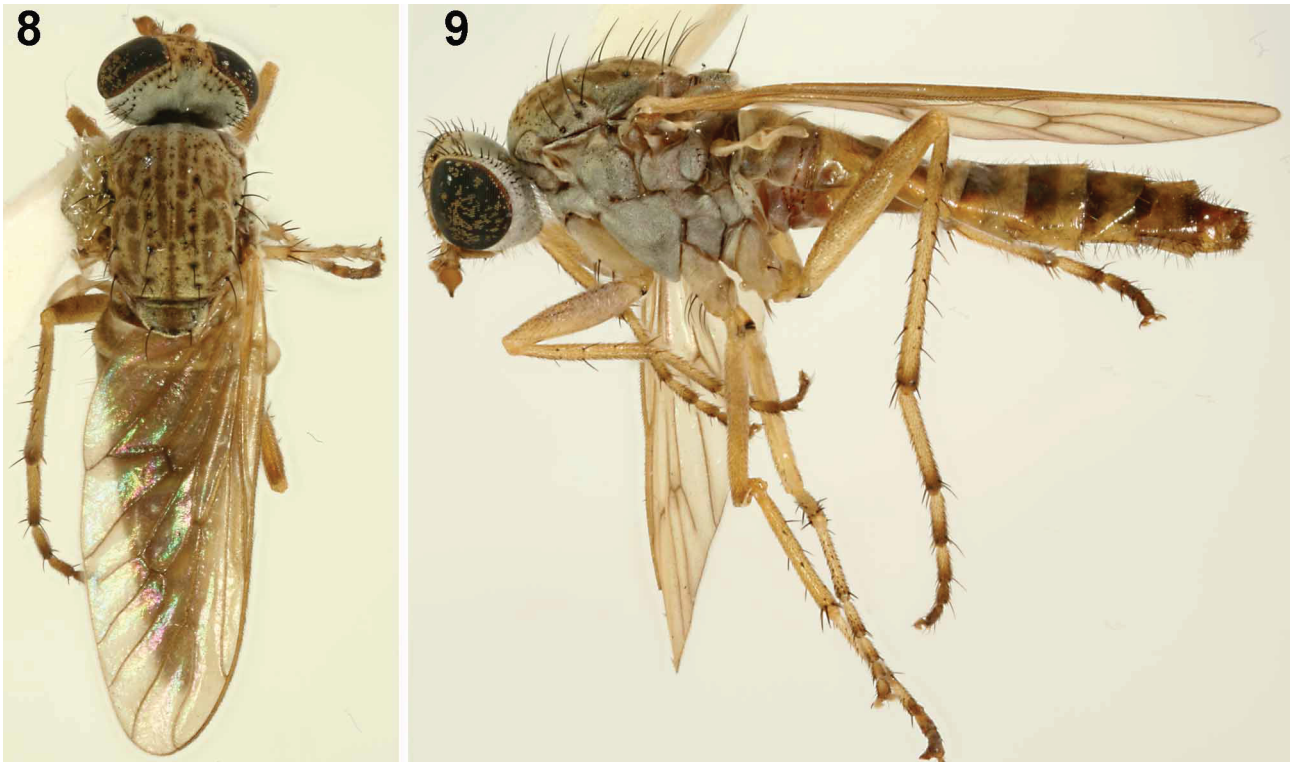
pubescence grey-tan with brown markings; pleuron with silver-grey pubescence; katatergite setae uniform pale; coxae pale, overlain with silver-grey pubescence, coxal setae mostly dark; femora dark yellow with brown dorso-medially, rarely uniform yellow, femora vestiture short dark setae, longer pale setae on fore and mid femora; tibia and tarsi dark yellow with apicies brown; wing hyaline; haltere colour variable, usually stem dark, knob pale. Scutal chaetotaxy (macrosetae pairs): notopleural macrosetae 3, supra alar 1, post alar 1, dorsocentral 4–6, scutellar 1. *Abdomen*. Silver velutum present on abdominal tergites 2–7; male abdomen base colour darkish, obscured by extensive velutum covering; male abdomen additional vestiture mostly elongate pale setae laterally; female abdominal markings with tergites dark brown dorsally, intersegmental membrane distinctly pale coloured, well defined.



**FIGURE 6, 7.** *Neodialineura ataxia* **sp. nov.**: Holotype male. 6, dorsal [[Morphbank](#)]; 7, lateral [[Morphbank](#)]. Body length= 3.8 mm.

**Comments.** *Psilocephala lutea* White (1915) was transferred to *Nanexila* Winterton & Irwin by Metz (2003). Mann (1933) previously redescribed the male of *P. lutea* from a series of male and female specimens from King Island, Tasmania, and incorrectly designated an allotype. Following examination of the type of *P. lutea* (MEI241961) (see discussion in Winterton 2007) and of the ‘allotype’ (MEI024210) designated by Mann (1933), it is clear that while *Nanexila lutea* (White) is a valid combination, the series Mann examined are actually specimens of *Neodialineura ataxia* **sp. nov.**, and not *N. lutea*. Two characters unique to some individuals of *N. ataxia* **sp. nov.** are wing vein  $R_{2+3}$  abruptly bent posteriorly approximately at mid point, and vein  $M_3$  terminating before wing margin. Both characters are highly variable in form, specifically the degree

of vein distortion in  $R_{2+3}$ , and length of  $M_3$ , varying from joined to wing margin to terminating approximately midway towards margin.



**FIGURE 8, 9.** *Neodialineura ataxia* sp. nov.: Paratype female. 8, dorsal [[Morphbank](#)]; 9, lateral [[Morphbank](#)]. Body length= 5.0 mm.



**FIGURE 10.** *Neodialineura ataxia* sp. nov.: Paratype female head, anterior [[Morphbank](#)]. Head width= 1.0 mm.

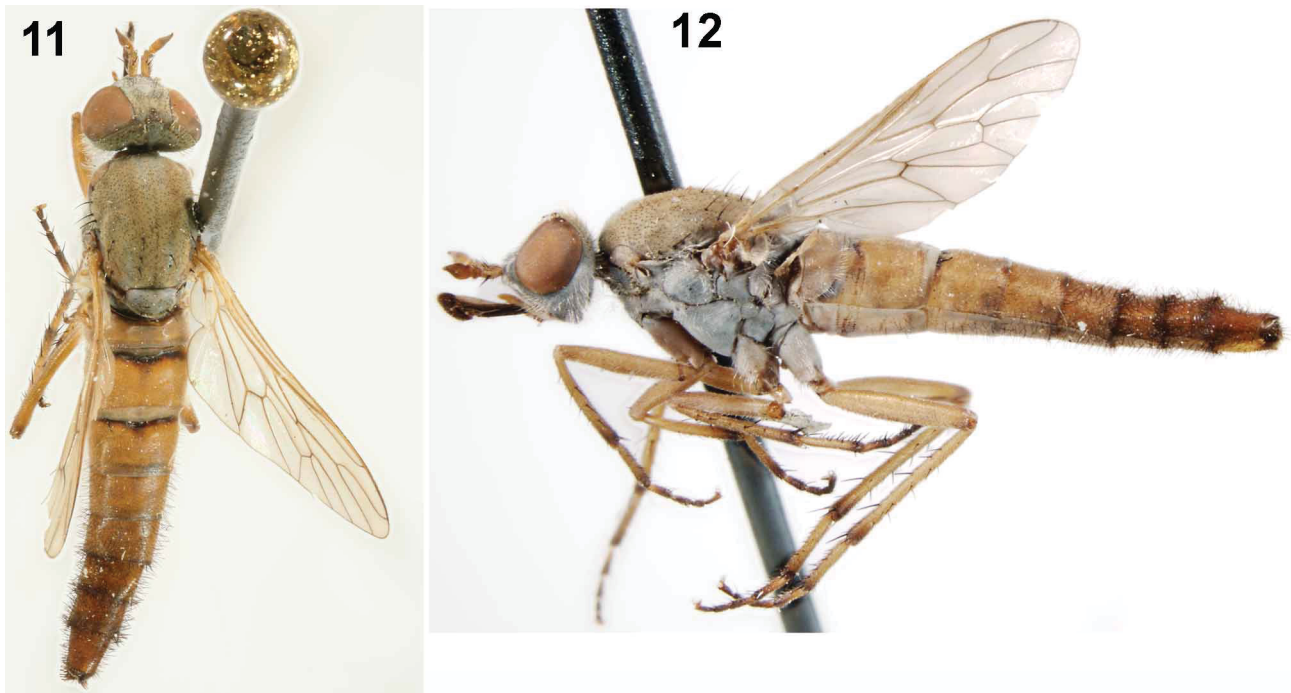
*Neodialineura atmis* sp. nov. [Zoobank]

(Figs 11–12)

**Holotype** female, AUSTRALIA: **Western Australia**: Tammin, 23.x.1969, H.E. Evans, R. W. Matthews, [-31.64, 117.48] (MEI080313) (MCZ).

**Diagnosis.** *Head.* Frons and occiput pubescence silver ventrally, grey-tan dorsally; frons profile flat, wholly pubescent, frontal vestiture with uniform minute setae; postocular setae pale coloured; parafacia without setae; antennal scape equal length to flagellum, cylindrical, scape vestiture sparsely covered with short, dark setae with occasional longer setae apically; flagellum orange-yellow or brownish orange, darker distally. *Thorax.* Scutum pubescence uniform tan-orange suffusion; pleuron with silver-grey pubescence; katatergite setae uniform pale; coxae pale, overlain with silver-grey pubescence, coxal setae mostly pale; femora uniform yellow, femora vestiture uniform short dark setae; tibia and tarsi dark yellow with apices brown; wing hyaline; haltere uniform pale orange. Scutal chaetotaxy (pairs): notopleural 3, supra alar 2, post alar 2 (rarely 1), dorsocentral 3, scutellar 1. *Abdomen.* Female abdominal tergites pale, mostly without markings; intersegmental membrane distinctly pale coloured, well defined.

**Comments.** *Neodialineura atmis* sp. nov. is a distinctively coloured species known only from a single female from Western Australia. It appears closely related to other western species such as *N. bafaria* sp. nov. and *N. trichidion* sp. nov.



**FIGURE 11, 12.** *Neodialineura atmis* sp. nov.: Holotype female. 11, dorsal [Morphbank]; 12, lateral [Morphbank]. Body length= 8.0 mm.

*Neodialineura bagdad* sp. nov. [Zoobank]

(Figs 13–14)

**Holotype** female, AUSTRALIA: **Tasmania**: Bagdad, Chauncy Vale Wildlife Sanctuary [-42.613, 147.258]; 18–19.xii.1998, S. Winterton (MEI165162) (ANIC).

**Paratypes.** AUSTRALIA: **Tasmania**: 2 females, same data as Holotype (MEI165163, 165164) (QM); female, Chauncy Vale Wildlife Sanctuary, nr. Bagdad, Malaise trap, 17–27.xii.1998, S. Winterton, J. & A. Skevington, D. Yeates 42°36'51"S 147°15'23"E [-42.614 147.256] (MEI165165) (ANIC).

**Diagnosis.** *Head.* Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat,



wholly pubescent; female frontal vestiture with short to moderate length setae; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical, vestiture sparsely covered with short, dark setae; flagellum orange-yellow. *Thorax*. Scutum pubescence grey or tan with tessellate brown pattern or grey-tan with brown markings; pleuron with silver-grey pubescence, katatergite setae uniformly dark; coxae pale, overlain with silver-grey pubescence, coxal setae mostly dark, femora dark yellow with apicies brown, or dark yellow with brown dorso-medially; femora vestiture short dark setae, longer pale setae on fore and mid femora; tibia and tarsi dark yellow with apicies brown; wing mottled infusate; haltere stem dark with knob pale, or stem pale with knob mostly brown. Scutal chaetotaxy (pairs): notopleural 2–3, supra alar 1–2, post alar 1, dorsocentral 2–3, scutellar 1–2. *Abdomen*. Female abdominal markings with tergites dark brown dorsally; intersegmental membrane distinctly pale coloured, well defined, or sometimes not distinct from tergite colour.

**Comments.** *Neodialineura bagdad* **sp. nov.** is known only from a small series of female specimens from Bagdad, Tasmania. The distinctive tessellate scutal patterning and mottled wing along with short, cylindrical-shaped antennal scape are diagnostic for this species.



**FIGURE 13, 14.** *Neodialineura bagdad* **sp. nov.**: Holotype female. 13, dorsal [[Morphbank](#)]; 14, lateral [[Morphbank](#)]. Body length= 7.5 mm.

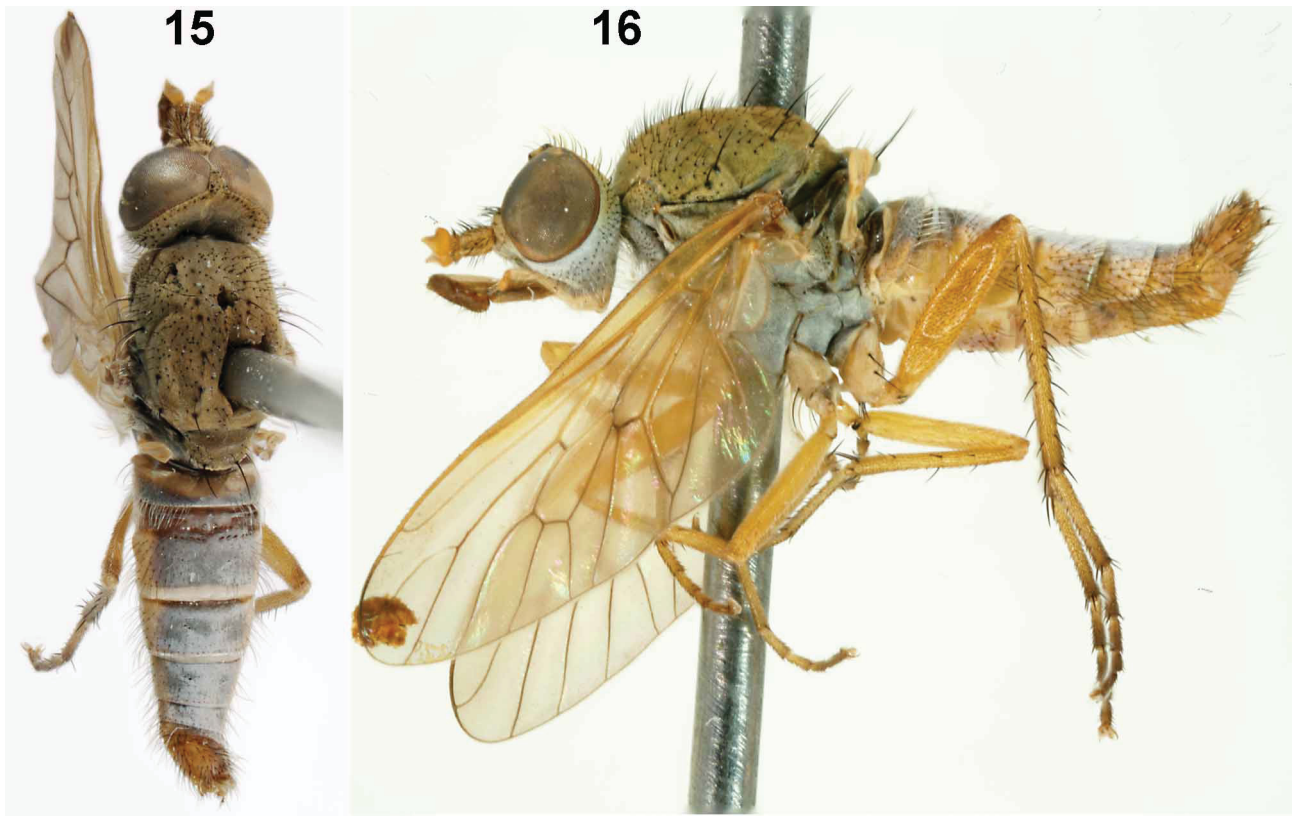
*Neodialineura bifaria* **sp. nov.** [[Zoobank](#)]  
(Figs 15–18)

**Holotype** male, AUSTRALIA: **Western Australia:** 7 km N Badgingarra, 31.x.1987, on *Leptospermum* flowers, M.E. Irwin, E.I. Schlinger, [-30.500, 115.667] ([MEI025150](#)) (ANIC).

**Paratypes.** AUSTRALIA: **Western Australia:** 2 males, 2 females, Stirling Range National Park, Gold Holes, 20.xi.1987, M.E. Irwin, [-34.433, 118.067] ([MEI025017](#), [025018](#), [025047](#), [025048](#)) (ANIC); 10 males,



female, 11 km N Cataby, 29.x.1987, sweep net, M.E. Irwin, E.I. Schlinger, [-30.733, 115.533] ([MEI025064](#), [025067](#), [025068](#), [025069](#), [025071](#), [025076](#), [025078](#), [025079](#), [025120](#), [025179](#), [128999](#)) (MEIC/CAS); male, 20 km N Eneabba, Arrowsmith Road, 13.x.1981, L.P. Kelsey, [-29.833, 115.333] ([MEI025129](#)) (ANIC); 5 males, 7 km N Badgingarra, 31.x.1987, on *Leptospermum* flowers, M.E. Irwin, E.I. Schlinger, [-30.500, 115.667] ([MEI025138](#), [025148](#), [025151](#), [025152](#), [025153](#)) (ANIC); male, 10 km SE Hwy 1 on Wheat River Road, 12.xi.1987, M.E. Irwin, E.I. Schlinger ([MEI025268](#)) (ANIC).



**FIGURE 15, 16.** *Neodialineura bifaria* sp. nov.: Holotype male. 15, dorsal [[Morphbank](#)]; 16, lateral [[Morphbank](#)]. Body length= 5.2 mm.

**Diagnosis.** *Head.* Frons and occiput pubescence grey with orange suffusion; frons profile flat, wholly pubescent; male frontal vestiture with extensive covering of elongate (often dense) setae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but not contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae pale coloured, rarely black (admixed); parafacia without setae; antenna scape longer than flagellum, bulbous, scape vestiture densely covered with large, dark setae, occasionally with longer seta apically; flagellum orange-yellow. *Thorax.* Scutum pubescence uniform tan-orange suffusion; pleuron with grey pubescence suffused with orange, or with silver-grey pubescence (male); katatergite setae uniform pale, rarely with admixed pale and dark setae; coxae pale, overlain with silver-grey pubescence, coxal setae mostly pale; femora uniform yellow; femora vestiture uniform short dark setae; tibia and tarsi dark yellow with apices brown; wing pale orange infuscate along costal margin; haltere uniform pale orange. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 5–8, scutellar 2. *Abdomen.* Silver velutum on abdominal tergites 2–7 of male; male abdomen base colour dark brown dorsally, yellow laterally; vestiture mostly dark setae, elongate laterally; female abdominal markings with posterior segments dark brown, anterior pale or with tergites pale, mostly without markings; female intersegmental membrane distinctly pale coloured, well defined.

**Comments.** *Neodialineura bifaria* sp. nov. is a western species closely related to *N. spinosa* sp. nov., *N.*

*atmis* sp. nov. and *N. trichidion* sp. nov. The hyaline wing, orange suffused pubescence on the head and thorax, and two pairs of scutellar macrosetae are distinctive for this species.



FIGURE 17, 18. *Neodialineura bifaria* sp. nov.: Paratype female, dorsal [[Morphbank](#)]; 18, lateral [[Morphbank](#)]. Body length= 8.1 mm.

*Neodialineura litura* sp. nov. [[Zoobank](#)]

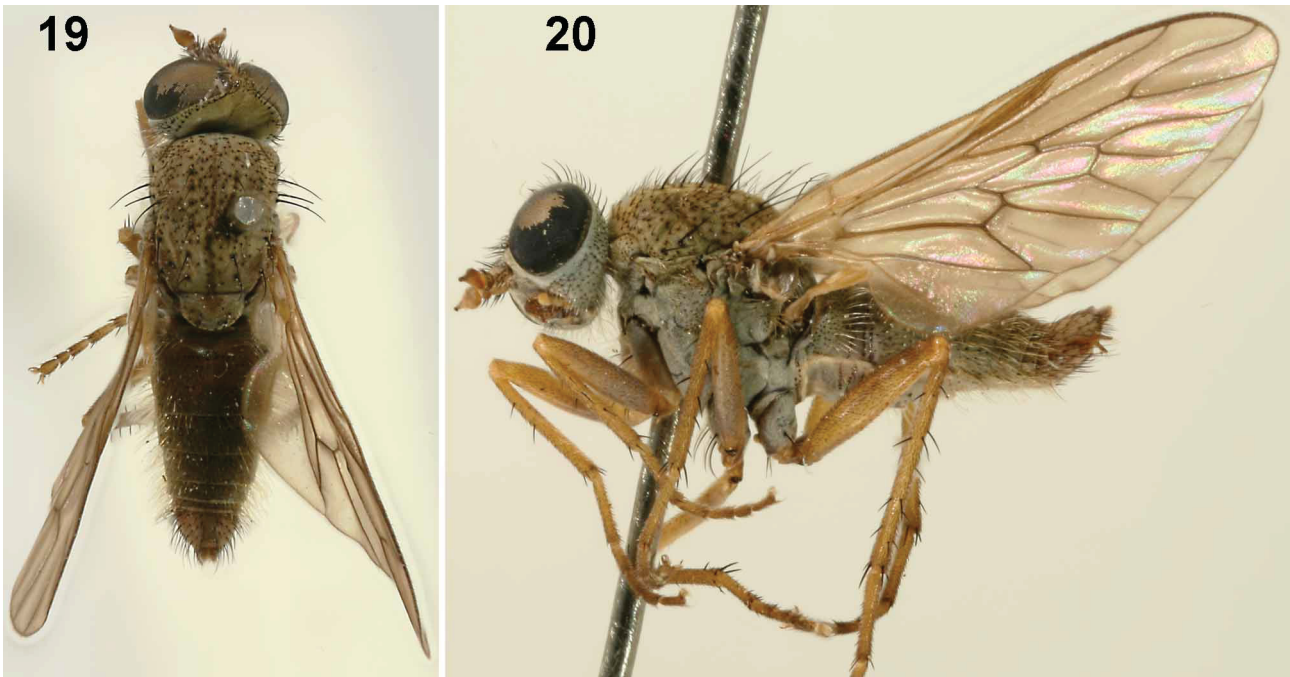
(Figs 19–22)

**Holotype** male, AUSTRALIA: **South Australia**: Flinders Ranges N.P., Hilltop 4 km S Wilpeena Pound turn off [-31.549, 138.646], 8.x.1997, J. Skevington, summit sweeping; ([MEI165170](#)) (ANIC).

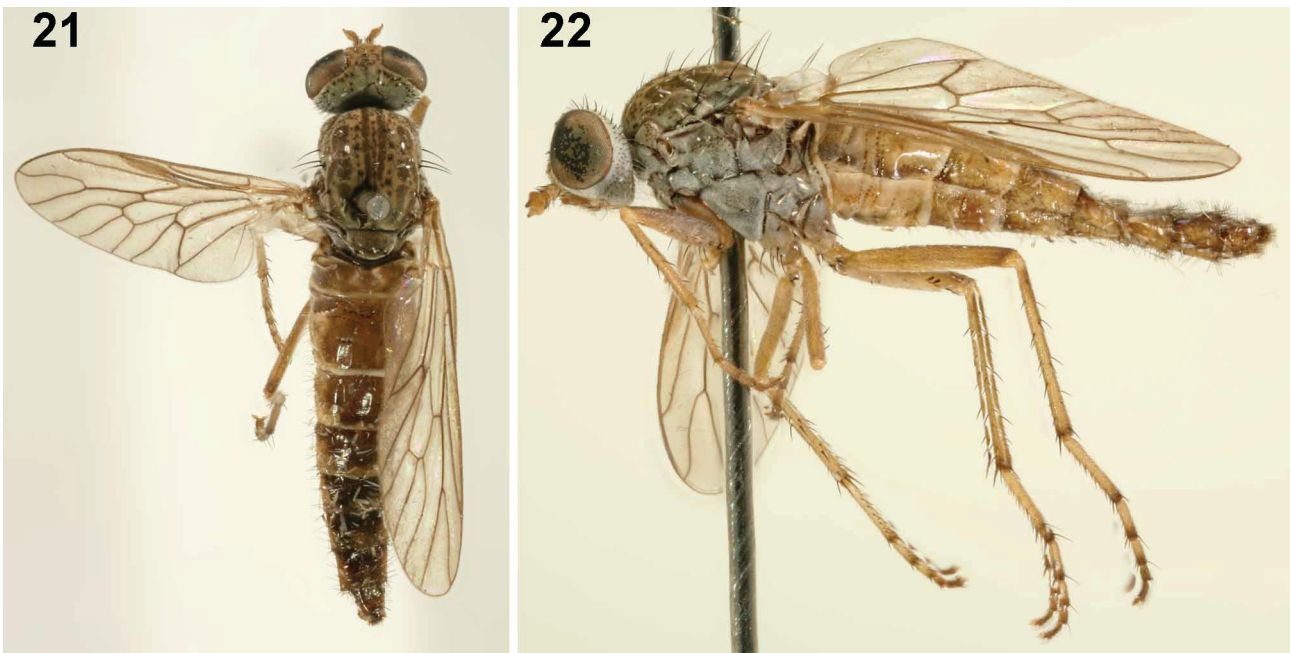
**Paratypes**. AUSTRALIA: **South Australia**: male, Flinders Ranges N.P., Love Range Mine Rd., [-31.402, 138.781], 8–10.x.1997, S. Winterton, J. & A. Skevington, C. Lambkin, Malaise in Callitrus and mallee lined creek-bed ([MEI165171](#)) (QM); 2 males, Flinders Ranges N.P., Dingley's Dell Camp, Oraparinna Ck., 32°21'17"S 138°42'16"E [-32.355, 138.704], 8–9.x.1997, J. & A. Skevington, S. Winterton, C. Lambkin, Malaise ([MEI165172](#), [165173](#)) (QM); female, Gammon Ranges N.P., Weetootla Gorge, dry creek bed, [-30.476, 139.220], 11–13.x.1997, S. Winterton, J. & A. Skevington, C. Lambkin, Malaise trap ([MEI165174](#)) (ANIC).

**Diagnosis**. *Head*. Frons and occiput pubescence silver-grey with dark brown markings (female) or blue-grey with brown markings (male); frons profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae; female frontal vestiture with uniform minute setae; male frons width at narrowest point slightly wider than anterior ocellus; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical; scape vestiture densely covered with large, dark setae, rarely sparsely covered with short, dark setae; flagellum orange-yellow, terminus dark. *Thorax*. Scutum pubescence grey-tan with brown markings;

pleuron with silver-grey pubescence; katatergite setae uniform pale; coxae dark, overlain with silver-grey pubescence, coxal setae mostly pale; femora uniform yellow, dark yellow with brown dorso-medially, or suffused dark brown, vestiture uniform short dark setae or short dark setae, longer pale setae on fore and mid femora; tibia and tarsi dark yellow, or dark yellow with apicies brown; wing slightly infuscate along wing veins; haltere uniform pale orange, or stem dark with knob pale. Scutal chaetotaxy (pairs): notopleural 3–4, supra alar 1, post alar 1, dorsocentral 4–7, scutellar 1–2. *Abdomen*. Male abdomen base colour dark brown dorsally, grey pubescent laterally, without silver velutum on abdominal tergites; male abdomen vestiture mostly elongate pale setae laterally; female abdominal markings with tergites dark brown dorsally; female intersegmental membrane distinctly pale coloured, well defined.



**FIGURE 19, 20.** *Neodialineura litura* sp. nov.: Holotype male. 19, dorsal [[Morphbank](#)]; 20, lateral [[Morphbank](#)]. Body length= 4.0 mm.



**FIGURE 21, 22.** *Neodialineura litura* sp. nov.: Paratype female; 21, dorsal [[Morphbank](#)]; 22, lateral [[Morphbank](#)]. Body length= 6.5 mm.

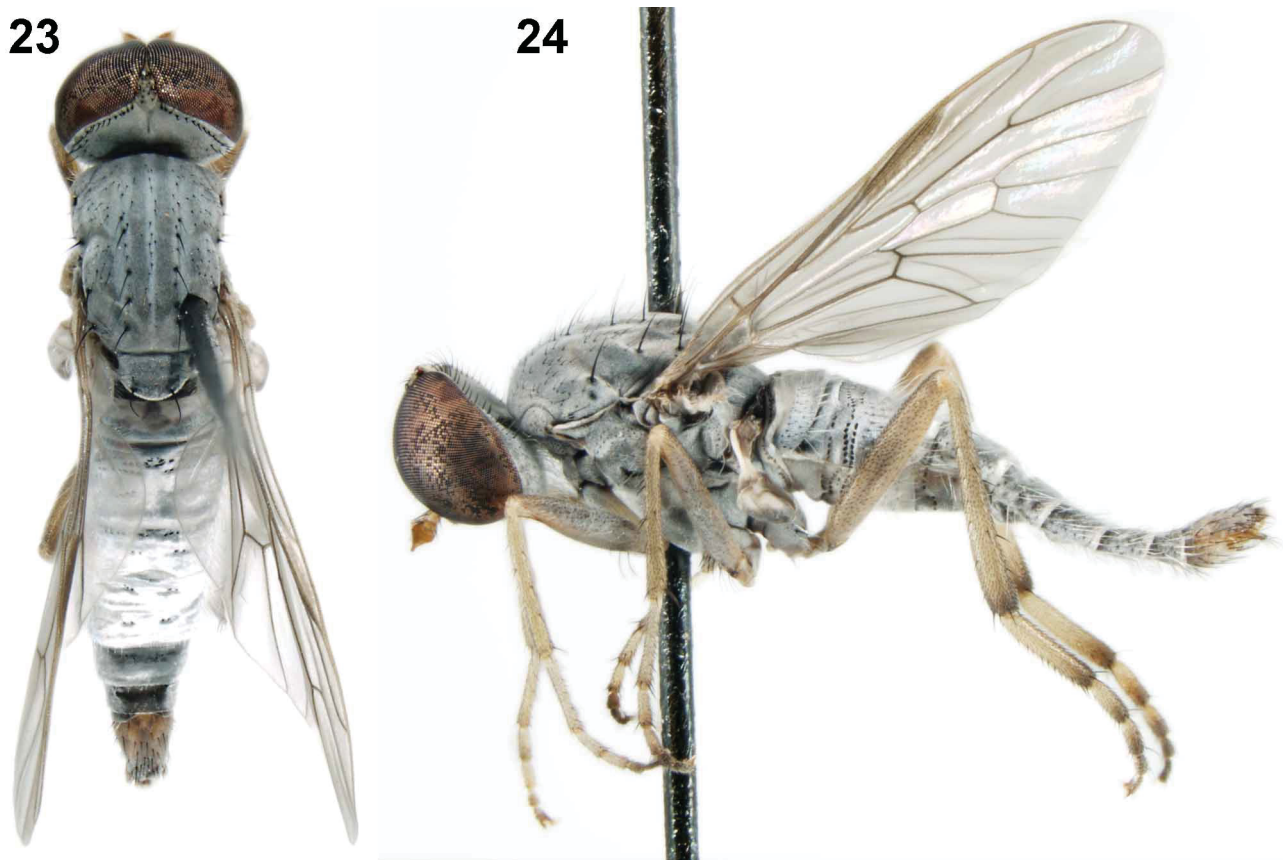


**Comments.** *Neodialineura litura* **sp. nov.** is a small species from the Flinders and Gammon Ranges in South Australia. This species is very similar to *N. ataxia* **sp. nov.** and *N. nitens* **sp. nov.** and females of these species are difficult to separate due to their variable colour and markings. *Neodialineura litura* **sp. nov.** can be diagnosed from other *Neodialineura* species by the lack of abdominal velutum and relatively wide frons in the male and distinctive scutal patterning.

*Neodialineura nitens* (White) [[Zoobank](#)]  
(Figs 2, 23–26)

*Psilocephala nitens* White, 1915: 50; Mann, 1933: 332 [redescription]; Irwin & Lyneborg 1989: 358 [catalogue].  
*Neodialineura nitens* (White 1915: 50); Metz *et al.* 2003: 260 [combination change].

**Type** male, AUSTRALIA: **Tasmania**: Hobart, 30.xi.1913, G.H. Hardy. The type was deposited in personal collection of G.H. Hardy (Australia: Katoomba) but was subsequently destroyed by pests.

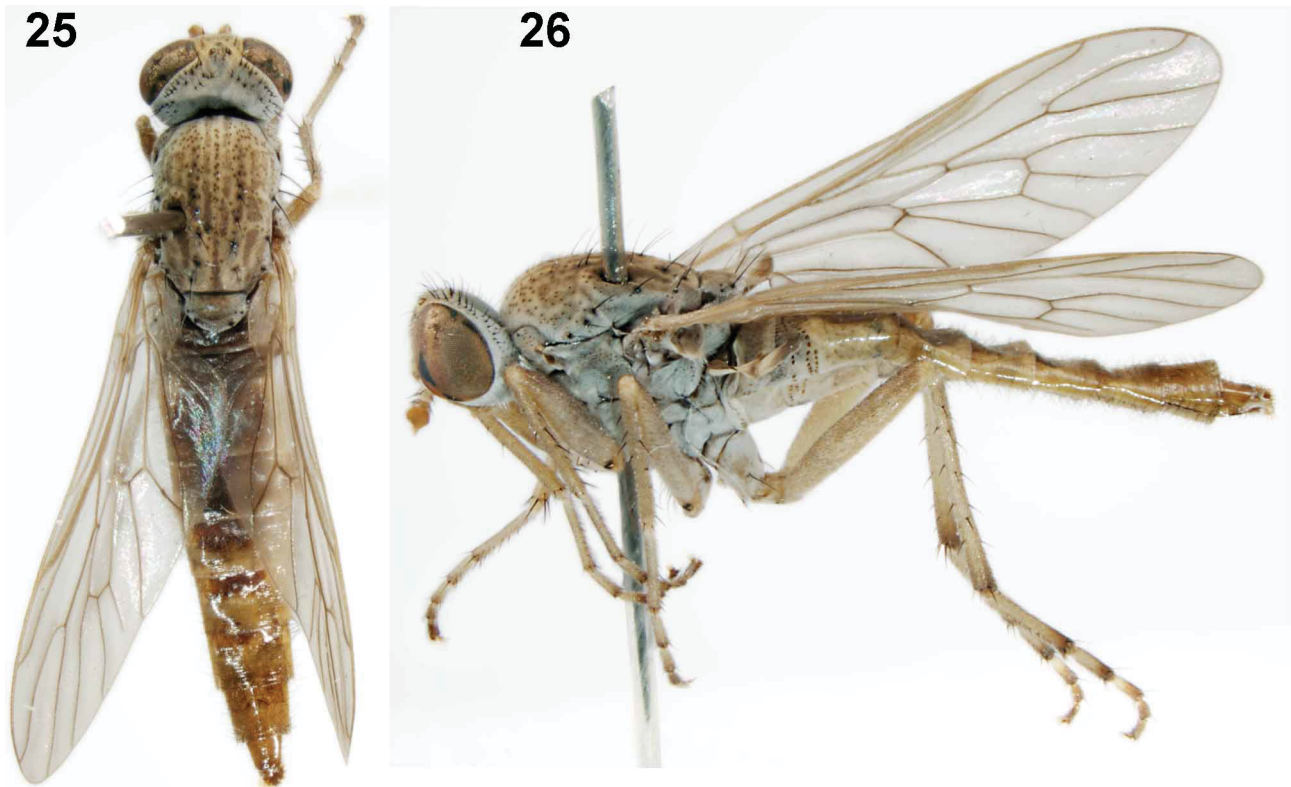


**FIGURE 23, 24.** *Neodialineura nitens* (White): male. 23, dorsal [[Morphbank](#)]; 24, lateral [[Morphbank](#)]. Body length= 4.0 mm.

**Other material examined.** AUSTRALIA: **Tasmania**: male, Chauncy Vale Wildlife Sanctuary, near Bagdad, Malaise trap, 17–27.xii.1998, S. Winterton, J. & A. Skevington, D. Yeates, [-42.614, 147.257] ([MEI165180](#)) (UQIC). **Western Australia**: male, Porongurup National Park [Porongurup Range], Yate Flats, 12–13.xi.1987, Malaise trap, E.I. Schlinger, M.E. Irwin [-34.667, 117.850] ([MEI024166](#)) (MEIC/CAS); male, female, SW Nannup, on Brockman Highway, Karri Gully, 8.xi.1987, sifted [reared from larva; pupal cases attached to pins], E.I. Schlinger, M.E. Irwin [-34.000, 115.750] ([MEI024204](#), [024206](#)) (MEIC/CAS); male, Moingup Spring, Stirling Ranges, 6.xii.1970, mv lamp, G.A. Holloway ([MEI130662](#)) (AMS). **New South Wales**: male, Oberon, 26.xi.1981, C. Pike, [-33.667, 149.833] ([MEI024252](#)) (NDAA); male, Round Hill



Fauna Reserve, 24.x.1977, G. Daniels, [-33.017, 146.167] ([MEI024259](#)) (MEIC/CAS); male, Lake George, Cullarin Winery, 14.xii.1987, Malaise trap, M.E. Irwin, [-35.100, 149.417] ([MEI024264](#)) (MEIC/CAS); male, 26 km S Queanbeyan, Urila, 1–10.xii.1987, Malaise trap, M.E. Irwin, [-35.562, 149.287] ([MEI024268](#)) (MEIC/CAS); male, Warrumbungle National Park, Browns Creek, 10.xii.1995, Malaise trap, M.E. Irwin, [-31.273, 148.961] ([MEI158307](#)) (MEIC/CAS). **Australian Capital Territory:** male, Black Mountain, 26.xi.1959, light trap, I.F.B. Common, [-35.267, 149.100] ([MEI024253](#)) (ANIC).



**FIGURE 25, 26.** *Neodialineura nitens* (White): female. 25, dorsal [[Morphbank](#)]; 26, lateral [[Morphbank](#)]. Body length=7.2 mm.

**Diagnosis** *Head.* Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae; female frontal vestiture with uniform minute setae, rarely with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but only rarely contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical; scape vestiture sparsely covered with short, dark setae; flagellum orange-yellow. *Thorax.* Scutum pubescence silver-grey velutum with darker grey pattern (male) or grey-tan with brown markings, rarely uniform grey-tan (female); pleuron with silver-grey pubescence; katatergite setae uniform pale, rarely with admixed pale and dark setae; coxae pale, overlain with silver-grey pubescence, coxal setae mostly dark or mostly pale; femora uniform yellow, femora vestiture short dark setae, longer pale setae on fore and mid femora; tibia and tarsi dark yellow with brown apices; wing hyaline; haltere stem pale, knob mostly brown. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 4–7, scutellar 1. *Abdomen.* Male abdomen base colour darkish; silver velutum on abdominal tergites 2–7, obscured by extensive velutum; male abdomen vestiture mostly elongate pale setae laterally; female abdominal markings with tergites dark brown dorsally; intersegmental membrane distinctly pale coloured, well defined.

**Comments** The identity of *N. nitens* is well circumscribed from the original description by White (1915) and subsequent redescription by Mann (1933). Additional material collected from the type locality and

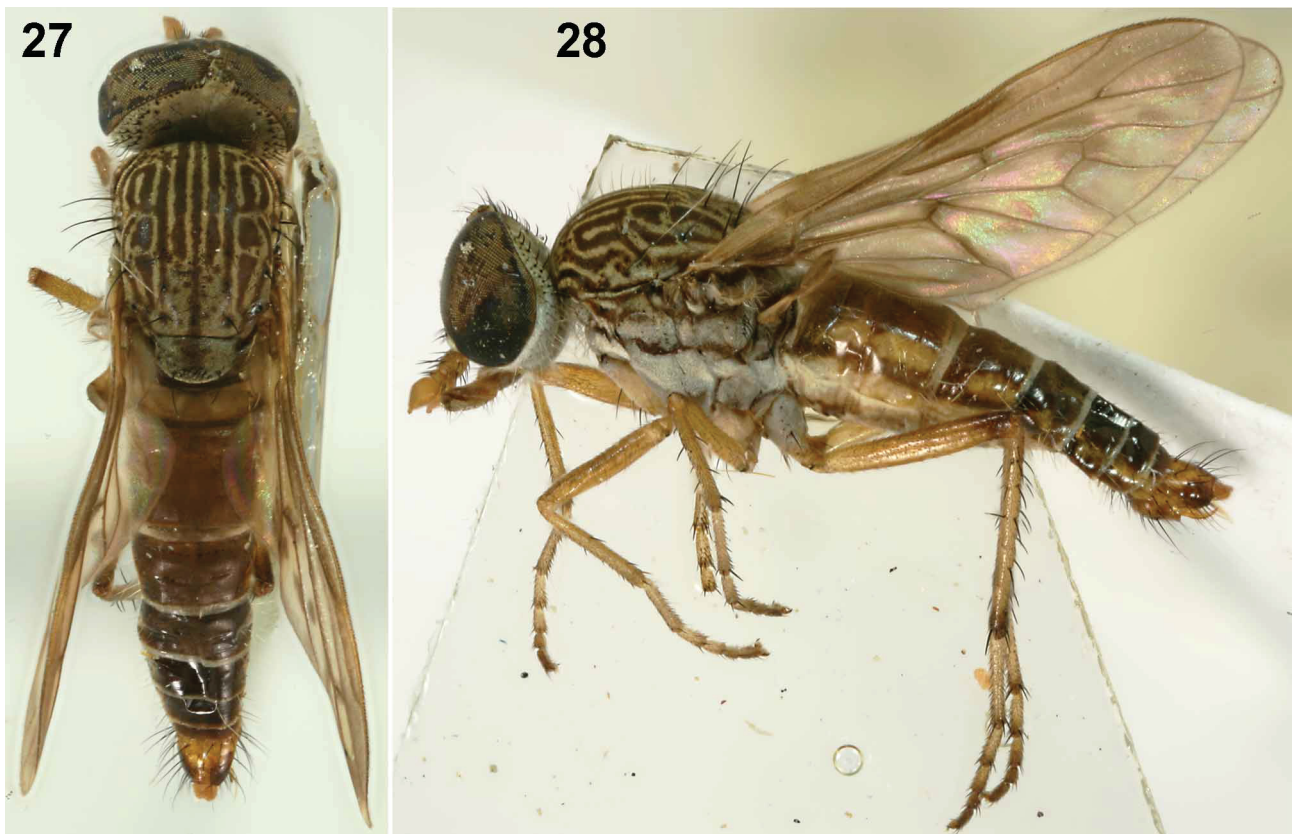
examined herein was readily associated based on these treatments. As the identity of this species is well defined, designation of a neotype is therefore not necessary as per Article 75, International Commission on Zoological Nomenclature (1999). The male of this species is highly distinctive, with reflective blue-grey pubescence covering the body, silver velutum on the abdomen, hyaline wing and orange antennae (Fig. 2). There is dramatic sexual dimorphism in *N. nitens* and females were previously difficult to associate without confirmation via pairs *in copula*. The female of *N. nitens* is very similar to other species such as *N. litura* **sp. nov.** and *N. ataxia* **sp. nov.** and care should be taken when identifying these species based on females.

*Neodialineura polygramma* **sp. nov.** [[Zoobank](#)]

(Figs 27–30)

**Holotype** male, AUSTRALIA: New South Wales: Hornsby Heights, 18.x.1977, F.W. [-33.670, 151.095] ([MEI165167](#)) (AMS).

**Paratypes.** AUSTRALIA: New South Wales: female, Currant Mountain Swamp, nr. Kandos Weir, 20.xi.1978, G. Daniels ([MEI165168](#)) (GDCB/AMS); female, Mt. Tomah, Blue Mountains, 13.xi.1992, N.W. Rodd ([MEI165166](#)) (AMS); male, Black Range, Tallaganda N.P., 1–15.i.2005, Malaise trap, D. Carlisle, ([MEI165169](#)) (ANIC).

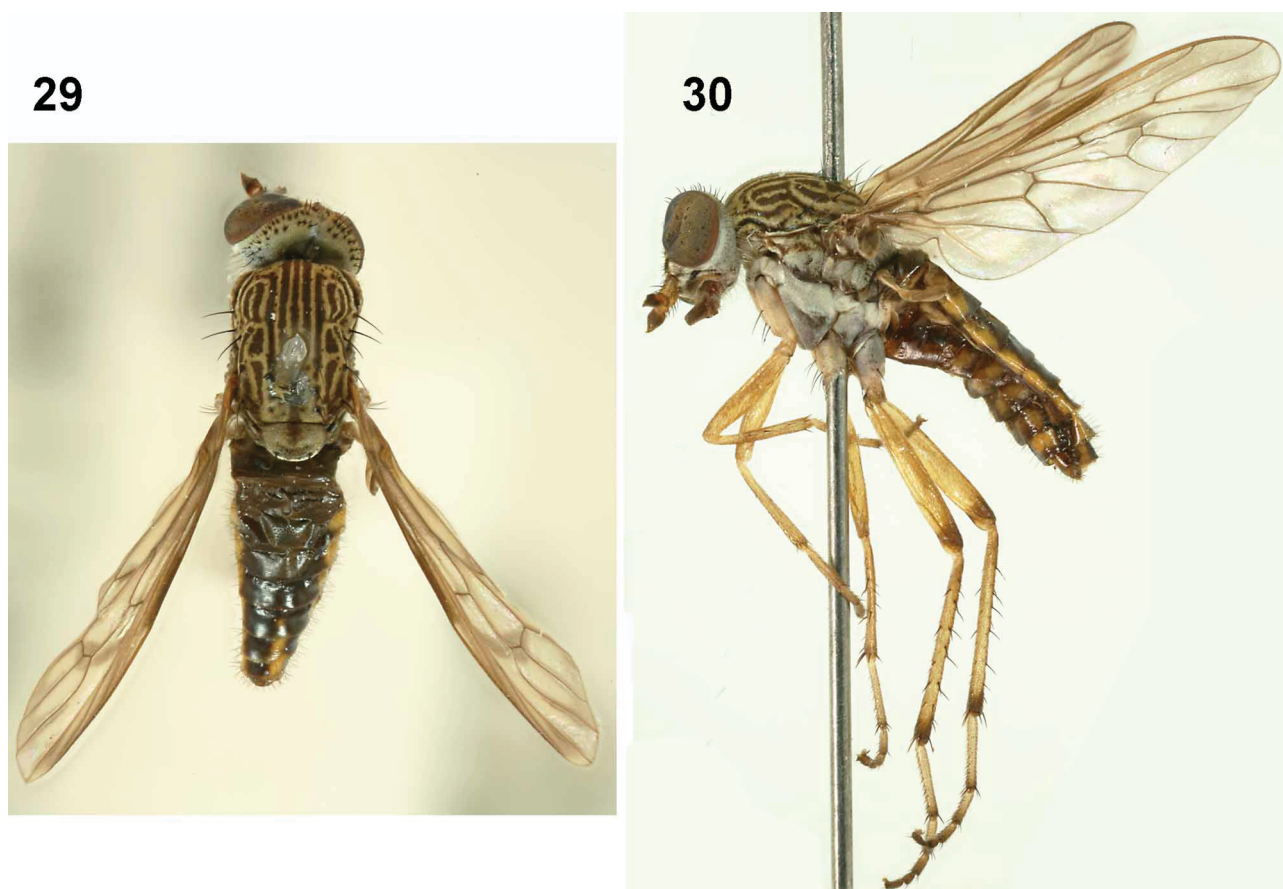


**FIGURE 27, 28.** *Neodialineura polygramma* **sp. nov.**: Holotype male. 27, dorsal [[Morphbank](#)]; 28, lateral [[Morphbank](#)]. Body length= 5.0 mm.

**Diagnosis** *Head.* Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape equal length to flagellum, cylindrical; scape vestiture densely covered with large, dark setae; flagellum

brownish orange, darker distally. *Thorax*. Scutum pubescence grey or tan with tessellate brown pattern; pleuron with grey pubescence with thin glabrous stripe; katatergite setae uniformly dark; coxae pale, overlain with silver-grey pubescence; coxal setae mostly dark; femora dark yellow with apicies brown; femora vestiture uniform short dark setae or admixed with longer pale setae on fore and mid femora (male); tibia and tarsi dark yellow with apicies brown; wing mottled infuscate, darker along costal margin; haltere stem pale, knob mostly brown. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 2–3, scutellar 1. *Abdomen*. Male abdomen base colour dark brown dorsally, yellow laterally, without silver velutum; male abdomen vestiture mostly elongate pale setae laterally; female abdominal markings with tergites dark brown dorsally; intersegmental membrane distinctly pale coloured, well defined, rarely not distinct from tergite colour.

**Comments** This species has a very distinctively striped and tessellate scutum, and mottled wings. *Neodialineura polygramma* **sp. nov.** is closely related to *N. striatithorax*, with similar body colouration and patterning. It is easily distinguished from *N. striatithorax* by the non-bulbous antennal scape.



**FIGURE 29, 30.** *Neodialineura polygramma* **sp. nov.**: Paratype female. 29, dorsal [[Morphbank](#)]; 30, lateral [[Morphbank](#)]. Body length= 6.4 mm.

*Neodialineura saxatilis* (White) [[Zoobank](#)]

(Figs 31–34)

*Psilocephala saxatilis* White, 1915: 52; Mann, 1928: 194; Mann, 1933: 333; Irwin & Lyneborg 1989: 358 [catalogue].

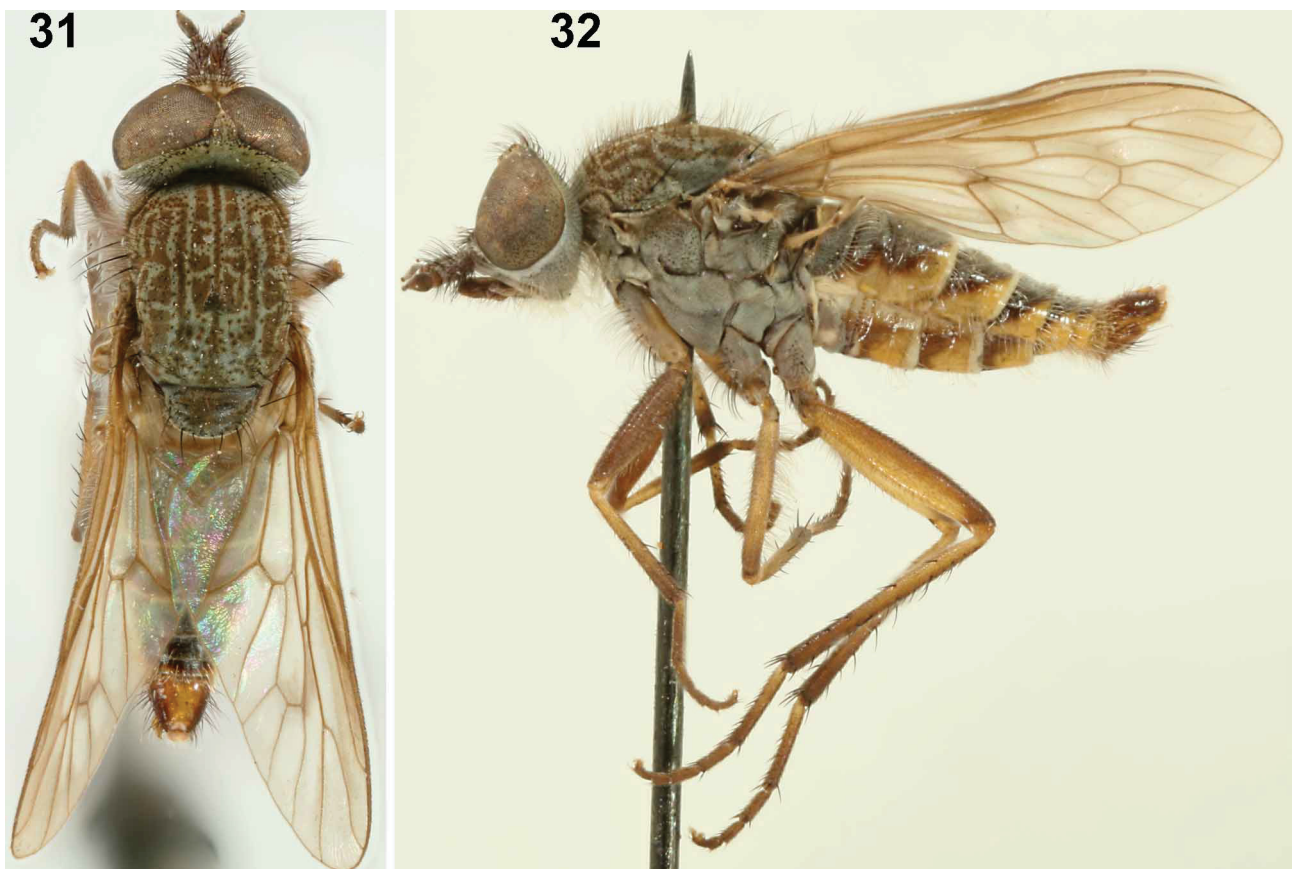
*Neodialineura saxatilis* (White 1915: 52); Metz *et al.* 2003: 260 [combination change].

**Syntype** female, AUSTRALIA: **Tasmania**: Mangalore, 26.i.1912, A. White [-42.648, 147.234] ([BMNH\(E\) 241960](#)) (BMNH).



**Other material examined.** AUSTRALIA: **Australian Capital Territory:** male, female, Brindabella Range, Snowy Flats, 29.xii.1974, G. Daniels, [-35.565, 148.783] ([MEI024127](#), [024128](#)) (GDCB/AMS). **New South Wales:** male, Mt. Kosciusko, 5800 ft., 27.i.1965, D. Havenstein [-36.450, 148.260] ([MEI165992](#)) (ANIC). **Tasmania:** female, 12 km NNE Bronte Park, 20.I.1983, I.D. Naumann, J.C. Cardale, [-42.033, 146.550] ([MEI024131](#)) (ANIC). **Victoria:** male, female, St. Bernhard, Mount Hotham, 1375m, 13.xii.1962, E.S. Ross, D.Q. Cavagnaro, [-36.983, 147.133] ([MEI024107](#), [024100](#)) (CAS); male, near Mount Hotham, C.R.B. Hill, 1500m, 23.xii.1977, E.I. Schlinger, [-36.983, 147.133] ([MEI024116](#)) (MEIC/CAS); 2 males, Hotham Heights, 1981m, 10.xii.1949, S.J. Paramonov, [-36.983, 147.150] ([MEI165984](#), [024117](#)) (ANIC).

**Diagnosis.** *Head.* Frons and occiput pubescence silver-grey with dark brown markings (female) or blue-grey with brown markings (male); frons profile flat, wholly pubescent; male frontal vestiture with extensive covering of elongate (often dense) setae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but not contiguous; male postocular setae as two or more rows immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape longer than flagellum, bulbous; scape vestiture densely covered with large, dark setae; flagellum brownish orange, darker distally. *Thorax.* Scutum pubescence grey or tan with tessellate brown pattern; pleuron with silver-grey pubescence; katatergite with admixed pale and dark setae or setae uniform dark; coxae pale, overlain with silver-grey pubescence, coxal setae mostly dark; femora dark yellow with apicies brown or dark yellow with brown dorso-medially; femora vestiture relatively elongate, dark setae admixed with shorter setae; tibia and tarsi dark yellow with apicies brown; wing mottled infusate, darker along costal margin; haltere stem pale, knob mostly brown. Scutal chaetotaxy (pairs): notopleural 3–4, supra alar 1, post alar 1, dorsocentral 1–4, scutellar 1–4. *Abdomen.* Male abdomen base colour dark brown dorsally, yellow laterally, silver velutum on abdominal tergites 2–7; male abdomen vestiture mostly elongate pale setae laterally; female abdominal markings with tergites dark brown dorsally, intersegmental membrane distinctly pale coloured, well defined.



**FIGURE 31, 32.** *Neodialineura saxatilis* (White): male. 31, dorsal [[Morphbank](#)]; 32, lateral [[Morphbank](#)]. Body length=6.5 mm.



**Comments.** *Neodialineura saxatilis* is recorded from Tasmania, Australian Capital Territory, New South Wales and Victoria. Collection data for all specimens examined here supports the suggestion by White (1915) that this is a montane species. *Neodialineura saxatilis* is a robust species with dense setae covering the body, and is diagnosed by a tessellate scutal pattern, infusate costal margin of the wing and multiple scutellar bristles. Metz *et al.* (2003) referred to the male syntype as a holotype instead of designating it as a lectotype. Moreover the specimen referred to is actually the female syntype (BMNH(E) 241960), which corresponds to the label data originally cited by White (1915); the male syntype could not be located.



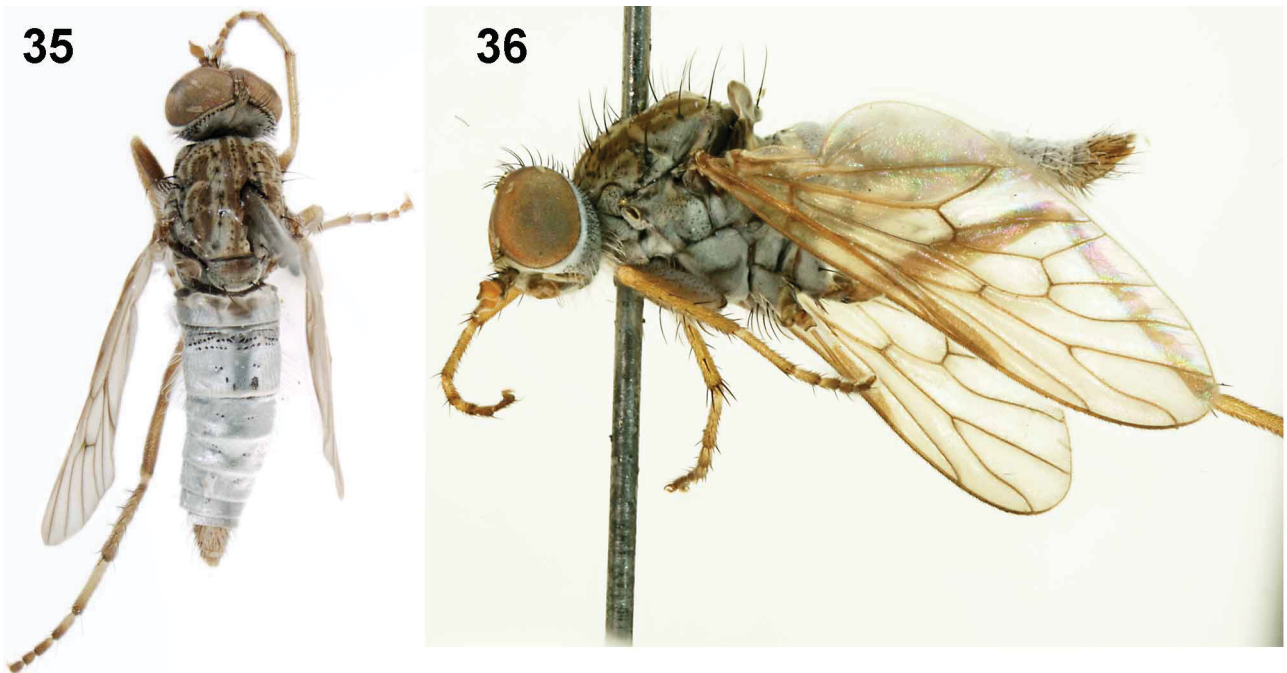
**FIGURE 33, 34.** *Neodialineura saxatilis* (White): female. 33, dorsal [[Morphbank](#)]; 34, lateral [[Morphbank](#)]. Body length= 7.0 mm.

*Neodialineura signum* sp. nov. [[Zoobank](#)]  
(Figs 35–36)

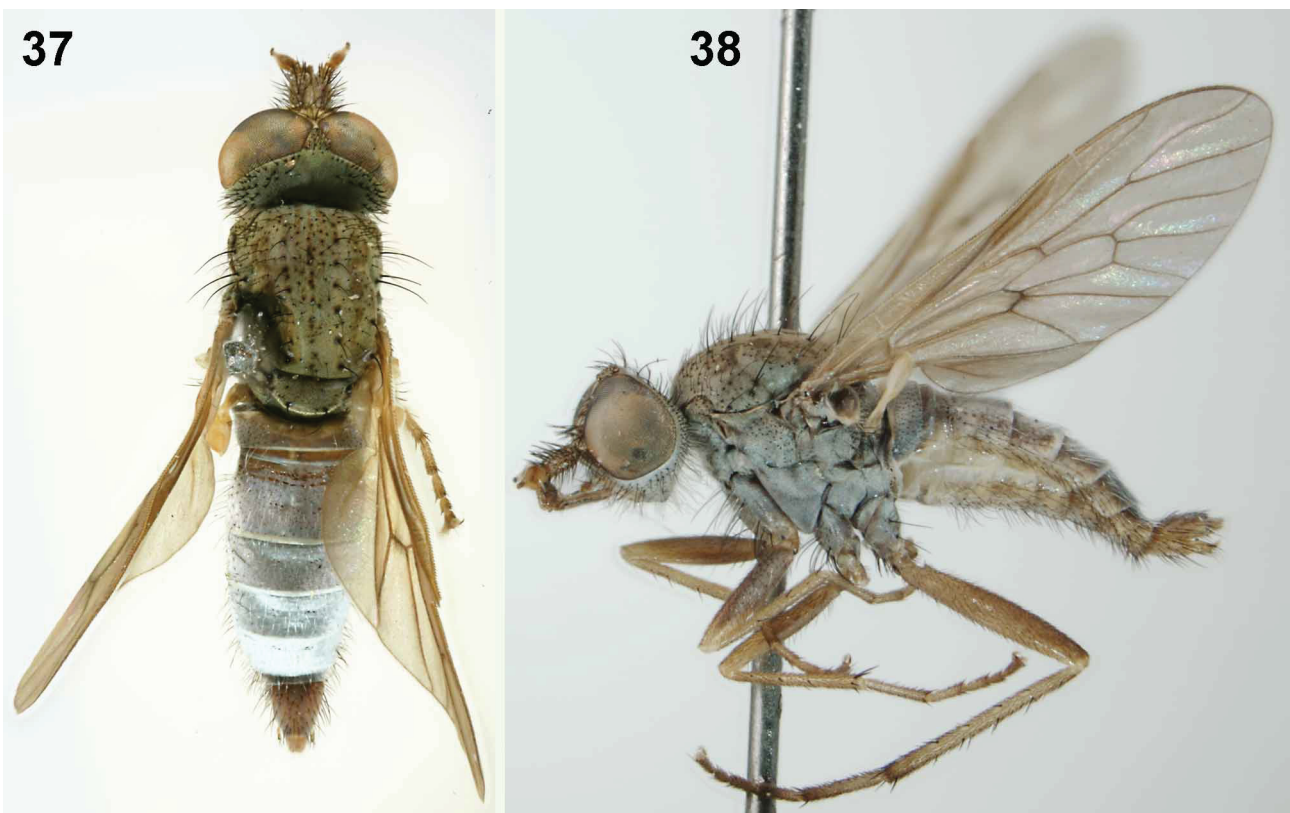
**Holotype** male, AUSTRALIA: **Victoria:** Lakes Entrance, 9.xi.1983, M.E. Irwin, [-37.917, 148.000] ([MEI024213](#)) (ANIC).

**Diagnosis.** *Head.* Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat, wholly pubescent; male frons width at narrowest point contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical; scape vestiture densely covered with large, dark setae; flagellum orange-yellow, terminus dark or brownish orange, darker distally. *Thorax.* Scutum pubescence grey or tan with tessellate brown pattern or grey-tan with brown markings; pleuron with silver-grey pubescence; katatergite setae uniform pale; coxae dark, overlain with silver-grey pubescence, coxal setae mostly dark; femora suffused dark brown, vestiture uniform short dark setae; tibia and tarsi dark yellow with apicies brown; wing slightly infusate along wing veins; haltere stem pale, knob mostly brown. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 5–7, scutellar 1. *Abdomen.* Male abdomen base colour darkish, obscured by extensive silver velutum on abdominal tergites 2–7; abdomen vestiture mostly elongate, pale setae laterally.

**Comments.** *Neodialineura signum* **sp. nov.** is a distinctly marked species diagnosed by the distinctive scutal patterning, infuscate wing veins and male abdominal velutum. The female is unknown.



**FIGURE 35, 36.** *Neodialineura signum* **sp. nov.**: Holotype male. 35, dorsal [[Morphbank](#)]; 36, lateral [[Morphbank](#)]. Body length= 4.8 mm.



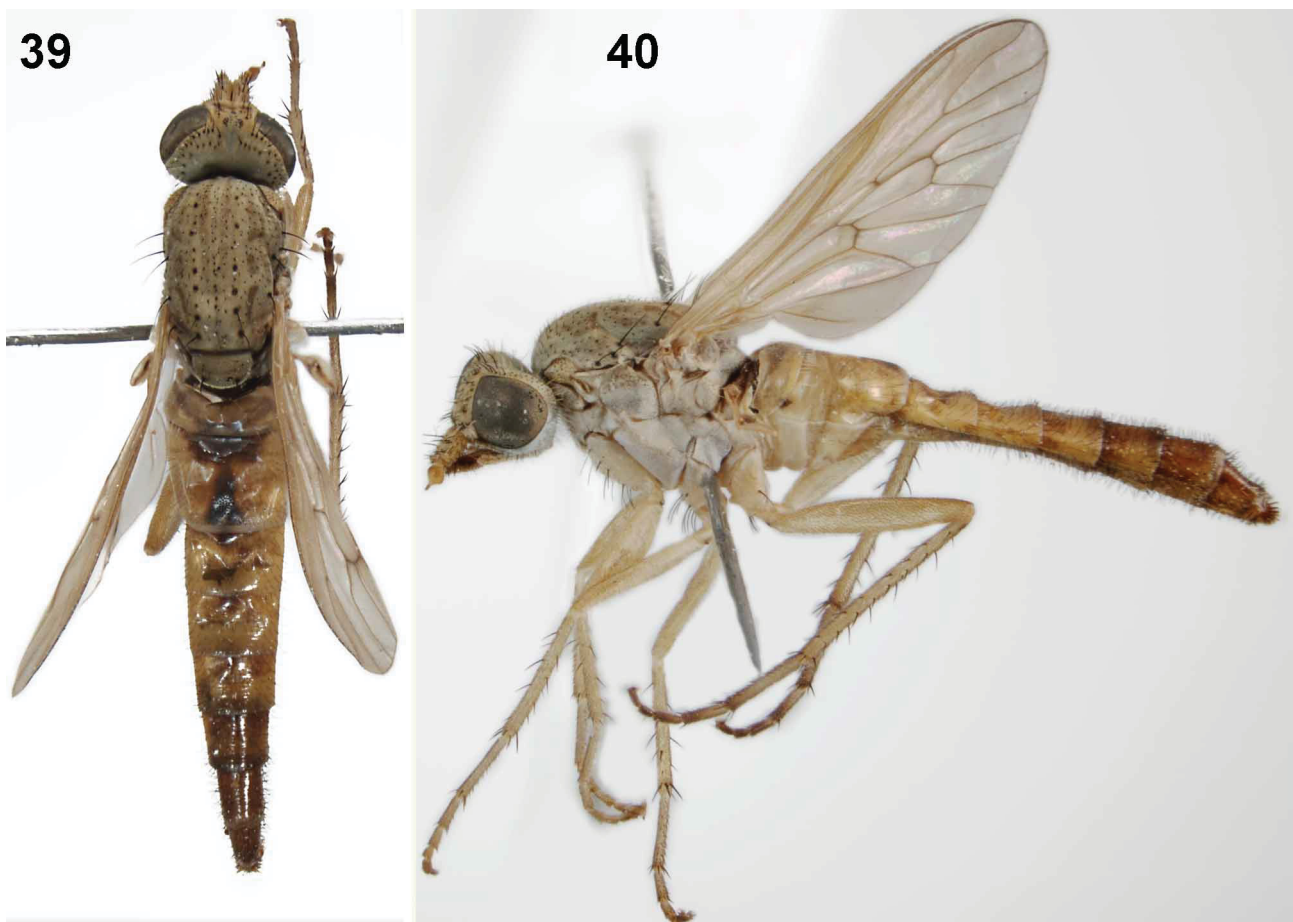
**FIGURE 37, 38.** *Neodialineura spinosa* **sp. nov.**: Holotype male. 37, dorsal [[Morphbank](#)]; 38, lateral [[Morphbank](#)]. Body length= 4.0 mm.

*Neodialineura spinosa* sp. nov. [[Zoobank](#)]

(Figs 3–4, 37–40)

**Holotype** male, AUSTRALIA: **Western Australia**: 1 km E Yanchep Beach, 23.x.1987, vegetated dunes, M.E. Irwin, [-31.525, 115.626] ([MEI024770](#)) (ANIC).

**Paratypes**. AUSTRALIA: **Western Australia**: 3 males, female, 3 km S Dawesville, at Tim's Thicket Road, 27.x.1987, M.E. Irwin, E.I. Schlinger, white sand [-32.633, 115.633] ([MEI024640](#), [024653](#), [024655](#), [024773](#)) (ANIC); male, Yanchep National Park, near Ranger's Office, 23.x.1987, sandy plain with Eucalyptus, M.E. Irwin, [-31.517, 115.683] ([MEI024646](#)) (MEIC/CAS); female, Perth, Reabold Hill, City Beach, 10.x.1974, S.M. Wade, [-32.000, 115.833]. ([MEI024790](#)) (WAM); 3 males, female, Melaleuca Park, 39 km N Perth, 21–29.X.1987, swept in heath, M.E. Irwin, E.I. Schlinger, [-31.950, 115.850] ([MEI024829](#), [024835](#), [024839](#), [024847](#)) (ANIC); 2 females, Nambung National Park, 5 km S Cervantes, 30.X.1987, swept in heath, M.E. Irwin, E.I. Schlinger, [-30.500, 115.067] ([MEI024972](#), [024974](#)) (MEIC/CAS); male, 15 km N Wanneroo, 24.x.1987, M.E. Irwin, [-31.750, 115.833] ([MEI088354](#)) (CAS).



**FIGURE 39, 40.** *Neodialineura spinosa* sp. nov.: Paratype female. 39, dorsal [[Morphbank](#)]; 40, lateral [[Morphbank](#)]. Body length= 6.5 mm.

**Diagnosis** *Head*. Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae or with extensive covering of elongate (often dense) setae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but not contiguous; male postocular setae as two or more rows immediately laterad of ocellar tubercle; postocular setae black; parafacia with black setae laterally; antennal scape longer than flagellum, bulbous; scape vestiture densely covered with large, dark setae; flagellum orange-yellow, terminus dark. *Thorax*. Scutum pubescence uniform grey-tan, rarely grey-tan with



brown markings; pleuron with silver-grey pubescence; katatergite with admixed pale and dark setae; coxae pale, overlain with silver-grey pubescence, setae mostly dark; femora uniform yellow (female) or suffused dark brown, vestiture uniform short dark setae (female) or admixed with longer pale setae on fore and mid femora (male); tibia and tarsi dark yellow with apicies brown; wing pale orange infusate along costal margin and slight infuscation along wing veins; haltere uniform pale orange. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 6–8, scutellar 1–2. *Abdomen*. Male abdomen base colour dark brown dorsally, yellow laterally with silver velutum on abdominal tergites 2–7, vestiture mostly dark setae, elongate laterally; female abdominal markings with tergites dark brown dorsally or variable, usually with pale patch medially on tergite 2, intersegmental membrane usually not distinct from tergite colour, rarely distinctly pale coloured, well defined.

**Comments** *Neodialineura spinosa* **sp. nov.** is a western species closely related to *N. trichidion* **sp. nov.** and *N. bifaria* **sp. nov.** This species is diagnosed by the numerous setae on the frons, parafacia and antenna, lack of scutal patterning and silver abdominal velutum in the male.

*Neodialineura striatithorax* Mann [[Zoobank](#), [Genbank](#)]  
(Figs 1, 41–44)

*Neodialineura striatithorax* Mann, 1928: 172; Irwin & Lyneborg 1989: 357.

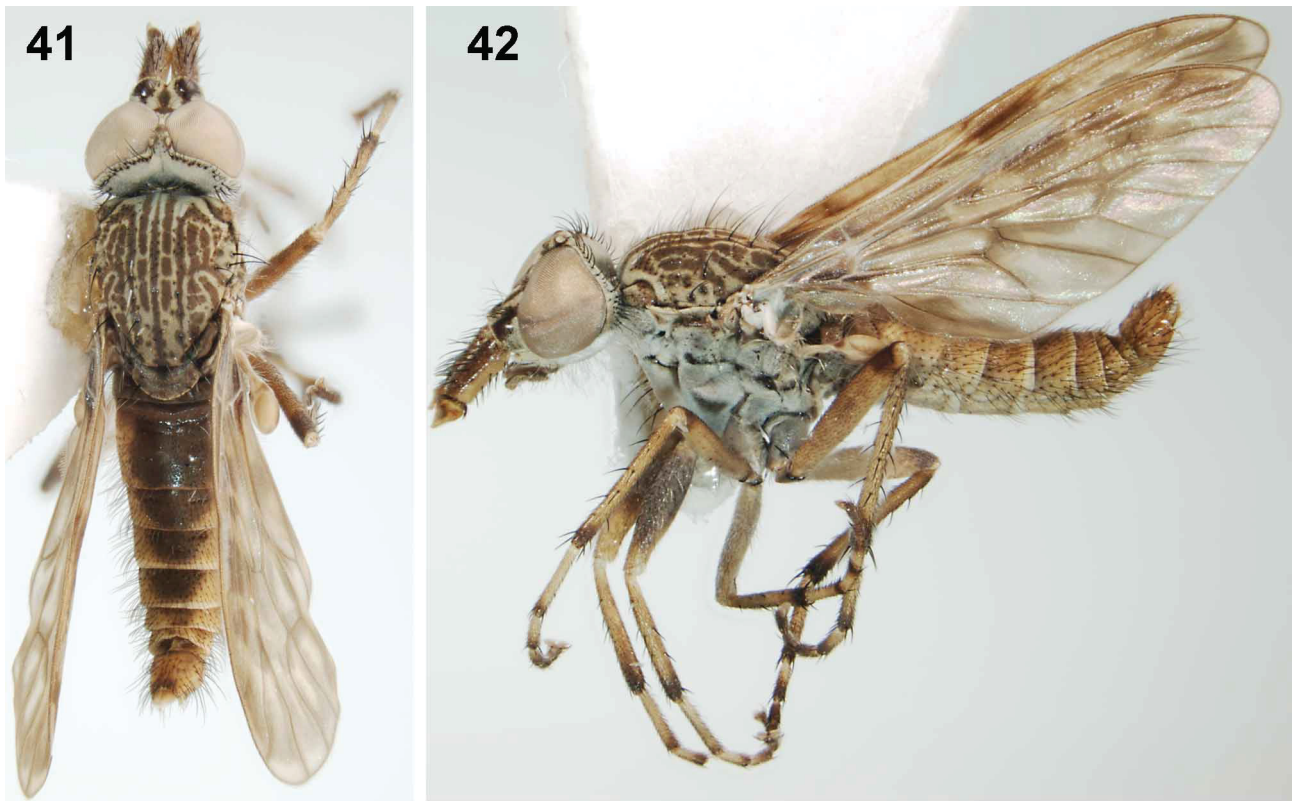
**Holotype** male, AUSTRALIA: **Queensland**: National Park 25.x.1923, H. Hacker, D 3267 [-28.240, 153.140] ([MEI165181](#)) (QM).

**Paratype** AUSTRALIA: **Queensland**: ‘Allotype’ female, Tamborine Mt., W.H. Davidson ([MEI165182](#)) (QM).

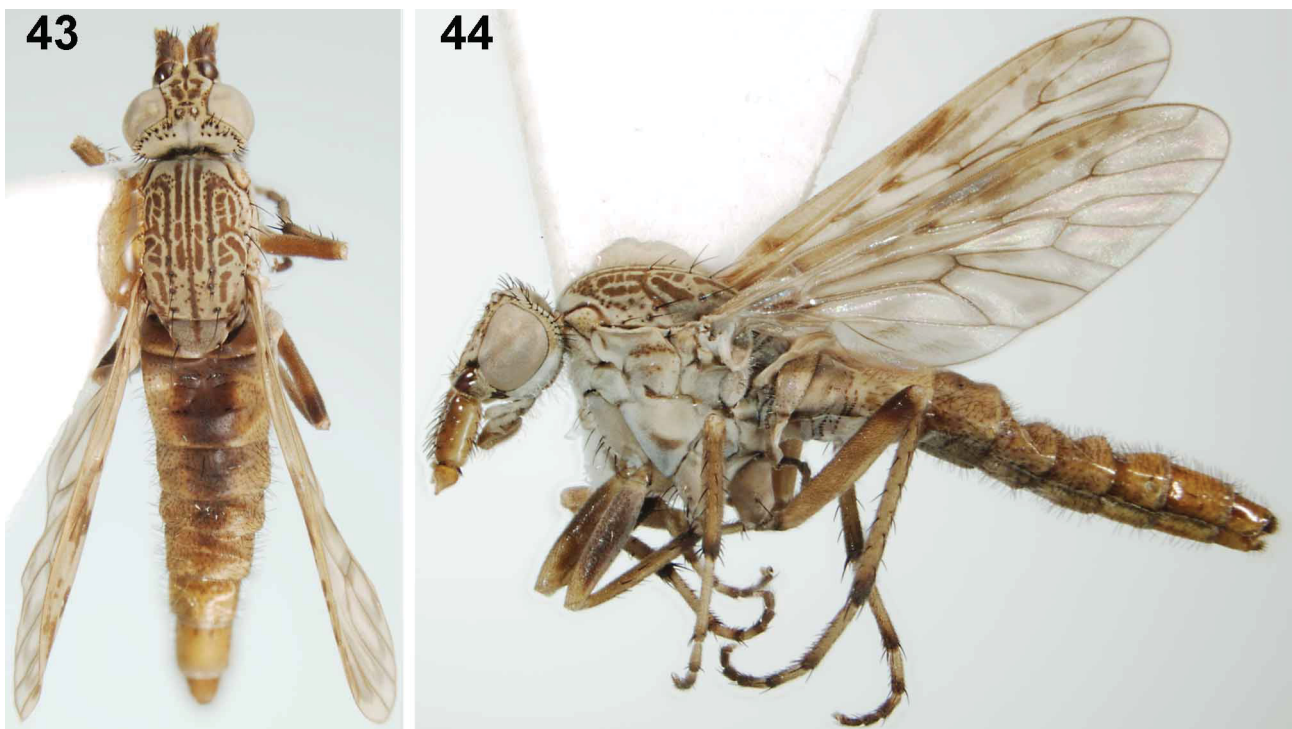
**Other material examined.** AUSTRALIA: **Queensland**: female, Brisbane, Jamboree Heights, 22.ix.1984, G. Daniels, [-27.557, 152.933] ([MEI025351](#)) (GDCB/AMS); female, Mount Tamborine, 11–18.iv.1935, R.E. Turner, [-27.917, 153.15] ([MEI032020](#)) (BMNH); female, Carnarvon National Park, Mt. Moffatt Section, Top Mt. Moffatt Cmp. (Site 24) [-25.068, 148.057] 760m amsl, 25.xi.1995, M.E. Irwin, S.D. Gaimari, ex. Focks trap ([MEI030863](#)) (MEIC/CAS). New South Wales: male, female, Warrumbungle National Park, at Woolshed, Wambelong Creek, 27.xii.1987, M.E. Irwin, [-31.233, 148.983] ([MEI025323](#), [025331](#)) (MEIC/CAS); male, Mount Kaputar National Park, Upper Bullawa Creek, 18.i.1994, malaise trap, M.E. Irwin, D.K. Yeates, [-30.233, 150.100] ([MEI025324](#)) (MEIC/CAS); male, Moree, 15.xii.1961, E. Cheah, [-29.5, 149.833] ([MEI025325](#)) (ANIC); male, Lidcombe, 26.i.1969, G. Daniels ([MEI025329](#)) (GDCB/AMS); male, Narrabri, 19–20.xi.1960, M. Nikitin, B.M. 1961–77 ([MEI032017](#)) (BMNH).

**Diagnosis.** *Head*. Frons and occiput pubescence silver-grey with dark brown markings; frons profile raised, with glabrous patch laterally; male frontal vestiture with extensive covering of elongate (often dense) setae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but not contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape longer than flagellum, bulbous, vestiture densely covered with large, dark setae; flagellum brownish orange, darker distally. *Thorax*. Scutum pubescence grey or tan with tessellate brown pattern; pleuron with silver-grey pubescence; katatergite with admixed pale and dark setae; coxae pale, overlain with silver-grey pubescence, setae mostly dark; femora dark yellow with apicies brown or brown dorso-medially, vestiture uniform short dark setae (female) or short dark setae, longer pale setae on fore and mid femora (male); tibia and tarsi dark yellow with apicies brown; wing mottled infusate; haltere stem pale, knob mostly brown. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 3–6, scutellar 1. *Abdomen*. Male abdomen colour dark brown dorsally, yellow laterally, without silver velutum; vestiture mostly dark short setae, elongate laterally; female abdominal markings with tergites dark brown dorsally, intersegmental membrane distinctly pale, well defined.

**Comments.** *Neodialineura striatithorax* is easily distinguished by the greatly enlarged scape and bilobed antennal base. It is distributed throughout eastern Queensland and New South Wales.



**FIGURE 41, 42.** *Neodialineura striatithorax* Mann: male. 41, dorsal [[Morphbank](#)]; 42, lateral [[Morphbank](#)]. Body length= 4.6 mm.



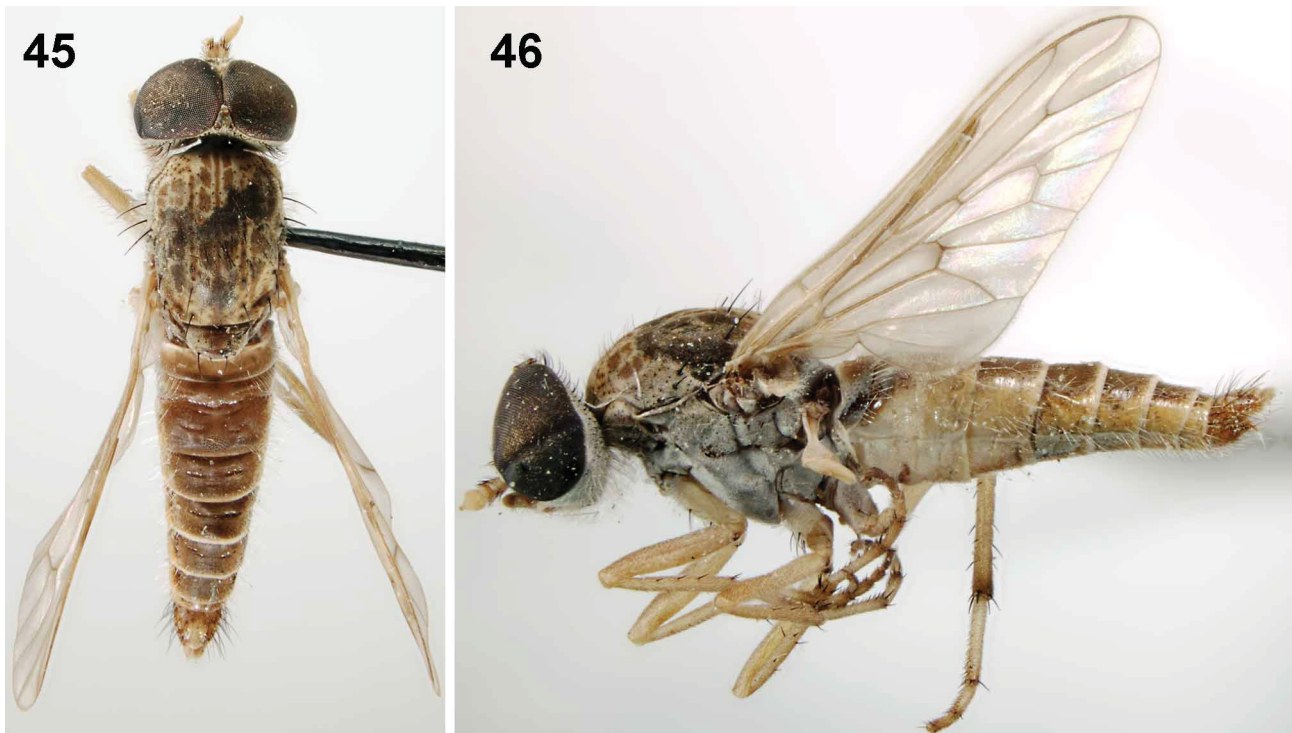
**FIGURE 43, 44.** *Neodialineura striatithorax* Mann: female. 43, dorsal [[Morphbank](#)]; 44, lateral [[Morphbank](#)]. Body length= 8.0 mm.

*Neodialineura tessella* sp. nov. [[Zoobank](#)]  
(Figs 45–46)

**Holotype** male, AUSTRALIA: **Australian Capital Territory**: Blundell's, 21.i.1931, A.L. Tonnoir [-35.280, 148.850] ([MEI165972](#)) (ANIC).

**Diagnosis.** *Head.* Frons and occiput pubescence silver-grey with dark brown markings; frons profile flat, wholly pubescent; male frontal vestiture with patch of short setae above antennae; male frons width at narrowest point contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape shorter than flagellum, narrow cylindrical, vestiture sparsely covered with short, dark setae; flagellum orange-yellow. *Thorax.* Scutum pubescence grey or tan with tessellate brown pattern; pleuron with grey pubescence with thin glabrous stripe; katatergite setae uniformly dark; coxae pale, overlain with silver-grey pubescence, setae mostly dark; femora uniform yellow, vestiture short dark setae, longer pale setae on fore and mid femora; tibia and tarsi dark yellow with apicies brown; wing slight infuscate along wing veins; haltere uniform pale orange. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 3, scutellar 1–2. *Abdomen.* Male abdomen base colour dark brown dorsally, yellow laterally, without silver velutum; abdominal vestiture mostly elongate pale setae laterally.

**Comments.** *Neodialineura tessella* sp. nov. is closely related to *N. striatithorax* and *N. polygramma* sp. nov. This species is easily diagnosed by the scutal pattern, slight wing infuscation and antennal shape. The female is unknown.



**FIGURE 45, 46.** *Neodialineura tessella* sp. nov.: Holotype male. 45, dorsal [[Morphbank](#)]; 46, lateral [[Morphbank](#)]. Body length= 5.0 mm.

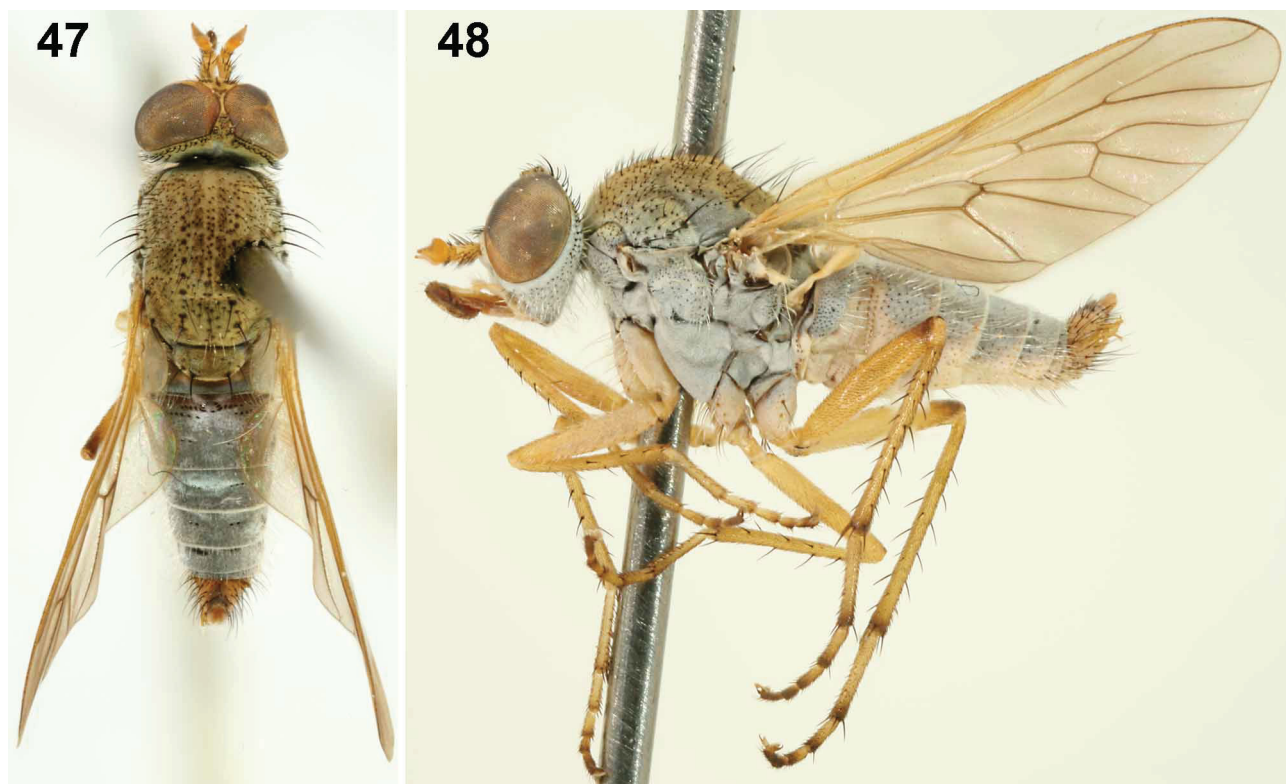
*Neodialineura trichidion* sp. nov. [[Zoobank](#)]  
(Figs 47–50)

**Holotype** male, AUSTRALIA: **Western Australia**: 10 km SE Hwy 1 on Wheat River Road, 12.xi.1987, at



*Leptospermum* flowers, M.E. Irwin, E.I. Schlinger ([MEI025271](#)) (ANIC).

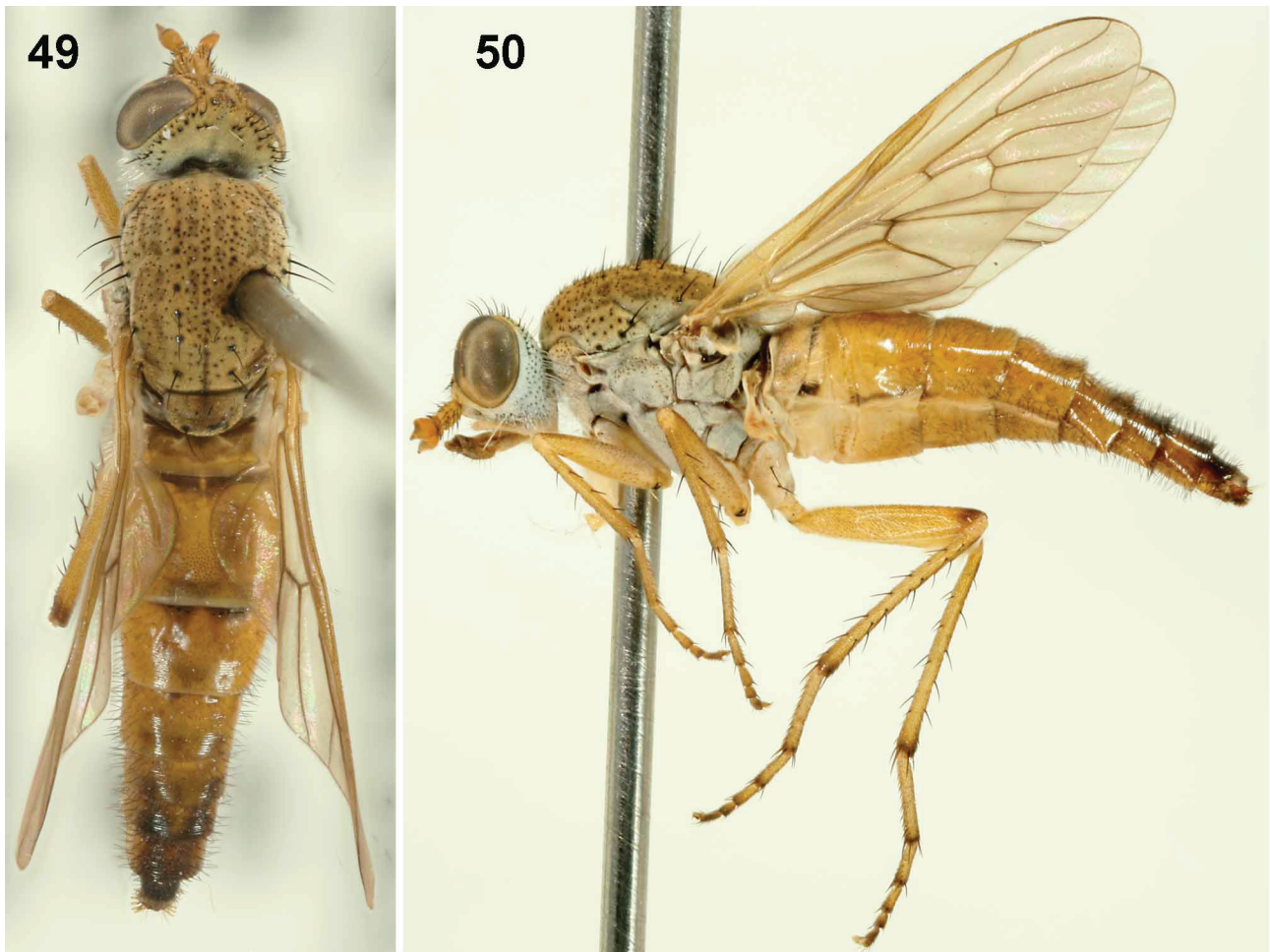
**Paratypes.** AUSTRALIA: **Western Australia:** 2 males, 4 females, Leeuwin Naturalist National Park, Cape Naturaliste, Yallingup, Yallingup Caves, 23.xii.1979, R.M. Bohart, [-33.650, 115.033] ([MEI024058](#), [024061](#), [024075](#), [024079](#), [024080](#), [024088](#)) (UCDC); male, Stirling Range National Park, Stirling Range, Gold Holes, 20.xi.1987, M.E. Irwin, [-34.433, 118.067] ([MEI025019](#)) (ANIC); female, Toodyay, 31.x.1979, R.M. Bohart, [-31.583, 116.417] ([MEI025234](#)) (UCDC); 6 males, 3 females, 10 km SE Hwy 1 on Wheat River Road, 12.xi.1987, at *Leptospermum* flowers, M.E. Irwin, E.I. Schlinger ([MEI025255](#), [025256](#), [025259](#), [025263](#), [025266](#), [025283](#), [025286](#), [025287](#), [025288](#)) (MEIC/CAS); Tammin, 23.x.1969, H.E. Evans, R.W. Matthews, [-31.640, 117.480] ([MEI080308](#)) (MCZ).



**FIGURE 47, 48.** *Neodialineura trichidion* sp. nov.: Holotype male. 47, dorsal [[Morphbank](#)]; 48, lateral [[Morphbank](#)]. Body length= 5.0 mm.

**Diagnosis.** *Head.* Frons and occiput pubescence grey with orange suffusion, rarely silver-grey with dark brown markings; frons flat in profile, wholly pubescent, male frontal vestiture with patch of short setae above antennae, rarely with extensive covering of elongate (often dense) setae; female frontal vestiture with short to moderate length setae; male frons width at narrowest point narrower than anterior ocellus but not contiguous; male postocular setae as single row immediately laterad of ocellar tubercle; postocular setae black; parafacia without setae; antennal scape equal length to flagellum, cylindrical; scape densely covered with large, dark setae; flagellum orange-yellow. *Thorax.* Scutum pubescence uniform grey-tan or grey-tan with brown markings; pleuron with silver-grey pubescence; katatergite setae uniform pale; coxae pale, overlain with silver-grey pubescence, setae mostly pale; femora uniform yellow, vestiture uniform short dark setae (female), or admixed with longer pale setae on fore and mid femora (male); tibia and tarsi colour dark yellow with apicies brown; wing pale orange infuscate along costal margin; haltere uniform pale orange. Scutal chaetotaxy (pairs): notopleural 3, supra alar 1, post alar 1, dorsocentral 4–8, scutellar 1. *Abdomen.* Male abdomen base colour darkish, obscured by silver extensive velutum abdominal tergites 2–7; vestiture mostly elongate pale setae laterally; female abdominal markings with posterior segments dark brown, anterior pale or variable, usually with pale patch medially on tergite 2, intersegmental membrane distinctly pale coloured, well defined.

**Comments.** *Neodialineura trichidion* **sp. nov.** is a western species closely related to *N. spinosa* **sp. nov.** and *N. bifaria* **sp. nov.** The lack of parafacial setae, single pair of scutellar macrosetae, distinctive scutal patterning and silver abdominal velutum in the male easily distinguishes this species.



**FIGURE 49, 50.** *Neodialineura trichidion* **sp. nov.**: Paratype female. 49, dorsal [[Morphbank](#)]; 50, lateral [[Morphbank](#)]. Body length= 7.5 mm.

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## Appendix 1. Links and LSIDs for web resources

### Zoobank LSIDs:

*Neodialineura*: <http://zoobank.org/urn:lsid:zoobank.org:act:5421A96F-A173-4166-A895-74357B3E89E4>  
*Neodialineura ataxia*: <http://zoobank.org/urn:lsid:zoobank.org:act:129082EA-7DEB-4C1C-A696-9E00D3477BA7>  
*Neodialineura atmis*: <http://zoobank.org/urn:lsid:zoobank.org:act:C1819F66-546E-4A3C-9075-6DD84D4B71DC>  
*Neodialineura bagdad*: <http://zoobank.org/urn:lsid:zoobank.org:act:3779F507-5580-48FA-9A99-2ADECAD0F1A7>  
*Neodialineura bifaria*: <http://zoobank.org/urn:lsid:zoobank.org:act:3180CF80-9150-46D2-9880-1B98123BD4DE>  
*Neodialineura litura*: <http://zoobank.org/urn:lsid:zoobank.org:act:A8C50C3A-4858-4712-97BF-D4B7C2017A2E>  
*Neodialineura nitens*: <http://zoobank.org/urn:lsid:zoobank.org:act:DB0077B6-2AD6-43C9-A34F-C9824530050B>  
*Neodialineura polygramma*: <http://zoobank.org/urn:lsid:zoobank.org:act:18C6FD1A-E07B-4C5F-B251-7A0A9F08254C>  
*Neodialineura saxatilis*: <http://zoobank.org/urn:lsid:zoobank.org:act:A2070365-D8BD-4531-B10B-D5D7974A6E37>  
*Neodialineura signum*: <http://zoobank.org/urn:lsid:zoobank.org:act:C9F0E328-2854-43AD-A458-F1059E1A4F53>  
*Neodialineura spinosa*: <http://zoobank.org/urn:lsid:zoobank.org:act:BA280D60-AD37-4D83-82AC-A61505640BB1>  
*Neodialineura striatithorax*: <http://zoobank.org/urn:lsid:zoobank.org:act:B87924D4-D27B-41A3-B24F-73F70E329548>  
*Neodialineura tessella*: <http://zoobank.org/urn:lsid:zoobank.org:act:97E42201-D463-4ADA-A1B1-0CD737B550DD>  
*Neodialineura trichidion*: <http://zoobank.org/urn:lsid:zoobank.org:act:99ED12BC-1C3B-4E02-B5CA-41F3476DAB9F>

### Images:

	Link to image in Morphbank
Figure 1	<a href="http://www.morphbank.net/?id=464656&amp;imgType=jpeg">http://www.morphbank.net/?id=464656&amp;imgType=jpeg</a>
Figure 2	<a href="http://www.morphbank.net/?id=464657&amp;imgType=jpeg">http://www.morphbank.net/?id=464657&amp;imgType=jpeg</a>
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Figure 32	<a href="http://www.morphbank.net/?id=464688&amp;imgType=jpeg">http://www.morphbank.net/?id=464688&amp;imgType=jpeg</a>
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Figure 36	<a href="http://www.morphbank.net/?id=464690&amp;imgType=jpeg">http://www.morphbank.net/?id=464690&amp;imgType=jpeg</a>
Figure 37	<a href="http://www.morphbank.net/?id=464691&amp;imgType=jpeg">http://www.morphbank.net/?id=464691&amp;imgType=jpeg</a>
Figure 38	<a href="http://www.morphbank.net/?id=464692&amp;imgType=jpeg">http://www.morphbank.net/?id=464692&amp;imgType=jpeg</a>
Figure 39	<a href="http://www.morphbank.net/?id=464693&amp;imgType=jpeg">http://www.morphbank.net/?id=464693&amp;imgType=jpeg</a>
Figure 40	<a href="http://www.morphbank.net/?id=464694&amp;imgType=jpeg">http://www.morphbank.net/?id=464694&amp;imgType=jpeg</a>
Figure 41	<a href="http://www.morphbank.net/?id=464697&amp;imgType=jpeg">http://www.morphbank.net/?id=464697&amp;imgType=jpeg</a>
Figure 42	<a href="http://www.morphbank.net/?id=464698&amp;imgType=jpeg">http://www.morphbank.net/?id=464698&amp;imgType=jpeg</a>
Figure 43	<a href="http://www.morphbank.net/?id=464695&amp;imgType=jpeg">http://www.morphbank.net/?id=464695&amp;imgType=jpeg</a>
Figure 44	<a href="http://www.morphbank.net/?id=464696&amp;imgType=jpeg">http://www.morphbank.net/?id=464696&amp;imgType=jpeg</a>
Figure 45	<a href="http://www.morphbank.net/?id=464699&amp;imgType=jpeg">http://www.morphbank.net/?id=464699&amp;imgType=jpeg</a>
Figure 46	<a href="http://www.morphbank.net/?id=464700&amp;imgType=jpeg">http://www.morphbank.net/?id=464700&amp;imgType=jpeg</a>
Figure 47	<a href="http://www.morphbank.net/?id=464701&amp;imgType=jpeg">http://www.morphbank.net/?id=464701&amp;imgType=jpeg</a>
Figure 48	<a href="http://www.morphbank.net/?id=464702&amp;imgType=jpeg">http://www.morphbank.net/?id=464702&amp;imgType=jpeg</a>
Figure 49	<a href="http://www.morphbank.net/?id=464703&amp;imgType=jpeg">http://www.morphbank.net/?id=464703&amp;imgType=jpeg</a>
Figure 50	<a href="http://www.morphbank.net/?id=464704&amp;imgType=jpeg">http://www.morphbank.net/?id=464704&amp;imgType=jpeg</a>

## Appendix 2. Specimens examined LSIDs in Therevidae Mandala database

### *Neodialineura ataxia:*

MEI165156: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165156>  
 MEI165153: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165153>  
 MEI165154: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165154>  
 MEI165155: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165155>  
 MEI165159: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165159>  
 MEI165151: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165151>  
 MEI165158: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165158>  
 MEI165160: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165160>  
 MEI165161: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165161>  
 MEI165152: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165152>  
 MEI165157: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165157>  
 MEI024210: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024210>

### *Neodialineura atmis:*

MEI080313: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI080313>

### *Neodialineura bagdad:*

MEI165162: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165162>  
 MEI165163: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165163>  
 MEI165164: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165164>  
 MEI165165: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165165>

### *Neodialineura bifaria:*

MEI025150: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025150>  
 MEI025017: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025017>  
 MEI025018: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025018>  
 MEI025047: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025047>  
 MEI025048: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025048>  
 MEI025064: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025064>  
 MEI025067: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025067>

MEI025068: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025068>  
MEI025069: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025069>  
MEI025071: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025071>  
MEI025076: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025076>  
MEI025078: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025078>  
MEI025079: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025079>  
MEI025120: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025120>  
MEI025179: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025179>  
MEI128999: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI128999>  
MEI025129: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025129>  
MEI025138: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025138>  
MEI025148: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025148>  
MEI025151: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025151>  
MEI025152: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025152>  
MEI025153: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025153>  
MEI025268: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025268>

***Neodialineura litura:***

MEI165170: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165170>  
MEI165171: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165171>  
MEI165172: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165172>  
MEI165173: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165173>  
MEI165174: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165174>

***Neodialineura nitens:***

MEI165180: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165180>  
MEI024166: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024166>  
MEI024204: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024204>  
MEI024206: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024206>  
MEI130662: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI130662>  
MEI024252: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024252>  
MEI024259: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024259>  
MEI024264: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024264>  
MEI024268: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024268>  
MEI158307: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI158307>  
MEI024253: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024253>

***Neodialineura polygramma:***

MEI165167: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165167>  
MEI165168: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165168>  
MEI165166: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165166>  
MEI165169: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165169>

***Neodialineura saxatilis:***

BMNH(E)241960: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:BMNH241960>  
MEI024127: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024127>  
MEI024128: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024128>  
MEI165992: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165992>  
MEI024131: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024131>  
MEI024107: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024107>  
MEI024100: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024100>  
MEI024116: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024116>  
MEI165984: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165984>  
MEI024117: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024117>

***Neodialineura signum:***

MEI024213: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024213>

***Neodialineura spinosa:***

MEI024770: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024770>  
MEI024640: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024640>  
MEI024653: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024653>  
MEI024655: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024655>  
MEI024773: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024773>



MEI024646: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024646>  
MEI024790: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024790>  
MEI024829: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024829>  
MEI024835: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024835>  
MEI024839: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024839>  
MEI024847: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024847>  
MEI024972: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024972>  
MEI024974: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024974>  
MEI088354: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI088354>

***Neodialineura striatithorax:***

MEI165181: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165181>  
MEI165182: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165182>  
MEI025351: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025351>  
MEI032020: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI032020>  
MEI030863: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI030863>  
MEI025323: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025323>  
MEI025331: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025331>  
MEI025324: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025324>  
MEI025325: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025325>  
MEI025329: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025329>  
MEI032017: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI032017>

***Neodialineura tessella:***

MEI165972: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI165972>

***Neodialineura trichidion:***

MEI025271: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025271>  
MEI024058: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024058>  
MEI024061: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024061>  
MEI024075: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024075>  
MEI024079: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024079>  
MEI024080: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024080>  
MEI024088: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI024088>  
MEI025019: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025019>  
MEI025234: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025234>  
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MEI025283: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025283>  
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MEI025288: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI025288>  
MEI080308: <http://lsid.tdwg.org/urn:lsid:taxonomy.org.au:TherevidaeMandala:MEI080308>