A review of the genus *Psilocephala* ZETTERSTEDT
(Diptera: Therevidae) with the description of four new genera

[Eine Bearbeitung des Genus *Psilocephala* ZETTERSTEDT (Diptera: Therevidae)
nebst der Beschreibung von vier neuen Gattungen]

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Abstract
The 50 species currently in valid combination with *Psilocephala* ZETTERSTEDT are reviewed and their generic placement hypothesized. A brief history of the genus and the cause of the enormous number of names in combination since its description are included. Only two species, *P. imberbis* (FALLEN) and *P. vicina* (WALKER), are retained in *Psilocephala* and the remaining 48 species are placed in new combination with described genera, synonymy, or within new genera. Four new genera; *Argolepida gen. nov.*, *Manestella gen. nov.*, *Nigranitida gen. nov.*, and *Notiothereva gen. nov.* are described for species currently in combination with *Psilocephala*, which do not fit within the concept of any described genus. Two species, *P. longa* and *P. longiventris*, expand the generic concept of *Anolinga GAIMARI & IRWIN* and this genus is rediagnosed.

Key words
Therevidae, stiletto flies, taxonomy, generic placement, nomenclature

Zusammenfassung

Stichwörter
Therevidae, Luchsfliegen, Taxonomy, Einordnung der Gattungen, Nomenklatur

This work includes some of the clarification necessary to provide a structured foundation for the phylogeny and nomenclature of Therevidae before a stable classification can be reached. As part of a revision of Therevidae, a review was conducted of the species of the subfamily, which historically contained many species described in the genus *Psilocephala* ZETTERSTEDT (the history of which is described below) that require placement in currently available or new genera (Table 1). Preliminary phylogenetic analyses (unpublished data) have provided information on hypotheses of monophyly and character distributions that allow confident generic placement of the species originally described in the genus *Psilocephala*, but do not belong to the monophyletic group that includes *Psilocephala imberbis* (FALLEN, 1814). This work is an attempt to review the remaining *Psilocephala* names and determine their status in respect to the current knowledge of the family Therevidae.

First, the current knowledge of the genus *Psilocephala* is updated by providing a generic diagnosis, including synapomorphies for the species, and clarifying the species that belong in the genus. Then the synapomorphies and diagnoses of four new genera are included to
accommodate species of *Psilocephala* that can not be placed in any currently described genera. Finally, every currently valid species of *Psilocephala* is placed within a valid genus. All taxonomic actions are summarized in Table 1.

**The history of *Psilocephala***

The genus *Psilocephala* Zetterstedt, 1838 was erected when the author noted that two species of flies then placed in the genus *Thereva* Latreille, 1796 shared a similar distinguishing feature.

**Original citation:** “Not. Species haec pulchra et distinctissima, una cum *Thereva imberbi* et *Th. confini Fall.* proprium forte constitutum genus, cui nomen *Psilocephala* ob glabriitem capitis propono.” (Zetterstedt 1838: 525).

**Translation:** “Note. Species that I consider beautiful and distinguished are both *Thereva imberbi* and *Th. confini Fall.* which, in the strict sense as it happens, constitute a genus, for which I propose the name *Psilocephala* because the head is glabrous.”

Zetterstedt placed *Psilocephala*, along with the genus *Thereva*, within the family Anthracidæ Fallén. Although the family name Therevidae was first erected by Burmeister (1837), that family group name was not part of common usage until the publication of the Catalogus Dipterorum hucusque descriptorum (Kertész 1909). Kertész’ concept of the family included the genera *Agapophytus* Guérin, 1831; *Anabarhynchus* Macquart, 1848; *Baryphora* Loew, 1844; *Caenophanomyia* Bezzi, 1902; *Cyclotelles* Walker, 1850; *Dialineura* Rondani, 1856; *Ectinorhynchus* Macquart, 1850; *Henicomyia* Coquillett, 1898; *Metaphragma* Coquillett, 1894; *Nebritus* Coquillett, 1894; *Ozodiceromyia* Bigot, 1889; *Phycus* Walker, 1850; *Psilocephala* Zetterstedt, 1838; *Ruppellia* Wiedemann, 1830; *Thereva* Latreille, 1796; and *Xestomyza* Wiedemann, 1820. The genus *Psilocephala*, alone, was represented by 68 valid species names.

To this point in time, species with peculiar or notable diagnostic morphological features [e.g., elongated antennae (*Ozodiceromyia*), thickened antennae (*Dialineura*), or elongated mouth parts (*Ectinorhynchus*)] were placed in distinct genera other than *Thereva* or *Psilocephala*. These features were recognized by Kröber (1913) in his key to world species. *Thereva* and *Psilocephala* then became genera in which species were placed if they were clearly therevids but had no other easily discernible distinguishing features. Those species with filiform setae on the face were placed in *Thereva*, whereas species with bare faces were placed within *Psilocephala*.

During the four years between the catalogs of Kertész (1909) and Kröber (1913), 52 species were described or moved into *Psilocephala*, raising the total number of species in the genus to 120 (Kröber cataloged 117 names, but omitted *P. argentata* Matsumura, 1905; *P. obscura* Kröber, 1912; and *P. xylophagoides* Enderlein, 1912). As a result of this “process of elimination circumscription,” the genus *Psilocephala* has been used in combination with 211 names (not counting misspellings) throughout the history of its usage. Kröber became the father of the modern therevid synthesis, erecting several new genera for species newly described or previously described in *Psilocephala*. Since Kröber’s work in the early 20th century, other substantial contributions to the knowledge of the family Therevidae were produced by several workers (Ortiz 1946; Lyneborg 1975, 1976, 1980; Irwin & Lyneborg 1981a; Lyneborg 1984; Lyneborg 1986a, b; Irwin & Lyneborg 1989; Lyneborg 1989; Irwin & Webb 1992; Gaimari & Irwin 2000), who together erected several new genera and placed most
Tab. 1: Summary of the taxonomic movement of the remaining *Psilocephala* ZETTERSTEDT names.

<table>
<thead>
<tr>
<th>Species</th>
<th>Subgenus</th>
<th>Distribution</th>
</tr>
</thead>
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<tr>
<td><em>albiseta</em> Malloc, 1932</td>
<td>Brachylinga</td>
<td>Neotropical</td>
</tr>
<tr>
<td><em>antennata</em> Krober, 1911</td>
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<td><em>atra</em> Krober, 1911</td>
<td>Nigrantiida gen. nov.</td>
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<tr>
<td><em>bakeri</em> Krober, 1929</td>
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<td><em>bezzii</em> Krober, 1911</td>
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<tr>
<td><em>bigoti</em> Bigot, 1892</td>
<td>Irwinieia</td>
<td>Oriental</td>
</tr>
<tr>
<td><em>brunniipes</em> Krober, 1911</td>
<td>Notiothereva gen. nov.</td>
<td>Neotropical</td>
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<tr>
<td><em>brunniipes</em> var. clausa Krober, 1929</td>
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<td><em>ceylonica</em> Krober, 1912</td>
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<td><em>chetkangensis</em> Ouchi, 1943</td>
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<td><em>costata</em> van der Wulp, 1888</td>
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<td><em>cylindrica</em> (Walker, 1848)</td>
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<td>Oriental</td>
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<td><em>dives</em> Schiner, 1868</td>
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<td>Neotropical</td>
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<td><em>frontata</em> Krober, 1912</td>
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<td>Oriental</td>
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<td><em>fusi</em> Krober, 1928</td>
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<td>Neotropical</td>
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<tr>
<td><em>imberbis</em> (Fallen, 1814)</td>
<td>Psilocephala</td>
<td>Palaeartic</td>
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<td><em>indicata</em> van der Wulp, 1880</td>
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<td><em>interrupta</em> Krober, 1911</td>
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<td><em>javan</em> Krober, 1912</td>
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<td><em>longa</em> Krober, 1929</td>
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<td><em>longiventris</em> Krober, 1911</td>
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<td>Neotropical</td>
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<td><em>lutea</em> White, 1915</td>
<td>Nanexita</td>
<td>Australasian</td>
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<tr>
<td><em>maculifrons</em> Krober, 1928b</td>
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<td><em>melanoprocta</em> Loew, 1869</td>
<td>Psilocephala</td>
<td>Neartic</td>
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<td><em>mendicula</em> Loew, 1871</td>
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<td>Palaeartic</td>
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<td><em>munda</em> Loew, 1869</td>
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<td>Neartic</td>
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<td><em>nigrifrons</em> Krober, 1914</td>
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<td><em>nittens</em> White, 1915</td>
<td>Neodiadineura</td>
<td>Australasian</td>
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<td><em>obscura</em> Krober, 1912</td>
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<td><em>ornata</em> Krober, 1911</td>
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<td><em>pilifrons</em> Krober, 1928</td>
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<td><em>punctifrons</em> Krober, 1914</td>
<td>Brachylinga</td>
<td>Neartic</td>
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<td><em>pygmaea</em> Krober, 1911</td>
<td>Brachylinga</td>
<td>Neotropical</td>
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<tr>
<td><em>rivulosa</em> Krober, 1928</td>
<td>Argolepida gen. nov.</td>
<td>Neotropical</td>
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<tr>
<td><em>rubida</em> van der Wulp, 1888</td>
<td>Entesia</td>
<td>Neotropical</td>
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<tr>
<td><em>rufo</em> Krober, 1912</td>
<td>Neodiadineura</td>
<td>Australasian</td>
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<tr>
<td><em>rufticornis</em> Krober, 1911</td>
<td>Notiothereva gen. nov.</td>
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<td><em>saxatilis</em> White, 1915</td>
<td>Neodiadineura</td>
<td>Australasian</td>
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<td><em>schmidti</em> Krober, 1928</td>
<td>Rhagioforma</td>
<td>Neotropical</td>
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<tr>
<td><em>senilis</em> Bromley, 1934</td>
<td>Penniverpa</td>
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<td><em>sequa</em> (Walker, 1852)</td>
<td>Neodiadineura</td>
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<td>Notiothereva gen. nov.</td>
<td>Neotropical</td>
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<td><em>shiuotensis</em> Ouchi, 1943</td>
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<td><em>sinensis</em> Ouchi, 1943</td>
<td>Rhagioforma</td>
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<td><em>tristriata</em> Mann, 1933</td>
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<td>Neartic</td>
</tr>
<tr>
<td><em>vicina</em> (Walker, 1848)</td>
<td>Irwinieia</td>
<td>Oriental</td>
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</tbody>
</table>

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Psilocephala names in new combinations. *Psilocephala* sensu stricto, as interpreted here, presently contains only two valid species names. The remaining 50 currently valid *Psilocephala* names are herein placed into other genera or are placed into synonymy (Table 1).

Materials and methods

All taxonomic changes are noted as to whether they were decided objectively or subjectively. Lectotype and neotype designation follows the standards of the International Commission of Zoological Nomenclature Articles 72–76 (International Commission on Zoological Nomenclature 1999). An English translation is provided for original species descriptions published in a language other than English and never previously translated. Translations are as true to the original author’s meaning as possible so not much liberty was taken with syntax. Thus, some of the translations are grammatically displeasing, but more genuine to the original.


Each specimen was given a unique specimen code. Unless a unique code was already present on the specimen, it was assigned a unique code on a yellow label in the format THERESVIDAE/M. E. Irwin/Specimen #/999999. This code is recorded as "MEI 999999." When another institutional code was present, that format of letters and number was used. These codes facilitate entry and manipulation of data into a therevid systematic database within the architecture of MANDALA (Kampmeier et al. 1998) and are recorded with their associated specimens throughout the text.

The abbreviations used for museums and collections are as follows:

ANIC = Australian National Insect Collection, Canberra, A.C.T., Australia
BMNH = The Natural History Museum, London, England
CASC = California Academy of Sciences, San Francisco, California, USA
CNIC = Canadian National Collection of Insects, Ottawa, Ontario, Canada
CRIC = Centro Regional de Investigaciones Científicas y Tecnológicas, Mendoza, Argentina
DEIC = Deutsches Entomologisches Institut, Eberswalde, Germany
FSAC = Florida State Collection of Arthropods, Gainesville, Florida, USA
HNHM = Zoological Department, Hungarian Natural History Museum, Budapest, Hungary
ILMA = Fundacion e Instituto Miguel Lillo, Universidad Nacional de Tucuman, Tucuman, Argentina
INBC = Instituto Nacional de Biodiversidad, Santo Domingo de Heredia, Costa Rica
MEI = Personal Collection of Michael E. Irwin, Urbana, IL, USA (ultimately to be deposited in CASC)
MACN = Division Entomologia, Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina
MCZC = Entomology Department, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
MLUH = Wissenschaftsbereich Zoologie, Sektion Biowissenschaften Martin-Luther-Universität Halle (Saale), Germany
MLPA = Museo de La Plata, Division Entomologia, Universidad Nacional de La Plata, La Plata, Argentina
MNHN = National Collection of Insects, Museum National D'Histoire Naturelle, Paris, France
MNNC = Coleccion Nacional de Insectos, Museo Nacional de Historia Natural, Santiago, Chile
MSEI = Museum of the Shanghai Institute of Entomology, Academia Sinica, Shanghai, China
Genus *Psileocephala* Zetterstedt

*Psileocephala* Zetterstedt, 1838 – Zetterstedt (1838: 525). **Type species:** *Psileocephala imberbis* (Fallén, 1814) – *Fallén* (1814: 5). By subsequent designation (Coutelle 1910: 597).

*Paraclita* Enderlein, 1936 – Enderlein (1936: 88). Type species: *Psileocephala imberbis* (Fallén, 1814) – *Fallén* (1814: 5.) [as *imberbris* (Enderlein 1936: 88); incorrect subsequent spelling of *imberbis* (Fallén, 1814)]; by monotypy.

**Synapomorphies.** The following synapomorphies unite *Psileocephala* with other Therivinae; two spermathecae, a spermathecal sac, and appressed lanceolate setae on the femora. *Psileocephala* is characterized by the unique morphology of the aedeagus with a posteriorly directed, broad phallus; male terminal segments shiny black while the rest of abdomen is silver pruinose; and dorsal half of female frons shiny black.

**Diagnosis**

**Head:** Compound eyes of male holoptic; female dichoptic. Frons of male slightly depressed medially, pruinose; female frons silver pruinose ventrally, shiny black dorsally. Antenna shorter than head length. Scape length less than twice width; strongly setose. Pedicel round, strongly setose. Basal flagellomere pyriform, entire length smoothly tapered. Second flagellomere cylindrical, as high as long, slightly subapical. Third flagellomere nearly two times longer than high. Apical style short, spiculate. Palp cylindrical, filiform setose, one segmented, apex rounded. Occiput pruinose; fine, filiform setose; with single row of dark macrosetae dorsally.

**Thorax:** Silver pruinose; covered with light, fine, filiform setae. Prosternum, proepimeron, anepimeron, meron, and metakatepisternum pruinose; lacking setae. Metanepisternum below posterior spiracle setose. Scutum with 3 notopleural, 2 supra-alar, 1 postalar, and 2 dorsocentral pairs of macrosetae. Scutellum with 2 pairs of marginal macrosetae. **Legs:** Fore- and midcoxa with 2 apical macrosetae, one anterolaterally and one anteromedially. Midcoxa with posterolateral surface lacking fine, filiform setae. Hindcoxa with 1 macroseta laterally. Femora with short, fine, erect setae; long, filiform, erect setae; and appressed, lanceolate setae throughout; anteroventral macrosetae present on hindfemur. **Wing:** Membrane hyaline. Costa with uniform anterodorsal and anteroventral rows of setae. Cell m₃ closed, shortly petiolate.

**Abdomen** of male silver pruinose, lacking velutum; tergites covered with appressed, pale setae. **Male terminalia.** Tergite 8 strongly emarginate anteriorly and posteriorly; medial area of anterior margin turned dorsally almost forming a point; setose posteriorly; anterior sensory setae not evident. Sternite 8 triangular, posterior margin wider than anterior margin; truncate anteriorly, slightly emarginate posteriorly; setose posteriorly; 1 pair of sensory se-
tae anteriorly. Epandrium slightly emarginate anteriorly, deeply emarginate posteriorly; shiny brown to black. Hypandrium reduced to small sclerotized area of membrane, separate from gonocoxites. Gonocoxites separate medially; setose laterally and ventrally; ventral lobes short; shiny brown to black. Gonostylus smoothly tapering apically, setose dorsally and dorso-medially at midpoint, setose ventrally, curved medially and dorsomedially at apex. Inner gonocoxal process articulated with gonocoxite; short, broad, strongly clavate; apex dorsoventrally flattened, bent ventrally; possessing long, bristlelike setae on lateral and ventral surface apically. Outer gonocoxal process absent. Gonocoxal apodeme short, separated anteriorly from rest of gonocoxite, extending beyond margin of gonocoxite. Aedeagus in dorsal view triangular with posteriorly projecting phallus; longer than wide; dorsal apodeme rectangular, emarginate anteriorly. Distiphallus in lateral view blunt, robust, projecting posteriorly with dorsolateral flanges projecting dorsolaterally. Ventral apodeme wide, dorsoventrally flattened, dorsally concave with a medial keel on ventral surface. Ejaculatory apodeme narrow and laterally flattened anteriorly; rounded with medial area of lighter sclerotization posteriorly.

**Female terminalia.** Tergite 8 with anteromedial extension broad, rectangular posteriorly; sclerotized strip of cuticle connecting to the median lobe of tergite 9 present. Sternite 8 incised posteriorly; posterior lobe with densely spaced setae. Median lobe of tergite 9 and adjacent membrane glabrous. Two accessory glands originate independently on furcal membrane. Spermathecal sac duct and 2 spermathecal ducts originate from common duct. Spermathecal sac spherical to oval; membrane without crenulations or lacunae. Spermathecal duct wider basally, tapering smoothly and slowly to valve located at midpoint, membrane without crenulations. Spermatheca spherical.

**Included species**

*imberbis* (Fällen, 1814) (*Bibia*). – Fällen (1814: 5), type locality Vadstena, Sweden. A female specimen [MEI 134445] from MZLU labeled “Ps. imberbis/female/Wadstena” is considered to be part of Fällen’s original material and herein designate lectotype. This lectotype is designated in order to fix the concept of *P. imberbis* and to ensure universal and consistent interpretation of the same.

*vicina* (Walker, 1848) (*Theeva*). – Walker (1848: 222), type locality Nova Scotia, Canada. Two specimens labeled “syntype” from BMNH were examined. A male specimen [BMNH(E) 241966] is labeled “R” black type on green label; “vicina” black type on white label, folded; “Nova Scotia” black type on white label, folded; “Nova Scotia/REDMAN” black ink on white label; “one of WALKERS [sic] series so named.” black type on white label with black inked initials EAW; “vicina” black type on white label; “Syntype ‘5’/Pилоcephala/vicina (WALK.)/LYNEBORG det. 1977” pencil except for “LYNEBORG det. 19,” which is black type on white label. A female specimen [BMNH(E) 241968] is labeled “R” black type on green label; “SYNTYPE/Theeva/vicina WALKER/det. J. E. CHAINES 1981” black ink on white label. Walker originally describes a male specimen and records one specimen “b” as having slight variation. Although Walker is known to have mistaken sex in Diptera, the variation noted in the “b” specimen does not suggest a second female so it can not be determine if female [BMNH(E) 241968] was part of his consideration for this species. The male specimen [BMNH(E) 241966] is herein designated lectotype in order to fix the concept of *P. vicina* and to ensure universal and consistent interpretation of the same. The female specimen [BMNH(E) 241968] is considered part of REDMAN’s collection, but possibly not part of WALKER’s original syntype series of *P. vicina* therefore it retains no type status.

*mundula* Loew, 1869 (*Pilocephala*), syn. nov. – Loew (1869: 9), type locality Wisconsin, USA. Two female specimens [MEI 134202, MEI 134201] were examined both labeled “Type” “10670” black print on red and white label; “Wisc.” “Loew” black print on white label; one [MEI 134202] with “mundula” ink on white label from MCZC. The specimen [MEI 134201] in better condition is herein designated the lectotype. This lectotype is designated in order to fix the concept of *P. mundula* and to ensure universal and consistent interpretation of the same. The other specimen [MEI 134202] is designated as paralectotype.

*melanoprocta* Loew, 1869 (*Pilocephala*) – Loew (1869: 11), type locality Maine, USA. Two male specimens were examined labeled “Type” “10669” black print on red and white label; one [MEI 134203] with “Me” ink on white label, “Loew” black print on white label, and “melanoprocta” ink on white label; the other [MEI 134204] with
“H.B.T.” print on white label, “LOEW” print on white label from MCZC. We herein designate the male [MEI 134203] from Maine as the lectotype. This lectotype is designated in order to fix the concept of *P. melanoprocata* and to ensure universal and consistent interpretation of the same. The male [MEI 134204] from Hudson Bay Territory is designated as a paralectotype.

**Original description of Bibio imberbis** – from FALLEN (1814)

“*B. imberbis* nigricans, segmentis apice albis; fronte imberbi argentea: vertice feminae nigro nitido. Habitat in Ostrogothia rarior. D. ZETTERSTEDT
Obs. Caput nudum, oculi majores et corpus minime hirtum hanc speciem a praecedentibus omnino diversam determinat.”

**Translation**

“*B. imberbis* blackish, abdominal segments with white posterior borders; frons without a beard made of silver: vertex of the female black shiny.
Living scattered throughout Ostrogothia (a province in Sweden). D. ZETTERSTEDT
Female. A little smaller than *B. annulata*, black, shiny, with very few bristles. Eye covers up the entire head. Frons silvery shiny, bare. Antennae black, base with very little hair. Vertex black, smooth, with hardly any hair. Body black shiny: thorax covered by appressed sparse white hair; almost every abdominal segment has a posterior border of white. Tibiae yellow, spiny, with black apices. Wing glassy.
Obs. Head bare, eyes large and body only slightly bristled this species can be easily determined from all the differences.”

**New genera to the family Therevidae**

**Genus Argolepida Metz & Irwin gen. nov.**

(Figs 1, 2, 5 & 9)

**Etymology.** ἀργός = argo (Greek, adjective) = white, bright + ἑπίδα = lepida (Greek, adjective, feminine) = possessing scales. “The white scaly one” referring to all the known species being covered by dense, white lanceolate setae.

**Type species:** Psileocephala rivulosa KRÖBER, 1928 by present designation. – KRÖBER (1928b: 21).

**Synapomorphies.** The following synapomorphies unite *Argolepida* with other Therevidae; two spermathecae, a spermathecal sac, and appressed lanceolate setae on the femora. *Argolepida* is characterized by the covering of silver-white lanceolate setae over the body (also occurring in the New World genera *Ammonaios Irwin & Lyneborg, 1981* and *Insulatitan Metz & Irwin, 2000*); the widely dichoptic eyes of the males (Fig. 1); the sunken vertex; large, shiny callus on the frons of the female and a similar, although usually smaller, callus on the male frons (absent in one undescribed species) (Fig. 1); the small, knoblike gonocoxal apodeme (Fig. 5); the elongate spermathecae; and the independent openings to the ducts of the spermathecae and spermathecal sac (Fig. 2).

**Diagnosis**

Head (Fig. 1). Male and female compound eyes widely dichoptic. Vertex lower than dorsal margin of eye, appearing sunken. Frons pruinose, with or without shiny black callus; female frons often with shiny callus larger. Parafacial lacking fine filiform setae. Antenna shorter than head length. Scape length less than twice width; strongly setose towards apex. Pedicel

**Thorax:** Covered with light, lanceolate setae. Cervical sclerite, proepimeron, anepimeron, meron, and metakatepisternum pruinose; lacking setae. Prosternum setose. Metanepisternum below posterior spiracle setose. Scutum with 3 notopleural, 1 supra-alar, 1 postalar, and no dorsocentral pairs of macrosetae. Scutellum with 1 pair of marginal macrosetae. **Legs:** Fore- and midcoxa with 2 apical macrosetae anterolaterally and anteromedially. Midcoxa with...
fine filiform setae on posterolateral surface. Hindcoxa with 1 macroseta laterally. Femora with short, fine, erect setae; long, filiform, erect setae; and appressed lanceolate setae throughout; anterodorsal macrosetae present. **Wing**: Membrane hyaline. Costa with uniform anterodorsal and anteroventral rows of setae. Veins light and dark. Cell m₁ closed, petiolate. **Abdomen. Male.** Patterned with black and silver tomentum, no velutum. Segments 1–5 covered with appressed, lanceolate setae. Segments 6–8 with erect setae. **Male terminalia.** (Figs. 5 and 9) Tergite 8 strongly emarginate anteriorly and posteriorly; medial area very narrow; setose posteriorly; one pair of anterior sensory setae. Sternite 8 deep; emarginate anteriorly and posteriorly, length and width subequal; setose posteriorly; 1 pair of sensory setae anteriorly. Epandrium deeply emarginate anteriorly and posteriorly. Hypandrium much wider than long; not fusced with gonoxocites. Gonoxocites separate medially; setose laterally; ventral lobes short; outer gonocoxal process absent; gonocoxal apodeme very short, present only as a small knob. Gonostylus smoothly tapering apically, setose dorsally and dorsomedially at midpoint, setose ventrally along a ventral carina, apex curved medially and dorsomedially. Inner gonocoxal process articulated with gonoxocite; long, slender, smoothly tapering to apex, apex dorsoventrally flattened; possessing long setae on lateral surface and short setae on ventral surface apically. Aedeagus in dorsal view subrectangular with posteriorly projecting basiphallus; longer than wide; dorsal apodeme rectangular, emarginate anteriorly. Distiphallus in lateral view blunt, robust, projecting posterovertrally with lateral teeth apically. Ventral apodeme narrow, dorsoventrally flattened. Anterior ejaculatory apodeme dorsoventrally flattened apically. **Female terminalia.** (Fig. 2) Tergite 8 with anteromedial extension broad, circular; sclerotized strip of cuticle connecting to median lobe of tergite 9 present. Sternite 8 incised posteriorly; posterior lobes with densely spaced setae. Median lobe of tergite 9 with setae, adjacent membrane bare. Two accessory glands originate independently, openings widely spaced apart on furcal membrane. Spermathecal sac duct and 2 spermathecal ducts originate independently, sometimes on a short invagination in furcal membrane. Spermathecal sac spherical to oval; membrane without crenulations or lacunae. Spermathecal duct wider basally, tapering smoothly and slowly to valve located at midpoint, membrane without crenulations. Spermatheca elongate, much longer than wide. **Included species**

*rivulosa* (Kröber, 1928) (*Psilocephala*) **comb. nov.** – Kröber (1928b: 21), type locality Mendoza, Argentina. The female [MEI 134205] and male [MEI 134206] syntypes from MLUH were examined. The female [MEI 134205] is herein designated lectotype for *P. rivulosa*. This lectotype is designated in order to fix the concept of *P. rivulosa* and to ensure universal and consistent interpretation of the same.

An additional four undescribed species were examined from Argentina and Chile.

**Description of *Psilocephala rivulosa* from Kröber (1928b pp. 21–23, translated from German):**

"*Psilocephala rivulosa* n. sp. ♂ (Fig. 17).

Length nearly 8 mm. Antenna 0.6 mm. Wing length 5–5.6 mm. Wing breadth 1.3–1.5 mm.

Mendoza, Argentina. Type ♂: Halle.

I use the old manuscript name given by Gerstmeier. A striking form, which stands alone among the *Psilocephala* species: the whitish bristles of the occiput advance from both sides upwards to the upper frons to end with 2 or 3 bristles next to the ocellar tubercle. The short and broad frons possesses a shiny black callus, which is heart shaped, but is vaulted on the two dorsal extensions. Between these dorsal extensions there is a long tip that goes up to the ocellar tubercle. The antennae are moderately long, white bristled. First and second segments light red-yellow. First segment white pruinose, approximately twice as long as broad. Second segment spherical. First
segment with two long transparent red-yellow bristles above. First segment on the outer sides and the second segment similarly with shorter white bristles. Frons and the area next to the ocellar tubercle golden, light brown pruinose, whitish at the eye margin. Ocelli white-yellow with black borders, lower face silver-white. Palpus and labellum black-gray. Hair snow white. Occiput above golden yellow-brown with white scales shaped hair, below long white haired. The whole body completely gold-brown, matte. Thorax anteriorly with yellowish, appressed, matte hair and two broad white longitudinal stripes, which converge somewhat towards the scutellum. Between these lines lies a light brown stripe of hair. Between the shoulder and the wing base is a strong white stripe, which is snow white hair. Coxae and ventral thorax silver-gray shiny, whitish haired. Lower half of the shoulders with a gold colored long streak. Scutellum brown, whitish haired, with two light setae. Calypter and halter white-yellow, legs light yellow-brown. Tips of the tibiae and tarsi blackish. Femora and tibiae white haired and bristled. Tarsi black haired and bristled. Abdomen black-brown in ground color, nearly matte. First – fifth tergites with broad snow white hair margin and hind border. The middle of the first to the third tergites is indefinite rust-brown colored and the hair margins are also brownish colored here. On the sides of the second and third tergites appears another isolated snow white hair spot at the hind margin. The sixth and seventh segments and anal segment completely black and black haired. Ventral abdomen deep black. First through the fourth sternites white haired, fifth the last deep black. Wing whitish hyaline with strong brown veins. Fourth hind marginal cell open. Upper fork strongly sinate. In each wing lies a supernumerary vein fragment: in the right wing it projects from the discal cell into the fourth hind marginal cell, in the left wing from the fourth hind marginal cell into the third hind marginal cell. – The cotype is more slender in the abdomen, poorly preserved. Scutellum wholly light yellow-brown. Veins normal.”

Genus Manestella Metz gen. nov.
(Figs 3, 6 &10)

Etymology. mane (Latin, neuter) = morning + stella (Latin, feminine) = star. Referring to the densely setulate inner gonocoxal process of the ♂ and how it resembles the medieval weapon called a “morning star.”

Type species: Psileocephala tristriata MANN, 1933 by present designation. – MANN (1933: 331).

Synapomorphies. The following synapomorphies unite Manestella with other Taenogera genus group (WINTERTON et al. 1999b) therevids; three spermathecae and a spermathecal sac, absence of velutum on the femora and gonocoxites as in the Agapophyllinae WINTERTON (WINTERTON et al. 2001). Species of Manestella are the first known Taenogera genus group members to have a ventral apodeme that is not bifurcate. Like Neodialineura MANN, 1928, Manestella spp. lack an apical seta on the hind femur, but differ by having a dense patch of bristlelike setae on the medial surface at the apex of the inner gonocoxal process (Fig. 6), the gonocoxal apodeme fused to a conspicuous semicircular anterior projection (Fig. 6), the anterior “wall” of the spermathecal pump vertically oriented and bulbous with the opening to the phallus situated ventrally (Fig. 6), the path of the phallus oriented ventrally with the majority of the mass of the parameres dorsal (Fig. 6), the ejaculatory apodeme laterally flattened (Fig. 6).

Diagnosis

Head: (Fig. 3) Lower frons extended anteriorly making head longer than high. Compound eyes of male holoptic; female dichoptic. Frons pruinose, bilaterally setose, bare medially. Parafacial lacking fine filiform setae. Antenna shorter than length of head. Scape length less than twice width; setae absent medially. Pedicel strongly setose on all sides. First flagellomere in lateral view abruptly tapered apically, bulbous basally. Second and third flagellomeres short, much higher than long. Apical style setaceous. Palp cylindrical; one segmented. Mouth parts elon-
Figs 5–8: Aedeagus and gonocoxites with appendages. – 5: *Argolepida* spec.; – 6: *Manestella* spec.; – 7: *Nigrantida* spec.; – 8: *Notiohereva* spec. Scale bar = 0.2 mm. Explanation of abbreviations: eap = ejaculatory apodeme; gap = gonocoxal apodeme; gst = gonostylus; igp = inner gonocoxal process; vl = ventral lobe.
gate, tip reaching midpoint of basal flagellomere. Occiput pruinose with single row of macrosetae dorsally radiating laterally and ventrally half way down height of occiput where single row broadens to multiple rows where it meets the lower fine, filiform setae laterally and ventrally; female with multiple rows of macrosetae dorsally.
Thorax: Cervical sclerite with fine, filiform setae. Scutum with 3 notopleural, 1 supra-alar, 1 postalar, and several dorsocentral pairs of macrosetae. Scutellum with 1 pair of marginal macrosetae. Postpronotum, propisternum, anepisternum, dorsal katatergite and katatergite with long, fine, filiform setae. Legs: Forecoxa with 2 apical macrosetae, one anterolaterally and one anteromedially, and one macroseta basolaterally; hindcoxa with one macroseta laterally. Femora with short, fine, erect setae and long, filiform, erect setae throughout; without antero- and posteroventral macrosetae. Wing: Membrane hyaline with dense maculation, densely microtrichose. Costa with uniform anterdorsal and anteroventral rows of setae. Cell m₁ broadly open.

Abdomen. Male. Abdomen completely pruinose, sparsely setose throughout. Male terminalia (Figs. 6 and 10). Tergite 8 strongly emarginate posteriorly, medial area very narrow, posterior half setose. Sternite 8 truncate posteriorly, rectangular, wider than long, posterior third setose, 2 pairs of sensory setae anteriorly. Epaedrium slightly emarginate anteriorly and posteriorly. Hypandrium enlarged, fused to gonocoxites laterally. Gonocoxites separate medially; ventral lobes short; gonocoxal apodeme fused to a conspicuous semicircular anterior projection; setose laterally throughout. Gonostylus broadened at midpoint, tapering apically; setose dorsally and dorsomedially at midpoint; setose ventrally along a ventral carina; apex curved medially and dorsomedially. Inner gonocoxal process articulated with gonocoxite; long, slender, clavate; extending ventrally at apex; possessing a dense patch of short, bristlelike setae on medial surface apically. Aedeagus in dorsal view elongate; dorsal apodeme triangular; bifurcate anteriorly. Ventral apodeme broad, dorsoventrally flattened. Distiphallus in lateral view sinuate, projecting ventrally, turning posteriorly near apex so that gonopore faces posteriorly. Ejaculatory apodeme laterally flattened throughout; posterior face oval with medial “cross beam” spanning the dorsoventral radius.

Female terminalia. Tergite 8 with anteromedial extension broad, rounded posteriorly; sclerotized strip of cuticle connecting to the median lobe of tergite 9 present. Sternite 8 invaginated posteriorly; posterior lobe with more densely spaced setae. Median lobe of tergite 9 without setae, adjacent membrane bare. Two accessory glands originate independently from the furcal membrane. Spermathecal sac duct and 3 spermathecal ducts originating at same place from common duct. Spermathecal sac oval, longer than wide; membrane without crenulations or lacunae. Spermathecal duct wider basally, tapering sharply to valve located at midpoint; membrane without crenulations. Spermatheca subspherical, slightly wider than long.

Included species

tristriata (MANN, 1933) (Psiloecephala), comb. nov. – MANN (1933: 331), type locality Kiata, Victoria, Australia. The holotype male specimen [ANIC 29003033] from QMBA was examined.

One additional undescribed species was examined from Queensland.

Genus Nigranitida Metz gen. nov.

(Figs 4, 7 & 11)

Etymology. nigra (Latin, adjective) = black + nitida (Latin, adjective, feminine) shining; referring to the convex, shiny black frons of the female.

Type species: Psiloecephala costata van der Wulp, 1888 by present designation. – van der Wulp (1888: 368).

Synapomorphies. The following synapomorphies unite Nigranitida with other Therevinae: two spermathecae, a spermathecal sac and appressed lanceolate setae on the femora. Nigranitida is characterized by the glossy black female frons (Fig. 4) and the ventral apodeme being short, dorso-ventrally flattened, and extremely broad with middle area deeply emarginate to bifurcate (Fig. 7).
Diagnosis

Head: Male eyes holoptic, touching or separated by less than the width of the median ocellus; female eyes dichoptic. Male frons pruinose, silver ventrally, dark dorsally; female frons entirely or mostly shiny black, *N. costata* with frons considerably convex anteriorly. Parafacial lacking fine filiform setae. Antennae shorter than length of the head. Scape setose, setae absent medially. Pedicel subspherical, setose. First flagellomere shape variable; wider at base to wider at middle and then tapering towards apex. Second flagellomere cylindrical, nearly as high as long. Third flagellomere nearly twice as long as high. Apical style coneshaped to setaceous. Palp cylindrical, one segmented, slightly clavate. Male occiput pruinose; median occipital sclerite lacking fine, filiform setae; with a single row of dark macrosetae dorsally. Females of *N. costata* with dorsal occiput and area surrounding ocellar tubercle shiny black; occiput with some additional black macrosetae ventral to dorsal radiating row.

Thorax: Silver pruinose; erect, fine filiform and appressed, lanceolate setose. Cervical sclerite lacking fine, filiform setae. Prosternum fine, filiform setose. Metanepisternum behind posterior spiracle setose. Fine, filiform setae lacking on proepimeron, anepimeron, meron, and metakatepisternum. Scutum with 3 notopleural, 2 supra-alar, 1 postalar, and no dorsocentral pairs of macrosetae. Scutellum with 1 or 2 pairs of marginal macrosetae. Legs: Fore- and midcoxa with 2 apical macrosetae anterolaterally and anteromedially; midcoxa with fine filiform setae on posterolateral surface; hindcoxa with 1 macroseta laterally. Femora with short, fine, erect setae; long, filiform, erect setae; and appressed lanceolate setae; anteroventral macrosetae present; without velutum on ventral surfaces. Wing: Costa with uniform anterodorsal and anteroventral rows of setae. Cell m₁ closed with long petiole. Membrane hyaline, densely microtrichose, some species with darkened areas adjacent to veins, and some species with anterior margin darkened.

Abdomen. Male. Silver pruinose medially with shiny cuticle laterally; erect, silver setose laterally, appressed, lanceolate setose throughout. Tergites often with a more dense posterior fringe of lanceolate setae. Female tergites mostly black pruinose, tergites 5 and 6 with some silver pruinosity; lanceolate setae black except posterior margin with silver lanceolate setae.

Terminalia (Figs. 7 and 11). Tergite 8 strongly emarginate anteriorly and posteriorly; setose posteriorly; with 1 pair of anterior sensory setae. Sternite 8 rounded anteriorly, emarginate posteriorly, length subequal to width; setose posteriorly; with 1 pair of sensory setae anteriorly. Epandrium slightly wider than long, emarginate anteriorly and posteriorly, posterolateral corners invaginated forming a cuticular pocket. Hypandrium reduced to small, triangular sclerotized area in membrane between gonoxoites, slightly wider in middle; not fused with gonoxoites. Gonoxoites separated medially; setose laterally and ventrally with clearly defined patch of densely spaced setae on medially concave surface of ventromedial margin of gonoxoite (this patch smaller in *N. costata* Kröber, but quite large in undescribed species); lateral gonoxoite extended posteriorly into an invaginated process, which is setose throughout except medially, apex of process with very small medially directed "finlike" projection; posteroventral margin extended and flangelike forming a discontinuous ridge between ventral surface of gonoxoite and ventral lobe forming an open cavity; ventral lobes long; dorsal edge with a medially directed "spur" of sclerotized cuticle meeting a laterally projecting "spur" of sclerotized cuticle from the aedeagus; gonoxoal apodeme distinctly separated from dorsal margin of gonoxoite and extending beyond anterior border of gonoxoite. Gonostylus straight, projecting posteriorly and turning dorsally abruptly, coming to a sharp point with a subapical spur. Inner gonoxoal process absent. Aedeagus in dorsal view triangular, longer than wide with posteriorly projecting basiphallus. Distiphallus in lateral view curving smoothly ventrally and slightly posteriorly.
at apex. On some species, dorsal apodeme with laterally directed extension. Ventral apodeme short, dorsoventrally flattened, extremely broad with middle area deeply emarginate to bifurcate. Ejaculatory apodeme dorsoventrally flattened and extended laterally at anterior end; long and narrowly bifurcate at posterior end.

**Female terminalia.** Tergite 8 with anteromedial extension broad, short, rounded posteriorly; sclerotized strip of cuticle connecting to median lobe of tergite 9 present. Sternite 8 invaginated posteriorly, posterior lobe with more densely spaced setae present. Median lobe of tergite 9 and adjacent membrane glabrous. Two accessory glands originate independently from furcal membrane close together and equidistant from anterior and posterior ends of furca. Spermathecal sac duct and 2 spermathecal ducts originate from common duct at a point less than length of furca. Spermathecal sac oval, slightly elongate basally; membrane without crenulations or lacunae. Spermathecal duct wider basally, tapering smoothly and slowly until reaching a valve located at about midpoint; membrane without crenulations. Spermatheca spherical, width and length subequal.

**Included species**

*costata* (van der Wulp, 1888) (*Psilocephala*), comb. nov. — van der Wulp (1888: 368), type locality Cordova [Argentina]. The syntype ♂ and ♀ specimens of *Wulp* are presumed destroyed (Rothschild et al. 2000). The holotype ♀ specimen of *F. atrum* [MEI 084113] from NHMW is herein designated neotype for *P. costata*. This neotype is designated in order to fix the concept of *P. costata* and to ensure universal and consistent interpretation of the same as a senior objective synonym of *F. atrum*.

≡ *atra* (Kröber, 1911) (*Psilocephala*), comb. nov., syn. nov. — Kröber (1911: 512), type locality Poterillos [Poterillos], Mendoza Province, Argentina. The female holotype specimen [MEI 084113] from NHMW was examined.

There are an additional 3 undescribed species.

**Description of Psilocephala atra** from Kröber (1911, translated from German)

"Psilocephala atra n. sp.

♀: A small striking species with peculiarly silky, shiny wings, that are tinged with black. Frons throughout shiny black, moderately convex. Lower face black. Antennae black; third segment considerably large; first and second black bristled. Occiput shiny black, strongly bulged, partially white pollinose; hair whitish. Scutum and scutellum black-brown, matte; both appear bare. Ventral thorax shiny black-brown, with silver-white tomentum. Abdomen black, rather strongly shiny, particularly the last segment. The second segment with white, silky margin. Belly black, somewhat grayish pruinose. Hair of the entire abdomen short, erect, black. Legs totally black-brown, the tibiae nearly black. Wings peculiarly silky, with extraordinary strong, black veins. Stigma black, covering the entire anterior marginal cell to the opening of the second long vein. Also the rest of the anterior wing margin appears black. The apical half of the wing appears blackish tinged. With favorable illumination every vein appears to be bordered broadly with black. The fourth hind marginal cell is closed. — Length: 6 mm. Habitat: Poterillos [sic]— Argentina

Type ♀: K. k. Hofmus. Wien."

**Description of Psilocephala costata** from van der Wulp (1888, translated from Dutch)

"7. Psilocephala costata n. sp.

When following Wiedemann’s description this species appears related to his *Theracea setulins*, but can be told apart from his species by the dark leading edge of the wings.

♂: Forehead and face silver-white; back of the head light grey, from above against the eyes with a crown of black bristles; beard white; antennae and mouth parts black or brown-black. Thorax ash-grey, from above with three dark longitudinal bands, in the sides and at the back edge of the little shield with some black bristles; breast side light-grey. Abdomen narrow, depending on the lighting with white incision/indentation or silver-white with blackish incision/indentation;
hypoptygium dark-brown, the upper appendages reddish, the lower black, all with quite long, black bristlelike hairs. Legs and halter black (like tar or wax). Wings greyish, at the leading edge with dark-brown, not sharply limited by an edge; the upper arm of the cubital vein before its outlet (ending) sharply bent inward and the fork-cell open widely.

A not so perfect and headless female, which, according to the wings, without a doubt belongs to the same species, has lighter, yellow-brown legs.

Cordova"

**Genus Notiothereva Metz & Irwin gen. nov.**

(Figs 8 &12)

**Etymology.** *notos* (Greek, masculine) = southern + *Theresa* (Greek, feminine) = the type genus for the family. “The southern Theresa,” referring to the historical consideration that all known species were collected in the southern part of South America and, since some of these species have extensive parafacial setae, they would have been placed historically in the genus *Theresa.*

**Type species:** *Theresa albiventris* Philippi, 1865, by present designation. – Philippi (1865: 770). Although not a species ever placed in *Psilocephala, T. albiventris* is the most commonly collected therevid species in Chile. This is chosen as the type species of the genus for the practical reasons that it is most often collected and to clarify already established knowledge of the species despite not having been described under *Psilocephala.*

**Synapomorphies.** The following synapomorphies unite *Notiothereva* with other Therevidae; two spermathecae, a spermathecal sac, and appressed, lanceolate setae on the femora. *Notiothereva* is characterized by the laterally diverted, articulated inner gonocoecal process (Fig. 8); one to many macrosetae on the ventrolateral corner of the posterior margin of the gonocoxites (Fig. 8); the ovate shape of the aedeagus in dorsal view (Fig. 8); the anterolateral margins of the dorsal apodeme turned up to form winglike structures (Fig. 8); and the extremely long spermathecal sac duct. The mid to subapical, dorsal, macrosetae on the forefemur of the species in the *N. bezzii* group are considered autapomorphic for that species group.

**Diagnosis**

**Head:** Male compound eyes holoptic, touching or separated by less than width of median ocellus; female compound eyes dichoptic. Species in the *N. bezzii* group with a horizontal band of color through the middle of the eye. Males in the *N. albiventris* group with the subsuperior, anterior ommatidia larger than the dorsal, lateral, and ventral ommatidia; female ommatidia of equal size. Male frons pruinose, setose; female frons extremely wide, slightly convex anteriorly, setose throughout. Females in the *N. bezzii* group with a dark, velvet spot adjacent to each eye margin; *N. bezzii* with a large, shiny callus above each antenna. Parafacial fine filiform setose. Antennae shorter than length of head. Scape setose, setae absent medially. Pedicel subspherical, setose. First flagellomere wider at base to wider at middle, tapering slowly towards apex. Second flagellomere cylindrical. Third flagellomere nearly three times longer than high. Apical style setaceous. Palp cylindrical, one segmented. Occiput pruinose, lacking fine, filiform setae; with a single row of dark macrosetae dorsally.

**Thorax:** Silver or gold pruinose. Cervical sclerite pruinose; lacking fine, filiform setae. Prosternum fine, filiform setose. Metanepisternum below posterior spiracle setose. Fine, filiform setae lacking on proepimeron, anepimeron, meron, and metakatepisternum. Scutum with 3 notopleural, 2 supra-alar, 1 postalar, and 1 or 2 dorsocentral pairs of macrosetae. Scutellum with 2 pairs of marginal macrosetae. **Legs:** Fore- and midcoxa with 2 apical macrosetae, one anterolaterally and one anteromedially, midcoxa with fine filiform setae on posterolateral surface, hindcoxa with 1 macroseta laterally. Femora with short, fine, erect setae; long filiform, erect setae; and appressed lanceolate setae; anteroverentral macrosetae present, velutum absent from ventral surfaces. The species of the *N. bezzii* group have one or
more strong, mid to subapical, macrosetae on dorsum of forefemur. **Wing:** Costa with uniform anterodorsal and anteroventral rows of setae. Cell m\(_1\) closed at wing margin or closed and petiolate (Kröber originally described the female of *N. bezzii* as having m\(_2\) open. This specimen is not available and could be of another species). Membrane hyaline; densely microtrichose; with darkened areas at veins r-m, m-m and m-a, at intersection of veins R\(_1\) and R\(_2\), at origin of M veins, and at base of M\(_2\); one undescribed species with dark areas more extensive.

**Abdomen. Male:** Entirely silver pruinose or patterned with silver and dark pruinosity; erect, fine, filiform, silver setose or with corresponding areas of erect dark setae on dark pruinosity. Male terminalia (Figs. 8 and 12). Tergite 8 strongly emarginate posteriorly, truncate anteriorly; medial area very wide; setose posteriorly; basal sensory setae not evident. Sternite 8 truncate anteriorly, emarginate posteriorly, slightly wider than long; setose posteriorly; with 1 pair of sensory setae anteriorly. Epandrium deeply emarginate anteriorly, slightly emarginate posteriorly; posterolateral corners curved ventrally with a sclerotized "process" projecting anteromedially away from edges of epandrium. Hypandrium wider than long, triangular, longer in middle; separate from gonocoxites. Gonocoxites separated medially; setose laterally and ventrally with one to several long, more bristlelike setae projecting from the ventrolateral margins; ventral lobes long. Gonostylus smoothly tapering apically, with a dorsolateral bladelike extension; setose except laterally; apex curved medially and dorsomedially. Inner gonocoxal process articulated with gonocoxite; long, slender, slightly clavate towards apex; deviated laterally at protrusion from gonocoxite; possessing setae apically except on dorsal surface. Outer gonocoxal process absent. Anterior end of gonocoxal apodeme distinctly separated from dorsal margin of gonocoxite, extending beyond anterior border of gonocoxite. Aedeagus in dorsal view distinctly ovoid with posteriorly projecting basiphallus, longer than wide. Distiphallus in lateral view greatly attenuated, smoothly curving ventrally; with lateral teeth apically. Dorsal apodeme usually with medial, anteriorly directed extension on a more ventral plane. Species in the *N. albivenensis* group with a lateral and a medial carina on the dorsal apodeme just anterior to basiphallus. Anterolateral corners of aedeagus with dorsolateral to dorsally projecting extension forming a short tube when viewed posteriorly. Ventral apodeme short, narrow; cylindrical or sticklike; directed ventrally then abruptly directed anteriorly. Ejaculatory apodeme dorsoventrally flattened and extended laterally at anterior apex; long and narrowly bifurcate at posterior apex.

**Female terminalia.** Tergite 8 with anteromedial extension broad, rectangular; sclerotized strip of cuticle connecting to median lobe of tergite 9 present. Sternite 8 invaginated posteriorly; posterior lobe with more densely spaced setae. Median lobe of tergite 9 and adjacent membrane glabrous. Two accessory glands originate close together, but independently from the furcal membrane. Spermathecal sac duct and 2 spermathecal ducts originate from a short common duct that is shorter than the length of the furca. Spermathecal sac subspherical, slightly elongate basally; membrane without crenulations or lacunae; spermathecal sac duct long, at least three furcal lengths. Spermathecal ducts wider basally, tapering smoothly and slowly until reaching a valve located at about midpoint; membrane without crenulations. Spermatheca spherical, width and length subequal.

**Included species**

*albivenensis* (Philippi, 1865) (*Thereva* comb. nov. – Philippi (1865: 770), type locality Santiago, Chile. Two male specimens [MEI 134684, MEI 134685] labeled "*Thereva albivenensis* Phil.” Black ink on gray label; Philippi material/Museo Nacional de Historie Natural/dc Chile; V. Pérez” black type on white label from MNNC were examined. These specimens are considered part of Philippi’s original syntype material and one of the males [MEI
134684] is designated as the lectotype. This lectotype is designated to fix the concept of *T. albiventris* and to ensure universal and consistent interpretation of the same. The other male specimen [MEI 134685] is designated as paralectotype.

**bazzii** (Kröber, 1911) (*Psileocephala*) comb. nov. – Kröber (1911: 501), type locality Peru, Piura, Saman. Kröber (1911) originally described this species from an unrecorded number of male and female syntypes. The male locality was recorded as “Peru; Piura, Saman. 25 Juli – 21 November” and the female locality was recorded as “Peru-Piura, 31 January.” A male specimen [MEI 113148] labeled “COTYPE” black type on red label; “Peru/Saman/21 XI” black ink on green label; “TypeNo./24209/USNM.” black type on red label (number is in ink); “Psileocephala/Bazzii Kröber/Kröber det. 1917” black type on white label (Bazzii Kröber is in ink) from USNM is considered to be matching in the description and part of Kröber’s original syntype series. This specimen is herein designated as lectotype in order to fix the concept of *P. bazzii* and to ensure universal and consistent interpretation of the same.

**brunnipes** (Kröber, 1911) (*Psileocephala*) comb. nov. – Kröber (1911: 509), type locality Araica, Chile. Kröber stated that he deposited the holotype specimen in SMTD. Several specimens on hand [2♂♂ 3♀ MEI 083725; MEI 083732; 1♀ MEI 083738] from the area of the type locality were identified as *Psileocephala brunnipes* by Irwin. The locality of the available specimens and the specimens identified by Irwin suggest this placement of the species.

**ruficornis** (Kröber, 1911) (*Psileocephala*) comb. nov. – Kröber (1911: 520), type locality Concepción, Chile. Kröber deposited the male holotype in the collection of Hermann. This type is not located in the collections of the USNM, ZMHB or ZSMC and is presumed destroyed. Kröber’s original description correlated with the type locality are sufficient for the current placement, but no specimens at hand specifically match his original description so a neotype is not designated.

**simulata** (Malloch, 1932) (*Thereva*), comb. nov. – Malloch (1932: 244), type locality “L. Nahuel Huapi, eastern end.” Argentina. Specimens identified by Malloch and compared to the male holotype by K. C. Holston (pens. comm.) were examined.

**Description of Thereva albiventris** from Philippi (1865, translated from Latin and German)

“*Th. Albiventris* Ph. Th. ♂ black; face white, white haired; thorax grey; abdomen clothed in soft, long, appressed, silver-white hair; posterior segment fleshy, white margined; wing hyaline; stigma black. Length 3 ½ lines, “extens. Al. 6 lin.”

First collected in Santiago

The antennae are brown, the third segment red brown with a brown style; the bristles of the first segment as well as the vertex are black, otherwise the face is white and white haired. The thorax above is covered with short white hairs, at the sides and at the hind margin as well as the hind margin of the scutellum it’s clothed with black bristles. The lateral thorax, the ventral thorax, the ventral abdomen, and the dorsal abdomen are clothed with long, soft, white, hairs. The femora are dark brown, ventrally with several black bristles, dorsally with fine, white, appressed little hairs, especially the hind femur; the tibiae are light brown, the tarsi are blackish towards the tips; both are black bristled. The wings have every crossvein bordered with a narrow, brownish margin; the fourth hind cell is closed.”

**Description of Psileocephala bazzii** from Kröber (1911, translated from German)

“Psileocephala bazzii n. sp.

♂: An extraordinarily thickly woolly yellow, brown haired species. Frons and lower face brownish yellow pruinose. Eyes with a purple band in the middle. Antennae dark red yellow, the style and a little piece of the dorsum of segment 3 are black. Bristles sparse, black. Occiput yellow brown, whitish downward. Vreath of setae fine black; hair woolly white. Thorax with no streaks or stripes. Scutellum similar to the scutum only darker colored. Ventral thorax black in ground color with thick, woolly, gray hair. Abdomen in ground color dark brown while getting darker towards the hind end. The ground color is barely ascertainable through the thick hair. Belly more blackish, with darker hind margins on the segments. Anal segment pale yellow brown. Halter whitish. Femora dark brown the tip yellow brown with appressed whitish hair. Tibiae and tarsi dark yellow brown. The tip of the tibia with a black brown ring. Last tarsus somewhat
darkened. Wing silky, finely yellow brown tinged. Depending on the illumination it is gray or shimmery white here and there; similar to *Thereva marginata* (MEIGEN). The stigma is intensely black brown. The small cross vein, the front border of the discoid cell, and the 4 hind marginal cell are brown bordered. At the fork of the 3 long veins lies a black brown spot. In the individual cells there appears, at a favorable illumination, a darker nucleus. In one specimen from Saman, 21 Nov., the cross veins of the wing appear completely bordered with black brown spots. The legs are completely dark brown the tarsi nearly black. By reflected light the frons bears somewhat in the middle two ivory black spots that meld together. The 4 hind marginal cell is closed.

Length: 7mm
Habitat: Peru: Piura Saman 25 July - 21 November
Type ♂: KROBER collection

♀: The female appears newly emerged [teneral]. It is similar to the male; it is dull yellow brown, yellow brown haired. Eyes as the male. Frons entirely characteristic shaped. Right where the eye band ends at the frons are two considerably convex, shiny amber bumps, whose underside is deep velvet black. Below the bumps the face appears whitish, silky. Antennae as in the male. Abdomen at the second and third segments with dark margin, the sides are expanded. Belly dark yellow brown throughout. The last segment on both sides with short spread out black hair. Legs throughout whitish yellow (probably evidence that the species is discolored). The wing appears finely yellowish tinged, the stigma is distinct. All the crossoveins are characteristically speckled with black rings. At the fork of the 3rd long vein and at other long veins appear black flecks. The 4 hind marginal cell is open.

Length: 10 mm
Habitat: Peru: Piura, 31. January
Type ♀: Bezz Collection

**Description of Psilocephala brunnipes** from KROBER (1911, translated from German)

"Psilocephala brunnipes" n. sp.

♀: Frons silky yellow brown. From the front, a darker transverse band and two brown spots next to the eyes shine. Hair very fine, black. Antenna light transverse yellow; 3rd segment rather short with a long style. Bristles black. Occiput yellow-gray, lower more white-gray. Occipital macrosetae black. Hair white. Notum black brown; humeri, transverse suture and hind corner yellow-brown (perhaps a result of bad preservation?). Hair appressed yellow-brown. Breast side light yellow, partially silver-gray pruinose. Scutellum light yellow-brown. Halter white-yellow. Abdomen yellow-brown, every segment’s anterior half darker; nearly shiny. The second and third segments with whitish fringes, 6.-8. Segments shiny red-yellow. Abdomen nearly bare, unusually sparsely haired, on the first segment yellowish, on the last, black. Stermites like the teguies. Legs wholly pale yellow-brown. The extreme tips of the hind femur and all of the tibiae, as well as the tips of all the metatarsi and all of the following tarsal segments blackish. Wing wholly pale brown tinged, nearly transparent, with distinct veins, some of which are bordered by lighter colored membrane. Stigma pale yellow-brown, margin indistinct. The 4th hind marginal cell wide open.

- Length: 6.5 mm.
- Locality: Chile, Arica 7. X.
Type ♀: K. Zoolog. Mus. Dresden

**Description of Psilocephala ruficornis** from KROBER (1911, translated from German)

"Psilocephala ruficornis" n. sp.

♂: Head silver-white shiny. The 1st and 2nd antennal segments black, white pubescent: 3rd light red-yellow. Style black. Occiput gray above, with yellowish tone, below whitish. Hair white: wreath of setae black. Scutum brown, with very fine, whitish, appressed and likewise fine, black-brown, erect hair. Scutellum similar to the scutum. Breast side white-gray, sparsely white haired. Abdomen matte black. The 1st segment light-gray pruinose: 2nd and 3rd segments with silver-white hind marginal fringe, that are laterally very much broader; 5th-8th segments thick white
Habitat: Chile – Concepcion
Type ♂: Coll. Hermann.”

Species transferred from Psileocephala into described genera

Genus Anolinda Gaimari & Irwin

The placement of Psileocephala longiventris Kröber into Anolinda broadens the diagnosis of this genus and is changed herein.

Rediagnosis of Anolinda
Frons pruinose silver or gold. Scutum gray or brown pruinose, with erect black, yellow or white setae and appressed white, yellow or gold setae. Dorsocentral setae present or absent. Legs orange. Dorsal apodeme of aedeagus parallel-sided and elongate, greater than two times length of ventral apodeme. Ventral apodeme thin, swordlike. Distiphallus oriented upwards, in line with ventral apodeme. Outer extension of gonocoxite with denser distribution of setae along margins than on rest of gonocoxite. Female tergite six silver pruinose with medial area bare of pruinosity or pruinosity restricted to extreme posterolateral corners. Common spermathecal duct greater than two times length of furca, originating on posterior surface of furcal bulla or from furcal membrane. Furcal bulla sclerotized anteriorly, crescent shaped.

longiventris (Kröber, 1911) (Psileocephala), comb. nov. – Kröber (1911: 510), type locality “San Bernadini,” Paraguay. Kröber (1911) originally described this species from an unrecorded number of male and female syntypes. Although he stated that the type for P. longiventris was deposited in the Hungarian Museum, a male specimen [MEI 113150] labeled “COTYPE” black type on red label; “Paraguay/S. Bernardi/no” black ink on green label; “Cotype No./24214/U.S.N.M.” black ink and type on red label; “Psileocephala/longiventris Krb./Krober det. 1911” black ink and type on white label from USNM is considered to be matching in the description and part of Kröber’s original syntype series. This specimen is herein designated as lectotype in order to fix the concept of P. longiventris and to ensure universal and consistent interpretation of the same. Two specimens labeled “Fieber Paraguay San Bernardino” are located at NHMW and are probably from the same series of specimens from which Kröber described the species.
= longa (Kröber, 1929) (Psileocephala), comb. nov., syn. nov. – Kröber (1929a: 425), type locality Paraguay. The male holotype [MEI 134682] from ZMHB was examined.

The decision to place these species into the genus Anolinda is based on the available syntype specimen of Psileocephala longiventris [MEI 113150] borrowed from the USNM, the holotype specimen of Psileocephala longa [MEI 134682] borrowed from ZMHB, and 18 female specimens [MEI 088363, MEI 088367 - MEI 088383] considered to be conspecific, which possess the internal female genitalic characters diagnostic for the genus. The P. longiventris syntype specimen is considered to be conspecific with the original syntype series determined as P. longiventris by Kröber (1911) and matches the description for P. longa.

Description of Psileocephala longiventris from Kröber (1911, translated from German)

“13. Psileocephala longiventris n. sp.
♂: Lower face silky, yellow-brown, the same on the frons, but with illumination from another direction it appears matte, black. The 1st antennal segment light, yellow-brown, 2nd and 3rd
darker. Terminal style nearly black. Bristles unusually fine and black. Occiput, above yellow-brown, below white-gray. Hair fine, white. Wreath of setae on the head black. Scutum dark brown with gold-brown longitudinal stripes which are weakly differentiated. Hair appressed, white-yellow, very sparse. Ventral thorax yellow-brown, with white tomentum and whiter hair. Halter light, yellow-brown with blacker knob. Abdomen unusually long and fine, transparent, brown with silver iridescence and entirely covered with short, appressed, white hair. The 7th segment strikingly dark. Belly like the upper-side; hair sparser, more yellowish, black on the last segment, considerably long and thick. Legs pitch-brown; fore femur and each tibia lighter. Wing considerably, intensely yellow-brown tinged. From the anterior border of the base to the mouth above the fork branches the wing is covered by intense dark brown. The upper fork branch also completely squared off in brown. The 4th hind marginal cell wide open. — Length: 9–11 mm.
The silver iridescence is so strong on this light colored specimen that the ground color of the abdomen is not blocked off.
Habitat: Paraguay
Type ♂ : Mus. Hung.
♀ : Similar in all characters to the male. Lower face and frons and upper half of the antennae silky yellow-brown. The rest of the frons and the vertex, depending on the lighting, deep ivory-black or dark, gold-brown. Abdomen black-shiny without tomentum. Instead it has the hind margin of individual segments ± with distinctly white-yellow iridescent spots. Wing more intensively tinged. 4th hind marginal cell wide open. — Length: 11 mm.
Habitat: Paraguay
Type ♀ : Mus. Hung."

Description of Psilocephala longa from KRÖBER (1929a, translated from German)
"Psil. longa n. sp., ♂ (Fig. 14), from Paraguay, 25.VI.
A extraordinarily thin formed species from the rubida v. d. Wulp group; which can be recognized because of the darkened anterior margin of the wing.
Length 10 mm. Antennae 0.8 mm. Wing length 7.6 mm. Wing width nearly 2 mm.
Eyes separated by a hair fine distance. Ocellar spot gray-black with 3 red ocelli. Frons and lower face silver-white, white pilose. Antenna reddish, basal segment reddish, very short white pilose, 3rd segment longer than the 1st and 2nd combined. Terminal style 2 segmented, with a longer bristle. Labium and labellum long threadlike, light red-yellow. Occiput below whitish, white pilose, above blackish-gray, black bristled. Thorax blackish, dull matte, with black median stripe. Lateral margin, the humeri, scutum, ventral thorax, legs rust-red with white luster. Scutellum with 2 setae. Legs with short black bristles. Calypter light yellow. Halter red-brown with darker knob. Wing brownish hyaline with intensive brown anterior margin out to the stigma, beyond this point out to the tip somewhat paler. Fourth hind marginal cell wide open. Abdomen very long, light rust-red, but intensively silver iridescent. 2nd–4th segments with white silky border, and similar to the posterior margin of the first segment is long white haired. Ventral abdomen light yellow-brown with white margin on segments 2–4. Anal segment light rust-yellow with two long valves and a long middle piece, black pilose."

Genus Brachylinga IRWIN & LYNEBOG
abdominalis (FABRICIUS, 1805) (Bibio) – FABRICIUS (1805: 68), type locality West Indies.
   = vexans (CURRAN, 1926) (Psilocephala) – CURRAN (1926: 2) Type locality St. Thomas, Virgin Islands. This species was synonymized with P. abdominalis by IRWIN & LYNEBOG (1981a).
   = pygmaea (KRÖBER, 1911) (Psilocephala), comb. nov., syn. nov. – KRÖBER (1911: 515), type locality St. Thomas, Virgin Islands. The female holotype [MEI 134207] from NHMW was examined.
albisea (MALLOCH, 1932) (Psilocephala), comb. nov. – MALLOCH (1932: 252), type locality L. Nahuel Huapi, east end, Argentina. The male holotype [BMNH(E) 241969] from BMNH was examined.
antennata (Kröber, 1911: 508) (Psilocephala), comb. nov. — Kröber (1911: 508), type locality Concepción, Chile. This species may well be synonymous with Brachylinga sericeifrons (Kröber, 1928b). Kröber deposited male and female specimens in the collection of Herrmann. This type is not located in the collections of the USNM, ZMHB or ZSMC, is presumed destroyed, and the description is insufficient for species comparison. Although matching in some color attributes and locality, Kröber’s emphasis of the antennal structures (the species’ namesake) suggests that it might be novel.

clausa (Kröber, 1929) (Psilocephala), stat. nov., comb. nov. (elevation of brunipes var. clausa to species rank). — Kröber (1929b: 170), type locality Samayhua, Bolivia. The female holotype [MEI 121031] from SMNS was examined and is not congeneric with P. brunipes (Kröber, 1911) — Kröber (1911: 509), which has been moved to the newly erected genus Notothereva.

interrupta (Kröber, 1911) (Psilocephala), comb. nov. — Kröber (1911: 507), type locality Santiago, Chile. The female holotype [MEI 113147] from USNM (Type No. 24213) was examined. Kröber deposited a male and a female “type” in the collection of Herrmann. These specimens are not located in the collections of the ZMHB or ZSMC, however, a female specimen [MEI 113147] from USNM (Type No. 24213) was examined. This female specimen labeled “Type” print on red label; “Chile/Concepcion/1904” handwritten on green label; “Type No./24213/U.S.N.M.” print and handwritten on white label is designated herein as lectotype. This lectotype is designated in order to fix the concept of P. interrupta and to ensure universal and consistent interpretation of the same.

ornata (Kröber, 1911) (Psilocephala), comb. nov. — Kröber (1911: 516), type locality Paraguay. The female holotype was deposited in the Hungarian Museum and is presumed destroyed. The placement of this species was primarily based on characteristics of the female frons coloration, which is diagnostic for species in this genus. There are no specimens at hand that match Kröber’s original description so no neotype is herein designated.

ornatifrons (Kroeber, 1911: 519) (Psilocephala), comb. nov. — Kröber (1911: 519), type locality Arequipa, Peru. The male holotype [MEI 134208] from SMTD was examined.

punctifrons (Kroeber, 1914: 58) (Psilocephala) comb. nov. — Kroeber (1914: 58), type locality Punta Arenas, Costa Rica. The male and female syntypes were originally deposited in ZMUH and are presumed destroyed. Female specimens at hand have been collected from Guatemala to Costa Rica and match the original description. A male specimen [MEI 108667] labeled “GUATEMALA: Dpto. Esquinta/13 53.08’N 90 29.02’W/Monterrico, 21 May 1997/Sm. S. L. WINTERTON” black type on white label; “Schlinger Foundation/Guatemala Expedition/May 1997” black type on white label is designated herein as neotype and deposited in INBC. This neotype is designated in order to fix the concept of P. punctifrons and to ensure universal and consistent interpretation of the same.

The phylogenetic status of Brachylinga

Brachylinga is in great need of revision. All of the above Psilocephala species fit within the current diagnosis for the genus and are at least superficially similar. The genus, however, is quite possibly paraphyletic with respect to other therevina genera (i.e., Lysilinga Irwin & Lynneborg, 1981) and is not founded on well supported apomorphies; rather, placement of species in this genus has been based on the absence of distinctive (synapomorphic) characters present in other, better defined genera. In removing these names from combination with Psilocephala, the hope is to bring to the attention of the reviser those species which should be considered as part of or near the generic concept of Brachylinga.

Description of Psilocephala antennata from Kröber (1911, translated from German)

“10. Psilocephala antennata n. sp. 
♂: Head black, the antennae are characteristic in their formation. The 1st segment thick, almost spherical; 2nd extremely short; 3rd wider nearly spherical to egg shaped, with a bent upright, considerably long and thick style. Antennae black, terminal segment sometimes shiny silver-white. Occiput blackish, below thick, gray haired. Scutum black, dull matte, covered sparsely with appressed yellow-brown hair. Ventral thorax black, covered sparsely with gray hair. Scutellum like the scutum. Halter black with lighter stem. Abdomen black, covered with white hair making it shiny silver. Anal lamella light red-yellow with rust-yellow hair. Belly like the upper side. Legs black. The middle, the hind tibia, and the base of the fore metatarsi yellow-brown. Wing smoky gray with a light brown stigma. The 4th hind marginal cell open. Veins considerably distinct. — 248
Description of *Pseudocephala clausa* from Kröber (1929b, translated from German)

"*Pseudocephala brunnipes* Kröb. var. *clausa* n. var. ♀ (Fig. 1).  
1 ♀ from Samuhuate, Bol. IV.

Length 8 mm, antennae 0.5 mm, wing 4.9 mm, -breadth 1.9 mm. Similar in almost all characters (Chile, Arica), but the scutellum is whitish-gray tomentose, with 4 black marginal bristles. Humeri, side- and hindmargin of the thorax gray tomentose. Abdomen shiny black, 1st–6th segments with whitish-gray hind marginal band, especially broad on tergite 2, the last bands have more white iridescent lateral triangles. 7th and 8th tergites dark/dusky red-yellow. Belly dirty yellow-brown with blackish parts. Legs wholly yellow-brown, only the hind femora are indistinctly blackish darkened, but white tomentose. 4th hind marginal cell closed and short stemmed. Veins (in part) fine, brown squared off. Lower fork nearly straight, only immediately before the wing margin somewhat bowed out; above remarkably bent, the branch originates at the tip of the wing point."

Description of *Pseudocephala interrupta* from Kröber (1911, translated from German)

"♀. *Pseudocephala interrupta* n. sp.  
♂: Lower face silver-white. Depending on the lighting the frons appears either black or white. Antennae unusually short. Scape somewhat thick, similarly the pedicel is deep black, black setose; the first flagellomere translucent red-yellow with a black border. The style is black. Occipit blackish above and covered with gray hair throughout below. Wreath of setae around the head black. Scutum dull black with appressed gray hair. Ventral thorax black, gray tomentose, gray pilose. Abdomen deep black not shiny. All segments with a circle of yellow-white hair on the hind margin. The circle is discontinuous medially on segments 2 and 3. Anal segment red-brown. Sterna black-brown with clear indentations. Legs black; knee yellow-brown. Femora with appressed white hair. Wing hyaline and particularly silky brilliant. The veins are black, sharply contrasted. Stigma black, with a sharp edge. The 4th hind marginal cell closed. — Length: 6 mm.

Habitat: Chile, Concepcion  
Type ♂: Coll. Hermann  
♀: Lower face and the frons above the antennae yellowish-white; the rest of the frons similarly the vertex brown, with black setae. The first and second antennae segments black, black setose; lacking on the third. Upper half of occiput yellow-brown, lower half white gray both covered with snow white pile, black setose. Scutum black-brown, dull, with two yellow-brown dorsocentral vittae with indistinct edges. Scutum with appressed yellow-brown hair. Ventral thorax white-green, lusterless, white pilose. Scutellum similar to the scutum. Halter light yellow-brown, base of the knob blackish. Abdomen deep black, lusterless, like the male. Segments 1–3 have white-yellow fringes of hair discontinuous medially, segment 4 with a trace of a similar fringe; segments 5–7 white-gray tomentose with a darker median line. Anal segment shiny black. Sterna dark brown. Sterna 2–4 with whitish-yellow fringe. Hair on the last segment of the abdomen
short, black and evenly spaced dorsally and ventrally. Legs dark brown, femur nearly black with appressed silver-white hair. Knee and extreme base of the metatarsi light yellow-brown. Wings like the δ. The 4th hind marginal cell closed. — Length: 7.5 mm

Habitat: Chile, Concepcion
Type ?: Coll. HERMANN

Description of Psilecephala ornata from KRÖBER (1911, translated from German)

"22. Psilecephala ornata n. sp.

♀: Lower face and frons near the antennae silver-white, shiny; the rest of the frons and the vertex deep gold-brown. At the border between the two colors is a deep, velvet black band, that is pouched downward twice. The 1st and 2nd antennal segments black, gray tomentose, very finely bristled; 3rd missing. Occiput above yellowish, below white-gray tomentose. Eye margin silver-white. Hair white, wreath of setae around the head black. Scutum, in ground color, black-brown, with two yellow-gray longitudinal stripes. Scutellum like the scutum; both are dull, matte, sparsely white haired. Ventral thorax silver-gray, lusterless. Halter blackish, knob whitish. Abdomen black, barely somewhat shiny. The 1st segment grayish; 2nd - 4th with silver-white hind marginal fringe that is barely, somewhat widened laterally; white-gray tomentose. Anal segment black. Belly similar to the upper side, somewhat more shiny. Femur black with appressed white hair. Tibiae and tarsi light, yellow-brown, the tips somewhat darkened. Wing hyaline. Stigma barely perceptible. The 4th hind marginal cell closed at the border. — Length: 8 mm.

Habitat: Paraguay
Type ?: Mus. Hung.

Description of Psilecephala ornatifrons from KRÖBER (1911, translated from German)

"27. Psilecephala ornatifrons

♂: Lower face and lower portion of the frons silver-white. Upper frontal triangle deep, velvet black, divided into two triangles by a longitudinal groove. Antennae black, black setose; 3rd segment short with a proportionately long and strong style. Occiput above yellow-gray with black bristles, laterally yellow-brown with yellow-browner hair, lower white-gray with grayer hair. Scutum black in ground color, looks dark brown because of the pubescence, with two very narrow, light longitudinal stripes. On the second third of the scutum they flow together and broaden into a spot as they reach the scutum. The broad, brown stripe between them is divided by a light, longitudinal line. All hair short, appressed, yellow-brown. Scutellum yellow-brown, dull matte. Ventral thorax white-gray, woolly gray haired. Halter brown with a whitish stalk. Abdomen silver-white, shiny; 2nd and 3rd segments with broad 4th with narrow, silver-white, hind marginal fringe. Anal segment red-yellow. Hair white throughout. Belly white-gray, dull matte, with light white fringes on 2nd–4th segments and whiter hair. Femora black, white haired. Tibiae light yellow-brown, the extreme tips blackish. Tarsi black, the bases yellowish. Wing nearly clear as glass, completely tinged pale brownish with brown, very distinct veins and a sharply defined, light brown stigma. The 4th hind marginal cell closed. Length: 7 mm.

Habitat: Peru Aroquipa. 13. XI
Type ♂: K. Zoolog. Mus. Dresden"

Description of Psilecephala punctifrons from KRÖBER (1914, translated from German)

"Psilecephala punctifrons n. sp.

black. Bowed pale spot distinct, blackish. Fourth hind marginal cell narrowly open. — 7 mm.
The species is closest to *P. gracilis* Kröb.
Abdominal bands interrupted. Anal segment red-yellow.............................. *P. gracilis* Kröb.
Abdominal bands uninterrupted. Anal segment black............................... *P. punctifrons* n. sp.
♀: It can easily be distinguished by the head design. Lower face and the portion above the antennae shiny silver-white. Vertex brown, dull matte, with two darker, isolated longitudinal streaks. Between the vertex and the frons lie two deep, ivory-black, large spots. The spots lie close to the eye margin and a brown-gold line travels down between them to the antennae. Occiput gray-brown, turning white ventrally, snow-white haired. Wreath of setae around the head black. Scutum matte brown, with traces of stripes and fine, yellowish, erect hair. Halter and wing as the m. Scutellum brown, gray-white on the posterior margin, with four black setae. Ventral thorax and legs as the m. Abdomen shiny black. First segment white haired on the posterior margin; second and third with complete silver-white bands. Fourth segment with silver-white lateral spots; fifth and sixth with narrow uninterrupted white bands. Seventh shiny black. Circle of setae brownish. — 7 mm.
Immediately distinguishable from its nearest relative, *P. interrupta* Kröb. by the two marks on the frons.
One ♀ and one ♀ from Punta Arenas, Costa Rica. 14 - 21 VII — Type : ♀ and ♀ Mus. Hamburg.”

**Genus Cyclotetus Walker**


*fascipennis* (Macquart, 1846) (Thereva), *comb. nov.* – Macquart (1846: 232), type locality Central America. Macquart figured the wing and head from lateral view. The placement of this species was based on the diagnostic banding of the wing (Macquart’s figure 5) and diagnostic characters in the original description. These characters include the black, hairy scutellum; the black, shiny callus on the frons; elongate antenna; narrow, apically rounded first flagellomere; and the thickened anterior basitarsus.

*femorata* (Kröber, 1911) (*Psilocephala*), *comb. nov.* – Kröber (1911: 522), type locality Paraguay. The male holotype was deposited in the Hungarian Museum and is presumed destroyed. The placement of this species was based on the diagnostic features in Kröber’s original description and the type locality. These characters include the deeply sunken, velvety black frons; the brown stripe between the notum and the pleura; and the deep, velvety black scutellum.

The female holotype was deposited in Hamburg and is presumed destroyed (Weidner 1967). The placement of this species was based on the diagnostic features in Kröber’s original description and the type locality. These characters include the deep black, matte pruinosity on the upper frons and vertex with the dorsally extended lateral corners and the broad, light gray band between the humerus and the wing base.

**Description of Psilocephala fascipennis** from Macquart (1846, translated from Latin and French)

“*Thereva fascipennis*, new” [from Latin]

“Ashen. Scutellum black. Apex of the abdomen brownish yellow. Feet red. Wing darkly banded. (Tab. 9, fig. 5)” [from French]

“Length. 4 lines. Female. Proboscis slightly projecting. Face bare, black, with a covering of white tomentum. Frons narrow; lower part larger with a covering of slate covered tomentum. The rest is black, with callus glossy, bisected in the middle. Antennae slightly elongate; the first segment cylindrical, slightly elongate with very short hairs; third is straight, narrow and rounded at the extremity, terminated by a very short, indistinct style. Thorax dull gray; sides slate colored; scutellum black, hairy. Abdomen narrow, conical, blackish gray; the sixth and seventh segments brownish yellow; the last is terminated by a circle of very small bristles. The tarsi are brown, the first segment of the anterior leg is a little thick. The wings are yellowish anteriorly followed by
a clear band, then a brownish band and finally the apex is clear.
From Central America. Collection of M. ROBYNS, of Brussels.”

Description of *Psilopephala femorata* from KRÖBER (1911, translated from German)

“10. *Psilopephala femorata* n. sp.
♂: Lower face and frons white. Frontal triangle itself deeply sunken, ivory black. The 1st and 2nd antennal segments slender, brown, 3rd missing. Occiput dark gray above, silver-white below. Hair white; wreath of setae around the head black. Scutum thick, gold-brown haired. Ventral thorax silver-gray, barely shiny, gray haired. A brown vitta, prevalent with black-brown hair, lies between the dorsal and ventral thorax. Scutellum deep, velvet-black, with light brown bristles. The ground color of the abdomen is black and covered throughout with appressed, white hair. It’s nearly silver-white, shiny, but with a bit of yellow. A lighter hind marginal fringe appears only from thicker hair. Belly black, barely shiny, with short, erect, white hair. Coxae black. Basal half of the femora black-brown, apical half light yellow-brown with silver-white appressed hair. Fore and middle tibiae and tarsi black-brown. Middle segment of the hind tarsus nearly whitish. Wing completely hyaline.
Veins very fine. Stigma absent. The 4th hind marginal cell closed. — Length: 6.5 mm
Habitat - Paraguay
Type ♂ - Mus. Hung.”

Description of *Psilopephala nigritrons* from KRÖBER (1914, translated from German)

“*Psilopephala nigritrons* n. spec.
♀: Very similar to *P. quadrimalculata* KRÖB. Lower face and frons and upper half of the antennae intensely silver-white shiny. Vertex pure black, dull matte. The border of both colors proceeds to the edge, and then after is directed upward. Vertex narrow, only as broad as the ocelli above. Antennae thin, black. First segment thick with silver-white pollen. Occiput gray-white, below lighter, white haired. Wreath of setae around the head black. Scutum black, in ground color, but with thick gray-white tomentum, with two distinct, whitish longitudinal lines. Between the shoulder and the wing base lies a broad, white-gray band. Scutellum gray-white. Ventral thorax shiny, black, but complete with silver-white tomentum. Halter black-brown. Abdomen shiny black. First to the third segment with an uninterrupted snow-white hind marginal band, white haired. Before lies a lateral strongly expanded white-gray band of tomentum. Fourth segment wholly black. Fifth and sixth with almost square, silver-white lateral spots. Seventh segment shiny black. Coxae silver-white tomentose. Femora deep black, tibiae and tarsi dark brown. Wing hyaline.
Veins fine, brownish. Stigma absent. Fourth hind marginal cell wide open. — 8 mm.
Punta Arenas in Costa Rica. R. PAESSLER leg. 4.–6. V. Type: Mus. Hamburg
This species can be distinguished from *P. quadrimalculata* KRÖB. by the absolutely black frons, which lacks any reflexions.”

**Genus Dichoglena IRWIN & LYNEBOG**


*nigrina* (KRÖBER, 1914) (*Psilopephala*) — KRÖBER (1914: 53), type locality Colorado, USA.
  = *amplifrons* (COLE, 1925) (*Psilopephala*), replacement name for *P. latifrons* COLE, 1923 preoccupied by *Psilopephala latifrons* (FREY, 1921), type locality New York, USA.
  = *latifrons* (COLE, 1922) (*Psilopephala*), nec latifrons FREY, 1921 (Aristothereya), junior secondary homonym, preoccupied in Psilopephala latifrons (Frey, 1921) — FREY (1921: 82).

*mendicula* (LOEW, 1871) (*Psilopephala*), comb. nov. — LOEW (1871: 200), type locality Kuluk, Russia. The location of the female holotype specimen is unknown. A female specimen [MEI 134683] from MLUH collected at “Sanny Djuvan” is labeled *Psilopephala mendicula* det. KRÖBER 1926. Although in poor condition, this specimen has diagnostic characters that place it within *Dichoglena*. The lower frons and upper face is produced anteriorly, there are bands of dark velutum between the parafacial and lower frons, and the forecoxae have several robust black macrosetae. The placement of this species was based on this identified specimen in combination with the type locality and original description.
Description of *Psilocephala mendicula* from Loew (1871, translated from Latin and German)

“106. *Psilocephala mendicula*, nov. sp. ♀ [German]
Brown, with a likewise colored frons, the abdomen with black transverse bands; legs muddyellow, the femora partially black; wing dilute brown. [Latin]

Darker, front similar colored, darkened, abdomen black banded, feet golden-yellow, femora in part black, wing dilute slightly darkened body length 4 ¾ lines – wing length 3 ½ lines [German]

It has no similarity with any of the other as yet described *Psilocephala* species, in comparison she is similar to some extent to *Thereva subfasciata* Schumm., only it is slimmer, has a much browner overall color and darker wing. The ground color of the body is black. Frons uneven, relatively broad, above less constricted, like the rest of the *Psilocephala* species, from mud color dusting matte brown, with black hair, only in the area adjacent of her anterior margin is occupied sparsely with whitish, velvet like hair. Face inclusive of the small cheeks lower half of the occiput with dense white dust the upper half of the occiput therefore mud yellow, nearly ochre yellow dusted. The pale brown palpi, the chin and the lower half of the occiput with white hairs; the upper half of the occiput with a few black bristles. Antennae black, the first two segments with grayish mud yellow dust and with black bristles. Thorax and scutellum of mud colored dust brown with very fine yellow tomentum and with short black hairs. The usual bristles on the side of the thorax and the posterior end of the scutellum also black. The narrow interstice of the outer broad thorax stripe has a somewhat more yellowish tending coloration, but it is barely perceptible, and could be completely overlooked without careful observation. Lateral thorax white dusted gray with white hairs. Abdomen black brown, somewhat shiny; the first segment with white posterior margin, the following five segments with white dust, on the lateral sides broader hind stripes; on the seventh segment the dusting is becoming also lighter going to the posterior margin, but there is no light posterior margin; the 8th segment is not dusted and shiny black. Venter on the first segments whitish, further posterior with yellow dust, overall completely dull; the first segments of the venter with relatively broad, dirty white posterior margins. The hairs of the abdomen are pale yellow the upper side of the first segment whitish, on the anterior sternites pure white. The coxa blackish, white dusted and with white hairs, and with a few black bristles. The front femur black with mud yellow tip and with a trace of a mud yellow longitudinal stripe on the inner side; the mid femur mud yellow, before the end very strong brownish, especially on the upper side; the hind femur on the under side mud yellow, on the upper side black or brown black. The tibiae mud yellow with brown black tip. The first three tarsal segments with the same brownish yellow coloration, but each is darkened on the apical end, while the both last segments are completely black. The halteres pale yellow, the knob brown at the base. Wings with intense brownish tinge, which is more intense around the crossveins, around the bifurcation of the third longitudinal veins and on the anterior side of the frontal part of the fourth longitudinal vein; stigma brownish. On the posterior half of the wing the veins are brown black, only the first part of the fourth, the first part of the sixth and the root of the seventh longitudinal vein brown yellowish; the costal vein and all the other veins on the anterior part of the wing have a brownish coloration, only the end of the second and even more the end of the third longitudinal vein are remarkably darker; the fourth hind marginal cell is wide open, the anal cell on the wing margin closed.

Locality – Kultuk [Siberia] collected by Mr. von Maack”

**Genus Entesia Oldroyd**


*fuzi* (Kröber., 1928) (*Psilocephala*), comb. nov. – Kröber (1928a: 34), type locality Perales, Chile. The female holotype [MEI 115972] from DEIC was examined.

= *fuzi* (Kröber, 1928) (*Psilocephala*) – Kröber (1928b: 6), misspelling for *P. fuzi* Kröber, 1928.

*leptiformis* (Kröber., 1928) (*Psilocephala*), comb. nov. – Kröber (1928a: 33), type locality Valparaiso, Chile. The male holotype [MEI 115971] from DEIC was examined.
rubida (van der Wulp, 1888) (P. rubida), comb. nov. - van der Wulp (1888: 369), type locality Cordova [Argentina]. The types from the 1888 paper of van der Wulp are all presumed destroyed (Rotheray et al. 2000, p. 393 “Taxonomic Notes”). A female specimen [MEI 134210] collected from Tucuman, matching van der Wulp’s original description, and determined by Kröber as Psilocephala rubida van der Wulp in 1926 is herein designated neotype and deposited in MLUH. This neotype is designated in order to fix the concept of P. rubida and to ensure universal and consistent interpretation of the same.

Description of Psilocephala fusi from Kröber (1928a, translated from German)

“Psilocephala fusi (n. sp.) ♀ Fig. 3: length 11, Antennae 0.6–0.8, wing length 7.5–8.5, wing breadth 2–2.2 mm. Chile, Perales, II. Type ♀: Dtsch. Ent. Mus. Dahlem. - The entire body is truly cinnamon brown. Frons nearly double the width of the ocelli, sides parallel, lower first considerably widened. The underside of the antennae somewhat lighter, antenna short, little reddish yellow. Basal segment cinnamon brown pollinose, strong black bristled. Second segment with few black bristles. Third with distinct two segmented terminal style. Third segment peculiarly constricted. Palpus and proboscis ochre colored, yellow haired. Occiput above yellow, lower whitish gray. Hair short, whitish. Wreath of setae around head consists of two concentric circles of light reddish yellow bristles. Thorax cinnamon brown with fine brown median stripe and a trace of a brown lateral stripe. Setae long, black. Scutellum the same as the thorax, with 4 setae. Breast side and coxae whitish. Legs light yellowish brown, somewhat shiny. Tibial band with shiny black spot. Bristles black, extraordinarily sparse. Calypter and halter ochre yellow. Abdomen with somewhat reddish tone. Third - fifth tergites with unclear, dark basal spot. Belly the same as the upper side. Hair extraordinarily sparse, yellow and black. Wing brownish, veins fine yellowish. Fourth hind marginal cell open. - 1 ♀ bears blackish basal spots on tergites 1–6, where through a lighter hind marginal fringe appears.”

Description of Psilocephala leptiformis from Kröber 1928a, translated from German)

“Psilocephala leptiformis (n. sp.) ♂ Fig. 2: length 9.9, Antennae 0.7, wing length 7, wing breadth 2.4 mm. - Chile, Valparaiso, IX. Type ♂: Dtsch. Ent. Mus. Dahlem. - Makes throughout the impression of a Leptis, caused by the condition of the slender body form and the spotted wings. Head and thorax have unfortunately suffered somewhat from moisture, so that the whole accurate color condition can not be given. Eyes very narrowly separated. The rest of theomentum of the lower face and occiput white. Antennae pale reddish yellow, black bristled. The style appears to be two segmented, at least I believe I can perceive a second groove. Third segment peculiarly constricted at the base with a strong, deep groove. Second segment small, plain. First hardly twice as long as wide. Palpi and proboscis pale reddish yellow, white haired. Thorax with the rest covered with brown tomentum and two whitish longitudinal stripes. Scutellum dark with a brown border and two setae. Breast side black, light brown spotted, whitish tomentose, white haired. Calypter brown hyaline; halter yellow brown, with a partly black knob. Coxae reddish yellow with yellowish tomentum, thick white haired. Legs pale yellowish brown. Hindfemur on top lengthwise blackish. Femora white haired. Tarsi black, the middle tarsus largest segment light. Abdomen cinnamon brown, lusterless. First - fourth tergite darker because of the moisture, second and third with light, yellowish hind marginal fringe. Hair on the first - sixth appears yellowish, without black. The edge toward the sternite is lighter yellowish with light white hoarfrost. Then follows from the second - sixth segments a complicated pattern of spots and black stripes that obscures the dorsal surface. Belly lighter yellowish brown with yellowish iridescence. Anal segment somewhat swollen, reddish brown, with long fine black hair. Wing peculiarly silky, ground color brown, with light, yellowish brown transparent spots in all the cells. All the cross veins, the fork veins, the stigma and the entire wing margin somewhat intensively browned, so that the wing appears particularly cloudy. Veins considerably fine, brown. Fourth hind marginal cell narrowly open.”
Description of *Psilocephala rubida* from van der Wulp 1888, translated from Dutch)

“8. *Psilocephala rubida* n. sp.
Same color all over, red-yellow, even the antennae, legs and halters, at the most the thorax from above slightly browoned; bristles at the sides and at the rear edge of the thorax dark-brown; abdomen of the male with red-yellow, dense hairs sticking-out; the genitalia are sticking out only slightly. Wings with brown-yellow, with a more vigorous tinge along the leading edge, the cubital vein only slightly bent.
A pair, Cordova.”

**Genus Irwinella Lyneborg**


*bakeri* (Kröber, 1929) (*Psilocephala*), comb. nov. – Kröber (1929c: 327), type locality Philippines. A male specimen [MEI 113145] labeled; “Dapitan, Mindanao, Baker” print on white label; “Cotype” print on red label; “*Psilocephala Bakeri* & Kröb. det. Kröber 1927” and a male specimen [MEI 113149] labeled; “Kolambugan, Mindanao, Baker” print on white label; “Cotype” print on red label; “*Psilocephala Bakeri* & Kröb. det. Kröber 1927” from USNM were examined. Kröber never designated a holotype specimen in his original description. Instead he listed all the localities of the specimens he had at hand; “Mindanao, Kolambugan, Davao, and Dapitan,” apparently confused about the locality information presented on Baker’s labels. The male specimen [MEI 113145] from Dapitan is considered part of the original syntype series and designated lectotype herein. This lectotype is designated in order to fix the concept of *P. bakeri* and to ensure universal and consistent interpretation of the same.

*bogoti* (Bigot, 1892) (*Psilocephala*), comb. nov. replacement name for *Psilocephala indica* Bigot, 1889 nec. indica van der Wulp, 1880. – Bigot (1892: 154), type locality India. The male lectotype [BMNH(E) 240485] was borrowed from BMNH and examined.

= *indica* (Bigot, 1889) (*Psilocephala*) preoccupied by *Psilocephala indica* van der Wulp 1880 (Bigot 1889: 326).

= *bogoti* (Lyneborg, 1975) (*Psilocephala*), unnecessary replacement name for *Psilocephala indica* Bigot, 1892. Lyneborg (1975: 92) unaware of Bigot’s action in 1892, replaced the name unnecessarily.

*ceylonica* (Kröber, 1912) (*Psilocephala*), comb. nov. – Kröber (1912b: 251), type locality Colombo, Sri Lanka. The male holotype was deposited in the Hungarian Museum and is presumed destroyed. The placement of this species was based on the diagnostic features contained in Kröber’s original description and the type locality. These characters include the velvet black uppermost part of the frontal triangle and the dark brown median vitta with white margins on the notum.

*cyllindrica* (Walker, 1848) (*Thereva*), comb. nov. – Walker (1848: 224), type locality “East Indies.” The male holotype [BMNH(E) 241895] was borrowed from BMNH and examined.

*indica* (van der Wulp, 1880) (*Psilocephala*), comb. nov. – van der Wulp (1880: 169), type locality Java. The location of the type is unknown. The placement of this species was based on characters from Wulp’s original description and the type locality. These characters include the silver lower frons, the yellow upper frons and lateral, black spots where the two colors meet, and the three dark brown vittae on the notum with the middle vitta being wider.

*javana* (Kröber, 1912) (*Psilocephala*), comb. nov. – Kröber (1912b: 253), type locality Java. Kröber deposited the female holotype of this species in the collection of Hermann. This collection is reputedly housed in ZMH but upon inquiry, was not available from that collection. Neither is the holotype in the USNM or the ZMSC so it is presumed lost. The placement of this species was based the diagnostic characters from Kröber’s original description and the type locality. These characters include the overall large size of the specimen (11.5 mm) and the broad, brown medial vitta on the scutum.

*kroeberti* Metz, nom. nov., replacement name for *frontata* Kröber, 1912 – Kröber (1912c: 123), preoccupied by *Irwinella frontata* (Becker, 1908) – Becker (1908: 23). – Type locality Formosa. The female holotype was deposited in HHNM and is presumed destroyed. Several specimens located at USNM and collected from Formosa were determined by Kröber as *Psilocephala frontata*. One of the female specimens [MEI 125432] is herein designated neotype. This neotype is designated in order to fix the concept of *P. frontata* Kröber and to ensure universal and consistent interpretation of the same.

lateralis (Eschscholtz, 1822) (Thereva), comb. nov. – Eschscholtz (1822: 112), type locality Philippines. Wiedemann (1828) included this species in his catalog of non-European Diptera, but quoted Eschscholtz’ original description. Although Kröber “seemed” to have full access to this species and redescribed it in 1912b and 1929c, he does not mention the holotype or its location so the location of the holotype is unknown. Specimens are on hand from MLUH with labels reading “Psilocephala lateralis Eschsch. by Kröber” and are from localities in the South Pacific. Kröber (1912b) also reports that the species is widely distributed on the South Pacific islands. The placement of this species was based on the diagnostic characters from the subsequent descriptions, the type locality, and specimens determined by Kröber. A neotype specimen was not designated because of the uncertainty of the existence of the holotype material and the inability to estimate whether the distribution of the species might span from the Philippines to the Solomon Islands.

obscura (Kröber, 1912a: 25) (Psilocephala), comb. nov. – Kröber (1912a: 25), type locality Formosa. The female holotype [MEI 125429] from DEIC was examined.

sequa (Walker, 1852: 157) (Thereva), comb. nov. – Walker (1852: 157), type locality East Indies. The male holotype [BMNH (E) 241957] from BMNH was examined.

sequens (Walker, 1852) (Thereva), comb. nov. – Walker (1852: 158), type locality East Indies. The male holotype [BMNH (E) 241909] from BMNH was examined.

shuoensis (Öuchi, 1943) (Psilocephala), comb. nov. – Öuchi (1943b: 484), type locality “Shuo,” North Korea. The current location of this holotype is unknown. Although Öuchi deposited holotypes of species in other families of Diptera in MSEL, upon inquiry, this holotype was not found. The placement of this species was based on the diagnostic characters from the figures in Öuchi’s original description and the type locality. These characters include the broad brown medial vitta on the notum and the coloration of the abdomen.

sinensis (Öuchi, 1943) (Psilocephala), comb. nov. – Öuchi (1943a: 477), type locality Tienmushan, Chekiang Province, China. The placement of this species was based on the diagnostic characters from Öuchi’s original description and the type locality. These characters include the overall coloration of the specimen, which is of limited value, but all that the description has to offer.

= chekiangensis (Öuchi, 1943) (Psilocephala), comb. nov., syn. nov. – Öuchi (1943a: 478), type locality Tienmushan, Chekiang Province, China. The female specimens of P. chekiangensis seem to be conspecific with the males of P. sinensis and are placed in synonymy herein.

The phylogenetic status of Irwiniella

Irwiniella is in need of revision. All of the above Psilocephala species fit within the current diagnosis for Irwiniella and are at least superficially similar. However, Irwiniella is quite possibly paraphyletic with respect to other therevine genera (i.e., Acrosathe IRWIN & LYNEBOURG, 1981) and is not founded on well supported apomorphies; rather, placement of species in this genus has been based on the absence of distinctive (synapomorphic) characters present in other, better defined genera. Of particular concern are those species from the Oriental region. It is anticipated that many of the names will also be synonyms. In removing these names from combination with Psilocephala, the hope is to bring to the attention of the reviser those species which should be considered as part of or near the generic concept of the genus.

Description of Psilocephala bakeri from Kröber (1929c, translated from German)

“♂ - length 8 to 10; antennae 1.3; wing length 8 to 8.4; wing width 2.5 to 3 mm.

Similar in all characteristics to P. lateralis, but the abdomen is completely different. Eyes separated by a hair fine distance. Under side of the mouth parts lengthwise brownish-yellow. Style apparently one segmented, so that the very small lens shape basal section is not perceptible from every position. The third segment is less strongly bristled than lateralis. Abdomen extraordinarily thick white haired. Second to fourth segments with narrower, shiny black band on the anterior margin; fifth to sixth with the anterior margin scarcely somewhat darker. In perfect specimens the hair is so thick and bluish silver shiny, that the ground color, except for the black bands, can’t be detected. Second and third sternites with black bands; fourth silver-white; fifth to the seventh black. Anal segment white pruinose, otherwise formed just like lateralis. The halter appears broader at the base, both of the knobs are silver white above.
Mindanao, Kolambugan, Davao, Dapitan. Leg. C. F. Baker."

**Description of Psilocephala bigoti** from Bigot (1892, translated from Latin)

"♂ . Antenna dark, base, black partly setose; haustellum dark; palpus black, white pilose; face black, white pruinose; beard white; thorax black, with two closely spaced lines; scutellum black; pleura white pruinose; halter dark, club, apex, reddish-yellow; abdomen black, incisions indistinctly red, ventrally white pruinose; femur black, tibia reddish-yellow, all the apices black, tarsi chestnut, metatarsis reddish-yellow; wing glassy, fourth cell closed before the margin.

♀ . Resembling the ♂; front black and ashen below; abdominal incisions paler.

Indies 3 ♂♂, 2 ♀♀?"

**Description of Psilocephala ceylonica** from Kröber (1912b, translated from German)

"Psilocephala ceylonica n. sp.

♂ : Throughout sparsely snow-white haired. Eyes contiguous, moderately large, shiny green. Lower face and frons snow-white, silver shiny. Utmost frontal triangle velvet black. First antennal segment black, second and third dark red-brown. Style black. Wreath of setae around the head black. Thorax matte dark gray with very dark brown median stripe, that is narrowly enclosed by white gray. The short, erect hair is blackish, the setae are black. Scutellum dark gray with the middle very dark brown. Ventral thorax silver-gray. Ground color of the abdomen matte velvet black, depending on the direction it is viewed either wholly black or silver white shiny. Hind margin whitish, blurry. Genitalia small, reddish, Belly the same as the upper side; segment margins distinct. Halter black-brown, stem and tip of the knob lighter. Femora black, silver-white haired. Tibiae and tarsi brownish yellow, on the foreleg very dark brown, to the remaining tips darker. Wing brown tinged, at the anterior border moderately intensive yellow-brown. Veins very strong, edges very square. Fourth hind marginal cell in one wing closed, in the other incomplete.

Length: 12mm.

Habitat: Colombo. [Colombo, Sri Lanka]

Type ♂ : Mus. Hung."

**Description of Psilocephala indica** from Van der Wulp (1880, translated from Latin and Dutch)

"23. Psilocephala indica nov. spec. [from Latin]

Thorax ashen, with three dark brown lines; abdomen shiny black, with white letter like markings; head silver; posterior frons with a hard covering; legs yellow, femora gray, tarsi dark brown; wing yellow, stigma obscure. – female length 9 mm. [from Dutch]

Face bare, silver-white same as the most anterior part of the forehead; the latter narrows towards the back and there leather-yellow; at the separation between the two colors a blackish little spot on both sides against the eyes; the back of the head seen from above with black bristles; the chinbeard whitish. Antennae as long as the head; the first segment cylindrical, grey, with short black bristles; the next two black, the second short, the third awl-shaped, with a short, downward oriented style; Thorax from above ashygrey, with three dark brown longitudinal stripes, of which the middle one is the widest and at the same time drawn the sharpest; on both sides at the front of the wing base are placed a row of three stiff bristles; breast sides light grey; scutellum at the root black; further light grey, and at the posterior edge with four black bristles. Abdomen coneshaped, black and rather shiny, with white side blotches, which on the first and especially the second segment become so wide that they pretty much form a white posterior border, which on the dorsal side continues and there is little of the base color revealed; the second segment the longest, the third and following noticeably shorter; the hairs on the back of the abdomen short and rather close together, mostly black. Coxae and femora light grey, tibiae reddish yellow, tarsi dark brown, the coxae with white hair, on the front ones from the front a pair of black bristles, on the rear coxae a single one sticking out to the sides. Femora and tibiae with short black bristles; on the tibiae in greater number. Halteres reddish yellow, with blackish stem. Wings a little yel-
low brown tinge, at the stigma more pronounced, vein pattern the same of our inland Ps. ardea; the fourth posterior cell not stemmed, but rather toward the rear edge closed.

A ♂, Java (Piepers).

As far as I can determine there is not one species of this genus, from the East-Indian archipelago described."

**Description of Psilocephala javana** from Kröber (1912b, translated from German)

"Psilocephala javana n. sp.

Female: Throughout brown colored. Frons dorsally at the width at the ocelli, ventrally considerably distributed, brown, hardly shiny, partly somewhat white iridescent. Antennae pale brown, black bristled. Proboscis pale brown, palpi nearly whitish, long white haired. Occiput above dark brown, below whitish. Wreath of setae around the head and hair white. Scutum light brown, matte, with a broad dark brown median stripe. Hair whitish, considerably scattered. Scutellum similar to the scutum. Breast side somewhat lighter, sparsely white haired. First to the fourth abdominal segment with whitish hind marginal fringe, laterally triangular, with a snow white spot of hair here. Hair on the first to the fourth segments whitish, on the fifth to the eighth black. Belly light brown, without divisions. Legs light brown, tarsi darker. Hindfemur with three black bristles. Wing hyaline. Fourth hind marginal cell closed. - Length: 11.5 mm.

Habitat: Java

Type ♂: Coll. Hermann."

**Description of Psilocephala kroeberi as frontata** from Kröber (1912c, translated from German)

"16. Psilocephala frontata n. sp.

♂. Lower face and frons (Fig. 19) upper half of the antennae silky white, the rest matte brown tomentose. A deep black band lies at the edge of both colors. Hair on the frons black, short, scattered. Antennae blackish brown, second segment and base of the third reddish shiny. Occiput slate gray, black bristled, snow white haired. Wreath of setae around the head black. Thorax matte yellowish brown with a dark brown longitudinal stripe, that is bordered by two diffuse light stripes. Scutellum similar to the thorax; middle dark brown. Breast side whitish gray, sparsely white haired. Halter blackish, stem and knob whitish yellow. Abdomen blackish brown, somewhat shiny. From the second segment on with whitish gray, triangular lateral tomentose spots. Second and third segment with silky hind marginal fringe. Hair extraordinarily sparse, white. On both sides of the fifth to the eighth segments it is erect black. Ground color of the belly black, matte, with gray shimmer; first to the third segments sparsely white haired. Femora gray tomentose, ground color black, extraordinarily sparsely white haired. Tibiae and tarsi light yellowish brown, with darkened tips. Bristles black. Wing brownish tinged, remarkably long, the abdomen strongly surpassing. Stigma hardly somewhat darker. Fourth hind marginal cell closed. - Length: 8.5 mm.

Habitat: Formosa

Type ♂: Budapest Museum"

**Description of Psilocephala obscura** from Kröber (1912a, translated from German)

"Psilocephala obscura nov. spec.

♂. Regrettably not perfectly maintained. Head considerably large. Eyes with beautiful blue-green sheen. Frons narrow, shiny black, without calli. Lower face and the area next to the antennae silver-white shiny. Antennae very thin; third segment with remarkably long acuminate style. Probosci white pilose. Occiput gray-black entirely sparsely shiny. Wreath of setae around the head black. Hair white. Scutellum and abdomen deep black, matte (although in perfect specimens ?), with thick, strong white pile. Second segment with traces of a silky, whitish hind margin. The white hair forms a triangular lateral spot on the second to the fourth segments. Fifth to the eighth segment short erect black pilose. Ventral abdomen plain black, without light margins, whitish pilose. Halter black-brown, tip of the knob yellowish. Coxa and femur black, appressed yellowish hair makes it appear gray. Tibiae light red-yellow, the extreme tips deep black. Tarsi
black. Base of the metatarsi more or less yellow-brown. Wing completely fine yellowish tinged. Stigma large, yellow-brown. Veins strong, brown. Fourth hind marginal cell completely short closed.

- Length: 12 mm. — Since a true callus is not present, on the contrary the whole frons including vertex is somewhat black shiny, this species represents a new group, since all of the species without calli usually have a matte brown, to black-brown tomentum on the frons.

Habitat: Anping, V. Formosa (H. Sauter leg.)

Type ♀: Deutsche Entom. Museum

Only selections of Ouchi’s original species descriptions were made available by a translator so the translated descriptions are not included here.

**Genus Lysilinga Irwin & Lyneborg**


maculifrons (Kröber, 1928) (Psileocephala), comb. nov. — Kröber (1928b: 20), type locality San Jose, Costa Rica. The female holotype was deposited in ZMUH and is presumed destroyed. Specimens from Guanacaste and San Jose, Costa Rica were compared to the description and were determined to belong to this species. A female specimen [MEI 011277] on a pin with a male [MEI 109120] in copula from this series from Estacion Maritza, Guanacaste are in good condition so the male specimen [MEI 109120] is herein designated neotype and deposited in INBC. This neotype is designated in order to fix the concept of *P. maculifrons* and to ensure universal and consistent interpretation of the same.

pilifrons (Kröber, 1928: 18) (Psileocephala) comb. nov. — Kröber (1928b: 18), type locality San Jose, Costa Rica. The male holotype [MEI 115974] from DEIC was examined.

**Description of Psileocephala maculifrons** from Kröber 1928b, translated from German)

“Psileocephala maculifrons n. sp. ♀ (Fig. 16)

Length 7 mm. Antennae nearly 1 mm. Wing length nearly 5 mm. Wing breadth 1.5 mm.

Costa Rica, San José, Farm La Caja, XI-XII, Type ♀: Hamburg

It has suffered somewhat from moisture, but the frons pattern is detectable. The whole head is dull, matte black, only whitish tomentose next to the antennae. Frons with two ivory-black spots at the eye margin, the spots are considerably smaller than those of *punctifrons* Kröb. Antennae short, compacted, deep black. Labellum and labium light yellow-brown. Frons above as narrow as the width of the ocellar tubercle. Eyes a lovely, dark green. Occiput black, below whitish tomentose and white haired; the wreath of setae around the head black. Thorax dark brown, lusterless, without detectable stripes with a completely minute, lateral area shiny, nearly calyptrat shaped. There are yellow-green cilia in the fore part of the scutum, and in front of the scutellum where they are considerably long. Scutellum dark brown, lusterless with 4 setae. Ventral thorax snow-white tomentose. Halter black-brown with lighter stem. Coxae and femora black, knee yellow-brown, from the middle femora to the apical quarter, bright. Tibiae and tarsi light, yellow-brown. End of the tarsi somewhat brownish, darkened. Femur with very shallow longitudinal grooves, finely silver-gray pruinose. Abdomen shiny black, narrow. First segment with yellow-green lateral hair fringe (perhaps this noteworthy coloring is only one consequence of the killing medium, or a condition of the dissolved vegetable color in the solution!). Second segment with white hind marginal fringe, third - fourth with fine silver-white, iridescent lateral triangles at the hind border. Anal segment black with a very short circle of setae. Wing brownish tinged. Stigma very unsharp. Veins strong; fourth hind marginal cell closed.”

**Description of Psileocephala pilifrons** from Kröber 1928b, translated from German)

“Psileocephala pilifrons n. sp. ♂ (Fig. 14)

Length 5–5.5 mm. Wing Length 3.6–4 mm.

A small species in the form of *P. senilis* F. Eyes finely divided. Frons matte black, considerably strongly arched, with many long erect, black bristles and with yellow hair next to the antennae.
The bristles are in part as long as both the basal segment and the antenna together. Antennae short, black. First and second segments white tomentose, third with fine, white, hoarfrost. From above and from the front the third looks remarkably sinuous, it has a distinctly two segmented terminal style, a short, stiff bristle is here, but is not completely central. The males have both suffered from moisture, but are so characteristic in structure that I nevertheless risk naming them. Lower face black, probably without tomentum. Palpi and labium light red-yellow. Head hair white. Wreath of setae on the occiput black. Thorax, ventral thorax and scutum black with whitish, yellow-brown, and white hair. Scutellum with 4 bristles. Calypters very small, yellowish. Halter brownish-yellow. Coxae and femora black; knee, tibiae and tarsi light yellow-brown. Extreme tips of the tibiae blackish, also the tarsal segments, so that the tarsi looked annulated. Abdomen yellow-brown, black spotted with the rest silver iridescent. Second and third segments with white hind marginal fringe. Hair of the abdomen long and white. Belly on the first sternite blackish, otherwise yellow-brown. Anal segment light rust-yellow, black haired. Wing yellowish tinged with fine brown veins. Fourth hind marginal cell closed. Upper fork strongly arched.

Costa Rica, San Jose, Farm La Caja, II–IV Type ♀ Hamburg”

**Genus Nanoxila WINTERTON & IRWIN**


_lutea* (WHITE, 1915) (*Psilocephala*), comb. nov. – WHITE (1915: 49), type locality Mangalore, Tasmania. The female holotype [BMNH(E) 241961] from BMNH was examined.

_rufa* (KRÖBER, 1912b: 253) (*Psilocephala*), comb. nov. – KRÖBER (1912b: 253), type locality Sydney, Australia. The female holotype was deposited in HNHM and is presumed destroyed (Weidner 1967). A female specimen [MEI 134209] labeled “*Psilocephala X‘ rufa KRB/KRÖBER det.1927*” black type (‘X,’ _rufa_, KRB. and 7 of 1927 is in ink) on white label: “Sydnic/Anabarynchus/rufa comata” black ink on white label from MLUH is designated herein as neotype. This neotype is designated in order to fix the concept of _P. rufa_ and to ensure universal and consistent interpretation of the same.

**Description of Psilocephala rufa** from KRÖBER (1912b, translated from German)

“*Psilocephala rufa* n. sp.

♀: Fronds very broad, gold-brown tomentose, with two transverse impressions. Below that lies a darker, bow shaped spot. Lower face white, with yellowish sheen. The very short antennae, the labrum and labellum are dark red-yellow. Occiput gray, above yellowish, below more white. Wreath of setae around the head black, hair white. Scutum cinnamon-brown, with countless, dark brown, completely fine spots, the hair comes out of these and with two not clearly demarcated, dark brown longitudinal lines. Scutellum red-yellow, with darker middle. Breast side red-yellow, white dusted. Abdomen dark red-yellow, on the second to the fourth segments with discontinuous, dark-brown longitudinal line. Demarcations absent. Belly light red-yellow, at the base white dusted. Hair extraordinarily sparse, at the first segment white, on the last black-brown. Halter light red-yellow. Legs light red-yellow. Wing pale brown, tinged. Trace of a bow shaped smear present. Veins fine, black-brown. Fourth hind marginal cell wide open. – Length 8 mm.

Habitat: Sydney. – Type ♀: Mus. Hamburg”

**Genus Neodialineura MANN**


_nitens* (WHITE, 1915) (*Psilocephala*), comb. nov. – WHITE (1915: 50), type locality Hobart, Tasmania. Specimens identified as _P. nitens_ by comparison with the male holotype were examined.

_saxalis* (WHITE, 1915) (*Psilocephala*), comb. nov. – WHITE (1915: 52), type locality Mangalore, Tasmania. The male holotype [BMNH(E) 241960] from BMNH was examined.
Genus **Penniverpa** IRWIN & LYNEBORG


_bromleyi_ MÖLLER & IRWIN nom. nov., replacement name for _Psilocephala sentilis_ BROMLEY, 1934 (in CURRAN, 1934: 361) preoccupied by _Penniverpa sentilis_ (FABRICIUS, 1805), type locality Kartabo, Guyana. The male holotype [MEI 134211] from AMNH was examined.


dives (SCHINNER, 1868: 147) (_Psilocephala_), comb. nov. – SCHINNER (1868: 147), type locality Venezuela. SCHINNER (1868) originally described this species from five male and one female syntype specimens from South America. A male specimen [MEI 134212] labeled “Venezuela/1864” black ink on green label, “_Psilocephala/dives SCHINNER/KRÖBER det 1911” black ink and type on white label from MNHN was examined. Four additional specimens are located at NHMW and should be examined before a lectotype is designated.

Description of _Psilocephala dives_ from SCHINNER (1868, translated from German)

“♂ Notum black; abdomen rust yellow, the first three segments with small black spots at the hind lateral corners, the whole body is covered densely with silver-white tomentum so that you can see the ground color from certain angles. The thorax has three darker vittae (change silvery at different angles) between the silver tomentum. The extremely short hairs on the middle of the notum are brownish, the hairs on the abdomen are silky, silverish-white, the tip of the abdomen has black hair. The genitalia are rust-yellow and very complex. The head is overall silvery-white. The eyes are holoptic. The antennae are brownish-yellow, the basal segments shimmery white. The stylus (tip of the antenna) is bent downwards. Proboscis and palpi blackish brown. Legs blackish. Coxae and femora shimmery white. Femora bare (no bristles). Tibiae rust-brown with a few short bristles. Calypter with white tuft of hair. Halter brown, with yellow knob. Wing nearly transparent, the fourth hind marginal cell open. 3”

♀ Black shiny; notum with three longitudinal stripes. Pleura with white tomentum and white hairs, abdomen, on the second and third segments, with rusty yellow hind margin, which are very narrow in the middle and dusted all over with white dust; fifth and sixth segments with broad rusty-yellow side spots over which there is a silver whitish tomentum; sternites with rust yellow bands more conspicuous, also a band on the first sternite, on the first segment the band is broader laterally. The frons is broader lower and narrow upper, all black, the head itself is like the male, whitish, the rest as in the male. 4”

Five ♂♂ and one ♀ from South America. The species is similar in gestalt to _P. ardea_ F.”

Genus **Ragioforma** IRWIN & LYNEBORG


_schmidtii_ (KRÖBER, 1928) (_Psilocephala_), comb. nov. – KRÖBER (1928b: 12), type locality San Jose, Costa Rica. Male and female syntype specimens were deposited in ZMUH and are presumed destroyed. A female specimen [MEI 115975] labeled “Farm La Caja/8km. West S. José [sic]/Nov.-Dec. 1924” black type on blue label; “_Psilocephala schmidtii_ /KRÖBER det. KRÖBER 1927” black ink and black type on white label; “Syntypus” black type on red label; “Type” black type on red label; “Mus. Hamburg” black type on white label; “_Psilocephala/schmidtii_” black ink on white label; “Coll. DEI/Eberswalde” black type on white label from DEIC is herein designated lectotype. This lectotype is designated in order to fix the concept of _P. schmidtii_ and to ensure universal and consistent interpretation of the same.

Description of _Psilocephala schmidtii_ from KRÖBER (1928b, translated from German)

“_Psilocephala schmidtii_ n. sp. ♂ (Fig. 6 and 7)
♂. Length 10 mm, antennae 1.4 mm, wing length 9.3 mm, wing breadth 3.1 mm.
♀. Length 11.5 mm, antennae 1.1 mm, wing length nearly 10 mm, wing breadth 3 mm.
Costa Rica, San José, Farm La Caja, XI–XII. Type ♂: Hamburg

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A large, slender yellow-brown species with light yellow-brown legs and violet eyes that are separated by the thickness of a hair. Frons gold-yellow tomentose, fine and very short black haired. Lower face extending up to next to the antennae silver-white tomentose. Antennae pale, red-yellow with a long segmented terminal style. The terminal segment is only black. Labellum small, spherically, similarly the labium, light red-yellow. Occiput above gold-yellow, below silver-white haired. Wreath of setae around the head fine and black. Thorax cinnamon-brown pollinose throughout with 3 suggested broad, brown longitudinal stripes, completely lusterless. Hair short, appressed, yellow-brownish. Bristles long erect, black. Ventral thorax silverish, considerably lusterless. Scutellum with 4 bristles. Halter yellow-brown with blackish darkened knob. Calypters small, yellow-brown with long, sparse, snow-white hair. Legs long, light, red-yellow. Coxae completely silver-white tomentose. All of the tarsi and the ends of the hind tibiae blackish. Hair on the femora fine white, otherwise short black. Femora with several short, black bristles, tibiae with long bristles. Abdomen yellow-brown, from 2-6 becoming increasingly darkened, through the tomentum they appear slate gray, in reflected light silver-white iridescent. 2-5 tergites with fine white fringe. Anal segment light red-yellow, long black haired. Belly light red-yellow, slowly darkening to black-brown-red from the 3 segment. 2-4 with yellow fringe. Hair fine white. Wing fine yellowish tinged with strong, brown veins. Costal and sub-costal cells to the stigma hyaline. The latter pale brown. Fork cell and fourth vein distinctly bordered with brown. A fine, hyaline, narrow stripe lies at the wing border between the mouth and the sub-costal and above the forks. 4 hind marginal cell narrowly open.

? Similar to the δ, but is nearly naked, the abdomen is without any metallic luster. Frons very long and narrow, above the width of the ocellar tubercle, downward to the antennae lovely, gold-brown tomentose. Antennae very deep articulated. The silver shine of the lower face travels up near the eye margin only a little bit at the antennae. Antennae short like the male. The stripes of the thorax shine laterally and appear, depending on the illumination, sometimes light or sometimes dark stripes. Ventral thorax yellow-brown with fine white tomentum, as are the coxae. Scutellum with cinnamon-brown middle. Abdomen yellow-brown, moderately strong shiny. Third - fifth tergites with brown-black, + quadrangular basal spots that don't reach the lateral border. Hind border of first and second whitish, yellow-silk squared. Hair of the last third tergite erect, fine, red-yellow, on first - third black. Circle of setae on the anal segment rust-yellow, short, but strong. Belly unicolorously red-yellow. All other characters like the male.

I name the species in honor of the restless collector H. Schmidt in La Caja.

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