

Tables

Table 1. The diagnostic characters and type specimens for the five subgenera of *Conostigmus*.

Subgenus	Type species	Diagnostic Characters
<i>Conostigmus</i> s. str.	<i>C. alutaceus</i> Thomson, 1858 (location of type specimen(s) unknown)	Mesosoma not lengthened; pronotum not enlarged; mesonotum not reduced; transscutal articulation present, with mesoscutum and axilla as separate sclerites; sternaulus absent or present; wings absent or present; volsella not fused in males.
<i>Eumegaspilus</i> Ashmead	<i>C. canadensis</i> Ashmead, 1888 (location of male type unknown)	Mesosoma not lengthened; pronotum not enlarged; mesonotum not reduced; transscutal articulation present, with mesoscutum and axilla as separate sclerites; sternaulus absent or present; wings absent or present; volsella fused in males.
<i>Dolichoceraphron</i> Hellén	<i>C. linearis</i> Hellén, 1966	Mesosoma lengthened; pronotum not enlarged; mesonotum not reduced; transscutal articulation present, with mesoscutum and axilla as separate sclerites; sternaulus absent; wings present or absent; volsella not fused in males.
<i>Ecnomothorax</i> Dessart and Masner	<i>C. muesebecki</i> Dessart and Masner, 1965	Mesosoma not lengthened; pronotum enlarged; mesonotum reduced; transscutal articulation present, with mesoscutum and axilla as separate sclerites; sternaulus absent; wings absent; volsella fused in males.
<i>Szelenyides</i> Dessart	<i>C. confluens</i> Dessart, 1974	Mesosoma not lengthened; pronotum not enlarged; mesonotum not reduced; transscutal articulation absent, with mesoscutum and axilla forming a single sclerite; wings absent. Male unknown.

Table 2. A list of all museum repositories that contributed specimens to this study and their corresponding collection codens, updated from Johnson & Musetti (2004) and Arnett et al. (1993).

Collection Coden	Museum Name and Location
AMNH	American Museum of Natural History, New York, New York, USA
CAS	California Academy of Sciences, San Francisco, California, USA
CLEV	Cleveland Museum of Natural History, Cleveland, Ohio, USA
CNC	Canadian National Collection of Insects, Ottawa, Ontario, Canada
EDNC	North Carolina Department of Agriculture, Raleigh, North Carolina, USA
HIC	Hymenoptera Institute Collection, Department of Entomology, University of Kentucky, Lexington, Kentucky, USA
INHS	Illinois Natural History Survey, Champaign, Illinois, USA
MCSN	Museu Civico di Storia Naturale "Giacomo Doria", Genoa, Italy
MCZC	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, USA
MNHN	Museum National d'Histoire Naturelle, Paris, France
MSUC	Michigan State University, East Lansing, Michigan, USA
MZLU	Museum of Zoology, Lund University, Lund, Sweden
NCSU	North Carolina State University Insect Collection, Raleigh, North Carolina, USA
NHMUK (formerly BMNH)	The Natural History Museum, London, UK
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden
NMKE	National Museum of Kenya, Nairobi, Kenya
OSUC	C. A. Triplehorn Insect Collection, Ohio State University, Columbus, Ohio, USA
PSUC	Frost Entomological Museum, Pennsylvania State University, State College, PA, USA
QM	Queensland Museum, South Brisbane, Queensland, Australia
ROME	Royal Ontario Museum, Toronto, Ontario, Canada
SAMC	Iziko Museum of Capetown (formerly South African Museum), Cape Town, South Africa
TAMU	Texas A&M University, College Station, Texas, USA
UAM	Entomology Collection, University of Alaska Museum, Fairbanks, Alaska, USA
UCFC	University of Central Florida, Orlando, Florida, USA
UCRC	Entomology Research Museum, Department of Entomology, University of California, Riverside, California, USA
ULQC	University of Laval, Quebec, Canada
UMSP	University of Minnesota Insect Collection, St. Paul, Minnesota, USA
UNSA	Natal Museum, Pietermaritzburg, Kwa-Zulu Natal, South Africa
USNM	Smithsonian Institution, Washington, DC, USA
WIRC	University of Wisconsin Insect Research Collection, Department of Entomology, University of Wisconsin, Madison, Wisconsin, USA

Table 3. A list of the measurements and abbreviations used for the morphometric analysis.

Measurement Abbreviations	
Abbreviation	Measurement
HH	Head height (vertical); Longest vertical line between the dorsal and ventral margin of cranium (not the mandible) in lateral view.
HL	Head length (horizontal line). The longest anatomical line of the cranium that is perpendicular to the ventrolateral portion of the occipital carina in lateral view and extends between the anterior and posterior cranial margins.
HW	Head width. The longest horizontal anatomical line between the lateral cranial margins in frontal view.
IOS	Interorbital space. The shortest anatomical line between the compound eyes in frontal view.
EWf	Eye frontal width. Longest horizontal anatomical line between the medial and lateral eye margin in frontal view.
EHf	Eye frontal height. Longest vertical line between the dorsal and ventral eye margins in frontal view.
OCL	Ocello-clypeal line. The longest distance between the median ocellus and the distal clypeal margin (the head has to be in a position with the maximum median anatomical line of the cranium).
OOL	Ocello-ocular line. Shortest anatomical line between eye and lateral ocellus.
POL	Posterior ocellar line. Shortest anatomical line between lateral ocelli.
LOL	Lateral ocellar line. Shortest anatomical line between median and lateral ocelli.
scaL	Median anatomical line of scape.
pedL	Median anatomical line of the pedicel.
AscW	Anterior mesoscutal width. The anatomical line between the anterolateral edges of the mesoscutum dorsal view (measure one half if the specimen is poorly mounted and double).
PscW	Posterior mesoscutal width. The longest transverse anatomical line of the mesoscutum.
MsdL	Mesoscutal length. The longest median anatomical line of the mesoscutum.
MsdL	Mesoscutellar length. The longest median anatomical line of the mesoscutellum.
PcL	Petiole neck length. The median length of petiole neck.
PcW	Shortest width of petiole neck.
PcW	Shortest width of petiole neck.

Table 4. A table depicting all the morphological differences between male *Conostigmus* and *Dendrocerus*.

Character	Male <i>Conostigmus</i>	Male <i>Dendrocerus</i>
Flagellomere Shape	Symmetrical (Cylindrical)	Assymetrical (serrate, toothed, trapezoidal, or branched), except in <i>D. punctipes</i> species group and <i>D. penmaricus</i> species group
Ocellar triangle shape (POL to LOL)	Equilateral or Acute (POL equal to or less than LOL) in most species	Obtuse (POL greater than LOL) in all species
POL to OOL	POL less than OOL in most species	POL greater than OOL in all species
Sternaulus	Present or Absent	Never Present
Wings	Present or Absent	Never Absent
Notauli Posterior End	Always adjacent to transscutal articulation	Adjacent or not adjacent to transscutal articulation
Parossiculae presence (fusion with gonostipes)	Always present (not fused with gonostipes)	Present (not fused with gonostipes) or absent (fused with gonostipes)
Medioventral conjunctiva of the gonostyle-volsella complex (parossiculae fusion)	Present or Absent (parossiculae independent or fused)	Absent (parossiculae never independent)
Facial Pit	Absent in most	Present in most
Metapleural sulcus shape	Usually curved	Usually straight
Head shape	Usually globular or circular	Usually triangular

Table 5. A table depicting all the morphological differences between female *Conostigmus* and *Dendrocerus*.

Character	Female <i>Conostigmus</i>	Female <i>Dendrocerus</i>
Sternaulus	Present or Absent	Never Present
Wings	Present or Absent	Never Absent
Notauli Posterior End	Always adjacent to transscutal articulation	Adjacent or not adjacent to transscutal articulation
Facial Pit	Absent in most	Present in most
Metapleural sulcus shape	Usually curved	Usually straight
Head shape	Usually globular or circular	Usually triangular