

RESEARCH ARTICLE

## Annotated key to weevils of the world: Part 5 - Subfamily Entiminae (Curculionidae)

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Taxonomic entities included in the present key are: new tribe Isanirini Legalov, trib. n. (type genus *Isaniris* J. Thomson, 1858), three new subtribes Deracanthina Legalov, subtrib. n. (type genus *Deracanthus* Schoenherr, 1823) of the tribe Ophryastini, Rhigiina Legalov, subtrib. n. (type genus *Rhigus* Schoenherr, 1823) of the tribe Entimini and Mesagroicina Legalov, subtrib. n. (type genus *Mesagroicus* Schoenherr, 1840) of the tribe Naupactini. The systematic position of Gonipterina Lacordaire, 1863, placem. n., Auchmeresthinae Reitter, 1913, placem. n., Omilei Horn, 1876, placem. n., Brachycamacina Poinar, Legalov et Brown, 2013, placem. n., Trigonoscutae LeConte, 1874, placem. n. and Calyptilli Horn, 1876, placem. n. are changed. Changes of status for Strangalioidina Lacordaire, 1863, stat. n., Phyxeliina Horn, 1876, stat. n., Byrsopagina Lacordaire, 1863, stat. n., Canonopsina Dreux et Voisin, 1989, stat. n., Metacinopini Reitter, 1913, stat. n., Simoina Pierce, 1913, stat. n., Pseudocneorrhina Kono, 1930, stat. n., Gonipterina Lacordaire, 1863, stat. n., Pandeleteina Pierce, 1913, stat. n. are made. Statuses of Eurylobiini Jekel, 1856, stat. res., Cepurina Capiomont, 1867, stat. res., Coniatina Legalov, 2007, stat. res., Phaeopholina Legalov, 2011, stat. res., Macrotarrhusina Legalov, 2007, stat. res., Scythropini Lacordaire, 1863, stat. res., Platyomina Champion, 1911, stat. res., Evotini LeConte, 1874, stat. res. are recovered. New synonyms, *Parahypera* Brancsik, 1914, syn. n. to *Fronto* Petri, 1901 and *Parahypera ussurica* Brancsik, 1914, syn. n. to *Fronto capiomonti* (Faust, 1882), *Trichalophus rubripes* Zherikhin et Nazarov, 1990, syn. n. to *T. albonotatus* (Motschulsky, 1860), *T. korotyaevi* Zherikhin et Nazarov, 1990, syn. n. to *T. biguttatus* (Gebler, 1832), *Otiorrhynchus kasachstanicus* Arnoldi, 1964, syn. n. to *O. ursus* Gebler, 1844; *O. karkaralensis* Bajtenov, 1974, syn. n. and *O. relicinus* Arnoldi, 1975, syn. n. to *O. altaicus* Strierlin, 1861 are established. A key to the tribes and subtribes of Entiminae is provided. Systematic list of tribes and subtribes of Entiminae are given.

**Keywords:** Insecta; Coleoptera; Curculionoidea; Curculionidae; Entiminae; New taxa; New rankings; Checklist; Key

### Introduction

In the five part (first, second, third and fourth see in Legalov, 2018a, 2018c, 2018d, 2020b), a key to the tribes and subtribes of the subfamily Entiminae, descriptions of new taxa and lists of tribes and subtribes are given.

### Materials and Methods

The Curculionoidea species used for this study are deposited in the Institut Royal des Sciences Naturelles de Belgique (Belgium: Brussels), Institute of Systematics and Ecology of Animals (Russia: Novosibirsk), Museum für Tierkunde, Senckenberg Naturhistorische Sammlungen Dresden (Germany: Dresden), Zoological Institute of Russian Academy of Sciences (Russia: St. Petersburg), Zoological Museum of Moscow State University (Russia: Moscow), etc. General publications are given after the subfamily.

### Results and Discussion

Subfamily **Entiminae** Schoenherr, 1823

Lacordaire, 1863; Capiomont, 1867, 1868; Scudder, 1893; Petri, 1901; Champion, 1906-1909; Bovie, 1908; Reitter, 1912, 1913a, 1913b, 1914; Pierce, 1913; **Marshall, 1916, 1942, 1944a, 1944b, 1956**; Sharp, 1919; Heller, 1925; Hustache, 1925, 1947; Schenkung, Marshall, 1929, 1931a, 1931b; Csiki, 1934; Klima, 1935, 1936; Dalla Torre et al., 1936, 1937; Emden, 1936, 1944; Kuschel, 1949, 1952, 1954, 1956, 1958, 1992, 1995; Hoffmann, 1950; Voss, 1953, 1954, 1958; Zaslavskij, 1958; Arnoldi, 1960; **Morimoto, 1962; Kissinger, 1964; Bajtenov, 1974; Dieckmann, 1980; Pesarini, 1981; O'Brien, Wibmer, 1982; Richard, 1983; Gandhi, Pajni, 1984a, 1984b; Wibmer, O'Brien, 1986; Oberprieler, 1988, 1995, 2010; Dreux, Voisin, 1989; Pajni, 1990; Pelletier, 1991, 1994; Zherikhin, Egorov, 1991; Thompson, 1992; Zherikhin, 1992; Morimoto, Kojima, 1994; Kuschel, Chown, 1995; Marvaldi, 1997; Morrone, 1998, 1999, 2002; Alonso-Zarazaga, Lyal, 1999; Gaiger, 2001; Morimoto, Kojima, 2001;**



**Figures 1-16.** Entiminae: 1 - *Thecesternus affinis* (LeConte, 1857), mandibles; 2 - *Lepidophorus lineaticollis* Kirby, 1833, mandibles; 3 - *Leptopius tribulus* (Fabricius, 1775), mouthparts; 4 - *Sysciophthalmus bruchi* Heller, 1906, rostrum and head, dorsally; 5 - *Parhaptomerus schneideri* (Kirsch, 1878), rostrum and head, laterally; 6 - *Tanyrhynchus* sp., apex of rostrum, dorsally; 7 - *Lordops gyllenhali* (Dalman, 1823), rostrum and head, dorsally; 8 - *Ophryastes nivosus* (Fall, 1910), rostrum and head, dorsally; 9 - *Deracanthus* sp., rostrum and head, dorsally; 10 - *Deracanthus* sp., apex of tibia and tarsus; 11 - *Prypnus* sp., rostrum and head, laterally; 12 - *Entimus imperialis* (Forster, 1771), rostrum and head, dorsally; 13 - *Rhytideres plicatus* (Olivier, 1790), metaventrite; 14 - *Rhigus dejeanii* Gyllenhal 1833, metaventrite; 15 - *Rh. dejeanii*, rostrum and head, dorsally; 16 - *Cydianerus latruncularius* (Perty, 1832), rostrum and head, dorsally.

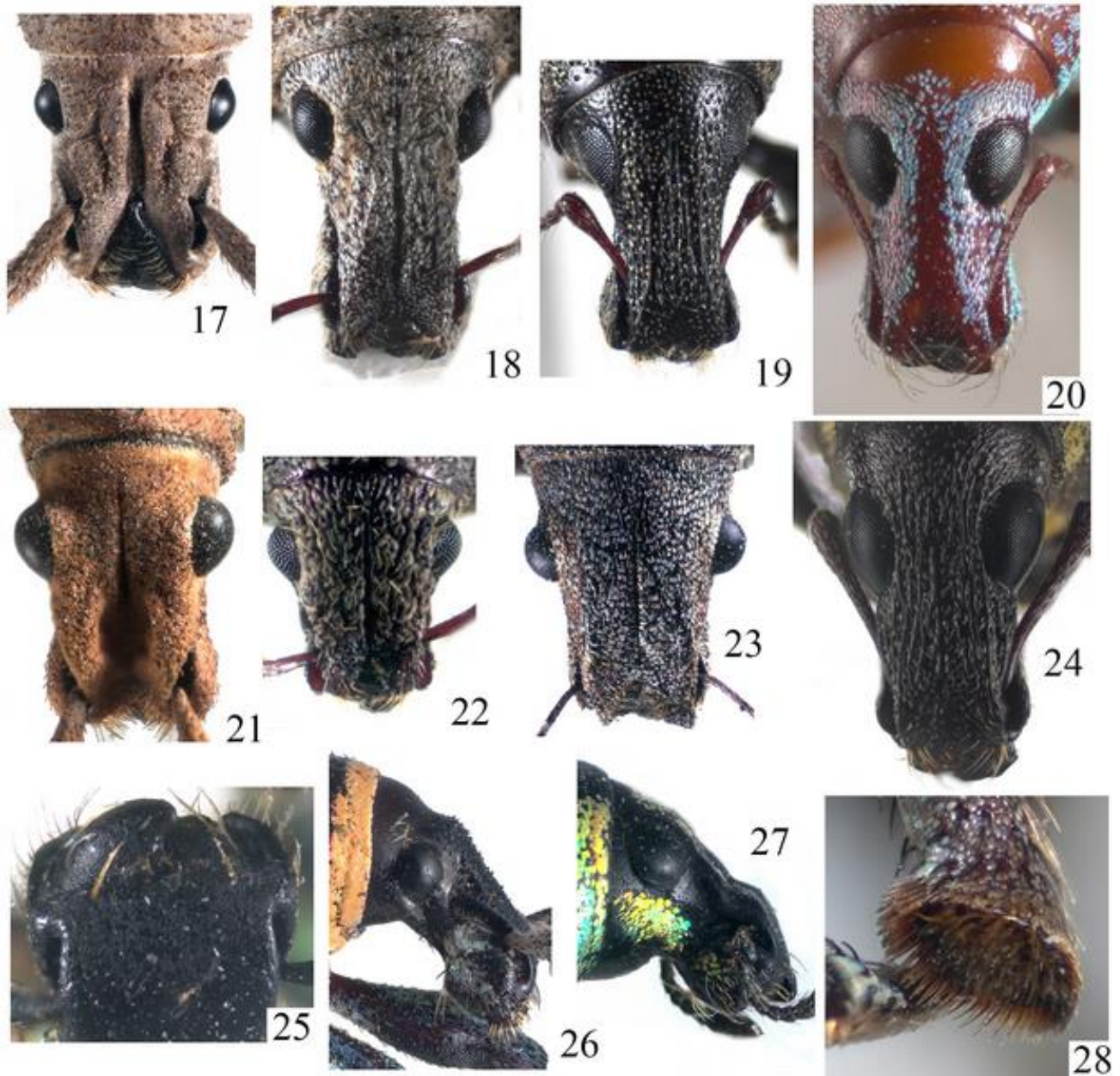
Anderson, Howden, 2002; Borovec, 2003, 2006, 2009, 2010, 2014, 2015; Marvaldi, Lanteri, 2005; Vanin, Gaiger, 2005; Morimoto et al., 2006; Velázquez de Castro et al., 2007; Colonnelli, 2009; Legalov, 2010, 2011, 2012, 2013, 2015, 2017, 2018b, 2020a; Machado, 2010; Yunakov, Kirejtshuk, 2011; Franz, 2012; Girón, Franz, 2013; Poinar et al., 2013, 2017; Marvaldi et al.,

2014; Oberprieler et al., 2014; Grebennikov, 2015, 2016; Legalov, Bukejs, 2015; Lanteri, Del Rio, 2016; Alonso-Zarazaga et al., 2017; Legalov et al., 2017, 2019; Machado et al., 2017; Poinar, Legalov, 2017; Bukejs, Legalov, 2019; etc.

### Key to tribes and subtribes of Entiminae

1. Eyes absent. Body small (0.8-2.4 mm) ..... Typhlorhinini
- Eyes distinct. Body usually larger ..... 2
2. Pronotum with postocular lobes (Figures 11 and 29) ..... 3
- Pronotum without postocular lobes (Figures 26 and 27) ..... 26
3. Tibiae with apical spurs ..... 4
- Tibiae lacking apical spurs ..... 5
4. Mandibles with scar of deciduous process. Rostrum longer than wide. Prosternum simple ..... Cylydrorhinini
- Mandibles without scar of deciduous process (Figure 1). Rostrum shorter than wide. Prosternum with rostral channel. ... Thecesternini
5. Mandibles prognathous (Figure 2), without scar of deciduous process or a very small scar ..... Byrsopagina (Tropiphorini)
- Mandibles not prognathous, with scar of deciduous process (Figure 3) ..... 6
6. Antennal scrobes dorsally in first half and laterally in second half of rostrum (Figures 4, 30 and 32) ..... 7
- Antennal scrobes laterally (Figures 7- 9, 12, 15 and 16) ..... 13
7. Rostrum long, strongly compressed laterally. Eyes flat, located closer to upper side of head (Figure 5) ..... Myorhinini (part)
- Rostrum short, if long than of a different shape and eyes widely separated ..... 8
8. Rostrum no **narrower** than head (Figure 30). Head without bare line under eyes reaching underside of head. .... Cyphicerina (Cyphicerini)
- Rostrum much **narrower** than head (Figure 32) ..... 9
9. Forehead much wider than rostrum. Rostrum sides narrowed from base to apical quarter. Head without bare line under eyes. .... Premnotrypini
- Forehead is approximately equal to or slightly wider than rostrum. Rostrum sides subparallel. .... 10
10. Rostrum without pterygia (Figure 6). Antennal scrobes almost reaching eyes ..... Tanyrhynchini
- Rostrum with distinct pterygia. Antennal scrobes definitely not reaching eyes ..... 11
11. Mandibles with more than three long setae. Head without bare line under eyes ..... Phyxeliina (Tropiphorini)
- Mandibles with three long setae. Head with bare line under eyes reaching underside of head. .... 12
12. Humeri convex ..... Phytoscaphina (Cyphicerini)
- Humeri rounded ..... Acanthotrachelina (Cyphicerini)
13. Eyes covered dorsally by conspicuous frontal tubercles (Figure 4) ..... Anomophthalmiini
- Eyes simple ..... 14
14. Procoxal cavities separated ..... Leptostethini
- Procoxal cavities contiguous ..... 15
15. Tarsi without pulvilli (Figure 10). Tibial apex with spines (Figure 10) ..... Deracanthina (Ophryastini)
- Tarsi with pulvilli. Tibial apex without spines ..... 16
16. Rostrum short, at most slightly longer than wide ..... 17
- Rostrum longer, distinctly longer than wide ..... 18
17. Mandibles with three long setae, bare. Humeri rounded. Maxillae covered laterally by prementum. .... Pseudocneorrhina (Trachyphloeini)
- Mandibles with more than three long setae, partially covered with scales. Humeri more or less convex. Maxillae **exposed** ..... Eudiagogini
18. Prosternum with rostral channel ..... Eurylobiini
- Prosternum without rostral channel ..... 19
19. Rostrum subparallel or slightly extended to apex (Figure 7). Body usually narrow and elongated ..... Lordopini
- Rostrum distinctly extended to apex (Figure 8). Body usually more or less wide ..... 20
20. Antennomeres 1-9 covered with round overlapping scales (Figure 8). Pronotum sometimes tuberculate laterally. .... Ophryastina (Ophryastini)
- Antennomeres 1-9 lacking round overlapping scales, sometimes scape with scales. Pronotum never tuberculate laterally ..... 21
21. Front margin of pronotum lacking vibrissae. Postocular lobes weak ..... Eupholini
- Front margin of pronotum with vibrissae. Postocular lobes strong or weak ..... 22
22. Postocular lobes weak (Figure 11) ..... Prypnini
- Postocular lobes strong ..... 23
23. Metaventrite conspicuous (Figure 13). Elytra oval, subparallel or round-oval. Maxillae usually exposed at sides of prementum. (Tropiphorini, part) ..... 24
- Metaventrite tumid (Figure 14). Elytra usually back, trapezoid with widest width in humeri, if almost subparallel than claws fused at base. Maxillae covered by prementum. (Entimini) ..... 25
24. Claws fused at base ..... Tropiphorina
- Claws free ..... Strangalioididina
25. Rostrum greatly expanded to apex and narrowed to forehead, triangular (Figure 15), or back of rostrum with two grooves merging in front of forehead and forming angle (Figure 16). Claws fused at base ..... Rhigiina
- Back of rostrum subparallel, without grooves merging in front of forehead (Figure 12). Claws free ..... Entimina
26. Antennal scrobes located dorsally in first half and laterally in second half of rostrum (Figures 17 and 31), usually significantly not reaching eyes ..... 27
- Antennal scrobes lateral (Figures 18-24 and 40), reaching eyes or directed under eyes ..... 59
27. Mandibles without scar of deciduous process, small ..... 28
- Mandibles with scar of deciduous process, massive, with three or more setae, not covered by clypeus ..... 30





**Figures 17-28.** Entiminae: 17 - *Episomus* sp., rostrum and head, dorsally; 18 - *Geonemus flabellipes* (Olivier, 1807), rostrum and head, dorsally; 19 - *Barynotus obscurus* (Fabricius, 1775), rostrum and head, dorsally; 20 - *Lachnopus vittatus* (Klug, 1829), rostrum and head, dorsally; 21 - *Platyomus cultricolis* Germar, 1824, rostrum and head, dorsally; 22 - *Mesagroicus obscurus* Boheman, 1840, rostrum and head, dorsally; 23 - *Naupactus xantographus* (Germar, 1823), rostrum and head, dorsally; 24 - *Diaprepes famelicus* (Olivier, 1790), rostrum and head, dorsally; 25 - *Pachyrhynchus orbifer* Waterhouse, 1841, mandibles; 26 - *Polycatus eupholoides* Heller, 1916, rostrum and head, laterally; 27 - *Pachyrhynchus orbifer*, rostrum and head, laterally; 28 - *Polycatus eupholoides*, metatibial corbels.

28. Rostrum long. Mandibles, large, not covered by clypeus (Figure 6) ..... Tanyrhynchini (part)  
 —Rostrum short, flattened. Mandibles small, covered by clypeus (Figure 31). (Ectemnorhinini) ..... 29  
 29. Elytra rounded apically. Pygidium exposed. Tarsomere 3 wide ..... Ectemnorhinina  
 —Elytra pointed apically. Pygidium covered by elytra. Tarsomere 3 narrow ..... Canonopsina  
 30. Rostrum long, strongly compressed laterally, hump-shaped at antennal attachment (Figure 5). Eyes flat, located closer to upper side of head ..... Myorhinini  
 —Rostrum short, if long than different shape and eyes widely separated ..... 31  
 31. Mandibles with three long setae ..... 32  
 —Mandibles with more than three long setae ..... 41  
 32. Metatibial corbels closed ..... 33  
 —Metatibial corbels open ..... 34  
 33. Claws fused at base ..... Embrithini  
 —Claws free ..... Oosomini  
 34. Claws fused at base ..... 35  
 —Claws free ..... 37  
 35. Maxillae exposed at sides of prementum. Metacoxae more or less narrowly separated, metacoxal cavity wider than abdominal process ..... Metacinopini

—Maxillae covered laterally by prementum. Metacoxae widely separated, metacoxal cavity narrower than abdominal process.....	36
<b>36. Metafemora</b> attached further from inner corner of coxa (Fig. 33) .....	Peritelina (Peritelini)
—Metafemora attached near the inner corner of coxa (Figure 34) .....	Omiini
37. Body covered with hairs. Scales absent. ....	Mylacorrhina (Cyphicerini)
—Body covered with thick scales. ....	38
38. Antennal scrobes directed to eye .....	Trachyphloeina ( <b>Trachyphloeini</b> )
—Antennal scrobes directed under eye .....	39
39. Metacoxae more or less narrowly separated; procoxal cavity wider than abdominal process .....	Myloccerina (Cyphicerini)
—Metacoxae widely separated, procoxal cavity narrower or equal to abdominal process .....	40
40. Back of rostrum and forehead in same plane .....	Simoina ( <b>Peritelini</b> )
—Back of rostrum and forehead in different planes .....	Trachyphilina ( <b>Trachyphloeini</b> )
41. Metatibial corbels closed (Figure 28) .....	42
—Metatibial corbels open .....	51
42. Claws fused at base .....	43
—Claws free .....	44
43. Rostrum carinate in middle. Humericonvex. Antennomere 8 simple. Epistoma small .....	Isanirini
—Rostrum sulcate in middle. Humeri rounded. Antennomere 8 elongate. Epistoma large .....	Episomini
44. Tarsomere 3 not wider than tarsomere 2 .....	Nothognathini
—Tarsomere 3 distinctly wider than tarsomere 2 .....	45
45. Rostrum usually narrowed to apex, with middle longitudinal groove or impression (Figure 21) .....	Platyomina ( <b>Naupactini</b> )
—Rostrum widened to apex, usually with middle longitudinal carina, without middle longitudinal groove .....	46
46. Procoxal cavities usually separated. Mesepimeron reduced. (Celeuthetini) .....	47
—Procoxal cavities contiguous. Mesepimeron strongly convex .....	48
47. Rostrum separated from forehead by transverse sulcus .....	Isopterina
—Rostrum not separated from forehead by transverse sulcus .....	Celeuthetina
48. Vertex and forehead located in different planes (Figure 26). Humeri rounded .....	Polycatini
—Vertex located in same plane with forehead .....	49
49. Maxillae exposed. Rostrum twice as long as head, sharply narrowed after antennal insertion .....	Evotini
—Maxillae covered by large prementum. Rostrum shorter, other shaped .....	50
50. Abdominal process wider than width of metacoxa. Humeri rounded. Body flattened .....	Elytrurini
—Abdominal process distinctly narrower than width of metacoxa. Humeri convex. Body convex .....	Eustylini (part)
51. Claws fused at base .....	52
—Claws free .....	55
52. Rostrum separated from forehead by transverse sulcus. Maxillae covered laterally by prementum .....	Holcorrhini
—Rostrum not separated from forehead by transverse sulcus. Maxillae exposed at sides of prementum .....	53
53. Antennal scape not reaching pronotum. Rostrum 1.5–2.0 times as long as width in middle. Beetles large, covered with rather thick scales .....	Nastini
—Antennal scape extends beyond base of pronotum. Rostrum approximately equal to width in middle, rarely slightly narrower or wider (maximum 1.3 times as long as width in middle). Beetles usually small .....	54
54. Suture between 1st and 2nd ventrites almost straight or slightly curved. Metepisternum wider. Humeri usually convex. ....	Phyllobiini
—Suture between 1st and 2nd ventrites distinctly extended to metaventrite. Metepisternum very narrow. Humeri smoothed .....	Laparocerini
55. Mandibles always with deciduous process. Club single-segmented, if three-segmented then 1st segment larger than other club segments combined. Scape flattened .....	Mesostyliini
—Mandibles usually without deciduous process. Club three-segmented, if 1st segment larger than other club segments combined then scape not flattened .....	56
56. Flagellum 6-segmented .....	Agraphini
—Flagellum 7-segmented .....	57
57. Antennal scape short, not reaching pronotum .....	Hormorini
—Antennal scape long, extending beyond front margin of pronotum .....	58
58. Maxillae exposed. Body flattened. Elytra usually with keel around <b>edges</b> .....	<b>Rhyncogonini</b>
—Maxillae covered by large prementum. Body usually convex. Elytra without keel around edges .....	Otiorhynchini
59. Mandibles without scar of deciduous process (Figure 25) .....	60
—Mandibles with scar of deciduous process .....	68
60. Mandibles with scales .....	Sitonini
—Mandibles lacking scales .....	61
61. Maxillae covered by large prementum. Procoxal cavities usually separated .....	62
—Maxillae exposed at sides of prementum. Procoxal cavities contiguous. (Hyperini) .....	63
62. Antennal scrobes downward almost at right angles with longitudinal axis of rostrum. Apical part of rostrum usually separated by transverse groove dorsally .....	Ottistirini
—Antennal scrobes directed obliquely with longitudinal axis of rostrum (Figure 27). Apical part of rostrum usually not separated by transverse groove dorsally .....	Pachyrhynchini

63. Mesepimeron widely trapezoidal (Figure 37). Metepisternum wide, expanded upward and downward. Prementum large. ....	64
—Mesepimeron narrowly triangular (Figure 36). Metepisternum narrow, usually extended upward. Prementum small. ....	65
64. Eyes convex, rounded (Figure 40). Metaventrite tumid (Figure 39). Rostrum short. ....	Gonipterina
—Eyes flattened, transversely oval. Metaventrite conspicuously. Rostrum usually long. ....	Cepurina
65. Sclerites of 8th sternite of females wide, separated or contiguous at base (Figure 41). Humeri usually rounded. Aedeagus symmetrical or asymmetrical. ....	Macrotarrhusina
—Sclerites of 8th sternite of females contiguous (Figures 35 and 38). Humeri usually convex. Aedeagus symmetrical. ....	66
66. Body round. Rostrum long. ....	Phaeopholina
—Body elongated. Rostrum usually short. ....	67
67. Eyes convex, rounded. Sclerites of 8th sternite of females contiguous along entire length (Figure 35). Body covered with thick green scales. ....	Coniatina
—Eyes usually flattened, transversely oval. Sclerites of 8th sternite of females contiguous at base (Figure 38) or at apex and base. Body without thick green scales, if scales present than deeply dissected. ....	Hyperina
68. Front margin of pronotum with vibrissae. (Tanymecini). ....	69
—Front margin of pronotum lacking vibrissae, if vibrissae present then eyes partly encroaching on head ( <i>Diaprepes</i> Schoenherr, 1823, Eustylini). ....	72
69. Rostrum separated from forehead by transverse sulcus. Claws free. ....	Tainophthalmina
—Rostrum not separated from forehead by transverse sulcus. ....	70
70. Claws fused at base. ....	Piazomiina
—Claws free. ....	71
71. Procoxal cavities contiguous. ....	Tanymecina
—Procoxal cavities separated. ....	Pandeleiteina
72. Claws free. ....	73
—Claws connate at base. ....	78
73. Apex of rostrum with carina forming posterior edge of large epistoma. ....	Anypotactini
—Posterior border of epistoma indistinct without carina, or carinate epistoma small. ....	74
74. Rostrum with longitudinal sulcus or line reaching vertex (Figures 22 and 23). (Naupactini). ....	75
—Rostrum without longitudinal sulcus or line reaching forehead. ....	76
75. Mandibles with scales. ....	Naupactina
—Mandibles without scales. ....	Mesagroicina
76. Eyes partly encroaching on head (Figures 20 and 24). (Eustylini). ....	77
—Eyes lateral (Figures 18 and 19). ....	78
77. Profemora without tooth. ....	Eustylina
—Profemora with prominent tooth. ....	Brachycamacina
78. Rostrum separated from forehead by transverse sulcus. ....	Psallidiini
—Rostrum not separated from forehead by transverse sulcus. ....	Geonemini
79. Metatibial corbels closed. ....	80
—Metatibial corbels open. ....	81
80. Humeri smoothed. ....	Cneorrhini
—Humeri convex. ....	Dermatodini
81. Mandibles with three long setae. ....	82
—Mandibles with more than three long setae. ....	83
82. Maxillae covered by large prementum. ....	Sciaphilini
—Maxillae exposed at sides of prementum. ....	Scythropini
83. Head constricted behind eyes. ....	84
—Head not constricted behind eyes. ....	85
84. Ventrite 2 equal to or slightly longer than ventrite 3. ....	Blosyrini
—Ventrite 2 distinctly longer than ventrite 3. ....	Brachyderini (part)
85. Fore legs much longer than the others. Profemora enlarged. ....	Cratopini
—Fore legs not longer than others. ....	86
86. Maxillae covered by large prementum. ....	Brachyderini
—Maxillae exposed at sides of prementum. ....	Polydrusini

### Systematic list of tribes and subtribes of Entiminae

Supertribe **Cyldrorhinitae** Lacordaire, 1863

Tribe **Cyldrorhinini** Lacordaire, 1863

Supertribe **Thecesteritae** Lacordaire, 1863

Tribe **Thecesternini** Lacordaire, 1863

Supertribe **Entimintae** Schoenherr, 1823

Tribe **Tropiphorini** Marseul, 1863

Subtribe **Tropiphorina** Marseul, 1863

=Synirmini Bedel, 1883

Subtribe **Strangalioididina** Lacordaire, 1863, **stat. n.** =Pantopeides Lacordaire, 1863

=Synapionycides Lacordaire, 1863

=Alophini LeConte, 1874

=Rhigopsini LeConte, 1874

=Dyslobini LeConte, 1874

=Stenocorynini McKeown, 1939



=Leptosinae Marshall, 1952

**Remarks.** The study of materials (including types) from Siberia and Far East allowed to establish two new synonyms: *Trichalophus rubripes* Zherikhin et Nazarov, 1990, **syn. n.** to *T. albonotatus* (Motschulsky, 1860) and *Trichalophus korotyaevi* Zherikhin et Nazarov, 1990, **syn. n.** to *T. biguttatus* (Gebler, 1832) = (*Alophus rudis* Boheman, 1842). The differences cited by Zherikhin and Nazarov (1990) are variability.

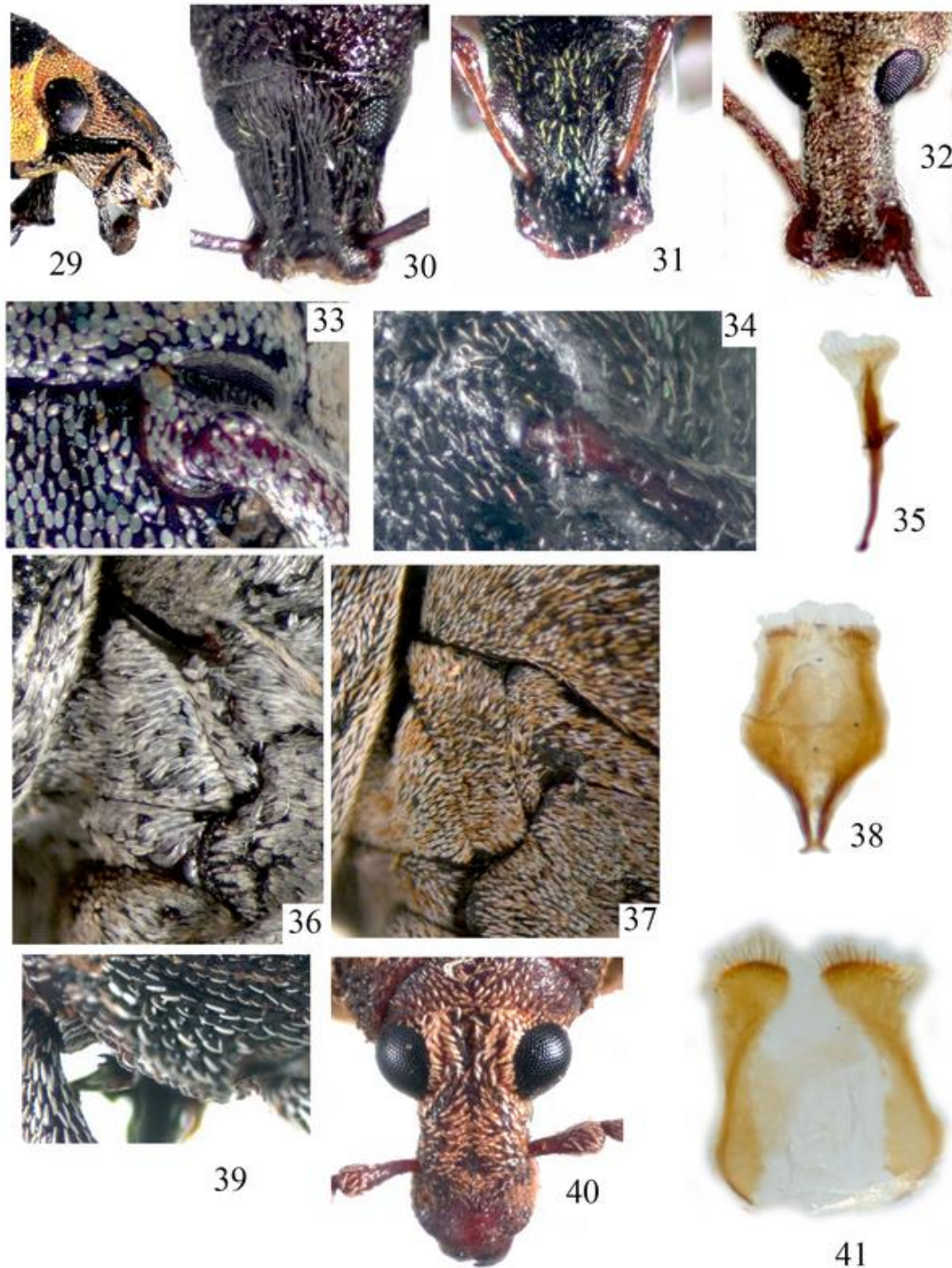
Subtribe **Phyxeliina** Horn, 1876, **stat. n.**

**Remarks.** The genera *Panscopus* Schocnherr, 1842, *Phyxelis* Schoenherr, 1842 and *Hybreoleptops* Kuschel, 1949 belong to the subtribe.

Subtribe **Byrsopagina** Lacordaire, 1863, **stat. n.**

= Dirotognathini Horn, 1876

**Remarks.** The genera *Byrsopages* Schoenherr, 1842, *Dirotognathus* Horn, 1876, *Lepidophorus* W. Kirby, 1837 and *Vitavitus* Kissinger, 1974 belong to the subtribe.



**Figures 29-41.** Entiminae: 29 - *Eudiagogus* sp., rostrum and head, laterally; 30 - *Lagenolobus* sp., rostrum and head, dorsally; 31 - *Bothrometopus* sp., rostrum and head, dorsally; 32 - *Phytoscapus ciliatus* Roelofs, 1873, rostrum and head, dorsally; 33 - *Pseudomeira flavipennis* (Jacquelin du Val, 1853), metacoxa; 34 - *Omius glomeratus* Schoenherr, 1826, metacoxa; 35 - *Bagoides steveni* (Capiomont, 1868), 8th sternite; 36 - *Eremochorus* sp., mesepimeron; 37 - *Isorhinus gibbus* Champion, 1902, mesepimeron; 38 - *Hypera transsilvanica* (Petri, 1901), 8th sternite; 39 - *Oxyops fasciata* (Boisduval, 1835), metaventrite; 40 - *Gonipterus* sp., rostrum and head, dorsally; 41 - *Eremochorus* sp., 8th sternite.

Tribe **Lordopini** Schoenherr, 1823

=Hypsonotidae Jekel, 1853

=Alocorhini Jekel, 1856

=Elytroxysi Jekel, 1856

=Merodonti Jekel, 1856

=Tomorhini Jekel, 1856

Tribe **Eurylobiini** Jekel, 1856, **stat. res.**

Tribe **Leptostethini** Lacordaire, 1863

Tribe **Ophryastini** Lacordaire, 1863

Subtribe **Ophryastina** Lacordaire, 1863

Subtribe **Deracanthina** Legalov, **subtrib. n.**

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**Type genus.** *Deracanthus* Schoenherr, 1823

**Diagnosis.** Body covered with dense scales. Head widened behind eyes, without bare line under eyes reaching underside of head. Rostrum longer than wide, almost straight, significantly shorter than pronotum, subparallel, weakly widened at apex, separated from forehead by transverse sulcus. Mandibles with scar of deciduous process. Maxillae covered by prementum. Epistoma small, glabrous. Forehead wide, wider than rostrum base width. Eyes large, not protruding from contour of head, transverse-oval, sometimes pointed to dorsum. Genuiculate antennae inserted behind middle of rostrum. Antennal scrobes laterally directed under base of rostrum. Scape reaching eye. Antennomeres 1-9 covered with round overlapping scales. Pronotum bell-shaped, with stark apical and basal constrictions, sometimes tuberculate laterally. Scutellum wide-triangular. Elytra convex, almost suboval, with smoothed humeri. Punctate striae distinct. Interstriae convex or flat. Prosternum with strong postorbital lobe, and vibrissae. Pre- and postcoxal portions of prosternum short. Procoxal cavities contiguous. Metaventricle flat and short. Metepisternum quite narrow. Abdomen flattened. 3rd and 4th ventrites short. Procoxae located near middle of prosternum. Femora without teeth. Tibiae lacking apical spurs. Tibial apex with spines. Metatibial corbel absent. Tarsi without pulvilli. Claws free.

**Comparison.** The new subtribe differs from the nominative subtribe by the rostrum separated from the forehead by the transverse sulcus, maxillae covered by prementum, tarsi without pulvilli and tibial apex with spines.

**Composition.** Only type genus.

Tribe **Premnotrypini** Kuschel, 1956

Tribe **Entimini** Schoenherr, 1823

Subtribe **Entimina** Schoenherr, 1823

**Remarks.** The genera *Entimus* Germar, 1817, *Phaedropus* Schoenherr, 1823 and *Polyteles* Germar, 1829 belong to the subtribe.

Subtribe **Rhigiina** Legalov, **subtrib. n.**

urn:lsid:zoobank.org:act:10C60D45-2DE1-49DD-9FE1-9FF4B60C86CE

**Type genus.** *Rhigus* Schoenherr, 1823

**Diagnosis.** Head not constricted behind eyes, with bare line under eyes reaching underside of head. Rostrum distinctly longer than wide, almost straight, slightly shorter than pronotum, greatly expanded to apex and narrowed to forehead, appears triangular or the back of rostrum with two grooves merging in front of forehead and forming an angle. Mandibles with scar of deciduous process. Maxillae covered by prementum. Epistoma large, glabrous, sometimes with scales. Forehead quite narrow, narrower than rostrum base width. Eyes large, barely protruding from contour of head, transverse, pointed to dorsum. Genuiculate antennae inserted in middle or behind middle of rostrum. Antennal scrobes lateral, directed under base of rostrum. Scape reaching eye. Pronotum bell-shaped, densely punctate, sometimes with tubercles. Scutellum rounded or triangular. Elytra convex, almost subparallel or dorsum trapezoid with widest width in humeri. Humeri convex. Punctate striae distinct. Interstriae usually convex. Prosternum with strong postorbital lobe, and vibrissae. Pre- and postcoxal portions of prosternum short. Procoxal cavities contiguous. Metaventricle tumid. Metepisternum quite narrow. Abdomen flattened. 3rd and 4th ventrites short. Procoxae located near middle of prosternum. Femora without teeth. Tibiae lacking apical spurs. Metatibial corbel closed. Tarsi with pulvilli. Claws connate at base.

**Comparison.** The new subtribe differs from the subtribe Entimina in the rostrum greatly expanded to apex and narrowed to forehead, appearing triangular or the back of rostrum with two grooves merging in front of forehead and forming an angle, and claws fused at base.

**Composition.** The genera *Rhigus* Schoenherr, 1823, *Cydzianerus* Schoenherr, 1840, *Trachyus* Kuschel, 1955 and *Nasocomptus* Vanin et Gaiger, 2005 belong to the subtribe.

Tribe **Anomophthalmiini** Morrone, 1998

Tribe **Eudiagogini** LeConte, 1874

=Promecopides Lacordaire, 1863

=Bathyrini LeConte, 1874

=Leptopiinae Oke, 1951

Tribe **Tanyrhynchini** Schoenherr, 1826

=Eremnides Lacordaire, 1863

Supertribe **Hyperitae** Lacordaire, 1863

Tribe **Hyperini** Lacordaire, 1863

Subtribe **Cepurina** Capiomont, 1867, **stat. res.**

**Remarks.** New synonyms, *Parahypera* Brancsik, 1914, syn. n. to *Fronto* Petri, 1901 and *Parahypera ussurica* Brancsik, 1914, syn. n. to *Fronto capiomonti* (Faust, 1882) are established.

Subtribe **Gonipterina** Lacordaire, 1863, **stat. n., placem. n.**

Subtribe **Coniatina** Legalov, 2007, **stat. res.**

**Remarks.** The genus *Geranorhinus* Chevrolat, 1860 is close to the genus *Coniatus* Germar, 1817 was not correctly placed in the tribe Itini (Meregalli, Borovec, 2011).

Subtribe **Phaeopholina** Legalov, 2011, **stat. res.**

Subtribe **Hyperina** Lacordaire, 1863



Subtribe **Macrotarrhusina** Legalov, 2007, **stat. res.**

Supertribe **Otiorhynchitae** Schoenherr, 1826

Tribe **Polycatini** Marshall, 1956

Tribe **Nothognathini** Marshall, 1916

Tribe **Episomini** Lacordaire, 1863

Tribe **Isanirini** Legalov, **trib. n.**

urn:lsid:zoobank.org:act:8F934447-BD0A-4CA4-90F6-CFC6D4E78906

**Type genus.** *Isaniris* J. Thomson, 1858

**Diagnosis.** Body covered with small scales. Head slightly widened behind eyes, with sulcus from forehead to vertex. Rostrum longer than width, shorter than pronotum, subparallel, with three carinae, not separated from forehead by transverse sulcus. Pterigya and epistoma large. Posterior border of epistoma without carina. Mandibles with scar of deciduous process, with more than three long setae, without scales. Maxillae covered by prementum. Forehead slightly wider than rostrum base width. Eyes large, convex, rounded. Geniculate antennae inserted subapically. Antennal scrobes dorsally in apical third. Scape reaching vertex. Pronotum bell-shaped. Scutellum triangular. Elytra convex, almost suboval, with distinct humeri. Punctate striae distinct. Interstriae weakly convex. Pronotum without postocular lobes and vibrissae. Pre- and postcoxal portions of prosternum short. Procoxal cavities contiguous. Metaventricle quite long. Metepisternum narrow. Abdomen flattened. 3rd and 4th ventrites shorter than ventrites 1 and 2. Femora without teeth. Metatibial corbel closed. Tarsi with pulvilli. Claws fused at base.

**Comparison.** The new tribe is similar to the tribe Eustylini but differs in the claws fused at base. From the tribe Peritelini it differs in the closed metatibial corbels.

**Composition.** The genera *Isaniris* J. Thomson, 1858 and *Machaerorhinus* Marshall, 1943 belong to the tribe.

Tribe **Celeuthetini** Lacordaire, 1863

Subtribe **Celeuthetina** Lacordaire, 1863

=Platyspartina Voss, 1940

Subtribe **Isopterina** Morimoto et Kojima, 2001

Tribe **Elytrurini** Marshall, 1956

Tribe **Holcorhinini** Desbrochers, 1898

=Cyclopterini Reitter, 1913

Tribe **Nastini** Reitter, 1913

Tribe **Phyllobiini** Schoenherr, 1826

=Aphrasti LeConte, 1874

Tribe **Laparocerini** Lacordaire, 1863

Tribe **Mesostylini** Reitter, 1913

Tribe **Agraphini** Horn, 1876

Tribe **Hormorini** Horn, 1876

Tribe **Otiorhynchini** Schoenherr, 1826

**Remarks.** The study of types and materials from Kazakhstan allowed to establish a new synonymy: *Otiorhynchus kasachstanicus* Arnoldi, 1964, **syn. n.** to *O. ursus* Gebler, 1844; *O. karkaralensis* Bajtenov, 1974, **syn. n.** and *O. relicinus* Arnoldi, 1975, **syn. n.** to *O. altaicus* Strierlin, 1861.

Tribe **Rhyncogonini** Sharp, 1919

Tribe **Myorhinini** Marseul, 1863

Tribe **Ectemnorhinini** Lacordaire, 1863

Subtribe **Ectemnorhinina** Lacordaire, 1863

Subtribe **Canonopsina** Dreux et Voisin, 1989, **stat. n.**

Tribe **Typhlorhinini** Kuschel, 1954

Supertribe **Cyphiceritae** Lacordaire, 1863

Tribe **Metacinopini** Reitter, 1913, **stat. n.**

=Auchmeresthinae Reitter, 1913, **placem. n.**

**Remarks.** The genera of the tribe Phyllobiini, as noted by Marshall (1942) are characterized by mandibles with three setae, and only the genus *Phyllobius* Germar, 1823 has the mandibles with more than three. This character is of great systematic importance and does not represent the genera *Euphyllobiomorphus* Morimoto, 1962, **placem. n.**, *Metacinops* Kraatz, 1862, **placem. n.**, *Oedecnemidius* K. Daniel, 1903, **placem. n.**, *Parascythopus* Desbrochers, 1875, **placem. n.**, *Pseudomylocerus* Desbrochers, 1872 and *Rhinoscythopus* Desbrochers, 1895 **placem. n.** in the tribe Phyllobiini. The name Metacinopini is suitable for this tribe.

Tribe **Cyphicerini** Lacordaire, 1863

Subtribe **Cyphicerina** Lacordaire, 1863

=Amblyrhinides Schoenherr, 1823

=Corigetini Faust, 1885

Subtribe **Acanthotrachelina** Marshall, 1944

Subtribe **Mylacorrhinina** Reitter, 1913

Subtribe **Myllocerina** Pierce, 1913

=Ptochini Reitter, 1913

Subtribe **Phytoscaphina** Lacordaire, 1863

Tribe **Peritelini** Lacordaire, 1863

Subtribe **Peritelina** Lacordaire, 1863

=Paraptochi Pierce, 1913

Subtribe **Simoina** Pierce, 1913, **stat. n.**

=Homorythmini Hoffmann, 1950

Tribe **Omiini** Shuckard, 1840

=Mylacini Reitter, 1913

Tribe **Scythropini** Lacordaire, 1863, **stat. res.**

**Remarks.** The genera *Pachyrhinus* Schoenherr, 1823, **placem. n.**, *Rungsythropus* Hoffmann, 1953, **placem. n.**, and *Bremondiscytropus* Hoffmann, 1942, **placem. n.**, belong to the tribe because they are characterized by the sublaterally antennal scrobes, mandibles with three long setae and maxillae exposed at sides of prementum.

Tribe **Sciaphilini** Sharp, 1891

Tribe **Oosomini** Lacordaire, 1863

Tribe **Embrithini** Marshall, 1942

Tribe **Trachyphloeini** Lacordaire, 1863

Subtribe **Trachyphloeina** Lacordaire, 1863

=Cathormiocerini Reitter, 1913

=Trachyphloeini Pierce, 1913 (non Lacordaire, 1863)

Subtribe **Trachyphilina** Voss, 1948

Subtribe **Pseudocneorrhinina** Kono, 1930, **stat. n.**

Supertribe **Polydrusitae** Schoenherr, 1823

Tribe **Sitonini** Gistel, 1856

Tribe **Ottistirini** Heller, 1925

Tribe **Pachyrhynchini** Schoenherr, 1826

Tribe **Anypotactini** Champion, 1911

Tribe **Naupactini** Gistel, 1856

Subtribe **Naupactina** Gistel, 1856

=Cyphides Lacordaire, 1863

=Macrostyles LeCoote, 1874

=Symmathetes LeCoote, 1874

=Artipi Horn, 1876

=Alceidini Pierce, 1913

=Glaphyrometopi Pierce, 1913

=Pseudocyphi Pierce, 1913

=Neocyphini Hustache, 1919

=Canephorotomina Voss, 1954

=Pantomorina Voss, 1954

=Plectrophorina Voss, 1954

Subtribe **Platyomina** Champion, 1911, **stat. res.**

**Remarks.** The cladistic analysis (Lanteri, Del Rio, 2016) showed that this group is isolated from the genera of the tribe Naupactini, but the mandibles with scales allow *Platyomina* to remain in the subtribe of the tribe.

Subtribe **Mesagroicina** Legalov, **subtrib. n.**

urn:lsid:zoobank.org:act:3ABE5C4B-DCE9-409B-A765-5A0C5904B389

**Type genus.** *Mesagroicus* Schoenherr, 1840

**Diagnosis.** Body covered with dense scales. Head weakly widened behind eyes, with sulcus from epistoma to vertex. Rostrum shorter or subequal to width, more than two times shorter than pronotum, subparallel, not separated from forehead by transverse sulcus. Pterigya small. Epistoma small. Posterior border of epistoma indistinct without carina or carinate. Mandibles with scar of deciduous process, with more than three long setae, without scales. Maxillae covered by prementum. Forehead wide, wider than rostrum base width. Eyes large, convex, rounded. Genuiculate antennae inserted subapically. Antennal scrobes lateral, directed under eyes. Scape almost reaching pronotum. Pronotum bell-shaped. Scutellum triangular. Elytra convex, almost suboval, with smooth humeri. Punctate striae distinct. Interstriae flat. Pronotum without postocular lobes and vibrissae. Pre- and postcoxal portions of prosternum short. Procoxal cavities contiguous. Metaventricle short. Metepisternum quite narrow. Abdomen flattened. 3rd and 4th ventrites short. Procoxae located near middle of prosternum. Femora without teeth. Metatibial corbel open. Tarsi with pulvilli. Claws free.

**Comparison.** The new subtribe differs from the subtribe Naupactina by the mandibles lacking scales.

**Composition.** Only type genus.

Tribe **Geonemini** Gistel, 1856

=Barynotides Lacordaire, 1863

=Epicaeri Horn, 1876

Tribe **Evotini** LeConte, 1874, **stat. res.**

Tribe **Eustylini** Lacordaire, 1863

Subtribe **Eustylina** Lacordaire, 1863

=Exophthalmiini Horn, 1876

=Omilei Horn, 1876, **placem. n.**

=Menoetiini Pierce, 1913

=Compsi Pierce, 1913, **placem. n.**

**Remarks.** The problem of the systematic position of some genera of the tribes Geonemini and Eustylini was discussed (Franz, 2012; Girón, Franz, 2013). The genera of these tribes have been re-studied. The study showed that the genera *Geonemus* Schoenherr, 1833, *Barynotus* Germar, 1817 and the type species of the genus *Epicaerus* Schoenherr, 1834 are characterized by the lateral eyes and wide foreheads. The eyes partly encroaching on the head and forehead are narrower than the base of the rostrum are characters of the tribe Eustylini.

Subtribe **Brachycamacina** Poinar, Legalov, Brown, 2013, **placem. n.**

Tribe **Psallidiini** Lacordaire, 1863

=Trigonoscutae LeConte, 1874, **placem. n.**

=Calyptilli Horn, 1876, **placem. n.**

Tribe **Prypniini** Lacordaire, 1863

Tribe **Eupholini** Alonso-Zarazaga et Lyal, 1999

Tribe **Cratopini** Hustache, 1919

Tribe **Polydrusini** Schoenherr, 1823

=Oligocyidae Gistel, 1856

**Remarks.** The genus *Paophilus* Faust, 1891, **placem. n.** belongs to the tribe because it is characterized in the mandibles with more than three long setae and maxillae exposed at sides of prementum.

Tribe **Brachyderini** Schoenherr, 1826

Tribe **Blosyrini** Lacordaire, 1863

Tribe **Cneorhinini** Lacordaire, 1863

=Philopedini Bedel, 1883

Tribe **Dermatodini** Emden, 1936

=Stigmatrachelini Richard, 1983

= Ophthalmorrhynchini Hoffmann, 1965

Tribe **Tanymecini** Lacordaire, 1863

Subtribe **Tanymecina** Lacordaire, 1863

=Hadromerides Jekel, 1865

=Siderodactylides Jekel, 1865

=Pachnaei LeConte, 1874

=Minyomeri Horn, 1876

Subtribe **Pandeleiteina** Pierce, 1913, **stat.n.**

Subtribe **Piazomiina** Reitter, 1913

=Herpisticini Winkler, 1932

=Ischnotrachelini Hoffmann, 1965

Subtribe **Tainophthalmina** Desbrochers, 1873

=Amomphi LeConte, 1874

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