

**Catalogue of the Cerambycidae (Coleoptera) of Canada and
United States of America. Part II. Subfamilies Lepturinae
and Necydalinae**

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Catalogue of the Cerambycidae (Coleoptera) of Canada and United States of America. Part II. Subfamilies Lepturinae and Necydalinae

This catalogue is an attempt to offer the names, the geographical distribution and bibliographic references for extant taxa of Cerambycidae of Canada and United States of America.

All informations of the present catalogue were previously published, there is not unpublished data. The geographical distribution of the extant families and subfamilies is based on previously published records, supplemented by data extracted from several collections.

Tribes are listed in alphabetical order, and in each tribe genera and species follow the same order. The geographical distribution of the species from Canada were adapted from Bousquet, Laplante, Hammond and Langor, 2017. Each species-group name is followed by author (s), publication year, page, and figure (if any), acronym of the institution depository of the type, host plants (when available) and when not strictly taxonomical, an abbreviated indication of the matter is given as:

ab. - aberration
 biol. - biological data
 cat. - catalogue
 distr. - distribution
 ecol. - ecological data
 emend. - emendation
et al., - more than four authors
 lect. - lectotype (designation).
 mim. - mimetism
 paras. - parasites
 pherom. - pheromones
 pred. - predators
 refs - bibliographic references
 rev. - revision
 reval. - revalidation
 syn. - synonymy
 terat - teratology
 var. - variety

Acronyms of the institutions or private collections mentioned in the Part II of the catalogue:

AMNH - American Museum of Natural History, New York, New York, United States.
 ANSP - Academy of Natural Sciences, Philadelphia, Pennsylvania, United States.
 BMNH - The Natural History Museum, London, United Kingdom.
 CASC - California Academy of Sciences, San Francisco, California, United States
 CNCI - Canadian National Collection of Insects, Ontario, Ottawa, Canada.
 EMEC - Essig Museum of Entomology, University of California, Berkeley, California, United States.
 FINH - Finnish Museum of Natural History, University of Helsinki, Finland
 FMNH - Field Museum of Natural History, Chicago, Illinois, United States

LSUK - Linnean Society, London, United Kingdom.
 MCZN - Museum of Comparative Zoology, Harvard University, Cambridge,
 Massachusetts, United States.
 MNHN - Muséum National d'Histoire Naturelle, Paris, France
 NHRS - Naturhistoriska Riksmuseet, Stockholm, Sweden
 SEMC - Snow Entomological Museum, University of Kansas, United States
 SMTD - Staatliches Museum für Tierkunde, Dresden, Germany.
 USNM - National Museum of Natural History, Washington, D. C., United States.
 UZIU - Uppsala University, Uppsala, Sweden.
 ZMHB - Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.
 ZMUM - Zoological Museum, Moscow State University, Moscow, Russia.

LEPTURINAE Latreille, 1802

Lepturetae Latreille, 1802: 218.

Type-genus: *Leptura* Linnaeus, 1758.

Type-species: *Leptura quadrifasciata* Linnaeus, 1758 designated by Westwood (1838: 41).

CARILIINI Zamoroka, 2022

Cariliini Zamoroka, 2022: 307

Type-genus: *Carilia* Mulsant, 1863

Brachysomida Casey, 1913

Brachysomida Casey, 1913: 19; Chemsak & Linsley, 1963: 86; Chemsak, 1964: 231; Linsley & Chemsak, 1972: 227; Monné, M.A., 1995a: 42; Chemsak, 2005: 34, 175; Monné, M.A. & Hovore, 2006: 159 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 109 (key spp.); Zamoroka, 2022: 308

Type-species - *Acmaeops tumida* LeConte, 1857 (= *Acmaeops californica* LeConte, 1850) (original designation).

1. *Brachysomida atra* (LeConte, 1850)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - Southeastern Alberta to the Okanagan Valley in south-central British Columbia, south to southern Oregon and Colorado.

Acmaeops ater LeConte, 1850b: 323; 1857: 23 (distr.).

Acmaeops atra; LeConte, 1873a: 209, Leng, 1890: 105; Chagnon, 1897: 15 (distr.,) Wickham, 1900: 598 (distr.); Canova, 1936: 126 (cat.).

Acmaeops (Pseudodinoptera) atra; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Brachysomida atra; Casey, 1913: 221; Leng, 1920: 271 (cat.); Linsley & Chemsak, 1972: 131; Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 43 (cat.); Heffern, 1998: 8 (distr.); Chemsak, 2005: 176, pl. 14, figs 1,2; Monné, M.A. & Hovore, 2006: 159 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 109

Acmaeops (Brachysomida) atra; Hatch, 1971: 142.

Brachysomida morata Casey, 1913: 222; Leng, 1920: 271 (cat.); Casey. 1924: 275; Lingafelter *et al.*, 2014: 102, fig. 112s (holotype).

Type locality - Holotype male: United States, Colorado: Summit of Mount Arapahoe. (USNM).

Brachysomida aterrима Casey, 1924: 276; Lingafelter *et al.*, 2014: 20, fig. 21 a (holotype).

Type locality - Holotype male: Canada, Alberta: Calgary. (USNM).

2. *Brachysomida bivittata* (Say, 1824)

Syntypes locality - Syntypes: United States, Missouri: vicinity of Council Bluff and the Pawnee villages. (Depository unknown). **Distribution** - This species is known from Cape Breton Island to the Lake Timiskaming area in western Quebec, south to northeastern Mississippi and North Carolina

Leptura bivittata Say, 1824: 416; LeConte, 1850a: 340; LeConte, 1859c: 195

Acmaeops bivittata; LeConte, 1859d: 49 (distr.); 1873a: 209 (syn.); Austin, 1874: 270 (biol., distr.); Slosson, 1894: 3 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 172, fig. 27 (biol.); Smith, 1900: 291 (distr.); Knaus, 1901: 112 (distr.); Dury, 1902: 161 (distr.); Longley, 1905: 125 (distr.); Smith, 1910: 330; Blatchley, 1910: 1050, fig. 447 (biol.); Lovell, 1915: 114; Chagnon, 1917: 234 (distr.); Gibson, 1917: 150 (distr.); Graham, 1922: 193, pl. 3 (morphol.); Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 438 (distr.); Hopping, 1928: 7 (syn.); Park, 1931: 193; Saalas, 1936: 75 (morphol.); Chagnon, 1936: 247 (distr.); Brimley, 1938: 212 (distr.); Knull, 1946: 181; Dillon & Dillon, 1961: 622, pl. 61, No. 14,15; Chagnon & Robert, 1962: 247; Gardiner, 1970: 287 (biol.); Wilson, 1971: 62 (biol.); Swan & Papp, 1972: 450, fig. 959.

Acmaeops (Pseudodinoptera) bivittata; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Gaurotes bivittatus; Casey, 1913: 218.

Brachysomida bivittata; Linsley & Chemsak, 1972: 129; Gosling & Gosling, 1976: 7, fig. 77 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 91 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Chemsak, Linsley & Noguera, 1992: 91 (cat.); MacRae, 1993: 238 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 43 (cat.); Yanega, 1996: 31, pl. 3, figs 31a-d; Heffern, 1998: 24 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Chemsak, 2005: 176, 178, pl. 13, figs 11,12; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 19, 22, 140, 2 figs., pl. 4d; Guarnieri, 2009: 14 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 109, pl.20

Acmaeops varians LeConte, 1850a: 324.

Acmaeops (Pseudodinoptera) bivittata ab. *variens*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Syntypes localities - Syntypes: United States, Missouri, Wisconsin. (MCZN).

Acmaeops fusciceps LeConte, 1850a: 324; Leonard, 1928: 438 (distr.)

Acmaeops (Pseudodinoptera) bivittata ab. *fusciceps*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Gaurotes fusciceps; Casey, 1913: 218.

Type locality - Holotype: United States, New York: Cattaraugus County. (MCZN).

Acmaeops incertus Bland, 1863: 321.

Type locality - Holotype: United States, Virginia: Hampshire County. (ANSP).

Gaurotes oblongus Casey, 1913: 218; Lingafelter *et al.*, 2014: 110, fig. 120 w (holotype).

Acmaeops oblongus; Hopping, 1928: 7.

Type locality - Holotype female: United States, Nebraska. (USNM)

3. *Brachysomida californica* (LeConte, 1851)

Type locality - Holotype: United States, California. (MCZN). **Distribution** - Washington to southern California. **Host plants** - *Lomatium lucidum* (Torrey & A. GrayJepson (Apiaceae).

Acmaeops californicus LeConte, 1851: 101; 1857: 23.

Leptura californica; Fall, 1901: 149 (distr.).

Acmaeops (Pseudodinoptera) californica; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Brachysomida californica; Casey, 1913: 225; Linsley & Chemsak, 1972: 131, fig. 41; Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 44 (cat.); Heffern, 1998: 8 (distr.); Chemsak, 2005: 177, pl. 14, figs 3, 4; Monné, M.A. & Hovore, 2006: 159 (checklist); Swift, 2008: 4 (distr., hosts); Gimmel *et al.*, 2023: 257 (distr.)

Acmaeops subaeneus LeConte, 1851: 101; 1857: 23; 1873a: 209; Leng, 1890: 105; Fall, 1901: 149 (distr.); Canova, 1936: 126 (distr.).

Acmaeops (Pseudodinoptera) subaenea; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Brachysomida subaenea; Casey, 1913: 224; Moore, 1937: 88 (distr.); Hatch, 1971: 142.

Type locality - Holotype: United States, California: San Francisco. (MCZN).

Acmaeops fusca LeConte, 1857: 62.

Acmaeops (Pseudodinoptera) californica ab. *fusca*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Type locality - Holotype: United States, California: Sacramento. (MCZN).

Acmaeops lugens LeConte, 1857: 62.

Acmaeops (Pseudodinoptera) californica ab. *lugens*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Brachysomida lugens; Casey. 1913: 223.

Type locality - Holotype: United States, California: Sacramento. (MCZN).

Acmaeops subcyanea LeConte, 1857: 63.

Acmaeops (Pseudodinoptera) californica ab. *subcyanea*; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Brachysomida subcyanea; Casey, 1913: 226.

Type locality - Holotype: United States, California: San Francisco. (MCZN).

Acmaeops tumida LeConte, 1857: 63; 1873a: 209; Snow, 1877a: 19 (distr.); 1877b: 76 (distr.); Leng, 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.); Linsley & Usinger, 1934: 105 (distr.); Canova, 1936: 127 (distr.); Linsley, 1936: 200 (hosts).

Acmaeops (Pseudodinoptera) californica ab. *tumida*; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Brachysomida tumida; Casey, 1913: 223; Linsley & MacSwain, 1959: 24 (biol.).

Type locality - Holotype: United States, California: San Francisco. (MCZN).

Acmaeops mollipilosa LeConte, 1860: 321; Canova, 1936: 126 (distr.).

Acmaeops (Pseudodinoptera) californica ab. *mollipilosa*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Brachysomida mollipilosa; Casey. 1913: 223; Hatch, 1971: 143.

Type locality - Holotype: United States, Oregon or Rocky Mountains. (MCZN).

Acmaeops viola LeConte, 1860: 321; Horn, 1885b: 180; Leng, 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.)

Acmaeops (Pseudodinoptera) californica ab. *viola*; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Brachysomida viola; Casey. 1913: 222; Hatch, 1971: 143.

Type locality - Holotype: United States, Oregon or Rocky Mountains. (MCZN).

Acmaeops pinguis LeConte, 1873a: 210; Leng, 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.).

Acmaeops (Pseudodinoptera) pinguis; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Brachysomida pinguis; Casey, 1913: 229.

Type locality - Holotype: United States, California. (MCZN).

Brachysomida celestina Casey, 1913: 222; Lingafelter et al., 2014: 39, 365, fig. 40i (

Type locality - Lectotype female: United States, California: Santa Cruz Mountains. (USNM).

Brachysomida caerulea chalybea Casey, 1913: 227; Lingafelter et al., 2014: 35, 365, fig. 35u (lectotype).

Type locality - Lectotype: United States, California: Santa Cruz Mountains. (USNM).

Brachysomida robustula Casey, 1913: 228; Lingafelter et al., 2014: 310, fig. 144m (holotype).

Type locality - United States, California: Gilroy Springs. (USNM).

Brachysomida protensicollis Casey, 1913: 228; Lingafelter et al., 2014: 303, fig. 136k (holotype).

Type locality - Holotype male: United States, California: Lake County. (USNM).

Brachysomida hirsuta Casey, 1913: 228; Lingafelter et al., 2014: 75, 365, fig. 81g (lectotype).

Type locality - Lectotype: United States, California. (USNM).

Brachysomida lepidula Casey, 1913: 229; Lingafelter et al., 2014: 88, 365, fig. 97k (lectotype).

Type locality - Lectotype male: United States, California. (USNM).

Brachysomida versicolor Casey, 1913: 229; Lingafelter et al., 2014: 343, 365, fig. 181a (lectotype).

Type locality - Lectotype: United States, California: Calaveras County. (USNM).

4. *Brachysomida nigripennis* (LeConte, 1850)

Type locality - Holotype: United States, Missouri. (MCZN). **Distribution** - British Columbia south to Mississippi and North Carolina.

Acmaeops nigripennis LeConte, 1850a: 323; Longley, 1905: 125 (distr.); Leonard, 1928: 438 (distr.).

Acmaeops (Pseudodinoptera) bivittata ab. *nigripennis*; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Gaurotes nigripennis; Casey, 1913: 218.

Acmaeops nigripennis; Park, 1931: 193; Brimley, 1938: 212 (distr.).

Brachysomida nigripennis; Bousquet, Laplante. Hammond & Langor, 2017: 110, pl. 20

5. *Brachysomida rugicollis* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Wyoming: 20 miles East of Lyman. (SEMC). **Distribution** - United States (Wyoming, Utah, Montana and Idaho).

Brachysomida rugicollis Linsley & Chemsak, 1972: 135; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 45 (cat.); Heffern, 1998: 8 (distr.); Chemsak, 2005: 177, 184, pl. 14, figs 5, 6; Monné, M.A. & Hovore, 2006: 160 (checklist);

6. *Brachysomida vittigera* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California: 15 miles SW of Havilah, Kern County. (CASC). **Distribution** - United States (California). **Host plants** - *Lomatium utriculatum* (Torrey & A. Gray) J. M. Coulter & Rose (Apiaceae).

Brachysomida corpulenta Hopping, 1943: 119 (not Casey, 1913).

Brachysomida vittigera Linsley & Chemsak, 1972: 127, fig. 40; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 45 (cat.); Chemsak, 2005: 176, pl. 13, figs 9, 10; Monné, M.A. & Hovore, 2006: 160 (checklist); Swift, 2008: 4 (distr., hosts).

***Gnathacmaeops* Linsley & Chemsak, 1972**

Gnathacmaeops Linsley & Chemsak, 1972: 135; Monné, M.A., 1995a: 45; Chemsak, 2005: 34, 186; Bousquet, Laplante. Hammond & Langor, 2017: 111; Zamoroka, 2022: 308

Type-species - *Leptura pratensis* Laicharting, 1784 (original designation).

1. *Gnathacmaeops pratensis* (Laicharting, 1784)

Syntype locality - Syntypes: Austria, Tyrolen: Innsbruck. (Naturhistorika Museum, Innsbruck). **Distribution** - Boreal areas of Holarctic Region; in North America extending over taiga forests of Alaska and Canada and southward through the Appalachian mountains to northwestern Georgia, the Rocky Mountains to central New Mexico and southern Arizona, and the Pacific mountain chains to southern California. **Host plants** - *Acer pictum* var. *truncatum* (Bunge) Chin S. Chang (Aceraceae), *Picea abies* Linnaeus, *Pinus sylvestris* Linnaeus (Pinaceae).

Leptura pratensis Laicharting, 1784: 172.

Acmaeops pratensis; LeConte, 1873a: 210; Horn, 1876: 170 (syn.); LeConte, 1876: 520 (distr.); Provancher, 1877a: 610; Kraatz, 1879: 85; LeConte, 1879: 505 (distr.); Snow, 1883: 42 (distr.); Harrington, 1883: 59; Holland, 1888: 90 (distr.); Fauvel, 1889: 150 (distr.); Hamilton, 1889a: 145; Harrington, 1890: 185 (distr.); Leng, 1890: 106; Cockerell, 1890: 38 (distr.); Hanham, 1894: 352 (distr.); Hamilton, 1894a: 31 (distr.); 1894b: 396 (distr.); Townsend, 1895: 48 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 171; 1897c: 157 (distr.); Slosson, 1897: 238 (distr.); Wickham, 1899b: 199 (distr.); 1900: 598 (distr.); Fall, 1901: 149 (distr.); Knaus. 1902: 152 (distr.); MacGillivray & Houghton, 1902: 252 (distr.); Skinner, 1903: 40 (distr.); Houghton, 1905: 51 (distr.); Fall & Cockerell, 1907: 193 (distr.); Sherman, 1910: 194 (distr.); Blatchley, 1910: 1050; Casey, 1913: 241; Lovell, 1915: 114; Notman, 1916: 166 (distr.); Chagnon, 1917: 234 (distr.); Garnett, 1918: 213 (distr.); Munding, 1924: 317 (distr.); Fall, 1926: 202 (distr.); Engelhardt, 1927: 73 (distr.); Leonard, 1928: 438; Beaulne. 1932: 199 (hosts); Mank, 1934: 80 (distr.); Brown, 1934: 229 (distr.); Doane *et al.*, 1936: 177; Chagnon, 1936: 247; Canova, 1936: 126 (distr.); Saalas, 1936: 74, pl. 7, fig. 87 (morphol.); Hatch, 1939: 49 (distr.); Chagnon, 1939: 86 (distr.); Smith *et al.*, 1943: 315, fig. 314; Knull, 1946: 180; Hardy, 1948: 32 (distr.); Knowlton & Wood, 1950: 11 (distr.); Hicks, 1955: 165 (distr.); Clark, 1956: 41 (distr.); Chagnon & Robert, 1962: 247; Gardiner, 1970: 287 (biol.); Wilson, 1971: 62; Hatch, 1971: 143; Monné, M.A. & Hovore, 2006: 156 (checklist); Webster, 2016: 486; Rice, MacRae & Merickel, 2017: 670 (distr.)

Gnathacmaeops pratensis; Linsley & Chemsak, 1972: 136; Gosling & Gosling, 1976: 7 (biol., distr.); Laliberté, Chantal & LaRoche, 1977: 93 (biol.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 45 (cat.); Yanega, 1996: 32, pl. 7, fig. 72; Linsley & Chemsak, 1997: 379 (hosts); Heffern, 1998: 9 (distr.); Burne, 1998: 393 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 186, pl. 14, figs 7, 8; MacRae & Rice, 2007: 246 (distr.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Bousquet, Laplante. Hammond & Langor, 2017: 111, pl. 20;

Leptura strigilata Fabricius, 1793: 341; Germar, 1825: 11, pl. 11, figs a,b; Zimsen, 1964: 182 (type).

Acmaeops strigilata; LeConte, 1850ba: 235; 1850: 323; 1869: 371 (distr.); 1870: 399 (syn.); Snow, 1877a: 19 (distr.).

Type locality - Holotype: Sweden. (Depository unknown).

Leptura lateralis Estlund, 1796: 127, pl. 5, fig. 1. (not Olivier, 1795).

Type locality - Sweden.

Leptura longiceps Kirby, 1837: 187; Haldeman, 1847a: 65.

Acmaeops longiceps; LeConte, 1850a: 324; Bethune, 1872: 118.

Syntypes locality - Syntypes: America Septentrionalis, latitudes 54 and 65 degrees. (BMNH).

Leptura semimarginata Randall, 1838: 30.

Type locality - Holotype: United States, Maine: Abbott, between the Kennebec river and Penobscot county. (MCZN).

Pachyta strigilata var. *suturalis* Mulsant, 1839: 246.

Type locality - Holotype: France, Basses-Alpes (Alpes-de-Haute-Provence). (MNHN).

Pachyta fulvipennis Mannerheim, 1853: 251.

Leptura fulvipennis; LeConte, 1857: 23.

Type locality - Holotype: United States, Alaska: Peninsula Kenai, ad rivulos flumen Tschunuktnu peninsulae Kenai. (MZHF).

Acmaeops (Acmaeops) pratensis var. *obscuripennis* Pic, 1901b: 24

Syntypes locality - Syntypes: France, Pyrénées. (MNHN).

***Pseudogaurotina* Plavilstshikov, 1958**

Gaurotes (Pseudogaurotina) Plavilstshikov, 1958: 722; Podany, 1962: 224;

Pseudogaurotina; Chemsak & Linsley, 1963: 82; Chemsak, 1964: 234; Hatch, 1971: 125; Linsley & Chemsak, 1972: 123; Monné, M.A., 1995a: 41; Chemsak, 2005: 34, 170; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 108 (key spp.); Zamoroka, 2022: 307

Type-species - *Gaurotes splendens* Jakovlev, 1893 (original designation).

1. *Pseudogaurotina abdominalis* (Bland, 1862)

Type locality - Holotype: United States, Virginia: Hampshire County. (ANSP).

Distribution - This species ranges from the Lac Saint-Jean area in Quebec to the Steel River Provincial Park area north of Lake Superior in Ontario, south to Virginia.

Gaurotes abdominalis Bland, 1862: 270; Lacordaire, 1868: 443; Horn, 1880a: xi; Hamilton, 1885: 46 (biol.); Leng, 1890: 156; Hamilton, 1895: 338 (distr.); Chagnon, 1917: 234 (distr.); Boppe, 1921: 70; Mason, 1922: 227 (distr.); Kirk & Knull, 1926: 24 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 438 (distr.); Schaeffer, 1931: 102; Chagnon, 1936: 247; Doane *et al.*, 1936: 177; Hopping, 1937: 20, pl. 5; Knull, 1946: 179, pl. 6, fig. 24; Procter, 1946: 177 (distr.); Chagnon & Robert, 1962: 247; Wilson, 1971: 62.

Gaurotes (Neogaurotes) abdominalis; Podany, 1962: 226, pl. 6, fig. 16.

Pseudogaurotina abdominalis; Chemsak & Linsley, 1963: 83; Gardiner, 1970: 287; Linsley & Chemsak, 1972: 124; Gosling & Gosling, 1976: 6 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 97 (biol.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Glaser, 1992: 153 (distr.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 42 (cat.); Yanega, 1996: 37, pl. 3, fig. 28; Chemsak, 2005: 171, pl. 13, fig. 4; Monné, M.A. & Hovore, 2006: 167 (checklist); Lingafelter, 2007: 25, 141, 2 figs, pl. 6c; Bousquet, Laplante. Hammond & Langor, 2017: 109, pl. 19

Gaurotes (Neogaurotes) abdominalis ab. *micans* Podany, 1962: 226; Ruetter, 1970: 19 (type).

Type locality - Holotype: Canada, Ontario: Nable. (CNCI).

2. *Pseudogaurotina cressoni cressoni* (Bland, 1864)

Type locality - Holotype male: United States, Colorado: Rocky Mountains. (ANSP).

Distribution - From the southwestern mainland of British Columbia to southwestern Alberta, south to southern Colorado and southern Utah Rocky Mts. **Host plants** - *Abies* sp., *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Gaurotes Cressoni Bland, 1864: 69; LeConte, 1879: 505 (distr.); Horn, 1880a: xi; Boppe, 1921: 70.

Gaurotes cressoni; Leng, 1890: 156; Laurent, 1899: 302 (distr.); Hopping, 1928: 7 (syn.); Beaulne, 1932: 199 (hosts); Hopping, 1937: 19, pl. 5.

Gaurotes (Pseudogaurotina) cressoni; Podany, 1962: 237, pl. 4, fig. 8, pl. 5, fig., 18.

Pseudogaurotina cressoni; Chemsak & Linsley, 1963: 83; Gardiner, 1970: 287 (biol.); Hatch, 1971: 143; Chemsak, Linsley & Noguera, 1992: 99 (cat.).

Pseudogaurotina cressoni cressoni; Linsley & Chemsak, 1972: 125; Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 42 (cat.); Linsley & Chemsak, 1997: 426 (hosts); Chemsak, 2005: 173, pl. 13, figs 5, 6; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 109, pl. 19; Rice, MacRae & Merickel, 2017: 674 (distr.)

Gaurotes (Pseudogaurotina) cressoni ab. *howdeni* Podany, 1962: 237; Ruetter, 1970: 19.

Type locality - Holotype: Canada, British Columbia, Robson. (CNCI).

Gaurotes (Pseudogaurotina) cressoni ab. *amethystina* Podany, 1962: 238; Ruetter, 1970: 20.

Type locality - Holotype: Canada, British Columbia, Nicola (CNCI).

Gaurotes (Pseudogaurotina) cressoni ab. *nigrita* Podany, 1962: 238; Ruetter, 1970: 20.

Type locality - Holotype: Canada, British Columbia, Midday Valley, Merritt. (CNCI).

2a. *Pseudogaurotina cressoni lecontei* (Casey, 1913)

Type locality - Holotype female: United States, Oregon. (USNM). **Distribution** - Cascade Range from Washington southward along coast ranges to southern California, Sierra Nevada. **Host plants** - *Abies* sp, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Gaurotes lecontei Casey, 1913: 219; Leng, 1920: 272 (cat.).

Gaurotes (Pseudogaurotina) lecontei; Podany, 1962: 238.

Pseudogaurotina cressoni lecontei; Linsley & Chemsak, 1972: 126, figs 31, 39; Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 42 (cat.); Linsley & Chemsak, 1997: 426 (hosts); Chemsak, 2005: 174, pl.13, figs 7, 8; Monné, M.A. & Hovore, 2006: 167 (checklist); Lingafelter *et al.*, 2014: 88, fig. 96o, (holotype).

Gaurotes cressoni; Garnett, 1918: 248 (distr.); Hopping, 1928: 7 (syn.); Mank, 1934: 80 (distr.); Canova, 1936: 130 (distr.); Doane *et al.*, 1936: 177; Hopping, 1937: 19, pl. 5; Hardy, 1948: 32 (distr.) (not Bland, 1864).

DESMOCERINI Blanchard, 1845

Desmocérines Blanchard, 1845: 163; Chenu, 1870: 328;

Desmoceritae; Thomson, 1860: 159

Desmocerini; LeConte, 1873b: 324; LeConte & Horn, 1883: 309; Leng, 1890: 11; Blatchley. 1910: 1043; Boppe, 1921: 13, 29; Linsley, 1940: 270; Knull, 1946: 185; Arnett. 1962: 856, 878; Hatch, 1971: 123; Linsley & Chemsak, 1972: 3; Monné, M. A., 1995a: 1; Chemsak, 2005: 2; Bouchard *et al*, 2011: 462; Bousquet, Laplante. Hammond & Langor, 2017: 116

Type-genus - *Desmocerus* Dejean, 1821

Type-species - *Stenocorus cyaneus* Fabricius, 1775 (monotypy).

***Desmocerus* Dejean 1821**

Desmocerus Dejean, 1821: 111; Gray, 1832: 111; Audinet-Serville, 1835: 202; Laporte, 1840: 498; Blanchard, 1849: 493; 317; Emmons. 1854: 125; Thomson, 1861: 145, 159; 1864: 149, 510; Lacordaire, 1868; LeConte, 1850a: 317; Chenu, 1870: 328; 734; LeConte, 1873b: 324; Provancher, 1877a: 580, 604; Horn, 1881: viii; LeConte & Horn, 1883: 309; Leng, 1890: 11; Wickham, 1897b: 87; Webb, 1905: 105; Blatchley, 1910: 1044; Boppe, 1921: 15, 29; Burke, 1921: 450; Craighead, 1923: 86; Bradley, 1930: 228; Chagnon, 1936: 243; Knull, 1946: 185; Dillon & Dillon, 1961: 623; Arnett, 1962: 856, 878; Chagnon & Robert, 1962: 240; Chemsak, 1964: 232; Linsley & Chemsak, 1972: 4; Monné, M.A., 1995a: 2; Chemsak, 2005: 2, 3; Monné, M.A. & Hovore, 2006: 156 (checklist); Švácha & Lawrence, 2014: 78, 144, 153, 155, 156; Haack, 2017: 116; Bousquet, Laplante. Hammond & Langor, 2017: 116 (key spp.)

Type-species - *Stenocorus cyaneus* Fabricius, 1775 (monotypy) (= *Cerambyx palliatus* Forster, 1771)

1. *Desmocerus aureipennis aureipennis* Chevrolat 1855

Type locality - Holotype: United States, Rocky Mountains. (BMNH). **Distribution** - Sierra Nevada Mts. of California to southern Oregon and Nevada. **Host plants** - *Sambucus glauca* Nuttall ex Torrey & A. Gray, *S. mexicana* Presl ex de Candolle (Caprifoliaceae).

Desmocerus aureipennis Chevrolat, 1855: 187; 1858: 325, pl. 8, fig. 6; Strauch, 1861: 138 (cat.); Thomson, 1861: 159; Lacordaire, 1868: 459; Horn, 1881: viii; Boppe, 1921: 30.

Desmocerus auripennis; LeConte, 1857: 23 (error); LeConte, 1873b: 324; Horn, 1879: xxx; Riley, 1880: 239 (hosts); Leng, 1890: 110 (distr.); Blaisdell, 1892: 34 (hosts); Fall, 1901: 147 (distr.); Webb, 1905: 105; Garnett, 1918: 211 (distr.); Burke, 1921: 452 (biol.); Essig, 1926: 454, fig. 355 (biol.); Tanner, 1927: 33; Beaulne, 1932: 200 (hosts); Doane *et al.*, 1936: 178, fig. 85; Jaques, 1951: 258, fig. 611; Linsley & Chemsak, 1972: 8; Swan & Papp, 1972: 451, fig. 963; Furniss & Carolin, 1977: 296 (biol.); Chemsak, Linsley & Noguera, 1992: 89 (cat.).

Desmocerus auripennis auripennis; Hatch, 1971: 145, pl. 17, fig. 5; Linsley & Chemsak, 1972: 8; Hovore & Giesbert, 1976: 350 (hosts); Monné, M.A., & Giesbert, 1994: 157 (checklist); Linsley & Chemsak, 1997: 365 (hosts); Chemsak, 2005: 8, pl. 1, fig. 6.

Desmocerus aureipennis aureipennis; Monné, M.A. & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 2 (cat.); Monné, M.A. & Hovore, 2006: 156 (checklist); Bezark, 2019b: 74 (distr.)

1a. *Desmocerus aureipennis lacustris* Linsley & Chemsak 1972

Type locality - Holotype male: United States, Oregon: Crater Lake. (CASC). **Distribution** - United States (Southcentral Oregon). **Host plants** - *Sambucus callicarpa* Greene, *S. glauca* Nuttall ex Torrey & A. Gray, *S. mexicana* Presl ex de Candolle (Caprifoliaceae).

Desmocerus auripennis lacustris Linsley & Chemsak, 1972: 11, figs. 1, 4; Chemsak, Linsley & Noguera, 1992: 89 (cat.).

Desmocerus aureipennis lacustris. Monné, M.A., & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 2 (cat.); Chemsak, 2005: 11, pl. 1, figs 10, 11; Monné, M.A. & Hovore, 2006: 156 (checklist);

2. *Desmocerus californicus californicus* Horn 1881

Type locality - Holotype: United States, Southern California. (ANSP). **Distribution** - Coastal California from Mendocino Co. to Los Angeles Co., lower Sacramento Valley to upper San Joaquin Valley. **Host plants** - *Sambucus glauca* Nuttall ex Torrey & A. Gray, *S. mexicana* Presl ex de Candolle, *S. racemosa* L. var. *microbotrys* (Rydb.) Kearney (Caprifoliaceae).

Desmocerus californicus Horn, 1881: vii; Leng, 1890: 11; Fall, 1901: 147 (distr.); Blaisdell, 1903: 276 (biol.); Webb, 1905: 105; Garnett, 1918: 211 (distr.); Boppe, 1921: 30; Burke, 1921: 451 (biol.); Davis & Comstock, 1924: 179 (larva, biol.); Essig, 1926: 454 (biol.); Davis, 1931: 187 (hosts); Doane *et al.*, 1936: 178 (biol.); Moore, 1937: 89 (distr.); Jaques, 1951: 258; Linsley & Chemsak, 1972: 7; Swan & Papp, 1972: 451; Damoiseau & Cools, 1987: 7 (types); Chemsak, Linsley & Noguera, 1992: 89 (cat.); Halstead & Oldham, 2000: 74, fig. 1 (distr.).

Desmocerus californicus californicus; Linsley & Chemsak, 1972: 7; Monné, M.A., & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 3 (cat.); Collinge *et al.*, 2001: 104 (hosts); Chemsak, 2005: 5, pl. 1, fig. 3; Monné, M.A. & Hovore, 2006: 156 (checklist); Hanks & Wang, 2017: 134 (biol); Gimmel *et al.*, 2023: 255 (distr.)

2a. *Desmocerus californicus dimorphus* Fisher 1921

Type locality - Holotype male: United States, California: Sacramento. (USNM). **Distribution** - United States, California (Lower Sacramento Valley to upper San Joaquin Valley). **Host plants** - *Sambucus glauca* Nuttall ex Torrey & A. Gray, *S. mexicana* Presl ex de Candolle, *S. racemosa* L. var. *microbotrys* (Rydb.) Kearney & Peebles.

Desmocerus dimorphus Fisher, 1921: 207.

Desmocerus californicus dimorphus; Doane *et al.*, 1936: 178; Linsley & Chemsak, 1972: 7, fig. 2; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., 1995a: 3 (cat.); Linsley & Chemsak, 1997: 365 (hosts); Huxel, 2000: 81 (ecol.); Collinge *et al.*, 2001: 104 (biol.); Chemsak, 2005: 6, pl.1, figs 4,5; Monné, M.A. & Hovore, 2006: 156 (checklist); Bouchard, 2014: 541; Lingafelter *et al.*, 2014: 54, fig. 57c (holotype); Ray *et al.*, 2014: 2 (pherom.)

3. *Desmocerus cribripennis* Horn 1881

Syntypes locality - Syntypes male and female: United States, Washington Territory. (ANSP). **Distribution** - Pacific Coast from central California. In Canada, British Columbia, it occurs on Haida Gwaii and Vancouver Island, east to the Okanagan Valley. **Host plants** - *Sambucus callicarpa* Greene (Caprifoliaceae).

Desmocerus cribripennis Horn, 1881: viii; Leng, 1890: 11; Fall, 1901: 147 (distr.); Webb, 1905: 105; Garnett, 1918: 211 (distr.); Burke, 1921: 451 (biol.); Boppe, 1921: 30; Craighead, 1923: 87 (larva); Essig, 1926: 454 (distr.); Hardy, 1926b: 36; 1927: C36; Hardy & Preece, 1927b: 63 (hosts); Beaulne, 1932: 200 (hosts); Doane *et al.*, 1936: 178; Damoiseau & Cools, 1987: 9 (types); Bousquet, Laplante. Hammond & Langor, 2017: 116, pl. 22

Desmocerus auripennis cribripennis; Hatch, 1971: 145; Linsley & Chemsak, 1972: 9, fig. 1; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 2 (cat.); Linsley & Chemsak, 1997: 365 (hosts); Chemsak, 2005: 9, pl. 1, fig. 7; Monné, M.A. & Hovore, 2006: 156 (checklist);

4. *Desmocerus palliatus* (Forster 1771)

Type locality - Holotype: America Septentrionali. (LSUK). **Distribution** - Eastern North America from Canada to Florida and westward to Kansas. In Canada this species ranges from eastern Newfoundland to the Lake Nipigon area in central Ontario. **Host plants** - *Sambucus canadensis* Linnaeus, *S. nigra* Linnaeus, *S. racemosa* Linnaeus (Caprifoliaceae).

Ceramyx palliatus Forster, 1771: 40.

Desmocerus palliatus; Fitch, 1845:250; Haldeman, 1847a: 58; LeConte, 1850a: 318; Chevrolat, 1852: 651; Jaeger, 1859: 56, fig. 14; Bland, 1861: 100 (distr., hosts); Bland, 1863: 322 (syn.); Jaeger, 1864: 56, fig. 14; Lacordaire, 1868: 459; LeConte, 1873b: 324; Popenoe, 1877: 33 (distr.); Gardiner, 1879: 213 (distr.); Riley, 1880: 239 (biol.); Horn, 1880a: xi (syn.); 1881: viii; LeConte & Horn, 1883: 309; Townsend, 1884: 221; 1885: 70; Horn, 1885c: 89; Harrington, 1890: 185; Leng, 1890: 110; 1890: 11; Hamilton, 1893a: 274 (distr.); 1893b: 326 (distr.); Harrington, 1894a: 86, fig. 6C; Hamilton, 1895: 338 (distr.); Beutenmuller, 1896: 87 (hosts); Wickham, 1897a: 157 (distr.); 1897b: 169; Lugger, 1899: 204, pl. 4, fig. 124; Smith, 1900: 291 (distr.); Dury, 1902: 160 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 35 (distr.); Stevenson, 1905: 90; Webb, 1905: 105; Wickham, 1909a: 28 (distr.); Leng, 1910: 77 (distr.); Smith, 1910: 330; Blatchley, 1910: 1044; Fisher & Kirk, 1912: 312 (distr.); Kaeber, 1914: 430 (hosts); Morris, 1915: 22 (biol.); 1916a: 201; Johnson, 1915: 315 (distr.); Nicolay, 1917a: 94 (distr.); Chagnon, 1917: 233 (distr.); Hess, 1917: 64 (morphol.); Nicolay, 1919: 68 (distr.); Britton, 1920: 268 (distr.); Boppe, 1921: 30, pl. 2, fig. 6; Burke, 1921: 451; Graham, 1922: 196, fig. 3 (morphol.); Herrick, 1923: 543, pl. 7; Craighead, 1923: 87, pl. 17, fig. 11, pl. 31, fig. 8 (larva); Hatch, 1925: 580 (distr.); Kirk & Knull, 1926: 26 (distr.); Procter, 1927: 112 (distr.); Leonard, 1928: 443 (distr.); Ware, 1929: 368 (distr.); Beaulne, 1932: 200 (hosts); Goldman, 1933: 93, pl.5, figs 40-44 (anat.); Herrick, 1935: 324, figs 271-272; Chagnon, 1936: 243, pl. 15, fig. 3; Doane *et al.*, 1936: 278; Saalas, 1936: 84, fig. 9, pl. 8, figs 102a,b; Brimley, 1938: 214 (distr.); Smith *et al.*, 1943: 215, pl. 15, fig. 3; Loding, 1945: 118 (distr.); Knull, 1946: 185, pl. 8, fig. 33; Sherman, 1946: 127 (distr.); Procter, 1946: 180 (biol.); Fattig, 1947: 21; Craighead, 1950: 244 (biol.); Jaques, 1951: 258, fig. 610; Alexander, 1958: 46; Dillon & Dillon, 1961: 623, pl. 62, No. 6; Chagnon & Robert, 1962: 243, pl. 15, fig. 3; Hicks, 1965: 39 (distr.); Gardiner, 1966: 202, 207, figs 10, 42; 1970: 287 (hosts); Linsley & Chemsak, 1972: 5, fig. 1; Baker, 1972: 193 (biol.); Swan & Papp, 1972: 451, fig. 962; Gosling & Gosling, 1976: 2, fig. 62 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 92 (biol.); Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 340; Gosling, 1984: 71 (hosts); 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 89 (cat.); MacRae, 1993: 237 (distr.); Monné, M.A., & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 3 (cat.); Yanega, 1996: 28, pl. 88, fig. 221; Linsley & Chemsak, 1997: 365 (hosts); Schiefer, 1998: 120 (distr.); Vlasák & Vlasakova, 2002: 204 (distr.); Chemsak, 2005: 4, pl. 1, figs 1, 2; Monné, M.A. & Hovore, 2006: 156 (checklist); Lingafelter, 2007: 35, 140, 2 figs, pl. 22, fig. b; Guarnieri, 2009: 14 (distr.); Holt, 2013: 243 (distr.); Švácha & Lawrence, 2014: figs 2, 4, 7 (morphol.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Haack, 2017: 116; Bousquet, Laplante, Hammond & Langor, 2017: 116, pl. 22

Desmocerus spalliatatus; Provancher, 1877a: 605 (error).

Calopus blandus Fabricius, 1775: 182; Zimsen, 1964: 172 (types).

Syntypes locality - Syntypes: Indiis. (BMNH).

Stenocorus cyaneus Fabricius, 1775: 823; 1781: 226; 1787: 143; 1793: 293; Olivier, 1795: 23, pl. 3, fig. 26; Fabricius, 1801: 305; Knoch, 1801: 148, pl. 6, fig. 1; Palisot de Beauvois, 1805: 249, pl. 7, fig. 6; Illiger, 1805: 111; Latreille, 1807: 41; Zimsen, 1964: 172 (types).

Cerambyx (Stenocorus) cyaneus; Gmelin, 1790: 1861.

Rhagium cyaneum; Schoenherr, 1817: 411 (syn.).

Desmocerus cyaneus; Dejean, 1821: 111 (cat.); Audinet-Serville, 1835: 202; Laporte, 1840: 499, pl. 54, fig. 1; Harris, 1841: 92 (biol.); Guérin-Méneville, 1844: 251, pl. 46, figs 1, 1a-b; Thomson, 1861: 159; 1864: 149; Chenu, 1870: 328; Croft, 1872: 120 (distr.); Packard, 1872: 501 (biol.).

Type locality - Holotype: India. (HUMG).

Desmocerus elongatus Bland, 1862: 269; Lacordaire, 1868: 459.

Type locality - Lectotype female: United States, Virginia: Hampshire County. (ANSP).

5. *Desmocerus piperi* Webb 1905

Type locality - Holotype male: United States, Washington: Blue Mountains. (USNM).

Distribution - Northern Rocky Mts. From Oregon and Washington to Montana. In Canada

- southwestern Alberta and southeastern British Columbia. **Host plants** - *Sambucus melanocarpa* A. Gray (Caprifoliaceae).
- Desmocerus piperi* Webb, 1905: 104; Burke, 1921: 452 (biol.); Boppe, 1921: 30; Craighead, 1923: 87 (larva); Hardy, 1926b: 7; Essig, 1926: 454; Berlioz, 1933: 111; Mank, 1934: 80 (distr.); Jaques, 1951: 258; Clark, 1956: 41 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 117
- Desmocerus auripennis piperi*; Doane *et al.*, 178 (distr.); Linsley & Chemsak, 1972:11, fig. 1; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Linsley & Chemsak, 1997: 365 (hosts)
- Desmocerus aureipennis piperi*; Monné, M.A., & Giesbert, 1994: 157 (checklist); Monné, M.A., 1995a: 2 (cat.); Chemsak, 2005: 10, pl. 1, figs 8, 9; Korotyaev *et al.*, 2005: 253 (hosts); Monné, M.A. & Hovore, 2006: 156 (checklist); Lingafelter *et al.*, 2014: 300, fig. 133i (holotype); Rice, MacRae & Merickel, 2017: 670 (distr.)

ENCYCLOPINI LeConte, 1873

Encyclopini LeConte, 1873b: 326; LeConte & Horn, 1883: 211; Leng, 1890: 10; Blatchley, 1910: 1043, 1045; Bousquet *et al.*, 2009: 22; Bouchard *et al.*, 2011: 462.
; Bousquet, Laplante, Hammond & Langor, 2017:

Type-genus: *Encyclops* Newman, 1838

Type-species: *Encyclops pallipes* Newman, 1838 (monotypy)

Encyclops Newman 1838

Encyclops Newman, 1838: 392; Haldeman, 1847b: 375; LeConte, 1850a: 317; Thomson, 1861: 145, 149; 1864: 149, 410; Lacordaire, 1868: 455; LeConte, 1873b: 327; LeConte & Horn, 1883: 312; Leng, 1890: 13; Wickham, 1897b: 88; Blatchley, 1910: 1045; Boppe, 1921: 79; Craighead, 1923: 82; Swaine & Hopping, 1928: 11, 14; Bradley, 1930: 235; Hopping, 1937: 2; Knull, 1946: 170; Gressitt, 1947: 191; Dillon & Dillon, 1961: 17; Arnett, 1962: 857, 877; Chemsak, 1964: 232; Linsley & Chemsak, 1972: 61; Monné, M.A., 1995a: 24; Chemsak, 2005: 32, 88; Monné, M.A. & Hovore, 2006: 160 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 115

Type-species - *Encyclops pallipes* Newman, 1838 (= *Leptura caerulea* Say, 1826) (monotypy).
Microrhabdium Kraatz 1879: 99; Chemsak, 1964: 233.

Microrhabdium; Plaviltstshikov 1936: 108, 123, 423, 498.

Type-species - *Microrhabdium macilentum* Kraatz, 1879 (monotypy).

1. *Encyclops caerulea* (Say, 1827)

Syntypes locality - Syntypes: United States (Depository unknown). **Distribution** - Eastern North America. In Canada, it is known from one locality in east-central New Brunswick and several localities in southern Ontario north to the Ottawa area **Host plants** - *Acer* sp. (Aceraceae), *Castanea* sp., *Quercus bicolor* Willd. (Fagaceae), *Carya glabra* (Miller) Sweet, *Juglans nigra* Linnaeus (Juglandaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Fraxinus americana* Linnaeus (Oleaceae), *Pinus contorta* Douglas ex Loudon (Pinaceae).

Leptura caerulea Say, 1827: 280.

Encyclops caeruleus; Haldeman, 1847b: 376; LeConte, 1850a: 317; White, 1855: 203; LeConte, 1859c: 336; Thomson, 1861: 159; Bland, 1861: 100; Thomson, 1864: 149; Leng, 1890: 110; Harrington, 1890: 185 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 173; Smith, 1900: 291 (distr.); Dury, 1902: 160 (distr.); Ulke, 1903: 26, 50 (distr.); Smith, 1910: 330; Blatchley, 1910: 1045; Fisher & Kirk, 1912: 312 (distr.); Chagnon, 1917: 233 (distr.); Nicolay, 1917a: 94 (distr.); Britton, 1920: 268 (distr.); Craighead, 1923: 89, pl. 1, fig. 2, pl. 27, fig. 2; 1950: 247 (biol.).

Encyclops caerulea; Lacordaire, 1868: 456; Horn, 1885a: 5 (syn.); Morris, 1909b: 416; Boppe, 1921:80; Kirk & Knull, 1926: 26 (distr.); Leonard, 1928: 443 (distr.); Knull, 1932: 63; 1934: 210 (hosts); Beaulne, 1932: 200 (hosts); Saalas, 1936: 83 (morphol.); Hopping, 1937: 2, pl.

1; Brimley, 1938: 214 (distr.); Knull, 1946: 170, pl. 5, fig. 16; Sherman, 1946: 127 (distr.); Fattig, 1947: 21; Dillon & Dillon, 1961: 617, pl. 61, No. 16; Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 62; Baker, 1972: 199 (biol.); Perry, 1975: 59 (hosts); Gosling & Gosling, 1976: 3 (biol., distr.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); Arnett, 1985: 368, fig. 24.201; White, 1985: 283, fig. 123; Gosling, 1986: 156 (hosts); Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 24 (cat.); Krinsky & Godwin, 1996: 238; Yanega, 1996: 32, pl. 4, fig. 42; Linsley & Chemsak, 1997: 373 (hosts); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 89, pl. 6, fig. 9; Rice & Veal, 2006: 258 (distr.); Monné, M.A. & Hovore, 2006: 160 (checklist); Lingafelter, 2007: 17, 140, 2 figs, pl. 3, fig. h; Webster, McCorquodale & Majka, 2009: 294 (distr.); Guarnieri, 2009: 15 (distr.); Webster, 2016: 485; Haack, 2017: 115; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 116, pl. 20; Heffern, Vlasak & Allen, 2018: 744 (hosts).

Encyclops pallipes Newman, 1838: 392

Syntypes locality - Syntypes: United States, New York: Trenton Falls, (BMNH).

2. *Encyclops californica* Van Dyke 1920

Type locality - Holotype male: United States, California: Marin County, Cañon near Lagunitas. (CASC), **Distribution** - Coastal northern California. **Host plants** - *Lithocarpus densiflora* Rehder (Fagaceae), *Tsuga* sp. (Pinaceae), *Rhamnus californica* Eschscholtz (Rhamnaceae).

Encyclops californicus Van Dyke, 1920: 45; Hopping, 1937: 3.

Encyclops californica; Linsley & Chemsak, 1972: 62, fig. 20; Penrose & Westcott, 1974: 234; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 24 (cat.); Linsley & Chemsak, 1997: 373 (hosts); Chemsak, 2005: 90, pl. 6, figs 10,11; Monné, M.A. & Hovore, 2006: 160 (checklist); Swift, 2008: 4 (distr.).

Leptalia LeConte 1873

Leptalia LeConte, 1873: 204a; 1873b: 327; LeConte & Horn, 1883: 312; Leng, 1890: 13; Boppe, 1921: 79; Craighead, 1923: 83; Swaine & Hopping, 1928: 11, 14; Bradley, 1930: 235; Hopping, 1937: 2; Arnett, 1962: 857, 877; Chemsak, 1964: 233; Hatch, 1971: 124; Linsley & Chemsak, 1972: 99; Monné, M.A., 1995a: 36; Chemsak, 2005: 33, 132; Monné, M.A. & Hovore, 2006: 164 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 115

Type-species - *Anoplodera macilenta* Mannerheim, 1853 (original designation).

1. *Leptalia macilenta* (Mannerheim 1853)

Syntypes locality - Syntypes: United States, Alaska, Peninsula Kenai, ad rivulos flumen Tschunuktnu. (MZHF). **Distribution** - In United States Alaska, Montana southward to Central California. In Canada, it occurs from the Aleutian Islands south to southern Vancouver Island, east to the Rocky Mountains in southwestern Alberta. **Host plants** - *Acer macrophyllum* Pursh (Aceraceae), *Alnus rubra* Bongard (Betulaceae), *Quercus agrifolia* Née (Fagaceae), *Umbellularia californica* (Hooker & Arnott) Nuttall (Lauraceae), *Prunus emarginata* Walpers (Rosaceae), *Salix* sp. (Salicaceae).

Anoplodera macilenta Mannerheim, 1853: 253

Leptura macilenta; LeConte, 1857: 23

Leptalia macilenta; LeConte, 1873b: 327; 1873a: 204; LeConte & Horn, 1883: 312; Leng, 1890: 13; Hamilton, 1894a: 31; Harrington, 1899: 108 (distr.); Kincaid, 1900: 376, pl. 25, figs 8-12 (larva); Schwarz, 1900: 535 (distr.); Fall, 1901: 148 (distr.); Van Dyke, 1902: 199 (distr.); Schwarz, 1910: 183 (distr.); Garnett, 1918: 211 (distr.); Boppe, 1921: 79; Craighead, 1923: 89, pl. 1, fig. 1 (larva); Fall, 1926: 202 (distr.); Hardy, 1926b: 35; Beaulne, 1932: 198 (hosts); Mank, 1934: 80 (distr.); Doane *et al.*, 1936: 170 (biol.); Saalas, 1936: 83 (morphol.); Canova, 1936: 130 (distr., hosts); Moore, 1937: 88 (distr.); Clark, 1956: 41 (distr.); Chemsak & Powell, 1971: 101 (hosts); Linsley & Chemsak, 1972: 99, fig. 32; Penrose & Westcott, 1974:

234; Deyrup, 1977: 182 (hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 36 (cat.); Linsley & Chemsak, 1997: 387 (hosts); Chemsak, 2005: 133, pl. 10, fig. 3; Monné, M.A. & Hovore, 2006: 164 (checklist); Swift, 2008: 5 (distr., hosts); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 115, pl. 21

Anoplodera Frankenhaeuseri Mannerheim 1853: 252.

Leptura Frankenhaeuseri; LeConte, 1857: 23.

Leptalia macilenta var. *Frankenhaeuseri*; LeConte, 1873b: 327; 1873a: 205; LeConte & Horn, 1883: 312.

Leptalia macilenta var. *frankenhaeuseri*; Leng, 1890: 13; Hardy, 1926a: 4; 1942: 10.

Leptalia frankenhaeuseri; Hopping, 1937: 2 pl. 1; Hatch, 1971: 136, pl. 15, figs 5, 5^a.

Leptalia frankenhaeuseri ab. *macilenta*; Hatch, 1971: 136.

Type locality - Syntypes: United States, Alaska, Peninsula Kenai, ad rivulos flumen Tschunuktnu. (MZHF).

Leptura fuscicollis LeConte, 1857: 65; 1869: 283 (distr.); Canova, 1936: 130 (distr., hosts).

Leptalia macilenta var. *fuscicollis*; LeConte, 1873b: 327; 1873a: 205; LeConte & Horn, 1883: 312; Leng, 1890: 13.

Leptalia frankenhaeuseri ab. *fuscicollis*; Hatch. 1971: 136.

Type locality - Holotype: United States, California: San Francisco. (MCZN).

EVODINIINI Zamoroka, 2022

Evodiniini Zamoroka, 2022: 302

Type-genus - *Evodinus* Mulsant, 1863

***Brachyta* Fairmaire, 1868**

Brachyta Fairmaire, 1868: 185; Plavilstshikov, 1936: 186; Sama, 2003: 16; Bousquet, Laplante. Hammond & Langor, 2017: 108; Zamoroka, 2022: 302

Type species - *Leptura interrogationis* Linnaeus, 1758 (monotypy)

1. *Brachyta lanhami* Lewis, 1976

Type locality - Holotype female: United States, Wyoming: Park County, Beartooth Plateau. (Department of Entomology Collection, University of Colorado). **Distribution** - United States (Wyoming) in Canada (Saskatchewan and Alberta).

Evodinus lanhami Lewis, 1976: 227; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M. A., 1995a: 26 (cat.); Chemsak, 2005: 97, pl. 7, figs 8, 9; Monné, M.A. & Hovore, 2006: 161 (checklist);

Brachyta lanhami; Bousquet, Laplante. Hammond & Langor, 2017: 108, pl. 19

***Evodinus* LeConte, 1850**

Evodinus LeConte, 1850a: 325; 1850b: 235; Thomson, 1861: 365; Casey, 1913: 216; Boppe, 1921: 71; Swaine & Hopping, 1928: 11; Bradley, 1930: 235; Chagnon, 1936: 246; Hopping, 1937: 18; Linsley, 1938: 109; Knull, 1946: 151; Dillon & Dillon, 1961: 618; Arnett, 1962: 857; Chagnon & Robert, 1962: 241; Chemsak & Linsley, 1963: 82; Chemsak, 1964: 232; Hatch, 1971: 125; Linsley & Chemsak, 1972: 70; Monné, M.A., 1995a: 26; Chemsak, 2005: 32; Monné, M.A. & Hovore, 2006: 161 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 107 (key spp.); Zamoroka, 2022: 302

Type -species - *Leptura monticola* Randall, 1838 (monotypy).

1. *Evodinus monticola* (Randall, 1838)

Syntypes locality - Syntypes: United States, Maine: on the Saddleback Mountains, and in the vicinity of the Mousehead Lake. (MCZN). **Distribution** - From eastern Newfoundland and Labrador to southeastern Manitoba, south through the Appalachian Mountains to northern Georgia. **Host plants** - *Abies* sp., *Picea* sp., *Pinus banksiana* Lambert, *P. resinosa* Aiton, *Tsuga* sp. (Pinaceae).

Leptura monticola Randall, 1838: 27.

Evodinus monticola; LeConte, 1850b: 235 (distr.); 1850a: 326 (biol.); Thomson, 1864: 142; Boppe, 1921: 72; Mundinger, 1924: 316 (biol.); Kirk & Knull, 1926: 24 (distr.); Fletcher, 1926: 143 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 438 (distr.); Pack, 1930: 119 (distr.); Beaulne, 1932: 199 (hosts); Brown, 1934: 229 (distr.); Saalas, 1936: 73 (morphol.); Chagnon, 1936: 246, pl. 16, fig. 1; Canova, 1936: 129 (distr., hosts); Doane *et al.*, 1936: 278; Hopping, 1937: 18, pl. 5; Brimley, 1938: 212 (distr.); Chagnon, 1939: 86 (distr.); Procter, 1946: 177 (distr.); Knull, 1946: 178, pl. 6, fig. 21; Sherman, 1946: 127 (distr.); Fattig, 1947: 15 (distr.); Dillon & Dillon, 1961: 218, pl. 61, No. 11; Chagnon & Robert, 1962: 246, pl. 16, fig. 1; Gardiner, 1966: 202, fig. 9; 1970: 787 (distr., hosts); Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 70; Gosling & Gosling, 1976: 3 (biol., distr.); Lewis, 1976: 227; Laliberté, Chantal & LaRochelle, 1977: 93 (biol.); Miliczky & Osgood, 1979: 133 (biol.); Švácha & Danilevsky, 1989: 75 (larva); Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 27 (cat.); Monné, M.A. & Hovore, 2006: 161 (checklist); Lingafelter, 2007: 21, 149, 2 figs, pl. h; Bousquet, Laplante, Hammond & Langor, 2017: 107, pl. 19

Argaleus monticola; LeConte, 1854b: 218.

Pachyta monticola; Austin, 1874: 270 (distr.); Provancher, 1877: 608; Leng, 1890: 97; Harrington, 1890: 185 (distr.); Slosson, 1894: 3 (distr.); Hamilton, 1894a: 31 (distr.); 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 171; 1897c: 157 (distr.); Harrington, 1899: 108 (distr.); Schwarz, 1900: 535 (distr.); MacGillivray & Houghton, 1902: 252 (distr.); Chagnon, 1905: 36 (distr.); Houghton, 1905: 51 (distr.); Blatchley, 1910: 1049; Schwarz, 1910: 183 (distr.); Fisher & Kirk, 1912: 312 (distr.); Lovell, 1915: 114; Morris, 1916: 19 (hosts); Chagnon, 1917: 233 (distr.); Nicolay, 1917a: 94; Blackman, 1918: 125 (distr.); Craighead, 1923: 141, pl. 1, fig. 3, pl. 22, fig. 15 (larva).

Evodinus monticola monticola; Linsley & Chemsak, 1972: 71; Frost, 1979: 347 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Hansen & Osgood, 1983: 149 (biol.); Gosling, 1986: 156 (hosts); Drouin, 1992: 175 (distr.); Monné, M.A., 1995: 27 (cat.); Yanega, 1996: 32, pl. 8, figs 87a,b; Linsley & Chemsak, 1997: 377 (hosts); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 98, pl. 8, fig. 5; Webster, 2016: 486;

Evodinus carolinensis Casey, 1924: 275; Wray, 1967: 46 (syn.); Lingafelter *et al.*, 2014: 36, 367, fig. 38s (lectotype).

Type locality - Lectotype: United States, North Carolina: Summit of Black Mountains. (USNM).

2. *Evodinus vancouveri* Casey, 1913

Type locality - Lectotype: Canada, British Columbia: Vancouver Island. (USNM).

Distribution - This species ranges from south-central Alaska south to central Idaho and central California along the Pacific Coast, east to Saskatchewan. In Canada, it is known from central Yukon and southwestern Northwest Territories, south to east-central Saskatchewan and southern British Columbia, including southern Vancouver Island. **Host plants** - *Abies* sp., *Pseudotsuga menziesii* (Mirbel) Franco, *Tsuga heterophylla* (Rafinesque) Sargent (Pinaceae).

Evodinus vancouveri Casey, 1924: 216; Leng, 1920: 271 (cat.); Hardy, 1926a: 5; 1927: C35; Canova, 1936: 129 (distr.); Hopping, 1937: 19, pl. 5; Hardy, 1944: 16 (distr.); 1948: 32 (distr.); 1955: B50 (distr.); Clark, 1956: 41; Barr & Penrose, 1969: 90 (distr.); Hatch, 1971: 144, pl. 20, figs 13-21; Bousquet, Laplante, Hammond & Langor, 2017: 108, pl. 19

Evodinus monticola vancouveri; Linsley & Chemsak, 1972: 71, figs 24, 25; Deyrup, 1977: 182 (biol.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 27 (cat.); Linsley & Chemsak, 1997: 378 (hosts); Chemsak, 2005: 99, pl. 7, figs 6, 7; Monné, M.A. & Hovore, 2006: 161 (checklist); Lingafelter *et al.*, 2014: 340, 367, fig. 178e (lectotype); Rice, MacRae & Merickel, 2017: 670 (distr.)

Metacmaeops Linsley & Chemsak, 1972

Metacmaeops Linsley & Chemsak, 1972: 137; Monné, M.A., 1995a: 46; Chemsak, 2005: 34, 188; Monné, M.A. & Hovore, 2006: 165 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 111; Zamoroka, 2022: 302

Type-species - *Leptura vittata* Swederus, 1787 (original designation).

1. *Metacmaeops vittata* (Swederus, 1787)

Type locality - Holotype: Amérique Septentrionale. (Depository unknown). **Distribution** - Canada (southern Quebec), eastern United States to Alabama and midwestern states. **Host plants** - *Castanea* sp. (Fagaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae).

Leptura vittata Swederus, 1787: 198; Gmelin, 1790: 1875.

Acmaeops vittata; Gemminger in Gemminger & Harold, 1872: 2862 (cat.).

Acmaeops (Pseudodinoptera) vittata; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Metacmaeops vittata; Linsley & Chemsak, 1972: 137; Gosling & Gosling, 1976: 7 (b iol., distr.); Turnbow & Franklin, 1980: 338 (distr.); Chemsak, Linsley & Noguera, 1992: 97 (cat.); MacRae, 1993: 238 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., 1995a: 46 (cat.); Yanega, 1996: 36, pl. 15, fig. 180; Linsley & Chemsak, 1997: 397 (hosts); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 188, pl. 14, fig. 9; Monné, M.A. & Hovore, 2006: 165 (checklist); Lingafelter, 2007: 25, 141, 2 figs, pl. 6a (hosts); Guarnieri, 2009: 15 (distr.); McDowell, 2011: 412 (biol.); Holt, 2013: 245 (distr.); Steury & MacRae, 2014: 9 (biol., distr.); Bousquet, Laplante, Hammond & Langor, 2017: 111, pl. 20; Klingeman *et al.*, 2017: 296 (distr.)

Leptura quadrivittata Schoenherr, 1817: 497.

Anoplodera 4-vittata; Haldeman, 1847a: 65.

Acmaeops quadrivittatus; Bland, 1861: 100.

Type locality - America Septentrionalis.

Leptura directa Newman, 1841: 71.

Anoplodera directa; Haldeman, 1847b: 374.

Acmaeops directa; LeConte, 1873a: 210; Horn, 1885a: 6; Leng, 1890: 106; Hamilton, 1895: 338 (distr.); Smith, 1900: 291 (distr.); Ulke, 1903: 26, 50 (distr.); Leng, 1910: 77 (distr.); Blatchley, 1910: 1050; Smith, 1910: 330; Fisher & Kirk, 1912: 312 (distr.); Banks, 1912: 106; Casey, 1913: 241; Johnson, 1916: 119 (distr.); Chagnon, 1917: 234 (distr.); Blackman, 1918: 130; Britton, 1920: 267 (distr.); Craighead, 1923: 139 (larva); Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 438 (distr.); Beaulne, 1932: 199 (hosts); Loding, 1933: 148 (distr.); Canova, 1936: 126 (distr.); Brimley, 1938: 212 (distr.); Wright & Whitehouse, 1941: 72 (distr.); Loding, 1945: 16 (distr.); Gibson & Carrillo, 1959: 118 (distr.); Dillon & Dillon, 1961: 619, pl. 61, No.13; Hatch, 1971: 143; Staines, 2008: 145 (distr.)

Type locality - Holotype: United States, New York. (BMNH).

Anoplodera 4-vittata var. *pallida* Haldeman, 1847a: 65.

Acmaeops vittata var. *pallida*; Gemminger in Gemminger & Harold, 1872: 2862 (cat.).

Acmaeops (Pseudodinoptera) vittata ab. *pallida*; Aurivillius, 1912: 193 (cat.); Boppe, 1921: 77.

Type locality - Holotype: United States, Pennsylvania. (MCZN).

LEPTURINI Latreille, 1802

Lepturetae Latreille, 1802: 218.

Lepturaeidae; Gistel, 1848a: (9).

Lepturinae; Pascoe, 1869: 553, 555.

Lepturini; LeConte, 1873b: 292, 327; LeConte & Horn, 1883: 312; Leng, 1890: 10; Blatchley, 1910: 1043, 1045; Casey, 1913: 193; Boppe, 1921: 15, 77; Swaine & Hopping, 1928: 1, 14; Bradley, 1930: 228, 234; Knull, 1946: 151; Linsley, 1961a: 629 (mimet.); Dillon & Dillon, 1961: 607; Chagnon & Robert, 1962: 240; Arnett, 1962: 856, 876; Hatch, 1971: 123; Linsley & Chemsak, 1972: 26; Villiers, 1974: 208, 212; 1980: 154; Svacha & Danilevsky, 1989: 15 (larva); Monné, M.A., 1995a: 15 (cat.); Chemsak, 2005: 29 (rev.); Monné, M.A., 2006: 114 (cat.); Bousquet *et al.*, 2009: 22; Bouchard *et al.*, 2011: 462; Bousquet, Laplante, Hammond & Langor, 2017: 117; Dutrillaux & Dutrillaux, 2018: 47 (cytogenetics)

Type-genus: *Leptura* Linnaeus, 1758.

Type-species: *Leptura quadrifasciata* Linnaeus, 1758 designated by Westwood (1838: 41).

Grammoptérites Mulsant, 1863: 569 (based on *Grammoptera* Audinet-Serville, 1835). *Nomen nudum*. Comment. This name is unavailable under Article 11.7 (not subsequently Latinized and attributed to Mulsant 1863).

Strangalini Zagajkevich, 1991: 96 (based on *Strangalia* Audinet-Serville, 1835). *Nomen nudum*. Comment. This name is unavailable under Article 11.5 (first published as a junior synonym).

***Alosternida* Podany 1961**

Alosterna (*Alosternida*) Podany, 1961: 27; 1963: 47.

Alosternida; Linsley & Chemsak, 1976: 37; Monné, M.A., 1995a: 72; Chemsak, 2005: 36, 232; Monné, M.A. & Hovore, 2006: 158 (checklist);

Type-species - *Pachyta chalybaea* Haldeman, 1847 (monotypy).

1. *Alosternida chalybaea* (Haldeman, 1847)

Type locality - Holotype: United States, Pennsylvania. (MCZN). **Distribution** - Eastern United States.

Pachyta chalybaea Haldeman, 1847a: 60.

Strangalia chalybea; LeConte, 1850a: 331.

Gaurotes chalybea; Gemminger in Gemminger & Harold, 1872: 2863 (cat.).

Leptura chalybaea; LeConte, 1873a: 217; Leng, 1890: 185, 186, 188, 194; Hamilton, 1895: 338 (distr.); Dury, 1902: 161 (distr.); Blatchley, 1910: 1056.

Leptura chalybea; Wickham, 1897b: 190.

Strangalia (*Strangalia*) *chalybea*; Aurivillius, 1912: 242 (cat.); Boppe, 1921: 100;

Parallelina chalybea; Casey, 1913: 255; Leng, 1920: 273 (cat.); Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 440 (distr.).

Alosterna chalybea; Swaine & Hopping, 1928: 23, pl. 1, fig. 20; Knull, 1946: 156, pl. 4, fig. 12.

Alosterna (*Alosternida*) *chalybea*; Podany, 1961: 28; 1963: 47.

Alosternida chalybea; Linsley & Chemsak, 1976: 38; Gosling & Gosling, 1976: 8 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.) Monné, M.A., & Giesbert, 1994: 159 (checklist);

Alosternida chalybaea; Monné, M.A., 1995a: 72 (cat.); Yanega, 1996: 29, pl. 4, fig. 47; Chemsak, 2005: 233, pl. 17, fig. 3; Monné, M.A. & Hovore, 2006: 158 (checklist); Lingafelter, 2007: 29, 33, 139, 2 figs, pl. 7e.; Klingeman *et al.*, 2017: 295 (distr.)

***Analeptura* Linsley & Chemsak 1976**

Analeptura Linsley & Chemsak, 1976: 26; Monné, M.A., 1995a: 70 (cat.); Chemsak, 2005: 35, 216; Monné, M.A. & Hovore, 2006: 158 (checklist);

Type-species - *Leptura lineola* Say, 1824 (original designation).

1. *Analeptura lineola* (Say 1824)

Syntypes locality - Syntypes: United States, Pennsylvania and Mississippi. (Depository unknown). **Distribution** - In United States, Florida to midwestern states, in Canada, from the Nova Scotia peninsula to the Rainy River District in western Ontario. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Betula* sp., *Corylus americana*, *Ostrya virginiana* (Miller) K. Koch (Betulaceae), *Viburnum acerifolium* Linnaeus (Cornaceae), *Carpinus caroliniana* Walter (Corylaceae), *Rhododendron* sp. (Ericaceae), *Fagus grandifolia* Ehrhart, *Quercus* sp. (Fagaceae), *Lindera benzoin* (Linnaeus) Blume (Lauraceae), *Tilia americana* Linnaeus (Malvaceae), *Pinus contorta* Douglas ex Loudon, *P. strobus* Linnaeus (Pinaceae), *Malus* sp., *Prunus virginiana* Linnaeus (Rosaceae).

Leptura lineola Say, 1824: 421; LeConte, 1859c: 199; Horn, 1868: 24 (distr.); LeConte, 1873a: 217; Henshaw, 1874: 22 (distr.); Provancher, 1877a: 614; Schaupp, 1880: 84 (biol.); Horn,

1885a: 6 (syn.); Leng, 1890: 187, 194; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 190; 1897c: 158 (distr.); Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 33 (distr.); Morris, 1909b: 416 (biol.); Blatchley, 1910: 1055; Leng, 1910: 77 (distr.); Smith, 1910: 331; Fisher & Kirk, 1912: 313 (distr.); Johnson, 1915: 35 (distr.); Lovell, 1915: 114; Chagnon, 1917: 234 (distr.); Blackman, 1918: 125 (biol.); Nicolay, 1919: 69 (distr.); Craighead, 1923: 97 (larva); Swaine & Hopping, 1928: 30, pl. 3, fig. 33, pl. 12, fig. 4; Knull, 1934: 209 (hosts); Chagnon, 1936: 252; Knull, 1946: 159; Fattig, 1947: 18; Dillon & Dillon, 1961: 610, pl. 50, No. 11; Chagnon & Robert, 1962: 252; Bayer & Shenefelt, 1969: 11, fig. 21; Kirk, 1970: 78; Wilson, 1971: 60 (biol.); Swan & Papp, 1972: 449, fig. 955; Perry, 1975: 59 (hosts); Gosling & Gosling, 1976: 13; Laliberté, Chantal & LaRochelle, 1977: 94 (biol.); Miliczky & Osgood, 1979: 133 (biol.).

Stenura lineola; Haldeman, 1847a: 63.

Strangalia lineola; LeConte, 1850a: 330; Bland, 1861: 101 (biol., distr.).

Strangalia (Strangalia) lineola; Aurivillius, 1912: 243 (cat.); Boppe, 1921: 100.

Strangalepta lineola; Casey, 1913: 257; Britton, 1920: 268; Leng, 1920: 273 (cat.); Fletcher, 1926: 143 (distr.); Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 440 (distr.); Frost & Dietrich, 1929: 436 (distr.); Park, 1931: 193 (biol.); Beaulne, 1932: 199 (hosts); Loding, 1933: 148 (distr.); Brimley, 1938: 213 (distr.); Loding, 1945: 117 (distr.); Gibson & Carrillo, 1959: 119 (distr.).

Strangalia (Leptura) lineola; Saalas, 1936: 80 (morphol.).

Analeptura lineola; Linsley & Chemsak, 1976: 26; Frost, 1979: 345 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 79 (biol.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); MacRae, 1993: 239 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 159 (checklist); Monné, M.A., 1995a: 70 (cat.); Krinsky & Godwin, 1996: 238; Yanega, 1996: 29, pl. 15, figs 181a, b; Linsley & Chemsak, 1997: 340 (hosts); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 216, pl. 16, fig. 4; Senchina, 2005: 329 (biol.); Monné, M.A. & Hovore, 2006: 158 (checklist); Rice & Veal, 2006: 158 (distr.); Majka, McCorcuodale & Smith, 2007: 259 (distr.); Lingafelter, 2007: 31, 139, 2 figs, pl. 7j; Staines, 2008: 145 (distr.); Guarnieri, 2009: 14 (distr.); McDowell, 2011: 412 (biol.); Holt, 2013: 443 (biol., distr.); Steury & MacRae, 2014: 9; Vlasák, 2014: 317 (hosts); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 118, pl. 22

Leptura indirecta Newman, 1841: 71.

Syntypes locality - Syntypes: United States, New York. (BMNH).

Stenura cincta Haldeman, 1847a: 63.

Syntypes locality - Syntypes: United States, Pennsylvania. (MCZN).

Stenura cincta var. *lateralis* Haldeman, 1847a: 63.

Strangalia lateralis; LeConte, 1850a: 330.

Strangalia (Strangalia) lineola ab. *lateralis*; Aurivillius, 1912: 243 (cat.).

Strangalepta lineola lateralis; Leng, 1920: 273 (cat.).

Type locality - Holotype: United States. (MCZN).

Stenura cincta var. *obsoleta* Haldeman, 1847a: 63.

Strangalia (Strangalia) lineola ab. *obsoleta*; Aurivillius, 1912: 243 (cat.).

Strangalepta lineola obsoleta; Leng, 1920: 273 (cat.).

Type locality - Holotype: United States, (MCZN).

Anastrangalia Casey, 1924

Strangalia (Anastrangalia) Casey, 1924: 280; Monné, M.A., 2006: 115 (cat.); Monné, M.A. & Hovore, 2006: 158 (checklist); Monné, M. A., 2012: 121; Bousquet, Laplante, Hammond & Langor, 2017: 132 (key spp)

Anastrangalia; Chemsak, 1964: 231; Linsley & Chemsak, 1976: 144; Monné, M.A., 1995a: 104 (cat.); Chemsak, 2005: 386 (rev.).

Type-species - *Leptura sanguinea* LeConte, 1859 (original designation).

Marthaleptura Ohbayashi, 1963: 9

Type-species - *Leptura scotodes* Bates, 1873 (original designation).

1. *Anastrangalia haldemani* (Casey, 1891)

Type locality - Lectotype male: United States, New Mexico. (USNM). **Distribution** - United States (South Dakota, Colorado, Arizona and New Mexico), Mexico (Durango). **Host plants** - *Pinus leiophylla chihuahuana* (Engelmann) A. E. Murray, *Pinus ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).

Leptura haldemani Casey, 1891: 42; Hamilton, in Leng & Hamilton, 1896: 175; Lingafelter *et al.*, 2014: 74, figs 79s, t (lect. designation).

Brachyleptura haldemani; Casey, 1913: 251.

Strangalia (Anastrangalia) haldemani; Casey, 1924: 280.

Anoploclera haldemani; Swaine & Hopping, 1928: 58, pl. 9, fig. 88.

Anastrangalia haldemani; Linsley & Chemsak, 1976: 148, fig. 39 (syn.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 159 (checklist); Monné, M.A., 1995a: 104 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 340 (hosts); Heffern, 1998: 10 (distr.); Monné, M.A., 2002: 36 (cat. hosts); Chemsak, 2005: 391, pl. XXV, figs 9-11; Monné, M.A., 2006: 115 (cat.); Monné, M.A. & Hovore, 2006: 1578 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Leptura lucifera Hopping, 1922: 163; Ruetter, 1970: 20 (type).

Anoploclera lucifera; Swaine & Hopping, 1928: 58, pl. 9, fig. 87; Canova, 1936: 129 (distr., hosts); Linsley, Knull & Statham, 1961: 27 (distr.).

Type locality – Holotype female: United States, Arizona: Cochise Co. (CNCI).

2. *Anastrangalia laetifica* (LeConte, 1859)

Syntypes locality - Syntypes female: United States, Washington: Shoalwater Bay. (MCZN).

Distribution - Canada (Southern half of British Columbia, as far north as the Fraser River Valley east of Prince George), United States (Washington, Oregon, California, Idaho), Mexico (Baja California). **Host plants** - *Pinus contorta* Douglas ex Loudon, *P. insignis* Douglas ex Loudon, *P. ponderosa* Douglas ex Lawson & P. Lawson, *P. sabiniana* Douglas ex D. Don, *P. tuberculata* Gordon (Pinaceae).

Leptura laetifica LeConte, 1859a: 291; 1859b: 89 (distr.); 1873a: 220 (distr.); Provancher, 1877a: 615, 620; Leng, 1890: 197; Harrington, 1899: 108 (distr.); Fall, 1901: 150 (distr.); Wright & Coolidge, 1908: 68 (distr.); Dow, 1913: 78; Burke, 1917: 88 (paras.); Garnett, 1918: 251 (distr.).

Brachyleptura laetifica; Casey, 1913: 251; Hardy, 1926b: 29, pl. 4, fig. 12; Keen, 1929: 69; Beaulne, 1932: 199 (hosts).

Strangalia (Anastrangalia) laetifica; Casey, 1924: 280.

Anoploclera laetifica; Swaine & Hopping, 1928: 58, pl. 8, figs 85, 86, pl. 12, fig. 18; Canova, 1936: 128 (distr.); Doane *et al.*, 1936: 175 (hosts); Hardy, 1948: 32; Schoening & Tilden, 1959: 167; Tyson, 1966: 202 (hosts); Hatch, 1971: 133, pl. 15, fig. 1.

Anastrangalia laetifica; Linsley & Chemsak, 1976: 146; Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 104 (cat.); Noguera & Chemsak, 1996: 403 (distr.); Linsley & Chemsak, 1997: 340 (hosts); Monné, M.A., 2002: 37 (cat. hosts); Chemsak, 2005: 389, pl. XXV, figs 7, 8; Monné, M.A., 2006: 115 (cat.); Monné, M.A. & Hovore, 2006: 159 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 133, pl. 29; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497; Gimmel *et al.*, 2023: 256 (distr.)

Leptura lugens LeConte, 1859b: 89.

Type locality - Holotype male: United States, Washington: Shoalwater Bay. (MCZN).

3. *Anastrangalia sanguinea* (LeConte, 1859)

Type locality - Holotype: United States, Washington Territory. (MCZN). **Distribution** - British Columbia to New Brunswick, Western United States to California, Arizona and New

- Mexico. **Host plants** - *Abies* sp., *Picea* sp., *Pinus ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga* sp., *Tsuga* sp. (Pinaceae).
- Leptura sanguinea* LeConte, 1859a: 291; 1859b: 89; 1869: 371 (distr.); 1873a: 220; Snow, 1877a: 18 (distr.); 1878: 76 (distr.); Gardiner, 1879: 213 (distr.); LeConte, 1879: 505 (distr.); Snow, 1883: 42 (distr.); Leng, 1890: 189, 190, 197; Evans, 1895b: 173 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); 1899a: 7 (distr.); 1899b: 199 (distr.); Fall, 1901: 150 (distr.); Fall & Cockerell, 1907: 193 (distr.); Garnett, 1918: 251 (distr.); Craighead, 1923: 91, 95 (larva).
- Brachyleptura sanguinea*; Casey, 1912: 252; Leng, 1920: 273 (cat.); Munding, 1924: 317; Kirk & Knull, 1926: 24 (distr.); Fall, 1926: 202 (distr.); Hardy, 1927: C35; Leonard, 1928: 440 (distr.); Beaulne, 1932: 199 (hosts); Kirk & Balsbaugh, 1975: 97 (distr.).
- Leptura (Leptura) sanguinea*; Aurivillius, 1912: 224 (cat.); Boppe, 1921: 91.
- Strangalia (Anastrangalia) sanguinea*; Casey, 1924: 280.
- Anastrangalia sanguinea*; Chemsak, 1964: 231; Gosling & Gosling, 1976: 15, fig. 107 (biol., distr.); Linsley & Chemsak, 1976: 145, fig. 38; Hansen & Osgood, 1983: 149 (biol.); Gosling, 1984: 79 (biol.); 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 104 (cat.); Yanega, 1996: 29, pl. 7, fig. 78; Linsley & Chemsak, 1997: 340 (hosts); Heffern 1998: 10 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Chemsak, 2005: 387, pl. 25, fig. 6; Monné, M.A. & Hovore, 2006: 159 (checklist); MacRae & Rice, 2007: 245 (biol., distr.); Webster, 2016: 485; Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 133, pl. 29
- Brachyleptura boulderensis* Casey, 1912: 252; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 31, fig. 31i (holotype).
- Strangalia (Anastrangalia) boulderensis*. Casey, 1924: 280.
- Type locality** - Holotype female: United States, Colorado: Boulder County. (USNM).
- Strangalia apicata*; Criddle, 1925: 98.
- Type locality** - Lectotype male: United States, Colorado. (USNM).

Anoplodera (Anoploderomorpha) Pic 1901

- Leptura (Anoploderomorpha) Pic*, 1901a: 59; Matsushita, 1933: 197
- Anoploderomorpha* Gressitt, 1939: 90; Nakane & Ohbayashi, 1957: 50; Chiang & Chen, 2001: 148
- Anoplodera (Anoploderomorpha)*; Monné, M.A. & Hovore, 2006: 159 (checklist); Danilevsky, 2014: 158
- Type-species** - *Leptura excavata* Bates, 1884 (subsequent designation, Nakane & Ohbayashi, 1957: A 244 (50)).

1. *Anoplodera (Anoploderomorpha) pubera* (Say, 1827)

- Syntypes locality** - Syntypes: United States, (Depository unknown). **Distribution** - The range of this species extends from Cape Breton Island to east-central Saskatchewan, south to eastern Kansas and northern Georgia, North Carolina and Nebraska. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Juglans nigra* Linnaeus (Juglandaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Pinus contorta* Douglas ex Loudon (Pinaceae), *Ulmus* sp. (Ulmaceae).
- Leptura pubera* Say, 1827: 279; Haldeman, 1847a: 65; LeConte, 1850a: 236; 1850b: 337; 1859c: 336; Bland, 1861: 101 (distr.); LeConte, 1873a: 221; Provancher, 1877a: 616; Leng, 1990: 191, 199; Harrington, 1890: 185 (distr.); Slossom, 1894: 3 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 192; 1897v: 159 (distr.); Smith, 1900: 292 (distr.); Knaus, 1901: 112 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 36 (distr.); Wickham, 1909a: 29 (distr.); Morris, 1909b: 414; Smith, 1910: 331; Blatchley, 1910: 1059; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Chagnon, 1917: 235 (distr.); Nicolay, 1917a: 95 (distr.); Blackman, 1918: 125 (biol.); Morris, 1919: 50; Cloudman, 1925: 33.
- Strangalepta pubera*; Casey, 1913: 257; Britton, 1920: 268 (distr.); Leng, 1920: 273 (cat.); Hatch, 1925: 579 (distr.); Kirk & Knull, 1926: 75 (distr.); Fletcher, 1926: 143 (distr.); Engelhardt, 1927: 72 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 440 (distr.); Park, 1931: 193; Beaulne, 1932: 200 (hosts); Brimley, 1938: 213 (distr.); Procter, 1946: 179 (distr.); Papp,

1955: 217 (distr.); Gosling & Gosling, 1976: 15, fig. 105 (biol., distr.); Linsley & Chemsak, 1976: 138; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984a: 73 (hosts); 1984b: 80 (biol.); 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 102 (cat.); MacRae, 1993: 241 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 102 (cat.); Krinsky & Godwin, 1996: 238; Yanega, 1996: 38, pl. 4, fig. 44; Linsley & Chemsak, 1997: 438 (hosts); Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 378, pl. 25, fig. 2.

Leptura (Leptura) pubera; Boppe, 1921: 91.

Anoploclera pubera; Swaine & Hopping, 1928: 65, pl. 10, fig. 102; Mank, 1934: 80 (distr.); Chagnon, 1936: 249; Hoffmann, 1940: 59 (biol.); Knull, 1946: 170; Dillon & Dillon, 1961: 617, pl. 60, No. 13; Chagnon & Robert, 1962: 249; Bayer & Shenefelt, 1969: 8, fig. 18; Gardiner, 1970: 285 (biol.); Wilson, 1971: 61 (biol.); Perry, 1975: 59 (hosts); Laliberté, Chantal & LaRoche, 1977: 90 (biol.); Guarnieri, 2009: 14 (distr.); Webster, McCorquodale & Majka, 2009: 292 (biol., distr); Bousquet, Laplante, Hammond & Langor, 2017: 131, pl. 28

Brachyleptura pubera; Kirk & Balsbaugh, 1975: 97 (distr.).

Anoploclera (Anoplocleromorpha) pubera; Monné, M.A. & Hovore, 2006: 159 (cat.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295.

***Bellamira* LeConte 1873**

Bellamira LeConte, 1873b: 328; LeConte & Horn, 1883: 313; Leng, 1890: 156; Wickham, 1897b: 88; 1897c: 187; Blatchley, 1910: 1046; Casey, 1913: 248, 272; Boppe, 1921: 102; Swaine & Hopping, 1928: 10, 15; Bradley, 1930: 237; Chagnon, 1936: 243, 251; Hopping, 1937: 21; Knull, 1946: 152, 182; Chagnon & Robert, 1962: 243, 251; Arnett, 1962: 858, 878; Chemsak, 1964: 231; Bayer & Shenefelt, 1969: 6; Linsley & Chemsak, 1976: 23; Monné, M.A., 1995a: 70; N. Ohbayashi, Kurihara & Niisato, 2005: 293; Chemsak, 2005: 35, 214; Monné, M.A. & Hovore, 2006: 159 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 118

Type-species - *Leptura scalaris* Say, 1827 (original designation).

1. *Bellamira scalaris* (Say, 1826)

Type locality – Holotype: United States, New Jersey: Point Breeze. (Depository unknown).

Distribution - Northeast North America to Florida and South Dakota. In Canada ranges from the Nova Scotia peninsula to the Fort McMurray area in northeastern Alberta. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Betula alleghaniensis* Britton, *B. lenta* Linnaeus, *B. nigra* Linnaeus (Betulaceae), *Chamaecyparis obtusa* (Siebold & Zuccarini) Endlicher (Cupressaceae), *Fagus ferruginea* Aiton, *Quercus* sp. (Fagaceae), *Carya* sp. (Juglandaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Tilia americana* Linnaeus (Malvaceae), *Picea glehnii* Masters, *P. jezoensis* Carrière, *P. polita* Carrière, *Pinus contorta* Douglas ex Loudon, *P. densiflora* Siebold & Zuccarini, *P. thunbergii* Parlato, *Tsuga sieboldii* Carrière (Pinaceae), *Populus* sp., *Salix* sp. (Salicaceae), *Cryptomeria japonica* D. Don (Taxodiaceae).

Leptura scalaris Say, 1827: 278; Haldeman, 1847a: 65; LeConte, 1859c: 335; Horn, 1868: 124 (distr.).

Strangalia scalaris; LeConte, 1850a: 327.

Bellamira scalaris; LeConte, 1873b: 328; Schaupp, 1878: 20 (distr.); 1880: 84 (biol.); Packard, 1881: 129; LeConte & Horn, 1883: 213; Townsend, 1885: 70 (distr.); Dimmock, 1885: 283 (hosts); Harrington, 1887: 30; Leng, 1890: 156; Packard, 1890: 387, 486 (biol.); Hamilton, 1895: 338 (distr.); Slosson, 1895a: 6 (distr.); Evans, 1895b: 173 (distr.); Beutenmuller, 1896: 77 (hosts); Wickham, 1897b: 187; 1897c: 157 (distr.); Smith, 1900: 292; Klages, 1901: 273 (distr.); Ouellet, 1902: 122 (distr.); Dury, 1902: 161 (distr.); Laurent, 1903: 339 (distr.); Felt, 1906: 467; Davis, 1908: 53; Adams, 1909: 200 (distr.); Leng, 1910: 77 (distr.); Smith, 1910: 331; Blatchley, 1910: 1051, fig. 444; Fisher & Kirk, 1912: 313 (distr.); Casey, 1913: 248, 272; Morris, 1916b: 297; Chagnon, 1917: 234 (distr.); Blackman, 1918: 130 (biol.); Boppe, 1921: 102, pl. 8, fig. 7; Champlain, 1922: 98 (paras.); Craighead, 1923: 90, pl. 1, fig. 5, pl. 17, fig. 4, pl. 22, figs 5, 7, pl. 31, fig. 6 (larva); Munding, 1924: 319 (distr.); Kirk & Knull,

1926: 25 (distr.); Procter, 1927: 112 (distr.); Leonard, 1928: 442 (distr.); Beaulne, 1932: 200 (hosts); Chagnon, 1936: 251, pl. 16, fig. 8; Sherman, 1936: 127 (distr.); Hopping, 1937: 21, pl. 6; Daviault, 1937: 118; Brimley, 1938: 213 (distr.); Townes, 1944: 773 (paras.); Loding, 1945: 117 (distr.); Knull, 1946: 182, pl. 6, fig. 23; Procter, 1946: 179 (biol.); Alexander, 1958: 45 (distr.); Townes & Townes, 1960: 573 (paras.); Chagnon & Robert, 1962: 251, pl. 16, fig. 8; Gardiner, 1966: 202, 207, figs 8, 43; Bayer & Shenefelt, 1960: 10, fig. 20; Gardiner, 1970: 287 (biol.); Wilson, 1971: 62 (biol.); Perry, 1975: 59 (hosts); Stein & Tigestad, 1976: 6, fig. 2; Linsley & Chemsak, 1976: 23, figs 8, 9; Gosling & Gosling, 1976: 7, fig. 83 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 91 (biol.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 90 (cat.); MacRae, 1993: 239 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 70 (cat.); Yanega, 1996: 30, pl. 5, figs 60a-c; Linsley & Chemsak, 1997: 350 (hosts); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Sikes & Webster, 2005: 320 (distr.); Chemsak, 2005: 214, pl. 16, figs 2, 3; Rice & Veal, 2006: 258 (distr., hosts); Monné, M.A. & Hovore, 2006: 159 (checklist); Sama, 2007: 102, figs 1, 3; Majka, McCorcuodale & Smith, 2007: 259 (distr.); Lingafelter, 2007: 32, 139, 2 figs, pl. 8c (hosts); Ohbayashi, 2008: 409; Guarnieri, 2009: 14 (distr.); Holt, 2013: 243 (biol., distr.); Steury & MacRae, 2014: 9 (distr.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295; Bousquet, Laplante, Hammond & Langor, 2017: 118, pl. 22; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Strangalia (Bellamira) scalaris; Aurivillius, 1912: 244 (cat.); Saalas, 1936: 80 (morphol.).

Toxotus coarctatus Haldeman, 1847a: 59.

Strangalia coarctata; LeConte, 1850a: 327.

Type locality – Holotype: United States, Pennsylvania. (MCZN).

***Brachyleptura* Casey 1913**

Brachyleptura Casey, 1913: 247, 251; Chemsak, 1964: 231; Linsley & Chemsak, 1976: 67; Monné, M.A., 1995a: 109; Chemsak, 2005: 40, 414-417; Monné, M.A. & Hovore, 2006: 159 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 136

Type-species - *Leptura vagans* Olivier, 1795 (original designation).

1. *Brachyleptura brevis* (Kirby, 1837)

Type locality - Holotype: Canada. (BMNH) **Distribution** - From Nova Scotia and Prince Edward Island to Minnesota, south to Florida. **Host plants** - *Pinus contorta* Douglas ex Loudon, *P. resinosa* Aiton, *P. rigida* Miller, *Tsuga* sp. (Pinaceae).

Leptura brevis Kirby in Richardson, 1837: 182; Haldeman, 1847a: 65; Bethune, 1872: 114.

Leptura vagans var. *brevis*; Hamilton, 1893a:274 (distr.); 1893b: 326 (distr.)

Leptura (Leptura) vagans ab. *brevis*; Boppe, 1921: 91

Brachyleptura brevis; Bousquet, Laplante, Hammond & Langor, 2017: 136, pl. 30 (syn.)

Brachyleptura champlaini Casey, 1913: 254; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 170; Frost, 1979: 345 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 79 (biol.); 1985: 167 (hosts); 1986: 155 (hosts); Glaser, 1992: 153 (distr.); Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 110 (cat.); Yanega, 1996: 30, pl. 6 figs 70a, b; Krinsky & Godwin, 1996: 238; Linsley & Chemsak, 1997: 350 (hosts); Peck & Thomas, 1998: 120 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 416, pl. 27, fig. 2; Monné, M.A. & Hovore, 2006: 157 (checklist); Lingafelter, 2007: 24, 25, 139, 2 figs, pl. 5g (hosts); Majka, McCorcuodale & Smith, 2007: 259 (distr.); Webster, McCorcuodale & Majka, 2009: 293 (biol., distr.); Holt, 2013: 243 (biol., distr.); Lingafelter *et al.*, 2014: 39, fig. 41e (holotype); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.)

Type locality - Holotype female: United States, Pennsylvania: Carlisle Junction. (USNM).

Anoplodera vagans; Swaine & Hopping, 1928: 63; Knull, 1946: 169; Dillon & Dillon, 1961: 616, pl. 61, No. 5 (not Olivier, 1795).

Brachyleptura vagans; Gosling & Gosling, 1976: 14 (not Olivier, 1795).

2. *Brachyleptura circumdata* (Olivier, 1795)

Type locality - Holotype female: Amérique Septentrionale. (MNHN). **Distribution** - The range of this species extends from New Brunswick to Minnesota, south to northeastern Texas and northern Georgia and North Carolina. **Host plants** - *Heracleum lanatum* Michaux (Apiaceae), *Betula* sp. (Betulaceae), *Picea* sp. (Pinaceae).

Leptura circumdata Olivier, 1795: 32, pl. 4, fig. 98; Schoenherr, 1817: 477; Haldeman, 1847a: 65; LeConte, 1850a: 337; 1873: 219; Provancher, 1877a: 615; Horn, 1886a: 139; Leng, 1890: 189, 197; Hamilton, 1895: 338 (distr.); Smith, 1900: 292 (distr.); Ulke, 1903: 26, 50 (distr.); Wickham, 1909a: 29 (distr.); Smith, 1910: 331 (distr.); Lovell, 1915: 114; Blackman, 1918: 130 (biol.); Nicolay, 1919: 69 (distr.).

Brachyleptura circumdata; Casey, 1913: 251; Leng, 1920: 273 (cat.); Munding, 1924: 317; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts); Loding, 1933: 148 (distr.); Gosling & Gosling, 1976: 14 (distr.); Linsley & Chemsak, 1976: 174; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 110 (cat.); Yanega, 1996: 30, pl. 6, fig. 31; Krinsky & Godwin, 1996: 238; Linsley & Chemsak, 1997: 350 (hosts); Heffern, 1998: 10 (distr.); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 417, 426, pl. 27, fig. 7; Monné, M.A. & Hovore, 2006: 159 (checklist); Rice & Veal, 2006: 258 (distr., hosts); Lingafelter, 2007: 24, 140, 2 figs, pl. 5f (hosts); Guarnieri, 2009: 14 (distr.); Webster, McCorquodale & Majka, 2009: 293 (biol., distr.); Holt, 2013: 243 (biol., distr.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 137

Leptura (Leptura) circumdata; Boppe, 1921: 91.

Strangalia (Anastrangalia) circumdata; Casey, 1924: 280.

Anoploclera circumdata; Swaine & Hopping, 1928: 64, pl. 10, fig. 99; Knull, 1946: 169; Chagnon & Robert, 1962: 250; Bayer & Shenefeldt, 1969: 8, fig. 17; Wilson, 1971: 61 (biol.).

Brachyleptura subquadrata Casey, 1913: 251; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 328, fig. 165 i (holotype).

Strangalia (Anastrangalia) subquadrata; Casey, 1924: 280.

Type locality - Holotype female: United States, Colorado. (USNM).

3. *Brachyleptura dehiscens* (LeConte, 1859)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - In British Columbia, it is found from Vancouver Island to the Shuswap Lake area, north to the Skeena River to northern Sierra Nevada of California. **Host plants** - *Pinus ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Leptura dehiscens LeConte, 1859a: 291; 1859b: 89; 1869: 371 (distr.); 1873a: 219; Leng, 1890: 189, 197; Fall, 1901: 150 (distr.); Morris, 1916b: 300; Garnett, 1918: 251 (distr., hosts); Hopping, 1928: 7.

Brachyleptura dehiscens; Casey, 1913: 253; Knaus, 1914: 91; Leng, 1920: 272 (cat.); Casey, 1924: 280; Hardy, 1926b: 28, pl. 4, fig. 11; Keen, 1929: 69; Linsley & Chemsak, 1976: 171; Cope, 1984: 28 (hosts); Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 110 (cat.); Linsley & Chemsak, 1997: 350 (hosts); Chemsak, 2005: 417, 420, pl. 17, fig. 3; Monné, M.A. & Hovore, 2006: 159 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 137, pl. 30

Leptura (Leptura) dehiscens; Boppe, 1921: 91.

Anoploclera dehiscens; Swaine & Hopping, 1928: 63, pl. 10, fig. 97; Canova, 1936: 128 (distr., hosts); Hardy, 1942: 10; 1944: 16 (distr.); Hatch, 1971: 135, pl. 15, fig. 3; Penrose & Westcott, 1974: 72 (biol.).

4. *Brachyleptura rubrica* (Say 1824)

Syntypes localities - Syntypes: United States, Missouri, Pennsylvania. (Depository unknown). **Distribution** - Eastern North America eastern Nebraska, south to southern Mississippi and central Florida. In Canada, it occurs from the Nova Scotia peninsula to southern Ontario. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Betula* sp., *Ostrya*

virginiana (Miller) K. Koch (Betulaceae), *Carpinus caroliniana* Walter ssp. *virginiana* (Marshall) J.J. Furlow (Corylaceae), *Castanea* sp., *Fagus ferruginea* Aiton, *Quercus montana* Willd. (Fagaceae), *Carya* sp. (Juglandaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Platanus occidentalis* Linnaeus (Platanaceae), *Prunus* sp. (Rosaceae).

Leptura rubrica Say, 1824: 418; LeConte, 1850a: 336; Emmons, 1854: 127, pl. 8, fig. 10; LeConte, 1859d: 49 (distr.); 1859c: 197; Bland, 1861: 101 (distr.); Horn, 1868: 124 (distr.); LeConte, 1873a: 219; Provancher, 1877a: 615; Horn, 1889: 199 (syn.); Leng, 1890: 189, 197; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 191 (distr.); 1897c: 158; Smith, 1900: 292; Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Wickham, 1909a: 29 (distr.); Smith, 1910: 331; Blatchley, 1910: 1057; Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Johnson, 1915: 315 (distr.); Chagnon, 1917: 235 (distr.); Blackman, 1918: 127 (biol.); Wenzel & Wenzel, 1918: 360; Nicolay, 1919: 69 (distr.); Cushman & Rohwer, 1921: 520 (paras.); Craighead, 1923: 92, 97, pl. 17, fig. 1, pl. 22, fig. 4 (larva); Cloudman, 1925: 33; Engelhardt, 1928: 252 (distr.); Goldman, 1933: 92; Moennich, 1934: 98.

Brachyleptura rubrica; Casey, 1913: 251; Britton, 1920: 268 (distr.); 1927, 1924: 16, 29, 111; Munding, 1924: 317; Kirk & Knull, 1926: 24 (distr.); Fletcher, 1926: 143 (distr.); Brues, 1927: 76 (hosts); Procter, 1927: 111 (distr.); Leonard, 1928: 439 (distr.); Ware, 1929: 368 (distr.); Frost & Dietrich, 1929: 436; Park, 1931: 193; Beaulne, 1932: 199 (hosts); Loding, 1933: 148 (distr.); Brimley, 1938: 212 (distr.); Loding, 1945: 116; Gosling & Gosling, 1976: 14 (biol., distr.); Linsley & Chemsak, 1976: 169; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 91 (cat.); MacRae, 1993: 241 (distr.); Shimomura, 1994: 164 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 110 (cat.); Krinsky & Godwin, 1996: 238; Yanega, 1996: 31, pl. 6, fig. 68; Linsley & Chemsak, 1997: 350 (hosts); Heffern, 1998: 24; Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 416, pl. 17, fig. 1; Monné, M.A. & Hovore, 2006: 159 (checklist); MacRae & Rice, 2007: 246 (distr., hosts); Lingafelter, 2007: 23, 140, 2 figs, pl. 5e (hosts); Guarnieri, 2009: 14 (distr.); McDowell, 2011: 412 (biol.); Holt, 2013: 243 (biol., distr.); Steury & MacRae, 2014: 9 (distr.); Vlasák, 2014: 317 (hosts); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 137, pl. 30.

Strangalia (Anastrangalia) rubrica; Casey, 1924: 280.

Anoplodera rubrica; Swaine & Hopping, 1928: 63, pl. 10, fig. 96; Knull, 1932: 63; Chagnon, 1936: 249; Knull, 1946: 168; Procter, 1946: 178; Dillon & Dillon, 1961: 616, pl. 51, No. 2; Chagnon & Robert, 1962: 249; Bayer & Shenefelt, 1969: 8, fig. 19; Kirk, 1970: 77; Wilson, 1971: 61; Laliberté, Chantal & LaRochelle, 1977: 90 (biol.).

Leptura erythroptera Germar, 1823: 522 (not Hagenbach, 1822).

Type locality - Holotype: America Septentrionali (Depositary unknown).

5. *Brachyleptura vagans* (Olivier, 1795)

Type locality - Holotype female: Amérique Septentrionale. (MNHN). **Distribution** - Eastern North America to Wisconsin and Florida. **Host plants** - *Betula* sp. (Betulaceae), *Carya* sp., *Juglans nigra* Linnaeus (Juglandaceae), *Pinus* sp., *Tsuga* sp. (Pinaceae).

Leptura vagans Olivier, 1795: 31, pl. 4, fig. 46; Haldeman, 1847a: 64; LeConte, 1850a: 337; Bland, 1861: 101; LeConte, 1873a: 219; Horn, 1876: 170 (syn.); Provancher, 1877a: 615, 620; Schaupp, 1880: 84 (biol.); Horn, 1886a: 139; Leng, 1890: 189, 197; Packard, 1890: 486; Chittenden, 1894: 98 (hosts); Hamilton, 1895: 338 (distr.); Beutenmuller, 1896: 77 (hosts); Wickham, 1897b: 191; 1897c: 158 (distr.); Harrington, 1899: 108 (distr.); Smith, 1900: 292 (distr.); Ulke, 1903: 26, 50 (distr.); Felt, 1906: 427, 440, fig. 97; Morris, 1909b: 417; Davis, 1909: 96 (distr.); Leng, 1910: 77 (distr.); Blatchley, 1910: 1058; Smith, 1910: 331; Fisher & Kirk, 1912: 313 (distr.); Banks, 1912: 306; Lovell, 1915: 115; Notman, 1916: 166 (distr.); Chagnon, 1917: 235 (distr.); Blackman, 1918: 127; 1932; Britton, 1920: 268 (distr.); Cushman & Rohwer, 1921: 520 (paras.); Craighead, 1923: 92, 97 (larva); Cloudman, 1925: 26, 33; Engelhardt, 1928: 252 (distr.).

Pachyta vagans; Haldeman, 1847a: 374.

Brachyleptura vagans; Casey, 1913: 247, 253; Leng, 1920: 272 (cat.); Casey, 1924: 280; Kirk & Knull, 1926: 24 (distr.); Procter, 1927: 11 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts); Barrett, 1932: 289 (hosts); Loding, 1933: 148 (distr.); Wolcott & Montgomery, 1933: 155 (distr.); Brimley, 1938: 212 (distr.); Loding, 1945: 116 (distr.); Gibson & Carrillo, 1959: 119 (distr.); Linsley & Chemsak, 1976: 173; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 81 (cat.); MacRae, 1993: 241 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 111 (cat.); Yanega, 1996: 31, pl. 6, figs 69a,b; Linsley & Chemsak, 1997: 350 (hosts); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Chemsak, 2005: 417, 425, pl. 27, fig. 6; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 24, 25, 140, 2 figs, pl. 5h (hosts); Guarnieri, 2010: 20 (distr.); Holt, 2013: 244 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.)

Anoplodera vagans; Swaine & Hopping, 1928: 63, pl. 10, fig. 98; Chagnon, 1936: 250, pl. 16, fig. 6; Knull, 1946: 169; Procter, 1946: 178; Dillon & Dillon, 1961: 616, pl. 51, No. 4; Chagnon & Robert, 1962: 250, pl. 16, fig. 6; Bayer & Shenefelt, 1969: 8, fig. 19; Gardiner, 1970: 286 (biol.); Kirk, 1970: 77; Wilson, 1971: 61 (biol.); Baker, 1972: 197; Perry, 1975: 59 (hosts); Laliberté, Chantal & LaRochelle, 1977: 90 (biol.).

Brachyleptura cuneatula Casey, 1913: 253; Leng, 1920: 272 (cat.); Lingafelter *et al.*, 2014: 49, fig. 51s (lectotype).

Type locality - Lectotype: United States, Wisconsin: Bayfield. (USNM).

Brachyleptura fusella Casey, 1913: 254; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 68, fig. 73o (lectotype).

Type locality - Lectotype male: United States, (USNM).

Brachyleptura puella Casey, 1913: 254; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 304, fig. 137s (lectotype).

Type locality - Lectotype male: United States. (USNM).

Brachyleptura puella tetrica Casey, 1913: 255; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 304, fig. 137u (holotype).

Type locality - Holotype male: United States. (USNM).

***Charisalia* Casey 1913**

Charisalia Casey, 1913: 247, 256; Swaine & Hopping, 1928: 10,37; Bradley, 1930: 237; Knull, 1946: 152, 163; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 27; Monné, M.A., 1995a: 71; Chemsak, 2005: 35, 218; Monné, M.A. & Hovore, 2006: 161 (checklist);

Type-species - *Stenura americana* Haldeman, 1847 (original designation).

1. *Charisalia americana* (Haldeman, 1847)

Type locality - Holotype: United States, Pennsylvania. (MCZN). **Distribution** - This species ranges from Maine to Wisconsin and Nebraska, south to Oklahoma and northern Florida. In Canada, it is known from the Lake Ontario region and from Saint Joseph Island, Sault Ste. Marie. **Host plants** - *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Nyssa sylvatica* Marshall (Nyssaceae).

Stenura americana Haldeman, 1847a: 63.

Strangalia americana; LeConte, 1850a: 331.

Leptura americana; Gemminger in Gemminger & Harold, 1872: 2864 (cat.); LeConte, 1873a: 217; Leng, 1890: 188, 194; Wickham 1897c: 158 (distr.); Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Wickham, 1909a: 29 (distr.); Blatchley, 1910: 1056; Smith, 1910: 331; Craighead, 1923: 91, 96, pl. 14, fig. 7.

Charisalia americana; Casey, 1913: 247, 256; Leng, 1920: 273 (cat.); Kirk & Knull, 1926: 25 (distr.); Swaine & Hopping, 1928: 37, pl. 12, fig. 9; Leonard, 1928: 440 (distr.); Ware, 1929: 368 (distr.); Knull, 1930: 85 (hosts); Beaulne, 1932: 199 (hosts); Cooper, 1935: 152 (distr.); Knull, 1946: 163, pl. 8, fig. 29; Linsley & Chemsak, 1976: 28; Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); 1986: 155 (distr.); Glaser, 1992: 154 (distr.);

Chemsak, Linsley & Noguera, 1992: 92 (cat.); MacRae, 1993: 239 (distr.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 71 (cat.); Yanega, 1996: 32, pl. 5, figs 53a, b; Linsley & Chemsak, 1997: 354 (hosts); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.); Sykes & Webster, 2005: 320 (distr.); Chemsak, 2005: 218, pl. 16, fig. 5; Monné, M.A. & Hovore, 2006: 161 (checklist); Rice & Veal, 2006: 258 (distr.); MacRae & Rice, 2007: 246 (distr.); Lingafelter, 2007: 34, 140, 2 figs, pl. 8h (hosts); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 118, pl. 23
Strangalia (Strangalia) americana; Aurivillius, 1912: 242 (cat.); Boppe, 1921: 100.
Strangalia (Charisalia) americana; Saalas, 1936: 80 (morphol.).

***Choriolaus* Bates, 1885**

Choriolaus Bates, 1885: 283; Boppe, 1921: 107; Chemsak, 1964: 232; Linsley & Chemsak, 1971: 6; Chemsak & Linsley, 1976a: 38 (key spp.); Linsley & Chemsak, 1976: 33; Monné, M.A., 1995a: 50 (cat.); Chemsak, 2005: 225 (rev.); Monné, M.A. & Hovore, 2006: 161 (checklist); Monné, M.A., 2006: 117 (cat.); Monné, M.A., 2012: 121;

Type-species - *Choriolaus latescens* Bates, 1885 (subsequent designation, Chemsak, 1964: 232).

Euryptera (partim); LeConte, 1873b: 328; LeConte & Horn, 1883: 313; Boppe, 1921: 106; Casey, 1924: 285; Hopping, 1937: 26; Knull, 1946: 184.

1. *Choriolaus sabinoensis* (Knull, 1954)

Type locality - Holotype female: United States, Arizona: Santa Catalina Mountains, Sabino Canyon. (FMNH). **Distribution** - Arizona (Santa Catalina, Baboquivari, Peloncillos and Pajarito Mts.). **Host plants** - *Quercus* sp. (Fagaceae).

Euryptera sabinoensis Knull, 1954: 129; Linsley, 1961b: 138 (type); Chemsak, 1977: 175 (type).

Megachoriolaus sabinoensis; Linsley, 1970: 129; Chemsak & Linsley, 1974: 35.

Choriolaus sabinoensis; Chemsak & Linsley, 1976: 39; Chemsak, Linsley & Noguera, 1992: 93. (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 51 (cat.); Chemsak, 2005: 159, pl. 16, fig. 10; Monné, M.A. & Hovore, 2006: 161 (checklist);

***Cyphonotida* Casey, 1913**

Cyphonotida Casey, 1913: 247, 260; Swaine & Hopping, 1928: 10, 15; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 133; Monné, M.A., 1995a: 100 (cat.); Chemsak, 2005: 374 (rev.); Monné, M.A., 2006: 120 (cat.); Monné, M.L. & Monné, M.A., 2008: 39; Monné, M.A., 2012: 121; Monné, M.A. & Hovore, 2006: 162 (checklist);

Type-species - *Ophistomis ventralis* Horn, 1894 (original designation).

1a. *Cyphonotida rostrata rostrata* (Bates, 1872)

Type locality - Lectotype male: Colombia. (MNHN). **Distribution** - United States (Texas), Mexico (Baja California, Jalisco, Guerrero, Oaxaca, Sinaloa, Veracruz), Guatemala, El Salvador, Nicaragua (Matagalpa, Jinotega), Costa Rica (Guanacaste, Puntarenas, Alajuela, Heredia), Colombia, Guiana, Ecuador, Brazil (Rondônia), Bolivia (Chuquisaca, Tarija). **Host flowers** - *Croton* sp. (Euphorbiaceae), *Coccoloba* sp. (Polygonaceae), *Bumelia celastrina* Kunth (Sapotaceae).

Ophistomis rostratus Bates, 1872: 183; Chemsak, 1967c: 82 (lect.).

Cyphonotida rostrata; Linsley & Chemsak, 1971: 24; Giesbert & Hovore, 1998: 18.

Cyphonotida rostrata rostrata; Giesbert & Hovore, 1998: 19 (syn.); Turnbow, Cave & Thomas, 2003: 19 (distr.); Chemsak, 2005: 374; Monné, M.A., 2006: 120 (cat.); Hovore, 2006: 374 (distr.); Monné, M.A. & Hovore, 2006: 162 (checklist); Noguera *et al.*, 2007: 312 (distr.); Monné, M.L. & Monné, M.A., 2008: 39, fig. 1 (distr.); Swift *et al.*, 2010: 33 (distr.); Maes *et al.*, 2010b: 7, 8 figs (distr.); Perger & Guerra, 2013: 214 (distr.); Gutiérrez & Noguera, 2015: 137 (distr.); Noguera *et al.*, 2017: 3 (distr.); Lingafelter, Wappes & Ledezma Arias, 2017: 12, 1 fig. (distr.); Audureau & Roguet, 2018: 89 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Ophistomis laevicollis Bates, 1880: 39; Lameere, 1883: 26 (cat.); Bates, 1885: 279 (distr.).
Cyphonotida laevicollis; Linsley & Chemsak, 1976: 134; Chemsak, Linsley & Mankins, 1980: 34 (distr.); Chemsak, Linsley & Noguera, 1992: 94; Monné, M.A., & Giesbert, 1994: 163 (checklist); Chemsak & Noguera, 1995: 64 (distr.).

Cyphonotida laevicollis laevicollis; Linsley & Chemsak, 1976: 136; Hovore, Penrose & Neck, 1987: 309 (distr.); Maes *et al.*, 1994: 26 (distr.); Monné, M.A., 1995a: 100 (cat.); Noguera & Chemsak, 1996: 403 (distr.); Maes, 1998: 909 (distr.).

Type locality - Holotype female: Guatemala, Sacatepéquez: Capetillo. (BMNH).

1b. *Cyphonotida rostrata borealis* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, Arizona: Santa Rita Mts., Madera Canyon. (CASC). **Distribution** - United States (Arizona, New Mexico), Mexico (Chihuahua, Nuevo León). **Host flowers** - *Baccharis* sp., *Brickellia* sp., *Guardiola* sp. (Asteraceae), *Petalostemon candidus* Michaux (Fabaceae), *Bumelia* sp. (Sapotaceae).

Cyphonotida laevicollis borealis Linsley & Chemsak, 1976: 135, fig. 35; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Noguera & Chemsak, 1996: 403 (cat.).

Ophistomis laevicollis; Casey, 1891: 4 (not Bates, 1880); Hamilton *in* Leng & Hamilton, 1896: 175 (not Bates, 1880); Hopping, 1937: 21, pl. 3 (not Bates, 1880); Vogt, 1949: 143 (distr., not Bates, 1880); Linsley, Knull & Statham, 1961: 25 (distr., not Bates, 1880); Toledo *et al.*, 2002: 529 (distr., not Bates, 1880).

Cyphonotida ventralis; Casey, 1913: 260 (not Horn, 1894).

Ophistomis laevicollis var. *ventralis*; Leech & Green, 1955: 28 (biol.).

Cyphonotida rostrata borealis; Monné, M.A., & Giesbert, 1994: 163 (checklist); Giesbert & Hovore, 1998: 19; Chemsak, 2005: 376, pl. 24, fig. 12; Monné, M.A., 2006: 120 (cat.); Monné, M.A. & Hovore, 2006: 162 (checklist);

1c. *Cyphonotida rostrata texana* Giesbert & Hovore, 1998

Type locality - Holotype male: United States, Texas: Cameron County, Brownsville-Southmost, Sabal Palm Grove. (EMEC). **Distribution** - United States (Texas), Mexico (Tamaulipas). **Host flowers** - *Clematis* sp. (Ranunculaceae), *Serjania* sp. (Sapindaceae), *Bumelia* sp. (Sapotaceae). *Cissus* sp. (Vitaceae).

Cyphonotida rostrata texana Giesbert & Hovore, 1998: 19; Chemsak, 2005: 375, pl. 24, fig. 11; Monné, M.A. & Hovore, 2006: 162 (checklist); García Morales *et al.*, 2015: 111 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

1d. *Cyphonotida rostrata ventralis* (Horn, 1894)

Type locality - Lectotype female: Mexico, Baja California: El Taste. (CASC). **Distribution** - United States (Southern California), Mexico (Baja California).

Ophistomis ventralis Horn, 1894: 401; Hamilton *in* Leng & Hamilton, 1896: 175; Skinner, 1905: 291 (distr.); Schaeffer, 1908: 330 (distr.); Garnett, 1918: 252 (distr.).

Cyphonotida ventralis; Casey, 1913: 247

Ophistomis (Cyphonotida) ventralis; Saalas, 1936: 80.

Ophistomis laevicollis ventralis; Linsley, 1942: 52.

Cyphonotida laevicollis ventralis; Linsley & Chemsak, 1976: 136; Hovore, 1988: 28 (distr.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 100 (cat.); Noguera & Chemsak, 1996: 403 (cat.).

Cyphonotida rostrata ventralis; Giesbert & Hovore, 1998: 19; Monné, M.A., 2006: 120 (cat.).

Dorcasina Casey 1913

Leptura (Dorcasina) Casey, 1913: 269.

Dorcasina; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 63; Monné, M.A., 1995a: 80; Chemsak, 2005: 37, 272; Monné, M.A. & Hovore, 2006: 162 (checklist);

Type-species - *Leptura matthewsi* LeConte, 1869 (original designation).

1. *Dorcasina grossa* (LeConte 1873)

Type locality - Holotype female: United States, California. (MCZN). **Distribution** - Sierra Nevada of California. **Host plants** - *Calocedrus decurrens* (Torrey) Florin (Cupressaceae), *Pinus ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae), *Sequoia sempervirens* (D. Don) Endlicher (Taxodiaceae).
Leptura grossa LeConte, 1873a: 225; Leng, 1890: 189, 196; Fall, 1901: 150 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 250 (distr.); Essig, 1926: 453 (hosts).
Judolia grossa; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94.
Leptura (Dorcasina) grossa; Leng, 1920: 274 (cat.).
Anoplodera grossa; Swaine & Hopping, 1928: 46, pl. 5, fig. 54; Canova, 1936: 128 (distr., hosts); Hatch, 1971: 129.
Dorcasina grossa; Hovore & Giesbert, 1976: 351 (hosts); Linsley & Chemsak, 1976: 64; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 80 (cat.); Linsley & Chemsak, 1997: 366 (hosts); Chemsak, 2005: 272, 274, pl. 19, fig. 5; Monné, M.A. & Hovore, 2006: 162 (checklist);

2. *Dorcasina matthewsii* (LeConte, 1869)

Type locality - Holotype female: Canada, British Columbia: Vancouver's Island. (MCZN). **Distribution** - British Columbia (from Vancouver Island to the Okanagan Valley) to coastal central California. **Host plants** - *Calocedrus decurrens* (Torrey) Florin, *Thuja plicata* Donn ex D. Don (Cupressaceae), *Sequoia sempervirens* (D. Don) Endlicher (Taxodiaceae).
Leptura Matthewsii LeConte, 1869: 384.
Leptura Mathewsi; Gemminger in Gemminger & Harold, 1872: 2867 (cat.); Beaulne, 1932: 200 (hosts).
Leptura Mathewsii; LeConte, 1873a: 218.
Leptura mathewsii; Leng, 1890: 189, 196; Fall, 1901: 150 (distr.); Garnett, 1918: 250 (distr.).
Judolia Mathewsi; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94.
Leptura (Dorcasina) mathewsi; Casey, 1913: 270.
Leptura mathewsi; Hardy, 1926b: 30, pl. 4, fig. 14; Essig, 1926: 453 (hosts); Hardy & Preece, 1927a: 189 (hosts).
Anoplodera mathewsi; Swaine & Hopping, 1928: 46, pl. 5, fig. 43; Linsley & Usinger, 1934: 103 (distr.); Doane *et al.*, 1936: 173; Canova, 1936: 128; DeLeon, 1952: 80 (hosts); Hatch, 1971: 129, pl. 14, fig. 5.
Dorcasina mathewsi; Linsley & Chemsak, 1976: 63, fig. 16; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 80 (cat.); Linsley & Chemsak, 1997: 366 (hosts); Chemsak, 2005: 272, pl. 19, fig. 4; Monné, M.A. & Hovore, 2006: 162 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 122, pl. 23
Leptura (Dorcasina) macrocera Casey, 1913: 270; Lingafelter *et al.*, 2014: 94, 368, fig. 103o (lectotype).
Type locality - Lectotype: United States, California: Mendocino County, Gualala. (USNM).

Etorofus Matsushita, 1933

Etorofus Matsushita, 1933: 204; Svacha & Lawrence, 2014: 156; Danilevsky, 2014: 293; Bousquet, Laplante, Hammond & Langor, 2017: 124 (key spp.)
Type species - *Etorofus variicornis* Matsushita, 1933 (original designation).

1. *Etorofus anthracinus* (LeConte, 1875)

Syntypes locality - Syntypes male and female: United States, Oregon. (MCZN). **Distribution** - West central Oregon to southern Sierra Nevada and southwestern California. Canada, British Columbia. **Host plants** - *Abies concolor* Gordon & Glen (Pinaceae).
Leptura anthracina LeConte, 1875: 17; Swaine & Hopping, 1928: 26, pl. 2, fig. 23; Doane *et al.*, 1936: 271; Canova, 1936: 130 (distr.); Hatch, 1971: 126, pl. 14, fig. 1; Cope, 1984: 30 (biol.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Linsley & Chemsak, 1997: 389 (hosts); Heffern, Vlasák & Alten, 2017: 125 (hosts)

Leptura (Leptura) anthracina; Linsley & Chemsak, 1976: 102; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 88 (cat.); Chemsak, 2005: 318, 331, pl. 22, fig. 8 (biol.); Monné, M.A. & Hovore, 2006: 164 (checklist);

Etorofus anthracinus; Bousquet, Laplante, Hammond & Langor, 2017: 125

Leptura subcostata Fall, 1907: 249; Garnett, 1918: 251.

Strangalia (Strangalia) subcostata; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100; Hardy, 1926b: 29, pl. 4, fig. 15.

Type locality - Holotype female: United States, California: Lake Tahoe. (MCZN).

2. *Etorofus deletus* (LeConte, 1850)

Type locality - Holotype: United States, Massachusetts. (MCZN). **Distribution** – Canada (New Brunswick), United States (Northeastern states: Massachusetts, New Hampshire, Pennsylvania and New Jersey). **Host plants** - *Thuja occidentalis* Linnaeus (Cupressaceae), *Pinus rigida* Miller (Pinaceae).

Strangalia deleta LeConte, 1850a: 328; Casey, 1913: 258; Leng, 1920: 273 (cat.); Boppe, 1921: 100; Kirk & Knull, 1926: 25 (distr.); Frost, 1929: 14 (distr.); Cooper, 1935: 152 (distr.).

Leptura deleta; LeConte, 1873a: 216; Leng, 1890: 187, 193; Smith, 1900: 292; Evans, 1906: 99 (distr.); Smith, 1910: 331 (distr.); Lovell, 1915: 114; Frost, 1920: 27 (biol.); Swaine & Hopping, 1928: 30, pl. 3, fig. 32.

Pedostrangalia deleta; Webster, 2016: 485;

Leptura (Leptura) obliterateda deleta; Linsley & Chemsak, 1976: 100; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 90 (cat.); Chemsak, 2005: 328, pl. 22, figs 3, 4; Monné, M.A. & Hovore, 2006: 164 (checklist); Webster, McCorquodale & Majka, 2009: 294 (distr., hosts); Vlasák, 2014: 316 (hosts).

Leptura obliterateda deleta; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Yanega, 1996: 35, pl. 6, fig. 64; Vlasák & Vlasakova, 2002: 206 (distr.); Lingafelter, 2007: 32, 141, 2 figs, pl. 8b.

Etorofus deletus; Bousquet, Laplante, Hammond & Langor, 2017: 125, pl. 26

3. *Etorofus obliteratedus* (Haldeman, 1847)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** – Canada in British Columbia, it is found over the southern half of the province, including Haida Gwaii and Vancouver Island, north to the Nass River region to coast ranges of California, to Idaho and Montana. **Host plants** - *Abies grandis* (Lambert) Lindley, *A. nobilis* Lindley, *Picea engelmanni* Engelman, *Pinus contorta* Douglas ex Loudon, *P. ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga menziesii* (Mirbel) Franco, *P. taxifolia* (Poiret) Britton, *Tsuga mertensiana* (Bongard) Carrière (Pinaceae), *Sequoia sempervirens* (D. Don) Endlicher (Taxodiaceae).

Stenura obliterateda Haldeman, 1847a: 62.

Strangalia obliterateda; LeConte, 1850a: 328; 1854a: 19; Casey, 1913: 259; Leng, 1920: 273 (cat.); Boppe, 1921: 100; Casey, 1924: 179; Hardy, 1926b: 29, pl. 5, fig. 30; Essig, 1926: 452 (biol.); Hardy & Preece, 1927a: 189 (hosts); 1927b: 62 (biol., hosts); Beaulne, 1932: 200 (hosts); Moore, 1936: 39 (distr.).

Leptura obliterateda; LeConte, 1857: 23; 1869: 371 (distr.); 1873: 216; Holland, 1888: 91 (distr.); Wickham, 1890: 35 (distr.); Leng, 1890: 187, 193; Keen, 1895: 219 (distr.); Wickham, 1897c: 167 (distr.); Harrington, 1899: 108 (distr.); Fall, 1901: 150 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 248 (distr., hosts); Craighead, 1923: 91, figs (larva); Swaine & Hopping, 1928: 29, pl. 3, figs 30, 31, pl. 12, fig. 3; Cushman, 1930: 13 (paras.); Doane *et al.*, 1936: 171 (hosts); Canova, 1936: 180 (distr., hosts); Hatch, 1938: 187; Bedard, 1938: 193 (hosts); Hardy, 1942: 10 (biol.); Kimmey & Furniss, 1943: 26, fig. 6f; Townes, 1944: 772 (paras.); Hardy, 1945: 83, fig. 30; 1948: 32; Townes, 1950: 108 (paras.); DeLeon, 1952: 81 (hosts); Keen, 1952: 196 (hosts); Clark, 1956: 41 (distr.); Townes & Townes, 1960: 466 (paras.); Linsley, 1963: 168, fig. 2; Chapman, 1964: 3 (biol.); Ross, 1968: 11 (biol.); Hatch, 1971: 127, pl. 16, fig. 3; Penrose & Westcott, 1974: 72 (biol.); Deyrup, 1977: 181 (paras.); Furniss & Carolin, 1977: 296, fig. 176 (hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.).

Leptura obliterata obliterata; Gressitt, 1947: 192; Linsley & Chemsak, 1997: 289 (hosts); Monné, M.A. & Hovore, 2006: 164 (checklist); Rice, MacRae & Merickel, 2017:

Anoplodera obliterata; Hardy, 1957: D65 (distr.).

Leptura (Leptura) obliterata; Linsley & Chemsak, 1976: 97.

Leptura (Leptura) obliterata obliterata; Linsley & Chemsak, 1976: 98; Monné, M.A., & Giesbert, 1994a: 165 (checklist); Monné, M.A., 1995: 89 (cat.); Heffern, 1998: 11 (distr.); Chemsak, 2005: 326, pl. 12, fig. 1.

Etoforus obliteratus; Bousquet, Laplante, Hammond & Langor, 2017: 125, pl. 25

Leptura (Stenura) obliterata var. *perductor*; LeConte, 1870: 402 (syn.)

Strangalia perductor; Casey, 1913: 258; Leng, 1920: 273 (cat.).

Type locality - Holotype: Canada, British Columbia. (BMNH).

Strangalia idahoensis Casey, 1913: 259; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 78, 370, fig. 84w (lectotype).

Type locality - Lectotype male: United States, Idaho: Bonner County, Priest Lake. (USNM).

4. *Etoforus plagifer* (LeConte, 1873)

Type locality - Holotype female: United States: California-Nevada: Lake Tahoe, Sierra Nevada. (MCZN). **Distribution** - Rocky Mts. to south central British Columbia and the southern Sierra Nevada. **Host plants** - *Picea* sp., *Pinus contorta* Douglas ex Loudon, *P. ponderosa* Douglas ex Lawson & P. Lawson, *P. strobus* Linnaeus (Pinaceae).

Leptura plagifera LeConte, 1873a: 224; Wickham, 1890: 35 (distr.); Leng, 1890: 187, 194; Fall, 1901: 150 (distr.); Garnett, 1918: 249 (distr.); Craighead, 1923: 91, 95 (larva); Swaine & Hopping, 1928: 28, pl. 2, fig. 25; Doane *et al.*, 1936: 171 (distr.); Canova, 1936: 131 (distr., hosts); Hatch, 1971: 126, pl. 14, fig. 2; Chemsak, Linsley & Noguera, 1992: 86 (cat.); Linsley & Chemsak, 1997: 390 (hosts); Heffern, 1998: 24 (distr.); Rice, MacRae & Merickel, 2017: 670 (distr.)

Strangalia (Strangalia) plagifera; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100.

Strangalia plagifera; Casey, 1913: 258; Leng, 1920: 273 (cat.); Keen, 1929: 69; Beaulne, 1932: 200 (hosts).

Leptura (Leptura) plagifera; Linsley & Chemsak, 1976: 106; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 90 (cat.); Chemsak, 2005: 318, 337, pl. 22, fig. 12 (biol.); Monné, M.A. & Hovore, 2006: 164 (checklist);

Etoforus plagifer; Bousquet, Laplante, Hammond & Langor, 2017: 126

5. *Etoforus plebejus* (Randall, 1838)

Syntypes localities - Syntypes: United States, Maine: Hallowel & Augusta. (MCZN).

Distribution - This species ranges from eastern Newfoundland to southeastern Manitoba, south at least to North Carolina and Michigan. **Host plants** - *Picea rubens* Sargent, *Pinus contorta* Douglas ex Loudon, *P. rigida* Miller *P. strobus* Linnaeus (Pinaceae).

Leptura plebeja Randall, 1838: 28; LeConte, 1873a: 216; Austin, 1874: 271 (distr.); Provancher, 1877a: 614; Leng, 1890: 187; Hamilton, 1890: 214; Wickham, 1897b: 189; 1897c: 158; Smith, 1900: 292; Blatchley, 1910: 1055; Smith, 1910: 331; Chagnon, 1917: 235 (distr.); Blackman, 1918: 127; Morris, 1921: 14 (distr.); Swaine & Hopping, 1928: 28, pl. 2, fig. 28; Chagnon, 1936: 252; Knull, 1946: 159; Chagnon & Robert, 1962: 252; Bayer & Shenefelt, 1969: 11, fig. 21; Gardiner, 1970: 284 (biol.); Wilson, 1971: 60 (biol.); Perry, 1975: 59 (hosts); Gosling & Gosling, 1976: 12, fig. 98 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 94 (biol.); Gosling, 1984: 80 (biol.); 1986: 156 (hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Yanega, 1996: 35, pl. 6, figs 65a,b; Linsley & Chemsak, 1997: 390 (hosts); Vlasák & Vlasakova, 2002: 206 (distr., hosts); MacRae & Rice, 2007: 247 (biol., distr.); Steury & MacRae, 2014: 9 (distr.).

Strangalia plebeja; LeConte, 1850b: 236 (distr.); 1850b: 333; Casey, 1913: 258; Boppe, 1921: 100; Mundinger, 1924: 318; Hatch, 1925: 580 (distr.); Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 441 (distr.); Procter, 1946: 179.

Leptura (Leptura) plebeja; Linsley & Chemsak, 1976: 101; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 90 (cat.); Chemsak, 2005: 317, 328, pl. 22, fig. 5; Monné, M.A. & Hovore, 2006: 164 (checklist);
Pedostrangalia plebeja; Webster, 2016: 485;
Etoforus plebejus; Bousquet, Laplante, Hammond & Langor, 2017: 126, pl. 26

6. *Etoforus propinquus* (Bland, 1865)

Type locality - Lectotype male: United States, Colorado Territory. (ANSP). **Distribution** British Columbia south to the Sierra Nevada in central California, and through the Rocky Mountains to southern Arizona and southern New Mexico, including northwestern Nebraska
Host plants - *Abies* sp., *Picea engelmanni* Engelm., *Pinus contorta* Douglas ex Loudon, *P. jeffreyi* Balfour, *P. monticola* Douglas ex D. Don, *P. ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).

Leptura propinqua Bland, 1865: 384; LeConte, 1873a: 216; 1876: 520 (distr.); Snow, 1877a: 19 (distr.); Horn, 1880a: xii; Cockerell, 1890: 38 (distr.); Leng, 1890: 187, 193; Townsend, 1895: 48 (distr.); Wickham, 1901: 151; Fall, 1901: 150 (distr.); Knaus, 1903: 176 (distr.); Skinner, 1903: 40 (distr.); Garnett, 1918: 248 (distr.); Craighead, 1923: 91, 95 (larva); Swaine & Hopping, 1928: 28, pl. 2, fig. 29, pl. 12, fig. 2; Doane *et al.*, 1936: 171 (hosts); Knowlton & Thatcher, 1936: 279 (distr.); Canova, 1936: 131 (distr., hosts); Moore, 1937: 89 (distr.); Hardy, 1944: 16 (distr.); 1948: 32; Knowlton & Wood, 1950: 11 (distr.); Hardy, 1955: B50; Clark, 1956: 41 (distr.); Hatch, 1971: 126, pl. 14, fig. 3; Penrose & Westcott, 1974: 72 (biol.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Linsley & Chemsak, 1997: 390 (hosts); Rice, MacRae & Merickel, 2017: 670 (distr.)

Strangalia (Strangalia) propinqua; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100.

Strangalia propinqua; Casey, 1913: 259; Leng, 1920: 273 (cat.); Hardy, 1927a: C25; 1927b: C36; Keen, 1929: 69; Beaulne, 1932: 200 (hosts); Papp, 1955: 217 (distr.).

Leptura (Leptura) propinqua; Linsley & Chemsak, 1976: 107; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 91 (cat.); Heffern, 1998: 11 (distr.); Chemsak, 2005: 318, 338, pl. 23, fig. 1; Monné, M.A. & Hovore, 2006: 164 (checklist);

Etoforus propinquus; Bousquet, Laplante, Hammond & Langor, 2017: 126, pl. 26

Strangalia regularis Casey, 1913: 259; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 309, fig. 143a (holotype).

Type locality - Holotype female: United States. (USNM).

Strangalia minuscula Casey, 1913: 260; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 100. 370, fig. 110e (lectotype).

Type locality - Lectotype: United States, Colorado. (USNM).

7. *Etoforus soror* (LeConte, 1873)

Syntypes locality - Syntypes male and female: United States, California. (MCZN).

Distribution - Sierra Nevada of California. **Host plants** - *Pinus jeffreyi* Balfour, *P. ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).

Leptura soror LeConte, 1873a: 223; Wickham, 1890: 35 (distr.); Leng, 1890: 187, 193; Fall, 1901: 150 (distr.); Garnett, 1918: 248 (distr., hosts); Craighead, 1923: 95 (larva); Hardy, 1949: K25, K44; 1950: 86.

Strangalia (Strangalia) soror; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100.

Strangalia soror; Casey, 1913: 260; Leng, 1920: 273 (cat.); Hardy, 1926b: 29, pl. 5, fig. 31; Essig, 1926: 452, fig. 353 (biol.); Keen, 1929: 69; Beaulne, 1932: 200 (hosts); Jaques, 1951: 257.

Leptura obliterated ab. *soror*; Swaine & Hopping, 1928: 29, pl. 3, fig. 30; Doane *et al.*, 1936: 172 (biol., distr.); Hatch, 1971: 127, pl. 17, fig. 3.

Leptura obliterated soror; Gressitt. 1947: 192.

Strangalina soror; Swan & Papp, 1972: 450, fig. 960.

Leptura (Leptura) obliterated soror; Linsley & Chemsak, 1976: 99, fig. 24; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 90 (cat.); Chemsak, 2005: 327, pl. 22, fig. 2; Monné, M.A. & Hovore, 2006: 162 (checklist);

Leptura oblitterata soror; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Linsley & Chemsak, 1997: 390 (hosts); Monné, M.A. & Hovore, 2006: 164 (checklist); MacRae & Rice, 2007: 247 (biol., distr.).

Etoforus soror. Bousquet, Laplante, Hammond & Langor, 2017: 18

8. *Etoforus subhamatus* (Randall, 1838)

Type locality - Holotype: United States, New Hampshire: in the notch White Mountains.

(MCZN). **Distribution** - Northeastern North America to Tennessee and Minnesota. In Canada, it is found from Cape Breton Island to the Sudbury District in Ontario, north to the Gaspé area in Quebec. **Host plants** – *Picea rubens* Sargent, *Pinus strobus* Linnaeus, *Tsuga canadensis* (Linnaeus) Carrière (Pinaceae).

Leptura subhamata Randall, 1838: 44; LeConte, 1873a: 216; Provancher, 1877a: 614; Schaupp, 1878: 20 (distr.); 1880: 84 (biol.); Horn, 1885a: 6 (syn.); Leng, 1890: 187; Hamilton, 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 190, fig. 29; 1897c: 158 (distr.); Harrington, 1897: 73 (hosts); Smith, 1900: 292; Ulke, 1903: 26, 50 (distr.); Felt, 1904: 171; 1906: 650, 675, fig. 675 (biol.); Morris, 1909b: 417; Smith, 1910: 331 (distr.); Blatchley, 1910: 1055, fig. 450; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Morris, 1916b: 300; Chagnon, 1917: 235 (distr.); Blackman, 1918: 130; Frost, 1920: 27 (biol.); Craighead, 1923: 91, 94, pl. 14, fig. 9; Mundinger, 1924: 318; Cloudman, 1925: 33; Swaine & Hopping, 1928: 28, pl. 2, figs 26, 27, pl. 12, fig. 1; Chagnon, 1936: 253; Knull, 1946: 158; Fattig, 1947: 18; Dillon & Dillon, 1961: 610, pl. 60 No. 10, 12; Chagnon & Robert, 1962: 253; Bayer & Shenefelt, 1969: 11; Gardiner, 1970: 284 (biol.); Kirk, 1970: 78; Wilson, 1971: 59 (biol.); Gosling & Gosling, 1976: 12, fig. 97 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 94 (biol.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1986: 176 (hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Yanega, 1996: 36, pl. 5, figs 59a, b; Linsley & Chemsak, 1997: 390 (hosts); Vlasák & Vlasakova, 2002: 206 (hosts); Rice & Veal, 2006: 259 (distr.); Lingafelter, 2007: 32, 141, 2 figs, pl. 8a (hosts); Guarnieri, 2009: 15 (distr.); Leavengood & Chapman, 2014: 2 (distr.).

Strangalia subhamata; Haldeman, 1847a: 61; LeConte, 1850a: 328; Casey, 1913: 258; Leng, 1920: 273 (cat.); Boppe, 1921: 100; Champlain, Kirk & Knull, 1925: 107; Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 111 (distr.); Criddle, 1928: 97 (distr.); Leonard, 1928: 441 (distr.); Beaulne, 1932: 200 (hosts); Brimley, 1938: 213 (distr.); Procter, 1946: 179 (distr.); Jaques, 1952: 257, fig. 609.

Leptura (Leptura) subhamata; Linsley & Chemsak, 1976: 96; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 91 (cat.); Chemsak, 2005: 317, 323, pl.21, fig.12; Monné, M.A. & Hovore, 2006: 164 (checklist);

Etoforus subhamatus; Bousquet, Laplante, Hammond & Langor, 2017: 126, pl. 25

Pedostrangalia subhamata; Webster, 2016: 485;

Leptura interrupta Newman, 1841: 72; LeConte, 1850a: 340.

Type locality - Holotype: United States, (BMNH).

Stenura elegans Haldeman, 1847a: 63.

Strangalia elegans; LeConte, 1850a: 329; Casey, 1913: 258; Leng, 1920: 273 (cat.); Casey, 1924: 279; Mundinger, 1924: 318; Leonard, 1928: 441 (distr.).

Leptura subhamata form *elegans*; Leng, 1890: 93.

Strangalia (Strangalia) subhamata ab. *elegans*; Boppe, 1921: 100.

Strangalia subhamata var. *elegans*; Kirk & Knull, 1926: 25 (distr.).

Iconotype locality - Iconotype: United States. (MCZN).

Stenura armata Haldeman, 1847a: 63.

Strangalia armata; Morris, 1909b: 410 (biol.).

Type locality - Holotype: United States, Pennsylvania. (MCZN).

9. *Etoforus vitiosus* (LeConte, 1854)

Syntypes localities - Syntypes: United States, Oregon: Fort Vancouver & Prairie Paso. (MCZN). **Distribution** - From Haida Gwaii to the Rocky Mountains in Alberta, south at

least to northeastern California (Trinity County, CNC) and the Sierra Nevada (El Dorado County)

Strangalia vitiosa LeConte, 1854a: 18; Casey, 1913: 259.

Leptura vitiosa; LeConte, 1857: 23, 63.

Strangalia (Strangalia) obliterata ab. *Vitiosa*; Boppe, 1921: 100.

Etoforus vitiosus; Bousquet. Laplante, Hammond & Langor, 2017: 126, pl. 25:

Grammoptera Dejean, 1835

Grammoptera Dejean, 1835: 356; Audinet-Serville, 1835: 215; Thomson, 1864: 141; Chenu, 1870: 332; Boppe, 1921: 83; Swaine & Hopping, 1928: 11, 19; Bradley, 1930: 236; Chagnon, 1936: 243, 251; Doane *et al.*, 1936: 171; Knoll, 1946: 152, 154; Dillon & Dillon, 1961: 607, 608; Arnett, 1962: 857, 876; Chagnon & Robert, 1962: 243, 251; Chemsak, 1964: 232; Bayer & Shenefelt, 1969: 6, 11; Hatch, 1971: 124, 125; Villiers, 1974: 212, 215; Linsley & Chemsak, 1976: 38; Svacha & Danilevsky, 1989: 103 (larva); Chemsak, 2005: 234 (rev.); Monné, M.A., 2006: 122 (cat.); Monné, M.A. & Hovore, 2006: 163 (checklist); Bousquet & Bouchard, 2013: 82; Bousquet, Laplante. Hammond & Langor, 2017: 119 (key spp.)

Type-species - *Leptura praeusta* Fabricius, 1787 (subsequent designation, Westwood, 1840).

Parallelina Casey, 1913: 247, 255; Chemsak, 1964: 234.

Type-species - *Strangalia molybdica* LeConte, 1851 (original designation).

Fallaciomorpha Pic 1900: 37.

Type-species - *Grammoptera angustata* Pic, 1892 (original designation).

1. Grammoptera exigua (Newman 1841)

Type locality - United States, New York: Trenton Falls. (BMNH). **Distribution** -From southern Quebec, as far north as the Quebec City area, to southern Manitoba, south to Missouri and Georgia. **Host plants** - *Tilia americana* Linnaeus (Malvaceae), *Ceanothus americanus* Linnaeus (Rhamnaceae), *Populus* sp. (Salicaceae).

Leptura exigua Newman, 1841: 73; LeConte, 1873a: 217; Horn, 1885a: 6 (syn.); 1888: 301; Townsend, 1889: 233 (distr.); Hamilton, 1889b: 32; 1890: 215; Leng, 1890: 188, 194; Hamilton, 1895: 338 (distr.); Leng & Hamilton, 1896: 174; Wickham, 1897b: 190; Ouellet, 1902: 122; Dury, 1902: 161 (distr.); Chagnon, 1905: 35 (distr.); Blatchley, 1910: 1056; Woodruff, 1915: 73 (biol.); Gibson, 1917: 50 (distr.); Nicolay, 1917a: 94 (distr.); Chagnon, 1917: 234 (distr.); Craighead, 1923: 91 (larva).

Strangalia (Strangalia) exigua; Aurivillius, 1912: 243 (cat.); Boppe, 1921: 100.

Parallelina exigua; Casey, 1913: 255; Britton, 1920: 268 (distr.); Leng, 1920: 273 (cat.); Kirk & Knoll, 1926: 24 (distr.); Leonard, 1928: 440 (distr.).

Grammoptera exigua; Swaine & Hopping, 1928: 21, pl. 1, fig. 13; Knoll, 1930: 85 (hosts); Chagnon, 1936: 251; Knoll, 1946: 154, pl. 8, fig. 31; Fattig, 1947: 17; Dillon & Dillon, 1961: 608, pl. 50, No. 9; Chagnon & Robert, 1962: 251; Bayer & Shenefelt, 1969: 11; Gardiner,

1970: 284 (biol., paras.); Wilson, 1971: 59 (biol.); Gosling & Gosling, 1976: 9 (distr.); Linsley & Chemsak, 1976: 41; Laliberté, Chantal & LaRochelle, 1977: 93 (biol.); Turnbow & Franklin, 1980: 347; Gosling, 1984: 71 (hosts); Chemsak, Linsley & Noguera, 1992: 95 (cat.); MacRae, 1993: 239 (distr.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 72 (cat.); Yanega, 1996: 33, pl. 4, fig. 50; Linsley & Chemsak, 1997: 380 (hosts); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 236, pl. 17, fig. 7; Monné, M.A. & Hovore, 2006: 163 (checklist); Rice & Veal, 2006: 258 (distr., hosts); Guarnieri, 2009: 15 (distr.); Karns, 2015: 4; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 119

Leptura saucia LeConte, 1862: 40; 1873a: 217; Harrington, 1884: 73 (distr.); 0: 15 (distr.).

Syntypes locality - Syntypes: United States, Middle States. (MCZN).

2. *Grammoptera haematites* (Newman, 1841)

Syntypes locality - Syntypes: United States, New York: Trenton Falls. (BMNH).

Distribution - Found in Canada from New Brunswick and the Gaspé peninsula to the Fort McMurray area in northeastern Alberta, south to Arkansas and northern Georgia. **Host plants** - *Acer* sp. (Aceraceae), *Cornus* sp. (Cornaceae), *Carpinus* sp. (Corylaceae), *Quercus* sp. (Fagaceae), *Carya* sp. (Juglandaceae).

Leptura haematites Newman, 1841: 73; LeConte, 1873a: 217; Provancher, 1877b: 332 (distr.); Horn, 1885a: 6; Hamilton, 1889b: 32; Leng, 1890: 186, 188, 194; Smith, 1900: 292 (distr.); Ouellet, 1902: 122 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 35 (distr.); Lovell, 1915: 114; Chagnon, 1917: 234 (distr.); Nicolay, 1917a: 94 (distr.); 1919: 69 (distr.); Britton, 1920: 268 (distr.).

Strangalia (Strangalia) nana ab. *haematites*; Aurivillius, 1912: 243 (cat.).

Parallelina nana var. *haematites*; Casey, 1913: 255; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 440 (distr.); Brimley, 1938: 213 (distr.).

Grammoptera haematites; Swaine & Hopping, 1928: 21, pl. 1, fig. 14; Chagnon, 1936: 251; Knull, 1946: 154; Chagnon & Robert, 1962: 251; Bayer & Shenefelt, 1969: 11, fig. 21; Wilson, 1971: 99 (biol.); Linsley & Chemsak, 1976: 45; Gosling & Gosling, 1976: 9 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 93 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); MacRae, 1993: 239 (distr.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 73 (cat.); Krinsky & Godwin, 1996: 238; Yanega, 1996: 33, pl. 4, fig. 51; Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 206 (distr., hosts); Chemsak, 2005: 236, 241, pl. 17, fig. 8; Monné, M.A. & Hovore, 2006: 162 (checklist); Rice & Veal, 2006: 259 (distr., hosts); MacRae & Rice, 2007: 246 (biol., distr.); Lingafelter, 2007: 33, 140, 2 figs, pl. 8d; Holt, 2013: 244 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.); Webster, 2016: 485; Bousquet, Laplante, Hammond & Langor, 2017: 120.

Parallelina haematites; Beaulne, 1932: 199 (hosts).

Leptura nana Newman, 1841: 73; LeConte, 1873a: 217 (type). Horn, 1888: 301 (syn.); Hamilton, 1889a: 108; Leng, 1890: 215; Hamilton, 1890: 215; 1895: 338 (distr.); Wickham, 1897b: 190; Chagnon, 1917: 235 (distr.); Blackman, 1918: 126 (biol.).

Strangalia nana; LeConte, 1850a: 332; Aurivillius, 1912: 243 (cat.); Boppe, 1921: 100.

Parallelina nana; Casey, 1913: 255; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 440 (distr.); Brimley, 1938: 213 (distr.).

Leptura nana var. *haematites*; Hamilton, 1890: 215; Leng, 1890: 215; Leng & Hamilton, 1896: 174; Wickham, 1897b: 190; Smith, 1910: 331.

Type locality - Holotype: United States, New York: Trenton Falls. (BMNH).

3. *Grammoptera militaris* (Chevrolat, 1855)

Type locality - Holotype female: United States, Rocky Mountains. (BMNH). **Distribution** - Central California to northern Mexico, Baja California. **Host plants** - *Acer macrophyllum* Pursh (Aceraceae), *Rhus* sp. (Anacardiaceae), *Quercus* sp. (Fagaceae), *Juglans* sp. (Juglandaceae), *Umbellularia* (Lauraceae)

Leptura militaris Chevrolat, 1855: 187; LeConte, 1857: 23 (distr.).

Strangalia (Strangalia) molybdica ab. *militaris*; Aurivillius, 1912: 243 (cat.).

Parallelina molybdica militaris; Leng, 1920: 272 (cat.).

Grammoptera militaris; Tyson, 1966: 203 (hosts); Linsley & Chemsak, 1976: 41, figs 12, 13; Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Noguera & Chemsak, 1996: 403 (distr.); Linsley & Chemsak, 1997: 380 (hosts); Monné, M.A., 2002: 37 (cat. hosts); Chemsak, 2005: 239, pl. XVII, fig. 6; Monné, M.A., 2006: 122 (cat.); Monné, M.A. & Hovore, 2006: 162 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Leptura molybdica; LeConte, 1873a: 218 (*partim*).

Grammoptera molybdica; Swaine & Hopping, 1928: 20, pl. 1, fig. 12 (*partim*).

4. *Grammoptera molybdica* (LeConte, 1851)

Syntypes locality - Syntypes: United States, California: San Francisco. (MCZN).

Distribution - Yukon Territory to Idaho and southern California, and Colorado. In Canada, it occurs from the Klondike region in west-central Yukon Territory south to southern Vancouver Island, east to the Rocky Mountains in southeastern British Columbia. **Host plants** - *Aesculus californica* (Spach) Nuttall (Hippocastanaceae).

Strangalia molybdica LeConte, 1851: 101; 1857: 23 (distr.); 1873: 218; Leng, 1890: 188, 195; Fall, 1901: 149 (distr.); Garnett, 1918: 249 (distr.); Boppe, 1921: 100.

Parallelina molybdica; Casey, 1913: 247, 255; Leng, 1920: 273 (cat.); Hardy, 1927b: C36; Moore, 1937: 88 (distr.).

Grammoptera molybdica; Swaine & Hopping, 1928: 20, pl. 1, fig. 11; Doane *et al.*, 1936: 271; Canova, 1936: 130 (distr.); Leech, 1955: 40 (hosts); Hatch, 1971: 125; Linsley & Chemsak, 1976: 40, fig. 11; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 73 (cat.); Linsley & Chemsak, 1997: 380 (hosts); Chemsak, 2005: 235, pl. 17, fig. 5; Monné, M.A. & Hovore, 2006: 162 (checklist); MacRae & Rice, 2007: 247 (biol., distr); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 120, pl. 23

5. *Grammoptera rhodopus* (LeConte, 1874)

Syntypes locality - Syntypes: United States, California. (MCZN). **Distribution** - Oregon to southern California, and western Nevada. **Host plants** - *Lithocarpus densiflora* Rehder (Fagaceae), *Rhamnus californica* Eschscholtz (Rhamnaceae).

Leptura rhodopus LeConte, 1874: 68.

Leptura subargentata form *rhodopus*; Leng, 1890: 195; Garnett, 1918: 249 (hosts).

Strangalia (Strangalia) subargentata ab. *rhodopus*; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100.

Parallelina rhodopus Casey, 1913: 255.

Parallelina subargentata rhodopus; Leng, 1920: 273 (cat.); Moore, 1937: 89 (distr.).

Grammoptera rhodopus; Swaine & Hopping, 1928: 21; Canova, 1936: 130 (distr.); Linsley & Chemsak, 1976: 39 (syn.); Cope, 1984: 29 (hosts); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 74 (cat.); Linsley & Chemsak, 1997: 380 (hosts); Chemsak, 2005: 235, pl. 17, fig. 4; Monné, M.A. & Hovore, 2006: 162 (checklist);

Parallelina campanifera Casey, 1913: 256; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 36, fig. 37c.

Grammoptera campanifera; Swaine & Hopping, 1928: 20, pl. 1, fig. 10.

Type locality - Holotype female: United States, California: Mokelumne Hill, Calaveras County. (USNM).

6. *Grammoptera ruficeps* (LeConte 1862)

Type locality - Holotype: United States, Upper Georgia. (MCZN). **Distribution** - United States (Georgia, Massachusetts). **Host plants** - *Cornus* sp. (Cornaceae).

Leptura ruficeps LeConte, 1862: 40; 1873a: 217;

Leptura subargentata form *ruficeps*; Leng, 1890: 195; Blatchley, 1910: 1057; Garnett, 1918: 249
Strangalia (Strangalia) subargentata ab. *ruficeps*; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100
Grammoptera ruficeps; Swaine & Hopping, 1928: 22, pl. 1, fig. 16; Knull, 1946: 155; Wilson,
 1971: 59; Yanega, 1996: 33, pl. 4, fig. 49; Vlasák & Vlasakova, 2002: 206 (distr.).

7. *Grammoptera subargentata* (Kirby, 1837)

Type locality - Holotype: North America, 65 degrees. (BMNH). **Distribution** - Boreal North America, western Newfoundland to central Alaska to northeastern California, New Mexico, North Carolina and Alabama. **Host plants** - *Rhus glabra* Linnaeus (Anacardiaceae), *Lithocarpus densiflora* Rehder, *Quercus densiflora* Hooker & Arnott (Fagaceae), *Populus trichocarpa* Torrey & A. Gray (Salicaceae).

Leptura subargentata Kirby, 1837: 184; Haldeman, 1847a: 65; LeConte, 1857: 23; Bethune, 1872: 116; LeConte, 1873a: 217; Austin, 1874: 271 (distr.); Horn, 1876: 170; Provancher, 1877a: 614; Snow, 1877a: 19 (distr.); LeConte, 1879: 505 (distr.); Horn, 1885a: 9 (syn.); Hamilton, 1889b: 32; Wickham, 1890: 35 (distr.); Leng, 1890: 195; Cockerell, 1890: 38 (distr.); Harrington, 1890: 185 (distr.); Wickham, 1893: 2 (distr.); 1897b: 190 (distr.); 1897a: 158 (distr.); Harrington, 1899: 108 (distr.); Fall, 1901: 150 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Fall & Cockerell, 1907: 193 (distr.); Adams, 1909: 200 (distr.); Morris, 1909b: 416; Blatchley, 1910: 1056; Lovell, 1915: 114; Chagnon, 1917: 235 (distr.); Blackman, 1918: 130 (biol.); Garnett, 1918: 249 (distr.).

Strangalia subargentata; LeConte, 1850a: 236 (distr.); 1850b: 331; Boppe, 1921: 100; Saalas, 1936: 80.

Grammoptera subargentata; Mannerheim, 1853: 251; Hamilton, 1894a: 31 (distr.); Swaine & Hopping, 1928: 21, pl. 1, fig. 15, pl. 13, fig. 34; Mank, 1934: 80 (distr.); Chagnon, 1936: 251; Canova, 1936: 130 (distr., hosts); Doane *et al.*, 1936: 271; Knowlton & Thatcher, 1936: 279 (distr.); Knull, 1946: 155; Knowlton & Wood, 1950: 11 (distr.); Chagnon & Robert, 1962: 251; Gardiner, 1970: 284 (biol.); Horning & Barr, 1970: 36; Wilson, 1971: 59 (biol.); Hatch, 1971: 125; Linsley & Chemsak, 1976: 46, fig. 14 (syn.); Gosling & Gosling, 1976: 9 (biol.); Perry, 1977: 98 (distr.); Laliberté, Chantal & LaRochelle, 1977: 93; Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1986: 156 (hosts); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Glaser, 1992: 1554 (distr.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 74 (cat.); Yanega, 1996: 33, pl. 4, fig. 48; Linsley & Chemsak, 1997: 380 (hosts); Heffern, 1998: 10 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 236, 243, pl. 17, fig. 9; Monné, M.A. & Hovore, 2006: 162 (checklist); Majka, McCorquodale & Smith, 2007: 260 (distr.); Lingafelter, 2007: 33, 140, 2 figs, pl. 8e (hosts); Webster, McCorquodale & Majka, 2009: 294 (distr.); Webster, 2016: 485; Rice, MacRae & Merickel, 2017: 670 (distr.); Klingeman *et al.*, 2017: 295 (distr.)

Parallelina subargentata; Casey, 1913: 255; Hardy, 1926b: 29; Essig, 1926: 452; Kirk & Knull, 1926: 24 (distr.); Flechter, 1926: 143 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 440 (distr.); Brimley, 1938: 213 (distr.); Procter, 1946: 178 (distr.).

Leptura similis Kirby, 1837: 185; Haldeman, 1847a: 65; Bethune, 1872: 116; LeConte, 1873a: 217; Horn, 1876: 170 (syn); Snow, 1877a: 19 (distr.).

Strangalia similis; LeConte, 1850a: 331.

Leptura subargentata var. *similis*; Harrington, 1890: 185 (distr.); Leng, 1890: 195; Garnett, 1918: 249; Fall, 1926: 202 (distr.).

Parallelina similis; Casey, 1913: 255.

Type locality - Holotype: North America, 65 degrees. (BMNH).

Leptura rufibasis LeConte, 1862: 40.

Leptura subargentata form *rufibasis*; Leng, 1890: 195.

Syntypes locality - Syntypes: North America, Hudson's Bay Territory, about Methy Lake (MCZN).

Leptura quebecensis Couper, 1864: 88; Becker, 1974: 68 (lectotype).

Type locality - Lectotype male: Canada, Québec. (Depository unknown).

Parallelina filicornis Casey, 1913: 255; Lingafelter *et al.*, 2014: 62, fig. 62g.

Grammoptera filicornis; Swaine & Hopping, 1928: 22, pl. 1, fig. 17; Canova, 1936: 130 (distr.); Hardy, 1942: 10 (biol.); Knull, 1946: 155; Hardy, 1948: 32 (distr.); Clark, 1956: 41 (distr.); Hardy, 1957: D65; Hatch, 1971: 125.

Type locality - Holotype male: United States, Washington. (USNM).

***Idiopidonia* Swaine & Hopping 1928**

Idiopidonia Swaine & Hopping, 1928: 15; Bradley, 1930: 236; Knull, 1946: 151; Arnett, 1962: 857, 876; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 66; Monné, M.A., 1995a: 81; Chemsak, 2005: 37,40,276; Monné, M.A. & Hovore, 2006: 163 (checklist);

Type-species - *Leptura pedalis* LeConte, 1861 (original designation).

1. *Idiopidonia pedalis* (LeConte 1861)

Syntypes locality - Syntypes: United States, Lake Superior. (MCZN). **Distribution** - Northeastern Canada, western Newfoundland to the Kenora District in northwestern Ontario to Great Lakes region, Central States and Appalachian region south to northwestern Georgia.

Leptura pedalis LeConte, 1861: 355; 1873: 221; Austin, 1874: 271 (distr.); Provancher, 1877a: 615; Leng, 1890: 189, 199; Evans, 1895b: 173 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); Lovell, 1915: 114; Boppe, 1921: 91; Mundinger, 1924: 318; Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 112 (distr.); Leonard, 1928: 442 (distr.); Saalas, 1936: 78 (morphol.); Brimley, 1938: 213 (distr.); Procter, 1946: 179 (distr.).

Leptura (Trachysida) pedalis; Casey, 1913: 271; Hatch, 1925: 580 (distr.).

Idiopidonia pedalis; Swaine & Hopping, 1928: 19, pl. 1, fig. 8, pl. 13, fig. 33; Knull, 1946: 153, pl. 5, fig. 17; Chemsak, 1964: 232; Wilson, 1971: 59 (biol.); Linsley & Chemsak, 1976: 66; Gosling & Gosling, 1976: 10 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 94 (biol.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1986: 156 (biol.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 81 (cat.); Yanega, 1996: 34, pl. 4, fig. 43; Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 276, pl. 19, fig. 6; Monné, M.A. & Hovore, 2006: 163 (checklist); Lingafelter, 2007: 30, 140, 2 figs, pl. 7h.; Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.)

***Judolia* Mulsant, 1863**

Judolia Mulsant, 1863: 496; Casey, 1913: 247, 249; 1924: 282; Planet, 1924: 86; Chemsak, 1964: 232; Villiers, 1974: 214, 216; Linsley & Chemsak, 1976: 47; Monné, M.A., 1995a: 75 (cat.); Chemsak, 2005: 244 (rev.); Monné, M.A., 2006: 123 (cat.); Monné, M.A. & Hovore, 2006: 163 (checklist); Monné, M.A., 2012: 121.

Judolia (Judolia); Boppe, 1921: 94; Bousquet, Laplante, Hammond & Langor, 2017: 120 (key spp.)

Type-species - *Leptura 6-maculata* Linnaeus, 1758 (subsequent designation, Casey, 1913: 247).

1. *Judolia cordifera* (Olivier, 1795)

Type locality - Holotype female: Amérique Septentrionale. (Depository unknown).

Distribution - Canada (Quebec)?, Eastern United States from New England to Georgia.

Host plants - *Castanea mollissima* Blume, *C. sativa* Miller (Fagaceae).

Leptura cordifera Olivier 1795: 25, pl. 4, fig. 41; Horn, 1886:125 (distr.); LeConte, 1873a: 218; Provancher, 1877b: 332 (distr.); Lugger, 1884: 204 (hosts); Horn, 1886: 139; Leng, 1890: 186, 196; Hamilton, 1895: 338 (distr.); Smith, 1900: 292 (distr.); Ulke, 1903: 26, 50 (distr.); Felt, 1906: 720; Leng, 1910: 77 (distr.); Smith, 1910: 331; Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Johnson, 1915: 315 (distr.); Morris, 1915: 21 (hosts); 1916b: 300; Chagnon, 1917: 234 (distr.); Nicolay, 1917a: 94 (distr.); Blackman, 1918: 128 (biol.)

Pachyta cordifera; Haldeman, 1847a: 59; Emmons, 1854: 128, pl. 8, fig. 12.

Strangalia cordifera; LeConte, 1850a: 332; 1850b: 336; Bland, 1861: 101 (distr., hosts).

Judolia cordifera; Casey, 1913: 249; Leng, 1920: 272 (cat.); Britton, 1920: 268 (distr.); Boppe, 1921: 94; Kirk & Knoll, 1926: 24 (distr.); Fletcher, 1926: 143 (distr.); Leonard, 1928: 439 (distr.); Jones, 1932: 353 (biol.); Brimley, 1938: 212 (distr.); Loding, 1945: 116 (distr.); Gibson & Carrillo, 1959: 119 (distr.); Gosling & Gosling, 1976: 9 (distr.); Linsley & Chemsak, 1976: 51; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); MacRae, 1993: 240 (distr.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 75 (cat.); Yanega, 1996: 34, pl. 8, fig. 85; Krinsky & Godwin, 1996: 238; Linsley & Chemsak, 1997: 385 (hosts); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 246, 250, pl. 17, fig. 12; Monné, M.A. & Hovore, 2006: 163 (checklist); Lingafelter, 2007: 37, 140, 2 figs. pl. 9h (hosts); Staines, 2008: 146 (distr.); Guarnieri, 2009: 15 (distr.); Holt, 2013: 244 (distr.); Steury & MacRae, 2014: 9 (distr., hosts); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 121

Anoplodera cordifera; Swaine & Hopping, 1928: 50, pl. 6, fig. 62; Doane *et al.*, 1936: 173; Knoll, 1946: 165; Dillon & Dillon, 1961: 615, pl. 61, No. 6; Kirk, 1970: 77; Wilson, 1971: 60 (biol.); Swan & Papp, 1972: 450, fig. 957.

Pachyta cordifera var. *lunaris* Haldeman, 1847a: 59.

Judolia cordifera lunaris; Leng, 1920: 272 (cat.).

Type locality - Holotype: United States, Pennsylvania. (MCZN).

Judolia deceptiva Casey, 1924: 283; Lingafelter *et al.*, 2014: 50, fig. 53q (holotype).

Type locality - Holotype female: United States, Massachusetts: Framingham. (USNM).

Judolia longior Casey, 1924: 284; Lingafelter *et al.*, 2014: 92, fig. 101c (holotype).

Type locality - Holotype male: United States, Pennsylvania: Carlisle Junction. (USNM).

2. *Judolia gaurotoides gaurotoides* (Casey, 1893)

Type locality - Holotype female: United States, Utah. (USNM). **Distribution** - Southwestern Utah to Montana and Rocky Mts. of Oregon. Canada, ranges from southeastern Saskatchewan to southeastern Alberta.

Leptura gaurotoides Casey, 1893: 592; Leng & Hamilton, 1896: 174.

Judolia gaurotoides; Aurivillius, 1912: 227 (cat.); Casey, 1913: 249; Linsley & Chemsak, 1976: 49; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Lingafelter *et al.*, 2014: 69, fig. 73w (holotype).

Judolia (Judolia) gaurotoides; Boppe, 1921: 94.

Anoplodera instabilis ab. *gaurotoides*; Hatch, 1971: 129.

Judolia gaurotoides gaurotoides; Linsley & Chemsak, 1976: 50; Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995: 76 (cat.); Chemsak, 2005: 248, pl. 17, fig. 10; Monné, M.A. & Hovore, 2006: 63 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 121, pl. 24

Judolia vivarium Casey, 1924: 282; Lingafelter *et al.*, 2014: 345, fig. 183w (holotype).

Type locality - Holotype female: United States, Wyoming: Yellowstone National Park, Norris Geyser Basin. (USNM).

Anoplodera knulli Swaine & Hopping, 1928: 46, pl. 6, fig. 63; Canova, 1936: 128 (distr.); Ruetter, 1970: 18 (types); Hatch, 1971: 129.

Type locality - Holotype: United States, Wyoming: Yellowstone National Park. (CNCI).

2a. *Judolia gaurotoides auripilis* Linsley & Chemsak 1976

Type locality - Holotype male: United States, California: Placer County, Cisco. (CASC).

Distribution - From southern Oregon, down the Sierra Nevada of California.

Judolia gaurotoides auripilis Linsley & Chemsak, 1976: 50; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 76; Chemsak, 2005: 249, pl. 17, fig. 11; Monné, M.A. & Hovore, 2006: 163 (checklist);

3. *Judolia impura* (LeConte 1857)

Type locality - Holotype: United States, California: Sacramento. (MCZN). **Distribution** - Oregon to central California. **Host plants** - *Calocedrus decurrens* (Torrey) Florin (Cupressaceae), *Sequoia sempervirens* (D. Don) Endlicher (Taxodiaceae).
Leptura impura LeConte, 1857: 64; 1873a: 218; Provancher, 1877a: 614; Leng, 1890: 188, 195; Fall, 1901: 150 (distr.); Garnett, 1918: 250 (distr.).
Judolia impura; Aurivillius, 1912: 227 (cat.); Casey, 1913: 249; Leng, 1920: 272 (cat.); Essig, 1926: 452 (biol.); Linsley & Chemsak, 1976: 59; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 76 (cat.); Linsley & Chemsak, 1997: 385 (hosts); Chemsak, 2005: 247, 263, pl. 18, figs 10, 11; Monné, M.A. & Hovore, 2006: 163 (checklist);
Judolia (Judolia) impura; Boppe, 1921: 94.
Anoplodera impura; Swaine & Hopping, 1928: 52, pl. 6, fig. 67; Canova, 1936: 128 (hosts); Doane *et al.*, 1936: 273 (hosts); DeLeon, 1952: 80 (hosts); Hatch, 1971: 130, pl. 14, fig. 10.

4. *Judolia instabilis* (Haldeman, 1847)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - Southern California to southern Arizona and south along Sierra Madre to Mexico (Baja California, Durango). In Canada this species ranges from western Manitoba to southwestern British Columbia, north to the Klondike region in west-central Yukon Territory and Northwest Territories. **Host plants** - *Pinus ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).
Pachyta instabilis Haldeman, 1847a: 59.
Strangalia instabilis; LeConte, 1850a: 332.
Leptura instabilis; LeConte, 1857: 23 (distr.); 1873a: 218; Austin, 1874: 271 (distr.); Snow, 1877a: 19 (distr.); Leng, 1890: 196; Fall, 1901: 149 (distr.); Fletcher & Gibson, 1909: 109; Garnett, 1918: 250 (distr.).
Judolia instabilis; Aurivillius, 1912: 227 (cat.); Casey, 1913: 249; 1924: 284; Saalas, 1936: 79; Linsley & Chemsak, 1976: 52, fig. 15; Turnbow & Franklin, 1980: 347; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 76 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 385 (hosts); Heffern 1998: 10 (distr.); Monné, M.A., 2002: 37 (cat. hosts); Chemsak, 2005: 252, pl. XVIII, fig. 1; Monné, M.A., 2006: 123 (cat.); Monné, M.A. & Hovore, 2006: 164 (checklist); Gutiérrez & Noguera, 2015: 137 (distr.); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 121, pl. 24; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497
Anoplodera instabilis; Swaine & Hopping, 1928: 47, pl. 5, figs 55, 56; pl. 12, fig. 14; Canova, 1936: 128 (hosts); Doane *et al.*, 1936: 173 (biol.); Fox, 1943: 206; Knowlton, 1945: 110; Hardy, 1948: 32 (distr.); Knowlton & Wood, 1950: 11 (distr.); Rockwood, 1951: 152 (hosts); Linsley, Knull & Statham, 1961: 25; Gardiner, 1970: 285 (biol.); Horning & Barr, 1970: 37; Hatch, 1971: 129, pl. 14, figs 8, 8a, pl. 20, figs 1-12.
Anoplodera (Judolia) instabilis; Linsley & Ross, 1940: 76 (distr.).
Strangalia convexa LeConte, 1850a: 332.
Leptura convexa; LeConte, 1857: 23 (distr.); Snow, 1877a: 19 (distr.); Popenoe, 1877: 33 (distr.); Snow, 1878: 76 (distr.); Townsend, 1895: 48; Leng, 1910: 77 (distr.).
Leptura instabilis v. *convexa*; Wickham, 1909a: 29 (distr.).
Judolia instabilis ab. *convexa*; Aurivillius, 1912: 227 (cat.).
Judolia convexa; Casey, 1913: 249.
Anoplodera convexa; Canova, 1936: 127 (distr.).
Type locality - Holotype: United States, Oregon. (MCZN).
Leptura quadrata; Horn, 1886b: xiii (not LeConte, 1873).
Leptura flaviventris Schaeffer, 1908: 342; Lingafelter *et al.*, 2014: 63, figs 68g, h (holotype).
Judolia flaviventris; Aurivillius, 1912: 227 (cat.); Casey, 1913: 249.
Anoplodera flaviventris; Swaine & Hopping, 1928: 48; Linsley, Knull & Statham, 1961: 25, fig. 21
Type locality - Holotype female: United States, Arizona: Huachuca Mts. (USNM).
Judolia pacifica Casey, 1913: 249; Lingafelter *et al.*, 2014: 293, figs 125o, p (holotype).

Type locality - Holotype male: United States, California. (USNM).

Judolia trajecta Casey, 1913: 250; Lingafelter *et al.*, 2014: 334, figs 172g, h (holotype).

Type locality - Holotype male: United States, Colorado: Boulder Co. (USNM).

5. *Judolia montivagans montivagans* (Couper, 1864)

Type locality - Holotype male: Canada, Québec: St. Catharines Bay, mouth of Saguenay River, Northeast of Québec City. (Depository unknown). **Distribution** - Alaska to Labrador, Rocky Mts. to New Mexico and eastern United States. **Host plants** - *Abies* sp., *Picea* sp., *Pinus* sp., *Pseudotsuga taxifolia* (Poiret) Britton (Pinaceae), *Populus trichocarpa* Torrey & A. Gray, *Salix* sp. (Salicaceae).

Leptura montivagans Couper, 1864: 87; Becker, 1974: 78 (lectotype).

Judolia montivagans; Linsley & Chemsak, 1976: 54; Gosling & Gosling 1976: 10, fig. 87 (biol., distr.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Lingafelter, 2007: 28, 141, 2 figs, pl. 6k (hosts); O'Neill, Fultz & Ivie, 2008: 30 (biol.).

Judolia montivagans montivagans; Linsley & Chemsak, 1976: 54; Hansen & Osgood, 1983: 149 (biol.); Gosling, 1986: 156 (hosts); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 77 (cat.); Yanega, 1996: 34, pl. 8, figs 88a, b; Linsley & Chemsak, 1997: 385 (hosts); Heffern, 1998: 10 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 254, pl. 18, fig. 2; Monné, M.A. & Hovore, 2006: 164 (checklist); Webster, 2016: 485; Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 122, pl. 24

Leptura sexmaculata Kirby, 1837: 182; Haldeman, 1847a: 65 (not Linnaeus, 1758); Bethune, 1872: 114; LeConte, 1873a: 218; Austin, 1874: 271 (distr.); Horn, 1876: 170; Provancher, 1877a: 618; Horn, 1886b: xiv; Hamilton, 1889a: 146; Leng, 1890: 185, 196; Harrington, 1890: 185 (distr.); Hamilton, 1894b: 396; Slossom, 1894: 3 (distr.); Harrington, 1894b: 15 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 190; 1897c: 158 (distr.); 1899: 199 (distr.); Ouellet, 1902: 122 (distr.); Adams. 1909: 200 (distr.); Morris, 1915: 19 (hosts); Gibson, 1917: 150; Chagnon, 1917: 235 (distr.); Garnett, 1918: 250 (distr.).

Strangalia sexmaculata; LeConte, 1850b: 236; 1850a: 333.

Leptura (Judolia) sexmaculata; Fauvel, 1889: 150.

Judolia sexmaculata; Aurivillius, 1912: 227 (cat.); Casey, 1913: 247; Leng, 1920: 272 (cat.); Boppe, 1921: 94; Carr, 1923: 197; Munding, 1924: 317; Kirk & Knull, 1926: 24 (distr.); Essig, 1926: 452 (biol.); Procter, 1927: 111 (distr.); Hardy, 1971: C35; Leonard, 1928: 439 (distr.); Procter, 1946: 178 (distr.).

Anoplodera sexmaculata; Swaine & Hopping, 1928: 49, pl. 6, fig. 57; Brown, 1930: 244 (distr.); Mank, 1934: 80 (distr.); Canova, 1936: 129 (distr., hosts); Chagnon, 1936: 250 (distr.); Doane *et al.*, 1936: 273 (biol.); Hardy. 1948: 32 (distr.); Clark, 1956: 41 (distr.); Linsley, Knull & Statham, 1961: 27 (distr.); Bayer & Shenefelt, 1969: 7, fig. 19; Gardiner, 1970: 286 (biol.); Wilson, 1971: 60 (biol.); Hatch. 1971: 130, pl. 14, fig. 6; Laliberté, Chantal & LaRochelle, 1977: 90 (biol.); Miliczky & Osgood, 1979: 133 (biol.).

Syntypes locality - Syntypes: Amerique Septentrionale, latitude 65 (BMNH)

Judolia seminigra Casey, 1924: 283; Lingafelter *et al.*, 2014: 317, fig. 151w (holotype).

Judolia barberi seminigra; Kirk & Balsbaugh, 1975: 97.

Type locality - Holotype male: United States, Idaho: Bonner County, Priest Lake. (USNM).

5a. *Judolia montivagans barberi* (Fall, 1907)

Type locality - Holotype male: United States, California: Humboldt County, Fieldbrook. (MCZN). **Distribution** - Southwestern Oregon to southern Sierra Nevada and coastal northern California. **Host plants** - *Picea sitchensis* (Bongard) Carr (Pinaceae).

Leptura barberi Fall, 1907: 150; Garnett, 1918: 250 (distr.).

Strangalia (Strangalia) Barberi; Aurivillius, 1912: 242 (cat.); Boppe, 1921: 100.

Strangalia barberi; Leng, 1920: 273 (cat.); Essig, 1926: 452.

Anoplodera barberi; Swaine & Hopping, 1928: 50, pl. 6, fig. 61; Canova, 1936: 127 (hosts); Doane *et al.*, 1936: 173 (biol.); Hatch, 1971: 130.

Judolia montivagans barberi; Linsley & Chemsak, 1976: 55; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 77 (cat.); Linsley & Chemsak, 1997: 385 (hosts); Chemsak, 2005: 255, pl. 18, fig. 3; Monné, M.A. & Hovore, 2006: 164 (checklist); MacRae & Rice, 2007: 247 (biol., distr.).

6. *Judolia quadrata* (LeConte, 1873)

Type locality - Holotype female: Canada, Saskatchewan. (MCZN). **Distribution** - This boreal species ranges from western Quebec to northwestern Alaska, south to southeastern British Columbia and the Lake Superior, Yukon and Northwest Territories.

Leptura quadrata LeConte, 1873a: 225.

Judolia instabilis ab. *quadrata*; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94.

Judolia quadrata; Casey, 1913: 249; Linsley & Chemsak, 1976: 55; Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 78 (cat.); Yanega, 1996: 35, pl. 8, figs 86a, b; Heffern, 1998: 11 (distr.); Chemsak, 2005: 246, 256, pl. 18, figs 4, 5; Monné, M.A. & Hovore, 2006: 164 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 122, pl. 24

Anoploclera quadrata; Swaine & Hopping, 1928: 46.

7. *Judolia scapularis* (Van Dyke, 1920)

Type locality - Holotype male: United States, California: Havilah. (CASC). **Distribution** - North central California coastally to southern California, and southeastward to western Nevada to north central Arizona and northern Mexico (Baja California).

Leptura scapularis Van Dyke, 1920: 43.

Judolia scapularis; Leng & Mutchler, 1927: 41 (cat.); Linsley & Chemsak, 1976: 56; Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 78 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Chemsak, 2005: 258, pl. XVIII, fig. 6; Monné, M.A., 2006: 123 (cat.); Monné, M.A. & Hovore, 2006: 164 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Anoploclera scapularis; Swaine & Hopping, 1928: 51; Linsley, 1940: 257.

Anoploclera (Judolia) scapularis; Linsley & Ross, 1940: 76 (distr.).

Leptura isabellae Hopping, 1922: 162; Ruetten, 1970: 20 (type).

Judolia isabellae; Leng & Mutchler, 1927: 41 (cat.).

Anoploclera isabellae; Swaine & Hopping, 1928: 51, pl. 6, fig. 65.

Type locality - Holotype male: United States, California: Isabella. (CNCI).

8. *Judolia sexspilota* (LeConte, 1859)

Syntypes locality - Syntypes male and female: United States, California: Fort Tejon. (MCZN). **Distribution** - Coastal southern California to Mexico, northern Baja California.

Host plants - *Juniperus californica* Afonso Carrillo (Cupressaceae)

Leptura 6-spilota LeConte, 1859b: 80.

Leptura sexspilota; LeConte, 1873a: 218; Leng, 1890: 196; Horn, 1894: 339 (distr.); Fall, 1901: 149 (distr.); Garnett, 1918: 250 (distr.).

Judolia sexspilota; Aurivillius, 1912: 228 (cat.); Casey, 1913: 249; Davis, 1932: 85 (distr.); Linsley & Chemsak., 1976: 57; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 78 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Chemsak, 2005: 259, pl. XVIII, fig. 7; Monné, M.A., 2006: 124 (cat.); Monné, M.A. & Hovore, 2006: 164 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Anoploclera sexspilota; Swaine & Hopping, 1928: 51, pl. 6, fig. 64; Moore, 1937: 89 (distr.).

Anoploclera (Judolia) 6-spilota; Linsley, 1942: 52.

Judolia minuta Casey, 1924: 284; Lingafelter *et al.*, 2014: 100, figs 110g, h (holotype).

Type locality - Holotype female: United States, Texas. (USNM).

9. *Judolia swaini swaini* (Hopping, 1922)

Type locality - Holotype male: United States, California: Tulare Co, Kaweah. (CNCI).

Distribution - Santa Inez Mts. to San Bernardino Mts. and central Sierra Nevada foothills, Mexico (Baja California Norte).

Leptura swaini Hopping, 1922: 163; Ruetter, 1970: 20 (type).

Judolia swaini; Leng & Mutchler, 1927: 41; Linsley & Chemsak, 1976: 58; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 78 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Chemsak, 2005: 261, pl. XVIII, fig. 8; Monné, M.A., 2006: 124 (cat.).

Anoplodera swaini; Swaine & Hopping, 1928: 51, pl. 6, fig. 66.

Judolia swaini swaini; Linsley & Chemsak, 1976: 58; Hovore, 1988: 18 (distr.); Monné, M.A. & Hovore, 2006: 164 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

9a. *Judolia swaini jacintana* (Linsley, 1940)

Type locality - Holotype female: United States, California: Piñon Flats, San Jacinto Mountains. (CASC). **Distribution** - United States (California: San Jacinto Mts.).

Anoplodera jacintana Linsley, 1940: 256, fig. 2.

Judolia swaini jacintana; Linsley & Chemsak, 1976: 58; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 78 (cat.); Chemsak, 2005: 262; Monné, M.A. & Hovore, 2006: 164 (checklist); MacRae & Rice, 2007: 247.

Leptura Linnaeus 1758

Leptura Linnaeus, 1758: 397; Fabricius, 1775: 196; 1776: 55; Olivier, 1792: 508; 1795: 1; Latreille, 1807: 41; Lamarck, 1817: 310; Audinet-Serville, 1835: 317; Blanchard, 1845: 164; Haldeman, 1847a: 62; LeConte, 1850a: 336; 1854b: 219; Thomson, 1861: 152; 1864: 141, 407; Lacordaire, 1868: 445; Chenu, 1870: 331; LeConte, 1873b: 328; Girard, 1873: 736; Provancher, 1877a: 580; LeConte & Horn, 1883: 313; Leng, 1890: 185; Wickham, 1897b: 88; 1897c: 188; Blatchley, 1910: 1046; Casey, 1913: 248, 286; Boppe, 1921: 86; Craighead, 1923: 91; Swaine & Hopping, 1928: 11, 25; Bradley, 1930: 237; Chagnon, 1936: 252; Knull, 1946: 152, 157; Dillon & Dillon, 1961: 210; Chagnon & Robert, 1962: 252; Arnett, 1962: 858, 886; Chemsak, 1964: 233; Hatch, 1971: 124; Linsley & Chemsak, 1976: 91; Monné, M.A., 1995a: 88; Monné, M.A. & Hovore, 2006: 164 (checklist);

Leptura (Stenura); LeConte, 1873a: 215; Provancher, 1877a: 613; Leng, 1890: 185.

1. *Leptura abdominalis* (Haldeman, 1847)

Type locality - Holotype: United States. (MCZN). **Distribution** - Eastern United States to Florida and Texas. **Host plants** - *Chamaecyparis thyoides* (Linnaeus) Britton, Sterns & Poggenburg, *Juniperus* sp. (Cupressaceae), *Taxodium distichum* (Linnaeus) Richard (Taxodiaceae).

Stenura abdominalis Haldeman, 1847a: 63.

Typocerus abdominalis; LeConte, 1850a: 335.

Leptura abdominalis; LeConte, 1873a: 216; Horn, 1880a: xi (syn.); LeConte, 1880: xxiv (hosts); Townsend, 1885: 70 (distr.); Leng, 1890: 187, 194; Beutenmuller, 1896: 78 (hosts); Smith, 1900: 292 (distr.); Felt, 1906: 755 (hosts); Smith, 1910: 331; Schaeffer, 1912: 206 (distr.); Engelhardt, 1928: 252 (biol., distr.); Swaine & Hopping, 1928: 27, pl. 2, fig., 24; Knull, 1930: 85 (hosts, paras.); Gosling & Gosling, 1976: 12 (distr.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 88 (cat.); Yanega, 1996: 35, pl. 6, figs 63a-c; Linsley & Chemsak, 1997: 389 (hosts); Monné, M.A. & Hovore, 2006: 164 (checklist); MacRae & Rice, 2007: 247 (biol., distr.); Lingafelter, 2007: 32, 141, 2 figs, pl. 7k (hosts); Vlasák, 2014: 317 (hosts).

Strangalia abdominalis; Casey, 1913: 258; Leng, 1920: 273 (cat.); Boppe, 1921: 100; Champlain & Knull, 1926: 206 (hosts); Loding, 1933: 148 (distr.); Brimley, 1938: 213 (distr.); Loding, 1945: 1178 (distr.).

Leptura (Leptura) abdominalis; Linsley & Chemsak, 1976: 101; Monné, M.A., 1995: 88 (cat.); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 101 (distr.); Chemsak, 2005: 307, 330, pl. 22, figs 6, 7; Holt, 2013: 244 (distr.).

Leptura atrovittata Bland 1864: 255.

Type locality - Holotype female: United States, New Jersey. (ANSP).

2. *Leptura hovorei* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, California: 9 miles South of Fairview, Tulare County. (CASC). **Distribution** - Western south central California. **Host plants** - *Abies concolor* Gordon & Glen, *Pinus jeffreyi* Balfour, *P. sabiniana* Douglas ex D. Don (Pinaceae).

Leptura (Leptura) hovorei Linsley & Chemsak, 1976: 103, fig. 25; Monné, M.A., 1995a: 89a (cat.); Chemsak, 2005: 318, 333, pl. 22, fig. 9 (biol., distr., hosts).

Leptura hovorei; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A. & Hovore, 2006: 164 (checklist); Swift, 2008: 5 (distr., hosts).

3. *Leptura kerniana* Fall, 1907

Type locality - Holotype male: United States, California: Kern River. (MCZN). **Distribution** - Oregon to southern California. **Host plants** - *Abies* sp., *Pinus coulteri* D. Don, *P. ponderosa* Douglas ex Lawson & P. Lawson, *P. sabiniana* Douglas ex D. Don (Pinaceae).

Leptura kerniana Fall, 1907: 249; Garnett, 1918: 249 (distr.); Swaine & Hopping, 1928: 27; Linsley & Chemsak, 1976: 107; Cope, 1984: 30 (hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 89 (cat.); Linsley & Chemsak, 1997: 389 (hosts); Chemsak, 2005: 319, 340, pl. 23, fig. 2 (biol., distr., hosts); Monné, M.A. & Hovore, 2006: 164 (checklist);

Strangalia (Strangalia) kerniana; Aurivillius, 1912: 243 (cat.); Boppe, 1921: 100.

4. *Leptura pacifica* (Linsley, 1940)

Type locality - Holotype female: United States, California: Pinon Flats, southeastern margin of San Jacinto Mountains, Riverside County. (CASC). **Distribution** - United States (Southern California). **Host plants** - *Quercus john-tuckeri* K.C. Nixon & C.H. Muller (Fagaceae).

Strangalia pacifica Linsley, 1940: 255, fig. 1.

Leptura (Leptura) pacifica; Linsley & Chemsak, 1976: 103, fig. 26; Monné, M.A., 1995a: 90 (cat.); Chemsak, 2005: 318, 334, pl. 22, fig. 10; Monné, M.A. & Hovore, 2006: 164 (checklist);

Leptura pacifica; Skiles, Hovore & Giesbert, 1978: 107 (biol.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Swift, 2008: 5 (distr., hosts); Haack, Keena & Eyre, 2017: 76 (biol.)

5. *Leptura sequoiae* (Hopping, 1934)

Type locality - Holotype male: United States, California: Sequoia National Park. (CNCI). **Distribution** - Sierra Nevada & northern Coast ranges. **Host plants** - *Quercus* sp. (Fagaceae).

Neobellamira sequoiae Hopping, 1934: 115; 1937: 23, pl. 5; Ruetten, 1970: 20 (type).

Leptura (Leptura) sequoiae; Linsley & Chemsak, 1976: 105; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 91 (cat.); Chemsak, 2005: 318, 336, pl. 22, fig. 11 (biol., hosts); Monné, M.A. & Hovore, 2006: 164 (checklist);

Lepturobosca Reitter, 1912

Leptura (Lepturobosca) Reitter, 1912: 17; Sama, 2003: 25. Danilevsky, 2014: 290; Bousquet, Laplante, Hammond & Langor, 2017: 139

Type species - *Leptura virens* Linnaeus, 1758 (monotypy)

Leptura (Cosmosalia) Casey, 1913: 267

Cosmosalia; Casey, 1924: 281; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 181; Monné, M.A., 1995: 113; Chemsak, 2005: 40, 433; Monné, M.A. & Hovore, 2006: 162 (checklist);

Type-species - *Leptura chrysocoma* Kirby, 1837 (original designation).

1. *Lepturobosca chrysocoma* (Kirby, 1837)

Syntypes locality - Syntypes: Canada, Saskatchewan, Nova Scotia, Cumberland House. (BMNH). **Distribution** - Yukon Territory to Newfoundland, California to New Mexico and northern Mexico. **Host plants** - *Alnus* sp. (Betulaceae), *Picea nigra* Link, *Pinus contorta* Douglas ex Loudon, *P. flexilis* James, *P. jeffreyi* Balfour, *P. ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae), *Populus trichocarpa* Torrey & A. Gray (Salicaceae).

Leptura chrysocoma Kirby, 1837: 179, pl. 5, fig. 1; Haldeman, 1847a: 65; LeConte, 1850b: 236; 1850b: 339; 1869: 371 (distr.); Bethune, 1872: 112; LeConte, 1873a: 220; Horn, 1876: 170; Provancher, 1877a: 615, 620 (biol.); Snow, 1877a: 19 (distr.); 1878: 76 (distr.); 1883: 42 (distr.); Holland, 1888: 91 (distr.); Wickham, 1890: 35 (distr.); Leng, 1890: 190, 198; Harrington, 1890: 185 (distr.); 1894b: 15 (distr.); Hanham, 1894: 352 (biol.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); 1899: 7 (distr.); Harrington, 1899: 108 (distr.); Wickham, 1900: 598 (distr.); Fall, 1901: 150 (distr.); Knaus, 1902: 149 (distr.); MacGillivray & Houghton, 1902: 252 (distr.); Chagnon, 1905: 36 (distr.); Fall & Cockerell, 1907: 193 (distr.); Wright & Coolidge, 1908: 68 (distr.); Adams, 1909: 201 (distr.); Lovell, 1915: 78 (biol.); 1915: 144; Morris, 1915: 19 (hosts); Notman, 1916: 166 (distr.); Chagnon, 1917: 234 (distr.); Garnett, 1918: 251 (distr.); Boppe, 1921: 90; Craighead, 1923: 91, 94, pl. 14, fig. 3 (larva); Mundinger, 1924: 318; Hardy, 1926b: 30; Kirk & Knull, 1926: 25 (distr.); Essig, 1926: 453 (hosts); Procter, 1927: 112 (distr.); Leonard, 1928: 441 (distr.); Tanner, 1928: 278 (distr.); Criddle, 1928: 97 (distr.); Fletcher, 1929: 259 (distr.); Knowlton, 1930: 75 (distr.); Beaulne, 1932: 200 (hosts); Chagnon, 1939: 86 (distr.); Procter, 1946: 179; Hardy, 1955: B50; 1957: D65.

Leptura (Cosmosalia) chrysocoma: Casey, 1913: 267; Leng, 1920: 274 (cat.); Hatch, 1925: 580 (distr.); Webster, 2016: 485.

Anoplodera chrysocoma; Swaine & Hopping, 1928: 62, pl. 9, fig. 94; Brown, 1934: 229 (distr.); Mank, 1934: 80 (distr.); Canova, 1936: 127 (distr., hosts); Knowlton & Thatcher, 1936: 281 (distr.); Chagnon, 1936: 249; Doane *et al.*, 1936: 275 (biol.); Lange, 1937: 175 (biol.); Malkin, 1941: 290 (distr.); Hardy, 1942: 10; Townes, 1944: 772 (paras.); Hardy, 1945: 92, pl. 5, fig. 28 (biol.); Carl & Hardy, 1945: C36; Knull, 1946: 168; Hardy, 1948: 32; 1949: K44 (distr.); Knowlton & Wood, 1950: 11 (distr.); Clark, 1956: 41 (distr.); Gardiner, 1957: 251; Linsley, Knull & Statham, 1961: 25 (distr.); Chagnon & Robert, 1962: 249; Gardiner, 1966: 202, 207, figs 5, 37; Bayer & Shenefelt, 1969: 8, fig. 17; Gardiner, 1970: 285 (biol.); Wilson, 1971: 61 (biol.); Hatch, 1971: 135, pl. 17, fig. 4; Penrose & Westcott, 1974: 72 (biol.); Kirk & Balsbaugh, 1975: 97 (distr.); Gosling & Gosling, 1976: 17 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 89 (biol.); Furniss & Carolin, 1977: 295 (biol.); Miliczky & Osgood, 1979: 133 (biol.).

Cosmosalia chrysocoma; Chemsak, 1964: 232; Linsley & Chemsak, 1976: 181, figs 48, 49; Hansen & Osgood, 1983: 149 (biol.); Gosling, 1986: 255 (hosts); Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 113 (cat.); Yanega, 1996: 32, pl. 9, fig. 102; Linsley & Chemsak, 1997: 356 (hosts); Heffern, 1998: 10 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Chemsak, 2005: 434, pl. 27, fig. 11; Monné, M.A. & Hovore, 2006: 162 (checklist); Majka, McCorcuodale & Smith, 2007: 259 (distr.); MacRae & Rice, 2007: 246 (distr., biol.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Rice, MacRae & Merickel, 2017: 670 (distr.).

Lepturobosca chrysocoma; Bousquet, Laplante, Hammond & Langor, 2017: 138, pl. 30

Leptura auripilis LeConte, 1850a: 339.

Leptura (Cosmosalia) auripilis; Casey, 1913: 267; Leng, 1920: 273 (cat.).

Cosmosalia auripilis; Casey, 1924: 281.

Type locality - Holotype: United States, New Mexico: Santa Fe. (MCZN).

Leptura (Cosmosalia) aureola Casey, 1913: 268; Leng, 1920: 274 (cat.); Lingafelter et al., 2014: 22, 368, fig. 22o (lectotype).

Type locality - Lectotype female: United States, Colorado. (USNM).

Cosmosalia auripilis densepilosa Casey, 1924: 281; Lingafelter et al., 2014: 23, fig. 23g (holotype).

Type locality - Holotype female: United States, Utah: North Fork, Provo Canyon. (USNM).

2. *Lepturobosca nigrolineata* (Bland, 1865)

Type locality - Holotype: United States, Colorado Territory. (ANSP). **Distribution** - United States (Colorado and New Mexico).

Leptura nigrolineata Bland, 1865: 383; LeConte, 1873a: 220; Provancher, 1877a: 615, 621; Horn, 1880a: xii; Snow, 1885: 68 (distr.); Leng, 1890: 190, 198 (distr.); Wickham, 1900: 598 (distr.); 1901: 151; Van Dyke, 1906: 227 (distr.); Fall & Cockerell, 1907: 193 (distr.); Boppe, 1921: 91; Papp, 1955: 117 (distr.).

Leptura (Cosmosalia) nigrolineata; Casey, 1913: 267; Leng, 1920: 274 (cat.).

Anoploclera nigrolineata; Swaine & Hopping, 1928: 63, pl. 10, fig. 95; Canova, 1936: 128 (distr.); Hatch, 1971: 135, pl. 15, fig. 2.

Lepturobosca nigrolineata; Bousquet, Laplante, Hammond & Langor, 2017: 138

Cosmosalia nigrolineata nigrolineata; Monné, M.A., 1995a: 114 (cat.); Heffern, 1998: 10 (distr.); Rice, MacRae & Merickel, 2017: 670 (distr.).

Leptura nigrolineata truxali Papp, 1955: 217.

Cosmosalia nigrolineata truxali; Linsley & Chemsak, 1976: 185; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995: 114 (cat.).

Type locality - Holotype male: United States, New Mexico: Sangre de Cristo Range, Truchas Mountains. (ANSP).

Lepturopsis Linsley & Chemsak 1976

Lepturopsis Linsley & Chemsak, 1976: 158; Monné, M.A., 1995a: 107; Chemsak, 2005: 39, 404; Monné, M.A. & Hovore, 2006: 164 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 135

Type-species - *Leptura dolorosa* LeConte, 1861 (original designation)

1. *Lepturopsis biforis* (Newman, 1841)

Type locality - Holotype: United States, New York: Trenton Falls. (BMNH). **Distribution** - This species ranges from Cape Breton Island to the western side of Lake Superior in northwestern Ontario, south to Mississippi and southern North Carolina. **Host plants** - *Castanea* sp. (Fagaceae), *Pinus* sp., *Tsuga* sp. (Pinaceae), *Populus* sp. (Salicaceae).

Leptura biforis Newman, 1841: 70; Haldeman, 1847a: 64; LeConte, 1850a: 338; 1873: 220; Leng, 1890: 190; Laurent, 1893: 7 (distr.); Hamilton, 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b : 191; Chagnon, 1905: 35 (distr.); Morris, 1908: 447 (biol.); 1909a: 61 (biol.); 1909b: 417; Leng, 1910: 77 (distr.); Dickerson, 1911: 207 (distr.); Fisher & Kirk, 1912: 313 (distr.); Lovell., 1915: 114; Frost, 1916: 389; Chagnon, 1917: 234 (distr.); Blackman, 1918: 131; Britton, 1920: 268 (distr.); Boppe, 1921: 90; Morris, 1921: 14 (biol.); Craighead, 1923: 91, 93 (larva); Kirk & Knull, 1926: 25 (distr.); Fletcher, 1926: 143 (distr.); Procter, 1927: 112 (distr.); Leonard, 1928: 442 (distr.); Beaulne, 1932: 200 (hosts); Brimley, 1938: 213 (distr.); Procter, 1946: 179 (distr.).

Leptura (Dorcasina) biforis; Casey, 1913: 271; Leng, 1920: 274 (cat.).

Anoploclera biforis; Swaine & Hopping, 1928: 59, pl. 9, fig. 90; Knull, 1932: 63; Chagnon, 1936: 250, pl. 16, fig. 4; Knull, 1946: 167; Dillon & Dillon, 1961: 615, pl. 60, No. 18; Chagnon & Robert, 1962: 250, pl. 16, fig. 4; Bayer & Shenefelt, 1969: 7, fig. 16; Kirk, 1970: 77; Wilson,

1971: 60 (biol.); Baker, 1972: 197; Gosling & Gosling, 1976: 16, fig. 113 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 89 (biol.).

Lepturopsis biforis; Linsley & Chemsak, 1976: 161; Perry, 1977: 98 (distr.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1986: 156 (hosts); Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M.A., 1995a: 107 (cat.); Yanega, 1996: 36, pl. 7, fig. 82; Linsley & Chemsak, 1997: 391 (hosts); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 404, pl. 26, fig. 8; Monné, M.A. & Hovore, 2006: 164 (checklist); Lingafelter, 2007: 29, 141, 2 figs, pl. 7f (hosts); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 135, pl. 30

Leptura (Dorcasina) laurentica Casey, 1913: 217; Leng, 1920: 274 (cat.); Lingefelter *et al.*, 2014: 88, fig. 96i (holotype).

Leptura laurentica; Leonard, 1928: 442 (distr.).

Type locality - Holotype male: United States, New York: Bluff Point on Lake Champlain, 3 miles below Plattsburg. (USNM).

2. *Lepturopsis dolorosa* (LeConte, 1861)

Type locality - Holotype: United States, East of Fort Colville. (MCZN). **Distribution** - British Columbia north to Haida Gwaii and east to the Okanagan Valley South to central California. **Host plants** - *Pseudotsuga menziesii* (Mirbel) Franco, *P. mucronata* Rafinesque, *P. taxifolia* (Poiret) Britton (Pinaceae).

Leptura dolorosa LeConte, 1861: 355; 1869: 371; 1873a: 220; Leng, 1890: 189, 198; Fall, 1901: 150 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 251 (distr.); Boppe, 1921: 91; Hardy & Preece, 1926: 36 (biol., hosts); Hardy, 1926b: 30, pl. 4, fig. 10.

Leptura (Cosmosalia) dolorosa; Casey, 1913: 267; Leng, 1920: 274 (cat.).

Anoplodera dolorosa; Swaine & Hopping, 1928: 59, pl. 9, fig. 89; Canova, 1936: 128 (distr., hosts); Hardy, 1942: 10 (biol.); 1945: 90, fig. 10; 1949: K25, K 44; 1955: B50; 1957: D65; Hatch, 1971: 134; Penrose & Westcott, 1974: 72 (biol.).

Lepturopsis dolorosa; Linsley & Chemsak, 1976: 159, fig. 43; Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M.A., 1995a: 108 (cat.); Linsley & Chemsak, 1997: 391 (hosts); Chemsak, 2005: 404, pl. 26, fig. 7; Monné, M.A. & Hovore, 2006: 164 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 136, pl; 30

Lycochoriolaus Linsley & Chemsak, 1976

Lycochoriolaus Linsley & Chemsak, 1976: 34; Monné, M.A., 1995a: 73 (cat.); Chemsak, 2005: 227 (rev.); Monné, M. A., 2006: 125 (cat.); Monné, M.A. & Hovore, 2006: 165 (checklist); Monné, M.L. & Monné, M.A., 2008: 42 (key South American spp.); Monné, M.A., 2012: 121.

Type-species - *Leptura lateralis* Olivier, 1795 (original designation).

1. *Lycochoriolaus lateralis* (Olivier, 1795)

Type locality - Holotype female: Amérique septentrionale. (MNHN). **Distribution** - Southeastern and Gulf States from North Carolina to Florida and eastern Texas to southern Mexico (Oaxaca, Tamaulipas, Veracruz, Chiapas, Hidalgo).

Leptura lateralis Olivier, 1795: (73) 22, pl. 3, fig. 37; Schoenherr, 1817: 487.

Typocerus lateralis; LeConte, 1850a: 335.

Euryptera lateralis; LeConte, 1873b: 328; Bates, 1885: 284; Horn, 1886a: 139; 1889: 199 (syn.); Packard, 1889: 225; Leng, 1890: 213; Belon, 1897: 342; Ulke, 1903: 26 (distr.); Wickham, 1909b: 402 (distr.); Blatchley, 1910: 31 (distr.); Kirk & Knull, 1926: 26 (distr.); Hopping, 1937: 27, pl. 6; Brimley, 1938: 214 (distr.); Loding, 1945: 118 (distr.); Knull, 1946: 184, pl. 27, fig. 116; Sherman, 1946: 127 (distr.); Linsley, 1961b: 134.

Euryptera lateralis lateralis; Knull, 1954: 129; Kirk, 1970: 79.

Choriolaus lateralis; Linsley & Chemsak, 1971: 12

Lycochoriolaus lateralis; Linsley & Chemsak, 1976: 35; Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., 1995a: 53 (cat.); Noguera & Chemsak, 1998: 403; Monné, M.A., & Giesbert, 1994: 166 (checklist); Chemsak, 2005: 228, pl. XVI, figs 11, 12, pl. XVII, fig. 1; Monné, M.A., 2006: 125 (cat.); Monné, M.A. & Hovore, 2006: 165 (checklist); Lingafelter, 2007: 34, 141, 2 pls., pl. 8i; García Morales *et al.*, 2015:111 (distr.); Bezark, 2019a: 409 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Leptura distans Germar, 1823: 524.

Typocerus distans; LeConte, 1850a: 335.

Euryptera distans; Lacordaire, 1868: 455.

Type locality - Holotype: United States, Kentucky. (ZMHB).

Euryptera flavatra Blatchey, 1914: 92; 1922: 31 (distr.).

Euryptera lateralis flavatra; Knull, 1954: 129.

Euryptera lateralis var. *flavatra*; Linsley, 1961b: 134.

Type locality - Holotype: United States, Florida: near Dunedin. (IUBC).

Euryptera subintegra Casey, 1924: 285; Brimley, 1938: 214 (distr.); Lingafelter *et al.*, 2014: 328, figs 164i, j (holotype).

Type locality - Holotype female: United States, North Carolina: Southern Pines (USNM).

***Megachoriolaus* Linsley, 1970**

Megachoriolaus Linsley, 1970: 128; Linsley & Chemsak, 1971: 3; Chemsak & Linsley, 1974: 35; 1976: 41; Linsley & Chemsak, 1976: 28; Monné, M.A., 1995a: 48 (cat.); Chemsak, 2005: 219 (rev.); Monné, M.A., 2006: 127 (cat.); Monné, M.L. & Monné, M.A., 2008: 46 (key South American spp.); Monné, M.A., 2012: 121.

Type-species - *Megachoriolaus chemsaki* Linsley, 1970 (original designation).

1. *Megachoriolaus cruentus* (Martin, 1930)

Type locality - Holotype female: United States, Arizona: Huachuca Mountains (Carr Canyon). (CASC). **Distribution** - Mountains of southeastern Arizona. **Host plants** - *Quercus* sp. (Fagaceae).

Euryptera cruenta Martin, 1930: 70; Linsley, 1961b: 138.

Euryptera cruentata; Hopping, 1937: 27 (error).

Euryptera cruneta; Knull, 1954: 129 (error).

Megachoriolaus cruentus; Chemsak & Linsley, 1974: 35; 1976: 41; Linsley & Chemsak, 1976: 29; Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M.A., 1995a: 48 (cat.); Linsley & Chemsak, 1997: 395 (hosts); Giesbert & Hovore, 1998: 21; Chemsak, 2005: 220, pl. 16, fig. 6; Monné, M.A. & Hovore, 2006: 165 (checklist); Monné, M.L. & Monné, M.A., 2008: 46.

2. *Megachoriolaus ignitus* (Schaeffer, 1908)

Type locality - Holotype female: United States, Arizona: Huachuca Mountains. (USNM).

Distribution - Southern Arizona Mountains (Santa Rita, Huachuca, Chiricahua, Piñaleno).

Host plants - *Quercus* sp. (Fagaceae).

Leptura ignita Schaeffer, 1908: 341; Boppe, 1921: 91.

Cyphonotida ? ignita; Leng, 1920: 273 (cat.).

Euryptera ? ignita; Swaine & Hopping, 1928: 65.

Euryptera ignita; Hopping, 1937: 27; Knull, 1954: 129; Linsley, 1961b: 138; Linsley, Knull & Statham, 1961: 25 (distr.).

Megachoriolaus ignitus; Linsley, 1970: 128; Chemsak & Linsley, 1974: 35; 1976: 41; Linsley & Chemsak, 1976: 31, fig. 10; Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M. A., 1995a: 48 (cat.); Linsley & Chemsak, 1997: 395 (hosts); Giesbert & Hovore, 1998: 20 (syn.); Chemsak, 2005: 220, pl. 16, fig. 9; Monné, M.A. & Hovore, 2006: 165 (checklist); Monné, M.L. & Monné, M.A., 2008: 46; Lingafelter *et al.*, 2014: 78, fig. 85 c (holotype).

Euryptera breviceps Linsley, 1961b: 139.

Megachoriolaus breviceps; Linsley, 1970: 128; Chemsak & Linsley, 1974: 35; 1976: 30; Linsley & Chemsak, 1976: 30; Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M. A., 1995: 48 (cat.).

Type locality - Holotype male: United States, Arizona: Huachuca Mountains. (CASC).

3. *Megachoriolaus texanus* (Knull, 1941)

Type locality - Holotype female: United States, Texas: Davis Mts. (FMNH). **Distribution** - United States (Texas: Davis Mts.). **Host plants** - *Quercus* sp. (Fagaceae).

Euryptera texana Knull, 1941: 388, fig. 1; 1954: 129; Linsley, 1961b: 133; Chemsak, 1977: 175 (types).

Megachoriolaus texanus; Linsley, 1970: 129; Chemsak & Linsley, 1974: 35; 1976: 41; Linsley & Chemsak, 1976: 31; Chemsak, Linsley & Noguera, 1992: 97 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M.A., 1995a: 49 (cat.); Giesbert & Hovore, 1998: 21; Chemsak, 2005: 221, pl. 16, fig.s 7, 8; Monné, M.A. & Hovore, 2006: 165 (checklist); Monné, M. L. & Monné, M.A., 2008: 46.

Nealosterna Podany 1961

Alosterna (*Nealosterna*) Podany, 1961: 27; 1963: 47

Nealosterna; Linsley & Chemsak, 1976: 85; Monné, M.A., 1995a: 86; Chemsak, 2005: 37, 310; Monné, M.A. & Hovore, 2006: 166 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 123 (key spp.)

Type-species - *Leptura capitata* Newman, 1841 (monotypy).

1. *Nealosterna capitata* (Newman, 1841)

Syntypes locality - Syntypes: United States, New York: Trenton Falls. (BMNH).

Distribution - This species ranges from Nova Scotia to Wisconsin and Iowa, south to Arkansas, Mississippi, and Georgia. In Canada, it is known from Cape Breton Island to the Sault Ste. Marie area in Ontario. **Host plants** - *Betula alleghaniensis* Britton (Betulaceae), *Quercus velutina* Lamarck (Fagaceae).

Leptura capitata Newman, 1841: 71; LeConte, 1873a: 217; Provancher, 1877a: 614; Horn, 1885a: 6; Leng, 1890: 188, 194; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 190; Ouellet, 1902: 122 (distr.); Macgillivray & Houghton, 1902: 252 (distr.); Morris, 1909b: 416 (biol.); Blatchley, 1910: 1056; Lovell, 1915: 114; Chagnon, 1917: 234 (distr.).

Grammoptera capitata; Haldeman, 1847a: 65.

Strangalia capitata; LeConte, 1850a: 331; Boppe, 1921: 100.

Charisalia capitata; Casey, 1913: 256; Leng, 1920: 273 (cat.); Kirk & Knull, 1926: 25 (distr.); Leonard, 1928: 440 (distr.); Beaulne, 1932: 199; Brimley, 1938: 213 (distr.); Procter, 1946: 178 (distr.); Knull, 1946: 156.

Alosterna capitata; Swaine & Hopping, 1928: 23, pl. 1, fig., 19, pl. 13, fig. 36; Chagnon, 1936: 251; Chagnon & Robert, 1962: 251; Kirk, 1970: 78; Wilson, 1971: 59 (biol.); Laliberté, Chantal & LaRochelle, 1977: 89 (biol.).

Alosterna (*Nealosterna*) *capitata*; Podany, 1961: 28; 1963: 47.

Nealosterna capitata; Linsley & Chemsak, 1976: 88; Turnbow & Franklin, 1980: 339 (distr.); Hansen & Osgood, 1983: 149; Gosling, 1984: 80 (biol.); 1986: 156 (hosts); Chemsak, Linsley & Noguera, 1992: 89 (cat.); MacRae, 1993: 241; Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 86 (cat.); Yanega, 1996: 36, pl. 5, fig. 52; Linsley & Chemsak, 1997: 403 (hosts); Schiefer, 1998: 121 (distr.); Burne, 1998: 393 (distr.); Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 310, pl. 21, fig. 7; Monné, M.A. & Hovore, 2006: 166 (checklist); Rice & Veal, 2006: 259 (distr.); Lingafelter, 2007: 26, 141, 2 figs, pl. 6d (hosts); MacRae & Rice, 2007: 247 (distr., hosts); Guarnieri, 2009: 15 (distr.); Steury & MacRae, 2014: 9 (distr., hosts); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 123, pl. 24

2. *Nealosterna rubida* (LeConte, 1873)

- Type locality** - Holotype: United States, California. (MCZN). **Distribution** - From Vancouver Island and the Lower Mainland in southwestern British Columbia south to southern California. **Host plants** - *Abies* sp., *Tsuga* sp. (Pinaceae).
- Leptura rubida* LeConte, 1873a: 224; Leng, 1890: 187; Hamilton, 1895: 338 (distr.); Fall, 1901: 150 (distr.); Garnett, 1918: 249 (distr.).
- Strangalia (Strangalia) rubida*; Aurivillius, 1912: 244 (cat.); Boppe, 1921: 100
- Strangalepta rubida*; Casey, 1913: 257; Leng, 1920: 273 (cat.).
- Strangalepta (Alosterna) rubida*; Hardy, 1927b: C36.
- Alosterna rubida*; Swaine & Hopping, 1928: 23, pl. 1, fig. 18, pl.13, fig. 35; Canova, 1936: 127 (distr.); Hatch, 1971: 126.
- Alosterna (Alosterna) rubida*; Podany, 1961: 28; 1963: 47.
- Nealosterna rubida*; Linsley & Chemsak, 1976: 86, fig. 20 (syn.); Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 87 (cat.); Linsley & Chemsak, 1997: 403 (hosts); Chemsak, 2005: 310, pl. 21, figs 5, 6; Monné, M.A. & Hovore, 2006: 166 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 123, pl. 24
- Strangalepta keeni* Casey, 1913: 257; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 84, fig. 92a (holotype).
- Alosterna keeni*; Swaine & Hopping, 1928: 24; Canova, 1936: 127 (distr.); Podany, 1961: 28; 1963: 47; Hatch, 1971: 126.
- Type locality** - Holotype male: Canada, British Columbia: Inverness. (USNM).

***Neobellamira* Swaine & Hopping 1928**

- Neobellamira* Swaine & Hopping, 1928: 15; Bradley, 1930: 237; Hopping, 1934: 115; 1937: 22; Arnett, 1962: 858, 878; Chemsak, 1964: 233; Hatch, 1971: 124; Linsley & Chemsak, 1976: 4; Monné, M.A., 1995a: 58; Chemsak, 2005: 35, 190; Monné, M.A. & Hovore, 2006: 166 (checklist)6
- Type-species** - *Strangalia delicata* LeConte, 1874 (original designation).

1. *Neobellamira delicata delicata* (LeConte 1874)

- Syntypes locality** - Syntypes: United States, California. (MCZN). **Distribution** - Western Oregon to southern Sierra Nevada along west side, coastally to San Luis, Obispo County, California. **Host plants** - *Juglans californica* s. Watson, *J. regia* Linnaeus (Juglandaceae), *Fremontodendron californicum* (Torrey) Coville (Sterculiaceae)
- Strangalia delicata* LeConte, 1874: 68; Leng, 1890: 157; Fall, 1901: 149 (distr.); Garnett, 1918: 252.
- Strangalia (Strangalina) delicata*; Aurivillius, 1912: 245 (cat.).
- Strangalina delicata*; Boppe, 1921: 103.
- Neobellamira delicata*; Swaine & Hopping, 1928: 15; Hopping, 1934: 115; Hatch, 1971: 127, pl. 14, fig. 4; Linsley & Chemsak, 1976: 4; Chemsak, Linsley & Noguera, 1992: 98 (cat.).
- Ophistomis delicata*; Barrett, 1932: 291 (hosts); Moore, 1937: 89 (distr.).
- Neobellamira delicata delicata*; Linsley & Chemsak, 1976: 5, figs 1, 2; Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 58 (cat.); Linsley & Chemsak, 1997: 403 (hosts); Chemsak, 2005: 191, pl. 14, fig. 10; Monné, M.A. & Hovore, 2006: 166 (checklist); MacRae & Rice, 2007: 247 (biol., distr.); Heffern, Vlasak & Alten, 2017: 748 (hosts)

1a. *Neobellamira delicata australis* Linsley & Chemsak, 1976

- Type locality** - Holotype male: United States, California: Mt. Laguna, San Diego Co. (CASC). **Distribution** - Southern California. **Host plants** - *Alnus rhombifolia* Nuttall (Betulaceae), *Quercus kelloggii* Newberry (Fagaceae), *Juglans* sp. (Juglandaceae), *Fraxinus excelsior* Linnaeus (Oleaceae).
- Neobellamira delicata australis* Linsley & Chemsak, 1976: 5, fig. 2; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A.,

1995a: 59 (cat.); Chemsak, 2005: 192, pl. 14, figs 11, 12; Monné, M.A. & Hovore, 2006: 166 (checklist); Swift, 2008: 5 (distr., hosts); Vlasák, 2014: 318 (hosts).

***Orthochoriolaus* Linsley & Chemsak, 1976**

Orthochoriolaus Linsley & Chemsak, 1976: 36; Monné, M.A., 1995a: 51 (cat.); Chemsak, 2005: 230 (rev.); Monné, M.A., 2006: 132 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Monné, M.A., 2012: 122.

Type-species - *Euryptera chihuahuae* Bates, 1885 (original designation).

1. *Orthochoriolaus chihuahuae* (Bates, 1885)

Type locality - Holotype female: Mexico, Chihuahua: Pinos Altos. (BMNH). **Distribution** - United States (southern Arizona), Mexico (Chihuahua, Jalisco, Durango).

Euryptera chihuahuae Bates, 1885: 285; Belon, 1897: 342; Linsley, 1961b: 135.

Choriolaus chihuahuae; Linsley & Chemsak, 1971: 8 (syn.).

Orthochoriolaus chihuahuae; Linsley & Chemsak, 1976: 37; Hovore & Giesbert, 1976: 351 (biol.); Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., 1995a: 52 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Chemsak, 2005: 230, pl. XVII, fig. 2; Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 2006: 132 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Euryptera huachucae Schaeffer, 1905: 164; 1908: 330 (distr.); Saalas, 1936: 80; Hopping, 1937: 28; Knull, 1954: 129; Linsley, 1961b: 136; Linsley, Knull & Statham, 1961: 25 (distr.); Lingafelter *et al.*, 2014: 77, figs 83s, t (syntype); Bezark, 2019a: 405 (distr.)

Syntypes locality – Syntypes male and female: United States, Arizona: Huachuca Mts., Miller's Cañon. (USNM).

Euryptera batesi Linsley, 1961b: 134.

Type locality – Holotype male: Mexico, Chihuahua: Pinos Altos. (BMNH).

***Ortholeptura* Casey, 1913**

Ortholeptura Casey, 1913: 204; Linsley, 1942: 51; Chemsak, 1964: 233; Linsley & Chemsak, 1976: 129; Monné, M.A., 1995a: 99 (cat.); Chemsak, 2005: 368 (rev.); Monné, M.A., 2006: 132 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Monné, M.A., 2012: 122; Bousquet, Laplante, Hammond & Langor, 2017: 1130

Type-species - *Ortholeptura oculatea* Casey, 1913 (original designation) [= *Leptura valida* LeConte, 1857].

1. *Ortholeptura insignis* (Fall, 1907)

Syntypes locality - Syntypes male and female: United States, California: Monterey. (MCZN). **Distribution** - Coastal California from Mendocino to Monterey County and Guadalupe Island, Baja California. **Host plants** - *Alnus rubra* Bongard (Betulaceae), *Lithocarpus densiflora* Rehder (Fagaceae), *Pinus contorta* Douglas ex Loudon, *P. insignis* Douglas ex Loudon, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Leptura insignis Fall, 1907: 251; Garnett, 1918: 252 (distr.); Essig, 1958: 453 (biol.).

Ortholeptura insignis; Casey, 1913: 205; Blaisdell, 1925: 341 (distr.); Keen, 1929: 69; Linsley, 1942: 51; Leech, 1966: 10, figs 11-13 (pupa); Linsley & Chemsak, 1976: 130, figs 33, 34; Cope, 1984: 32 (hosts); Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 99 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 413 (hosts); Monné, M.A., 2002: 39 (cat. hosts); Chemsak, 2005: 369, pl. XXIV, fig. 4; Monné, M.A., 2006: 132 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 497

Anoplodera insignis; Swaine & Hopping, 1928: 56, pl. 8, fig. 80, pl. 12, fig. 17; Linsley, 1934b: 59 (distr.); Canova, 1936: 128 (distr., hosts)

2. *Ortholeptura obscura* (Swaine & Hopping, 1928)

Type locality - Holotype female: United States, Washington: Blue Mountains. (USNM).
Distribution - Blue Mountains, Washington, Oregon and Idaho. **Host plants** - *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Anoplodera obscura Swaine & Hopping, 1928: 56, pl. 8, fig. 81; Hatch, 1971: 133, pl. 14, fig. 18.
Ortholeptura obscura; Linsley & Chemsak, 1976: 133; Penrose, 1979: 160 (biol.); Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 99 (cat.); Chemsak, 2005: 369, 372, pl. 24, figs 9, 10; Monné, M.A. & Hovore, 2006: 166 (checklist); Lingafelter *et al.*, 2014: 110, fig. 121a (holotype).

3. *Ortholeptura valida* (LeConte, 1857)

Type locality - Holotype female: United States, Oregon: Shoalwater Bay. (MCZN).

Distribution - Pacific Coast from British Columbia to southern California, Mexico (Baja California). **Host plants** - *Calocedrus decurrens* (Torrey) Florin (Cupressaceae), *Abies concolor* Gordon & Glen, *A. magnifica* A. Murray, *Pinus flexilis* James, *P. jeffreyi* Balfour, *P. ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga menziesii* (Mirbel) Franco, *P. taxifolia* (Poiret) Britton, *Tsuga mertensiana* (Bongard) Carrière (Pinaceae).

Leptura valida LeConte, 1857: 64, pl. 2, fig. 14; 1869: 371; 1873a: 222; Leng, 1890: 192, 200; Fall, 1901: 149 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 252 (distr.); Craighead, 1923: 92, 98 (larva, pupa).

Ortholeptura valida; Casey, 1913: 205; Hardy, 1926b: 28, pl. 4, fig. 1; 1927: C35; Keen, 1929: 69; Beaulne, 1932: 199 (hosts); Leech, 1963: 150, fig. 1; Linsley & Chemsak, 1976: 131; Cope, 1984: 32 (hosts); Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 100 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 413 (hosts); Monné, M.A., 2002: 39 (cat. hosts); Chemsak, 2005: 371, pl. XXIV, fig. 8; Monné, M.A., 2006: 132 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Ray *et al.*, 2011: 173 (pherom); Bousquet. Laplante, Hammond & Langor, 2017: 131, pl. 28; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 498

Anoplodera valida; Swaine & Hopping, 1928: 55, pl. 8, fig. 79; Canova, 1936: 129 (distr., hosts); Doane *et al.*, 1936: 174 (biol.); Clark, 1956: 41 (distr.); Tyson, 1966: 202 (hosts); Hatch, 1971: 132, pl. 14, fig. 17.

Ortholeptura oculea Casey, 1913: 204; Lingafelter *et al.*, 2014: 291, figs 123a, b (holotype).

Type locality - Holotype male: United States, California: Truckee. (USNM).

Pseudostrangalia Swaine & Hopping, 1928

Pseudostrangalia Swaine & Hopping, 1928: 24; Bradley, 1930: 236; Knull, 1946: 152, 157; Arnett, 1962: 857, 876; Chemsak, 1964: 234; Bayer & Shenefelt, 1969: 6; Linsley & Chemsak, 1976: 89; Monné, M.A., 1995a: 87; Chemsak, 2005: 37, 313; Monné, M.A. & Hovore, 2006: 166 (checklist);

Type-species - *Leptura cruentata* Haldeman, 1847 (original designation).

1. *Pseudostrangalia cruentata* (Haldeman, 1847)

Type locality - Holotype: United States, Pennsylvania. (MCZN). **Distribution** - Eastern North America from Canada to Texas and Iowa. In Canada, it is found in the Lower Great Lakes/St. Lawrence Lowland region, as far north as the Montreal area

Stenura cruentata Haldeman, 1847a: 64; LeConte, 1850a: 332; Bland, 1861: 101 (distr.);

Leptura cruentata; Gemminger in Gemminger & Harold, 1872: 2865 (cat.); LeConte, 1873a: 217; Leng, 1890: 186, 194; Wickham, 1897b: 189; Smith, 1900: 292 (distr.); Knaus, 1903: 189 (distr.); Davis & Joutel, 1905: 99 (distr.); Blatchley, 1910: 1055; Cloudman, 1925: 33.

Strangalia cruentata; Casey, 1913: 258; Leng, 1920: 273 (cat.); Boppe, 1921: 100; Kirk & Knull, 1926: 25 (distr.); Leonard, 1928: 441 (distr.).

Pseudostrangalia cruentata; Swaine & Hopping, 1928: 24, pl. 1, fig. 9, pl. 13, fig. 38; Knull, 1946: 157, pl. 4, fig. 13; Bayer & Shenefelt, 1969: 12, fig. 22; Gosling & Gosling, 1976: 11 (distr.); Linsley & Chemsak, 1976: 89, fig. 21; Turnbow & Franklin, 1980: 340 (distr.);

Gosling, 1984: 80 (biol.); Rice, Turnbow & Hovore, 1985: 21 (distr.); Hovore, Penrose & Neck, 1987: 309 (distr.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); MacRae, 1993: 241 (distr.); Lingafelter & Horner, 1993: 279 (distr.); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 87 (cat.); Yanega, 1996: 37, pl. 4, fig. 46; Schiefer, 1998: 121 (distr.); Chemsak, 2005: 314, pl. 21, fig. 8; Monné, M.A. & Hovore, 2006: 168 (checklist); MacRae & Rice, 2007: 248 (distr.); Lingafelter, 2007: 35, 141, 2 figa, pl. 9a; Bousquet. Laplante, Hammond & Langor, 2017: 123, pl. 25

Strangalia maneei Casey, 1914: 367; Leng, 1920: 273 (cat.); Brimley, 1928: 213; Lingafelter *et al.*, 2014: 95, fig. 104 u (holotype).

Type locality - Holotype: United States, North Carolina: Southern Pines. (USNM).

***Pygoleptura* Linsley & Chemsak, 1976**

Pygoleptura Linsley & Chemsak, 1976: 59; Monné, M.A., 1995: 79; Chemsak, 2005: 37, 264; Monné, M.A. & Hovore, 2006: 168 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 122 (key spp.)

Type-species - *Leptura nigrella* Say, 1826 (original designataion).

1. *Pygoleptura brevicornis* (LeConte, 1873)

Type locality - Holotype female: United States, Nevada: Virginia City. (MCZN).

Distribution - Sierra Nevada to southern California and Oregon. **Host plants** - *Abies concolor* Gordon & Glen, *A. magnifica* A. Murray, *Pinus contorta* Douglas ex Loudon, *P. ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).

Leptura brevicornis LeConte, 1873a: 226; Horn. 1886b: xiv; Leng, 1890: 186, 196; Garnett, 1918: 250 (distr., hosts); Essig, 1926: 453 (hosts); Keen, 1929: 59; Swan & Papp, 1972: 449.

Strangalia (Strangalia) brevicornis; Aurivillius, 1912: 242 (cat.); Boppe, 1921: 100.

Leptura (Trachysida) brevicornis; Leng, 1920: 274 (cat.).

Anoplodera brevicornis; Swaine & Hopping, 1928: 44, pl. 5, fig. 51; Canova, 1936: 127 (hosts); Doane *et al.*, 1936: 172 (hosts); Tyson. 1966: 202 (hosts); Hatch, 1971: 128.

Pygoleptura brevicornis; Linsley & Chemsak, 1976: 62; Cope, 1984: 34 (hosts); Chemsak, Linsley & Noguera, 1992: 100 (cat.); Monné, M.A., 1995a: 79 (cat.); Linsley & Chemsak, 1997: 428 (hosts); Chemsak, 2005: 265, 270, pl. 19, fig. 3; Monné, M.A. & Hovore, 2006: 168 (checklist);

2. *Pygoleptura carbonata* (LeConte, 1861)

Type locality - Holotype: United States, Washington Territory. (MCZN). **Distribution** - Southern British Columbia to California and Idaho. **Host plants** - *Populus trichocarpa* Torrey & A. Gray (Salicaceae).

Leptura (Stenura) carbonata LeConte, 1861: 355.

Leptura carbonata; Gemminger *in* Gemminger & Harold, 1872: 2864 (cat.); LeConte, 1873a: 219; Provancher, 1877a: 614; Snow, 1878: 76 (distr.); 1883: 42 (distr.); Leng, 1890: 189, 197; Fall, 1901: 150 (distr.); Fall & Cockerell, 1907: 193 (distr.); Garnett, 1918: 251 (distr.).

Strangalia (Strangalia) carbonata; Aurivillius, 1912: 242 (cat.); Boppe, 1921: 100.

Leptura (Cosmosalia) carbonata; Casey, 1913: 267; Leng, 1920: 273 (cat.).

Anoplodera carbonata Swaine & Hopping, 1928: 43, pl. 5, figs 49, 50; Canova, 1936: 127 (hosts); Stace-Smith, 1948: 38; Hatch, 1971: 128.

Pygoleptura carbonata; Linsley & Chemsak, 1976: 60; Chemsak, Linsley & Noguera, 1992: 100 (cat.); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 79 (cat.); Linsley & Chemsak, 1997: 428 (hosts); Chemsak, 2005: 265, pl. 18, fig. 12; Monné, M.A. & Hovore, 2006: 168 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 122, pl. 23

3. *Pygoleptura nigella nigrella* (Say, 1827)

Syntypes locality - Syntypes: United States. (Depository unknown). **Distribution** - Central Alaska to eastern Newfoundland and northern United States to Arizona and the Black

Hills in western South Dakota. **Host plants** - *Abies* sp., *Larix laricina* (Duroi) K. Koch, *L. occidentalis* Nuttall, *Picea glauca* (Moench) Voss, *Pinus banksiana* Lambert, *P. contorta* Douglas ex Loudon, *P. resinosa* Aiton, *P. strobus* Linnaeus, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Leptura nigrella Say, 1827: 279; LeConte, 1859c: 335; Saunders, 1868: 13 (distr.); LeConte, 1873a: 219; Snow, 1877a: 19 (distr.); Provancher, 1877a: 614; Snow, 1883: 42 (distr.); Leng, 1890: 189; Harrington, 1890: 185 (distr.); Hamilton, 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); Slossom, 1906: 325 (distr.); Fall & Cockerell, 1907: 193 (distr.); Adams, 1909: 200 (distr.); Frost, 1916: 389; Chagnon, 1917: 235 (distr.); Garnett, 1918: 251; Carr, 1923: 197; Craighead, 1923: 91, pl. 17, fig. 3 (larva); Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 112 (distr.); Leonard, 1928: 441 (distr.); Chagnon, 1939: 83 (distr.); Procter, 1946: 179 (distr.).

Stenura nigrella; Haldeman, 1847a: 63.

Strangalia nigrella; LeConte, 1850b: 236 (distr.); 1850a: 333; Boppe, 1921: 100.

Leptura (Cosmosalia) nigrella; Casey, 1913: 267; Leng, 1920: 273 (cat.); Hatch, 1925: 580 (distr.).

Anoploclera nigrella; Swaine & Hopping, 1928: 44, pl. 5, fig. 42; Brown, 1930: 244 (distr.); Mank, 1934: 80 (distr.); Chagnon, 1936: 249 (distr.); Doane *et al.*, 1936: 173; Canova, 1936: 128 (distr., hosts); Hardy, 1944: 16 (distr.); Knull, 1946: 165; Hardy, 1948: 32 (distr.); Clark, 1956: 41 (distr.); Townes & Townes, 1960: 575 (paras.); Chagnon & Robert, 1962: 249; Bayer & Shenefelt, 1969: 7, fig. 18; Gardiner, 1970: 285 (hosts); Wilson, 1971: 60 (biol.); Baker, 1972: 197; Gosling & Gosling, 1976: 16 (distr.); Laliberté, Chantal & LaRoche, 1977: 89 (biol.).

Pygoleptura nigrella; Linsley & Chemsak, 1976: 61; Chemsak, Linsley & Noguera, 1992: 100 (cat.); O'Neill, Fultz & Ivie, 2008: 30 (distr., biol.); Rice, MacRae & Merickel, 2017: 670 (distr.)

Pygoleptura nigrella nigrella; Linsley & Chemsak, 1976: 61; Gosling, 1986: 157 (hosts); Drouin, 1991: 175 (distr.); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 79 (cat.); Yanega, 1996: 37, pl. 6, figs 66a, b; Linsley & Chemsak, 1997: 428 (hosts); Heffern, 1998: 11 (distr.); Chemsak, 2005: 265, pl. 19, fig. 1; Monné, M.A. & Hovore, 2006: 168 (checklist); Majka, McCorcuodale & Smith, 2007: 260 (distr.); Majka & Ogden, 2010: 13, figs 2, 4 (distr.); Webster, 2016: 485; Bousquet. Laplante, Hammond & Langor, 2017: 122, pl. 23

Leptura lacustris Casey, 1891: 43; Leng & Hamilton, 1896: 175; Wickham, 1897b: 193 (distr.); Boppe, 1921: 91; Lingafelter *et al.*, 2014: 85, 368, fig. 93g (lectotype).

Brachyleptura lacustris; Casey, 1913: 251; Leng, 1920: 273; Munding, 1924: 317; Leonard, 1928: 440 (distr.).

Strangalia (Anastrangalia) lacustris; Casey, 1924: 280.

Type locality - Lectotype: United States, Michigan: Marquette. (USNM).

Leptura (Cosmosalia) praestans Casey, 1913: 267; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 302, fig. 135s.

Leptura praestans; Engelhardt, 1927: 73 (distr.).

Anoploclera nigrella ab. *praestans*; Hatch, 1971: 128.

Type locality - Holotype female: United States, Colorado. (USNM).

Anoploclera nigrella ab. *nigrita* Hatch, 1971: 128.

Strangalia (Anastrangalia) serricornis Casey, 1924: 279; Lingafelter *et al.*, 2014: 318, 370, fig. 153i (lectotype).

Strangalia serricornis; Leng & Mutchler, 1927: 41 (cat.).

Type locality - Holotype female: United States, Michigan: Marquette. (USNM).

3a. *Pygoleptura nigrella oregonensis* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, Oregon: Oasis Spring, Crater Lake National Park. (CASC). **Distribution** - Oregon to California.

Pygoleptura nigrella oregonensis Linsley & Chemsak, 1976: 62; Chemsak, Linsley & Noguera, 1992: 100 (cat.); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 80 (cat.); Chemsak, 2005: 269, pl. 19, fig. 2; Monné, M.A. & Hovore, 2006: 168 (checklist);

***Stenelytrana* Gistel, 1848**

Stenelytrana Gistel, 1848b: 132 (*nomem nov. pro Stenura* Dejean, 1835); Monné, M.A., 2006: 134 (cat.); Monné, M.A. & Hovore, 2006: 168 (checklist); Monné, M.A., 2012: 122; Bousquet, Laplante, Hammond & Langor, 2017: 123

Leptura (*Stenelytrana*); Chemsak, 2005: 316.

Stenura Dejean, 1835: 381, not *Stenura* Cuvier, 1829, Aves; Chemsak, 1964: 233.

Leptura (*Stenura*); Linsley & Chemsak, 1976: 92 Monné, M.A., 1995a: 92 (cat.)

Type-species - *Leptura emarginata* Fabricius, 1787 (subsequent designation, Chemsak, 1964: 233).

Leptura (*Megaleptura*) Casey, 1913: 267.

Type-species - *Leptura emarginata* Fabricius, 1787 (subsequent designation, Chemsak, 1964: 233).

1. *Stenelytrana emarginata* (Fabricius 1787)

Syntypes locality - Syntypes: Cayenne. (HUMG). **Distribution** - Eastern United States to Texas and Kansas. In Canada, it occurs in the Lower Great Lakes/St. Lawrence Lowland region, as far north as the Montreal area **Host plants** - *Acer* sp. (Aceraceae), *Betula* sp. (Betulaceae), *Celtis* sp. (Cannabaceae), *Castanea* sp., *Fagus ferruginea* Aiton, *Quercus palustris* Du Roi, *Q. velutina* Lamarck, *Q. falcata* Michaux (Fagaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Salix nigra* Marshall (Salicaceae), *Ulmus americana* Linnaeus, *U. fulva* Michaux (Ulmaceae).

Leptura emarginata Fabricius, 1787: 158; Gmelin, 1790: 1869; Fabricius, 1793: 341; Olivier, 1795: 5, pl. 3, fig. 26; 1797: 514; Fabricius, 1801: 356; Schoenherr, 1817: 477; LeConte, 1858: 41 (distr.); Lacordaire, 1868: 448; LeConte, 1873a: 216; Provancher, 1877a: 614; Popenoe, 1877: 33 (distr.); Luggler, 1884: 204 (hosts); Leng, 1890: 186, 192; Hamilton, 1895: 338 (distr.); Beutenmuller, 1896: 77 (hosts); Hopkins, 1896: 46 (biol.); Wickham, 1897b: 189; Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Felt, 1906: 436, 724; Smith, 1910: 331; Blatchley, 1910: 1055; Daecke, 1911: 478 (hosts); Leng, 1911: 215 (distr.); Fisher & Kirk, 1912: 313 (distr.); Dow, 1914: 65; Morse, 1915: 212; Nicolay, 1919: 69 (distr.); Britton, 1920: 268 (distr.); Craighead, 1923: 91, 96, pl. 7, fig. 8 (larva); Champlain, Kirk & Knull, 1925: 107 (hosts); Kirk & Knull, 1926: 25 (distr.); Swaine & Hopping, 1928: 26, pl. 2, fig. 22; Leonard, 1928: 441 (distr.); Beaulne, 1932: 200; Davis, 1932: 213 (distr.); Loding, 1933: 148 (distr.); Knull, 1934: 210 (hosts); Sherman, 1946: 127 (distr.); Fattig, 1947: 18 (distr.); Alexander, 1958: 47 (distr.); Dillon & Dillon, 1961: 610, pl. 51, No. 3; Bayer & Shenefelt, 1969: 11; Wilson, 1971: 59 (biol.); Swan & Papp, 1972: 449, fig. 954; Gosling & Gosling, 1976: 12 (distr.); Turnbow & Franklin, 1980: 340 (distr.); Arnett, 1985: 369, fig.24.205; Glaser, 1992: 153 (distr.); Yanega, 1996: 35, pl. 5, fig.61; Linsley & Chemsak, 1997: 389 (hosts); Vlasák & Vlasakova, 2002: 206 (distr.).

Stenura emarginata; Dejean, 1835: 355 (cat.); Haldeman, 1847a: 62.

Strangalia emarginata; LeConte, 1850a: 328; Bland, 1861: 101 (distr.); Boppe, 1921: 100.

Leptura (*Megaleptura*) *emarginata*; Casey, 1913: 267; Leng, 1920: 273 (cat.); Chemsak, Linsley & Noguera, 1992: 96 (cat.); MacRae, 1993: 241 (distr.).

Megaleptura emarginata; Chemsak, 1964: 233.

Leptura (*Stenura*) *emarginata*; Linsley & Chemsak, 1976: 93, fig. 22; Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 92 (cat.); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 121 (distr.).

Leptura (*Stenelytrana*) *emarginata*; Chemsak, 2005: 316, pl. 21, fig. 9.

Stenelytrana emarginata; Monné, M.A. & Hovore, 2006: 168 (cat.); MacRae & Rice, 2007: 248 (distr., hosts); Lingafelter, 2007: 35, 141, 2 figs, pl. 8j (hosts); Holt, 2013: 244 (distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 124, pl. 25

2. *Stenelytrana gigas* (LeConte, 1873)

Syntypes locality - Syntypes: United States, Texas. (MCZN). **Distribution** - United States (Texas), northern Mexico (Chihuahua, Nuevo León, Tamaulipas). **Host plants** - *Quercus emoryi* Torr., *Q. hypoleuca* A. Camus (Fagaceae), *Populus* sp., *Salix nigra* (Salicaceae).
Leptura gigas LeConte, 1873a: 223; Popenoe, 1877: 33 (distr.); Leng, 1890: 192; Swaine & Hopping, 1928: 26, pl. 2, fig. 21; Vogt, 1949: 143 (hosts, distr.).
Strangalia (Strangalia) gigas; Aurivillius, 1912: 243 (cat.).
Leptura (Megaleptura) gigas; Casey, 1913: 267.
Leptura (Stenura) gigas; Linsley & Chemsak, 1976: 96, fig. 22; Hovore, 1983: 383 (biol.); Hovore, Penrose & Neck, 1987: 309 (biol.); MacKay, Zak & Hovore, 1987: 365 (distr., hosts); Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 166 (checklist); Lingafelter & Horner, 1993: 179 (distr.); Monné, M.A., 1995a: 93 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 389 (hosts); Monné, M.A., 2002: 38 (cat. hosts).
Leptura (Stenelytrana) gigas; Chemsak, 2005: 322, pl. XXI, fig. 11.
Stenelytrana gigas; Monné, M.A., 2006: 134 (cat.); Monné, M.A. & Hovore, 2006: 169 (checklist); Gutiérrez & Noguera, 2015: 137 (distr.); García Morales *et al.*, 2015: 111 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 498

3. *Stenelytrana splendens* (Knull, 1935)

Type locality - Holotype female: United States, Arizona: Globe. (FMNH), **Distribution** - United States (Arizona).
Leptura splendens Knull, 1935: 191; Chemsak, 1977: 176 (type).
Leptura (Stenura) splendens; Linsley & Chemsak, 1976: 94, fig. 23; Monné, M.A., & Giesbert, 1994: 166 (checklist); Monné, M.A., 1995a: 93 (cat.).
Leptura (Megaleptura) splendens; Chemsak, Linsley & Noguera, 1992: 96 (cat.).
Leptura (Stenelytrana) splendens; Chemsak, 2005: 316, 320, pl. 21, fig. 10.
Stenelytrana splendens; Monné, M.A. & Hovore, 2006: 169 (cat.).

Stenostrophia Casey 1913

Stenostrophia Casey, 1913: 248, 264; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 108; Monné, M.A., 1995a: 93 (cat.); Chemsak, 2005: 38, 341, 342; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 126 (key spp.)
Type-species - *Leptura tribalteata* LeConte, 1873 (original designation).

1. *Stenostrophia amabilis* (LeConte 1857)

Type locality - Holotype: United States, Washington: Steilacoom, Pierce County (southwest of Tacoma). (MCZN). **Distribution** - This species ranges from southern British Columbia, including Vancouver Island, as far north as the Tweedsmuir Provincial Park area south to the northern part of the Sierra Nevada in California. **Host plants** - *Pinus jeffreyi* Balfour, *P. ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).
Leptura amabilis LeConte, 1857: 64; 1873a: 217; Leng, 1890: 187, 194; Van Dyke, 1920: 44 (distr.).
Strangalia (Strangalia) amabilis; Aurivillius, 1912: 242 (cat.); Leng, 1920: 273 (cat.); Boppe, 1921: 100; Hardy, 1926b: 29.
Anoplodera amabilis; Swaine & Hopping, 1928: 49, pl. 6, fig. 60; Canova, 1936: 127 (distr., hosts); Hatch, 1971: 130, pl. 14, fig. 11; Penrose & Westcott, 1974: 72 (biol.).
Stenostrophia amabilis; Linsley & Chemsak, 1976: 114; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 93 (cat.); Linsley & Chemsak, 1997: 436 (hosts); Chemsak, 2005: 342, 348, pl. 23, fig. 7; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 127, pl. 26

2. *Stenostrophia coquilletti* (Linell, 1897)

Type locality - Holotype male: United States, California: Wilson's Peak, Los Angeles County. (USNM). **Distribution** - Central to southern California.

Leptura coquilletti Linell, 1897: 398; Fall, 1901: 149; Garnett, 1918: 249 (distr.).

Judolia Coquilletti; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94.

Stenostrophia coquilletti; Casey, 1913: 264; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 109, fig. 27; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 94 (cat.); Chemsak, 2005: 342, pl. 23, fig. 3; Monné, M.A. & Hovore, 2006: 168 (checklist); Lingafelter *et al.*, 2014: 46, fig. 48e (holotype).

Anoplodera coquilletti; Swaine & Hopping, 1928: 49, pl. 6, fig. 59.

Anoplodera amabilis var. *coquilletti*; Moore, 1938: 89 (distr.).

3. *Stenostrophia tribalteata tribalteata* (LeConte, 1873)

Type locality - Holotype male: United States, California: Inyo County, Owen's Valley. (MCZN). **Distribution** - East side of Sierra Nevada to west central Nevada.

Leptura tribalteata LeConte, 1873a: 224; Leng, 1890: 188, 195; Hamilton, 1892: 298 (syn.); Leng & Hamilton, 1896: 174 (syn.); Fall, 1901: 349 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 249 (distr.).

Judolia tribalteata; Aurivillius, 1912: 228 (cat.); Boppe, 1921: 94.

Stenostrophia tribalteata; Casey, 1913: 248; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 110; Chemsak, Linsley & Noguera, 1992: 102 (cat.).

Anoplodera tribalteata; Swaine & Hopping, 1928: 49, pl. 6, fig. 58; Doane *et al.*, 1936: 173; Canova, 1936: 129 (distr.).

Anoplodera amabilis var. *tribalteata*; Moore, 1937: 89 (distr.).

Stenostrophia tribalteata tribalteata; Linsley & Chemsak, 1976: 111, fig. 128; Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 94 (cat.); Chemsak, 2005: 345, pl. 23, fig. 4; MacRae & Rice, 2007: 249 (biol., distr.).

Stenostrophia tribalteata sierrae Linsley & Chemsak, 1976: 113, fig. 28; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., 1995: 94 (cat.); Chemsak, 2005: 347, pl. 23, fig. 6; Monné, M.A. & Hovore, 2006: 168 (checklist); MacRae & Rice, 2007: 248 (biol., distr.).

Type locality - Holotype: United States, California: Strawberry, Tuolumne County. (CASC).

3a. *Stenostrophia tribalteata serpentina* (Casey, 1891)

Type locality - Holotype female; United States, Idaho. (USNM). **Distribution** - Ranges from southern British Columbia, north to the Hanceville area in the Chilcotin District, south to southern Oregon and central Nevada, and east to western Wyoming.

Leptura serpentina Casey, 1891: 41; Hamilton, 1892: 160 (distr.); Leng & Hamilton, 1896: 174

Judolia tribalteata ab. *serpentina*; Aurivillius, 1912: 228 (cat.); Boppe, 1921: 94

Stenostrophia serpentina; Casey, 1913: 264

Anoplodera serpentina; Horning & Barr, 1970: 37

Stenostrophia tribalteata serpentina; Linsley & Chemsak, 1976: 111, fig. 28; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 94 (cat.); Chemsak, 2005: 346, pl. 23, fig. 5; Monné, M.A. & Hovore, 2006: 168 (checklist); Lingafelter *et al.*, 2014: 318, fig. 153 c (holotype); Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 127, pl. 26

Stictoleptura (*Stictoleptura*) Casey 1924

Brachyleptura (*Stictoleptura*) Casey, 1924: 280.

Stictoleptura; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 139; Monné, M.A., 1995a: 102; Chemsak, 2005: 39, 281; Monné, M.A. & Hovore, 2006: 169 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 131, (key spp., *nomen protectum*)

Nephropis Gosse, 1840 (*nomen oblitum*)

Type-species - *Leptura cribripennis* LeConte, 1859 (original designation).

1. *Stictoleptura canadensis canadensis* (Olivier, 1795)

- Type locality** - Holotype female: Canada. (MNHN). **Distribution** - This subspecies ranges from eastern Newfoundland to western Ontario, north to the Goose Bay area in Labrador, south to southern central Illinois, and through the Appalachian Mountains to northern Georgia westward to Minnesota. **Host plants** - *Acer* sp. (Aceraceae), *Ostrya* sp. (Betulaceae), *Abies* sp., *Larix laricina* (Duroi) K. Koch, *Picea glauca* (Moench) Voss, *Pinus strobus* Linnaeus, *Tsuga canadensis* (Linnaeus) Carrière (Pinaceae), *Populus trichocarpa* Torrey & A. Gray (Salicaceae).
- Leptura canadensis* Olivier, 1795: 8, pl. 3, fig. 27; Fabricius, 1801: 357; Illiger, 1805: 122; Schoenherr, 1817: 480; Kirby, 1837: 181; Haldeman, 1847a: 64; LeConte, 1850b: 236 (distr.); 1850a: 336; Reed, 1868: 19 (distr., Horn, 1868: 125 (distr.)); Bethune, 1872: 113; LeConte, 1873a: 219; Austin, 1874: 271 (distr.); Horn, 1876: 170; Schaupp, 1878: 20 (distr.); Packard, 1881: 240; Smith, 1882: 25; Horn, 1886: 139; Lintner, 1888: 23; Packard, 1889: 225; Townsend, 1889: 233 (distr.); Wickham, 1890: 35 (distr.); Packard, 1890: 871, fig. 297; Leng, 1890: 185, 197; Harrington, 1890: 185 (distr.); Hamilton, 1893a: 274 (distr.); 1893b: 326 (distr.); Slossom, 1894: 3 (distr.); Hamilton, 1894b: 396; 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Beutenmuller, 1896: 78 (hosts); Wickham, 1897b: 191; 1897c: 158 (distr.); Harrington, 1899: 158 (distr.); Hopkins, 1904: 37 (biol.); Chagnon, 1905: 35 (distr.); Knaus, 1906: 331 (distr.); Felt, 1906: 650 (biol.); Fall & Cockerell, 1907: 193 (distr.); Morris, 1909b: 417; Adams, 1909: 200 (distr.); Blatchley, 1910: 1057; Daecke, 1914: 90 (hosts); Lovell, 1915: 114; Notman, 1916: 166 (distr.); Chagnon, 1917: 234 (distr.); Blackman, 1918: 128; Britton, 1920: 268 (distr.); Boppe, 1921: 90; Forbes, 1922: 345, pl. 35, fig. 65 (morphol.); Craighead, 1923: 92, 97, pl. 22, fig. 3, pl. 28, fig. 2; Cloudman, 1925: 33; Hopping, 1928: 7; Saalas, 1936: 78, fig. 10 (morphol.); Craighead, 1950: 265, fig. 56E (larva).
- Brachyleptura canadensis*; Casey, 1913: 251; Leng, 1920: 273 (cat.); Hatch, 1925: 579; Kirk & Knull, 1926: 24 (distr.); Brues, 1927: 77; Procter, 1927: 111 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts).
- Brachyleptura (Stictoleptura) canadensis*; Casey, 1924: 280.
- Anoplodera canadensis*; Swaine & Hopping, 1928: 61, pl. 9, fig. 93, pl. 12, fig. 15; Mank, 1934: 80 (distr.); Chagnon, 1936: 249, pl. 16, fig. 3; Doane *et al.*, 1936: 175; Palmerlee, 1941: 377 (hosts); Knull, 1946: 168, pl. 6, fig. 22; Procter, 1946: 178; Knowlton & Wood, 1950: 11 (distr.); Gardiner, 1957: 251; Gibson & Carrillo, 1959: 119 (distr.); Dillon & Dillon, 1961: 616, pl. 61, No. 1; Chagnon & Robert, 1962: 249, pl. 16, fig. 3; Gardiner, 1966: 207, fig. 36; Bayer & Shenefelt, 1969: 8, fig. 17; Gardiner, 1970: 285 (biol.); Wilson, 1971: 60 (biol.); Baker, 1972: 196 (biol.); Penrose & Westcott, 1974: 233 (hosts); Kirk & Balsbaugh, 1975: 97 (distr.); Furniss & Carolin, 1977: 295 (biol.); Laliberté, Chantal & LaRochelle, 1977: 89 (biol.).
- Stictoleptura canadensis*; Linsley & Chemsak, 1976: 139, fig. 36; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Glaser, 1992: 153 (distr.); Lingafelter, 2007: 23, 141, 2 figs, pl. 5d (hosts).
- Stictoleptura canadensis canadensis*; Linsley & Chemsak, 1976: 140, fig. 36; Gosling, 1986: 157 (hosts); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 102 (cat.); Yanega, 1996: 38, pl. 6, fig. 67a,b; Linsley & Chemsak, 1997: 437 (hosts); Vlasák & Vlasakova, 2002: 207 (distr., hosts); Chemsak, 2005: 383, pl. 25, fig. 3; Monné, M.A. & Hovore, 2006: 169 (checklist); Majka, McCorcuodale & Smith, 2007: 260 (distr.); Leavengood & Chapman, 2014: 2 (distr.); Webster, 2016: 485; Bousquet, Laplante, Hammond & Langor, 2017: 132, pl. 28
- Leptura erythroptera* Kirby, 1837: 180 (not Hagenbach, 1822, not Germar, 1823); Haldeman, 1847a: 64; LeConte, 1850a: 336; Bethune, 1872: 113; Wickham, 1890: 35 (distr.); Evans, 1895b: 173 (distr.); Klingeman *et al.*, 2017: 295 (distr.); DiGirolomo & Dodds, 2017: 409 (hosts).
- Leptura canadensis* var. *erythroptera*; Horn, 1876: 170; Schaupp, 1878: 20 (distr.); Hamilton, 1889a: 146; Wickham, 1897b: 19c1; 1897: 167 (distr.); Harrington, 1899: 158 (distr.).
- Anoplodera canadensis* var. *erythroptera*; Hatch, 1971: 134.
- Type locality** - Holotype: Canada, Nova Scotia. (BMMH).
- Leptura annulata* Gory, 1844: 254, pl. 46, figs. 8, 8^a.

Type locality - Holotype female: Amérique du Nord. (Depository unknown).

Leptura tenuicornis Haldeman, 1847a: 64.

Leptura canadensis var. *tenuicornis*; Wickham, 1897c: 167 (distr.).

Type locality - Holotype: United States. (MCZN).

Leptura cinnamoptera Haldeman, 1847a: 64 (not Randall, 1838).

Brachyleptura canadensis cinnamoptera; Leng, 1920: 273 (cat.).

Leptura (Leptura) canadensis ab. *cinnamoptera*; Boppe, 1921: 90.

Brachyleptura canadensis var. *cinnamoptera*; Munding, 1924: 317 (distr.); Leonard, 1928: 439 (distr.).

Type locality - Holotype: United States. (MCZN).

1a. *Stictoleptura canadensis arizonensis* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, Arizona: Catalina Mts. 18 Hk Hy. (CASC).

Distribution - United States (Arizona and New Mexico). **Host plants** - *Pinus* sp. (Pinaceae).

Stictoleptura canadensis arizonensis Linsley & Chemsak, 1976: 144, fig. 36; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 103 (cat.); Chemsak, 2005: 385, pl. 15, fig. 5; Monné, M.A. & Hovore, 2006: 169 (checklist);

1b. *Stictoleptura canadensis cribripennis* (LeConte, 1859)

Type locality - Holotype: United States, Nebraska: Platte River. (MCZN). **Distribution** - Ranges from eastern Manitoba to Vancouver Island, as far north as the Lake Athabasca area in northeastern Alberta, south to the northern part of the Sierra Nevada in California and through the Rocky Mountains to southern New Mexico. **Host plants** - *Ostrya* sp. (Betulaceae), *Quercus garryana* Douglas (Fagaceae), *Abies grandis* (Lambert) Lindley, *Larix laricina* (DuRoi) K. Koch, *Picea* sp., *Pinus contorta* Douglas ex Loudon, *P. strobus* Linnaeus, *Pseudotsuga menziesii* (Mirbel) Franco, *Tsuga heterophylla* (Rafinesque) Sargent (Pinaceae), *Populus tremuloides* Michaux, *P. trichocarpa* Torrey & A. Gray, *Salix* sp. (Salicaceae).

Leptura cribripennis LeConte, 1859d: 21; 1861: 355 (distr.); Bland, 1861: 101 (distr.); LeConte, 1869: 371 (distr.); Snow, 1877a: 19 (distr.); 1883: 42 (distr.).

Leptura canadensis cribripennis; LeConte, 1876: 520.

Leptura canadensis var. *cribripennis*; Hamilton, 1889a: 146; Harrington, 1899: 108 (distr.); Fall & Cockerell, 1907: 193 (distr.); Schaeffer, 1908: 330 (distr.); Boppe, 1921: 90.

Brachyleptura cribripennis; Casey, 1913: 251; Leng, 1920: 273 (cat.); Hardy, 1926b: 29, pl. 5, fig. 42.

Anoplodera canadensis race *cribripennis*; Doane *et al.*, 1936: 175; Knowlton & Thatcher, 1936: 281 (distr.).

Anoplodera canadensis cribripennis; Clark, 1956: 41 (distr.).

Stictoleptura canadensis cribripennis; Linsley & Chemsak, 1976: 142, figs 36, 37; Cope, 1984: 35 (hosts); Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 103 (cat.); Linsley & Chemsak, 1997: 437 (hosts); Heffern, 1998: 11 (distr.); Chemsak, 2005: 384, pl. 25, fig. 4; Monné, M.A. & Hovore, 2006: 169 (checklist); Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 132, pl. 28

Leptura coccinea LeConte, 1873a: 226.

Leptura (Cosmosalia) coccinea; Casey, 1913: 267; Leng, 1920: 274 (cat.).

Type locality - Holotype female: United States, California. (MCZN).

Leptura canadensis var. *ebena* Leng, 1890: 185, 197.

Brachyleptura cribripennis ebena; Leng, 1920: 273 (cat.).

Anoplodera canadensis race *ebena*; Doane *et al.*, 1936: 175; Knowlton & Thatcher, 1936: 281 (distr.); Knowlton & Wood, 1950: 11 (distr.); Clark, 1956: 41 (distr.).

Type locality - Type: United States. (Public Museum of Staten Island).

Brachyleptura (Stictoleptura) cribripennis divisa Casey, 1924: 281; Lingafelter *et al.*, 2014: 48, 365, fig. 50i (lectotype).

Type locality - Lectotype male: United States, Idaho: Bonner County, Priest Lake (USNM).

***Strangalepta* Casey 1913**

Strangalepta Casey, 1913: 247, 257; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 136; Monné, M.A., 1995a: 101; Chemsak, 2005: 39, 377; Monné, M.A. & Hovore, 2006: 170 (checklist)

Type species - *Leptura vittata* Olivier, 1797 (original designation) (= *Leptura abbreviata* Germar, 1823)

1. *Strangalepta abbreviata* (Germar, 1823)

Leptura vittata Olivier, 1795: 30, pl. 4, fig. 45; 1797: 523; Schoenherr, 1817: 496; Haldeman, 1847a: 64; 1847b: 374; LeConte, 1850a: 337; Emmons, 1854: 126, pl. 8, fig. 13; Bland, 1861: 101 (distr., hosts); LeConte, 1873a: 221; Horn, 1876: 170 (syn.); Provancher, 1877a: 615; Schaupp, 1880: 84 (biol.); Snow, 1881: 76 (distr.); Horn, 1886: 139; 1889: 199 (syn.); Leng, 1890: 185, 199; Harrington, 1890: 185 (distr.); Hamilton, 1895: 338 (distr.); Evans, 1895a: 142 (distr.); 1895b: 173 (distr.); Wickham, 1897b: 192; 1897c: 158 (distr.); Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 35 (distr.); Morris, 1909b: 417; Wickham, 1909a: 29 (distr.); Leng, 1910: 77 (distr.); Blatchley, 1910: 1059; Smith, 1910: 331; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 78 (biol.); 1915: 115; Johnson, 1915: 315 (distr.); Chagnon, 1917: 235 (distr.); Nicolay, 1917a: 95 (distr.); Blackman & Stage, 1918: 73 (biol.); Blackman, 1918: 126 (biol.); Nicolay, 1919: 69 (distr.); Cushman & Rohwer, 1921: 520 (paras.); Boppe, 1921: 91; Craighead, 1923: 92, pl. 17, fig. 12 (larva); Cloudman, 1925: 34; (preoccupied).

Strangalepta vittata; Casey, 1913: 247; Leng, 1920: 273 (cat.); Britton, 1920: 268 (distr.); Munding, 1924: 318; Hatch, 1925: 579 (distr.); Kirk & Knull, 1926: 25 (distr.); Fletcher, 1926: 143 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 440 (distr.); Wolcott & Montgomery, 1933: 156; Loding, 1933: 148 (distr.); Goldman, 1933: 91; Saalas, 1936: 78 (morphol.); Brimley, 1938: 213 (distr.); Townes, 1944: 772 (paras.); Loding, 1945: 117 (distr.); Procter, 1946: 179; Papp, 1955: 217 (distr.); Linsley & Chemsak, 1976: 137.

Anoplodera vittata; Swaine & Hopping, 1928: 65, pl. 10, fig. 103, pl. 12, fig., 16; Chagnon, 1936: 250, pl. 16, fig. 7; Knull, 1946: 170; Gibson & Carrillo, 1959: 119 (distr.); Townes & Townes, 1960: 568 (paras.); Dillon & Dillon, 1961: 617, pl. 51, No. 19; Chagnon & Robert, 1962: 250, pl. 16, fig. 7; Bayer & Shenefelt, 1969: 8, fig. 19; Gardiner, 1970: 286 (biol.); Kirk, 1970: 77; Wilson, 1971: 61 (biol.); Baker, 1972: 197; Gosling & Gosling, 1976: 15 (distr.); Laliberté, Chantal & LaRochelle, 1977: 90; Miliczky & Osgood, 1979: 133 (biol.).

Type locality - Holotype male: Canada. (MNHN)

Leptura abbreviata Germar, 1823: 523.

Type locality - Holotype, America Septentrionali (SM S D). **Distribution** - Canada and United States. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Fagus grandifolia* Ehrhart, *Quercus rubra* Linnaeus (Fagaceae), *Picea* sp. (Pinaceae).

Strangalepta abbreviata; Linsley & Chemsak, 1976: 137; Turnbow & Franklin, 1980: 339 (distr.); 2, 1983: 149 (distr.); Gosling, 1984: 80 (biol.); 1986: 157 (hosts); Hovore, Penrose & Neck, 1987: 23 (distr.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); MacRae, 1993: 241 (distr.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 101 (cat.); Yanega, 1996: 38, pl. 15, figs 182a, b; Krinsky & Godwin, 1996: 238; Linsley & Chemsak, 1997: 438 (hosts); Vlasák & Vlasakova, 2002: 207 (distr., hosts); Chemsak, 2005: 378, pl. 25, fig. 1; Monné, M.A. & Hovore, 2006: 170 (checklist); Lingafelter, 2007: 28, 31, 142, 2 figs, pl.7d (hosts); Majka, McCorcuodale & Smith, 2007: 260 (distr.); Guarnieri, 2010: 24 (distr.); McDowell, 2011: 412; Holt, 2013: 244 (distr., biol.); Steury & MacRae, 2014: 9 (biol., distr.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 131, pl. 28

Type locality - Holotype: America Septentrionali. (SMTD). **Distribution** - This species ranges from Cape Breton Island to the Swan River area in westcentral Manitoba, south to Louisiana and northern Georgia and Nebraska. **Host plants** - *Acer* sp. (Aceraceae), *Betula alleghaniensis* Britton (Betulaceae), *Juniperus* sp. (Cupressaceae), *Castanea* sp., *Quercus* sp.

(Fagaceae), *Abies* sp., *Larix laricina* (Duroi) K. Koch, *Picea* sp., *Pinus rigida* Miller, *Tsuga canadensis* (Linnaeus) Carrière (Pinaceae), *Populus* sp. (Salicaceae).

Leptura semivittata Kirby, 1837: 183; Haldeman, 1847a: 65; Bethune, 1872: 115.

Type locality - Holotype: Canada. (BMNH).

Leptura gulosa Kirby, 1837: 184; Haldeman, 1847a: 65; LeConte, 1850a: 340; Bethune, 1872: 115.

Strangalepta vittata gulosa; Leng, 1920: 273 (cat.).

Type locality - Holotype: Canada, Nova Scotia. (BMNH).

Leptura nitidipennis Provancher, 1877a: 616.

Syntypes locality - Syntypes: Canada, Québec. (Musée de la Province du Québec).

Anoplodera vittata var. *saratogensis* Rau, 1935: 63; Hennessey, 1990: 467 (type).

Type locality - Holotype male: United States, New York: Saratoga Springs. (Staten Island Institute of Arts and Sciences).

***Strangalia* Dejean, 1835**

Strangalia Dejean, 1835: 355; Audinet-Serville, 1835: 220; LeConte, 1850a: 327; 1854b: 219; Thomson, 1861: 144, 154; 1864: 141; Lacordaire, 1868: 450; Chenu, 1870: 331; Girard, 1873: 737; LeConte, 1873a: 211; 1873b: 328; Redtenbacher, 1874: 432; Provancher, 1877a: 29; 1877b: 331; LeConte & Horn, 1883: 313; Leng, 1890: 157; Casey, 1891: 39; Wickham, 1897b: 187; Blatchley, 1910: 1051; Casey, 1913: 247, 258; Boppe, 1921: 95; Swaine & Hopping, 1928: 13, 15; Linsley, 1938: 107 (syn.); Knull, 1946: 152, 182; Chemsak, 1964: 235; 1969: 2; Linsley & Chemsak, 1971: 23; 1976: 7; Chemsak & Linsley, 1976b: 216; Villiers, 1980: 154; Giesbert, 1985: 273 (key spp.); 1986: 140; Monné, M.A., 1995a: 59 (cat.); Monné, M.L. & Monné, M. A., 2005: 228 (key spp.); Chemsak, 2005: 193 (rev.); Monné, M.A., 2006: 134 (cat.); Monné, M.A. & Hovore, 2006: 170 (checklist); Monné, M.L. & Monné, M.A., 2008: 48 (key South American spp.); Bousquet & Bouchard, 2013: 94; Bousquet, Laplante. Hammond & Langor, 2017: 117 (key spp.)

Type-species - *Leptura luteicornis* Fabricius, 1775 (subsequent designation, Thomson, 1860: 154).

Ophistomis Thomson, 1857: 319; 1861a: 154; 1864: 140; Lacordaire, 1868: 451; Bates, 1870: 311; 1880: 38; Casey, 1913: 248, 275; Boppe, 1921: 103; Bradley, 1930: 236; Arnett, 1962: 858, 878; Chemsak, 1964: 233.

Capito Gistel, 1848b: xi (unjustified new name not in prevailing usage).

Ophistomis Gemminger in Gemminger & Harold, 1872: 2875 (unjustified emend., cat.).

Type-species - *Ophistomis flavocinctus* Thomson, 1861 (subsequent designation, Thomson, 1864: 140).

Strangalia (*Strangalina*) Aurivillius, 1912: 245 (*nomem nov. pro Strangalia*).

Strangalina; Boppe, 1921: 102; Swaine & Hopping, 1928: 13, 16; Bradley, 1930: 236; Hopping, 1937: 23; Dillon & Dillon, 1961: 597, 622; Arnett, 1962: 858, 878; Chemsak, 1964: 235; Bayer & Shenefelt, 1969: 5, 12.

1. *Strangalia acuminata* (Olivier, 1795)

Type locality - Holotype male: Amérique Septentrionale. (MNHN). **Distribution** - This species ranges from southern New Hampshire to southern Wisconsin, south to northern Louisiana and northern Florida and Canada, Ontario. **Host plants** - *Alnus* sp., *Ostrya virginiana* (Miller) K. Koch (Betulaceae), *Viburnum dentatum* Linnaeus (Caprifoliaceae), *Carpinus* sp. (Corylaceae), *Quercus* sp. (Fagaceae), *Hamamelis virginiana* Linnaeus (Hamamelidaceae), *Physocarpus* sp. (Rosaceae).

Leptura acuminata Olivier, 1795: 20, pl. 3, fig. 35; Schoenherr, 1817: 488.

Strangalia acuminata; LeConte, 1850a: 330; Bland, 1861: 101 (distr.); Lacordaire, 1868: 451; LeConte, 1873a: 212; Horn, 1885a: 6 (syn.); 1886: 139; Leng, 1890: 157; Hamilton, 1895: 338 (distr.); Smith, 1900: 291 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Evans, 1906: 99 (distr.); Knaus, 1906: 106 (distr.); Smith, 1910: 330; Blatchley, 1910: 1051; Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 115; Johnson, 1915: 315 (distr.);

- Nicolay, 1919: 68 (distr.); Craighead, 1923: 92 (larva); Knull, 1934: 210 (hosts); 1946: 183, pl. 5, fig. 18; Linsley & Chemsak, 1976: 22; Gosling & Gosling, 1976: 7 (distr.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); Arnett, 1985: 369, fig. 24.204; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995aa: 59 (cat.); Yanega, 1996: 39, pl. 6, fig. 62; Krinsky & Godwin, 1996: 239; Linsley & Chemsak, 1997: 438 (hosts); Peck & Thoms, 1998: 120 (distr.); Schiefer, 1998: 22 (distr.); Burne, 1998: 393 (distr.); Vlasák & Vlasakova, 2002: 207 (distr., hosts); Senchina, 2005: 329, fig. 3 (biol.); Chemsak, 2005: 196, 213, pl. 16, fig. 1; Monné, M.A. & Hovore, 2006: 170 (checklist); Lingafelter, 2007: 38, 142, 2 figs, pl. 10a; Staines, 2008: 147 (distr.); Guarnieri, 2009: 15 (distr.); Holt, 2013: 244 (biol., distr.); Steury & MacRae, 2014: 10 (distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 117, pl. 23
- Strangalia (Strangalina) acuminata*; Aurivillius, 1912: 245 (cat.).
- Ophistomis acuminata*; Leng, 1920: 274 (cat.); Britton, 1920: 268 (distr.); Champlain, Kirk & Knull, 1925: 108 (hosts); Kirk & Knull, 1926: 26 (distr.); Leonard, 1928: 443 (distr.); Davis, 1932: 213 (distr.); Beaulne, 1932: 200 (hosts); Loding, 1933: 148 (distr.); Brimley, 1938: 214 (distr.); Loding, 1945: 118 (distr.).
- Strangalina acuminata*; Boppe, 1921: 103; Hopping, 1937: 24, pl. 6; Dillon & Dillon, 1961: 622, pl. 62, No. 3; Wilson, 1971: 62 (biol.); Swan & Papp, 1972: 451, fig. 961.
- Strangalia emaciata* Newman, 1841: 68; Haldeman, 1847a: 61.
- Type locality** - Holotype: United States. (BMNH).
- Strangalia unicolor* Haldeman, 1847a: 62; LeConte, 1850a: 330; Lacordaire, 1868: 451.
- Strangalia (Strangalina) acuminata* ab. *unicolor*; Aurivillius, 1912: 245 (cat.).
- Ophistomis acuminata unicolor*; Leng, 1920: 274 (cat.); Brimley, 1938: 214 (distr.).
- Strangalina acuminata* ab. *unicolor*; Boppe, 1921: 103.
- Strangalia acuminata unicolor*; Kirk, 1970: 78.
- Type locality** - Holotype: United States, Pennsylvania. (MCZN).

2. *Strangalia antennata* Schaeffer, 1908

- Syntypes locality** - Syntypes female: United States, Arizona: Huachuca Mountains. (USNM). **Distribution** - Mountains of southeastern Arizona. **Host plants** - *Quercus* sp. (Fagaceae).
- Strangalia antennata* Schaeffer, 1908: 342; Linsley & Chemsak, 1976: 19, fig. 6; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 60 (cat.); Linsley & Chemsak, 1997: 438 (hosts); Chemsak, 2005: 196, 208, pl. 15, figs 9, 10; Monné, M.A. & Hovore, 2006: 170 (checklist);
- Strangalia (Bellamira) antennata*; Aurivillius, 1912: 244 (cat.).
- Bellamira antennata*; Casey, 1913: 272; Boppe, 1921: 102; Linsley, Knull & Statham, 1961: 25 (distr.).
- Neobellamira antennata*; Hopping, 1937: 21.

3. *Strangalia bicolor* (Swederus, 1787)

- Type locality** - Type: America Septentrionale. (Depository unknown). **Distribution** - Eastern United States to Colorado. Canada, southern Ontario. **Host plants** - *Acer* sp. (Aceraceae), *Quercus alba* Linnaeus (Fagaceae).
- Leptura bicolor* Swederus, 1787: 197; Gmelin, 1790: 1875; Olivier, 1797: 523; Schoenherr, 1817: 488; Horn, 1868: 125 (distr.).
- Strangalia bicolor*; Haldeman, 1847a: 61; LeConte, 1850a: 329; 1859d: 197; Bland, 1861: 101 (distr.); Lacordaire, 1868: 451; LeConte, 1873b: 312; Schaupp, 1874: 34 (distr.); Townsend, 1889: 233 (distr.); Leng, 1890: 157; Hamilton, 1895: 338 (distr.); Knab, 1896: 113 (distr.); Wickham, 1897b : 187; Smith, 1900: 291 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Smith, 1910: 330; Blatchley, 1910: 1052; Leng, 1911: 215 (distr.); Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Cushman & Rohwer, 1921: 521 (paras.); Craighead, 1923: 91, pl. 14, fig. 2 (larva); Knull, 1946: 183; Fattig, 1947: 21; Linsley, 1949: 125 (biol.); Kirk, 1970: 78; Linsley & Chemsak, 1976: 17; Gosling & Gosling, 1976: 7, fig. 81 (distr.); Gosling,

- 1977: 163, fig. 1; Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 102 (cat.); MacRae, 1993: 238 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 61 (cat.); Yanega, 1996: 39, pl. 5, fig. 54; Linsley & Chemsak, 1997: 438 (hosts); Heffern, 1998: 24; Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 195, 205, pl. 15, fig 6, 7; Monné, M.A. & Hovore, 2006: 170 (checklist); Rice & Veal, 2006: 259 (distr.); Lingafelter, 2007: 34, 142, 2 figs, pl. 8g (hosts); Staines, 2008: 147 (distr.); Guarnieri, 2009: 15 (distr.); McDowell, 2011: 412 (biol.); Holt, 2013: 244 (biol., distr.); Spomer, 2014: 298, fig. 3 (distr.); Steury & MacRae, 2014: 10 (distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 117, pl. 23; Heffern, Vlasák & Alten, 2018: 748 (hosts)
- Strangalia (Strangalina) bicolor*; Aurivillius, 1912: 245 (cat.).
- Ophistomis bicolor*; Casey, 1913: 278; Kirk & Knull, 1926: 26 (distr.); Leonard, 1928: 443 (distr.); Beaulne, 1932: 200 (hosts); Brimley, 1938: 214 (distr.); Loding, 1945: 118 (distr.); Alexander, 1958: 49 (distr.).
- Strangalina bicolor*; Boppe, 1921: 103; Hopping, 1937: 25, pl. 6; Townes, 1944: 773 (paras.); Townes & Townes, 1960: 578 (paras.); Dillon & Dillon, 1961: 623, pl. 62, No. 1; Wilson, 1971: 62 (biol.).
- Leptura bicolorata* Turton, 1806: 352 (emendation).
- Leptura bicolor* Say, 1824: 418.
- Syntypes localities** - Syntypes: United States, Pennsylvania, Ohio and Mississippi. (Depository unknown).
- Ophistomis simulans* Casey, 1913: 278; Lingafelter *et al.*, 2014: 320, 368, fig. 156e (lectotype).
- Type locality** - Lectotype male: United States, Colorado. (USNM).

4. *Strangalia cambrei* Linsley & Chemsak 1976

- Type locality** - Holotype male: United States, Mississippi: Scott County. (CASC).
- Distribution** - United States (Mississippi).
- Strangalia cambrei* Linsley & Chemsak, 1976: 20, fig. 7; Chemsak, Linsley & Noguera, 1992: 102 (cat.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 62 (cat.); Schiefer, 1998: 122 (distr.); Chemsak, 2005: 196, 210, pl. 15, fig. 11; Monné, M.A. & Hovore, 2006: 170 (checklist);

5. *Strangalia famelica famelica* Newman 1841

- Syntypes locality** - Syntypes: United States. (BMNH). **Distribution** - East of the Appalachian Mts. from Massachusetts to Florida. **Host plants** - *Betula* sp. (Betulaceae), *Castanea dentata* (Marshall) Borkhausen, *Quercus stekellata* Wagenh. (Fagaceae).
- Strangalia famelica* Newman, 1841: 68; LeConte, 1850a: 330; Bland, 1861: 101 (biol., distr.); Lacordaire, 1868: 451; LeConte, 1873a: 212; Horn, 1885a: 6; Townsend, 1889: 233 (distr.); Leng, 1890: 157; Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 115; Dozier, 1918: 335 (distr.); Nicolay, 1919: 68 (distr.); Craighead, 1923: 91 (larva); Dillon & Dillon, 1961: 623, pl. 62, No. 4; Kirk, 1970: 78; Linsley & Chemsak, 1976: 12; Stein & Tigestad, 1976: 41 (distr.); Gosling & Gosling, 1976: 7 (distr.); Bouseman, 1977: 180 (biol.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); Yanega, 1996: 39, pl. 5, fig. 57a-c; Vlasák & Vlasakova, 2002: 208 (distr.); Guarnieri, 2009: 15 (distr.);
- Strangalia famelica*; Haldeman, 1847a: 61.
- Strangalia (Strangalina) famelica*; Aurivillius, 1912: 245 (cat.).
- Ophistomis famelica*, Casey, 1913: 276; Champlain, Kirk & Knull, 1925: 108 (hosts); Kirk & Knull, 1926: 26 (distr.); Leonard, 1928: 442 (distr.); Brimley, 1938: 214 (distr.); Knull, 1946: 183; Alexander, 1958: 49 (distr.); Gibson & Carrillo, 1959: 119 (distr.).
- Strangalina famelica*; Boppe, 1921: 103; Hopping, 1937: 25, pl. 6; Wilson, 1971: 62 (biol.).
- Strangalia famelica famelica*; Linsley & Chemsak, 1976: 13; Turnbow & Franklin, 1980: 340 (distr.); Hovore, 1983: 383 (distr.); Waters & Hyche, 1984: 284 (distr.); Monné, M.A., & Giesbert, 1994: 171 (checklist); Monné, M.A., 1995a: 63 (cat.); Linsley & Chemsak, 1997: 438 (hosts); Peck & Thomas, 1998: 120 (distr.); Chemsak, 2005: 201, pl. 15, fig. 2; Monné,

- M.A. & Hovore, 2006: 170 (checklist); Lingafelter, 2007: 36, 142, 2 figs, pl. 9f (hosts); Holt, 2013: 244 (biol., distr.); Steury & MacRae, 2014: 10 (biol., distr.). Klingeman *et al.*, 2017: 295 (distr.)
- Strangalia obsoleta* Haldeman, 1847a: 61; LeConte, 1850a: 329; Lacordaire, 1868: 451.
- Strangalia (Strangalina) famelica* ab. *obsoleta*; Aurivillius, 1912: 245 (cat.).
- Ophistomis famelica obsoleta*; Leng, 1920: 274 (cat.).
- Type locality** - Holotype: United States, Pennsylvania. (MCZN).
- Strangalia obsoleta* var. *flaviceps* Haldeman, 1847a: 61.
- Strangalia (Strangalina) obsoleta* ab. *flaviceps*; Aurivillius, 1912: 245 (cat.).
- Ophistomis famelica flaviceps*; Leng, 1920: 274 (cat.).
- Type locality** - Holotype: United States. (MCZN).
- Strangalia famelica* var. *confluenta* Haldeman, 1847a: 61.
- Strangalia famelica* var. *confluens*; Haldeman, 1847b: 374.
- Strangalia (Strangalina) famelica* ab. *confluenta*; Aurivillius, 1912: 245 (cat.).
- Syntypes locality** - Syntypes: United States. (MCZN).
- Ophistomis ochreipennis* Casey, 1913: 278; Lingafelter *et al.*, 2014: 291, fig. 122 g (lectotype).
- Type locality** - Lectotype: United States. (USNM).

6. *Strangalia luteicornis* (Fabricius, 1775)

- Type locality** - Holotype: United States, Carolina. (BMNH). **Distribution** - Eastern North America from Ontario to Florida to Kansas and Texas. In Canada, it is known from the Montreal area in southern Quebec to the Windsor area in southern Ontario. **Host plants** - *Betula nigra* Linnaeus (Betulaceae), *Viburnum dentatum* Linnaeus (Caprifoliaceae), *Carpinus caroliniana* Walter (Corylaceae), *Vaccinium corymbosum* Linnaeus (Ericaceae), *Fagus ferruginea* Aiton, *F. grandifolia* Ehrhart, *Quercus* sp. (Fagaceae), *Lindera benzoin* (Linnaeus) Blume (Lauraceae), *Prunus virginiana* Linnaeus (Rosaceae), *Ulmus* sp. (Ulmaceae), *Vitis* sp. (Vitaceae).
- Leptura luteicornis* Fabricius, 1775: 197; Zimsen, 1964: 183 (type).
- Leptura luteicornis*; Fabricius, 1781: 248; 1787: 160; 1793: 345; Olivier, 1795: 20, pl. 3, fig. 34; 1797: 520; Fabricius, 1801: 361; Schoenherr, 1817: 488; Horn, 1868: 125 (distr.).
- Strangalia luteicornis*; Dejean, 1835: 355; Audinet-Serville, 1835: 221; Haldeman, 1847a: 61; LeConte, 1850a: 329; Bland, 1861: 101 (biol., distr.); Thomson, 1864: 141; Lacordaire, 1868: 451; Rogers, 1872: 119 (distr.); LeConte, 1873a: 212; Popenoe, 1877: 33 (distr.); Provancher, 1877b: 331 (distr.); Smith, 1882: 25; Horn, 1886: 139; Townsend, 1889: 233 (distr.); Leng, 1890: 157; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 187; Smith, 1900: 291 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Wickham, 1909a: 29 (distr.); Leng, 1910: 77 (distr.); Blatchley, 1910: 1052, fig. 449; Smith, 1910: 330 (distr.); Banks, 1912: 106; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 115; Johnson, 1915: 315 (distr.); Morris, 1915: 21; 1916b: 299 (biol.); Chagnon, 1917: 234 (distr.); Rohwer, 1917: 158 (paras.); Blackman, 1928: 127 (biol.); Nicolay, 1919: 68 (distr.); Craighead, 1923: 91, pl. 14, fig. 1, pl. 30, fig. 4 (larva); Frost, 1937: 202 (distr.); Hoffmann, 1940: 59 (biol.); Smith *et al.*, 1943: 314; Knull, 1946: 184 (biol.); Fattig, 1947: 20 (distr.); Kirk, 1970: 78 (distr.); Gosling & Gosling, 1976: 7, fig. 79 (distr.); Linsley & Chemsak, 1976: 10, figs 3, 4; Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); Lingafelter & Horner, 1993: 178 (distr.); MacRae, 1993: 239 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 172 (checklist); Monné, M.A., 1995a: 65 (cat.); Yanega, 1996: 39, pl. 5, fig. 56; Krinsky & Godwin, 1996: 239 (distr.); Browne & Peck, 1996: 2159 (distr.); Linsley & Chemsak, 1997: 439 (hosts); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 195, 198, pl. 15, fig. 1; Monné, M.A. & Hovore, 2006: 170 (checklist); MacRae & Rice, 2007: 249 (distr., hosts); Lingafelter, 2007: 36, 142, 2 figs, fig. 9e (hosts); Staines, 2008: 147 (distr.); Guarnieri, 2010: 24 (distr.); McDowell, 2011: 412 (biol.); Holt, 2013: 244 (biol., distr.); Hart, Cope & Ivie, 2013: 134, fig. 3 (distr.); Steury & MacRae, 2014: 10 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 118, pl. 23

Strangalia (Strangalina) luteicornis; Aurivillius, 1912: 245 (cat.); Saalas, 1936: 80 (morphol.)
Ophistomis luteicornis; Casey, 1913: 275; Britton, 1920: 268 (distr.); Champlain, Kirk & Knull, 1925: 108 (hosts); Kirk & Knull, 1926: 26 (distr.); Leonard, 1928: 443 (distr.); Frost & Dietrich, 1929: 436 (distr.); Park, 1931: 191; Beaulne, 1932: 200 (hosts); Brimley, 1938: 214 (distr.); Loding, 1945: 118 (distr.); Alexander, 1958: 49 (distr.); Gibson & Carrillo, 1959: 119 (distr.).

Strangalina luteicornis; Boppe, 1921: 103; Rohwer, 1921: 457 (paras.); Swaine & Hopping, 1928: 13; Hopping, 1937: 26, pl. 6; Townes, 1944: 773 (paras.); Townes & Townes, 1960: 486 (paras.); Dillon & Dillon, 1961: 623, pl. 62, No. 2; Bayer & Shenefelt, 1969: 12, fig. 23; Wilson, 1971: 62 (biol.).

Ophistomis eversa Casey, 1913: 277; Lingafelter *et al.*, 2014: 58, 368, fig. 62k (lectotype).

Type locality - Lectotype male: United States, Illinois. (USNM).

Ophistomis carolinae Casey, 1913: 277; Lingafelter *et al.*, 2014: 37, fig. 38o (holotype).

Type locality - Holotype male; United States, South Carolina. (USNM).

7. *Strangalia occidentalis* Linsley & Chemsak, 1976

Type locality - Holotype male: Mexico, Chihuahua: 15 mi N Temoris. (CASC). **Distribution** - United States, southern Arizona to northern Mexico (Chihuahua, Sonora).

Strangalia occidentalis Linsley & Chemsak, 1976b: 15, fig. 5; Chemsak, Linsley & Noguera, 1992: 103 (cat.); Monné, M.A., & Giesbert, 1994: 172 (checklist); Monné, M.A., 1995a: 66 (cat.); Noguera & Chemsak, 1996: 404 (cat.); Monné, M.A., 2006: 141 (cat.); Monné, M.A. & Hovore, 2006: 170 (checklist); Gutiérrez & Noguera, 2015: 137 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 498

8. *Strangalia sexnotata* Haldeman, 1847

Type locality - Holotype: United States. (MCZN). **Distribution** - Virginia to Florida west to Arizona.

Strangalia sexnotata Haldeman, 1847a: 61; LeConte, 1850a: 329; Lacordaire, 1868: 451; LeConte, 1873b: 312; Snow, 1883: 42 (distr.); Leng, 1890: 158; Casey, 1891: 39; Hamilton, 1896: 174 (syn.); Fall & Cockerell, 1907: 193 (distr.); Kirk, 1970: 78; Linsley & Chemsak, 1976: 17, fig. 4; Turnbow & Franklin, 1980: 340 (distr.); Glaser, 1986: 355 (distr.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); Lingafelter & Horner, 1993: 178 (distr.); MacRae, 1993: 239 (distr.); Monné, M.A., 1995a: 68 (cat.); Yanega, 1996: 39, pl. 5, figs 55a-b; Heffern, 1998: 11 (distr.); Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 196, m207, pl. 15, fig. 8; Monné, M.A. & Hovore, 2006: 170 (checklist); MacRae & Rice, 2007: 249 (biol., distr.); Lingafelter, 2007: 39, 142, 2 figs, pl. 10b; Holt, 2013: 244 (distr.).

Strangalia (Strangalina) sexnotata; Aurivillius, 1912: 245 (cat.).

Ophistomis sexnotata; Casey, 1913: 275; Brimley, 1938: 214 (distr.); Loding, 1945: 118 (distr.); Alexander, 1958: 49 (distr.).

Strangalina sexnotata; Boppe, 1921: 103; Hopping, 1937: 26, pl. 6.

Strangalia montana Casey, 1891: 40; Fall & Cockerell, 1907: 193 (distr.).

Strangalia (Strangalina) sexnotata ab. *montana*; Aurivillius, 1912: 245 (cat.).

Ophistomis montana; Casey, 1913: 275; Lingafelter *et al.*, 2014: 101, fig. 111m (holotype).

Type locality - Holotype female: United States, New Mexico: Las Vegas. (USNM).

Ophistomis texana Casey, 1913: 276; Alexander, 1958: 49 (distr.); Lingafelter *et al.*, 2014: 332, 368, fig. 169o (lectotype).

Type locality - Lectotype: female: United States, Texas. (USNM).

Ophistomis evanescens Casey, 1913: 276; Alexander, 1958: 49 (distr.); Lingafelter *et al.*, 2014: 58, fig. 62i (holotype).

Type locality - Holotype male: United States, Texas: Harris County. (USNM).

9. *Strangalia solitaria* Haldeman 1847

Type locality - Holotype: United States, Alabama. (MCZ|N). **Distribution** - Canada (Ontario), United States, western side of the Appalachians to the Great Plains and Alabama and Texas. **Host plants** - *Betula* sp. (Betulaceae), *Quercus* sp. (Fagaceae).

Strangalia famelica var. *solitaria* Haldeman, 1847a: 61.

Strangalia famelica var. *solitaria*; Haldeman, 1847b: 374.

Strangalia (Strangalina) famelica ab. *solitaria*; Aurivillius, 1912: 245 (cat.).

Ophistomis famelica solitaria; Leng, 1920: 274 (cat.).

Strangalina famelica ab. *solitaria*; Boppe, 1921: 103.

Strangalia famelica solitaria; Linsley & Chemsak, 1976: 14; Hovore, 1983: 383 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); MacRae, 1993: 238 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 172 (checklist) Monné, M.A., 1995a: 63 (cat.); Yanega, 1996: 39, pl. 5, figs 58a-c; Linsley & Chemsak, 1997: 439 (hosts); Chemsak, 2005: 202, pl. 15, fig. 3; Monné, M.A. & Hovore, 2006: 170 (checklist); McDowell, 2011: 412 (biol.); Holt, 2013: 244 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.)

Strangalia solitaria; Schiefer, 1998: 122 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 118

10. *Strangalia strigosa* Newman, 1841

Syntypes locality - Syntypes: United States, Florida: St. John's Bluff. (BMNH).

Distribution - United States (Florida and Georgia).

Strangalia strigosa Newman, 1841: 69; Lacordaire, 1868: 451; LeConte, 1873a: 212; Horn, 1885a: 6; Leng, 1890: 157; Castle & Laurent, 1896: 303 (distr.); Wickham, 1909a: 29 (distr.); 1909b: 402 (distr.); Dozier, 1918: 335 (distr.); Linsley & Chemsak, 1976: 21; Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 103 (cat.); Monné, M.A., & Giesbert, 1994: 172 (checklist); Monné, M.A., 1995a: 68 (cat.); Browne & Peck, 1996: 2159 (distr.); Peck & Thomas, 1998: 120 (distr.); Chemsak, 2005: 196, 211, pl. 15, fig. 12; Monné, M.A. & Hovore, 2006: 172 (checklist); Lingafelter, 2007: 36, 142, 2 figs, pl. 9d.

Strangalia (Strangalina) strigosa; Aurivillius, 1912: 245 (cat.).

Ophistomis strigosa; Leng, 1920: 274 (cat.).

Strangalina strigosa. Boppe, 1921: 103, pl. 8, fig., 6; Hopping, 1937: 26, pl. 6.

11. *Strangalia virilis* LeConte, 1873

Syntypes locality - United States, Texas. (MCZN). **Distribution** - United States (Texas and Oklahoma). **Host plants** - *Quercus nigra* Linnaeus (Fagaceae).

Strangalia virilis LeConte, 1873a: 212; Leng, 1890: 157; Casey, 1891: 39; Linsley & Chemsak, 1976: 14; Hovore, 1983: 383 (biol.); Hovore, Penrose & Neck, 1987: 308 (distr., hosts); Chemsak, Linsley & Noguera, 1992: 103 (cat.); Lingafelter & Horner, 1993: 178 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist) Monné, M.A., 1995a: 69 (cat.); Linsley & Chemsak, 1997: 439 (hosts); Chemsak, 2005: 195, 203, pl. 15, fig. 4; Monné, M.A. & Hovore, 2006: 171 (checklist); Heffern, Vlasák & Alten, 2017: 748 (hosts)

Strangalia (Strangalina) virilis; Aurivillius, 1912: 245 (cat.).

Ophistomis virilis; Casey, 1913: 275; Alexander, 1958: 49 (distr.);

Strangalina virilis; Boppe, 1921: 103.

Strophiona Casey, 1913

Strophiona Casey, 1913: 248, 264; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 175; Monné, M.A., 1995a: 112; Chemsak, 2005: 40, 428; Monné, M.A. & Hovore, 2006: 172 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 137, (key spp.)

Type-species - *Leptura laeta* LeConte, 1857 (original designation).

1. *Strophiona laeta* (LeConte, 1857)

Syntypes localities - Syntypes: United States, California: Sacramento. Washington: Steilacoom. (MCZN). **Distribution** - This species ranges from Vancouver Island and the

Lower Mainland of British Columbia, south to southern California, and east to New Mexico.

Host plants - *Castanopsis chrysophylla* (Douglas) A. de Candolle, *Notholithocarpus densiflorus* (Hook. & Arn.), *Quercus* sp. (Fagaceae).

Leptura laeta LeConte, 1857: 64; 1859b: 80 (distr.); 1869: 371 (distr.); 1873a: 218; Rivers, 1886: 7; Leng, 1890: 186, 195; Harrington, 1899: 108 (distr.); Fall, 1901: 149 (distr.); Garnett, 1918: 249 (distr.).

Judolia laeta; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94

Strophiona laeta; Casey, 1913: 248, 265; Leng, 1920: 273 (cat.); Essig, 1926: 453 (biol.); Hardy, 1926b: 29, pl. 5, fig. 36; Davis, 1932: 85 (distr.); Linsley & Chemsak, 1976: 177; Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist) Monné, M.A., 1995a: 112 (cat.); Linsley & Chemsak, 1997: 439 (hosts); Chemsak, 2005: 429, pl. 27, fig. 9; Monné, M.A. & Hovore, 2006: 172 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 137, pl. 30

Anoplodera laeta; Swaine & Hopping, 1928: 52; Canova, 1936: 128 (distr.); Doane *et al.*, 1936: 174 (biol.); Moore, 1937: 89 (distr.); Hardy, 1942: 10 (biol.); 1945: 92; 1957: D65 (distr.); Leech, 1959: 42 (hosts); Linsley, Knull & Statham, 1961: 25 (distr., hosts); Hatch, 1971: 131.

Strophiona ostenta Casey, 1913: 265; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 293, fig. 125i (holotype).

Type locality - Holotype female: United States, New Mexico. (USNM).

2. *Strophiona nitens* (Forster, 1771)

Type locality - Holotype: America Septentrionale. (LSUK). **Distribution** - Eastern ranges From Prince Edward Island to southeastern Manitoba, south to northern Kansas and northern Florida and Colorado. **Host plants** - *Acer saccharum* Marshall (Aceraceae), *Castanea* sp., *Fagus ferruginea* Aiton, *Quercus alba* Linnaeus, *Q. prinus* Linnaeus (Fagaceae), *Carya* sp., *Juglans nigra* Linnaeus (Juglandaceae).

Leptura nitens Forster, 1771: 45; Horn, 1861: 30 (hosts); Bland. 1861: 101 (biol., distr.); LeConte, 1873a: 218; Horn, 1889: 199 (syn.); Leng, 1890: 185, 195; Hamilton, 1891a: 130 (syn); 1893b: 326 (distr.); 1893a: 274 (distr.); 1895: 338 (distr.); Wickham, 1897b: 190; 1897c: 158 (distr.); Chittenden, 1897: 72 (paras.); Smith, 1900: 292 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 35 (distr.); Stevenson, 1905: 91 (biol.); Felt, 1906: 702; Wickham, 1909a: 29 (distr.); Smith, 1910: 331; Blatchley, 1910: 1056, fig. 451; Fisher & Kirk, 1912: 313 (distr.); Rohwer, 1913: 534 (paras.); Lovell, 1915: 114; Chagnon, 1917: 235 (distr.); Nicolay, 1919: 69 (distr.); Rohwer, 1921: 441 (paras.); Craighead, 1923: 92, figs (larva); Cloudman, 1925: 33; Goldman, 1933: 90, pl. 5, fig. 29-31 (morphol.).

Strangalia nitens; LeConte, 1852: 176 (syn.).

Argaleus nitens; Packard, 1872: 93 (distr.); Horn, 1873: 717; Packard, 1888: 143 (distr.).

Judolia nitens; Aurivillius, 1912: 227 (cat.); Boppe, 1921: 94.

Strophiona nitens; Casey, 1913: 265; Leng, 1920: 273 (cat.); Britton, 1920: 268 (distr.); Hatch, 1925: 580 (distr.); Kirk & Knull, 1926: 25 (distr.); Leonard, 1928: 441 (distr.); Ware, 1929: 368 (distr.); Frost & Dietrich, 1929: 436 (distr.); Beaulne, 1932: 199 (hosts); Brimley, 1938: 213 (distr.); Loding, 1945: 117 (distr.); Gosling & Gosling, 1976: 15, fig. 110 (biol., distr.); Linsley & Chemsak, 1976: 176, fig. 46; Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); MacRae, 1993: 242 (distr.); Shimomura, 1994: 164 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist) Monné, M.A., 1995a: 112 (cat.); Krinsky & Godwin, 1996: 239; Yanega, 1996: 39, pl. 9, fig. 101; Linsley & Chemsak, 1997: 439 (hosts); Peck & Thomas, 1998: 121 (distr.); Heffern, 1998: 11 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 428, pl. 27, fig. 8; Monné, M.A. & Hovore, 2006: 172 (checklist); Lingafelter, 2007: 27, 142, 2 figs, pl. 6e (hosts); Majka, McCorquodale & Smith, 2007: 260 (distr.); Guarnieri, 2009: 16 (distr.); Webster, McCorquodale & Majka, 2009: 295 (biol., distr.); Holt, 2013: 244 (distr.); Sponer, 2014: 299 (distr.); Steury & MacRae, 2014: 10 (distr.); Webster, 2016: 485; Haack, 2017: 117; Klingeman *et al.*, 2017: 295 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 138, pl. 30

Anoplodera nitens; Swaine & Hopping, 1928: 52, pl. 7, fig. 68; Chagnon, 1936: 249, pl. 16, fig. 2; Doane *et al.*, 1936: 174; Frost, 1937: 202 (distr.); Townes, 1944: 773 (paras.); Procter, 1946: 178 (biol.); Knull, 1946: 165; Craighead, 1950: 251 (biol.); Linsley, 1958: 107; Townes & Townes, 1960: 509 (paras.); Dillon & Dillon, 1961: 615, pl. 60, No. 17; Chagnon & Robert, 1962: 249, pl. 16, fig. 2; Bayer & Shenefeld, 1969: 7, fig. 18; Kirk, 1970: 77; Wilson, 1971: 60 (biol.); Baker, 1972: 196 (biol.); Laliberté, Chantal & LaRochelle, 1977: 90 (biol.); White, 1985: 283 (biol.).

Leptura quagga Germar, 1823: 521.

Strangalia quagga; LeConte, 1850a: 332.

Type locality - Holotype: America Septentrionali. (SMTD).

Leptura zebra Provancher, 1877a: 614.

Strophiona bellina Casey, 1913: 265; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 27, fig. 27s.

Type locality - Holotype male: United States, Colorado. (USNM).

3. *Strophiona tigrina* Casey, 1913

Type locality - Holotype male: United States, California: Los Angeles. (USNM).

Distribution - United States (Washington) to Mexico (northern Baja California). **Host plants** - *Quercus* sp. (Fagaceae).

Strophiona tigrina Casey, 1913: 266; Linsley & Chemsak, 1976: 179; Hovore, 1988: 19 (distr., hosts); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 113 (cat.); Noguera & Chemsak, 1996: 404 (cat.); Linsley & Chemsak, 1997: 440 (hosts); Monné, M.A., 2002: 40 (cat. hosts); Chemsak, 2005: 432, fig. XXVII, fig. 10; Monné, M.A., 2006: 145 (cat.); Monné, M.A. & Hovore, 2006: 172 (checklist); Lingafelter *et al.*, 2014: 333, figs 171e, f (holotype); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 498; Gimmel *et al.*, 2023: 25c6 (distr.)

Anoplodera tigrina; Swaine & Hopping, 1928: 52, pl. 7, fig. 69.

Strophiona reducta Casey, 1913: 266; Lingafelter *et al.*, 2014: 309, figs 142q, r (holotype).

Type locality - Holotype male; United States, California. (USNM).

Anoplodera laeta; Swaine & Hopping, 1928: 52, pl. 7, fig. 70; Hatch, 1971: 16, pl. 14, fig. 12 (part).

Toxoleptura Miroshnikov 1998

Toxoleptura Miroshnikov 1998: 411; Bousquet, Laplante, Hammond & Langor, 2017: 136

Type-species - *Pachyta vexatrix* Mannerheim, 1853 (original designation).

1. *Toxoleptura pernigra* (Linell 1897)

Type locality - United States, California: Wilson's Peak, Los Angeles County. (USNM).

Distribution - Mountains of southern California.

Leptura pernigra Linell, 1897: 397; Fall, 1901: 149 (distr.); Garnett, 1918: 251 (distr.); Boppe, 1921: 91.

Brachyleptura pernigra; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 172; Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 110 (cat.); Chemsak, 2005: 417, 423, pl. 27, fig. 5; Lingafelter *et al.*, 2014: 297, fig. 130 e (holotype).

Anoplodera pernigra; Swaine & Hopping, 1928: 64, pl. 10, fig. 100.

Toxoleptura pernigra; Bousquet, Laplante, Hammond & Langor, 2017: 136

2. *Toxoleptura vexatrix* (Mannerheim 1853)

Syntypes locality - United States, Alaska: Peninsula Kenai, ad castellum Nicolajevsk, and ad rivulos flumen Tschunuktnu. (FINH) **Distribution** - Alaska to southern Sierra Nevada and central coastal California. In Canada, from Vancouver Island to the Okanagan Valley, north to the Stikine River area in northwestern British Columbia.

Pachyta vexatrix Mannerheim, 1853: 250; LeConte, 1857: 6, 23 (distr.).

Leptura vexatrix; Horn, 1886b: xiv; Henshaw, 1887: 218; Leng, 1890: 185, 196; Hamilton, 1894a: 31 (distr.); Fall, 1901: 150 (distr.); Van Dyke, 1906: 227; Garnett, 1918: 250 (distr.); Van Dyke, 1920: 45 (distr.); Fall, 1926: 202 (distr.).

Judolia vexatrix; Aurivillius, 1912: 228 (cat.); Casey, 1913: 249; Boppe, 1921: 94.

Brachyleptura vexatrix; Linsley & Chemsak, 1976: 171; Chemsak, Linsley & Noguera, 1992: 91 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 112 (cat.); Chemsak, 2005: 417, 422, pl. 27, fig. 4; Monné, M.A., & L. Hovore, 2006: 59 (checklist)

Toxoleptura vexatrix; Bousquet, Laplante, Hammond & Langor, 2017: 136, pl. 30

Leptura quadrillum LeConte, 1859b: 88; 1859a: 291 (distr.); 1869: 371 (distr.); 1873a: 220; Wickham, 1890: 35 (distr.); Leng, 1890: 190, 198; Holland, 1900: 423 (distr.); Garnett, 1918: 251 (distr.); Boppe, 1921: 91.

Judolia quadrillum; Casey, 1913: 249; Hardy, 1926b: 28, pl. 4, fig. 8.

Syntypes locality - United States, Washington Territory, Shoalwater Bay. (MCZN).

Judolia convolvens Casey, 1913: 250; Lingafelter *et al.*, 2014: 46, 367, fig. 48c (lectotype).

Type locality - United States, California: Siskiyou County. (USNM)

***Trachysida* Casey, 1913**

Trachysida Casey, 1913: 271; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 114; Monné, M.A., 1995a: 95; Chemsak, 2005: 38, 350; Monné, M.A. & Hovore, 2006: 172 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 127 (key spp.)

Type-species - *Leptura mutabilis* Newman, 1841 (original designation).

1. *Trachysida aspera aspera* (LeConte, 1873)

Syntypes locality - Syntypes: Canada, British Columbia, Vancouver Island. (MCZN).

Distribution - From Central Alaska to the Lake Athabasca area in northeastern Alberta, south to northern New Mexico along the Rocky Mountains and to southern Oregon. **Host plants** - *Betula* sp. (Betulaceae), *Picea* sp., *Pinus contorta* Douglas ex Loudon, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae), *Populus deltoides* Bartram ex Marshall, *Salix* sp. (Salicaceae).

Leptura aspera LeConte, 1873a: 228; Snow, 1877a: 19 (distr.); Provancher, 1877b: 332 (distr.); Leng, 1890: 215; Harrington, 1890: 186 (distr.); Leng, 1890: 192, 200; Townsend, 1895: 48 (distr.); Evans, 1906: 99 (distr.); Fall & Cockerell, 1907: 193 (distr.); Nicolay, 1917a: 95 (distr.); Garnett, 1918: 252 (distr.); Boppe, 1921: 90; Craighead, 1923: 92, 99 (larva); Kirk & Knull, 1926: 25 (distr.); Hardy, 1927b: C36; Beaulne, 1932: 200 (hosts).

Leptura (Trachysida) aspera; Casey, 1913: 271; Leng, 1920: 274 (cat.).

Anoplodera aspera; Swaine & Hopping, 1928: 56, pl. 8, fig. 82; DeLeon, 1934: 57 (hosts); Mank, 1934: 80 (distr.); Doane *et al.*, 1936: 175 (biol.); Canova, 1936: 127 (hosts); Bedard, 1938: 193 (hosts); Leech, 1947: 106; Hardy, 1948: 32; 1955: B50 (distr.); Clark, 1956: 41 (distr.); Howden, 1959: 158 (distr., hosts); 1966: 1189; Gardiner, 1970: 285 (biol.); Hatch, 1971: 133; Harling, Snyder & Coletti, 1977: 35.

Trachysida aspera; Linsley & Chemsak, 1976: 116; Gosling & Gosling, 1976: 15 (distr.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.).

Trachysida aspera aspera; Linsley & Chemsak, 1976: 117; Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 95 (cat.); Linsley & Chemsak, 1997: 444 (hosts); Heffern, 1998: 11 (distr.); Chemsak, 2005: 353, pl. 23, fig. 9; Monné, M.A. & Hovore, 2006: 172 (checklist); Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 127, pl. 26

Leptura aspera var. *parkeri* Hippisley, 1922: 66.

Anoplodera aspera var. *parkeri*; Clark, 1956: 41 (distr.); Hatch, 1971: 133.

Type locality - Holotype male: Canada, British Columbia: 3.5 miles southwest of Terrace ("West Lodge"). (MCZN).

1a. *Trachysida aspera brevifrons* (Howden, 1959)

Type locality - Holotype male; Canada, Québec, Mt. Lavall. (CNCI). **Distribution** - This subspecies ranges from southern Labrador to the Yellowknife area in southern Northwest Territories, south to northern Illinois and southern New York to Minnesota. **Host plants** - *Abies* sp., *Picea rubens* (Pinaceae).

Anoplodera brevifrons Howden, 1959: 158; Ruelle, 1970: 18 (types); Gosling & Gosling, 1976: 17 (biol., distr.); Laliberté, Chantal & LaRoche, 1977: 89 (biol.).

Trachysida aspera brevifrons; Linsley & Chemsak, 1976: 118; Gosling, 1986: 158 (hosts); Drouin, 1992: 175 (distr.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 95 (cat.); Yanega, 1996: 40, pl. 7, fig. 76; Linsley & Chemsak, 1997: 444 (hosts); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 355, pl. 23, fig. 12; Monné, M.A. & Hovore, 2006: 172 (checklist); Webster, McCorquodale & Majka, 2009: 95 (distr.); Webster, 2016: 485; Bousquet, Laplante, Hammond & Langor, 2017: 128, pl. 26

1b. *Trachysida aspera rufescens* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, California: Santa Cruz County, Felton. (CASC). **Distribution** - Coastal central California. **Host plants** - *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Trachysida aspera rufescens Linsley & Chemsak, 1976: 117; Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 95 (cat.); Chemsak, 2005: 354, pl. 23, figs 10, 11; Monné, M.A. & Hovore, 2006: 172 (checklist);

2. *Trachysida mutabilis* (Newman, 1841)

Syntypes locality - Syntypes: United States, New York: Trenton Falls. (BMNH).

Distribution - From eastern Newfoundland to the Fort Liard area in southwestern Northwest Territories, south to Arkansas, Mississippi, southern Alabama, and northern Georgia. **Host plants** - *Acer pensylvanicum* Linnaeus (Aceraceae), *Alnus acuminata* Kunth, *A. incana* Linnaeus, *A. serrulata* (Aiton) Willd., *Quercus rubra* Linnaeus, *Betula alleghaniensis* Britton, *B. lenta* Linnaeus, *Betula nigra* Linnaeus, *Ostrya virginiana* (Miller) K. Koch (Betulaceae), *Cornus florida* Linnaeus (Cornaceae), *Carpinus* sp. (Corylaceae), *Castanea* sp., *Fagus ferruginea* Aiton, *Quercus alba* Linnaeus (Fagaceae), *Carya ovata* (Miller) K. Koch (Juglandaceae), *Hamamelis virginiana* Linnaeus (Hamamelidaceae), *Sassafras albidum* (Nuttall) Nees (Lauraceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Amelanchier canadensis* Medikus, *Prunus serotina* Ehrhart (Rosaceae), (Rosaceae), *Populus deltoides* Bartram ex Marshall, *P. grandidentata* Michaux, *Salix* sp. (Salicaceae), *Ulmus* sp. (Ulmaceae).

Leptura mutabilis Newman, 1841: 71; LeConte, 1850b: 236; 1850a: 340; Bland, 1861: 101 (distr.); LeConte, 1873a: 223; Henshaw, 1874: 23 (distr.); Austin, 1874: 271 (distr.); Provancher, 1877a: 616; Snow, 1883: 42 (distr.); Horn, 1885a: 6; Harrington, 1890: 186 (distr.); Leng, 1890: 186, 192, 200; Harrington, 1894b: 15 (distr.); Slossom, 1894: 3 (distr.); Evans, 1895b: 173 (distr.); Hamilton, 1895: 339 (distr.); Wickham, 1897b: 192; 1897c: 159 (distr.); Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Ouellet, 1902: 122 (distr.); MacGillivray & Houghton, 1902: 252 (distr.); Ulke, 1902: 26, 50 (distr.); Chagnon, 1905: 36 (distr.); Fall & Cockerell, 1907: 193 (distr.); Morris, 1909b: 414; Adams, 1909: 201 (distr.); Blatchley, 1910: 1052; Smith, 1910: 332; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Laurent, 1916: 44 (hosts); Johnson, 1916: 119 (distr.); Chagnon, 1917: 234 (distr.); Nicolay, 1917a: 95 (distr.); Blackman, 1918: 124 (biol.); Wenzel & Wenzel, 1918: 360; Nicolay, 1919: 69 (distr.); Britton, 1920: 268 (distr.); Boppe, 1921: 91; Champlain, 1922: 95 (paras.); Craighead, 1923: 92, 98 (larva); Mundinger, 1924: 318; Kirk & Knull, 1926: 25 (distr.); Procter, 1927: 112 (distr.); Criddle, 1928: 97 (distr.); Leonard, 1928: 442 (distr.); Cooper, 1930: 24; Beaulne, 1932: 200 (hosts); Saalas, 1936: 78 (morphol.); Daviault, 1937: 119 (biol.); Brimley, 1938: 213 (distr.); Kaston, 1938: 239; Procter, 1946: 179.

Stenura mutabilis; Haldeman, 1847b: 374.

Strangalia mutabilis; Melsheimer, 1853: 114 (cat.).

- Leptura (Trachysida) mutabilis*; Casey, 1913: 271; Leng, 1920: 274 (cat.); Hatch, 1925: 580 (distr.).
- Anoplodera mutabilis*; Swaine & Hopping, 1928: 57, pl. 8, fig. 83, pl. 12, fig. 13; Knull, 1930: 102 (hosts); 1932: 63; 1934: 210 (hosts); Chagnon, 1936: 250; Knull, 1946: 166; Fattig, 1947: 17 (distr.); Howden, 1959: 157 (lectotype); Dillon & Dillon, 1961: 615, pl. 61 No. 7, 8; Chagnon & Robert, 1962: 250; Howden, 1966: 1189; Gardiner, 1966: 207, fig. 39; Bayer & Shenefelt, 1969: 7, fig. 17; Gardiner, 1970: 285 (biol.); Wilson, 1971: 60 (biol.); Baker, 1972: 197; Laliberté, Chantal & LaRoche, 1977: 89 (biol.); Miliczky & Osgood, 1979: 133 (biol.).
- Trachysida mutabilis*; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 115; Gosling & Gosling, 1976: 14 (biol., distr.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 95 (cat.); Krinsky & Godwin, 1996: 239 (hosts); Yanega, 1996: 40, pl. 7, figs. 77a, b; Linsley & Chemsak, 1977: 444 (hosts); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr., hosts); Chemsak, 2005: 350, pl. 23, fig. 8; Monné, M.A. & Hovore, 2006: 172 (checklist); Rice & Veal, 2006: 259 (distr.); Majka, McCorcuodale & Smith, 2007: 260 (distr.); Lingafelter, 2007: 30, 142, 2 figs, pl. 7g; Holt, 2013: 244 (biol., distr.); Steury & MacRae, 2014: 10 (distr.); Vlasák, 2014: 18 (hosts); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 128, pl. 26
- Nivellia mutabilis*; Stein & Tøgestad, 1976: 24.
- Stenura luridipennis* Haldeman, 1847a: 63.
- Leptura mutabilis* var. *luridipennis*; Wickham, 1897b: 192; 1897c: 159 (distr.); Gibson, 1917: 150 (distr.); Munding, 1924: 318; Leonard, 1928: 442 (distr.).
- Leptura (Trachysida) mutabilis luridipennis*; Leng, 1920: 274 (cat.); Hatch, 1925: 580 (distr.).
- Syntypes locality** - Syntypes: United States, Pennsylvania. (MCZN).
- Leptura quadricollis* LeConte, 1850a: 339; 1873a: 223; Leng, 1890: 192, 200; Smith, 1900: 292 (distr.); Smith, 1910: 332; Boppe, 1921: 91.
- Leptura (Trachysida) ? quadricollis*; Casey, 1913: 271.
- Type locality** - Holotype: United States, Vermont. (MCZN).
- Leptura laetifia* Provancher, 1877a: 615.
- Type locality** - Holotype: Canada, Québec. (Musée de la Province du Québec).
- Leptura (Leptura) mutabilis* ab. *Provancheri* Aurivillius, 1912: 223 (cat., *nom. nov.*).
- Leptura (Trachysida) mutabilis provancheri*; Leng, 1920: 274 (cat.).

***Trigonarthris* Haldeman, 1847**

- Trigonarthris* Haldeman, 1847a: 65; Swaine & Hopping, 1928: 13; Chemsak, 1964: 235; Linsley & Chemsak, 1976: 162; Monné, M.A., 1995a: 108; Chemsak, 2005: 40, 407; Monné, M.A. & Hovore, 2006: 172 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 133 (key spp.)
- Type-species** - *Leptura proxima* Say, 1824 (monotypy).
- Leptura (Cercolia)* Casey, 1913: 268
- Cercolia* Casey, 1924: 281; Chemsak, 1964: 232.
- Type-species** - *Leptura proxima* Say, 1824 (subsequent designation, Chemsak, 1964: 232)

1. *Trigonarthris atrata* (LeConte, 1850)

- Type locality** - Holotype: United States, Georgia. (MCZN). **Distribution** - Southeastern United States to Texas and Nebraska.
- Leptura atrata* LeConte, 1850a: 339; 1873a: 220; Horn, 1884: 148; Loding, 1933: 148 (distr.); 1945: 117 (distr.).
- Leptura (Leptura) proxima* ab. *atrata*; Aurivillius, 1912: 223 (cat.); Boppe, 1921: 91.
- Leptura (Cercolia) proxima atrata*; Leng, 1920: 274 (cat.).
- Anoplodera atrata*; Swaine & Hopping, 1928: 59, pl. 9, fig. 51; Alexander, 1958: 55 (distr.).
- Trigonarthris atrata*; Linsley & Chemsak, 1976: 163, fig. 44 (syn.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); MacRae, 1993: 241 (distr.);

Lingafelter & Horner, 1993: 180 (distr.); Shimomura, 1994: 138 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 108 (cat.); Yanega, 1996: 40, pl. 7, fig. 79; Peck & Thomas, 1998: 121 (distr.); Heffern, 1998: 11 (distr.); Schiefer, 1998: 122 (distr.); Chemsak, 2005: 408, pl. 26, fig. 10; Monné, M.A. & Hovore, 2006: 172 (checklist); Lingafelter, 2007: 26, 142, 2 figs, pl. 6g; Holt, 2013: 244 (distr.).

Anthophilax liebecki Hopping, 1922: 164; Ruetze, 1970: 18 (type).

Anoplodera liebecki; Swaine & Hopping, 1928: 59; Alexander, 1948: 55 (distr.).

Type locality - Holotype male: United States, Texas. (CNCI).

2. *Trigonarthris proxima* (Say, 1824)

Syntypes locality - Syntypes: United States, Missouri. (Depository unknown). **Distribution**

- Cape Breton Island to southern Manitoba, south to central Texas and South Carolina. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Castanea* sp. (Fagaceae), *Hamamelis virginiana* Linnaeus (Hamamelidaceae), *Carya* sp. (Juglandaceae); *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Tilia americana* Linnaeus (Malvaceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Ulmus americana* Linnaeus (Ulmaceae).

Leptura proxima Say, 1824: 420; LeConte, 1850b: 236 (distr.); 1850a: 338; 1859c: 198; 1873a: 220; Austin, 1874: 271 (distr.); Horn, 1876: 170 (syn.); Provancher, 1877a: 615; Popenoe, 1877: 33 (distr.); Schaupp, 1880: 84 (biol.); Horn, 1884: 148 (syn.); Harrington, 1884: 47 (biol.); 1890: 185 (distr.); Leng, 1890: 190; Davis, 1891: 65 (biol.); 1892: 80; Slossom, 1894: 3 (distr.); Hanham, 1894: 352 (distr.); Hamilton, 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); Harrington, 1899: 108 (distr.); Smith, 1900: 292 (distr.); Slossom, 1900: 322 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26, 50 (distr.); Chagnon, 1905: 36 (distr.); Felt, 1906: 727; Wickham, 1909a: 29 (distr.); Morris, 1909b: 417; Adams, 1909: 201 (distr.); Smith, 1910: 331 (distr.); Blatchley, 1910: 1058; Leng, 1911: 215 (distr.); Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Johnson, 1916: 119 (distr.); Morris, 1915: 19 (hosts); Nicolay, 1917a: 94 (distr.); Chagnon, 1917: 235 (distr.); Blackman, 1918: 126 (biol.); Morris, 1919: 50; Rohwer, 1921: 444 (paras.); Boppe, 1921: 91; Craighead, 1923: 91, 943, pl. 4, fig. 4, pl. 22, fig. 1 (larva); Cloudman, 1925: 33; Kirk & Knoll, 1926: 25 (distr.); Procter, 1927: 112 (distr.); Criddle, 1928: 97 (distr.); Leonard, 1928: 441 (distr.); Beaulne, 1932: 200 (hosts); Saalas, 1936: 78 (morphol.); Brimley, 1938: 213 (distr.); Savely, 1939: 383 (hosts); Loding, 1945: 117 (distr.); Procter, 1947: 179 (distr.).

Leptura (Cercolia) proxima; Casey, 1913: 269; Hatch, 1925: 580 (distr.).

Cercolia proxima; Casey, 1924: 281.

Anoplodera proxima; Swaine & Hopping, 1928: 60, pl. 9, fig. 92, pl. 12, fig. 11; Knoll, 1930: 101 (hosts); Chagnon, 1936: 250, pl. 16, fig. 5; Doane *et al.*, 1936: 175 (hosts); Canova, 1936: 128 (distr.); Chagnon, 1937: 279; Townes, 1944: 773 (paras.); Knoll, 1946: 167; Fattig, 1947: 17 (distr.); Townes & Townes, 1960: 140, 527 (paras.); Dillon & Dillon, 1961: 616, pl. 60, No. 19; Chagnon & Robert, 1962: 250, pl. 16, fig. 5; Townes & Townes, 1962: 496 (paras.); Bayer & Shenefelt, 1969: 89, fig. 18; Gardiner, 1970: 285 (biol.); Kirk, 1970: 77; Hatch, 1971: 134, pl. 14, fig. 16; Wilson, 1971: 60 (biol.); Baker, 1972: 197; Kirk & Balsbaugh, 1975: 97 (distr.); Laliberté, Chantal & LaRochelle, 1977: 90

Trigonarthris proxima; Haldeman, 1847a: 65; Linsley & Chemsak, 1976: 165; Gosling & Gosling, 1976: 15 (biol., distr.); Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1984: 80 (biol.); 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 104 (cat.); MacRae, 1993: 241 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 108 (cat.); Yanega, 1996: 40, pl. 7, figs 81a-d; Linsley & Chemsak, 1997: 446 (hosts); Vlasák & Vlasakova, 2002: 208 (distr., hosts); Taber & Fleenor, 2005: 118; Chemsak, 2005: 408, 412, pl. 26, fig. 11; Monné, M.A. & Hovore, 2006: 172 (checklist); Lingafelter, 2007: 26, 143, 2 figs, pl. 6h (hosts); Majka, McCorquodale & Smith, 2007: 260 (distr.); Guarnieri, 2009: 16 (distr.); Webster, McCorquodale & Majka, 2009: 295 (biol., distr.); Holt, 2013: 245 (biol., distr.); Steury & MacRae, 2014: 10 (distr.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 133, pl. 28

Cercolia kempiana Casey, 1924: 281; Lingafelter *et al.*, 2014: 84, fig. 92e.

Leptura kempiana; Leonard, 1928: 442.

Type locality - Holotype female: United States, New York, Lake George. (USNM).

3. *Trigonarthris subpubescens* (Kirby, 1837)

Type locality - Holotype: Canada. (BMNH). **Distribution** - The range of this species extends from Cape Breton Island to the Kootenay region in southeastern British Columbia, south to east-central Texas, central Florida and North Dakota. **Host plants** - *Acer rubrum* Linnaeus (Aceraceae), *Betula alleghaniensis* Britton (Betulaceae), *Fagus ferruginea* Aiton, *F. grandifolia* Ehrhart, *Quercus* sp. (Fagaceae), *Carya* sp. (Juglandaceae), *Tilia americana* Linnaeus (Malvaceae), *Nyssa aquatica* Linnaeus, *N. sylvatica* Marshall (Nyssaceae), *Picea rubra* H. A. Dietrich, *Pinus contorta* Douglas ex Loudon (Pinaceae), *Prunus serotina* Ehrhart (Rosaceae), *Populus deltoides* Bartram ex Marshall, *Salix nigra* Marshall (Salicaceae), *Ulmus americana* Linnaeus (Ulmaceae).

Leptura subpubescens Kirby, 1837: 180; Haldeman, 1847a: 65; Emmons, 1854: 127, pl. 8, fig. 11; Bethune, 1872: 112

Trigonarthris subpubescens; Monné, M.A. & Hovore, 2006: 171 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 134, pl. 28 (syn)

Leptura (Cercolia) minnesotana Casey, 1913: 269; Leng, 1920: 274 (cat.); Hatch, 1925: 580 (distr.).

Cercolia minnesotana; Casey, 1924: 281.

Anoplodera minnesotana; Swaine & Hopping, 1928: 60; Knull, 1929: 145 (distr.); 1932: 63; 1934: 210 (hosts); 1946: 167; Gardiner, 1966: 202, 207, figs 4, 38; Bayer & Shenefelt, 1969: 8, 9, fig. 17; Gardiner, 1970: 285 (biol.); Hatch, 1971: 134; Wilson, 1971: 60 (biol.); Baker, 1972: 197; Perry, 1975: 59 (hosts); Stein & Tagestad, 1976: 3 (distr.); Gosling & Goslings, 1976: 17 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 89 (biol.).

Trigonarthris minnesotana; Linsley & Chemsak, 1976: 162; Gosling, 1984: 80 (biol.); 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 104 (cat.); MacRae, 1993: 241 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 108 (cat.); Yanega, 1996: 40, pl. 7, figs, 80a-c; Linsley & Chemsak, 1997: 446 (hosts); Peck & Thomas, 1998: 121 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 408, pl. 26, fig. 9; Monné, M.A. & Hovore, 2006: 172 (checklist); Rice & Veal, 2006: 260 (distr.); Lingafelter, 2007: 26, 142, 2 figs, pl. 6f (hosts); Holt, 2013: 244 (distr.); Vlasák, 2014: 318 (hosts); Lingafelter *et al.*, 2014: 100, 368, fig. 100a (lectotype) Webster, 2016: 485;.

Type locality - Lectotype male: United States, Wisconsin: Bayfield. (USNM).

Typocerus LeConte, 1850

Typocerus LeConte, 1850a: 333; 1854b: 219; Thomson, 1861: 143, 153; LeConte, 1873a: 213; 1873b: 328; Provancher, 1877a: 580, 611; LeConte & Horn, 1883: 313; Leng, 1890: 158; Wickham, 1897b: 187; 1897c: 88; Blatchley, 1910: 1046, 1052; Casey, 1913: 248, 272; Craighead, 1923: 90; Swaine & Hopping, 1928: 13, 30; Bradley, 1930: 237; Chagnon, 1936: 252; Knull, 1946: 252; Dillon & Dillon, 1961: 611; Chagnon & Robert, 1962: 243, 252; Arnett, 1962: 858, 876; Chemsak, 1964: 235; Bayer & Shenefelt, 1969: 6, 12; Hatch, 1971: 124; Linsley & Chemsak, 1976: 67; Monné, M.A., 1995a: 81; Chemsak, 2005: 37, 278, 282; Monné, M.A. & Hovore, 2006: 173 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 128 (key spp.)

Strangalia (Typocerus); Aurivillius, 1912: 246; Boppe, 1921: 101

Type-species - *Leptura zebrata* Fabricius, 1801 (= *Leptura zebra* Olivier, 1795) (subsequent designation, Thomson, 1861: 153)

1. *Typocerus acuticauda acuticauda* Casey, 1913

Type locality - Lectotype male: United States, Massachusetts. (USNM). **Distribution** - Eastern North America from Nova Scotia peninsula to southernmost Ontario to Florida westward to Nebraska. **Host plants** - *Quercus* sp. (Fagaceae), *Salix nigra* Marshall (Salicaceae).

Typocerus acuticauda Casey, 1913: 274; Johnson, 1915: 319; Britton, 1920: 268 (distr.); Leng, 1920: 274 (cat.); Munding, 1924: 319; Procter, 1927: 112 (distr.); Swaine & Hopping, 1928: 32, pl. 3, fig. 34; Leonard, 1928: 442 (distr.); Knull, 1929: 144 (distr.); Loding, 1933: 148 (distr.); 1945: 117 (distr.); Procter, 1946: 179 (distr.); Knull, 1946: 160; Fattig, 1947: 19 (distr.); Alexander, 1958: 51 (distr.); Kirk, 1970: 78; Wilson, 1971: 60 (biol.); Gosling & Gosling, 1976: 10, fig. 90 (distr.); Linsley & Chemsak, 1976: 73; Laliberté, Chantal & LaRochelle, 1977: 99 (biol.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Staines, 2008: 147 (distr.); McDowell, 2011: 412 (biol.).

Typocerus acuticauda acuticauda; Linsley & Chemsak, 1976: 74; Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); MacRae, 1993: 240 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 81 (cat.); Yanega, 1996: 41, pl. 9, fig. 99; Peck & Thomas, 1998: 121 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 287, pl. 19, fig. 10; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 39, 143, 2 figs, pl. 10d; Holt, 2013: 245 (biol., distr.); Steury & MacRae, 2014: 10 (biol., distr.); Vlasák, 2014: 316 (hosts); Lingafelter *et al.*, 2014: 10, 370, fig. 9a (lectotype); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 129, pl. 27

Typocerus thoracicus Casey, 1913: 274; Leng, 1920: 274 (cat.); Lingafelter *et al.*, 2014: 333, fig. 170s (holotype).

Type locality - Holotype male: United States. (USNM).

1a. *Typocerus acuticauda standishi* Knull, 1938

Type locality - Holotype female: United States, Texas. (FMNH). **Distribution** - From Kansas to Texas and east to Mississippi.

Typocerus standishi Knull, 1938: 141, pl. 1, fig. 1; Alexander, 1958: 51 (distr.); Chemsak, 1977: 179 (types).

Typocerus acuticauda standishi; Linsley & Chemsak, 1976: 74; Chemsak, Linsley & Noguera, 1992: 104 (cat.); Lingafelter & Horner, 1993: 179 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 81 (cat.); Schiefer, 1998: 122 (distr.); Chemsak, 2005: 288, pl. 19, fig. 11; Monné, M.A. & Hovore, 2006: 173 (checklist); Holt, 2013: 245 (biol., distr.).

Typocerus oklahomensis Hopping, 1940: 33 (part).

Type locality - Allotype female; United States, Oklahoma: Latimer County. (CASC).

2. *Typocerus badius* (Newman, 1841)

Syntypes locality - Syntypes: United States, Florida: In the hammocks near St. John's Bluff. (BMNH). **Distribution** - Central Florida to Georgia. **Host plants** - *Quercus* sp. (Fagaceae).

Leptura badia Newman, 1841: 69; Haldeman, 1847b: 375.

Typocerus badius; LeConte, 1850a: 335; 1873a: 213; Horn, 1885a: 6; Leng, 1890: 158; Wickham, 1909a: 29 (distr.); Casey, 1913: 272; Leng, 1920: 274 (cat.); Swaine & Hopping, 1928: 33, pl. 3, fig. 37; Brimley, 1938: 213; Loding, 1945: 117 (distr.); Fattig, 1947: 19 (distr.); Linsley & Chemsak, 1976: 76; Turnbow & Hovore, 1979: 220 (biol., hosts.); Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 82 (cat.); Linsley & Chemsak, 1997: 447 (hosts); Peck & Thomas, 1998: 121 (distr.); Chemsak, 2005: 280, 291, pl. 20, figs 1, 2; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 38, 143, 2 figs, pl. 9l (hosts); MacRae & Rice, 2007: 249 (biol., distr.); Holt, 2013: 245 (distr.).

Strangalia (Typocerus) badia; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.

3. *Typocerus balteatus balteatus* Horn, 1878

Syntypes localities - Syntypes male and female: United States, Colorado, Arizona. (ANSP).

Distribution - Central Saskatchewan to south-central Alberta, south to east-central California, southern Arizona, and New Mexico. **Host plants** - *Chrysothamnus viscidiflorus* (Hooker) Nuttall (Asteraceae)

Typocerus balteatus Horn, 1878: 55; Casey, 1913: 272; Leng, 1920: 274 (cat.); Swaine & Hopping, 1928: 34, pl. 4, fig. 41; Knowlton & Thatcher, 1936: 279 (distr.); Canova, 1936: 132 (distr.); Knowlton & Wood, 1950: 11 (distr.); Barr & Penrose, 1969: 94 (distr.); Hatch, 1971: 127; Linsley & Chemsak, 1976: 80, fig. 19; Chemsak, Linsley & Noguera, 1992: 104 (cat.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 82 (cat.); Linsley & Chemsak, 1997: 447 (hosts); Heffern, 1998: 11 (distr.); Chemsak, 2005: 299, pl. 20, fig. 8.

Leptura balteata; Lameere, 1883: 24 (cat.).

Strangalia (Typocerus) balteata; Aurivillius, 1912: 2467 (cat.); Boppe, 1921: 101.

Typocerus balteatus balteatus; Lewis, 2001: 11; Monné, M.A. & Hovore, 2006: 173 (checklist); MacRae & Rice, 2007: 249 (biol., distr.); Rice, MacRae & Merickel, 2017: 571 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 129, pl. 27

3a. *Typocerus balteatus diana* Lewis, 2001

Type locality - Holotype male: United States, Texas: El Paso County, 19 miles East of El Paso (on Highway 180). (EMEC). **Distribution** - Southwestern Texas.

Typocerus balteatus diana Lewis, 2001: 11, 2 figs; Chemsak, 2005: 300, pl. 20, figs 9, 10; Monné, M.A., & Hovore, 2006: 173 (cat.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 498

4. *Typocerus confluens* Casey, 1913

Type locality - Lectotype male: United States, Kansas, Hamilton County. (USNM).

Distribution - Canada (Manitoba), central United States, Indiana to Colorado, Arizona, New Mexico to North Dakota. **Host plants** - *Acer negundo* Linnaeus (Aceraceae), *Carpinus* sp. (Corylaceae), *Fagus* sp. (Fagaceae), *Juglans nigra* Linnaeus (Juglandaceae).

Typocerus confluens Casey, 1913: 272; Knaus, 1914: 91; Leng, 1920: 274 (cat.); Swaine & Hopping, 1928: 36, pl. 4, fig. 45; Hendrickson, 1930: 104; Alexander, 1958: 41 (distr.); Kirk & Balsbaugh, 1975: 97 (distr.); Stein & Tigestad, 1976: 46, fig. 20; Linsley & Chemsak, 1976: 71; Chemsak, Linsley & Noguera, 1992: 104 (cat.); MacRae, 1993: 240 (distr.); Monné, M.A., 1995a: 82 (cat.); Yanega, 1996: 41, pl. 9, figs 97a, b; Heffern, 1998: 11 (distr.); Chemsak, 2005: 279, 283, pl. 19, fig. 8; Rice & Veal, 2003: 260 (distr.); Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter *et al.*, 2014: 43, 370, fig. 45q (lectotype); Bousquet. Laplante, Hammond & Langor, 2017: 30, pl. 27

Typocerus caligans Casey, 1913: 273; Knaus, 1914: 91; Leng, 1920: 274 (cat.); Alexander, 1958: 41 (distr.); Lingafelter *et al.*, 2014: 35, 370, fig. 36s (lectotype).

Type locality - Lectotype male: United States, Kansas. (USNM).

5. *Typocerus deceptus* Knull, 1929

Type locality - Holotype female: United States, Pennsylvania: Clark's Valley, North of Harrisburg. (FMNH). **Distribution** - Pennsylvania to Indiana & South Carolina. **Host plants** - *Quercus* sp. (Fagaceae).

Typocerus deceptus Knull, 1929: 144; 1946: 162, pl. 6, fig. 19; Alexander, 1958: 51 (distr.); Ruetten, 1970: 22 (paratypes); Linsley & Chemsak, 1976: 79; Chemsak, 1977: 179 (types); Bouseman, 1977: 179 (biol., distr.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1983: 187 (biol., distr.); 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 104 (cat.); Shimomura, 1994: 164 (distr.); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 82 (cat.); Yanega, 1996: 41, pl. 9, fig. 100; Peck & Thomas, 1998: 121 (distr.); Schiefer, 2001: 335 (distr.); Chemsak, 2005: 281, 295, pl. 20, fig. 5; Rice & Veal, 2006: 260 (distr.); Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 39, 143, 2 figs, pl. 10c; McDowell, 2011: 412 (biol.); Holt, 2013: 245 (biol., distr.); Vlasák, 2014: 317 (hosts); Klingeman *et al.*, 2017: 295 (distr.)

6. *Typocerus fulvocinctus* Knull, 1956

Type locality - Holotype female: United States, Florida: Sebring. (FMNH). **Distribution** - United States (Central Florida).

Typocerus fulvocinctus Knull, 1956: 338; Chemsak, 1977: 179 (type); Monné, M.A., & Giesbert, 1994: 173 (checklist); Monné, M.A., 1995a: 82 (cat.); Peck & Thomas, 1998: 121 (distr.); Chemsak, 2005: 282, 307, pl. 21, fig. 3; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 36, 14u3, 2 figs, pl. 9c.

Typocerus flavocinctus; Linsley & Chemsak, 1976: 84; Chemsak, Linsley & Noguera, 1992: 104 (cat., error).

7. *Typocerus gloriosus* Hopping, 1922

Type locality - Holotype male: United States, New Mexico, McKinley County, Fort Wingate. (CNCI), **Distribution** - United States (Colorado, Utah, New Mexico and Arizona). **Host plants** - *Juniperus osteosperma* (Torrey) Little (Cupressaceae)

Typocerus gloriosus Hopping, 1922: 166; Swaine & Hopping, 1928: 36, pl. 4, fig. 48; Ruetter, 1970: 22 (type); Linsley & Chemsak, 1976: 80; Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 82 (cat.); Heffern, 1998: 12 (distr.); Chemsak, 2005: 281, 297, pl. 20, figs 6, 7; Monné, M.A. & Hovore, 2006: 173 (checklist); Heffern, Vlasák & Alten, 2018: 748 (hosts)

8. *Typocerus lugubris* (Say, 1824)

Syntypes locality - Syntypes: United States, Missouri, banks of the lower part of the Missouri. (Depository unknown). **Distribution** - Eastern North America from southern Canada to Florida, westward to Kansas and Texas. It is known in Canada only from the Great Lakes area in southern Ontario **Host plants** - *Quercus alba* Linnaeus (Fagaceae), *Pinus* sp. (Pinaceae).

Leptura lugubris Say, 1824: 419; LeConte, 1859c: 198.

Stenura lugubris; Haldeman, 1847a: 63.

Typocerus lugubris; LeConte, 1850a: 334; LeConte, 1873a: 213; Townsend, 1889: 233 (distr.); Leng, 1890: 159; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 188; Smith, 1900: 292 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Wickham, 1909a: 29 (distr.); Morris, 1909b: 417 (distr.); Smith, 1910: 331; Blatchley, 1910: 1053; Leng, 1911: 215 (distr.); Fisher & Kirk, 1912: 313 (distr.); Banks, 1912: 106; Casey, 1913: 272; Morris, 1919: 50; Leng, 1920: 274 (cat.); Morris, 1921: 13; Leonard, 1928: 442 (distr.); Swaine & Hopping, 1928: 33, pl. 3, fig. 38; Ware, 1929: 368 (distr.); Loding, 1933: 148 (distr.); Brimley, 1938: 213 (distr.); Loding, 1945: 117 (distr.); Knull, 1946: 161; Fattig, 1947: 19 (distr.); Alexander, 1958: 51 (distr.); Dillon & Dillon, 1961: 611, pl. 60, No. 15; Bayer & Shenefelt, 1969: 13, fig. 23; Gosling & Gosling, 1976: 10, fig. 93 (biol., distr.); Linsley & Chemsak, 1976: 85; Bouseman, 1977: 180 (biol.); Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 80 (biol.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); MacRae, 1993: 240 (distr.); Shimomura, 1994: 164 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 83 (cat.); Yanega, 1996: 41, pl. 4, fig. 45; Linsley & Chemsak, 1997: 447 (hosts); Peck & Thomas, 1998: 121 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 2872, 308, pl. 21, fig. 4; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 33, 143, 2 figs, pl. 8f (hosts); Staines, 2008: 147 (distr.); Guarnieri, 2009: 16 (distr.); McDowell, 2011: 242 (biol.); Holt, 2013: 245 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 130, pl. 27

Strangalia (Typocerus) lugubris; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.

9. *Typocerus lunulatus lunulatus* (Swederus, 1787)

Type locality - Holotype: Promont. bonae Spei. (Depository unknown). **Distribution** - Pennsylvania to Kansas and Florida. **Host plants** - *Pinus* sp. (Pinaceae).

Leptura lunulata Swederus, 1787: 197; Gmelin, 1790: 1875; Schoenherr, 1817: 498.

Strangalia (Typocerus) lunulata; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.;

Typocerus lunulata; Brimley, 1938: 213 (distr., Loding, 1945: 117 (distr.); Alexander, 1958: 51 (distr.); Kirk, 1970: 78; Linsley & Chemsak, 1976: 83; Chemsak, Linsley & Noguera, 1992: 105 (cat.); Peck & Thomas, 1998: 121 (distr.); Lingafelter, 2007: 36, 143, 2 figs, pl. 9b (hosts).

Typocerus lunulatus lunulatus; Linsley & Chemsak, 1976: 86 (syn.); Turnbow & Franklin, 1980: 340 (distr.); Rice, 1981: 461 (distr.); MacRae, 1993: 240 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 83 (cat.); Yanega, 1996: 41, pl. 8, fig. 90; Linsley & Chemsak, 1997: 447 (hosts); Schiefer, 1998: 122 (distr.); Chemsak, 2005: 305, pl. 21, fig. 1; Monné, M.A. & Hovore, 2006: 173 (checklist); MacRae & Rice, 2007: 249 (biol., distr.); Holt, 2013: 245 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.)

Leptura arcuata Olivier, 1795: 32, pl. 4, fig. 47; Schoenherr, 1817: 491.

Type locality - Holotype female: Amérique Septentrionale. (MNHN).

Leptura lunata Fabricius, 1801: 360; Schoenherr, 1817: 486; Horn, 1886: 139; Zimsen, 1964: 183 (type); Horn, 1886: 139.

Stenura lunata Haldeman, 1847a: 63

Typocerus lunatus; LeConte, 1850a: 334; 1873b: 313; Leng, 1890: 159; Ulke, 1903: 26 (distr.); Leng, 1910: 77 (distr.); Fisher & Kirk, 1912: 313 (distr.); Banks, 1912: 106; Casey, 1913: 272; Dozier, 1920: 366 (distr.); Leng, 1920: 274 (cat.); Craighead, 1923: 92, pl. 14, fig. 5 (larva); Kirk & Knull, 1926: 26 (distr.); Swaine & Hopping, 1928: 33, pl. 3, fig. 39, pl. 12, fig. 5; Engelhardt, 1928: 252 (distr.); Knull, 1946: 161; Fattig, 1947: 19 (distr.)

Typocerus lunatus lunatus; Hoffman, 1958: 218, figs 1-3; Wray, 1967: 47 (distr.).

Syntypes locality - Syntypes: United States, Carolina). (ZMUC).

Typocerus lunatus fractus Hoffman, 1958: 220, figs 2,3; Wray, 1967: 46 (distr.); Lingafelter *et al.*, 2014: 93, fig. 102k (holotype).

Type locality - Holotype: United States, Virginia: Blacksburg. (USNM).

9a. *Typocerus lunulatus texanus* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, Texas: Angelina County, 10 miles North of Lufkin. (AMNH). **Distribution** - Arkansas, Louisiana, Texas, Oklahoma, Mississippi.

Typocerus lunulatus texanus Linsley & Chemsak, 1976: 84; Chemsak, Linsley & Noguera, 1992: 105 (cat.); MacRae, 1993: 240 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 83 (cat.); Yanega, 1996: 42, pl. 8, fig. 91; Schiefer, 1998: 122 (distr.); Chemsak, 2005: 306, pl. 21, fig. 2; Monné, M.A. & Hovore, 2006: 173 (checklist);

10. *Typocerus octonotatus* (Haldeman, 1847

Type locality - Holotype: United States, Alabama. (MCZN). **Distribution** - Eastern North America from northern Vermont to central Montana, north to southcentral Saskatchewan, south to central Texas and northern Georgia, Florida, New Mexico and Wyoming. **Host plants** - *Agropyron smithii* Rydberg, *Andropogon scoparius* Michaux, *Sorghastrum avenaceum* (Michaux) Nash, *S. nutans* Nash, *Sporobolus airoides* Torrey (Poaceae).

Stenura 8-notata Haldeman, 1847a: 62.

Stenura octonotata; Casey, 1924: 278.

Typocerus octonotatus; Linsley & Chemsak, 1976: 72, fig. 18; Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); MacRae, 1993: 240 (distr.); Lingafelter & Horner, 1993: 178 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 83 (cat.); Yanega, 1996: 42, pl. 9, figd 96a, b; Linsley & Chemsak, 1997: 448 (hosts); Heffern, 1998: 12 (distr., hosts); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 279, 285, pl. 19, fig. 9; Monné, M.A. & Hovore, 2006: 173 (checklist); Holt, 2013: 245 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 130, pl. 27

Typocerus sinuatus; LeConte, 1850a: 335; 1858: 41 (distr.); 1859d: 49 (distr.); Horn, 1868: 124 (distr.); LeConte, 1873a: 214; Provancher, 1877a: 612; Popenoe, 1877: 33 (distr.); Snow, 1877a: 19 (distr.); 1878: 67 (distr.); 1883: 42 (distr.); Horn, 1885a: 6; Townsend, 1889: 233; Leng, 1890: 159; Robertson, 1891: 571 (hosts); Ulke, 1903: 26 (distr.); Fall & Cockerell, 1907: 93 (distr.); Wickham, 1909a: 29 (distr.); Blatchley, 1910: 1023; Banks, 1912: 106;

Casey, 1913: 272; Leng, 1920: 274 (cat.); Wade, 1922: 27 (larva); Ortenburger & Hatch, 1926: 147 (distr.); Swaine & Hopping, 1928: 36, pl. 4, figs 46, 46; Hendrickson, 1928: 136 (biol.); Ware, 1929: 368 (distr.); Hendrickson, 1930: 105; Lacy, 1931: 497; Goldman, 1933: 92, pl. 5, figs 21-24; Whelan, 1936: 114; Brimley, 1938: 213 (distr.); Smith *et al.*, 1943: 314; Loding, 1945: 117 (distr.); Knull, 1946: 162; Dillon & Dillon, 1961: 614, pl. 61, No. 9; Bayer & Shenefelt, 1969: 12, fig. 23; Kirk, 1970: 78; Wilson, 1971: 60 (biol.); Kirk & Balsbaugh, 1975: 97 (distr.); Rogers, 1977: 834 (biol.). (not Newman, 1841).

Strangalia (Typocerus) sinuata; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.

Typocerus arapahoe Casey, 1924: 278; Lingafelter *et al.*, 2104: 19, 370, pl. 18w (lectotype).

Type locality - Lectotype female: United States, Colorado: Wray (USNM).

11. *Typocerus serraticornis* Linsley & Chemsak, 1976

Type locality - Holotype male: United States, Nevada, Humboldt County, Winnemucca. (CASC). **Distribution** - United States (Nevada, Utah, New Mexico and Idaho). **Host plants** - *Oryzopsis hymenoides* (Roemer & Schultes) Ricker (Poaceae).

Typocerus serraticornis Linsley & Chemsak, 1976: 69, fig. 17; Penrose, 1979: 159 (biol., distr.); Bechtel, Hanks & Rust, 1983: 474 (distr.); Robertson, 1988: 228, figs 1-13, 15-16, 19, 24-32 (biol.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 84 (cat.); Heffern, 1998: 12 (distr.); Chemsak, 2005: 278, 282, pl. 19, fig. 7; Monné, M.A. & Hovore, 2006: 173 (checklist); Rice, MacRae & Merickel, 2017: 671 (distr.)

12. *Typocerus sinuatus* (Newman, 1841)

Type locality - Holotype: United States, Florida: St. John's Bluff. (BMNH). **Distribution** - Middle and southeastern states to New Mexico and Colorado.

Leptura sinuata Newman, 1841: 70.

Typocerus sinuata; Alexander, 1958: 51 (distr.).

Typocerus sinuatus; Linsley & Chemsak, 1976: 81; Gosling & Gosling, 1976: 10, fig. 89 (biol., distr.); Stein & Tigestad, 1976: 46 (distr.); Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Glaser, 1992: 154 (distr.); Lingafelter & Horner, 1993: 179 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 84 (cat.); Yanega, 1996: 42, pl. 9, fig. 95; Heffern, 1998: 12 (distr.); Peck & Thomas, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 208 (distr.); Chemsak, 2005: 281, 301, pl. 20, fig. 11; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 378, 143, 2 figs, pl. 9i; Klingeman *et al.*, 2017: 295 (distr.)

Typocerus brunnicomis LeConte, 1873a: 214; 1876: 520 (distr.); Snow, 1877a: 19 (distr.); 1883: 42 (distr.); Leng, 1890: 159; Fall & Cockerell, 1907: 193 (distr.); Casey, 1913: 272; Leng, 1920: 274 (cat.).

Strangalia (Typocerus) brunnicomis; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.

Syntypes locality - Syntypes male: United States, Texas. (MCZN).

Typocerus brunnicomis inflatus Knull, 1959: 47; Ruetter, 1970: 22 (paratype); Chemsak, 1977: 179 (type).

Type locality - Holotype male: United States, North Carolina: Southern Pines. (FMNH).

13. *Typocerus sparsus* LeConte, 1878

Type locality - Holotype female: United States, Michigan: Lake Superior, Escanaba. (MCZN). **Distribution** - This species ranges from western New Brunswick to the Prince Albert area in central Saskatchewan, south to Wisconsin, Michigan, and Maine. **Host plants** - *Pinus* sp. (Pinaceae).

Typocerus sparsus LeConte, 1878: 614; Leng, 1890: 59; Hamilton, 1893a: 274 (distr.); 1893: 326 (distr.); Wickham, 1897b: 188; Morris, 1909b: 417; Blatchley, 1910: 1052; Casey, 1913: 272; Swaine & Hopping, 1928: 34, pl. 4, fig. 40, pl. 12, fig. 6; Brown, 1934: 229 (distr.); Chagnon, 1936: 252, pl. 16, fig. 11; Knull, 1946: 161, pl. 27, fig. 118; Chagnon & Robert, 1962: 252, pl. 16, fig. 11; Gardiner, 1966: 201, figs 3, 35 (biol.); Bayer & Shenefelt, 1969:

13, fig. 24; Gardiner, 1970: 284 (biol.); Stein & Tagestad, 1976: 47 (distr.); Linsley & Chemsak, 1976: 872; Gosling & Gosling, 1976: 10, fig. 92 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 100 (biol.); Gosling, 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 84 (cat.); Yanega, 1996: 42, pl. 8, fig. 92; Linsley & Chemsak, 1997: 448 (hosts); Chemsak, 2005: 281, 303, pl. 20, fig. 12; Monné, M.A. & Hovore, 2006: 173 (checklist); Webster, 2016: 485; Bousquet. Laplante, Hammond & Langor, 2017: 130, pl. 27

Strangalia (Typocerus) sparsa; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101; Saalas, 1936: 80 (morphol.).

14. *Typocerus velutinus velutinus* (Olivier, 1795)

Type locality - Holotype female: Amérique Septentrionale. (MNHN). **Distribution** - From Cape Breton Island to southern Manitoba, south to southeastern Nebraska, Arkansas, Mississippi, northern Georgia, and southern South Carolina. **Host plants** - *Alnus serrulatus*, *Betula alleghaniensis* Britton, *B. lenta* B., *populifolia* (Betulaceae), *Juiperus virginiana* Linnaeus (Cupressaceae), *Fagus grandifolia*, *Quercus alba* Linnaeus, *Q. ilicifolia*, *Q. stellata* (Fagaceae). *Castanea dentata* (Marshall), Borkhausen, *Quercus* sp. (Fagaceae), *Sassafras albidum* (Nuttall) Nees (Lauraceae), *Carya* sp. (Juglandaceae), *Liriodendron tulipifera* Linnaeus (Magnoliaceae), *Populus deltoides* Bartram ex Marshall, *Pinus rigida* Miller (Pinaceae). *Salix exigua* Nuttall (Salicaceae).

Leptura velutina Olivier, 1795: 18, pl. 3, fig. 32; Newman, 1841: 69; Weiss & Dickerson, 1921: 140 (hosts).

Stenura velutina; Haldeman, 1847a: 62; 1847b: 374.

Strangalia velutina; Melsheimer, 1853: 114 (cat.).

Typocerus velutinus; LeConte, 1873a: 213 (syn.); Horn, 1876: 170 (syn.); Provancher, 1877a: 612; Popenoe, 1877: 33 (distr.); Snow, 1878: 67 (distr.); 1883: 42 (distr.); Smith, 1882: 25; Lameere, 1884: cccxxii (distr.); Harrington, 1884: 47; Horn, 1885a: 6 (syn.); 1886: 139; Leng, 1890: 159; Hamilton. 1893: 274 (distr.); 1895: 338 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 188; 1897c: 157 (distr.); Smith, 1900: 292; Dury, 1902: 161 (distr.); Ulke, 1903: 26 (distr.); Chagnon, 1905: 36 (distr.); Felt, 1906: 436 (distr.); Fall & Cockerell, 1907: 193 (distr.); Wickham, 1909a: 29 (distr.); Smith, 1910: 331; Blatchley, 1910: 1053; Banks, 1912: 206; Fisher & Kirk, 1912: 313 (distr.); Casey, 1913: 248, 272; 1913: 274; Johnson, 1915: 315 (distr.); Chagnon, 1917: 234 (distr.); Dozier, 1918: 335 (distr.); Blackman, 1918: 128 (biol.); Nicolay, 1919: 69 (distr.); Britton, 1920: 268 (distr.); Dozier, 1920: 366 (distr.); Craighead, 1923: 91, pl. 14, fig. 4, pl. 22, fig. 2 (larva); Blackman & Stage, 1924: 16 (biol.); Munding, 1924: 319; Hatch, 1925: 580 (distr.); Kirk & Knull, 1926: 26 (distr.); Champlain & Kirk, 1926: 290 (biol.); Procter, 1927: 112 (distr.); Leonard, 1928: 442 (distr.); Swaine & Hopping, 1928: 35, pl. 4, fig. 43; Criddle, 1928: 97 (distr.); Ware, 1929: 368 (distr.); Knowlton, 1930: 75 (distr.); Park, 1931: 190; Champlain & Knull, 1932: 256; Knull, 1932: 63 (biol.); Beaulne, 1932: 200 (hosts); Whelan, 1936: 114; Chagnon, 1936: 252, pl. 16, fig. 10; Frost, 1937: 202 (distr.); Brimley, 1938: 213 (distr.); 1941: 121; Wray & Brimley. 1943: 130 (distr.); Loding, 1945: 117 (distr.); Procter, 1946: 179 (biol.); Knull, 1946: 162; Fattig, 1947: 19; Alexander, 1958: 51 (distr.); Gibson & Carrillo, 1959: 119 (distr.); Dillon & Dillon, 1961: 611, pl. 60 No. 14; Chagnon & Robert, 1962: 252, pl. 16, fig. 10; Bayer & Shenefelt, 1969: 12, fig. 24; Gardiner, 1970: 285; Kirk, 1970: 78; Wilson. 1971: 60 (biol.); Swan & Papp, 1972: 450, fig. 956; Kirk & Balsbaugh, 1975: 97 (distr.); Gosling & Gosling, 1976: 10 (biol., distr.); Linsley & Chemsak, 1976: 77 (syn.); Laliberté, Chantal & LaRochelle, 1977: 100 (biol.); Bouseman, 1977: 180 (biol.); Dailey, Graves & Kingsolver, 1978: 226; Frost, 1979: 347 (biol.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); McDowell, 2011: 412 (biol.); Steury & MacRae, 2014: 10 (distr.); Vlasák, 2014: 318 (hosts).

Typocerus velutinus velutinus; Linsley & Chemsak, 1976: 77; Turnbow & Franklin, 1980: 340 (distr.); Gosling, 1984: 81 (biol.); 1986: 158 (hosts); MacRae, 1993: 240 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 85 (cat.); Yanega, 1996: 42, pl. 9, figs 98a-c; Linsley & Chemsak, 1997: 448 (hosts); Schiefer, 1998: 123 (distr.); Vlasák & Vlasakova, 2002: 208 (distr., hosts); Chemsak, 2005:

- 293, pl. 20, fig. 3; Monné, M.A. & Hovore, 2006: 173 (checklist); MacRae & Rice, 2007: 249 (distr., hosts); Lingafelter, 2007: 39, 143, 2 figs, pl. 10e; Guarnieri, 2009: 16 (distr.); Holt, 2013: 245 (biol., distr.); Webster, 2016: 485; Klingeman *et al.*, 2017: 295 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 130, pl; 27
- Strangalia (Typocerus) velutina*; Aurivillius, 1912: 346 (cat.); Boppe, 1921: 101, pl. 8, fig. 5.
- Leptura fugax* Fabricius, 1798: 153; 1801: 359; Zimsen, 1964: 183 (type).
- Stenura fugax*; Haldeman, 1847a: 62; 1847b: 374.
- Typocerus fugax*; LeConte, 1850b: 334; 1852: 176; Urban, 1859d: 320; Bland, 1861: 101 (biol., distr.); Rogers, 1872: 119 (distr.).
- Strangalia fugax*; Melsheimer, 1853: 114 (cat.)
- Type locality** - Holotype: America. (ZMUC).
- Leptura tenuior* Kirby. 1837: 181; Haldeman, 1847: 65; Bethune, 1872: 113.
- Strangalia tenuior*; LeConte, 1850a: 333.
- Type locality** - Holotype: Canada. (BMNH).
- Typocerus manitobensis* Swaine & Hopping, 1928: 35, pl. 4, fig. 44; Ruetter, 1970: 22 (type).
- Type locality** -Holotype: Canada, Manitoba: Victoria Beach. (CNCI).

14a. *Typocerus velutinus nobilis* (Newman, 1841)

- Syntypes locality** - Syntypes: United States, Florida: In the hammocks near St. John's Bluff. (BMNH). **Distribution** - Florida to Georgia, southwest to Louisiana, Oklahoma and Texas.
- Leptura nobilis* Newman, 1841: 69.
- Typocerus nobilis*; LeConte, 1850a: 335.
- Typocerus velutinus nobilis*; Linsley & Chemsak, 1976: 70 (syn.); Turnbow & Frankiln, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 85 (cat.); Peck & Thomas, 1998: 121 (distr.); Schiefer, 1998: 123 (distr.); Chemsak, 2005: 294, pl. 20, fig. 4; Monné, M.A. & Hovore, 2006: 173 (checklist); Holt, 2013: 245 (biol., distr.).
- Typocerus trimaculatus* Champlain & Knull, 1922a: 304; Swaine & Hopping, 1928: 35; Loding, 1945: 117 (distr.); Fattig, 1947: 20 (distr.); Alexander, 1958: 51 (distr.); Chemsak, 1977: 179 (types).
- Type locality** - Holotype male: United States, Louisiana: New Roads. (FMNH).
- Typocerus oklahomensis* Hopping, 1940: 33 (part).
- Toxotus oklahomensis*; Alexander, 1958: 51 (distr.).
- Type locality** - Holotype male: United States, Oklahoma: Latimer County. (CASC)

15. *Typocerus zebra* (Olivier, 1795)

- Type locality** - Holotype female: Amérique Septentrionale. (MNHN). **Distribution** - Eastern United States from Florida to Texas. **Host plants** - *Pinus contorta*, *Pinus echinata* Miller, *Pinus inops* Solander, *P. virginiana* (Pinaceae).
- Leptura zebra* Olivier, 1795: 19, pl. 3, fig. 33; Newman, 1841: 70; Johnson, 1915: 315 (distr.).
- Stenura zebra*; Haldeman, 1847a: 62.
- Typocerus zebra*; Leng, 1908: 242 (syn.); Gahan, 1908: 143 (syn.); Casey, 1913: 272; Morris, 1921: 13; Hatch, 1925: 580 (distr.); Kirk & Knull, 1926: 25 (distr.); Leonard, 1928: 442 (distr.); Whelan, 1936: 114; Brimley, 1938: 213 (distr.); 1941: 121; Wray & Brimley, 1943: 180 (distr.); Loding, 1945: 117 (distr.); Knull, 1956: 160; Fattig, 1947: 10 (distr.); Howden & Vogt, 1951: 591 (hosts); Kirk, 1970: 78; Wilson, 1971: 60 (biol.); Gosling & Gosling, 1976: 10 (distr.); Linsley & Chemsak, 1976: 75, fig. 18; Frost, 1979: 347 (biol.); Turnbow & Franklin, 1980: 340 (distr.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); MacRae, 1993: 240 (distr.); Lingafelter & Horner, 1993: 179 (distr.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 86 (cat.); Yanega, 1996: 42, pl. 8, fig. 93; Browne & Peck, 1996: 2159 (distr.); Linsley & Chemsak, 1997: 448 (hosts); Peck & Thomas, 1998: 121 (distr.); Schiefer, 1998: 123 (distr.); Vlasák & Vlasakova, 2002: 209 (distr.); Chemsak, 2005: 280, pl. 19, fig. 12; Monné, M.A. & Hovore, 2006: 173 (checklist); Lingafelter, 2007: 38, 143, 2 figs, pl. 9k (hosts); Guarnieri, 2010: 24 (distr.); Holt, 2013: 245 (biol., distr.); Klingeman *et al.*, 2017: 295 (distr.)

Strangalia (Typocerus) zebra; Aurivillius, 1912: 246 (cat.); Boppe, 1921: 101.

Leptura zebrata Fabricius, 1801: 364; Illiger, 1805: 125; Latreille, 1807: 42; Zimsen, 1964: 184 (type).

Strangalia zebrata; Melsheimer, 1853: 114 (cat.).

Typocerus zebratus; LeConte, 1850a: 334; 1852: 176; 1873a: 213; Provancher, 1877b: 312; Smith, 1882: 25; Snow, 1883: 42 (distr.); Townsend, 1885: 70 (distr.); Horn, 1885a: 6 (syn.); Leng, 1890: 159; Packard, 1890: 80, fig. 28; Hamilton, 1895: 338 (distr.); Beutenmuller, 1896: 77 (hosts); Castle & Laurent, 1896: 301 (distr.); Wickham, 1897b: 188, fig. 28; Smith, 1900: 292 (distr.); Ulke, 1903: 26 (distr.); Felt, 1906: 72; Fall & Cockerell, 1907: 193 (distr.); Leng, 1910: 77 (distr.); Smith, 1910: 331; Chagnon, 1917: 234 (distr.); Dozier, 1918: 335 (distr.); Craighead, 1923: 92 (larva); Swaine & Hopping, 1928: 32, pl. 3, fig. 35, 36; Beaulne, 1932: 200 (hosts); Dillon & Dillon, 1961: 611, pl. 60, No. 16.

Syntypes locality - Syntypes: United States, Carolina. (ZMUC).

Leptura carolina Weber, 1801: 91.

Strangalia carolina; Melsheimer, 1853: 114 (cat.)

Type locality - Holotype: United States, Carolina. (ZMUC).

Leptura aurigera Newman, 1841: 70; Horn, 1885a: 5 (syn.).

Syntypes locality - Syntypes: United States, New York: Trenton Falls. (BMNH).

***Xestoleptura* Casey 1913**

Xestoleptura Casey, 1913: 248, 260; 1924: 285; Chemsak, 1964: 236; Linsley & Chemsak, 1976: 150; Monné, M.A., 1995a: 105; Chemsak, 2005: 39, 392; Monné, M.A. & Hovore, 2006: 173 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 134 (key spp.)

Type- species - *Xestoleptura corusca* Casey, 1913 (= *Leptura crassicornis* LeConte, 1873) (original designation).

1. *Xestoleptura behrensii* (LeConte, 1873)

Type locality - Holotype female: United States, California: Mendocino. (MCZN).

Distribution - British Columbia (from Haida Gwaii and Vancouver Island east to the Okanagan Valley) to coastal central California. **Host plants** - *Picea sitchensis* (Bongard) Carr, *Pseudotsuga menziesii* (Mirbel) Franco, *P. taxifolia* (Poiret) Britton (Pinaceae).

Leptura Behrensii LeConte, 1873a: 227; Keen, 1895: 219 (distr.); Boppe, 1921: 90.

Leptura behrensii; Leng, 1890: 191; Fall, 1901: 150 (distr.); Garnett, 1918: 252 (distr.)

Xestoleptura behrensi; Casey, 1913: 261; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 154, fig. 41; Deyrup, 1977: 182 (hosts); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 105 (cat.); Linsley & Chemsak, 1997: 450 (hosts); Chemsak, 2005: 398, pl. 26, fig. 4; Monné, M.A. & Hovore, 2006: 173 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 135, pl; 29

Anoplodera behrensii; Swaine & Hopping, 1928: 54, pl. 7, fig. 76; Canova, 1936: 127 (distr., hosts); Doane *et al.*, 1936: 174 (distr.); Hardy, 1950: 85 (distr.); Hatch, 1971: 132, pl. 14, fig. 9.

2. *Xestoleptura cockerelli* (Fall, 1907)

Type locality - Holotype male: United States, New Mexico: Beulah. (MCZN). **Distribution** - United States (Colorado Plateau). **Host plants** - *Pinus* sp. (Pinaceae).

Leptura cockerelli Fall, 1907: 251; Boppe, 1921: 91.

Xestoleptura cockerelli; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 151; Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 105 (cat.); Linsley & Chemsak, 1997: 450 (hosts); Heffern, 1998: 12 (distr.); Chemsak, 2005: 393, pl. 25, fig. 12, pl. 26, fig. 1; Monné, M.A. & Hovore, 2006: 173 (checklist);

Anoplodera cockerelli; Swaine & Hopping, 1928: 55, pl. 8, fig. 78, pl. 9, fig. 89.

3. *Xestoleptura crassicornis* (LeConte, 1873)

- Type locality** - Holotype female; United States, California. (MCZN). **Distribution** – Canada (British Columbia, British Columbia from the Okanagan Valley and the Lytton area), Washington to Idaho and Sierra Nevada to southern California. **Host plants** - *Abies* sp., *Pinus* sp. (Pinaceae).
- Leptura crassicornis* LeConte, 1873a: 227; Wickham, 1890: 35 (distr.); 1897a: 167 (biol.); Harrington, 1899: 108 (distr.).
- Xestoleptura crassicornis*; Casey, 1913: 260; Leng, 1920: 273 (cat.); Linsley & Chemsak, 1976: 156, fig. 42; Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 105 (cat.); Linsley & Chemsak, 1997: 450 (hosts); Chemsak, 2005: 394, 400, pl. 26, fig. 5; Monné, M.A. & Hovore, 2006: 173 (checklist); Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 135, pl. 29
- Anoplodera crassicornis*; Swaine & Hopping, 1928: 53, pl. 7, figs 71, 72; Doane *et al.*, 1936: 174; Canova, 1936: 127 (distr.); Hatch, 1971: 131, pl. 14, figs 14, 14a; Penrose & Westcott, 1974: 72 (biol.).
- Xestoleptura corusca* Casey, 1913: 261; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 46, 370, fig. 49a (lectotype).
- Type locality** - Lectotype male: United States, California: Grant Forest. (USNM).

4. *Xestoleptura crassipes* (LeConte, 1857)

- Type locality** - Holotype female: United States, Washington: Steilacoom, Pierce County (southwest of Tacoma). (MCZN) **Distribution** - From the Skeena River in western British Columbia to the Banff area in the Rocky Mountains of Alberta, south to northern Colorado and southern California. **Host plants** - *Thuja plicata* Donn ex D. Don (Cupressaceae), *Chrysolepis* sp., *Lithocarpus densiflora* Rehder, *Quercus* sp. (Fagaceae), *Umbellularia californica* (Hooker & Arnott) Nuttall (Lauraceae), *Eucalyptus globulus* Labillardière (Myrtaceae), *Abies grandis* (Lambert) Lindley, *Larix laricina* (DuRoi) K. Koch, *Pinus ponderosa* Douglas ex Lawson & P. Lawson. *Pseudotsuga menziesii* (Mirbel) Franco, *P. taxifolia* (Poiret) Britton, *Tsuga* sp. (Pinaceae), *Salix* sp. (Salicaceae), *Sequoia sempervirens* (D. Don) Endlicher (Taxodiaceae).
- Leptura crassipes* LeConte, 1857: 65; 1873a: 221; Rivers, 1886: 7; Wickham, 1890: 35; Leng, 1890: 189, 198; Wickham, 1897b: 167 (biol.); Fall, 1901: 149 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 251 (distr., hosts); Craighead, 1923: 92 (larva).
- Xestoleptura crassipes*; Casey, 1913: 263; 1924: 285 (syn.); Hardy, 1926b 29, pl. 5, figs 46, 47; Essig, 1926: 453, fig. 354; Hardy & Preece, 1926: 35 (hosts); 1927: 63 (hosts); Kirk & Balsbaugh, 1975: 97 (distr.); Linsley & Chemsak, 1976: 156; Frost, 1979: 347 (biol.); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 106 (cat.); Linsley & Chemsak, 1997: 451 (hosts); Heffern, 1998: 12 (distr.); Chemsak, 2005: 394, 402, pl. 26, fig. 6; Monné, M.A. & Hovore, 2006: 173 (checklist); Vlasák, 2014: 318 (hosts); Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 135, pl. 29; Gimmel *et al.*, 2023: 256 (distr.)
- Anoplodera crassipes*; Swaine & Hopping, 1928: 54, pl. 7, figs. 74, 75; Exline & Hatch, 1934: 450; Canova, 1936: 128 (distr., hosts); Doane *et al.*, 1936: 174 (biol.); Moore, 1937: 89 (distr.); Hardy, 1942: 10 (biol.); Leech, 1947: 105; Hardy, 1948: 32 (distr.); 1949: K25, K44; DeLeon, 1952: 81 (hosts); Hardy, 1955: B50; Clark, 1956: 41 (distr.); Hardy, 1957: D65 (distr.); Linsley, 1958: 107; MacSwain, 1958: 104 (hosts); Ross, 1967: 23; Hatch, 1971: 132, pl. 14, figs 15, 15a; Penrose & Westcott, 1974: 72 (biol.).
- Leptura xanthogaster* LeConte, 1859b: 88; 1859a: 291 (distr.).
- Type locality** - Holotype male: United States, Washington Territory: Shoalwater Bay. (MCZN).
- Leptura fasciventris* LeConte, 1861: 355; 1869: 371 (distr.).
- Type locality** - Holotype: United States, California. (MCZN).
- Xestoleptura vancouveri* Casey, 1913: 263; Lingafelter *et al.*, 2014: 340, fig. 78g (holotype).
- Type locality**- Holotype female: Canada, British Columbia: Vancouver Island. (USNM).
- Xestoleptura muliebris* Casey, 1913: 263; Lingafelter *et al.*, 2014: 102, fig. 113g (holotype).

Type locality - Holotype female: United States, California. (USNM).

Xestoleptura crassipes shastana Casey, 1913: 263; Lingafelter et al., 2014: 47, fig. 50a (holotype).

Type locality - Holotype male: United States, California: Mount Shasta. (USNM).

5. *Xestoleptura octonotata* (Say, 1824)

Type locality - Holotype: United States, Mississippi, on the Mississippi. (Depository unknown). **Distribution** - This species ranges from New Hampshire to Iowa (Rice and Veal 2006: 260), south to southeastern Tennessee and southwestern North Carolina in the Appalachian Mountains. In Canada, it is known only from the Great Lakes area in southern Ontario. **Host plants** - *Quercus alba* Linnaeus (Fagaceae).

Leptura 8-notata Say, 1824: 419; Haldeman, 1847a: 65; LeConte, 1850a: 337; 1859c: 197; Bland, 1861: 101 (distr., hosts); Saunders, 1868: 13 (distr.).

Leptura octopunctata; Emmons, 1854: 127 (error).

Leptura octonotata; Gemminger in Gemminger & Harold, 1872: 2868 (cat.); LeConte, 1873a: 221; Horn, 1885a: 6 (syn); Leng, 1890: 189, 199; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 191; 1897c: 158 (distr.); Smith, 1900: 292 (distr.); 1910: 331; Blatchley, 1910: 1058; Daecke, 1911: 477; Fisher & Kirk, 1912: 313 (distr.); Lovell, 1915: 114; Johnson, 1915: 315 (distr.); Chagnon, 1917: 235 (distr.); Morris, 1921: 13; Boppe, 1921: 91; Saalas, 1936: 78 (morphol.).

Xestoleptura octonotata; Casey, 1913: 260; Leng, 1920: 273 (cat.); Britton, 1920: 268 (distr.); Kirk & Knull, 1926: 25 (distr.); Leonard, 1928: 441 (distr.); Brimley, 1938: 213 (distr.); Gibson & Carrillo, 1959: 119 (distr.); Gosling & Gosling, 1965: 15, fig. 108 (biol., distr.); Linsley & Chemsak, 1976: 153; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 339 (distr.); Arnett, 1985: 369, fig. 24.206; Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 106 (cat.); Yanega, 1996: 43, pl. 9, fig. 94; Linsley & Chemsak, 1997: 451 (hosts); Vlasák & Vlasakova, 2002: 209 (distr.); Chemsak, 2005: 394, pl. 26, fig. 3; Monné, M.A. & Hovore, 2006: 173 (checklist); Rice & Veal, 2006: 260 (distr.); Lingafelter, 2007: 28, 143, 2 figs, pl. 7a (hosts); Guarnieri, 2009: 16 (distr.); Klingeman et al., 2017: 295 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 135

Anoplodera octonotata; Swaine & Hopping, 1928: 55, pl. 7, fig. 77, pl. 12, fig. 12; Knull, 1946: 166, pl. 27, fig. 115; Dillon & Dillon, 1961: 615, pl. 61, No. 10; Bayer & Shenefelt, 1969: 7, fig. 19; Kirk, 1970: 77; Wilson, 1971: 60 (biol.).

Leptura stictica Newman, 1841: 72.

Syntypes locality - Syntypes: United States, New York: Trenton Falls. (BMNH).

Leptura 4-punctata Haldeman, 1847a: 64.

Leptura octonotata var. *quadripunctata*; Gemminger in Gemminger & Harold, 1872: 2868 (cat.); Aurivillius, 1912: 223 (cat.); Boppe, 1921: 91.

Xestoleptura octonotata quadripunctata; Leng, 1920: 273 (cat.).

Type locality - Holotype: United States, Pennsylvania. (MCZN).

6. *Xestoleptura tibialis* (LeConte, 1850)

Type locality - Holotype: United States, Lake Superior, St. Ignace. (MCZN). **Distribution** - British Columbia to northwestern California, Rocky Mountains, northeastward to Labrador and Newfoundland. **Host plants** - *Abies* sp., *Larix laricina* (Duroi) K. Koch, *L. occidentalis* Nuttall, *Picea engelmanni* Engelmann, *Pinus strobus* Linnaeus (Pinaceae).

Leptura tibialis LeConte, 1850b: 236; 1850a: 339; 1873a: 221; Austin, 1874: 271; Leng, 1890: 191; Adams, 1909: 201 (distr.); Sherman, 1910: 195 (distr.); Boppe, 1921: 81; Fall, 1926: 202 (distr.).

Xestoleptura tibialis; Leng, 1920: 273 (cat.); Casey, 1924: 285; Hardy, 1926b: 29; 1927: C24; Linsley & Chemsak, 1976: 151, fig. 40; Gosling, 1986: 158 (hosts); Chemsak, Linsley & Noguera, 1992: 105 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist); Monné, M.A., 1995a: 107 (cat.); Yanega, 1996: 43, pl. 8, figs 83a-b; Linsley & Chemsak, 1977: 451 (hosts);

- Chemsak, 2005: 393, pl. 26, fig. 2; Monné, M.A. & Hovore, 2006: 173 (checklist); MacRae & Rice, 2007: 250 (biol., distr.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Webster, McCorquodale & Majka, 2009: 295 (distr.); Webster, 2016: 485; Rice, MacRae & Merickel, 2017: 671 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 135, pl. 29
- Anoplodera tibialis*; Swaine & Hopping, 1928: 53, pl. 7, fig. 53; Mank, 1934: 80 (distr.); Canova, 1936: 129 (distr., hosts); Doane *et al.*, 1936: 174; Hardy, 1944: 16 (distr.); Carl & Hardy, 1945: C36; Hardy, 1948: 32; 1955: B50; Gardiner, 1970: 286 (biol.); Hatch, 1971: 131, pl. 14, fig. 13; Penrose & Westcott, 1974: 72 (biol.); Gosling & Gosling, 1976: 17, fig. 114 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 90 (biol.).
- Leptura hirtella* LeConte, 1873a: 226; Austin, 1874: 271; Leng, 1890: 190; Sherman, 1910: 195 (distr.).
- Xestoleptura hirtella*; Leng, 1920: 273 (cat.).
- Type locality** - Holotype male: Canada, Labrador. (MCZN).
- Xestoleptura columbica* Casey, 1913: 261; Leng, 1920: 273 (cat.); Lingafelter *et al.*, 2014: 43, fig. 44w (holotype).
- Type locality** - Holotype female: Canada, British Columbia. (USNM).
- Leptura miquelonensis* Pic, 1921: 11.
- Type locality** - Holotype: Saint-Pierre et Miquelon. (MNHN).
- Xestoleptura pictipennis* Casey, 1924: 285; Lingafelter *et al.*, 2014: 229, 370, fig. 131s (lectotype).
- Type locality** - Lectotype female: United States, Idaho; Bonner County, Priest Lake. (USNM).

RHAGIINI Kirby, 1837

Rhagiadae Kirby, 1837: 178.

Rhagiidae Gistel, 1848a: (9).

Rhagiaires Planet, 1924

Rhagii Boppe, 1921: 14

Rhagiini; Bousquet *et al.*, 2009: 22; Bouchard *et al.*, 2011: 463; Dutrillaux & Dutrillaux, 2018: 47 (cytogenetics); Zamoroka, 2022: 301 (*sensu novo*)

Type-genus: *Rhagium* Fabricius, 1775

Type-species: *Cerambyx inquisitor* Linnaeus, 1758 designated by Westwood (1838: 41).

Stenocoridae Hope, 1834: 106

Type-genus: *Stenocorus* Geoffroy *sensu* Hope, 1834 (= *Phoracantha* Newman, 1840)

Comment. Because the type genus was misidentified when Hope established his family-group name, the case is to be referred to the Commission for a ruling (Article 65.2.1). In fact, an application should be made to the Commission to reject the name for both the Principles of Homonymy and Priority. (Bousquet *et al.*, 2009: 22).

Toxotaires Mulsant, 1839: 230. (based on *Toxotus* Dejean, 1821). *Nomen nudum*.

Comment. This name is unavailable under Article 11.7 (not subsequently Latinized and attributed to Mulsant, 1839).

Pachytes Motschulsky, 1849: 60 (based on *Pachyta* Dejean, 1821). *Nomen nudum*.

Comment. This name is unavailable under Article 11.7 (not subsequently Latinized and attributed to Motschulsky 1849).

Toxoti LeConte and Horn, 1883: 313.

Type-genus: *Toxotus* Dejean, 1821.

Type-species: *Leptura meridiana* Linnaeus, 1758 designated by Westwood (1838: 41).

Comment. This family-group name is a junior homonym of Toxotidae Günther, 1860 (based on *Toxotes* Cuvier and Cloquet, 1816 [Perciformes]). The case is to be referred to the Commission for a ruling to remove the homonymy (Article 55.3.1).

Pachytini Portevin, 1934: 119 (key), 129.

Type-genus: *Pachyta* Dejean, 1821.

Type-species: *Leptura octomaculata* Fabricius, 1792 designated by Westwood (1838: 41).

***Pachyta* Dejean, 1821**

Pachyta Dejean, 1821: 112; Audinet-Serville, 1835: 213; Laporte, 1840: 502; Blanchard, 1845: 164; LeConte, 1850b: 235; Thomson, 1864: 142, 408; Lacordaire, 1868: 427, 439; Chenu, 1870: 331; LeConte, 1873b: 328; LeConte & Horn, 1883: 313; Leng, 1890: 97; 1890: 65; Wickham 1897a: 88; Blatchley, 1910: 1046; Boppe, 1921: 63; Craighead, 1923: 88; Bradley, 1930: 235; Doane *et al.*, 1936: 176; Chagnon, 1936: 245; Hopping, 1937: 17; Linsley, 1938: 109; Chagnon & Robert, 1962: 241; Arnett, 1962: 857, 877; Chemsak, 1964: 233; Podany, 1964: 42; Hatch, 1971: 125; Linsley & Chemsak, 1972: 65; Monné, M.A., 1995a: 25; Chemsak, 2005: 32, 93; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 104 (key spp.)

Type-species - *Leptura 4-maculata* Linnaeus, 1758 (subsequent designation, Westwood, 1840: 41).

Argaleus LeConte, 1850a: 319; 1854b: 218; Thomson, 1861: 144, 166; Lacordaire, 1868: 439; Swaine & Hopping, 1928: 10; Linsley, 1938: 109; Chemsak, 1964: 231

Type-species - *Argaleus nitens* LeConte, 1850 (= *Pachyta liturata* Kirby, 1837) subsequent designation, Swaine & Hopping, 1928:10).

Acmaeops; Thomson, C. G. 1866 (not LeConte, 1850).

Anthophilax; Blessig, 1873 (not LeConte, 1850)

Neopachyta Bedel, 1906: 93 (*nom.nov.*).

Type-species -

Linsleyana Podany, 1964: 42

Type-species - *Pachyta armata* LeConte, 1873 (original designation).

1. *Pachyta armata* LeConte, 1873

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - This species ranges from British Columbia to the Sierra Nevada in east-central California. It is recorded also from northwestern Montana. In British Columbia, it occurs mostly over the western half of the province, including Vancouver Island, as far north as the Portland Inlet area. **Host plants** - *Pinus monticola* Douglas ex D. Don, *Tsuga mertensiana* (Bongard) Carrière (Pinaceae).

Pachyta armata LeConte, 1873a: 207; Leng, 1890: 97; 1920: 271 (cat.); Boppe, 1921: 63; Hardy, 1927a: C24 (biol.); Canova, 1936: 131 (distr., hosts); Doane *et al.*, 1936: 276; Hopping, 1937: 17, pl. 3; Hardy, 1944: 15; 1948: 32 (distr.); 1955: B50; Clark, 1956: 41 (distr.); Hatch, 1971: 139; Linsley & Chemsak, 1972: 67, fig. 23; Furniss & Carolin, 1977: 297 (biol.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 25 (cat.); Linsley & Chemsak, 1997: 414 (hosts); Chemsak, 2005: 96, pl. 7, fig. 5; Monné, M.A. & Hovore, 2006: 167 (checklist); Swift, 2008: 6 (biol., distr., hosts); Bousquet. Laplante, Hammond & Langor, 2017: 104, pl. 17

Pachyta (Linsleyana) armata; Podany, 1964: 52, pl. 3, fig. 4

2. *Pachyta lamed lamed* (Linnaeus, 1758)

Syntypes locality - Syntypes: Sweden, Roslagia. (UZI). **Distribution** - North and middle Europe, Siberia, and Boreal North America. **Host plants** - *Abies* sp., *Larix koreana* Nakai, *L. olgensis* A. Henry var. *amurensis* (Kolesnikov ex Dylis) Kitagawa, *Picea abies* Linnaeus, *P. glehnii* Masters, *P. jezoensis* Carrière, *Pinus armandii* Franchet,

P. massoniana D. Don, *P. sylvestris* Linnaeus, *P. tabulaeformis* Hortulanorum ex C. Koch (Pinaceae).

Cerambyx lamed Linnaeus, 1758: 391; 1761: 187; 1767: 630.

Stenocorus lamed; Fabricius, 1775: 178; 1781: 226; 1787: 143; 1793: 293.

Pachyta lamed: Zettersted, 1828: 376; Linsley & Chemsak, 1972: 66; Furniss & Carolin, 1977: 297 (biol.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Chemsak, 2005: 94; Monné, M.A. & Hovore, 2006: 165 (checklist);

Leptura pedella DeGeer, 1775: 129, pl. 4, fig. 10.

Type locality - Type: Sweden. (NHRS).

Leptura spadicea Paykull, 1800: 103.

Type locality - Holotype: Sweden. (NHRS).

2a. *Pachyta lamed liturata* Kirby, 1837

Syntypes locality - Syntypes: North America, latitudes 54 and 65 degrees. (BMNH).

Distribution - From Newfoundland to western Alaska, north to the Inuvik area in northern Northwest Territories, south to east-central California in the Sierra Nevada, southern Arizona, southern Colorado and Pennsylvania. **Host plants** - *Abies grandis* (Lambert) Lindley, *Picea* sp., *Pinus* sp., *Pseudotsuga menziesii* (Mirbel) Franco, *P. taxifolia* (Poiret) Britton (Pinaceae).

Pachyta liturata Kirby, 1837: 178; Haldeman, 1847a: 60; LeConte, 1850a: 340; Mannerheim, 1852: 367; Bethune, 1872:111; Horn, 1876: 170; LeConte, 1876: 520 (distr.); Snow, 1877a: 19 (distr.); Provancher, 1877a: 608; Smith, 1885: 62 DD; Leng, 1890: 97; Harrington, 1890: 185 (distr.); Hamilton, 1894a: 31 (distr.); Townsend, 1895: 48 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 171; 1899b: 199 (distr.); Harrington, 1899: 108 (distr.); Holland, 1900: 423 (distr.); Schwarz, 1900: 535 (distr.); Fall, 1901: 148 (distr.); Skinner, 1903: 40 (distr.); Fall & Cockerell, 1907: 193 (distr.); Sherman, 1910: 194 (distr.); Blatchley, 1910: 1049; Schwarz, 1910: 183 (distr.); Garnett, 1918: 212 (distr.); Fall, 1926: 202 (distr.); Hardy, 1926a: 5; Essig, 1926: 452, fig. 352 (biol.); Mank, 1934: 80 (distr.); Knowlton, 1934: 86; Canova, 1936: 131 (distr., hosts); Chagnon, 1936: 245; Knowlton & Thatcher, 1936: 279 (distr.); Doane *et al.*, 1936: 176; Chagnon & Robert, 1962: 245.

Leptura liturata; LeConte, 1857: 6.

Argaleus lituratus; LeConte, 1861: 356 (syn.); Lacordaire, 1868: 440.

Evodinus lituratus; Aurivillius, 1912: 188 (cat.); Boppe, 1921: 72; Saalas, 1922: 63 (morphol.).

Pachyta lamed liturata; Linsley & Chemsak, 1972: 77, fig. 22; Gosling & Gosling, 1976: 3 (distr.); Laliberté, Chantal & LaRochelle, 1977: 96 (biol.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 26 (cat.); Yanega, 1996: 36, pl. 8, figs 89a,b; Linsley & Chemsak, 1997: 414 (hosts); Heffern, 1998: 9 (distr.); Chemsak, 2005: 95, pl. 8 figs, 2, 3; Monné, M.A. & Hovore, 2006: 167 (checklist); MacRae & Rice, 2007: 248 (distr.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Bousquet, Laplante, Hammond & Langor, 2017: 104, pl., 17; ; Rice, MacRae & Merickel, 2017: 670 (distr.)

Argaleus nitens LeConte. 1850a: 319; 1850b: 235; Linsley, 1938: 109.

Type locality - Holotype: Canada, Ontario, (Nord du Lac Supérieur), Mouth of Pic River. (MCZN).

Pachyta conflagrata Motschulsky, 1860: 147.

Pachyta lamed var. *conflagrata*; Aurivillius, 1912: 184 (cat.); Boppe, 1921: 64.

Syntypes locality - Syntypes male and female: United States, Alaska. (ZMUM)

Pachyta (Pachyta) lamed americana Podany, 1964: 50, pl. 1, figs 13-25, pl. 2, figs 2, 64, pl. 3 fig. 1.

Type locality - Holotype: Canada, Ontario: Ottawa. (Collection C. Podany, Muséum de Benátky n. Jiz.).

Rhagium (Rhagium) Fabricius 1775

Stenocorus Geoffroy, 1762: 221 Official Index of Rejected and Invalid Works by the International Commission on Zoological Nomenclature (Opinion 228, 1954).

Rhagium Fabricius, 1775: 182; Audinet-Serville, 1835: 205; Laporte, 1840: 500; Blanchard, 1845: 164; Haldeman, 1847a: 58; LeConte, 1850a: 319; Emmons, 1854: 125; LeConte, 1854b: 219; Thomson, 1861: 144, 156; 1864: 144, 409; Lacordaire, 1868: 428; LeConte, 1873b: 328; 1874: 190; Provancher, 1877a: 580; LeConte & Horn, 1883: 313; Bates, 1885: 277; Leng, 1890: 65; Wickham, 1897b: 88; Blatchley, 1910: 1046; Gressitt, 1953: 207; Arnett, 1962: 857; Podany, 1964: 5; Chemsak, 1964: 234; Linsley & Chemsak, 1972:84; Monné, M.A., 1995a: 30 (cat.); Chemsak, 2005: 33, 118; Monné, M.A. & Hovore, 2006: 168 (checklist); Zamoroka, 2022: 301

Type-species - *Cerambyx inquisitor* Linnaeus, 1758 (subsequent designation, Curtis, 1839).

Hargium Samouelle, 1819: 210

Rhagium (Hargium); Casey, 1913: 194

Type-species - *Cerambyx inquisitor* Linnaeus, 1758 (monotypy).

Allorhagium Kolbe, 1884: 270

Rhagium (Allorhagium) Gressitt, 1953: 207

Type-species - *Cerambyx inquisitor* Linnaeus, 1758 (monotypy).

1. *Rhagium inquisitor inquisitor* (Linnaeus) 1758

Syntypes locality - Syntypes: Sweden. (LSUK). **Distribution** - Holarctic ; boreal in North America, Mexico (Michoacán, Guerrero). **Host plants** - *Betula* sp. (Betulaceae), *Fagus sylvatica* Linnaeus, *Quercus* sp. (Fagaceae), *Abies concolor* Gordon & Glen, *A. grandis* (Lambert) Lindley, *A. holophylla* Maximowicz, *A. lasiocarpa* Hooker, *A. magnifica* A. Murray, *A. nephrolepis* (Trautvetter) Maximowicz, *A. numidica* De Lannoy ex Carrière, *Cedrus atlantica* Manetti, *Keteleeria fortunei* Carrière, *Larix europaea* de Candolle, *L. kaempferi* Fortune ex Gordon, *L. occidentalis* Nuttall, *Picea abies* Linnaeus, *P. engelmanni* Engelmann, *P. excelsa* Link, *P. glauca* (Moench) Voss, *P. jezoensis* Carrière, *P. koraiensis* Nakai, *P. orientalis* Carrière, *P. sitchensis* (Bongard) Carr, *Pinus armandii* Franchet, *P. ayacahuite* Ehrenberg ex Shlechtendal, *P. contorta* Douglas ex Loudon, *P. coulteri* D. Don, *P. densiflora* Siebold & Zuccarini, *P. echinata* Miller, *P. inops* Solander, *P. insignis* Douglas ex Loudon, *P. jeffreyi* Balfour, *P. koraiensis* Siebold & Zuccarini, *P. monticola* Douglas ex D. Don, *P. nigra calabrica* (Loudon) E. Murray, *P. palustris* Miller, *P. ponderosa* Douglas ex Lawson & P. Lawson, *P. radiata* D. Don, *P. resinosa* Aiton, *P. rigida* Miller, *P. sabiniana* Douglas ex D. Don, *P. strobus* Linnaeus, *P. sylvestris* Linnaeus, *P. yunnanensis* Franchet, *Pseudotsuga menziesii* (Mirbel) Franco, *Tsuga* sp. (Pinaceae).

Cerambyx inquisitor Linnaeus, 1758: 393; 1761: 190; 1767: 630.

Rhagium inquisitor; Fabricius, 1775: 182; 1781: 229; 1787: 145; 1793: 304; 1801: 313; Laporte, 1840: 500; LeConte, 1857: 23 (distr.); Hamilton, 1894a: 31; 1894b: 396; 1895: 338 (distr.); Gardiner, 1957: 251, figs 4, 12, 15; Tyson, 1966: 206 (hosts); Gardiner, 1966: 209, fig. 6; 1970: 286 (biol.); Hatch, 1971: 138; Linsley & Chemsak, 1972: 85, fig. 29 (syn.); Perry, 1975: 59 (hosts); Kirk & Balsbaugh, 1975: 98 (distr.); Gosling &

Gosling, 1976: 5 (distr., hosts); Furniss & Carolin, 1977: 297; Laliberté, Chantal & LaRoche, 1977: 97; Skiles, 1978: 14 (hosts); Turnbow & Franklin, 1980: 338 (distr.); Gosling, 1986: 157 (hosts); Chemsak, Linsley & Noguera, 1992: 100 (cat.); MacRae, 1993: 238 (distr., hosts); Monné, M.A., 1995a: 31 (cat.); Noguera & Chemsak, 1996: 403 (distr.); Yanega, 1996: 37, pl. 2, fig. 24; Linsley & Chemsak, 1997: 428 (hosts); Peck & Thomas, 1998: 120 (distr.); Vlasák & Vlasakova, 2002: 207 (distr.); Sikes & Webster, 2005: 327 (distr.); Chemsak, 2005: 119, pl. 9, figs 2,3; Monné, M.A. & Hovore, 2006: 168 (checklist); Lingafelter, 2007: 29, 141, 2 figs, pl. 4e (hosts); O'Neill, Fultz & Ivie, 2008: 33 (distr.); Guarnieri, 2009: 15 (distr.); 2010: 24 (distr.); Costello, Jacobi & Negrón, 2013: 151 (hosts); Steury & MacRae, 2014: 9 (distr.); Webster, 2016: 486; Bousquet, Laplante, Hammond & Langor, 2017: 104, pl. 18; Hanks & Wang, 2017: 105; Klingeman *et al.*, 2017: 296 (distr.); Rice, MacRae & Milliken, 2017: 670 (distr.)

Rhagium (Hargium) inquisitor; Aurivillius, 1912: 164 (cat.).

Stenocorus inquisitor; Hopping, 1937: 9, pl. 4; Knull, 1946: 174, pl. 7, fig. 25; Fattig, 1947: 13 (distr.); ing: 32; Knowlton & Wood, 1950: 11 (distr.); Howden & Vogt, 1951: 591 (hosts); Beal, Haliburton & Knight, 1952: 110 (biol.); Thomas, 1955: 340; Dillon & Dillon, 1961: 618; Wilson, 1971: 61.

Rhagium inquisitor inquisitor; Monné, M.A., & Giesbert, 1994: 169 (checklist); Schiefer, 1998: 121 (distr.); Heffern, 1998: 9 (distr., hosts); Holt, 2013: 245 (distr., hosts).

Cerambyx nubecula Bergsträsser, 1778: 25.

Type locality - ?

Rhagium indagator Fabricius, 1787: 145..

Syntypes locality - Syntypes: Germania. (ZMUC).

Rhagium minutum Fabricius, 1787: 146; Chevrolat, 1851: 664 (syn.).

Syntypes locality - Syntypes: Germany, Schleswig-Holstein, Kiel. (BMNH).

Cerambyx (Rhagium) exilis Gmelin, 1790: 1844.

Type locality - Holotype: locality unknown. (NHRS).

Stenocorus lineatus Olivier, 1795: 13, pl. 3, fig. 22; Lacordaire, 1868: 430; Provancher, 1877a: 605; Chagnon, 1936: 244, pl. 15, fig. 5; Canova, 1936: 131 (distr., hosts); Leech, 1947: 108 (biol.); Craighead, 1950: 232; Clark, 1956: 41 (distr.); Townes & Townes, 1960: 140 (paras.); Chagnon & Robert, 1962: 244, pl. 15, fig. 5;

Rhagium lineatum; Audinet-Serville, 1835: 307; Harris, 1838: 95; 1841: 93; Haldeman, 1847a: 58; LeConte, 1850b: 235; 1850a: 319; Emmons, 1854: 126, pl. 10, fig. 1; Fitch, 1858: 715 (biol.); LeConte, 1860: 316 (syn.); Horn, 1861: 30 (biol.); Bland, 1861: 100 (distr., hosts); LeConte, 1869: 371; Dimmock, 1871: 15; Packard, 1872: 501; Fuller, 1875: 97 (biol.); Moody, 1875: 96 (biol.); Planchard, 1875: 96 (biol.); Andrews, 1875: 80 (distr.); Horn, 1876: 169; LeConte, 1879: 505 (distr.); Riley, 1880: 239 (biol.); Harrington, 1881: 33 (hosts); Packard, 1881: 162, 226, 236; Riley, 1883: 259 (biol.); Bates, 1885: 277 (distr.); Schwarz, 1886a: 29 (biol.); 1886b: 27 (biol.); Horn, 1886: 138; Mann, 1886: 27 (distr.); Holland, 1888: 91 (distr.); Riley & Howard, 1889: 190 (biol.); Townsend, 1889: 233 (distr.); Harrington, 1890: 185 (distr.); Packard, 1890: 704, 830, 862, pl. 21, figs 1,2, fig. 242; Leng, 1890: 65; Hopkins, 1893: 195; Chittenden, 1893: 248; Hanham, 1894: 352 (distr.); Slosson, 1894: 3 (distr.); Chittenden, 1895: 419; Keen, 1895: 219 (distr.); Townsend, 1895: 48 (distr.); Laurent, 1895: 323 (distr.); Evans, 1895b: 173 (distr.); Beutenmuller, 1896: 77 (hosts); Slosson, 1896: 263 (distr.); Wickham, 1897b: 170; Hopkins, 1899: 439 (biol.); Warren, 1899: 296 (distr.); Smith, 1900: 291 (distr.); Fall, 1901: 148 (distr.); Ulke, 1903: 26, 50 (distr.); Hopkins, 1904: 37 (biol.); Wenzel, 1905: 159 (distr.); Felt, 1906: 335; Fall & Cockerell, 1907: 193 (distr.); Morris, 1908: 443; Smith, 1910: 330; Blatchley, 1910: 1048, fig. 445; Fisher & Kirk, 1912: 312 (distr.); Engelhardt, 1912: 221 (distr.); Morris, 1915: 19; Chagnon, 1917: 233; Woodruff,

1917: 85; Hess, 1917: 64 (morphol.); Nicolay, 1917a: 94; Garnett, 1918: 212 (distr.); Nicolay, 1919: 68 (biol.); Britton, 1920: 267 (distr.); Hess, 1920: 367, figs 61-66; Craighead, 1923:88 (larva); Mundinger, 1924: 316; Essig, 1926: 451, fig. 351; Kirk & Knull, 1926: 23 (distr.); Fletcher, 1926: 143 (distr.); Hardy, 1926a: 4, pl. 5, fig. 29; Hardy & Preece, 1926: 35 (hosts); Hardy, 1927a: C24; Procter, 1927: 111; Tanner, 1927: 33, figs 165-166; 1928: 277 (distr., hosts); Leonard, 1928: 437 (distr.); Keen, 1929: 64 (biol.); Pack, 1930: 219 (distr.); Beaulne, 1932: 198 (hosts); Ingles, 1933: 59 (biol.); Wolcott & Montgomery, 1933: 155 (biol.); Easterling, 1934: 131; Mank, 1934: 80 (distr.); Herrick, 1935: 251 (hosts); Knowlton & Thatcher, 1936: 279 (distr.); Lange, 1937: 173 (hosts); Brimley, 1938: 211 (distr.); Chagnon, 1939: 86 (distr.); Savely, 1939: 333 (biol.); Palmerlee, 1941: 377 (hosts); Loding, 1945: 16 (distr.); Procter, 1946: 177 (biol.); Hardy, 1955: B50; Gibson & Carrillo, 1959: 118 (distr.); Ross, 1967: 24; 1968: 11 (biol.);

Hargium lineatum; Kirby, 1837: 178

Hargium (Hargium) lineatum; Bethune, 1872: 96 (distr.);

Rhagium (Hargium) lineatum; Casey, 1912: 196; Podany, 1964: 23, pl. 6, fig. 1

Rhagium (Hargium) inquisitor var. *lineatum*; Aurivillius, 1912: 165 (cat.)

Type locality - Holotype: Amérique. (Depository unknown).

Rhagium investigator Mulsant, 1839: 227; Mannerheim, 1852: 367 (hosts); LeConte, 1857: 23 (distr.); LeConte, 1869: 371

Type locality - Holotype: France. (MNHN).

Rhagium (Hargium) californicum Casey, 1913: 195; Lingafelter *et al.*, 2014: 35, 369, fig. 36i (lectotype).

Type locality - Lectotype female; United States, California: Sacramento. (USNM).

Rhagium (Hargium) crassipes Casey, 1913: 195; Lingafelter *et al.*, 2014: 47, fig. 49u (lectotype).

Type locality - Holotype male: United States, Massachusetts, Medford. (USNM).

Rhagium (Hargium) parvicorne Casey, 1913: 195; Lingafelter *et al.*, 2014: 296, fig. 128o (holotype).

Type locality - Holotype female: United States, Massachusetts, Malden. (USNM).

Rhagium (Hargium) boreale Casey, 1913: 195; Lingafelter *et al.*, 2014: 31, fig. 31k (holotype).

Type locality - Holotype male: United States, Wisconsin: Bayfield. (USNM).

Rhagium (Hargium) cariniventre Casey, 1913: 196; Podany, 1964: 33, pl. 7, fig. 4; Lingafelter *et al.*, 2014: 37, 369, fig. 38m (lectotype).

Type locality - Lectotype male: United States, Pennsylvania: State College. (USNM).

Rhagium (Hargium) thoracicum Casey, 1913: 196; Lingafelter *et al.*, 2014: 333, fig. 170 k (holotype).

Type locality - Holotype female: United States, New Mexico: Las Vegas.(USNM).

Rhagium (Hargium) montanum Casey, 1913: 197; Podany, 1964: 31, pl. 2, fig. 25, pl. 7, fig. 3; Lingafelter *et al.*, 2014: 101, 369, fig. 111w (lectotype).

Type locality - Lectotype female: United States, Colorado: Boulder County, Fraser. (USNM).

Rhagium (Hargium) mexicanum Casey, 1913: 197; Podany, 1964: 35, pl. 2, fig. 25, pl. 7, fig. 6; Lingafelter *et al.*, 2014: 98, 369, fig. 98a (lectotype).

Type locality - Lectotype female: Mexico, Guerrero. (USNM).

Rhagium (Hargium) inquisitor inquisitor var. *sudetica* Plavilstshikov, 1915: 46.

Syntypes locality - Syntypes: Tcheck Republic, Bohemia: Sudetes, (ZMUM).

Rhagium Iberonis Ericson, 1916: 240

Type locality - Holotype: Spain, Navarra. (Skara - Västergötlands museum).

Rhagium (Hargium) canadense Podany, 1964: 30, pl. 2, fig. 19, pl. 7, figs 1,2;

Type locality - Holotype male: Canada, British Columbia: Marming Park (CNCI).

Rhagium (Hargium) americanum Podany, 1964: 32, pl. 6, fig. 6.

Type locality - Holotype female: North America. (SMFT).

Rhagium (Hargium) quadricostatum Podany, 1964: 34, pl. 2, fig. 17; pl. 7, fig. 5.

Type locality - Holotype male: Canada, Northwest Territory. (Collection C. Podaný, Muséum de Benátky n. Jiz.).

Rhagium papayanum Podany, 1978: 4.

Type locality - Holotype male: Mexico, Papayo. (Collection C. Podaný, Muséum de Benátky n. Jiz.)

Rhagium mexicanum nigra Podany, 1978: 4.

Type locality - Holotype male: Mexico, Papayo. (Collection C. Podaný, Muséum de Benátky n. Jiz.)

Rhamnusiini Althoff and Danilevsky, 1997: 9 (based on *Rhamnusium* Latreille, 1829).

Nomen nudum.

Comment. This name is unavailable under Article 13.1 (no description or indication).

***Acmaeops* LeConte, 1850**

Acmaeops LeConte in Agassiz, 1850b: 235; LeConte, 1850a: 321 (*partim*); 1854b: 219; Lacordaire, 1868: 441 (*partim*); LeConte, 1873a: 208; 1873b: 328 (*partim*); Provancher, 1877a: 580, 610 (*partim*); LeConte & Horn, 1883: 313 (*partim*); Leng, 1890: 104 (*partim*); Wickham, 1897b: 171 (*partim*); Blatchley, 1910: 1046, 1049 (*partim*); Casey, 1913: 240 (*partim*); Swaine & Hopping, 1928: 9, 14 (*partim*); Bradley, 1930: 236; Chagnon, 1936: 247 (*partim*); Linsley, 1938: 109; Knull, 1946: 151, 179 (*partim*); Arnett, 1962: 857 (*partim*); Chagnon & Robert, 1962: 243 (*partim*); Chemsak & Linsley, 1963: 82 (*partim*); Chemsak, 1964: 231; Hatch, 1971: 125; Linsley & Chemsak, 1972: 95; Villiers, 1974: 210, 212; Svacha & Danilevsky, 1989: 86 (larva); Chemsak, 2005: 128 (rev.); Monné, M.A., 2006: 114 (cat.); Monné, M.A. & Hovore, 2006: 158 (checklist); Monné, M.A., 2012: 123; Bousquet, Laplante. Hammond & Langor, 2017: 110 (key spp.)

Type-species - *Leptura proteus* Kirby, 1837 (subsequent designation, Casey, 1913: 219)

1. *Acmaeops discoideus* (Haldeman, 1847)

Type locality - Holotype: United States. (MCZN), **Distribution** - This species ranges from Nova Scotia to the Upper Peninsula of Michigan, south to eastern Oklahoma and the Florida Panhandle. It is known in Canada from three localities: on the Nova Scotia peninsula, in New Brunswick, and southern Quebec North America. **Host plants** - *Pinus contorta* Douglas ex Loudon, *P. resinosa* Aiton, *P. strobus* Linnaeus (Pinaceae).

Pachyta discoidea Haldeman, 1847a: 60.

Acmaeops discoideus; LeConte, 1850b: 235 (distr.); 1850a: 323; 1873a: 221; Leng, 1890: 106; Smith, 1900: 291 (distr.); Ulke, 1903: 26, 50 (distr.); Smith, 1910: 330; Blatchley, 1910: 1050; Casey, 1913: 245; Nicolay, 1919: 68 (distr.); Leng, 1920: 272 (cat.); Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 438 (distr.); Loding, 1933: 148 (distr.); Brimley, 1938: 212 (distr.); Loding, 1945: 116 (distr.); Knull, 1946: 181, pl. 7, fig. 26; Linsley & Chemsak, 1972: 98; Perry, 1975: 59 (hosts); Gosling & Gosling, 1976: 5 (distr.); Perry, 1977: 98 (distr., hosts); Turnbow & Franklin, 1980: 338 (distr.); Arnett, 1985: 368, fig. 24.203; Chemsak, Linsley & Noguera, 1992: 90 (cat.); MacRae, 1993: 238 (distr.); Monné, M.A., & Giesbert, 1994a: 159 (checklist); Monné, M.A., 1995a: 35 (cat.); Yanega, 1996: 29, pl. 7, fig. 74; Linsley & Chemsak, 1997: 338 (hosts); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Chemsak, 2005: 2129, pl. 10, figs 1, 2; Monné, M.A. & Hovore, 2006: 158 (checklist); MacRae & Rice, 2007: 245 (distr.); Lingafelter, 2007: 28, 138, 2 figs, pl. 7b (hosts); Webster, McCorquodale & Majka, 2009: 292 (distr.); Webster *et al.* 2012: 312 (biol., distr.); Holt, 2013: 245 (distr.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante. Hammond & Langor, 2017: 110, pl. 20

Acmaeops (Pseudodinoptera) discoidea; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

2. *Acmaeops proteus proteus* (Kirby, 1837)

Syntypes locality - Syntypes: North America, latitudes 54 and 65 degrees. (BMMH).

Distribution - Alaska to Newfoundland south to North Carolina; south through Rocky Mountain region to the mountains of southern Arizona and the Sierra Madre Occidental, Mexico, and south from western Canada along Pacific mountain chains to southern California. **Host plants** - *Abies* sp., *Picea glauca* (Moench) Voss, *Pinus resinosa* Aiton, *P. strobus* Linnaeus, *Tsuga* sp. (Pinaceae).

Leptura proteus Kirby, 1837: 186; Haldeman, 1847a: 65; 1847b: 374.

Acmaeops proteus; LeConte, 1850b : 235 (distr.); 1850a: 323; Saunders, 1868: 13 (distr.); Lacordaire, 1868: 442; Bethune, 1872: 116; LeConte, 1873a: 210; Austin, 1874: 271 (distr.); Horn, 1876: 170; Provancher, 1877a: 610; Snow, 1878: 76 (distr.); Smith, 1885: 62DD (distr.); Harrington, 1890: 185 (distr.); Leng, 1890: 106; Cockerell, 1890: 37 (distr.); Casey, 1891: 38 (syn.); Slosson, 1894: 3 (distr.); Harrington, 1894b: 15 (distr.); Evans, 1895b: 173 (distr.); Chagnon, 1897: 124 (distr.); Wickham, 1897: 172; 1897b: 157 (distr.); 1899: 199 (distr.); 1899: 123 (distr.); 1900: 598 (distr.); Holland, 1900: 423 (distr.); Schwarz, 1900: 535 (distr.); Skinner, 1903: 40 (distr.); Chagnon, 1905: 35 (distr.); Fall & Cockerell, 1907: 193 (distr.); Davis, 1909: 42 (distr.); Adams, 1909: 200 (distr.); Sherman, 1910: 195 (distr.); Blatchley, 1910: 1050; Schwarz, 1910: 183 (distr.); Frost, 1912: 306 (distr.); Casey, 1913: 245; Chagnon, 1917: 234 (distr.); Gibson, 1917: 150 (distr.); Nicolay, 1917a: 94 (distr.); Garnett, 1918: 213 (distr.); Leng, 1920: 272 (cat.); Morris, 1920: 73 (distr.); Fall, 1926: 202 (distr.); Kirk & Knull, 1926: 24 (distr.); Criddle 1928: 97 (distr.); Brown, 1930: 244 (distr.); Beaulne, 1932: 199 (hosts); Brown, 1934: 229 (distr.); Knowlton, 1934: 86 (distr.); Chagnon, 1936: 247 (distr.); Canova, 1936: 126 (distr.); Morley, 1939: 244 (biol.); Chagnon, 1939: 86 (distr.); Knull, 1946: 180; Procter, 1946: 177 (distr.); Hardy, 1948: 32 (distr.); Smith, 1950: 66; 1953: 41; Gardiner, 1954: 190, figs 1-5; Hicks, 1955: 165 (distr.); Clark, 1956: 41 (distr.); Gardiner, 1957a: 249, figs 11, 15 (biol.); 1957b: 2 (biol.); Gardiner & MacLeod, 1959: 62 (paras.); Linsley, Knull & Statham, 1961: 25 (distr.); Chagnon & Robert, 1962: 247; Gardiner, 1970: 287 (biol.); Hatch, 1971: 143, pl. 19, fig. 3; Wilson, 1971: 62 (biol.); Linsley & Chemsak, 1972: 96; Gosling & Gosling, 1976: 5 (biol., distr.); Furniss & Carolin, 1977: 295 (biol.); Laliberté, Chantal & LaRoche, 1977: 98 (biol.); Gosling, 1986: 154 (hosts); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Linsley & Chemsak, 1997: 338 (hosts); Chemsak, 2005: 129, pl. 9, fig. 12; Lingafelter, 2007: 25, 30, 139, 2 figs, pl. 5i (hosts); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.).

Acmaeops (Pseudodinoptera) proteus; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Acmaeops proteus proteus; Linsley & Chemsak, 1972: 98; Monné, M.A., & Giesbert, 1994: 159 (checklist); Monné, M.A., 1995a: 35 (cat.); Yanega, 1996: 29, pl. 7, figs 73a, b; Heffern, 1998: 8 (distr.); Androw & Keeney, 1999: 4 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Monné, M.A. & Hovore, 2006: 156 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 110, pl. 20

Pachyta sublineata Haldeman, 1847a: 60.

Syntypes locality - Syntypes: United States, Pennsylvania, Lake Superior. (MCZN).

Acmaeops gibbula LeConte, 1861: 356; Casey, 1913: 245.

Acmaeops proteus form *gibbula*; LeConte, 1879: 505 (distr.).

Syntypes locality - Syntypes: United States, Washington Territory. (MCZN).

Acmaeops pinicola Schaeffer, 1908: 341; Casey, 1913: 245; Lingafelter et al., 2014: 300, fig. 133a (holotype).

Acmaeops (Pseudodinoptera) pinicola; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Type locality - Holotype female: United States, Arizona: Huachuca Mountains, Carn's Peak. (USNM).

Acmaeops parkeri Casey, 1913: 242; Lingafelter et al., 2014: 295, fig. 127u (holotype).

Type locality - Holotype female: United States, Colorado: Boulder County. (USNM).

Acmaeops lacustrina Casey, 1913: 242; Lingafelter et al., 2014: 85, fig. 93c (holotype).

Type locality - Holotype male: United States, Lake Superior. (USNM).

Acmaeops obsoleta Casey, 1913: 243; Lingafelter et al., 2014: 110, fig. 121m (holotype).

Type locality - Holotype female: United States, Colorado. (USNM).

Acmaeops puncticeps Casey, 1913: 243; Lingafelter et al., 2014: 306, 365, fig. 139q (lectotype).

Type locality - Lectotype male: United States, Colorado. (USNM).

Acmaeops aurora Casey, 1913: 244; Lingafelter et al., 2014: 23, fig. 23o (holotype).

Type locality - Holotype male: United States, Colorado: Boulder County; (USNM).

Acmaeops coloradensis Casey, 1913: 244; Lingafelter et al., 2014: 42, 365, fig. 44k (lectotype).

Acmaeops subpilosa coloradensis; Canova, 1936: 127 (distr.).

Type locality - Lectotype: United States, Colorado, Fraser. (USNM).

Acmaeops cavicollis Casey, 1913: 244; Munding, 1924: 317; Leonard, 1928: 438 (distr.);

Lingafelter et al., 2014: 38, 265, fig. 39u (lectotype).

Type locality - Lectotype: United States, Maine, Paris. (USNM).

Acmaeops scutellata Casey, 1924: 276; Lingafelter et al., 2014: 316, fig. 151e (holotype).

Type locality - Holotype female: United States, Idaho, Bonner County, Priest Lake. (USNM).

***Acmaeopsoidea* Linsley & Chemsak, 1976**

Acmaeopsoidea Linsley & Chemsak, 1976: 166; Monné, M.A., 1995a: 109; Chemsak, 2005: 40. 413; Monné, M.A. & Hovore, 2006: 158 (checklist);

Type-species - *Pachyta rufula* Haldeman, 1847 (original designation).

1. *Acmaeopsoidea rufula* (Haldeman, 1847)

Type locality - Holotype: United States, Michigan: Lake Superior, Eagle Harbor. (MCZN).

Distribution - This species ranges from Cape Breton Island to central British Columbia, north to the Lake Athabasca area near the borders of Northwest Territories, Alberta, and Saskatchewan. It is known in the United States only from the Upper Peninsula of Michigan.

Host plants - *Picea mariana* Britton, Sterns & Poggenburg (Pinaceae).

Pachyta rufula Haldeman, 1847a: 60.

Leptura rufula; LeConte, 1850b: 236 (distr.); 1850a: 338; 1873a: 220; Leng, 1890: 190; Boppe, 1921: 91.

Acmaeops rufula; Swaine & Hopping, 1928: 95; Gardiner, 1970: 288 (biol.); Gosling & Gosling, 1976: 6 (biol., distr.); Gosling, 1986: 155 (hosts).

Acmaeopsoidea rufula; Linsley & Chemsak, 1976: 167, fig. 45; Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 159 (checklist); Monné, M.A., 1995a: 109 (cat.); Yanega, 1996: 29, pl. 7, fig. 75; Chemsak, 2005: 414, pl. 26, fig. 12; Monné, M.A. & Hovore, 2006: 158 (checklist); Webster, McCorquodale & Majka, 2009: 292 (distr., hosts); Webster, 2016: 485; Bousquet, Laplante, Hammond & Langor, 2017: 115, pl. 21

***Anthophylax* LeConte 1850**

Anthophylax LeConte. 1850: 326; 1854b: 219; Thomson, 1861: 156; Lacordaire, 1868: 443; LeConte, 1873b: 328; Provancher, 1877a: 580; LeConte & Horn, 1883: 313; Leng, 1890: 65; Boppe, 1921: 67; Linsley, 1938: 108; Knull, 1946: 176; Arnett, 1962: 857, 877; Chemsak, 1964: 231; Linsley & Chemsak, 1972: 72; Švácha & Danilevsky, 1989: 45; Monné, M.A., 1995a: 27 (cat.); Hoffman, 2003: 50; Chemsak, 2005: 32, 102; Monné, M.A. & Hovore, 2006: 159 (checklist); Švácha & Lawrence, 2014: 155; Bousquet, Laplante, Hammond & Langor, 2017: 101 (key spp.)

Anthophylax; LeConte, 1850b: 236; Thomson, 1864: 141, 408; Provancher, 1877a: 609; Horn in Leng. 1890: 98; Wickham, 1897b: 171; 1897c: 88; Blatchley, 1910: 1046; Nicolay, 1917b: 38; Craighead, 1923: 85; Swaine & Hopping, 1928: 10, 14; Bradley, 1930: 235; Chagnon, 1936: 245; Hopping, 1937: 13; Chagnon & Robert, 1962: 241, 245; Hatch, 1971: 125.

Type-species - *Anthophylax viridis* LeConte, 1850 (subsequent designation, Thomson, 1864: 1420).

1. *Anthophylax cyaneus* (Haldeman, 1848)

Type locality - Holotype: North America. Lake Superior. (MCZN). **Distribution** - From Nova Scotia to northeastern Minnesota, south to Tennessee and northern Georgia and Michigan. In Canada, it occurs from Cape Breton Island to near the eastern edge of Lake Superior. **Host plants** - *Acer rubrum* Linnaeus, *A. spicatum* Lamarck (Aceraceae), *Betula papyrifera* Marsh (Betulaceae), *Castanea* sp., *Fagus ferruginea* Aiton (Fagaceae), *Amelanchier canadensis* Medikus (Rosaceae).

Leptura malachiticus Haldeman, 1847a: 64; Emmons, 1854: 27, pl. 31, fig. 7.

Pachyta malachiticus; Haldeman, 1847b: 374 (syn.).

Anthophylax malachiticus; LeConte, 1850a: 326; Lacordaire, 1868: 443; Fletcher, 1902: 107; Brimley, 1941: 121; Knull, 1942: 226; 1946: 176; Fattig, 1947: 15; Jaques, 1951: 255; Wilson, 1971: 61 (biol.).

Anthophilax malachiticus; LeConte, 1850b: 236; Horn *in* Leng, 1890: 98; Hamilton, 1891b: 63; Hanham, 1894: 352 (distr.); Hamilton, 1895: 338 (distr.); Slosson, 1897: 238 (distr.); Wickham, 1897b: 171; Barber, 1904: 60 (distr.); Blatchley, 1910: 1049; Barber, 1912: 212 (distr.); Shoemaker, 1916: 164 (distr.); Johnson, 1916: 119 (distr.); Notman, 1916: 166 (distr.); Nicolay, 1917b: 40; 1917a: 94; Chagnon, 1917: 233 (distr.); Britton, 1920: 267 (distr.); Hopping, 1922: 166 (distr.); Champlain, Kirk & Knull, 1925: 107; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts); Chagnon, 1936: 245, pl. 15, fig. 9; Hopping, 1937: 15, pl. 4; Procter, 1946: 178 (distr.); Chagnon & Robert, 1962: 245, pl. 15, fig. 9; Gardiner, 1970: 286 (biol.).

Type locality - Holotype: United States, Pennsylvania, Somerset County. (MCZN).

Pachyta malachiticus var. *cyaneus* Haldeman, 1847b: 374.

Stenura ? *cyanea* Haldeman, 1848: 151.

Anthophylax cyaneus; Aurivillius, 1912: 195 (cat.); Boppe, 1921: 67; Linsley & Chemsak, 1972: 77; Gosling & Gosling, 1976: 4 (biol., distr.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1986: 155 (hosts); Drouin, 1991: 175 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Glaser, 1992: 154 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 28 (cat.); Krinsky & Godwin, 1996: 238 (hosts); Yanega, 1996: 30, pl. 3, fig. 27; Linsley & Chemsak, 1997: 344 (hosts); Vlasák & Vlasakova, 2002: 205 (distr.); Hoffman, 2003: 50 (distr.); Chemsak, 2005: 103, pl. 8, fig. 2; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 17, 139, 2 figs, pl. 3f; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 101, pl. 16

Anthophilax cyaneus; Casey, 1918: 416; Laliberté, Chantal & LaRochelle, 1997: 90 (biol.).

Type locality - Holotype: North America: Lake Superior. (MCZN)

2. *Anthophylax hoffmanii* Beutenmuller, 1903

Syntypes locality - Syntypes male and female: United States, North Carolina: Yancey County, Summits of the Black Mountains. (AMNH). **Distribution** - United States (North Carolina, Georgia and Tennessee). **Host plants** - *Abies fraseri* (Pursh) Poiret, *Picea* sp. (Pinaceae).

Anthophilax hoffmanii Beutenmuller, 1903: 518, pl. 49, figs 9, 10.

Anthophilax hoffmani; Mutchler, 1912: 213 (type); Nicolay, 1917b: 41; Leng, 1920: 272 (cat.); Craighead, 1923: 86, pl. 11, fig. 8, pl. 22, fig. 16 (larva); Doane *et al.*, 1936: 177; Hopping, 1937: 14; Shoemaker & Stecher, 1938: 40 (distr.); Brimley, 1938: 212 (distr.); Fattig, 1947: 15 (distr.).

Anthophilax hoffmani; Linsley & Chemsak, 1972: 76, pl. 1; Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 28 (cat.); Linsley & Chemsak, 1997: 345 (hosts); Hoffman, 2003: 50, fig. 1 (distr.); Chemsak, 2005: 102, pl. 7, figs 11,12, pl. 8, fig. 1; Monné, M.A. & Hovore, 2006: 159

7 (checklist); Lingafelter, 2007: 17, 139; Klingeman *et al.*, 2017: 295 (distr.)

3. *Anthophylax viridis* LeConte, 1850

Type locality - Holotype: United States, Michigan, Lake Superior, Eagle Harbor. (MCZN).

Distribution - Nova Scotia to northern Wisconsin, south to northern Georgia and Wisconsin.

In Canada, it occurs from Cape Breton Island to the Sault Ste. Marie area in Ontario. **Host plants** - *Acer spicatum* Lamarck (Aceraceae), *Betula* sp. (Betulaceae), *Fagus ferruginea* Aiton (Fagaceae), *Picea mariana* Britton, Sterns & Poggenburg, *Pinus banksiana* Lambert (Pinaceae).

Anthophylax viridis LeConte, 1850a: 326; Thomson, 1861: 156; Lacordaire, 1868: 443; Boppe, 1921: 67; Linsley, 1938: 109; Knull, 1942: 226; 1946: 176; Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 78; Gosling & Gosling, 1976: 4 (biol., distr.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 29 (cat.); Yanega, 1996: 30, pl. 3, fig. 26; Linsley & Chemsak, 1997: 345 (hosts); Vlasák & Vlasakova, 2002: 205 (distr.); Hoffman, 2003: 50 (distr.); Chemsak, 2005: 103, pl. 8, figs 3, 4; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 17, 139, 2 figs, pl. 3g (hosts); Webster, McCorquodale & Majka, 2009: 292 (distr., hosts); Klingeman *et al.*, 2017: 295 (distr.)

Anthophylax viridis; LeConte, 1850b: 236; Thomson, 1864: 142; Provancher, 1877a: 609; Horn *in* Leng, 1890: 98; Wickham, 1897b: 171; Van der Wielen, 1897: 206 (distr.); Beutenmuller, 1903: 519, pl. 49, fig., 11; Blatchley, 1910: 1049; Chagnon, 1917: 233 (distr.); Nicolay, 1917b: 40; Leng, 1920: 272 (cat.); Hopping, 1922: 166 (distr.); Craighead, 1923: 86 (larva); Kirk & Knull, 1926: 24 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 439 (distr.); Burke, 1931: 101 (distr.); Beaulne, 1932: 199 (hosts); Doane *et al.*, 1936: 177; Hopping, 1937: 15 (syn.); Brimley, 1938: 212 (distr.); Procter, 1946: 178 (distr.); Chagnon & Robert, 1962: 246; Laliberté, Chantal & LaRochelle, 1977: 90 (biol.);

Anthophylax viridis viridipennis Casey, 1913: 416; Leng, 1920: 272 (cat.); Lingafelter *et al.*, 2014: 344,365, fig. 182u (lectotype).

Type locality - Lectotype: United States, New York, Ulster County, Slide Mt. (USNM).

, *Centrodera* LeConte, 1850

Centrodera LeConte, 1850a: 325; 1854b: 219; Thomson, 1861: 145, 158; LeConte, 1862: 38, 41; Thomson, 1864: 145; 1865: 409; Lacordaire, 1868: 427, 432; LeConte, 1873b: 328; Provancher, 1877a: 580, 606; LeConte & Horn, 1883: 313; Leng, 1890: 65, 66; Wickham, 1897b: 88; Blatchley, 1910: 1046, 1048; Boppe, 1921: 33; Craighead, 1923: 82; Swaine & Hopping, 1928: 10, 14; Bradley, 1930: 235; Doane *et al.*, 1936: 175; Chagnon, 1936: 244; Hopping, 1937: 10; Knull, 1946: 151, 174; Gressitt, 1947: 191; 1953: 207; Chagnon & Robert, 1962: 241; Arnett, 1962: 857, 877; Leech, 1963: 154; Chemsak, 1964: 231; Hatch, 1971: 124; Linsley & Chemsak, 1972: 31; Chemsak, 2005: 44 (rev.); Monné, M.A. & Hovore, 2006: 160 (checklist); Monné, M.A., 2012: 123; Bousquet, Laplante, Hammond & Langor, 2017: 102 (key spp.)

Type-species - *Rhagium decoloratum* Harris, 1841 (subsequent designation, Thomson, 1864: 145).

Rhamnusium; Haldeman, 1847a: 58.

Centrodera (*Apatophysis*); Gressitt, 1947: 191.

Parapachyta Casey, 1913: 216; Chemsak, 1964: 234.

Type-species - *Toxotus spurcus* LeConte, 1857 (original designation).

1. *Centrodera autumnata* Leech, 1963

Type locality - Holotype male: United States, California: Marin County, Mill Valley. (CASC). **Distribution** - Coastal California from Humboldt Co. to San Diego Co.

Centrodera autumnata Leech, 1963: 173, figs 8-11, 13, 15, 16, 18; Ruetter, 1970: 19 (paratypes); Linsley & Chemsak, 1972: 38; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M. A., 1995a: 15 (cat.); Chemsak, 2005: 46, 55, pl. 4, fig. 3; Monné, M.A. & Hovore, 2006: 160 (checklist); Gimmel *et al.*, 2023: 257 (distr.)

2. *Centrodera dayi* Leech, 1963

Type locality - Holotype male: United States, California: Scott River at Klamath River, Siskiyou County. (CASC), **Distribution** - Cascade Mountains from Washington to central California.

Centrodera dayi Leech, 1963: 178, figs 4, 7, 9-11, 13-15, 17, 18; Ruetter, 1970: 19 (paratypes); Hatch, 1971: 138; Linsley & Chemsak, 1972: 37; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., 1995a: 16 (cat.); Chemsak, 2005: 46, 54, pl. 4, figs 1,2; Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A. & Hovore, 2006: 160 (checklist);

3. *Centrodera decolorata* (Harris, 1838)

Type locality - Holotype female: United States, New Hampshire: Dublin. (MCZN).

Distribution - This species ranges from Nova Scotia to northern Minnesota, south to northern Georgia. In Canada, it occurs from the Nova Scotia peninsula to the western edge of Lake Superior in Ontario. **Host plants** - *Acer saccharinum* Linnaeus (Aceraceae), *Castanea* sp., *Fagus ferruginea* Aiton, *Quercus alba* Linnaeus, *Quercus rubra* Linnaeus (Fagaceae), *Carya* sp., *Juglans nigra* Linnaeus (Juglandaceae), *Liriodendron tulipifera* Linnaeus, *Magnolia acuminata* Linnaeus (Magnoliaceae), *Fraxinus* sp. (Oleaceae), *Malus* sp., *Prunus serotina* Ehrh. (Rosaceae).

Rhagium decolorarum Harris, 1838: 96; 1841: 93.

Rhamnusium ? decoloratum; Haldeman, 1847a: 58.

Toxotus decoloratus: Haldeman, 1847b: 374.

Centrodera decolorata; LeConte, 1850a: 325; Thomson, 1861: 158; 1864: 145; Lacordaire, 1868: 432; Provancher, 1877a: 606; Lugger, 1884: 204 (hosts); Saunders, 1887: 29 (distr.); Leng, 1890: 66; Hamilton, 1893a: 274 (distr.); 1893b: 326 (distr.); Laurent, 1893: 7 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 170, fig. 26; 1897: 157 (distr.); Harrington, 1897: 73 (hosts); Smith, 1900: 291; Ulke, 1903: 26, 50 (distr.); Felt, 1906: 456, fig. 110 (biol.); Smith, 1910: 330; Blatchley, 1910: 1048, fig. 446; Fisher & Kirk, 1912: 312 (distr.); Morris, 1915: 20 (hosts); Chagnon, 1917: 233 (distr.); Britton, 1920: 267 (distr.); Morris, 1920: 76 (distr.); Boppe, 1921: 34; Craighead, 1923: 85, pl. 11, fig. 5, pl. 14, fig. 8, pl. 22, fig. 14 (larva); Cloudman, 1925: 32 (biol.); Hatch, 1925: 579 (distr.); Kirk & Knull, 1926: 23 (distr.); Leonard, 1928: 437 (distr.); Beaulne, 1932: 199 (hosts); Barrett, 1932: 289 (hosts); Saalas, 1936: 71 (morphol.); Chagnon, 1936: 244, pl. 15, fig. 6; Hopping, 1937: 11, pl. 3; Brimley, 1938: 212 (distr.); Loding, 1945: 116 (distr.); Sherman, 1946: 127 (distr.); Procter, 1946: 177 (distr.); Knull, 1946: 174; Fattig, 1947: 14; Jaques, 1951: 255, fig. 601; Chagnon & Robert, 1962: 244, pl. 15, fig. 6; Leech, 1963: 154, 157, 184, 191, figs 20-23; Gardiner, 1970: 286 (biol.); Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 33; Gosling & Gosling, 1976: 34 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 91 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Gosling, 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 16 (cat.); Yanega, 1996: 31, pl. 4, fig. 39; Krinsky & Godwin, 1996: 237; Linsley & Chemsak, 1997: 354 (hosts); Vlasák & Vlasakova, 2002: 205 (distr., hosts); Sikes & Webster, 2005: 320 (distr.); Chemsak, 2005: 45, pl. 3, fig. 8; Monné, M.A. & Hovore, 2006: 160 (checklist); Rice & Veal, 2006: 2589 (distr.); Lingafelter, 2007: 18, 240, 2 figs, pl. 3j (hosts); Steury & MacRae, 2014: 9 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 103, pl. 17; Klingeman *et al.*, 2017: 295 (distr.)

Toxotus rubidus Haldeman, 1847a: 58.

Type locality - Holotype: United States. (MCZN).

Centrodera decolorata lacustris Casey, 1913: 416; Lingafelter *et al.*, 2014: 512, 366, fig. 53u (lectotype).

Type locality - Lectotype: United States, Michigan, Lake Superior, Marquette. (USNM).

4. *Centrodera minima* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Colorado: Mesa Verde National Park. (CASC).

Distribution - Southwestern Colorado to eastern Utah.

Centrodera minima Linsley & Chemsak, 1972: 40; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 17 (cat.); Heffern,

1998: 8 (distr.); Chemsak, 2005: 47, 60, pl. 4, fig. 7; Monné, M.A. & Hovore, 2006: 160 (checklist);

5. *Centrodera nevadica nevadica* LeConte, 1873

Type locality - Holotype female: United States, Nevada, Virginia City. (MCZN). **Distribution** - East side of Sierra Nevada to eastern Oregon and Idaho. **Host plants** - *Artemisia tridentata* Nuttall (Asteraceae), *Acacia farnesiana* (Linnaeus) Willdenow, *Leucaena pulverulenta* (Schlechtendal) Benth (Mimosaceae).

Centrodera nevadica LeConte, 1873a: 205; Leng, 1890: 66; Casey, 1891: 37; Leng, 1920: 271 (cat.); Boppe, 1921: 34; Van Dyke, 1927: 103; Canova, 1936: 129 (hosts); Hatch, 1971: 139; Linsley & Chemsak, 1972: 41, pl. 1; Chemsak, Linsley & Noguera, 1992: 92 (cat.).

Centrodera nevadica nevadica; Linsley & Chemsak, 1972: 41; Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 17 (cat.); Linsley & Chemsak, 1997: 354 (hosts); Chemsak, 2005: 47, 63, pl. 4, fig. 9; Monné, M. .A. & Hovore, 2006: 160 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.)

5a. *Centrodera nevadica arizonica* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Arizona, Pine Mt. Lake Lodge, Hualpai Mts., Mohave Canyon. (LACM). **Distribution** - United States (Arizona).

Centrodera nevadica arizonica Linsley & Chemsak, 1972: 42; Lewis, 1979: 24 (distr.); Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 17 (cat.); Chemsak 2005: 64, pl. 4, fig. 10; Monné, M.A. & Hovore, 2006: 160 (checklist);

6. *Centrodera oculata oculata* Casey, 1913

Type locality - Holotype male: United States, California: Contra Costa County, Mount Diablo. (USNM). **Distribution** - Coastal central California and Sierra Nevada. **Host plants** - *Pinus ponderosa* Douglas ex Lawson & P. Lawson (Pinaceae).

Centrodera oculata Casey, 1913: 202; Canova, 1936: 129 (distr.); Linsley & Chemsak, 1972: 34; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Lingafelter *et al.*, 2014: 291, fig. 122w (holotype).

Centrodera oculata oculata; Linsley & Chemsak, 1972: 35, fig. 12; Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 17 (cat.); Linsley & Chemsak, 1997: 354 (hosts); Chemsak, 2005: 45, pl. 3, fig. 9; Monné, M.A. & Hovore, 2006: 160 (checklist);

Centrodera nevadica; Fall, 1901: 148; Garnett, 1918: 212 (distr., hosts); Doane *et al.*, 1936: 275 (biol.); Hopping, 1937: 12, pl. 3; Moore, 1937: 88 (distr.). (not LeConte, 1873).

Centrodera arida Van Dyke, 1927: 89.

Type locality - Holotype male: United States, California: Modoc County, Davis Creek. (CASC).

6a. *Centrodera oculata blaisdelli* Van Dyke, 1927

Type locality - Holotype: United States, California: San Diego County, Cuyamaca Mountains. (CASC). **Distribution** - Coastal southern California from San Luis Obispo Co.

Centrodera blaisdelli Van Dyke, 1927: 102; Hopping, 1937: 12; Moore, 1937: 88 (distr.).

Centrodera oculata blaisdelli; Linsley & Chemsak, 1972: 35, fig. 12; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Chemsak, 2005: 50, pl. 3, fig. 10; Monné, M.A. & Hovore, 2006: 160 (checklist);

7. *Centrodera osburni* Knull, 1947

Type locality - Holotype male: United States, California: New York Mountains. (Ohio State University, Columbus). **Distribution** - Mountains of southern California and Sierra Nevada.

Host plants - *Ceanothus integerrimus* Hooker & Arnott (Rhamnaceae).

Centrodera osburni Knull, 1947: 73, pl. 1, fig. 1; Linsley & Chemsak, 1972: 40; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Chemsak, 2005: 47, 61, pl. 4, fig. 8; Monné, M.A. & Hovore, 2006: 160 (checklist); Swift, 2008: 4 (distr., hosts).

8. *Centrodera quadrimaculata* (Champlain & Knull, 1922)

Type locality - Holotype female: United States, Ohio: Rock Bridge. (FMNH). **Distribution** - United States (Ohio).

Anthophilax quadrimaculatus Champlain & Knull, 1922b: 147; Hopping, 1937: 15; Chemsak, 1977: 173 (type).

Anthophylax quadrimaculatus; Knull, 1946: 177; Arnett, 1985: 368, fig. 24.202.

Centrodera quadrimaculata; Linsley & Chemsak, 1972: 35, pl. 1; Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Yanega, 1996: 31, pl. 3, fig. 30; Chemsak, 2005: 46, 51, pl. 3, fig. 11; Monné, M.A. & Hovore, 2006: 160 (checklist); Lingafelter, 2007: 21, 140.

9. *Centrodera spurca* (LeConte, 1857)

Type locality - Holotype female: United States, Washington: Steilacoom. (MCZN).

Distribution - From southern British Columbia, including Vancouver Island, north to Kakwa Provincial Park in the Rocky Mountains, south to southern California and southern New Mexico, Utah and northern Baja California. **Host plants** - *Shepherdia canadensis* Nuttall (Elaeagnaceae), *Arbutus menziesii* Pursh (Ericaceae), *Quercus wislizenii* var. *frutescens* (Engelmann) E. Murray (Fagaceae), *Amelanchier canadensis* Medikus (Rosaceae).

Toxotus spurcus LeConte, 1857: 63; 1860: 63; Lacordaire, 1868: 439; LeConte, 1870: 402 (syn.).

Pachyta spurca; Leng, 1890: 97, 98; Harrington, 1899: 108 (distr.); Fall, 1901: 148 (distr.); Wright & Coolidge, 1908: 68 (distr.); Gibson, 1917: 150 (distr.); Garnett, 1918: 212 (distr.).

Evodinus spurcus; Aurivillius, 1912: 188 (cat.); Boppe, 1921: 72; Saalas, 1936: 73.

Parapachyta spurca; Casey, 1913: 217; Hardy, 1926a: 5, pl. 4, fig. 3; 1926b: 28, pl. 4, fig. 3; Essig, 1926: 452; Beaulne, 1932: 199 (hosts); Moore, 1937: 88 (distr.); Hardy, 1945: 90. fig. 3.

Pachyta (Parapachyta) spurca; Doane *et al.*, 1936: 176, 177.

Evodinus (Centrodera) spurcus; Saalas, 1936: 82.

Centrodera spurca; Canova, 1936: 129 (distr., hosts); Hopping, 1937: 11; Hardy, 1942: 10 (biol.); Leech, 1963: 160, figs 1-3, 5, 6, 9-14, 18, 19, 24-28; Hatch, 1971: 138, pl. 15, fig. 10; Linsley & Chemsak, 1972: 36; Hovore, 1988: 18 (distr.); Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 354 (hosts); Chemsak, 2005: 52, pl. III, fig. 12; Monné, M.A. & Hovore, 2006: 160 (checklist); Bousquet, Lap Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 499lante, Hammond & Langor, 2017: 103, pl. 17; Rice, MacRae & Merickel, 2017: 670 (distr.);

Typocerus cervinus Walker in Lord's 1866: 332.

Type locality - Holotype female: Canada, British Columbia. (BMNH).

10. *Centrodera sublineata* LeConte, 1862

Syntypes locality - Syntypes: United States, Middle & Western States. (MCZN).

Distribution - Eastern United States, central New York to Georgia, Texas and central Nebraska.

Centrodera sublineata LeConte, 1862: 40; Lacordaire, 1868: 432; Leng, 1890: 66; Hamilton, 1895: 338 (distr.); Dury, 1902: 161 (distr.); Blatchley, 1910: 1049; Boppe, 1921: 34; Kirk & Knull, 1926: 23 (distr.); Hopping, 1937: 13; Brimley, 1938: 212 (distr.); Knull, 1946: 175, pl. 6, fig. 20; Fattig, 1947: 14; Linsley & Chemsak, 1972: 39; Turnbow & Franklin, 1980: 338 (distr.); Chemsak, Linsley & Noguera, 1992: 92 (cat.); MacRae, 1993: 237 (distr.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Yanega, 1996: 31, pl. 4, fig. 41; Schiefer, 1998: 121 (distr.); Chemsak, 2005: 47, 58, pl. 4, figs 5, 6;

Rice & Veal, 2006: 258 (distr.); Monné, M.A. & Hovore, 2006: 160 (checklist); Lingafelter, 2007: 20, 140, 2 figs, pl. 4f; Staines, 2008: 146 (distr.); Guarnieri, 2009: 14 (distr.); Holt, 2013: 245 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 103, pl; 17; Klingeman *et al.*, 2017: 295 (distr.)

11. *Centrodera tenera* Casey, 1913

Type locality - Holotype male: United States, California: San Diego. (USNM). **Distribution** - Coastal southern California.

Centrodera tenera Casey, 1913: 203; Van Dyke, 1927: 103; Hopping, 1937: 13; Moore, 1937: 88 (distr.); Linsley & Chemsak, 1972: 39 (syn.); Chemsak, Linsley & Noguera, 1992: 92 (cat.); Monné, M.A., & Giesbert, 1994: 161 (checklist); Monné, M.A., 1995a: 18 (cat.); Chemsak, 2005: 46, 57, pl. 4, fig. 4; Monné, M.A. & Hovore, 2006: 160 (checklist); Lingafelter *et al.*, 2014: 331, fig. 68g (holotype).

Centrodera pilosa Van Dyke, 1927: 101; Hopping, 1937: 13

Type locality - Holotype female: United States, California: Los Angeles County, Sierra Madre Mountains. (CASC).

Comacmaeops Linsley & Chemsak, 1972

Comacmaeops Linsley & Chemsak, 1972: 88; Monné, M.A., 1995a: 32 (cat.); Chemsak, 2005: 33, 121; Monné, M.A. & Hovore, 2006: 161 (checklist);

Type-species - *Brachysomida brunnea* Knull, 1962 (original designation).

1. *Comacmaeops brunnea* (Knull, 1962)

Type locality - Holotype female: United States, Texas: Pine Canyon, Big Bend National Park. (CNCI). **Distribution** - United States (Texas). **Host plants** - *Quercus* sp. (Fagaceae), *Pinus cembroides* Zuccarini (Pinaceae).

Brachysomida brunnea Knull, 1962: 107, fig.2; Ruetze, 1970: 18 (types).

Comacmaeops brunnea; Linsley & Chemsak, 1972: 89; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 32 (cat.); Van Pelt, 2002: 128 (distr.); Chemsak, 2005: 121, pl. 9, figs 4, 5; Monné, M.A. & Hovore, 2006: 161 (checklist);

Cortodera Mulsant, 1864

Cortodera Mulsant, 1864: 188; Hopping & Hopping, 1947: 220; Arnett, 1962: 857, 877; Chemsak, 1964: 232; Hatch, 1971: 125; Linsley & Chemsak, 1972: 101; Villiers, 1974: 212, 214; Svacha & Danilevsky, 1989: 95 (larva); Monné, M.A., 1995a: 37 (cat.); Chemsak, 2005: 134 (rev.); Monné, M.A., 2006: 119 (cat.). Monné, M.A., 2012: 123; Monné, M.A. & Hovore, 2006: 161 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 111 (key spp.)

Type-species - *Grammoptera spinosula* Mulsant, 1839 (subsequent designation, Gressitt, 1951: 79).

Acmaeops; LeConte, 1850a: 321 (*partim*); Leng, 1890: 104 (*partim*).

Acmaeops (Pseudodinoptera); Aurivillius, 1912: 191 (cat., *partim*).

Leptacmaeops Casey, 1913: 219, 230; Swaine & Hopping, 1928: 11, 14; Bradley, 1930: 235; Chemsak, 1964: 232.

Leptacmaeops (Leptacmaeops); Casey, 1913: 230.

Type-species - *Leptura longicornis* Kirby, 1837 (original designation).

Leptacmaeops (Acmaeopsilla) Casey, 1913: 240.

Acmaeopsilla; Chemsak, 1964: 231.

Type-species - *Acmaeops falsa* LeConte, 1860 (monotypy).

1. *Cortodera barri* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Idaho: Cassia County, Cassia Creek, 4 miles West of Malta. (CASC). **Distribution** - Great Basin areas of Idaho, Nevada, and Oregon.

Cortodera barri Linsley & Chemsak, 1972: 120; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 37 (cat.); Chemsak, 2005: 138, 162, pl. 12, figs 7, 8; Monné, M.A. & Hovore, 2006: 161 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.)

2. *Cortodera bivittata* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Arizona: South Rim Grand Canyon. (CASC).

Distribution - Grand Canyon area, Arizona.

Cortodera bivittata Linsley & Chemsak, 1972: 121; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 37 (cat.); Chemsak, 2005: 139, 165, pl. 12, fig. 11; Monné, M.A. & Hovore, 2006: 161 (checklist);

3. *Cortodera coniferae* Hopping & Hopping, 1947

Type locality - Holotype male: Canada, British Columbia, Merritt, Midday Valley. (CNCI).

Distribution - From western British Columbia to western Alberta, north to Omineca Provincial Park and the Omineca Protected Area in central British Columbia, south to northwestern Montana and northeastern Oregon. **Host plants** - *Picea* sp., *Pinus* sp. (Pinaceae).

Cortodera coniferae Hopping & Hopping, 1947: 233; Ruetter, 1970: 19 (types); Hatch, 1971: 142; Linsley & Chemsak, 1972: 119; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 37 (cat.); Linsley & Chemsak, 1997: 356 (hosts); Heffern, 1998: 9 (distr.); Chemsak, 2005: 138, 160, pl. 12, figs 5, 6; Monné, M.A. & Hovore, 2006: 161 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 112

4. *Cortodera cubitalis* (LeConte, 1861)

Type locality - Holotype: United States, California: San Mateo. (MCZN). **Distribution** - California coast ranges from Mendocino to San Luis Obispo Cos. and central and southern Sierra Nevada. **Host plants** - *Pinus jeffreyi* Balfour (Pinaceae).

Leptura cubitalis LeConte, 1861: 355; 1873a: 223; Leng, 1890: 186; Fall, 1901: 150 (distr.); Garnett, 1918: 252 (distr.); Boppe, 1921: 91.

Acmaeops cubitalis: Van Dyke, 1906: 227.

Lectacmaeops (Lectacmaeops) cubitalis; Casey, 1913: 234; Tanner, 1928: 277 (distr.); Knowlton & Thatcher, 1936: 279 (distr.); Moore, 1937: 88 (distr.).

Cortodera cubitalis; Hopping & Hopping, 1945: 235, figs 3,4,6; Linsley & Chemsak, 1971: 113; Frost, 1979: 346 (biol.); Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 37 (cat.); Heffern, 1998: 24; Chemsak, 2005: 137, 151, pl. 11, fig. 8; Monné, M.A. & Hovore, 2006: 161 (checklist); MacRae & Rice, 2007: 246 (distr.).

Acmaeops basalis LeConte, 1873a: 211; Leng, 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.); Canova, 1936: 126 (distr.).

Acmaeops (Pseudodinoptera) basalis; Aurivillius, 1912: 191 (cat.); Boppe, 1921: 77.

Lectacmaeops (Lectacmaeops) basalis; Casey, 1913: 231; Lange, 1937: 175 (biol.).

Cortodera basalis; Hopping & Hopping, 1947: 235; Hatch, 1971: 142.

Type locality - Holotype: United States, California. (MCZN).

Lectacmaeops (Lectacmaeops) basalis dichroma Casey, 1913: 231; Lingafelter et al., 2014: 26, 367, fig. 26 g (lectotype).

Type locality - Lectotype: United States, California: Santa Barbara. (USNM).

Lectacmaeops (Lectacmaeops) cuneata Casey, 1913: 232; Lingafelter et al., 2014: 49, fig. 51q (holotype).

Type locality - Holotype male: United States, California: Santa Barbara. (USNM).

Lectacmaeops (Lectacmaeops) auricollis Casey, 1913: 232; Lingafelter et al., 2014: 22, 367, fig. 22a (lectotype).

Type locality - Lectotype: United States, California: Calaveras County, Mokelumne Hill. (USNM).

Lectacmaeops (Lectacmaeops) elegantula Casey, 1913: 232; Lingafelter et al., 2014: 57, fig. 60o (holotype).

Type locality - Holotype male: United States, California: Calaveras County. (USNM).

Lectacmaeops (Lectacmaeops) quadrinotata Casey, 1913: 233; Lingafelter et al., 2014: 307, fig. 141 m (holotype).

Type locality - Holotype male: United States, California: Santa Cruz Mts. (USNM).

Lectacmaeops (Lectacmaeops) tenuis Casey, 1913: 233; Lingafelter et al., 2014: 331, fig. 168m (holotype).

Type locality - Holotype male: United States, California. (USNM).

Lectacmaeops (Lectacmaeops) temporalis Casey, 1913: 233; Lingafelter et al., 2014: 331, 367, fig. 168a (lectotype).

Type locality - Lectotype: United States, California: Lake County. (USNM).

Lectacmaeops (Lectacmaeops) minima Casey, 1913: 234; Lingafelter et al., 2014: 99, fig. 109u (holotype).

Type locality - Holotype female: United States, California. (USNM).

5. *Cortodera falsa* (LeConte, 1859)

Type locality - Holotype: United States, California: Fort Tejon. (MCZN). **Distribution** - Monterey Co. and southern Sierra Nevada foothills to northern Mexico (Baja California).

Host plants - *Ambrosia dumosa* (A. Gray) W.W.Payne (Asteraceae).

Acmaeops falsa LeConte, 1859b: 80; 1873a: 210; Leng, 1890: 106, 109; Coquillett, 1893: 312 (biol.); Horn, 1894: 339 (distr.); Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.).

Acmaeops (Pseudodinoptera) falsa; Aurivillius, 1912192 (cat.):

Leptacmaeops (Acmaeopsilla) falsa; Casey, 1913: 240.

Leptacmaeops falsa; Davis, 1932: 85 (distr.); Moore, 1937: 88 (distr.).

Cortodera (Acmaeopsilla) falsa; Linsley, 1942: 52.

Cortodera falsa; Linsley & Chemsak, 1972: 104, figs 33, 34; Goeden & Ricker, 1976: 48 (hosts); Hovore, 1988: 28 (distr.); Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 38 (cat.); Noguera & Chemsak, 1996: 403 (cat.); Chemsak, 2005: 141, pl. X, fig. 5; Monné, M.A., 2006: 119 (cat.); Monné, M.A. & Hovore, 2006: 161 (checklist); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 499

6. *Cortodera ferrea* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California: Inyo County, Westgard Pass Plateau. (CASC). **Distribution** - East central California. **Host plants** - *Pinus monophylla* Torrey & Frémont (Pinaceae).

Cortodera ferrea Linsley & Chemsak, 1972: 115, fig. 38; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 38 (cat.); Chemsak, 2005: 137, 153, pl. 11, figs 9, 10; Monné, M.A. & Hovore, 2006: 161 (checklist);

7. *Cortodera fraudis* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Nevada: Minden. (CACS). **Distribution** - West central Nevada and northeastern California.

Cortodera fraudis Linsley & Chemsak, 1972: 121; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 38 (cat.); Chemsak, 2005: 139, 163, pl. 12, figs 9, 10; Monné, M.A. & Hovore, 2006: 161 (checklist);

8. *Cortodera funerea* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California, Lassen County, Norval Flats. (CASC), **Distribution** - Northeastern California. **Host plants** - *Ribes* sp. (Grossulariaceae), *Pinus contorta* Douglas ex Loudon (Pinaceae), *Prunus* sp. (Rosaceae).

Cortodera funerea Linsley & Chemsak, 1972: 118, pl. 2; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 38 (cat.); Chemsak, 2005: 137, 156, pl. 12, figs 1, 2; Monné, M.A. & Hovore, 2006: 161 (checklist);

9. *Cortodera impunctata* Hopping & Hopping, 1947

Type locality - Holotype male: United States, Washington: Wenatchee. (CASC).

Distribution - United States (Central Washington to Oregon).

Cortodera impunctata Hopping & Hopping, 1937: 222; Ruetter, 1970: 19 (paratypes); Hatch, 1971: 140; Linsley & Chemsak, 1972: 104; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 39 (cat.); Chemsak, 2005: 135, pl. 10, fig. 4; Monné, M.A. & Hovore, 2006: 161 (checklist);

10. *Cortodera longicornis* (Kirby, 1837)

Type locality - Holotype: North America, latitude 65 degrees. (BMNH). **Distribution** - From southeastern Saskatchewan to Vancouver Island, north to the Peace River area in eastern British Columbia, south to northern California, southern Colorado, New Mexico and Nebraska. **Host plants** - *Pinus contorta* Douglas ex Loudon (Pinaceae).

Leptura longicornis Kirby, 1837: 185; Haldeman, 1847a: 65; LeConte, 1870: 399 (syn.).

Acmaeops longicornis; LeConte, 1850a: 321; Bethune, 1872: 116; LeConte, 1873a: 209; Horn, 1876: 170 (syn.); Snow, 1877a: 19 (distr.); LeConte, 1879: 505 (distr.); Bates, 1885: 278 (distr.); Leng, 1890: 105; Casey, 1891: 38 (syn.); Wickham, 1897b: 172; 1899: 7; Fall, 1901: 149 (distr.); Fall & Cockerell, 1907: 193 (distr.); Knowlton, 1930: 75 (distr.); Canova, 1936: 126 (distr.); Saalas, 1936: 75 (morphol.).

Acmaeops (Pseudodinoptera) longicornis; Aurivillius, 1912: 192 (cat.).

Lectacmaeops (Leptacmaeops) longicornis; Casey, 1913: 238; Hopping, 1928: 7; Canova, 1936: 130 (distr.); Hardy, 1948: 32 (distr.).

Cortodera longicornis; Leech, 1947: 106; Hopping & Hopping, 1947: 231; Hatch, 1971: 141; Linsley & Chemsak, 1972: 112 (syn.); Kirk & Balsbaugh, 1975: 98 (distr.); Stein & Tigestad, 1976: 7 (distr.); White, 1985: 283; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 39 (cat.); Heffern, 1998: 9 (distr.); Chemsak, 2005: 136, 148, pl. 11, figs 4,5; Monné, M.A. & Hovore, 2006: 161 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 112, pl. 21; Rice, MacRae & Merickel, 2017: 670 (distr.)

Acmaeops dorsalis LeConte, 1859d: 21.

Lectacmaeops alticola var. *dorsalis*; Leng, 1920: 272 (cat.).

Type locality - Holotype: United States, Republican Fork of Kansas River. (MCZN).

Acmaeops vincta LeConte, 1861: 356; 1873a: 209; Leng, 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.).

Lectacmaeops alticola var. *vincta*; Leng, 1920: 272 (cat.).

Syntypes locality - Syntypes: United States, Oregon: Bitter Root Valley. (MCZN).

Acmaeops ligata LeConte, 1873a: 211; 1879: 505 (distr.); Leng, 1890: 105; Evans, 1906: 99 (distr.).

Lectacmaeops (Leptacmaeops) ligata; Casey, 1913: 239.

Syntype locality - Syntypes: United States, Montana. (MCZN).

Lectacmaeops (Leptacmaeops) punctiventris Casey, 1913: 238; Lingafelter et al., 2014: 306, 367, fig. 140k (lectotype).

Type locality - Lectotype: United States, New Mexico, Sandia Mountains. (USNM).

Lectacmaeops (Leptacmaeops) alticola Casey, 1913: 239; DeLeon, 1934: 57 (hosts); Canova, 1936: 130 (distr.); Knowlton & Thatcher, 1936: 279 (distr.); Lingafelter et al., 2014: 13, fig. 13e (holotype).

Type locality - Holotype female: United States, Colorado. Veta Pass. (USNM).

Lectacmaeops suturalis Casey, 1924: 277; Lingafelter et al., 2014: 330, 367, fig. 167a (lectotype).

Type locality - Lectotype: United States, California. (USNM).

Cortodera bakeri Hopping & Hopping, 1947: 229; Ruetter, 1970: 19 (type); Hatch, 1971: 141.

Type locality - Holotype: United States, Washington: Rainier National Forest. (CASC).
Cortodera harneyensis Hopping & Hopping, 1947: 228; Hatch, 1971: 141.

Type locality - Holotype: United States, Oregon: Steens Mountain, Harney County. (CACS).
Cortodera oregonensis Hopping & Hopping, 1947: 227, figs 1,2,5; Hatch, 1971: 141.

Type locality - Holotype male: United States, Oregon: Ashland. (CACS).

11. *Cortodera militaris militaris* (LeConte, 1850)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - Northern Washington south to central California. **Host plants** - *Ranunculus californicus* Bentham (Ranunculaceae).

Acmaeops militaris LeConte, 1850a: 322; 1857: 23 (distr.); 1873a: 209; Horn, 1886b: xiii; Leng, 1890: 185; 1890: 105; Fall, 1901: 149 (distr.); Garnett, 1918: 213 (distr.).

Acmaeops (Pseudodinoptera) militaris; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Leptacmaeops (Leptacmaeops) militaris; Casey, 1913: 235; Canova, 1936: 130 (distr.).

Cortodera militaris; Hopping & Hopping, 1947: 225; Knowlton & Wood, 1950: 11 (distr.); Hatch, 1971: 140 (distr.); Linsley & Chemsak, 1972: 109; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 39; Linsley & Chemsak, 1997: 356 (hosts); Chemsak, 2005: 145, pl. 10, figs 10, 11; Monné, M.A. & Hovore, 2006: 162 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 112, pl. 21

11a. *Cortodera militaris constans* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California: Modoc County, Buck Creek Ranger Station. (CASC). **Distribution** - Northeastern California.

Cortodera militaris constans Linsley & Chemsak, 1972: 110, fig. 36; Penrose, 1979: 59 (distr.); Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Chemsak, 2005: 157, pl. 11, figs 2, 3; Monné, M.A. & Hovore, 2006: 162 (checklist);

11b. *Cortodera militaris variipes* (Casey, 1891)

Type locality - Lectotype male: United States, California. (USNM). **Distribution** - Coastal central California. **Host plants** - *Sisyrinchium* sp. (Iridaceae), *Ranunculus californicus* Bentham (Ranunculaceae).

Acmaeops variipes Casey, 1891: 38; Leng & Hamilton, 1896: 174; Fall, 1901: 149 (distr.).

Acmaeops (Pseudodinoptera) variipes; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Lectacmaeops (Lectacmaeops) variipes; Casey, 1913: 234.

Cortodera militaris variipes; Linsley & Chemsak, 1972: 110 (syn.); Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995: 40 (cat.); Linsley & Chemsak, 1997: 356 (hosts); Chemsak, 2005: 146, pl. 10, fig. 12, pl. 11, fig. 1; Monné, M.A. & Hovore, 2006: 162 (checklist); Lingafelter *et al.*, 2014: 341, 365, fig. 179s (lectotype).

Cortodera berkeleyensis Hopping & Hopping, 1947: 226; Linsley & MacSwain, 1959: 24, pl. 8e.

Type locality - Holotype: United States, California: Berkeley. (CASC).

12. *Cortodera nitidipennis* (Casey, 1913)

Type locality - Lectotype: United States, Washington: Seattle. (USNM). **Distribution** - Washington to southwest Oregon.

Lectacmeops (Lectacmaeops) nitidipennis Casey, 1913: 236; Leng, 1920: 272 (cat.).

Cortodera nitidipennis; Hopping & Hopping, 1947: 231; Hatch, 1971: 141; Linsley & Chemsak, 1972: 108; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Chemsak, 2005: 136, 143, pl. 10, figs 8, 9; Monné, M.A. & Hovore, 2006: 162 (checklist); Lingafelter *et al.*, 2014: 107, 367, fig. 118q (lectotype).

13. *Cortodera placherensis* Hopping & Hopping, 1947

Type locality - Holotype: United States, California: Placerville. (CACS). **Distribution** - Sierra Nevada to mountains of southern California. **Host plants** - *Calocedrus decurrens* (Torrey) Florin (Cupressaceae).

Cortodera placherensis Hopping & Hopping, 1947: 223; Ruetten, 1970: 19 (paratype); Linsley & Chemsak, 1972: 113 (syn.); Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Linsley & Chemsak, 1997: 356 (hosts); Chemsak, 2005: 137, 150, pl. 11, figs 6, 7; Monné, M.A. & Hovore, 2006: 162 (checklist);

Cortodera sierrae Hopping & Hopping, 1947: 224.

Type locality - Holotype male: United States, California: Fresno County, Huckleberry Meadow. (CACS).

14. *Cortodera robusta* Hopping & Hopping, 1947

Type locality - Holotype female: United States, Washington, Vantage. (CASC). **Distribution** - United States (Washington).

Cortodera robusta Hopping & Hopping, 1947: 234; Ruetten, 1970: 19 (paratype); Hatch, 1971: 142; Linsley & Chemsak, 1972: 119; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Chemsak, 2005: 138, 159, pl. 12, fig. 4; Monné, M.A. & Hovore, 2006: 162 (checklist);

15. *Cortodera spuria* (LeConte, 1873)

Syntypes locality - Syntypes male and female: United States, Oregon and Washington Territory. (MCZN). **Distribution** - Idaho to Wyoming. **Host plants** - *Ranunculus californicus* Benth (Ranunculaceae).

Leptura spuria LeConte, 1873a: 228; Leng & Hamilton, 1896: 174.

Leptacmaeops (Leptacmaeops) spuria; Casey, 1913: 239.

Leptacmaeops spuria; Linsley & Usinger, 1934: 105 (distr.).

Cortodera spuria; Linsley, 1936: 200 (hosts); Hopping & Hopping, 1947: 232; Hatch, 1971: 142; Linsley & Chemsak, 1972: 122; Chemsak, Linsley & Noguera, 1992: 93 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Heffern, 1998: 9 (distr.); Chemsak, 2005: 139, 166, pl. 12, fig. 12; Monné, M.A. & Hovore, 2006: 162 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.)

16. *Cortodera stolidia* (Casey, 1924)

Type locality - Holotype male: United States, Nevada: Las Vegas. (USNM). **Distribution** - Nevada and east side of Sierra Nevada to mountains of southern California. **Host plants** - *Juniperus* sp. (Cupressaceae), *Pinus monophylla* Torrey & Frémont. (Pinaceae).

Leptacmaeops stolidia Casey, 1924: 277; Knowlton & Thatcher, 1936: 279 (distr.).

Cortodera stolidia; Hopping & Hopping, 1947: 234; Linsley & Chemsak, 1972: 117; Hovore & Giesbert, 1976: 350 (hosts); Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 40 (cat.); Linsley & Chemsak, 1997: 356 (hosts); Chemsak, 2005: 137, 155, pl. 11, figs 11,12; Monné, M.A. & Hovore, 2006: 162 (checklist); Lingafelter *et al.*, 2014: 234, fig. 160g.

17. *Cortodera subpilosa* (LeConte, 1850)

Syntypes locality - Syntypes: United States, Oregon. (MCZN). **Distribution** - From central British Columbia to central Alberta, south to northwestern Nebraska, northern California and Wyoming.

Acmaeops subpilosus LeConte, 1850a: 322; 1857: 23 (distr.);

Acmaeops subpilosa; LeConte, 1873a: 209; Leng, 1890: 105; Wickham, 1897b: 172; Fall, 1901: 149 (distr.); Pack, 1930: 209 (distr.); Canova, 1936: 126 (distr.);

Acmaeops (Pseudodinoptera) subpilosa; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77

Leptacmaeops (Leptacmaeops) subpilosa; Casey, 1913: 235; Knowlton, 1930: 75 (distr.); Mank, 1934: 80 (distr.)

Cortodera subpilosa Hopping & Hopping, 1947: 231; Knowlton & Wood, 1950: 11 (distr.); Gardiner, 1970: 288 (biol.); Horning & Barr, 1970: 37 (biol.); Hatch, 1971: 142, pl. 19, fig. 2; Linsley & Chemsak, 1972: 107, fig. 35; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 162 (checklist); Monné, M.A., 1995a: 41 (cat.); Chemsak, 2005: 136, pl. 10, figs 6, 7; Monné, M.A. & Hovore, 2006: 162 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 112, pl. 21; Rice, MacRae & Merickel, 2017: 670 (distr.)

Acmaeops lupina LeConte, 1860: 321

Acmaeops (Pseudodinoptera) lupina; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77

Leptacmaeops (Leptacmaeops) lupina; Casey, 1913: 237; Canova, 1936: 130 (distr.);

Type locality - Holotype: United States, Rocky Mountains. (MCZN).

Leptacmaeops (Leptacmaeops) intermedia Casey, 1913: 236; Lingafelter *et al.*, 2014: 82, fig. 89i (holotype).

Type locality - Holotype female: United States. (USNM).

Leptacmaeops (Leptacmaeops) pugetana Casey, 1913: 237; Lingafelter *et al.*, 2014: 305, 367, fig. 138e (lectotype).

Type locality - Lectotype: United States, Washington: Seattle. (USNM).

Leptacmaeops (Leptacmaeops) quadriceps Casey, 1913: 237; Knowlton & Thatcher, 1936: 179 (distr.); Lingafelter *et al.*, 2014: 307, 367, fig. 141a (lectotype.).

Type locality - Lectotype: United States, Utah. (USNM).

18. *Cortodera thorpi* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Nevada: Eureka County, 28.5 miles West of Eureka. (CASC). **Distribution** - United States (Nevada).

Cortodera thorpi Linsley & Chemsak, 1972: 123; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 41 (cat.); Chemsak, 2005: 139, 169, pl. 134, fig. 3; Monné, M.A. & Hovore, 2006: 162 (checklist);

19. *Cortodera tuberculicollis* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, New Mexico: Fort Wingate. (CASC).

Distribution - Northwestern New Mexico.

Cortodera tuberculicollis Linsley & Chemsak, 1972: 118, pl. 2; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 41 (cat.); Chemsak, 2005: 138, 158, pl. 12, fig. 3; Monné, M.A. & Hovore, 2006: 162 (checklist);

20. *Cortodera vanduzeei* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California: Fresno County, Mt. Kaiser. (CACS). **Distribution** - Central to southern Sierra Nevada.

Cortodera vanduzeei Linsley & Chemsak, 1972: 122; Chemsak, Linsley & Noguera, 1992: 94 (cat.); Monné, M.A., & Giesbert, 1994: 163 (checklist); Monné, M.A., 1995a: 41 (cat.); Chemsak, 2005: 139, 167, pl. 13, figs 1, 2; Monné, M.A. & Hovore, 2006: 162 (checklist);

Enoploderes Faldermann, 1837

Enoploderes Faldermann, 1837: 309; Nakane & Ohbayashi, 1959: A63; Kusama & Hayashi, 1971: 98; Danilevsky, 2014: 73.

Type-species - *Enoploderes sanguineus* Faldermann, 1837 (monotypy).

Enoploderes (Enoploderes); Miroshnikov, 2000: 56.

Pyrotrichus LeConte, 1862: 41; Thomson, 1864: 149, 410; Lacordaire, 1868: 456; LeConte, 1873a: 727; LeConte & Horn, 1883: 312; Leng, 1890: 13; Casey, 1913: 197; Boppe, 1921: 37; Swaine & Hopping, 1928: 12; Bradley, 1930: 235; Hopping, 1937: 1; Arnett, 1962: 857;

Chemsak, 1964: 234; Hatch, 1971: 124; Linsley & Chemsak, 1972: 63; Monné, M.A., 1995a: 25; Chemsak, 2005: 32, 91; Monné, M.A. & Hovore, 2006: 168 (checklist);

Type-species - *Pyrotrichus vitticollis* LeConte, 1862 (monotypy).

Xylostylon Reitter, 1879: 484.

Type-species - *Xylostylon Lederi* Reitter, 1879 (= *Enoploderes sanguineus* Faldermann, 1837) (monotypy).

1. *Enoploderes vitticollis* (LeConte, 1862)

Type locality - Holotype: United States, California. (MCZN). **Distribution** - British Columbia (Skeena River region and the southern part of Vancouver Island) to southern California and western Nevada. **Host plants** - *Acer* sp. (Aceraceae), *Alnus* sp. (Betulaceae), *Arbutus* sp. (Ericaceae), *Quercus* sp. (Fagaceae), *Umbellularia californica* (Hooker & Arnott) Nuttall (Lauraceae), *Populus trichocarpa* Torrey & A. Gray, *Salix* sp. (Salicaceae), *Ulmus procera* Salisbury (Ulmaceae).

Pyrotrichus vitticollis LeConte, 1862: 41; Thomson, 1864: 149; Lacordaire, 1868: 456; Leng, 1890: 13; Fall, 1901: 148 (diistr.); Garnett, 1918: 211 (distr.); Leng, 1920: 274 (cat.); Boppe, 1921: 37, pl. 3, figs 3-3b; Essig, 1926: 454 (biol.); Hardy, 1926a: 7; Beaulne, 1932: 200 (hosts); Saalas, 1936: 83 (morphol.); Hopping, 1937: 1, pl. 1; Hardy, 1944: 16 (hosts); Linsley & Chemsak, 1972: 64, fig. 21; Hovore & Giesbert, 1976: 350 (hosts); Cope, 1984: 33 (hosts); Chemsak, Linsley & Noguera, 1992: 100 (cat.); Monné, M.A., 1995a: 25 (cat.); Chemsak, 2005: 92, pl. 6, fig. 12, pl. 7, fig. 1; Monné, M.A. & Hovore, 2006: 168 (checklist); Lingafelter *et al.*, 2014: 47, fig. 50g (holotype).

Enoploderes vitticollis; Miroshnikov, 2000: 56, figs 3,4,9,10; Bousquet, Laplante, Hammond & Langor, 2017: 102, pl. 17; Haack, 2017: 115 (biol.)

Pyrotrichus cribripennis Casey, 1913: 198; Leng, 1920: 274 (cat.).

Type locality - Holotype female: United States, California: Los Angeles County. (USNM).

Gaurotes LeConte 1850

Gaurotes LeConte, 1850a: 324; 1854b: 219; Thomson, 1861: 156; 1864: 142, 408; Lacordaire, 1868: 442; LeConte, 1873b: 328; Provancher, 1877a: 580, 611; LeConte & Horn, 1883: 313; Blanchard, 1884: 108; Leng, 1890: 156; Wickham, 1897b: 88; Blatchley, 1910: 1046; Casey, 1913: 217; Boppe, 1921: 69; Swaine & Hopping, 1928: 11, 14; Chagnon, 1936: 246; Hopping, 1937: 19; Knoll, 1946: 178; Dillon & Dillon, 1961: 619; Podany, 1962: 224; Chagnon & Robert, 1962: 243; Chemsak & Linsley, 1963: 82; Chemsak, 1964: 232; Linsley & Chemsak, 1972: 91; Monné, M.A., 1995a: 33; Chemsak, 2005: 33, 125; Monné, M.A. & Hovore, 2006: 161 (checklist);

Type-species - *Rhagium cyanipennis* Say, 1824 (monotypy).

1. *Gaurotes cyanipennis* (Say, 1824)

Syntypes localities - Syntypes: United States, Pennsylvania, near Philadelphia; Arkansas, Arkansas River. (Depository unknown). **Distribution** - This species ranges from New Brunswick to northeastern Minnesota, south to northeastern Mississippi, northeastern Alabama, northern Georgia and Wisconsin. In Canada, it occurs from eastern New Brunswick to the Sault Ste. Marie area in Ontario, north to the Lac Saint-Jean area in Quebec. **Host plants** - *Rhus glabra* Linnaeus (Anacardiaceae), *Betula* sp. (Betulaceae), *Cornus florida* Linnaeus (Cornaceae), *Castanea* sp., *Quercus rubra* Linnaeus (Fagaceae), *Juglans nigra* Linnaeus (Juglandaceae), *Morus rubra* Linnaeus (Moraceae), *Nyssa sylvatica* Marshall (Nyssaceae), *Prunus* sp. (Rosaceae).

Rhagium cyanipenne Say, 1824: 423; LeConte, 1859c: 200.

Pachyta cyanipennis; Newman, 1842: 18; Haldeman, 1847a: 60.

Gaurotes cyanipennis; LeConte, 1850a: 325; Bland, 1861: 100 (distr., hosts); Thomson, 1861: 156; 1864: 142; Lacordaire, 1868: 442; Austin, 1874: 271 (distr.); Provancher, 1877a: 611; Packard, 1881: 137 (biol.); Caulfield, 1881: 60 (biol.); 1882: 31 (biol.); Moffat, 1882: 58 (distr.); Planchard, 1884: 108; Horn, 1885a: 6; Leng, 1890: 156; Packard, 1890: 337, 536,

fig. 126 (biol.); Hausen, 1891: 158 (biol.); Hamilton, 1893a: 274 (distr.); 1893b: 326 (distr.); 1895: 338 (distr.); Slosson, 1895b: 319 (distr.); Evans, 1895b: 173 (distr.); Beutenmuller, 1896: 77 (hosts); Wickham, 1897b: 172 (biol.); 1897c: 157 (distr.); Lugger, 1899: 204, pl. 24, fig. 125; Smith, 1900: 291 (distr.); Dury, 1902: 161 (distr.); Ulke, 1903: 26, 50 (distr.); Hopkins, 1904: 36 (biol.); Felt, 1906: 454 (biol.); Wickham, 1909a: 29 (distr.); Morris, 1909b: 416 (biol.); Smith, 1910: 330 (distr.); Blatchley, 1910: 1050, fig. 448; Fisher & Kirk, 1912: 312 (distr.); Casey, 1913: 217; Lovell, 1915: 114; Johnson, 1915: 315 (distr.); Chagnon, 1917: 234 (distr.); Nicolay, 1917a: 94 (distr.); Britton, 1920: 267 (distr.); Boppe, 1921: 70; Craighead, 1923: 88, pl. 4, fig. 1, pl. 17, fig. 6 (larva); Mundinger, 1924: 317 (biol.); Champlain, Kirk & Knull, 1925: 107 (hosts); Cloudman, 1925: 32; Kirk & Knull, 1926: 24 (distr.); Champlain & Kirk, 1926: 290; Procter, 1927: 111 (distr.); Leonard, 1928: 438 (distr.); Champlain & Knull, 1932: 256; Barrett, 1932: 290 (hosts); Beaulne, 1932: 199 (hosts); Knull, 1934: 209 (hosts); Chagnon, 1936: 246; Doane *et al.*, 1936: 177; Hopping, 1937: 20, pl. 5; Brimley, 1938: 212 (distr.); 1941: 120 (distr.); Sherman, 1946: 127 (distr.); Knull, 1946: 178; Procter, 1946: 177; Fattig, 1947: 15; Dillon & Dillon, 1961: 619, pl. 61, No. 12; Podany, 1962: 246, pl. 5, fig. 19; Chagnon & Robert, 1962: 247; Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 93, fig. 31; Gosling & Gosling, 1976: 5 (distr.); Laliberté, Chantal & LaRoche, 1977: 93 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Rice, 1981: 461 (distr.); Gosling, 1984: 71 (hosts); 1984: 809 (biol.); 1986: 156 (hosts); Švácha & Danilevsky, 1989: 86 (larva); Chemsak, Linsley & Noguera, 1992: 94 (cat.); Glaser, 1992: 154 (distr.); MacRae, 1993: 238 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 33 (cat.); Yanega, 1996: 32, pl. 3, fig. 29; Krinsky & Godwin, 1996: 238; Linsley & Chemsak, 1997: 378 (hosts); Schiefer, 1998: 121 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Sikes & Webster, 2005: 237 (distr.); Chemsak, 2005: 125, pl. 98, figs 8, 9; Monné, M.A. & Hovore, 2006: 161 (checklist); Lingafelter, 2007: 17, 140, 2 figs, pl. 3i (hosts); Webster, McCorquodale & Majka, 2009: 294 (biol., distr.); Guarnieri, 2009: 15 (distr.); Holt, 2013: 245 (distr.); Steury & MacRae, 2014: 9 (distr.); Webster, 2016: 486; Bousquet, Laplante. Hammond & Langor, 2017: 108, pl. 20; Klingeman *et al.*, 2017: 296 (distr.)

Pachyta Servillei Audinet-Serville, 1835: 214; Strauch, 1861: 138.

Gaurotes (s.str.) cyanipennis m. servillei; Podany, 1962: 246.

Syntypes locality - Syntypes: Amérique Septentrionale. (BMNH).

Pachyta Ione Newman, 1840: 30.

Gaurotes (s.str.) cyanipennis ab. ione; Podany, 1962: 246.

Syntypes locality - Syntypes: ? (BMNH).

Pachyta Laportii Guérin-Méneville, 1844: 253, pl. 46, fig. 6.

Type locality - Type: Amérique du Nord. (Depository unknown).

Pachyta leonardi Haldeman, 1847a: 60.

Gaurotes (Neogaurotes) leonardi; Podany, 1962: 246.

Syntypes localities - Syntypes male: United States, Massachusetts, Pennsylvania. (JMCZN).

Gaurotes (s.str.) cyanipennis ab. canadensis Podany, 1962: 246; Ruetter, 1970: 20 (types).

Type locality - Holotype male: Canada, Ontario: Port Rowan. (CNCI).

Gaurotes (s.str.) cyanipennis ab. aurata Podany, 1962: 246; Ruetter, 1970: 20 (types).

Type locality - Holotype male: United States, North Carolina: Macon County, Wayah Bald. (CNCI).

Type locality - Holotype: United States, Pennsylvania. (MCZN). **Distribution** - Eastern North

2. *Gaurotes thoracica* (Haldeman, 1847)

America.

Pachyta thoracica Haldeman, 1847a: 60.

Acmaeops thoracica; LeConte, 1850a: 324; 1850b: 235; 1873b: 208; Leng, 1890: 105; Baylis, 1919: 119 (distr.); Britton, 1920: 267 (distr.); Leonard, 1928: 438 (distr.); Knull, 1946: 181.

Acmaeops (Pseudodinoptera) thoracica; Aurivillius, 1912: 192 (cat.); Boppe, 1921: 77.

Gaurotes thoracica; Casey, 1913: 218; Linsley & Chemsak, 1972: 95; Gosling & Gosling, 1976: 5 (distr.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994:

164 (checklist); Monné, M.A., 1995a: 34 (cat.); Yanega, 1996: 32, pl. 3, fig. 32; Schiefer, 2001: 335 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Morris, 2002: 211 (distr.); Chemsak, 2005: 125, pl. 9, figs 10,11; Monné, M.A. & Hovore, 2006: 161 (checklist); MacRae & Rice, 2007: 246 (distr.); Lingafelter, 2007: 19, 140, 2 figs, pl. 4c; Guarnieri, 2009: 15 (distr.); Holt, 2013: 245 (distr.); Klingeman *et al.*, 2017: 296 (distr.)

***Gnathacmaeops* Linsley & Chemsak, 1972**

Gnathacmaeops Linsley & Chemsak, 1972: 135; Monné, M.A., 1995a: 45; Chemsak, 2005: 34, 186; Bousquet, Laplante. Hammond & Langor, 2017: 111

Type-species - *Leptura pratensis* Laicharting, 1784 (original designation).

1. *Gnathacmaeops pratensis* (Laicharting, 1784)

Syntype locality - Syntypes: Austria, Tyrolen: Innsbruck. (Naturhistorika Museum, Innsbruck). **Distribution** - Boreal areas of Holarctic Region; in North America extending over taiga forests of Alaska and Canada and southward through the Appalachian mountains to northwestern Georgia, the Rocky Mountains to central New Mexico and southern Arizona, and the Pacific mountain chains to southern California. **Host plants** - *Acer pictum* var. *truncatum* (Bunge) Chin S. Chang (Aceraceae), *Picea abies* Linnaeus, *Pinus sylvestris* Linnaeus (Pinaceae).

Leptura pratensis Laicharting, 1784: 172.

Acmaeops pratensis; LeConte, 1873a: 210; Horn, 1876: 170 (syn.); LeConte, 1876: 520 (distr.); Provancher, 1877a: 610; Kraatz, 1879: 85; LeConte, 1879: 505 (distr.); Snow, 1883: 42 (distr.); Harrington, 1883: 59; Holland, 1888: 90 (distr.); Fauvel, 1889: 150 (distr.); Hamilton, 1889a: 145; Harrington, 1890: 185 (distr.); Leng, 1890: 106; Cockerell, 1890: 38 (distr.); Hanham, 1894: 352 (distr.); Hamilton, 1894a: 31 (distr.); 1894b: 396 (distr.); Townsend, 1895: 48 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 171; 1897c: 157 (distr.); Slosson, 1897: 238 (distr.); Wickham, 1899b: 199 (distr.); 1900: 598 (distr.); Fall, 1901: 149 (distr.); Knaus, 1902: 152 (distr.); MacGillivray & Houghton, 1902: 252 (distr.); Skinner, 1903: 40 (distr.); Houghton, 1905: 51 (distr.); Fall & Cockerell, 1907: 193 (distr.); Sherman, 1910: 194 (distr.); Blatchley, 1910: 1050; Casey, 1913: 241; Lovell, 1915: 114; Notman, 1916: 166 (distr.); Chagnon, 1917: 234 (distr.); Garnett, 1918: 213 (distr.); Munding, 1924: 317 (distr.); Fall, 1926: 202 (distr.); Engelhardt, 1927: 73 (distr.); Leonard, 1928: 438; Beaulne, 1932: 199 (hosts); Mank, 1934: 80 (distr.); Brown, 1934: 229 (distr.); Doane *et al.*, 1936: 177; Chagnon, 1936: 247; Canova, 1936: 126 (distr.); Saalas, 1936: 74, pl. 7, fig. 87 (morphol.); Hatch, 1939: 49 (distr.); Chagnon, 1939: 86 (distr.); Smith *et al.*, 1943: 315, fig. 314; Knull, 1946: 180; Hardy, 1948: 32 (distr.); Knowlton & Wood, 1950: 11 (distr.); Hicks, 1955: 165 (distr.); Clark, 1956: 41 (distr.); Chagnon & Robert, 1962: 247; Gardiner, 1970: 287 (biol.); Wilson, 1971: 62; Hatch, 1971: 143; Monné, M.A. & Hovore, 2006: 156 (checklist); Webster, 2016: 486; Rice, MacRae & Merickel, 2017: 670 (distr.)

Gnathacmaeops pratensis; Linsley & Chemsak, 1972: 136; Gosling & Gosling, 1976: 7 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 93 (biol.); Chemsak, Linsley & Noguera, 1992: 95 (cat.); Monné, M.A., & Giesbert, 1994: 164 (checklist); Monné, M.A., 1995a: 45 (cat.); Yanega, 1996: 32, pl. 7, fig. 72; Linsley & Chemsak, 1997: 379 (hosts); Heffern, 1998: 9 (distr.); Burne, 1998: 393 (distr.); Vlasák & Vlasakova, 2002: 206 (distr.); Chemsak, 2005: 186, pl. 14, figs 7, 8; MacRae & Rice, 2007: 246 (distr.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Bousquet, Laplante. Hammond & Langor, 2017: 111, pl. 20;

Leptura strigilata Fabricius, 1793: 341; Germar, 1825: 11, pl. 11, figs a,b; Zimsen, 1964: 182 (type).

Acmaeops strigilata; LeConte, 1850ba: 235; 1850: 323; 1869: 371 (distr.); 1870: 399 (syn.); Snow, 1877a: 19 (distr.).

Type locality - Holotype: Sweden. (Depository unknown).

Leptura lateralis Estlund, 1796: 127, pl. 5, fig. 1. (not Olivier, 1795).

Type locality - Sweden.

Leptura longiceps Kirby, 1837: 187; Haldeman, 1847a: 65.

Acmaeops longiceps; LeConte, 1850a: 324; Bethune, 1872: 118.

Syntypes locality - Syntypes: America Septentrionalis, latitudes 54 and 65 degrees. (BMNH).

Leptura semimarginata Randall, 1838: 30.

Type locality - Holotype: United States, Maine: Abbott, between the Kennebec river and Penobscot county. (MCZN).

Pachyta strigilata var. *suturalis* Mulsant, 1839: 246.

Type locality - Holotype: France, Basses-Alpes (Alpes-de-Haute-Provence). (MNHN).

Pachyta fulvipennis Mannerheim, 1853: 251.

Leptura fulvipennis; LeConte, 1857: 23.

Type locality - Holotype: United States, Alaska: Peninsula Kenai, ad rivulos flumen Tschunuktnu peninsulae Kenai. (MZHF).

Acmaeops (Acmaeops) pratensis var. *obscuripennis* Pic, 1901b: 24

Syntypes locality - Syntypes: France, Pyrénées. (MNHN).

***Neanthophylax* Linsley & Chemsak, 1972**

Neanthophylax Linsley & Chemsak, 1972: 78; Monné, M.A., 1995a: 29 (cat.); Chemsak, 2005: 32, 108; Monné, M.A. & Hovore, 2006: 166 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 101 (key spp.)

Type-species - *Anthophylax tenebrosus* LeConte, 1873 (original designation).

1. *Neanthophylax mirificus* (Bland, 1865)

Type locality - Lectotype female: United States, Colorado Territory. (ANSP). **Distribution** - This species ranges from central British Columbia and the Rocky Mountains in Alberta, south to Colorado, Utah, and eastern Oregon, Mexico, Costa Rica?. **Host plants** - *Abies* sp., *Picea* sp., *Pinus contorta* Douglas ex Loudon, *Pinus monticola* Douglas ex D. Don, *Pinus ponderosa* Douglas ex Lawson & P. Lawson, *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Anthophylax ? mirificus Bland, 1865: 382.

Anthophylax mirificus; Gemminger in Gemminger & Harold, 1872: 2863 (cat.); Horn, 1880a: xi, xii; Saalas, 1936: 75; Knowlton & Wood, 1950: 11 (distr.).

Anthophylax mirificus; LeConte, 1873a: 208; Packard, 1881: 244 (biol.); Horn in Leng, 1890: 98; Leng, 1890: 110 (syn.); Packard, 1890: 858, fig. 292 (biol.); Beutenmuller, 1896: 77 (hosts); Nicolay, 1917b: 42 (distr.); Hopping, 1922: 165; Carr, 1923: 197 (distr.); Pack, 1930: 220 (distr.); DeLeon, 1934: 57; Doane *et al.*, 1936: 77; Hopping, 1937: 16, pl. 4; Ross, 1968: 11 (biol.); Hatch, 1971: 139, pl. 15, fig. 13.

Neanthophylax mirificus; Linsley & Chemsak, 1972: 83; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 29 cat.); Noguera & Chemsak, 1996: 403 (cat.); Linsley & Chemsak, 1997: 402 (host); Heffern, 1998: 9 (distr.); Monné, M.A., 2002: 38 (cat. hosts); Chemsak, 2005: 116, pl. VIII, fig. 12, pl. IX, fig. 1; Monné, M.A., 2006: 130 (cat.); Monné, M.A. & Hovore, 2006: 166 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 102, pl. 17; Rice, MacRae & Merickel, 2017: 670 (distr.); Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 499

Anthophylax ? venustus Bland, 1865: 383.

Type locality - Lectotype male: United States, Colorado Territory. (ANSP).

Pachyta costaricensis Bates, 1885: 277, pl. 20, fig. 1.

Type locality - Holotype male: Costa Rica, Cartago: Volcán de Irazú. (BMNH).

2. *Neanthophylax pubicollis* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Idaho: Shoshone County, Crater Peak. (CASC).

Distribution - United States (Idaho).

Neanthophylax pubicollis Linsley & Chemsak, 1982: 81; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 29 (cat.);

Chemsak, 2005: 109, 115, pl. 9, fig. 11; Monné, M.A. & Hovore, 2006: 166 (checklist); Rice, MacRae & Merickel, 2017: 670 (distr.)

3. *Neanthophylax subvittatus* (Casey, 1891)

Type locality - Lectotype male: United States, Colorado?. (USNM). **Distribution** - Colorado, Montana.

Anthophilax subvittata Casey, 1891: 37; Leng & Hamilton, 1896: 173 (distr.); Nicolay, 1917b: 43; Leng, 1920: 272 (cat.); Hopping, 1937: 16.

Anthophylax subvittatus; Aurivillius, 1912: 195 (cat.); Boppe, 1921: 67.

Neanthophylax subvittatus; Linsley & Chemsak, 1972: 79; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995: 29 (cat.); Heffern, 1998: 9 (distr.); Chemsak, 2005: 109, pl. 8, fig. 5; Monné, M.A. & Hovore, 2006: 166 (checklist); Lingafelter *et al.*, 2014: 329, 365, fig. 166a (lectotype).

4. *Neanthophylax tenebrosus tenebrosus* (LeConte, 1873)

Type locality - Holotype female: United States, Southeastern California. (MCZN).

Distribution - Sierra Nevada to southern Oregon. **Host plants** - *Abies magnifica* A. Murray, *Pinus monticola* Douglas ex D. Don, *Tsuga mertensiana* (Bongard) Carrière (Pinaceae).

Anthophilax tenebrosus LeConte, 1873a: 208; Horn *in* Leng, 1890: 98; Fall, 1901: 49 (distr.); Nicolay, 1917b: 41; Garnett, 1918: 213 (distr.); Doane *et al.*, 1936: 177; Hopping, 1937: 16, pl. 4; Hatch, 1971: 139.

Anthophylax tenebrosus; Lameere, 1883: 23 (cat.); Boppe, 1921: 67

Neanthophylax tenebrosus; Linsley & Chemsak, 1972: 80; Chemsak, Linsley & Noguera, 1992: 98 (cat.).

Neanthophylax tenebrosus tenebrosus; Linsley & Chemsak, 1972: 80, fig. 27; Monné, M.A., 1995: 30 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 30 (cat.); Linsley & Chemsak, 1997: 402 (hosts); Chemsak, 2005: 112, pl. 8, fig. 6; Monné, M.A. & Hovore, 2006: 166 (checklist);

4a. *Neanthophylax tenebrosus nigrolineatus* (Van Dyke, 1917)

Type locality - Holotype male: United States, Oregon: Mt. Jefferson. (CASC). **Distribution** - Cascade Range of Oregon and Washington to British Columbia?. **Host plants** - *Pseudotsuga menziesii* (Mirbel) Franco. (Pinaceae).

Anthophilax nigrolineatus Van Dyke, 1917: 36; Nicolay, 1917b: 44; Leng, 1920: 272 (cat.); Canova, 1936: 29 (distr.).

Neanthophylax tenebrosus nigrolineatus; Linsley & Chemsak, 1972: 80; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 30 (cat.); Linsley & Chemsak, 1997: 402 (hosts); Chemsak, 2005: 113, pl. 8, figs 7, 8; Monné, M.A. & Hovore, 2006: 166 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 102, pl. 17

4b. *Neanthophylax tenebrosus orientalis* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Utah, Provo. (CASC). **Distribution** - Colorado to Oregon.

Neanthophylax tenebrosus orientalis Linsley & Chemsak, 1972: 81; Chemsak, Linsley & Noguera, 1992: 98 (cat.); Monné, M.A., & Giesbert, 1994: 167 (checklist); Monné, M.A., 1995a: 30 (cat.); Heffern, 1998: 9 (distr.); Chemsak, 2005: 114, pl. 8, figs 9, 10; Monné, M.A. & Hovore, 2006: 166 (checklist);

PIDONIINI Zamoroka, 2022

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Type genus - *Pidonia* Mulsant, 1863

Type species - *Leptura lurida* Fabricius, 1793

Pidonia (Ceratopidonia) Linsley & Chemsak, 1976

Pidonia (Ceratopidonia) Linsley & Chemsak, 1976: 119; Monné, M.A., 1995a: 99; Chemsak, 2005: 357, 366; Monné, M.A. & Hovore, 2006: 167 (checklist);

Type-species - *Pidonia quadrata* Hopping, 1931 (original designation).

1. *Pidonia (Ceratopidonia) quadrata* Hopping, 1931

Type locality - Holotype female: Canada, British Columbia: Wigwam Inn, Burrard Inlet. (CNCI). **Distribution** - Coastal Pacific Northwest from British Columbia to northwestern California. In British Columbia, it was collected on Vancouver Island, in the Lower Mainland, and in the Quesnel Lake area.

Pidonia quadrata Hopping, 1931: 233; Hardy, 1944: 15 (distr.); Ruetter, 1970: 21 (types); Hatch, 1971: 144; Bousquet, Laplante. Hammond & Langor, 2017: 114, pl. 22

Pidonia (Ceratopidonia) quadrata; Linsley & Chemsak, 1976: 126; Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 99 (cat.); Chemsak, 2005: 367, pl. 14, fig. 6; Monné, M.A. & Hovore, 2006: 167 (checklist);

Pidonia (Pidonia) Mulsant, 1863

Pidonia Mulsant, 1863: 570; Boppe, 1921: 80; Swaine & Hopping, 1928: 12; Bradley, 1930: 236; Chagnon, 1936: 241; Knull, 1946: 151; Dillon & Dillon, 1961: 608; Chagnon & Robert, 1962: 241; Arnett, 1962: 857; Chemsak, 1964: 234; Hatch, 1971: 125; Linsley & Chemsak, 1976: 118; Monné, M.A., 1995a: 96; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 113 (key spp.)

Pidnota; Bayer & Shenefelt, 1969: 5 (error).

Pidonia (Pidonia); Linsley & Chemsak, 1976: 119; Monné, M.A., 1995: 96; Chemsak, 2005: 357.

Type-species - *Leptura lurida* Fabricius, 1793 (subsequent designation, Swaine & Hopping, 1928: 12).

Pseudopidonia Pic, 1902: 21, 23; Gressitt, 1939: 89; 1951: 70.

Type-species - *Pseudopidonia amurensis* Pic, 1900 (monotypy?).

Hapalosalia Casey, 1913: 200; Chemsak, 1964: 234

Type-species - *Leptura vibex* Newman, 1841 (original designation).

1. *Pidonia (Pidonia) aurata* (Horn, 1860)

Syntypes locality - Syntypes male and female: United States, Western Virginia: Allegheny Ridge. **Distribution** - Atlantic States to southern Appalachian Region in northwestern Georgia.

Leptura aurata Horn, 1860: 570, pl. 8, fig. 5; LeConte, 1873a: 222; Leng, 1890: 192, 199; Hamilton, 1895: 339 (distr.); Dury, 1902: 161 (distr.); Leng, 1910: 77, 81 (distr.); Blatchley, 1910: 1059; Fisher & Kirk, 1912: 313 (distr.); Blackman, 1918: 131; Cloudman, 1925: 33.

Hapalosalia aurata; Casey, 1913: 201; Leng, 1920: 271 (cat.); Kirk & Knull, 1926: 23 (distr.); Leonard, 1928: 437 (distr.); Brimley, 1938: 211 (distr.); Sherman, 1946: 126 (distr.).

Pidonia aurata; Swaine & Hopping, 1928: 17, pl. 1, fig. 7; Doane *et al.*, 1936: 171; Knull, 1946: 122, pl. 5, fig. 15; Dillon & Dillon, 1961: 608, pl. 60, No.4; Kirk, 1970: 76; Wilson, 1971: 59 (biol.); Laliberté, 1978: 200; Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 96 (cat.); Monné, M.A. & Hovore, 2006: 167 (checklist); Yanega, 1996: 36, pl. 15, fig. 183; Lingafelter, 2007: 27, 141, 2 figs, pl. 6i; Klingeman *et al.*, 2017: 296 (distr.)

Pidonia (Pidonia) aurata; Linsley & Chemsak, 1976: 124; Monné, M.A., 1995: 96 (cat.); Chemsak, 2005: 258, 262, pl. 24, fig. 3.

2. *Pidonia (Pidonia) densicollis* (Casey, 1914)

Type locality - Holotype male: United States, North Carolina: Black Mountains. (USNM).

Distribution - Appalachian region from Pennsylvania to northwestern Georgia.

Hapalosalia densicollis Casey, 1914: 366; Leng, 1920: 271 (cat.); Brimley, 1938: 211 (distr.).

Pidonia densicollis; Swaine & Hopping, 1928: 19; Turnbow & Franklin, 1980: 338 (distr.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 97 (cat.); Yanega, 1996: 36, pl. 15, fig. 184; Lingafelter, 2007: 27, 141, 2 figs, pl. 6j; Lingafelter *et al.*, 2014: 52, fig. 55g (holotype); Monné, M.A. & Hovore, 2006: 167 (checklist); Klingeman *et al.*, 2017: 296 (distr.)

Pidonia (Pidonia) densicollis; Linsley & Chemsak, 1976: 125; Monné, M.A., 1995: 97 (cat.); Chemsak, 2005: 258, 363, pl. 24, fig. 4; MacRae & Rice, 2007: 248 (distr.).

3. *Pidonia (Pidonia) nitidicollis* (Horn, 1860)

Syntypes locality - Syntypes male and female: United States, Virginia: Alleghany Ridge. (ANSP). **Distribution** - Canada, Ontario to Maryland and Virginia.

Leptura nitidicollis Horn, 1860: 570, pl. 8, fig. 6; 1862: 188

Pidonia nitidicollis; Monné, M.A. & Hovore, 2006: 167 (checklist); Bousquet, Laplante. Hammond & Langor, 2017: 114, pl. 22

4. *Pidonia(Pidonia) ruficollis* (Say, 1824)

Syntypes locality - Syntypes: United States, Kentucky. (Depository unknown). **Distribution** - Northeastern Canada (Cape Breton Island to the western edge of Lake Superior in Ontario) to the Great Lakes Region, Central States and southern Appalachian region (South Carolina to northwest Georgia). **Host plants** - *Acer saccharinum* Linnaeus (Aceraceae), *Betula* sp. (Betulaceae), *Castanea* sp., *Fagus* sp. (Fagaceae), *Tilia americana* Linnaeus (Malvaceae), *Fraxinus* sp. (Oleaceae), *Prunus serotina* Ehrhart (Rosaceae) (Rosaceae), *Populus* sp. (Salicaceae).

Leptura ruficollis Say, 1824: 421; LeConte, 1859c: 199; LeConte, 1866: 348; Slosson, 1894: 3 (distr.); Hamilton, 1895: 339 (distr.); Dury, 1902: 161 (distr.); Knaus, 1903: 189 (distr.); Morris, 1908: 444 (biol.); Wickham, 1909a: 29 (distr.); Morris, 1909b: 411; Fisher & Kirk, 1912: 313 (distr.); Chapin, 1917: 30 (biol.); Chagnon, 1917: 235 (distr.).

Grammoptera ruficollis; Haldeman, 1847a: 66.

Strangalia ruficollis; LeConte, 1850a: 331.

Hapalosalia ruficollis Casey, 1913: 202.

Leptura sphaericollis var. *ruficollis*; Nicolay, 1917a: 95 (dist.); Chagnon, 1917: 235.

Leptura sphaericollis Say, 1827: 280; LeConte, 1850b: 236; 1850a: 338; 1859c: 336; 1866: 348; 1873: 222; Austin, 1874: 271 (distr.); Provancher, 1877a: 616; Austin, 1877: 94 (syn.); Popenoe. 1878: 83 (distr.); Horn. 1885a: 6 (distr.); Leng, 1890: 192; Harrington, 1894b: 15 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 192; Dury, 1902: 161 (distr.); Blatchley, 1910: 1059; Blackman, 1918: 131; Craighead, 1923: 92, pl. 3, fig. 9, pl. 17, fig. 9 (larva); Cloudman, 1925: 33.

Pidonia ruficollis; Swaine & Hopping, 1928: 18, pl. 1, figs 1, 2; Chagnon, 1936: 246; Doane *et al.*, 1936: 171; Knull, 1946: 153; Dillon & Dillon, 1961: 608, pl. 60, No. 5; Chagnon & Robert, 1962: 246; Bayer & Shenefelt, 1969: 12, fig. 22; Gardiner, 1970: 284 (biol.); Wilson, 1971: 59 (biol.); Gosling & Gosling, 1976: 13, fig. 100 (biol., distr.); Laliberté, Chantal & LaRochelle, 1977: 96 (biol.); Frost, 1979: 346 (biol.); Turnbow & Franklin, 1980: 338 (distr.); Hansen & Osgood, 1983: 149 (biol.); Gosling, 1986: 157 (hosts); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 97 (cat.); Yanega, 1996: 37, pl. 15, figs 185a, b; Linsley & Chemsak, 1997: 420 (hosts); Vlasák & Vlasakova, 2002: 207 (distr., hosts); Monné, M.A. & Hovore, 2006: 167 (checklist); Lingafelter, 2007: 28, 141, 2 figs, pl. 7c; Bousquet, Laplante. Hammond & Langor, 2017: 114, pl. 22; Klingeman *et al.*, 2017: 296 (distr.)

Pidonia (Pidonia) ruficollis; Linsley & Chemsak, 1976: 119; Monné, M.A., 1995a: 97 (cat.); Chemsak, 2005: 358, pl. 24, fig. 1; Holt, 2013: 245 (biol., distr.); Webster, 2016: 486;

Pidonia ruficollis var. *sphaericollis*; Chagnon, 1936: 246; Chagnon & Robert, 1962: 246.

Grammoptera sphaericollis; Haldeman, 1847a: 66.

Hapalosalia sphaericollis; Casey, 1913: 202; Procter, 1927: 111 (distr.); Leonard, 1928: 437 (distr.); Beaulne, 1932: 199 (hosts); Brimley, 1938: 212 (distr.).

Leptura sphaericollis form *ruficollis*; Leng, 1890: 199; Wickham, 1897b: 192 (distr.); 1897c: 150.

Hapalosalia sphaericollis var. *ruficollis*; Kirk & Knoll, 1926: 23 (distr.); Leonard, 1928: 437 (distr.).

Pidonia sphaericollis; Procter, 1946: 177 (distr.).

Syntypes locality - Syntypes: United States, Massachusetts, Salem. (Depository unknown).

Leptura allecta Newman, 1841: 72.

Leptura sphaericollis var. *allecta*; Horn, 1885a: 8.

Syntypes locality - Syntypes: United States, New York: near New York. (BMNH).

Leptura paupercula Newman, 1841: 72.

Leptura sphaericollis var. *paupercula*; Horn, 1885a: 8.

Syntypes locality - Syntypes: United States, New York: near New York. (BMNH).

Leptura straussi Webb, 1908: 41; Lingafelter et al., 2014: 326, fig. 162o (holotype).

Pidonia straussi; Swaine & Hopping, 1928: 18, pl. 1, fig. 4.

Hapalosalia straussi; Brimley, 1938: 212 (distr.).

Type locality - Holotype female: United States, North Carolina: Tryon, (USNM).

Hapalosalia laeviceps Casey, 1913: 201; Lingafelter et al., 2014: 85, fig. 93 m (holotype).

Type locality - Holotype female: United States, Wisconsin: Bayfield. (USNM).

Hapalosalia vibex fragilis Casey, 1913: 202; Lingafelter et al., 2014: 343, 367, fig. 181m (lectotype).

Type locality - United States, Indiana. (USNM).

Hapalosalia lineicornis Casey, 1913: 201; Lingafelter et al., 2014: 89, fig. 98o (holotype).

Type locality - Holotype female: United States, Wisconsin: Bayfield. (USNM).

5. *Pidonia (Pidonia) scripta* (LeConte, 1869)

Type locality - Canada, from Haida Gwaii to the Edmonton area in central Alberta, south to central California British Columbia: Vancouver's Island. (MCZN). **Distribution** - Pacific coast from southern Alaska to central California. **Host plants** - *Acer* sp. (Aceraceae), *Lithocarpus densiflora* Rehder, *Quercus agrifolia* Née (Fagaceae), *Umbellularia californica* (Hooker & Arnott) Nuttall (Lauraceae), *Prunus* sp. (Rosaceae).

Leptura scripta LeConte, 1869: 384. 1873: 222; Holland, 1888: 91 (distr.); Wickham, 1890: 35 (distr.); Leng, 1890: 192, 199; Harrington, 1899: 108 (distr.); Fall, 1901: 150 (distr.); Gibson, 1910: 122; Garnett, 1918: 252 (distr.); Saalas, 1936: 78 (morphol.).

Hapalosalia scripta; Casey, 1913: 200; Leng, 1920: 271 (cat.); Hardy, 1926b: 27, pl. 4, fig. 7.

Pidonia scripta; Swaine & Hopping, 1928: 19, pl. 1, figs 5,6, pl. 13, fig. 31; Canova, 1936: 131 (distr., hosts); Doane et al., 1936: 170; Hardy, 1942: 10 (biol.); Leech, 1947: 106; Clark, 1956: 41 (distr.); Hardy, 1957: D64 (biol.); Rentz, 1964: 63 (hosts); Hatch, 1971: 145, pl. 15, figs 16, 16a; Cope, 1984: 33 (hosts); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 97 (cat.); Linsley & Chemsak, 1997: 420 (hosts); Monné, M.A. & Hovore, 2006: 167 (checklist); Vlasák, 2014: 318 (hosts); Rice, MacRae & Merickel, 2017: 670 (distr.)

Pidonia (Pidonia) scripta; Linsley & Chemsak, 1976: 121, figs 129, 130; Monné, M.A., 1995: 98 (cat.); Chemsak, 2005: 360, pl. 24, fig. 2; Bousquet, Laplante. Hammond & Langor, 2017: 114, pl. 22

6. *Pidonia (Pidonia) vibex* (Newman, 1841)

Type locality - Holotype: United States, New York: Trenton Falls. (BMNH). **Distribution** - Canada, from Cape Breton Island to the Sault. Ste. Marie area in Ontario, south to at least Virginia, Maryland and North Carolina.

Leptura vibex Newman, 1841: 72; LeConte, 1850a: 340; 1873: 222; Austin, 1874: 271 (distr.); Provancher, 1877a: 616; Moffat, 1882: 58 (distr.); Horn, 1885a: 6; Hamilton, 1885: 104 (syn.); Leng, 1890: 192; Hamilton, 1890: 215; Hanham, 1894: 352 (distr.); Hamilton, 1895: 339 (distr.); Wickham, 1897b: 192; 1897c: 159; Ouellet, 1902: 122 (distr.); Dury, 1902: 161

(distr.); Morris, 1909b: 414; Blatchley, 1910: 1059; Notman, 1916: 166 (distr.); Blackman, 1918: 131 (distr.).
Hapalosalia vibex; Casey, 1913: 201; Britton, 1920: 267 (distr.); Kirk & Knull, 1926: 23 (distr.); Fletcher, 1926: 143 (distr.); Leonard, 1928: 437 (distr.); Brimley, 1938: 211 (distr.); Malkin, 1941: 290 (distr.); Sherman, 1946: 126 (distr.).
Hapalosalia vibex fragilis Casey, 1913: 202; Lingafelter *et al.*, 343, fig 181 m (lectotype)
Type locality - Lectotype: United States, Indiana. (USNM)
Pidonia ruficollis var. *vibex*; Chagnon, 1936: 246; Chagnon & Robert, 1962: 246.
Pidonia vibex; Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 97 (cat.); Monné, M.A. & Hovore, 2006: 168 (checklist); Webster, 2016: 486; Bousquet, Laplante, Hammond & Langor, 2017: 115, pl. 22

Pidonia (Thesalia) Casey, 1891

Thesalia Casey, 1891: 36; 1913: 198; Boppe, 1921: 80; Chemsak, 1964: 235
Pidonia (Thesalia); Linsley & Chemsak, 1976: 119; Monné, M.A., 1995a: 98; Chemsak, 2005: 357; Monné, M.A. & Hovore, 2006: 167 (checklist);
Type-species - *Acmaeops lisa* Leng, 1890 (= *Leptura gnathoides* LeConte, 1873) (original designation).

1. *Pidonia (Thesalia) gnathoides* (LeConte, 1873)

Type locality - Holotype male: United States, Oregon. (MCZN). **Distribution** - From the Lower Mainland of southwestern British Columbia to central California along the coast and the Sierra Nevada
Leptura gnathoides LeConte, 1873a: 228; Leng, 1890: 192; Fall, 1901: 150 (distr.); Schaeffer, 1908: 342 (syn.); Garnett, 1918: 252 (distr.).
Thesalia gnathoides; Leng, 1920: 274 (cat.); Boppe, 1921: 80.
Pidonia gnathoides; Swaine & Hopping, 1928: 17, pl. 1, fig. 1; Canova, 1936: 131 (distr.); Doane *et al.*, 1936: 170; Hatch, 1971: 144, pl. 15, fig. 11; Bousquet, Laplante, Hammond & Langor, 2017: 114, pl. 22
Pidonia (Thesalia) gnathoides; Linsley & Chemsak, 1976: 125, fig. 31; Chemsak, Linsley & Noguera, 1992: 99; Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M. A., 1995a: 96 (cat.); Monné, M.A., 1995: 98 (cat.); Chemsak, 2005: 365, pl. 24, fig. 5; Monné, M.A. & Hovore, 2006: 167 (checklist);
Acmaeops lisa Leng, 1890: 108.
Thesalia lisa; Casey, 1891: 36.
Type locality - Holotype: United States, Washington, (Public Museum of Staten Island).
Thesalia rubriceps Casey, 1913: 198; Boppe, 1921: 80; Lingafelter *et al.*, 2014: 311, fig. 145s (holotype).
Type locality - Holotype male: United States, California: Marin County. (USNM).

***Piodes* LeConte, 1850**

Piodes LeConte, 1850a: 318; 1854b: 219; Thomson, 1861: 380; 1864: 144, 409; LeConte, 1873b: 328; Provancher, 1878: 382; LeConte & Horn, 1883: 313; Leng, 1890: 65; 1890: 110; Boppe, 1921: 67; Swaine & Hopping, 1928: 12; Bradley, 1930: 235; Hopping, 1937: 18; Arnett, 1962: 857; Chemsak, 1964: 234; Hatch, 1971: 125; Monné, M.A., 1995a: 19; Chemsak, 2005: 31, 65; Monné, M.A. & Hovore, 2006: 167 (checklist);
Type-species - *Piodes coriacea* LeConte, 1850 (monotypy).

1. *Piodes coriacea* LeConte, 1850

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - Known only from south-central British Columbia, Washington, northern Oregon, and southern Idaho.
Piodes coriacea LeConte, 1850a: 318; 1857: 62 (distr.); Thomson, 1864: 144; Provancher, 1877a: 382; Leng, 1890: 110; Leng, 1920: 272 (cat.); Boppe, 1921: 67; Canova, 1936: 131 (distr.); Hopping, 1937: 18, pl. 3; Hatch, 1971: 140; Linsley & Chemsak, 1972: 42, pl. 13; Chemsak,

Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 19 (cat.); Chemsak, 2005: 66, pl. 4, figs 11, 12; Monné, M.A. & Hovore, 2006: 167 (checklist); Westcott *et al.*, 2006: 10 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 131, pl. 17; Rice, MacRae & Merickel, 2017: 674 (distr.)

OXYMIRINI Danilevsky, 2014

Oxymirini Danilevsky, 2014: 70; Bousquet, Laplante, Hammond & Langor, 2017: 100; Zamoroka, 2022: 302

***Anthophylax* LeConte 1850**

Anthophylax LeConte. 1850: 326; 1854b: 219; Thomson, 1861: 156; Lacordaire, 1868: 443; LeConte, 1873b: 328; Provancher, 1877a: 580; LeConte & Horn, 1883: 313; Leng, 1890: 65; Boppe, 1921: 67; Linsley, 1938: 108; Knull, 1946: 176; Arnett, 1962: 857, 877; Chemsak, 1964: 231; Linsley & Chemsak, 1972: 72; Švácha & Danilevsky, 1989: 45; Monné, M.A., 1995a: 27 (cat.); Hoffman, 2003: 50; Chemsak, 2005: 32, 102; Monné, M.A. & Hovore, 2006: 159 (checklist); Švácha & Lawrence, 2014: 155; Bousquet, Laplante, Hammond & Langor, 2017: 101 (key spp.); Zamoroka, 2022: 302

Anthophilax; LeConte, 1850b: 236; Thomson, 1864: 141, 408; Provancher, 1877a: 609; Horn *in* Leng. 1890: 98; Wickham, 1897b: 171; 1897c: 88; Blatchley, 1910: 1046; Nicolay, 1917b: 38; Craighead, 1923: 85; Swaine & Hopping, 1928: 10, 14; Bradley, 1930: 235; Chagnon, 1936: 245; Hopping, 1937: 13; Chagnon & Robert, 1962: 241, 245; Hatch, 1971: 125.

Type-species - *Anthophylax viridis* LeConte, 1850 (subsequent designation, Thomson, 1864: 1420).

1. *Anthophylax cyaneus* (Haldeman, 1848)

Type locality - Holotype: North America. Lake Superior. (MCZN). **Distribution** -From Nova Scotia to northeastern Minnesota, south to Tennessee and northern Georgia and Michigan. In Canada, it occurs from Cape Breton Island to near the eastern edge of Lake Superior. **Host plants** - *Acer rubrum* Linnaeus, *A. spicatum* Lamarck (Aceraceae), *Betula papyrifera* Marsh (Betulaceae), *Castanea* sp., *Fagus ferruginea* Aiton (Fagaceae), *Amelanchier canadensis* Medikus (Rosaceae).

Leptura malachiticus Haldeman, 1847a: 64; Emmons, 1854: 27, pl. 31, fig. 7.

Pachyta malachiticus; Haldeman, 1847b: 374 (syn.).

Anthophylax malachiticus; LeConte, 1850a: 326; Lacordaire, 1868: 443; Fletcher, 1902: 107; Brimley, 1941: 121; Knull, 1942: 226; 1946: 176; Fattig, 1947: 15; Jaques, 1951: 255; Wilson, 1971: 61 (biol.).

Anthophilax malachiticus; LeConte, 1850b: 236; Horn *in* Leng, 1890: 98; Hamilton, 1891b: 63; Hanham, 1894: 352 (distr.); Hamilton, 1895: 338 (distr.); Slosson, 1897: 238 (distr.); Wickham, 1897b: 171; Barber, 1904: 60 (distr.); Blatchley, 1910: 1049; Barber, 1912: 212 (distr.); Shoemaker, 1916: 164 (distr.); Johnson, 1916: 119 (distr.); Notman, 1916: 166 (distr.); Nicolay, 1917b: 40; 1917a: 94; Chagnon, 1917: 233 (distr.); Britton, 1920: 267 (distr.); Hopping, 1922: 166 (distr.); Champlain, Kirk & Knull, 1925: 107; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts); Chagnon, 1936: 245, pl. 15, fig. 9; Hopping, 1937: 15, pl. 4; Procter, 1946: 178 (distr.); Chagnon & Robert, 1962: 245, pl. 15, fig. 9; Gardiner, 1970: 286 (biol.).

Type locality - Holotype: United States, Pennsylvania, Somerset County. (MCZN).

Pachyta malachiticus var. *cyaneus* Haldeman, 1847b: 374.

Stenura ? *cyanea* Haldeman, 1848: 151.

Anthophylax cyaneus; Aurivillius, 1912: 195 (cat.); Boppe, 1921: 67; Linsley & Chemsak, 1972: 77; Gosling & Gosling, 1976: 4 (biol., distr.); Turnbow & Franklin, 1980: 339 (distr.); Gosling, 1986: 155 (hosts); Drouin, 1991: 175 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Glaser, 1992: 154 (distr.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 28 (cat.); Krinsky & Godwin, 1996: 238 (hosts); Yanega, 1996: 30, pl. 3, fig. 27; Linsley & Chemsak, 1997: 344 (hosts); Vlasák & Vlasakova, 2002: 205 (distr.);

Hoffman, 2003: 50 (distr.); Chemsak, 2005: 103, pl. 8, fig. 2; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 17, 139, 2 figs, pl. 3f; Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 101, pl. 16
Anthophilax cyaneus; Casey, 1918: 416; Laliberté, Chantal & LaRochelle, 1997: 90 (biol.).
Type locality - Holotype: North America: Lake Superior. (MCZN)

2. *Anthophilax hoffmanii* Beutenmuller, 1903

Syntypes locality - Syntypes male and female: United States, North Carolina: Yancey County, Summits of the Black Mountains. (AMNH). **Distribution** - United States (North Carolina, Georgia and Tennessee). **Host plants** - *Abies fraseri* (Pursh) Poiret, *Picea* sp. (Pinaceae).
Anthophilax hoffmanii Beutenmuller, 1903: 518, pl. 49, figs 9, 10.
Anthophilax hoffmani; Mutchler, 1912: 213 (type); Nicolay, 1917b: 41; Leng, 1920: 272 (cat.); Craighead, 1923: 86, pl. 11, fig. 8, pl. 22, fig. 16 (larva); Doane *et al.*, 1936: 177; Hopping, 1937: 14; Shoemaker & Stecher, 1938: 40 (distr.); Brimley, 1938: 212 (distr.); Fattig, 1947: 15 (distr.).
Anthophilax hoffmani; Linsley & Chemsak, 1972: 76, pl. 1; Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 28 (cat.); Linsley & Chemsak, 1997: 345 (hosts); Hoffman, 2003: 50, fig. 1 (distr.); Chemsak, 2005: 102, pl. 7, figs 11,12, pl. 8, fig. 1; Monné, M.A. & Hovore, 2006: 159
 7 (checklist); Lingafelter, 2007: 17, 139; Klingeman *et al.*, 2017: 295 (distr.)

3. *Anthophilax viridis* LeConte, 1850

Type locality - Holotype: United States, Michigan, Lake Superior, Eagle Harbor. (MCZN). **Distribution** - Nova Scotia to northern Wisconsin, south to northern Georgia and Wisconsin. In Canada, it occurs from Cape Breton Island to the Sault Ste. Marie area in Ontario. **Host plants** - *Acer spicatum* Lamarck (Aceraceae), *Betula* sp. (Betulaceae), *Fagus ferruginea* Aiton (Fagaceae), *Picea mariana* Britton, Sterns & Poggenburg, *Pinus banksiana* Lambert (Pinaceae).
Anthophilax viridis LeConte, 1850a: 326; Thomson, 1861: 156; Lacordaire, 1868: 443; Boppe, 1921: 67; Linsley, 1938: 109; Knull, 1942: 226; 1946: 176; Wilson, 1971: 61 (biol.); Linsley & Chemsak, 1972: 78; Gosling & Gosling, 1976: 4 (biol., distr.); Turnbow & Franklin, 1980: 339 (distr.); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 29 (cat.); Yanega, 1996: 30, pl. 3, fig. 26; Linsley & Chemsak, 1997: 345 (hosts); Vlasák & Vlasakova, 2002: 205 (distr.); Hoffman, 2003: 50 (distr.); Chemsak, 2005: 103, pl. 8, figs 3, 4; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 17, 139, 2 figs, pl. 3g (hosts); Webster, McCorquodale & Majka, 2009: 292 (distr., hosts); Klingeman *et al.*, 2017: 295 (distr.)
Anthophilax viridis; LeConte, 1850b: 236; Thomson, 1864: 142; Provancher, 1877a: 609; Horn in Leng, 1890: 98; Wickham, 1897b: 171; Van der Wielen, 1897: 206 (distr.); Beutenmuller, 1903: 519, pl. 49, fig., 11; Blatchley, 1910: 1049; Chagnon, 1917: 233 (distr.); Nicolay, 1917b: 40; Leng, 1920: 272 (cat.); Hopping, 1922: 166 (distr.); Craighead, 1923: 86 (larva); Kirk & Knull, 1926: 24 (distr.); Procter, 1927: 111 (distr.); Leonard, 1928: 439 (distr.); Burke, 1931: 101 (distr.); Beaulne, 1932: 199 (hosts); Doane *et al.*, 1936: 177; Hopping, 1937: 15 (syn.); Brimley, 1938: 212 (distr.); Procter, 1946: 178 (distr.); Chagnon & Robert, 1962: 246; Laliberté, Chantal & LaRochelle, 1977: 90 (biol.);
Anthophilax viridis viridipennis Casey, 1913: 416; Leng, 1920: 272 (cat.); Lingafelter *et al.*, 2014: 344,365, fig. 182u (lectotype).
Type locality - Lectotype: United States, New York, Ulster County, Slide Mt. (USNM).

Proanthophilax Zamoroka, 2022

Proanthophilax Zamoroka, 2022: 297, 302

Type species - *Anthophilax attenuatus* (Haldeman, 1847) (original designation)

1 *Proanthophylax attenuatus* (Haldeman, 1847).

Type locality - Holotype: United States, Michigan, Lake Superior, Eagle Harbor, Kiwenaw Point. (MCZN). **Distribution** - From Cape Breton Island to western Ontario, south to northern Kentucky and Minnesota. **Host plants** - *Acer saccharinum* Linnaeus, *A. saccharum* Marshall (Aceraceae), *Betula* sp., *Ostrya virginiana* (Miller) K. Koch (Betulaceae), *Fagus ferruginea* Aiton (Fagaceae), *Populus* sp. (Salicaceae).

Pachyta attenuata Haldeman, 1847a: 59.

Argaleus attenuatus; LeConte, 1850b: 235 (distr.); 1850a: 319.

Anthophylax attenuatus; LeConte, 1854b: 219; Lacordaire, 1868: 443; Boppe, 1921: 67; Brimley, 1941: 121 (biol.); Knoll, 1946: 177; Jaques, 1951: 255, fig. 602; Gardiner, 1966: 202, figs 7, 44; 1970: 286 (hosts); Wilson, 1971: 61 (hosts); Linsley & Chemsak, 1972: 74; Gosling & Gosling, 1976: 4, fig. 71; Gosling, 1986: 155 (hosts); Chemsak, Linsley & Noguera, 1992: 90 (cat.); Monné, M.A., & Giesbert, 1994: 160 (checklist); Monné, M.A., 1995a: 28 (cat.); Yanega, 1996: 20, pl. 2, fig. 25; Linsley & Chemsak, 1997: 344 (hosts); Androw & Keeney, 1999: 3 (distr.); Vlasák & Vlasakova, 2002: 205 (distr.); Hoffman, 2003: 50 (distr.); Chemsak, 2005: 103, pl. 7, fig. 10; Monné, M.A. & Hovore, 2006: 159 (checklist); Lingafelter, 2007: 20, 139, 2 figs, pl. 4g (hosts); Webster, McCorquodale & Majka, 2009: 293 (distr.); Švácha & Lawrence, 2014: 85 (morphol.); Haack, Keena & Eyre, 2017: 72 (biol.); Klingeman *et al.*, 2017: 295 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 101, pl. 16

Leptura attenuata; Horn, 1868: 124 (distr.).

Anthophilax attenuatus; Provancher, 1877a: 609; Horn *in* Leng, 1890: 98; Slossom, 1893: 250 (distr.); 1894: 3 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 171; Youngs, 1997: 192 (biol.); Harrington, 1897: 73 (hosts); Felt, 1906: 488, fig. 122; Nicolay, 1917a: 94; 1917: 39; Chagnon, 1917: 233 (distr.); Leng, 1920: 272 (cat.); Mason, 1922: 227 (distr.); Hopping, 1922: 126 (distr.); Craighead, 1923: 85, pl. 22, figs 6, 17, pl. 28, fig. 4 (larva); Mundinger, 1924: 317 (biol.); Champlain, Kirk & Knoll, 1925: 107 (hosts); Kirk & Knoll, 1926: 24; Fletcher, 1926: 143 (distr.); Leonard, 1928: 439 (distr.); Beaulne, 1932: 199 (hosts); Brown, 1934: 229 (distr.); Chagnon, 1936: 245, pl. 15, fig. 8; Doane *et al.*, 1936: 177; Hopping, 1937: 15, pl.4; Procter, 1946: 178; Chagnon & Robert, 1962: 245, pl. 15, fig. 8; Laliberté, Chantal & LaRoche, 1977: 90 (biol.).

Proanthophylax attenuatus; Zamoroka, 2022: 297,302

Pachyta liturata Kirby, 1837: 178; Haldeman, 1847a: 60; LeConte, 1850a: 340; Mannerheim, 1852: 367; Bethune, 1872:111; Horn, 1876: 170; LeConte, 1876: 520 (distr.); Snow, 1877a: 19 (distr.); Provancher, 1877a: 608; Smith, 1885: 62 DD; Leng, 1890: 97; Harrington, 1890: 185 (distr.); Hamilton, 1894a: 31 (distr.); Townsend, 1895: 48 (distr.); Evans, 1895b: 173 (distr.); Wickham, 1897b: 171; 1899b: 199 (distr.); Harrington, 1899: 108 (distr.); Holland, 1900: 423 (distr.); Schwarz, 1900: 535 (distr.); Fall, 1901: 148 (distr.); Skinner, 1903: 40 (distr.); Fall & Cockerell, 1907: 193 (distr.); Sherman, 1910: 194 (distr.); Blatchley, 1910: 1049; Schwarz, 1910: 183 (distr.); Garnett, 1918: 212 (distr.); Fall, 1926: 202 (distr.); Hardy, 1926a: 5; Essig, 1926: 452, fig. 352 (biol.); Mank, 1934: 80 (distr.); Knowlton, 1934: 86; Canova, 1936: 131 (distr., hosts); Chagnon, 1936: 245; Kniowlton & Thatcher, 1936: 279 (distr.); Doane *et al.*, 1936: 176; Chagnon & Robert, 1962: 245.

Leptura liturata; LeConte, 1857: 6.

Argaleus lituratus; LeConte, 1861: 356 (syn.); Lacordaire, 1868: 440.

Evodinus lituratus; Aurivillius, 1912: 188 (cat.); Boppe, 1921: 72; Saalas, 1922: 63 (morphol.).

Pachyta lamed liturata; Linsley & Chemsak, 1972: 77, fig. 22; Gosling & Gosling, 1976: 3 (distr.); Laliberté, Chantal & LaRoche, 1977: 96 (biol.); Chemsak, Linsley & Noguera, 1992: 99 (cat.); Monné, M.A., & Giesbert, 1994: 168 (checklist); Monné, M.A., 1995a: 26 (cat.); Yanega, 1996: 36, pl. 8, figs 89a,b; Linsley & Chemsak, 1997: 414 (hosts); Heffern, 1998: 9 (distr.); Chemsak, 2005: 95, pl. 8 figs, 2, 3; Monné, M.A. & Hovore, 2006: 167 (checklist); MacRae & Rice, 2007: 248 (distr.); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Bousquet, Laplante, Hammond & Langor, 2017: 104, pl., 17; ; Rice, MacRae & Merickel, 2017: 670 (distr.)

Argaleus nitens LeConte. 1850a: 319; 1850b: 235; Linsley, 1938: 109.

Type locality - Holotype: Canada, Ontario, (Nord du Lac Supérieur), Mouth of Pic River. (MCZN).

Pachyta conflagrata Motschulsky, 1860: 147.

Pachyta lamed var. *conflagrata*; Aurivillius, 1912: 184 (cat.); Boppe, 1921: 64.

Syntypes locality - Syntypes male and female: United States, Alaska. (ZMUM)

Pachyta (Pachyta) lamed americana Podany, 1964: 50, pl. 1, figs 13-25, pl. 2, figs 2, 64, pl. 3 fig. 1.

STENOCORINI Thomson, 1861

Stenocorini; Zamoroka, 2022: 302

Stenocorus (Stenocorus) Geoffroy 1762

Stenocorus Geoffroy, 1762: 221; Fabricius, 1775: 178; Lepeletier & Audinet-Serville, 1825: 481; LeConte, 1873b: 328; Casey, 1913: 205; Boppe, 1921: 64; Hopping, 1928: 7; Chemsak, 1964: 234; Hatch, 1971: 124; Linsley & Chemsak, 1972: 44; Monné, M.A., 1995a: 19; Chemsak, 2005: 31, 67; Monné, M.A. & Hovore, 2006: 169 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 105 (key spp.)

Stenocorus (Stenocorus); Casey, 1913; 207

Stenochorus; Reitter, 1913: 177

Type-species - *Leptura meridiana* Linnaeus, 1758 (Plavilstshikov, 1936 designation, ICNZ, 1994, Opinion 1754)

Toxotus Dejean, 1821: 112; Audinet-Serville, 1835: 211; Westwood, 1839: 41; LeConte, 1850a: 320; 1854b: 219; Thomson, 1861: 144; 1864: 142, 408; Lacordaire, 1868: 438; Chenu, 1870: 330; Girard, 1873: 735; LeConte, 1873b: 328; Provancher, 1877a: 580, 606; LeConte & Horn, 1883: 313; Leng, 1890: 675; Wickham, 1897b: 87; Blatchley, 1910: 1045; Swaine & Hopping, 1928: 13; Bradley, 1930: 235; Chagnon, 1936: 244; Hopping, 1937: 3; Linsley, 1938: 109; Knull, 1946: 171; Gressitt, 1953: 207; Dillon & Dillon, 1961: 128; Arnett, 1962: 857; Chagnon & Robert, 1962: 241; Chemsak, 1964: 235

Type-species - *Leptura meridiana* Linnaeus, 1758 (subsequent designation, Westwood, 1840).

Endemus Gistel, 1848: xi

Type-species - ?

Toxotus (Minaderus) Mulsant, 1862: 467

Type-species - *Leptura meridiana* Linnaeus, 1758 (monotypy).

1. *Stenocorus (Stenocorus) alteni* Giesbert & Hovore, 1998

Type locality - Holotype male: United States, California: San Bernardino County, Cajon Pass. (EMEC). **Distribution** - Southwestern California. **Host plants** - *Quercus john-tuckeri* K. C. Nixon & C. H. Muller (Fagaceae).

Stenocorus alteni Giesbert & Hovore, 1998: 16, fig. 1; Chemsak, 2005: 69, 75, pl. 5, figs 6, 7; Monné, M.A. & Hovore, 2006: 169 (cat.); Swift, 2008: 6 (distr., hosts).

2. *Stenocorus (Stenocorus) copei* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, New Mexico: Cloudcroft (CASC). **Distribution** - Southcentral New Mexico. **Host plants** - *Quercus gambelli* Nuttall (Fagaceae).

Stenocorus copei Linsley & Chemsak, 1972: 54; Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 20 (cat.); Chemsak, 2005: 70, 82, pl. 6, fig. 1; Monné, M.A. & Hovore, 2006: 169 (checklist);

3. *Stenocorus (Stenocorus) cylindricollis* (Say, 1824)

Syntypes locality - Syntypes male and female: United States. (Depository unknown).

Distribution - Eastern North America from southern Canada? to Georgia westward to

Oklahoma and Illinois. **Host plants** - *Rhus* sp. (Anacardiaceae), *Quercus alba* Linnaeus (Fagaceae), *Carya* sp. (Juglandaceae).

Leptura cylindricollis Say, 1824: 417; LeConte, 1859c: 196.

Toxotus cylindricollis; Haldeman, 1847a: 58; 1847b: 374 (syn.); LeConte, 1850a: 320; Cox, 1861: 46 (distr.); Bland, 1861: 100 (distr.); Lacordaire, 1868: 439; McBride, 1880: 107 (distr.); Horn, 1885a: 6 (syn.); Leng, 1890: 68; Laurent, 1893: 7 (distr.); Hamilton, 1895: 338 (distr.); Wickham, 1897b: 170; Ehrmann, 1897: 169 (hosts); Smith, 1900: 291 (distr.); Dury, 1902: 161; Blatchley, 1910: 1047; Smith, 1910: 330; Fisher & Kirk, 1912: 312 (distr.); Morris, 1916b: 300 (biol.); 1916: 21 (hosts); Baylis, 1919: 119 (distr.); Hopping, 1937: 5, pl. 2; Knull, 1946: 171, pl. 3, fig. 5; Fattig, 1947: 14 (distr.).

Stenocorus cylindricollis; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 65; Kirk & Knull, 1926: 24 (distr.); Leonard, 1928: 438 (distr.); Beaulne, 1932: 199 (hosts); Brimley, 1938: 212 (distr.); Loding, 1945: 116 (distr.); Linsley & Chemsak, 1972: 46; Gosling & Gosling, 1976: 3 (biol., distr.); Turnbow & Franklin, 1980: 338 (distr.); Arnett, 1985: 368, fig. 23.200; Chemsak, Linsley & Noguera, 1992: 101 (cat.); MacRae, 1993: 238 (distr.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 20 (cat.); Yanega, 1996: 38, pl. 3, fig. 33; Schiefer, 1998: 122 (distr.); Chemsak, 2005: 68, pl.5, figs 1, 2; Monné, M.A. & Hovore, 2006: 169 (checklist); Lingafelter, 2007: 18, 141, 2 figs, pl. 3k (hosts); Guarneri, 2009: 15 (distr.); Holt, 2013: 246 (distr., hosts); Spomer, 2014: 299, fig. 4 (distr.); Ozdikmen, Cihan & Kaya, 2014: 697 (distr.); Bousquet. Laplante, Hammond & Langor, 2017:106, pl. 18; Klingeman *et al.*, 2017: 296 (distr.)

Stenocorus (Anisorus) cylindricollis; Casey, 1913: 215.

Toxotus dives Newman, 1841: 68.

Type locality - Holotype: United States, New York: Trenton Falls. (BMNH).

Toxotus atratus Haldeman, 1847a: 58.

Stenocorus (Stenocorus) cylindricollis atratus; Leng, 1920: 271 (cat.).

Toxotus cylindricollis var. *atratus*; Fattig, 1947: 14.

Type locality - Holotype: United States, Georgia. (MCZN).

Toxotus dentipennis Haldeman, 1847a: 58.

Type locality - Holotype: United States, Alabama? (MCZN).

4. *Stenocorus (Stenocorus) flavolineatus* (LeConte, 1854)

Type locality - Holotype: United States, Oregon: found on the journey from Vancouver to Yokolt Plain. (MCZN). **Distribution** - Pacific Coast from British Columbia to northern California. In British Columbia, it is known from the Central Coast Regional District south to southernmost Vancouver Island.

Toxotus flavolineatus LeConte, 1854a: 18; 1857: 63; 1861: 356 (distr.); Lacordaire, 1868: 439; LeConte, 1869: 371 (distr.); Leng, 1890: 67; Garnett, 1918: 212 (distr.); Doane *et al.*, 1936: 176 (distr.); Canova, 1936: 132 (distr.); Hopping, 1937: 5, pl. 2; Hardy, 1945: 92, fig. 37.

Toxotus flavolimbatus; LeConte, 1857: 23; Fall, 1901: 148 (error).

Stenocorus flavolineatus; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 65; Hardy, 1926a: 5, pl. 5 fig. 3; Hatch, 1971: 136, pl. 16, fig. 2; Linsley & Chemsak, 1972: 48; Penrose & Westcott, 1964: 22 (biol.); Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 20 (cat.); Giesbert & Hovore, 1998: 17; Chemsak, 2005: 69, pl. 5, fig. 5; Monné, M.A. & Hovore, 2006: 169 (checklist); Ozdikmen, Cihan & Kaya, 2014: 697 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 106, pl. 18

Stenocorus (Stenocorus) flavolineatus; Casey, 1913: 208.

5. *Stenocorus (Stenocorus) nubifer* (LeConte, 1859)

Type locality - Holotype: United States, California: Tejon. (MCZN). **Distribution** - This species ranges from southwestern Alberta to southern Vancouver Island, north to the Quesnel area in British Columbia, south to southern California and southern Utah.

Toxotus nubifer LeConte, 1859b: 80; Lacordaire, 1868: 439; Leng, 1890: 67; Fall, 1901: 148 (distr.).

Stenocorus nubifer; Aurivillius, 1912: 182 (cat.); Casey, 1913: 207; Boppe, 1921: 65; Hopping, 1928: 7; Davis, 1932: 85 (distr.); Linsley & Chemsak, 1972: 59, fig. 17 (syn.); Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 21 (cat.); Giesbert & Hovore, 1998: 18 (syn.); Chemsak, 2005: 70, 86, pl. 6, fig. 6-8; Monné, M.A. & Hovore, 2006: 169 (checklist); Bousquet. Laplante, Hammond & Langor, 2017: 106, pl. 18; Rice, MacRae & Merickel, 2017: 670 (distr.)

Toxotus lateralis Casey, 1891: 37; Fall, 1901: 148 (distr.); Hopping, 1937: 7, pl. 2; Knowlton & Wood, 1950: 11 (distr.); Lingafelter *et al.*, 2014: 86, fig. 94m (holotype).

Stenocorus lateralis; Aurivillius, 1912: 182 (cat.); Casey, 1913: 208; Boppe, 1921: 65.

Type locality - Holotype male: United States, California: summit of Mount Diablo, Contra Costa County, near San Francisco. (USNM).

Stenocorus (Stenocorus) pacificus Casey, 1913: 209; Hatch, 1971: 137; Lingafelter *et al.*, 2014: 2894, 369, fig. 125q (lectotype).

Toxotus pacificus; Hopping, 1937: 6, pl. 1.

Type locality - Lectotype male: United States, California: Lake County. (USNM).

Stenocorus (Stenocorus) tenellus Casey, 1913: 210; Lingafelter *et al.*, 2014: 331, 370, fig. 168e (lectotype).

Type locality - Lectotype male: United States, California: Lake County. (USNM).

Stenocorus (Stenocorus) hesperus Casey, 1913: 210; Lingafelter *et al.*, 2014: 75, fig. 80s (holotype).

Type locality - Holotype female: United States, California: Lake County. (USNM).

Stenocorus (Stenocorus) parviceps Casey, 1913: 210; Lingafelter *et al.*, 2014: 296, fig. 128 i (holotype).

Type locality - Holotype female: United States, California: Lake County. (USNM).

Stenocorus (Stenocorus) truncatulus Casey, 1913: 211; Lingafelter *et al.*, 2014: 336, fig. 174k (holotype).

Type locality - Holotype female: United States, California: Lake County. (USNM).

Stenocorus (Stenocorus) apiciventrif Casey, 1913: 211; Lingafelter *et al.*, 2014: 18, fig. 18q (holotype).

Type locality - Holotype female: United States, California: Santa Cruz Mountains. (USNM).

Stenocorus (Stenocorus) rufipennis Casey, 1913: 213; Lingafelter *et al.*, 2014: 312, 369, fig. 146q (lectotype).

Type locality - Lectotype male: United States, California. (USNM).

Stenocorus uteanus Casey, 1924: 273; Linsley & Chemsak, 1972: 57, figs 18, 19; Lingafelter *et al.*, 2014: 339, 369, fig. 177 s (lectotype).

Toxotus uteanus; Knowlton & Thatcher, 1936: 279 (distr.); Horning & Barr, 1970: 37 (biol.); Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., 1995: 22 (cat.).

Type locality - Lectotype female: United States, Utah: Provo. (USNM).

Stenocorus morio Casey, 1924: 274; Lingafelter *et al.*, 2014: 102, 369, fig. 112u (lectotype).

Toxotus morio; Knowlton & Thatcher, 1936: 279 (distr.).

Type locality - Lectotype male: United States, Utah: Provo. (USNM).

Stenocorus plagiatus Casey, 1924: 273; Lingafelter *et al.*, 2014: 300, fig. 133o (holotype).

Type locality - Holotype female: United States, California: Placer County, Cisco. (USNM).

Stenocorus marginellus Casey, 1924: 274; Lingafelter *et al.*, 2014: 95, fig. 105e (holotype).

Type locality - Holotype male: United States, California: Mount Wilson. (USNM).

Toxotus spinosus Hopping, 1940: 32; Malkin, 1943: 127 (distr.);

Type locality - Holotype male: United States, Oregon: McMinnville. (CACS).

6. *Stenocorus (Stenocorus) obtusus* (LeConte, 1873)

Type locality - Holotype: United States, Yellowstone Basin. (MCZN). **Distribution** - Rocky Mts. from Colorado to British Columbia, Oregon, Nevada and New Mexico.

Toxotus obtusus LeConte, 1873a: 206; Leng, 1890: 68; Hopping, 1937: 8, pl. 1; Barr & Penrose, 1969: 94 (distr.); Gardiner, 1970: 186 (biol.).

Stenocorus obtusus; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 65; Hatch, 1971: 137, pl. 15, fig. 8; Linsley & Chemsak, 1972: 51, fig. 14; Chemsak, Linsley & Noguera, 1992: 101 (cat.);

Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 21 (cat.); Heffern, 1998: 10 (distr.); Chemsak, 2005: 69, 79, pl. 5, figs 10,11; Monné, M.A. & Hovore, 2006: 169 (checklist); O'Neill, Fultz & Ivie, 2008: 30 (biol., distr.); Ozdikmen, Cihan & Kaya, 2014: 697 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 106, pl. 18; Rice, MacRae & Merickel, 2017: 670 (distr.)

Stenocorus (Stenocorus) brevicollis Casey, 1913: 214; Mank, 1934: 80 (distr.); Lingafelter *et al.*, 2014: 32, 369, fig. 32w (lectotype).

Toxotus brevicollis; Canova, 1936: 132 (distr.).

Type locality - Lectotype: United States, Washington. (USNM).

7. *Stenocorus (Stenocorus) testaceus* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, Utah: Buckboard Flat Camp, 7 miles West of Monticello, San Juan County. (AMNH). **Distribution** - Southeastern Utah to Southwestern Colorado.

Stenocorus testaceus Linsley & Chemsak, 1972: 51, fig. 15; Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 22 (cat.); Chemsak, 2005: 69,78, pl. 5, fig. 9; Monné, M.A. & Hovore, 2006: 169 (checklist); Ozdikmen, Cihan & Kaya, 2014: 697 (distr.)

8. *Stenocorus (Stenocorus) trivittatus* (Say, 1824)

Syntypes locality - Syntypes: United States, Mississippi. (Depository unknown).

Distribution - This species ranges from southern Manitoba to west-central Alberta, south to central Colorado and Wyoming.

Rhagium trivittatum Say, 1824: 422; LeConte, 1859c: 199.

Toxotus trivittatus; Melsheimer, 1853: 112 (cat.); Bland, 1861: 100 (distr.); 1862: 270 (distr.); Lacordaire, 1868: 439; Ouellet, 1902: 122 (distr.); Knaus, 1906: 331 (distr.); Hopping, 1937: 6.

Stenocorus trivittatus; Aurivillius, 1912: 182 (cat.); Britton, 1920: 267 (distr.); Boppe, 1921: 66; Fletcher, 1926: 143 (distr.); Linsley & Chemsak, 1972: 56; Stein & Tigestad, 1976: 39 (distr.); Chemsak, Linsley & Noguera, 1992: 101 (cat.); MacRae, 1993: 238; Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 22 (cat.); Yanega, 1996: 38, pl. 4, fig. 37; Heffern, 1998: 10 (distr.); Chemsak, 2005: 70, 85, pl. 6, figs 4, 5; Monné, M.A. & Hovore, 2006: 169 (checklist); Ozdikmen, Cihan & Kaya, 2014: 697 (distr.); Bousquet. Laplante, Hammond & Langor, 2017: 107, pl. 18

9. *Stenocorus (Stenocorus) vestitus* (Haldeman, 1847)

Type locality - Holotype: United States, Oregon. (MCZN). **Distribution** - British Columbia to southern California and Utah. **Host plants** - *Pseudotsuga menziesii* (Mirbel) Franco (Pinaceae).

Toxotus vestitus Haldeman, 1847a: 59; LeConte, 1850a: 321; 1857: 23 (distr.); Lacordaire, 1868: 439; LeConte, 1869: 371 (distr.); Leng, 1890: 67; Wickham, 1897b: 170; Harrington, 1899: 108 (distr.); Fall, 1901: 148 (distr.); Knaus, 1902: 150 (distr.); 1903: 176 (distr.); Fall & Cockerell, 1907: 193 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 212 (distr.); Davis, 1932: 75 (distr.); Knowlton & Thatcher, 1936: 279 (distr.); Hopping, 1937: 8, pl. 2; Hardy, 1942: 10 (biol.); Knowlton & Wood, 1950: 11 (distr.).

Stenocorus vestitus; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 66; Hardy, 1926a: 5, pl. 5, fig. 27; 1927: C35; Hardy & Preece, 1927b: 62 (hosts); Hopping, 1928: 7 (syn.); Ware, 1929: 368 (distr.); Knowlton, 1930: 75 (distr.); Pack, 1930: 219 (distr.); Beaulne, 1932: 199 (hosts); Knowlton, 1934: 86 (distr.); Mank, 1934: 80 (distr.); Saalas, 1936: 72 (morphol.); Hardy, 1957: D65; Hatch, 1971: 137, pl. 15, figs 9, 9a; Linsley & Chemsak, 1972: 52, fig. 16; Chemsak, Linsley & Noguera, 1992: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 22 (cat.); Linsley & Chemsak, 1997: 434 (hosts); Chemsak, 2005: 69, 80, pl. 5, fig. 12; Monné, M.A. & Hovore, 2006: 169 (checklist); Bousquet.

- Laplante, Hammond & Langor, 2017: 107, pl. 19; Rice, MacRae & Merickel, 2017: 671 (distr.); Gimmel *et al.*, 2023: 258 (distr.)
- Stenocorus (Stenocorus) vestitus*; Casey, 1913: 214
- Toxotus virgatus* LeConte, 1874: 67; Harrington, 1899: 108 (distr.); Canova, 1936: 132 (distr.).
- Stenocorus virgatus*; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 66.
- Stenocorus (Stenocorus) virgatus*; Casey, 1913: 209.
- Syntypes localities** - Syntypes male and female: United States, Oregon. Canada, British Columbia, Vancouver. (MCZN).
- Toxotus vestitus* var. *ater* Leng, 1890: 68.
- Stenocorus vestitus* ab. *ater*; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 66; Hatch, 1971: 137.
- Type locality** -
- Stenocorus (Stenocorus) aureatus* Casey, 1913: 213; 1924: 172 (syn.); Lingafelter *et al.*, 2014: 22, fig. 22k (holotype).
- Toxotus aureatus*; Hopping, 1937: 9, pl. 1.
- Type locality** - Holotype female: United States, California. (USNM).
- Stenocorus (Stenocorus) aureatus gilvicornis* Casey, 1913: 213; Lingafelter *et al.*, 2014: 22, fig. 22m (holotype).
- Type locality** - Holotype male: United States, California. (USNM).
- Stenocorus (Stenocorus) sericatus* Casey, 1913: 213; Lingafelter *et al.*, 2014: 318, fig. 152u (holotype).
- Type locality** - Holotype female: United States, California. (USNM).
- Stenocorus (Stenocorus) subpinguis* Casey, 1913: 213; Lingafelter *et al.*, 2014: 328, fig. 165e (holotype).
- Type locality** - Holotype female: United States, Utah. (USNM).
- Stenocorus (Stenocorus) oregonensis* Casey, 1913: 214; Hatch, 1971: 137, pl. 15, fig. 7; Lingafelter *et al.*, 2014: 292, fig. 124a (holotype).
- Toxotus oregonensis*; Canova, 1936: 132 (distr.); Hopping, 1937: 9, pl. 1.
- Type locality** - Holotype female: United States, Oregon: Bull Run, Clackamas County. (USNM).
- Stenocorus (Stenocorus) flaccidus* Casey, 1913: 212; Lingafelter *et al.*, 2014: 63, fig. 67 m (holotype).
- Stenocorus rufipennis flaccidus*; Casey, 1924: 272.
- Type locality** - United States, California. (USNM).

10. *Stenocorus (Stenocorus) vittiger* (Randall, 1838)

- Type locality** – Holotype: at the foot of Mount Bigelow, near the margin of the Dead River. (MCZN). **Distribution** - This species ranges from the Gaspé peninsula in Quebec to northeastern North Dakota, south to southwestern North Carolina. In Canada, it occurs from the Gaspé peninsula and New Brunswick to southern Ontario Southeastern Canada and northeastern United States.
- Leptura vittigera* Randall, 1838: 29
- Toxotus vittiger*; Cox, 1861: 46; Provancher, 1877a: 607; Hamilton, 1895: 338 (distr.); Wickham, 1897b: 169 (distr.); Ehrmann, 1897: 169; Smith, 1910: 220; Barber, 1912: 212; Johnson, 1915: 315; Hopping, 1937: 5, pl. 2; Brimley, 1941: 120; Knull, 1946: 172; Wilson, 1971: 61
- Stenocorus (Stenocorus) vittiger*; Casey, 1913: 208;
- Stenocorus vittiger*; Leonard, 1928: 438] Gibson & Carrillo, 1959: 118; Linsley & Chemsak, 1972: 65; Perry, 1975: 121; Gosling & Gosling, 1976: 3; Stein & Tigestad, 1976: 40; Laliberté, Chantal & LaRochelle, 1977: 99; Gosling, 1986: 157; Chemsak, Linsley & Noguera, 1972: 101 (cat.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995: 23 (cat.); Yanega, 1996: 38, pl. 4, fig. 36; Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 70; Monné, M.A. & Hovore, 2006: 169 (checklist); Rice & Veal, 2006: 259; Webster, McCorquodale & Majka, 2009: 295; Bousquet, Laplante, Hammond & Langor, 2017: 107, pl. 19; Webster, 2016: 486; Klingeman *et al.*, 2017: 296 (distr.)
- Toxotus trivittatus* var. *nigripes* Haldeman, 1847a: 58
- Type locality** - Holotype: United States, Pennsylvania (MCZN)

Stenocorus (Eutoxotus) Casey, 1913*Stenocorus (Eutoxotus) Casey, 1913: 206; Löbl & Smetana, 2010: 134**Eutoxotus; Chemsak, 1964: 232.***Type-species** - *Toxotus Schaumii* LeConte, 1850 (original designation).**1. *Stenocorus (Eutoxotus) schaumii* (LeConte, 1850)****Type locality** - Holotype: United States, Ohio. (MCZN). **Distribution** - This species ranges from New Brunswick to southern Montana, south to Oklahoma, northern Alabama, and northern Georgia. In Canada, it occurs from western New Brunswick to southern Manitoba, north to the Saguenay area in Quebec. **Host plants** - *Acer* sp. (Aceraceae), *Fagus ferruginea* Aiton (Fagaceae), *Juglans nigra* Linnaeus (Juglandaceae), *Fraxinus americana* Linnaeus (Oleaceae), *Amelanchier canadensis* Medikus (Rosaceae), *Populus* sp. (Salicaceae).*Toxotus Schaumii* LeConte, 1850a: 320; 1862: 41; Provancher, 1877a: 607; Dury, 1879: 162; Hamilton, 1885: 103; Leng, 1890: 67.*Toxotus schaumii*; Hamilton, 1895: 338 (distr.); Harrington, 1897: 73 (hosts); Wickham, 1897b: 170; Dury, 1902: 161 (distr.); Ouellet, 1902: 122 (distr.); Felt, 1906: 722; Fletcher, 1907: 100 (biol.); Wickham, 1909a: 29 (distr.); Blatchley, 1910: 1047; Chagnon, 1917: 233 (distr.); Chagnon, 1936: 244; Doane *et al.*, 1936: 176; Hopping, 1937: 7, pl. 2; Brimley, 1941: 120 (biol.); Knull, 1946: 172; Chagnon & Robert, 1962: 244; Wilson, 1971: 61.*Stenocorus (Eutoxotus) schaumii*; Casey, 1913: 206; Leng, 1920: 271 (cat.).*Stenocorus Schaumi*; Boppe, 1921: 66.*Stenocorus schaumii*; Kirk & Knull, 1926: 23 (distr.); Leonard, 1928: 437 (distr.); Beaulne, 1932: 199 (hosts); Linsley & Chemsak, 1972: 47, fig. 14; Gosling & Gosling, 1976: 3 (biol., distr.); Stein & Tagedstad, 1976: 38, fig. 17; Laliberté, Chantal & LaRochelle, 1977: 99 (biol.); Aubé *et al.*, 1978: 56; Rice, 1981: 461 (hosts); Chemsak, Linsley & Noguera, 1992: 101 (cat.); Glaser, 1992: 154 (distr.); MacRae, 1992: 238 (distr.); Skillman, 1993: 210 (distr.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 22 (cat.); Yanega, 1996: 38, pl. 3, figs 34a,b; Linsley & Chemsak, 1997: 434 (hosts); Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 68, 72, pl. 5, figs 3, 4; Monné, M.A. & Hovore, 2006: 169 (checklist); MacRae & Rice, 2007: 248 (distr.); Lingafelter, 2007: 19, 141, 2 figs, pl. 4a (hosts); Webster, McCorquodale & Majka, 2009: 295 (distr.); Holt, 2013: 246 (distr.); Webster, 2016: 486; Bousquet. Laplante, Hammond & Langor, 2017: 107, pl. 18; Klingeman *et al.*, 2017: 296 (distr.)*Toxotus Schaumii* var. *croceus* Leng, 1890: 68; Knull, 1946: 173.*Stenocorus (Eutoxotus) schaumii croceus*; Leng, 1929: 271 (cat.).*Stenocorus schaumii* var. *croceus*; Leonard, 1928: 437 (distr.).**Syntypes locality** - Syntypes male and female: United States, Vermont and northern Illinois. (Public Museum of Staten Island).***Stenocorus (Toxotopsis) Casey, 2013****Stenocorus (Toxotopsis) Casey, 1913: 206**Toxotopsis; Chemsak, 1964: 235***Type-species** - *Leptura cinnamoptera* Randall, 1838 (monotypy).**1. *Stenocorus (Toxotopsis) cinnamopterus* (Randall, 1838)****Type locality** - Holotype: United States, Massachusetts: Cambridge. (MCZN). **Distribution** - From the northeastern United States south to Georgia and west into Kansas. **Host plants** - *Quercus nigra* Linnaeus (Fagaceae).*Leptura cinnamoptera* Randall, 1838: 45.*Toxotus cinnamopterus*; Haldeman, 1847b: 374 (syn.); LeConte, 1850a: 321; Bland, 1861: 100 (distr., hosts); Lacordaire, 1868: 439; Popenoe, 1877: 33 (distr.); Leng, 1890: 67; Hamilton, 1895: 338 (distr.); Dury, 1902: 161 (distr.); Blatchley, 1910: 1047; Fisher & Kirk, 1912: 312

- (distr.); Doane *et al.*, 1936: 176; Hopping, 1937: 7, pl. 2; Knull, 1946: 173; Fattig, 1947: 14 (distr.).
- Stenocorus cinnamopterus*; Aurivillius, 1912: 182 (cat.); Boppe, 1921: 65; Kirk & Knull, 1926: 23 (distr.); Leonard, 1928: 437; Brimley, 1938: 212 (distr.); Alexander, 1958: 50 (distr.); Linsley & Chemsak, 1972: 49; Gosling & Gosling, 1976: 3 (biol., distr.); Perry, 1977: 98 (distr.); Turnbow & Franklin, 1980: 338 (distr.); Waters & Hyche, 1984: 284 (distr.); Chemsak, Linsley & Noguera, 1992: 201 (cat.); Glaser, 1992: 154 (distr.); MacRae, 1993: 238 (distr.); Lingafelter & Horner, 1993: 178 (distr.); Shimomura, 1994: 163 (distr.); Monné, M.A., & Giesbert, 1994: 170 (checklist); Monné, M.A., 1995a: 20 (cat.); Yanega, 1996: 37, pl. 3, figs 35a,b; Peck & Thomas, 1998: 120 (distr.); Schiefer, 1998: 122 (distr.); Vlasák & Vlasakova, 2002: 207 (distr.); Chemsak, 2005: 69, pl. 5, fig. 8; Monné, M.A. & Hovore, 2006: 167 (checklist); Rice & Veal, 2006: 159 (distr.); Lingafelter, 2007: 19, 141, 2 figs, pl. 4b (hosts); Guarnieri, 2009: 15 (distr.); Holt, 2013: 246 (distr., hosts); Bousquet. Laplante, Hammond & Langor, 2017: 106; Klingeman *et al.*, 2017: 296 (distr.)
- Stenocorus (Toxotopsis) cinnamopterus*; Casey, 1913: 206; Leng, 1920: 271 (cat.),
Toxotus aesculi Haldeman, 1847a: 59.
- Type locality** - Holotype: United States, Carolina. (MCZN).

SACHALINOBIINI Danilevsky, 2010

Sachalinobiini Danilevsky, 2010: 43, 136; Bouchard *et al.*, 2011: 464; Zamoroka, 2022: 302

Type genus: *Sachalinobia* Jakobson, 1899.

Type-species: *Sachalinobia retata* Jacobson, 1899 (= *Brachyta koltzei* Heyden, 1887) (original designation).

Sachalinobia Jakobson, 1899

Sachalinobia Jakobson, 1899: 39; Boppe, 1921: 64; Gressitt, 1953: 207; Chemsak & Linsley, 1963: 86; Chemsak, 1964: 234; Linsley & Chemsak, 1972: 90; Monné, M.A., 1995a: 33; Monné, M.A. & Hovore, 2006: 166 (checklist); Švácha & Lawrence, 2014: 155.

Type-species - *Sachalinobia retata* Jacobson, 1899 (= *Brachyta koltzei* Heyden, 1887) (original designation).

Pseudopachyta Swaine & Hopping, 1928: 16; Bradley, 1930: 235; Chagnon, 1936: 241; Gressitt, 1953: 207; Chagnon & Robert, 1962: 241; Arnett, 1962: 857; Chemsak, 1964: 234

Type-species - *Pachyta rugipennis* Newman, 1844 (original designation).

1. *Sachalinobia rugipennis* (Newman. 1844)

Syntypes locality - Syntypes: Canada. (BMNH). **Distribution** - Eastern Canada (New Brunswick, Quebec, Ontario, Nova Scotia) and northeastern United States (Maine, New Hampshire, Michigan). **Host plants** - *Abies balsamea* (Linnaeus) Miller, *Larix laricina* (Duroi) K. Koch, *Picea glauca* (Moench) Voss, *Pinus* sp. (Pinaceae).

Toxotus rugipennis Newman, 1844: 476; Horn, 1885a: 6.

Pachyta rugipennis; LeConte, 1873a: 207; Leng, 1890: 97; Evans, 1895b: 173 (distr.); Wickham, 1897b: 170; Fletcher, 1905: 75; Chagnon, 1905: 36; 1906: 101; Frost, 1912: 307; Chagnon, 1917: 233 (distr.); Nicolay, 1917a: 94 (distr.); Leonard, 1928: 438 (distr.).

Evodinus rugipennis; Aurivillius, 1912: 188 (cat.); Boppe, 1921: 72; Saalas, 1936: 73 (morphol.).

Pseudopachyta rugipennis; Swaine & Hopping, 1928: 14; Brown, 1934: 229 (distr.); Chagnon, 1936: 245, pl. 15, fig. 7; Chagnon & Robert, 1962: 245, pl. 15, fig. 7; Wilson, 1971: 59 (biol.).

Sachalinobia rugipennis rugipennis; Gressitt, 1953: 207; Gardiner, 1970: 287 (biol.); Linsley & Chemsak, 1972: 91, fig. 30; Laliberté, Chantal & LaRoche, 1977: 97 (biol.); Gosling, 1986: 157 (hosts); Drouin 1989: 28; Drouin, 1991: 172 (biol., hosts); Monné, M.A., & Giesbert, 1994: 169 (checklist); Monné, M.A., 1995a: 33 (cat.); Yanega, 1996: 37, pl. 2, fig. 23; Linsley & Chemsak, 1997: 430 (hosts); Vlasák & Vlasakova, 2002: 207 (distr.).

Sachalinobia rugipennis; Gosling & Gosling, 1976: 5 (distr.); Shimomura, 1992: 98 (distr.); Chemsak, Linsley & Noguera, 1992: 100 (cat.); Chemsak, 2005: 123, pl. 9, figs 6,7; Monné, M.A. & Hovore, 2006: 166 (checklist); Webster, 2016: 486; Bousquet, Laplante, Hammond & Langor, 2017: 102, pl, 17

XYLOSTEINI Reitter, 1913

Xylosteina Reitter, 1913: 5.

Xylosteini; Bouchard *et al.*, 2011: 464; Danilevsky, 2014: 66; Zamoroka, 2022: 302

Type genus: *Xylosteus* Frivaldszky, 1838.

Type-species: *Xylosteus Spinolae* Frivaldszky, 1838 (monotypy).

***Leptorhabdium* Kraatz, 1879**

Leptorhabdium Kraatz, 1879: 118; Aurivillius, 1912: 168; Boppe, 1921: 16, 33; Gressitt, 1947: 191; Chemsak, 1964: 233; Linsley & Chemsak, 1972: 29; Monné, M.A., 1995a: 16; Chemsak, 2005: 31, 42; Monné, M.A. & Hovore, 2006: 164 (checklist);

Type-species - *Xylosteus gracilis* Kraatz, 1873 (= *Xylosteus illyricus* Kraatz, 1871) (monotypy).

Leptorrhabdium; Ganglbauer, 1882: 716; Reitter, 1912: 5

Psilorhabdium Kraatz, 1879: 118.

Type-species - *Psilorhabdium caucasicum* Kraatz, 1879 (monotypy).

1. *Leptorhabdium pictum* (Haldeman, 1847)

Type locality - Holotype: United States, Pennsylvania. (MCZN). **Distribution** - Eastern United States to Georgia. **Host plants** - *Betula alleghaniensis* Britton (Betulaceae), *Cornus florida* Linnaeus (Cornaceae), *Castanea* sp., *Quercus* sp. (Fagaceae), *Carya* sp. (Juglandaceae), *Prunus serotina* Ehrhart (Rosaceae),

Toxotus pictus Haldeman, 1847a: 58.

Centrodera picta; LeConte, 1850a: 325; Bland, 1861: 101 (distr.); Thomson, 1861: 158; Lacordaire, 1868: 432; Leng, 1890: 66; Hamilton, 1895: 338 (distr.); Smith, 1900: 291 (distr.); Ulke, 1903: 26, 50 (distr.); Leng, 1910: 77 (distr.); Smith, 1910: 330; Blatchley, 1910: 1049; Fisher & Kirk, 1912: 312 (distr.); Nicolay, 1919: 68 (distr.); Britton, 1920: 267 (distr.); Boppe, 1921: 34, pl. 2, fig. 11; Kirk & Knull, 1926: 23; Leonard, 1928: 437 (distr.); Knull, 1932: 63; Hopping, 1937: 12, pl. 3; Frost, 1937: 202 (distr.); Brimley, 1938: 212 (distr.); Knull, 1946: 175 (biol.); Fattig, 1947: 14; Leech, 1963: 205.

Leptorhabdium pictum; Linsley & Chemsak, 1972: 30, fig. 11; Turnbow & Franklin, 1980: 338 (distr.); Ohbayashi & Shimomura, 1986: 286, fig. 10; Chemsak, Linsley & Noguera, 1992: 96 (cat.); Monné, M.A., & Giesbert, 1994: 165 (checklist); Monné, M.A., 1995a: 16 (cat.); Yanega, 1996: 35, pl. 4, fig. 38; Linsley & Chemsak, 1997: 387 (hosts); Chemsak, 2005: 43, pl. 3, figs 6,7; Monné, M.A. & Hovore, 2006: 164 (checklist); Guarnieri, 2009: 15 (distr.); Klingeman *et al.*, 2017: 296, (distr.)

***Pseudoxylosteus* Sama 1993**

Pseudoxylosteus Sama, 1993: 12; Chemsak, 2005: 30, 40; Monné, M.A. & Hovore, 2006: 168 (checklist); Bi & Ohbayashi, 2014: 7

Type-species - *Xylosteus ornatus* LeConte, 1873 (original designation).

1. *Pseudoxylosteus ornatus* (LeConte, 1873)

Type-locality - Holotype: United States, Oregon. (MCZN). **Distribution** - Sierra Nevada of California to Oregon. **Host plants** - *Abies* sp. (Pinaceae).

Xylosteus ornatus LeConte, 1873a: 205; Leng, 1890: 67; 1920: 271 (cat.); Boppe, 1921: 32; Canova, 1936: 132 (distr.); Hopping, 1937: 13, pl. 3; Hatch, 1971: 139, pl.1 15, fig. 12; Linsley & Chemsak, 1972: 28, fig. 10; Hovore & Giesbert, 1976: 350 (hosts); Chemsak,

Linsley & Noguera, 1992: 106 (cat.); Monné, M.A., & Giesbert, 1994: 174 (checklist);
 Monné, M.A., 1995a: 15 (cat.); Linsley & Chemsak, 1997: 451 (hosts).
Leptorhabdium ornatum; Gressitt, 1947: 191.
*Pseudoxystoleus ornatu*s; Chemsak, 2005: 41, pl. 3 figs 4, 5; Monné, M.A. & Hovore, 2006: 168
 (checklist);

NECYDALINAE Latreille, 1825

Necydalides Latreille, 1825: 401; Guérin-Méneville, 1827: 487; Lacordaire, 1868: 469.
 Necydalaires; Mulsant, 1839: 27, 107; Planet, 1924: 120.
 Necydalidae; Newman, 1840: 19.
 Necydalina; Thomson, 1859: 150; 1866: 47; Reitter, 1912: 24.
 Necydalitae; Thomson, 1861: 159; 1864: 147.
 Necydalites; Fairmaire *in* Jacquelin DuVal, 1864a: 232.
 Necydalinae; Pascoe, 1869: 553, 565; Bousquet *et al.*, 2009: 22; Bouchard *et al.*, 2011:
 465.
 Necydalini; LeConte, 1873b: 325; LeConte & Horn, 1883: 310; Leng, 1890: 11;
 Blatchley, 1910: 1044; Aurivillius, 1912: 256 (cat.); Craighead, 1923: 83 (larva);
 Bradley, 1930: 228, 237; Linsley, 1940: 271; Knull, 1946: 151, 185; Gressitt, 1951:
 123; Arnett, 1962: 856, 878; Hatch, 1971: 123; Linsley & Chemsak, 1972: 13;
 Villiers, 1974: 208, 217; Monné, M.A., 1995a: 4 (cat.); Chemsak, 2005: 12 (rev.);
 Monné, M.A., 2006: 147 (cat.).
 Necydaliini; Portevin, 1927: 19; Plavilstshikov, 1936: 107, 461; Heyrovsky, 1955: 74,
 138.

Type-genus: *Necydalis* Linnaeus, 1758.

Type-species: *Necydalis major* Linnaeus, 1758 designated by Latreille (1829: 120).

***Necydalis* Linnaeus, 1758**

Necydalis Linnaeus, 1758: 421; 1767: 641; Fabricius, 1776: 62; 1793: 350; Olivier, 1795: (69) 1;
 Latreille, 1802: 303; Audinet-Serville, 1834a: 543; Laporte, 1840: 441; Newman, 1840: 20;
 Haldeman, 1847a: 44; Blanchard, C. E. *in* Cuvier, 1849: 482; LeConte, 1850a: 317;
 Thomson, 1861: 146; 1864: 149; 1865: 411; Lacordaire, 1868: 447; Girard, 1873: 732;
 LeConte, 1873b: 325; LeConte & Horn, 1883: 310; Leng, 1890: 12; Wickham, 1897b: 87;
 Blatchley, 1910: 1044; Van Dyke, 1923: 52 (key spp.); Bradley, 1930: 237; Linsley, 1940:
 271; Knull, 1946: 185; Gressitt, 1951: 123; Arnett, 1962: 856, 878; Chemsak, 1964: 233;
 Hatch, 1971: 145; Linsley & Chemsak, 1972: 14 (rev.); Villiers, 1974: 217; Monné, M.A.,
 1995a: 4 (cat.); Chemsak, 2005: 13; Monné, M.A., 2006: 152 (cat.). Monné, M.A. & Hovore,
 2006: 157 (checklist); Monné, M.A., 2012: 124 ; Bousquet, Laplante, Hammond & Langor,
 2017: 87 (key spp.)

Type-species - *Necydalis major* Linnaeus, 1758 (subsequent designation, Latreille, 1829:
 120).

1. *Necydalis acutipennis* Van Dyke, 1923

Type locality - Holotype female: United States, California: Shasta County, near Castle Crags.
 (CACS). **Distribution** - Southern Oregon to Plumas and Tulare Counties, California.

Necydalis acutipennis Van Dyke, 1923: 51; Doane *et al.*, 1936: 379; Linsley, 1940: 275;
 Linsley & Chemsak, 1972: 19; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A.,
 & Giesbert, 1994: 156 (checklist); Monné, M. A., 1995a: 5 (cat.) ; Chemsak, 2005: 20, pl. 2,
 figs 6,7; Monné, M.A. & Hovore, 2006: 173 (checklist);

2. *Necydalis barbarae* Rivers, 1890

Type-locality - Holotype male: United States, California: Santa Barbara. (CASC).

Distribution - Coastal California from San Mateo and Santa Barbara Counties to San
 Bernardino Co. **Host plants** - *Quercus agrifolia* Née, *Q. chrysolepis* Liebmann (Fagaceae).

Necydalis barbarae Rivers, 1890: 112; Fall, 1901: 148; Garnett, 1918: 211 (distr.); Van Dyke, 1923: 52; Doane *et al.*, 1936: 179; Linsley, 1940: 272; Nellis, 1959: 56 (distr.); Linsley & Chemsak, 1972: 15, fig. 5; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 5 (cat.); Linsley & Chemsak, 1997: 402 (hosts); Chemsak, 2005: 16, pl. 1, fig. 12, pl. 2, fig. 1; Monné, M.A. & Hovore, 2006: 157 (checklist); Swift, 2008: 5 (distr., hosts).

3. *Necydalis cavipennis* LeConte, 1873

Syntypes locality - Syntypes: United States, California: San Francisco. (MCZN)

Distribution - This species ranges from British Columbia south to southern California, Arizona, and northern Mexico, Baja California. In British Columbia, it occurs on Haida Gwaii, Vancouver Island, and the southwestern mainland. **Host plants** - *Alnus* sp., *Betula* sp. (Betulaceae), *Lithocarpus densiflora* Rehder, *Quercus agrifolia* Née, *Q. chrysolepis* Liebmann, *Q. garryana* Douglas, *Q. wislizenii* A. de Candolle (Fagaceae), *Eucalyptus globulus* Labillardière, *E. grandis* W. Hill ex Maiden (Myrtaceae), *Heteromeles arbutifolia* (Aiton) M. Roemer (Rosaceae).

Necydalis cavipennis LeConte, 1873a: 204; Lameere, 1883: 30 (cat.); Leng, 1890: 12; Fall, 1901: 148 (distr.); Schaeffer, 1908: 330 (distr.); Garnett, 1918: 211 (distr.); Craighead, 1923: 84, pl. 11, figs 1, 2, pl. 22, figs 8-10 (larva); Van Dyke, 1923: 53; Hardy, 1926a: 7; 1926b: 30; Hardy & Preece, 1927b: 64 (hosts); Doane *et al.*, 1936: 179 (hosts); Linsley, 1940: 274 (rev.); Hardy, 1942: 11 (biol.); Keen, 1952: 198 (hosts); Chemsak, 1958: 41 (hosts); Leech, 1959: 43 (key, hosts); Nellis, 1959: 56 (distr.); Linsley, Knull & Statham, 1961: 27 (distr.); Leech, 1966: 2, figs 1-10 (larva, pupa); Hatch, 1971: 146; Linsley & Chemsak, 1972: 17, fig. 6; Furniss & Carolin, 1977: 296 (biol.); Hovore, 1988: 18 (distr.); Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 5 (cat.); Noguera & Chemsak, 1996: 403 (distr.); Linsley & Chemsak, 1997: 402 (hosts); Monné, M.A., 2002: 43 (cat. hosts); Chemsak, 2005: 19, pl. II, figs 4, 5; Monné, M.A., 2006: 152 (cat.); Monné, M.A. & Hovore, 2006: 157 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 88, pl. 16; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 493

4. *Necydalis diversicollis diversicollis* Schaeffer, 1932

Type locality - Holotype female: United States, Utah: Logan. (USNM). **Distribution** - The range of this subspecies extends from southern British Columbia, including southern Vancouver Island, south along the coast to Monterey County in California. **Host plants** - *Alnus rubra* Bongard (Betulaceae), *Quercus gambelii* (Fagaceae), *Rhamnus* sp. (Rhamnaceae), *Amelanchier canadensis* Medikus (Rosaceae), *Salix* sp. (Salicaceae).

Necydalis diversicollis Schaeffer, 1932: 152; Linsley, 1940: 278; Knowlton & Wood, 1950: 11 (distr.); Hatch, 1971: 147; Linsley & Chemsak, 1972: 21; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Lingafelter *et al.*, 2014: 361.

Necydalis diversicollis diversicollis; Linsley, 1940: 278; Linsley & Chemsak, 1972: 22; Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 5 (cat.); Linsley & Chemsak, 1997: 403 (hosts); Heffern, 1998: 8 (distr.); Chemsak, 2005: 25, pl. 2, fig. 12; Monné, M.A. & Hovore, 2006: 157 (checklist); Rice, MacRae & Merickel, 2017: 669 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 88, pl. 16

5. *Necydalis diversicollis californica* Linsley, 1940

Type locality - Holotype male : United States, California: Mt. Diablo. (CACS). **Distribution** - Coastal California from Mendocino Co. to San Luis Obispo Co. **Host plants** - *Alnus* sp. (Betulaceae), *Quercus* sp. (Fagaceae), *Eucalyptus grandis* W. Hill ex Maiden (Myrtaceae), *Rhamnus californica* Eschscholtz (Rhamnaceae), *Salix* sp. (Salicaceae).

Necydalis diversicollis californica Linsley, 1940: 279; Linsley & Chemsak, 1972: 22; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 5 (cat.); Linsley & Chemsak, 1997: 403 (hosts); Chemsak, 2005: 26, pl. 2, figs 1, 2; Monné, M.A. & Hovore, 2006: 157 (checklist);

6. *Necydalis laevicollis* LeConte, 1869

Type locality - Holotype: Canada, British Columbia : Vancouver's Island. (MCZN).

Distribution - Pacific Coast from British Columbia to Mendocino Co., California eastward to Plumas Co. and Lake Tahoe, California. . In British Columbia, it occurs on Haida Gwaii and Vancouver Island, east to the Rocky Mountain. **Host plants** - *Alnus rubra* Bongard (Betulaceae), *Arbutus menziesii* Pursh (Ericaceae), *Lithocarpus densiflora* Rehder, *Quercus* sp. (Fagaceae), *Salix* sp. (Salicaceae).

Necydalis laevicollis LeConte, 1869: 383; Leng, 1890: 12; Fall, 1901: 148 (distr.); Garnett, 1918: 211 (distr.); Craighead, 1923: 8; Beaulne, 1932: 201 (hosts); Doane *et al.*, 1936: 279; Moore, 1937: 89 (distr.); Linsley, 1940: 276; Hardy, 1945: 91, fig. 32; Leech, 1959: 42 (hosts); Hatch, 1971: 146, pl. 19, fig. 4; Linsley & Chemsak, 1971: 20, figs 6, 7 (syn.); Furniss & Carolin, 1977: 297 (biol.); Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 5 (cat.); Linsley & Chemsak, 1997: 403 (hosts); Chemsak, 2005: 23, pl. 2, figs 10, 11; Monné, M.A. & Hovore, 2006: 173 (checklist); Bousquet, Laplante, Hammond & Langor, 2017: 88, pl. 16 ; Gimmel *et al.*, 2023: 256 (distr.)

Necydalis laevicollis laevicollis; Linsley, 1940: 277.

Necydalis laevicollis seminiger Linsley, 1940: 277; Hatch, 1971: 146.

Type locality - Holotype male: United States, California: Crescent City. (CACS).

7. *Necydalis mellita* (Say, 1835)

Syntypes locality - Syntypes male and female: United States, Indiana. (Depositary unknown).

Distribution - The range of this species extends from New York to eastern Nebraska, north to southern Ontario, south to Arkansas, northern Mississippi, and northern Georgia, west to Missouri and Nebraska. **Host plants** - *Castanea* sp., *Quercus* sp. (Fagaceae), *Pinus contorta* Douglas ex Loudon (Pinaceae).

Molorchus melittus Say, 1835: 194; Harris, 1837: 89; Chevrolat, 1838: 119; LeConte, 1859c: 664; Greene, 1918: 260.

Necydalis melittus; Haldeman, 1847a: 44; LeConte, 1850a: 317; White, 1855: 182; Bland, 1861: 96 (distr.); Lacordaire, 1868: 478; Pettit, 1871: 106 (distr.); LeConte, 1873b: 325; LeConte & Horn, 1883: 310; Leng, 1890: 110; 1890: 12; Wickham, 1897b: 169; Dury, 1902: 160 (distr.); Ulke, 1903: 26, 50 (distr.); Blatchley, 1910: 1044; Mutchler, 1912: 213 (distr.); Fisher & Kirk, 1912: 312 (distr.); Craighead, 1923: 84 (larva); Van Dyke, 1923: 52; Kirk & Knull, 1926a: 26 (distr.); Leonard, 1928: 443 (distr.).

Callisphyrus melittus; Haldeman, 1847b: 372.

Necydalis melitta; Hamilton, 1895: 338 (distr.); Doane *et al.*, 1936: 270; Brimley, 1938: 214 (distr.); Linsley, 1940: 273; Loding, 1945: 118 (distr.); Knull, 1946: 186, pl. 8, fig. 27; Sherman, 1946: 127 (distr.); Fattig, 1947: 21 (distr.); Linsley & Chemsak, 1972: 15; Perry, 1975: 59 (hosts); Gosling & Gosling, 1976: 2 (biol., distr.); Turnbow & Franklin, 1980: 340 (distr.); Arnett, 1985: 367; Chemsak, Linsley & Noguera, 1992: 89 (cat.); MacRae, 1993: 237 (distr.); Shimomura, 1994: 164 (distr.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 6 (cat.); Yanega, 1996: 28, pl. 15, figs 175a-175b; Linsley & Chemsak, 1997: 403 (hosts); Schiefer, 1998: 121 (distr.); Chemsak, 2005: 17, pl. 2, figs 2, 3; Monné, M.A. & Hovore, 2006: 157 (checklist); Lingafelter, 2007: 40, 141, 2 figs., pl. 10g; Guarnieri, 2009: 15 (distr.); Holt, 2013: 246 (distr.); Steury & MacRae, 2014: 9 (distr.); Klingeman *et al.*, 2017: 294 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 88, pl. 16; Heffern, Vlasák & Alten, 2018: 747 (hosts); Haddad *et al.*, 2018: 3, fig. 1E

Necydalis americanus Haldeman, 1847a: 44.

Type locality - Holotype female: United States, Pennsylvania. (MCZN).

8. *Necydalis rudei* Linsley & Chemsak, 1972

Type locality - Holotype male: United States, California: Oso Flaco Lake, San Luis Obispo Canyon. (CASC). **Distribution** - Coastal southcentral California. **Host plants** - *Ericameria ericoides* (Lessing) Nuttall ex Jepson (Asteraceae).

Necydalis rudei Linsley & Chemsak, 1972: 19; Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., 1995: 6 (cat.); Monné, M.A., & Giesbert, 1994: 158 (checklist); Monné, M.A., 1995a: 6 (cat.); Chemsak, 2005: 22, pl. 2, figs 8, 9; Monné, M.A. & Hovore, 2006: 157 (checklist);

***Ulochaetes* LeConte, 1854**

Ulochaetes LeConte, 1854c: 82; 1857: 62; Thomson, 1861: 146; 1864: 151; 1865: 411; Lacordaire, 1868: 478; LeConte, 1873b: 325; LeConte & Horn, 1883: 310; Leng, 1890: 12; Bradley, 1930: 237; Linsley, 1940: 279; Arnett, 1962: 856, 878; Chemsak, 1964: 235; Hatch, 1971: 145; Linsley & Chemsak, 1972: 23; Monné, M.A., 1995a: 6 (cat.); Chemsak, 2005: 27; Monné, M.A., 2006: 157 (cat.); Monné, M.A. & Hovore, 2006: 173 (checklist); Monné, M.A., 2012: 124.

Type-species - *Ulochaetes leoninus* LeConte, 1854 (monotypy).

1. *Ulochaetes leoninus* LeConte, 1854

Type locality - Holotype: United States, Oregon: Prairie Paso. (MCZN). **Distribution** - Pacific Coast from British Columbia down Sierra Nevada Mts. to mountains of Southern California and Mexico (Baja California). **Host plants** - *Abies concolor* Gordon & Glen, *Abies grandis* (Lambert) Lindley, *Picea jeffreyi*, *Pinus contorta* Douglas ex Loudon, *P. jeffreyi* Balfour, *P. lambertiana* Douglas, *P. ponderosa* Douglas ex Lawson & P. Lawson, *P. sabiniana* Douglas ex D. Don, *Pseudotsuga menziesii* (Mirbel) Franco, *Tsuga* sp. (Pinaceae).

Ulochaetes leoninus LeConte, 1854c: 82; 1857: 62, pl. 2, fig. 12; Thomson, 1864: 151; Horn, 1867: 293 (biol.); LeConte, 1869: 371; Lacordaire, 1868: 479; LeConte, 1873b: 325; Riley, 1880: 239 (biol.); LeConte & Horn, 1883: 310; Leng, 1890: 12; Fletcher, 1891: 283 (distr.); Fowler, 1901: li; Fall, 1901: 148 (distr.); Wright & Coolidge, 1908: 68 (distr.); Garnett, 1918: 211 (distr.); Craighead, 1923: 83, pl. 4, fig. 3, pl. 17, figs 2, 13; pl. 23, fig. 11, pl. 29, fig. 2 (larva); Hardy & Preece, 1926: 36 (hosts); Hardy, 1926b: 30, pl. 5, fig. 34; Essig, 1926: 455, fig. 356 (biol.); Tanner, 1927: 33; Hardy & Preece, 1927b: 64; Keen, 1929: 68 (biol.); Beaulne, 1932: 201 (hosts); Doane *et al.*, 1936: 179, fig. 86 (biol.); Linsley, 1940: 280 (rev.); Hardy, 1942: 10 (biol.); 1945: 91, fig. 34 (biol.); Kevan, 1945: 231 (distr.); Keen, 1952: 196 (hosts); Duffy, 1953: 145, figs 102, 103 (larva, pupa); Hardy, 1955: B50; Linsley, 1959: 126 (mimet.); Barr & Penrose, 1969: 94 (distr.); Hatch, 1971: 146, pl. 17, fig. 6; Wilson, 1971: 80; Wasbauer, 1971: 80; Linsley & Chemsak, 1972: 23, figs 8, 9; Swan & Papp, 1972: 451, fig. 964; Furniss & Carolin, 1977: 297, fig. 178 (biol.); Hovore, 1988: 18 (distr.); Chemsak, Linsley & Noguera, 1992: 89 (cat.); Monné, M.A., & Giesbert, 1994: 159 (checklist); Monné, M.A., 1995a: 6 (cat.); Noguera & Chemsak, 1996: 403 (distr.); Linsley & Chemsak, 1997: 448 (hosts); Monné, M.A., 2002: 44 (cat. hosts); Chemsak, 2005: 28, pl. III, fig. 3; Monné, M.A., 2006: 157 (cat.); Monné, M.A. & Hovore, 2006: 173 (checklist); Bouchard, 2014: 542; Monné, M.L., Monné, M.A. & Wang, 2017, fig. 37; Haack, Keena & Eyre, 2017: 85; Haack, 2017: 113 (hosts); Rice, MacRae & Merickel, 2017: 669 (distr.); Bousquet, Laplante, Hammond & Langor, 2017: 89, pl. 16; Pérez-Flores, Toledo-Hernández, Bezark & Monné, M.A. 2021 : 483

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