

A SYSTEMATIC INDEX TO THE KEYS FOR THE DETERMINATION OF THE NEARCTIC COLEOPTERA*

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Adequate analytical keys are scarcely less important to the progress of coleopterology than are the original descriptions. The following index has been drawn up with the object of facilitating reference to the extant keys for the determination of families, genera, and species of the Coleoptera of America north of Mexico.

The several systematic groups are arranged in the sequence of the Leng (1920) "Catalogue of the Coleoptera of America north of Mexico" and are followed by brief bibliographical references which involve the author's name, the last two figures of the year of publication, and a page number which refers either to the first page of the paper containing the key or to the first page upon which the key actually begins. The complete reference is to be obtained either from the bibliography (to Jan. 1, 1919) on pages 367 to 444 of the Leng (1920) "Catalogue" or from the supplementary bibliography at the end of this index. The abbreviation "G.I." followed by a figure indicates a fascicule of Wytsman's *Genera Insectorum*, which is not further mentioned in the bibliography.

Further information concerning the scope of the key is given in parentheses after the page number. If no such notation occurs, it is to be understood that the key is to *all* the *species* of *adults* known to its author for the *entire* Nearctic area north of Mexico *previous to the date of publication*. The key may be limited by being only to the species of a part of the group or genus, a subgenus, a group of species or the species of a particular geographical region. It may further be limited by being only to families, genera, or subgeneric groups. Finally, it may be a key to some

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other than the adult stage, as to eggs, larvæ, or pupæ. In view of the paucity of keys to larvæ and the similarity of the Nearctic and Palæarctic genera, European as well as American keys to genera of larvæ have frequently been included. Larval keys to genera rarely exhaust the genera of the group under consideration. Some of the earlier keys by Leconte and others did not go further than to groups of species, whereupon one must read through a series of specific descriptions to make a determination. Such keys are designated, in part, as "imperfect."

The more inclusive papers are indexed but once, so that, if one desires to ascertain the keys that exist for any particular genus, he must not only consult that genus, but look for possible references under the tribe, subfamily, family, and series, as well as the group of references preceding Adaphaga at the beginning of the index.

The student must always remember that he will find keys to genera in Leconte and Horn (1883), keys to species inhabiting Indiana, exclusive of the Rhyncophora, in Blatchley (1910), keys to the species of most of the genera of Rhyncophora in Leconte and Horn (1876), and keys to the species of Rhyncophora of eastern North America in Blatchley and Leng (1916). Furthermore, the student should generally use the most recent key and check it against species or groups not included in it, especially such as have been described since its publication.

The aim of the index has been practical, and little effort has been made to go back of Leconte and Horn or to include references of primarily historical interest. The bibliographies in Blatchley's "Coleoptera of Indiana," Blatchley and Leng's "Rhyncophora of North Eastern America," and the bibliographical references in Leng's "Catalogue of the Coleoptera of America north of Mexico" have been used, but especial acknowledgment must be made to the bibliography by Henshaw in the back of Leconte and Horn's "Classification of the Coleoptera of North America" (1883), its supplement in the back of Henshaw's "Third Supplement to the List of the Coleoptera of America north of Mexico" (1895), and Bank's "List of Works on North American Entomology" (1910), all of which were drawn up to serve somewhat the same purpose as the present index. The

author is further indebted to Professor Paul S. Welch for calling his attention to some of the references to larvæ.

It is hoped that it may be possible to issue periodic supplements to this index which will include new keys as they appear as well as old references that have been overlooked in the preparation of the present work. The author will appreciate having omissions and errors called to his attention.

COLEOPTERA Leconte and Horn 83 (genera), Hayward 09 (fam.), Brues and Melander 15:30 (fam.) Comstock 25:467 (fam.), Essig 26:369-521 (fam.), Lec. 69:251 (fam. of *Rhypophaga*), Pierce 16:462 (superfam. of *Phytophaga*), Leng 20:15-16 (series), MacGillivray 03:289 (fam. of larvæ), Schiödte 61-83 (many keys to larvæ: not seen), Kuhnt 13:1091 (fam. of *Cantharoid* larvæ), Seidlitz 98:312 (fam. of larvæ of *Lagriidæ*, *Pyrochroidæ*, *Pythidæ*).

COLEOPTERA GENUINA Blatchley 10 (Ind.).

COLEOPTERA AQUATIC Needham 18:937 (genera of adults, fam. of larvæ), Wilson 23:268-71 (fam. and genera of larvæ and pupæ of Iowa).

ADEPHAGA Horn 67:153 (fam.), Fowler 12:51 (fam.), Notman 25:4 (fam.), Ganglbauer 92:4 (fam. of larvæ).

CICINDELIDÆ Schaupp 83:73, Leng and Beutenmüller 94:87-96 (n. e. N. A.), Horn 08-15: G. I. 82 (genera), Hamilton 25:1 (larvæ). **AMBLYCHEILA** Csy. 24:2. **OMUS** Horn and Schaupp 78:6, Csy. 98:288, 09:255, 14:1, 16:20 (*hornii* group). **CICINDELA** Lec. 57:27, Csy. 13:27 (*12-guttata* group), 14:17 (*longilabris* group), 97:294 (*Dromochorus*), Wickham 94:151 (Ont., Que.), Blanchard 23:412 (Cheyboygan and Emmet Co., Mich.).

CARABIDÆ Horn 81:91 (genera), van Emden 19:3-33 (genera of larvæ), 21:128 (genera of larvæ).

Carabinæ Leng and Beutenmüller 94:135-141, 175-190 (n. e. N. A., no key to genera).

Trachypachini Horn 78:30, Csy. 20:144, Van Dyke 25:112.

- Cydrini** Horn 78: 168, Schaupp 79: 79, Lec. 68: 60 (Pacific), Roesche 07: 9-277. **NOMARETUS-MARONETUS** Schwarz 95: 269. **PEMPHUS** Csy. 97: 338. **BRENNUS** Csy. 97: 307, 20: 183 (*cordatus* group). **NEOCYCHRUS** Van Dyke 24: 6.
- Carabini**: **CARABUS** Horn 76: 247, Lec. 78: 66. **CALOSOMA-CALLISTHENES** Lec. 78: 64, Burgess 17: 17 (adults and larvæ). **CALLISTHENES** Csy. 20: 164 (*pimeloides* group), 13: 70 (*luxatus* group).
- Elaphrini** Horn 78: 29 (except species of *Elaphrus*). **ELAPHRUS** Horn 76: 246, Schaupp 78: 6. **BLETHISA** Horn 76: 247.
- Loriccerini** Horn 78: 29, Van Dyke 25: 114, Rousseau 08: G. I. 86 (genera).
- Opisthiini** Horn 78: 30, Dupuis 12: G. I. 126 (genera).
- Notiophilini** Horn 76: 247, 78: 30, Fall 06: 82, Dupuis 12: G. I. 134 (genera).
- Nebriini** Bänninger 25: 180, 256, 329 (groups). **PELOPHILA-NEBRIA** Horn 70: 97, Lec. 78: 473, Schaupp 78: 45, 63.
- Metriini** Van Dyke 25: 123, Dupuis 11: G. I. 116 (genera).
- Promecognathini** Schaupp 79: 15, Csy. 13: 93, Rousseau 08: G. I. 84 (genera).
- Scaritini** Lec. and Schaupp 79: 15-18, 31-34, 59. **PASIMACHUS** Lec. 74: 266 (imperfect), Csy. 13: 76, Leng 15: 567 (Fla.). **SCARITES** Leng 15: 568. **CLIVINIA-ARDISTOMIS** Lec. 57: 75 (no keys to genera, keys imperfect). **CLIVINIA** Horn 81: 7 (groups), Fall 22: 161 (groups).
- Harpalinæ Bisetosæ**: **Panagæini** Lec. 79: 59, Leng and Beutenmüller 95: 73 (n. e. N. A.).
- Psydrini** Dupuis 12: G. I. 123 (genera).
- Bembidiini** Lec. 57: 2 (groups), Csy. 18: 1. **BEMBIDION** (s. lat.) Hayward 97: 32, Fall 10: 94 (*littorale* group), Notman 19: 296 (*musculicola* group). **TACHYS** (s. lat.) Hayward 99: 191.
- Pogonini-Pogonini veri** Horn 82: 47-48. **PATROBUS-PLATIDUS** Horn 75: 130, Csy. 18: 395, 398. **PATROBUS** Leng and Beutenmüller 95: 74 (n. e. N. A.). **TRECHUS** Schæffer 01: 209, Leng and Beutenmüller 95: 76 (n. e. N. A.), Csy. 18: 405, Jeannel 27: 113, 146-156, 167, 185. **NEAPHÆNOPS-**

PSEUDANOPHTHALMUS (*Anopthalmus*) Horn 68: 126, 71: 329, 83: 270.

Pterostichini Lec. 52: 225, Wickham 95: 180-190 and 96: 42 (n. e. N. A., no key to genera), Csy. 18: 320 (genera). MYAS Schaupp 82: 63, Csy. 18: 326. HOLCIOPHORUS Horn 80: 50, Csy. 13: 96. CYLINDROCHARIS Csy. 18: 327. PTEROSTICHUS (s. lat.) Lec. 73: 302, Schaupp 82: 15, Csy. 13: 100-129 (parts). LEPTOFERONIA Horn 91: 33 (*Pterostichus*). GASTRELLARIUS-EVARTHURUS Csy. 18: 339-358. GASTRELLARIUS Horn 91: 34 (*Pterostichus*). EVARTHURUS (s. lat.) Lec. 73: 318, Schaupp 80: 21, Wickham 95: 189 (n. e. N. A.). EVARTHURINUS Csy. 20: 194. FERESTRIA Csy. 20: 191. EUFERONIA Csy. 18: 365. GASTROSTICTA Csy. 18: 371. LOPHOGLOSSUS Schaupp 80: 49, Csy. 13: 143. PARARGUTOR Csy. 18: 377. BOTHRIOPTERUS Csy. 13: 138. LOXANDRUS Lec. 52: 250, 78: 375. Schaupp 80: 19, Csy. 18: 380.

Amarini Lec. 55: 346 (imperfect), Wickham 96: 33-42 (n. e. N. A.), Hayward 08: 13 (except *Celia*), Csy. 18: 225 (genera). BRADYTUS-TRIÆNA Csy. 18: 235-314. BRADYTUS Horn 75: 128. CELIA Horn 92: 19. AMARA Horn 75: 127. TRIÆNA Horn 92: 18.

Licinini Wickham 96: 43-49 (n. e. N. A., no key to genera). REMBUS Horn 80: 52, Csy. 97: 347, 13: 147. DICÆLUS Lec. 69: 246 (groups), Horn 80: 51, Csy. 20: 206 (*elongatus* group). BADISTER Lec. 80: 165, 82: 7, Csy. 20: 207.

Platynini: CALATHUS Lec. 54: 36, 60: 317 (imperfect), Schaupp 83: 49, Csy. 13: 156, 20: 213 (Pacific species). RHADINE Lec. 78: 450, Csy. 13: 162. PLATYNUS Lec. 54: 35, 69: 244 (groups), 79: 43, Csy. 20: 3, Hatch 26: 247 (*decorus* group). OLISTHOPUS Lec. 54: 58, Horn 82: 63, Csy. 13: 162. PERIGONIA Horn 92: 44.

Anchoderini-Egini Lec. and Schaupp 79: 61, 62, 85. GALERITA Csy. 20: 266.

Lebiini Horn 82: 126 (except *Lebia*), Horn and Schaupp 79: 86 and 81: 39-44, 53-55 (*Tetragonoderus-Lebia*, *Dromius*, *Blechrus-Pinacodera*), Dupuis 13: G. I. 145 (genera of Pentagonicinae). LEBIA Horn 72: 130, Csy. 20: 234 (*Loxopeza*),

- 13: 191 (*aphelogenia* group), 20: 240–252 (parts), 20: 262 (*Dianchomena*). DROMIUS-BLECHRUS Csy. 20: 268–277. AXINOPALPUS Csy. 20: 265. PHILOPHUGA Csy. 13: 173. PINACODERA Csy. 20: 279. CYMINDIS Csy. 13: 178.
- Helluonini** Lec. 79: 60.
- Harpalinæ Unisetosæ: Brachinini** Lec. 62: 523 (imperfect).
- Chlæniini** Lec. 56: 25 (imperfect), Horn 76: 253, 81: 3, 29. ANOMOGLOSSUS Csy. 14: 39.
- Oödiini** Horn 70: 105, 81: 29. ANATRICHIS Horn 91: 36.
- Harpalini** Csy. 14: 45. CRATACANTHUS Csy. 84: 73. HARPALUS Lec. 65: 98. SELENOPHORUS Horn 80: 78, 82: 8. DISCODERUS Horn 83: 52. **Anisodactyli** Horn 80: 162, 81: 83. ANISODACTYLUS Lec. 63: 15 (e. N. A.). **Acupalpi** Lec. 68: 373 (imperfect), Schaupp and Horn 83: 15, 50–54, Fall 05: 177 (genera). GLYCERIUS Fall 05: 175. PELMATELLUS, TACHYCELLUS, TRILIARTHUS Fall 05: 172.
- Pseudomophinæ** Horn 83: 16, 83: 273, Notman 25: 14.
- AMPHIZOIDÆ** Van Dyke 27: 97.
- OMOPHRONIDÆ** Horn 70: 71, Schaupp 78: 5, Csy. 97: 300, 13: 42 (parts), Leng and Beutenmüller 94: 133 (n. e. N. A.), Bänninger 21: 113 (groups), Rousseau 08: G. I. 83 (genera).
- HALIPLIDÆ** Matheson 12: 156, Zimmermann 24: 1, Wickham 95: 69–70 (Ont., Que.), Leng and Mutchler 18: 92–94 (Fla.). PELTODYTES Roberts 13: 122, Zimmermann 19: 68.
- DYTISCIDÆ** Crotch 73: 383 (imperfect), Sharp 82: 179, Wickham 95: 70–76, 117–122, 149–153 (Ont., Que.), Zimmermann 19: 68 (genera). CANTHYDRUS Blatchley 19: 308 (Fla.). LACCOPHILUS Horn 83: 283. BIDESSUS Fall 17: 167 (*pictodes* group), Leng and Mutchler 18: 82 (Fla.). **Hydroporini** Lec. 55: 290. CÆLAMBUS Fall 19: 1. HYDROPORUS Fall 23: 1, 26: 141 (*12-lineatus* group). AGABUS Fall 22: 3. COLYMBETES Lec. 62: 521 (imperfect).
- GYRINIDÆ** Lec. 68: 365 (imperfect), Leng and Mutchler 18: 95–97 (Fla.), Regimbart 02: G. I. 1 (genera), Hatch 25: 110 (larvæ). DINEUTUS Roberts 95: 279, Hatch 25: 447 (subgenera), 26: 344 (subgenera), 27: 28 (Mich. larvæ), Ochs 26: 64 (subgenera). GYRINUS Fall 22: 275.

HYDROPHILIDÆ Lec. 55: 356 (imperfect), Wickham 95: 181-186, 213-216 (Ont., Que.), Kuhnt 13: 1087 (genera of larvæ), Richmond 20: 82-88 (genera of egg-cases, larvæ, and pupæ). **OCHTHEBIUS** Lec. 78: 378, Horn 90: 18. **HYDRÆNA** d'Orchymont 23: 33. **LIMNEBIUS** Csy. 86: 167, 00: 51. **EPIMETOPUS** Schwarz and Barber 17 (18): 132. **BEROSUS** Horn 73: 118. **HYDROUS-DIBOLOCELUS** Regimbart 01-02: 192. **HYDROPHILUS** Horn 76: 251, 95: 233. **TROPISTERNUS** Horn 76: 251, d'Orchymont 21: 349-374 and 22: 3-39. **Hydrobiini** Horn 73: 118, 90: 237 (except *Laccobius* and *Helobata*), Winters 26: 49-58 (subtribes, genera and species of *Hydrobius-Crenitis*, *Laccobius*). **PARACYMUS** Fall 10: 100 (*degener* group). **ENOCHRUS** Horn 73: 126. **LACCOBIUS** Horn 73: 125. **CHÆTARTHRIA** Horn 73: 124. **Sphæridiinae** Horn 90: 279. **DACTYLOSTERNUM** Schwarz 78: 355. **CERCYON** Fall 24: 249 (*melanocephalus* group), 24: 252 (*lugubris* group).

PLATYPSYLLIDÆ Desneux 06: G. I. 41 (genera).

BRATHINIDÆ Hubbard 94: 10.

LEPTINIDÆ Horn 82: 113 (genera).

SILPHIDÆ Lec. 53: 274, Horn 80: 219, Peyerimhoff 06: 117 (subfam. of larvæ), Jeannel 11: 95 (subfam. of larvæ), Henricksen 22: 252, 255 (subfam. of larvæ). **NICROPHORUS-SILPHA** Portevin 26: 1. **NICROPHORUS** Portevin 23-25. **PINODYTES** Horn 92: 46. **Catopinæ** (Choleviini) Peyerimhoff 06: 117 and 07: 87 (genera of larvæ). **CATOPS** (*Choleva*) Blanchard 15: 294 (parts).

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 66: 108 (genera).

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- EUGLENIDÆ** Pic 02: G. I. 8 (genera). VANONUS Csy. 05: 162. XYLOPHILUS Lec. 55: 276, 78: 425.
- CEROPHYTIDÆ** Horn 86: 51.
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- PLASTOCERIDÆ** Schwarz 07: G. I. 50 (genera), Horn 81: 76-81. ENICONYX Horn 85: 52. APLASTUS Horn 74: 24.
- RHIPICERIDÆ** Horn 81: 85-86.
- ELATERIDÆ** Lec. 53: 405, Schwarz 06-07: G. I. 49 (genera of part), Perris 77: 185 (genera of larvæ), Forbes 94: 31 (genera of larvæ), Kuhnt 13: 1107 (genera of larvæ), Henriksen 13: 43-48 (larvæ of Danish species). ADELOCERA Horn 79: xiv. CHALCOLEPIDIUS Fall 98: 239, Csy. 07: 29. OISTUS Hyslop 17: 127. PYROPHORUS Hyslop 17: 3-6. LUDIUS Horn 71: 319 (*Corymbites*; groups). HEMICREPIDIUS Horn 80: 69 (*Asaphes*). Hypnoidini Horn 91: 1-31. PARALLELOSTETHUS, CRIGMUS Horn 84: 46 (*Ludius*). AGRIOTES Lec. 84: 15. DRASTERIUS Lec. 84: 4. ELATER-ECTAMENOGONUS Lec. 84: 8. ELATER Horn 71: 307 (part). MEGAPENTHES Lec. 84: 6. CARDIOPHORUS Blanchard 89: 4. HORISTOMUS Horn 84: 34. ESTHESOPUS Horn 84: 41.
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- BUPRESTIDÆ** Lec. 59: 187, Knull 25: 5 (Penn.), Kerremans 02-03: G. I. 12 (genera), Perris 77: 155 (genera of larvæ), Henriksen 13: 11 (genera of larvæ), Burke 17: 5 (genera of larvæ). POLYCESTA Lec. 58: 68, Schæffer 06: 23. ACMEODERA Horn 78: 4, Fall 99: 1-37. TYNDARIS Skinner 03: 238. THRINCOPYGE Horn 85: 147. Chalcophorini and Buprestini Csy. 09: 50. HIPPOMELAS Horn 68: 134, 83: 287-288.

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- EROTYLIDÆ Lec. 54: 158, Crotch 73: 349, Wickham 94: 339–342 (Ont., Que.). Languriinæ Fowler 08: G. I. 78 (genera). LANGURIA Schæffer 04: 198. Erotylinæ Kuhnt 09: G. I. 88 (genera). DACNE Csy. 16: 153.
- CRYPTOPHAGIDÆ Csy. 00: 75. DIPLOCÆLUS Horn 78: 606. TOMARUS Horn 95: 240.
- MYCETOPHAGIDÆ Lec. 56: 12 (imperfect), Csy. 00: 128. MYCETOPHAGUS Horn 78: 603. LITARGUS Horn 78: 606, Csy. 16: 174 (*Litargellus*).
- COLYDIIDÆ Horn 78: 555. EUCICONES Csy. 97: 632. BITOMA Schæffer 07: 136. LASCONOTUS Kraus 12: 27. CERYLON Csy. 97: 634.
- MURMIDIIDÆ Horn 78: 555–592, Csy. 95: 452.
- LATHRIDIIDÆ Lec. 55: 299, Fall 99: 101, Belon 02: G. I. 3 (genera). DASYCERUS Horn 82: 117.
- MYCETAEIDÆ, ENDOMYCHIDÆ Lec. 53: 357, Crotch 73: 359, Wickham 94: 337–339 (Ont., Que.).
- PHALACRIDÆ Lec. 56: 15 (imperfect), Csy. 90: 89. PHALACRUS Csy. 16: 35. OLIBRUS Csy. 16: 45. ACYLOMUS Csy. 16: 74. STILBUS Csy. 16: 55. LEPTOSTILBUS Csy. 16: 71.
- COCCINELLIDÆ Crotch 73: 363 (except *Scymnus*), Csy. 99: 71, Wickham 94: 297–306 (Ont., Que., except *Scymnus*), Gage 20: 27 (larvæ of certain genera and species). HYPERASPIS Lec. 80: 186, Nunenmacher 11: 73 (*lateralis* group). BRACHYACANTHA Leng 11: 289. MICROWEISEA Horn 95: 82. SCYMNUS Horn 95: 87, Wickham 99: 82 (Ont., Que.). CEPHALOSCYMNUS Horn 95: 111. DELPHASTUS Horn 95: 83. PSYLLOBORA Leng 03: 210. Coccinellini Leng 03: 36 (genera allied to *Hippodamia*), 03: 194 (genera allied to *Coccinella*). CERATOMEGILLA Leng 03: 38 (*fuscilabris* group). HIPPODAMIA Leng 03: 40, Timberlake 19: 167 (*convergens* group), 171 (*glacialis* group). COCCINELLA Leng 03: 196

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TENEBRIONIDÆ Horn 70: 253, Csy. 90: 391-393 (tribes of Tenebrioninæ), Seidlitz 98: 211-216 (genera of larvæ), Kuhnt 13: 1120 (genera of larvæ).

Tentyriinæ Csy. 07: 275. **Eurymetopini** Csy. 90: 330, 347. EMMENASTRICHUS Horn 94: 413. TRIMYTIS Horn 94: 412. PROMPTOPION-CHILOMETOPON Csy. 90: 366. POLEMIOTUS-PHENGONEUS Csy. 91: 53-54. MICROMES, OXYGONODERA, STIBIA Horn 74: 29. EDROTES Csy. 90: 174, 502. **Zopherini** Horn 67: 162, Csy. 07: 35-38. **Nosodermini** Csy. 07: 42-44. USECHUS Csy. 90: 176. ARGEOSCHIZUS Csy. 90: 368, Horn 90: 339. DACODERUS Horn 76: 219, 93: 139. ANEPSIUS Csy. 91: 55. SCHIZILLUS Blaisdell 21: 207. **Asidini** Csy. 12: 70, Horn 94: 416 (part of *Asida*). MICROCHATIA Horn 93: 140.

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Ulominæ Lec. 66: 130 (genera of Hypophlœini). **LATHETICUS** Chittenden 10: 137. **ULOMA** Lec. 66: 124. **APHANOTUS** Csy. 90: 483. **HYPOPHLÆUS** Lec. 78: 424.

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Strongyliinæ Lec. 78: 425.

LAGRIIDÆ Horn 88: 28, Seidlitz 98: 312 (genera of larvæ). **ARTHROMACRA** Leng 17: 17. **STATIRA** Schæffer 05: 179, Leng 23: 185.

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PTINIDÆ Fall 05: 99–127.

ANOBIIDÆ Fall 05: 127–283, Lec. 65: 22 (except *Euceratocerus* and *Ptilinus*), Perris 77: 248 (genera of larvæ), Böving 27: 57 (genera of larvæ). **EUCERATOCERUS** Csy. 98: 61. **TRICHODESMA** Horn 94: 388. **CATORAMA** Lec. 78: 410, Horn 94: 390 (part). **PTILINUS** Csy. 98: 61. **CÆNOCARA** Lec. 78: 412.

BOSTRICHIDÆ Horn 78: 540, Lesne 96: 95–121, 97: 319–350, 98: 438–621, 00: 473–639, 06: 445–561, 09: 471–594 (species of world). **Bostrichini** Csy. 98: 65 (genera). **DENDRO-**

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LYCTIDÆ Kraus 11: 116. LYCTUS Csy. 90: 324, 91: 13.

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Coprinæ: CANTHON Lec. 59: 1-58, von Harold 68: 1-144, Horn 70: 44, Blanchard 85: 164. CHÆRIDIMUM Horn 75: 137, Blanchard 85: 170. PINOTUS, COPRIS Horn 70: 42, Schæffer 06: 255. PHANÆUS Blanchard 85: 168. ONTHOPHAGUS Horn 75: 137, Schæffer 14: 137.

Ægialiinæ Horn 71: 293, Lec. 78: 610, Horn 87: 98, Schmidt 13: G. I. 150 (genera).

Aphodiinæ Horn 70: 110-134 and 71: 284-297, 87: 1-110, Schmidt 10: G. I. 110 (genera). APHODIUS Garnett 20: 140 (*subeolus* group).

Ochodæinæ Lec. 68: 51, Horn 76: 180, Fall 09: 30, Schmidt 13: G. I. 150 (genera).

Hybosorinæ Schmidt 13: G. I. 150 (genera).

Geotrupinæ Schæffer 06: 250 (genera, and species except *Odon-tæus* and *Geotrupes*), Boucomont 02: G. I. 7 (genera).

Bolbocerini Horn 70: 48-50 (imperfect). BOLBOCEROSOMA Dawson and McCulloch 24: 10. GEOTRUPES Horn 68: 313-320, 80: 145, Blanchard 88: 105.

Pleocominæ Lec. 74: 81, Horn 88: 04, 88: 234.

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Troginæ: GLARESIS Fall 07: 25. TROX Lec. 54: 211, Horn 74: 1, 6.

Melolonthinæ Lec. 56: 225–288. ONCERUS Horn 94: 395. CHNAUNANTHUS Horn 94: 395. DIPLLOTAXIS Fall 09: 11. PHYLLOPHAGA Horn 87: 209, Smith 88: 503 (*fusca* group), Forbes 91: 48 (Ill.), 94: 141 (Ill.). LISTROCHELUS Horn 78: 137. PHYTALUS Horn 85: 119. POLYPHYLLA-PLECTRODES Csy. 14: 307 (genera). POLYPHYLLA Horn 81: 73, Csy. 91: 17, 14: 323. THYCE Csy. 90: 170, 14: 308. DICHELONYX Horn 76: 186, Fall 01: 280. CÆNONYCHA Horn 76: 192. MACRODACTYLUS Horn 76: 184. HOPLIA Lec. 80: 191, Essig 26: 445 (certain Calif. species).

Rutelinæ Csy. 15: 1. RHOMBONALIA-PACHYSTETHUS Horn 84: 157 (*Anomala*), Schæffer 07: 69 (*Anomala*). OLIGANOMALA, STRIGODERMA, ALAMONA Schæffer 07: 73. COTALPA-POCALTA Horn 67: 169, 71: 338, Wickham 05: 1–4.

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Prioninæ Leng 84: 8-11, 57-60 (except Parandrini), Craighead 23: 28 (genera of pupæ), Lameere 19: G. I. 172 (genera). PARANDRA Csy. 12: 216. ARCHODONTES-STENODONTES Csy. 12: 221 (genera and subgenera). ERGATES Csy. 90: 491. DEROBRACHUS Lameere 11: 274, Csy. 12: 230 (*Orthosoma*), Schæffer 02: 235 (s. str.). PRIONUS Csy. 12: 231, 24: 209 (except *Neopolyarthron* and *Antennalia*). TRAGOSOMA Csy. 90: 491, 99: 98.

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- Donaciinæ** Schæffer 25: 45, Jacoby and Clavereau 04: G. I. 21 (genera). **DONACIA** Lec. 51: 310, Crotch 73: 20, Leng 91: 159, Schæffer 19: 308 (subgenera), MacGillivray 03: 314 (eggs, larvæ, pupæ, adults of N. Y.).
- Orsodacninæ** Horn 92: 1-7 (no keys to genera). **ORSODACNE** Hatch 24: 307. **ZEUGOPHORA** Wickham 99: 86 (Ont., Que.).
- Criocerinæ**: **CRIOCERIS** Pic 06: 121 (var. of *asparagi* L.). **LEMA** Crotch 73: 24.
- Megascelinæ** Jacoby and Clavereau 05: G. I. 32 (genera).
- Clytrinæ** Clavereau 07: G. I. 49, 49 bis (genera). **ANTIPUS** Ortenburger and Hatch 26: 147 (part). **Megalostomini** Horn 92: 10-18 (no key to genera). **SAXINIS** Horn 92: 8, Schæffer 06: 226.
- Fulcidacinæ** (Chlamydinæ) Achard 14: G. I. 160 (genera). **BOLOSCHESIS** (*Chlamys*) Linell 97: 476, Schæffer 06: 229, 26: 182. **EXEMA** Crotch 73: 30.
- Cryptocephalinæ** Lec. 80: 196-209 (no key to genera), Fall 15: 300 (certain genera). **GRIBURIUS** Crotch 73: 32. **PACHYBRACHYS** Fall 15: 308. **MONACHULUS** Crotch 73: 30.
- Eumoplinæ** Horn 92: 195. **NODONATA** Schæffer 06: 238. **GRAPHOPS** Lec. 84: 26. **FIDIA** Schæffer 04: 227. **MYOCHROUS** Schæffer 04: 228. **CHRYSOCHUS** Horn 85: 156.
- Chrysomelinæ** Stal 62: 7 (genera). **Timarchini-Chrysomelini** Rogers 56: 29 (imperfect). **Prasocurini-Chrysomelini** Crotch 73: 47-51. **PRASOCURIS** Lec. 66: 9. **Chrysomelini** Linell 96: 195. **PHÆDON** Crotch 73: 52. **GASTROIDEA** Crotch 73: 51. **PHYTODECTA**, **SPARTOPHILA** Notman 21: 76 (genera). **PHYTODECTA** Schæffer 24: 140. **PHYLLECTHRUS** Horn 96: 376.
- Galerucinæ** Horn 93: 57, Lec. 65: 213 (*Galeruca*, et al.). **TRIRHABDA** Lec. 65: 219, Schæffer 06: 242. **GALERUCELLA** Fall 24: 82 (N. Eng.), Mutchler and Weiss 26: 14 (N. J.). **MONOXIA** Lec. 65: 221. **DIABROTICA** Lec. 65: 211, 68: 58 (groups). **PHYLLOBROTICA** Lec. 65: 206, Horn 96: 378. **LUPERODES** Lec. 65: 208. **PHYLLECTHRUS** Lec. 65: 207.
- Halticinæ** Horn 89: 163, Heikertinger 25: 54 (genera). **ÆDIO-NYCHIS** Crotch 73: 57. **DISONYCHA** Crotch 73: 64. **HALTICA**

Woods 18: 154-155 (adults, eggs, larvæ, pupæ of Me.).
LACTICA Horn 80: 151, Schæffer 06: 251. LUPERALTICA Horn
93: 134. CHÆTOCNEMA Lec. 78: 419. LONGITARSIS Blatch-
ley 21: 18 (e. N. A.).

Hispinæ Horn 83: 290, Weise 11: G. I. 125 (genera). ANOPLITIS
Crotch 73: 80. MICRORHOPALA Crotch 73: 82, Van Dyke 25:
173 (*rubrolineata* group).

Cassidinæ Barber 16: 126.

MYLABRIDÆ Horn 73: 311. MYLABRIS Fall 10: 160-188
(parts). ZABROTES Horn 85: 156.

RHYNCOPHORA Lec. and Horn 76: 1-455 (the few genera for
which no specific keys are provided are usually those mono-
graphed shortly before and cited below), Blatchley and Leng
16: 1-682 (e. N. A.), Pierce 16: 462 (superfam.).

BRENTIDÆ Horn 72: 127, Schæffer 15: 52, von Schönfeldt
08: G. I. 65 (genera).

PLATYSTOMIDÆ: ANTHRIBUS Schæffer 04: 236.

BELIDÆ Lea and Bovie 09: G. I. 91 (genera).

CURCULIONIDÆ Pierce 19: 22 (certain subfam.), Cotton
21: 605-606 (adults, larvæ, pupæ attacking corn).

Rhinomacerinæ Pierce 09: 325.

Rhynchitinæ Pierce 13: 365 (genera). AULETES Pierce 09: 326.
EUGNAMPTUS Pierce 09: 329, 13: 366. RHYNCHITES Pierce
09: 330, 13: 370 (*bicolor* group).

Apioninæ: APION Smith 84: 41, Fall 98: 105, Wagner 13: G. I.
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Tachygoninæ Csy. 97: 679.

Otiorhynchinæ Pierce 13: 372-426 (genera). Ophryastini
Pierce 09: 341 (genera), Bovie 08: G. I. 69 (genera).
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liodes) Pierce 09: 346 (genera), 13: 377 (genera; species
except *Anametis*). AMOTUS Csy. 88: 244. DYSLOBUS-ADA-
LERES Csy. 95: 809. DYSLOBUS Csy. 88: 247 (*Amnesia*).
PANSCOPUS Buchanan 27: 27. PANDELETEIUS Schæffer 08:
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Calendrinæ Cotton 24: 5 (genera of larvæ). **SCYPHOPHORUS** Horn 73: 409. **CACTOPHAGUS** Csy. 92: 685. **CALENDRA** (*Sphenophorus*) Horn 73: 411, Chittenden 05: 51 (*pertinax* group), 24: 146 (*æqualis* group). **SITOPHILUS** (*Calendra*) Csy. 92: 685. **YUCCABORUS** Csy. 92: 687.

PLATYPODIDÆ Chapuis 66: 1-344, Strohmeier 14: G. I. 163 (genera), Blackman 22: 38 (Miss.).

SCOLYTIDÆ Hopkins 15: 224 (subfam.), Hagedorn 10: G. I. 111 (genera), Zimmermann 68: 142, 147 (certain genera), Lec. 68: 151 (genera of Tomicini and Hylurgini), Eichhoff 78: 1-531 (Tomicinæ), Swaine 18: 38 (Canada), Blackman 22: 38-121 (Miss.), Chamberlin 18: 11 (Douglas Fir species). **SCOLYTUS** Lec. 68: 165. **DENDROCTONUS** Lec. 68: 173, Hopkins 09: 69-78 (adults and larvæ). **PHLÆOSINUS** Swaine 24: 146-147 (parts). **PHLÆOSINUS-LEPERISINUS**, **HYLURGOPINUS**, **PSEUDOHYESINUS** Lec. 68: 169 (*Hylesinus*). **Micracinæ** Blackman 20: 7. **Cryphalini** Hopkins 15: 7-8. **Ips** Hopkins 15: 54 (*concinus* group), Swaine 25: 197 (*concinus* group), 24: 71 (*confusus* group). **GNATHOTRICHUS-PITYOPHTHORUS** Lec. 68: 154 (*Cryphalus*). **AMBROSIODMUS-DRYOCÆTES** Hopkins 15: 9-10. **ANISANDRUS** Swaine 10: 165.

STREPSIPTERA Pierce 09: 1-232, 11: G. I. 121 (genera).

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