

# Contents

Editors' preface.....	V	4.8. Plastoceridae Crowson, 1972 <i>Marc A. Branham</i> .....	103
Contributors .....	XI	4.9. Family Drilidae Blanchard, 1845 <i>Ladislav Bocak, Marc A. Branham and Robin Kundrata</i> .....	104
1. Changes in classification and list of families and subfamilies <i>John F. Lawrence, Rolf G. Beutel, Richard A. B. Leschen and Adam Ślipiński</i> .....	1	4.10. Family Omalisidae Lacordaire, 1857 <i>Ladislav Bocak and Milada Bocakova</i> .....	110
2. Glossary of Morphological Terms <i>John F. Lawrence, Rolf G. Beutel, Richard A. B. Leschen and Adam Ślipiński</i> .....	9	4.11. Lycidae Laporte, 1836 <i>Ladislav Bocak and Milada Bocakova</i> .....	114
3. Adephaga (Addendum) Introduction and Phylogeny <i>Rolf G. Beutel, Ignacio Ribera and Michael Balke</i> .....	21	4.12. Telegeusidae Leng, 1920 <i>John F. Lawrence</i> .....	123
3.1. Aspidytidae Ribera, Beutel, Balke and Vogler, 2002 <i>Rolf G. Beutel, Michael Balke and Ignacio Ribera</i> .....	21	4.13. Phengodidae LeConte, 1861 <i>Cleide Costa and Santiago Zaragoza-Caballero</i> .....	126
3.2. Meruidae Spangler and Steiner 2005 <i>Rolf G. Beutel, Michael Balke and Warren E. Steiner</i> .....	28	4.14. Rhagophthalmidae Olivier, 1907 <i>Itsuro Kawashima, John F. Lawrence and Marc A. Branham</i> .....	135
4. Elateroidea Introduction, Phylogeny <i>John F. Lawrence, Ladislav Bocak, Milada Bocakova, Rolf G. Beutel and Jyrki Muona</i> .....	35	4.15. Lampyridae Latreille, 1817 <i>Marc A. Branham</i> .....	141
4.1. Rhinorhipidae Lawrence, 1988 <i>John F. Lawrence</i> .....	38	4.16. Omethidae LeConte, 1861 <i>Alistair S. Ramsdale</i> .....	149
4.2. Armatopodidae Lacordaire, 1857 <i>John F. Lawrence</i> .....	42	4.17. Cantharidae Imhoff, 1856 <i>Alistair S. Ramsdale</i> .....	153
4.3. Brachypsectridae Horn, 1881 <i>Cleide Costa, Sergio A. Vanin, John F. Lawrence, Sergio Ide and Marc A. Branham</i> .....	47	4.18. Elateriformia <i>Incertae Sedis</i> <i>John F. Lawrence, Itsuro Kawashima and Marc A. Branham</i> .....	162
4.4. Cerophytidae Latreille, 1834 <i>Cleide Costa, Sergio A. Vanin, John F. Lawrence and Sergio Ide</i> .....	54	5. Derodontiformia Introduction, Phylogeny <i>John F. Lawrence, Rolf G. Beutel and Richard A. B. Leschen</i> .....	179
4.5. Eucnemidae Eschscholtz, 1829 <i>Jyrki Muona</i> .....	61	5.1. Derodontidae LeConte, 1861 <i>Richard A. B. Leschen and Rolf G. Beutel</i> .....	180
4.6. Throscidae Laporte, 1840 <i>Jyrki Muona, John F. Lawrence and Adam Ślipiński</i> .....	69	5.2. Nosodendridae Erichson, 1846 <i>Richard A. B. Leschen and Rolf G. Beutel</i> .....	185
4.7. Elateridae Leach, 1815 <i>Cleide Costa, John F. Lawrence and Simone Policena Rosa</i> .....	75	5.3. Jacobsoniidae Heller, 1926 <i>John F. Lawrence and Richard A. B. Leschen</i> .....	190
		6. Bostrichiformia Latreille 1802 <i>John F. Lawrence, Richard A. B. Leschen and Rolf G. Beutel</i> .....	197
		6.1. Dermestidae Latreille, 1804 <i>John F. Lawrence and Adam Ślipiński</i> .....	198
		6.2. Endecatomiidae LeConte, 1861 <i>John F. Lawrence</i> .....	206

- 6.3. Bostrichidae Latreille, 1802  
*John F. Lawrence* . . . . . 209
- 6.4. Ptinidae Latreille, 1802  
*T. Keith Philips and Karen L. Bell* . . . . . 217
7. Cucujiformia Lameere, 1938  
Introduction, Phylogeny  
*Richard A. B. Leschen and Adam Ślipiński* . . . . . 227
8. Lymexloidae Fleming, 1821  
*John F. Lawrence* . . . . . 229
9. Cleroidea Latreille, 1802  
Introduction and Phylogeny  
*Richard A. B. Leschen* . . . . . 237
- 9.1. Phloiophilidae Kiesenwetter, 1863  
*John F. Lawrence and Richard A. B. Leschen* . . . . . 239
- 9.2. Trogossitidae Fabricius, 1801  
*Jiří Kolibáč and Richard A. B. Leschen* . . . . . 241
- 9.3. Chaetosomatidae Crowson, 1952  
*Richard A. B. Leschen* . . . . . 247
- 9.4. Metaxinidae Kolibáč, 2004  
*Jiří Kolibáč and Richard A. B. Leschen* . . . . . 250
- 9.5. Thanerocleridae Chapin, 1924  
*Jiří Kolibáč and Richard A. B. Leschen* . . . . . 253
- 9.6. Cleridae Latreille, 1802  
*Jiří Kolibáč* . . . . . 257
- 9.7. Acanthocnemidae Crowson, 1964  
*John F. Lawrence and Richard A. B. Leschen* . . . . . 262
- 9.8. Phycosecidae Crowson, 1952  
*Richard A. B. Leschen and Rolf G. Beutel* . . . . . 265
- 9.9. Prionoceridae Lacordaire, 1857  
*John F. Lawrence and Richard A. B. Leschen* . . . . . 268
- 9.10. Mauroniscidae Majer, 1994  
*John F. Lawrence* . . . . . 271
- 9.11. Melyridae Leach, 1815  
*John F. Lawrence and Richard A. B. Leschen* . . . . . 273
10. Cucujoidea, Latreille, 1802  
Introduction, Phylogeny  
*Richard A. B. Leschen and Adam Ślipiński* . . . . . 281
- 10.1. Boganiidae Sen Gupta and Crowson, 1966  
*John F. Lawrence and Adam Ślipiński* . . . . . 282
- 10.2. Byturidae Jacquelin duVal, 1858  
*Andrew R. Cline, Michael A. Goodrich and Richard A. B. Leschen* . . . . . 286
- 10.3. Helotidae Reitter, 1876/Chapuis, 1876  
*John F. Lawrence, Adam Ślipiński and Chi-Feng Lee* . . . . . 292
- 10.4. Protocucujidae Crowson, 1954  
*Adam Ślipiński and Rolf G. Beutel* . . . . . 296
- 10.5. Sphindidae Jacquelin du Val, 1861  
*Juanita A. Forrester and Joseph V. McHugh* . . . . . 300
- 10.6. Biphyllidae LeConte, 1861  
*Andrew R. Cline and Floyd W. Shockley* . . . . . 306
- 10.7. Erotylidae Leach, 1815  
*Richard A. B. Leschen, Paul E. Skelley and Joseph V. McHugh* . . . . . 311
- 10.8. Monotomidae Laporte, 1840  
*Yves Bousquet* . . . . . 319
- 10.9. Hobartiidae Sen Gupta and Crowson, 1966  
*Wioletta Tomaszewska and Adam Ślipiński* . . . . . 324
- 10.10. Cryptophagidae Kirby, 1837  
*Richard A. B. Leschen* . . . . . 327
- 10.11. Agapythidae Sen Gupta and Crowson, 1969  
*Richard A. B. Leschen and John F. Lawrence* . . . . . 334
- 10.12. Priasilphidae Crowson, 1973  
*Richard A. B. Leschen and John F. Lawrence* . . . . . 336
- 10.13. Phloeostichidae Reitter, 1911  
*John F. Lawrence and Adam Ślipiński* . . . . . 340
- 10.14. Silvanidae Kirby, 1837  
*Michael C. Thomas and Richard A. B. Leschen* . . . . . 346
- 10.15. Cucujidae Latreille, 1802  
*Michael C. Thomas and Richard A. B. Leschen* . . . . . 350
- 10.16. Myraboliidae Lawrence and Britton, 1991  
*Adam Ślipiński, Wioletta Tomaszewska and John F. Lawrence* . . . . . 354
- 10.17. Cavognathidae Sen Gupta and Crowson, 1966  
*Adam Ślipiński and Wioletta Tomaszewska* . . . . . 357
- 10.18. Lamingtoniidae Sen Gupta and Crowson, 1969  
*John F. Lawrence and Richard A. B. Leschen* . . . . . 360
- 10.19. Passandridae Blanchard, 1845/  
Erichson, 1845  
*Daniel Burckhardt and Adam Ślipiński* . . . . . 363
- 10.20. Phalacridae Leach, 1815  
*John F. Lawrence, Matthew L. Gimmel and Warren E. Steiner, Jr.* . . . . . 368

- 10.21. Propalticidae Crowson, 1952  
*John F. Lawrence* . . . . . 374
- 10.22. Laemophloeidae Ganglbauer, 1899  
*Michael C. Thomas and  
Richard A. B. Leschen* . . . . . 376
- 10.23. Tasmosalpingidae Lawrence and  
Britton, 1991  
*John F. Lawrence and  
Adam Ślipiński* . . . . . 381
- 10.24. Cyclaxyridae Gimmel, Leschen &  
Ślipiński, 2009  
*Richard A. B. Leschen,  
Matthew L. Gimmel and  
Adam Ślipiński* . . . . . 383
- 10.25. Kateretidae Erichson in Agassiz, 1846  
*Josef Jelínek and Andrew R. Cline* . . . . . 386
- 10.26. Nitidulidae Latreille, 1802  
*Josef Jelínek, Chris Carlton,  
Andrew R. Cline and Richard A. B. Leschen* . . . 390
- 10.27. Smicripidae Horn, 1879  
*Andrew R. Cline* . . . . . 407
- 10.28. Bothrideridae Erichson, 1845  
*Adam Ślipiński, Nathan Lord and  
John F. Lawrence* . . . . . 411
- 10.29. Cerylonidae Billberg, 1820  
*Adam Ślipiński and  
John F. Lawrence* . . . . . 422
- 10.30. Alexiidae Imhoff, 1856  
*Adam Ślipiński and  
Wioletta Tomaszewska* . . . . . 432
- 10.31. Discolomatidae Horn, 1878  
*Andrew R. Cline and Adam Ślipiński* . . . . . 435
- 10.32. Endomychidae Leach, 1815  
*Wioletta Tomaszewska* . . . . . 442
- 10.33. Coccinellidae Latreille, 1802  
*Adam Ślipiński and  
Wioletta Tomaszewska* . . . . . 454
- 10.34. Corylophidae LeConte, 1852  
*Adam Ślipiński, John F. Lawrence  
and Andrew R. Cline* . . . . . 472
- 10.35. Latridiidae Erichson, 184  
*Christopher S. Hartley and  
Joseph V. McHugh* . . . . . 481
11. Tenebrionoidea  
Introduction, Phylogeny  
*John F. Lawrence, Darren A. Pollock  
and Adam Ślipiński* . . . . . 487
- 11.1. Mycetophagidae Leach, 1815  
*John F. Lawrence and  
Richard A. B. Leschen* . . . . . 491
- 11.2. Archeocrypticidae Kaszab, 1964  
*John F. Lawrence* . . . . . 496
- 11.3. Pterogeniidae Crowson, 1953  
*John F. Lawrence* . . . . . 501
- 11.4. Ciidae Leach in Samouelle, 1819  
*John F. Lawrence and  
Cristiano Lopes-Andrade* . . . . . 504
- 11.5. Tetratomidae Billberg, 1820  
*John F. Lawrence and  
Richard A. B. Leschen* . . . . . 514
- 11.6. Melandryidae Leach, 1815  
*Nikolai B. Nikitsky and  
Darren A. Pollock* . . . . . 520
- 11.7. Mordellidae Latreille, 1802  
*John F. Lawrence and  
Adam Ślipiński* . . . . . 533
- 11.8. Ripiphoridae Gemminger and Harold,  
1870 (Gerstaecker, 1855)  
*John F. Lawrence, Zachary H. Falin and  
Adam Ślipiński* . . . . . 538
- 11.9. Zopheridae Solier, 1834  
*Adam Ślipiński and  
John F. Lawrence* . . . . . 548
- 11.10. Ulodidae Pascoe, 1869  
*Richard A. B. Leschen and  
Adam Ślipiński* . . . . . 559
- 11.11. Promecheilidae Lacordaire, 1859  
*John F. Lawrence, Adam Ślipiński  
and Mario Elgueta* . . . . . 563
- 11.12. Chalcodryidae Watt, 1974  
*John F. Lawrence and  
Richard A. B. Leschen* . . . . . 567
- 11.13. Trachelostenidae Lacordaire, 1859  
*John F. Lawrence and  
Adam Ślipiński* . . . . . 571
- 11.14. Tenebrionidae Latreille, 1802  
*Eric G. Matthews, John F. Lawrence,  
Patrice Bouchard, Warren E. Steiner, Jr.  
and Adam Ślipiński* . . . . . 574
- 11.15. Prostomidae G. G. Thomson, 1859  
*Ainsley Seago and Rolf G. Beutel* . . . . . 659
- 11.16. Synchronidae Lacordaire, 1859  
*Adam Ślipiński and  
John F. Lawrence* . . . . . 667
- 11.17. Stenotrachelidae C. G. Thomson, 1859  
*John F. Lawrence and  
Adam Ślipiński* . . . . . 670
- 11.18. Oedemeridae Latreille, 1810  
*John F. Lawrence and  
Adam Ślipiński* . . . . . 674
- 11.19. Meloidae Gyllenhal, 1810  
*Marco A. Bologna, Federica Turco and  
John D. Pinto* . . . . . 681
- 11.20. Mycteridae Blanchard, 1845  
*Darren A. Pollock* . . . . . 693

11.21. Boridae C. G. Thomson, 1859 Darren A. Pollock . . . . .	699	11.26. Anthicidae Latreille, 1819 Donald S. Chandler . . . . .	729
11.22. Trictenotomidae Blanchard, 1845 Darren A. Pollock and Dmitry Telnov . . . . .	704	11.27. Aderidae Winkler, 1927 John F. Lawrence and Adam Ślipiński . . . . .	741
11.23. Pythidae Solier, 1834 Darren A. Pollock . . . . .	708	11.28. Scaptiidae Mulsant, 1856 John F. Lawrence and Adam Ślipiński . . . . .	746
11.24. Pyrochroidae Latreille, 1807 Daniel K. Young and Darren A. Pollock. . . . .	715	11.29. Tenebrionoidea Incertae sedis John F. Lawrence, Hermes Escalona and Richard A. B. Leschen. . . . .	750
11.25. Salpingidae Leach, 1815 John F. Lawrence, Adam Ślipiński, Darren A. Pollock and Hermes Escalona . . . . .	722	Taxonomic Index . . . . .	761