

Terrestrial Invertebrates of the Pálava Biosphere Reserve of UNESCO, II
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Coleoptera: Staphyloidea 4

(Micropeplidae and Staphylinidae)

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The family Staphylinidae including the family Micropeplidae (up to recent time classified as a subfamily of the family Staphylinidae) with regard to species forms one of the richest groups of beetles. According to the latest data (BOHÁČ 1993) 1096 species are known in the territory of Moravia (1256 in the Czech Republik). If we consider this number in relation to the species number recorded from the adjacent countries (Austria 1654, Bohemia 1184, Poland 2399 and Slovakia 1224) and in relation to the area and biogeographical position of Moravia we can assess that the real number of species occurring in Moravia will be higher by ca. 100 species. In the study area of the extended Pálava Biosphere Reserve 450 species have been found, hence a little less than a half of species known in Moravia. Staphylinidae are predominantly predators of small invertebrates. However, several species are to a different extent fungivorous, pollinivorous or algivorous. *Aleochara* larvae are parasites of larval Diptera, adults are predators. Non-specialized predatory species live mainly epigeic in the litter and on the other hand they also seek excrements, carrion, decaying mushrooms and accidentally penetrate into nests of birds, mammals or social insects. Several genera or at least some species have specialized on a certain type of habitat. For example, the species of the genera *Gyrophaena*, *Oxyporus* and *Bolitophilus* occur only in mushrooms, *Creophilus maxillosus* on carrions and *Emus hirtus* on excrements. *Velenius dilatatus* lives in hornet nests, the species of the genus *Haploglossa* in ants' or birds' nests, the highly specialized *H. nidicola* lives in sand martin's nests (*Riparia riparia*). The species of the genera *Xylodromus* and *Zeteotomus brevicornis* prey on fir bark beetle larvae. The species of the genus *Lomechusa* and *Dinarda* belong to morphologically adapted myrmecophils, and the species of the genera *Zyras* and *Drusila canaliculata* adapted only their colour to ants. The species of the genus *Stenus* are highly specialized shore inhabitants having an ability of reactive movement on the water surface and preying by means of extruding mouth parts. Several representatives of the subfamily Omaliinae (genera *Anthophagus*, *Eusphaelerum*) sometimes occur in great numbers on flowers. The material was gained by usual entomological methods (sweeping of herb layer by entomological net, sifting of litter and water drift), and individual collecting (under stones, stepping and searching special habitats), pitfall traps prove to be the best for quantitative samplings.

History of investigation. The first two data concernig staphylinids of the extended Pálava B.R. are published by FLEISCHER (1927-1930): *Pachyglutta ruficollis* and

Emus hirtus. Furthermore, in 14 species the wash of the Dyje River is mentioned only, so the possibility that they were found in the study area cannot be excluded. *Anotylus bernhaueri* and *Philonthus salinus* are notable findings among these species and they prove significantly a wider distribution of salt habitats in southern Moravia in the past. In recent literature there are only few faunistic data concerning staphylinids in the study area. The findings mainly represent rarer species published by LAUTERER & FLEISCHER (1954), SMETANA (1958, 1961, 1964, 1966), NOHEL (1970), STREJČEK (1973), ŠUSTEK (1974, 1977, 1983, 1992), BOHÁČ (1979a, 1979b, 1982, 1988), JANÁK (1983, 1993), ŠUSTEK & TÓTH (1986), and ZÜBER (1988). The first systematic studies are documented in zoocoenological papers by OBRTEL (1971, 1972) and ŠUSTEK (1972, 1976, 1983) concerning floodplain forests nr. Lednice, reed swamps of the Nesyt Fishpond and forest communities in Děvin Hill. VÁVRA & SCHILLHAMMER (1993) described a new species *Philonthus hanae* from the vicinity of Břeclav but this species was later elucidated as a mere synonym of *Philonthus palmi* Smetana, 1954 (cf. SCHILLHAMMER 1994). Within the last ten years the staphylinids have been studied as a part of the research concerning the structural changes in the insect communities along line formations of woody vegetation in the fields and on the border of various ecosystems (Z. ŠUSTEK leg.). In the years 1993-1994 Administration of the Pálava B.R. entered the programme of Monitoring Protected Landscape Areas. By using pitfall-trapping, an interesting material of staphylinids was sampled in five localities (J. CHYTIL leg.). In this way several tens of thousands of individuals were collected and they, together with literary sources and occasional findings from the collection of J. BOHÁČ and the author, form the basis of the List of species. In spite of the facts the mentioned data should be considered as incomplete and an increase in the number of species is to be expected.

Remarkable records. In the study area of the extended Pálava B.R. ten new species for Moravia of the family Staphylinidae were found: *Eusphaeruleus atrum*, *Stenus calcaratus*, *Paederus balcanicus*, *Xantholinus balaton*, *Pseudoocypus mus*, *Quedius humeralis*, *Tachinus bonvuloiri*, *Mycetoporus forticornis*, *Atheta fimorum*, *A. nannon*, *Zyras hampei*. It is also necessary to mention the occurrence of halophilous species: *Troglophloeus halophilus*, *T. gangelbaueri*, *Anotylus bernhaueri*, and *Philonthus salinus*. Further rare species are: *Achenium humile*, *Leptophius flavocinctus*, *Platydracus latebricola*, and *Zyras haworthi*. Conspicuously thermophilous species are: *Platydracus fulvipes*, *Ocypus brunipes*, *O. ophthalmicus*, *O. pedator*, *Pseudoocypus mus*, *Tasgius pedator*, and *Alapsodus compressus*. During the years 1971-1981 a striking expansion of the species *Pseudoocypus mus* was documented. *Philonthus palmi* is based on the male holotype originating from Sicily, further 6 specimens were found at Břeclav.

Monitoring. Some species of the family Staphylinidae show good bioindicating features thanks to their ecological specialization. But their importance for biomonitoring is limited because of the difficult identification and various sampling strategies of some species. Furthermore, among staphylinids, carabids and probably spiders competitive food relations rise to such an extent that staphylinid cumulative abundance drops in those habitats which are densely inhabited by carabids and vice versa. Thus the isolated interpretation of the results of the staphylinid monitoring can be misleading.

On the other hand, staphylinids are certainly a good source of valuable complementary knowledge.

Conservation. The rare species *Emus hirtus*, mentioned by FLEISCHER (1927-1930) previously frequent in the Pavlovské vrchy Hills, does not occur in this territory any more. It bears the relation to the fact that grazing was stopped here. It is necessary to concentrate the conservation on original ecosystems, animals, mushrooms or typical niches, to which staphylinids are existentionally bound. In the study area at least a partial renaturation of shore and riparian ecosystems is needed, since they were damaged in connection with water management alterations. A list of threatened Austrian species is to be found in JÄCH (1994).

PUBLISHED SOURCES

1. FLEISCHER A., 1927-1930: Přehled brouků fauny Československé republiky. /A Survey of Beetles of the Czechoslovak Republic/. Moravské museum zemské, Brno, 485 pp. (In Czech).
2. LAUTERER P. & FLEISCHER Z., 1954: Nové nálezy vzácných a zajímavých brouků na jižní Moravě. /New records of rare and interesting beetles in southern Moravia/. Acta Soc. ent. Českoslov., 51: 181-182. (In Czech).
3. SMETANA A., 1958: Drabčikoviti I. /Staphylinids I/. Fauna ČSR. ČSAV, Praha, 435 pp. (In Czech, Germ. summ.).
4. SMETANA A., 1961: Systematické a faunistické poznámky ke zviřeně drabčiků Československa V. Systematische und faunistische Beiträge zur Kenntnis der Staphylinidenfauna der Tschechoslowakei V. Čas. Slez. Muz. Opava (A), 10: 113-121. (In Czech, Germ. summ.).
5. SMETANA A., 1964: Systematische und faunistische Beiträge zur Kenntnis der Staphyliniden-Fauna der Tschechoslowakei 6. Acta Soc. ent. Českoslov., 61: 162 - 172.
6. SMETANA A., 1966: Systematische und faunistische Beiträge zur Kenntnis der Staphylinidenfauna der Tschechoslowakei VII (Col. Staphylinidae). Acta ent. Bohemoslov., 63: 322-336.
7. NOHEL P., 1970: Příspěvek k faunistice drabčiků Československa (Col. Staphylinidae). A contribution to the faunistics of the Staphylinidae of Czechoslovakia (Col. Staphylinidae). Zprávy Čs. spol. ent. ČSAV, Praha, 6: 31-36. (In Czech, Engl. summ.).
8. OBRTEL R., 1971: Soil surface Coleoptera in a lowland forest. Acta Sc. Nat. Brno, 5 (7): 1 - 47.
9. OBRTEL R., 1972: Soil surface Coleoptera in a reed swamp. Acta Sc. Nat. Brno, 6 (9): 1-35.
10. ŠUSTEK Z., 1972: Carabidae a Staphylinidae jako složka přírodních geobiocenóz. /Carabidae and Staphylinidae as a component of natural geobiocoenoses/. Sbor. samostatných prací Biol. soutěže studentů škol II. cyklu. Ústř. dům pionýrů a mládeže J. Fučíka, Praha, 57 pp. (In Czech).
11. STREJČEK J., 1973: Nové nebo jinak zajímavé druhy brouků z Čech a Moravy. Neue oder sonst interessante Käferarten aus Böhmen and Mähren. Zprávy Čs. spol. ent. ČSAV, Praha, 9: 57-67. (In Czech, Germ. summ.).

12. ŠUSTEK Z., 1974: Nálezy několika vzácnějších brouků na jižní Moravě. The occurrence of several sporadic species of Coleoptera in Moravia. Zprávy Čs. spol. ent. ČSAV, Praha, 10: 83. (In Czech, Engl. summ.)
13. ŠUSTEK Z., 1976: Role čeledi Carabidae a Staphylinidae v lesních geobiocenózách. /The role of Carabidae and Staphylinidae in forest geobiocenoses/. Thesis, Faculty of Forestry, University of Agriculture, Brno, 57 pp. + supplements. (In Czech).
14. ŠUSTEK Z., 1977: Příspěvek k rozšíření a ekologii drabčika *Ocypus mus* (Brullé, 1832) v Československu. Beitrag zur Verbreitung und Oekologie des Raubkäfers *Ocypus mus* (Brullé, 1832) in der Tschechoslowakei (Coleoptera, Staphylinidae). Zprávy Čs. spol. ent. ČSAV, Praha, 13: 107-108. (In Czech, Germ. summ.)
15. JURÍK M. & ŠUSTEK Z., 1978: The Coleoptera in the nests of *Passer domesticus* in Czechoslovakia. Věst. Čs. spol. zool., 42: 255-272.
16. BOHÁČ J., 1979: Nové a zajímavé nálezy drabčikovitých z Československa. New and interesting finds of Staphylinidae from Czechoslovakia (Coleoptera - Staphylinidae). Zprávy Čs. spol. ent. ČSAV, Praha, 15: 121-132. (In Czech, Engl. summ.)
17. BOHÁČ J., 1979: Faunistic records from Czechoslovakia. Coleoptera, Staphylinidae. Acta ent. Bohemoslov., 76: 345-346.
18. ŠUSTEK Z. & JURÍK M., 1980: The Coleoptera from the nests of *Riparia riparia* in Czechoslovakia. Věst. Čs. spol. zool., 44: 286-292.
19. BOHÁČ J., 1982: Nové a zajímavé nálezy drabčikovitých z Československa 2. New and interesting finds of Staphylinidae from Czechoslovakia 2. Zprávy Čs. spol. ent. ČSAV, Praha, 18: 65-81. (In Czech, Engl. summ.)
20. JANÁK J., 1983: Faunistic records from Czechoslovakia. Coleoptera, Staphylinidae. Acta ent. Bohemoslov., 80: 399.
21. ŠUSTEK Z., 1983: A comparison of Carabidae and Staphylinidae in Pavlovské kopce hills during the period 1971-1981. Biológia (Bratislava), 38: 105-115.
22. ŠUSTEK Z., 1983: Poznámky k výskytu a ekologii několika vzácnějších drabčiků ve střední Evropě. Bemerkungen zur Verbreitung und Ökologie einiger Staphyliniden (Coleoptera - Staphylinidae). Zprávy Čs. spol. ent. ČSAV, Praha, 18: 87-89. (In Czech, Germ. summ.)
23. ŠUSTEK Z. & TÓTH L., 1986: Bionomical and ecological notes on *Ontholestes haroldi* (Eppelsheim, 1884). Biológia (Bratislava), 41: 557-561.
24. BOHÁČ J., 1988: Nové a zajímavé nálezy drabčiků podčeledi Aleocharinae (Coleoptera, Staphylinidae) v Československu. New and interesting finds of Staphylinids from the subfamily Aleocharinae (Coleoptera, Staphylinidae) from Czechoslovakia. Zprávy Čs. spol. ent. ČSAV, Praha, 24: 43-54.
25. ZÚBER M., 1988: Příspěvek k poznání výskytu některých drabčikovitých brouků (Coleoptera - Staphylinidae). /Contribution to the knowledge of occurrence of some staphylinids/. Zprávy Čs. spol. ent. ČSAV, Praha, 24: 99-100. (In Czech).
26. ŠUSTEK Z., 1992: Expansion and ecology of *Ocypus mus* (Brullé, 1832) in Slovakia and Moravia. Biológia (Bratislava), 47: 129-132.
27. JANÁK J., 1993: Zajímavé nálezy drabčiků na Moravě a Slovensku (Coleoptera: Staphylinidae). Interessante Funde der Kurzflügler aus Mähren und aus der Slo-

- wakei (Coleoptera: Staphylinidae). Klapalekiana, 29: 1-17. (In Czech, Germ. summ.).
28. VÁVRA J. & SCHILLHAMMER H., 1993: *Philonthus hanae* sp.nov. from Moravia (Coleoptera: Staphylinidae). Ent. Probl., 24: 35-37.

COLLECTIONS EXAMINED

29. Coll. Z. ŠUSTEK. Quantitative samples by pitfall traps during seasons 1983-1985 (HV, fields, balks, grass steppe), 1985-1988 (HL, 1.1.2.3; KJ, 1.1.2.2), 1986-1987 (BU, 1.1.1.5, windbreaks, fields), 1988-1990 (PA, 1.1.1.5, balks, fields, orchards, vineyards), 1991-1993 (KL, 1.1.1.6, windbreak, grass steppe) and occasional individual records.
30. Coll. Administration of the Pálava Biosphere Reserve, Mikulov, J. CHYTIL leg., Z. ŠUSTEK det.
31. Coll. J. BOHÁČ, Bezdrevská 15, 370 11 České Budějovice (J. BOHÁČ, Z. KAČENKA, J. STREJČEK leg.; J. BOHÁČ det.). Occasional samples from 1972-1979 (BR, BU, KJ, LA, LE, LR, MI, NM, PV, SE, SN, SK).

ABBREVIATIONS

General abbreviations: see comments on abbreviations (pp. 13-19) and a separate Appendix.

Special abbreviations: AAT amphiatlantic (distributed in Europe and E North America), cf coprophilous, fu fungicolous, ha halophilous, mf myrmecophilous, nf necrophilous, ni nidicolous, ri ripicolous.

Example: *Micropeplus porcatus* (Fabricius, 1792): PA¹ (29)², A1³, F1⁴, EUR⁵.

Explanation: ¹locality, ²number of source, ³abundance, ⁴frequency, ⁵distribution.

LIST OF SPECIES

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| MICROPEPLIDAE | (30), A1, F1, EUR. |
| <i>Micropeplus porcatus</i> (Fabricius, 1792): | <i>Acrolocha minuta</i> (Olivier, 1795): LE |
| PA (29), A1, F1, EUR. | (31), F2, W PAL. |
| STAPHYLINIDAE | <i>Anthobium atrocephalum</i> (Gyllenhal, |
| OSORIINAE | 1827): LE (8), DV (21), BU, HL, |
| <i>Thoracophorus corticinus</i> Motschulsky, | HV, PA, KL (29), RA (30), 1.1-2, |
| 1837: LE (31), mf, A1, F1, CEU. | A2, F4, HOL. |
| PROTEININAE | <i>Anthophagus caraboides</i> (Linnaeus, |
| <i>Megarthus hemipterus</i> (Illiger, 1794): | 1758): LE (10), A1, F1, EUR. |
| BR, LA (31), F3, PAL. | <i>A. melanocephalus</i> Heer, 1839: LE (8), |
| <i>M. sinuaticollis</i> (Boisduval & Lacordaire, | A1, F1, CEU (probably misidentifi- |
| 1835): HL (29), A1, F1, HOL. | cation). |
| OMALIINAE | <i>Arpedium quadrum</i> (Gravenhorst, 1806): |
| <i>Acidota crenata</i> (Fabricius, 1792): RA | BU, PA (29), KJ (30), A1, F1, HOL. |
| (30), A1, F1, HOL. | <i>Eusphalerum semicoleoptratum</i> (Panzer, |
| <i>A. cruentata</i> (Mannerheim, 1831): SN | 1794): HL (29), A1-2, F1, CEU. |

- Hapalarea floralis* (Paykull, 1789): MI (7), A1, F1, W PAL.
- H. melanocephala* (Fabricius, 1787): PA (29), A1, F1, CEU.
- Olophrum assimile* (Paykull, 1800): SE (9), A4, F1, EUR.
- O. austriacum* Scheerpelz 1929: LE (7), A1, F1, CEU.
- O. piceum* (Gyllenhal, 1810): HV (29), A1, F1, SBM.
- Omalium caesum* Gravenhorst, 1806: LE (8, 10, 13), SE (9), DV (13, 21), BU, HL, HV, KJ, NM, PE, (29), RA (30), 1.1-2, 2.2, A1-3, F4, HOL.
- O. ferrugineum* Kraatz, 1858: DV (21), A1, F1, CEU.
- O. rivulare* (Paykull, 1789): LE (8, 10, 13), SE (9), DV (10, 13, 21), BU, DO, HL, HV, KJ, KL, PE, PA, (29), ME, RA (30), 1.1-2, 2.2, A3, F5, HOL.
- Xylodromus affinis* (Gerhardt, 1877): SN (30), burrows of *Talpa europea*, A1, F1, EUR.
- OXYTELINAE**
- Anotylus inustus* (Gravenhorst, 1806): PA (29), A1, F1, PAL.
- A. mutator* Lohse, 1963: LR (31), F2, W PAL.
- A. nitidulus* (Gravenhorst, 1806): KL (29), A1, F1, HOL.
- A. sculpturatus* (Gravenhorst, 1806): DV, LE (10, 13), BU, DO, HL, HV, KJ, KL, PA, PE, (29), 1.1-2, A3, F5, PAL.
- A. tetracarيناتus* (Block, 1799): DV (21), BU, DO, HL, HV, KJ, KL, PA, PE (29), RA (30), 1.0, 2.0, A2, F5, HOL.
- Bledius gallicus* (Gravenhorst, 1806): DO (29), A2, F1, EUR.
- B. germanicus* Wagner, 1935, SN (31), ph, F2, PON.
- B. opacus* (Block, 1799): PA (29), A1, F1, AAT.
- B. tricornis* (Herbst, 1784): SN (31), ph, F2, PAL.
- Carpelimus obesus* (Kiesenwetter, 1844): KJ, LA, LR, NM, SN (31), F4, PAL.
- C. rivularis* (Stephens, 1834): KJ, LA, LR, NM, SN (31), F5, PAL.
- Elonium striatulum* (Fabricius, 1792): BU, DO, PA (29), 1.2, 2.2, A2, F2, CEU.
- Manda mandibularis* (Gyllenhal, 1827): KJ (11, 31), LR, NM (31), F3, PAL.
- Oxytelus insecatus* Gravenhorst, 1806: DV (10, 13), BU, HV, KL, PA (29), RA, SN (30), 2.1, 2.2, A1-2, F5, EUR.
- O. rugifrons* Hochhut, 1849: LE (8), A1, F1, PAL.
- O. rugosus* (Fabricius, 1775): LE (8, 10, 13), SE (9), DV (21), BU, DO, HL, NM, PA (29), KJ (29, 30), RA (30), 1.1.2, 2.2.1, hg, A3, F4, HOL.
- Planeustomus palpalis* (Erichson, 1839): KJ (11), 1.1.2, hg, A1, PAL.
- Platystethus arenarius* (Fourcroy, 1785): PA (29), A1, F1, PAL.
- P. cornutus* (Gravenhorst, 1802): BU, HV, NM (29), A1, F2, EUA.
- Troglophloeus bilineatus* (Stephens, 1834): KJ (29), ri, A3, F3, HOL.
- T. gangelbaueri* Bernhauer, 1901: SN (2), ha, A1, F1, EUR.
- T. subtilis* (Erichson, 1839): SE (9), ri, A1, F1, AAT.
- OXYPORINAE**
- Oxyporus rufus* (Linnaeus, 1758): BU (29), fu, A1, F2, EUA.
- STENINAE**
- Stenus argus* Gravenhorst, 1802: DO (29), KJ (29, 30), ri, A2, F2, HOL.
- S. bifoveolatus* Gyllenhal, 1827: DO (29), ri, A2, F2, EUA.
- S. biguttatus* (Linnaeus, 1758): DO, KJ, PA (29), ri, A3, F2, EUA.
- S. bimaculatus* Gyllenhal, 1810: DO, KJ, PV (29), ri, A2, F2, EUS.
- S. binotatus* Ljungh, 1804: LR (31), F2, PAL.
- S. bohemicus* Machulka, 1947: NT (27), LR (31), F2, PAL.

- S. boops* Ljungh 1804: DO (29), ri, A1, F2, EUS.
- S. brunipes* Stephens, 1833: KJ, NM (31), F2, W PAL.
- S. calcaratus* Scriba: LA (4), ri, A1, F1, EUS.
- S. cicindeloides* (Schaller, 1783): KJ, LR, NM, SN (31), F4, PAL.
- S. clavicornis* (Scopoli, 1763): KJ, LA, LE, LR, NM, SN (31), F4, PAL.
- S. comma* Leconte, 1863: DO, ST (29), ri, A2, F2, HOL.
- S. crassus* Stephens, 1833: KJ (29), ri, A1, F1, EUS.
- S. flavipes* Stephens, 1833: KJ (29), ri, A1, F1, EUS.
- S. fuscipes* Gravenhorst, 1802: KJ, NM (31), F2, PAL.
- S. humilis* Erichson, 1839: LA (4), LE (13), BU, KJ (29), RA (30), 1.1.2, hg, A1-2, F3, HOL.
- S. incrassatus* Erichson, 1839: LA, LR, NM (31), F3, PAL.
- S. juno* (Paykull, 1789): ST (29), ri, A2, F2, HOL.
- S. lustrator* Erichson: LA (4), ri, A1, F1, EUS.
- S. melanopus* (Marsham, 1802): SN (31), F1, ri, PAL.
- S. morio* Gravenhorst, 1806: SE (9), ri, A1, F1, PAL.
- S. ochropus* Kiesewetter, 1858: LE (8), DV, KL (29), ME (30), MI (7), A1, F2, EUS.
- S. pallipes* Gravenhorst, 1802: PE (29), A1, F1, EUR.
- S. palustris* Erichson, 1839: LA (5), A1, F1, EUS.
- S. similis* (Herbst, 1784): KL, PL (29), A1, F2, PAL.
- S. solutus* Erichson, 1840: ST (5), ri, A1, F1, EUR.
- S. tarsalis* Ljungh, 1804: LA, LR (31), F2, EUA
- EUASTETHINAE**
- Euastethus laeviusculus* (Mannerheim, 1844): SE (9), DO, KJ, NM (29), hg, ri, A2, F3, EUS.
- PAEDERINAE**
- Achenium depressum ephippium* Erichson, 1840: BU (29), A1, F1, SBM.
- A. humile* (Nicolai, 1823): BU (16), KL (29), A1, F2, EUR.
- Astenus gracilis* (Paykull, 1789): PA (29), A1, F1, EUR.
- A. immaculatus* Stephens, 1833: HV (29), A1, F2, W PAL.
- A. procerus* (Gravenhorst, 1806): HV, PA (29), A2, EUR.
- Doliceon biguttulus* (Lacordaire, 1835): KJ, SN (31), F2, ri, PON-SBM.
- Medon bruneus* (Erichson, 1839): DV (13, 21), BU, PE (29), ME (30), A1, F3, EUR.
- M. dilutus* (Erichson, 1839): LE (27), A1, SBM.
- M. ferrugineus* (Erichson, 1840): LE (8), A1, F1, EUR.
- M. rufiventris* Nordmann, 1837: LA (31), F1, PON-SBM.
- Lathrobium brunipes* (Fabricius, 1792): LE (8, 10, 13), SE (9), DV (21), DO, HL, HV, KJ, NM (29), KJ, RA (30), 1.1.2, 2.1.5, 2.2.1, hg, A1-2, F3, EUA.
- L. castaneipenne* Kolenati, 1846: LE (16), DO, HL (29), 1.1.2, 2.1.5, 2.2.1, hg, A2, F3, EUS.
- L. dilutum* Erichson, 1839: SE (9), 2.1.5, hg, A1, F1, CEU.
- L. elongatum* (Linnaeus, 1767): LE (8), BU, HL, KL, PA (29), RA, SN (30), 1.1.2, 2.1.5, hg, A2, F4, EUR.
- L. fennicum* Renkonen, 1938: KJ (29), hg, A1, F1, W PAL.
- L. fovulum* (Stephens, 1833): LE (13), HL (29), 1.1.2, 2.1.5, hg, A1, F1, CEU.
- L. geminum* Kraatz, 1857: DV, LE (13), 1.1.2, 2.1.5, hg, A1, F1, EUA.
- L. impressum* Heer, 1841: SE (9), PA (29), hg, A1, F1, EUR.
- L. longulum* Gravenhorst, 1802: LE (8),

- hg, A1, F1, EUA.
- L. multipunctatum* (Gravenhorst, 1802): KL (29), hg, A1, F1, SBM.
- L. pallidum* Nordmann, 1837: LE (8), KJ, RA, SN (30), 1.1.2, 2.1.5, hg, A1, F3, EUR.
- L. rufipenne* Gyllenhal, 1813: DV (21), A1, F1, EUR.
- Octephilum fracticorne* (Paykul, 1800): SE (9), A1, F1, EUS.
- Paederus balcanicus* Koch, 1938: BR, VA (19), A1, F1, PON?.
- P. littoralis* Gravenhorst, 1802: BU, HV, KL, PA (29), hg, ri, A2, F2, EUR.
- P. riparius* (Linnaeus, 1758): SE (9), DO, HV (29), hg, ri, A2, F3, W PAL.
- P. schoenherri* Czwalina, 1899: BU, KL, PA (29), RA, SE (30), 2.1.5, 2.2.0, A2, F3, PAL.
- Pseudomedon obsoletus* (Nordmann, 1837): SE (9), A1, F1, EUR.
- Rugilus orbiculatus* (Paykull, 1789): MI (9), PA (29), A1, F2, W PAL.
- R. rufipes* (Germar, 1836): DV (10, 13, 21), BU, HL, HV, KL, PA, PE, (29), RA (30), 1.0, 2.0, A2, F4, W PAL.
- Scopaeus bicolor* Baudi di Silve, 1848: BR (16, 19), A1, F1, EUR.
- S. cognatus* Mulsan & Rey, 1855: PA (29), A1, F1, CEU-EUR.
- Sunius melanocephalus* (Fabricius, 1792): MI (7), A1, F1, SBM.
- STAPHYLININAE
- Alapsodus compressus* Marsham, 1802: DV (21), HL, KL (29), A1, F1, EUR.
- A. melanarius* Heer, 1839: SE (9), DV (10, 13), BU, HL, HV, KL, PA, (29), KJ (29, 30), RA, SN (30), 1.0, 2.0, A1-2, F4, EUR.
- Astrapaeus ulmi* (Rossi, 1790): BU, MI, PV, SE (31), F2, PON-SBM.
- Emus hirtus* (Linnaeus, 1758): PA (1), cf. W PAL, EX.
- Erichsonius cinerascens* (Gravenhorst, 1802): PV (29), 2.1.5, hg, A2, F2, AAT.
- Gabrius femoralis* (Hochhuth, 1851): LE (8), A1, F1, PON.
- G. nigrutilus* (Gravenhorst, 1802) SE (9), HV, NM (29), A1, F3, EUA.
- G. osseticus* (Kolenati, 1846): LE (8), SE (9), DV (13, 21), BU, HL, KL, PA (29), KJ, RA (30), 1.0, 2.0, A1-2, F4, EUA.
- G. splendidulus* (Gravenhorst, 1802): LE (8), A1, F1, EUS.
- G. suffragani* Joy, 1913: LA, NT (6), DO (29), 2.1.5, A1, F1, PON.
- G. trossulus* (Nordmann, 1837): NM (29), A1, F1, CEU.
- G. velox* Sharp, 1910: LA (6), LE (27), hg, A1, EUR.
- Gyrophypnus atratus* (Heer, 1839): BU, HV, NM (29), A2, F3, EUR.
- G. fracticornis* (Müller, 1776): BU, KL (29), A1, F3, COS.
- Heterothops dissimilis* (Gravenhorst, 1802): LE (8), DV (13), DO (22, 29), BU, HV, KL, PA, PE, (29), 1.0, 2.0, A1, F4, EUA.
- H. niger* Kraatz, 1868: BU, KL (29), A1, F1, CEU.
- H. praeivus* Erichson, 1839: BU, PV (29), A1, F2, EUA.
- H. quadripunctulus* (Gravenhorst, 1806): LE, LR (31), F2, EUA.
- Leptacinus pusillus* (Stephens, 1833): BU, HL, PA (29), KJ (30), A1, F2, EUS.
- Leptophius flavocinctus* (Hochhuth, 1849): HL (29), A1, F1, SBM.
- Nudobius lentus* (Gravenhorst, 1806): DV (13), A1, F1, EUA.
- Ocypus brunipes* Fabricius, 1781: DV (12, 13, 21), PV (16), BR, LD, LE (27), KL, PA (29), 1.0, 2.0, A2, F3, CEU.
- O. nero semialatus* J. Müller, 1904: DV (10, 13, 21), LE (13), BU, HL, HV, KL, PA (29), KJ (29, 30), SN (30), 1.0, A1-3, F4, W PAL.
- O. ophthalmicus* Scopoli, 1763: PV (11, 25), LE (16), DV (21), A2, F1, W PAL.

- O. tenebricosus* Gravenhorst, 1847: DV (10, 13, 21, 30), BU, HV, KL, PA, PE, (29), ME (30), 1.1.1, A1-4, F4, CEU.
- O. winkleri* Bernhauer, 1906: PV (31), F1, W PAL.
- Ontholestes haroldi* (Eppelsheim, 1884): BU, HV, PE (26, 29), HL, KL, PA (29), RA (30), 1.2.5, 2.2.0, A1-2, F3, CEU.
- O. murinus* (Linnaeus, 1758): PA (29), ne, A1, F3, PAL.
- O. tessellatus* (Fourcroy, 1785): LE (8), DV (21), ne, A1, F3, EUA.
- Othius brevipennis* (Kraatz, 1857): HL, KJ (29), 1.1-2, A1, F1, CEU.
- O. myrmecophilus* Kiesenwetter, 1843: LE (8), HL (29), 1-2., A1, F1, EUR.
- O. punctulatus* (Goeze, 1777): LE (8, 13), DV (10, 13, 21), BU, HL, KL, PA, PE, (29), RA (30), 1-2, A1, F5, PAL.
- Philonthus atratus* (Gravenhorst, 1802): DO, KJ (29), A2, F2, HOL.
- P. bimaculatus* (Gravenhorst, 1802): LE (3), A1, F1, EUS.
- P. carbonarius* (Gyllenhal, 1810): BU, HV, KL (29), A3, F3, EUA.
- P. concinnus* (Gravenhorst, 1802): BU, HV, KJ, KL, ME, PA (29), A3, F4, PAL.
- P. corruscus* (Gravenhorst, 1802): DV (21), A1, F1, W PAL.
- P. decorus* (Gravenhorst, 1802): LE (8, 10, 13), DV (10, 13, 21), BU, HL, HV, KJ, KL, PA (29), RA (30), 1.1.1.6, 1.1.2, me, A2-5, F4, EUR.
- P. debilis* (Gravenhorst, 1802): ME (29), A1, F1, HOL.
- P. diversiceps* Bern: PA (19), A1, F1, EUR.
- P. fumarius* (Gravenhorst, 1806): LE (8, 10, 13), SE (9), DV (13, 21), KJ (29, 30), HL (29), 1.1.2, 2.1.5, hg, A2-4, F2, EUR.
- P. fuscipennis* (Mannerheim, 1830): MI (7), DV (21), BU, HV, KL, PA, (29), KJ (29, 30), 2.2, A1-3, F5, HOL.
- P. intermedius* (Lacordaire, 1835): KJ, PA (29), A1, F1, W PAL.
- P. laminatus* (Creutzer, 1799): DV (13, 21), HL, HV, KJ, KL, PA (29), 1.0, 2.0, A1, F4, W PAL.
- P. lepidus* (Gravenhorst, 1802): PV (29), A1, F1, CEU.
- P. mannerheimi* (Fauvel, 1868): LE (8), hg, A1, F1, EUR.
- **P. palmi* Smetana, 1954 (= *hanae* Vávra & Schill.): BR (28), A1, ?SBM (Sicily & Pálava B.R.).
- P. politus* (Linnaeus, 1758): BU, KI, PA (29), A2, F3, HOL.
- P. puella* (Nordmann, 1837): DV (13), A1, F1, SBM.
- P. punctus* (Gravenhorst, 1802): LE (3), A1, F1, W PAL.
- P. quisquiliarius* (Gyllenhal, 1810): DO, HV, KJ, KL, PA (29), ME (30), 1.0, 2.0, A1-3, F3, COS.
- P. rotundicollis* (Ménétrières, 1832): PA (29), KJ (30), A2, F3, PAL.
- P. salinus* Kiesenwetter, 1844: SE (2, 6, 9), LR (27), 2.1.5, ha, A1, F1, W PAL.
- P. sordidus* (Gravenhorst, 1806): BU (29), A1, F1, COS.
- P. spermophili* Gangelbauer, 1897: DV (21), HV (29), A2, F2, EUR.
- P. succicola* C. G. Thomson, 1860: LE (8), DV (13, 21), BU, HV, KJ, KL, PA (29), 1.0, 2.0, A1-4, F4, EUA.
- P. varians* (Paykull, 1789): LE (8), BU, HL, HV, PA (29), 1.0, 2.0, A2, F3, HOL.
- P. varipennis* W. Scriba, 1864: BU, KL (29), A1, F1, PON.
- Platydracus chalconcephalus* (Fabricius, 1801): DV (10, 13, 21), BU, HV, KJ, KL, PA (29), 1.0, 2.0, A1-3, F5, SBM.
- P. fulvipes* (Scopoli, 1763): DV (10, 13, 21), HL, HV, KL, PA, RA (29), 1.0, 2.0, A1, F4, EUA.
- P. latebricola* (Gravenhorst, 1806): PV

- (16), A1, F1, CEU.
- P. stercorarius* (Olivier, 1795): DV (10, 13, 21), HL, HV, KL, PE (29), 1.0, 2.0, A1-2, F4, EUR.
- Pseudoocypus fulvipennis* Erichson, 1840: HV, KL, PE, PV (29), A1, F3, EUS.
- P. fuscatus* Gravenhorst, 1802: KL, PA (29), SN (30), A1, F3, EUS.
- P. mus* Brullé, 1832: DV (13, 15, 21, 26), LE (27), BU, HL, PE (29), ME (30), 1.0, A2-3, F4, PON-SBM.
- Quedius balticus* Korge, 1960: SN (27), ha, A1, EUR.
- Q. brevicornis* (C. Q. Thomson, 1860): LA (27), A1, EUR.
- Q. fuliginosus* (Gravenhorst, 1802): LE (8, 10, 13), SE (9), BU, HL, HV, KL, PA (29), KJ (29, 30), RA, SN (30), 1.0, A1-2, F3, W PAL.
- Q. fumatus* (Stephens, 1833): BU (29), A1, F1, W PAL.
- Q. humeralis* Stephens, 1832: LE (8), A1, F1, EUR.
- Q. limbatus* Heer, 1839: MI (7), LE (8), DV (13), A1, F2, EUR.
- Q. microps* Gravenhorst, 1847: LE (8), A1, F1, CEU.
- Q. molochinus* (Gravenhorst, 1806): SE (9), DV (21), BU (29), KJ, SN (30), A1, F3, W PAL.
- Q. nemoralis* Baudi di Selve, 1848: LE (8), A1, F2, EUR.
- Q. ochripennis* (Ménétriés, 1832): DV (10, 13, 21), BU, DO, HV (29), KJ (29, 30), RA (30), A1-5, F3, PON.
- Q. paradisianus* Heer, 1839: DV (13), BU, HL, HV, PA, PE (29), A1, F3, W PAL.
- Q. scitus* (Gravenhorst, 1806): DV (13, 21), A1, F1, PAL.
- Q. umbrinus* Erichson, 1839: DV (13, 21), A1, F2, EUR.
- Rabigus tenuis* (Fabricius, 1792): KJ, SN (31), F2, EUA.
- R. pullus* (Nordmann, 1837): KJ, SN (31), F2, PAL.
- Staphylinus caesareus* Cederhjelm, 1798: DV (13), BU, HV, KL, PA (29), KJ, ME, RA, SN (30), 2.0, A2, F4, EUR.
- S. erythropterus* Linnaeus, 1758: LE (10, 13), HL (29), KJ (29, 30), RA, SN (30), 1.1.2, hg, A1-3, F3, HOL.
- Tasgius ater* Gravenhorst, 1802, DV (21), BU (29), A1, F1, W PAL.
- T. pedator* Gravenhorst, 1802: PV (3), DV (10, 12, 13, 21), HL, HV, PA (29), A1, F4, SBM.
- Xantholinus balaton* Bordoni, 1973, LE (20), 2.1.5, A1, F1, CEU?
- X. jarrigei* Coiffait, 1956: DV (10, 22), PE (29), A1, F1, ATL.
- X. linearis* (Olivier, 1794): LE (8), SE (9), DV (13, 21), BU, DO, HL, HV, KL, PA, PV (29), KJ (29, 30), RA, SN (30), 1.0, 2.0, A1-3, F5, PAL.
- X. logiventris* (Heer, 1839): DV (13, 21, 22), A2, F1, EUR.
- X. tricolor* (Fabricius, 1787): LE (8, 13), DV (10, 13), BU, HL, HV, KL, PA (29), RA (30), 1.1, 1.2, 2.0, me, A1-2, F3, EUR.
- HABROCERINAE**
- Habrocerus capilaricornis* (Gravenhorst, 1806): MI (7), HL (29), A1, F1, W PAL.
- TACHYPORINAE**
- Bolitobius cingulatus* Mannerheim, 1831: LE (8), SE (9), HV, KL (29), KJ (29, 30), RA (30), A2, F5, HOL.
- B. formosus* (Gravenhorst, 1806): DV (13, 21), BU, HL, HV, KL, PA, PE (29), A1, F3, CEU.
- Lordithon exoletus* (Erichson, 1839): BU (29), A1, F1, PAL.
- L. lunulatus* (Linnaeus, 1761): KJ, PA (29), A2, F2, EUS.
- L. striatus* (Olivier, 1795): BR (31), F2, PAL.
- Mycetoporus clavicornis* (Stephens, 1832): MI (7), A1, F1, W PAL.
- M. forticornis* Fauvel, 1875: SE (9), A1, F1, EUR.

- M. lepidus* (Gravenhorst, 1802): DO, HV, KJ, KL, PA (29), A1, F4, HOL.
- M. splendidus* (Gravenhorst, 1806): LE (8), BU, DO, KJ (29), RA (30), A4, F4, HOL.
- Sepedophilus bipunctatus* (Gravenhorst, 1802): LE (8), A1, F1.
- S. immaculata* (Stephens, 1832): BU, HV (29), A1, F1, PAL.
- S. litoreus* (Linnaeus, 1758): DV (13, 21), A1, F2, HOL.
- S. marshami* (Stephens, 1832): PV (31), F2, W PAL.
- S. obtusus* Luzé, 1902: PV (31), F1, PON.
- S. pedicularia* (Gravenhorst, 1802): MI (7), BU, HV, KJ, KL (29), SE (31), A1-2, F4, PAL.
- S. testaceus* (Fabricius, 1792): LE (8), DV (13, 21), BU, HL, HV, KL, PA, PE, (29), KJ (29, 30), RA, SE (30), 1.0, 2.0, A1-2, F5, HOL.
- Tachinus bonvouloiri* Pandellé, 1869: MI (7), A1, F1, CEU.
- T. corticinus* Gravenhorst, 1802: MI (7), BU (29), A1, F1, EUA.
- T. laticollis* Gravenhorst, 1802: DV (10, 21), BU, PA (29), A2, F3, EUA.
- T. marginellus* (Fabricius, 1781): BR, BU (31), F3, PAL.
- T. pallipes* (Gravenhorst, 1806): PA (29), A1, F1, AAT.
- T. signatus* (Gravenhorst, 1802): DV (10, 13), LE (10, 13), HL, HV, KJ, KL, PA, PV (29), RA (30), 1.1.1.6, 1.1.2, hg, A1-3, F3, HOL.
- T. subterraneus* (Linnaeus, 1758): PA (29), A1, F1, EUA.
- Tachyporus abdominalis* (Fabricius, 1781): SE (9), A1, F1, EUR.
- T. chrysomelinus* (Linnaeus, 1758): LE (13), DV (13, 21), BU, HL, HV, KL, PA, PE (29), KJ (29, 30), SN (30), 2.0, 1.0, A1-3, F5, HOL.
- T. hypnorum* (Fabricius, 1775): LE (8), DV (13, 21), BU, DO, HL, HV, KL, PA, PE (29), KJ (29, 30), ME (30), 1.0, 2.0, A1-4, F5, PAL.
- T. nitidulus* (Fabricius, 1781): DV (13, 21), PA (29), 1.0, 2.0, A1, F3, HOL.
- T. obtusus* (Linnaeus 1767): BU (29), A1, F1, PAL.
- T. solutus* Erichson, 1839: LE (13), DV (21), BU, HL, HV, KJ (29), 1.0, 2.0, A1, F4, EUA.
- T. transversalis* Gravenhorst, 1806: SE (9), A1, F1, EUR.

ALEOCHARINAE

- Alaobia scapularis* (Sahlberg, 1831): LE (31), F1, W PAL.
- Aleochara bilineata* (Gyllenhal, 1810): BU, HV, PA (29), cf, A1-3, F4, HOL.
- A. bipustulata* (Linnaeus, 1761): LE (8), BU, HV, KL, PA (29), ME (30), cf, A1-3, F4, HOL.
- A. brevipennis* Gravenhorst, 1806: SE (9), PE (29), KJ (30), A1-2, F2, PAL.
- A. curtula* (Goeze, 1777): SE (9), DV (13, 21), HV, KJ, KL, PA, PE, (29), ME (30), nf, A1-2, F5, HOL.
- A. fumata* Gravenhorst, 1802: LA (31), F2, W PAL.
- A. intricata* Mannerheim, 1830: PV (31), F3, PAL.
- A. lanuginosa* Gravenhorst, 1802: LE (10, 13), A1, F1, EUA.
- A. laevigata* Gyllenhal, 1810: KL (29), A1, F1, EUA.
- A. laticornis* Kraatz, 1856: PV (31), F1, PON-SBM.
- A. ripicola* Mulsant & Rey: HV (29), A1, F1, EUA.
- A. ruficornis* Gravenhorst, 1802: HL, KJ, KL, PA (29), RA (30), 1.1.2, hg, A2, F3, PON.
- A. sparsa* Heer, 1839: LE (31), F3, W PAL.
- Alianta incana* (Erichson, 1837): KJ, SN (31), F2, W PAL.
- A. nigella* (Erichson, 1837): KJ, SN (31), F2, W PAL.
- Aloconota gregaria* (Erichson, 1839): LR (31), F2, W PAL.

- A. insecta* (Thomson, 1856): LR (31), F3, W PAL.
- A. sulcifrons* (Kirby, 1832): LR (31), F2, AAT.
- Amischa analis* (Gravenhorst, 1802): BU, LA, LE, MI, PV, SE, SK (31), F5, PAL.
- Amarochara forticornis* (Lacordaire, 1835): BU, MI (31), F2, W PAL.
- Anomognathus cuspidatus* (Erichson, 1839): LA, NM (31), F2, W PAL.
- Atheta angustula* (Gyllenhal, 1810): SE (9), A1, F1, EUS.
- A. clancula* (Erichson, 1837): BR (16), A1, F1, EUS.
- A. crassicornis* (Fabricius, 1792): BU, LA, LE, MI, NM, SE (31), F5, PAL.
- A. dadopora* Thomson, 1867: LA (31), F2, PAL.
- A. fimorum* (Brisout de Barneville, 1860): LE (19), A1, F1, W PAL.
- A. fungi* (Gravenhorst, 1806): SE (9), HL, HV, KL, PE (29), KJ (30), A1-2, F4, W PAL.
- A. hypnorum* (Kiesenwetter, 1850): HL (29), A1, F1, EUR.
- A. gagatina* (Baudi di Selve, 1848): LA, LE (31), F2, my, PAL.
- A. graminicola* (Gravenhorst, 1806): SE (9), A1, F1, EUS.
- A. inquinula* (Gravenhorst, 1802): PV (31), F3, W PAL.
- A. laticollis* (Kirby, 1832): BR, BU, MI, SE, SK (31), F4, PAL.
- A. liturata* (Kirby, 1832): LE (16), A1, F1, EUS.
- A. livida* Mulsant & Rey, 1852: BU, LA, MI (31), F3, W PAL.
- A. longicornis* (Gravenhorst, 1802): LE (8, 31), A1, F1, W PAL.
- A. occulta* (Erichson, 1837): LE (31), F2, EUA.
- A. parca* Mulsant & Rey, 1873: LE (19), A1, F1, CEU.
- A. picipes* (Thomson, 1856): LA, LE (31), F3, PAL.
- A. sodalis* (Erichson, 1837): LA, LE (31), mf, F3, W PAL.
- A. sordidula* (Erichson, 1837): PV (31), F2-3, PAL.
- A. triangulata* (Kraatz, 1858-9): DO, HV (29), A1-2, F2, EUR.
- A. volans* (Scriba, 1859): KJ, SN (31), F2, W PAL.
- Autalia impressa* Olivier, 1795: LA, LE (31), F2, W PAL.
- Bolitochara bella* Märkel, 1844: BU, LA, LE (31), mf, F3, W PAL.
- B. lucida* (Gravenhorst, 1802): BU, LA, LE (31), mf, F3, W PAL.
- B. lunulata* Paykull, 1889: BU, LA, LE (31), F3, my, PAL.
- B. obliqua* Erichson, 1839: BU, LA, LE (31), F4, W PAL.
- Brachida exigua* (Heer, 1839): SK (31), F1, W PAL.
- Brachyusa concolor* (Erichson, 1839): KJ, SN (31), F2, EUA.
- Callicerus obscurus* Gravenhorst, 1802: KL (29), A1, F1, EUR.
- Calodera nigrita* Mannerheim, 1830: NM (19), A1, F1, EUS.
- C. uliginosa* Erichson, 1837: NM (19), A1, F1, EUS.
- Cordalia obscura* (Gravenhorst, 1802): PA (29), SN (30), A1, F2, HOL.
- Crataraea suturalis* (Mannerheim, 1830): LE (31), F3, PAL.
- Dasygnypeta velata* (Erichson, 1839): KJ, SN (31), F2, W PAL.
- Devia prospera* (Erichson, 1839): HV (16), A1, F1, HOL.
- Dinaraea aequata* (Erichson, 1837): BU, LA, LE, MI, NM, SE (31), F5, PAL.
- Drusila canaliculata* (Fabricius, 1787): SE (9), DV (10, 13, 21), BU, HV, KJ, KL, PA, PE (29), ME, RA, SN (30), mf, A1-5, F5, EUA.
- Euryusa optabilis* Heer, 1842: LE (31), F2, W PAL.
- E. sinuata* Erichson, 1837: LE (31), F1, W PAL.