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A Bibliographic Compilation on the Immature Stages of Hydrophiloidea (Insecta, Coleoptera)

by **M. Archangelsky**

Abstract: A bibliographic compilation with more than 400 references is reported. It includes the following families: Helophoridae, Epimetopidae, Georissidae, Hydrochidae, Spercheidae, and Hydrophilidae. Histeridae (considered by some authors within the Hydrophiloidea) is not included. References that deal with Hydraenidae, which until recently have been traditionally considered within the Hydrophiloidea (now within Staphilinoidea), have been omitted.

Key Words: Coleoptera – Hydrophiloidea – Hydrophilidae – immature stages – larva – pupa – egg case – biology – ecology – bibliography.

This bibliographic compilation started as a tool necessary for my research on immature stages of hydrophilids. Considering the large amount of information it contains, this list may be useful to many other researchers, therefore making its publication worthwhile. It includes references in which immatures (eggs, egg cases, larvae and pupae) are described or mentioned (e.g. as part of a phylogenetic study, part of experimental observations, etc.). Also general references that provide important and useful information on the biology or ecology of hydrophiloids have been included (e.g. habitats in which adults can be collected, etc.).

Hydrophiloidea in this paper is considered in Hansen's (1991) sense. It includes the following families: Helophoridae, Epimetopidae, Georissidae, Hydrochidae, Spercheidae, and Hydrophilidae. Histeridae (considered by some authors within the Hydrophiloidea) is not included. References that deal with Hydraenidae, which until recently have been traditionally considered within the Hydrophiloidea (now within Staphilinoidea), have been omitted.

This list contains close to 400 references. Of course I expect that some references may have been overlooked, and to be able to complete and update the present compilation, I would appreciate receiving any citations, reprints, unpublished information (such as Ms. or Ph.D. theses), and also any corrections to the present list.

Finally, I would like to acknowledge an anonymous reviewer for his comments, and also Dr. P. J. Spangler for his comments and additions to the list.

- ABDULLAH, M. (1971): *On the primitive and derivative characters of the families of beetles (Coleoptera)*. Beitr. Ent. 21: 503–506.
- AIKEN, R. B. (1985): *Sound production by aquatic insects*. Biol. Rev. 65: 163–211.
- ALLEN, A. A. (1956): *Hydrophilus piceus* at Deal; and a seldom noticed ? habit of the larva. Entomologist's Mon. Mag. 92: 153.
- ANDERSON, J. M. E. (1976): *Aquatic Hydrophilidae (Coleoptera). The biology of some Australian species with descriptions of immature stages reared in the laboratory*. J. Aust. ent. Soc. 15(2): 219–228.
- ANDERSON, W. H. (1936): *A comparative study of the labium of Coleopterous larvae*. Smithson. misc. Collns. 95(13): 1–29, 8 Plates.
- ANGUS, R. B. (1970): *Genetic experiments on Helophorus F. (Coleoptera: Hydrophilidae)*. Trans. R. ent. Soc. Lond. 122: 257–276.
- ANGUS, R. B. (1970): *Helophorus orientalis (Coleoptera: Hydrophilidae), parthenogenetic water beetle from Siberia and North America, and a British Pleistocene fossil*. Can. Ent. 102(2): 129–143.
- ANGUS, R. B. (1970): *A revision of the beetles of the genus Helophorus F. (Coleoptera: Hydrophilidae) subgenera Orphelophorus d'Orchymont, Gephelophorus Sharp and Meghelophorus Kuwert*. Acta zool. fenn. 129: 1–62.
- ANGUS, R. B. (1970): *Notes of the Helophorus species of Fennoscandia and northern Russia*. Notul. ent. 54: 25–32.
- ANGUS, R. B. (1973): *The habitats, life histories and immature stages of Helophorus F. (Coleoptera: Hydrophilidae)*. Trans. R. ent. Soc. Lond. 125(1): 1–26.
- ANGUS, R. B. (1982): *Separation of two species standing as Helophorus aquaticus (L.) (Coleoptera, Hydrophilidae) by banded chromosome analysis*. Syst. Entomology 7(3): 265–281.
- ANGUS, R. B. (1983): *Evolutionary stability since the Pleistocene illustrated by reproductive compatibility between Swedish and Spanish Helophorus lapponicus Thomson (Coleoptera, Hydrophilidae)*. Biol. J. Linn Soc. London 19: 17–25.
- ANGUS, R. B. (1986): *A revision of the Palearctic species of Helophorus F. (Coleoptera: Hydrophilidae) grouped with H. minutus F., with the aid of chromosome analysis and hybridization experiments*. Syst. Ent. 11: 133–163.
- ANGUS, R. B. (1988): *A new sibling species of Helophorus F. (Coleoptera: Hydrophilidae), revealed by chromosome analysis and hybridization experiments*. Aquatic Insects, 10(3): 171–183.
- ANGUS, R. B. (1992): *Insecta: Coleoptera: Hydrophilidae: Helophorinae*. Gustav Fischer Verlag, Stuttgart, 148 pp.
- AOUAD, N. (1984): *Etude écologique des Hydrophiloidea d'eaux stagnates de la région de Rabat (Maroc.)*. These Doct. 3eme cycle, Fac. Sc. Toulouse 3.
- AOUAD, N. (1988): *The biological cycle and polymorphism of Berosus affinis (Coleoptera: Hydrophilidae) in Morocco*. Ent. News, 99(2): 105–110.
- ARCHANGELSKY, M. (1994): *Description of the preimaginal stages of Dactylosternum cacti (Coleoptera, Hydrophilidae: Sphaeridiinae)*. Ent. scand. 25: 121–128.
- ARCHANGELSKY, M. (1994): *Description of the immature stages of three Nearctic species of the genus Berosus Leach (Coleoptera: Hydrophilidae)*. Int. Revue ges. Hydrobiol. 79(3): 357–372.
- ARCHANGELSKY, M. (1996): *Studies on the biology, ecology, and systematics of the preimaginal stages of New World Hydrophiloidea, with considerations on their phylogeny (Coleoptera: Staphyliniformia)*. Ph.D. Dissertation, The Ohio State University, 446 pp.

- ARCHANGELSKY, M. & DURAND, M. E. (1992): *Description of the preimaginal stages of *Dibolocelus ovatus* (Gemminger and Harold, 1868) (Coleoptera, Hydrophilidae: Hydrophilinae)*. Aquatic Insects 14(2): 107–116.
- ARCHANGELSKY, M. & DURAND, M. E. (1992): *Description of the preimaginal stages of *Derallus angustus* Sharp, 1882 (Coleoptera: Hydrophilidae, Berosinae)*. Aquatic Insects 14(3): 169–178.
- ARCHANGELSKY, M. & DURAND, M. E. (1992): *Description of the immature stages and Biology of *Phaenonotum exstriatum* (Say, 1835) (Coleoptera: Hydrophilidae: Sphaeridiinae)*. Coleopt. Bull. 46(3): 209–215.
- ARCHANGELSKY, M. & FERNANDEZ, L. A. (1994): *Description of the preimaginal stages and biology of *Phaenonotum (Hydroglobus) puncticolle* Bruch (Coleoptera: Hydrophilidae)*. Aquatic Insects 16(1): 55–63.
- ARNETT, R. H. (1963): *The beetles of the United States; A manual for identification*. Washington. Catholic Univ. of America Press. 1112 pp.
- BAKER, W. K. (1894): *Hydrobius fuscipes, notes on its life-history, larval anatomy, etc.* *The Naturalist*, pp. 327–333. London.
- BALDUF, W. V. (1935): *The bionomics of entomophagous Coleoptera*. John S. Swift Co., St. Louis. 220 pp.
- BALFOUR-BROWNE, J. (1939): *New and rare species of aquatic Coleoptera from New Caledonia. – Dytiscidae and Palpicornia*. Ann. Mag. nat. Hist. 3(11): 370–376.
- BALFOUR-BROWNE, J. (1939): *Contribution to the study of the Palpicornia. II*. Entomologist's mon. Mag. 75: 1–8.
- BALFOUR-BROWNE, W. A. F. (1910): *On the life-history of *Hydrobius fuscipes* L.* Trans. R. Soc. Edinb., 47: 317–340, Pl. III.
- BALFOUR-BROWNE, W. A. F. (1913): *The life-history of a water-beetle*. Nature 92: 20–24. London.
- BALFOUR-BROWNE, W. A. F. (1944): *The proventriculus of the coleoptera (Adephaga) and other insects. A study in evolution*. J. R. microsc. Soc. 64: 68–117.
- BALFOUR-BROWNE, W. A. F. (1958): *British water beetles, III*. London, Ray Society. 210 pp.
- BAMEUL, F. (1986): *Les Hydrophiloidea des iles Mascareignes (Coleoptera)*. Revue suisse Zool. 93: 875–910.
- BAMEUL, F. (1991): *Description of *Nannomicrus*, new genus of the tribe Omicrini Smetana from Sri Lanka (Coleoptera: Hydrophilidae: Sphaeridiinae)*. Elytron 4: 131–136.
- BAY, E. C. (1972): *An observatory built in a pond provides a good view of aquatic animals and plants*. The Amateur Scientist. Sci. Am. 227: 114–118.
- BAY, E. C. (1974): *Predator-prey relationships among aquatic insects*. Ann. Rev. Entomol. 19: 441–453.
- BEDEL, L. (1879-1881): *Faune des Coléoptères du bassin de la Seine, Vol. 1*. App. Annl. Soc. ent. Fr. xxiv + 260 pp.
- BELLSTEDT, R. (1982): *Hydrochus ignicollis* Motschulsky, 1960 in der DDR (Col. Hydrochidae). Ent. Nachr. 26: 79–81.
- BENICK, L. (1926): *Die Käfer der Oldesloer Salzstellen*. Mitt. geogr. Ges. Naturh. Mus. Lübeck 31: 59-90.
- BENNEMA, B. A. & SMELIK, P. G. (1950): *De nestbouw van spinnende watertorren (*Hydrous piceus* eu *Hydrophilus caraboides*)*. Levende Natuur. 53: 21–29.

- VAN BERGE HENEGOUWEN, A. L. (1975): *Description of the egg case and larva of *Limnoxenus niger* (Zschach) (Coleoptera, Hydrophilidae)*. Ent. Ber. 35(1): 27–30.
- VAN BERGE HENEGOUWEN, A. L. (1982): *Notes on the larval stages of some East African Hydrophilinae (Coleoptera: Hydrophilidae)*. Ent. Ber. 42(1): 11–16.
- VAN BERGE HENEGOUWEN, A. L. (1982): *The dutch species of the genus *Laccobius* Erichson (Coleoptera, Hydrophilidae), a systematic and faunistic study*. Zool. Bijdr. 28: 59–84. (In Dutch).
- BERLESE, A. (1909): *Gli Insetti: loro organizzazione, sviluppo, abitudini e rapporti con l'uomo. I. Embriologia e Morfologia, (*Hydrobius fuscipes*; *Hydrophilus piceus*; *Berosus spinosus*)*. Milano Società editrice libraria, 1044 pp.
- BERNET KEMPERS, K. J. W. (1944): *De Larven der in Nederland voorkomende Hydrophilidae*. Ent. Ber. 11: 165–168.
- BERTRAND, H. (1933): *Spedizione scientifica all'oasi di Cufra (Marzo-luglio, 1931), Note sur deux larves de Coléoptères aquatiques*. Annali Mus. civ. Stor. nat. Genova 56: 295–262.
- BERTRAND, H. (1935): *Larves de Coléoptères aquatiques de l'Expédition Limnologique Allemande en Insulinde*. Arch. Hydrobiol. Sup. Bd. 14, "Tropische Bienengewasser" 6: 193–215.
- BERTRAND, H. (1935): *Voyage de Ch. Alluaud et de P. A. Chappuis dans l'Afrique occidentale française, Les larves de Coléoptères aquatiques*. Revue fr. ent. 2(3): 132–140.
- BERTRAND, H. (1938): *Les larves aquatiques des Coléoptères*. Verh. Intern. Verin. Limnol. (1937) 8(3): 3–17.
- BERTRAND, H. (1939): *Les larves aquatiques des Coléoptères*. Terre et Vie 9: 99–107.
- BERTRAND, H. (1947): *Larves de Coléoptères aquatiques recueillies sur *Pistia stratiotes**. Notes afr. 33: 26–29.
- BERTRAND, H. (1948): *Les insectes hygropétriques*. L'Entomologiste 4(2): 66–100.
- BERTRAND, H. (1949): *L'adaptation chez les larves et nymphes des Coléoptères aquatiques*. Année. biol. 53: 161–186.
- BERTRAND, H. (1950): *Observations biologiques sur les larves des Hydrophilides*. Bull. Soc. Zool. Fr. 75 (2–3): 96–103.
- BERTRAND, H. (1951): *Les larves aquatiques suceuses*. L'Entomologiste, 7: 64–74.
- BERTRAND, H. (1954): *Tableaux de détermination (ordres et familles) des larves-nymphes aquatiques d'insectes*. Cahier Natur., N. S., 9: 3–18.
- BERTRAND, H. (1955): *Les insectes aquatiques d'Europe, Vol. I*. Enc. Entom., ser A, 30: 1–556.
- BERTRAND, H. (1955): *Captures et élevages de larves de Coléoptères aquatiques*. Bull. Soc. ent. Fran. 60: 50–59.
- BERTRAND, H. (1962): *Contribution à l'étude des premiers états des Coléoptères aquatiques de la région éthiopienne (4^e note)*. Bull. Inst. fr. Afr. noire 24 A(4): 1065–1114.
- BERTRAND, H. (1965): *Contribution à l'étude des premiers états des Coléoptères aquatiques de la région éthiopienne (7^e note)*. Bull. Inst. fr. Afr. noire 27 A: 1336–1393.
- BERTRAND, H. (1966): *Larves de Coléoptères aquatiques de l'Angola (Insecta: Coleoptera)*. Pubçoes. cult. Co. Diam. Angola, 72: 137–161.
- BERTRAND, H. (1966, 1967): *Clé de détermination des larves des genres d'Hydrophilides holartiques*. Cah. Nat., 22: 85–88.

- BERTRAND, H. (1967): *Les larves aquatiques madicoles de Coléoptères de l'Afrique éthiopienne*. Trav. ass. Int. Limn. theor. appl., 16: 1731–1738.
- BERTRAND, H. (1967): *Récoltes des larves de Coléoptères aquatiques dans la région Ethiopienne (Afrique Occidentale et Equatoriale)*. Bull. Inst. fr. Afr. noire, 29: 1334–1341.
- BERTRAND, H. (1968): *Larves des Coléoptères aquatiques recueillies au Brésil par G. M. Marlier*. Bull. Soc. ent. Fr., 73(1-2): 8–21.
- BERTRAND, H. (1968): *Larves des Coléoptères aquatiques de Nouvelle-Calédonie*. Cahiers O.R.S.T.O.M., Hydrobiologie, 2(1): 75–82.
- BERTRAND, H. (1969): *Contribution à l'étude des premiers états des Coléoptères aquatiques de la région éthiopienne (8^e note)*. Bull. Mus. Hist. nat. 41(2): 458–475.
- BERTRAND, H. (1972): *Larves et nymphes des Coléoptères aquatiques du globe*. F. Pailart, Paris, 804 pp.
- BERTRAND, H. (1973): *Larves et nymphes de Coléoptères aquatiques*. Bull. Soc. ent. Fr. 78(3-4): 89–97.
- BERTRAND, H. (1973): *Note sur les nymphes des Coléoptères aquatiques*. Entomologiste 29(6): 197–202.
- BERTRAND, H. (1974): *Larves et nymphes des Coléoptères aquatiques*. 2. Bull. Soc. ent. Fr. 79(3-4): 53–63.
- BEUTEL, R. G. (1994): *Phylogenetic analysis of Hydrophiloidea based on characters of the head of adults and larvae (Coleoptera: Staphyliniformia)*. Koleopterologische Rundschau 64: 103–131.
- BEUTENMÜLLER, W. (1891): *Bibliographical catalogue of the described transformations of N. A. Coleoptera*. J. N. Y. Microsc. Soc., 7: 1–52.
- BLACKBURN, T. (1898): *Further notes on Australian Coleoptera, with descriptions of new genera and species*. XXIV. Trans. R. Soc. Aust. 22(1897-98): 221–233.
- BLATCLEY, W. S. (1910): *An illustrated descriptive catalogue of the Coleoptera or beetles (exclusive of the Rhynchophora) known to occur in Indiana*. (Indiana Dept. Geol. and Nat. Res. Bull. 1). Indianapolis: Nature Pub. Co., 1386 pp.
- BØVING, A. G. (1914): *On the abdominal structure of certain beetle larvae of the campodeiform type. A study of the relation between the structure of the integument and the muscles*. Proc. ent. Soc. Wash. 16: 55–63, Pls. III–IV.
- BØVING, A. G. (1914): *Notes on the larva of Hydroscapha and some other aquatic larvae from Arizona*. Proc. ent. Soc. Wash. 16: 169–174, Pls. XVII–XVIII.
- BØVING, A. G. (1929): *On the clasification of beetles according to larval characters*. Bull. Brooklyn ent. Soc. 24: 55–97.
- BØVING, A. G. & CRAIGHEAD, F. (1931): *An illustrated synopsis of the principal larval forms of the order Coleoptera*. Entomologica am. 11:1–351.
- BØVING, A. G. & HENRIKSEN, K. L. (1938): *The developmental stages of the Danish Hydrophilidae (Ins., Coleoptera)*. Vidensk. Meddr. dansk naturh. Foren. 102: 27–162.
- BOOTH, R. G., COX, M. L. & MADGE, R. B. (1990): *IIE Guides of importance to man: 3, Coleoptera*. International Institute of Entomology, The Natural History Museum, The University Press, Cambridge. 384 pp.
- BOWDITCH, F. C. (1884): *Notes on the habits of Hydrocharis obtusatus Say and Magdalis olyra Herbst*. J. Boston Zool. Soc., 3: 1–6.
- BRIGHAM, W. U. (1982): *Aquatic Coleoptera*. In A. R. Brigham, W. U. Brigham, and A. Gnilka: *Aquatic insects and oligochaetes of North and South Carolina*. Midwest Aquatic Enterprises, Mahomet, Illinois, 837 pp.

- BRITTON, E. B. (1966): *On the Larva of Sphaerius and the systematic position of the Sphaeriidae (Coleoptera)*. Austr. J. Zool.: 1193–1198.
- BROCHER, F. (1911): *Berosus aericeps. Observations biologiques sur quelques insectes aquatiques*. Anns. Biol. lacustre, Bruxelles 4: 367–379.
- BROCHER, F. (1924): *Sur la nymphe du Grand Hydrophile (Hydrous piceus)*. Anns. Biol. lacustre, Bruxelles, 13(1-2): 77–81.
- BROUCI, R. (1980): *Coleoptera. In Rosbosny, R. (Ed.): Key to aquatic larvae of insects*. Ceskoslovenska Akademic Ved, Prague, 521 pp. (In Czech).
- BROUN, T. (1886): *Manual of the New Zealand Coleoptera. Part IV*: 817–973. Wellington.
- BROUN, T. (1893): *Manual of the New Zealand Coleoptera. Part VII*: 1395–1504. Wellington.
- BROUN, T. (1904): *Description of a new Coleopterous Insect from Bounty Island*. Ann Mag. nat. Hist. (7) 14: 273–274.
- BROUN, T. (1910): *Descriptions of new genera and species of Coleoptera*. Bull. N. Z. Inst. 1(1): 3–78.
- BROUN, T. (1917): *Descriptions of new genera and species of Coleoptera. Part V*. Ibid. 1(5): 347–474.
- BRUCH, C. (1915): *Nuevas especies de Coleopteros Hidrofilidos*. Revta. Mus. La Plata 19(2): 447–470.
- BRUES, C. T. (1932): *Further studies on the fauna of North American hot springs*. Proc. Am. Acad. Arts & Sci. 67(7): 186–303.
- BUKH, F. (1910): *Lebensweise und Entwicklung von Spercheus emarginatus*. Ent. Rdsch. 27: 127–128, 134–136.
- C.S.I.R.O. (1991): *The insects of Australia. A textbook for sétudents and research workers. Second Edition*. Cornell University Press, Ithaca, New York. 1137 pp.
- CAMPADELLI, G. (1982): *Due abitatori dell'acqua: Hydrous piceus L. e Dytiscus marginalis L.* Natura Montagna 29(1): 59–63.
- CHAPMAN, R. F. (1982): *The insects, structure and function*. Harvard University Press, Cambridge, Massachusetts. 919 pp.
- CHEARY, B. S. (1971): *The biology, ecology and sytematics of the genus Laccobius (Laccobius) (Coleoptera: Hydrophilidae) of the New World*. Ph.D. Thesis, University of California, Riverside, 148 pp.
- CHU, H. F. (1949): *How to know the immature insects*. W.C. Brown, Dubuque, Iowa. 234 pp.
- CLIFFORD, H. F. (1991): *Aquatic invertebrates of Alberta*. Univ. of Alberta Press, Edmonton 538 pp.
- CORNELL, J. F. (1972): *Larvae of the families of Coleoptera: a bibliographic survey of recent papers and tabular summary of 7 selected English language contributions*. Coleopt. Bull. 26(1): 81–96.
- COSTA, C., VANIN, S. A. & CASARI-CHEN, S. A. (1988): *Larvas de Coleoptera do Brasil*. Museo de Zoologia, Universidade de São Paulo. 282 pp., 165 pls.
- CRAMPTON, G. (1921): *The sclerites of the head, and the mouth parts of certain immature and adult insects*. Ann. ent. Soc. Am. 14 (2).
- CRAMPTON, G. (1925): *A phylogenetic study of the labium of Holometabolous Insects with particular reference to Diptera*. Proc. ent. Soc. Wash. 27: 68–91.
- CROWSON, R. A. (1950): *The classification of the families of British Coleoptera*. Entomologist's mon. Mag. 86: 149–171, 274–288, 324–344.

- CROWSON, R. A. (1955): *The natural classification of the families of Coleoptera*. London: N. Lloyd, 187 pp.
- CROWSON, R. A. (1960): *The phylogeny of Coleoptera*. Ann. Rev. Entomol. 5: 111–134.
- CROWSON, R. A. (1967): *The natural classification of the families of Coleoptera. Addenda and corrigenda*. Entomologist's mon. Mag. 103: 209–214.
- CROWSON, R. A. (1981): *The biology of Coleoptera*. Academic Press; Harcourt Brace Jovanovich, Publishers. 802 pp.
- CUPPEN, J. G. M. (1986): *On the habitats, distribution and life-cycles of the Western European species of the genus Helochares Mulsant (Coleoptera: Hydrophilidae)*. Hydrobiologia, 131(2): 169–183.
- CUPPEN, J. G. M. (1986): *Het recent voorkomen van tien keversoorten in Nederland (Coleoptera)*. Ent. Ber. 52(12): 177–184.
- CUSSAC, E. (1852): *Moeurs et métamorphoses du Spercheus emarginatus et de l'Helochares lividus*. Anns. Soc. ent. Fr. 10: 617–627, Pl. XII.
- CUSSAC, E. (1856): *Notice concernant les métamorphoses du Ceutorhynchus raphani et du Mycetochares linearis et remarques sur les moeurs de l'Hydrobius fuscipes*. Anns. Soc. ent. Fr. 3(3): 241–248.
- BATZER, D. P. & RESH, V. H. (1991): *Trophic interactions among a beetle predator, a chironomid grazer, and periphyton in a seasonal wetland*. Oikos 60: 251–257.
- DAS, G. (1938): *The musculature of the mouth-parts of Insect-larvae*. Quart. J. micr. Sci., 80: 39–80.
- DETTNER, K. (1976): *Populationsdynamische Untersuchungen an Wasserkäfern zweier Hochmoore des Nordschwarzwaldes*. Arch. Hydrobiol. 77: 375–402.
- DORSEY, C. K. (1943): *The musculature of the labium, and pharyngeal region of adult and immature Coleoptera*. Smithson. misc. Collns. 103: 1–42.
- DORST, M. B. P. (1989): *Helophorus croaticus and H. pumilio in the Netherlands, with description of their larvae (Coleoptera: Hydrophilidae)*. Ent. Ber. 49(1): 1–7.
- DUGES, E. (1884): *Métamorphoses du Tropisternus lateralis Fab.* Anns. Soc. ent. Belg. 28: 7–12, Pl. I.
- DURRETT TURNER, E. S. (1979): *A survey of the aquatic Coleoptera of Madison County, Kentucky, Including critical thermal maxima values for selected species*. Ms. Dissertation, Eastern Kentucky University, Richmond, Kentucky. 77 pp.
- DYBAS, H. S. (1976): *The larval characters of featherwing and limulodid beetles and their family relationships in the Staphylinoidea (Coleoptera: Ptiliidae and Limulodidae)*. Fieldiana Zool. 70: 29–78.
- VAN EMDEN, F. I. (1932): *Ergebnisse einiger Moorexcursionen im West Erzgebirge*. Koleopt. Rdsch. 18: 140–150.
- VAN EMDEN, F. I. (1942): *Larvae of British beetles. III. Keys to the families*. Entomologist's mon. Mag. 78: 206–226, 253–272.
- VAN EMDEN, F. I. (1946): *Egg-bursters in some families of polyphagous beetles and some general remarks on egg-bursters*. Proc. R. ent. Soc. Lond. (A) 21: 89–97.
- VAN EMDEN, F. I. (1956): *The Georyssus larva, a Hydrophilid*. Proc. R. ent. Soc. Lond. 31(1-3): 20–24.
- ERICHSON, W. F. (1841): *Hydrous larva*. Arch. Naturgesch. 7: 108–110.
- EYRE, M. D., CARR, R., McBLANE, P. & FOSTER, G. N. (1992): *The effects of varying site-water duration on the distribution of water beetle assemblages, adults and larvae (Coleoptera: Haliplidae, Dytiscidae, Hydrophilidae)*. Arch. Hydrobiol. 124(3): 281–291.

- FERNÁNDEZ, L. A. (1980): *Descripción de las formas preimaginales de Tropisternus (Pristoternus) ignoratus Knisch 1919 (Coleoptera, Hydrophilidae)*. Revta. Soc. ent. argent. 39: 127–133.
- FERNÁNDEZ, L. A. (1983): *Helochares (Sindolus) talarum sp. nov., redescrición de Helochares (Helochares) pallipes (Brulle) y descripción de sus estados preimaginales. Coleoptera, Hydrophilidae*. Limnobios 2(6): 439–449.
- FERNÁNDEZ, L. A. (1989, 1990): *Aspectos sobre la ecología poblacional de Helochares talarum Fernández (Coleoptera: Hydrophilidae)*. Revta. Soc. ent. argent. 48(1–4): 161–165.
- FERNÁNDEZ, L. A. (1991, 1992): *Descripción de la ooteca y estadios larvales de Enochrus (Hugoscottia) scutellaris (Bruch) y Enochrus (Methyrus) vulgaris (Steinheil) (Coleoptera, Hydrophilidae)*. Revta. Soc. ent. argent. 50 (1–4): 343–352.
- FERNÁNDEZ, L. A. & DOMIZI, E. A. (1983): *Estudio preliminar sobre la biología de Tropisternus (Pristoternus) setiger Germar (Coleoptera, Hydrophilidae)*. Revta. Soc. ent. argent. 42(1-4): 261–265.
- FERNÁNDEZ, L. A. & KEHR, A. I. (1994): *The annual life cycle of an Argentinean population of Helochares femoratus (Brullé)*. Coleopt. Bull. 48(1): 95–98.
- FERNÁNDEZ, L. A. & KEHR, A. I. (1995): *Disposición espacial y su variabilidad con respecto al tiempo de una población de Helochares femoratus (Coleoptera: Hydrophilidae)*. Revta. Soc. ent. argent. 54(1-4): 67–73.
- FERNANDO, C. H. (1958): *The colonization of small freshwater habitats by aquatic insects, I. General discussion, methods and colonization in the aquatic Coleoptera*. Ceylon J. Sci. 1: 117–154.
- FERNANDO, C. H. (1963): *The distribution of aquatic insects in South East Asia with special reference to their dispersal*. Bull. Nat. Mus., Singapore, 32: 72–79.
- FICHTNER, E. (1972): *Aus der Biologie der Wasserkäfer*. Ent. Ber. 1972: 11–13.
- FISCHER-SIGWART, H. (1889): *Das Thierleben im Terrarium*. Mitt. aargan. naturf. Ges. 5: 1–178.
- FISCHER-SIGWART, H. (1899): *Egg-laying of Hydrobius piceus*. Arch. Sci. Nat. 8: 494–495.
- FORBES, S. A. (1888): *On the food relations of fresh-water fishes: A summary and discussion*. Bull. Ill. St. Lab. nat. Hist., 2: 475–538.
- FORGE, P. (1981): *Flore et faune aquatiques de l'Afrique sahélo-soudaniennne*. Tome 2. Coléoptères. Initiations-Doc. tech. O.R.S.T.O.M. 45: 487–516.
- FORMANOWICZ, D. R. JR. & BRODIE, E. D. JR. (1988): *Prey density and ambush site changes in Tropisternus lateralis larvae (Coleoptera: Hydrophilidae)*. J. Kans. ent. Soc. 61(4): 420–427.
- FORMANOWICZ, D. R. JR., BOBKA, M. S. & BRODIE, E. D. JR. (1982): *The effect of prey density on ambush-site changes in an extreme ambush-type predator*. Am. Midl. Nat. 108(2): 250–256.
- FORTICH, L. F. (1979): *Descripción de los estadios preimaginales de Tropisternus (Pristoternus) setiger (Germar) (Coleoptera, Hydrophilidae)*. Seminario para la Licenciatura, Univesidad de Buenos Aires. 29 pp., 29 pl.
- FOWLER, W. W. (1882): *A contribution to the life-history of Spercheus emarginatus*. Entomologist's. Mon. Mag. 19: 79.
- FRANKENBERG, G. (1940): *Ein brutpflegender und musizierender Wasserkäfer (Spercheus emarginatus)*. Natur Volk, 70: 79–89.

- FREUDE, H., HARDE, K. W. & LOHSE, G. A. (1971): *Die Käfer Mitteleuropas*. Band 3. Goecke & Evers, Krefeld. 365 pp.
- FRISCH, J. L. (1721): *Beschreibung von allerley Insecten in Teuschland II*. pp. 26–32.
- FUJIMORI, N. (1961): *Habitat of Laccobius oscillans Sharp*. *Collecting and Breeding*, 23(6): 177.
- FUKUDA, A., KUROSA, K. & HAYASHI, N. (1959): *Illustrated larvae of Japan (Coleoptera)*. pp. 391–546.
- FULLAGAR, J. (1879): *Hydrophilus piceus: notes on habits and transformations*. *Sci. gos.* 15: 132–133.
- GANGLBAUER, L. (1904): *Die Käfer von Mitteleuropa IV*. Wien, 286 pp.
- GARMAN, H. (1881): *The egg-case and larva of Hydrophilus triangularis Say*. *Am. Nat.* 15: 660–663.
- GENTILI, E. & CHIESA, A. (1976): *Revisione dei Laccobius paleartici (Coleoptera: Hydrophilidae)*. *Mem. Soc. ent. Ital.* 54: 5–187.
- GHILAROV, M. S. (1964): *Bestimmungsbuch für bodenbewohnende Insektenlarven*. Moskau (russian).
- GOPALASWAMY C. & HANUMANTHA RAO, K. (1975): *Studies on the feeding and breeding habits of Dineutes indicus (Aubé) (Gyrinidae) and Regimbartia attenuata (Fabr.) (Hydrophilidae) found in the brackish waters of Visakhapatnam (S. India)*. *Bull. Dep. nar. Sci. Univ. Cochin* 7(3): 569–582.
- GRABER, V. (1888): *Über die primäre segmentierung des Keimstreifs der Insekten*. *Morphologisches Jahrbuch*. 14: 345–368.
- GRABER, V. (1889): *Vergleichende Studien ber die Keimhllen und die Rückenbildung der Insekten*. *Denkschr. Akad. Wiss., Wien* 55: 109–162.
- GRAMBOW, A. (1985): *Über die Brutfursorge des Kolbenwasserkafers*. *Aquarien-terror. Mschr. Ornith. Vivar.* 32(1): 27–29.
- GRAY, L. J. (1981): *Species composition and life histories of aquatic insects in a lowland Sonoran Desert stream*. *Am. Midl. Nat.* 106(2): 229–242.
- GREEN, D. (1990): *Aquatic faunal communities and their fluctuations in adjacent ponds*. *Trans. Nat. Hist. Soc. Northumbria (The Hancock Museum)*, 55(2): 97–135.
- GUNDERSEN, R. W. (1967): *Taxonomic revision of the genus Enochrus subgenera Enochrus and Methydrus for the Nearctic region (Coleoptera: Hydrophilidae)*. Ph.D. thesis, University of Minnesota, 235 pp.
- GRUNDERSEN, R. W. (1978): *Nearctic Enochrus. Biology, keys, descriptions and distribution (Coleoptera: Hydrophilidae)*. St. Cloud, Minnesota. 54 pp.
- GUNDEVIA, H. S. & RAMAMURTY, P. S. (1984): *The female accessory reproductive glands and cocoon in Hydrophilus olivaceus Fabr. (Polyphaga: Coleoptera)*. *Z. mikrosk. -anat. Forsch.* 98(2): 293–301.
- HAFEZ, H. (1939): *Some ecological observations of the insect fauna of dung*. *Bull. Soc. Fouad I. Ent.* 23: 241–288.
- HAFEZ, H. (1939): *The external morphology of the full grown larva of Cercyon quisquilius L. (Hydrophilidae)*. *Bull. Soc. Fouad I. Ent.* 23: 339–343.
- HAFEZ, H. (1939): *The life history of Sphaeridium scaraboides L. (Col. Hydrophilidae)*. *Bull. Soc. Fouad I. Ent.* 23: 312–318.
- HAFEZ, H. (1945): *Observations on the biology of two common dung-beetles, Cercyon quisquilius LeC. and Hister bimaculatus L. (Coleoptera)*. *Bull. Soc. Fouad I. Ent.* 25: 25–29.

- HALLEZ, P. (1886): *Loi de l'orientation de l'embryon chez les insectes*. C. r. hebd. Séanc. Acad. Sci., Paris, 103: 606–608.
- HANSEN, M. (1983): *Danish species of Helophorus Fabricius, 1775 (Coleoptera, Hydrophilidae)*. Ent. Meded., 50(2): 55–76.
- HANSEN, M. (1987): *The Hydrophiloidea (Coleoptera) of Fennoscandia and Denmark*. E. J. Brill/Scandinavian Science Press Ltd., 254 pp.
- HANSEN, M. (1989): *New genera of Sphaeridiinae (Coleoptera: Hydrophilidae)*. Ent. scand. 20: 251–262.
- HANSEN, M. (1990): *Australian Sphaeridiinae (Coleoptera: Hydrophilidae): A taxonomic outline, with descriptions of new genera and species*. Invertebr. Taxon. 4: 317–395.
- HANSEN, M. (1991): *The hydrophiloid beetles: Phylogeny, classification and a revision of the genera (Coleoptera, Hydrophiloidea)*. Biologiske Skrifter, Kongelige Danske Videnskabernes Selskab, 40: 1–367.
- HARRIS, R. L. & BLUME, R. R. (1986): *Beneficial insects inhabiting bovine droppings in the United States. Biological control of muscoid flies*. Misc. Publ. ent. Soc. Am. 61: 10–15.
- HARTL, A. (1988): *Der Kolbenwasserkfer*. Aquarien Mag. 22(1): 31–34.
- HASHMI, A. A., ASGHAR, M. A. & HAMED, M. (1986): *Scanning of taxonomic characters in coleopterous larvae*. Pakistan J. Zool. 18(2): 139–143.
- HAUPT, H. (1907): *Was mich eine Hydrophilus (Hydrous) larve lehrte*. Wschr. Aquar. u. Terrarienk. 4: 326–328.
- HAUPT, H. (1909): *Zur Biologie de Hydrous (Hydrophilus) Larve*. Z. Naturw. 81: 301–304.
- HEIDER, K. (1889): *Die Embryonalentwicklung von Hydrophilus piceus, L. Erster Theil*, 88pp., 13 pls. Jena.
- HENNEGUY, L. (1904): *Les insectes: Morphologie, reproduction, embryogonie*. Paris, 804 pp.
- HENRIKSEN, K. L. (1931): *Vandkaerer (Palpicornia: Hydrophilidae), Larverne*. In V. HANSEN: Danmarks Fauna. 9: 102–163.
- HERNANDEZ LOPEZ, L. R. & RUIZ GARCIA, F. N. (1978): *El nido de Hydrophilus ater Oliver (Coleoptera: Hydrophilidae), y notas sobre las larvas del primer estadio*. Miscelanea zool. 7: 3–4.
- VAN HEYDEN, L. (1863): *Beitrag zur Coleopterenfauna des Oberengadins*. Jahresber. naturf. Ges. Graubnden N. F. 8: 13–14.
- HILSENHOFF, E. W. L. (1991): *Comparison of bottle traps with a D-frame net for collecting adults and larvae of Dytiscidae and Hydrophilidae*. Coleops. Bull. 45(2): 143–146.
- HINTON, H. E. (1981): *Biology of insect eggs. Volume 2*. Pergamon Press, Oxford, 475–778.
- HOSOI, M. (1939): *The life-history of Hydrous acuminatus Motschulsky. (in Japanese)*. Bot. Zool., Tokyo, 7: 1867–1874.
- HOSSEINIE, S. H. (1966): *Studies on the biology and life histories of aquatic beetles of the genus Tropisternus (Coleoptera: Hydrophilidae)*. Diss. Abstr. 26: 4903.
- HOSSEINIE, S. H. (1976): *Comparative life histories of three species of Tropisternus in the laboratory (Coleoptera: Hydrophilidae)*. Int. Revue ges. Hydrobiol. Hydrogr. 61(2): 261–268.

- HOSSEINIE, S. H. (1976): *Effects of the amount of food on duration of stages, mortality rates, and size of individuals in Tropisternus lateralis nimbatus (Say) (Coleoptera: Hydrophilidae)*. Int. Revue ges. Hydrobiol. Hydrogr. 61(3): 383–388.
- HOSSEINIE, S. H. (1976): *Comparative studies on the developmental stages of three species of Tropisternus (Coleoptera: Hydrophilidae)*. Int. Revue ges. Hydrobiol. Hydrogr. 61(6): 847–857.
- HRBACEK, J. (1943): *Dve Larvy Hydrophilidu*. Casopis C. Spol. Ent., 40: 98–105.
- HUANG, C. & PU, Z. (1984): *The biology of the water scavenger beetle Sternolophus rufipes, a predator of mosquito larvae*. Kunchong tiandi 6(2): 97–100. (In Chinese).
- HUDSON, G. V. (1934): *New Zealand beetles and their larvae. An elementary introduction to the study of our native Coleoptera*. Wellington, Ferguson & Osborn Ltd., 236 pp.
- IMMS, D. (1933): *On some aquatic Coleopterous larvae, scientific results of the Cambridge Expedition to the East African Lakes*. J. Linn. Soc. Zoology 38: 301–307.
- IMMS, D. (1957): *A textbook of Entomology*. MacMillan & Co., London.
- JAMES, H. G. (1964): *Insect and other fauna associated with the rock pool mosquito Aedes atropalpus (Coq.)*. Mosquito News 24: 325–329.
- KESSLER, H. & BALSBAUGH, E. U. Jr. (1972): *Succession of adult Coleoptera in bovine manure in East Central South Dakota*. Ann. ent. Soc. Am. 65(6): 1333–1336.
- VAN KIESENWETTER, E. A. H. (1845): *Entomologische Nitizen*. Stettin. ent. Ztg. 6: 147–149, 220–227.
- KLAUSNITZER, B. (1977): *Bestimmungstabellen für die Gattungen der aquatischen Coleopteren-Larven Mitteleuropas*. Beitr. Ent. 27: 145–192.
- KLAUSNITZER, B. (1978): *Bestimmungsbücher zur Bodenfauna Europas, Lieferung 10, Ordnung Coleoptera (Larven)*. W. Junk, Berlin, 378 pp.
- KLAUSNITZER, B. (1981): *Gegenwärtiger Stand und zukünftige Aufgaben bei der Erforschung der Coleopterenlarven Mitteleuropas*. Ent. Ber. 1980(1): 5–11.
- KLAUSNITZER, B. (1984): *Käfer im und am Wasser*. A. Ziemsen Verlag, Wittenberg Lutherstadt, 148 pp.
- KNISCH, A. (1924): *Coleopterorum catalogus auspiciis et auxilio*. S. Schenkling Ed. Pt. 79, Family Hydrophilidae. W. Junk, Berlin, 306 p.
- KOWAWVSKY, A. (1871): *Embryologische Studien an Würmern u. Arthropoden*. Mém. Acad. St. Petesbourg, 14: 1-70, XII pls.
- KRYGER, J. P. & SØNDERUP, H. P. S. (1940): *Biologiske Iagttagelser over 200 Arter af danske Billelarver I*. Ent. Meddr. 22: 57–136.
- KRYZHANOVSKIY, O. L. (1977): *Order Coleoptera-beetles*. In Kutikova, L. A. & Ya. I. Starobogatov, Eds.: *Key to freshwater invertebrates from the European parts of the SSSR (plankton and benthos)*. Gidrometeoizdat, Leningrad, 510 pp. (In Russian).
- KRYZHANOVSKIY, O. L. & REICHARDT, A. N. (1976): *Beetles of the superfamily Histeroidea (Families Sphaeritidae, Histeridae, Syntelidae)*. Fauna SSSR, Coleoptera, 5(4), 434 pp. (in Russian).
- LACORDAIRE, T. (1854): *Histoire naturelle des insectes, genera des Coléoptères, 1*: 443–475.
- LAKER, A. G. (1881): *The cocoons of Hydrophilus piceus and Hydrobius fuscipes*. Entomologist 14: 82–84.
- LAMEERE, A. (1899): *Les métamorphoses des insectes*. Annls. Soc. ent. Belg. 43: 619–636.

- LANDIN, J. (1976): *Seasonal patterns in abundance of water beetles belonging to Hydrophiloidea (Coleoptera)*. Freshwat. Biol. 6: 89–108.
- LANDIN, J. (1980): *Habitats, life histories, migration and dispersal by flight of two water-beetles Helophorus brevipalpis and H. strigifrons (Hydrophilidae)*. Holarctic Ecol. 3(3): 190–201.
- LARSEN, E. B. (1936): *Biologische Studien über die tunnelgrabenden Käfer auf Skallingen*. Vidensk. Medd. dansk naturh. Foren. 100: 1–232.
- LARSEN, D. J. (1987): *Aquatic Coleoptera of peatlands and marshes in Canada*. Mem. ent. Soc. Can. 140: 99–132.
- LARSSON, S. G. (1938): *Larvene*. In: V. HANSEN: Danmarks Fauna, Band 10, 44: 1–320, Kopenhagen.
- LARSSON, S. G. & GIGJA, G. (1959): *Coleoptera I. Synopsis*. The Zoology of Iceland, III(46a): 122–126.
- LATREILLE, P. A. (1810): *Considérations générales sur l'ordre naturel des animaux composant les classes des Crustacés, des Arachnides et des Insectes*. Paris, 444 pp.
- LAURENCE, B. O. (1954): *The larval inhabitants of cow pats*. J. Anim. Ecol. 23: 234–260.
- LAWRENCE, J. F. & NEWTON, A. F. Jr. (1982): *Evolution and classification of beetles*. Ann. Rev. Ecol. Syst. 13: 261–290.
- LEECH, H. B. & CHANDLER, H. P. (1956): *Aquatic Coleoptera*. In: R. L. USINGER: *Aquatic Insects of California*. pp. 293–371. 508 pp. University of California Press, Berkeley.
- LEECH, H. B. & SANDERSON, M. B. (1959): *Coleoptera*. In: W. T. EDMONDSON: *Fresh-Water Biology*. 2nd Ed., 1248 pp. Wiley, New York.
- LEA, A. M. (1919): *Notes on some miscellaneous Coleoptera, with descriptions of new species*. Part V. Trans. R. Soc. S. Aust. 43: 166–229.
- LEHMKUHL, D. M. (1979): *How to know the aquatic insects. Pictured Key Nature Series, Wm. C. Brown Co. Publ., Dubuque, Iowa*. 168 pp.
- LETZNER, K. (1853): *Zur Verwandlungsgeschichte einiger Käfer*. Denkschr. schles. Ges. vat. Kultur, pp. 205–219.
- LYKINS, M. (1972): *Genetic and environmental factors influencing egg case mast length in Tropisternus collaris (Coleoptera: Hydrophilidae)*. Diss. Abstr. int. B 33(1): 251–252.
- LYONET, P. (1829): *Anatomie de différentes espèces d'insectes (2)*. Mém. Mus. natn. Hist. nat. Paris 18: 377–464.
- LYONET, P. (1832): *Recherches sur l'anatomie et les métamorphoses de différentes espèces d'insectes. Ouvrage posthume*. Mém. Mus. Hist. nat. 18: 129–151, Pls. XII–XIII.
- MACDOUGALL, R. S. (1904): *The turnip mud-beetle. (Helophorus rugosus)*. J. Board Agric. 12: 102–104.
- MACGILLIVRAY, A. D. (19—): *Key to the families of coleopterous larvae*. Bull. N. Y. St. Mus 68 (Ent. 18): 289–294.
- MCCLURE, H. E., LIM, B.-L. & WINN, S. E. (1967): *Fauna of the Dark cave, Batu caves, Kuala Lumpur, Malaysia*. Pacific Ins. 9(3): 399–428.
- MCCORKLE, D. V. (1967): *A revision of the species of Helophorus Fabricius in America North of Mexico*. Ph.D. thesis, University of Washington, 149 pp.
- MCDANIEL, B. & BALSBAUGH, E. U. Jr. (1968): *Bovine manure as an overwintering medium for Coleoptera in South Dakota*. Ann. ent. Soc. Am. 61(3): 765–768.
- MAILLARD, Y.-P. (1970): *Etude comparée de la construction du cocon de ponte chez Hydrophilus piceus L. et Hydrochara caraboides L. (insecte Coleopt. Hydrophilidae)*. Bull. Soc. zool. Fr. 95: 71–84.

- MAILLARD, Y.-P. (1972): *Structure fine de la surface de la filière et de la soie du cocon de ponte des Hydrophilidae (Ins, Coléoptères)*. C. r. hebd. Sanc. Acad. Sc. Paris, série D, 275: 75–78.
- MALCOLM, S. E. (1971): *The water beetles of Maine: including the families Gyrinidae, Haliplidae, Dytiscidae, Noteridae, and Hydrophilidae*. Univ. Maine tech. Bull. 48: 49 pp.
- MALCOLM, S. E. (1981): *A phylogeny and classification of the Sphaeridiinae (Coleoptera: Hydrophilidae)*. Ph.D. Thesis, Univ. of Connecticut, 220 pp.
- MAMAEV, B. M. (1972): *Key to insects classified according to their larvae*. Manual for teachers. Prosveshcheinie Moskva, 1–400. (In Russian).
- MARCHE-MARCHARD, J. (1974): *Observations sur la biologie des Amphiops Er. (Coléoptères, Hydrophilidae): découverte de la nymphe*. Bull. Inst. fr. Afr. noire, sér. A, 36(4): 924–930.
- MATHESON, R. (1914): *Notes on Hydrophilus triangularis Say*. Can. Ent. 46: 337–343.
- MATTA, J. M. (1982): *The bionomics of two species of Hydrochara (Coleoptera: Hydrophilidae) with descriptions of their larvae*. Proc. ent. Soc. Wash. 84(3): 461–467.
- MATTHEY, W. (1976): *Observations sur Crenitis punctostriata (Letzn.) (Coleoptera, Hydrophilidae) dans les tourbières jurassiennes: habitats des larves et des adultes*. Bull. Soc. neuchatel. Sci. nat. 99: 45–52.
- MATTHEY, W. (1977): *Description de la nymphe de Crenitis punctatostrata (Letzn.) (Coleoptera, Hydrophilidae)*. Bull. Soc. neuchatel. Sci. nat. 100: 13–15.
- MESUGAR, F. (1906): *Einfluss abnormaler Gravitationswirkung auf die Embryonalentwicklung bei Hydrous aterrimus Eschscholts*. Entw. Mech. Org., Leipzig 22: 141–148.
- MEGUSAR, F. (1909): *Lebensgeschichte der Hydrophiliden*. Verh. zool.-bot. Ges. Wien 59: 278–287.
- MEINERT, F. (1892–1893): *Fortegnelse over Zoologisk Museums Billelarver*. Ent. Meddr. 3: 168–314.
- MEINERT, F. (1897): *Om Mundbygningen hos Insekterne*. Overs. K. danske Vidensk. Selsk. Forth. 3: 299–324.
- MEYER, W. & DETTNER, K. (1981): *Untersuchungen zur Ökologie und Bionomie von Wasserkäfern der Drover Heide bei Düren (Rheinland)*. Decheniana 134: 274–291.
- MIALL, F. (1895): *Aquatic beetles*. The natural history of aquatic insects. London, pp. 61–93.
- MIGER, F. (1809): *Mémoires sur les larves d'insectes Coléoptères aquatiques, 1er Mém. sur le grand Hydrophile*. Annl. Mus. Hist. nat., 14: 441–459; Pl. XXVIII.
- MILLER, D. C. (1963): *The biology of Hydrophilidae*. The Biologist, 45(3–4): 33–38.
- MILLER, D. C. (1974): *Revision of the New World Chaetarhria (Coleoptera: Hydrophilidae)*. Entomologica am. 49(1): 1–123.
- MIURA, T., TAKAHASHI, R. M. & MULLIGAN III., F. S. (1978): *Field evaluation of the effectiveness of predacious insects as a mosquito control agent*. Proc. Calif. Mosq. Vector Contr. Assoc. 46: 80–81.
- MJOBORG, E. (1906): *Cercyon littoralis, early stages*. Z. wiss. Insektenbiol., 2: 138.
- MOGL, M., MIYAGI, I. & CABRERA, B. D. (1984): *Development and survival of immature mosquitoes (Diptera: Culicidae) in Philippine rice fields*. J. Med. Ent. 21(3): 283–291.

- MORIOKA, A. (1955): *Description of four Hydrophilid larvae from Japan* (in Japanese). Shin Konchu 8(10): 15–18.
- MOULINS, M. (1959): *Contribution à la connaissance de quelques types larvaires d'Hydrophilidae (Coléoptères)*. Trav. Lab. Zool. stn. aquic. Grimaldi Dijon 30: 1–53.
- MULSANT, E. (1844): *Histoire naturelle des Coléoptères de France*. Palpicornia. Paris, 196 pp., 1 pl (errata et addenda: 197).
- NEEDHAN, J. G. (1965): *A Guide to the Study of Fresh-Water Biology*. Holden-Day Inc., Oakland.
- NEEDHAN, J. G. (1978): *Guia para el Estudio de los Seres Vivos de las Aguas Dulces*. Editorial Reverte, Barcelona.
- NELSON, F. R. S. (1977): *Predation on mosquito larvae by beetle larvae, Hydrophilus triangularis and Dytiscus marginalis*. Mosq. News 37(4): 628–630.
- NEWTON, A. F., Jr. (1990): *Larvae of Staphyliniformia (Coleoptera): Where do we stand?* Coleopts. Bull. 44(2): 205–210.
- NIELSEN, E. T. & NIELSEN, A. T. (1953): *Field observations on the habits of Aedes taeniorhynchus*. Ecology 34: 141–156.
- NIKITSKII, N. B. (1976): *The morphology of the larva of Sphaerites glabratus and the phylogeny of Histeroidea*. Zoologicheskii Zhurnal 55(4): 531–537 (in Russian).
- NOWROJEE, D. (1912): *Life histories of Indian insects – II. Some aquatic Rhynchota and Coleoptera*. Mem. Dept. Agr., India, Ent. Ser., II 9: 165–191, 6 pls.
- d'ORCHYMONTE, A. (1913): *Contribution à l'étude des larves Hydrophilides*. Anns. Biol. lacustre, 6: 173–214; Pls. I–XXIII.
- d'ORCHYMONTE, A. (1916): *Notes pour la classification et la phylogénie des Palpicornia*. Anns. Soc. ent. Fr. 85: 91–106.
- d'ORCHYMONTE, A. (1917): *De la place que doivent occuper dans la classification les sous-familles des Sphaeridiinae et des Hydrophilinae*. Bull. Soc. ent. Fr. 1916: 235–239.
- d'ORCHYMONTE, A. (1919): *Contribution à l'étude des sous-familles des Sphaeridiinae et des Hydrophilinae*. Anns. Soc. ent. Fr. 88: 105–168.
- d'ORCHYMONTE, A. (1926): *Faune des Coléoptères de la région lyonnaise*. Anns. Soc. linn. Lyon, 72: 111–143.
- d'ORCHYMONTE, A. (1928): *Catalogue of Indian insects. Part 14 – Palpicornia*. Calcutta, 146 pp.
- d'ORCHYMONTE, A. (1932): *Zur Kenntnis der Kolbenwasserkäfer (Palpicornia) von Sumatra, Java und Bali*. Arch. Hydrobiol. Supplement 9: 623–714.
- d'ORCHYMONTE, A. (1933): *Contribution à l'étude des Palpicornia. VIII*. Bull. Anns. Soc. r. ent. Belg. 73: 271–313.
- d'ORCHYMONTE, A. (1937): *Contribution à l'étude des Palpicornia. X*. Bull. Anns. Soc. r. ent. Belg. 77: 457–475.
- d'ORCHYMONTE, A. (1937): *Sphaeridiinae broméliadicoles nouveaux (Coleoptera: Hydrophilidae, Sphaeridiinae)*. Ann. Mag. nat. Hist. (10) 20: 127–140.
- d'ORCHYMONTE, A. (1940): *Les palpicornia des Iles Atlantiques*. Mem. Mus. r. hist. nat. Belg., 2¼ ser. 20: 1–86.
- d'ORCHYMONTE, A. (1942): *Palpicornia (Coleoptera) IV*. Bull. Mus. r. Hist. nat. Belg. 18(62): 1–16.
- d'ORCHYMONTE, A. (1943): *Faune du Nord-Est Brésilien (recoltes du Dr. O. Schubart)*. Palpicornia. Mem. Mus. r. Hist. nat. Belg. (2) 28: 1–85.

- d'ORCHYMONT, A. (1948): *Report on the Palpicornia (Coleoptera), Mr. Omer-Cooper's Investigation of the Abyssinian fresh waters (Hugh Scott Expedition)*. Proc. zool. Soc. Lond. 117(1947-1948): 716-741.
- ORDISH, R. G. (1974): *Arthropoda of the Subantarctic Islands of New Zealand (3). Coleoptera: Hydrophilidae*. J. R. Soc. N. Z. 4: 307-314.
- OTRONEN, M. & HANSKI, I. (1983): *Movement patterns in Sphaeridium: differences between species, sexes and feeding and breeding individuals*. J. Anim. Ecol. 52: 663-680.
- PACKARD, A. S. (1898): *Text-book of Entomology*, Macmillan & Co, 729 pp.
- PAGANETTI-HUMMLER, G. (1899): *Coleopterische Liebesszenen der Ochtebien*. Z. Ent. 4: 107.
- PANZERA, O. (1932): *Descrizione delle larve di Helochares griseus Fabr. e H. lividus Forst. (Coleoptera, Hydrophilidae)*. Mem. Soc. ent. ital. 2: 52-63.
- PAULIAN, R. (1941): *Les premiers états des Staphylinoidea. Etude de morphologie comparée*. Mém. Mus. Hist. nat. Paris (N.S.) 15: 1-361.
- PAULIAN, R. (1943): *Les Coléoptères. Formes-moeurs-role*. Paris, Payot. 396 pp.
- PAULIAN, R. (1988): *La biologie des Coléoptères*. Lechevalier d., Paris: 719 pp.
- PAVLOVSKY, E. N. (1922): *Zur Biologie der Larven des kleinen Kolben Wasserkäfers (Hydrophilus caraboides L.)*. Russ. Hydrobiol. Zs. Saratov. 1: 193-200.
- PENNAK, R. W. (1978): *Freshwater invertebrates of the United States*, 2nd Ed. John Wiley & Sons, New York. 803 p.
- PERKINS, P. D. (1972): *A study of the Hydraenidae and Hydrophilidae of the San Gabriel River, with emphasis on larval taxonomy*. University Microfilms, Ann Arbor, Michigan. 257 pp.
- PERKINS, P. D. (1979): *Six new neotropical species of aquatic beetles in the Epimetopus costatus complex (Hydrophilidae: Epimetopinae)*. Coleopt. Bull. 33(3): 319-325.
- PERKINS, P. D. & SPANGLER, P. J. (1981): *A description of the larva of Helocombus bifidus (Coleoptera: Hydrophilidae)*. Pan-Pacif. Ent. 57(1): 52-56.
- PERRIS, E. (1876): *Nouvelles Promenades entomologiques*. Annls. Soc. ent. Fr. (5) 6: 171-244.
- PERRIS, E. (1877): *Larves de Coléoptères*. Paris, 577 pp., 14 pls.
- PETERSON, A. (1951): *Larvae of insects, an introduction to Nearctic Species. Part II. (Coleoptera, Diptera, Neuroptera, Siphonaptera, Mecoptera and Trichoptera)*. Edwards Bros., Inc. Ann Arbor, Mich. 416 pp.
- PETHERBRIDGE, F. R. (1928): *The turnip mud beetles (Helophorus rugosus Ol. and Helophorus porculus Bedel)*. Ann. appl. Biol. 15: 659-678.
- PETHERBRIDGE, F. R. & THOMAS, F. R. (1936): *Damage to wheat by Helophorus nubilus* F. Ann. appl. Biol. 23: 640-648.
- DE PEYERIMHOFF, P. (1933): *Les larves des Coléoptères d'après A. G. Boving et F. C. Craighead et les grands criteriums de l'ordre*. Annls. Soc. ent. Fr. 102: 77-106.
- PHILLIPS, K. C. J. (1923): *The larva of a Hydrophilid beetle Megasternum boletophagum*. Irish Nat., Dublin, 32: 109-112.
- PIRISINU, Q. (1982): *Palpicorni (Coleoptera: Hydraenidae, Helophoridae, Spercheidae, Hydrochidae, Hydrophilidae, Sphaeridiidae)*. Guide Riconosc. Spec. anim. Acque. int ital. 13: 1-97.
- PLANET, L. (1891): *Développement de l'Hydrophile brun (Hydrophilus piceus)*. Métamorphoses. Naturaliste, Paris, 13(2): 259-260.

- PORTIER, R. (1911): *Recherches physiologiques sur les insectes aquatiques*. Archs. Zool. exp. gen. Ser. 5, 8: 89–379.
- POUJADE, G.A. (1902): *Nouvelle note sur l'Hydrophilus piceus*. Bull. Soc. ent. Fr. 71: 206, 219 and 238.
- QUENNEDEY, A. (1965): *Contribution à la connaissance de quelques types larvaires de Sphaeridiinae (Col., Hydrophilidae)*. Trav. Lab. Zool. stn. aquic. Grimaldi, Dijon, 66: 1–58.
- QUIROZ, H., & BADI, M. H. (1990): *Predatory capacity of Tropisternus sp. on Culex pipiens L. larvae*. Southwest Ent. 15(2): 151–158.
- REICHARDT, H. (1973): *A critical study of the suborder Myxophaga, with a taxonomic revision of the Brazilian Torridincolidae and Hydroscaphidae (Coleoptera)*. Arq. Zool. (São Paulo) 24(2): 73–162.
- REISEN, W. K., MEYER, R. P., SHEILDS, J. & ARBOLANTE, C. (1989): *Population ecology of preimaginal Culex tarsalis (Diptera: Culicidae) in Kern County, California*. J. Med. Ent. 26(1): 10–22.
- REITTER, E. (1909): *Coleoptera*. In H. Brauer: *Die Süßwasserfauna, Deutschlands*. Jena, 235 pp.
- RENGEL, C. (1901): *Zur biologie des Hydrophilus piceus*. Biol. Zbl. 21: 173–182, 209–220.
- RICHMOND, E. A. (1920): *Studies on the biology of aquatic Hydrophilidae*. Bull. Am. Mus. nat. Hist. 42: 1–94.
- RICHOUX, P. (1982): *Coléoptères aquatiques*. Bull. mensuel de la Soc. Linn. de Lyon, 51e anne 4: 8+9.
- RICHTER, H. (1919): *Beitrag sur Kenntnis der argentinischen Käfer. Ein Wasserbaukünstler*. Z. Deutsch. Wiss. Ver. Kultur u. Landeskunde Argentinien 1919: 298–302.
- RILEY, C. V. (1881): *Notes on Hydrophilus triangularis Say*. Am. Nat. 15: 814–817.
- RIVERS, I. L. (1954): *Nevada Hydrophilidae*. Am. Midl. Nat. 52(1): 164–174.
- ROBERTS, A. W. R. A. (1930): *A key to the principal families of Coleoptera in the larval stage*. Bull. Entom. Res. (London) 21(1): 57–712.
- ROBINSON, W. H. & TUNER, E. C. Jr. (1975): *Insect fauna of some Virginia thermal streams*. Proc. ent. Soc. Washington 77(3): 391–398.
- ROCHA, A. A. (1967): *Biology and first instar larva of Epimetopus trogoides (Col., Hydrophilidae)*. Papéis Dept. Zool. S. Paulo 20: 223–228.
- ROCHA, A. A. (1969): *Sobre o genero Epimetopus (Col., Hydrophilidae)*. Papéis Dept. Zool. S. Paulo 22: 175–189.
- RODIONOV, Z. (1928): *Helophorus micans Fald., un ennemi des gramins (in Russian)*. Zashch. Rast. Vredit. (Defence des Plantes, Leningrad). 4: 951–954. (in Russian).
- ROLDAN, P., GABRIEL, T. & MACHADO, C. (1988): *Coleoptera, una Guía para el Estudio de los Macroinvertebrados Acuáticos del Departamento de Antioquia*. Pp. 116–144, Editorial Presencia Ltda. Bogotá, Colombia.
- ROTH, A. H. & JACKSON, J. F. (1987): *The effect of pool size on recruitment of predatory insects and on mortality in a larval anuran*. Herpetologica 43(2): 224–232.
- RUDALL, K. M. (1962): *Silk and other cocoon proteins*. Comp. Biochem. Physiol. 4: 397–433.
- RUPERTBERGER, M. (1880): *Biologie der Käfer Europas*. Linz-on-Danube, 295 pp.

- RUPERTBERGER, M. (1894): *Die biologische Literatur über die Käfer Europas von 1880 an mit Nachtragen aus früherer Zeit und einen Larven-Cataloge*. Linz, pp. 113–115, 279.
- RYKER, L. C. (1972): *Acoustic behavior of four sympatric species of water scavenger beetles (Coleoptera, Hydrophilidae, Tropisternus)*. Occ. Papers Mus. Zool. Univ. Mich. 666: 1–19.
- RYKER, L. C. (1974): *Some aspects of the biology and behaviour of a river rockpool-inhabiting water scavenger beetle (Hydrophilidae, Tropisternus ellipticus LeConte)*. Proc. Wash. ent. Soc. 35: 360–363.
- RYKER, L. C. (1975): *Observations on the life cycle and flight dispersal of a water beetle, Tropisternus ellipticus LeConte, in western Oregon*. Pan-Pacific Entom. 51: 184–194.
- SANDERS, D. P. & DOBSON, R. C. (1966): *The insect complex associated with bovine manure in Indiana*. Ann. ent. Soc. Am. 59(5): 955–959.
- SATÔ, M. (1960): *Some notes on Japanese Dytiscidae and Hydrophilidae (Coleoptera)*. Trans. Shikoku ent. Soc. 60: 80.
- SATÔ, M. (1963): *Description of a new hydrophilid species from Japan (Coleoptera)*. Kontyû 31: 267–269.
- SATÔ, (1979): *Ergebnisse der Bhutan-Expedition 1972 und Indien-Nepal-Expeditionen 1975–1977 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Georissidae, Hydraenidae, Hydrophilidae und Ptilodactylidae*. Entomologica Basiliensia 4: 43–67.
- SAUNDERS, W. (1879): *Hydrophilus triangularis: habits and transformations popularly noticed*. Can. Ent. 11: 223.
- SCHAUPP, F. G. (1879): *List of the described coleopterous larvae of the United States, with some remarks on their classification*. Bull. Brooklyn ent. Soc. 2: 1, 13–14, 21–22, 29–30.
- SCHIÖDTE, J. C. (1861–1883): *De Metamorphosi eleutheratorum Observationes: Bidrag til insekternes udviklings-historie*. Naturalist. Tidskr.
- SCHLICK, W. (1887): *Rearing conditions with Spercheus emarginatus*. Ent. Meddr. 1: 26–27.
- SCHULTE, F. (1985): *Eidonomy, ethoecology and larval systematics of dung-inhabiting Cercyon species (Coleoptera: Hydrophilidae)*. Ent. Gen., 11(1–2): 47–55.
- SCHULTE, F. (1988): *Zum Kokonbau-und Eiablage-Verhalten dungbewohnender Cercyon-Arten (Coleoptera: Hydrophilidae)*. Ent. Bl. Biol. Syst. Kaefer 84(1–2): 95–103.
- SCOTT, M. A. (1912): *A contribution to the knowledge of the fauna of Bromeliaceae*. Ann. Mag. Nat. Hist. (ser. 8) 10: 424–438.
- SCOTT, M. A. (1913): *The Percy Sladen Trust Expedition to the Indian Ocean in 1905, under the leadership of Mr. J. Stanley Gardiner, M. A. Volume V No X. Coleoptera; Hydrophilidae, Histeridae*. Trans. Linn. Soc. Ser 2 16: 193–235, Plate 14.
- SERVICE, M. W. (1977): *Mortalities of the immature stages of species B of the Anopheles gambiae complex in Kenya: comparison between rice fields and temporary pools, identification of predators, and effects of insecticidal spraying*. J. Med. Ent. 13(4-5): 535–545.
- SMETANA, A. (1974): *Revision of the genus Cymbiodyta Bed. (Coleoptera: Hydrophilidae)*. Mem. ent. Soc. Can. 93: 1–113.
- SMETANA, A. (1975): *Revision of the new world genera of the tribe Omicrini trib nov. of the hydrophilid subfamily Sphaeridiinae*. Stud. neotrop Fauna 10: 153–182.

- SMETANA, A. (1978): *Revision of the subfamily Sphaeridiinae of America North of Mexico (Coleoptera: Hydrophilidae)*. Mem. ent. Soc. Can. 105: 1–292.
- SMETANA, A. (1979): *Revision of the subfamily Sphaeridiinae of America North of Mexico (Coleoptera: Hydrophilidae)*. Supplementum 1. Can. Ent. 111: 959–966.
- SMETANA, A. (1984): *Revision of the subfamily Sphaeridiinae of America North of Mexico (Coleoptera: Hydrophilidae)*. Supplementum 2. Can. Ent. 116: 555–556.
- SMETANA, A. (1985): *Revision of the subfamily Helophorinae of the Nearctic Region (Coleoptera: Hydrophilidae)*. Mem. ent. Soc. Can. 131: 1–154.
- SMETANA, A. (1988): *Review of the family Hydrophilidae of Canada and Alaska (Coleoptera)*. Mem. ent. Soc. Can. 142: 1–316.
- SNODGRASS, R. E. (1947): *The insect cranium and the "epicraneal suture"*. Smithson. misc. Collns. 107(7): 1–52.
- SPANGLER, P. J. (1960): *A revision of the genus Tropisternus (Coleoptera: Hydrophilidae)*. Ph.D. Dissertation, University of Missouri. 364 pp.
- SPANGLER, P. J. (1961): *Notes on the biology and distribution of Sperchopsis tessellatus (Ziegler), (Coleoptera, Hydrophilidae)*. Coleopts. Bull. 15(4): 105–112.
- SPANGLER, P. J. (1962): *Description of the larva and pupa of Ametor scabrosus (Horn), (Coleoptera, Hydrophilidae)*. Coleopts. Bull. 16(1): 15–19.
- SPANGLER, P. J. (1962): *A new species of the genus Oosternum and a key to the U. S. species (Coleoptera: Hydrophilidae)*. Proc. biol. Soc. Wash. 75: 97–100.
- SPANGLER, P. J. (1966): *The Catherwood Foundation Peruvian-Amazon Expedition, limnological systematic studies, aquatic Coleoptera (Dytiscidae, Noteridae, Gyri-nidae, Hydrophilidae, Dascillidae, Helodidae, Psephenidae, Elmidae)*. Monogr. Acad. nat. Sci. Philad. 14: 377–443.
- SPANGLER, P. J. (1966): *A description of the larva of Derallus rudis Sharp, (Coleoptera, Hydrophilidae)*. Coleopts. Bull. 20: 97–100.
- SPANGLER, P. J. (1972): *A new genus and two new species of maladiculous beetles from Venezuela (Coleoptera: Hydrophilidae)*. Proc. biol. Soc. Wash. 85: 139–146.
- SPANGLER, P. J. (1973): *A description of the larva of Hydrobiomorpha casta (Coleoptera: Hydrophilidae)*. J. Wash. Acad. Sci. 63(4): 160–164.
- SPANGLER, P. J. (1979): *A new genus of water scavenger beetle from Chile*. Coleopts. Bull. 33: 303–308.
- SPANGLER, P. J. (1979): *A new genus of maladiculous beetles from Ecuador (Coleoptera: Hydrophilidae: Hydrobiinae)*. Proc. biol. Soc. Wash. 92: 753–761.
- SPANGLER, P. J. (1979): *Hydramarra argentina, a description of its larva and a report on its distribution (Coleoptera: Hydrophilidae)*. Proc. ent. Soc. Wash. 81(4): 536–543.
- SPANGLER, P. J. (1979): *A new genus of water beetle from austral South America (Coleoptera: Hydrophilidae)*. Proc. biol. Soc. Wash. 92(4): 697–718.
- SPANGLER, P. J. (1979): *Description of the larva and pupa of Cylorygmus lineatopunctatus (Coleoptera: Hydrophilidae: Rygmondini)*. Proc. biol. Soc. Wash. 92(4): 743–752.
- SPANGLER, P. J. (1981): *Coleoptera*. In S. H. Hurlbert, G. Rodriguez, and N. D. Santos (Eds.): "Aquatic biota of tropical South America, Part 1: Arthropods". San Diego State University, San Diego, California. pp. 129–220.

- SPANGLER, P. J. (1981): *A new water beetle, Troglochaes ashmolei, n. gen., n. sp. from Ecuador; the first known eyeless cavernicolous hydrophilid beetle (Coleoptera: Hydrophilidae)*. Proc. ent. Soc. Wash. 83: 316–323.
- SPANGLER, P. J. (1982): *Coleoptera*. In S. H. Hulbert, and A. Villalobos-Figueroa (Eds.): “*Aquatic biota of Mexico, Central America and the West Indies*“. San Diego State University, San Diego, California. pp. 328–397.
- SPANGLER, P. J. (1986): *A new genus and species of water scavenger beetle, Guyanobius adocetus, from Guyana and its larva (Coleoptera: Hydrophilidae: Hydrobiinae)*. Proc. Ent. Soc. Wash. 88(3): 585–594.
- SPANGLER, P. J. & CROSS, J. L. (1972): *A description of the egg case and larva of the water scavenger beetle, Helobata striata (Coleoptera: Hydrophilidae)*. Proc. biol. Soc. Wash. 85: 413–418.
- STEELMAN, C. D. & COLMER, A. R. (1970): *Some effects of organic wastes on aquatic insects in impounded habitats*. Ann. ent. Soc. Am. 63(2): 397–400.
- STEHR, F. E. (1989): *Immature Insects, Volume 2*. Kendall/Hunt Pub. Co., Dubuque, Iowa.
- STEPHENS, J. F. (1829, 1832, 1835): *Illustrations of British entomology; or a synopsis of indigenous insects: containing their generic and specific distinctions; with an account of their metamorphoses, times of appearance, localities, food, and economy, as far as practicable*. Mandibulata (1829), 2: 113–200; (1832), 4: 367–413; (1935), 5: 369–447.
- VAN TASSELL, E. R. (1965): *An audiospectrographic study of stridulation as an isolating mechanism in the genus Berosus (Coleoptera: Hydrophilidae)*. Ann. ent. Soc. Am. 58(4): 407–413.
- VAN TASSELL, E. R. (1966): *Taxonomy and biology of the subfamily Berosinae of North and Central America and the West Indies (Coleoptera: Hydrophilidae)*. Ph.D. Dissertation, The Catholic University of America, Washington D. C., 329 pp.
- VALIELA, I. (1974): *Composition, food webs and population limitation in dung arthropod communities during invasion and succession*. Am. Midl. Nat. 92: 370–385.
- VALLADARES, L. F. (1994): *Descripción de la larva de Laccobius canariensis Orchymont, 1940 (Coleoptera, Hydrophilidae)*. Nouv. Revue Ent. (N.S.) 11(2): 117–121.
- VANDELVELDE, G. (1920): *La construction de la coque ovigere de l'Hydrophile*. Bull. Soc. ent. Belg. 1: 9–12.
- VENESKI, R. & WASHINO, R. K. (1970): *Ecological studies of Hydrophilus triangularis in the laboratory and in a rice field habitat, a preliminary report*. Proc. Pap. Ann. Conf. Calif. Mosquito Contr. Assoc. 38: 95–97.
- DE VIEDMA, M. G. & NELSON, M. L. (1976): *Significance of the morphological characters used in higher-level natural classification of coleopteran larvae*. Ent. News 87(9 & 10): 249–255.
- VLASBLOM, A. G. & WOLVERKAMP, H. P. (1957): *On the function of the “funnel” on the nest of the water beetle Hydrous piceus L.* Physiol. Comp. 4: 240–246.
- WADE, J. S. (1938): *A contribution to the bibliography of the described immature stages of North American Coleoptera*. Washington, 116 pp.
- WAILES, G. (1883): *Observations on the Enicoceri*. Entom. Mag. 1: 256–258.
- WALTON, W. E., TIETZE, N. S. & MULLA, M. S. (1990): *Ecology of Culex tarsalis (Diptera: Culicidae): factors influencing larval abundance in mecosystems in southern California*. J. Med. Ent. 27(1): 57–67.
- WARREN, M. L. (1985): *Notes on distribution and habitat of Sperchopsis tessellatus (Coleoptera, Hydrophilidae) in Kentucky*. Ent. News 96(1): 43–44.

- WASHINO, R. K. (1981): *Biocontrol of mosquitoes associated with California rice fields with special reference to the recycling of Laegenidium giganteum Couch and other microbial agents*. In M. Laird: *Biocontrol of medical and veterinary pests*, pp. 122-139. Praeger, New York.
- WASHINO, R. K. & HOKAMA, Y. (1968): *Quantitative sampling of aquatic insects in a shallow-water habitat*. Ann. ent. Soc. Am. 61(3): 785-786.
- WEISS, A. (1890): *Bemerkungen ber die Lebensweise eines befruchteten Hydrophilus piceus*. Stettin. ent. Ztg. 50: 343.
- WESENBERG-LUND, C. (1913): *Fortpflanzungsverhältnisse: Paarung und Eiablage der Süßwasserinsekten*. Fortschr. naturw. Forsch. herausg. 8: 161-286.
- WESENBERG-LUND, C. (1915): *Insektlivet i ferske Vande. (The freshwater insect life)*. Kopenhagen, Cyldendal. 528 pp.
- WESENBERG-LUND, C. (1943): *Biologie der Süßwasserinsekten*. Copenhagen.
- WHITE, D. S., BRIGHAM, W. U. & DOYEN, J. T. (1984): *Coleoptera*. In R. W. Merritt and K. W. Cummins: *An Introduction to Aquatic Insects of North America*. 2nd Ed., pp. 361-437. Kendall/Hunt, Dubuque.
- WHITEHEAD, W. E. (1932): *The morphology of the head-capsule of some Coleopterous larvae*. Can. J. Res. 6(3): 228-252.
- WICKHAM, F. H. (1893): *Description of the early stages of several North American Coleoptera*. Bull. Labs. nat. Hist., St. Univ. Ia, 2(4): 228-341, Pl. IX.
- WICKHAM, F. H. (1894): *On some aquatic larvae, with notice of their parasites*. Can. Ent. 26: 39-41.
- WICKHAM, F. H. (1895): *On the larvae and pupae of Hydrocharis obtusatus and Silpha surinamensis*. Ent. News 6: 168-171, Pl VI.
- WIGGINS, G. B., MACKAY, R. J. & SMITH, I. M. (1980): *Evolutionary and ecological strategies of animals in annual temporary pools*. Arch. Hydrobiol. 58(1-2): 97-206.
- WIGGLESWORTH, V. B. (1965): *The principles of insect physiology*. 6th edition. Methuen & Co. 741 pp.
- WILLIAMS, D. D. & FELTMATE, B. W. (1992): *Aquatic Insects*. C. A. B. International, 358 pp.
- WILLIAMS, F. X. (1936): *Biological studies in Hawaiian water-loving insects. Part I. Coleoptera or beetles*. Proc. Hawaii ent. Soc., Honolulu, 9: 235-349.
- WILLSON, R. B. (1970): *The Hydrophilidae of Michigan with keys to species of the Great Lakes Region*. M. S. Thesis, Michigan State University, Michigan. 100 pp.
- WILSON, C. B. (1920): *Dragonflies and damselflies in relation to pondfish culture, with a list of those found near Fairport, Iowa*. Bull. Bur. Fish., Washington, 36: 181-264, Pls. LXVII-LXIX,
- WILSON, C. B. (1923): *Life history of the scavenger water beetle Hydrous (Hydrophilus) triangularis and its economic relation to fish breeding*. Bull. Bur. Fish., Washington, 39: 9-38.
- WILSON, C. B. (1923): *Water beetles in relation to pondfish culture with life-histories of those found in fishponds at Fairport, Iowa*. Bull. Bur. Fish., Washington, 39: 231-345.
- WINGO, C. W., THOMAS G. D., CLARK, G. N. & MORGAN, C. E. (1974): *Succession and abundance of insects in pasture manure: relationship to face fly survival*. Ann. ent. Soc. Am. 67: 386-390.
- WINTERBOURN, M. J. (1970): *The hydrophilidae (Coleoptera) of New Zealand's thermal waters*. Trans. R. Soc. N. Z. (Biol. Sci.) 12: 21-28.

- WINTERBOURN, M. J. (1971): *The larva of Anacaena tepida (Coleoptera: Hydrophilidae) from a Rotorua hot spring*. N. Z. Ent. 5: 171–174.
- WINTERBOURN, M. J. & GREGSON, K. L. D. (1981): *Guide to the aquatic insects of New Zealand*. Bull. ent. Soc. N. Z., 5: 1–80.
- WINTERBOURN, M. J. & GREGSON, K. L. D. (1989): *Guide to the aquatic insects of New Zealand*. Bull. ent. Soc. N. Z. 9: 1–95. (revised edition of No. 5, 1981).
- WINTERSTEINER, F. (1913): *Environment of Hydrophilidae*. J. N. Y. ent. Soc. 21: 54–55.
- WOOLDRIDGE, D. P. (1962): *Note on a cross mating between two subspecies of Tropisternus lateralis (Fabr.) (Coleoptera: Hydrophilidae)*. Coleopt. Bull. 16: 119–120.
- WOOLDRIDGE, D. P. (1964): *Studies on Tropisternus mexicanus complex (Coleoptera: Hydrophilidae) I. The biology of the races and their genetic crosses*. Ann. ent. Soc. Am. 57: 19–24.
- WOOLDRIDGE, D. P. (1965): *Studies on the Tropisternus mexicanus complex (Coleoptera: Hydrophilidae) II. The control of the pigmentation pattern*. Ann. ent. Soc. Am. 58(1): 44–48.
- XAMBEU, C. (1894): *Moeurs et métamorphoses d'insectes. Hydrophilides*. 5th. Mem. Anns. Soc. linn. Lyon, (n. ser.), 41: 107–156.
- XAMBEU, C. (1895): *Moeurs et métamorphoses d'insectes. Hydrophilides*. 6th. Mem. Anns. Soc. linn. Lyon, (n. ser), 42: 25–42.
- YOUNG, F. N. (1954): *The water beetles of Florida*. University of Florida Press, Gainesville, 238 pp.
- YOUNG, F. N. (1958): *Notes on the care and rearing of Tropisternus in the laboratory (Coleoptera, Hydrophilidae)*. Ecology 39(1): 166–167.
- YOUNG, F. N. (1965): *Hybridization between North and South American Tropisternus (Coleoptera: Hydrophilidae)*. XII. Intern. Congr. Entom., London.
- ZALOM, F. G., GRIGARIK, A. A. & WAY, M. O. (1978): *Predation by the larvae of Tropisternus lateralis (Fabricius) in California rice fields - a preliminary report*. Proc. Calif. Mosq. Vector Contr. Assoc. 46: 82–84.

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