

NOTE

Reversal of precedence in favor of Lachniden Herrich-Schaeffer 1854
(Hemiptera: Aphididae) over Lachnaedes Billberg 1820
(Coleoptera: Tenebrionidae)

DOI: 10.4289/0013-8797.118.4.647

Bouchard et al. (2011) drew attention to the homonymy of the family-group names Lachnaedes Billberg 1820: 34 and Lachniden Herrich-Schaeffer 1854: VII based, respectively, on the genus-group names *Lachna* Billberg 1820: 35 and *Lachnus* Burmeister 1835: 91. Despite the different spellings of their type genus names, the stem for both family-group names, i.e., Lachn-, is identical (e.g., Lachnidae, Lachninae). In cases of homonymy of family-group names based on similar generic names, per Article 55.3.1 of the International Code of Zoological Nomenclature (ICZN 1999), an application is to be sent to the International Commission on Zoological Nomenclature for a ruling to remove the homonymy, unless the senior synonym is a nomen oblitum.

The Herrich-Schaeffer name is currently used as a valid subfamily of Aphididae Latreille 1802 (Hemiptera) whereas that of Billberg is considered a synonym of the subfamily Lagriinae Latreille 1825 (1820) (Coleoptera: Tenebrionidae). Bouchard et al. (2005) established that the widely-used but younger names Lagriinae, Lagriini, and Lagriina should be conserved over Lachninae, Lachnini, and Lachnina following ICZN Article 40.2.

In order maintain usage of the Hemiptera family-group name, we here establish a reversal of precedence in accordance with ICZN Article 23.9. The Coleoptera family-group name Lachn- Billberg 1820

has not been used as a valid name after 1899, conforming to ICZN Article 23.9.1.1. To address Article 23.9.1.2 and provide evidence of the recent and frequent usage of Lachn- Herrich-Schaeffer 1854 as valid, we here list “25 works, published by at least 10 authors in the preceding 50 years and encompassing a span of not less than 10 years”: Inouye 1970, Mamontova 1972, Steffan 1972, Holman 1974, Raychaudhuri et al. 1980, Ghosh 1982, Binazzi 1984, Harrington 1985, Verma and Das 1992, Footit and Richards 1993, Heie 1995, 2015, Nieto Nafría et al. 1997, 2002, 2011, Remaudière and Remaudière 1997, Zhang and Chen 1999, Normark 2000, Ripka 2001, Lampel and Meier 2003, Petrović-Obradović 2003, Binazzi and Scheurer 2009, Blackman 2010, Osiadacz and Hałaj 2010, Chen et al. 2012, 2015. Lachn- Billberg is thus a nomen oblitum with respect to Lachn- Herrich-Schaeffer, and the latter is a nomen protectum with respect to the former.

LITERATURE CITED

- Billberg, G. J. 1820. *Enumeratio Insectorum in Museo Gust. Joh. Billberg. Gadel, Stockholm.* 138 pp.
- Binazzi, A. 1984. Chiave per le specie afidiche più note delle conifere in Europa. *Redia* 67: 547–571.
- Binazzi, A. and S. Scheurer. 2009. *Atlas of the honeydew producing conifer aphids of Europe.* Aracne, Rome. 127 pp.
- Blackman, R. L. 2010. *Aphids – Aphidinae (Macrosiphini).* Handbook for the Identification of British Insects 2: 1–414.

- Bouchard, P., Y. Bousquet, A. Davies, M. Alonso-Zarazaga, J. Lawrence, C. Lyal, A. Newton, C. Reid, M. Schmitt, A. Slipinski, and A. Smith. 2011. Family-group names in Coleoptera (Insecta). *ZooKeys* 88: 1–972.
- Bouchard, P., J. F. Lawrence, A. Davies, and A. F. Newton. 2005. Synoptic classification of the world Tenebrionidae (Insecta: Coleoptera) with a review of family-group names. *Annales Zoologici (Warszawa)* 55: 499–530.
- Burmeister, H. C. C. 1835. Handbuch der Entomologie: Rhynchota. Enslin, Berlin. 396 pp.
- Chen, R., C. Favret, L. Jiang, Z. Wang, and G. Qiao. 2015. An aphid lineage maintains a bark-feeding niche while switching to and diversifying on conifers. *Cladistics early view*: 1–18.
- Chen, R., L. Y. Jiang, and G. X. Qiao. 2012. The effectiveness of three regions in mitochondrial genome for aphid DNA barcoding: a case in Lachninae. *PLoS ONE* 7: e46190.
- Foottit, R. G. and W. R. Richards. 1993. The genera of the aphids of Canada. Homoptera: Aphidoidea and Phylloxeroidea. *The Insects and Arachnids of Canada Part 22*: 1–766.
- Ghosh, A. K. 1982. The Fauna of India and Adjacent Countries. Homoptera, Aphidoidea. Part 2. Subfamily Lachninae. *Zoological Survey of India*, Calcutta. 167 pp.
- Harrington, R. 1985. A comparison of the external morphology of “scent plaques” on the hind tibiae of oviparous aphids (Homoptera: Aphididae). *Systematic Entomology* 10: 135–144.
- Heie, O. E. 1995. The Aphidoidea (Hemiptera) of Fennoscandia and Denmark. VI. Family Aphididae: Part 3 of tribe Macrosiphini of subfamily Aphidinae, and family Lachnidae. *Fauna Entomologica Scandinavica* 31: 1–222.
- Heie, O. E. 2015. A theory about the evolutionary history of Lachnidae and comments on the results of some molecular phylogenetic studies of aphids (Hemiptera: Aphidoidea). *Polish Journal of Entomology* 84: 275–287.
- Herrich-Schaeffer, D. 1854. Vorwort des Herausgebers, pp. III–VIII. In C.L. Koch. *Die Pflanzenläuse Aphiden Getreu Nach Dem Leben Abgebildet Und Beschrieben*. J.L. Lotzbeck, Nürnberg. 36 pp.
- Holman, J. 1974. Los Áfidos de Cuba. Instituto cubano del libro, Havana. 304 pp.
- Inouye, M. 1970. Revision of the conifer aphid fauna of Japan (Homoptera, Lachnidae). *Bulletin of the Government Forest Experiment Station* 228: 57–102.
- International Commission on Zoological Nomenclature (ICZN). 1999. International Code of Zoological Nomenclature, Fourth Edition. International Trust for Zoological Nomenclature, London. 306 pp.
- Lampel, G. and W. Meier. 2003. *Aphidina 1. Fauna Helvetica* 8: 1–312.
- Latreille, P. A. 1802. *Histoire naturelle, générale et particulière des crustacés et des insectes*. F. Dufart, Paris. 467 pp.
- Latreille, P. A. 1825. *Familles naturelles du règne animal, exposées succinctement et dans un ordre analytique, avec l'indication de leurs genres*. J.-B. Baillière, Paris. 570 pp.
- Mamontova, V. A. 1972. *Aphids - Lachnids*. *Fauna Ukraini* 20: 1–228.
- Nieto Nafría, J. M., M. P. Mier Durante, and G. Remaudière. 1997. Les noms des taxa du groupe-famille chez les Aphididae (Hemiptera). *Revue Française d'Entomologie*, Nouvelle Série 19: 77–92.
- Nieto Nafría, J. M., M. P. Mier Durante, A. Binazzi, and N. Pérez Hidalgo. 2002. *Hemiptera Aphididae II*. *Fauna Ibérica* 19: 1–350.
- Nieto Nafría, J. M., M. P. Mier Durante, and N. Pérez Hidalgo. 2011. Register of family-group taxa of Aphidoidea, pp. 21–80. In Nieto Nafría, J.M., Favret, C. (eds.), *Registers of Family-Group and Genus-Group Taxa of Aphidoidea (Hemiptera Sternorrhyncha)*. Universidad de León, Leon, Spain. 465 pp.
- Normark, B. B. 2000. Molecular systematics and evolution of the aphid family Lachnidae. *Molecular Phylogenetics and Evolution* 14: 131–140.
- Osiadacz, B. and R. Hałaj. 2010. Systematic review of aphids (Hemiptera: Sternorrhyncha: Aphidomorpha) of Poland with host plant index. A monographic survey. *Silesian Natural History Monographs* 1: 1–192.
- Petrović-Obradović, O. 2003. *Aphid Fauna (Homoptera: Aphididae) of Serbia*. University of Belgrade, Belgrade. 153 pp.
- Raychaudhuri, D. N., M. R. Ghosh, and A. K. Ghosh. 1980. Subfamily Lachninae, pp. 394–408. In Raychaudhuri, D.N. (ed.), *Aphids of North-East India and Bhutan*. The Zoological Society, Calcutta. 521 pp.
- Remaudière, G. and M. Remaudière. 1997. Catalogue of the World's Aphididae. INRA Editions, Paris. 473 pp.

- Ripka, G. 2001. New data to the knowledge of the aphid fauna of Hungary (Homoptera: Aphidoidea). *Acta Phytopathologica et Entomologica Hungarica* 36: 81–87.
- Steffan, A. W. 1972. Unterordnung Aphidina, Blattläuse, pp. 162–370. In Schwenke, W. (ed.), *Die Forstsäädlinge Europas. Ein Hanbuch in Fünf Bänden. Erster Band: Würmer, Schnecken, Spinnentiere, Tausendfüssler Und Hemimetabole Insekten*. Paul Parey, Hamburg & Berlin. 464 pp.
- Verma, K. D. and S. M. Das. 1992. The Aphididae of North West India (With Special Reference to Aphids of Jammu and Kashmir State). S.B. Nangia for Ashish Publishing House, New Delhi. 171 pp.
- Zhang, G. X. and X. L. Chen. 1999. Studies on the phylogeny and host plant association of Lachnidae (Homoptera: Aphidinea). *Entomologia Sinica* 6: 193–208.

Colin Favret and Patrice Bouchard,
(CF) *Department of Biological Sciences, Biodiversity Centre, University of Montreal, Canada* (ORCID: 0000-0001-6243-3184);
(PB) *Canadian National Collection of Insects, Arachnids and Nematodes, Agriculture and Agri-Food Canada, Ottawa, Canada*