

REVIVED PROPOSAL FOR THE SUPPRESSION OF THE  
APHID NAMES OF RAFINESQUE UNDER THE  
PLENARY POWERS (INSECTA, HEMIPTERA,  
APHIDIDAE). Z.N.(S.)327

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I am writing with reference to Z.N.(S.)327 and in response to R.V. Melville's open letter that appeared in the March 1981 *Aphidologists' Newsletter*, Vol. 16, No. 1.

2. Hottes first submitted his petition on the aphid names of Rafinesque to the Commission in 1947. Hottes' formal proposal, as published in 1963 (*Bull. zool. Nom.*, vol. 20, pp. 128–133), is now not only out-of-date but also was and is incomplete. Hottes listed Rafinesque's 1817 and 1818 papers, which contain aphid names; but he neglected to indicate that a third paper published by Rafinesque in 1814 contains many new zoological names, among which are two aphid names. These three papers (1814, 1817, 1818) contain all of the aphid names proposed by Rafinesque. If the 1814 paper is suppressed with the 1817 and 1818 papers, as requested in Hottes' 1963 petition (paragraph 6, page 131), the nomenclature of groups (e.g. Mollusca and Crustacea) other than the APHIDIDAE will be affected.

3. The argument that Rafinesque's specific names are trinominals and are not available because most consist of two hyphenated words is not valid. Rafinesque's specific epithets are the names of the host plants and, as nouns in apposition to the generic name, are available. The argument that the diagnoses are not complete is not relevant as that condition applies to most early descriptions (even those of Linnaeus) of insects whose names are now commonly used and accepted.

4. Rafinesque's specific names have not been used, with the exception of *hieraciumpaniculatum*. Although these names probably cannot properly be called *nomina oblita*, I do agree that no useful purpose will be served by declaring them available since they would be senior synonyms of well-known names in use today. Suppression, for the purpose of priority but not for those of homonymy, of all of Rafinesque's aphid specific names by the Commission seems in order.

5. Of the four Rafinesque generic names, only *Dactynotus* has been used. But this use has been so extensive and long standing that its suppression would cause as much disorder as would the



validation of the other generic and specific names of Rafinesque. The concept of *Dactynotus* is well defined, the generic name *Dactynotus* has been used throughout the world for many, many years, and more than 62 valid species and 12 valid subspecies have been described and placed in the genus (Hille Ris Lambers, 1939; Stroyan, 1950; Bodenheimer & Swirski, 1957; Takahashi, 1962; Olive, 1963; Shaposhnikov, 1964; Holman, 1965; Paik, 1965; Eastop, 1966; Calilung, 1967; Szelegiewicz, 1968; Holman, 1969; Miyazaki, 1971; Richards, 1972; Holman, 1974; Basu & Raychaudhuri, 1976; Raychaudhuri, Raha & Raychaudhuri, 1977; and Raychaudhuri, 1980). The species in *Dactynotus* live throughout the year on various Compositae and Campanulaceae. More than 15 species have been reported to be vectors of plant viruses; and, while several species of *Dactynotus* are considered to be plant pests, others are being evaluated as possible biological control agents on such plants as thistles and goldenrod. *Dactynotus rudbeckiae* (Fitch) and its common name, goldenglow aphid, are listed in the Entomological Society of America's standard list, the *Common Names of Insects and Related Organisms* (1978).

6. In 1914 Mordvilko proposed *Uroleucon* and *Uromelan* as subgenera for the brown or redbrown *Macrosiphum*-like species on Compositae. In 1968, Ilharco, believing that the aphid names of Rafinesque had been officially suppressed by the Commission, used *Uroleucon* for his new species *gulbenkiani*, which is a synonym of *Macrosiphoniella tapuskae* (Hottes & Frison). In 1974 Hille Ris Lambers described *sijpkensi* and placed it in *Uroleucon* which he noted as '...(formerly *Dactynotus*)...' To date approximately twelve valid species and one valid subspecies have been described with the generic designation *Uroleucon*. In 1976 Eastop & Hille Ris Lambers, in their *Survey of the World's Aphids*, listed all of Rafinesque's aphid names as invalid and, without explanation, used *Uroleucon* Mordvilko instead of *Dactynotus*. Because of this stand by Drs Eastop and Hille Ris Lambers, some people have begun to use *Uroleucon* while others, in accordance with Article 80 of the Code, have continued to use *Dactynotus*.

7. Rafinesque did not designate a type species for *Dactynotus*; but that reason does not justify its suppression, for many genera, now in common use, did not have a type species designated for them by their original describer. In 1910 Wilson listed *hieraciumpaniculatum* Rafinesque and *rudbeckiae* Fitch (1871) as synonyms. With reference to Wilson's (1910) supposition that *Aphis hieraciumpaniculatum* Rafinesque is identical with *Aphis rudbeckiae* Fitch, Börner (1930) designated *hieraciumpaniculatum* Rafinesque as the type species for *Dactynotus*. In 1922 Oestlund described *Tritogenaphis* with *rudbeckiae* Fitch as the type. In 1939



Hille Ris Lambers stated that *Tritogenaphis* was thus a synonym of *Dactynotus* because they probably have the same type. Fitch's original syntype series of *rudbeckiae* is in the collection of the U.S. National Museum of Natural History; and, in his 1963 study of the genus *Dactynotus*, Olive selected and designated a lectotype for *rudbeckiae*. If *hieraciumpaniculatum* Rafinesque is to be suppressed with the rest of Rafinesque's specific names, and since it is probably the same as *rudbeckiae* Fitch, the Commission should use its plenary powers to designate *rudbeckiae* Fitch as the type species of *Dactynotus*.

8. In accordance with the above the International Commission on Zoological Nomenclature is asked:

(a) to use its plenary powers

(1) to suppress the 38 nomenclaturally valid specific names of aphids published by Rafinesque in 1814, 1817 and 1818 for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(2) to suppress the generic names *Cladoxus* Rafinesque, 1817, *Loxerates* Rafinesque, 1817 and *Adactynus* Rafinesque, 1818 for the purposes of the Law of Priority but not for those of the Law of Homonymy;

(3) to set aside all fixations of type species hitherto made for the nominal genus *Dactynotus* Rafinesque, 1818 and to designate *Aphis rudbeckiae* Fitch, 1871 as type species of that genus;

(b) to place the generic name *Dactynotus* Rafinesque, 1818 (gender: masculine), type species, by designation under the plenary powers in (a)(3) above, *Aphis rudbeckiae* Fitch, 1871, on the Official List of Generic Names in Zoology;

(c) to place the specific name *rudbeckiae* Fitch, 1871, as published in the binomen *Aphis rudbeckiae* (specific name of type species of *Dactynotus* Rafinesque, 1818) on the Official List of Specific Names in Zoology;

(d) to place the generic names, *Cladoxus* Rafinesque, 1817, *Loxerates* Rafinesque, 1817 and *Adactynus* Rafinesque, 1818 as suppressed under the plenary powers in (a)(2) above, on the Official Index of Rejected and Invalid Generic Names in Zoology;

(e) to place the following specific names, as suppressed under the plenary powers in (a)(1) above, on the Official Index of Rejected and Invalid Specific Names in Zoology;

*montana*, *Aphis*, Rafinesque, 1814, p. 28



- striata*, Aphis, Rafinesque, 1814, p. 28  
*diervillalutea*, Aphis, Rafinesque, 1817, p. 360  
*araliahispidata*, Aphis, Rafinesque, 1817, pp. 360-361  
*aquilegiacanadensis*, Aphis, Rafinesque, 1817, p. 361  
*hieraciumvenosum*, Aphis, Rafinesque, 1817, p. 361  
*melampyrumlatifolium*, Aphis, Rafinesque, 1817,  
p. 361  
*pterisaquilinoides*, Aphis, Rafinesque, 1817, p. 361  
*campanulariparia*, Aphis, Rafinesque, 1817, p. 361  
*chenophyllumcanadense*, Aphis, Rafinesque, 1817,  
p. 361  
*erigeronphiladelphicum*, Aphis, Rafinesque, 1817,  
p. 361  
*verticolor*, Aphis, Rafinesque, 1817, p. 361  
*furcipes*, Aphis, Rafinesque, 1817, p. 361  
*fusciclava*, Aphis, Rafinesque, 1817, p. 361  
*rosasuaveolens*, Aphis, Rafinesque, 1818, p. 16  
*diplepha*, Aphis, Rafinesque, 1818, p. 16  
*rhodryas*, Aphis, Rafinesque, 1818, p. 16  
*viburnumopulus*, Aphis, Rafinesque, 1818, p. 16  
*viburnumacerifolium*, Aphis, Rafinesque, 1818, p. 16  
*crateguscoccinea*, Aphis, Rafinesque, 1818, p. 16  
*cornusstricta*, Aphis, Rafinesque, 1818, p. 16  
*populusgrandidentata*, Aphis, Rafinesque, 1818, p. 16  
*populustrepida*, Aphis, Rafinesque, 1818, p. 16  
*jacobeabalsamita*, Aphis, Rafinesque, 1818, pp. 16-17  
*oreaster*, Aphis, Rafinesque, 1818, p. 17  
*erigeronstrigosum*, Aphis, Rafinesque, 1818, p. 17  
*gibbosa*, Aphis, Rafinesque, 1818, p. 17  
*xanthesis*, Aphis, Rafinesque, 1818, p. 17  
*annulipes*, Aphis, Rafinesque, 1818, p. 17  
*hieraciumpaniculatum*, Aphis, Rafinesque, 1818, p. 17  
*verbenahastata*, Aphis, Rafinesque, 1818, p. 17  
*polanisiagraveolens*, Aphis, Rafinesque, 1818, p. 17  
*arabismollis*, Aphis, Rafinesque, 1818, p. 17  
*polygalasenea*, Aphis, Rafinesque, 1818, p. 17  
*brassicanapus*, Aphis, Rafinesque, 1818, p. 17  
*erigeroncanadense*, Aphis, Rafinesque, 1818, p. 17  
*ambrosia*, Aphis, Rafinesque, 1818, p. 17  
*acaroides*, Aphis, Rafinesque, 1818, p. 17

[Note by the Editor. Mrs Carol Parron (North Carolina State University, Raleigh, N.C. 27650) has deposited with me a list of 315 papers that have used either *Dactynotus* or *Uroleucon* between 1930 (when Börner designated type species for these genera) and 1979. She has analysed the use of each name as follows:



	1930–	1940–	1950–	1960–	1965–	1970–	1975–	Total
	1939	1949	1959	1964	1969	1974	1979	references
<i>Dactynotus</i>	13	13	51	63	48	49	22	259
<i>Uroleucon</i>					2	22	32	56

Of the 123 senior authors involved, 97 have used *Dactynotus* and 26 *Uroleucon*. Of the latter, however, 14 had previously used *Dactynotus*.

Mrs Parron supports Dr Stoetzel's proposals, but urges that a decision, whichever way it falls, be taken rapidly. RVM]

## REFERENCES

- BASU, R.C. & RAYCHAUDHURI, D.N., 1976. Studies on the Aphids (Homoptera: Aphididae) from Eastern India XXIX. Genus *Macrosiphoniella*. *Oriental Insects*, vol. 10(2), pp. 295–297.
- BODENHEIMER, F.S. & SWIRSKI, E., 1957. *The Aphidoidea of the Middle East*. (Jerusalem, Weizmann Science Press of Israel), pp. 268–270.
- BÖRNER, C., 1930. Beiträge zu einem neuen system der Blattläuse. *Arch. f. Klass. u. Phylog. Entomol.*, vol. 1, pp. 115–194.
- CALILUNG, V.J., 1967. A faunistic study of Philippine aphids (Aphididae, Homoptera). *Philippine Agriculturist*, vol. 51, pp. 132–134.
- EASTOP, V.F., 1966. A taxonomic study of Australian Aphidoidea (Homoptera). *Aust. J. Zool.*, vol. 14, pp. 439–440.
- EASTOP, V.F. & HILLE RIS LAMBERS, D., 1976. *Survey of the World's Aphids*. (The Hague, Junk) 573 pp.
- FITCH, A., 1851. Catalogue of the known Homoptera of the State of New York in 1851. *Fourth Ann. Rept. State Cabinet of Nat. Hist. (New York)*. Family Aphidae, p. 66.
- HILLE RIS LAMBERS, D., 1939. Contributions to a monograph of the Aphididae of Europe. II. The genera *Dactynotus* Rafinesque 1818; *Staticobium* Mordvilko, 1914; *Macrosiphum* Passerini, 1860; *Masonophis* nov. gen.; *Pharalis* Leach, 1826. *Temminckia*, vol. 4, pp. 1–134.
- 1974. On American aphids, with descriptions of a new genus and some new species (Homoptera, Aphididae). *Tijdschr. voor Entomol.* vol. 117 (4), pp. 153–154.
- HOLMAN, J., 1965. Description of two new *Dactynotus* species (Homoptera, Aphididae). *Acta. Entomol. Bohemoslov*, vol. 62(3), pp. 195–201.
- 1969. *Dactynotus* (Uromelan) *asyneumatis* sp. n. (Homoptera, Aphididae). *Acta. Entomol. Bohemoslov*, vol. 66(2), pp. 97–99.
- 1974. *Los Afidos de Cuba*. (Habana, Instituto Cuban del Libro). pp. 120–128.
- HOTTES, F.C., 1963. Aphid names of Rafinesque: Proposed suppression under the plenary powers (Insecta, Hemiptera, Aphididae). Z.N.(S.)327, *Bull. zool. Nom.*, vol. 20, pp. 128–133.
- ILHARCO, F.A., 1968. *Uroleucon gulbenkiani*, a new aphid species from the island of Porto Santo. *Agronomia Lusit.* vol. 29, pp. 43–51.
- MIYAZAKI, M., 1971. A revision of the tribe Macrosiphini of Japan (Homoptera: Aphididae, Aphidinae). *Insecta Matsumurana*, vol. 34(1), pp. 30–37.



- MORDVILKO, A.K., 1914, Aphid (Aphidoidea) fauna of Russia. *Izd. Akad. Nauk.*, vol. 1 (1914), p. 64.
- OESTLUND, O.W., 1922. A synoptical key to the Aphididae of Minnesota. *Rep. State Entomol.* (Minn.), vol. 19, pp. 114–151.
- OLIVE, A.T., 1963. The genus *Dactynotus* Rafinesque in North Carolina (Homoptera: Aphidae). *Misc. Pub. Entomol. Soc. America*, vol. 4(2), pp. 31–66.
- PAIK, W.H., 1965. *Aphids of Korea*. (Seoul, Publishing Center of Seoul National University), pp. 81–83.
- RAFINESQUE, C.S., 1814. *Précis des découvertes somiologiques ou zoolo-giques et botaniques*. Palerme 1814, pp. 1–55 (28).
- 1817. Specimens of several new American species of the genus *Aphis*. *Amer. mon. Mag. Crit. Rev.*, vol. 1, pp. 360–361.
- 1818. Second memoir on the genus *Aphis*, containing the descriptions of 24 new American species. *Amer. mon. Mag. Crit. Rev.*, vol. 3, pp. 15–18.
- RAYCHAUDHURI, D.N., RAHA, S.K. & RAYCHAUDHURI, D., 1977. *Entomon.* vol. 2(1), pp. 71–75.
- RAYCHAUDHURI, D.N. (ed.), 1980. *Aphids of North-East India and Bhutan*. Zool. Soc. Calcutta, pp. 128–132.
- RICHARDS, W.R., 1972. Review of the *Solidago*-inhabiting aphids in Canada with descriptions of three new species (Homoptera: Aphididae). *Can. Entomol.*, vol. 104(1), pp. 5–31.
- SHAPOSHNIKOV, G.K., 1964. Suborder Aphidinea — Aphids. In Bei-Bienko (ed.). *Keys to the insects of the European part of the USSR*, pp. 613–614 (Russian).
- STROYAN, H.L.G., 1950. Recent additions to the British aphid fauna. Part I. *Dactynotus* Rafinesque to *Rhopalosiphum* Koch, C.L. *Trans. r. entomol. Soc. London*, vol. 101, pp. 89–124.
- SUTHERLAND, D.W.S., 1978. *Common Names of Insects and Related Organisms* (1978 revision), *Entomol. Soc. Am.*, Spec. Pub. 78–1, pp. 18, 55, 101.
- SZELEGIEWICZ, H., 1968. *Mszyce Aphidodea. Katalog fauny Polski*. (Warsaw, Państwowe Wydawnictwo Nauk), vol. 21(4), pp. 183–190.
- TAKAHASHI, R., 1962. Key to Japanese species of *Dactynotus* with description of four new species (Aphididae, Homoptera). *Kontyu*, vol. 30(2), pp. 73–81.
- WILSON, H.F., 1910. Notes on the two papers on Aphididae by Rafinesque. *Proc. entomol. Soc. Washington*, vol. 12, pp. 27–30.



Stoetzel. 1982. "Revived proposal for the suppression of the aphid names of Rafinesque under the plenary powers (Insecta, Hemiptera, Aphididae) Z.N.(S.) 327." *The Bulletin of zoological nomenclature* 39, 146–151.

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