

NEW SYNONYMIES AND A NEW COMBINATION IN THE
NORTH AMERICAN MIRIDAE (HEMIPTERA)

THOMAS J. HENRY

Systematic Entomology Laboratory, IIBIII, Agricultural Research Service, USDA, % National Museum of Natural History, Washington, D.C. 20560.

Abstract.—Four species of Miridae (Hemiptera) from the eastern United States are shown to be synonyms: *Phytocoris discoidalis* Henry, 1974 = *P. dreisbachi* Knight, 1974; *Plagiognathus inopinus* Knight, 1926 = *P. albus* Van Duzee, 1915; *Rhinocapsus miniatus* Knight, 1923 = *R. rubricans* Provancher, 1887; and *Texocoris secludis* Schaffner, 1974 = *Parthenicus nigrellus* Knight, 1939. The monotypic genus *Texocoris* Schaffner, 1974 is retained to accommodate *nigrellus* (new combination).

A forthcoming paper on the Miridae associated with ericaceous plants in eastern North America has prompted me to provide information showing that *Rhinocapsus miniatus* Knight is a junior synonym of *R. rubricans* (Provancher). Additional synonymies and a new combination involving three other species from the eastern United States are also presented. Unless otherwise noted, all specimens examined are deposited in the collections of the Pennsylvania Department of Agriculture, Harrisburg, or the National Museum of Natural History, Washington, D.C.

Phytocoris dreisbachi Knight

Phytocoris dreisbachi Knight, 1974: 125; Kelton, 1980: 177.

Phytocoris discoidalis Henry, 1974: 187; Henry, 1979: 9. NEW SYNONYMY.

Knight (1974) described 15 new species of the *Phytocoris junceus* group. That same year I described the new species *discoidalis* (Henry, 1974). Because my species belonged to the *junceus* group, I used Knight's key and found that *discoidalis* runs to couplet 4 with *dreisbachi*. Recently, after examining Knight's type-specimens, I found that *discoidalis* is conspecific with *dreisbachi*. Because Knight's description appeared a few months prior to mine, I must recognize *P. discoidalis* as a junior synonym of *P. dreisbachi*.

Phytocoris dreisbachi, originally described from Michigan, is now known

to occur in Pennsylvania, Virginia, Wisconsin (Henry, 1979), and Alberta and Manitoba (Kelton, 1980). This species has been collected on *Pinus banksiana* Lamb. and *P. virginiana* Mill.

***Plagiognathus albus* (Van Duzee)**

Psallus albus Van Duzee, 1915: 116.

Plagiognathus albus: Van Duzee, 1916: 46; Van Duzee, 1917: 410; Knight, 1923: 445; Blatchley, 1926: 943; Knight, 1941: 36; Froeschner, 1949: 160; Davis, 1955: 132; Carvalho, 1958: 94; Wheeler and Henry, 1977: 153; Wheeler, 1980: 354 (see for review of economic literature).

Plagiognathus inopinus Knight, 1926: 11; Blatchley, 1926: 942; Carvalho, 1958: 103. **NEW SYNONYMY.**

Plagiognathus albus often has been implicated as a pest of sycamore or American plane, *Platanus occidentalis* L. Wheeler (1980) studied the life history and gave evidence that *P. albus* caused necrotic lesions and eventual holes in the foliage of London plane, *Platanus* × *acerifolia*. This common eastern North American mirid occurs wherever *Platanus* species grow (Wheeler, 1980).

Plagiognathus inopinus, the only other member of this genus recorded from *Platanus* spp. (Knight, 1926), was found to be common on street plantings of London plane at Harrisburg, Pennsylvania (the type-locality for this species). Having had the advantage to collect in Harrisburg for eight years, I was able to observe a close relationship between *inopinus* and *albus*. *Plagiognathus inopinus* is a uniformly dark species; *P. albus* is largely pale with darker markings. Continued collecting in this area showed that besides the typically dark *inopinus* and the much lighter colored *albus*, at least three intermediate color morphs were present concurrently. All morphological structures are the same, including color and lengths of the antennal segments and the distinct spots on the pale femora. Male genitalia offer no distinctions. I have examined Knight's holotype and conclude that *inopinus* is only a dark extreme of *albus*.

***Rhinocapsus rubricans* (Provancher)**

Plagiognathus rubricans Provancher, 1887: 154.

Microphylellus rubricans: Van Duzee, 1912: 323.

Rhinocapsus rubricans: Van Duzee, 1917: 409; Carvalho, 1958: 140; Kelton, 1968: 1075 (lectotype designation); Kelton, 1980: 306.

Rhinocapsus miniatus Knight, 1923: 460; Blatchley, 1926: 926. **NEW SYNONYMY.**

Rhinocapsus miniatus, described from a single male taken at Lakehurst, New Jersey, is one of several species of Miridae in North America that has remained obscure since its original description. Over the past eight years,

Table 1. Comparison of the length of the second antennal segment and the basal width of the pronotum for specimens of *Rhinocapsus rubricans* (in mm).

Male			Female		
Length of Antennal Segment II	Difference	Basal Width of Pronotum	Length of Antennal Segment II	Difference	Basal Width of Pronotum
1.18	+.12 ^a	1.06	1.14	+.04 ^a	1.10
1.36	+.06	1.30	1.22	+.14	1.08
1.14	.00	1.14	1.20	+.02	1.18
1.34	+.04	1.30	1.04	-.02	1.06
1.26	+.06	1.20	1.22	-.12	1.34
1.30	+.12	1.18	1.08	+.04	1.04
1.20	+.08	1.12	1.18	-.08	1.26
1.30	+.06	1.24	1.18	.00	1.18
1.32	+.04	1.28	1.18	-.10	1.28
1.36	+.06	1.30	1.20	-.08	1.28
1.30	+.06	1.24	1.16	-.10	1.26
1.32	+.02	1.30	1.24	-.04	1.28
1.34	+.22	1.12	1.18	-.08	1.26
1.36	+.10	1.26	1.26	-.04	1.30
1.24	+.06	1.18	1.14	+.04	1.10

^a Differences (in mm) of measurements with "+" indicating that the second antennal segment is longer than the basal width of the pronotum and "-" indicating that the second antennal segment is shorter.

I have obtained numerous specimens of *Rhinocapsus* species, including examples from southern New Jersey. In an attempt to identify this material, I found that Knight's (1923: 459) key for separating *miniatus* from *rubricans* is unworkable.

Knight presented only two distinguishing characters for recognizing these two species: (1) Length of second antennal segment less than or subequal to basal width of pronotum (*rubricans*) or second antennal segment distinctly greater than basal width of pronotum (*miniatus*); and (2) size larger (4.3–4.6 mm for *rubricans*) or size smaller (3.4 mm based on the holotype of *miniatus*).

In measuring 15 males and 15 females of *rubricans*, I discovered that, in all but one specimen, the lengths of male second antennal segments are greater than the basal width of the pronotum; in females the lengths of the second segments were, in all but five examples, less than the basal width of the pronotum (Table 1). For the same number of specimens, males of *rubricans* averaged 4.26 mm in body length, with a range of 4.00–4.67 mm, and females averaged 3.86 mm, with a range of 3.25–4.33 mm.

It is apparent that *rubricans* males in most cases will key to *miniatus* and females to *rubricans*. Perhaps, in assembling his key, Knight used females of *rubricans* for his comparison to *miniatus* (a male). Also, the size of

females frequently falls into the small-size range diagnosed for *miniatus*. Although no males were found that measured less than 4.00 mm, it is within the bounds of variation for such smaller specimens to occur, especially if the more harsh conditions of the Lakehurst-New Jersey Pine Barrens region are considered. I have remeasured the holotype of *miniatus* and find it to be 3.64 mm in length (by my ocular micrometer), rather than 3.4 as given by Knight.

Knight also commented that *miniatus* was more uniformly red than *rubricans* (which is typically fuscous on the hemelytra). An examination of his holotype suggests that the specimen is teneral; the color is light red and the metafemora are collapsed. Reared adults (teneral) of *rubricans*, also, are lighter or more uniformly reddish. Other than the slight size difference, teneral males of *rubricans* are indistinguishable from *miniatus*; thus, I consider *miniatus* a junior synonym of *rubricans*.

Texocoris nigrellus (Knight), NEW COMBINATION

Parthenicus nigrellus Knight, 1939: 23; Froeschner, 1949: 166; Carvalho, 1958: 123, Akingbohunge et al., 1972: 11; Akingbohunge et al., 1973: 14; Henry and Smith, 1979: 214.

Texocoris secludis Schaffner, 1974: 283. NEW SYNONYMY.

While examining Miridae in the Texas A&M University insect collection, I recognized that specimens identified as *Texocoris secludis* were very similar to *Parthenicus nigrellus*. Further examination of Schaffner's (1974) figures of male genitalia and comparison of type-material of both species confirmed that *secludis* is a junior synonym of *nigrellus*. Because *nigrellus* does not belong in the genus *Parthenicus* Reuter, I find it necessary to retain the monotypic genus *Texocoris* Schaffner to accommodate *nigrellus*.

Texocoris nigrellus has been reported from Georgia, Illinois, Iowa, Texas (Knight, 1941), and Missouri (Froeschner, 1949). Akingbohunge et al. (1972) added Wisconsin and listed bloodroot as the host. Recently, I identified a series of *nigrellus* collected in Missouri (Columbia, Boone Co., 31 May 1981) on a fruiting mulberry tree, *Morus* sp.

ACKNOWLEDGMENTS

I thank A. G. Wheeler, Jr. (Bureau of Plant Industry, Pennsylvania Department of Agriculture, Harrisburg) for lending specimens of *Plagiognathus albatrus* and *Rhinocapsus rubricans* and Robert Blinn (Department of Entomology, University of Missouri, Columbia) for allowing me to report his collection of *Texocoris nigrellus*.

LITERATURE CITED

- Akingbohunge, A. E., J. L. Libby, and R. D. Shenefelt. 1972. Miridae of Wisconsin (Hemiptera: Heteroptera). Univ. Wis.-Madison Coll. Agric. Life Sci. Res. Div. Res. Bull. R 2396, 24 pp.

- . 1973. Nymphs of Wisconsin Miridae (Hemiptera: Heteroptera). Univ. Wis.-Madison Coll. Agric. Life Sci. Res. Div. Res. Bull. R 2561, 25 pp.
- Blatchley, W. S. 1926. Heteroptera or true bugs of eastern North America. Nature Publ. Co., Indianapolis, Indiana. 1116 pp.
- Carvalho, J. C. M. 1958. Catalog of the Miridae of the world. Arq Mus. Nac., Rio de J. Part II. Phylinae 45: 1-216; Part III. Orthotylinae 47: 1-161.
- Davis, N. T. 1955. Morphology of the female organs of reproduction in the Miridae (Hemiptera). Ann. Entomol. Soc. Am. 48: 132-150.
- Froeschner, R. C. 1949. Contribution to a synopsis of the Hemiptera of Missouri. Pt. IV. Am. Midl. Nat. 42: 126-188.
- Henry, T. J. 1974. Two new pine-inhabiting *Phytocoris* from Pennsylvania (Hemiptera: Miridae). Entomol. News 85: 187-191.
- . 1979. Descriptions and notes on five new species of Miridae from North America (Hemiptera). Melsheimer Entomol. Ser. 27: 1-10.
- Henry, T. J. and C. L. Smith. 1979. An annotated list of the Miridae of Georgia (Hemiptera-Heteroptera). J. Ga. Entomol. Soc. 14: 212-220.
- Kelton, L. A. 1968. On the Heteroptera in the Provancher collection (Hemiptera). Nat. Can. (Que.) 95: 1065-1080.
- . 1980. The plant bugs of the Prairie Provinces. Agric. Can. Publ. 1703, Ottawa. 408 pp.
- Knight, H. H. 1923. Family Miridae (Capsidae), pp. 422-655. In Britton, W. E., ed., Hemiptera of Connecticut. Conn. State Geol. Nat. Hist. Surv. Bull. 34.
- . 1926. Descriptions of four new species of *Plagiognathus* from the eastern United States (Hem., Miridae). Entomol. News 37: 9-12.
- . 1939. Three new species of Miridae from North America. Bull. Brooklyn Entomol. Soc. 34: 21-23.
- . 1941. The plant bugs, or Miridae, of Illinois. Bull. Ill. Nat. Hist. Surv. 22, 234 pp.
- . 1974. A key to species of *Phytocoris* Fallén belonging to the *Phytocoris junceus* group of species (Hemiptera, Miridae). Iowa State J. Res. 49: 123-135.
- Provancher, L. 1886-98. Petite faune entomol. du Canada. Les Hemiptères 3, 354 pp.
- Schaffner, J. C. 1974. *Texocoris secludis*, a new genus and species of Orthotylinae from Texas (Heteroptera: Miridae). J. Kans. Entomol. Soc. 47: 281-284.
- Van Duzee, E. P. 1912. Synonymy of the Provancher collection of Hemiptera. Can. Entomol. 44: 317-332.
- . 1915. New genera and species of North American Hemiptera. Pomona J. Entomol. Zool. 7: 109-121.
- . 1916. Checklist of the Hemiptera of America north of Mexico. New York (N.Y. Entomol. Soc.). 111 pp.
- . 1917. Catalog of the Hemiptera of America north of Mexico. Univ. Calif. Publ. Entomol. 2: 1-902.
- Wheeler, A. G. 1980. Life history of *Plagiognathus albaeus* (Hemiptera: Miridae), with description of the fifth instar. Ann. Entomol. Soc. Am. 73: 354-356.
- Wheeler, A. G., Jr. and T. J. Henry. 1977. Rev. Modestus Wirtner: Biographical sketch and additions and corrections to the Miridae in his 1904 list of western Pennsylvania Hemiptera. Great Lakes Entomol. 10: 145-157.