

IDENTITY OF *DOLICHOLYGUS* BLIVEN AND *XEROLYGUS* BLIVEN (HETEROPTERA: MIRIDAE: MIRINI)

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Abstract.—The holotypes of two monobasic genera, *Dolicholygus* Bliven, 1957 and *Xerolygus* Bliven, 1957 were studied. As a consequence, *Dolicholygus* and *Xerolygus* are synonymised with *Lygocoris* (s. str.) Reuter 1875 and *Stittocapsus* Knight 1942 respectively, based on the following two proposed new synonymies: *Lygocoris* (s. str.) *pabulinus* (Linnaeus, 1761) = *Dolicholygus scrophulariae* (Bliven, 1956) (new junior subjective synonym) and *Stittocapsus franseriae* Knight, 1942 = *Xerolygus orocopiae* Bliven, 1957 (new junior subjective synonym).

Key Words.—*Dolicholygus*, *Lygocoris*, *Stittocapsus*, *Xerolygus*, new synonymies.

Résumé.—Les deux genres monospécifiques *Dolicholygus* Bliven, 1957 and *Xerolygus* Bliven, 1957 furent étudiés sur base de leurs holotypes. Deux nouvelles synonymies sont proposées: (1) *Lygocoris* (s. str.) *pabulinus* (Linnaeus, 1761) (nom valide) = *Dolicholygus scrophulariae* (Bliven, 1956) (nouveau synonyme subjectif junior). (2) *Stittocapsus franseriae* Knight, 1942 (nom valide) = *Xerolygus orocopiae* Bliven, 1957 (nouveau synonyme subjectif junior).

Dolicholygus Bliven and *Xerolygus* Bliven have not received critical attention since Bliven's (1957) original unreviewed descriptions (Henry & Wheeler 1988, Schuh 1995). In a continuing effort to clarify relationships of genera within the "Lygus complex" of the Mirinae (Schwartz & Kerzhner 1996, Schwartz & Foottit 1998), we studied the type species of these two monobasic genera and discovered that they are both junior subjective synonyms of two common North American species. In this paper we document that *D. scrophulariae* Bliven is a junior synonym of *Lygocoris pabulinus* (L.) and that *X. orocopiae* Bliven is a junior synonym of *Stittocapsus franseriae* Knight.

GENUS *LYGOCORIS* REUTER, 1875

Lygocoris Reuter, 1875: 81. Type species: *Cimex pabulinus* Linnaeus, 1761.

Dolicholygus Bliven, 1957: 1. Type species: *Phytocoris scrophulariae* Bliven, 1956. NEW SYNONYM

Lygocoris pabulinus (Linnaeus, 1761)

Cimex pabulinus Linnaeus, 1761: 253.

Lygocoris pabulinus: Reuter, 1875: 81.

Phytocoris scrophulariae Bliven, 1956: 15. NEW SYNONYM

Dolicholygus scrophulariae: Bliven, 1957: 1.

Bliven (1956: 15) compared *Phytocoris scrophulariae* to *P. nigripubescens* Knight and *P. vividus* (Uhler), both junior synonyms of *P. vanduzeei* Reuter (cf. Stonedahl 1988: 132), and commented that within the genus, the shared green coloration of these taxa was "aberrant." He also noted that unlike *P. vanduzeei*,

P. scrophulariae is more elongate and narrower, has a smaller head and eyes, wider vertex, only white, simple setae on the dorsum, and different male genitalia. Bliven erroneously considered that the long, hind femora of *P. scrophulariae*, which surpasses the apex of the abdomen, were more typical of the genus *Phytocoris* than the shorter hind femora of *P. vanduzeei*. Stonedahl (1988), however, stated that the long, usually flattened femora, which reach beyond the apex of the abdomen, is a variable feature in *Phytocoris*.

Bliven (1957: 1) erected the monobasic genus *Dolicholygus* to accommodate *P. scrophulariae* because it differed from *Phytocoris* in "the relatively shorter antennae and in certain other details of structure." The dorsal habitus photograph and illustrations of the head, pronotum and parameres provided by Bliven (1956: 25, fig. 6, 1957: 7 figs. 1, 1a–c) document that the type species is unlike any other species in the very large and variable genus *Phytocoris*. After examination of the holotype, it became obvious to us that the medially obsolete basal carina of the vertex, the simple, suberect dorsal setae, and the paramere structure (compare Bliven's figures to Kelton's (1971: 7, figs. 1a, b), Wagner's (1970: 400, figs. 287a, b), or to Clayton's, (1982: 44, figs. 74, 83, 84)) of *D. scrophulariae* were identical with *Lygocoris* (s. str.) *pabulinus* (Linnaeus). All of the minute discrepancies between the illustrations (lateral dentition of the sensory lobe and narrow region between the arm and apex in the left paramere) can be attributed to the orientation of the parameres [parameres identical to those illustrated by Bliven were observed in *L. pabulinus* (see material examined below)]. Based on this discussion, *D. scrophulariae* (Bliven 1956) is now proposed as a new junior subjective synonym of *L.* (s. str.) *pabulinus* and *Dolicholygus* is placed in synonymy with *Lygocoris*.

One can only speculate why Bliven was unfamiliar with the widely distributed, naturally Holarctic species, *L. pabulinus* (Wheeler & Henry 1992: 46). Kelton (1971) reported it present in the northern Sierra Nevada Mountains of California and central coastal Oregon. Even though, *L. pabulinus* occurs on a wide variety of herbaceous plants, shrubs and trees, *Scrophularia californica* Cham. & Schlecht. reported by Bliven (1956) for adults and immatures, is a new host for this plant bug. Including the new synonymy proposed herein there are 10 known junior synonyms of *L. pabulinus* (Schuh 1995).

Material Examined.—*Lygocoris pabulinus*: USA. CALIFORNIA. *HUMBOLDT Co.*: Eureka, 14 Sep [19]48, B. P. Bliven, (holotype male, "*Phytocoris scrophulariae* B. P. Bliven 1956" [red label, type no. 13877]. "Genus *Dolicholygus* Bliv. 1957") (CAS). COLORADO. *GILPIN Co.*: Chambers Lake, Roosevelt National Forest, 11 Aug 1968, 2894 m (9200 ft), L. A. Kelton, ex *Picea* sp., 5 males, Canadian National Collection of Insects (CNC). *GRAND Co.*: Grand Lake Entrance, Rocky Mountain National Park, 18 Aug 1968, L. A. Kelton 26 males, 3 females (CNC).

Phytocoris vanduzeei: USA. ARIZONA. *PIMA Co.*: Tucson, 19 Apr 1924, A. A. Nichol male paratype, *P. nigripubescens* Knight (CNC), female allotype (USNM). CALIFORNIA. *SAN BERNARDINO Co.*: Providence Mountains State Recreational Area, 1311 m (4300 ft), 18 May 1982, M. D. Schwartz, ex *Larrea divaricata* 1 male (CNC). NEVADA. *NYE Co.*: Mercury, 5M, 10 Apr 1965, H. H. Knight & J. Merino (det *P. vividus* (Uhler) by H. H. Knight) 1 male (CNC).

GENUS *STITTOCAPSUS* KNIGHT, 1942

Stittocapsus Knight, 1942: 156. Type species: *Stittocapsus franseriae* Knight, 1942.

Xerolygus Bliven, 1957: 2. Type species: *Xerolygus orocopiae* Bliven, 1957.
NEW SYNONYM

Stittocapsus franseriae Knight, 1942

Stittocapsus franseriae Knight, 1942: 156.

Xerolygus orocopiae Bliven, 1957: 2. NEW SYNONYM

Bliven (1957: 2) erected the new genus *Xerolygus* to accommodate the type species, *X. orocopiae* Bliven, a species he remarked had resemblance to certain species of *Phytocoris*. As noted by Bliven (1957), the diagnostic features of *Xerolygus* are secondary sexual dimorphism of the wings (female hemelytra brachypterous), sparsely pubescent, nearly glabrous, shining dorsum, vertex without a basal carina, long antennae and legs, sharply declivous pronotum, hind femora surpassing the apex of genital segment, and parameres. Some of these characters (e.g., the emarginated vertex and dorsal vestiture) are likely symplesiomorphic in the Mirini (or higher category). Two characteristics that Bliven noted were important are the sulcate vertex and the deep division between frons and tylus. We find that the sulcus is imperceptible on the holotype, but the division between frons and tylus is remarkable. These characters correspond to those of *Stittocapsus franseriae* Knight. The parameres of *X. orocopiae*, as documented by Bliven (1957: 7, fig. 2 b,c), are identical to those of *S. franseriae* Knight (cf. Kelton 1959: 61, fig. 30) as is the structure of the brachypterous female (a defining character of *Stittocapsus* (Knight 1942: 156)), making it clear that *X. orocopiae* Bliven is a junior subjective synonym of *S. franseriae* Knight, 1942 and that *Xerolygus* is a synonymy of *Stittocapsus*.

Although Knight (1942: 156) suggested a relationship between his new genus and *Adelphocoris* Reuter, 1896, based on the following observations, *Stittocapsus* cannot be placed in a hypothesized *Adelphocoris* group of Mirini genera (Chérot, in preparation). Female *Stittocapsus* lack a wing membrane; the membrane is present in the *Adelphocoris* group. In *Stittocapsus*, antennal segments III and IV are much narrower than segment II; segments III and IV are almost as thick as segment II in the *Adelphocoris* group. *Stittocapsus* lack the prominent spines on antennal segment I which are present in the *Adelphocoris* group. The pronotum of *Stittocapsus* lacks a pair of antero-lateral bristles which are present in the *Adelphocoris* group. The hind femora of *Stittocapsus* does not have a series of spines which are present in some genera of the *Adelphocoris* group.

Assessing the affinity of *Stittocapsus* to other genera in the Mirini is beyond the scope of this paper, however Bliven's (1957: 2) assertion that his new genus resembled *Phytocoris* has some merit. In *Phytocoris*, certain species have brachypterous females and the inflated frons as in *Stittocapsus*. Both genera have long, flattened and tapered hind femora, but the inflated lora, scale-like dorsal setae, and male genitalia of *Phytocoris* are not found in *Stittocapsus*. The male genitalia of *Stittocapsus* (cf. Kelton 1959: 61, fig. 30 for *S. franseriae* and Carvalho & Afonso 1977: 13, figs. 6–8 for *S. mexicanus* Carvalho) is most similar to that of the genus *Irbisia*, especially *I. bliveni* Schwartz (cf. Schwartz 1984: 212, fig. 25, 214, fig. 48). Both genera have a sclerotized basal sclerite which projects dorsal to the secondary gonopore, terminates in a flattened minutely spi-

nose apex, and forms the back of the vesica. The left paramere of each genus is very similar in the sensory lobe, shaft and apex.

Material Examined.—*Stittocapsus franseriae* Knight: USA, ARIZONA. YUMA Co.: Mohawk, 1 Apr 1941, Lloyd L. Stitt, (female allotype) (USNM); same loc., 6 Apr 1937, ex reared from nymphs collected from *F[ranseria]. dumosa* Gray, (4 male, 2 female paratypes) (CNC, USNM). CALIFORNIA. RIVERSIDE Co.: Desert Center, Lot 173, Sub 7, 12 Apr [19]39, B.P. Bliven, (holotype male, "*Xerolygus orocopiae* B.P. Bliven 1957" [red label, type no. 13866]) (CAS).

Stittocapsus mexicanus Carvalho: MEXICO. BAJA CALIFORNIA. 38 km E of rt I to Parque San Pedro Martin, 400 m, 24 Apr 1985, R. T. Schuh & B. M. Massie, ex *Viguiera lacinata* A. Grey (Asteraceae) 1 male, 1 female (CNC).

ACKNOWLEDGMENT

We thank P. H. Arnaud and K. J. Ribardo, Department of Entomology, California Academy of Sciences, San Francisco, California (CAS) for loaning the holotypes of *D. scrophulariae* and *X. orocopiae*; T. J. Henry, Systematic Entomology Laboratory, USDA, % Department of Entomology, Smithsonian Institution, Washington, D.C. (USNM) for his help and hospitality; and two anonymous reviewers of the manuscript. This research was supported by "Fonds pour la Formation à la Recherche dans l'Industrie et dans l'Agriculture Belgium" to F. Chérot as partial fulfilment of the requirements for a Ph.D. degree.

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Received 23 Jul 1997; Accepted 23 Feb 1998.



Chérot, Frédéric. and Schwartz, Michael D. 1998. "Identity of Dolicholygus Bliven and Xerolygus Bliven (Heteroptera: Miridae: Mirini)." *The Pan-Pacific entomologist* 74(2), 108–112.

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