

Synonymy of *Blepharidopterus ulmi* (Knight) with *B. diaphanus* (Kirschbaum) (Heteroptera: Miridae)

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Blepharidopterus diaphanus (Kirschbaum, 1856) is proposed as the senior synonym of *B. ulmi* (Knight, 1927) and as a result is now recognized as a naturally Holarctic species.

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The synthesis of the Holarctic Miridae (Wheeler & Henry, 1992) and cooperation between Old and New World workers (Schuh, Lindskog & Kerzhner, 1995; Kerzhner & Schuh, 1995) has maintained an interest in the Holarctic plant bug fauna (Schwartz & Scudder, 1998). During studies on the plant bugs of British Columbia (Schwartz & Scudder, in press) and the catalogue of the Palaearctic Miridae (Kerzhner & Josifov, in press) several more Nearctic plant bug species are suspected to be junior synonyms of Palaearctic species. Here, I provide documentation for the proposed synonymy of *Blepharidopterus ulmi* with *B. diaphanus*.

***Blepharidopterus diaphanus* (Kirschbaum, 1856)**

Capsus diaphanus Kirschbaum, 1856: 238, 305.

Orthotylus ulmi Knight, 1927: 179, **syn. n.**

O. (Melanotrichus) diaphanus: Carvalho, 1958: 114.

Diaphnocoris ulmi: Kelton, 1965: 179; 1980b: 248, 264; Henry & Wheeler, 1988: 408.

Blepharidopterus diaphanus: Kerzhner, 1977: 19; 1988: 832; Schuh, 1995: 84.

B. ulmi: Schuh, 1995: 85.

Of four Nearctic species provisionally transferred from *Diaphnocoris* Kelton to *Blepharidopterus* Kolenati by Kerzhner (1977), two have subsequently been placed in other genera: *capitata* Van Duzee to *Paraproba* (by Kelton (1965) and confirmed by Carvalho (1987)), and *cockeri* Van Duzee to *Galapagocoris* Carvalho (by Carvalho & Gagné (1968)). A third species, *pellucidus* Uhler, was considered as the junior synonym

of *provancheri* Burque by Kelton (1980a). One more Nearctic species, not mentioned by Kerzhner (1977), placed in *Diaphnocoris* by Kelton (1965), and by virtue of generic synonymy by Kerzhner (1977) now in *Blepharidopterus*, is *Orthotylus ulmi*.

Knight (1927) distinguished *O. ulmi* from *O. provancheri* [as *O. translucens* Tucker] based on the more robust body, nearly straight posterior margin of the eyes, which provide the head with a transverse hind margin, and the shorter rostrum which does not attain the hind margin of the middle coxae. Kelton (1980b) added that the second antennal segment in *ulmi* is shorter than in *provancheri* and that the male genitalia of both species are diagnostic (p. 248, figs 201, 202, p. 265). The basal carina of the vertex of *ulmi* is considerably more prominent than of *provancheri*, and that barring dissection, the structure of the posterior portion of the head provides the best way to distinguish the two species. Kerzhner (1977) provided clear documentation (p. 18, figs 51-62) of the male genitalia for the species he placed in *Blepharidopterus* and with comparison to *B. diaphanus* and *B. provancheri* [as *pellucida*] convincingly argued the species status of *B. ulmicola* (Kerzhner).

Examination of the published figures of the male genitalia and numerous specimens (many freshly dissected for this note) of *B. ulmi* and *B. diaphanus* suggested that perhaps the two names are synonyms. The male genitalia are identical with both nominal species having: the spicula of the vesica extending well beyond the aperture of the sec-

ondary gonopore; the left paramere with apex of the blunt process almost always with three (sometimes with four) lobules and the apex of the pointed process subapically broad; the right paramere is "bill-shaped" and with two or three overlapping teeth, also some New and Old World specimens have one slightly enlarged subapical spicule. Body size, coloration, and head structure of both species are also identical. Based on the fact that the majority of the Nearctic specimens were collected from *Salix* and the identical morphology of the two species, I propose recognizing *B. ulmi* as the junior subjective synonym of *B. diaphanus*.

In North America, *B. diaphanus* was originally collected on *Ulmus americana* L. (U) from Minnesota, New York, Ontario, and Québec (Knight, 1927), but many specimens in the Canadian National Collection, Ottawa, were collected on *Salix* spp. (S), and some on *Betula* sp. (B) and *Corylus* sp. (C). Its distribution is relatively well-known, in Canada it spans from the lower Fraser River Valley and southern British Columbia across the Prairie Provinces (including the Peace River region) to Nova Scotia and in the United States it is widespread with localities known from California, Iowa, Missouri, New Hampshire, and Texas. In the Old World, *B. diaphanus* primarily breeds on *Salix* spp. and occasionally on *Populus* spp.; it is distributed throughout the Palaearctic region extending east to Primorskiy Krai. Because the Nearctic distribution is widespread and not limited to ports of introduction I consider *B. diaphanus* naturally Holarctic.

Male specimens dissected. **Austria:** Seebenstein. **Canada:** *Alberta:* Drumheller; *British Columbia:* Hope (S); Merritt (S); Savona; *Manitoba:* Boissevain (U); *Ontario:* Bridgenorth (U); Jordan (U); Long Point (S) [3 specimens]; Port Royal (S) [2 specimens]; Tillsburg (C); *Nova Scotia:* Ingonish (B); *Saskatchewan:* Esterhazy; Saskaton (S); Willow Bunch. **United States:** *California:* Blythe (S); Shively; *Colorado:* Estes Park; Poudre River; *Minnesota:* St. Paul (S) [paratype of *O. ulmi*]; *Texas:* Fort Davis. All specimens in the Canadian National Collection.

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