

*COMPSIDOLON (CONIORTODES) SALICELLUM*  
(HEMIPTERA: MIRIDAE): A PREDACEOUS PLANT BUG, NEW  
TO THE UNITED STATES, FOUND ON FILBERT

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*Abstract.*—*Compsidolon (Coniortodes) salicellum* is recorded for the first time from in the United States, feeding on aphids on cultivated filberts in western Oregon and Washington.

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The natural range of *Compsidolon (Coniortodes) salicellum* (Herrich-Schaeffer) extends from Great Britain east to western Russia and Norway, south to the Mediterranean region (Kiritschenko, 1951; Wagner and Weber, 1964; Wagner, 1975). Although the species is predaceous (Southwood and Leston, 1959; MacPhee and Sanford, 1961; Wagner and Weber, 1964; and Kelton, 1982), it is associated with relatively few plant species. The recorded plants include *Corylus* (Reuter, 1884; Stichel, 1933; Southwood and Leston, 1959; Wagner and Weber, 1964; Wagner, 1975; and Kelton, 1982), *Salix* (Reuter, 1884; Stichel, 1933; and Kerzhner, 1964), *Lonicera* (Stichel, 1933), *Alnus* (Southwood and Leston, 1959), *Malus* (Southwood and Leston, 1959; MacPhee and Sanford, 1961; Sanford and Herbert, 1967; and Herbert and Sanford, 1969), willow (*Salix* spp.) and bramble (*Rubus* spp.) (Southwood and Leston, 1959) and raspberry (*Rubus* sp.) and thimbleberry (*Rubus parviflorus*) (Kelton, 1982). There are a number of other species of the subgenus *Coniortodes* in Europe. These species occur on a variety of plants including species of *Adenocarpus*, *Cytisus*, *Salvia* and *Artemisia* (Wagner, 1975).

*Compsidolon (Coniortodes) salicellum* overwinters in the egg stage as do most mirids (Southwood and Leston, 1959). There is a single generation per year and the adults are found from June to September (Wagner, 1975). Southwood and Leston (1959) report the prey to be mites (e.g. *Bryobia praetiosa* Koch) and other small animals. MacPhee and Sanford (1961) considered the mirid (reported as *Psallus* sp.) to be predaceous, although they did not specify the exact prey species. Sanford and Herbert (1967) in their work on the influence of spray programs for phytophagous mites, including the European red mite, *Pananychus ulmi* (Koch), the blister mite, *Vasates schlechtendali* (Nal.) and the brown mite, *Bryobia arborea* (M. & A.), included *salicellum* (reported as *Coniortodes salicellus*) among the list of predators. Herbert and Sanford (1969) reported that *salicellum* (as *Coniortodes salicellus*) fed on the apple rust mite, *Vasates schlechtendali* (Nal.), and Kelton (1982) reported *salicellum* (as *Psallus salicellus*) feeding on aphids. The present paper reports *salicellum* as a predator of the filbert aphid, *Myzocallis coryli* (Goetze) in western Oregon.

Specimens of *C. (C.) salicellum* were first collected from filbert orchards in the

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<sup>1</sup> Oregon Agricultural Experiment Station Paper No. 7104.

vicinity of Corvallis, Oregon during the summer of 1981 when one of us (R.H.M.) undertook a study of the predator complex on commercial filbert trees. The true identity of the species was not worked out until early in 1982 (by J.D.L.). Because of confusion with other mirid nymphs, the exact date of egg hatch is not known but since the first adults appeared in early July, nymphs must have been present at least from the middle of June. During the 1982 season, Lattin, Gary M. Stonedahl (Oregon State University) and Thomas J. Henry (USDA-ARS Systematic Entomology Laboratory) collected adults and nymphs (third through fifth instars) on July 1 from filbert trees in the vicinity of Corvallis. While the peak occurrence of the adults was the end of July 1982, adults could be collected from the orchards until early October.

Adult bugs were observed feeding on the filbert aphid, and although no direct feeding observations of the nymphs were made, single second or third instar nymphs caged with aphids are believed to have consumed an average of 140 aphids each during a fifteen-day period at 24°C. In one laboratory trial, five out of six third and fourth instar nymphs reached the adult stage with only filbert leaf tissue for food. Samples taken from two untreated orchards showed that the populations of adults peaked in late July with about 5 individuals per tree sample, obtained by sharply tapping three tree limbs over a 30 × 30 inch canvas beating sheet. An orchard treated with Metasystox-R® in late April showed peak populations of less than one adult per tree sample whereas one orchard treated with Guthion® in early July showed a peak of 17 adults per tree sample at the end of July (Messing, 1983).

*Compsidolon (Coniortodes) salicellum* was first reported from North America from Nova Scotia, Canada, by MacPhee and Sanford in 1961 (as *Psallus* sp.). It was reported as *Coniortodes salicellum* from the same locality by Sanford and Herbert (1967) and Herbert and Sanford (1969). Kelton (1982) reported it as *Psallus salicellus*, citing the specific Nova Scotia locations referred to above and added Prince Edward Island and British Columbia, Canada, localities, thus establishing the occurrence of the species on both coasts. We have seen additional specimens from Oregon and Washington.

*Specimens examined.* OREGON: Benton Co., Corvallis, 3 July 81, on *Corylus avellana*, coll. R. Messing (OSU); Benton Co., 5 mi S. Philomath, 13 July 81, on *Corylus avellana*, coll. R. Messing (OSU); Corvallis, 1 July 82, on *Corylus avellana*, coll. T. Henry and J. D. Lattin (USNM: OSU); Corvallis, Oregon State University, campus, 20 July 82, on *Corylus*, coll. G. M. Stonedahl (OSU). WASHINGTON: Lewis Co., Chehalis, 110 Urquhart Rd., 22 July 79, on *Corylus* sp.) coll. G. M. Stonedahl (GMS, OSU).

The comprehensive review of the Miridae of the Mediterranean region by E. Wagner (1975) contains a thorough review of the genus *Compsidolon* Reuter including the four subgenera *Compsidolon*, *Apsinthophylus* E. Wagner, *Chamaeliops* E. Wagner and *Coniortodes* E. Wagner, complete with keys and many illustrations. His classification is followed here.

The taxonomic history of *C. (C.) salicellum* is complex. Carvalho (1958) presented a synonymical bibliography complete to the date of his publication. Additional work was done by E. Wagner (1952, 1975), E. Wagner and Weber (1964), and Kelton (1982). A condensed taxonomic and biological bibliography is presented below to summarize these prior contributions.

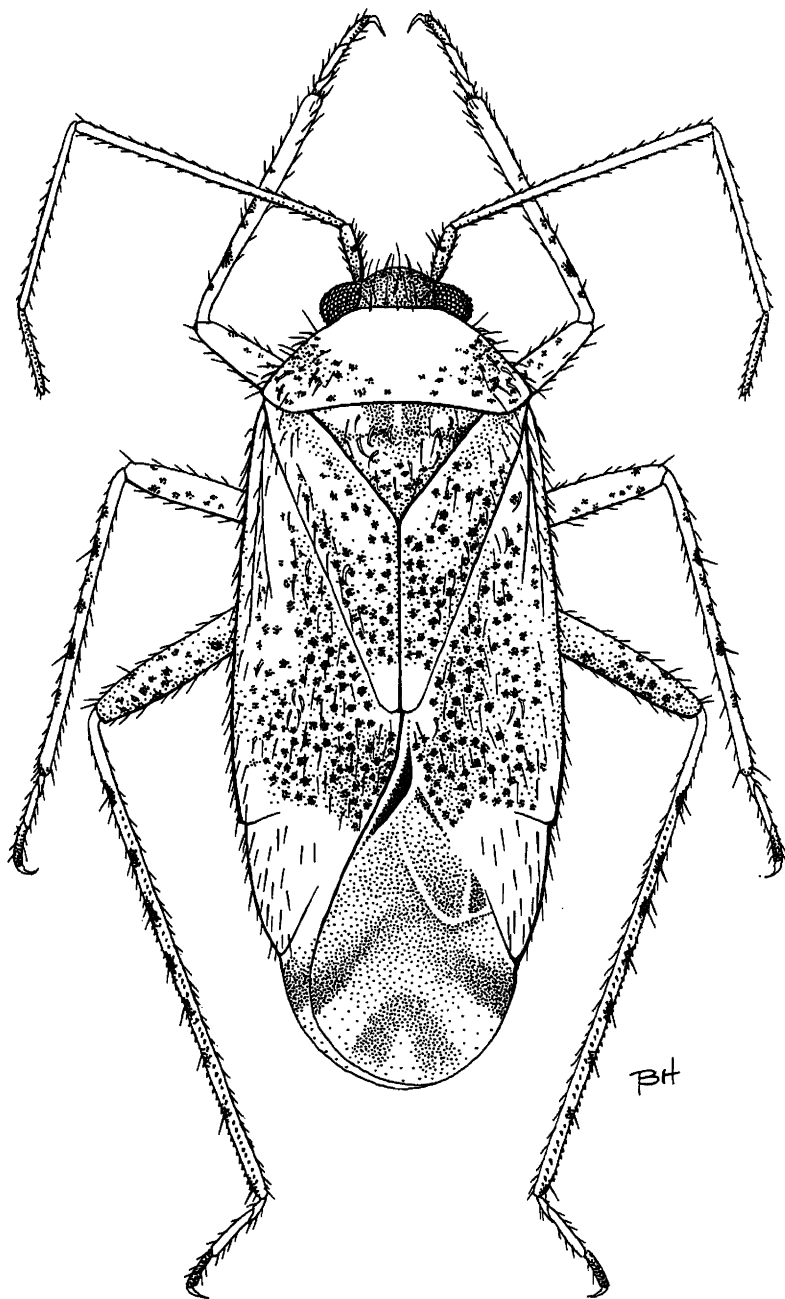


Fig. 1. Adult *Compsidolon (Coniortodes) salicellum* (Herrich-Schaeffer).

*Compsidolon (Coniortodes) salicellum* (Herrich-Schaeffer)

*Capsus salicellus* Herrich-Schaeffer, 1841:47, fig. 605.

*Psallus salicellus*: Fieber, 1861:305; Reuter, 1884:146; Stichel, 1933:272; Kiritschenko, 1951:206; Carvalho, 1958:130; Kelton, 1982:171-172; Kelton, 1983:140-142.

*Eurymerocoris salicellus*: Walker, 1873:151.

*Psallus (Coniortodes) salicellum*: E. Wagner, 1952:172; Southwood and Leston, 1959: 227, pl. 33, fig. 2.

*Coniortodes salicellum*: E. Wagner, 1954:9; Kerzhner, 1964:752, fig. 309, 328; Sanford and Herbert, 1967:693-696; Herbert and Sanford, 1969:62, 64-65.

*Psallus* sp., MacPhee and Sanford, 1961:671-673.

*Compsidolon salicellum*: E. Wagner and Weber, 1964:489, fig. 258a, 259a-e.

*Compsidolon (Coniortodes) salicellum*: E. Wagner, 1975:151, fig. 729a, 731, 734g.

*Compsidolon salicellum* keys to *Psallus* (couplet 183) in Slater and Baranowski (1978), but with some difficulty. Specimens are often badly rubbed, removing most of the pubescence, at least on the dorsal surface. The head is rather strongly deflexed downward and thus the tylus is not always visible from above. The tip of the rostrum attains the middle of the abdomen and the sexes are not dimorphic. The width of the vertex is greater than half the width of the head (4:7) and the length of antennal segment II is slightly greater than the basal width of the pronotum (12.5:11). The color pattern of small, regularly distributed brown spots on the clavi and coria of the hemelytra are distinctive, together with the pattern on the membrane. As Wagner and Weber (1964) and many others have pointed out, much work remains to be done in clarifying the generic limits of *Psallus* and closely related genera.

*Compsidolon* is a large genus and the host range of its known species is wide. It seems likely that additional species of this group of plant bugs will be detected in the North American fauna, either as introductions or as naturally occurring species. The western and southwestern portions of the United States, and particularly California, would seem appropriate areas for their occurrence. The planned investigations of the Phylinae of western North America by R. T. Schuh of the American Museum of Natural History should clarify the matter.

ACKNOWLEDGMENTS

We thank Bonnie B. Hall for the illustration of the adult, the Oregon Filbert Commission for financial assistance, M. T. AliNiizee for assistance and suggestions, Thomas J. Henry, USDA-ARS, Systematic Entomology Laboratory for the loan of some literature and specimens, and Gary M. Stonedahl for the loan of additional specimens from Washington state and for technical assistance.

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Received March 5, 1984; accepted March 20, 1984.