

***APHIDIUS RUBIFOLII* N. SP. (HYMENOPTERA:  
APHIDIIDAE). A PARASITOID OF *MASONAPHIS*  
*MAXIMA* FROM BRITISH COLUMBIA**

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ABSTRACT

*Aphidius rubifolii* n. sp. is described from coastal British Columbia. The parasitoid appears to be specific to *Masonaphis* species that feed on thimbleberry, *Rubus parviflorus* Nutt.

A large material of aphid parasitoids collected in British Columbia in recent years contained representatives of an undescribed species of genus *Aphidius* Nees. In Smith's (1944) key to the Nearctic *Aphidius* the new species runs to *rosae* Haliday. It differs from that species, in the female, mainly by its more slender petiole and the lighter colour which, in fact, is more similar to that of the European *loniceræ* Marshall. Small specimens of *rubifolii* resemble *polygonaphis* (Fitch) in some respects, but may be distinguished by the shape of the valvula 3 which in *polygonaphis* is almost three times as long as the maximum width as compared to less than twice as long as wide in *rubifolii*.

**Descriptions**

*Female*—Length, 1.8 - 2.7 mm; length of antenna, 1.3-2.1 mm; length of forewing, 1.7-2.6 mm.

Head: smooth, highly polished, sparsely hairy, contracted towards occiput; temples approximately twice as wide as transverse eye diameter. Eyes ovate, shortly pubescent. Face as wide as high (index 0.93-0.96). Malar space about twice as wide as length of second antennal segment. Antennae: with 18 or, rarely, with 17 or 19 segments (sgts. 3/17, 25/18, 2/19), distinctly shorter than body. Segment 3 slender, three times to three and one-half times as long as wide, one-sixth shorter than segment 4. All flagellar segments uniformly hairy; the last segment up to two times longer than preceding,

tapering distally. Thorax: smooth, shiny, very sparsely hairy. Notauli indicated at cephalic end only. Prescutellar groove sharply impressed, smooth. Scutellum more or less flat, broadly triangular. Propodeum with distinct longitudinal and transverse carinae; area centralis narrowly pentagonal, almost closed; areae posteroexternae concave, smooth. Wings: hyaline. Pterostigma of forewing narrow, elongate, approximately four times as long as broad, one and one-half times as long as metacarp (index 1 : 0.26 : 0.60); first abscissa of radius one-sixth longer than second; discocubital vein completely pigmented. Hind wings moderately broad, bluntly rounded apically. Abdomen: smooth, shiny, terminal segments sparsely hairy. Petiole slender, about four times as long as wide across spiracles; spiracular tubercles small but distinct; anterior third of tergite finely sculptured, more or less smooth apically; central carina distinct separating the two well-defined lateral depressions. Genitalia of typical form; valvula 3 stout, with a distinct basal hook. Legs: slender, moderately hairy. Colour: yellowish-testaceous. Head above antennae, second and following antennal segments (except anellus and base of third), mesoscutum, scutellum, postnotum, ovipositor sheaths, and last tarsal segments fuscous to black; abdominal segments 3 and following yellowish-beige, banded, the darker bands separated by more or less wide yellowish rings.

*Male*—Length, 2.0-2.8 mm; length of antenna, 2.0-3.0 mm; length of forewing, 2.1-2.6 mm.

Morphologically similar to female, except for sexual differences. Anten-

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nae with 19-21 segments, rarely with one or two segments more or less (sgts. 2/18, 4/19, 7/20, 4/21, 1/23), approximately as long as body. Petiole slender, more parallel-sided than in female, three to three and one-half times as long as wide across spiracles; tergite weakly sculptured, central carina more or less distinct. Colour: fuscous. Malar region, cheeks, first antennal segment and anellus, prothorax, parts of meso- and metasterna, lower half of propodeum, petiole, a variable-sized central area of the third abdominal tergite, and legs (except upper side of hind femora and tarsi which are obfuscated), testaceous to fusco-testaceous.

*Cocoon*—Inside the indurated skin of the dead host aphid. Colour of mummy beige to yellowish-brown; emergence hole generally between cornicles, roundish to ovate, with smooth edges.

*Types*—Holotype: ♀, Vancouver, B.C., 29.vii.1965, B. D. Frazer (C.N.C., No. 10,005). Allotype: ♂ (same locality and date), (C.N.C. No. 10,005). Paratypes: ♀ ♂ (see material examined). Type locality: Vancouver, U.B.C. Campus, British Columbia, Canada. Type host: *Masonaphis (Oestlundia) maxima* (Mason, 1925); (Homoptera:

Aphididae, Aphidinae) on *Rubus parviflorus* Nutt. (Rosaceae).

*Material examined* — Described from a large series of material which was reared from *Masonaphis maxima* on *Rubus parviflorus* in coastal British Columbia: Vancouver, U.B.C. Campus, 3.-29.vi.1965, B. D. Frazer; Vancouver, Point Grey district, 25.v.1965, M. Mackauer.

#### COMMENTS

The host range of *Aphidius rubifolii* appears to be restricted to species of *Masonaphis* Hille Ris Lambers that feed on thimbleberry, *Rubus parviflorus* Nutt. It is relatively common as a parasitoid of *M. (Oestlundia) maxima* (Mason) which evidently is the main host. In addition to *maxima* the parasitoid possibly may also attack *M. (O.) davidsoni* (Mason), since it was collected on occasion from mixed colonies containing both species of aphids on thimbleberry.

The only other record of a parasitoid that attacks genus *Masonaphis* is that of *Aphidius rosae* which was reared from *M. (O.) rubicola* (Oestlund) on *Rubus* by MacGillivray and Spicer (1953) in New Brunswick. This record may or may not pertain to the new species, *A. rubifolii*.

#### References

- MacGillivray, M.E., and P. B. Spicer. 1953. Aphid parasites collected in New Brunswick in 1950. *Can. Ent.* 85:423-431.  
 Smith, C. F. 1944. The Aphidiinae of North America (Braconidae: Hymenoptera). *Ohio State Univ. Contr. Zool. Ent.* 6:xii+154 p.