

## A new species of *Pteromalus* Swederus (Hymenoptera ; Pteromalidae) from Western Canada

M. Doğanlar \*

### Summary

*Pteromalus* (s. str.) *gallicolus* n.sp. is described from British Columbia, Canada. All specimens of the new species were reared from the galls of *Diastrophus kincaidii* Gill. (Hymenoptera : Cynipidae) on thimbleberry, *Rubus parviflorus* Nutt.

### Introduction

When the author was studying in British Columbia, Canada some interesting pteromalids were reared from the galls of *Diastrophus kincaidii* Gill. (Hymenoptera : Cynipidae) collected on thimbleberry, *Rubus parviflorus* Nutt. at Burnaby between March 1977 and October 1978. The reared pteromalid specimens run to *Pteromalus* Swederus in the key to the genera of Pteromalinae of Graham (1969), but in the key to the female of the species of *Habrocytus* and *Pteromalus*, it ends at the couplet 85, and in that of male at couplet 65. By checking the catalogue of Peck (1963), and studies of Graham (1969) and Burks (1975) it was found that none of the species of *Pteromalus* was associated with any of the gall insects up to that time.

When the specimens were compared with the types of the Nearctic species of *Pteromalus* in the Canadian National Collection (CNC), Ottawa, Ontario, it was found that the species is not conspecific with any of them.

Some specimens were sent to Dr. Z. Boucek of the Commonwealth Institute of Entomology, c/o British Museum (Natural History), London, England for his opinion in regarding the new species and comparing the specimens with the types of the Palearctic species. He stated that the specimens were *Pteromalus*, subgen. *Habrocytus*, which was recently regarded by Boucek and Graham (1978), and very close to *P. semotus* (Walker). He also pointed that «the puzzle in the identification is the host data, because I have not seen speci-

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\* Atatürk Üniversitesi, Ziraat Fakültesi, Bitki Koruma Bölümü, Erzurum, Turkey.  
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mens of *semotus* from any galls» (In the letter of Dr. Z. Boucek dated 5th October, 1978).

Further studies showed that the specimens belong to *Pteromalus*, subgen. *Pteromalus* s.str. by having both mandibles with four teeth, and distinctly different from *P. semotus* under different subgenus. It was recognized to be an undescribed species of the genus.

*Pteromalus (Pteromalus) gallicolus* n.sp.

(Figs. 1-5)

Female : Length 2.4-2.9 mm. Body dark green to blue green. Antennal scape and pedicellus fuscous, flagellum brown. Legs testaceous excepts coxae which are concolorous with thorax, and tarsi which are fuscous. Tegulae black; fore wings hyaline or with a fuscous cloud below marginal vein.

Head (fig. 1) about 1.2 times as broad as mesoscutum, in dorsal view 2.35 times as broad as long; temples slightly more than one third as long as eyes, distinctly converging; posterior ocelli separated by 2.33 times their major diameter from the eyes, POL 1.43 - 1.50 OOL. Malar space about 0.43 times as long as an eye. Both mandibles with four teeth. Anterior margin of clypeus moderately deeply emarginate. Head coarsely reticulate, excepts frons above toruli, face below toruli, and genae which are finely reticulate; clypeus strigose, striae hardly extending on to face and genae. Antennae inserted well above level of ventral edge of eyes, toruli about equidistant from median ocellus and anterior margin of clypeus, scape slightly shorter than an eye, reaching to level of vertex or slightly above it; combined length of pedicellus and flagellum almost equal to breadth of head; pedicellus twice as long as broad, slightly longer than first funicular segment; flagellum slightly clavate towards distal; first four flagellar segments distinctly, fifth slightly longer than broad, sixth quadrate; clava 2.5 times as long as broad.

Thorax (fig. 2) about 1.42 times as long as broad; pronotal collar distinctly margined, medially  $1/7$  to  $1/8$  as long as mesoscutum, moderately reticulate with a narrow shiny strip along its hind edge. Mesoscutum 1.65 to 2.00 as broad as long, coarsely reticulate, more finely at sides. Scutellum about as broad as long, moderately convex, moderately finely reticulate. Propodeum slightly less than half as long as scutellum; median area about twice as broad as long, without a costula, its panel irregularly sculptured; median carina incomplete; plicae sharp throughout, hardly sinuate in middle, their posterior parts, at sides of nucha, converging slightly; nucha occupying about one third the median length of propodeum, convex, finely reticulate as that of median area; spiracles elipsoid, separated by about a half their length from meta-

notum; callus slightly reticulate, rather sparsely pilose; mesepisternum moderately reticulate, with a triangular, nearly smooth area below base of hind wing. Legs moderately stout. Fore wing with lower surface of costal cell with a complete row of hairs and some additional ones scattered over distal half; basal cell bare, basal vein with 1-3 hairs; speculum open below, on upper surface of wing extending below marginal vein for about basal 1/3 length of the latter; apical margin ciliate; marginal vein 1.16 - 1.30 times as long as stigmal vein; postmarginal vein from slightly to distinctly longer than marginal vein; parastigma less thicker than marginal vein.

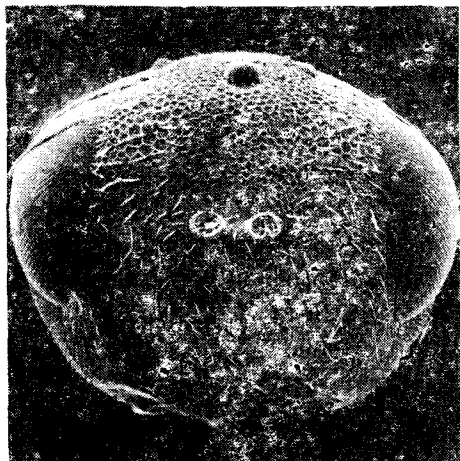


Fig. 1. *Pteromalus gallicolus* n.sp., female, head (100 X).

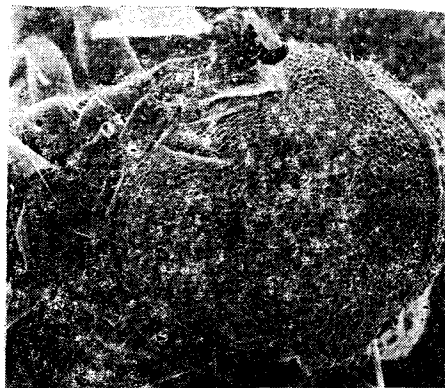


Fig. 2. *Pteromalus gallicolus* n.sp., female, thorax (70 X).

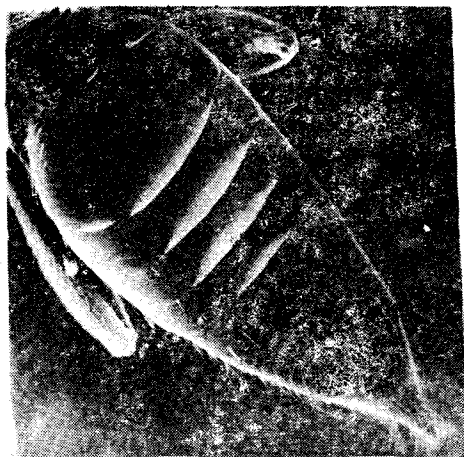


Fig. 3. *Pteromalus gallicolus* n.sp., female, gaster (70 X).

Gaster (fig. 3) lanceolate, from slightly to distinctly longer than head plus thorax, occasionally slightly shorter, 2.16 times as long as broad; first four tergites nearly smooth, fifth and sixth finely reticulate, last tergite slightly longer than its basal breadth.

Male : Length 1.4 - 2.3 mm. Differs from the female as follows :

Gaster with pale spot on second and third tergites. Head in dorsal view about twice as broad as long; temples about two third as long as eyes. Malar space a half as long as an eye; oral fossa not reaching the eyes, its breadth about 2.2 times malar space. Anterior margin of clypeus (fig. 4) shallowly emarginate. Base of mandibles without subcircular pit. Combined length of pedicellus and flagellum slightly to distinctly longer than breadth of head. Scape distinctly above the level of vertex (fig. 4); pedicellus slightly more than twice as long as broad, 0.7 times as long as first funicular segment; funicular segments filiform, distinctly longer than broad; clava slightly wider than funicular segments, 3.25 times as long as broad. Median area of propodeum (fig. 5) about 1.6 times as broad as long. Posterior parts of plicae, at sides of nucha, nearly parallel. Gaster lanceolate, slightly shorter than, but distinctly narrower than thorax, 1.7 - 2.0 times as long as broad.

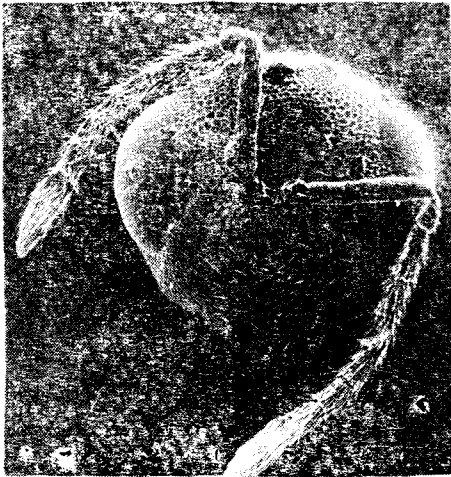


Fig. 4. *Pteromalus gallicolus* n.sp., male, head (80 X).



Fig. 5. *Pteromalus gallicolus* n.sp., male, thorax (70 X).

Holotype : Female, Burnaby, B.C., Canada, 15.XII.1977, (Doğanlar) (laboratory reared from the gall of *Diastrophus kincaidii* Gill. ex. *Rubus parviflorus* Nutt.) in CNC.

Allotype : Male, same locality and host as holotype, 6.XII.1977. (Doğanlar) in CNC.

Paratypes : Same locality and host as holotype, 25 females, 20.X.1977 - 4.I.1978, (Doğanlar); 1 female, 6.IV.1977 (Holmgren); 43 males, 25.X.1977 - 7.I.1978 (Doğanlar); 2 males 12.IV.1977, (Doğanlar).

Deposition of paratypes : 5 females, 5 males in the CNC; 5 females, 5 males in the United States National Museum; 5 females, 5 males in British Museum (Natural History); remainder in the author collection.

Biology : All specimens were reared from the galls of *Diastrophus kincaidii* on *Rubus parviflorus* in the period from 20.X.1977 to 7.I.1978 in laboratory. Only three specimens were swept on leaves of *R. parviflorus* in 6.-12. IV. 1977.

Remarks : *P. gallicolus* resembles only *P. bifoveolatus* Foerster, and *P. (Habrocytus) semotus* (Walker). It differs from the former by having in female POL 1.4-1.5 OOL (POL equal to or very slightly greater than OOL in *bifoveolatus*); in male oral fossa not nearly reaching the eyes, and its breadth 2.2 times the malar space (oral fossa extremely wide, reaching nearly to the eyes, its breadth 11 to 34 times the malar space in *bifoveolatus*); *P. gallicolus* differs from *P. (H.) semotus* by having both mandibles with four teeth, marginal vein 1.16-1.30 times as long as stigmal vein (in *semotus*, mandibular formula 3.4, and marginal vein 1.35 to 1.5 times as long as stigmal vein).

### Acknowledgements

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## Özet

Batı Kanada'dan yeni bir *Pteromalus Swederus* (Hymenoptera : Pteromalidae) türü.

British Columbia, Kanada'dan *Pteromalus* (s.str.) *gallicolus* yeni tür olarak isimlendirilmiş ve tanımlanmıştır. Yeni türün bütün örnekleri *Rubus parviflorus* Nutt. dallarında *Diastrophus kincaidii* Gill. (Hymenoptera : Cynipidae) larvaları tarafından oluşturulan gallerden laboratuvar koşullarında üretilmiştir.

## References

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