

ON THE INDIAN SPECIES OF *HALTICOPTERA* SPINOLA (HYMENOPTERA : CHALCIDOIDEA : PTEROMALIDAE)

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INTRODUCTION

Halticoptera Spinola belongs to the subfamily Miscogasterinae of Pteromalidae (Chalcidoidea) and is widely distributed in Europe and the Americas (Boucek, 1988). The members of the genus are parasites of Diptera mining leaves or burrowing in other tissues of herbaceous plants or ferns. In the Indian subcontinent the genus is known by a single species *H. propinqua* (Waterston) from Sri Lanka, India and Pakistan. Here one new species *H. agaliensis* is described under the genus and *H. propinqua* is reported for the first time from Kerala. Key to separate these species is provided. Based upon the study of the holotype of *H. propinqua* and fresh specimens from Kerala, the species is redescribed.

The type specimens of the new species are kept in the collections of Western Ghats Field Research Station, Zoological Survey of India, Calicut.

ABBREVIATIONS USED

F1-First funicular segment; OOL-Ocellocular distance; POL-Postocellar distance; T1, T2-gastral tergites 1 and 2; Smv-Submarginal vein; Mv-Marginal vein; Pmv-Post marginal vein; Stv-Stigmal vein; BMNH-British Museum of Natural History, London; ZSIC-Zoological Survey of India, Calicut.

Key to the Indian species of *Halticoptera*, females

1. Median area of propodeum finely but distinctly reticulate; gaster with posterior margin of T1 deeply incised in the middle (Fig. 3); petiole a little wider than long; forewing with Mv $3.5 \times$ Stv (Fig. 4); POL sub equal to OOL; frenal area of scutellum moderately reticulate; hind femora metallic; fore and mid femora dark brown, length 2.3-2.5 mm. India
..... *H. agaliensis* sp. nov
- Median area of propodeum smooth and shiny; gaster with hind margin of T1 only very slightly incised in the middle (Figs. 6 & 9); petiole a little longer than wide; forewing with

Mv $2.6 \times$ Stv (Figs. 7 & 9); POL $1.4 \times$ OOL; frenal area finely reticulate; all femora honey yellow, not metallic; smaller species; length 1.3-1.6 mm. India, Sri Lanka, Pakistan
 *H. propinqua* (Waterston)

1. *Halticoptera agaliensis* sp. nov.

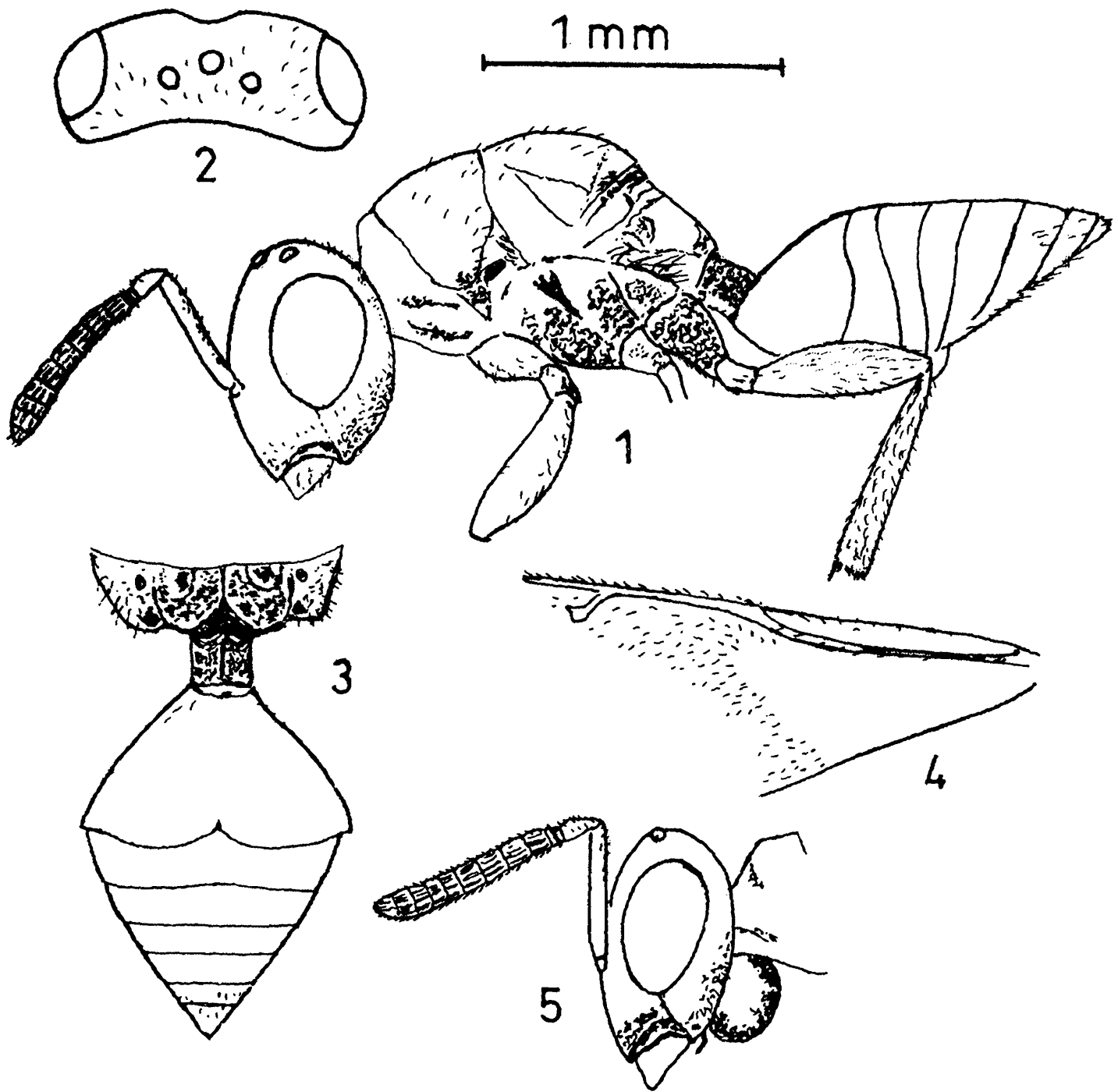
(Figs. 1-5)

Female : Length 2.3-2.5 mm (Holotype 2.5 mm). Body dark metallic blue with more metallic refringence on gaster. Antennae with basal half of scape testaceous, remainder dark brown; coxae concolorous with mesosoma; femora dark brown, metallic blue reflection on hind femora; remainder of legs honey yellow with tips of tarsi brown. Tegulae pale brown; wings hyaline; veins pale brown.

Head : (Figs. 1 & 2) Uniformly and moderately reticulate with sparse white pubescence, reticulation coarser on upper frons and vertex; clypeus finely reticulate, anterior margin deeply incised medially with two sharp teeth. In dorsal view head width $1.9 \times$ length; POL sub equal to OOL; head behind ocelli abruptly sloping so that occiput almost vertical; temple length $0.3 \times$ eye length. In front view head width $1.3 \times$ height; malar space length $0.44 \times$ eye length; malar grooves distinct; eyes separated by $1.6 \times$ their length; eye length $1.4 \times$ width (in profile). Antennae inserted along the line of lower ocular boarder; scape not quite reaching median ocellus, as long as eye; pedicel plus flagellum length $0.8 \times$ width of head; pedicel longer than Fl; anelli transverse, equal; funicular segments quadrate, little widening towards the tip; clava as long as 2.5 preceding segments combined.

Mesosoma : Coarsely reticulate, pronotal collar not margined anteriorly, but with slight indication of a ridge medially due to raised edges of reticulation; posterior smooth strip narrow. Mesoscutum width $2 \times$ length; notauli almost complete, though not clear in the posterior half. Scutellum as long as wide, reticulation on frenal area closer but not finer; axillae wide anteriorly so that anterior margin of scutellum narrow. Propodeum (Fig. 3) with median area finely but distinctly reticulate; median carina sharp and complete; plicae distinct as far forwards as spiracles; callus with long white hairs. Prepectus broad, reticulate punctate. Mesepisternum closely reticulate. Mesepimeron with broad reticulation on lower part, separated by a longitudinal alveolate groove from the smooth upper part. Metapleuron finely reticulate with a deep pit towards the posterior corner. Hind coxae reticulate; hind femora alutaceous. Forewing length $2.3 \times$ width; basal part almost bare; marginal fringe small. Relative lengths of Smv, Mv, Pmv and Stv as $33 : 19.5 : 11.5$ and 5.5 .

Gaster : (Figs. 1 & 3) Cordiform, length $1.4 \times$ width in dorsal view; petiole finely reticulate with distinct median and lateral ridges, a little wider than long; T1 occupying about half of gaster length, posterior margin deeply incised.



Figs. 1-5. *Halticoptera agaliensis* sp. nov. 1-4, Female. 1, Body in profile; 2, Head in dorsal view; 3, Propodeum and gaster in dorsal view; 4, Forewing; 5, Male Head and antenna in profile.

Male (Fig. 5) Length 2.3 mm. Resembles female but differs in having more metallic refringence on body, antennae uniformly testaceous, legs except coxae testaceous, maxillary palpi and stipites moderately enlarged and shorter gaster.

Holotype Female : India : Kerala; Agali (Palghat district), 12.ii.1987, Coll. P. M. Sureshan. (ZSIC)

Paratypes 1 Male, data same as that of holotype. 1 Female, Kerala : Calicut University campus, 3.ii.1987. Coll. P. M. Sureshan. (ZSIC)

Remarks : This species resembles the British species *H. letitiae* Askew (1972) having finer reticulation on median area of propodeum; gaster with T1 medially incised, metallic femora and in the nature of antenna. But it differs from *letitiae* in having Mv of forewing longer, 3.5x Stv and distinctly longer than Pmv; frenum closely reticulate, not marked by a groove; pronotal collar with a narrow shiny posterior strip and gaster longer than mesosoma (excluding propodeum). In *letitiae* Mv shorter, only 1.6x Stv and only slightly longer than Pmv; frenum almost smooth, marked by a groove; pronotal collar with a broad shiny strip posteriorly and gaster as long as mesosoma (excluding propodeum).

Etymology The species name pertains to the type locality.

2. *Halticoptera propinqua* (Waterston)

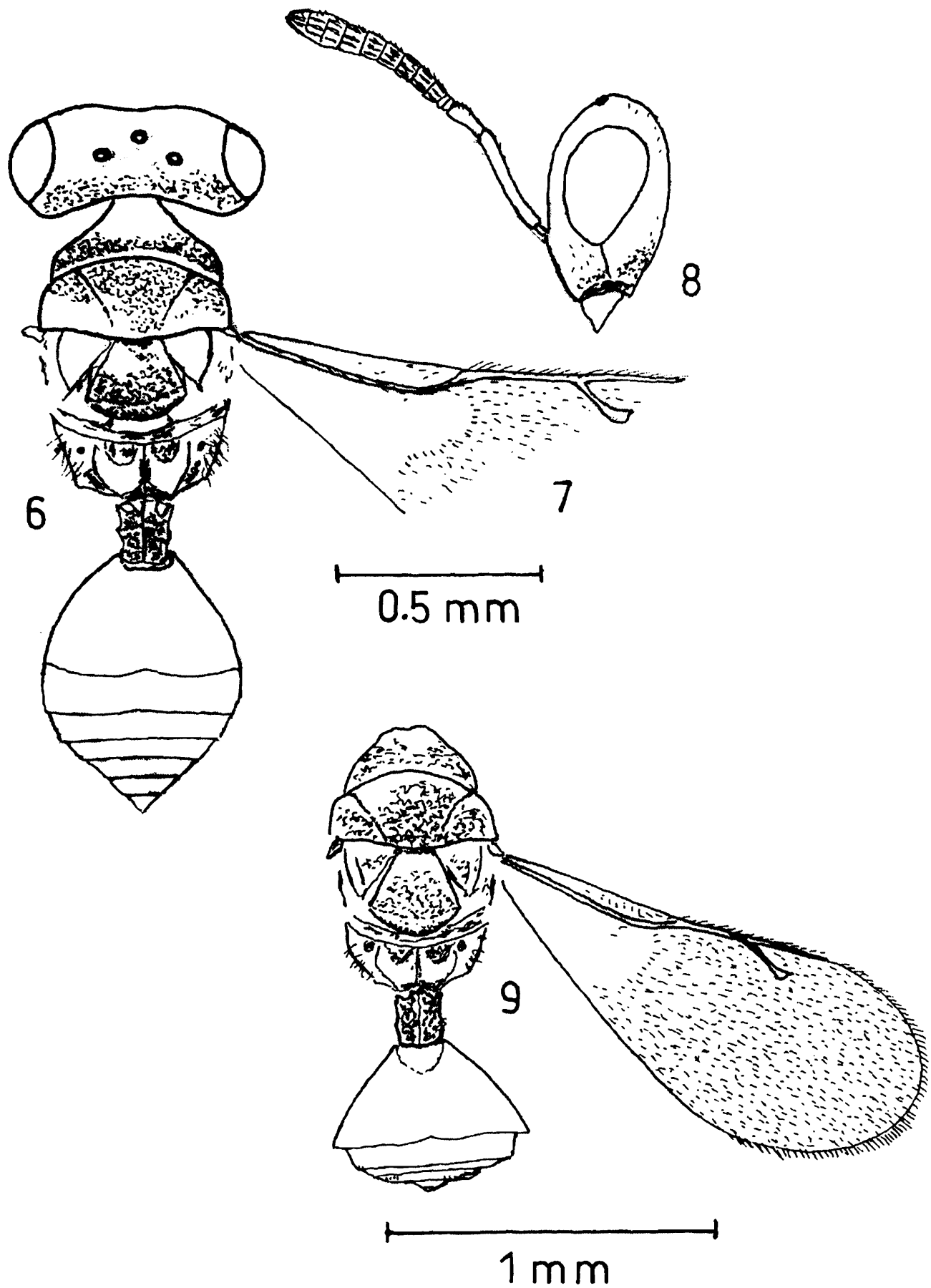
(Figs. 6-9)

Polycystus propinquus Waterston, 1915. 325. Male. Sri Lanka, Paradeniya (BMNH) (Examined). Syn. by Boucek et al. 1979.

The original description of the species by Waterston (1915) was based on a male specimen from Sri Lanka. Boucek et al (1979) reported the species from India (Delhi, Hyderabad). I have examined the holotype of the species in BMNH remounted by Boucek, which is in poor condition without head and antenna. I have also examined fresh specimens from Kerala, based upon which the species is redescribed.

Female Length 1.3 – 1.6 mm. Head, mesosoma and petiole dark metallic bluish green; gaster brown. Antennal scape testaceous, except distal tip and remainder of antenna brown. Coxae concolorous with mesosoma, except middle coxae brown, legs otherwise yellow except tips of tarsi dark brown. Tegulae brown; wings hyaline; veins pale brown.

Head : (Figs. 6&8) About 1.26x as broad as mesosoma (24:19). In dorsal view, width 2.2x length and in front view width 1.3x height; POL 1.4x OOL; temple length 0.3x eye length. Head closely and distinctly reticulate, reticulation coarser on frons and vertex; malar space length little more than half length of eye; eyes separated by 1.4x their length. Antennae (Fig. 8) inserted along lower ocular line; scape slender, slightly curved, reaching little beyond median ocellus, length slightly greater than eye length; pedicel plus flagellum length 0.9x head width; pedicel longer than



Figs. 6-9. *Halticoptera propinqua* (Waterston). 6-8, Female. 6, Body in dorsal view; 7, Forewing; 8, Head and antenna in profile; 9, Body (without head) in dorsal view, Holotype, ♂.

anelli and F1 combined; anelli transverse; F1 shortest; all funicular segments transverse, gradually widening towards the tip; clava almost equal to three preceding segments combined.

Mesosoma : Reticulate, moderately arched in profile, reticulation coarser and broader on mid lobe of mesoscutum. Pronotal collar rounded anteriorly with a smooth strip posteriorly. Mesoscutum width 2x length; notauli complete. Scutellum convex, as long as broad, reticulation finer on frenal area. Dorsellum shiny. Propodeum (Fig. 6&9) shiny with two broad foveae anteriorly on either side of median carina, interior of which is finely reticulate; plicae complete; spiracles very small; callus with few scattered hairs. Propodeum width 1.8x length in dorsal view. Forewing length 2.5x width; basal cell almost bare with one or two hairs on basal hair line; Mv 1.5x Pmv and 2.6x Stv. Relative lengths of Smv, Mv, Pmv and Stv as 22 : 13 : 8.5 and 5.

Gaster (Fig. 6) Ovate, petiole distinctly reticulate, little longer than wide, with distinct median carina. In dorsal view gaster length 1.3x width; T1 occupying little more than half length of gaster; hind margin of T1 and T2 very slightly incised in the middle, almost straight; hypopygium reaching little beyond middle of gaster.

Male : Length 1.6 mm. Resembles female but differs in having more metallic reflection on body, antennae uniformly testaceous with clava little darker and gaster short.

Material examined Holotype, Male of *H. propinqua* (Waterston) (BMNH collection. No. 5874) CEYLON : Paradeniya, 22.vii.1913. Coll.A.Rutherford; 1 Female, INDIA : Kerala, Mananthavady, (Wynad district), 22.ii.1988; 1 Female, Kerala, Manjeswaram (Kasaragod district), 27.ii.1988; 1 Female, Thariyod (Wynad district), 22.ii.1988; 1 Male, Kerala : Kottiyam (Nr. Trivandrum) 23.ii.1989. (Coll.P.M.Sureshan).

Remarks This species closely resembles *H. circulus* (Walker) in general colouration, in having pronotal collar anteriorly rounded; propodeum with median area smooth, narrow forewing and gastral petiole little longer than broad and in males inflated part of maxillary stipites small, but differs in having Mv of forewing 2.6x Stv, basal cell almost bare with one or two hairs on the basal hair line, reticulation on scutellum comparatively finer, little raised and frenal area almost shiny (in *circulus* Mv almost twice as long as Stv, basal cell of forewing with atmost 5–9 hairs, reticulation on scutellum distinctly raised.

SUMMARY

One new species of *Halticoptera* Spinola viz., *H. agaliensis* is described from India. *H. propinqua* (Waterston) is redescribed and reported for the first time from Kerala.

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