



New distribution and host records of Chalcidoidea (Hymenoptera) from India

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ABSTRACT: New distribution and host records of Chalcidoidea from various parts of India are listed. *Eupelmus antipoda* Ashmead is recorded for the first time from the Indian subcontinent. *Ischiodon scutellaris* (F.) is a new host record for *Syrphophagus aeruginosus* (Dalman). In all, 14 species including eight pteromalids, viz., *Dinarmus basalis* (Rondani), *Merismomorpha minuta* Sureshan, *Mesopolobus minutus* Sureshan & Narendran, *Oricoruna arcotensis* (Mani & Kurian), *Pachyneuron aeneum* Masi, *Sphexigaster reticulata* Sureshan & Narendran, *Syntomopus carinatus* Sureshan & Narendran and *Trichomalopsis thekkadiensis* Sureshan & Narendran; three encyrtids, viz., *Cerchysius laticeps* Kerrich, *Homalotylus ferrierei* Hayat *et al.*, and *Syrphophagus aeruginosus* (Dalman); one eulophid, *Euderus albitarsis* (Zetterstedt); and two eupelmids, viz., *Anastatus acherontiae* Narayanan *et al.* and *Eupelmus antipoda* Ashmead, are recorded from different parts of India and the details are provided.

KEY WORDS: Chalcidoidea, Encyrtidae, Eulophidae, Eupelmidae, India, new records, Pteromalidae.

INTRODUCTION

New distribution and host records of Chalcidoidea collected during extensive surveys in different parts of India are detailed in this paper with brief diagnostic accounts. The specimens of the present study are deposited in the reference collections of the Biosystematics Division, Project Directorate of Biological Control, Bangalore.

I. Family Encyrtidae

1. *Cerchysius laticeps* Kerrich

Cerchysius laticeps Kerrich, 1954: 372-376. F, Malaysia, Perak.

Psyllaephagus drosophilidus Singh & Agarwal, 1993. 74-77. F, M, India, Assam, Guwahati. Synonymy by Singh, 1996: 196.

[*Cerchysius subplanus* (Dalman): Basha, 1993: 33-37. F, Assam (Misidentification)].

Diagnosis: Frontovortex relatively broad. Exserted part of ovipositor about half the length of gaster. First funicular segment longer than second and pedicel individually. Head mainly dark brown with bronzy-violet lustre on frontovortex, with punctures relatively large. Fore wing with discal setae beyond linea calva and a few setae proximad of linea calva pale brown.

Material studied: 2♀ & 2♂; Karnataka: Bangalore, Malleshwaram, 06. iv.08, ex. *Leucopis* sp. (Diptera: Chamaemyiidae) on Aonla, Rajeshwari.

Distribution: Karnataka (new record), Andhra Pradesh, Assam and Meghalaya.

2. *Homalotylus ferrierei* Hayat, Alam & Agarwal

Homalotylus ferrierei Hayat et al., 1975: 65, 67. F, India, Nasik.

Echthroxylex ferrierei: Shafee and Fatma, 1984: 373.

Diagnosis: First, second and base of third funicular segments brown, rest of third, 4-6 funicular segments and clava white; pedicel as long as first and second funicular segments combined.

Material studied: 2♀ & 2♂; Kerala: Tusharagiri, 25.i.08, ex. *Planococcus* sp., Ankita.

Distribution: Kerala (new record) and Maharashtra.

3. *Syrphophagus aeruginosus* (Dalman)

Encyrtus aeruginosus Dalman, 1820: 170. F, Lectotype F, Sweden.

Syrphophagus aeruginosus: Ferrière, 1953: 34.

Diagnosis: Mid-tibia with a distinct sub-basal dark patch; antenna with first funicular segment longer than broad, 2-4 at most quadrate, clava as long as preceding four funicle segments combined; head 2.7x as broad as frontovertex.

Host: *Ischiodon scutellaris* (F.) is a new host record for *Syrphophagus aeruginosus* (Dalman). Earlier it was recorded from *Episyrphus balteatus*, *Eupeodes corollae*, *Melanostoma mellinum*, *Platyichirus discimanus*, *Neocnemodon* sp., *Paragus* sp. and *Syrphus* sp.

Material studied: 6♀ & 1♂; Karnataka: Chikkaballapur, 26.ii.08, ex. Pupa of *Ischiodon scutellaris* (F.), Ankita.

Distribution: Karnataka (new record) and Uttar Pradesh.

II. Eulophidae

4. *Euderus albitarsis* (Zetterstedt)

Entedon albitarsis Zetterstedt, 1838: 430.

Entedon amphis Walker, 1839: 106.-Dalla Torre, 1898: 6 (as *Euderus amphis*).

Euderus albitarsis: Boucek, 1963: 262.

Diagnosis: Female body blackish green. Fore wing with costal cell having two hairs above submarginal vein, stigma with three hairs, submarginal vein with six dorsal bristles; three admarginal hairs present.

Material studied: 2♀ & 2♂; Karnataka: Magadi road, 2.iv.08, sweeping on *Cajanas cajan* L., Rajeshwari.

Distribution: Karnataka (new record) and Uttaranchal.

III. Eupelmidae

5. *Anastatus acherontiae* Narayanan, Subba Rao & Ramachandra

Anastatus acherontiae Narayanan et al., 1960: 171.

Diagnosis: First funicular segment a little longer than pedicel, fore wings with two hyaline areas in middle bearing transparent setae.

Material studied: 1♀ & 1♂; Karnataka: Hessaraghatta, 3.i.08, ex. indet. sphingid eggs on *Cassia auriculata* L., Nagaraja.

Distribution: Karnataka (new record), Delhi and Punjab.

6. *Eupelmus antipoda* Ashmead

Eupelmus antipoda Ashmead, 1900: 342. Lectotype F, Australia-New South Wales, designated by Boucek, 1988.

Eupelmus grotii Girault, 1915: 3. Syntypes, Australia-Northern Territory. Synonym by Boucek, 1988: 560.

Diagnosis: Body of female metallic green, abdomen, axilla and scutellum purplish with a coppery tint;

antennal scape metallic green, rest of antenna black, first funicular segment longest; subequal to pedicel; legs concolorous except articulations and tips of tibia yellowish brown, tarsi whitish, fore wing with a narrow, rather indistinct brownish line across at base of marginal vein; ovipositor valves black at base.

Material studied: 4♂; Karnataka: Chikkaballapur, 13.vi.06, ex. Ootheca of indet. praying mantid, Ankita.

Distribution: New record for Indian subcontinent (India: Karnataka); Australia and New Zealand.

IV. Pteromalidae

7. *Dinarmus basalis* (Rondani)

Entedon basalis Rondani, 1877: 174. Lectotype M, Italy.

Diagnosis: Body dark green with brassy reflection; anterior margin of clypeus shallowly emarginate; antennae yellowish brown, pedicel shorter than first funicular segment; third anellus longest. Fore wing with post-marginal vein longer than marginal vein. Gaster ovate, dorsally flat, less collapsing.

Material studied: 1♂; Uttaranchal: Banbasa, 12.vi.05, ex. pupae of *Callosobruchus chinensis* L., Kuldeep.

Distribution: Uttaranchal (New record), Kerala, Bihar, Delhi, Karnataka, Tamil Nadu, Haryana, Madhya Pradesh and Rajasthan.

8. *Merismomorpha minuta* Sureshan

Merismomorpha minuta Sureshan, 2000: 105. F, M, India, Kerala.

Diagnosis: Lower margin of clypeus angulate; petiole shorter than hind coxa, exposed part of third gastral tergite distinctly longer than fourth; hind margin of first and second tergite incised in the middle.

Material studied: 1♂; Karnataka: Chikkaballapur, 29.xi.06, sweeping on *Cajanas cajan* L., Ankita.

Distribution: Karnataka (New record) and Kerala.

9. *Mesopolobus minutus* Sureshan & Narendran

Mesopolobus minutus Sureshan & Narendran, 2002: 88. F, M, India, Kerala.

Diagnosis: Female head and mesosoma bluish black; gaster brownish black with bluish reflection on first tergite dorsally; anterior margin of clypeus shallowly emarginate, pedicel slightly longer than anelli and first funicular segment combined. Plicae fine, complete, forewing with postmarginal vein 0.5x marginal vein.

Material Studied: 1♂; Karnataka: Chikkaballapur, 10.i.07, sweeping on general vegetation, Ankita.

Distribution: Karnataka (New record) and Kerala.

10. *Oricoruna arcotensis* (Mani & Kurian)

Pachycrepoides arcotensis Mani & Kurian, 1953: 11. F, India (Lost).

Oricoruna arcotensis: Boucek, 1979: 470.

Pachycrepoides coorgensis Mani & Kurian, 1953: 10. M, F, India (Lost).

Diagnosis: Female body black, legs yellowish brown, vertex distinctly coarsely punctate, marginal vein slightly longer than stigmal vein. Gaster as long as mesosoma; petiole shorter than propodeum.

Material studied: 6♂ 2♀; Kerala: Tusharagiri, 25.i.08, ex. *Icerya* sp. on indet. plant, Ankita.

Distribution: Kerala (new record), Karnataka, Bihar, Jharkhand and Tamil Nadu.

11. *Pachyneuron aeneum* Masi

Pachyneuron aeneum Masi, 1929: 229. F, Libya.

Pachyneuron kamathi Mani & Saraswat, 1974: 95. F, India, Dalhousie.

Pachyneuron deccanensis Mani & Saraswat, 1974: 95. India, Poona.

Diagnosis: Antenna with all funicular segments thicker than long; fore wing with marginal vein

about 2x as long as wide; postmarginal vein only little longer than stigmal vein.

Material studied: 1♂; Karnataka: Belgaon, 12.ii.08, Light trap, Babu.

Distribution: Karnataka (new record), Delhi, Himachal Pradesh, Maharashtra and Uttar Pradesh.

12. *Sphегigaster reticulata* Sureshan & Narendran

Sphегigaster reticulata Sureshan & Narendran, 1997: 195. F, India, Kerala.

Diagnosis: Petiole long and slender, second gastral tergite large, 0.6x as long as body of gaster; scutellum with frenum marked only on sides.

Material studied: 1♂; Uttaranchal: Pantnagar, 20.viii.05, Sweep net collection, Kuldeep.

Distribution: Uttaranchal (new record) and Kerala.

13. *Syntomopus carinatus* Sureshan & Narendran

Syntomopus carinatus Sureshan & Narendran, 1999: 84-86. F, M, India, Kerala.

Diagnosis: Body bright metallic green; antenna with scape and pedicel testaceous, remainder pale brown; legs except coxae testaceous. Propodeum with median carina complete; postmarginal vein 2x as long as stigmal vein.

Material studied: 1♂; Uttaranchal: Bhavali, 25.xi.05, Sweep net collection, Kuldeep.

Distribution: Uttaranchal (new record) and Kerala.

14. *Trichomalopsis thekkadiensis* Sureshan & Narendran

Trichomalopsis thekkadiensis Sureshan & Narendran, 2001: 400. M, F, India, Kerala.

Diagnosis: Body bluish green with metallic reflection, propodeum with plicae very sharp, reaching up to tip of nucha, nucha more constricted, median carina strong; first tergite of gaster reaching up to one third length.

Material studied: 1♂; Uttaranchal: Bhavali, 25.xi.05, Sweep net collection, Kuldeep.

Distribution: Uttaranchal (new record) and Kerala.

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