ON A COLLECTION OF CHALCIDOIDEA (HYMENOPTERA: INSECTA) FROM ORISSA, INDIA

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INTRODUCTION

The super family Chalcidoidea (popularly called “Chalcids”) forms one of the largest, species rich and taxonomically difficult group of insects belonging to the Order Hymenoptera (Ants, bees and wasps). As per the current estimates, about 22,000 species of Chalcids have been described and catalogued world wide and recent estimates suggest that there may be more than 500000 species in existence (Noyes, 2003). Chalcids are distributed in all zoogeographical regions of the world and majority of them are parasitoids attacking a large range of insect orders in their various stages of development and groups of species in several families are phytophagous, associated with different plant families. Chalcids attack insect hosts in 15 different orders and are also associated with spider egg sacs and some acari and other arachnids. By parasitizing a wide range of insects, chalcids play a vital in the terrestrial ecosystems in controlling the populations of insect pests. Many species of them have been utilized successfully in biological control programmes all over the world and majority of successful biological control projects of insect pests have used Chalcids to achieve substantial or complete control (Greathead, 1986). The great diversity in their morphology, biological intricacy and specialization combine to make them one of the most marvelously rewarding group of insects to study. Though Chalcids are mainly beneficial, more than 80 species of them are also known to be pests of agriculture. Members of some of the families like Eurytomidae and Torymidae make galls and attack seeds of crop plants.

Jajpur and Kendrapara during the years 2005 to 2007. The specimens were identified following recent literature on Chalcidoea (Boucek, 1988, Gibson et al., 1993, Narendran 1989 (Chalcididae) Narendran, 1994 (Torymidae and Eurytomidae) Sureshan, 2003, Sureshan & Narendran 2004, Boucek and Rasplus, 1991, Graham, 1969 (Pteromalidae). The classification of Chalcidoidea and terminology given by Boucek (1988) is followed in the present work. A total of 45 species of Chalcidoidea belonging to 28 genera and 4 families are reported from the state of Orissa and almost all of them were recorded for the first time from the state. The collections are deposited in Zoological Survey of India, Estuarine Biological Station, Gopalpur-on-Sea, Orissa.

Following abbreviations are used in the text: F-Female, F1-F6-Funicular segments 1 to 6; M-Male, MV-Marginal vein; OOL-Ocellocular distance; PMV-Post marginal vein; POL-Postocellar distance; SMV-Submarginal vein; STY-Stigmal vein; T1-T4-Gastral tergites 1 to 4.

**SYSTEMATIC ACCOUNT**

**Family** PTEROMALIDAE

**Subfamily** PTEROMALINAE

1. *Anisopteromalus calandrae* (Howard)


**Diagnostic characters:** Length 2.1-3.1 mm. Head and thorax bluish black, gaster brownish black; head finely reticulate, POL 1.6x OOL; antennae with scape not reaching median ocellus; pronotal collar not carinate, edge sharp; gaster elongate, as long as or longer than head and thorax combined.

**Material examined:** 1F, Jajpur dist., Krishnadaspur, Mantuka village, 10.iii.07, coll. P.M. Sureshan.

**Distribution:** India: Kerala, Orissa (present record) Tamil Nadu, West Bengal; Pakistan and Myanmar. Cosmopolitan.

**Remarks:** Common parasite of beetles (Coleoptera) associated with stored products. Recorded hosts include *Sitophilus oryzae*, *Sitophilus granarius*, *Tribolium castaneum*, and *Callosobruchus* sp.

2. *Callitula peethapada* Narendran & Mohana


**Diagnostic characters:** Female : Length 1.4-2.1 mm. Head and thorax metallic green with bronzy reflection dorsally; gaster brown with a broad yellowish spot dorsally at base; head 1.4x as wide as thorax, POL 1.6x OOL; anterior margin of clypeus shallowly emarginate, antennal scape reaching well beyond level of vertex, terminal stylus of club long; pronotal collar anteriorly margined; gaster elongate, ovate, 0.84x as long as head and thorax combined.
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Material examined: 1F, Kendrapara dist., Girango village, 12.iii.07, coll. P.M. Sureshan.
Distribution: India: Kerala, Maharashtra, Orissa (present record).

3. Callitula rugosa (Waterston)


Diagnostic characters: Female: Length 1.5-1.8 mm. Head and thorax dark green, almost black, gaster brownish black, antennae brown except scape yellowish brown; POL 1.5x OOL; anterior margin of clypeus slightly emarginate; Forewing with MV 2x STV; gaster as long as thorax, not collapsing, T1 occupying more than 1/3 length, T2 large, occupying 0.2x length of gaster.

Material examined: 1F, Jajpur dist., Panchapandava, 15.iii.07, coll. P.M. Sureshan.
Distribution: India: Kerala, Orissa (present record); Sri Lanka.

4. Callitula travancorensis Sureshan


Diagnostic characters: Length 1.1-1.4 mm. Head and thorax black, gaster mostly yellowish brown; clypeus weakly emarginate; POL 1.7x OOL; terminal stylus of antennal club short. Pronotal collar finely but sharply carinate. Forewing with basal cell closed, speculum narrow, almost closed below. Gaster short, petiole wider than long, T1 reaching more than one third length of gaster.

Material examined: 3F, Puri dist., Ashram, 22.i.06; 1F, Jajpur dist., Panchapandava, 15.iii.07, coll. P.M. Sureshan.
Distribution: India: Kerala, Orissa (present record).

5. Dinarmus acutus (Thomson)


Diagnostic characters: Female: Length 2.1-3.3 mm. Dark metallic blue; anterior margin of clypeus with two small teeth; antennae with third anellus not longer than second, pedicel as long as F1; propodeum with nucha long; forewing with PMV as long as MV; gaster short, non collapsing, 0.7x as long as head plus thorax.

Material examined: 3F, Ganjam dist., Gopalpur, 9.viii.05; 1F, Jajpur dist., Ratnagiri, 17.iii.07; 1F, Udayagiri, 17.iii.07; 1F, Kendrapara, Girango village, 12.iii.07, coll. P.M. Sureshan.
Distribution: India: Kerala, Maharashtra, Orissa (present record); Europe.
Remarks: Common species parasitizing bruchid beetles.
6. *Dinarmus maculatus* (Masi)


**Diagnostic characters**: Female: Length 2.5-3 mm. Metallic blue with bronzy patches on vertex and thorax, gaster darker; anterior margin of clypeus almost straight, not projecting; POL sub equal to OOL; antennal scape reaching up to middle of median ocellus; third anellus as long as first and second combined; forewing with PMV as long as or slightly longer than MV; gaster cordiform.


**Distribution**: India: Kerala, West Bengal, Maharashtra, Orissa (present record); Myanmar.

**Remarks**: Common species, parasitic on Bruchid beetles.

7. *Dinarmus colemani* (Crawford)


**Diagnostic characters**: Length 2.4 mm. Bluish black with metallic reflection, gaster brownish black; head narrow in profile, anterior margin of clypeus almost straight, slightly projecting; antennae with third anellus longest, pedicel little shorter than F1; propodeum with nucha long; forewing with stigma moderately capitatt; PMV little shorter than MV; gaster ovate, slightly collapsing, sub equal to head and thorax combined.

**Material examined**: 1F, Jajpur dist., Panchpandava, 15.iii.07, coll. P.M. Sureshan.

**Distribution**: India: Kerala, Bihar, Delhi, Kamataka, Tamil Nadu, Orissa (present record); Bangladesh.

**Remarks**: Uncommon species, parasitoid of *Callosobruchus chinensis* and other bruchid beetles in stored products.

8. *Metastenus indicus* Sureshan & Narendran


**Diagnostic characters**: Length 1.6-1.8 mm. Black; antennae testaceous; POL little greater than OOL; antennae inserted below centre of face; both mandible with three teeth; anterior margin of pronotal collar not carinate; propodeum with nucha short, finely reticulate, plicae very fine, almost indistinct. Gaster little longer than head plus thorax combined.

**Material examined**: 1F, Puri dist., Kushabadra, 22.i.2006, 6F, 1M, Kendrapara dist., Indupur, Dhumata, 13.iii.07; 1F, Giango village, 12.iii.07, 2M, Jajpur dist., Ratnagiri, 17.iii.07, coll. P.M. Sureshan.
Distribution: India: Kerala, Orissa (present record).

9. Norbanus acuminatus Dutt & Ferriere


Diagnostic characters: Length 2.5-5 mm. Head and thorax bluish black, gaster brown with greenish coppery tinge. Head engraved reticulate, POL almost as long as OOL, anterior margin of clypeus weakly emarginate, antennae with second anellus twice as long as first, clava almost as long as two preceding segments combined; gaster elongate, ovate, 1.2x as long as head plus thorax combined.


Distribution: India: Kerala, West Bengal, Orissa (present record).

Remarks: Parasitoid of *Nupserha bicolor* Thoms. (Coleoptera).

10. Notoglyptus scutellaris (Dodd & Girault)


Diagnostic characters: Length 1.3 mm. Head, thorax and petiole dark green, gaster brown; antennae with scape yellow, remainder brown; clypeus separated from face by obscure sulcus, anterior margin nearly straight, slightly reflexed; prontal collar finely carinate, scutellum coriaceous with distinct discal fovea; propodeum with nucha not bordered by carina anteriorly; gastral petiole length 1.2x width with weak medina carina, gaster length 1.3x width.


Distribution: India: Delhi, Orissa (present record), Kerala, Uttar Pradesh; Italy, Japan, America, Australia.

11. Oniticellobia longigastra Sureshan & Narendran


Diagnostic characters: Length 2.5-5 mm. Body shiny black with greenish gloss; antennae with third anellus as long as first and second combined; POL 1.5x OOL; ocelli moderate, median from lateral by 1.5x of its maximum diameter; gaster long, acuminate, 1.4x as long as head plus thorax combined, epipygium 2.5x as long as broad.


Distribution: India: Kerala, West Bengal, Orissa (Present record).

12. Oxysychus nupserhae (Dutt & Ferriere)


**Diagnostic characters:** Length 3.6 mm. Head and thorax dark blue, almost black, gaster aeneous with coppery shine, head swollen, POL greater than OOL; antennae with third anellus little longer than others, propodeum without median carina; forewing with MV almost half of SMV, STV half of MV, Gaster oval, longer than head plus thorax combined.

**Material examined:** 2F, 3M, Orissa: Kendrapara dist., Near Dangmal (Rajnagar), banks of river Hansina, 11.iii.2007; 1M, Jajpur dist., Balchandrapur, Rukatipato village, near river Virupa, 16.iii.2007; 1F, Krishandasapur, Mantuka village, 10.iii.07, coll. P.M. Sureshan.

**Distribution:** India: Kerala, West Bengal, Delhi, Orissa (present record).

**Remarks:** Parasitic on Cerambycid beetle *Nupserha bicolor* girdling the stem of jute.

13. *Propicroscytus mirificus* (Girault)


**Diagnostic characters:** Length 2.5-4 mm. Head and mesosoma black or bluish black, gaster pale to dark yellow with sides and middle with brown streaks longitudinally, antennae dark brown with scape, pedicel and anelli testaceous; clypeus slightly emarginate anteriorly; POL almost equal to OOL; pronotum distinctly at lower level, notaui indicated only anteriorly; gaster lanceolate, 1.2x as long as head plus thorax combined.

**Material examined:** 2F, 5M, Kendrapara dist., Nr Dangmal (Rajnagar), banks of river Hansina, 11.iii.2007, 2M, Manpur, Indupur, 1F, Dhumata, 13.iii.07, 14.iii.07, coll. P.M. Sureshan.

**Distribution:** India: Andhra Pradesh, Karnataka, Kerala, Maharashtra, Orissa (present record), Uttar Pradesh, South China, East Malaysia, Indonesia, Sri Lanka.

**Remarks:** Parasitic, sometimes secondarily on gall midges in rice and stems of some other grasses. Commonly occurring in paddy fields and adjacent grassy vegetation.

14. *Propicroscytus oryzae* (Subba Rao)


**Diagnostic characters:** Closely resembles *P. mirificus* (Girault) and mainly segregated by the body color. Head and thorax usually metallic green, dorsum usually with distinct green irridescence in certain lights.

**Material examined:** 2M, Jajpur dist., Ratnagiri, 17.iii.07, 1M, Ponosora village, Panchapandava, 15.ii.07, coll. P.M. Sureshan.

**Distribution:** India: Kerala, Orissa, Maharashtra, Andhra Pradesh, Arunachal Pradesh; Sri Lanka, China, Indonesia, Thailand.
Remarks: Parasitic on Orseolia oryzae (Wood-Mason), paddy gall fly. Commonly occurring in paddy field and adjacent grassy vegetations.

15. **Pteromalus puparum** (Linnaeus)

   Diagnostic characters: Length 2.4-3 mm. Dark metallic blue, antennae brown, scape testaceous. POL as long as OOL; temple wide, length 0.6x eye length; anterior margin of clypeus shallowly emarginate; antennae with F1 longer than pedicel, funicular segments longer than wide, propodeum with nucha long, gaster ovate, shorter than head and thorax combined.

   Material examined: 1F, Jajpur dist., Udayagiri, 17.iii.07, coll. P.M. Sureshan.

   Distribution: India: Kerala, Uttar Pradesh, Orissa (present record) Bihar, Assam cosmopolitan.

Remarks: Parasitic in the pupae of various butterflies.

16. **Pteromalus semotus** (Walker)

   Diagnostic characters: Length 1.9-2.8 mm. Dark metallic green with golden reflection, antennae testaceous, POL 1.8x OOL; temple 0.4x as long as eye; anterior margin of clypeus weakly emarginate; antennae with pedicel little longer than F1. Forewing with MV short, 1.1 -1.6x STV, gaster 1.1x as long as head plus thorax.

   Material examined: 2F, Puri dist., Ashram, 22.i.06; 2F, Kendrapara dist., Nr Dangmal (Rajnagar), banks of river Hansina, 11.iii.2007; 9F, 2M, Indupur, Dhumata, 13.iii.07, 9F, Bhuinpur, 14.iii.07, 4F, Girango village, 12.iii.07, 1F, Jajpur dist., Udayagiri, 17.iii.07, Sukuapoda, nr. Lalitagiri, 15.iii.07, 1F, Jajpur dist, Ratnagiri, 17.iii.07, coll. P.M. Sureshan.

   Distribution: India: Kerala, Orissa (present record) cosmopolitan.

   Remarks: Primary or secondary parasite in pupae of various Lepidoptera, less often certain beetles (Curculionidae).

17. **Sphegigaster brunneicornis** (Ferriere)

   Diagnostic characters: Female : Length 2-2.5 mm. Body dark green, almost black. Antennal scape, pedicel and anelli yellow, otherwise reddish brown. Antennae with F1 longer than pedicel, narrowed basally, funicular segments longer than wide except F6 sub quadrate; pronotum distinctly carinate; gaster (without petiole) not longer than thorax.

Distribution: India: Kerala, Maharashtra, Orissa (present record); Sri Lanka.

Remarks: Common species parasitic on pupae of Diptera (Agromyzidae).

18. Sphegigaster stepicola Boucek


Diagnostic characters: Length 1.5-2 mm. Body shiny black, slender; antennae with all funicular segments transverse, F1 shorter than pedicel; gaster oval, shorter than mesosoma, petiole length nearly 3 x width, hind margin of T1 with middle portion truncate or virtually so.


Distribution: India: Kerala, Delhi, Bihar, Uttar Pradesh, Orissa (present record); Austria, Chechoslovakia, USSR, Algeria.

Remarks: Parasitic on Melanagromyza soyae (Soya bean fly), Melanagromyza sp. and Phytomyza sp. (Agromyzidae : Diptera) mining the leaves of Helianthus and Vigna catjang.

19. Toxeumorpha minuta Sureshan & Narendran


Diagnostic characters: Length 1.2 mm. Black. Antennae brown with scape paler; POL 1.4x OOL; antennae inserted along the lower margin of eyes, scape not reaching median ocellus, pedicel longer than F1, third anellus as long as first and second combined; propodeum with plicae complete, callus with black bristles similar as on other areas of thorax; forewing with basal vein setate; gaster with T1 and T2 covering most of the length.


Distribution: India: Kerala, Orissa (present record).

20. Trichomalopsis apanteloctena (Crawford)


Diagnostic characters: Length 1.6-2.5 mm. Lower margin of clypeus rather deeply incised medially, striae on clypeus extending to lower margin of eyes and to malar sulcus; both mandibles
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with four teeth; occipital carina sharp, in posterior-dorsal view strongly curved medially. Antennae with combined length of pedicel plus flagellum length 0.8-0.93x head width in female and 0.95-1.05x in male. Gaster 1.7-2x as long as broad.


**Distribution:** India: Kerala, Tamil Nadu, Karnataka, Orissa (present record); Bangladesh, Korea, Malaysia, China, Japan, Taiwan, Philippines, Vietnam.

**Remarks:** Parasitic on *Cnaphalocrocis medinalis* (Lepidoptera: Pyralidae) and *Pelopidas mathias* (Lepidoptera: Hesperidae) Commonly occurring in paddy field and adjacent grassy vegetation.

21. **Trichomalopsis nigra** Sureshan & Narendran


**Diagnostic characters:** Length: 1.5-2 mm. head and thorax black with little metallic reflection. Pronotal collar weakly but sharply margined except at sides; antennae with scape as long as eye, pedicel plus flagellum 0.84x head width; gaster with T1 reaching almost half length of it; temple narrow, length 0.4x eye length.


**Distribution:** India: Kerala, Orissa (present record).

**Remarks:** Associated with paddy field and grasses.

22. **Trichomalopsis ovigastra** Sureshan & Narendran


**Diagnostic characters:** Length 1.8-2.4 mm. Dark brownish green with metallic reflection; temples rounded; pronotal collar regularly margined even on sides; forewing with PMV as long as MV; median area of propodeum broad, 1.3x as broad as long, plicae not very sharp. Gaster oval, ovipositor sheaths strongly protruding.


**Distribution:** India: Kerala, Orissa (present record).

23. **Trichomalopsis thekkadiensis** Sureshan & Narendran


**Diagnostic characters:** Length 1.6-2.7 mm. Bluish green with metallic reflection. Temple strongly converging behind eyes; pronotai collar irregularly margined; propodeum with plicae
very sharp, reaching up to tip of nucha, nucha more constricted, median carina strong; T1 of gaster reaching only one third length.

*Material examined*: 1F, Puri dist., Ashram, 22.i.06, coll. P.M. Sureshan.

*Distribution*: India: Kerala, Orissa (present record).

Subfamily **SPALANGINAE**

24. *Spalangia nigroaenea* Curtis


*Diagnostic characters*: Female: Length: 2.9-3.8 mm. Black, often with brassy lusture; head distinctly longer than broad (in male only as long as broad), umbilicately punctate with interspaces about as wide as punctures; pronotum with an isolated crenulate cross-line consisting of close punctures in front of hind margin, disc of collar more or less smooth, impunctate, collar bordered anteriorly by a narrow groove, setting off ridge like margin; gaster petiole expanded anteriorly.


*Distribution*: India: Delhi, Karnataka, Maharashtra; Pondicherry; cosmopolitan.

*Remarks*: Parasitoid of fly puparia, especially of the synanthropic species.

25. *Spalangia simplex* Perkins


*Diagnostic characters*: Black. Pronotal collar anteriorly rounded. Mesoprescutum with a distinct cross-line (similar to those on pronotum and scutellum) and a round fovea behind it on disc.


*Distribution*: India (Uttar Pradesh, Tamil Nadu, Orissa (present record); East Africa, Malaysia.

Subfamily **DIPARINAE**

26. *Netomocera nigra* Sureshan & Narendran


*Diagnostic characters*: Length 1.73-2.36 mm. Black, gaster ventrally brown. POL 3.5x OOL; antennal toruli at the level of anterior margin of eyes, funicular segments of equal length; club broad, as long as four preceding segments combined; forewing with MV 2x as long as PMV and 3x STV; gaster (without petiole) short, oval, 1.7x as long as its maximum width; petiole longitudinally rugose, as long as broad, T1 exceeding well beyond middle of gaster.


*Distribution*: India: Kerala, Orissa (present record).
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Subfamily HERBERTIINAE

27. *Herbertia indica* Howard


*Diagnostic characters:* Female: Length 1.1-1.5 mm. Black, metallic violaceous reflection on face and gaster dorsally; legs whitish except coxae, trochanter and femora bluish black; head and thorax granulate reticulate; antennae inserted on lower face, scape not reaching middle of face, extending 0.75x eye height, F1 shorter than pedicel, club as long as three preceding segments combined; forewing with MV slightly greater than 2x as long as PMV; gaster broad and short, T1 covering most of the gaster.

*Material examined:* 1F, Puri dist., Ashram, 22.i.06, coll. P.M. Sureshan.

*Distribution:* India: Madhya Pradesh, Bihar, Kerala, Karnataka, Maharashtra, Orissa (present record); Sri Lanka.

*Remarks:* Uncommon species parasitic on leaf mining dipterous larvae.

Subfamily PANSTENONINAE

28. *Panstenon oxylus* (Walker)


*Diagnostic characters:* Length 1.6-2.4 mm. Metallic green, head brownish with slight violaceous tinge, finely reticulate, anterior margin of clypeus truncate; eyes large; malar space about two fifths the length of an eye; pronotal collar weakly margined or not margined, notauli tending to be less slightly impressed; frenal line of scutellum fine and weak; gaster usually sunken dorsally, petiole without hairs, 2x as long as broad.


*Distribution:* India: Orissa (Present record), China, Finland, Japan, Korea, Sweden, United Kingdom.

Subfamily ORMOCERINAE

Tribe SYSTASINII

29. *Systasis dalbergiae* Mani

Diagnostic characters: Length 1.5-1.8 mm. Body bright metallic green, antennae dark brown; OOL 1.25x ocellar diameter, face rugously punctate between scape and inner orbital border, just below antennae transversely reticulate; both mandibles tridentate; antennae with pedicel much longer than F1, all funicular segments sub equal.

Material examined: 1F, Kendrapara dist., Indupur, Dhumata, 13.iii.07, coll. P.M. Sureshan.

Distribution: India: Karnataka, Orissa (present record).

30. Systasis dasyneurae  Ahamd & Mani
1939. Systasis dasyneurae Mani. in Ahmad & Mani, 1939: 535-537. India (Haryana).

Diagnostic characters: Length 1.75-2.0 mm. Bright metallic green. Antennae with pedicel slightly longer than first funicular segment, funicular segments sub equal; left mandible tridentate, right with an additional tooth between second and third; propodeum very short, almost hidden by scutellum medially; forewing hyaline, about twice as long as broad, MV nearly twice STV, PMV nearly one and one fourth to twice STV.

Material examined: 1F, Jajpur dist., Panchapandava, 15.iii.07, coll. P.M. Sureshan.

Distribution: India: Uttar Pradesh, Madhya Pradesh, Orissa (present record).

Family CHALCIDIDAE
Subfamily CHALCIDINAE

31. Brachymeria bengalensis (Cameron)

Diagnostic characters: Hind femur red (often with black patch of varying size on outer disc) with a yellow spot or patch at apex. Apex of scutellum distinctly and well emarginate with dense silvery pubescence.


Distribution: India: Assam, Delhi, Rajasthan, Uttar Pradesh, West Bengal, Orissa (present record); all over Oriental region and Japan.

Remarks: A common Brachymeria species parasitic on Earias vietlla (= fabia) Fabricius. (Lepidoptera: Noctuidae).

32. Brachymeria euploeae (Westwood)

Diagnostic characters: Apex of scutellum rounded or entire or at the most very weakly or slightly emarginate; hind femur always black with apex yellow. Antennal club more than twice preceding segment; gaster globose or subglobose.

Material examined: 1F, Orissa, Jajpur dist., Rainagiri, 17.i.2007, coll. P.M. Sureshan.
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Distribution: India: W. Bengal, Uttaranchal, Tamil Nadu, Kerala, Karnataka, Orissa (present record); North Borneo, Sumatra, Java, and Philippines.

Remarks: Common Brachymeria species parasitizing various Lepidoptera.

33. Brachymeria minuta (Linnaeus)


Diagnostic characters: Hind femur not more than one and four fifth times as long as wide with a distinct tooth at inner basal side, dorsal margin not angulate, usually black with apex yellow.

Material examined: 1F, Jajpur dist., Ratnagiri, 17.iii.07, coll. P.M. Sureshan.

Distribution: India: Karnataka, Sikkim, Tamil Nadu, Uttar Pradesh, W. Bengal, Orissa (present record); cosmopolitan.


34. Kriechbaumerella rufimanus (Walker)


Diagnostic characters: Pre-orbital carina distinct, post orbital carinae indistinct, genotemporal furrow absent; apex of scutellum bilobed; gaster shorter than thorax, first tergite smooth and shiny in female, in male microsculptured or shagreened. Hind femur black, liver brown or testaceous.

Material examined: 1F, Jajpur dist., Ratnagiri, 17.iii.07, coll. P.M. Sureshan.

Distribution: India: Kerala, Uttar Pradesh, Rajasthan, Tamil Nadu, Karnataka, Assam, Orissa (present record); Nepal, Sri Lanka, Indonesia, Pakistan, Java, Philippines.

Subfamily DIRHININAE

35. Dirhinus anthracia (Walker)


Diagnostic characters: Head below apex of each horn without distinct additional tooth, anterior and dorsal (inner) edge of horn converging in acute to right angle, anterior and lateral edges forming acute angle of about 60°; antennae fore and mid legs testaceous or rufous; antennae of female thick; scutellum anteriorly with a median impunctate strip; striae on first gastral tergite reaching only one-third length.

Material examined: 1F, Jajpur dist., Ponosora village, 15.iii.07; 1F, Kendrapara dist., Potamundi, 11.iii.07, 1M, Ganjam dist., Gopalpur, 26.08.05, coll. P.M. Sureshan.

Distribution: India: Madhya Pradesh, Manipur, Punjab, Tripura, Uttar Pradesh, Orissa (present record); Oriental region. Africa, Australian and Mediterranean region.

Remarks: Common species parasitic on various Diptera and Lepidoptera.
36. *Dirhinus bakeri* (Crawford)


*Diagnostic characters:* Forewing pubescence reduced especially with no hairline recurrent from stigmal or if a hair line partly developed, then petiole at least slightly transverse, in female area of four carinae on petiole 1.5-2 x as broad as long, dense striae on first tergite forming broad area with convex hind margin and taking up more than quarter of tergite length.


*Distribution:* India: Kerala, Orissa (present record), Uttar Pradesh, Karnataka, T. Nadu, Sikkim); Sri Lanka, Malaysia, Philippines and Japan.

*Remarks:* Common parasite of various Diptera and Lepidoptera.

Subfamily EPITRANINAE

37. *Epitranus albipennis* Walker


*Diagnostic characters:* Body mainly red brown, eyes large, in dorsal view maximum diameter about two-third the breadth of vertex; POL clearly more than twice OOL; hind femur behind basal tooth with comb of at lest 20 narrow regular teeth.

*Material examined:* 2F, Jajpur dist., Ratnagiri, 17.iii.07, coll. P.M. Sureshan.

*Distribution:* India: Uttar Pradesh, Kerala, Orissa (present record), W. Bengal, Andhra Pradesh); Malaysia, Indonesia, S. China, Taiwan, Philippines, Borneo and Japan.

*Remarks:* Parasitoid of Pyralid moth.

38. *Epitranus erythrogaster* Cameron


*Diagnostic characters:* Malar space hairy, frons with fine structure, scrobal part mainly reticulate to finely cross striate, clypeal roof more pilose, more extensively concave, antennae long and slender, thorax black.

*Material examined:* 2F, Jajpur dist., Panchapandava, 15.iii.07, coll. P.M. Sureshan.

*Distribution:* India : Karnataka, Kerala, Maharashtra, Tamil Nadu, Uttar Pradesh, West Bengal, Orissa (present record); All over Oriental region, S, Japan.


39. *Epitranus observator* Walker

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**Diagnostic characters:** Head red, thorax black, pubescence on thorax longer and denser; prontal collar carina broadly interrupted, head stout with almost round temples.

**Material examined:** 1F, Ganjam dist., Gopalpur, 20.viii.05, coll. P.M. Sureshan.

**Distribution:** India: Bengal, Orissa (present record), Africa, Sri Lanka, Thailand and Malaysia.

**Family** TORYMIDAE

**Subfamily** TORYMINAE

40. *Podagrion charybdis* Fernando


**Diagnostic characters:** Length 3.1-3.3 mm. Head and thorax metallic greenish blue; antennae testaceous, club brown, almost equal to preceding five segments combined; propodeum with an inverted V shaped carina, base of V not reaching base, join with irregular longitudinal rugae at the base; hind femora with 6 teeth, second tooth small, forewing with speculum and basal cell closed below, gaster including petiole slightly longer than thorax and 0.81x as long as head plus thorax, ovipositor 2.63x as long as gaster and 1.2x length of body.

**Material examined:** 44F, 12M, Kendrapara dist., Dhumata village, Idupur, ex. Ootheca of mantid *Tenodera fasciata* (Olivier), coll. P.M. Sureshan, 13.iii.2007.

**Distribution:** India: (Orissa) Sri Lanka.

**Remarks:** Reported for the first time from India after the original description from Sri Lanka (Sureshan, 2009).

41. *Odopoia reticulata* Sureshan


**Diagnostic characters:** Length 2.35 mm. Black with bright metallic greenish blue reflection on face and thorax; pronotum distinctly raised reticulate, mesoscutum, scutellum (except for a central oval shiny spot posteriorly) moderately reticulate; Forewing with a narrow cross band at stigmal area. Propodeum smooth, median area raised, with distinct median carina and several irregular longitudinal carinulae on either side, gaster with hind margin of T1 and T2 distinctly incised in the middle.


**Distribution:** India (Orissa).

42. *Torymoides anamalaianus* (Mani & Kurian)


Diagnostic characters : Female length : 2 mm scape, thorax, gaster, coxae, femora metallic green, length of ovipositor equal to thorax, POL 2x OOL, first four funicular segments of antenna width and length sub equal; ovipositor equal to length of gaster.


Distribution : India : Uttar Pradesh, Kerala, Tamil Nadu, Orissa (present record).

Remarks : Sureshan (2007) reported the species first time from Orissa.

43. *Palmon orchesticus* (Masi)


Diagnostic characters: Length 3.1 mm. Head and thorax metallic green with thorax darker, hind coxa yellow with blackish patch on dorsal side of basal half. Antennal club length exceeding preceding 5 or 6 segments but not exceeding 7 segments; hind femur with 8-9 teeth (7 teeth reported) 4 large primary teeth and 4 or 5 smaller secondary teeth, forewing with MV not longer than 3x PMV, Ovipositor 3 to 5x longer than the body.


Distribution : India : Kerala, Andhra Pradesh, Orissa; Sri Lanka, Taiwan.

Remarks : Sureshan (2007) reported the species first time from Orissa.

Family EURYTOMIDAE
Subfamily EURYTOMINAE

44. *Acantheurytoma spinifera* Cameron


Diagnostic characters : Length : 4.3 mm. Black, fore and mid femora, fore and mid tibiae, all trochanters reddish brown; maximum diameter of eye 2-3x malar space in profile; anterior width of head 1.62x distance between front ocellus and clypeal margin; frons concave, preorbital carinae profoundly raised, running up to vertex, vaguely joining each other behind front ocellus, front ocellus situated inside scrobe. Gastral petiole shorter than half length of hind coxa, with a tooth on either side on dorsal region.

Material examined : 1F, Kendrapara dist., Indupur, Dhumata, 13.iii.07, coll. P.M. Sureshan.

Distribution : India : Kerala, Orissa (present record), Tamil Nadu, East Malaysia (N. Borneo).

Remarks : Parasitic on sphecid wasp larva.
SURESHAN: On a collection of Chalcidoidea (Hymenoptera: Insecta) from Orissa, India

Subfamily RILEYINAE

45. Burasium naso Boucek


Diagnostic characters: Length 3-4.2 mm. Body reddish brown with antennae distally, gaster dorsally beyond middle of T4, all femora and tibiae darkened or infuscate. Forewing with two conspicuous infuscations one at parastigma and another attached to PMV and STV; inter antennal projection forming round headed tooth projecting abruptly between upper margins of antennal sockets, gaster with T4 with a deep transverse depression just behind base.

Material examined: 1F, Ganjam dist, Gopalpur, 16.viii.05, coll. P.M. Sureshan.

Distribution: India: Delhi, Orissa (present record), Pakistan and Thailand.

Remarks: Only known from Delhi (Type locality) and Orissa in India.

SUMMARY

The present paper deals with the report of 45 species of Chalcidoidea (Hymenoptera) belonging to 28 genera under 4 families (Pteromalidae, Eurytomidae, Chalcididae and Torymidae) from Orissa. The study is based on specimens collected from the coastal districts of South Orissa during the year 2005-07.

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REFERENCES


