DESCRIPTIONS OF SIX NEW AND RECORDS OF EIGHT KNOWN SPECIES OF ENCYRTIDAE FROM INDIA (HYMENOPTERA: CHALCIDOIDEA)

MOHAMMAD HAYAT, S. M. A. BADRUDDIN & F. R. KHAN
Department of Zoology, Aligarh Muslim University, Aligarh 202002 India
E-mail: mohd_hayat@rediffmail.com

ABSTRACT. Six new species of Encyrtidae are described. These are Ooencyrtus utpradianus Hayat, Sakencyrtus albiclavus Hayat, Rhopus rymma Hayat & F. R. Khan, Rhopus beatus Hayat & F. R. Khan, Paraphaenodiscus ramamurthyi Hayat & Badruddin, and Xenostryxis bella Hayat & Badruddin. Eight known species are recorded of which Prochiloneurus clavatus (Girault) and Psyllaephagus minor Prinsloo are new for the Indian fauna.

Key words: Hymenoptera, Encyrtidae, new species, records.

Introduction

During a recent survey (2005-2006) for parasitoids in Himachal Pradesh, Pathankot (Punjab) and Uttar Pradesh, we collected a large number of encyrtid species. Records of a majority of the known species collected was recently reported by Hayat et al. (2007). In this paper we record eight species and describe six new species. Specimens of some of the known species recorded here were received from the Project Directorate of Biological Control, Bangalore.

The terminology and abbreviations given in Hayat (2006) are followed here. Unless noted otherwise, the relative measurements are from the holotypes. The holotypes of the new species are deposited in the National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi (NPCI), and paratypes and other material are in the Department of Zoology, A.M.U. Aligarh (ZDAMU).

1. Coagerus bouceki Noyes & Hayat


This species was described from specimens collected in Coimbatore (Tamil Nadu) and Bangalore (Karnataka). The record of the same species from Uttar Pradesh extends its distribution into north India.

2. Encyrtus infelix (Embleton)


3. Gentakola trifasciata (Saraswat)

Specimen examined: INDIA: Karnataka: Bangalore: Hoskote, 1♀, 15.xii.2006 (Ankita) (In ZDAMU).
4. **Plagiomerus bangaloriensis** Shafee, Alam & Agarwal

*Specimen examined:* INDIA: Karnataka: Bangalore: Hoskote, 1♀, 15.xii.2006 (Ankita) (In ZDAMU)

5. **Prochiloneurus clavatus** (Girault)

*Achrysopephagus clavatus* Girault, 1915: 89. Australia, Qld.: Gordonvale (Cairns) (Queensland Museum, Brisbane).


This species is extremely close to *P. albifuniculus* (Hayat et al.), but can be distinguished by the absence of a brown streak in basal half of hind tibia, and the fore wing disc distad of infuscation with uniformly colored setae. (*In albifuniculus*: hind tibia with a brown streak in basal half; fore wing distad of infuscation distinguishable into two areas, a semicircular area with transparent setae adjacent to the infuscation, and this to apex with brownish setae.)

The above specimens are identified on the basis of study (by MH) of the slide mounted parts of the holotype and the notes and figures provided by Dr. E.C. Dahms (formerly of the Queensland Museum).

This is the first record of *P. clavatus* from India.

6. **Psyllaephagus minor** Prinsloo


*Psyllaephagus minor* Prinsloo, 1985: 283. Replacement name for *parvus* Prinsloo.


The above female is determined as *parvus* Prinsloo (= *minor* Prinsloo) with some hesitation. It has the ovipositor, as seen through the derm, arising from near base of gaster, and the IIIrd valuae subequal in length to mid tibial spur (*In minor*, as described by Prinsloo (1981), the ovipositor as seen through the derm, is about two-third length of gaster, and the third valuae1.4-1.7x as long as mid tibial spur). We do not consider it desirable to regard our specimen as distinct from the South African material on the basis of a single female. The males, however, are indistinguishable from the males of *minor*.

This is the first record of *P. minor* from India.

7. **Psyllaephagus phylloplectae** Sushil & Khan

*Specimens examined:* INDIA: Karnataka: Bangalore: Hoskote, 5♀, 1♂, (1♀ and 1♂ antenna on slide, EH.1173), 6.x.2006 (Kaumud Tyagi) (2♀, 1♂ retained in ZDAMU).

Because of the erroneous description, the species was placed in the wrong key couplet by Hayat (2006). The mid coxae are basally brown, and the hind coxae completely dark brown, metallic greenish with raised reticulations. It runs to *P. macrohomotomae* Singh & Agarwal (1993), but differs especially in the structure of the male antenna.

This species was described from material reared from *Phyllopecta hirsuta* in Nainital (formerly Uttaranchal, now Uttarakhand).
8. **Ruanderoma sankarani** Noyes & Hayat


This species was originally described from females collected in Karnataka and one male in Himachal Pradesh.

**Descriptions of new species**

1. **Ooencyrtus utpradianus** Hayat, sp. nov. (Figs. 20-23)

*Female:* Length, holotype, 0.80 mm (0.69–0.91 mm). Head, mesothoracic dorsum and TI of gaster shining bluish-green; pronotum, propodeum, pleura, and tegulae dark brown, largely with violet shine. Antenna with radicle dark brown, rest of antenna yellowish white to yellow; scape in basal half with light brownish infuscation; basal two-thirds in upper half of pedicel brown; clava pale brown to brownish yellow. Wings hyaline. Legs, including fore coxae, pallid; mid and hind coxae dark brown.

Head. Frontovertex slightly less than one quarter of head width; occipital margin narrow, but not sharp; ocellar triangle with apical angle slightly acute; posterior ocellus touching eye margin, but removed from occipital margin by at least 3 diameters of an ocellus, the distance of posterior ocellus to occipital margin is greater than distance to anterior ocellus; eyes, with head in profile, longer than high (15:13). Mandible (Fig. 20) with two teeth and a small truncation. Antenna as in Figure 21. Frontovertex with raised reticulate sculpture, sides of scrobes and malar space with elongate reticulate sculpture. Eyes with translucent white setae, each about as long as diameter of a facet; setae on frontovertex translucent white, long; setae between toruli and mouth margin as in Figure 20. Relative measurements (holotype): Head dorsal width (length), 23 (15); frontovertex width, 5; POL, 2.5; OCL, 4; AOL, 3; eye length, 14; malar space, 9.

Thorax subequal in length to gaster (27:28); mesoscutum with regular, slightly raised reticulate sculpture; axillae with transversely drawn out cells; scutellum with sculpture much shallower than that on mesoscutum, medially with very fine, hardly visible, penta-hexagonal cells which become almost faint in posterior third, and sides with slightly more prominent, longitudinally drawn out cells (Fig. 22); setae on mesoscutum translucent white, except for an apical pair which is pale brown; on axillae and scutellum pale brown; propodeum with two long translucent white setae on each side distal of spiracles. Fore wing venation and basal setation as in Fig. 23; note the posteriorly closed linea calva and the very small asetose area at base. Relative measurements (holotype): Mesoscutum length (width), 12 (20); scutellum length (width), 11.5 (12.5). (From paratype, slide): Fore wing length (width), 86.5 (32.5); venation from base, 42.5. Hind wing length (width), 64 (12); marginal fringe length, 6.

Gaster. Relative measurements (paratype slide): TVII length (width), 20 (32.5); ovipositor length, 35; IIIrd valvula length, 8.25 [Lengths: mid tibia, 30; mid basitarsus, 10.5; mid tibial spur, 8].

*Male:* Unknown.

Badruddin and F.R. Khan); Uttar Pradesh: Gonda: Porter Ganj, 1♀ (on slide, EH.1149), 7.x.2006 (F.R. Khan). Holotype in NPCI; three paratypes in ZDAMU; one carded para-
type from Lakhimpur in the Natural History Museum, London (BMNH).

Host: Unknown.

Distribution: India: Uttar Pradesh.

Comments: Hayat (2006) reviewed the encyrtid fauna of India. He recognized 29
species of Ooencyrtus Ashmead from India. Recently, Hayat & Khan (2007, in press) de-
scribed a further 4 species from India and recorded material pertaining to 7 species. In
this paper, one more new species of Ooencyrtus is described.

Because of the slightly flattened thorax, antero-posteriorly elongate head dorsum,
only slightly convex posterior margin of mesoscutum overlapping the axillae mesally, the
mesopleuron narrowly touching the base of the gaster, and body color, I was initially not
sure whether these specimens should be placed in Ooencyrtus or Helegonatopus Perkins.
Therefore, one specimen was sent to Dr. J. S. Noyes (BMNH), and he suggested that al-
though these two genera appear to be very closely related, the specimen is best placed in
Ooencyrtus.

In the key to the Indo-pacific species (Huang & Noyes, 1994), the new species runs
to O. erebus Huang & Noyes (key couplet, 32), but differs in several characters: thoracic
dorsum flattened; frontovertex, mesothoracic dorsum and TI of gaster bluish-green; fronto-
vertex at least slightly less than one-fourth of head width; mandible with truncate part
smaller; lateral third of scutellum with elongate reticulate sculpture, and median third
with very shallow regular reticulate sculpture that fades apically; ovipositor 1.16x as
long as mid tibia. (In erebus: Thoracic dorsum normally convex; frontovertex blackish,
weakly shining purplish; mesoscutum shining green or blue–green, but scutellum coppery
purple with margins and apex metallic green; frontovertex at least slightly broader than
one–fourth of head width; mandible with truncate part relatively broader; scutellum with
shallow imbricate sculpture basally, but becomes shallower towards sides and apex and
laterally more elongate; ovipositor 1.3x as long as mid tibia.)

2. Paraphaenodiscus ramamurthyi Hayat & Badruddin, sp. nov. (Figs. 9, 10)

Female: Length, holotype: 1.13 mm. Body largely brownish yellow, especially
mesoscutum and scutellum; tegulae yellow in basal third, brown in apical two-thirds;
gaster in about basal half dark brownish; tips of mandibles dark brown. Antennal radicle,
scape and pedicel brownish yellow; pedicel dorso-laterally, except apex, brown; F1-3
brown; F4-6 white, clava black (Fig. 9). Fore wing infuscate with basal fifth pale infus-
cate to subhyaline, and a small apical area hyaline. Legs, including coxae, testaceous yel-
low, indistinctly washed pale brown.

Head about 3.4x as broad as frontovertex width; occipital margin slightly concave
between eyes and sharp to behind eyes; eyes separated from occipital margin by about
one-facet diameter; ocellar triangle with apical angle about a right angle; POL, 7; OOL,
1.4; OCL, 3.75; AOL, 6; frontovertex with fine, polygonal, raised reticulate sculpture, the
cells smaller than the diameter of (the small) anterior ocellus; setae on head short. An-
tenna as in Fig. 9. Relative measurements: Head dorsal width; 40.5; frontovertex width
(length), 12 (23); head frontal height, 36.5; head lateral length, 20; eye length, 25; malar
space, 12. Antennal scape length (width), 16 (5); pedicel length, 5; funicle length, 20.5;
clava length, 13.
Thorax with mesoscutum and scutellum with fine, raised polygonal reticulations, slightly more prominent than on frontovertex; setae dark brown; setae on sides of propodeal spiracles silvery white; apical flange of scutellum covering propodeum medially. Fore wing venation and setation as in Fig. 10. Relative measurements: Thorax length, 40; mesoscutum length (width), 13 (33); scutellum length including flange (width), 21.5 (20). Fore wing length (width); 77.5 (34.5), width of apical hyaline area, 7.5.

Gaster as long as thorax and only slightly wider than long (40:41.5); ovipositor not exserted. TVII length (width), 24 (32).

**Male:** Unknown.

**Holotype:** ♀ (with one antenna, one fore wing and one fore leg minus coxa, all of right side, on slide, EH.1147), INDIA: Himachal Pradesh: Hamirpur: Anu Kalan, 1.vii.2006 (S.M.A. Badruddin and F.R. Khan). The holotype deposited in NPCI.

**Host:** Unknown.

**Distribution:** India; Himachal Pradesh.

The species is named after Dr. V. V. Ramamurthy, of the Division of Entomology, I.A.R.I, New Delhi, India.

**Comments:** The only species that appears to come close to the new species is the Indian *P. indicus* Singh & Agarwal (1993; see also Hayat, 2006), but that species was described from a brachypterus specimen. It has the funicle segments, except F6, longer than broad, and the head about 3.0x as broad as frontovertex.

3. **Rhopus beatus** Hayat & F. R. Khan, sp. nov. (Figs. 11-13)

**Female:** Length, holotype, ca 0.98 mm. Body and legs pale yellow, except as follows: malar space and mouth margin pale brown; anterior fifth or so of mesoscutum, scuto-axillar sutures, tegulae in distal half, and posterior margin of scutellum, metanotum (lightly), and propodeum completely brown; gaster especially last 2-3 terga and sides narrowly of these terga, pale infuscate brown; last segment of tarsi pale brown; tips of mandibles reddish brown. Antennal radicle yellow; scape yellow-brown, dorsally brownish; pedicel brownish, dorsally dark brown; funicle and clava dark brown.

Head (Fig. 11) densely setose; vertex with fine strigose reticulations; frons appears smooth; malar space with fine longitudinally drawn-out cells; eyes anteriorly converging so that the width of face anteriorly is much less than the width of frontovertex at anterior ocellus (16:19); eyes densely setose, setae pale, each seta as long as a facet. Antenna (Fig. 12) with ventral length of pedicel nearly as long as F1 and 2 combined; F1 slightly longer than broad, other segments slightly broader than long. In the paratype, F1 only 1.3x as long as F2 and F2-5 quadratic. Relative measurement (slide): Head frontal width, 31.75; head frontal height, 25.5; frontvertex width at anterior ocellus, 19; eye length, 16.5; malar space, 8.5. Antennal scape length (width), 11.5 (4); pedicel length, 5.5; funicle length, 19; clava length, 13.

Thorax with mesoscutum and scutellum with very fine reticulations, not clearly visible at 400x; scutellum with at least 30 pairs of setae; sides of propodeum with numerous setae; setae on thoracic dorsum pale. Fore wing veins and setation as in Fig. 13; linea calva interrupted by 2-3 setae. Relative measurements (slide): Thorax length, 37; mesoscutum length (width), 16 (25); scutellum length (width), 15 (18). Fore wing length
(width), 70 (29); venation length from base, 40; marginal fringe length, 3.25; hind wing length (width), 56 (9.5); marginal fringe length, 5.

Gaster (appears distended). Relative measurements (slide): TVII length (width), 26.5 (24); ovipositor length, 16 [Lengths: mid tibia, 24; mid basitarsus, 6; mid tibial spur, 6].

**Male:** Unknown.


The following specimen is conspecific with the new species, but is not designated as a paratype: INDIA: Bihar, Gaya, Division, 1♀ (on slide, EH.614), 22.x.1992 (S.B. Zeya).

**Host:** Unknown.

**Distribution:** India: Bihar, Himachal Pradesh, Uttar Pradesh.

**Comments:** This species appears very close to *notius* Prinsloo (1989) and *milo* Noyes & Hayat (1994). It differs from *notius* in the anteriorly converging eyes, eyes 1.94x as long as malar space, F2-6 each slightly broader than long. (In *notius*: eyes not converging anteriorly; eyes 1.7x as long as malar space; F2-6 each at least slightly longer than broad or quadratic). From *milo* it differs in the anteriorly converging eyes; relatively shorter ovipositor compared to mid tibial length and F2-6 slightly broader than long to at most quadratic; linea calva interrupted by 2-3 setae. (In *milo*: eyes not converging anteriorly; ovipositor 0.52x of mid tibia, and F2-6 slightly but distinctly longer than broad; linea calva not interrupted).

4. **Rhopus rymma** Hayat & F. R. Khan, sp. nov. (Figs. 14-19)

**Female:** Length, holotype, ca. 0.80 mm. Body pale yellow, head with malar space and mouth margin pale brown; thorax washed with very pale brown especially on pronotum and sides of propodeum, dark brown mark on sides of scutellum in about posterior half corresponding with dark brown internal plate; gaster washed with pale brown on distal terga and laterally from TIII onwards. Tips of mandibles reddish brown. Antennal scape and pedicel brown, ventrally pale brown; funicle and clava brown to dark brown. Wings hyaline; humeral plate and veins of fore wing pale brown. Legs yellow. The para-type has the body relatively more liberally marked with pale brown, also on anterior part of mesoscutum.

Structural details as in figures and the following measurements.

Head setation as in Fig. 14; sculpture visible with difficulty even with phase-contrast attachment, but on head appears penta-hexagonally reticulate with wide-meshed cells. Antenna as in Figs 15 and 16. Relative measurements (slide): Head frontal width (height), 24.5 (20.5); frontovertex width at anterior ocellus, 19; eye length, 11; malar space, 8. Scape length (width), 7 (2.75); pedicel length, 4.25; funicle length, 13; clava length, 11.5.

Thorax with pronotum with cells transversely drawn out; on mesoscutum and scutellum the cells elongate, those on mesoscutum somewhat oblique; mesoscutum with about 24 setae; scutellum with 5 pairs in addition to 3+3 setae along posterior margin (Fig. 17). Fore wing venation and setation as in Fig. 18. Relative measurements (slide): Thorax...
length, 31; mesoscutum length (width), 14.5(20); scutellum length (width), 11.5 (14). Fore wing length (width), 64 (22); marginal fringe length, 8.5; hind wing length (width), 54 (8); marginal fringe length, 8.

Gaster: A character that has not been seen in other species, is the presence of about 20 (apparently) glands on gastral terga. These ‘glands’ are arranged irregularly and appear to be absent on TI and TVII (Fig. 19). Relative measurements (slide): gaster length, 48; ovipositor length, 13. [Lengths: mid tibia, 18.5; mid basitarsus, 3.75, mid tibial spur, 4].

Variation: Not much in the two specimens studied, but the longitudinal sensilla on funicle segment vary; in the right antenna of the holotype, F1-6 with sensilla, the left antenna and those of the paratype has sensilla on segments 3-6.

Male: Unknown.

Holotype: ♀ (on slide, EH.1115), INDIA: Uttar Pradesh: Lakhimpur (Kheri): Imami Purwa, 27.ix.2006 (S.M.A. Badruddin and F.R. Khan). Paratype: 1♀ (on slide, EH.1114), with data same as holotype. Holotype deposited in NPCI; the paratype in ZDAMU.

Host: Unknown.

Distribution: India: Uttar Pradesh.

Comments: This species runs to R. mymaricoides in the key to the Oriental species given by Noyes & Hayat (1994), but differs from that species in several characters such as body color, the fore wing with a distinct linea calva, shorter marginal fringe, and different distal veins of the fore wing; normally large eyes with the malar space shorter than eye length. (In mymaricoides: eyes short, not longer than malar space; F1 at least as long as broad and as long as F6; fore wing more than 3x as long as broad; marginal fringe at least 0.5x of wing width; marginal vein virtually absent, the postmarginal and stigmal veins emitted from the apex of submarginal vein; linea calva obscure, setae on disc including those behind venation very sparse).

5. Sakencyrtus albiclavus Hayat, sp. nov. (Figs. 1-3)

Female: Length, holotype, 1.07 mm. Head golden yellow; inter-torular area largely pale brown; thorax yellow; pronotum with a median brown streak in anterior half; mesoscutum except mesally, largely white; scutellum with pale brown on sides and with a brown streak in anterior half; propodeum with a median brown streak; gaster yellow, with dark brown on sides of TI-TVI and adjacent to cercal plates, otherwise large brownish yellow to brownish with light metallic brony violet shine. Antennal radicle and scape pale yellow, the latter becoming white distally; pedicel and F1-5 dark brown; F5 apically whitish; F6 and clava white. Brachypterous form, the shortened fore wing hyaline (Fig. 3). Legs, including coxae, yellow, with faint pale brown suffusions along margins of femora; fore tarsi brown.

Structurally similar to the type species (S. mirus Hayat).

Head (Fig. 1): Occipital margin narrow, but not sharp, concave between eyes; ocellar triangle with apical angle obtuse; POL, 8; OOL, 2; OCL, 2.5; AOL, 4; scrobes reaching upwards to 0.6x head height from mouth margin, but with margins rounded; mandibles sharply three dentate, middle tooth longer. Antenna as in Fig. 2. Relative measurements: Head dorsal width, 33; frontovertex width, 14; frontovertex length, 12; head frontal height, 30; eye length, 24; malar space, 6.5. antennal scape length, 19.
Thorax slightly longer than gaster (39:36), pronotum medially long, slightly longer than visible part of mesoscutum; mesoscutum with curved notaular lines and the enclosed area slightly convex; mesoscutum scaly reticulate; scutellum with elongate reticulate sculpture; propodeum with two submedian ridges, and a ridge extending from spiracles to posterior propodeal margin; setae on collar of pronotum, mesoscutum, scutellum and sides of propodeum white. Relative measurements: Pronotum length (width), 10 (21), mesoscutum length (width), 8 (21); scutellum length (width), 13 (10); propodeum length, 8.

Gaster oval; cercal plates situated distad of middle of gaster length (21:36). Relative measurements (Paratype, slide): TVII length (width), 20.5 (25.5); ovipositor length, ca.32 [Lengths; mid tibia, 35.5; mid basitarsus, 7; mid tibial spur, 5.5]

Male: Unknown.


Host: Unknown.

Distribution: India: Himachal Pradesh.

Comments: This new species differs from type and only species in several characters such as broader frontovertex, shorter malar space compared to eye length, quadrato to slightly longer than broad and of almost uniform width of funicle segments; F6 and clava white; and the shortened fore wing broadest in basal third, venation short, and beyond venation the blade gradually narrowed to a nearly pointed apex. (In mirus: frontovertex one third of head width; malar space one third of eye length; F2-6 broader than long, clava obliquely truncate; fore wing with venation and shape different (Hayat, 1981: Fig. 49); flagellum dark brown).

6. Xenostryxis bella Hayat & Badruddin, sp. nov. (Figs. 4-8)

Female: Length, holotype, 0.75 mm. Body almost completely golden yellow, including scape, exserted part of ovipositor sheaths, and legs, except as follows: Vertex and inter-antennal area very lightly washed with brown; pronotal collar brown; scutellum on sides narrowly dark brown; tegulae dark brown; propodeum on sides brown to dark brown; mesopleuron posteriorly brownish yellow; metapleuron dark brown; gastral terga very lightly infuscate brown laterally. Antennal pedicel and flagellum very light brownish yellow. Fore wing with infuscate areas as in Fig. 7; base proximad of infuscated band and the transverse hyaline band distad of venation with transparent setae. Legs: mid tibia with a pale brown ring at basal fifth (excluding base); hind tibia in basal third with a dark brown patch, and a very pale brown, easily overlooked, incomplete brownish band in about distal half.

[Body color and length noted before clearing and mounting the specimen on slide].

Head with frontovertex broad; ocellar triangle with apical angle obtuse; frontovertex with fine reticulate sculpture; face on sides of toruli with sculpture of same depth but cells longitudinally drawn-out; behind malar sulcus lineolate-reticulate; setae on head translucent, those on face as in Fig. 4; eyes with transparent setae, each setae shorter than a facet. Mandible (Fig. 5) with one tooth and a broad truncation, this with indication of a second short tooth, and with a ‘Peg’ on its inner ventral surface. Antenna (Fig. 6) with all
funicle segments longer than broad, almost subequal in length, with F6 only slightly longer than F1. Relative measurements (slide): Head frontal width, 30; head frontal height, 20; frontovertex width, 14; eye length, 12.5; malar space, 11; mouth fossa width, 10. Antennal scape length (width), 13 (2.6); pedicel length, 4.5; funicle length, 22; clava length, 12.5.

Thorax: Pronotum with raised reticulate sculpture, the cells transversely drawn-out and prominent than on mesoscutum; sculpture on mesothoracic terga very fine, visible at 400x magnification; mesoscutum with very fine penta-hexagonal wide-meshed reticulations; scutellum with similar sculpture, but cells in posterior half longitudinally drawn-out; scutellum with 9 pairs of setae; propodeum with ridges on sides (a common character for the tribe Habrolepidini), and with a long seta arising from outer rim of spiracle and a second seta at outer margin. Fore wing setation and venation as in Fig. 8. Relative measurements: Thorax length, 34.5; mesoscutum length (width), 13 (24.5); scutellum length (width), 14 (16.5). Fore wing length (width), 76 (27).

Gaster on card mounted specimen slightly longer than thorax (13.5:12), but on slide, distinctly longer than thorax (45:34.5), conversely the exerted part of ovipositor greater when measured from the carded specimen (4:13.5) but appears lesser after the specimen was mounted on slide (6.5:37). Relative measurements: TVII length (width), 24 (26); ovipositor length, 40; IIIrd valvula length, 13. [Lengths: mid tibia, 29; mid basitarsus, 9; mid tibial spur, 9].

**Male:** Unknown


**Host:** Unknown

**Distribution:** India: Punjab

**Comments:** This species is quite distinct from all the Palearctic species (Trjapitzin, 1989, there as *Paraschedius*), but is apparently related to the Indian species, *X. brevicauda* Hayat (2003). It differs from *brevicauda* in dimensions of funicle segments, different infuscated pattern of the fore wings, and ovipositor 1.38x as long as mid tibia (1.18x in *brevicauda*).

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**References**


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Figs. 1–10 (1–3) *Sakencyrtus albiclavus* Hayat, sp. nov.; female: 1, head frontal; 2, antenna; 3, fore wing. (4-8) *Xenostryxis bella* Hayat & Badruddin, sp. nov.; female: 4, facial region; 5, mandibles; 6, antenna; 7, fore wing showing infuscation; 8, fore wing venation and setation. (9, 10) *Paraphaenodiscus ramamurthyi* Hayat & Badruddin, sp. nov.; female: 9, antenna; 10, fore wing, venation and setation.
Figs. 11–19. (11–13) *Rhopus beatus* Hayat & F.R. Khan, sp. nov.; female: 11, head frontal; 12, antenna; 13, fore wing venation and setation. (14–19) *Rhopus rymma* Hayat & F.R. Khan, sp. nov.; female: 14, head frontal; 15, left antenna; 16, pedicel and Fl-5, right antenna; 17, distal thorax; 18, fore wing; 19, gastral 'glands'.
Figs. 20–23. *Ooencyrtus utpradianus* Hayat, sp. nov., female; 20, facial region showing mandibles; 21, antenna; 22, part of thoracic dorsum; 23, left fore wing venation and setation, distal veins from right wing shown separately.