

*SUBFAMILY EPHIALTINAE*

GENUS XANTHOPIMPLA SAUSSURE (1892)

Xanthopimpla belongs to the tribe Ephialtini, subfamily Ephialtinae. It is one of the larger genera of family Ichneumonidae (Hymenoptera). Most of the species found in the Old world tropics and majority of them in the Indo-Australian area. Three species are found in the temperate parts of Japan; five are known from the Neotropical Region; and fifty five nominal species are recorded from the Ethiopian Region.

Xanthopimpla is relatively easy to distinguish. The body is stout and yellow in colour, marked with black spots or bands. The clypeus is divided by a median transverse suture. The tarsal claws are very large and sharp. The propodeum has carinae.

They occur in forests or among shrubs, a few species among coarse grasses. Because of their abundance, the species of Xanthopimpla are important factors in biological control.

Indo-Australian species of Xanthopimpla are studied in detail by Townes and Chiu (1970). 165

species and 105 subspecies are described under this genus. They divided the genus into twenty species groups with key. But, the descriptions are inadequate for comparing the species. To facilitate required data X. honorata honorata (cameron) and x. punctata Fabricius are redescribed here.

Xanthopimpla honorata honorata (cameron)-(Fig 7A)

Pimpla honorata Cameron, 1899. Mem. 4 proc. Manchester lit. phil. Soc. 43 (3) : 170

Xanthopimpla cera Cameron, 1908. System Hymen. Dipt. 8 : 38.

Xanthopimpla kriegneriana cameron, 1908. Ztschr. System Hymen Dipt. 8 : 38.

Xanthopimpla binghami cameron, 1908. Ztschr. System Hymen. Dipt. 8 : 39.

Xanthopimpla kriegneriana Morley, 1913. Fauna of British India ----- Hymenoptera 3(1) : 128.

Xanthopimpla binghami Morley, 1913. Fauna of British India ----- Hymenoptera 3(1) : 133

Xanthopimpla cera Morley, 1913. Fauna of British India ----- Hymenoptera 3 (1) : 134

Xanthopimpla honorata Morley, 1913. Fauna of British India ----- Hymenoptera 3 (1) : 134.

Xanthopimpla binghami Krieger, 1914. Arch.f. naturgesch.

(A) 80 (6) : 14.

Xanthopimpla cera Krieger, 1914. Arch.f. Naturgesch

(A) 80 (6) : 14.

Xanthopimpla honorata Krieger, 1914. Arch.f. Naturgesch.

(A) 80 (6) : 15.

Xanthopimpla kriegeriana Krieger, 1914. Arch.f.

Naturgesch (A) 80 (6) : 16.

Xanthopimpla erythroceros Krieger, 1914. Arch.f.

Naturgesch (A) 80 (6) : 32.

Xanthopimpla eurycephala var. assamensis Krieger, 1914.

Arch.f. Naturgesch (A) 80 (7) : 99.

Xanthopimpla kriegerana Dutt, 1923. Mem. Dept. Agr.

India (Ent.) 8 : 14.

Xanthopimpla erythroceros cushman, 1925. Ent. Mitt.

14 : 50.

Xanthopimpla erythroceros Uchida, 1928. Jour. faculty

Agr. Hokkaido Imp. Univ. 25 : 63.

Xanthopimpla cera Beeson & Chatterjee, 1935. Indian

Forest Rec. (n.s., Ent.) 1 : 168.

Xanthopimpla cera Garthwaite & Desai, 1939. Indian

Forest Rec. (n.s., Ent) 5 : 352

Xanthopimpla cera Rao, 1953. Indian Forest Rec.  
(n.s., Ent.) 8 : 162.

Xanthopimpla taprobanica Rao, 1953. Indian Forest Rec.  
(n.s., Ent.) 8 : 163.

Xanthopimpla erythroceros Townes, Townes & Gupta, 1961  
Mem. Amer. Ent. Inst. 1 : 55.

Xanthopimpla eurycephala assamensis Townes, Townes &  
Gupta 1961. Mem. Amer. Ent. Inst. 1 : 55.

Xanthopimpla varimaculata, Townes, Townes & Gupta, 1961.  
Mem. Amer. Ent. Inst. 1 : 71.

Xanthopimpla cera Gupta, 1964. pacific. Ins. 6 : 231.

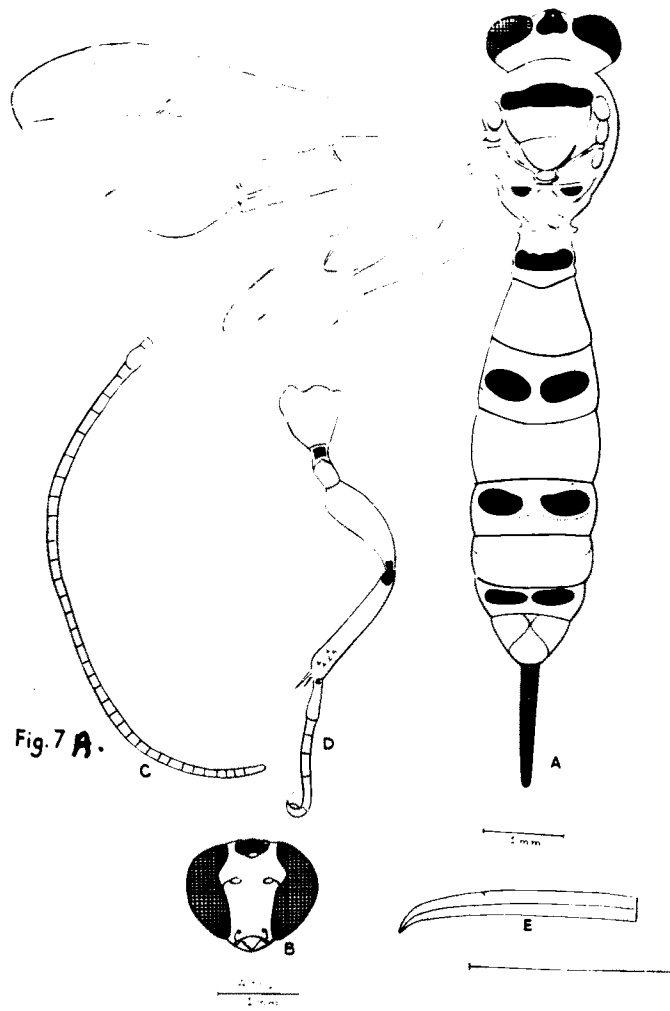
♀ : 8 mm. Head 0.88 times as long as broad, in profile 1.30 times as long as high; vertex smooth, impunctate, polished; ocellar triangle impunctate, smooth, polished; lateral ocelli separated from eye by 1.25 its diameter; frons smooth, polished, with lateral vertical shallow groove; antenna 2+32 segmented; scape 2.60 times as long as broad; pedicel 1.60 times as long as broad; terminal flagellar segment 2.40 times as long as broad; face weakly convex, weakly finely punctate, 1.11 times as long as broad; clypeus weakly convex, weakly finely punctate, 2.88 times as long as broad; mandible smooth, 2 times as long as broad, teeth equal; cheek

smooth, 0.90 times as long as width of mandible; occiput finely punctate; temple finely punctate; occipital carina complete; genal carina joining the oral carina above the mandible.

Thorax 1.50 times as long as broad; collar depressed, smooth, shiny; epomia prominent, reaching dorsally to the collar; pronotum smooth, shiny; mesoscutum strongly convex, sparsely punctate, posteriorly smooth & shiny; notaulus distinct basally not reaching the line connecting tegulae; scutellum sparsely punctate, strongly convex, smooth, shiny, with complete lateral flange, as long as broad; postscutellum smooth, shiny; propodeum smooth, shiny, sparsely punctate; areola absent; apical and basal carinae medially absent, lateral carinae present; propodeal spiracle elliptical, 2.33 times as long as broad; propleurum smooth, shiny; mesopleurum smooth, shiny sparsely punctate; speculum smooth, shiny; prepetal carina strong, reaching above the mid height of mesopleurum and away from the front margin of mesopleurum; postpectal carina in the form of flange; mesopleural suture clear, in the form of groove; mesepimeron small; juxtacoxal carina clear only at the base; submetapleural carina large, in the form of flange, reaching to the base of hind coxa; hind tarsal

FIGURE 7 A. XANTHOPIMPLA HONORATA HONORATA (CAMERON)

- A. Body, dorsal view
- B. Head, front view
- C. Antenna
- D. Hind leg
- E. Ovipositor





claw sharp, strongly curved, 3.33 times as long as broad, its largest bristle without widen tip; hind femur 2.72 times as long as broad; hind outer tibial spur 0.54 times the length of basitarsus. Fore wing 5.70 mm long, 1.90 mm broad; stigma 3.75 times as long as broad; first abscissa of radius 0.60 times the length of its second abscissa; first abscissa of the cubitus with one bulla; second recurrent with two bullae, strongly arched, 4.14 times the length of second intercubitus; discocubitus curved, unifenestrate; second discoidal cell 2 times as long as broad; areolet rectangular and stalked; nervulus straight, distad, 0.50 times the length of postnervulus; hind wing 3.80 mm long 0.96 mm. broad, with 1+7 hamuli; basal abscissa of radiella 0.44 times the length of its apical abscissa; mediella curved apically; basal abscissa of cubitella slightly curved and as long as its apical abscissa; nervellus intercepted below, superior & inferior nervellar abscissae 1 : 3; Brachiella basally present.

Abdomen 1.82 times the length of head and thorax combined; first tergite 1.19 times as long as broad, shiny except few large coarse punctures on subapical part; postpetiolar part basally with a pair of blunt, triangular tooth; spiracle oval, 1.50 times as long as broad; median dorsal carinae absent, dorsolateral

carinae strong reaching the apical region; ventro-lateral carinae strong, extending base to apex; apically transversely grooved bounding median rhombic area; glymma present; sternum free; second tergite 0.79 times the length of first tergite, rhombic area with few large coarse punctures, rest shiny; rhombic area of third to sixth tergite moderately striato-punctate, rest shiny; seventh tergite impunctate, shiny; cerci short, three segmented; ovipositor sheath 1.08 times the length of hind tibia; ovipositor stout, its tip decurved, upper valve with 8 weak transverse ridges.

Yellow with black markings . Ocellar triangle, hind basal trochanter, base of hind basitarsus black; apex of the hind femur; basal part of tibia, terminal tarsal segment, subapical spines of all tibia, tip of mandible dark brown; scape, terminal segment of antenna yellowish brown, remaining part of the flegellum brown; mesoscutum with black transverse band; propodeum with a pair of black spots, first tergite with dark black band, third & seventh tergites with pair of very close black marks tending to form a transverse black band; fifth tergite with a pair of dark black marks.

♂: Essentially similar to female except in having small size.

**Specimens Examined** : 4 ♀ ♀, 3 ♂ ♂. INDIA :  
 Maharashtra : Sangli, 2 ♀ ♀, 1 ♂, 12 IX 1987,  
 2 ♀ ♀, 2 ♂ ♂, 5 I 1988, On wing, D.G. Patil coll.  
 Antennae, wings, legs, mounted on slides and  
 labelled as above.

Host :

Hapalia machaeralis.

Hyblaea puera.

Sylepta derogata.

Xanthopimpla punctata Fabricius (Fig 7B)

Ichneumon punctatus Fabricius, 1781. Species insectorum  
1 : 437.

Pimpla punctata Fabricius, 1804, Systema Piezatorum  
p. 119.

Pimpla punctata Brulle, 1846. In Lepeletier : Historie  
naturelle des insectes. Hymenopteres 4 : 94.

Pimpla punctator Smith, 1858. Jour. of proc. Linn. Soc.  
London. Zool. 2 : 119.

Pimpla punctata Smith, 1873. Jour. Linn. Soc London  
Zool. 11 : 403.

Pimpla transversalis Vollenhoven, 1879. Stettjn. Ent.  
Zig. 40 : 146

Pimpla ceylonica Cameron, 1899. Mem. & proc. Manchester  
Lit. Phil. Soc. 43 (3) : 165.

Xanthopimpla transversalis Krieger, 1899. Sitzber.  
Naturf. Gessell. Leipzig 1897/98 : 65.

Xanthopimpla punctata Krieger, 1899. Sitzber Naturf.  
Gessell. Leipzig 1897/98 : 101.

Xanthopimpla ruficorais Krieger, 1899. Sitzber. Naturf.  
Gessell. Leipzig 1897/98 : 103.



- Xanthopimpla appendiculat Cameron, 1902 Fauna & Geogr. maldive & laccadive Archip. 1 (1) : 51.
- Pimpla punctata Tosquinet, 1903, Mem. soc. Ent. Belgique 10 : 85.
- Xanthopimpla brunneicornis Cameron, 1903, Jour. Straits Branch Roy. Asiatic Soc. 39 : 139.
- Xanthopimpla Kandvensis Cameron, 1905. Spolia Zeylanic 3 : 136.
- Xanthopimpla maculiceps Cameron, 1905. Tijdschr. v. Ent. 48 : 37.
- Xanthopimpla lissonota Cameron, 1906. Jour. Straits Branch Roy. Asiatic Soc. 46 : 115.
- Xanthopimpla punctator Schmiedeknecht, 1907. Genera Insectorum 62 : 40.
- Neopimpla punctata Kuroiwa, 1908. Provisional list of the Hymenoptera collected in Loochoo determined by Dr. Matsumura P.1.
- Xanthopimpla Kriegeri Szepligeti, 1908. Notes Leyden mus. 29 : 255.
- Pimpla punctatus Morley, 1909. Entomologist 42 : 136.
- Xanthopimpla Keiegeri szepiligeti, 1910. Notes leyden Mus. 32 : 101.
- Xanthopimpla punctata Roman, 1912. Zool. Bidr. Uppsala 1 : 268, 275.
- Xanthopimpla punctata Schulz, 1912. Berlin Ent. Ztschr. 57 : 72.

Neopimplodes syleptae viereck, 1912. Proc. U.S. Natl. Mus. 42 : 151.

Xanthopimpla trimaculata Matsumura, 1912, Thousand insects of Japan, supplement 4 : 145.

Xanthopimpla punctata Roman, 1913 Arkiv for Zool. 8 (15) : 18.

Xanthopimpla transversalis Morely, 1913. Fauna of British India ----- Hymenoptera 3 (1) : 122.

Xanthopimpla Kandiensis Morely, 1913 Fauna of British India ----- Hymenoptera 3 (1) : 123.

Xanthopimpla punctate Morley, 1913, Fauna of British India-----Hymenoptera 3(1) : 124.

Xanthopimpla tibialis Morley, 1913, Fauna of Britos India ----- Hymenoptera 3(1): 124

Xanthopimpla appendiculata Morley, 1913. Fauna of British India-----Hymenoptera 3(1) : 139

Xanthopimpla syleptae Krieger, 1914. Arch. f. Naturgesch (A) 80 (6) : 19

Xanthopimpla tibialis Krieger, 1914, Arch f. Naturgesch. (A) 80 (6): 19

Xanthopimpla punctata Krieger 1914, Arch F. Naturgesch (A) 80 (6) : 9, 10, 16, 20, 40,

126

Xanthopimpla punctata szepligetii krieger, 1914. Arch. f. Naturgesh. (A) 80 (6) : 131.

- Xanthopimpla ruficornis kriegler, 1914. Arch. f. Naturgesch (A) 80 (6) : 41
- Xanthopimpla punctata Morley, 1914. Rec. Indian Mus. 8:32
- Phygadenon punctator Ishida, 1915. Report of the sugar cane borer in Formosa 1 : 196.
- Xanthopimpla punctata Dutt, 1919. But. Agr. Res. Inst. Pusa, India 89 : 6
- Xanthopimpla punctata Cushman, 1922. Proc. V.S. Natl. Mus 60 (21) : 10
- Xanthopimpla punctata Dutt, 1923. Mem. Dept. Agr. India (Ent) 8:15
- Xanthopimpla punctata Cushman, 1925. Ent. Mitt. 14:48
- Theronia transversalis Menzel, 1925. meded Gour. Kina-proetsta Java 9:22
- Xanthopimpla punctata Matsumura and Uchida, 1926. Insecta of Matsumurana 1:74
- Xanthopimpla punctate Sonan, 1927. Rpt. Dept. Agr. Govt. Inst. Formosa 29.112
- Xanthopimpla punctate Uchida, 1928. Jour. faculty Agr. Hokkaido Imp. Univ. 25:66
- Xanthopimpla punctata Corbett and Miller, 1928. Malaya Agr. Jour. 16:410

- Xanthopimpla punctata Dammerman 1929, The Agricultural Zoology of the Malaya Archipelago p. 144
- Xanthopimpla punctata Sonan, 1929. Trans. Nat. Hist. Soc. Formosa : 19: 422
- Xanthopimpla punctate corbett, 1930. Proc. 4th Pacific Sci. Congr. Java 4 : 584
- Xanthopimpla punctata Matsumura, 1930. The illustrated thousand insects of Japan 2 : (Japanese) 138.
- Xanthopimpla punctata Matsumura, 1931. 6000 illustrations of insects of Japan Empire. p. 71.
- Xanthopimpla punctate Ishii, 1932, In Esaki et al : Iconographia insectorum Japonicorum p. 408
- Xanthopimpla punctata Uchida, 1932. Jour. Faculty Agr. Hokkaido Imp. Univ. 33:135, 22
- Xanthopimpla punctata Cortwright, 1933. Circ. U.S. Dept. of Agr. 289:9.
- Xanthopimpla punctata Ayyar and Margabandu, 1934, Madras Agr. Jour. 22:440
- Xanthopimpla punctata Chiu, 1934. Ent. and Phytopath. 2:663
- Xanthopimpla punctata Clark, 1934. U.S. Dept. Agr. Tech. Bul. 455 : 18



- Xanthopimpla punctata Uchida, 1934. Insect  
Matsumurana 9 : 3.
- Xanthopimpla punctata Uchida, 1935. Insecta  
matsumurana 9 : 81
- Xanthopimpla punctata Chiu, 1935. Year Book Bur.  
Ent. Hangchow 4 : 7
- Xanthopimpla punctata Ma, 1935. Ent and Phytopath. 3  
: 180
- Xanthopimpla punctata Li, 1935. Ent. and Phytopath  
3:306
- Xanthopimpla punctata Chiu and Hsia, 1937. Ent. and  
Phytopath 5 : 138
- Xanthopimpla punctata Tsai and Chun, 1937. Ent and  
Phytopath 5 : 265
- Xanthopimpla punctata Hoffmann, 1938. Lingnan Sci.  
Jour. 17 : 452
- Xanthopimpla punctata Woo and Hsiang, 1939. Tech.  
Bul. Szechwan prov. Agr. Impr. Inst. 1:17, 22
- Xanthopimpla punctata Watanabe, 1939, Kontyfi  
13:234
- Xanthopimpla punctata Sonan, 1944. Bul. Govt. Agr.  
Res. Inst. Taiwan 222:3

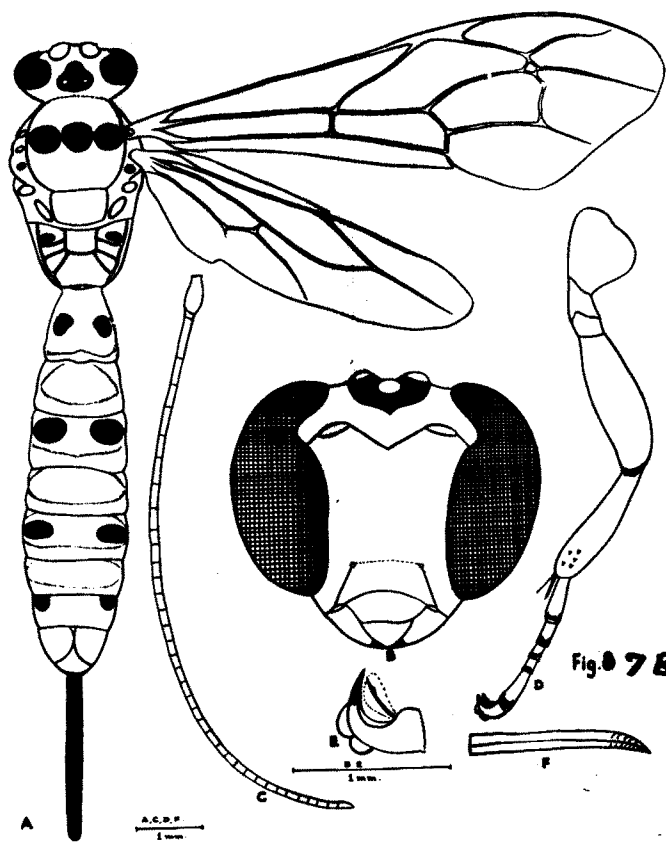
- Xanthopimpla punctata Lepesme, 1947. Less insects des palmiers P. 651
- Xanthopimpla punctata Dammerman, 1948, Verhandel Koninklijke Nederlandsche Akad Van Wetensch 44:385
- Xanthopimpla punctata Kalshoven and Vecht, 1950.  
Deplagen van de cultuurge wassen in indonesie  
1:453, 463
- Xanthopimpla punctata Krishnamurti and Usman, 1955.  
Indian Jour. Ent. 16 :333.
- Xanthopimpla punctata Uchida, 1956. Insecta matsumurana 19 : 92
- Xanthopimpla pyraustae Rao, 1953. Indian Forest Rec.  
(N.S.Ent.) 8:163.
- Xanthopimpla punctata Chao, 1957. Acta Ent. Sinica  
7:106
- Xanthopimpla punctata Townes, 1957, Proc. Ent. Soc.  
Washington 59 :112.
- Xanthopimpla punctate Iwata, 1960. Acta  
Hymenopterologica 1 : 148.
- Xanthopimpla punctata Townes, Townes and Gupta, 1961.  
Mem. Amer. Ent. Inst. 1 : 62
- Xanthopimpla punctata yasumatsu, 1966. Eleventh Pacific science congress, Tokyo, Symposium,  
28. p. 37
- Xanthopimpla punctata Momoi, 1968. Mushi 41 : 180
- Xanthopimpla punctata Momoi, 1969. Mushi 42 : 148.

♀ : 9.80 mm. Head 0.97 times as long as broad, in profile 0.57 times as long as high; vertex smooth, polished; ocellar triangle impunctate, smooth polished; lateral ocelli separated from eye by 0.73 of its diameter; frons polished, with lateral, vertical shallow groove; antenna 2 + 36 segmented; scape 1.92 times as long as broad; pedicel 0.6 times as long as broad; first flagellar segment 5 times as long as broad; terminal flagellar segment 2.07 times as long as broad; face 0.93 times as long as broad, weakly convex, finely sparsely punctate; mandible 2 times as long as broad, smooth; cheek 1.2 times as long as width of mandible, smooth; occiput finely punctate; temple finely punctate; occipital carina complete; genal carina joining the oral carina above the mandible.

Thorax 1.21 times as long as broad; collar depressed, smooth shiny; epomina prominent, reaching dorsally to the collar; pronotum triangular, smooth, shiny; mesoscutum strongly convex sparsely punctate; notaulus distinct basely, not reaching the line connecting tegulae; scutellum strongly convex, smooth, shiny, 0.72 times as long as broad, with complete lateral flange; postscutellum smooth, shiny; propodeum

FIGURE 7 B. XANTHOPIMPLA PUNCTATA FABRICIUS

- A. Body, dorsal view
- B. Head, front view
- C. Antenna
- D. Hind leg
- E. Hind claw
- F. Ovipositor



smooth, shiny; areola absent, basal carina medially absent, lateral carina present, first lateral area sparsely punctate; propodeal spiracle elongated, 2.50 times as long as broad; propleurum impunctate, smooth, convex, shiny; mesopleurum convex, smooth, shiny, sparsely punctate; speculum smooth, shiny; prepectal carina strong reaching above the mid height of mesopleurum; postpectal carina in the form of the flange; metapleurum, smooth, shiny, sparsely punctate; mesopleural suture clear; mesepimeron small; submetapleural carina strong in the form of flange; juxtacoxal carina weak, clear only at the base; hind tarsal claw large, strongly curved, sharp, 3.90 times as long as broad, its largest bristle with widen tip; hind femur 2.21 times as long as broad; outer tibial spur 0.81 times the length of basitarsus. Fore wing 7.60 mm long, 2.54 mm broad; stigma 5.62 times as long as broad; first abscissa of the radius 0.71 times length of its second abscissa, first abscissa of cubitus with single bulla; areolet rectangular; first intercubitus 0.31 times the length of second recurrent vein; second intercubitus with single bulla; second recurrent with two bullae, strongly curved, 3.18 times the length of second intercubitus; discocubitus curved, unifenestrate;

second discoidal cell 2.35 times as long as broad; discocubital cell 3.29 times as long as broad; subdiscoideus 2.10 times the length of apical abscissa of discocubitus; nervulus straight, basal, 0.60 times the length of postnervulus, fenestrae at lower end; hind wing 5.40 mm long, 1.30 mm broad, with 1 + 7 hamuli; basal abscissa of radiella 0.61 times the length of its apical abscissa; mediella curved basally; basal abscissa of cubitella slightly curved, 1.27 times the length of its apical abscissa; superior nervellar abscissa 0.50 times the length of inferior nervellar abscissa; branchiella basally present.

Abdomen 1.62 times the length of head and thorax combined; first tergite as long as broad at apex, shiny except few large coarse punctures on subapical part, with a pair of blunt tooth at the base; median dorsal carinae absent, dorsal lateral carinae strong and reaching the apical part, ventro-lateral carina strong and complete; spiracle oval, 2 times as long as broad; sternum free; glymma present; second tergite 0.66 times as long as broad at the apex, 0.88 times the length of first tergite, rhombic area with few large, coarse punctures, rest shiny; spiracle oval; rhombic area of third to sixth tergite moderately striatopunctate, rest

shiny; seventh tergite impunctate; ovipositor sheath 1.77 times the length of hind tibia; ovipositor long, stout, straight, not widened near the apex, tip pointed, upper valve with five transverse ridges.

Yellow with black markings. Ocellar triangle, apical part of hind tarsomeres black; apex of hind femur, basal part of tibia dark brown; subapical spines of tibia of all legs brown; scape and pedicel black dorsally and yellow ventrally; tip of the terminal segment of antenna yellow, remaining part of the flagellum brown; mesoscutum with three pairs of close, black marks; propodeum with a pair of circular black marks; first, third, fifth, seventh tergites with a pair of black marks.

♂ : Essentially similar to female except in having small size.

**Specimen** : 3 ♀♀, 2 ♂♂, INDIA : Maharashtra : Sangli,  
**Examined** 2 ♀♀, 1 ♂ 12 IX, 1987 and 1 ♀, 1 ♂, 1  
II 1987 on wing, D.G.Patil Coll.  
Antennae, wings, legs, mounted on slides  
and labelled as above.



Host recorded :

Anomis flava  
Chilo suppressalis  
Chilotraea infuscatella  
Dasychira mendosa  
Dendrolimus punctatus  
Glyphodes psittacalis  
Margaronia pyloalis  
Margaronia marinata  
Maruca testulalis  
Mameva bipunctello  
Olethreutes schistaceanus  
Ostrinica nubilulis  
Orgyia australis postica  
Papilio memnon  
Parnara guttata  
Pectinophora gossypiella  
Pyrousta celatalis  
Sphenoptera gossypii  
Syplepta derogate