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Xanthopimpla barodaensis spec. nov.

(Hymenoptera: Ichneumonidae)

An ochraceous species with hind first trochanters and base of hind tibiae nigrescent; mesonotum, propodaeum and abdomen with negrescent spots; propodaeum areated, areola hexagonal; the centre of basal tergite of abdomen with two nigrescent spots very near each other and two nearly round nigrescent spots on each side of tergites from second to seventh. Wings with no areolet, nigrescent spot at base of radix, the ratio of the length between second recurrent nervure and radial nervure from their junction to the base of radius wing 0.55.

Female: unknown.

Male: Ocelli, eyes, apical portion of mandibles, spots on mesonotum, on external areae, on abdominal tergites, stigma, first hind trochanters at base, hind tibiae at base, a spot at radix, and a spot before scutellum nigrescent. Vertex except the ocellar region, acciput, frons, orbits, face, clypeus, labrum, basal portion of mandibles and palpi flavous. Pronotum, mesonotum, propodaeum, episternum, epimeron, radix, tegulae, scutellum, postscutellum and legs ochraceous; antennae fuscous; ocelli large, in a triangle with interorbital space larger than the diameter of ocellus; frons concave, eyes large, emarginate next to scrobes. Pro- and mesonotum, propodaeum, episternum, epimeron, and prepectus smooth. Mesonotum with three nigrescent spots separate from one another, the middle one smaller, each parapsidal furrow end, i. e. at the base of radix with, nigrescent spot; scutellum convex with nigrescent spot in front, post scutellum prominent; propodaeum with areola hexagonal, external and dentiparal areae present, spiracular areae with linear spiracles, pleural areae present, petiolar area wide. Wings; Hyalone; front wing from 6.50 to 7.20 mm. long; stigma nigrescent; apical abscissa of radius slightly curved; only the internal submarginal nervure present but the external cubital nervure with a bulla; second recurrent nervure with two bullae; fore wing at radix with nigrescent spot; first recurrent nervure of hind wing postfurcal; the ratio of length between 2nd recurrent nervure and radial nervure from their junction to the base of radius of hind wing 0.55.

Leg: Ochraceous. The first hind trochanters and hind tibiae at base nigrescent.

Abdomen: Ochraceous. The length of first tergite almost equal to breadth; the length of second tergite 0.55 times its breadth; two nigrescent spots in the centre of first basal segment very near to each other; two nigrescent spots, one on each side from second tergite to seventh tergite. Each spot on second tergite 0.2 mm. long and braod; each spot on third tergite 0.4 mm. long and broad; each spot on fourth and fifth tergites 0.4 × 0.5 mm; each spot on sixth 0.2 × 0.4 mm; each spot on the 7th longer than broad and near each other.

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All tergites from second to 8th broader than long. The tergites from second to fifth strongly punctate; the apices of first to sixth tergites transversely impressed. The abdomen longer than the length of head and thorax combined.

Length of male: 7.75 mm. to 10 mm.

Described from holotype male in the general Collection Ent. Division I. A. R. I., New Delhi, and has been deposited in the National Insect Pusa collection (N. I. P. C.) of the Division of Entomology Indian Agricultural Research Institute, New Delhi. Type localaty: INDIA: Baroda, July 15, 1909, C. No. 761. One paratype male in the general collection of Entomology Division, Indian Agricultural Research Institute, New Delhi has been deposited in the National Insect Pusa Collection (N. I. P. C.) Entomology Division, Indian Agricultural Research Institute, New Delhi.

Host: *Clania crameri* WESTWOOD, case worm (Lepidoptera: Psychidae)

Xanthopimpla naenia MORLEY runs in number 8 in MORLEY's key entitled 'Table of species' in Fauna Brit. India Hymen., 3: III (1913). The first few number in MORLEY key have been modified for reception of new species *Xanthopimpla barodaensis*. The dichotomeous key of couplet system has been constructed from MORLEY's first few numbers of key which are not in couplet form. The key so constructed is as follows.

Table of some of the species of *Xanthopimpla* SAUSSURE showing their relation to *Xanthopimpla barodaensis* spec. nov.

1	Abdomen distinctly punctate at least in centre of central segments	
—	Abdomen glabrous and entirely impunctate throughout	27
2	Mesonotal vittae not carinate; scutellum less distinctly bordered	3
—	Mesonotal vittae carinate; scutellum more distinctly bordered	*honorata* CAMERON
3	Antennae not longer than body; areolet not or hardly petiolate	4
—	Antennae longer than body or areolet distinctly petiolate	19
4	Propodeal areola entirely wanting, beyond the costulae	5
—	Propodeal areola distinctly carinate throughout (Except. *kandiensis* CAMERON)	7
5	Areolet entire; mesonotum not centrally sulcate	6
—	Areolet wanting; mesonotum longitudinally sulcate in the centre	*naenia* MORLEY
6	Antennae basally refescent; eight abdominal segment with two black spots	*tigris* KRIEG
—	Antennae black above, eighth abdominal segment black with pale base	*varimaculata* CAMERON
7	Areolet wanting, areola hexagonal, and mesonotum not sulcate	8
		***barodaensis* spec. nov.**
—	Areolet entire, areola not transverse usually distinctly hexagonal	
8	Apical radial abscissa strongly sinuate, thorax immaculate	*immaculata* MORLEY
—	Apical radial abscissa hardly sinuate, thorax black marked	9

In the 5th couplet of the above mentioned key it has been shown that in *Xanthopimpla naenia* areolet is wanting. In the 7th couplet it has also been shown that *Xanthopimpla barodaensis* lack the areolet as does *Xanthopimpla naenia* i. e. *barodaensis* spec. nov. is without areolet. Very few species of *Xanthopimpla* lack the areolet as does *Xanthopimpla barodaensis* spec. nov. Thus the most nearest relative of this new species is *Xanthopimpla naenia*.

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Buth the differences of the new species from its allied *Xanthopimpla naenia* are as follows:

In the 5th couplet of the above mentioned key it has been shown that in case of *Xanthopimpla naenia* MORLEY, mesonotum is longitudinally sulcate. But in the 7th couplet of the key it may be noted that in the new species the mesonotum is not sulcate. Besides this *Xanthopimpla naenia* has incomplete areola and transverse bands on the first and seventh tergites. But in case of this new species areola is hexagonal and there are no transverse bands on the abdomen. By studying couplet 7th and 8th it has also been noted that both *Xanthopimpla immaculata* MORLEY and this new species have hexagonal areola.

Acknowledgement

This work on this parastic sub-family Pimplinae a sub-family of great-economic importance and of biological interest from applied point of view has been made possible under a generous grant sanctioned by the University Grants Commission, Mathura Road, New Delhi under a Scheme 'Utilization of the services of retired Professors and Scientists' for which I am highly indebted. I am grateful to Dr. A. B. JOSHI Director Indian Agricultural Research Institute, New Delhi and Dr. S. PRADHAN HEAD of the Division of Entomology for very kindly providing me working space and other necessary facilities for carrying out this piece of research work. I am also highly indebted to Prof. HENRY TOWNES specialist on Ichneumon flies of American Entomological Institute, Michigan U.S.A. for his very kindly going through the manuscript and for his valueable suggestions and comments which have been incorporated in this paper.

Summary

An ochraceous species with hind first trochanters and base of hind tibiae nigrescent; mesonotum, propodaeum and abdomen with nigrescent spots; propodaeum areated, areola hexagonal; the centre of basal tergite of abdomen with two nigrescent spots very near each other and two nearly round nigrescent spots on each side of the tergites from second to seventh. Wings without areolet, nigrescent spot at the base of the radix, the ratio of the length between second recurrent nervure and radial nervure from their junction to the base of the radius of the hind wing 0.55. — Very few species of *Xanthopimpla* SAUSSURE lack areolet as does *Xanthopimpla barodaensis* spec. nov. Thus the nearest relative of this new species is *Xanthopimpla naenia* MORLEY.

Zusammenfassung

Eine ockerfarbene Art mit schwärzlicher Färbung der hinteren ersten Trochantern und der Basis der hinteren Tibien; Mesonotum, Propodaeum und Unterleib mit schwärzlichen Flecken; Propodaeum zellig, Areole sechseckig; das Zentrum der basalen Rückenplatte des Unterleibs mit zwei sehr nahe beieinanderliegenden schwärzlichen Flecken und zwei fast runden schwärzlichen Flecken an jeder Seite der Tergiten von der zweiten bis zur siebenten. Flügel ohne kleine Areole, schwärzlicher Fleck an der Wurzelbasis, das Längenverhältnis zwischen der zweiten rückläufigen Ader und der Radialader von ihrer Verbindung bis zur Basis des Radius des Hinterflügels 0,55. — Bei sehr wenigen Arten von *Xanthopimpla* SAUSSURE fehlt die kleine Areola wie bei *Xanthopimpla barodaensis* spec. nov. Daher ist *Xanthopimpla naenia* MORLEY der nächste Verwandte dieser neuen Art.

Резюме

Описывается и обграничивается новый вид *Xanthopimpla barodaensis* spec. nov. рода *Xanthopimpla* SAUSSURE. Только у некоторых видов этого одра отсутствует маленькая Areole как у нового вида, поэтому является *Xanthopimpla naenia* MORLEY в самом близком родстве.

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