SUBFAMILY : MICROGASTERINAE
Genus: Protomicroplitis Ashmead.

Protomicroplitis Ashmead is an old genus belonging to the subfamily Mirogasterinae of family Braconidae. This genus is erected by Ashmead in 1898. Microgaster medius Cresson (1900) was the type species which was first included by Ashmead (1900) under the genus Protomicroplitis. There are 15 species in the Palearctic region of which 11 have been recorded in USSR, Telenga (1955).

Nixon (1965) revised this genus and listed 9 species from the Oriental region, of which only one is known from India. Later, Rao and Chalikwar (1970) added four more species viz., indicus, orientalis, rugolosus and breviterebrus under this genus. Rao and Chalikwar (1975) also added two more species under the genus Protomicroplitis viz., longiterebrus and punctata.

The earlier works on Protomicroplitis are by Szepligeti (1904), Roman (1910), Viereck (1913, 1914), Muesebeck (1922), Muesebeck and Walkley (1951), Telenga (1955), Tobias (1965), and Nixon (1965).

In this work, a new species belonging to the genus Protomicroplitis viz., raoi is described on the material collected in India: Western Maharashtra: Pune: Ambegaon. Thus there are
sixteen taxa under Protomicroplitis from Indo-Australian region, of which eight are from India.

A key to the Oriental species of Protomicroplitis by Nixon (1965) which was modified by Rao and Chalikwar (1970) has been followed for the determination of the new taxa, P. raoi, the same is included in the key cited above as is also provided below.
Key to the Oriental species of *Protomicroplitis* Ashmead

1. Length of inner spur of hind tibia
   - more than half the basitarsus.  ...  02
   - less than half of the basitarsus.  ...  13

2. 2nd transverse cubitus not indicated,
   - hence no areolet (at most spot like);
     1st transverse cubitus thickened; face
     only with superficial sculpture.
     (Nixon, 1965).  ...  ...  *melleus* Nixon

   - 2nd transverse cubitus well
     indicated; areolet 3 or 4 sided.  ...  03

3. Areolet 3 sided; second abscissa of
   radius not well indicated or sclerotised.  ...  04

   - Areolet 4 sided; 2nd abscissa of
     radius well indicated or sclerotised.  ...  11

4. 3rd tergite heavily sclerotised as 2nd,
   forming a sculptured carapace with
   median subtriangular polished area
and striate on sides; 1st tergite widened apically with a median longitudinal groove, spatulate; upcurved modified seta at the apex of the ovipositor sheath; propodeum smooth, with median keel; 1st abscissa of radius forming an obtuse angle with 1st transverse cubitus; edge of anal lobe without fringe of hairs. (Nixon, 1965).  ...  electes  Nixon

- 3rd tergite always smooth and shiny; carapace never formed. ... ... 05

5 2nd transverse cubitus meeting the first abscissa of radius at the junction of 2nd abscissa; face strongly rugoso- punctate on sides; thorax almost black; hind coxa reddish-yellow (Nixon, 1965). ... urios Nixon

- 2nd transverse cubitus meeting the 1st abscissa of radius far proximal to the junction of the second abscissa of radius. ... 06

6. Face slightly convex, with faint front median carina; fore and hind tibia with 3-4 pegs near the base of spur; third pleural area of propodeum carinated; metapleurum rugoso-reticulate.  raoi, sp.nov.
- Face flat, without frontomedian carina, rugulose; third pleural area smooth; metapleurum smooth. ... 07

7 Lateral sulci of 2nd tergite strongly developed, well grooved with pits and borders the edge of the tergite at least as far as the second suture, latter deeply and strongly carinate. ... 08

- Lateral sulci of 2nd tergite not strongly developed and never borders the second suture. ... ... ... 10

8 Median field of second tergite wider basally and seperated from lateral surfaces by broad rugose furrow; 1st tergite with a median longitudinal groove; propodeum smooth, with median longitudinal keel, ocelloocular distance less than longer diameter of ocellus (Rao, 1970). breviterebrus

  Rao & Chalikwar

- Median field of 2nd tergite parallel sided, sperated from lateral surfaces by rugose furrow; ocelloocular distance distinctly greater than longer diameter of the ocellus. ... 09

9. Front and middle claws with a comb of fine bristles; 1st tergite with a smooth deep pit at apex; lateral areas of 2nd tergite highly polished; 3rd tergite
slightly wider apically than median length in male. (Nixon, 1965). .... pyrene Nixon

Front and middle claws simple;
1st tergite with deep excavation at apex, surface on each side of excavation coarsely rugose; apical width of 3rd tergite 2 x the median length in male. (Nixon, 1965). .... seriphus Nixon

10. Ocellar diameter more than ocellocular distance; face shiny, smooth; length of first tergite 1.5 x the median width ; ovipositor sheath with a pale apical setaeform appendage (Nixon, 1965). .... medon Nixon

- Ocellar diameter less than ocellocular distance; face strongly, closely, deeply punctate, with a strong median longitudinal carina; median field of 2nd tergite marginal by shallow depressions; ovipositor sheath with 3 black setaeform appendages. .... indicus, Rao and Chalikwar (Rao and Chalikwar, 1970) Chalikwar

11 Metacarp very short, 1.5 x its distance from the apex of radial cell; lateral polished field of scutellum thin; parallel sided strip; propodeum polished and with median keel; claw with the fine basal tooth; middle tarsus very short; first tergite grooved medially; median field of second tergite widened apically. (Nixon, 1965). .... periandor Nixon
- Metacarp long; lateral polished field
  of scutellum distinctly convex
  anteriorly. ... ... ... 12

12 Anterior margin of postscutellum
not closely applied to posterior
margin of scutellum; phragma of
scutellum narrowly visible,
median field of 2nd tergite
subtriangular, widened behind; first
tergite strongly narrowed behind;
1st abscissa of radius much longer
than 2nd; propodeum with weak
median carina; vanal lobe with fringe
of long hairs; front fifth tarsal
segment with minute spines. (Nees, 1834) marginatus
(Nees)

- Anterior margin of postscutellum
closely applied to posterior margin;
median field of 2nd tergite not
widened behind: mesoscutum
rugoso-punctate; disc of scutellum
with large scattered punctures;
inner spur of hind tibia as long as
basitarsus: metacarp 2.5 x its
distance from the apex of radial cell; 1st
abscissa of discoideus as long as
2nd: 2nd abscissa of radius equal
to 2nd transverse cubitus.
(Wilkinson, 1930). ... .... tomentosa (Wilk.)
Metacarp 1.35 x its distance from apex of radial cell; 2nd abscissa of radius 1.5 x the 2nd transverse cubitus; 1st tergite with a median longitudinal depression. (Rao and Chalikwar, 1970)

- Metacarp equal to its distance from the apex of radial cell; 2nd abscissa of radius 0.5 times the 1st abscissa and 0.66 times the second transverse cubitus; 1st tergite with excavation in basal half. (Rao and Chalikwar, 1970)
Protomicroplitis raoi, sp. nov.

(Fig. 9 a to c)

Female 3.55 mm (Fig. 9a). Head 0.7 times as long as wide; vertex smooth, shiny, punctate, densely pubescent; occipital region concave, pubescent; interocellar distance between lateral ocelli 0.5 times the lateral ocellocular distance; interocellar distance between lateral and median ocelli 0.7 times the lateral ocellar distance; lateral ocellus 1.5 x as long as the diameter of median ocellus; ocellar region raised, granulate, sparsely pubescent; frons concave, smooth, punctate, without marginal carinae; face 1.5 x as long as wide basally, 1.8 x as long as broad apically, slightly medially elevated, with faint frontal carina, finely granulate, punctate, densely pubescent; clypeus 3 x as broad as long, semicircular, slightly convex, finely granulate, punctate, pubescent; malar space narrow, as long as basal width of mandible, densely pubescent; mandible 2.7 x as long as wide, bidentate, sparsely pubescent; maxillary palp 5 segmented; labial palp long, 5 segmented, densely pubescent; eye 1.25 x as long as wide, large, emarginate, sparsely pubescent; temple broad, convex, smooth, pubescent; occipital carina absent; antenna 2 + 16 segmented; scape 1.4 x as long as wide, cup shaped, pubescent; pedicel 2 x as long as wide, pubescent; first penultimate segment cylindrical, 3 x as long as wide, longitudinally striated, pubescent; second segment
Fig. 9

Protomicroplitis raoi, sp. nov. ♀

a) Lateral view, entire
b) Head, viewed from front
c) Propodeum
3.3 x as long as wide, striated, pubescent; middle segment 4 x as long as wide, closely striated, pubescent; terminal segment 3.5 x as long as wide, conical, striated, pubescent.

Thorax 1.4 x as long as wide; pronotal collar granulate, closely punctate; pronotum anteriorly crenulated, triangular, punctate; mesoscutum granulate, finely rugoso-reticulate, densely pubescent; notauli absent; prescutellar depression transversely crenulated, with nearly seven transverse carinae; lateral depression with four transverse carinae, obliquely striated; posterior medial depression crenulated, with two lateral triangular spaces; scutellum triangular, finely rugoso-reticulate, granulate, pubescent; metanotum transversely carinate; propodeum (Fig. 9c) with basal median longitudinal carina, with lateral transverse rugae; lateral carinae distinct; apical transverse carinae curved, medially appeared; first and second pleural area finely granulate; third pleural area obliquely carinated; propodeal spiracle oval, prominent, 0.5 times as long as wide; propleuron shiny, smooth, finely, transversely striate, closely punctate, pubescent; mesopleuron anteriorly rugoso-reticulate, deeply punctate, pubescent; medially finely granulate, punctate, sparsely pubescent; mediobasally, nearly triangularly foveolate; mesopleural furrow absent; mesopleural suture distinct, crenulated; metapleuron deeply rugoso-reticulate, foveolate, punctate, pubescent.
Fore wing 3.8 x as long as wide; stigma 3 x as long as wide; costa 1.7 x as long as metacarpus; metacarpus 1.25 x as long as stigma; subcosta 1.2 x as long as the width of stigma; first abscissa of radius 1.2 x as long as the width of stigma; second abscissa of radius partly sclerotised, partly interstitial; third abscissa of radius interstitial; two cubital cells present; second cubital cell open at the base; first intercubitus 0.4 times as long as basal; medius 0.85 times as long as submedius; subdiscoideus 0.9 times as long as brachial; nervulus 0.8 times as long as post nervulus, slightly reclivious, distad, with dark setae throughout.

Hind wing 4.1 x as long as wide; sub costella 1.2 x as long as mediella; basella 0.2 times as long as mediella; first abscissa of radiella 0.2 times as long as basella; cubitella interstitial; submediella 0.4 times as long as mediella; nervellus 0.8 times as long as submedius; subcostella with three hamuli.

Hind coxa at the level of the abdomen, 1.7 x as long as wide, punctate, pubescent; trochanter 2.5 x as long as wide; trochantellus 2.5 x as long as wide, pubescent; femur 3.4 x as long as wide, spindle shaped, punctate, pubescent; tibia 1.4 x as long as femur; 5.8 x as long as wide apically, 2.3 x as wide apically as basally, with 16 spines on the outer side, with 2 pegs at the base of the tibial spur, densely setose; tibial spurs unequal, inner spur 1.75 x as long as the outer spur, 0.45 times the length of basitarsus; basitarsus 0.6 times as long as rest of the tarsal
segments, densely pubescent; claw simple; fore tibia with 7 spines; mid tibia with 9 spines.

*Abdomen* subsessile, 3.5 x as long as broad; first abdominal segment as long as wide, with median deep groove and two faint lateral longitudinal carinae; posterior oval region deeply rugoso-reticulate, punctate, laterally sparsely pubescent, yellowish; second tergite as long as wide, with two opposite 'C' shaped dorsolateral crenulated furrows, smooth, punctate, sparsely pubescent; yellowish-brown with dark brownish band in the middle, third tergite 0.5 times as long as broad basally, 0.5 times as long as broad apically; suture between second and third tergites very deep, closely punctate, pubescent; yellowish-brown with dark brownish to black band in the middle; fourth tergite 0.4 times as long as wide, closely punctate, pubescent; with dark brownish-black band; suture between third and fourth segments deep; fifth tergite 0.7 times as long as wide; apically closely punctate, pubescent; completely black; sixth tergite 0.7 times as long as wide, boat shaped, closely punctate, pubescent; remaining tergites hidden under sixth segment; ovipositor broad basally, pointed apically, sickle shaped, 2 x as long as sixth abdominal tergite; ovipositor sheath 0.85 times as long as ovipositor, with single seta at the apex, pubescent, dark brown.

Body yellowish-brownish black; antenna, thorax, hind tibia yellowish-brown; scutellum dark brownish-black; meso-and
metapleurum brownish-black; propodeum black; first abdominal tergite yellow; second brownish-black; third, fourth with median black band; fifth with triangular 'T' shaped black strip, laterally yellow; sixth basally yellow, apically with brownish-black strip; ovipositor brownish; ovipositor sheath brownish-black; stigma dark brown to black; basal, radius, costa brownish-black; medius and submedius apical 1/4 region brownish-black; basal 3/4 region yellowish; stigma, wing veins setaceous; ocelli red.

Male: unknown.

Holotype: ♀: India: Western Maharashtra: Pune: Dimba; 24.IX.2000; Light trap; A.A. Shaikh Coll. Antenna, wings and legs mounted on slides and labelled as above.

Paratype: 1 ♀, data same as holotype.
DISCUSSION

According to the key to the Oriental species of *Protomicroplitis* Nixon (1965) which was modified by Rao and Chalikwar (1970), the new species *Protomicroplitis raoi* superficially resembles with *P. longiterebrus* Rao and Chalikwar (1975) in having: i) vertex smooth, shiny, moderately pubescent, ii) scutellar sulci crenulate, iii) antenna 2 + 16 segmented, iv) propodeum with longitudinal carina and v) hind tibia setose, with stout spines externally. However, *Protomicroplitis raoi* sp. nov. differs from the same having: i) clypeus 3 x as long as broad, finely granulate, ii) mesoscutum granulate, iii) eyes pubescent, iv) metapleural rugoso-reticulate, foveolate, v) first abdominal tergite incavate basally, apically rugoso-reticulate and vi) second abdominal tergite with 'C' shaped crenulate furrow.

This species also runs close to the *Protomicroplitis briviterebrus* Rao and Chalikwar (1970). However, it is distinguished from the same in having: i) face slightly convex with frontomedian carina, ii) antenna 2 + 16 segmented, iii) malar space as long as basal width of the mandible, iii) third pleural area of propodeum obliquely carinated, iv) fore tibia with 7 rows of spines, v) hind tibia with 9 rows of spines and vi) fore tibia and mid tibia with 3-4 pegs near base of spur.