

Rec. zool. Surv. India : 107(Part-4) : 1-5, 2007

A NEW SPECIES OF *POROPOEA* FÖRSTER (HYMENOPTERA : TRICHOGRAMMATIDAE) FROM INDIA WITH A KEY TO ORIENTAL SPECIES

T. C. NARENDRAN AND MOHAMMAD HAYAT*

*Systematic Entomology Laboratory, Department of Zoology,
University of Calicut, Kerala-673 635, India*

INTRODUCTION

The genus *Poropoea* was described by Förster (1851) with *Poropoea stollwerckii* Förster as the type species from Europe (Germany). Subba Rao (1969) reported the genus for the first time from the Oriental region by describing two new species. Luo and Liao (1994) described one new species and Lin (1994) described two new species from China. In this paper we describe a new species from India. A key to species of the Oriental region is also provided.

The following abbreviations are used in the text : F1-F4 = Funicular segments 1 to 4; OOL = Ocellocular distance; POL = Postocellar distance; STV = Stigmal vein. *Depositories* : IARI = National Pusa Collection, Division of Entomology, Indian Agricultural Research Institute, New Delhi. ZDAMU = Department of Zoology, Aligarh Muslim University, Aligarh.

Key to Oriental Species of *POROPOEA* Förster

(Based on females)

1. Ovipositor not exerted beyond apex of gaster; clava 1.77x as long as broad, pedicel a little longer than F1; F2 equal to F1; forewing vein with 6 dorsal setae; marginal fringe 0.54x as long as STV; ovipositor not exerted beyond apex of gaster (China) *P. brevituba* Lin.
- Ovipositor exerted beyond apex of gaster; other characters partly or completely different 2
2. Ovipositor sheath as long as or longer than head and body; discal cilia on upper surface of forewing with only 6 rows; arc shaped row of discal cilia basad of STV absent (Indonesia) ..
..... *P. orientalis* Subba Rao

*Department of Zoology, Aligarh Muslim University, Aligarh-202 002, India

- Ovipositor sheath shorter than head and body; other characters partly or completely different 3
- 3. STV without any row of cilia starting from parastigma; forewing vein with 8 dorsal setae; antennal formula 11232; clava a little less than 3x as long as broad; body dark brown with tibiae and tarsi luteus (China) *P. longicornis* Viggiani
- STV with a row of cilia starting from parastigma; other characters partly or completely different 4
- 4. Forewing with 6 or 7 rows of dorsal cilia on disc 5
- Forewing with more than 7 rows of discal cilia on dorsal side 6
- 5. Ovipositor sheath much longer than dorsal length of gaster; OOL half or shorter than half as long as diameter of hind ocellus; F2 much longer than F1; body mostly black (India)
..... *P. baleena* Narendran & Hayat sp. nov.
- Ovipositor sheath shorter or as long as dorsal length of gaster; OOL as long as diameter of front ocellus; F1 almost equal to F2; body mostly brown (India) *P. indica* Subba Rao
- 6. Ovipositor as long as ovipositor sheath; F1 about 1.3x as long as its width; clava (excluding spicula) a little longer than scape, a little longer than 2.8x its basal width; pedicel about 5x length of F1 (China) *P. tomapoderus* Luo & Liao
- Ovipositor longer than ovipositor sheath; F1 1.7x as long as its width, clava (excluding spicula) subequal to scape; pedicel about 0.9x length of F1 (China) *P. duplicata* Lin.

(The above key is mostly based on published information)

***Poropoea baleena* Narendran & Hayat sp. nov.**

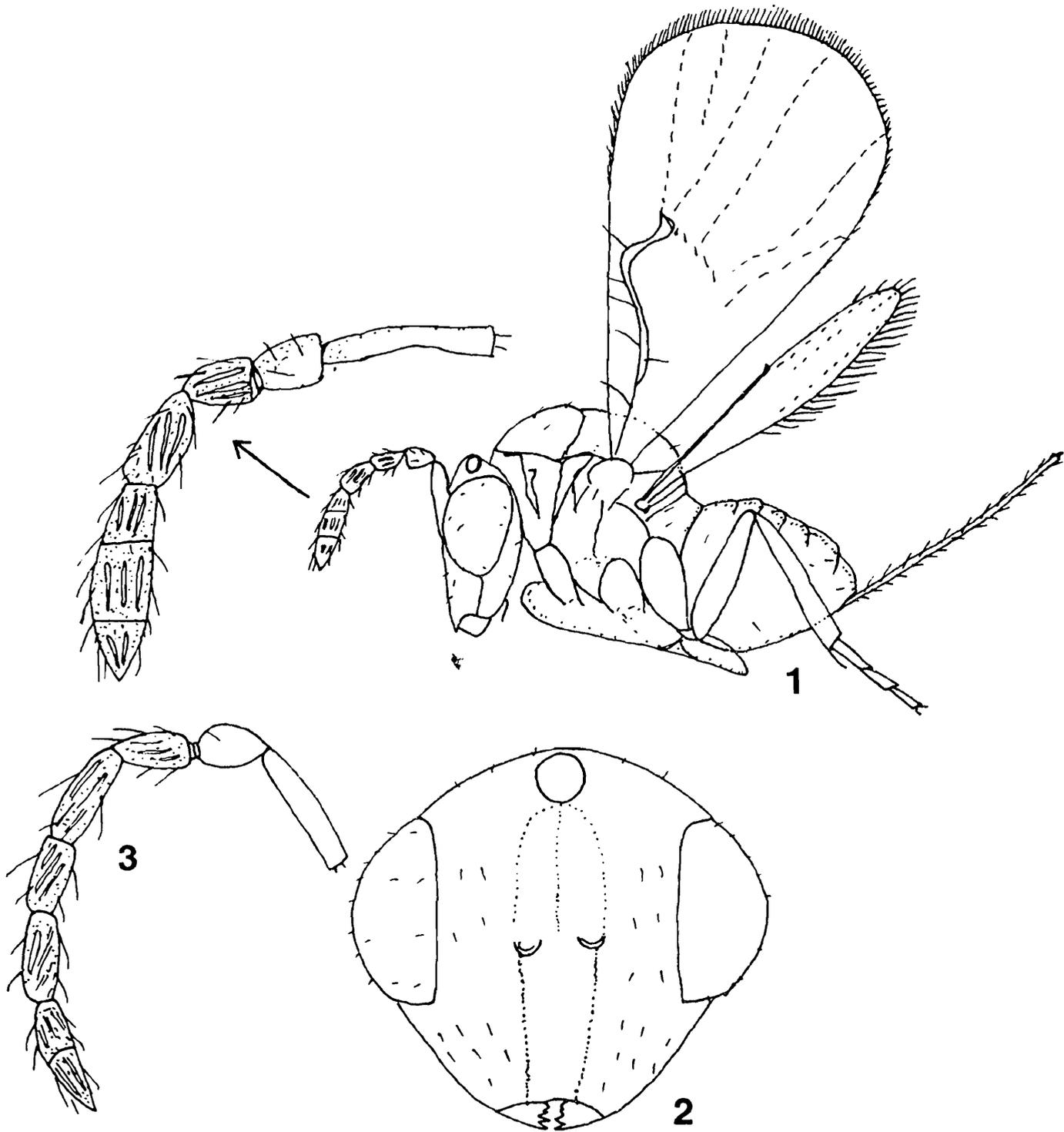
(Figs. 1-3)

Holotype : Female : Length (excluding ovipositor sheath) 0.89 mm. Ovipositor sheath 0.37 mm (Total length 1.26 mm). Head black with slight metallic blue refringence on frons and gena; vertex with a brown cross band; antenna pale brown; eye greyish yellow; ocelli pale brownish yellow. Mesosoma and gaster (excluding ovipositor sheath) deep black with slight bluish tinge; ovipositor sheath dark brown. Legs blackish brown with apices of femora, bases and apices of tibiae and tarsal segments pale yellow or pale whitish yellow; pretarsi brown. Wings hyaline, with veins and pilosity brown.

Head : (Fig. 2) Width in anterior view 1.1x as broad as long; frons with sparse pilosity; scrobe deep reaching front ocellus, margins ecarinate; frontoclypeal area with 2 longitudinal grooves; vertex with cross striations; POL 5.5x diameter of a hind ocellus; OOL half or less than half diameter of hind ocellus; antenna inserted close to each other and in the middle of face. Antennal formula 11223. Relative length : width of antennal segments : scape = 30 : 5; pedicel = 12 : 9;

F1 = 12 : 8; F2 = 19 : 8; clava = 35 : 10. Mandibles with two distal pointed teeth, inner teeth not distinctly visible (probably as in *indica*).

Mesosoma : Well arched in side view (Fig. 1), not laterally compressed. Mesoscutum with 2 pairs of setae; scutellum with 2 pairs of setae, anterior pair far behind middle level of scutellum



Figs. 1-3. : *Poropoea baleena* Narendran & Hayat sp. nov. 1 & 2. Female, 1. Body profile in part, 2. Head in front view; 3. Antenna of male.

and posterior pair at posterior margin of scutellum; scutellum with faint median groove. Forewing 1.9x as long as broad (including marginal fringe); upper side with 6 rows of discal cilia; lower surface with 7 rows of cilia including one arch shaped row basad of STV (in *indica*, Subba Rao (1969)) has shown this arch as on upper surface of wing). The veins with 5 upper and 1 lower setae as in figure 1. Marginal fringe in maximum with 0.085 x maximum width of forewing, closely spaced. Hind wing length (excluding marginal fringe) 6.44x its maximum width, marginal fringe a little less than three-fourths as long as breadth of the wing (5-9).

Gaster. Compressed from sides in dried specimens, shorter than mesosoma in dorsal view (30 : 38) (excluding ovipositor sheath); ovipositor sheath curved upwards at rest, longer than dorsal length of gaster; gaster ventral part extended anteriorly upto basal level of fore coxa (Fig. 1).

Male : Essentially similar to female except for measurements of antennal segments (Fig. 3).

Host : Unknown.

Material examined : Holotype : Female, INDIA, Punjab, PKT [Pathankot] : Dodhpur Kulian, 11.vii.2006, coll. S.M.A. Badruddin & F.R. Khan (IARI). *Paratypes :* 1 Female and 1 Male, INDIA, Uttar Pradesh, Shrawasti, Chakra Bhandar, 3.x.2006, coll. F.R. Khan (ZDAMU).

Remarks : *P. baleena* sp. nov. (females) comes close to *P. indica* Subba Rao (females) in the key to the world species of *Poropoea* by Subba Rao (1969), but differs from *indica* in the following characters :

- (1) Ovipositor sheath much longer than dorsal length of gaster in *baleena* (in *indica* ovipositor sheath distinctly shorter than dorsal length of gaster) or at the most as long as.
- (2) OOL half or shorter than half of diameter of hind ocellus (in *indica* OOL as long as diameter of hind ocellus).
- (3) Scape 2.5x as long as pedicel (in *indica* scape about 3x as long as pedicel).
- (4) F2 much longer than F1 (19 : 12) (in *indica* F1 almost equal to F2).
- (5) Body black (in *indica* head mostly brown, concolorous with antenna, sides of mesosoma and gaster brown).
- (6) Male antennal measurements differ in both species.

ACKNOWLEDGEMENTS

The first author acknowledges the University of Calicut for facilities. The second author acknowledges the Aligarh Muslim University, Aligarh for facilities, and the ICAR and Dr. V V Ramamurthy of the Division of Entomology, IARI, the National Coordinator of the Network Project on Insect Biosystematics, for financial assistance.

REFERENCES

- Förster, A. 1851. Eine Centurie neuer Hymenopteren Vierte und fünfte Dekade. *Verhandlungen des Naturhistorischen Vereins der Preussischen Rheinlande und Westfalens, Bonn.*, **8** : 1-42.
- Lin, N.Q. 1994. Systematic studies of Chinese Trichogrammatidae. *Contributions of the Biological Control Research Institute, Fujian Agricultural University, Special Publication No. 4* : 191-247. Chongqing Publishing House, Chongqing, China.
- Luo, W. and Liao, D. 1994. A new species of the genus *Poropoea* Förster from China (Hymenoptera : Chalcidoidea : Trichogrammatidae). *Acta Zootaxonomica sinica*, **19**(4) : 490-493.
- Subba Rao, B.R. 1969. Two new species of *Poropoea* Förster from the Orient with a key to species (Hymenoptera : Trichogrammatidae). *Oriental insects*, **3**(4) : 319-325.