

AN INTERESTING NEW GENUS OF PTEROMALIDAE (HYMENOPTERA) WITH EVANIIFORM GASTER

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ABSTRACT. A new genus of Pteromalidae is described, with two species from the Oriental Region : *Asoka appendigaster*, sp. nov. from Taiwan and *Asoka petiolatus*, sp. nov. from Sri Lanka and Malaya (West Malaysia).

Asoka, gen. nov.

Occiput immargined; temples terete, strongly receding, short; vertex feebly convex, ocelli in curved line; eyes bare, oval. Frons convex, inner eye orbits subparallel above but considerably diverging in lower half; scrobes moderately deep, narrow, with steep but terete sides; lower face feebly convex; clypeal region with radiating striation; clypeus not well delimited, tentorial pits indistinct, lower margin of clypeus with deep incision (Fig. 5); mouth margin otherwise nearly straight; genae convex, posterior margin not carinate. Mandibles normal. Antennae inserted above middle of face, subfiliform, in female formula 11353; pedicellus short, anelli short, funicle segments long, each with several irregular rows of small longitudinal sensilla; clava elongate, not sharply pointed, its first segment long, apical two segments very short.

Thorax short, densely pubescent, deeply reticulate with some cross-rugulae. Pronotum strongly transverse, slightly narrower than mesoscutum; collar narrowed medially, convex, anteriorly delimited by a fine carina, posterior margin without smooth strip; lateral panel with oblique groove. Notaular furrows shallow, nearly complete but posteriorly indistinct. Scutellum not subdivided. Metanotum in middle invisible owing to unusual form of propodeum the nuchal part of which is thrust upwards and forwards, to or even above apex of scutellum; surface of propodeum reticulate, plicae present (in type-species) or absent. Prepectus triangular, of medium size. Mesopleurum : lateral mesepisternum reticulate, depressed, flat; lower epimerum reticulate, separated from smooth upper epimerum by subvertical deep depression. Triangular metapleurum not reaching base of hind wing. Legs of normal shape; hind coxa dorsally bare; hind tibia with two apical spurs, outer spur small. Fore wing : marginal vein slender, long, slightly longer than postmarginal vein; stigmal vein hardly knobbed, less than one-third as long as the marginal; speculum developed, open below; basal cell with pilose cubital and basal folds and scattered discal hairs.

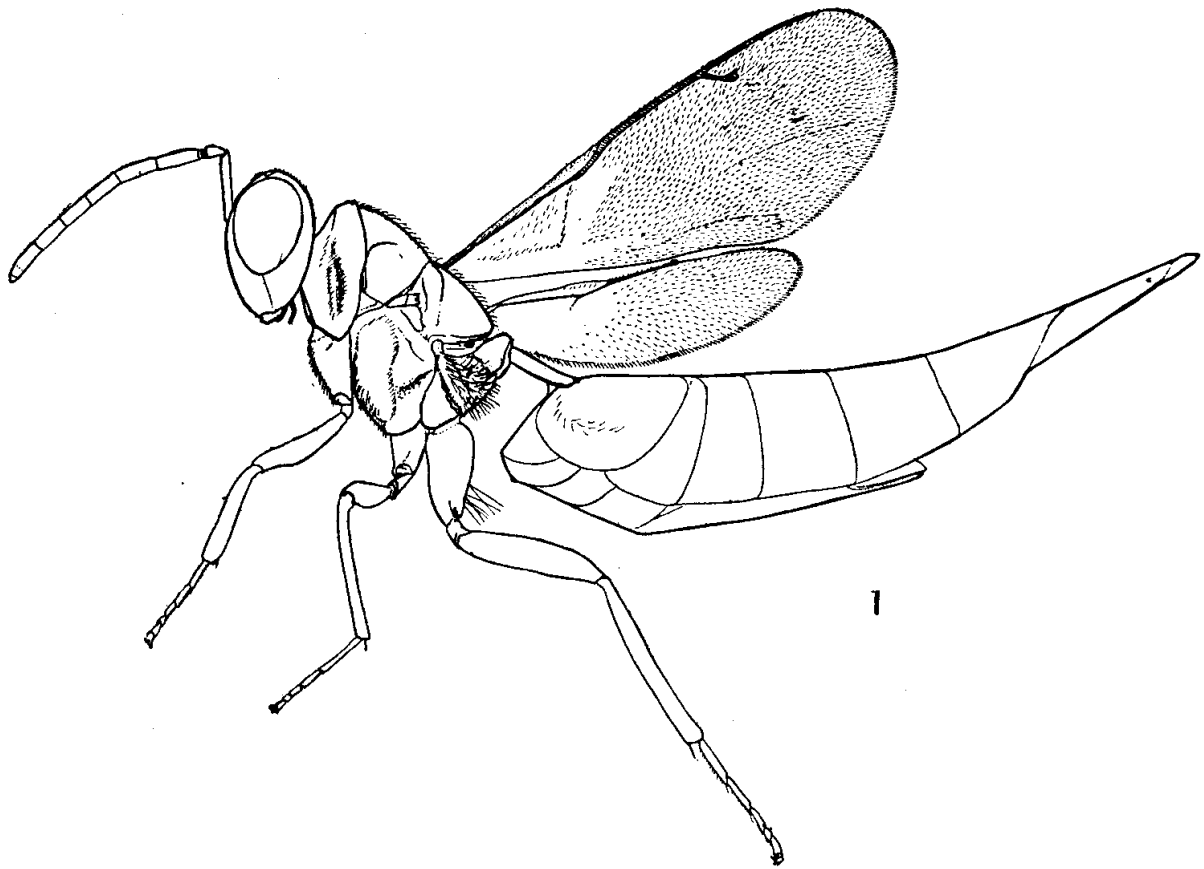


Fig. 1. *Asoka appendigaster*, gen. et sp. nov. ♀.

Abdominal petiole narrow, long, slightly expanding posteriorly, nearly smooth. Body of gaster in female compressed from sides, tapering to apex, very long; second tergite short dorsally, the following tergites of increasing length; epipygium very narrow, with small cerci near to apex, cercal setae short. Ovipositorial sheaths slightly protruding at tip.

Biology not known.

Type-species : *Asoka appendigaster*, sp. nov.

The name *Asoka*, of masculine gender, is after the wise king Asoka (often pronounced Ashoka) of India, of the third century B.C.

The genus belongs to subfamily Pteromalinae, in spite of the peculiar attachment of the gaster, which reminds one much of the forms known in the families Evaniidae or Gasteruptionidae. In my opinion this feature, however unusual, could not justify erection of a tribal name to accommodate the genus. This seems to belong to the group of genera near to *Dinarmus* Thomson, for which the names Bruchobiinae (Mani, 1939 : 75) and Dinarmineae (Domenichini, 1954 : 72) were proposed, eventually. As it is difficult, however, to delimit the group by definite characters, the tribal name is not used. In any case the attachment of the gaster makes it easy to separate the present genus from all the known genera of Pteromalidae.

KEY TO THE SPECIES

- Propodeum laterally with dense pubescence, its plicae strong, nuchal part thrust upwards to level with scutellum (Figs. 1,6); abdominal petiole about as long as scutellum; gaster relatively less elongate, hypopygium extending to its half, beyond middle of fifth tergite. Taiwan. **appendigaster**
- Propodeum with sparse pubescence, plicae vaguely indicated, nuchal part thrust up and forwards over apex of scutellum; abdominal petiole about 3× as long as scutellum (Figs. 2,3); gaster very slender, hypopygium not exceeding basal fifth of gaster. Sri Lanka, Malaya. **petiolatus**

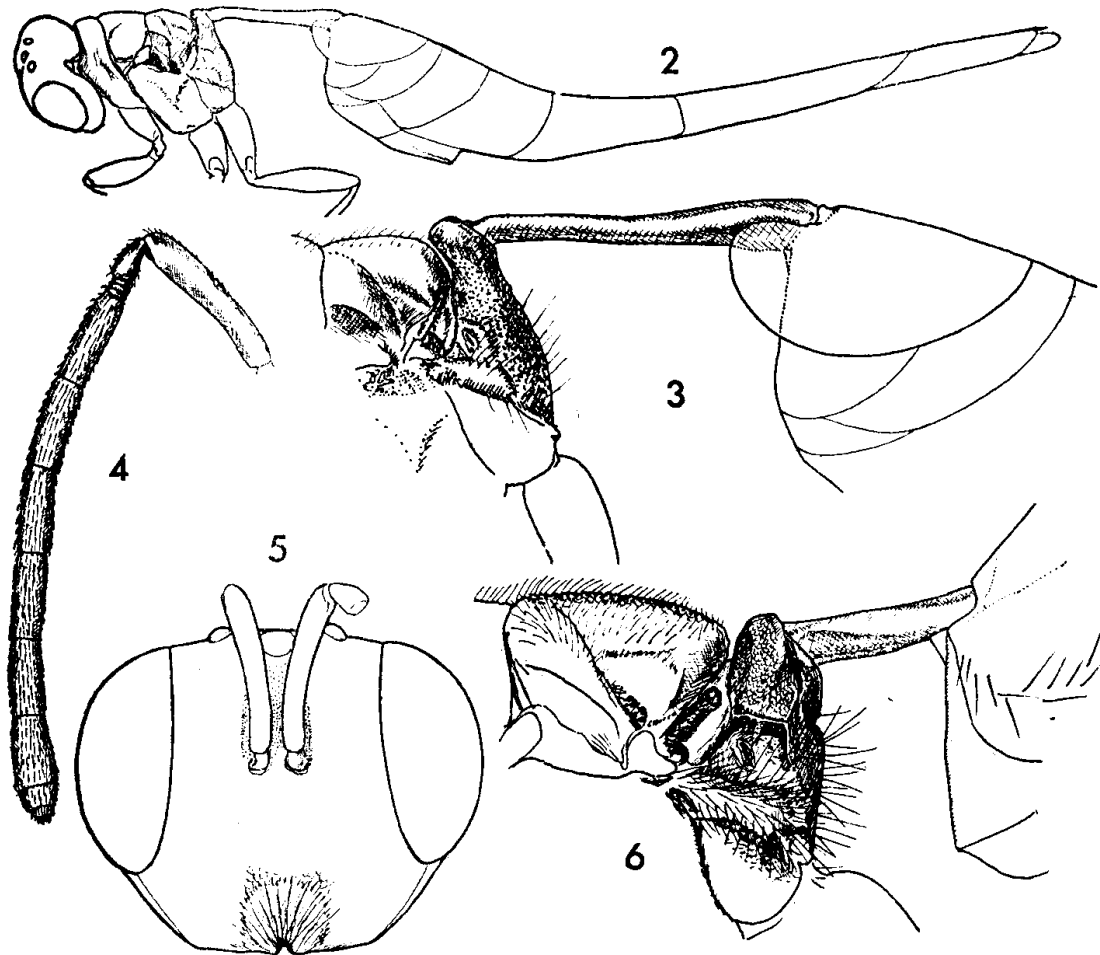
1. Asoka appendigaster, sp. nov.

Female : 7.3-8.5 mm. Head and thorax mainly bright bluish to violaceous, at least on sides, or more or less greenish (face and thoracic dorsum in paratype), or partly darker, blackish (occiput and mesoscutum in holotype); propodeum blue, subpetiolar area between hind coxae black; gaster infuscate but brownish translucent anteriorly, sides with iridescent violaceous tinge; scape testaceous, rest of antenna brown; coxae and femora infuscate with bluish tinge, tibiae whitish, tarsi pale testaceous. Wings subhyaline.

Head 1.18× as broad as mesoscutum, in dorsal view nearly 2× as broad as long (67 : 34), in facial view 1.24-1.26× as broad as high. Ocelli large, long diameter of lateral ocellus slightly longer than distance between lateral and median ocellus and slightly less than distance of eye (00L); POL about 2.1× 00L. Frons in front of ocelli only 0.52× the width of head. Dorsal margins of eyes strongly diverging backwards. Head in facial view shown in fig. 5. Relative measurements : height of head 53, width of frons 35, eye 37 : 28, malar space 16, width of mouth 28, length of scape 28, pedicellus plus flagellum 98, i.e. 1.46 × as long as breadth of head. Scapus by one-quarter of its length exceeding vertex level. For antenna see fig. 4.

Thorax about 1.5 × as long as broad (propodeum included), only slightly narrowed towards both ends. Pronotal collar medially less than 0.25 as long as mesoscutum, posteriorly broadly emarginate, swollen along hind margin and from there fairly sloping towards anterior collar carina. Mesoscutum with distinct though irregular transverse rugulae; mid lobe anteriorly convex; hind margin of lateral lobes at tegulae elevated. Scutellum about as long as broad (axillae excluded), feebly convex. Metanotum well visible on sides, deep depression along anterior margin delimited submedially by an oblique carina. Nuchal region of propodeum thrust upwards to level of scutellum; plicae strong, in posterior part strongly bent upwards; sides and posterior wall of propodeum with long and white pubescence; posterior part separated from subpetiolar area by strong keels which converge from dorsal margin of coxal socket upwards to circumpetiolar rim, approach each other closely below petiole but do not meet. Mesopleurum ventrally and anteriorly pubescent, also ventral aspect of fore and mid coxa densely hairy. Fore wing : relative lengths of costal cell, marginal vein, postmarginal and stigmal veins in ratio as 80 : 47 : 45 : 13,

Form of gaster and its attachment shown in Figs. 1 and 6. Petiole in dorsal view expanding caudad; its relative measurements : length 30, width anteriorly 7, posteriorly 12; surface dorso-basally with distinct granulation and a fine median arrow-like groove. Anterior gastral tergites smooth but their sides as well whole of distal tergites slightly dull owing to a microscopic cross-striation with intermixed fine punctures bearing short whitish pubescence.



Figs. 2-3, *Asoka petiolatus*, sp. nov. : 2, body of female in lateral view; 3, more enlarged view of the attachment of gaster. Figs. 4-6, *Asoka appendigaster*, sp. nov., ♀ : 4, antenna; 5, head in facial view; 6, detail of attachment of gaster.

Male : Unknown.

Holotype ♀, TAIWAN : Taihorinsho, x. 1909, Sauter (Termesztudományi Múzeum, Budapest). *Paratype* ♀, TAIWAN : Kosempo, ix. 1909, Sauter (BMNH, London).

2. *Asoka petiolatus*, sp. nov.

Female : 6.2-7.3 mm. Dark bluish or slightly greenish, mesoscutum mainly blackish; gaster laterally slightly blue or green, dorso-apically more purplish-black, in holotype slightly discolored, brownish. Antennae brown to black,

scapus and pedicellus testaceous; coxae and femora with metallic tinge, tibiae and tarsi testaceous, tibiae slightly infuscate in basal half. Wings subhyaline.

Morphologically in many respects similar to *A. appendigaster*. Head in facial view 1.26-1.28 × as broad as high. Ocelli relatively small, long diameter of lateral one less than its distance from median ocellus, POL 1.9-2 times OOL. Frons in front of ocelli 0.58 the width of head. Dorsal eye orbits moderately diverging backward. Relative measurements: height of head 41, width of frons 30.5, eye 24 : 19, malar space 13, width of mouth 23, length of scape 19, pedicellus plus flagellum 74, i.e. 1.45 × (in paratype 1.4 ×) as long as breadth of head. Antennal clava with first segment relatively shorter than in *A. appendigaster*, both sutures slightly oblique.

Thorax (including propodeum) about 1.05 × as long as broad. Pronotal collar medially slightly more than 0.33 as long as mesoscutum, moderately swollen at hind margin, anterior carina distinct. Sculpture of collar and mesoscutum rather coarse, reticulate with raised transverse rugulae. Scutellum trapeziform, transverse, apex partly hidden under overlapping nuchal region of propodeum (fig. 3). Plicae vague, only anteriorly indicated; part of propodeum above them finely reticulate, part below and behind them with very coarse deep reticulation which becomes finer towards median depression of posterior wall; subpetiolar area not well delimited, reduced to a transverse lozenge-like area between hind coxae far below petiolar foramen, with fine reticulation between some transverse rugae; propodeum at sides and posteriorly with sparse long thin white hairs. Fore wing: ratio between length of costal cell, marginal vein, postmarginal vein and stigmal vein as 57 : 31 : 28 : 8.5 (or 55 : 27 : 27 : 9 in paratype); stigmal vein with very weak knob.

Form of gaster and of its attachment shown in Figs. 2 and 3. Petiole slightly longer than distance between anterior margin of pronotum and apex of scutellum, its dorsal surface mostly smooth except for fine longitudinal striation at base, in form slightly widening caudad; relative width anteriorly 5, posteriorly 9, length 45 (including condyle-like base). Gastral tergites, except for basal ones dorsally, microscopically cross-reticulate to cross-striate, apical ones beginning with middle of fifth tergite with short dark adpressed pubescence.

Male : Unknown.

Holotype ♀, SRI LANKA (Ceylon) : Kandy, ii.-1912, O.S. Wickwar (BMNH, London). *Paratype* ♀, W. MALAYSIA : Kuala Lumpur, nr. L. Gardens, 3. iii. 1935, H.M. Pendlebury (BMNH, London).

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