

A NEW SPECIES OF JANUS STEPHENS (HYMENOPTERA: CEPHIDAE) FROM INDONESIAN

by

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ABSTRACT

Janus ecarinatus, n.sp., is described from western Kalimantan, Indonesia. This is the first record of the family Cephidae for Indonesia, the most southern in Asia, and one of the few known from the Southern Hemisphere. The absence of a genal carina and the long cercus are two of the significant characters that separate it from other species of *Janus*.

INTRODUCTION

The Cephidae, stem or twig borers as larvae, are primarily a northern temperate, holarctic group of about 100 species in 15 genera. Representatives are very rare in tropical regions. The southernmost record in the Western Hemisphere is for *Hartigia mexicana* (Guerin) from the State of Chiapas, Mexico (ca. 17° N) (Smith, 1988). One genus, *Achetocephus* Benson, with two species, is known from Madagascar (ca. 20° S) (Benson, 1946). In Asia, a species of *Janus* Stephens and one of *Urosyrista* Maa have been recorded from as far south as Burma (ca. 22° N) (Benson, 1946).

The species described below as *Janus ecarinatus* from western Kalimantan, Indonesia, now represent the most southern record of Cephidae in Asia, the second genus and third species from the Southern Hemisphere, and the first record of the family from Indonesia.

About ten species of *Janus* are known from Eurasia and North America, Larvae are twig borers, and recorded hosts are species of *Malus*, *Populus*, *Pyrus*, *Ribes*, *Quercus*, *Salix*, and *Viburnum*. Adults are

distinguished from other cephid genera by the tarsal claw, with the inner tooth longer and stouter than outer tooth and with an acute basal lobe; antenna not thickened apically but gradually thickened after the second flagellar segment and the antenal segment longer than the fourth; left mandible lacking a central tooth simple and inner tooth simple with a basal shoulder on lower inner surface; apical maxillary palpal segment originating near the base of the penultimate segment; forewing with vein 2A adjacent to the posterior margin of the wing and vannal fold, not separated from them by more than twice the width of the vein; and one or two preapical spines on the hindtibia.

Several characters typical for *Janus*, however, are different in *J. ecarinatus*. All known species of *Janus* have a genal carina, cercus one-third or less the length of the sawheath, the hindbasitarsus shorter than the following tarsal segment combined, and serrulae of the lancet truncate at their apices. In *J. ecarinatus*, the genal carina is absent, the cercus is nearly as long as the sheath (Fig. 1), the hindbasitarsus is longer than the following tarsal segments combined, and the serrulae of the lancet are pointed at their apices (Fig. 2). Regardless of these differences and because it shares so many derived character states with *Janus*, I believe it belongs in the same lineage as other *Janus* species. The absence of a genal carina also occurs elsewhere in Cephidae: in *Achetocephus* and in one species of *Pachycephus stein* (Benson, 1946), a genus of about five species found in the Mediterranean area and Eurasian steppes. I regard the other differences as more significant for species separation than for generic distinction. All these differences, however, are the first known in *Janus*.

Janus ecarinatus Smith, new species

(Figs. 1,2)

Female. Body length 13 mm.

Head yellow with eyes between dorsum black and with black extension through ocellar area anteriorly to antennae; broad black band on occiput surrounding occipital foramen; narrow anterior margin of clypeus, apex of mandible and apical maxillary palpal

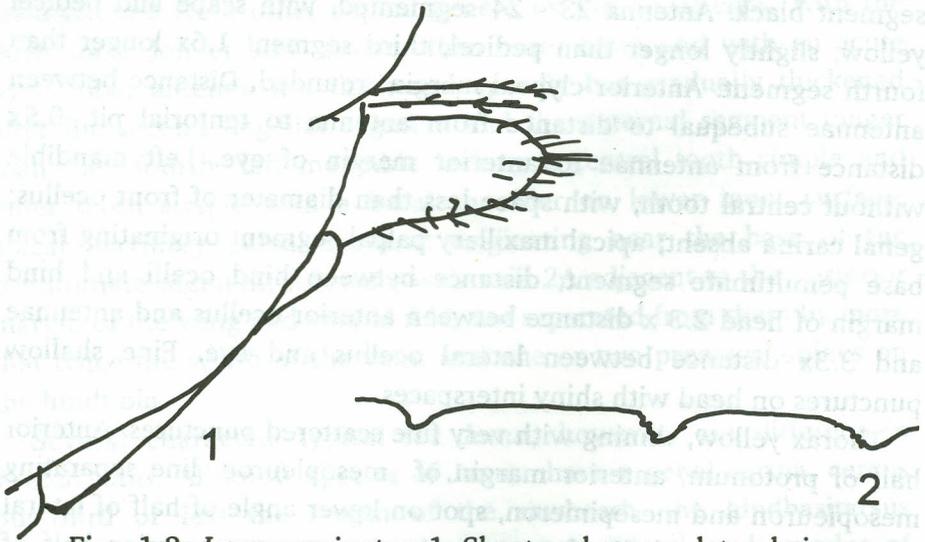
segment black. Antenna 23 - 24 segmented, with scape and pedicel yellow, slightly longer than pedicel, third segment 1.6x longer than fourth segment. Anterior clypeal margin rounded. Distance between antennae subequal to distance from antenna to tentorial pit, 0.5x distance from antennae to anterior margin of eye. Left mandible without central tooth, with space less than diameter of front ocellus; genal carina absent; apical maxillary palpal segment originating from base penultimate segment; distance between hind ocelli and hind margin of head 2.3 x distance between anterior ocellus and antennae and 3.3x distance between lateral ocellus and eye. Fine shallow punctures on head with shiny interspaces.

Thorax yellow, shining with very fine scattered punctures. Anterior half of pronotum, anterior margin of mesopleuron, line separating mesopleuron and mesepimeron, spot on lower angle of half of lateral lobe and anterior half of mesonotum (prestucum, anterior half of lateral lobe and anterior corner of scutellum) black. Mesonotum more punctate with fine surface sculpture. Legs yellow with hind femur more yellow at base, extreme apex of hind tibia lightly, and apical two tarsal segments black. Hind basitarsus 1.4 x longer than length of remaining tarsal segment combined; mid tibia with one preapical spine; hind tibia with two preapical spines, fore tibia with one long simple apical spine, 0.4 x length of fore basitarsus. Wings slightly uniformly yellowish, vein and stigma light brown. Vein 1r of the fore wing reaches stigma.

Abdomen shining without surface sculpture, yellow with brownish bands on apical half two-third of terga 2 - 7, narrower on 8. Cercus and sheath black, nearly reaching to apex of sawsheath; sawsheath about 0.6x length of basal plate. Serrulae of lancet pointed at apices, each with several small anterior subbasal teeth.

Male. Unknown.

Holotype. Female, labeled "Indonesia: W. Kalimantan, Gunung Palung Nat. PK., June 15 - August 15, 1991, Darling, Rosichon, Sutrisno, 11S 910116," "Cabang Panti Res. Sta. 1 15'S, 110 5'E, 1 rainforest, Malaise trap head, Sandstone - light gap." Deposited in the Royal Ontario Museum, Toronto, Ontario, Canada.



Figs. 1-2. *Janus ecarinatus*. 1, Sheath and cercus, lateral view.

2, Central serrule of lancet.

Etymology. The species name is from Latin, referring to the lack of a genal carina.

This species differs from all other species of *Janus* by the absence of a genal carina, long hindbasitarsus, long cercus, and pointed serrulae of the lancet, as discussed above. The predominately yellow coloration with black primarily on top the head, anterior half of the mesonotum, and bands on the abdomen are also distinctive. Benson (1946) described a species of *Janus* from Burma, Maa (1949,1950) described two species and gave keys to the species of China, and Muche (1981) gave a key to the world species. The differences cited above, however, preclude *J. ecarinatus* as a previously described species.

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