

THE DISCOVERY OF THE EULOPHID WASP GENUS *STENOPETIUS* BOUČEK (INSECTA: EULOPHIDAE: EULOPHINAE) IN INDONESIA, WITH DESCRIPTION OF A NEW SPECIES

Rosichon Ubaidillah

Museum Zoologicum Bogoriense, Research Center for Biology, Indonesian Institute of Sciences -

LIPI, Jl. Raya Jakarta-Bogor Km. 46, Cibinong 1691, Bogor, Indonesia

E-mail: ubaidillah003@yahoo.com

ABSTRACT. – The eulophid wasp genus *Stenopetius* Bouček is reported from Indonesia for the first time where it is represented by one species, *Stenopetius jeniei* new species, described and illustrated here. The new species was compared with *Stenopetius rugosus* Bouček, previously the only described species in the genus. A key to the two species is presented.

KEY WORDS. – Hymenoptera, Eulophidae, Eulophinae, *Stenopetius jeniei*, new species, Indonesia, key to species, taxonomy.

INTRODUCTION

The eulophid wasp subfamily Eulophinae is species-rich in Indonesia and previously undescribed species and new records have recently been reported from the region (Ubaidillah, 2000, 2003, 2006; Ubaidillah & Kojima, 2006, Ubaidillah *et al* 2003). There has never been a comprehensive treatment of the subfamily in South East Asia. This paper represents the first of a series of papers intended to review the genera of this subfamily and to describe the many new species. Within the subfamily Eulophinae, *Stenopetius* Bouček, 1988, is presently known from only a single species, *Stenopetius rugosus* Bouček, 1988. This species is restricted to the Australasian region, and is known from Queensland, the Solomon Islands, Fiji, and Papua New Guinea (Bouček 1988). A second species from Java and Sulawesi has since been discovered, dramatically increasing the geographical distribution of this genus.

Stenopetius is distinguished from other genera in the tribe Eulophini by the following characters: petiole long, longer than hind coxa; propodeum with two strong medial carinae, connected to each other apically; pronotum, mesonotum and scutellum very coarsely and irregularly rugose; pronotum with distinct transverse carina; head without temples, with broad concave occiput; both sexes with five funicular flagellomeres. The new species is described here and a key to species is provided.

MATERIALS AND METHODS

The specimens examined in this study were collected by the author with a sweep net. Specimens were mounted on rectangular cards and their external morphology and colouration were observed under a stereoscopic dissecting microscope. Drawings were made with the aid of a camera lucida. The holotype and one paratype of *S. rugosus* Bouček were also examined with a dissecting microscope to confirm the morphological characters of both species. Morphological terminology follows Bouček (1988). Measurements are given to nearest 0.05 mm. Acronyms for the museums/institutions in which specimens are deposited are as follows: IUNH, Natural History Collection, Ibaraki University, Mito, Japan; MZB, Museum Zoologicum Bogoriense, Bogor, Indonesia.

TAXONOMY

EULOPHIDAE WESTWOOD, 1829

Stenopetius Bouček, 1988

Stenopetius Bouček, 1988: 637–638. Type species *Stenopetius rugosus* Bouček, by monotypy and original designation.

Diagnosis. – Body colour predominantly dark brown or black; body usually glabrous without micropilosity, usually with sparse semi-erect short setae on posterior and submedian surface of vertex and pronotum, and long paired setae on posterior margin of pronotum, mesoscutal disk,

and scutellum. Head with occiput concave, dorso-laterally almost touching the eyes; posterior vertex, just behind the lateral ocelli with a transverse carina; eyes large and hairy; scrobe shallow, lower face slightly convex with tentorial pits on the sides of posterior clypeus; clypeus not prominent; antennae filiform, inserted in middle of face with five funicular segments; pronotum narrow, distinctly narrower than mesoscutum with a transverse carina; mesoscutum with notauli complete to reach the anterior margin of axilla, median mesoscutal with alveolate punctures and irregular rugosity; median disk of scutellum depressed; propodeal disk medially with two carinae, connected before the middle and forming an X-shape; petiole narrow, slightly widening caudad, much longer than hind coxa.

Key to species of *Stenopetius*

1. Scutellar disk coarsely wrinkled and with a semi oval median depression (Fig. 2b), submedian carinae on propodeum curving outward medially (Fig. 2d) *S. rugosus* Bouček
- Scutellar disk moderately reticulate with a longitudinal median depression (Figs. 1d, 2a), submedian carinae on propodeum straight, parallel (Fig. 1c) *S. jeniei*, new species

Stenopetius jeniei, new species

(Figs. 1, 2a,c)

Material examined. – Holotype: female (MZB), labeled “INDONESIA, West Java, Sukabumi, Salabintana, coll. R. Ubaidillah, sweeping, 8 Jul.2004”, and “female *Stenopetius jenii* Ubaidillah, new species. Holotype”.

Paratypes. – 1 female (IUNH), West Java, T. N. Gede Pangrango, kab. Sukabumi, Bodogol, 800 m a.s.l. Coll. Darmawan, 1 May 2005; 1 male (MZB), D. I. Yogyakarta, Sleman, Turgo Bawah, 07°35'E 110°26'E, 920 m a.s.l., coll. R. Ubaidillah & Darmawan, 17 Jul.2005; 1 female (MZB), West Java, Sukabumi, Kabandungan, Pemeungpeuk, tanjakan Ajle, 06°47'N 106°34'E, 1,100 m a.s.l., 23 Jul.2007, R. Ubaidillah, E. Cholik and Sarino, sweep sample; 1 female (MZB), North Sulawesi, Gorontalo, Bone Bolango, Tapa, Bone Talangi 00°35'N 123°06'E, sweep sample, coll. R. Ubaidillah, 16 Sep.2003.

Description. – Female: Body length 1.8–2.0 mm (holotype 1.9 mm). Forewing length 1.6–1.9 mm (holotype 1.75 mm).

Head metallic black with a bluish tinge, mesosoma and metasoma black; antennal scape light brown; pedicel and funicles dark brown; all coxae black, femora dark brown except anterior margin pale yellow; wing hyaline with brown on veins.

Head in frontal view (Fig. 1b) wider than high. Vertex reticulately sculptured, with pairs of long setae on area between posterior ocelli and along the occipital ridge. Eyes with short, sparse, white setae; posterior ocellus closer to anterior ocellus than to eye margin; ratio of distance between posterior ocelli (POL) and ocellular distance (OOL) 12:10. Scape, at rest, almost reaching level of vertex (Fig. 1c); pedicel 0.7 times the length of first funicular flagellomere,

the latter slightly thinner and longer than other funicular flagellomeres, about 1.2 times the length of the second (Figs. 1a,c). Scrobes finely reticulate, depressed medially; frons and lower face smooth and shiny; clypeus indicated laterally and with a relatively large tentorial pit on each apex of lateral clypeal line (Fig. 1b). Malar space about 0.4 times as long as eye height; malar sulcus straight, ending in small fovea at eye margin (Fig. 1c).

Mesosoma: Pronotum margined, with a transverse carina; median pronotal disk finely reticulately sculptured with sparse setae and three pairs of long setae arranged on anterior margin. Mesoscutum with notauli reaching anterior margin of scutellum; mesoscutum with relatively large alveolus and irregularly rugosely sculptured and with three pairs of setae, each seta bearing in the center of the alveolate sculptured; axilla with fine reticulate sculpture, and on anterior median with shallow, triangular pit. Scutellum reticulate posteriorly and slightly roughly reticulate anteriorly; with elongate median depression (Figs.1d, 2a). Propodeum 0.75 times the length of scutellum; with parallel, sub-median carinae; plicae present, reaching anterior margin of propodeal disk; median disk smooth, engraved with reticulation around propodeal spiracles; callus with six setae.

Metasoma (Fig. 1e): Petiole length about 3.8 times width, with two elongate carinae sub-laterally and one median carina dorsally. Metasomal gaster short, oval, and first gastral tergite covering at least anterior half of the length of gaster, cerci very short.

Legs and wings: Hind coxa smooth dorsally and finely striated laterally; first tarsomere of hind leg slightly longer than the second. Forewing length 2.4 times as long a wide (Fig. 1d); submarginal vein with five dorsal setae; ratio of lengths of submarginal, marginal, stigmal and postmarginal veins 18:39:9:15.

Male: Similar to female, but smaller, body length 1.7 mm; darker and less metallic; median groove of scutellum shallower; scutellar disk reticulately sculptured; metasomal terga black; metasomal petiole length 5 times the width, slightly broader posteriorly, abdominal gaster triangle-shaped, first tergite covering approximately two-thirds of length of abdomen.

Host. – Unknown

Etymology. – This species is named in honor of Prof. Dr. Umar Anggara Jenie of the chairman of the Indonesian Institute of Sciences (= LIPI) for his attention to the natural sciences in Indonesia.

Distribution. – Known from North Sulawesi and Java.

Discussion. – This species is very similar to its sister species *S. rugosus*, but can be distinguished from the latter by the presence of a median depression on the scutellar median disk and black body. This species is known very rare in the field and has mainly been collected from the forest edge.

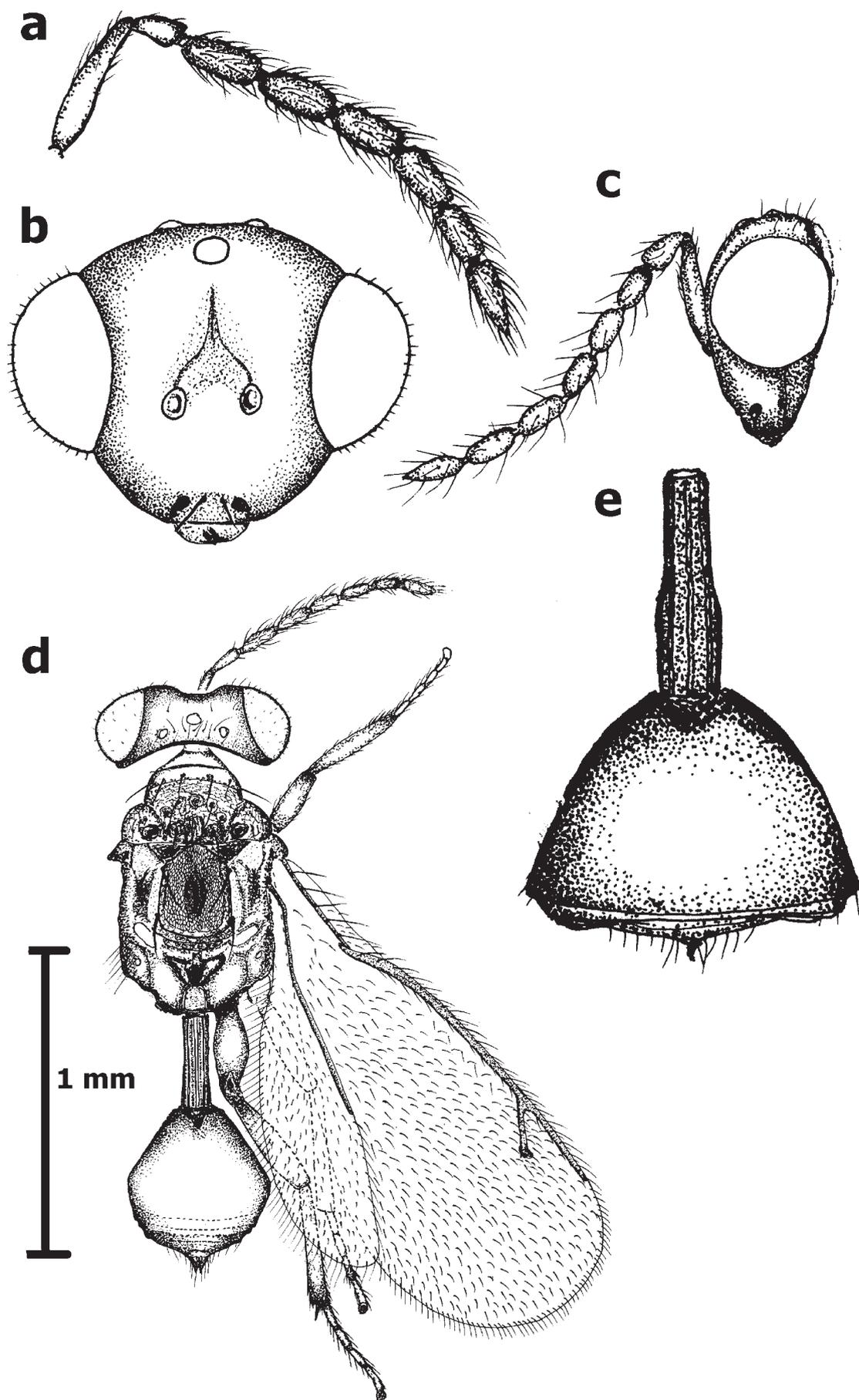


Fig. 1. Female of *Stenopetius jenii*, new species: a. antenna, b. head frontal view, c. head and antenna lateral view, d. habitus dorsal view, e. metasoma dorsal view.

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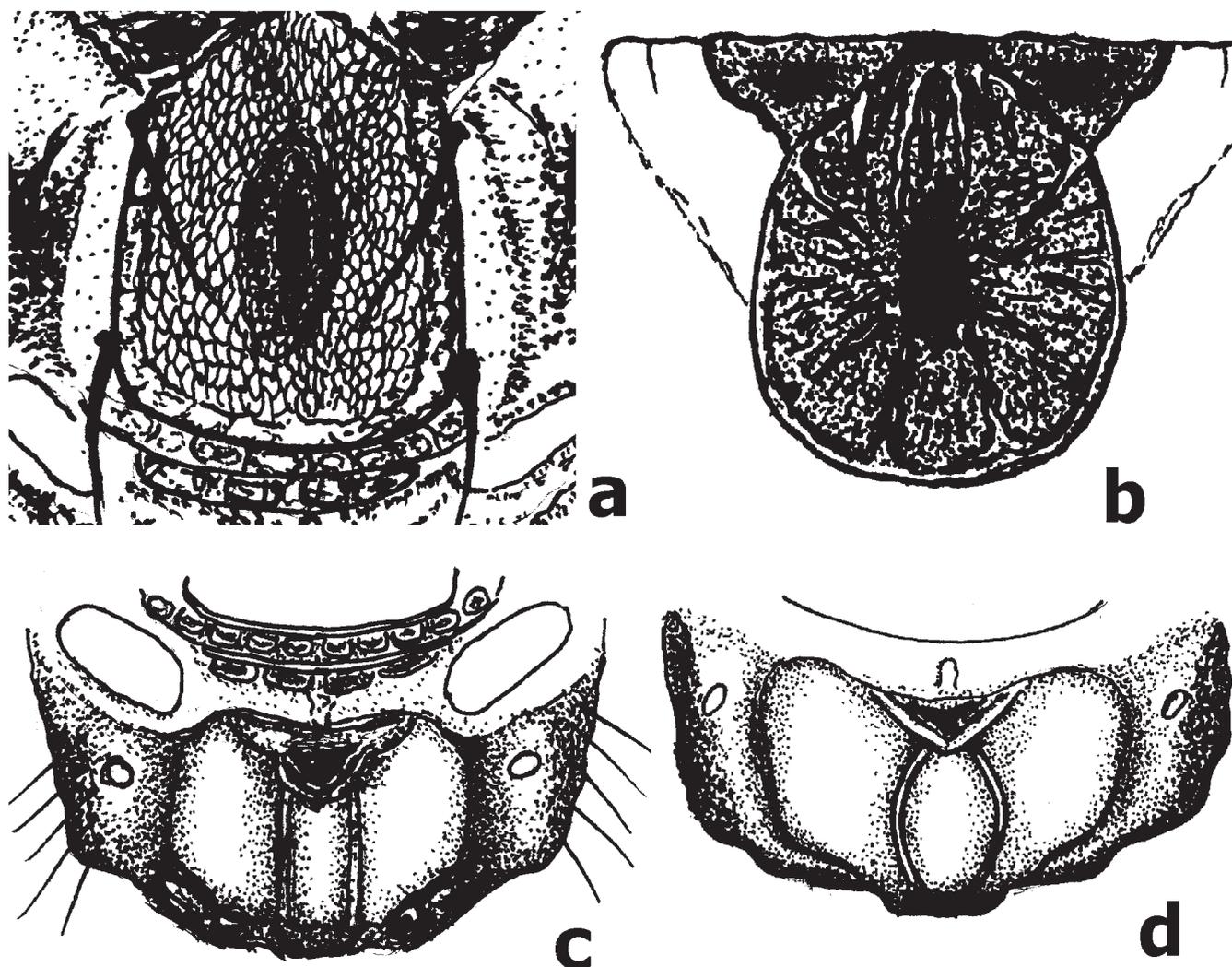


Fig. 2. Female of *Stenopetius jenii*, new species: a. scutellum dorsal view, c. propodeum dorsal view. b and d, Female of *Stenopetius rugosus* Bouček: b. scutellum dorsal view, d. propodeum dorsal view.