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**NEW RECORD OF SPECIES *PAREMA  
SULCATA* (KRIEGER) 1906 (HYMENOPTERA:  
ICHNEUMONIDAE: PIMPLINAE) FROM  
INDONESIA**

**Amanda T.P.O, Yaakop S. and Idris A.B.**

Centre for Insect Systematics, School of Environmental Science and  
Natural Resources, Faculty of Science and Technology,  
Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia.

*Corresponding author: idrisyatie@yahoo.com.my*

**ABSTRACT**

A new record of the species *Parema sulcata* (Krieger) 1906 (Hymenoptera: Ichneumonidae: Pimplinae) from Irian Jaya, Indonesia is reported. This species was reported for the first time and described by Krieger in 1906 and only encountered in Philippines with the name *Theronia sulcata* Krieger, 1906. Gupta (1962, 1987) redescribed the species *Theronia sulcata* Krieger, 1906 and discovered a new genus and subspecies-*Parema sulcata sulcata* Krieger and *Parema sulcata ferrugata* Gupta. However, he only relied on the colour characters in determining the difference between both subspecies. We synonymized the subspecies described by Gupta (1962) as we believe that colour is not a strong character for defining subspecies level. The species *Parema sulcata* Krieger was redescribed following a trip to 'Lembaga Ilmu Pengetahun Indonesia' (LIPI) Bogor, Indonesia.

**Keywords:** New record, *Parema*, Ichneumonidae, Pimplinae, Indonesia.

## ABSTRAK

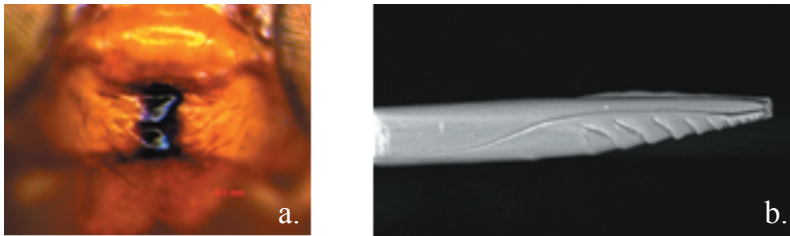
Satu rekod baru *Parema sulcata* (Krieger) 1906 (Hymenoptera: Ichneumonidae: Pimplinae) dari Irian Jaya, Indonesia dilaporkan. Spesies ini dijumpai untuk pertama kali serta diperihalkan oleh Krieger pada 1906 dan hanya dijumpai di Filipina dengan nama *Theronia sulcata* Krieger, 1906. Gupta (1962, 1987) memperihalkan semula spesies *Theronia sulcata* Krieger, 1906 dan menemukan genus dan subspecies baru - *Parema sulcata sulcata* Krieger and *Parema sulcata ferrugata* Gupta. Walau bagaimanapun, beliau hanya mengguna ciri warna untuk membezakan antara dua subspecies tersebut. Kami telah mensinonimkan subspecies yang telah diperihalkan oleh Gupta (1962) kerana kami percaya bahawa warna tidak merupakan ciri yang kuat untuk menjadikannya subspecies. Spesies *Parema sulcata* Krieger telah diperihalkan semula ekoran lawatan ke Lembaga Ilmu Pengetahuan Indonesia (LIPI) Bogor, Indonesia.

**Kata kunci:** Rekod baru, *Parema*, Ichneumonidae, Pimplinae, Indonesia.

## INTRODUCTION

The genus *Parema* from Indonesia was first studied and documented by Gupta (1962) in the Pacific Insects Monograph 4-Taxonomy, Zoogeography and Evolution of Indo-Australian *Theronia* (Hymenoptera: Ichneumonidae). It was then still at the subgenus level under the genus *Theronia*. However, Gupta (1987) elevated the level of all subgenus *Theronia* to genus level. Since then no further detailed taxonomic work was done on this genus from Indonesia. Based on previous records, there are three species of *Parema* from Indonesia namely *Parema nigrobalteata callida*, *Parema penetrans penetrans* and *Parema penetrans cephalotes* (Yu & Horstmann 1997).

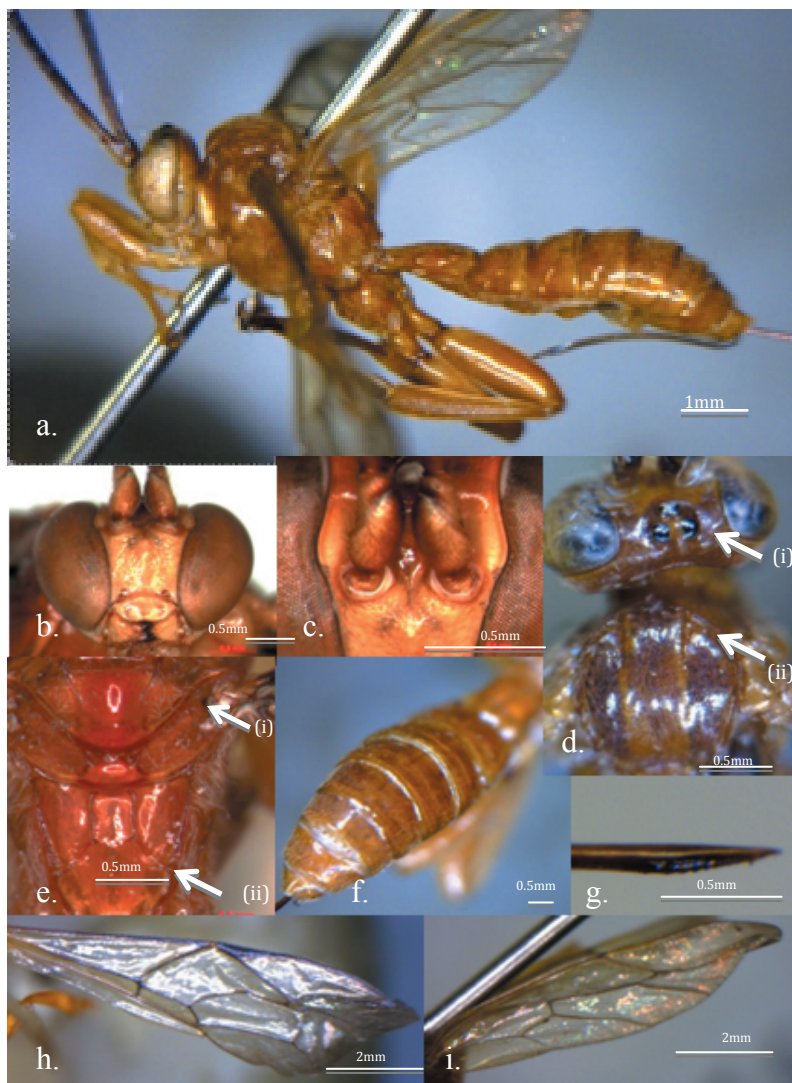
*Parema* is one of six genera under the genus-group *Theronia*. It differs from the other subgenera by its teeth and ovipositor. The mandibular teeth are equal in length (Fig.1a). The ovipositor is slightly depressed near apex and the tip of lower valve carina partly enclosing upper valve and with parallel ridges (Fig.1b). The name of this subgenus is derived from a Greek word *pariomus*, meaning neighbour, which refers to the similarity and sympatry of most of species of this subgenus with *Theronia* (Gupta 1962). Biological studies on this genus are not really known but they are mostly found in dense forests (Gupta 1962). Its host are said to be most probably upon lepidopteran larvae and its distribution is in Indo-Australian region (Gupta 1962).



**Fig. 1.** Mandibular teeth of the genus *Parema*; b. Ovipositor of the genus *Parema*

## MATERIALS AND METHODS

The species *Parema sulcata* (Fig. 2) has been redescribed during a trip to ‘Lembaga Ilmu Pengetahuan Indonesia’ (LIPI) Bogor, Indonesia. The specimens of *Parema sulcata* have been examined using a stereomicroscope provided and Dino-lite (digital microscope pro) to capture images. Morphological terminology used in this study follows those of Townes’ system (1969) with slight modification were identified using species to key constructed by Gupta (1962). The specimens were then compared to its type specimen, which was belonging to Gupta that was bought and deposited in Centre for Insect Systematics (CIS), Universiti Kebangsaan Malaysia.



**Fig. 2.** *Parema sulcata* (Krieger). a. habitus; b. face; c. vertex (in between antennae); d. (i) ocelli (ii) mesoscutum; e. (i) scutellum (ii) propodeum; f. abdomen; g. ovipositor; h. fore wing; i. hind wing. Scale 0.5 mm, 1 mm, 2 mm

## TAXONOMIC ACCOUNTS

*Parema sulcata* (Krieger), 1906

*Theronia sulcata* Krieger, 1906

*Theronia (Parema) sulcata sulcata* Krieger, 1906

*Theronia (Parema) sulcata ferrugata* Gupta, 1962

= *Parema sulcata sulcata* (Krieger), 1906, new syn.

= *Parema sulcata ferrugata* (Gupta), 1962, new syn.

### **Specimens examined (2)**

♀, INDONESIA, Irian Jaya, Freeport Concession Timika, 25 iii 1998, R. Ubaidillah, Peggie, 97013 (#1119)

♀, INDONESIA, Irian Jaya, Freeport Concession Timika, 6 v 1998, R. Ubaidillah, Peggie, 97033 (#6288)

**Distribution:** Philippines: Luzon; Negros; Panay; Sibuyan.

**Length:** 7-12.5mm, forewing 7-11mm, ovipositor 4.5-6mm

**Body colour:** light ferruginous to ferruginous, black ocelli. lateral of mesoscutum with very small black spots.

**Head:** face moderately punctate, punctures shallow, slightly raised above. Mandible teeth equal in length. Clypeus smooth, flat and without carina. Frons smooth with a groove in between of antenna. Vertex smooth.

**Torax:** notauli distinct in anterior 0.3 of mesoscutum. Mesoscutum with smooth texture. Scutellum convex, smooth with shiny blunt point in middle though not conspicuously raised up. Mesopleurum and mesosternum hairy with very fine and scattered punctures. Prepectal carinae of mesoscutum complete. Sternaulus indistinct. Propodeum smooth without costula but areola partly closed behind (may be closed with rugose line) and longer than wide. Pleural part of apical transverse carina absent. Submetapleural carina with conical projection above mid coxa.

**Tergite:** abdominal tergite is 1.5 times its apical width, dorso-lateral carina not extending beyond spiracle.

**Legs:** mid and hind femora with long hairs, hairs as long as those on fore femur.

**Wings:** forewing with closed areolet and second vein appear before middle of areolet. Hindwing with discoidal and brachial extending to the edge.

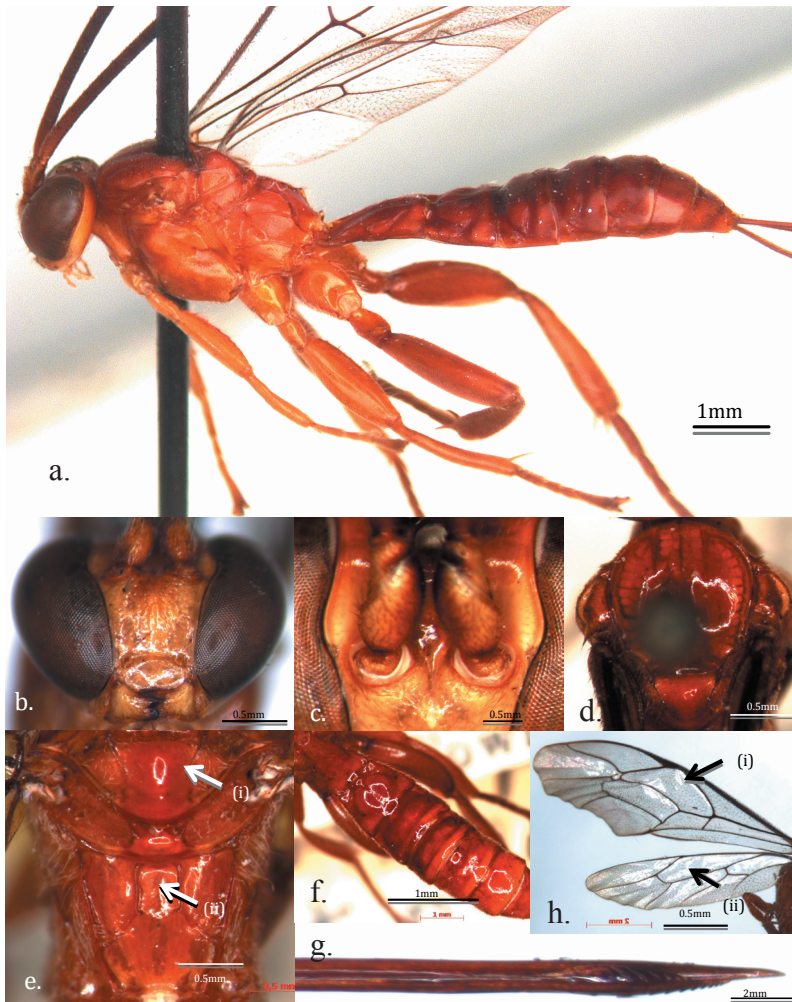
**Remarks:** New record for Indonesia. Differs from the Philippine specimen as the lateral of mesoscutum has very small black spots that are not present in the Philippine specimen.

## DISCUSSION

According to Gupta (1962), *Parema sulcata sulcata* Krieger and *Parema sulcata ferrugata* Gupta differs with each other due to its colouration; He arranged the specimens in two populations: One that is yellowish with ferruginous marks on the dorsal side from Palawan and Mindoro and the other that are wholly, deeply ferruginous from Luzon, NW Panay, Negros and Sibuyan (Fig. 3). Gupta (1962) also mentioned that both of these subspecies resembles each other and he relied solely on the colour character and are morphologically distinct. We believe that colour of a species is not strong enough to separate it to subspecies level. Therefore, we synonymise it to *Parema sulcata* (Krieger), using the initial name of the species that was described by Krieger in 1906.

## ACKNOWLEDGEMENTS

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**Fig. 3.** *Parema sulcata ferrugata* Gupta. a. habitus; b. face; c. vertex (in between antennae); d. mesoscutum; e. (i) scutellum (ii) propodeum; f. abdomen; g. ovipositor; h. (i) fore wing, (ii) hind wing. Scale 0.5 mm, 1 mm, 2 mm

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