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A NEW SPECIES OF *XANTHOPIMPLA* SAUSSURE (HYMENOPTERA: PIMPLINAE) FROM BUKIT NANAS FOREST RESERVE, KUALA LUMPUR.

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ABSTRACT

In the attempt to study the entomofauna of the Bukit Nanas Forest Reserve where located in the heart of Kuala Lumpur city, Malaysia, we have discovered an individual of *Xanthopimpla* as a new species to science, which is distinctively differs from any others species belonging to this genus. Name of the new species was given as *Xanthopimpla nanasiensis*.

ABSTRAK

Dalam usaha bagi mengkaji entomofauna di Hutan Simpan Bukit Nanas yang berlokasi di tengah-tengah bandaraya Kuala Lumpur,

Malaysia, kami telah berjaya menemui satu individu. *Xanthopimpla* yang mempunyai perbezaan yang nyata berbanding spesies- spesies lain di dalam genus ini. Nama spesies baru tersebut telah diberikan sebagai *Xanthopimpla nanasiensis*.

INTRODUCTION

Xanthopimpla Saussure is a very large genus and most of the species from that genus occur in the Old World tropic particularly in the Indo-Australian Region (Town & Chiu 1970). Systematic study of this genus from Malaysia started in 1858, when Smith had described the *Xanthopimpla punctata* (= *Pimpla punctata* Smith) from Sabah and Sarawak (Idris 2000). According to Gauld (1984a), these groups of insect are very difficult to recognize unless one has access to an extensive collection. Early authors (e.g., Krieger 1899) placed considerable emphasis on the pattens of black spot on the gastral tergites. However, this character was found not to be the primarily character for identification because frequently spots may be missing in smaller individuals. Instead, identification of the *Xanthopimpla* is more accurate based on the characters of the carina on its propodeum and combination of other characters including wing areolet, bristle on its hind and middle tarsal and so on. *Xanthopimpla* species are primarily endophagous idiobiont parasitoid of exposed or weakly concealed pupae of other insects (Gauld 1984b). Used of *Xanthopimpla* as biological control agents of rice stems borer insects was reported (Town & Chiu 1970). The majority of *Xanthopimpla* spp. are restricted to forest at various altitudes, from coastal mangrove to montane moss-forest. Idris *et. at*. (2003) proved that diversity of *Xanthopimpla* was higher in the recently logged forest than in the older logged forest.

Xanthopimpla nanasiensis, has very different characters in terms of its propodeum and its black bands on its tergites. It is believes that this species may become extinct soon because of rapid development around its habitat (forest), which is only about 10.0 ha remaining**.** Both factors are able to cause the insect to disappear easily. This is true because from thirty malaise traps installed for three consecutive months, a total of more than 6,000

insects individuals were collected but only one individual belongs to the *Xanthopimpla* genus. This scenario is very different from many others Tropical Rain forest in Malaysia (Idris 2003; Gonzaga 2002).

Xanthopimpla nanasiensis Ng & Idris, new species (Figs. 1-6)

Female. Clypeus strongly convex. Face weakly convex; with small punctures and about 1.0 x as wide as high. Antennae has 38 flagellar segments. Anterior lower corner of pronotum broadly rounded. Mesoscutun with small puntures; hairs sparsely covered at basal; about 1.0 x as wide as long. Notauli absent. Mesoscutal crest absent. Sub-marginal carina not complete. Subtegular ridge shape. Outer profile in dorsal view weakly convex. Scutellum weakly convex. Lateral flange reaching the apex of scutellum. Mesopleurum with small puntures; moderately smoth in texture. Sternaulus not distinct. Metapleurum lower division smooth, upper division smooth. Sub-metapleural carina complete. Postpectal carina a form of low flange and without notch in apex. Fore wing about 9.71 mm long. Areolet of forewing completely closed. Second recurrent vein near its outer corner. Nervulus directly opposite basal vein. Discoidella reaching the wing margin. Brachiella reaching the wing margin. Areola completely surrounded by carina; about 0.5 as long as wide; rugose in texture. First lateral area rugose in texture. Second lateral area rugose in texture. Lateral longitunal carina bounded about 0.7 at outer side of first lateral area. Pleural area without subdivided by a carina. Apical bristle 0. Preapical bristles 9. Apical hair on the inner side of tarsal claws near base wide, straight and blacked at tip. First tergite about 1.0 as wide as long. Dorso-lateral carina of first tergite present and completely reach apex. Median-dorsal carina complete. Gastral tergites 2 to 6 rough. Ovipositor tip straight, upper valve with 3 ridges and lower valve with 6 ridges.

Ovipositor shealth about 0.56 length of hind tibia.

Color Patten. Frons yellow. Ocellar, occiput and post occiput black. Antenna black with light brown at the margin of basal and apex of each segment. Scape dorsal black, ventral yellow. Pedicel dorsal black, ventral yellow. Pronotum yellow. Mesopleurum yellow. Mesoscutum with 'anchor' shape black sport. Axillary trough of mesonotum yellow. Tegulae 0.5 apical blacks. Mesosternum yellow. Forewing weakly infuscate. Stigma and wing vein black. Propodeum transverse black band.

Hind coax has a black spots at the middle of front side. Tronchanter uncircled black. Hind femur elongated black sport in front view and black at apical. Hind tibia black at basal and black sport near apical of front ad back view. Tarsal segment 1-3 brown tinge at lateral; 4-5 dark brown. Hind tarsal claws brown, black at tip. Gastral tergites 1-7 with a black sport at basal and a black band at apical; 8 with a black sport. Ovipositor sheath black spots at the middle of front side. Tronchanter uncircled black. Hind femur elongated black sport in front view and black at apical. Hind tibia black at basal and black sport near apical of front ad back view. Tarsal segment 1-3 brown tinge at lateral; 4-5 dark brown. Hind tarsal claws brown, black at tip. Gastral tergites 1-7 with a black sport at basal and a black band at apical; 8 with a black sport. Ovipositor sheath black.

HOLOTYPE. Female. Malaysia, Kuala Lumpur, Bukit Nanas Forest Reserve. 28. x. 2002. Ng, Y.F., Azura, Ruslan & Zabidi.

PARATYPES. None

ETYMOLOGY. The new species *nanasiensis*, is name after locality Bukit Nanas.

REMARKS. *Xanthopimpla nanasiensis* is belongs to *Citrina* group which have been erected by Town & Chiu (1970). *Citrina* group consists of two species namely *Xanthopimpla flavolineata* and *Xanthopimpla enderleni*. *X. nanasiensis* very conspicuously different from *X. flavolineata* and *X. enderleni*. based on the finely rugose character on propodeum and black bands on gastral tergites.

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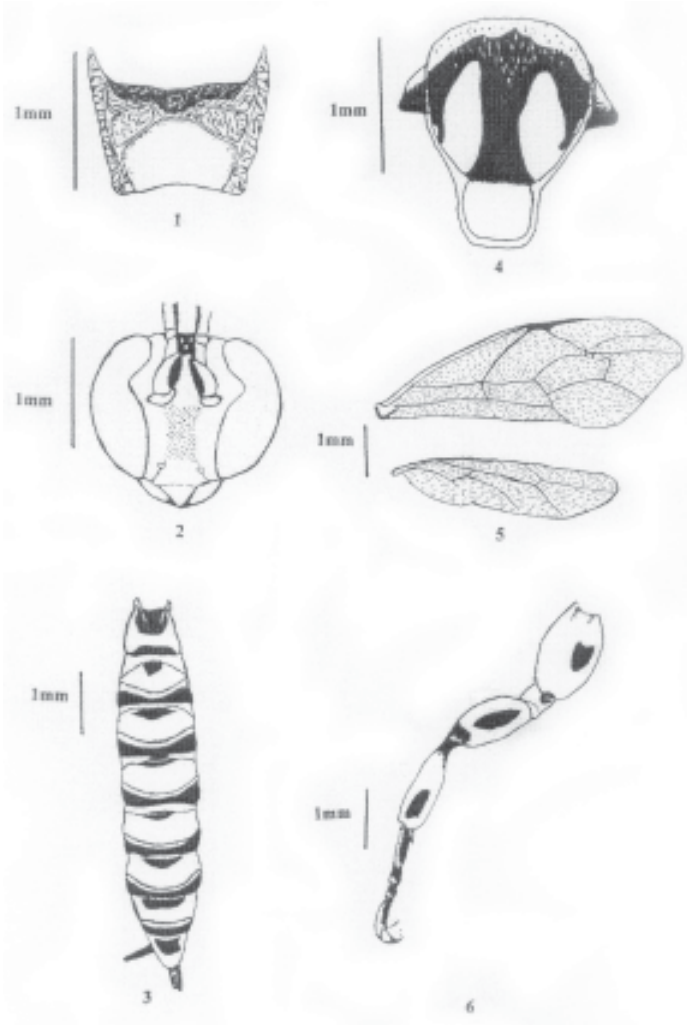

Figs 1-6. *Xanthopimpla nanasiensis* Ng & Idris, new species.1, propodeum; 2, face; 3, gastral tergites; 4, mesoscutum; 5, forewing and hind wing; 6, hind leg.