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RESEARCH ARTICLE

First record of the genus *Pareumenes* de Saussure, 1855 (Hymenoptera: Vespidae: Eumeninae) from the Philippine Islands with description of a new species

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Abstract: A new species of the genus *Pareumenes* de Saussure, 1855, from the Philippine Islands (Mindanao and Samar), *P. impunctatus* **sp. nov.**, is described. This is the first record of the genus from the Philippines. A key to the species of the genus occurring in insular South-East Asia is provided.

Key words: Vespidae, Eumeninae, *Pareumenes*, new species, first record, Philippine Islands.

Introduction

Pareumenes de Saussure, 1855 is a widely distributed genus of Old World solitary wasps currently including 17 species which occur in the Afrotropical, Palearctic and Oriental Regions (Nugroho *et al.* 2013). Seven species are known from the Oriental Region. According to van der Vecht (1963) this genus is related to five other Old World genera: *Coeleumenes* van der Vecht, 1963, *Ectopioglossa* Perkins, 1912, *Nortozumia* van der Vecht, (1937), *Pseudozumia* de Saussure, 1875 and *Pseumenes* Giordani Soika, 1935. Two further genera, of more recent description, also belong in the group: *Flavoleptus* Giordani Soika, (1992) and *Norteumenes* Gusenleitner & Gusenleitner, (2013). In this group *Pareumenes* can be recognized by means of the following characters: absence of epicnemial carina on mesepisternum (shared with *Pseumenes* and *Flavoleptus*), cephalic fovea on female vertex, forewing with prestigma longer than pterostigma, S I not fused with T I and transversely striate.

In the present paper this genus is newly recorded for the Philippine Islands with a new species described. A key to the species of *Pareumenes* occurring in the insular South-East Asia (Philippines and Indonesian Archipelago) is provided.

Material and methods

The adult morphological and color characters were observed on pinned dried specimens under a stereoscopic microscope.

“Body length” indicates the length of head, mesosoma and the first two metasomal terga combined. Metasomal terga, metasomal sterna and flagellomeres are abbreviated as T, S and F respectively.

The types of the new species were compared with a paratype of *Pareumenes nigerrimus* van der Vecht, 1963 having the following label data: “West Flores, Reo, 7.11.1949, leg. Bühler & Sutter, 1♀”. This paratype is deposited in Giordani Soika’s collection at the Museo Civico di Storia Naturale di Venezia.

The type specimens of the new species are deposited in the following collections: MSNVE – Museo Civico di Storia Naturale, Venezia (Italy); MSVI – private collection of Marco Selis, Viterbo (Italy).

Results

Genus *Pareumenes* de Saussure, 1855

Pareumenes de Saussure, 1855: 133, name for division of genus *Eumenes* Latreille. Type species: *Eumenes quadrispinosus* de Saussure, 1855, by subsequent designation of Bequaert, 1918: 271.

Pareumenes (Pareumenes) impunctatus sp. nov. (Figs. 1-6)

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Diagnosis: This new species is similar to *P. nigerrimus*, which it resembles in the extremely reduced yellow markings and a swollen S II. *P. impunctatus* can be distinguished by the following features: vertex and gena more developed posteriorly, distance from the posterior ocelli to the occipital margin about 2.1 times the distance from the posterior ocelli to the inner eye margin (about 1.5 times in *P. nigerrimus*); postocellar area raised (flat in *P. nigerrimus*); cephalic fovea included in a semicircular impression; mesoscutum, scutellum, metanotum and propodeum shiny and smooth, with only very fine punctures (with deep well impressed punctures in *P. nigerrimus*); propodeal fovea with lateral margins more straight and raised than in *P. nigerrimus*; T I shorter and less curved in lateral view; S I more widened posteriorly and with striation more marked and numerous; T II less reflexed apically; S II with basal convexity bearing a central hump (normally rounded in *P. nigerrimus*).

Material examined: 2 specimens.

Holotype: ♀ labeled “Philippines, Samar, Marabut, VI.2015, leg. local collector” (MSNVE). Paratype: ♀ labeled “Philippines, Mindanao, Zamboanga, Gutalac, V.2015, leg. local collector” (MSVI).

Description

Female. Body length 20 mm; fore wing length 19 mm.

Head in frontal view nearly circular, about as high as wide; cephalic foveae extremely close, forming a single pit, located in a semicircular impression (Fig. 2). Area behind ocelli slightly raised. Occipital carina well developed along entire length of gena, absent dorsally. Inner eye margins almost parallel. Clypeus in lateral view clearly convex in basal half, then straight to apical margin; in frontal view about 1.2 times as long as wide, basal margin in contact with antennal sockets; apical margin emarginated medially, forming a sharp tooth on each side; emargination 3.5 times as wide as deep (Fig. 3). Mandible with five teeth, three apical ones well separated and rounded apically, fourth one less distinct and partly fused with fifth one, fifth one modified into an elongated cutting surfaces and with two incisions forming three apical tips. Antennal scape about 3.7 times as long as its apical width; F I about 2 times as long as wide, F II-V slightly longer than wide, VI-IX as long as wide, terminal flagellomere bullet-shaped, about 1.5 times as long as its basal width. Mesosoma depressed dorsoventrally, in dorsal view about 1.5 times as long as wide. Pronotal carina slightly raised, rounded on humeri, reaching ventral corner of pronotum, fading medially on dorsum. Mesoscutum as long as its maximum width; with well impressed and deep prescutal grooves. Disc of scutellum and metanotum nearly flat, both with an extremely short and faint median furrow on anterior margin. Propodeum with two external dorsoventrally flattened teeth and two median teeth fused with propodeal valvulae; median fovea running from base to apex, bearing a median pit basally and a median longitudinal carina, lateral margins of fovea raised and distinct (Fig. 4). T I shorter than mesosoma; in lateral view flattened in basal half, curved in apical half; in dorsal view with apical width 2.5 times its basal width; apical longitudinal furrow well impressed (Fig. 5). T II in lateral view with dorsal margin convex, weakly reflexed apically. S II strongly bulging basally forming two almost perpendicular faces (Fig. 6).

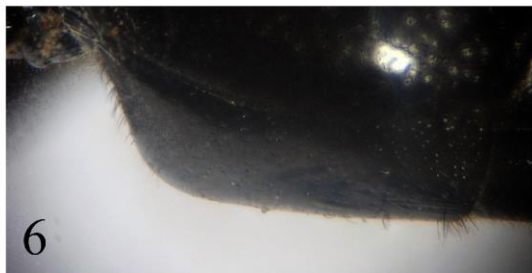
Body covered with black bristles, longer black hairs on apical margins of S II-V, long light hairs on lateral margins of propodeum, propodeal fovea and S I. Tuft of short brown bristles on cephalic fovea.

Clypeus with small deep punctures, interspaces 1 to 3 times the size of the diameter of the punctures; punctures on dorsal margin finer and denser. Frons densely covered with large shallow punctures, interspaces covered with small punctures. Vertex covered with fine punctures and some larger ill-defined punctures. Gena with deep well-defined punctures. Pronotum punctured as frons, except for the posterior margin, which is covered with fine and dense punctures, and the anterior vertical face, which is smooth. Mesoscutum densely covered with extremely fine punctures, bearing a few slightly bigger punctures anteriorly. Scutellum and metanotum smooth with extremely fine punctures on margins. Mesepisternum punctured like frons, but the large punctures less dense. Metapleuron smooth. Propodeum on dorsal surface smooth with few fine punctures and some big shallow ones on lateral margins; propodeal fovea obliquely striate; lateral faces with extremely fine and indistinct striation. T I with shallow punctures on lateral margins of apical half. T II almost impunctate on disc, some dense fine punctures laterally. T III-VI densely and finely punctured. S I strongly transversely striated on apical two thirds, some punctures on posterior angles. S II with shallow punctures on posterior angles. S III-VI punctured like respective terga, but punctures slightly deeper.

Color. Black with the following pale yellow markings: underside of scape, a small spot between antennal sockets, a small spot near bottom of ocular sinus, two small spots in

the middle of anterior pronotal margin, apical corners of propodeum and propodeal valvulae. Wings fuscous, dark brown, with strong bluish reflections.

Male. Unknown.



Figures 1-6. *Pareumenes impunctatus* sp. nov., paratype. **1**, habitus; **2**, dorsal view of vertex; **3**, frontal view of head; **4**, dorsal view of propodeum; **5**, dorsal view of T I; **6**, lateral view of S II.

Distribution: Philippines: Mindanao, Samar.

Etymology: The specific name refers to the extensive impunctate areas of this species.

Key to the species of *Pareumenes* occurring in insular South-East Asia

1. S II strongly swollen, bulging anteriorly 2
 - S II regularly and weakly convex from base to apex, not bulging anteriorly 3
2. Vertex and gena strongly developed; postocellar area raised; semicircular impression on vertex present; thorax smooth and shiny, without punctures; T I shorter and less curved in lateral view; S I with strong striations; T II with weak apical reflection; basal convexity of S II bearing a central hump; Philippines..... *impunctatus* **sp. nov.**
 - Vertex and gena normally developed; postocellar area flattened; vertex without semicircular impression; thorax with deep well impressed punctures; T I longer and strongly curved in lateral view; S I with fine and weak striations; T II strongly reflexed apically; basal convexity of S II normally rounded; Sumba, Flores*nigerrimus* van der Vecht
3. Punctures very coarse, especially on head, mesoscutum and mesepisternum; metanotum with distinct punctures; thorax covered with dense black pubescence; entirely black, with small yellow spots between antennae and on antennal scape; wings yellowish; Moluccas
 - Punctures not coarse; metanotum without distinct punctures; thorax without black pubescence; more extensively marked with yellow; wings hyaline-brownish..... 4
4. Head and thorax almost entirely black, very small yellow spots on clypeus, scape and metanotum; legs entirely black; yellow bands on abdomen very broad; Java
 - Head and thorax with many large yellow markings; legs with small yellow markings; yellow apical band on T II narrow and interrupted medially; yellow bands on abdomen narrow; peninsular Malaysia, Sarawak, Sumatra*quadrispinosus interjectus* van der Vecht

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