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with a checklist and key to the Philippine species

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A new Philippine species of *Ischalia* (Coleoptera: Ischaliidae), with a checklist and key to the Philippine species

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Abstract. A new species, *Ischalia (Ischalia) montana*, is described and illustrated from the island of Mindanao in the Republic of the Philippines. A checklist and dichotomous key for the Philippine *Ischalia* species are presented.

Key Words. Ischaliidae, *Ischalia (Ischalia) montana*, Mindanao, Philippine Islands, checklist, species key

Introduction

A review of the taxonomic history and familial placement of *Ischalia* Pascoe (Coleoptera: Ischaliidae) was provided by Young (2008), and comments relating to the subgenera were added by Young (2011). Speculations regarding various *Ischalia* species involved in mimicry complexes were offered by Telnov (2005) and Kazantsev and Young (2011). Yoshitomi (2011) described and illustrated the male genitalia for several species of *Ischalia*, including Philippine species *I. (I.) aposana*, *I. (I.) yasukii*, as well as the Malaysian, *I. (I.) atricornis*. I concur with these descriptions and illustrations except to add that several males of *I. (I.) yasukii* I have examined have the apex of the fused parameres very slightly emarginate – not rounded. In the same paper, he (Yoshitomi 2011) also provided evidence of the likely fungal diet of adults, adding support to previously summarized data (Young 1985).

The first Philippine species of *Ischalia* were described by Blair (1920). *Ischalia dimidiata* Blair was described from the island province of Basilan, the largest and northernmost of the major islands within the Sulu Archipelago, just off the southern coast of Zamboanga Peninsula, Mindanao. The type locality of *Ischalia philippina* Blair is Mt. Makiling, in the southern region of Luzon. Sixteen years later, Pic (1936) added the subspecies, *Ischalia philippina insuturalis* (as a new “variety”) from Mindanao; however it has subsequently been considered a synonym of *I. philippina*.

No species were added to the fauna of the Republic of the Philippines until rather recently, when Satô (2002a, 2002b) described *Ischalia (Ischalia) yasukii* from Mt. Apo in southern Mindanao, *Ischalia (Ischalia) sumaoi* from Mt. Data, Bontoc Province, Luzon, and *Ischalia (Ischalia) aposana*, also from Mt. Apo.

The new species described herein is known from two, card-mounted specimens in the Staatliches Museum für Naturkunde, Stuttgart.

Materials and Methods

Specimen data. Label data are presented verbatim. Line breaks on labels are denoted by a double slash (//); metadata (not written on the labels, themselves) are presented in brackets ([]); when data are included on more than one label, this is noted with curved brackets ({ }). Scientific names are uniformly presented in *italics*.

Collection acronyms. The collection of the Staatliches Museum für Naturkunde, Stuttgart (**SMNS**) houses the type specimens noted in the text. All other specimens compared in the diagnosis are from my personal collection (**DYCC**).

Figures. Images were captured as TIFF files from a JVC® KY-F75U digital camera attached to a Leica® Z16 APO dissecting microscope with apochromatic zoom objective and motor focus drive, using a Synchronscopy Automontage® System and software. Multiple images for a given “figure,” generally a “stack” of 10–20 images, were used to facilitate building the final image. Most subjects were illuminated with an LED ring light attached to the end of the microscope; lighting was generally filtered to reduce

glare. It should be noted that while this “softened” the incoming light, it also reduced the amount of captured metallic luster commonly exhibited in many Asian species of *Ischalia*. Specimen observation under normal, “white” lighting and microscopy reveals a much greater perception of the metallic blue sheen. The montaged images created were edited using a variety of software applications to form the final figure plates.

Systematics

Ischalia (Ischalia) montana Young, new species

(Fig. 1–3)

Description. Adult female. Length 7.9–8.3 mm (n=2). Body (Fig. 1–2) almost entirely black, moderately covered with short, yellowish to yellowish-brown setae, those of labrum and clypeus porrect, those of elytra retrorsely decumbent. Antennal setae longer, darker, coarser and dense, decumbent along axis of each antennomere.

Head: Cranium largely black, each subocular region with a brown to piceous spot; labrum piceous basally and yellowish-brown distally. Compound eyes emarginate to accommodate antennal insertions, lacking intrafacetal setae. Antennae stout, black, scape slightly swollen distally; pedicel short, 0.38 times length of flagellomere 1; flagellum filiform, apical flagellomere tapering to a bluntly rounded point. Labial and maxillary palpi piceous to black; terminal segment of each maxillary palpus inflated, bulbous, securiform.

Thorax: Pronotum (Fig. 3) sparsely, shallowly punctate, nitid, hypomera rufopiceous to black; scutellum slightly swollen, mildly bilobate apically, black; prothoracic and mesothoracic ventrites black. Pronotum with anterior edge shallowly emarginate mesally, lateral margins obtusely angulate near midlength, excurved at the acute, strongly produced and somewhat swollen hind angles. Pronotal disk with prominent median carina which is slightly enlarged and produced posterad hind margin, and two impressions on either side of the carina: a sub-circular, juxtacarinial sub-basal pair and another, obovate pair anterad the circular impressions. Legs black, tibiae lacking spurs, tarsi densely beset with yellowish-brown setae, especially ventrally and in association with ventral surface of bilobed penultimate tarsomere; tarsal claws simple. Elytra (Fig. 1–2) black with distinctly violaceous iridescence, elongate and covering abdomen, slightly broader posteriorly, surface densely and coarsely, confusedly punctate. Elytra carinate, with sutural, humeral, lateral discal, and lateral carinae present; humeral carinae a little more than one-third the length of lateral discal carinae, the later gradually curving inwardly toward the sutural carinae but becoming obsolete and not fusing with them. Macropterous, with metathoracic wings fully developed, smoky grayish-brown.

Abdomen: Entirely brownish-black to black ventrally.

Type material. HOLOTYPE (♀, SMNS): {First label}: [REPUBLIC OF THE PHILIPPINES]: MINDANAO, 30km NW of, // MARAMAG, 13.-17. MAY // BAGONG SILANG, 1700m // BOLM lgt., 1996; {Second label}: Auto-Montaged // digital image(s) // per D. K. Young; {Third label}: HOLOTYPE: // *Ischalia (Ischalia) montana* // Young.

PARATOPOTYPE (♀ (?), SMNS): [Data from first two labels are identical to those of the holotype]; {Third label}: PARATOPOTYPE: // *Ischalia (Ischalia) montana* // Young.

Distribution. As detailed above, the two specimens of *I. (I.) montana* were collected northwest of the city of Maramag. Plotting the indicated “30km” distance in a straight-line northwest direction (via Google Earth) I could not come close to confirming the recorded elevation (1700m). However, the two most likely areas with the recorded direction and elevation are Mt. Kitanglad, possibly near 8.082411° N, 124.818239° E, or Mt. Kalatungan, possibly near 7.994709° N, 124.776498° E. Since Mt. Kalatungan is distinctly northwest of Maramag, it would appear to be the more likely locality. In any case, as is typical for most other Asian *Ischalia*, a densely forested, mesic, montane habitat type is highly likely.

Etymology. The specific epithet, *montana*, is derived from the Latin root, “*mont-*” (= “a mountain”) in reference to the mountainous regions associated with the indicated elevation.

Diagnosis. The nearly unicolorous black body color with entirely black antennae and black elytra with a blue-purple luster will immediately separate *I. montana* from all but the Malaysian species, *Ischalia (Ischalia) atricornis* Pic. *Ischalia montana* is distinctly larger (length 7.9–8.3 mm) than *I. atricornis* (4.7–6.0 mm; n = 5, including the type [6 mm]). The antennal flagellomeres of *I. montana* (e.g., Fig. 2) are much longer than those of *I. atricornis* (Fig. 4), and the pronotum of *I. montana* is sub-hexagonal (Fig. 1–3), whereas it is subcampanulate in *I. atricornis* (Fig. 4–5). Among the Philippine species, the body size, antennal structure, and pronotal shape of *I. yasukii* (Fig. 6–7) are very similar to those of *I. montana*, but the former typically has the head, prothorax, and mesothorax orange (sometimes rufopiceous; infrequently the mesothorax is rufopiceous with the mesothoracic ventrite rufopiceous suffused with orange-testaceous color).

Discussion. The holotype is female, as the coxites can be seen extending from the apex of the abdomen. The paratopotype appears also to be a female, but the metathoracic wings cover the end of the abdomen. Since female genitalia have not been considered useful for taxonomic diagnoses in *Ischalia*, and because the wing apices are beginning to tear, I did not attempt to remove the specimen from the card mount.

Checklist of the Philippine *Ischalia* species

Young (2011) provided a world checklist of *Ischalia* which is the basis for the updated and amended list of *Ischalia* known from The Republic of the Philippines. All of the Philippine *Ischalia* species belong to the nominate subgenus, as redefined by Young (2011).

1. <i>Ischalia (I.) aposana</i> M. Satô 2002b: 332 (Fig. 8)	Mt. Apo, southern Mindanao
2. <i>Ischalia (I.) dimidiata</i> Blair 1920: 134 (Fig. 9)	Basilan (Island) Province
3. <i>Ischalia (I.) montana</i> , sp. nov. (Fig. 1–3)	northwest of Maramag, Mindanao
4. <i>Ischalia (I.) philippina</i> Blair 1920: 135	Mt. Makiling, southern Luzon;
= <i>Ischalia philippina insuturalis</i> Pic 1936: 299	Mindanao
5. <i>Ischalia (I.) sumaoi</i> M. Satô 2002b: 331 (Fig. 10)	Mt. Data, Bontoc Province, Luzon
6. <i>Ischalia (I.) yasukii</i> M. Satô 2002a: 341 (Fig. 6)	Mt. Apo, southern Mindanao

Key to the Species of Philippine *Ischalia*

1. Pronotum yellowish-orange	2
— Pronotum black (Fig. 1–3)	<i>Ischalia (Ischalia) montana</i> sp. nov.
2. Elytra unicolorous yellowish-orange to orange (Fig. 10), orange with brownish to black sutural maculae (Fig. 8), or bicolorous (orange in basal half, apical half black with metallic blue luster; Fig. 9)	3
— Elytra unicolorous black with strong metallic blue sheen (Fig. 6)	<i>Ischalia (Ischalia) yasukii</i> M. Satô
3. Elytra orange and black	4
— Elytra unicolorous yellowish-orange to orange (Fig. 10)	<i>Ischalia (Ischalia) sumaoi</i> M. Satô
4. Elytra orange with brownish to black sutural maculae	5
— Elytra orange in basal half, apical half black with metallic blue luster; black color advancing along elytral sutures (Fig. 9)	<i>Ischalia (Ischalia) dimidiata</i> Blair
5. Pronotum sub-hexagonal; black sutural color of elytra narrow (Fig. 8)	<i>Ischalia (Ischalia) aposana</i> M. Satô
— Pronotum campanulate, lateral margins not angulate; black elytral sutural marking broader	<i>Ischalia (Ischalia) philippina</i> Blair

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Fig. 1



Fig. 2

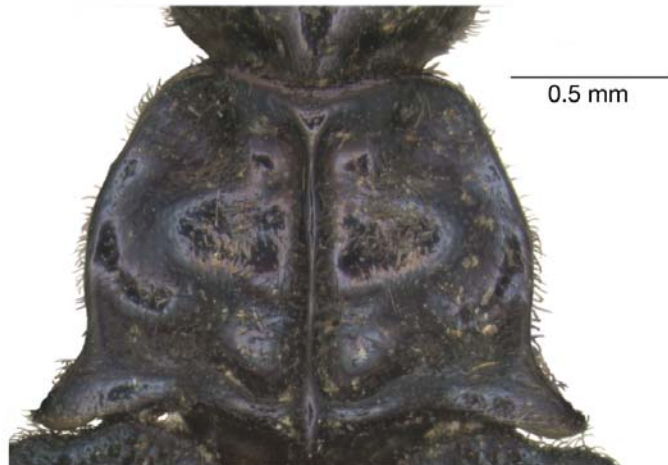


Fig. 3

Figures 1–3. *Ischalia (Ischalia) montana*, *sp. nov.* 1) Holotype, female, dorsal habitus. 2) Paratopotype, female (?), dorsal habitus. 3) Pronotum, dorsal view.



Fig. 4



Fig. 6



Fig. 5

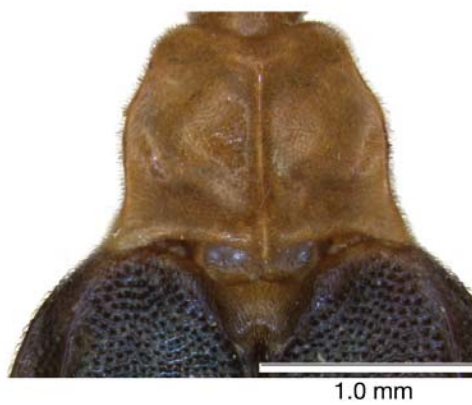


Fig. 7

Figures 4–7. *Ischalia (Ischalia) atricornis* Pic. **4)** Dorsal habitus. **5)** pronotum, dorsal view. *Ischalia (Ischalia) yasukii* M. Satô. **6)** Dorsal habitus. **7)** pronotum, dorsal view.



Fig. 8



Fig. 9



Fig. 10

Figures 8–10. 8) *Ischalia (Ischalia) aposana* M. Satô. Dorsal habitus. 9) *Ischalia (Ischalia) dimidiata* Blair. Dorsal habitus. 10) *Ischalia (Ischalia) sumaoi* M. Satô. Dorsal habitus.

