The bee genus *Ischnomelissa* in Peru, with a key to the species (Hymenoptera: Halictidae)

Michael S. Engel

**Abstract.** A new species of the rare augochlorine bee genus *Ischnomelissa* Engel (Augochlorini: Augochlorina) is described and figured from cloud forests of the Abra Patricia Reserve, Amazonas, Peru. *Ischnomelissa lignopteryx* Engel, new species, is distinguished from its congeners by the darkly infumate wing membranes, dark green and non-shining integument of the head and mesosoma, dark brown legs and metasoma (except basal patch of amber on the first metasomal tergum), and integumental sculpturing. A revised key to the species of the genus is provided.

**INTRODUCTION**


Herein the genus is recorded from northern Peru for the first time and based on a distinctive new species. The discovery of a new species affords the opportunity to compose a revised key to the species in the genus, supplanting the one provided by Engel & Brooks (2002).

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MATERIAL AND METHODS

Morphological terminology used herein follows that of Engel (2000, 2001, 2009) and Michener (2007), with the format for the description generally adapted from Engel & Brooks (2002), Engel (2010), and Engel & Rasmussen (2013). Photomicrographs were taken using a Canon 7D digital camera attached to an Infinity K-2 long-distance microscopic lens, and measurements were done with an ocular micrometer and Olympus SZX-12 stereomicroscope. The holotype is deposited in the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru (MUSM).

SYSTEMATICS

Genus *Ischnomelissa* Engel

*Ischnomelissa lignopteryx* Engel, new species

ZooBank: urn:lsid:zoobank.org:act:269083A3-1A3A-48DD-8664-068946437B7 (Figs. 1–4)

Diagnosis: The new species can be quickly recognized by the combination of a dark green head and mesosoma which have scattered coppery highlights, strongly infumate wing membranes, and an almost entirely dark brown metasoma (only amber colored at base and laterally on the first metasomal tergum) lacking tomentose bands of any kind.

Description: ♀: Total body length 9.0 mm; forewing length 8.0 mm. Head length 2.59 mm, width 1.81 mm. Clypeus beginning slightly above lower tangent of compound eyes (Fig. 2). Malar space slightly longer than basal mandibular width (malar length 0.31 mm; basal mandibular width 0.28 mm) (Figs. 2, 3). Upper interorbital distance 0.91 mm; lower interorbital distance 0.75 mm. Intertegular distance 1.56 mm; mesoscutum with medial line deeply impressed. Basal vein distad cu-a by two times vein width; 1rs-m distad 1m-cu by two times vein width; 2rs-m distad 2m-cu by six times vein width, 2rs-m relatively straight; first submarginal cell longer than combined lengths of second and third submarginal cells; second submarginal cell weakly narrowed anteriorly, anterior border of second submarginal cell along Rs only slightly shorter than that of third submarginal cell along same vein; posterior border of third submarginal cell about two times longer than anterior border. Hind wing with distal hamuli arranged 2-1-2. Inner metatibial spur with 12 branches, not including apical portion of rachis (Fig. 4).

Clypeus and supracylpeal area imbricate with weak, coarse punctures separated by 1–2 times a puncture width; face with small, contiguous or nearly contiguous punctures; punctures of face blending to imbricate integument in ocellocular area and with punctures more separated, punctures separated by 0.5–1 times a puncture width; vertex imbricate with punctures faint and separated by 1–2 times a puncture width; gena strongly imbricate with faint punctures separated by 2–3.5 times a puncture width; postgena strongly imbricate and impunctate. Pronotum imbricate with minute, scattered punctures; mesoscutum strongly imbricate with weak punctures separated by 1–3 times a puncture width, punctures smaller, more well defined, and denser laterally and posteriorly; mesoscutellum imbricate with small punctures separated by less than a puncture width; metanotum imbricate with faint, coarse punctures separated by a puncture width or less. Preepisternum and mesepisternum strongly imbricate...
with faint, coarse punctures separated by 0.5–1 times a puncture width; metepisternum strongly imbricate. Propodeum strongly imbricate. Metasoma finely imbricate.

Mandible dark brown, nearly black, except reddish at apex; labrum dark brown; clypeal apex dark brown, remainder of clypeus and head dark green, not shining, with scattered metallic coppery highlights, such highlights most noticeable on supraclypeal area and face. Antenna dark brown except scape amber over most surface, dark brown on upper apical half and somewhat infuscated on adjoining ventral apical half. Mesosoma dark green, not shining, with scattered coppery highlights; tegula dark brown.
Wing membranes strongly infumate; veins dark brown. Legs dark brown to black.
Metasoma dark brown throughout except basally and laterally amber on first tergum.

Pubescence generally yellowish except intermingled with dark fuscous setae on vertex, mesoscutum, mesoscutellum, metanotum, and lower portions of pleura. Dark fuscous setae predominant on tarsi, tibiae, and apicolmost metasomal segments.

♂: Unknown.

HOLOTYPE: ♂, Peru, AM [Amazonas], Abra Patricia [Reserve], Trocha Grallaria [Grallaria Trail], 25.ix.2012 [25 September 2012], 05°41′36″S/77°48′41.9″W, 2362 m, malaise trap, J. Suárez & P. Sánchez (MUSM).

ETYMOLOGY: The specific epithet is a combination of the Greek terms lignys, meaning “thick smoke”, and pteryx, meaning “wing”, and is a reference to the infumate wings of the species.

Key to the Species of Ischnomelissa

Females remain unknown for I. ecuadoriana, while males are unknown for I. rhina, I. cyanea, I. rasmusseni, and I. lignopteryx.

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<td>6(2). Integument of head and mesosoma dark metallic blue; T1–2 dark brown; inner metatibial spur with 12 branches, not including apical portion of rachis (Colombia: Nariño Department)</td>
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<td>7(1). Malar space almost as long as wide to slightly longer than wide</td>
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8(7). First flagellomere one-half length of second flagellomere; mandible, malar space, and scape at least anteriorly pale; malar space slightly shorter than wide (Ecuador: Pichincha Province) ........................................... *I. lescheni* Brooks & Engel

—. First flagellomere one-fourth length of second flagellomere; mandible, malar space, and scape dark brown to black; malar space slightly longer than wide (Ecuador: Imbabura Province) ........................................... *I. ecuadoriana* Brooks & Engel

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REFERENCES


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