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A NEW GENUS AND NEW SPECIES OF THE SUBTRIBE CICADINA (HEMIPTERA: CICADIDAE: CICADINI)

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ABSTRACT

A new genus, *Qurana* **gen. nov.** and a new species, *Qurana ggoma* **sp. nov.** of the subtribe Cicadina (Hemiptera: Cicadidae: Cicadini) are described from Cambodia. This new genus is allied to the genera *Purana* Distant, *Calcagninus* Distant, and *Gudaba* Distant but is distinguished by a long rostrum, a short male abdomen, a non-dentate pronotal collar, and a widely truncate uncus.

Key Words: taxonomy, *Qurana*, *Qurana ggoma*, *Purana*, *Calcagninus*, *Gudaba*, Cambodia

RESUMEN

Se describe un nuevo género, *Qurana* **gen. nov.**, y una nueva especie, *Qurana ggoma* **sp. nov.**, del subtribu Cicadina (Hemiptera: Cicadidae: Cicadini) de Cambodia. Este nuevo género es aliada con los géneros *Purana* Distant, *Calcagninus* Distant y *Gudaba* Distant pero puede ser distinguida por su largo rostro, el abdomen corto del macho, el collar del pronoto sin dientes y el uncus ancho y truncado.

A new species is described from Cambodia. It was found among undetermined material in the collections of the Institut royal des Sciences naturelles de Belgique, Brussels (IRSNB). A new genus is described here as well in order to include this unique new species. It is clear that this new species belongs to the subtribe Cicadina of the tribe Cicadini in the subfamily Cicadinae, following the classification of Lee (2008), because of its small body size, scale-like male operculum, and the structure of the male genitalia. The species is allied to the species of the genera *Purana* Distant, 1905, *Calcagninus* Distant, 1892, and *Gudaba* Distant, 1906. However, it cannot be placed in these or any other existing genera of Cicadina because of its unique morphology as discussed below. Morphological measurements were made with a Mitutoyo™ vernier caliper in mm.

Taxonomy

Genus *Qurana* **gen. nov.**

Type Species. *Qurana ggoma* sp. nov. (Cambodia)

Distinguishing Features. This genus is closely allied to the genus *Purana* in having a small and slender body and 2 pairs of tubercles on the abdominal sternite. Within *Purana*, *Qurana* looks more allied to the *Purana carmente* species group proposed by Schouten & Duffels (2002) in having male tymbal covers each with a striking black mark and the forewing with the bases of apical cells 2 and 3 not being infuscated (Schouten & Duffels 2002; Lee 2009). *Qurana* is distinguished by the following characters: body much smaller (male body length approximately 15.6 mm, but longer than 19 mm in

Purana); rostrum very long, passing center of sternite III (Fig. 1F); forewing very long (Fig. 1A, B); male abdomen short, about as long as or slightly shorter than distance from head to cruciform elevation (Fig. 1A); male operculum short and ellipsoidal (Fig. 1B, F); anterolateral pronotal collar not dentate; and uncus with a widely truncate apex and a rounded medial indent in ventral view (Fig. 1C).

Qurana is also similar to the genera *Gudaba* and *Calcagninus* in having a very small and slender body, 2 pairs of tubercles on the abdominal sternite, and short and transverse male opercula, but it is distinguished by the following characters: postclypeus not prominent; rostrum very long, passing center of sternite III (about reaching posterior coxae in *Gudaba* and just passing posterior coxae in *Calcagninus*); anterolateral pronotal collar not dentate; hind wing with 6 apical cells (6 in *Calcagninus* but 5 in *Gudaba*); male abdomen short (longer than distance from head to cruciform elevation in *Calcagninus* and *Gudaba*); and tymbal cover nearly complete (very short in *Calcagninus* and *Gudaba*).

Description. Body small (male body length approximately 15.6 mm). Postclypeus moderately swollen. Postclypeus with 2 longitudinal fasciae connecting medial ends of transverse fasciae. Rostrum long, usually passing center of sternite III and sometimes reaching posterior margin of sternite III. Pronotum long, longer than twice the length of head. Inner area barely marked between central fasciae and lateral fissures. Anterolateral pronotal collar not dentate. Wings hyaline, not infuscated. Forewing long, approximately 1.3 times the length of body. Costal vein considerably bent and narrowed

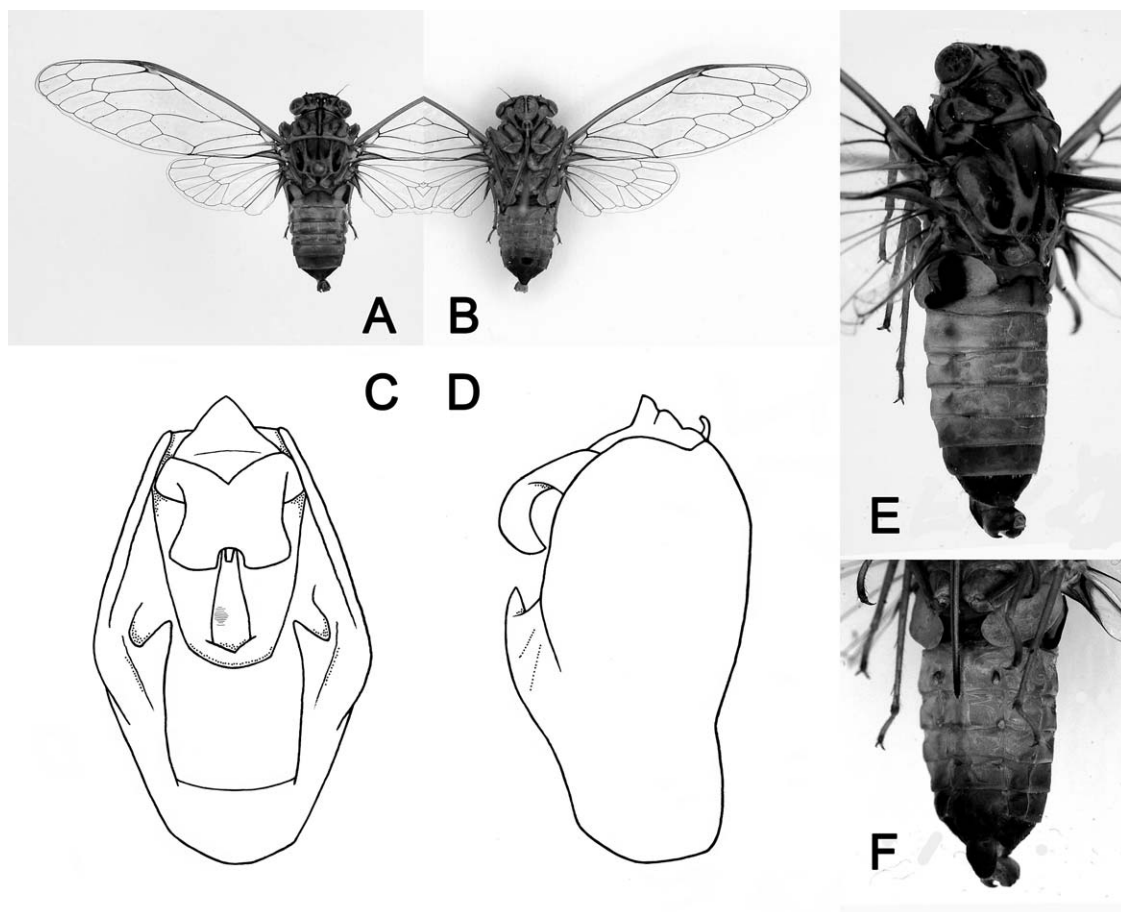


Fig. 1. *Qurana ggoma* **sp. nov.** male, Siem Reap, Cambodia, 28 May 2005 (IRSNB). A. holotype in dorsal view. B. holotype in ventral view. C. pygofer in ventral view. D. pygofer in lateral view. E. body in laterodorsal view. F. abdomen in lateroventral view.

after node. Anterior longitudinal vein of apical cell 5 about as long as anterior longitudinal vein of apical cell 7. Male operculum ellipsoidal, not or slightly passing posterior margin of sternite II. Male abdomen about as long as or slightly shorter than distance from head to cruciform elevation. Male tymbal cover with a distinct, large black mark laterally. Male abdominal sternites III and IV each with a pair of tubercles on lateral surfaces. Uncus not bifurcate, with a widely truncate apex and a rounded medial indent in ventral view. Basal lobe of pygofer spine-shaped with a narrow apex.

Etymology. The generic name is an arbitrary combination of letters, suggesting that this is a genus next to *Purana*.

Qurana ggoma **sp. nov.**
(Fig. 1)

Type Material. Holotype: male (Fig. 1A, B), "Coll. I.R.Sc.N.B. // CAMBODIA // (Siem Reap

prov) // Kbal Spean, Light Trap // 28 V 2005 // Leg Var&Grootaert" (printed yellow label) (IRSNB). Paratypes: 5 males and 2 females, same data as holotype (IRSNB).

Etymology. The specific name is a noun derived from the Korean noun *ggoma*, meaning "a small person", referring to the small sized body of this species, which is considerably smaller than the species of its allied genera.

Measurements of Types (6 males, 2 females; mean (range)). Length of body: male 15.6 (15.4-15.6), female 15.1 (14.5-15.7); width of head including eyes: male 4.9 (4.8-5.0), female 4.9 (4.9-4.9); wing span: male 44.9 (43.8-46.4), female 45.4 (44.7-46.1).

Description of Male (Fig. 1A, B, E, F). Head ochraceous with the following black to fuscous marks: a median large mark enclosing ocelli, with its anterior end nearly reaching frontoclypeal suture; a pair of upside-down "L"-shaped marks on the sides of the median mark, nearly

connecting with the median mark; a fascia along posterior margin of head; and a pair of short longitudinal fasciae along inner margin of compound eyes. Distance between lateral ocelli and compound eyes about as wide as twice the distance between lateral ocelli. Postclypeus moderately swollen. Antennae brown to dark brown. Ventral part of head ochraceous with black to fuscous marks. Postclypeus with transverse fasciae along transverse grooves, with posterior ones being very short, and 2 longitudinal lines connecting medial ends of transverse fasciae. Anteclypeus with 2 pairs of longitudinally arranged spots, with posterior ones reaching posterolateral margins of anteclypeus. Rostrum fuscous to black apically; usually passing center of sternite III and sometimes reaching posterior margin of sternite III. Lorum with a longitudinal fascia along inner margin of lorum, except anterior part. Gena with a transverse fascia between postclypeus and compound eye.

Pronotum (Fig. 1A, E) ochraceous. Inner area of pronotum with the following fuscous marks: a pair of central longitudinal fasciae slightly broadened at both anterior and posterior ends; a pair of longitudinal indistinct marks between median parts of paramedian fissures and posterior ends of lateral fissures; a pair of fasciae along lateral fissures; and a pair of curved fasciae along lateral margins of inner area. Pronotal collar with (sometimes without) a narrow transverse fascia along posterior margin and with a pair of narrow fasciae along lateral margins, and a pair of small (sometimes indistinct) spots at lateral inner corner. Anterolateral pronotal collar slightly developed, but not dentate.

Mesonotum (Fig. 1A, E) ochraceous, but partly darker or brighter, with the following black to fuscous marks: a median longitudinal fascia slightly broadened posteriorly to reach to posterior margin of cruciform elevation; a pair of small roundish spots enclosing scutal depressions; a pair of inwardly curved fasciae along parapsidal sutures; and a pair of longitudinal fasciae on lateral sigilla, with their posterior ends hooked outwardly. Cruciform elevation ochraceous with a median longitudinal fascia continued from mesonotum and a pair of fasciae along lateral margins, fuscous. Ventral part of thorax ochraceous.

Legs ochraceous. Fore-femur with a small subapical spine as well as primary and secondary spines; with a fuscous fascia along midline of ventral side. Fore- and mid-tarsi castaneous apically. Pretarsal claws dark brown to fuscous.

Wings (Fig. 1A, B) hyaline. Forewing without infuscation; long, approximately 1.3 times the length of body. Coastal vein ochraceous; considerably bent and narrowed after node. Basal cell slightly tinged with ochraceous. Basal membrane and hind wing jugum gray.

Operculum (Fig. 1F) bright ochraceous without marks; short, obliquely ellipsoidal, and not or slightly passing posterior margin of sternite II. Two opercula widely separated, with gap of about half to two-thirds as wide as operculum.

Abdomen (Fig. 1E, F) about as long as or slightly shorter than distance from head to cruciform elevation. Abdomen mostly ochraceous, but tergite 8 mostly dark brown to fuscous. Tergite 2 sometimes with a longitudinal median fuscous fascia. Posterior margin of tergite 3 about as wide as anterior margin of mesonotum. Tymbal cover ochraceous but fuscous on about lateral one-third to half; quarter round or semicircular, slightly wider than long, with lateral margin nearly linear. Ventral part of abdomen ochraceous except posterior margin of sternite II, posterior area of sternite VII, and most area of sternite VIII, fuscous. Sternites III and IV each with a pair of tubercles on lateral surfaces, bright ochraceous and protruding posteriorly.

Male genitalia (Fig. 1C, D): Pygofer oval in ventral view. Uncus with a widely truncate apex and a rounded medial indent in ventral view; curved downward in lateral view. Distal shoulder of pygofer smoothly curved without extension. Dorsal beak very short. Basal lobe of pygofer spine-shaped with a narrow apex.

Description of Female. Operculum ochraceous without distinct marks; very small, not touching posterior margin of sternite II. Ventral part of abdomen ochraceous to brown. In one specimen, sternite VII mostly black. Abdominal segment 9 fuscous dorsally but bright ochraceous ventrally. Ovipositor sheath fuscous, protruding far beyond anal styles. Dorsal beak about as long as anal styles.

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REFERENCES CITED

- DISTANT, W. L. 1892. A monograph of oriental Cicadidae, parts 5-7. Indian Museum, Calcutta, pp. i-xiv/97-158, pls. 10-15.
- DISTANT, W. L. 1905. Rhynchotal notes—XXIX. *Annals and Magazine of Natural History* (7)15: 58-70.
- DISTANT, W. L. 1906. *Rhynchota Vol. III (Heteroptera-Homoptera). The Fauna of British India, including Ceylon and Burma.* Taylor and Francis, London, xiv+503 pp.

- LEE, Y. J. 2008. A checklist of Cicadidae (Insecta: Hemiptera) from Vietnam, with some taxonomic remarks. *Zootaxa* 1787: 1-27.
- LEE, Y. J. 2009. Descriptions of two new species of the *Purana abdominalis* species group (Hemiptera: Cicadidae: Cicadini) from the Philippines, with a key to the species groups of *Purana*. *J. Natural History* 43: 1487-1504.
- SCHOUTEN, M. A., AND DUFFELS, J. P. 2002. A revision of the cicadas of the *Purana carmentis* group (Homoptera, Cicadidae) from the Oriental region. *Tijdschrift voor Entomologie* 145: 29-46.