



## First record of the ant genus *Emeryopone* Forel, 1912 (Hymenoptera: Formicidae: Ponerinae) from Vietnam

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(Received 08 August 2014, Accepted 20 October 2014)

**ABSTRACT:** The ant genus *Emeryopone* of the subfamily Ponerinae (Formicidae) is recorded from Me Linh, Vinh Phuc province in the northern part of Vietnam for the first time with one species, namely *Emeryopone buttelreepeni* Forel, 1912. Genus *Emeryopone* is a small group, with only 5 species distributed in Asia. They are *E. buttelreepeni* Forel, 1912 from Sumatra, *E. franzi* (Baroni Urbani, 1975) from Nepal, *E. loebli* (Baroni Urbani, 1975) from Israel, *E. melaina* Xu, 1998 from China, and *E. narendrani* Varghese, 2006 from India. The record of this genus from Vietnam fills a gap in the distribution pattern of the genus in Asia.

**Key Words:** *Emeryopone*, Formicidae, Ponerinae, Northern Part, Vietnam.

### INTRODUCTION

The ant genus *Emeryopone* of the subfamily Ponerinae was described by Forel (1912), monotypic for *E. buttelreepeni* Forel, 1912 from Sumatra of Indonesia. Up to now, four species were also described by several authors, they were *Emeryopone franzi* (Baroni Urbani, 1975) from Nepal, *E. loebli* (Baroni Urbani, 1975) from Israel, *E. melaina*, Xu, 1998 from southern China, and *E. narendrani* Varghese, 2006 from southern India. A key to all species of the genus was provided by Varghese (2006).

In this paper, the first record of the genus *Emeryopone* from Vietnam is documented, representing by one species named *E. buttelreepeni* Forel. Redescription of the species with its figure is also presented.

### MATERIALS AND METHODS

Four study sites were chosen at Me Linh Biodiversity Station in northern part of Vietnam, including natural evergreen raining forest, bamboo forest, planted forest under acacia shade and acacia forest. Fifteen pitfall traps with 4% of formalin were placed at each study site from May 2012 to June 2013. Specimens captured in the traps were collected after 10 days and two times per month (the traps were left empty for 10 days, between two times of collecting). Nearly 9,000 ant specimens were collected by this method, including only one specimen, a female of the genus *Emeryopone*. This

female was collected on 25.VI.2012, and deposited in Institute of Ecology and Biological Resources.

Drawings were made with the aid of a drawing tube installed on the stereoscopic dissecting microscope. The terminology follows Jaitrong and Yamane (2012) and Varghese (2006).

The abbreviations used for the measurements and indices are as follows:

HL: Maximum head length in full-face view, measured from the anterior clypeal margin to the midpoint of a line drawn across the posterior margin of the head.

HW: Maximum head width in full-face view.

ML: Mesosomal length measured from the point at which the pronotum meets the cervical shield to the posterior margin of metapleuron in profile.

PL: Petiole length measured from the anterior margin of the peduncle to the posteriormost point of tergite.

SL: Scape length, excluding the basal constriction and condylar bulb.

TL: Total length, roughly measured from the anterior margin of head to the tip of gaster in stretched specimens.

EL: Eye length, length of compound eye measured in the same view as HL.

SI: Scape index,  $SL/HW \times 100$ .

CI: Cephalic index,  $HW/HL \times 100$ .

ANTML: Antennomere length, length of the ultimate antennomere.

ANTMW: Antennomere width, width of the ultimate antennomere.

PRNW: Pronotum width, width of the pronotum at the dorso-lateral margins.

PTW: Petiole width, maximum width of the petiole in dorsal view.

PTH: Petiole height, maximum height of the petiole, measured in lateral view at right angles to petiole length.

ANTMI: Antennomere index  $ANTMW/ANTML \times 100$ .

PTWI: Petiole width index  $PTW/PL \times 100$ .

**RESULT AND DISCUSSION**

**Genus *Emeryopone* Forel, 1912**

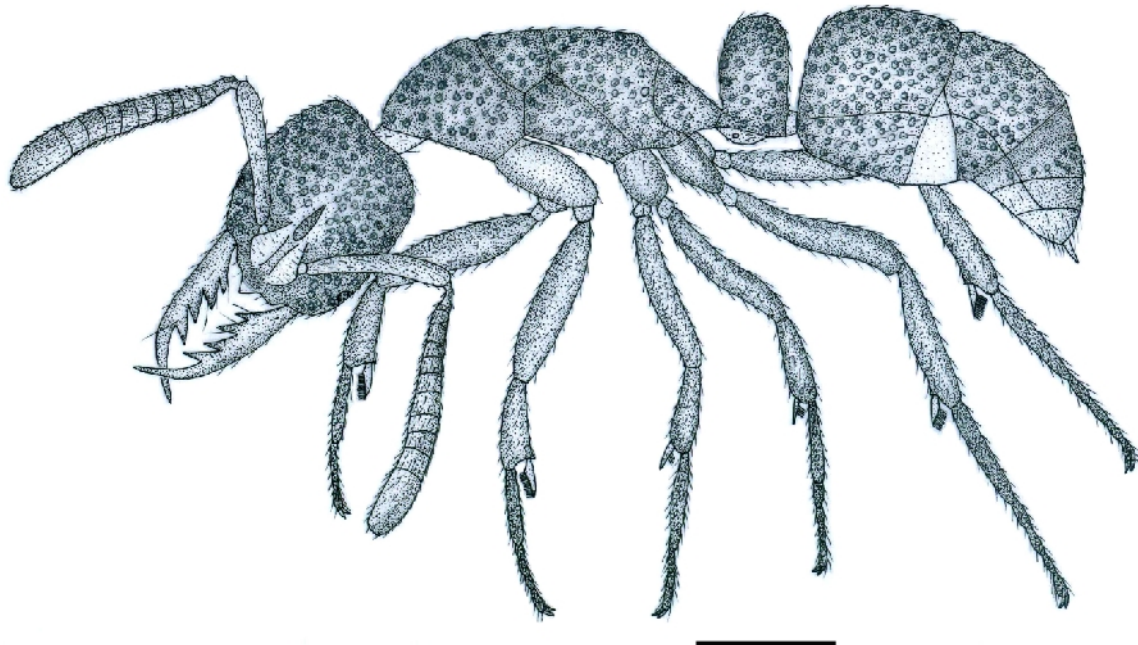
*Emeryopone* Forel, 1912, Rev. Sui. Zool. 20: 761, genus.

Type species: *Emeryopone buttelreepeni* Forel, 1912, by original designation and monotypy.

**Diagnosis:** This genus was separated from related genera by the combination of the following characteristics (Forel, 1912): Small to medium size, mandibles long with 5-6 teeth, apical tooth unusually long, and broadly curved. Antennae 12 segments with 3-segmented club. Eyes formed from one to ten ommatidia. Frontal lobes present. Alitrunk with well developed sutures. Petiole squamose with a well formed subpetiolar process. Hind tibia with a single pectinate spur. Body generally sculptured.

Forel (1912) described the *Emeryopone buttelreepeni* from Sumatra, Indonesia. None of the specimens of this species was seen then. Here we give the redescription of the species for further study.

*Emeryopone buttelreepeni* Forel, 1912(Fig. 1)



**Fig. 1.** *Emeryopone buttelreepeni* Forel, female. Scale bar: 1mm.

**Measurements.** HL 0.95mm; HW 0.78mm; EL 0.08mm; SL 0.76mm; ML 1.35mm; PL 0.44mm; TL 4.45mm; ANTML 0.33mm; ANTMW 0.13mm; PRNW 0.6mm; PTW 0.49mm; PTH 0.69mm; CI 82.1; SI 97.4; PTWI 111; ANTMI 39.3.

**Body length:** TL = 4.45mm. Head in full-face view clearly longer than wide (CI = 82.1mm) (excluding mandibles), with anterior portion narrower than posterior portion. Antennal scape (SL = 0.76mm) reached more than 2/3 length of the head. Frontal carina with margin elevated dorsally, brown translucent, forming a half circle above antennal sockets. Frontal lobe almost fully-covered antennal socket. Clypeus

prominent, with small convex triangular at anterior margin of clypeus. Mandibles long and sickle, masticatory margin armed with 5 long slender spiniform teeth and gradually increasing in size from base. Eye relatively small (EL = 0.08mm) in relation to size of head and placed towards the anterior lateral corners of head, more towards the base of mandibles. Antennal 12 segments, antennal flagellomere II, X, XI each longer than wide; antennal flagellomere III, IV, V each as wide as long, antennal flagellomere VI, VII, VIII, IX each as long as wide; terminal flagellomere 2.5 times longer than wide (ANTMI = 39.3).

Mesosoma almost flat in appearance in lateral view weakly convex dorsally, suture between mesopleuron and metapleuron present. Metanotal groove almost absent. Metapleural gland bulla larger, its maximum diameter about 4.6 times as long as distance between propodeal spiracle and metapleural gland bulla. Promesonotal suture clearly visible. Petiole wider than long (PTWI = 111), prominent, lacking spines and separated from both alitrunk and gaster, subpetiole process rectangular with near margin a translucent spot in the middle, anterior margin convex. Gaster long and rounded posteriorly, smoothly haired and sparse distributed. Each tibia of hind leg with a single distinctly pectinate spur. Body shiny reddish brown or light brown to dark brown in color. Mandibles, antennae, legs and pygidium paler. Body with long sparse yellowish hairs. Those on head shorter, hairs denser on antenna. Legs with thicker hairs.

#### ACKNOWLEDGMENT

The present study was supported by the grant from the Institute of Ecology and Biological Resources (IEBR.DT.02/14-15). We thank IDEA WILD for supporting the equipments. We give many thanks to Assoc. Prof. Dr. Truong Xuan Lam for his kind help in teaching of drawing the figure.

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