

*Batricavus tibialis*, a new genus and species  
of Batrisini from South China  
(Coleoptera: Staphylinidae: Pselaphinae)

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**Abstract.** A new monotypic genus *Batricavus* Yin & Li, gen. nov. and species *B. tibialis* Yin & Li, sp. nov. are described from Guangdong Province, South China. The male and female habitus are illustrated as well as diagnostic characters of the new taxa. The new genus may be distinguished from the allied genera by the presence of a pair of sub-anterior impressions on the pronotum in both sexes.

**Key words.** Coleoptera, Staphylinidae, Pselaphinae, Batrisini, *Batricavus*, new genus, new species, taxonomy, Guangdong, China

### Introduction

The Asian genera of Batrisini were classified into four genus-groups according to NOMURA & IDRIS (2003). The *Batrisocenus* genus-group (= Jeannel's fifth division (JEANNEL 1959); = *Batrisocenus* complex (NOMURA 1991)), containing about 20 genera, is characterized mainly by the pronotum having a pair of lateral longitudinal sulci and a complete or partially broken antebasal sulcus, each elytron possessing two basal foveae and an asymmetrical aedeagus with a movable dorsal apophysis. The group is very diverse in South China, with several undescribed genera and numerous new species known to us. The purpose of this paper is to describe a new genus and species and to discuss their taxonomic placement.

### Material and methods

A slash (/) is used to separate different lines on the same label. The terminology of the foveal system follows CHANDLER (2001), which of the female genitalia follows NOMURA (1991).

The following acronyms are used in the text: **BL** – length of the body (= HL+PL+EL+AL); **HL** – maximum length of the head, measured from anterior margin of the clypeus to the

posterior border, excluding the occiput; **HW** – maximum width of the head, measured across the eyes; **PL** – length of the pronotum, measured along the midline; **PW** – maximum width of the pronotum; **EL** – length of the elytra, measured along the suture line; **EW** – maximum width of the elytra; **AL** – maximum length of the abdomen; **AW** – maximum width of the abdomen.

The type series are deposited in the Insect Collection of Shanghai Normal University, Shanghai, P. R. China (SNUC).

## Taxonomy

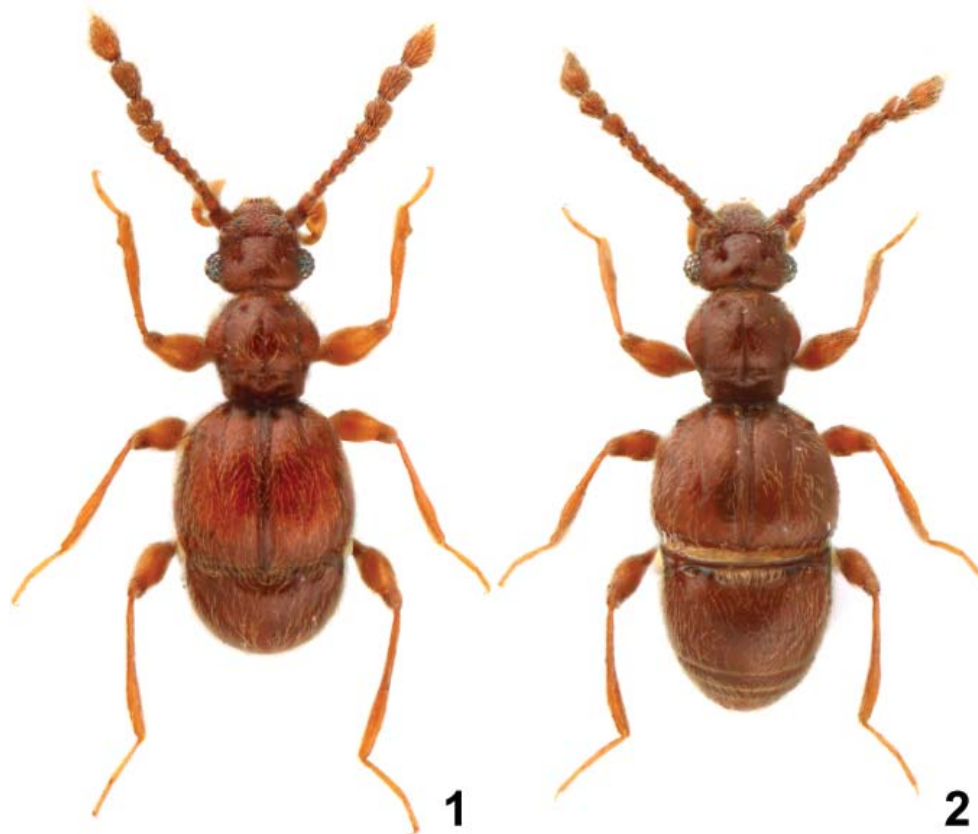
### *Batricavus* Yin & Li gen. nov.

**Type species.** *Batricavus tibialis* Yin & Li sp. nov. (here designated).

**Diagnosis.** Head nearly rectangular, frontal rostrum lacking. Antennal club formed by terminal three to four antennomeres. Pronotum with distinct median and lateral longitudinal sulci, transverse antebasal sulcus present; with a pair of sub-anterior impressions in both sexes. Elytra with two basal foveae, discal stria present. Tergite IV longer than V–VII combined.

**Description.** Head with clypeus visible in dorsal view, arcuate at anterior margin. Frons densely and roughly punctate, concave medially, slightly raised above antennal tubercles. Vertex sparsely and shallowly punctate. Vertexal foveae well-defined, connected by complete reverse U-shaped sulcus. Eyes well-developed, prominent. Gular foveae close in transverse opening; gular carina present. Maxillary palpi with segments I minute, II pedunculate, III nearly triangular, IV largest, fusiform, broadened at mesal margin. Antennae 11-segmented; scape thick, club four-segmented in male and three-segmented in female. Pronotum with pair of sub-anterior foveiform impressions, pair of lateral antebasal foveae connected by transverse antebasal sulcus, both inner and outer pair of basolateral foveae present. Each elytron with two basal foveae, subhumeral fovea and lateral striae present, discal striae extending from basal foveae to near elytral apex. Proventrite with lateral procoxal foveae. Thorax with lateral mesoventral foveae straightly inserted, median mesoventral foveae widely separated, lateral mesocoxal foveae and pair of lateral metaventral foveae present. Abdomen narrower than elytra, rounded apically. Tergite IV largest, mediobasal foveae and basolateral foveae present; discal carinae short and indistinct, reaching one-fifth of tergal length, paratergites absent; segments V–VI very short, lacking foveae; VII larger, with pair of lateral foveae. Sternite IV with mediobasal foveae and pair of lateral carinae present; VI–VII short, subequal in length. Aedeagus well-sclerotized.

**Remarks.** *Batricavus* gen. nov. is close to *Trisiniotus* Jeannel, 1960, *Batriscenaulax* Jeannel, 1958 and *Physomerinus* Jeannel, 1952 by the first antennomere lacking a trichome or a projection at the anterolateral margin, the aedeagus with a narrowed basal bulb of the median lobe, and an elongate and simple dorsal apophysis. *Trisiniotus* has the pronotum lacking a median longitudinal sulcus (except for one Sumatra species (NOMURA 1991: 11) and three to five highly modified apical antennomeres in the male. *Batriscenaulax* and *Physomerinus* are both characterized by possessing a complete median sulcus on the pronotum coupled with the male sexual characters present on tergite IV, protibiae or metafemora. But the two genera are distinguished from each other only by the locations of the male sexual characters

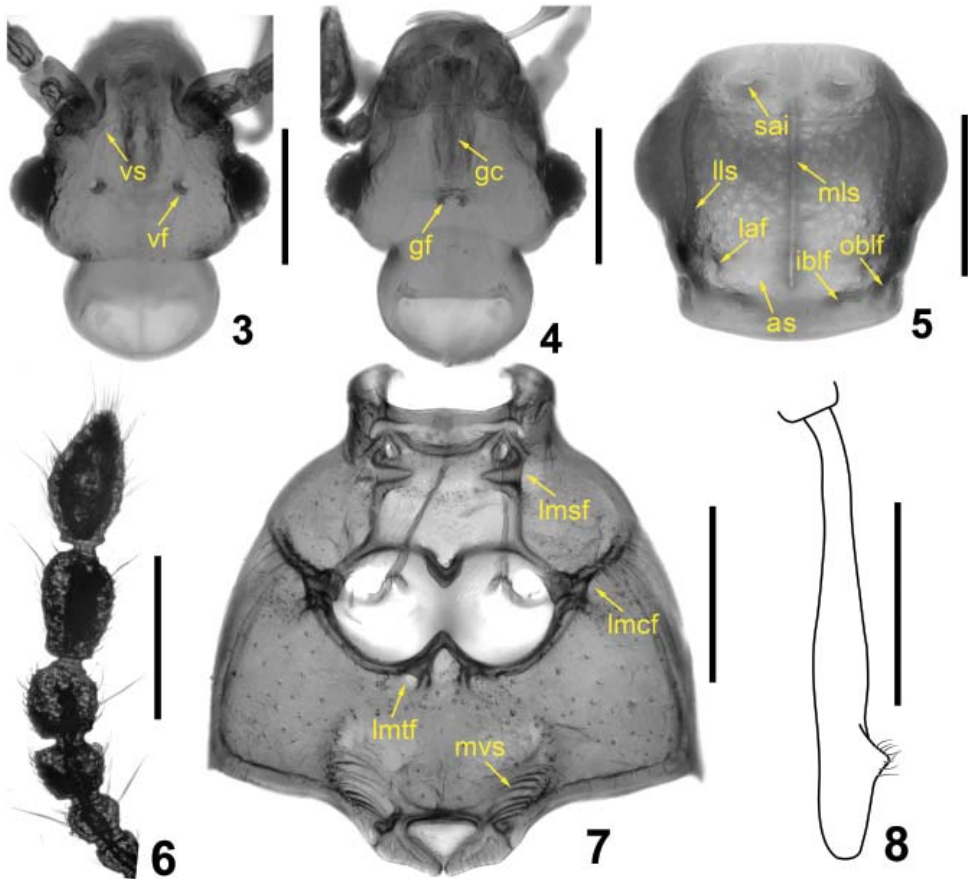


Figs. 1–2. Dorsal habitus of *Batricavus tibialis* Yin & Li, gen & sp. nov. 1–male; 2–female.

which potentially makes the validity of their generic conception questionable. *Batricavus* may be easily separated from the above genera by the presence of a pair of unique foveiform impressions in the anterior part of the pronotum in both sexes which is uncommon and has never been observed in any Asian batrisine genera.

*Batricavus tibialis* sp. nov. may be readily distinguished from other batrisine species also by the previous combination of male sexual characters except for the sub-anterior impressions on the pronotum, *viz.*: antennae with the apical four antennomeres modified, the metaventrite with two rows of median macrosetae, the protibiae protuberant laterally in the apical 1/3, and the shape of the aedeagus.

**Etymology.** The generic name is a combination of ‘*Batri-*’, a common stem used in Batrisini, and Latin word ‘*cavus*’, referring to the sub-anterior impressions on the pronotum. Gender masculine.



Figs. 3–8. Details of *Batricavus tibialis* Yin & Li, gen. & sp. nov., male. 3 – head, in dorsal view; 4 – same, in ventral view; 5 – pronotum; 6 – antennal club; 7 – meso- and metaventrite; 8 – protibia. Abbreviations: as – antebasal sulcus; gc – gular carina; gf – gular foveae; iblf – inner basolateral foveae; laf – lateral antebasal foveae; lls – lateral longitudinal sulcus; lmcf – lateral mesocoxal foveae; lmsf – lateral mesoventral foveae; lmtf – lateral metaventral foveae; mls – median longitudinal sulcus; mvs – metaventral setae; oblf – outer basolateral foveae; sai – subanterior impressions; vf – vertexal foveae; vs – vertexal sulcus. Scales: 0.2 mm.

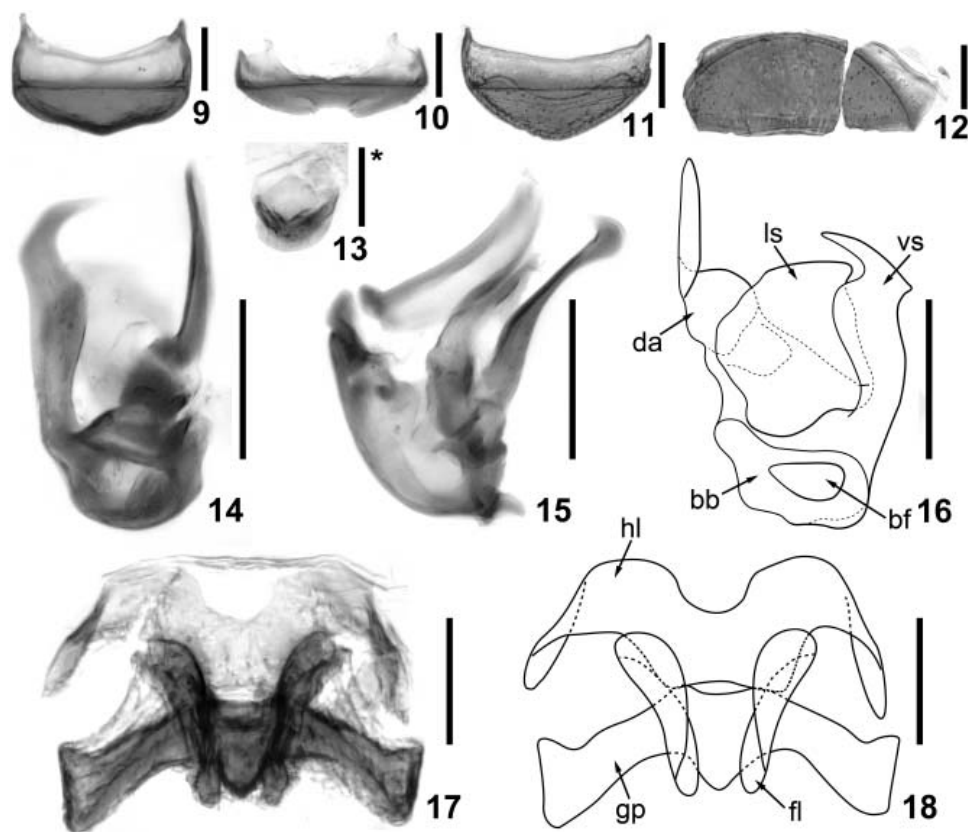
***Batricavus tibialis* Yin & Li sp. nov.**

(Figs. 1–18)

**Type locality.** South China, Guangdong Province, Nankunshan Nature Reserve.

**Type material.** HOLOTYPE: ♂, 'CHINA: GUANGDONG PROV. / Longmen County / Nankunshan N. R. / 20.viii.2010, alt. 700 m / Li-Zhen LI leg.' (SNUC). PARATYPES: 1 ♂ 1 ♀, 'CHINA: GUANGDONG PROV. / Shaoguan City / Nanling National N. R. / 9.viii.2010 / Li-Zhen LI leg.' (SNUC).

**Diagnosis.** Relatively small sized, length 1.57–1.78 mm. Antennal club four-segmented in the male, strongly modified, three-segmented and weakly-defined in the female. Male protibiae modified at lateral margin at apical one-third. Male metaventrite with rows of long modified



Figs. 9–18. Details of *Batricavus tibialis* Yin & Li, gen. & sp. nov. 9 – male tergite VIII; 10 – male sternite VIII; 11 – female tergite VIII; 12 – female sternite VIII; 13 – male sternite IX; 14 – aedeagus, dorsal view; 15 – same, lateral view; 16 – same, ventral view; 17–18 – female genitalia, ventral view. Abbreviations: bb – basal bulb; bf – basal foramen; da – dorsal apophysis; fl – fore lobe; gp – genital plate; hl – hind lobe; ls – lamellar sclerite; vs – ventral stalk. Scales: 0.1 mm, scale with '\*'=0.05 mm).

apical setae. Aedeagus with a reduced basal bulb, dorsal apophysis simple. Female genitalia composed of a membranous and transverse sternite IX, fore lobe with a pair of ventral processes, and a transverse genital plate.

**Description.** Male. Body (Fig. 1) yellowish brown, maxillary palpi and tarsi lighter. BL 1.57–1.66 mm. Head (Figs. 3–4) slightly wider than long, HL 0.33–0.36 mm, HW 0.39–0.44 mm. Eyes well-developed, each composed from about 30 large facets. Antennomere VIII (Fig. 6) transverse, IX about as wide as VIII and about as long as wide, X much longer than IX, narrowed at base, widest at middle, XI nearly fusiform, as long as X. Pronotum (Fig. 5) with sides round, slightly wider than long, PL 0.37–0.39 mm, PW 0.40–0.43 mm. Elytra combined wider than long, EL 0.53–0.56 mm, EW 0.64–0.72 mm; discal area convex, basal part slightly depressed. Hind wings fully developed. Metaventrte (Fig. 7) with pair of rows

of long setae in apicomedian part. Protibiae (Fig. 8) modified in apical 1/3, with projections outwards. Abdomen narrower than elytra, AL 0.34–0.35 mm, AW 0.56–0.60 mm. Tergite VIII (Fig. 9) emarginated on posteromedian margin. Sternite VIII (Fig. 10) transverse. Sternite IX (Fig. 13) semi-membranous, semi-circular, with several long setae at apex. Aedeagus (Figs. 16–18) well-sclerotized, length 0.28 mm; basal bulb short with small ventral process and small basal foramen; ventral stalk widest at apical 2/3, acute and curved mesally at apex; dorsal apophysis situated at right half, longer than ventral stalk, slender; lamellar sclerite orientated from base of ventral stalk, hemi-membranous and broad.

Female. Similar to male in general aspect; darker in color; wingless. BL 1.78 mm, HL 0.35 mm, HW 0.40 mm. Eyes smaller than in male, each composed from about 25 large facets. Terminal three segments of antennae loosely clubbed, not modified. PL 0.38 mm, PW 0.40 mm; EL 0.55 mm, EW 0.66 mm. Metaventricle lacking rows of long setae. Legs not modified. AL 0.50 mm, AW 0.60 mm. Female genitalia (Figs. 17–18) wider than long, maximum length 0.17 mm, maximum width 0.24 mm, composed of three parts. Hind lobe (sternite IX) transverse, semi-membranous, extending laterally; fore lobe with pair of long ventral sclerites separated from each other; genital plate as long as hind lobe, with pair of lateral arms thick at apices.

**Etymology.** The specific name refers to the sexually modified protibiae in the male.

**Habitat.** All individuals of *Batricavus tibialis* were sifted from mixed leaf litter of a broad-leaved forest.

**Distribution.** Guangdong Province (South China).

## Acknowledgment

The authors thank Shûhei Nomura (Tokyo, Japan) and Donald S. Chandler (Durham, U.S.A) for their thoughtful advice during this study. Comments from Ivan Löbl (Geneva, Switzerland) and an anonymous reviewer improved the paper. The language editor further corrected English of the manuscript. The present study is financially supported by the National Natural Science Foundation of China (No. 31172134; No. 31101659).

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