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Description of a New Cavernicolous Species of the Genus *Batrisodellus* (Coleoptera, Pselaphidae) from Southeast China[1)]

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Abstract A new cavernicolous species, *Batrisodellus callissimus*, is described from Guilin, Southeast China. This is the first record of the genus outside Japan.

The genus *Batrisodellus* belonging to the subtribe Batrisina has been known to occur in Japan and is recorded from Southeast China for the first time. A new species, *Batrisodellus callissimus*, is described from limestone caves in Guilin City.

Genus *Batrisodellus* JEANNEL

Batrisodellus JEANNEL, 1958, Mém. Mus. Hist. nat., Paris, (A), **18**: 37–38. —— NEWTON & CHANDLER, 1989, Field., Zool., (53): 34. —— TANABE & NAKANE, 1989, Jpn. J. Ent., **57**: 734–741. Type species: *Batrisodes nipponensis* RAFFRAY, 1909.

The genus *Batrisodellus* JEANNEL belongs to the division II of the subtribe Batrisina in JEANNEL's system and is well-defined by the eleventh antennal segment with an internal denticle at the basal part. This genus contains four known Japanese species, and a species is newly described below from China. Some of them are known to be cavernicolous.

Batrisodellus callissimus sp. nov.

(Figs. 1–3)

Male (Fig. 1). Length 2.0–2.1 mm. Width 0.6 mm.

Body light brown to reddish brown, very slender, antennae and legs remarkably

1) Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 4, No. 24).

elongate.

Head 1.4 times as long as wide; clypeus well expanded anteriorly, its anterior margin arcuate and slightly thick; frons concave and glabrous at median part, strongly convex and pubescent at lateral parts; vertex weakly convex with a pair of divergent carinae from lateral parts of frons to tempora, a median longitudinal carina in posterior 2/5 and a pair of deep dorsal tentorial pits. Eyes located at posterior 2/5, each ovoid, composed of about 40 facets. Antennae 1.5–1.6 mm long, very slender, reaching hind margin of elytra, 1st segment slightly longer than wide, subcylindrical, 2nd to 8th subequal in width, each thickened distally, 9th twice as long as wide, thickened distally in dorsal view, weakly excavated laterally, 10th shorter and thicker than 9th, excavated ventro-laterally, 11th (Fig. 3 A–B) largest, elongate, roundly expanded externally, strongly excavated internally with an internal denticle at basal 1/7 and its apical part conical; relative lengths from base to apex is 1.1 : 1.0 : 1.0 : 1.2 : 1.3 : 1.3 : 1.3 : 1.1 : 1.3 : 3.9. Mouthparts well projected anteriorly; labrum (Fig. 2 A) short, acutely projected at both antero-lateral corners, with a pair of round-headed setae at antero-median part and some long setae along anterior margin; mandibles (Fig. 2 B) thickened basally, each with three to four inner teeth; maxillae (Fig. 2 C) short, with a few setae on external side, maxillary palpi elongate, each 4-segmented, 1st segment very short, subcylindrical, 2nd slender, weakly thickened distally, 3rd short and subcylindrical, 4th largest, fusiform and pubescent, widest at basal 2/5; labium (Fig. 2 D) short, partially membranous on anterior part, labial palpi each 3-segmented, 1st segment very short and cylindrical, 2nd elongate and tubular, weakly curved externally, with a long and bold seta at apex, 3rd slender, as bold as apical seta of 2nd.

Pronotum 1.2 times as long as wide, widest at middle, round-sided and pubescent with a shallow median longitudinal sulcus, a pair of subparallel lateral sulci, a transverse depression at posterior 1/4 and a pair of rudimentary longitudinal carinae between median longitudinal sulcus and lateral sulci. Elytra slightly longer than wide, narrowed anteriorly, widest at posterior 1/3, dorsal surface weakly convex and pubescent; each elytron with 3 basal foveae and two indistinct sulci. Legs very slender; fore femora thickened in middle part, each with sensory setae in a line on ventral side; fore tarsi short, 2nd segment (Fig. 3 C) with a small denticle covered by pubescence at apex; hind trochanters very short, each with a short denticle on postero-ventral side. Hind wings well developed, each about as long as body.

Abdomen about as long as wide, weakly narrowed at base, rounded posteriorly, 4th segment largest, weakly convex on dorsal surface with a pair of short basal carinae, a pair of broad foveae at basal part and a pair of divergent lateral carinae, 5th to 6th short, 5th longer than 6th, 7th broad, 1.5 times as long as 6th, 8th tergite transverse and ovoid, 8th sternite semicircular and flattened at median part. Male genitalia (Fig. 2 E–F) weakly sclerotized and asymmetrical: median lobe bulbous on basal part with a broad basal foramen, a short ventral projection and two apical spines, ventro-apical spine broad, extending to the left at apex with two short denticles on the right side, dorso-apical spine slender, arcuately curved to the right and narrowed distally;

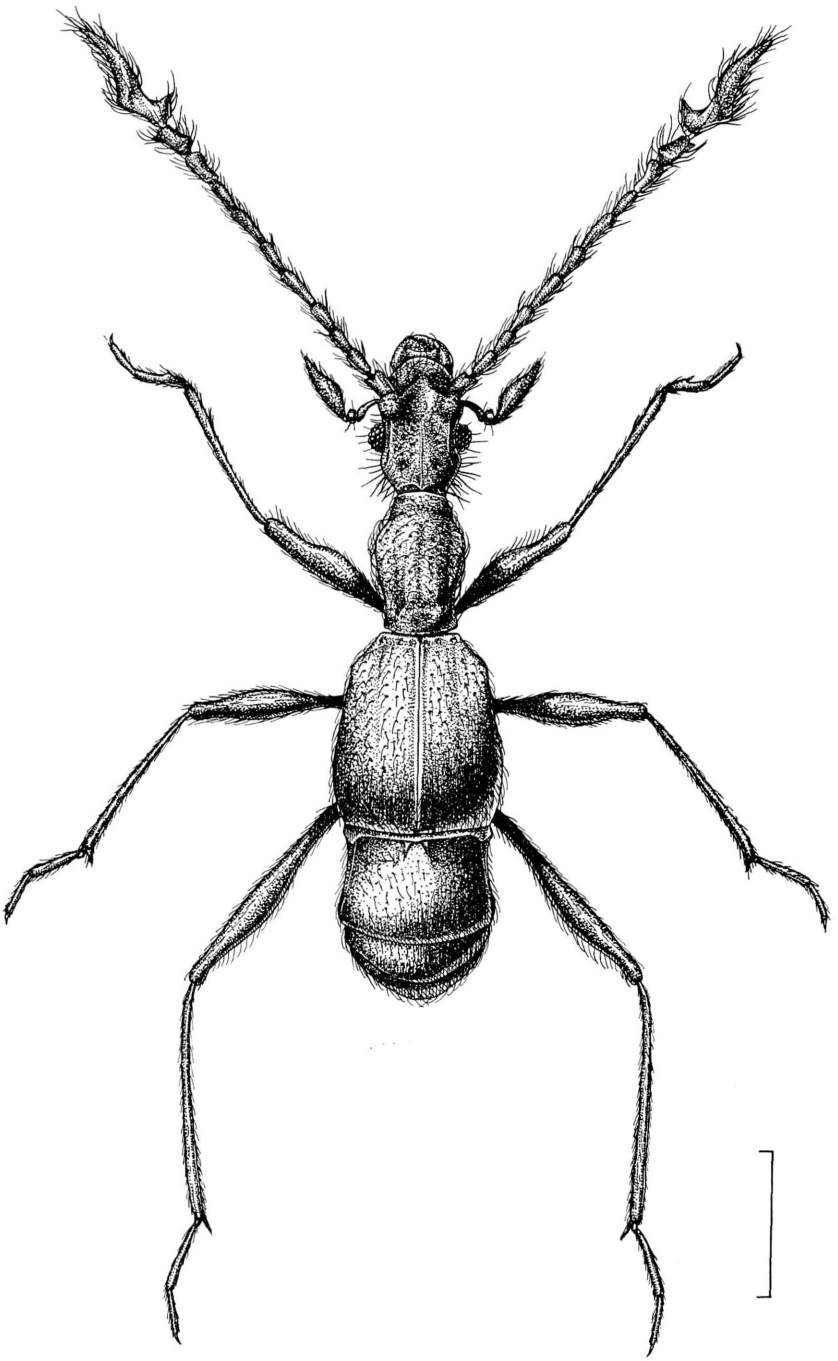

Fig. 1. *Batrisodellus callissimus* sp. nov., male, dorsal aspect (scale: 0.50 mm).

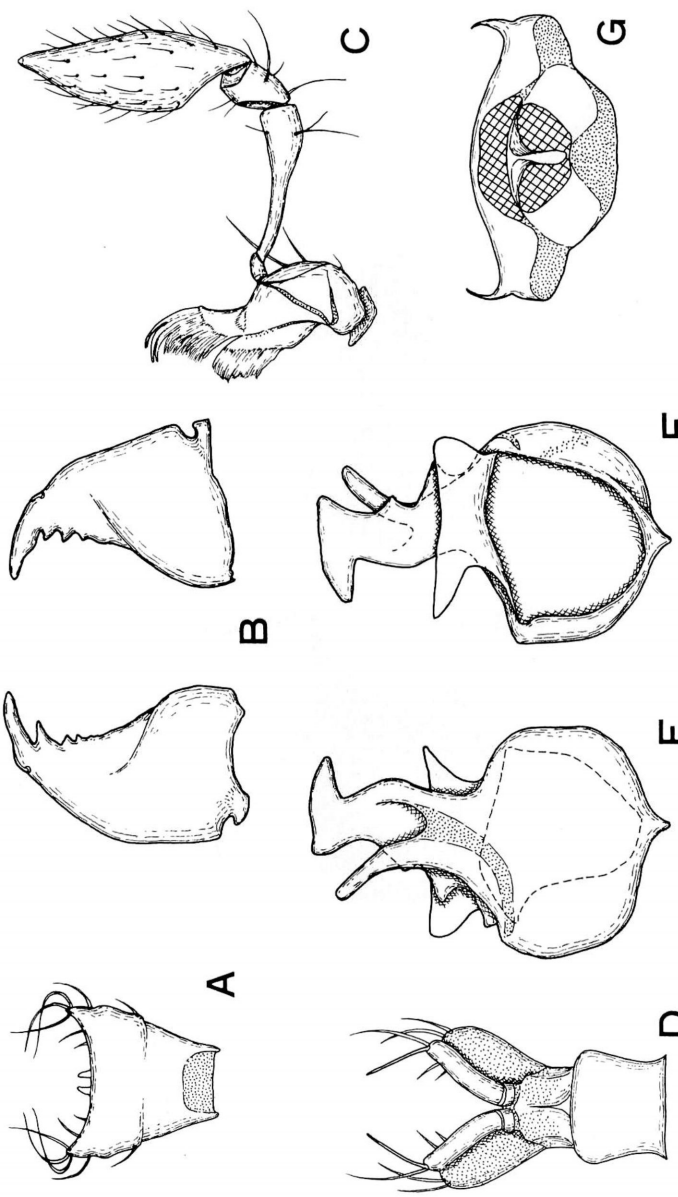

Fig. 2. *Batrisodellus callissimus* sp. nov., male (A–F); ditto, female (G). —— A, Labrum; B, mandibles; C, maxilla; D, labium; E, aedeagus in dorsal view; F, ditto, ventral view; G, 8th sternite and genital plate in posterior view.

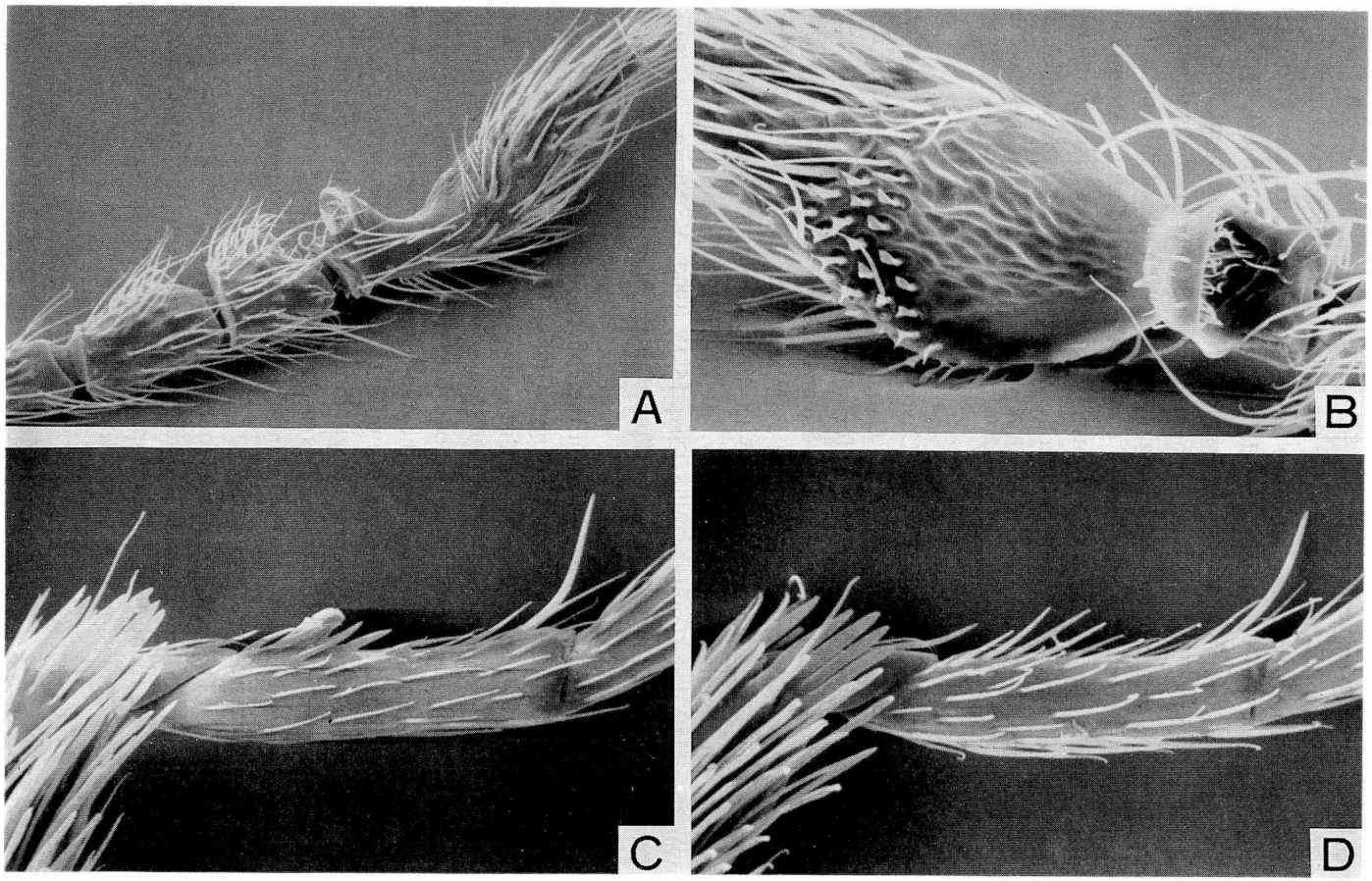

Fig. 3. *Batrisodellus callissimus* sp. nov., male (A–C); ditto, female (D). —— A, Eighth to 11th antennal segments in ventral view (×150); B, 11th antennal segment in internal view (×350); C–D, 2nd tarsal segment (×200).

parameres fused into a transverse plate.

Female. Similar to the male, except for the following features: eyes very small, each composed of about 10 facets; antennae more slender than in male, 9th to 11th segments with neither excavation nor denticle, 9th to 10th subcylindrical, 11th fusiform; metasternum weakly convex; fore tarsi slender, 2nd tarsal segment (Fig. 3 D) flat on ventral side, mid tibiae and hind trochanters without mucro or denticle; hind wings very short and membranous, each clinging on humeral angle of metanotum.

Female genitalia (Fig. 2 G) composed of two lobes of 9th abdominal sternite and genital plate; basal lobe of 9th sternite transverse in ventral view, membranous at median part, apical lobe wider than basal lobe, transverse and shortened medially, weakly sclerotized on both lateral parts; genital plate situated between the two lobes of 9th sternite, T-shaped in posterior view.

Distribution. Southeast China.

Type series. Holotype: male, Zhuyan Cave (=Liangyan Cave), Caoyangxiang, Guilin City, 11–II–1991, Y. NISHIKAWA, J. CAO, K. HAGAMI, Y. AWAKURA & F. WANG leg. Allotype: female, same data as for holotype. Paratypes: 7 males and 2 females, same data as for holotype; 3 males, 2 females, same locality as for holotype, 18–IX–1990, Y. NISHIKAWA, M. YOSHIDA & F. WANG leg.; 3 males, Yinyan Cave, Qixing Park, Guilin City, Guangxi, China, 15–IX–1990, Y. NISHIKAWA leg.; 1 female, Ludiyan Cave, Guangmingshan, Guilin City, 10–VI–1979, S. UÉNO leg.; 2 females, Taipingyan Cave, Jiazhai County, Guilin City, 16–IX–1990, Y. NISHIKAWA leg.; 1 female, Niubiyan Cave, Yangshuo County, Putaoxiang, Guilin City, 12–II–1991, Y. NISHIKAWA leg.

The holo- and allotypes are deposited in the collection of the Chinese Museum of Karst Geology, Institute of Karst Geology, Guilin, China.

Remarks. *Batrisodellus callissimus* is a distinctive species in this genus by having clearly asymmetrical male genitalia. This new species is easily distinguished from the Japanese species of this genus by the slender body, the large excavation and the internal spine of the eleventh antennal segment and the mid femur without spine in the male. However, the pronotum of this species is similar to that of *B. cerberus* TANABE et NAKANE in having a pair of rudimentary longitudinal carinae, and its elongate body and legs are similar to those of *B. coprea* TANABE et NAKANE. These similarities may be a parallelism caused by reduction of pronotal carinae and a convergence due to adaptation to cave environment, respectively.

Biological notes. This new species was found on the floor of limestone caves lying around Guilin City. Many individuals were captured from the undersides of stones, and a few were found from beneath spread straws on the cave floor (personal communication from Professor Y. NISHIKAWA).

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要　約

野村周平・王 福星：中国南部の好洞窟性 *Batrisodellus* 属 1 新種の記載．—— 従来，日本のみから知られていた *Batrisodellus* 属を初めて中華人民共和国南東部より記録し，廣西壮族自治区桂林市の石灰洞から採集された 1 新種 *B. callissimus* を記載した．本種は，日本産の 3 種とは，胴体や肢がいちじるしく細長いことと触角末端節の特徴的な内方突起により容易に区別できる．また，雄交尾器中央片がいちじるしく左右非対称である点でも，本属においてきわめて特異である．

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