

Contributions to the Knowledge of the Quediina  
(Coleoptera, Staphylinidae, Staphylinini) of China

Part 17. Genus *Bolitogyrus* CHEVROLAT, 1842. Section 1

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**Abstract** Three new species of the genus *Bolitogyrus* CHEVROLAT, 1842, *B. kitawakii* (Sichuan), *B. elegans* (Yunnan), and *B. pictus* (Yunnan) are described and illustrated. The status of *B. fukienensis* (SCHEERPELTZ, 1974) and some similar, apparently related species, is discussed.

This is the first contribution to the knowledge of the Chinese members of the genus *Bolitogyrus* CHEVROLAT, 1842, containing description of three new species, *B. kitawakii* from Sichuan, *B. elegans* from Yunnan, and *B. pictus* from Yunnan. The first new species is very similar and apparently closely related to *B. cyanipennis* ZHENG, 1988, also from Sichuan. In addition, comments are presented on *B. fukienensis* SCHEERPELTZ, 1974.

***Bolitogyrus fukienensis* (SCHEERPELTZ, 1974)**

*Cyrtothorax fukienensis* SCHEERPELTZ, 1974, 177, 183

**New record.** China: [Fujian]: Kuantun, 12–VI– and 10–X–46, Tschung-Sen, 2 ♀♀, in the collection of the Naturhistorisches Museum in Wien, Austria, and in the SMETANA collection, Ottawa, Canada.

**Type material.** SCHEERPELTZ (1974, 185) described the species from two specimens (male holotype and female allotype) from “Provinz Fukien in Südostchina, in Kuantun, Tschang-Sen”.

The SCHEERPELTZ collection in the Naturhistorisches Museum in Wien contains

the two specimens mentioned by SCHEERPELTZ, but they are both females. They are labelled as follows: Spec. No 1 (female): “♂”/“KUATUN, FUKIEN China 15-V-46 (TSUNG SEN.)”/“*Cyrtothorax fukienensis* Scheerp”/“ex coll. Scheerpeltz”/“HOLOTYPUS”/“TYPUS *Cyrtothorax fukienensis* Scheerpeltz”/“*fukienensis* Scheerpeltz”. Spec. No 2 (female): “♀”/all remaining labels match those of Spec. No 1, except label 5 reads “ALLOTYPUS”. The labels holotypus and allotypus were obviously attached subsequently. The specimen No 1, bearing the symbol “♂”, is hereby designated as the lectotype of *Bolitogyrus fukienensis*; the label “Lectotype *Cyrtothorax fukienensis* Scheerpeltz A. Smetana des. 2000” has been attached to it.

*Comments.* The two additional specimens are obviously of the same origin as the original material of this species, since they bear the same data, given by SCHEERPELTZ (*l.c.*) for the two specimens of the original series.

*Bolitogyrus fukienensis* belongs to a group of four species with a similar color pattern. These species are also quite similar to each other in other characters, and are difficult to distinguish except by the shape of the aedoeagus. These species are: *B. vulneratus* (FAUVEL, 1878), *B. fukienensis*, *B. rufomaculatus* (SHIBATA, 1979), and *B. taiwanensis* (HAYASHI, 1991). Unfortunately, only females of *Bolitogyrus fukienensis* are known at present. Also, the holotype of *B. vulneratus* from “Cochinchine/Tonkin” is a female, not a male as stated by FAUVEL (*l.c.*), and the remaining specimens under the name *B. vulneratus* in FAUVEL’s collection (not part of the original series) belong to at least two other species (SMETANA, 1988, 318). The two Taiwanese species are well described and illustrated in both sexes. There is a possibility that one of them is identical with *B. fukienensis*; however, this cannot be established with certainty until the males of *B. fukienensis* from the type locality become available for study.

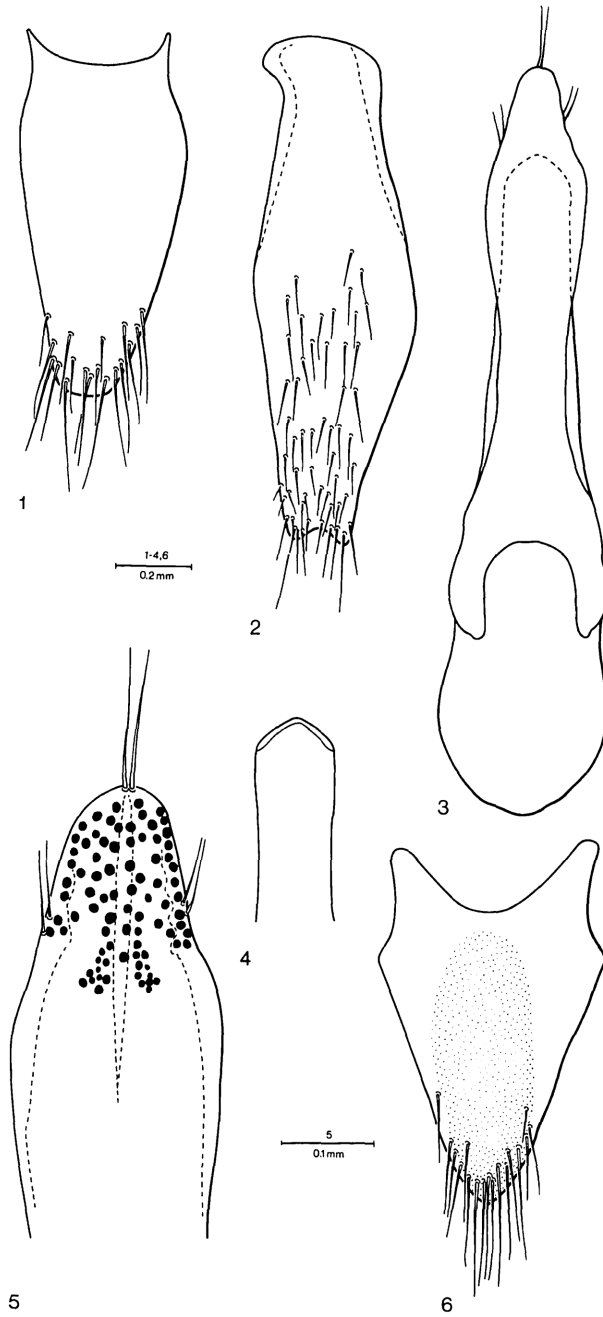
The locality Kuatun is at present known as Guadun village, Wuyi Shan, and lies in the northern part of Fujian.

### *Bolitogyrus kitawakii* sp. nov.

(Figs. 1–6)

*Description.* In all characters, including coloration, quite similar to *B. cyanipennis* but differing in the secondary sexual characters of both sexes, and in the shape of the aedoeagus in particular.

*Male.* First four segments of front tarsus distinctly, but in general only moderately dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Tergite 8 with apical margin evenly subarcuate. Sternite 8 subtruncate apically, without appreciable medioapical emargination, but subtriangular medioapical portion of sternite flattened and smooth. Genital segment with tergite 10 similar to that of *B. cyanipennis*, but in general smaller (Fig. 1); sternite 9 similar to that of *B. cyanipennis*, but somewhat shorter and slightly, sub-angulately widened at about middle (Fig. 2).



Figs. 1-6. *Bolitogyrus kitawakii*: 1, tergite 10 of male genital segment; 2, sternite 9 of male genital segment; 3, aedeagus, ventral view; 4, apical portion of median lobe; 5, apical portion of underside of paramere; 6, tergite 10 of female genital segment.

Aedoeagus (Figs. 3–5) similar to that of *B. cyanipennis*, but smaller; median lobe narrow, subparallel-sided, with angulate apex bearing a narrow lip. Paramere considerably exceeding apex of median lobe, narrower, not covering most of median lobe, more extensively attenuate in middle portion, arcuately widened around apical third and then narrowed into apical portion with obtusely truncate apex; with two fairly long, close, setae in middle of apex and with two similar setae much below apex at each lateral margin; underside of paramere with very numerous sensory peg setae, covering most of apical portion, extended posteriad along each lateral margin and forming two medial, more dense groups more or less diverging posteriad; internal sac with two very narrow, approximate sclerites.

**Female.** First four segments of front tarsus not appreciably different from those of male. Tergite 8 with apical margin subtruncate, without any medioapical emargination. Genital segment with tergite 10 of triangular shape, pigmented apically and mediobasally; with numerous setae at apex (Fig. 6).

Length 8.0–8.7 mm.

**Type material.** Holotype (male) and allotype (female): China: “CHINA NE Sichuan, Chengkou Xian, Daba Shan abv. Bashan, 1600–1900 m X–1996 W. Kitawaki leg.” In the collection of the National Science Museum (Natural History), Tokyo, Japan.

**Paratypes:** China: [Sichuan]: 1 ♂, 5 ♀♀, same data as holotype, 4 ♀♀ in the collection of the National Science Museum (Natural History), Tokyo; 1 ♂, 1 ♀ in the SMETANA collection, Ottawa, Canada; 1 ♂, two labels in Chinese reading “Sichuan Nanjiang Dajiangkou 1990–IX–22, collected by He Li”/“Nanjiang 1”/“sp.n. ♂”; 1 ♀, two labels in Chinese reading “Sichuan Nanjiang Dajiangkou 1990–IX–24, collected by Zhou Ping”/“Nanjiang 1”/“sp.n. ♀”. In the collection of the Sichuan Teachers College, Nanchong, China.

**Geographical distribution.** *Bolitogyrus kitawakii* is at present known from two localities, both in northeastern Sichuan.

**Bionomics.** Nothing is known about the habitat requirements of this species, though KITAWAKI’s specimens were found in baited traps set in a broadleaved forest.

**Recognition and comments.** *Bolitogyrus kitawakii* may only be confused with *B. cyanipennis* and may be distinguished only by slightly different sclerites of the male genital segment, and by the markedly different shape of the aedoeagus (Figs. 1–5). In the allotype and in one female paratype the pronotum is not pale red as in all other specimens, but brownish-piceous with dark coppery metallic sheen.

**Etymology.** Patronymic, the species was named in honor of the collector of most specimens of the original series, the late Wakô KITAWAKI, who unexpectedly passed away on May 12, 1997, at the age of 39, from fulminant hepatitis after a collecting trip to Sichuan.

*Bolitogyrus elegans* sp. nov.

(Figs. 7–12)

*Description.* Black with vague metallic hue; abdomen iridescent; maxillary and labial palpi brunneous; first five antennal segments testaceobrunneous to brunneous with blackened apex; labrum with margin yellowish; ventrobasal half to two-thirds of front femora, basal two-thirds of middle femora and basal half of posterior femora, and apices of all tibiae yellowish; all tarsi paler, most segments each darkened toward apex. Head rounded, distinctly wider than long (ratio 1.56), with very large and convex, bulging eyes, tempora considerably shorter than eyes from above (ratio 0.13); frons uneven, with more or less distinct, small middle pit, with moderately coarse and dense, unevenly distributed punctation, punctation on rest of head finer, in general sparser and unevenly spaced, fine punctures intermixed with somewhat coarser ones; three setiferous punctures along medial margin of eye between anterior and posterior frontal punctures; posterior frontal puncture separated from posteriomedial margin of eye by distance about equal to slightly smaller than diameter of puncture; no additional setiferous puncture between it and posterior margin of head; temporal puncture situated quite close to posterior margin of eye, almost touching it; surface of head without microsculpture. Antenna short, segment 1 slightly shorter than two following segments combined, segment 3 distinctly longer than segment 2 (ratio 1.30), segments 4 and 5 longer than wide, segment 5 slightly shorter and wider than segment 4, segment 6 about as long as wide, segments 7–10 gradually becoming appreciably wider than long, last segment slightly shorter than two preceding segments combined, markedly obliquely truncate laterally, therefore with rather sharp apex. Pronotum at widest point slightly wider than head (ratio 1.12), slightly wider than long (ratio 1.22), markedly transversely convex, broadly rounded basally, moderately narrowed anteriorly, posteriolateral portions slightly, inconspicuously explanate; dorsal rows each with two fine punctures, one close to anterior margin and one situated just behind middle of pronotum; large lateral puncture separated from lateral pronotal margin by distance about equal to diameter of puncture; anteriolateral corners of pronotum with rather dense, moderately coarse punctures, elevated posteriolateral portions of pronotum with similar but sparser punctation; disc of pronotum with scattered very fine punctures intermixed with somewhat coarser punctures; surface of pronotum without microsculpture. Scutellum fairly large, without microsculpture, with moderately coarse punctures on middle portion. Elytra at base slightly narrower than pronotum at widest point (ratio 0.89), at suture slightly (ratio 1.19), at sides markedly (ratio 1.33) longer than pronotum at midline, each with indefinite, oblique impression just behind middle; punctation coarse, irregularly spaced, becoming distinctly finer toward posterior margin, narrow area along posterior margin with only some fine punctures or almost impunctate; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) with distinct, whitish apical seam of palisade fringe; bases of visible tergites 1–3 markedly transversely impressed, with variably dense, moderately coarse

punctuation in impressions, discs impunctate; bases of visible tergites 4 and 5 with finer and usually less dense punctuation, discs with very fine and sparse punctuation becoming even sparser toward apices, or discs almost impunctate; surface with exceedingly dense and fine microsculpture of transverse striae.

**Male.** First four segments of front tarsus distinctly dilated, sub-bilobed, each covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 distinctly narrower than preceding segments. Apical margin of tergite 8 simple, widely, inconspicuously sinuate. Sternite 7 vaguely concave medioapically; sternite 8 with shallow, inconspicuous, arcuate medioapical emargination, fairly wide triangular area before emargination flattened and smooth. Genital segment with tergite 10 rather long, with arcuate apex, with numerous setae at and near apical margin (Fig. 7); sternite 9 elongate, with rudimentary, undifferentiated basal portion, deeply emarginate apically, with vaguely differentiated apical setae on each side of apical emargination (Fig. 8). Aedoeagus (Figs. 9–11) with median lobe narrowed into fairly sharp apex, with distinct medioapical carina on face adjacent to paramere. Paramere attenuate in middle portion, apical portion somewhat lanceolate, with apex distinctly exceeding apex of median lobe; two fine setae at apex, two similar setae at each lateral margin far below apex; sensory peg setae on underside of paramere quite numerous, covering most of apical portion except for narrow medial area, each forming basal extension directed obliquely posterolaterad; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus not appreciably different from those of male. Tergite 8 with apex simple, subtruncate. Genital segment with tergite 10 pigmented medially, anteriorly somewhat suddenly narrowed into rather sharp apex, with long setae on apical portion (Fig. 12).

Length 8.1–9.2 mm.

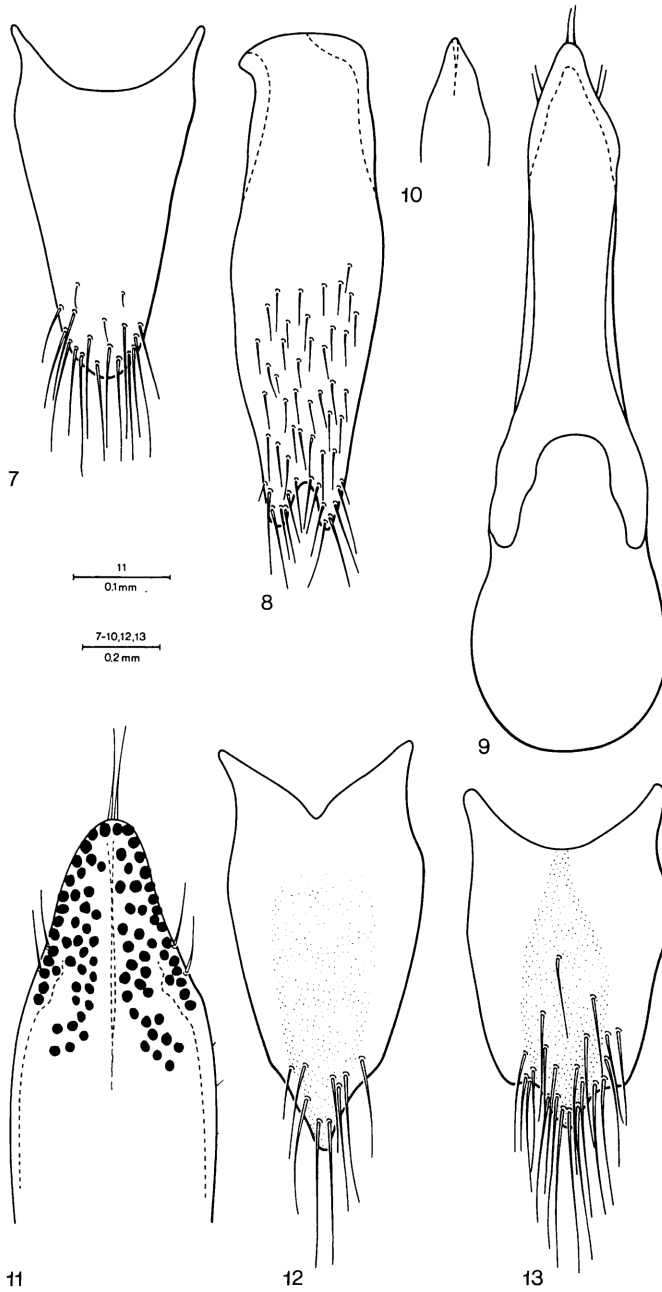
*Type material.* Holotype (male): China: “China N-YUNNAN Yulongshan mts. 2500–2800 m GANHAIZI/LIJIANG road lgt. D. Král 24–26/7'90”. In the collection of the Naturhistorisches Museum in Basel, Switzerland.

Allotype (female): [Yunnan]: “CHINA, YUNNAN, 2,5–3,8 km 27,20N; 100,11E HABASHAN mts. SE slope. 3–.6. 6. 1995 lgt. S. BECVAR”. In the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Yunnan]: 1 ♀, same data as holotype. In the collection of the Naturhistorisches Museum in Basel; 100 km W Baoshan, Gaoligongshan Nat. Res., 14.–21.6. 1993, J. Jendek & O. Sausa leg., 1 ♀, in the Naturhistorisches Museum, Wien, Austria.

*Bionomics.* Nothing is known about the collection circumstances and habitat requirements of this species.

*Recognition.* *Bolitogyrus elegans* is the only Chinese species of the genus with uniformly black body, with the anterolateral corners of the pronotum with rather dense and moderately coarse punctuation, and with the dorsal rows of the pronotum each with two fine punctures. It cannot be confused with any other species of the genus known to occur in China at present.



Figs. 7-13. — 7-12. *Bolitogyrus elegans*: 7, tergite 10 of male genital segment; 8, sternite 9 of male genital segment; 9, aedoeagus, ventral view; 10, apical portion of median lobe; 11, apical portion of underside of paramere; 12, tergite 10 of female genital segment. — 13. *Bolitogyrus pictus*: tergite 10 of female genital segment.

*Etymology.* The specific epithet is the Latin adjective *elegans*, *-ntis* (tasteful, graceful). It refers to the appearance of the species.

***Bolitogyrus pictus* sp. nov.**

(Fig. 13)

*Description.* Entirely testaceorufous (including underside); head black; elytra rufotestaceous, each with medial half of base, relatively wide strip along suture (suture itself narrowly rufotestaceous, rufotestaceous strip widened toward posterior margin) and posterior half, except for small rufotestaceous posteriolateral corners, black; abdomen iridescent, with most of fourth visible segment and segments 5 and 6 piceous-black; maxillary and labial palpi testaceous, antennae with five basal segments testaceous, remaining segments piceous, legs testaceous. Head rounded, distinctly wider than long (ratio 1.44), with very large and convex, bulging eyes, tempora quite short, considerably shorter than eyes from above (ratio 0.16); frons slightly uneven, with a V-shaped elevation and medial round impression posteriorly, disc of head with scattered, very fine punctures becoming more numerous and slightly coarser near eyes; three or four setiferous punctures along medial margin of eye between anterior and posterior frontal punctures; posterior frontal puncture separated from posteromedial margin of eye by distance about equal to diameter of puncture; one additional setiferous puncture between it and posterior margin of head, situated quite close to posterior frontal puncture; temporal puncture situated quite close to posterior margin of eye, almost touching it; surface of head without microsculpture. Antenna short, segment 1 slightly shorter than two following segments combined, segment 3 distinctly longer than segment 2 (ratio 1.38), segments 4 and 5 longer than wide, segment 5 slightly shorter and wider than segment 4, segment 6 about as long as wide, segments 7–10 gradually becoming appreciably wider than long, last segment slightly shorter than two preceding segments combined, obliquely truncate laterally. Pronotum at widest point about as wide as head, vaguely wider than long (ratio 1.10), markedly transversely convex, broadly rounded basally, moderately narrowed anteriorly, posterolateral and basal margins markedly, abruptly, narrowly explanate; no dorsal rows of punctures; large lateral puncture almost touching lateral pronotal margin; anterolateral corners of pronotum with numerous, very fine and superficial punctures; disc of pronotum impunctate; surface of pronotum without microsculpture. Scutellum moderately large, without microsculpture, with several moderately coarse punctures on middle portion. Elytra at base vaguely narrower than pronotum at widest point (ratio 0.91), at suture about as long as, at sides slightly longer (ratio 1.12) than pronotum at midline, each with vaguely elevated, central impunctate area just before middle; punctation coarse, irregularly spaced, becoming distinctly finer toward posterior margin, narrow area along posterior margin almost impunctate; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) with distinct, whitish apical seam of palisade fringe; bases of visible tergites 1–3 markedly transversely impressed, with



moderately coarse punctation in impressions, discs impunctate; lateral portions of visible tergite 4 sparsely, finely punctate; visible tergites 5 and 6 sparsely, finely punctate; surface with exceedingly dense and fine microsculpture of transverse striae.

Male unknown.

Female. First four segments of front tarsus moderately dilated, sub-bilobed, each covered with modified pale setae ventrally; segment 2 vaguely narrower than apex of tibia (ratio 0.92); segment 4 distinctly narrower than preceding segments. Apical margin of tergite 8 with middle portion slightly extended medioapically and with small, narrow and deep notch at middle. Genital segment with tergite 10 pigmented medially, wide, anteriorly suddenly narrowed into short apical portion, with numerous long setae on and in front of apical portion (Fig. 13).

Length 8.0 mm.

*Type material.* Holotype (female): China: (transcribed from Cyrillics): “Yun’an’. okr. Puzenya 900 m 28-III-1957 D. Panphilov”/“Yunnan near Puwen 900 1957-III-28 D. Bonfilofe” [in Chinese]. In the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

*Bionomics.* Nothing is known about the collecting circumstances and habitat requirements of this species.

*Recognition and comments.* *Bolitogyrus pictus* may be easily recognized by its coloration alone. It somewhat resembles *B. fukienensis*, but differs, in addition to some morphological characters, by the testaceous pronotum and first three visible abdominal tergites.

The holotype is missing the entire left antenna, the last segment of middle right tarsus, and the entire hind right tarsus.

*Etymology.* The specific epithet is the Latin adjective *pictus*, -a, -um (painted). It refers to the coloration of the species.

### Acknowledgments

The authors thank Dr. M. BRANCUCCI, Naturhistorisches Museum in Basel, Switzerland; Dr. H. SCHILHAMMER, Naturhistorisches Museum, Wien, Austria; Dr. A. SOLODOVNIKOV, Zoological Institute of the Russian Academy of Sciences, St. Petersburg, and Dr. Shun-Ichi UÉNO, National Science Museum, Tokyo, Japan, for providing them with the material this paper is dealing with. Dr. SCHILHAMMER also made the type material of *B. fukienensis* available for study. Dr. D. E. BRIGHT and Mr. A. DAVIES, Agriculture and Agri-Food Canada, Research Branch, Ottawa, commented on the original draft of the manuscript. Mr. Go SATO of the same establishment carefully finished the line drawings.

### 要 約

A. SMETANA: 中国産ツヤムネハネカクシ亜族に関する知見. 17. *Bolitogyrus* 属の1. — 中国

南西部の四川省と云南省から *Bolitogyrus* 属の3新種を記載し, *B. kitawakii*, *B. elegans* および *B. pictus* の新名を与えた。また, 福建省から記載された *B. fukienensis* (SCHEERPELTZ, 1974) を基準標本に基づいて検討し, この種と近縁種に関する私見を述べた。

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