

Descriptions of the first *Thyreocephalus* and *Daolus* from Taiwan¹ (Insecta: Coleoptera: Staphylinidae)

A. Bordoni*

Abstract

Thyreocephalus formosanus sp.n. and *Daolus shibatai* sp.n. from Taiwan are described. These are the first species of these genera surely known from this island.

Zusammenfassung

Thyreocephalus formosanus sp.n. und *Daolus shibatai* sp.n. werden von Taiwan beschrieben. Diese stellen die ersten gesicherten Nachweise der Gattungen für diese Insel dar.

Key words: Coleoptera, Staphylinidae, *Thyreocephalus*, *Daolus*, new species, Taiwan.

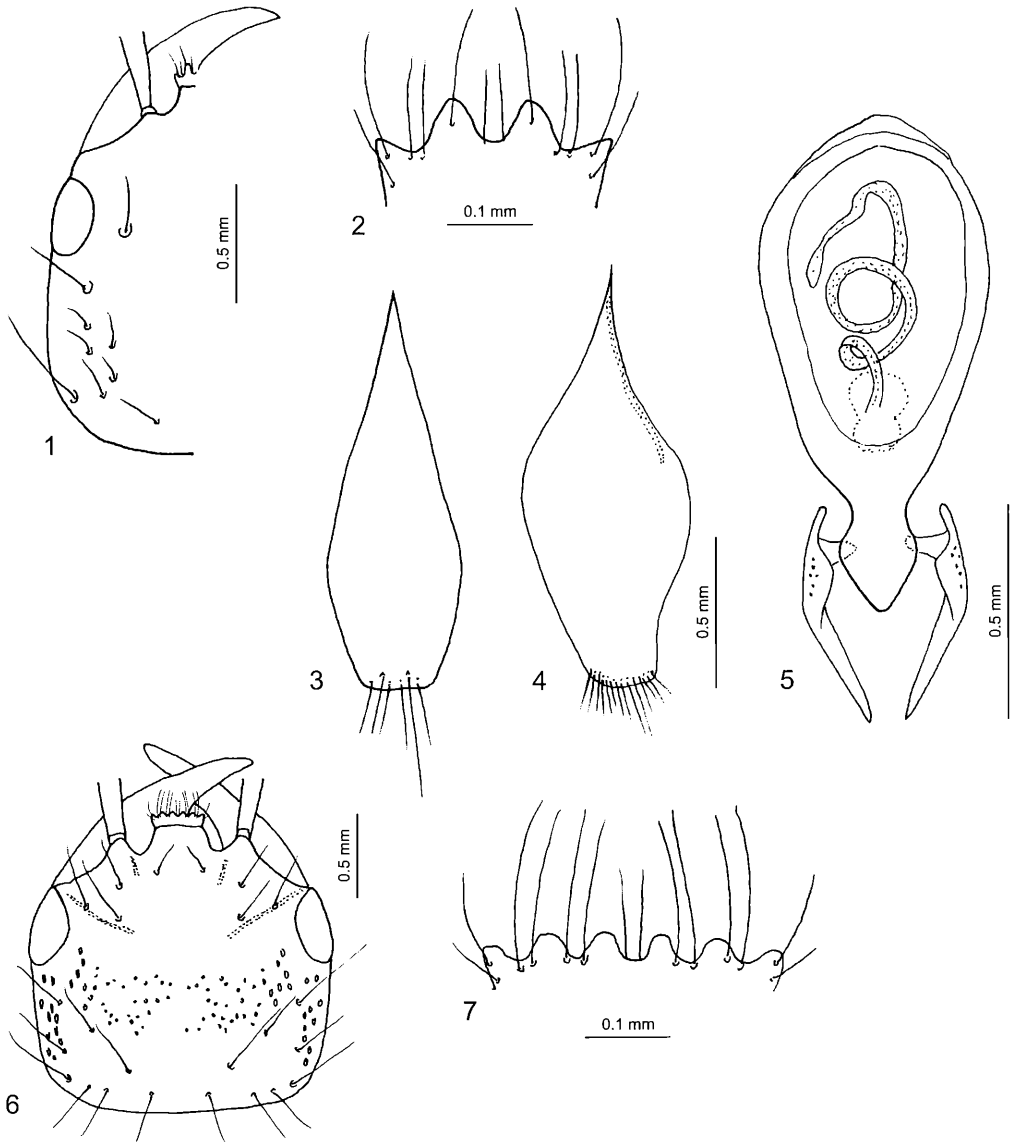
Introduction

The genus *Thyreocephalus* GUÉRIN DE MÉNEVILLE, 1844 is widely distributed in the Oriental Region (BORDONI 2002), Australia (BORDONI 2005), New Guinea (BORDONI in prep.), Africa (BORDONI in prep.) and in the Neotropical Region. Two species are recorded from North America (SMETANA 1982), three species have been introduced to New Zealand (BORDONI 2005a). In the Palaearctic Region the genus occurs only in the Himalaya and in the southern portion of China: Yunnan, Sichuan, Guangxi, Hainan, Hong Kong, Hubei, Shanghai (the latter being the eastern distribution limit of the genus in the Palaearctic Region). Species known from China are: *T. hongkongoensis* (REDTENBACHER, 1867), *T. purpuripennis* (BERNHAEUER, 1904), *T. tonkinensis* BORDONI, 2002, *T. feae* (FAUVEL, 1895) (BORDONI 2003), *T. gestroi* (FAUVEL, 1895) (BORDONI 2006), *T. shimianicus* BORDONI, 2003, *T. yunnanus* BORDONI, 2007.

Until now, no species of this genus was known from Taiwan, but a citation concerning this island is present in literature: SHIBATA (1973) recorded *Indoscitalinus rudis* (EPPELSHEIM, 1895) from Nantou Hsien, citing it again under the same name some years later (SHIBATA 1986). However, *Indoscitalinus* is a synonym of *Thyreocephalus*. In addition, Eppelsheim's name (described as *Xantholinus rudis*) is preoccupied by *X. rudis* SHARP, 1885 from Guatemala, and was renamed in *X. eppelsheimi* by BERNHAEUER & SCHUBERT (1914) (cfr. BORDONI 2002). The species was recently referred to the new genus *Daolus* BORDONI, 2004, based on the presence of the superior line of the pronotal hypomera not joining the inferior line, mandibles without lateral groove, narrow and

¹ 198th contribution to the knowledge of the Staphylinidae.

* Arnaldo Bordoni, Museo Zoologico "La Specola", via Romana 17, I-50125 Firenze, Italy. – arnaldo.bordoni@libero.it



Figs. 1–7: *Daolus shibatai* sp.n., head (right half omitted) (1), labrum (2), tergite (3) and sternite (4) of male genital segment, aedeagus (5); *Thyreocephalus formosanus* sp.n., head (6), labrum (7).

protruding labrum, almost obsolete frontal and ocular grooves, gular sutures contiguous for much of their length, divided antesternal plate, metatibiae with a supplementary ctenidium overlapping the former one, prosternum with two median overlapping protrusions (BORDONI 2008). *Thyreocephalus eppelsheimi* has been known from Meghalaya (Northeast India), central and oriental Nepal, Sikkim and Bhutan (BORDONI 2002) and in fact occurs only in the eastern part of the Himalayan range. The specimens referred to by

SHIBATA (1973, 1986) as *Indoscitalinus rudis* in fact represent a new species which is described below.

In addition, the discovery of a new species of a true *Thyrecephalus* from Taiwan is very interesting; it is the first representative of this genus surely known from the island and one of the eastern-most in the Palaearctic Region.

Daolus shibatai sp.n.

Type series. Holotype ♂: **Taiwan**, Koantauchi, Nantou Hsien, 650 m, Y Shibata 25.VII.1973 (coll. Shibata, Tokyo); paratypes: same data as holotype, 1 ♂ (author's collection); same data, Y Shibata 27.VII.1973, 1 ♂; near Lushan, Nantou Hsien, 1200 m, Y Shibata 27.VII.1977, 1 ♂; 28.VII.1977, 1 ♀ (coll. Shibata, Tokyo); Lala Shan, Taoyuan Hsien, S. Tsuyuki 30.IV.1979, 1 ♂ (author's collection).

Description: Body 13 mm long; length from anterior margin of head to posterior margin of elytra: 6.7 mm. Head and pronotum brown amarant more or less blackish, with testaceous elytra, abdomen, antennae and legs. Head small, longer than wide, with subparallel sides. Eyes small, as long as antennomeres 2–3 combined. Labrum as in Fig. 2. Surface of head shiny, with superficial frontal grooves and distinct ocular grooves. Punctuation as in Fig. 1. Pronotum longer and wider than head, with slightly sinuate sides and widely rounded anterior angles. Surface shiny, with a big puncture near anterior angles, and some punctures along lateral margins. Elytra subrectangular, narrower and as long as the pronotum, with distinct humeri. Surface with numerous series of deep and dense punctures, except for a narrow lateral impunctate strip. Scutellum large, blackish-brown, with numerous fine punctures. Abdomen with fine and dense transverse microstriae, with coarse and deep, dense punctation.

Tergite and sternite of male genital segment as in Figs. 3–4. Aedeagus (Fig. 5) small (1.4 mm long), narrow, with symmetrical and long parameres; internal sac ribbon-like, covered in the median and proximal parts by very fine scales.

Distribution: Taiwan: Taoyuan Hsien in the north-western part, and Nantou Nsien in the central part of the island. This distribution suggests that the species probably occurs all over Taiwan but is not common.

Etymology: Dedicated to Yasutoshi Shibata, well known Japanese specialist in Staphylinidae.

Notes: *Daolus shibatai* is the first record of this genus from Taiwan. This record confirms the assumption that *Daolus* is probably a Palaearctic genus with *D. shibatai* being the eastern-most species of that genus in this area.

Thyrecephalus formosanus sp.n.

Holotypus ♀: Taiwan, Kosempo, Sauter (Naturhistorisches Museum, Wien).

Description: Body 12 mm long; length from anterior margin of head to posterior margin of elytra: 7 mm. Head black, pronotum brown amarant, elytra testaceous reddish, abdomen brown black reddish; antennae with segments 1–3 brown black, remaining segments testaceous reddish.

Body flat. Head (Fig. 6) subquadrangular, with feebly rounded sides and widely rounded, almost obsolete posterior angles. Eyes medium sized, scarcely protruding. Labrum as in Fig. 7. Surface of head shiny, with micropunctuation and fine and dense punctation along a median longitudinal strip; some bigger setiferous punctures are present: one between frontal grooves and eyes, one at end of same grooves, one very large between previous point and eyes, one near inner anterior margin of eyes, near a groove along eyes, two under eyes, two near posterior angles of head; lateral surface of head covered by fine, deep and dense punctation. Pronotum narrow, narrower and about as long as head, dilated anteriorly, with well rounded anterior angles, sinuate sides, with shiny surface, with micropunctuation, and with a not particularly large puncture near anterior angles. Elytra large, much longer and larger than pronotum, with distinct humeri; surface shiny, with very dense punctation of medium-sized punctures, and with yellow, very distinct pubescence, epipleura also covered by dense but finer punctation, with shorter pubescence. Abdomen shiny, with very fine and superficial, transverse microstriae and with dense lateral punctation and long decumbent pubescence.

Male unknown.

Distribution: Known only from the type locality.

Etymology: The specific epithet is based on the former name of the island of Taiwan (Formosa).

Notes: By the flat body, colouration and punctation, this species differs from all taxa of the Palaearctic and Oriental Region, *T. purpuripennis* inclusive.

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References

- BERNHAEUER M. & SCHUBERT K., 1914: Staphylinidae IV (pars 57). – In: Junk W. & Schenkling S. (eds.): Coleopterorum Catalogus, vol. 5. Staphylinidae, Berlin, Junk: 289–408.
- BORDONI A., 2002: Xantholinini della Regione Orientale (Coleoptera: Staphylinidae). Classificazione, filogenesi e revisione tassonomica. – Memorie del Museo regionale di Scienze naturali, Torino, 33, 998 pp.
- BORDONI A., 2003: Contributo alla conoscenza degli Xantholinini della Cina. II (Coleoptera, Staphylinidae). – Fragmenta entomologica, Roma, 34, 2: 255–292.
- BORDONI A., 2004: Nuovi dati per la conoscenza degli Xantholinini della Regione Orientale. V *Daolus hromadkai* gen. n., sp. n. del Nepal e *Thyrecephalus perakensis* n. sp. della Malesia (Coleoptera Staphylinidae). – Entomologica, Bari, 38: 83–89.
- BORDONI A., 2005: Revision of the Xantholinini of Australia (Coleoptera: Staphylinidae). – Monografie del Museo regionale di Scienze naturali, Torino, 42: 435–614.
- BORDONI A., 2005a: Revisione degli Xantholinini della Nuova Zelanda (Coleoptera, Staphylinidae). – Bollettino del Museo regionale di Scienze naturali, Torino, 22, 2: 329–442.

- BORDONI A., 2006: Contributo alla conoscenza degli Xantholinini della Cina. VI. *Zeteotomus dilatipennis* (Kirshenblat, 1948) nello Shaanxi e descrizione di *Erymus dalianus* n. sp. dello Yunnan (Coleoptera: Staphylinidae). – *Animma.x*, 12: 16–23.
- BORDONI A., 2007: Contributo alla conoscenza degli Xantholinini della Cina. XI. Nuove specie dello Yunnan settentrionale e di Guizhou, Hubei e Anhui (Coleoptera Staphylinidae). – *Bollettino della Società entomologica italiana*, 139, 1: 7–18.
- BORDONI A., 2008: Sulla validità del genere *Daolus* Bordoni, 2004 e sulla sinonimia tra *Thyrecephalus eppelsheimi* Bernhauer & Schubert, 1914 e *Daolus hromadkai* Bordoni, 2004 (Coleoptera, Staphylinidae, Xantholinini). – *Onychium*, Firenze, 6: 60–61.
- SHIBATA Y., 1973: The subfamily Xantholininae from Taiwan, with descriptions of three new species (Coleoptera: Staphylinidae). – *The Transactions of the Shikoku Entomological Society*, 11, 4: 121–132.
- SHIBATA Y., 1986: A list of genera and species new to Taiwan and new data on distribution of the Staphylinidae discovered from Taiwan since 1973. – *Annual Bulletin of the Nichidai Sanko*, Tokyo, 24: 109–128.
- SMETANA A., 1982: Revision of the subfamily Xantholininae of America north of Mexico (Coleoptera: Staphylinidae). – *Memoirs of the Entomological Society of Canada*, 120, 389.