

## Review of the Genus *Isoclerus* LEWIS, 1892 (Coleoptera, Thanerocleridae) from Japan and Taiwan

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**Abstract** Japanese and Taiwanese species of the genus *Isoclerus* LEWIS, 1892 are reviewed with three species, *Isoclerus (Isoclerus) pictus* LEWIS, 1892, *I. (I.) parallelus* (LEWIS, 1892), and *I. (I.) disinlei* KOLIBÁČ, 1992. Lectotype is designated for *Isoclerus pictus* LEWIS, 1892. *Isoclerus (I.) disinlei* is newly recorded from Honshu, Shikoku, Kyushu, Amami-Ōshima, Tokunoshima, and Okinawa-jima, Japan. A key and a distributional map for the species from Japan and Taiwan are also provided.

### Introduction

The genus *Isoclerus* LEWIS, 1892 is included in the tribe Isoclerini KOLIBÁČ, 1992 (Thanerocleridae CHAPIN, 1924: Thaneroclerinae CHAPIN, 1924) (KOLIBÁČ, 2012; GIMMEL *et al.*, 2019), and represented by 13 species distributed throughout the Palearctic and Oriental Regions, Australia, the United States, and Brazil (KOLIBÁČ, 1992, 1998; MELNIK, 2005). The three subgenera, *Ababa* CASEY, 1897, *Isoclerus* LEWIS, 1892, and *Parathaneroclerus* PIC, 1936, are currently classified under the genus (KOLIBÁČ, 1998). From Japan and Taiwan, three *Isoclerus* species, *I. (I.) pictus* LEWIS, 1892, *I. (I.) parallelus* (LEWIS, 1892), and *I. (I.) disinlei* KOLIBÁČ, 1992, have been known to date.

Of those Japanese members, the type species of the genus *Isoclerus*, *I. (I.) pictus*, was originally described including two color forms (LEWIS, 1892), which had been recognized to be conspecific since the original description. After close examination of the syntypes of this species, however, I concluded that the type material is actually an assemblage of *I. (I.) pictus* and *I. (I.) disinlei*.

In order to stabilize the taxonomic concept of the species and the genus, I review the genus from Japan and Taiwan hereinafter. In this review, I designate the lectotype for *Isoclerus pictus* LEWIS, 1892, and provide a key and a distributional map for Japanese and Taiwanese species.

### Material and Methods

The material used in this study are preserved in the following institutions and private collections: BMNH — Natural History Museum, London, UK; EUMJ — Ehime University Museum, Matsuyama, Japan; SEHU — Hokkaido University Museum, Sapporo, Japan; AKC — private collection of Akira KASHIZAKI, Hokkaido, Japan; KAC — private collection of Katsumi AKITA, Mie, Japan; KSC — private collection of Kaoru SAKAI, Tokyo, Japan; SIC — private collection of Shōichi IMASAKA, Fukuoka, Japan; SSC — private collection of Shigemi SASAKI, Oita, Japan; TOC — private collection of Toshihiro OZAKI, Akita, Japan; YHC — private collection of Yukihiro HIRANO, Kanagawa, Japan; YTC — private collection of Yasutaka TAMAKI, Okinawa, Japan.

The original spelling of label data for the type series is indicated by double quotation mark (“ ”), of which line brakes are indicated by a slash (/). Additional notes are given in round parentheses. The color forms of *Isoclerus (Isoclerus) disinlei* indicates as F1 to F6 (see description for the detail features).

The abbreviations used in this paper are as follows: BL — body length (PL + EL); EL — elytral length (from basal margin to apex in suture); EW — maximum conjoint width of elytra; PL — maximum length of pronotum; PW — maximum width of pronotum.

The observational method of terminal parts follows MURAKAMI and YAMASAKO (2012). Habitus were taken with a microscopy camera system (Nikon DS-Fi1-L2) attached to a stereomicroscope (Leica S8APO). Measurements were done using a micrometer eyepiece with a scale.

## Taxonomy

### *Isoclerus (Isoclerus) paralleus* (LEWIS, 1892)

[Japanese name: Hoso-sabi-kakkô-mushi]

(Figs. 1, 4 & 37)

*Lycotosoma paralleum* LEWIS, 1892: 192; MIYATAKE, 1985: 153.

*Isoclerus (Lycotosoma) paralleus*: KOLIBÁČ, 1992: 321, figs. 38–40 & 81.

*Isoclerus (Isoclerus) paralleus*: KOLIBÁČ, 1998: 952; SAITÔ, 2015: 42.

*Thaneroclerus parvum* SCHENKLING, 1916: 222.

*Lycotosoma parvum* var. *parvulum* CORPORAAL, 1939: 353, fig. 8.

*Ababa longipennis* PIC, 1947: 6.

*Type material.* Syntype: 1 ex. (BMNH), “Nagasaki. / 13.II.-21.IV.81.”, “*Lycotosoma / paralleum / Type. Lewis*” (by handwriting), “Japan / G. Lewis. / 1910–320.”, “Type”.

*Diagnosis.* This species is easily distinguished from other Japanese and Taiwanese congeners by the unicolored body and parallel-sided elytra.

*Type locality.* Suwa-jinja, Nagasaki-shi, Nagasaki Pref., Japan.

*Distribution.* Vietnam; Indonesia: Sumatra (CORPORAAL, 1939) and Java (SCHENKLING, 1916; KOLIBÁČ, 1992); China: Sichuan (CORPORAAL, 1939); Japan: Osaka (SAITÔ, 2015) and Nagasaki (Fig. 37).

*Remarks.* This species was described based on two specimens (LEWIS, 1892).

### *Isoclerus (Isoclerus) pictus* LEWIS, 1892

[Japanese name: Kimadara-chibi-kakkô-mushi]

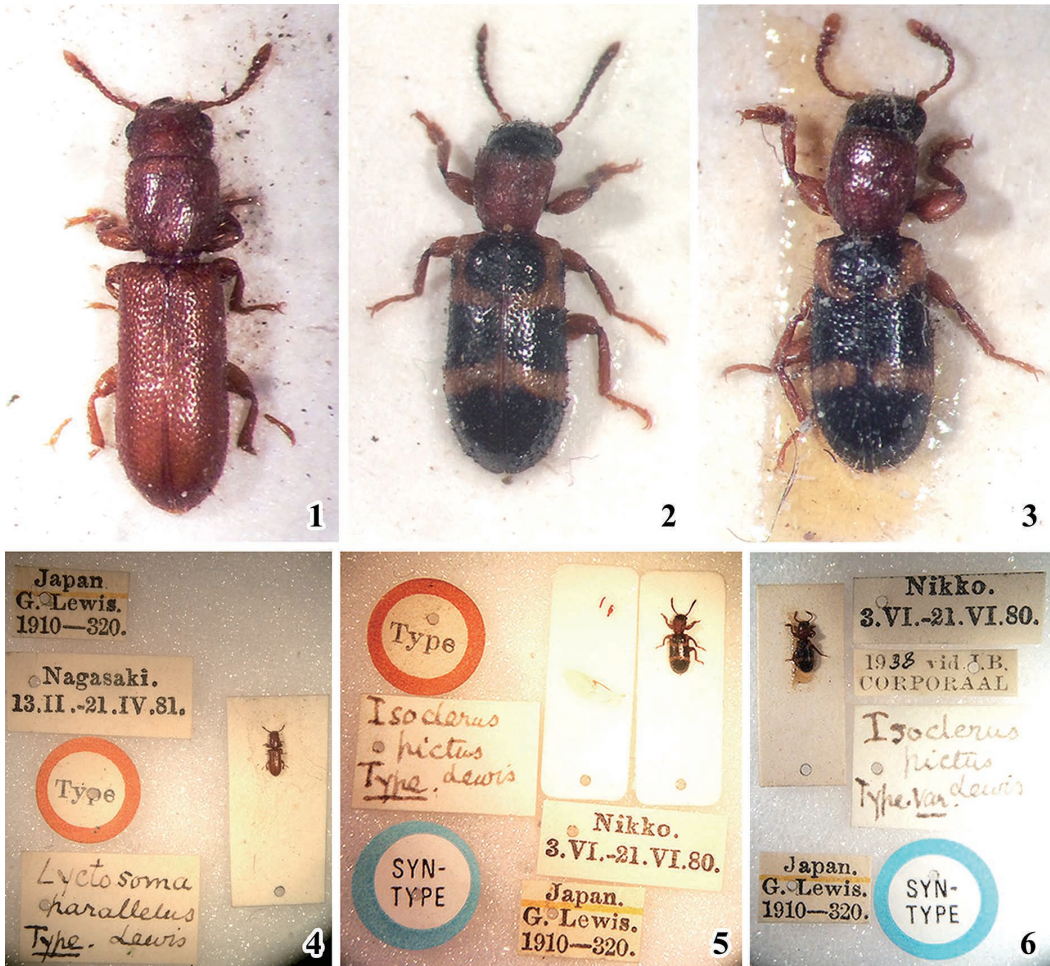
(Figs. 2, 5, 7, 14–20, 28–30, 34, 35 & 37)

*Isoclerus pictus* LEWIS, 1892: 191; CORPORAAL, 1939: 354, figs. 12 & 13.

*Isoclerus (Isoclerus) pictus*: KOLIBÁČ, 1992: 323, figs. 47–49 & 78.

*Type series.* Lectotype (designated here): 1 ex. (BMNH), “Nikko. / 3. VI.-21. VI. 80.”, “Japan. / G / Lewis. / 1910-320.”, “*Isoclerus / pictus / Lewis / Type.*” (by handwriting), “SYN- / TYPE”, “TYPE”.

*Specimens examined.* Japan. [Hokkaido] 1 ex. (YHC), Tomura-ushi camping area, Shintoku-chô, Kamikawa-gun, 25.IX.2014, Y. HIRANO leg.; 1 ex. (YHC), Tokoro-chô, Kitami-shi, 15.VI.2005, Y. HIRANO leg.; 2 ♂♂ (AKC), Horoman, Samani-chô, 23–24.IX.2007, A. KASHIZAKI leg.; 1 ♂ (AKC), Onishikatashiro, Obira-chô, Rumoi-gun, 8.VIII.2015, A. KASHIZAKI leg.; 1 ♀ (AKC), Kannonsawa, Mt. Toishiyama, Minami-ku, Sapporo-shi, 12.V.2007, A. KASHIZAKI leg.; 1 ♀ (AKC), Mt. Hakkenzan, Minami-ku, Sapporo-shi, 16.IX.2006, A. KASHIZAKI leg. [Aomori] 1 ♀ (TOC), Washinuma-rindô, Towadako-machi, 5.XI.2000, T. OZAKI leg. [Tochigi] 1 ♂, 1 ♀ (KAC), Yumoto, Okunikkô, Nikkô-shi,



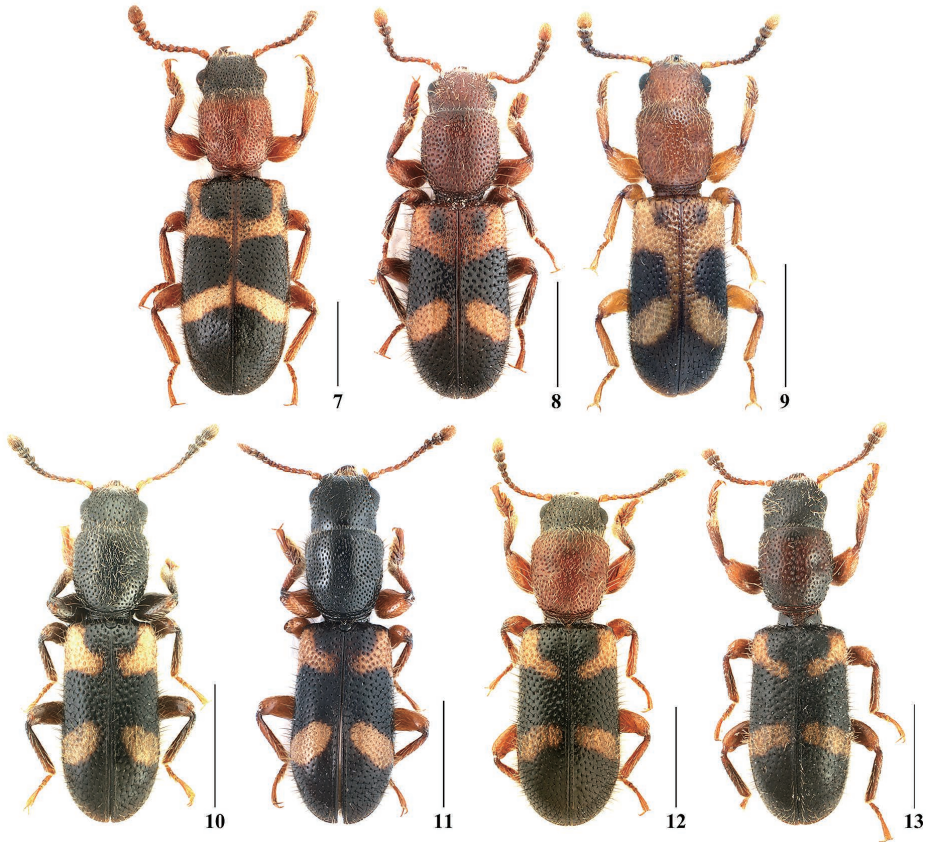
Figs. 1–6. Habitus and labels of type specimens deposited in BMNH. — 1 & 4, Syntype of *Lyctosoma parallelus* LEWIS, 1892; 2 & 5, lectotype of *Isoclerus pictus* LEWIS, 1892; 3 & 6, paralectotype of *Isoclerus pictus* LEWIS, 1892. — 1–3, Habitus; 4–6, labels. Photos taken by Beulah GARNER.

13.IX.2008, K. MASUMOTO leg. [Kanagawa] 1 ♀ (EUMJ), Dôdaira, Mt. Tanzawa, 16.VII.1995, Y. NOTSU leg. [Yamanashi] 1 ♀ (KSC), Masutomi, Sudama-chô, 25.V.2003, W. SUZUKI leg.

*Diagnosis.* This species is similar to *I. (I.) disinlei*, but distinguishable by the following characteristics: antennomere VII wider than VI and VIII; pronotum with three shallow depressions; elytral pale yellow basal marking and apical bands touching on suture, separating black areas; metaventrite with fine punctures on middle; phallus with a medial sclerite plate at apical 1/2; vagina of reproductive organs with cruciform sclerite.

*Redescription.* Male (Fig. 7). Head black; antennae, pronotum, and legs reddish brown. Elytra black, consecutively with pale yellow marking from base to apical 1/3; pale yellow apical bands divergent, extending basally, connecting with basal marking via elytral suture.

Head including eyes as wide as pronotum, evenly punctured in dorsal view. Eyes small, coarsely faceted. Terminal maxillary palpomere securiform; apical margin of labrum emarginate in middle. An-



Figs. 7–13. Habitus of *Isoclerus (Isoclerus)* spp. — 7, *I. (I.) pictus*; 8–13, *I. (I.) disinlei* (8, F1; 9, F2; 10, F3; 11, F4; 12, F5; 13, F6, see description for the detail features of F1 to F6). Scale bars: 1.0 mm.

tennae (Fig. 14) capitate; antennomere VII wider than VI and VIII.

Pronotum gently arcuate on lateral sides, widest at middle, evenly and finely with setiferous punctures, with three shallow depressions; side margins slightly crenate.

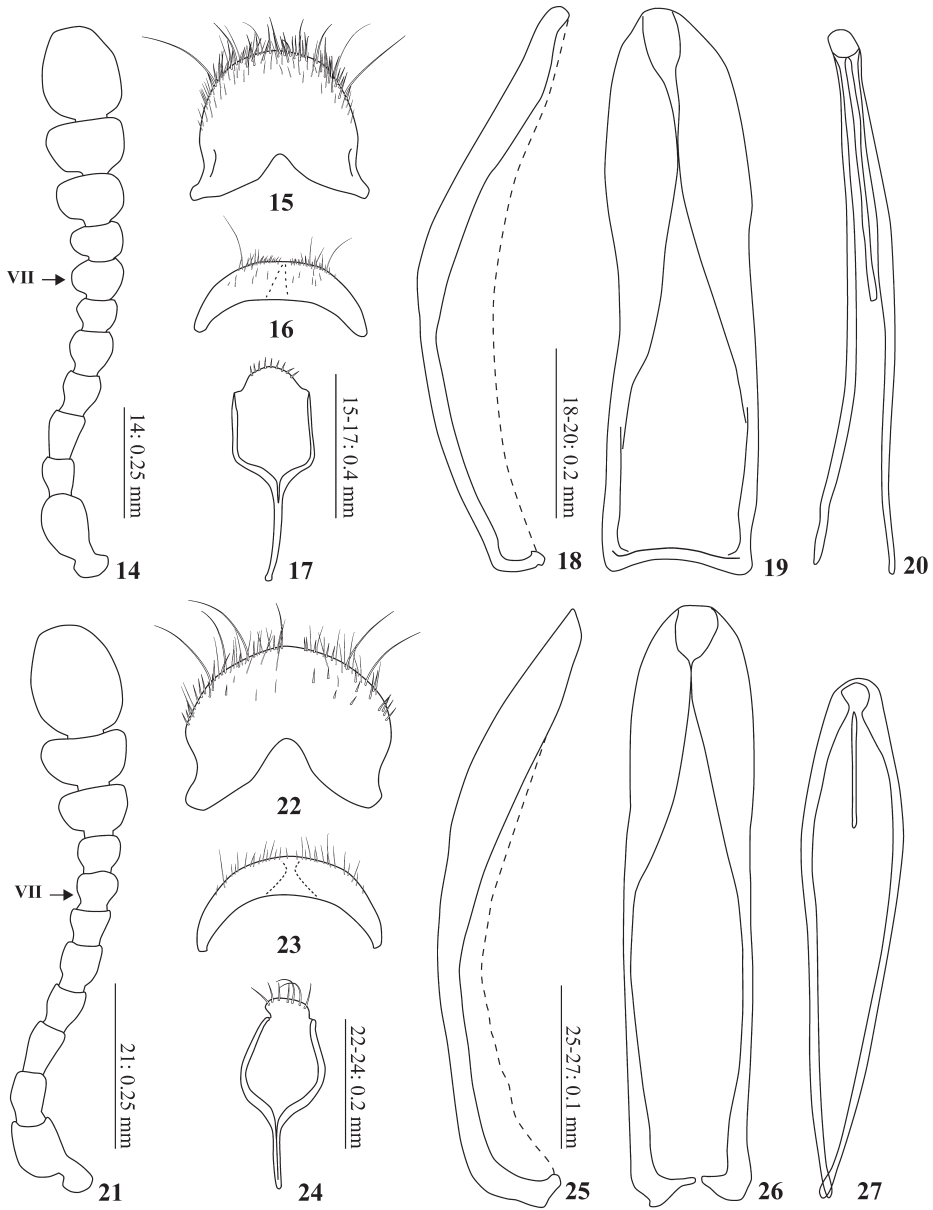
Elytra oblong, widened towards apical 1/3, thence apically narrowed, finely with setigerous punctures. Meso- and metaventrites finely with setigerous punctures; metaventral anterior process wider than mesoventral posterior process.

Legs without tarsal pulvilli; protarsomeres II–IV wide, with densely setae; meso- and metatarsomeres not wide; tarsomere V elongate; tarsal formula 5–4–4; tibial spur formula 0–2–2.

Abdominal ventrites I–V finely and densely punctured on medial portion; apical margin of sternite VII almost straight. Tergite VIII (Fig. 15) with posterior margin arcuate; sternite VIII (Fig. 16) semicircular; spicular apodeme (Fig. 17) without intraspicular plate.

Tegmen (Figs. 18 & 19) oblong, marginally sclerotized, without distinct phallobasic apodeme. Phallus (Fig. 20) elongate, as long as tegmen, with a linear medial plate at apical 1/2.

*F e m a l e.* Similar to male, but abdominal ventrites I–V without fine punctures on medial portion. Apical margin of sternite VII almost straight in middle; apical margins of tergite VIII (Fig. 28) and sternite VIII (Fig. 29) rounded. Ovipositor (Fig. 30) shorter than length of abdomen, longer than sternite VIII; vagina of reproductive organs (Figs. 34 & 35) with cruciform sclerite.



Figs. 14–27. Antennae and male terminal parts of *Isoclerus* (*Isoclerus*) spp. — 14–20, *I. (I.) pictus*; 21–27, *I. (I.) disinlei*. — 14 & 21, Antennae; 15 & 22, tergite VIII; 16 & 23, sternite VIII; 17 & 24, spicular fork; 18 & 25, tegmen in lateral views; 19 & 26, ditto in ventral views; 20 & 27, phallus in ventral views.

*Measurement and ratio.* Male (n = 5): PW 0.78–0.98 (0.88) mm; PL 0.86–1.06 (0.97) mm; EW 1.20–1.52 (1.34) mm; EL 2.20–2.87 (2.52) mm; BL 3.06–3.93 (3.49) mm; PL/PW 1.08–1.13 (1.11); EL/EW 1.83–1.94 (1.88); EL/PL 2.52–2.70 (2.60); EW/PW 1.50–1.56 (1.53). Female (n = 4): PW 0.84–0.92 (0.89) mm; PL 0.96–1.08 (1.01) mm; EW 1.30–1.44 (1.37) mm; EL 2.48–2.73 (2.63) mm; BL 3.44–3.81 (3.64) mm; PL/PW 1.11–1.17 (1.14); EL/EW 1.88–2.00 (1.92); EL/PL 2.53–2.71

(2.62); EW/PW 1.53–1.57 (1.55).

*Type locality.* Nikkô-shi, Tochigi Pref., Japan.

*Distribution.* Japan (Hokkaido and Honshu) (Fig. 37).

*Remarks.* The type species of the genus, *I. (I.) pictus*, was originally described from Japan based on the syntypes having conspicuous differences in the elytral markings (LEWIS, 1892). The differences had long been recognized as intraspecific variation within *I. (I.) pictus* since LEWIS (1892) (CORPORAAL, 1939; KOLIBÁČ, 1992). After close observations, however, I concluded that the syntypes are composed of two different species.

LEWIS (1892: 191) mentioned the specimen shown in Fig. 3 as variety of this species in his description and noted “Type var” on the label (Fig. 6). Considering his act, I designated the specimen shown in Fig. 2 as the lectotype of *Isoclerus pictus* LEWIS, 1892 and redescribed it above. As will be seen below, I place the variety of *I. (I.) pictus* (Fig. 3) under *I. (I.) disinlei*. As a result, the records of “*I. (I.) pictus*” from Miyake-jima, Shikoku, and Kyushu were excluded from the distribution range.

### *Isoclerus (Isoclerus) disinlei* KOLIBÁČ, 1992

[Japanese name: Taiwan-chibi-kakkômushi]

(Figs. 3, 6, 8–13, 21–27, 31–33, 36 & 37)

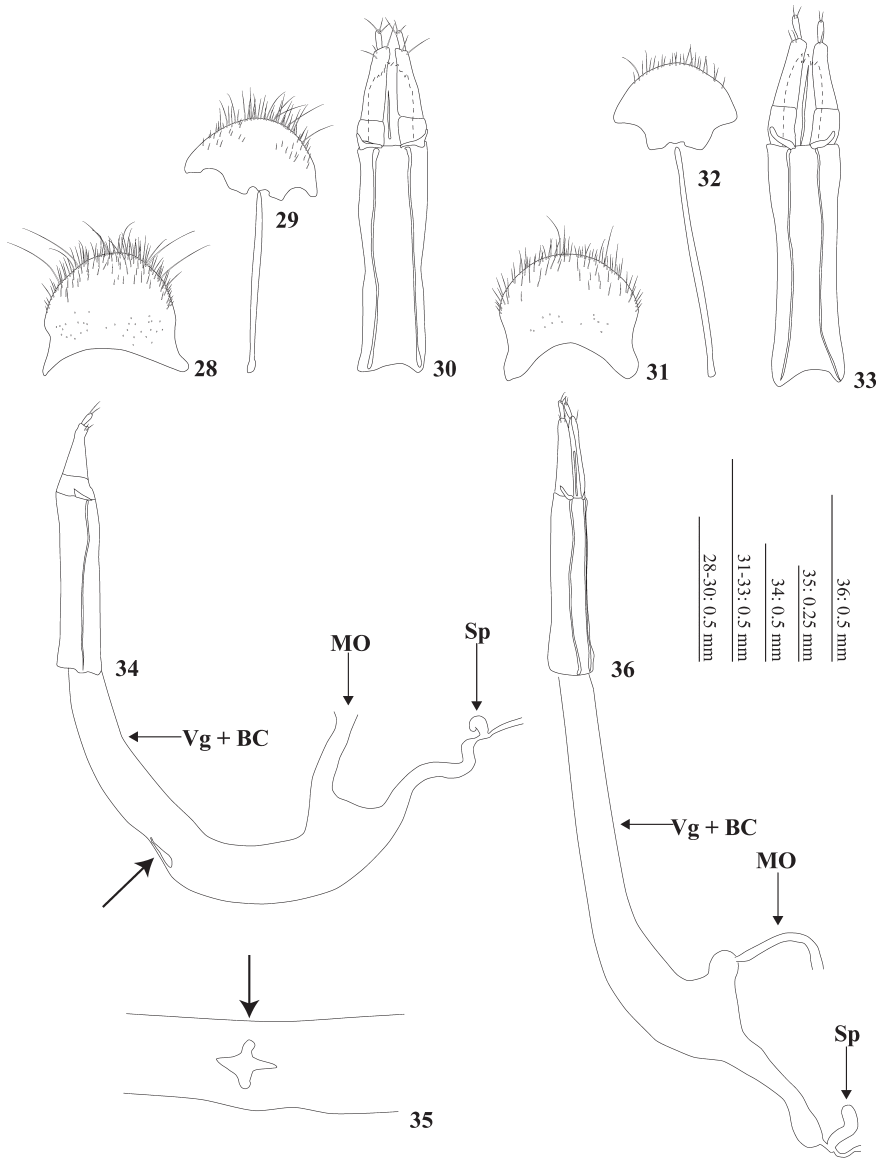
*Isoclerus (Isoclerus) disinlei* KOLIBÁČ, 1992: 325, figs. 52–55, 76 & 90; NAKANO & OGATA, 2019: 59.

*Isoclerus disinlei*: SATÔ, 1998: 4; KAWADA, 1999: 43; SAKAI, 2005: 45.

*Isoclerus pictus*: LEWIS, 1892: 191; CORPORAAL, 1939: 354, fig. 14; NAKANE, 1963: 183, pl. 92, fig. 4; WATANABE & SÔMA, 1972: 35; MIYATAKE, 1985: 153, pl. 24, fig. 29; SAKAI, 2002: 12, fig. 1.

*Type series of Isoclerus pictus.* Paralectotype. 1 ex. (F4, BMNH), “Nikko. / 3. VI.-21. VI. 80.”, “*Isoclerus / pictus / Lewis / Type. var.*” (by handwriting), “Japan. / G. Lewis. / 1910-320.”, “1938 vid J.B. / CORPORAAL”, “SYN- / TYPE”.

*Specimens examined.* Japan. [Aomori] 1 ♂ (F5, TOC), Igarisawa, Hirosaki-shi, 31.VII.1999, T. OZAKI leg. [Gunma] 1 ♂ (F5, EUMJ), Mt. Hôdaigi, Tone-gun, 12.V.2018, Y. & H. NOTSU leg. [Tokyo] 1 ♂ (F6, EUMJ), Tsubota-rindô, Miyake-jima, N34.0351°, E139.3149°, 24.V.2013, K. HOSHINO leg. [Kanagawa] 1 ex. (F5, YHC), Tônosawa, Hakone-machi, 12.X.2008, Y. HIRANO leg. [Kyoto] 1 ♂, 1 ♀ (F5, SEHU), Kurama, Sakyô-ku, 17.VI.1954, T. NAKANE leg. [Tottori] 1 ♂ (F5, EUMJ), Mt. Daisen, 22–23.VII.1974, Y. NOTSU leg. [Okayama] 1 ex. (F5, YHC), Mt. Gagyûsan, Takahashi-shi, 24. XI.2014, Y. HIRANO leg. [Hiroshima] 1 ♀ (F5, EUMJ), Ôasa-chô, 25–26.VI.1994, M. KAWANABE leg. [Ehime] 1 ♂ (F5, EUMJ), Jyôjusha, Mt. Ishizuchi, Saijô-shi, 1.XI.1962, Y. ARITA & N. OHBAYASHI leg.; 1 ♀ (F5, EUMJ), Shiratsue, Toon-shi, 28.VI.1970, M. SAKAI leg.; 1 ♂ (F5, EUMJ), Odamiyama, Uchiko-chô, 19.VI.1989, M. KAWANABE leg.; 1 ♀ (F5, EUMJ), same locality, but the date is 1.VI.1993; 1 ♂ (F5, EUMJ), Yoshinogawa, Uchiko-chô, 1.VII.1993, M. KAWANABE leg.; 1 ♀ (F5, EUMJ), same locality, but the date is 11.V.1993; 2 ♂♂, 1 ♀ (F5, EUMJ), same locality, but the date is 22.VII.1993; 1 ♀ (F5, EUMJ), Komenono, Matsuyama-shi, 2.VIII.1995, S. YOSHIMICHI leg.; 1 ♂ (F5, EUMJ), Tep-pôishi, Omogo-mura, 1.XI.1995, K. AKITA leg. [Tokushima] 1 ♂, 1 ♀ (F5, EUMJ), Iyakei, Miyoshi-shi, 8.V.2011, K. SUGAYA leg. [Nagasaki] 1 ♂ (F5, EUMJ), Izuhara, Tsushima-shi, Tsushima Is., 8.X.1997, Y. NOTSU leg.; 1 ex. (F5, SIC), Tanô, Ômura-shi, Tsushima Is., 20.V.1980, S. IMASAKA leg.; 1 ex. (F5, SIC), Akamatsu-dani, Shimabara-shi, 12.VI.1977, S. IMASAKA leg.; 1 ex. (F5, SIC), Kôji-ro-tunnel, Kunimi-chô, Unzen-shi, 1.IV.2014, S. IMASAKA leg.; 1 ex. (F5, SIC), Iwato, Azuma-chô, Unzen-shi, 12.IV.2014, S. IMASAKA leg. [Oita] 1 ex. (F5, SSC), Gama Ryûtaizan, Zaitsumachi, Hita-shi, 15.VII.2010, S. SASAKI leg.; 1 ♀ (F5, SSC), Urasebaru, Ishii, Hita-shi, 12.V.2013, S. SASAKI leg.; 1 ♀ (F5, SSC), Ôtsuru, Hita-shi, 16.X.2010, S. SASAKI leg.; 1 ♀ (F4, SSC), ditto, 20.V.2015; 1 ex. (F5, SSC),



Figs. 28–36. Female terminal parts and reproductive organs of *Isoclerus* (*Isoclerus*) spp. — 28–30, 34 & 35, *I. (I.) pictus*; 31–33 & 36, *I. (I.) disinlei*. — 28 & 31, Tergite VIII; 29 & 32, sternite VIII; 30 & 33, ovipositor in ventral view; 31 & 36, genitalia; 35, sclerite of vagina. Lettering: Vg + BC, vagina plus bursa copulatrix; MO, medial oviduct; Sp, spermatheca.

Chikura-dammer, Miwa, Hita-shi, 7.XI.2010, S. SASAKI leg.; 1 ex. (F5, SSC), Kamitsue-chô, Hita-shi, 28.VI.2011, S. SASAKI leg.; 1 ♀ (F5, SSC), Gamagase-rindô, Tono-machi, Hita-shi, 13.X.2013, S. SASAKI leg.; 1 ♀ (F5, SSC), Gakumeki-rindô, Ono, Hita-shi, 3.VII.2015, S. SASAKI leg.; 1 ♀ (F5, SSC), ditto, 2.IX.2016.; 1 ♀ (F5, SSC) ditto, 30.X.2016.; 1 ♀ (F5, SSC), Kitamameda, Hita-shi, 8.V.2015, S. SASAKI leg.; 1 ♀ (F5, SSC), ditto, 4.VI.2015.; 1 ex. (F5, SSC), Kouyadou, Asou, Usa-shi, 18.IV.2015,

S. SASAKI leg.; 1 ♀ (F5, SSC), Honyabakei-chô, Nakatsu-shi, 13.VIII.2010, S. SASAKI leg. [Kagoshima] 1 ex. (F5, YHC), Kawanagano-chô, Satsumasendai-shi, 9.V.2008, Y. HIRANO leg.; 1 ♂ (F4, YHC), Mt. Mikyôdake, Tokunoshima, 2.VII.2007, J. AOKI leg.; 1 ex. (F4, AKC, 85401), Higashinakama, Amami-Ôshima, 17.V.2014, M. NISHI leg. [Okinawa] 1 ♂ (F3, EUMJ), Sosu, Kunigami-son, Okinawa-jima, 19.V.2019, H. FUJIKAWA leg.; 1 ♂ (F3, YTC), Aha, Kunigami-son, Okinawa-jima, 28.IV.2019, Y. TAMAKI leg.; 1 ♂ (F2, SEHU), Kanbire-no-taki, Iriomote-jima, 29.VIII.1998, K. KAWADA leg. (Det. by J. BARTLETT, 2016); 1 ♀ (F2, EUMJ), Nakamagawa-rindô, Iriomote-jima, 29.IV.1994, M. KAWANABE leg.; 1 ♂ (F2, EUMJ), Ôtomi, 40m alt., Ishigaki-jima, 12.X.1988, M. SAKAI leg.; 1 ♀ (F2, KSC), Sakieda, Ishigaki-jima, 18.V.2002, K. SAKAI leg.; 1 ♂, 1 ♀ (F2, KSC), Omoto-dake, Ishigaki-jima, 31.III.2011, H. NISHIMO leg.; 1 ♂ (F2, EUMJ), same locality, 13.IV.2010, T. YOSHIDA leg.; 1 ♀ (F2, EUMJ), Takeda-rindô, Hirae, Ishigaki-jima, 5.I.2017, K. YOSHIDA leg. Taiwan. [Nantou] 1 ♀ (F1, EUMJ), Lumberyard of Taiwan University Plantation on the road from Wushe to Lushan, Renai Township, 19.VI.1977, K. USHIJIMA leg.; 1 ♀ (F1, EUMJ), Puli Township, 9.V.2009, J. AOKI leg. [Pingtung] 1 ♂, 1 ♀ (F1, EUMJ), Mt. Kaoshihfo-shan, Mudan Township, 12.VI.2013, J. YAMASAKO leg. [Taitung] 1 ♀ (F1, KSC), Daren Township, 3–5.V.2014, K. TAKAHASHI leg.

*Diagnosis.* This species is similar to *I. (I.) pictus*, but distinguishable by the following characteristics: antennomeres III–VIII same in width; pronotum with two depressions; metaventricle roughly with punctures in middle; phallus with a medial sclerite plate at apical 1/4.

*Additional description.* Male (Figs. 8–13). This species has color variations divided into the following six forms, except antennomeres I, II, and XI light yellow or brownish.

F1 (Fig. 8): head, pronotum and legs brownish red; base of elytra with two black round spots; elytral yellow markings on base and middle not conjoined.

F2 (Fig. 9): body color largely becoming lighter than F1; two round spots on base of elytra relatively small, sometimes almost disappeared; elytral yellow markings on base and middle sometimes conjoined.

F3 (Fig. 10): head and pronotum black; legs brownish black except for tarsi which are brownish yellow; two black round spots on base of elytra larger than F1 and F2, conjoined; elytral yellow markings on base and middle not conjoined.

F4 (Fig. 11): head and pronotum black; legs brownish red; two black round spots on base of elytra same as large as F3; elytral yellow basal markings disappearing near elytral suture, not conjoined with middle markings.

F5 (Fig. 12): head black; pronotum and legs brownish red; two black round spots on base of elytra similar to F3 and F4, but slightly larger; elytral yellow basal markings similar to F4, but middle markings relatively thinner and more parallel than other forms.

F6 (Fig. 13): similar to F5, but pronotum and legs blackish.

Head including eyes slightly narrower than pronotum, evenly punctured in dorsal view. Eyes small, coarsely faceted. Terminal maxillary palpomere securiform; apical margin of labrum emarginate at middle. Antennae (Fig. 21) capitate; antennomeres III–VIII gradually becoming shorter.

Pronotum gently arcuate on lateral sides, widest at middle, evenly and roughly vested with setigerous punctures, disk with two shallow depressions; side margins roughly crenate.

Elytra elongate oblong, slightly widened towards apical 1/3, thence apically narrowed, evenly and roughly covered with setigerous punctures. Meso- and metaventriles roughly with setigerous punctures; metaventral anterior process wider than mesoventral posterior process.

Legs without tarsal pulvilli; protarsomeres II–IV wide, densely with setae; meso- and metatarsomeres not wide; tarsomeres V elongate; tarsal formula 5–4–4; tibial spur formula 0–2–2.

Abdominal ventrites I–V finely and densely punctured on medial portion; apical margin almost



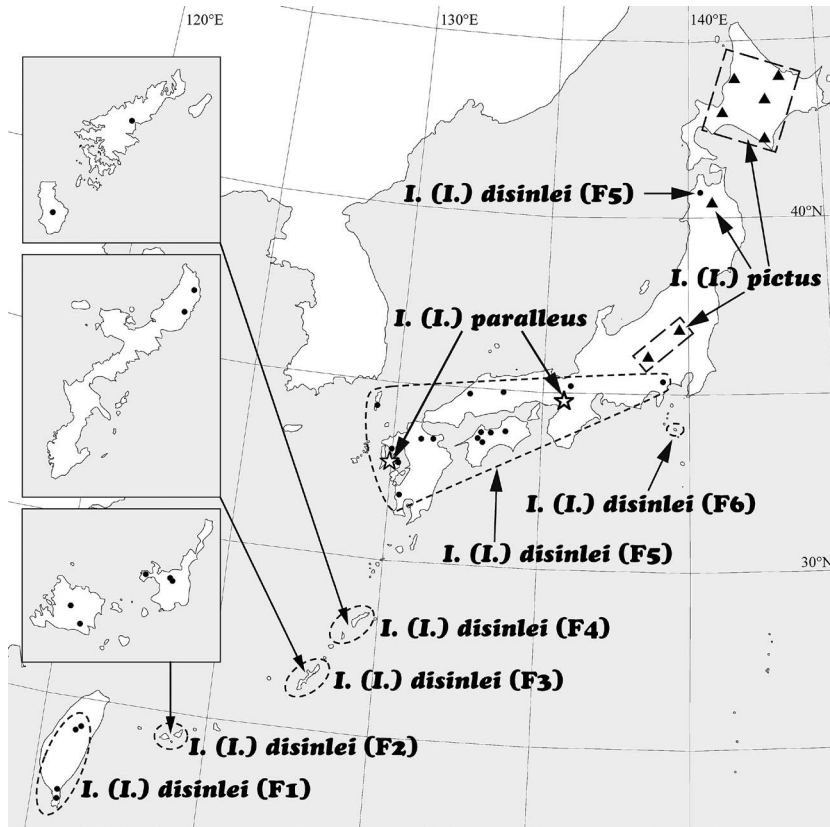


Fig. 37. Distribution map of *Isoclerus (Isoclerus)* spp. in Japan and Taiwan. See description for the detail features of F1 to F6.

straight. Tergite VIII (Fig. 22) with apical margin rounded; sternite VIII (Fig. 23) semicircular; spicular fork (Fig. 24) without intraspicular plate.

Tegmen (Figs. 25 & 26) oblong, marginally sclerotized, without phallobasic apodeme. Phallus (Fig. 27) oblanceolate, widest at apical 1/4, shorter than tegmen, with a linear medial plate at apical 1/4.

**F e m a l e.** Similar to male, but abdominal ventrites I–V without fine punctures on medial portion. Apical margin of sternite VII truncate U-shaped in middle; apical margins of tergite VIII (Fig. 31) and sternite VIII (Fig. 32) rounded. Ovipositor (Fig. 33) shorter than length of abdomen, longer than sternite VIII; vagina plus bursa copulatrix of reproductive organ (Fig. 36) without sclerite.

**Measurement and ratio.** Male (n = 12): PW 0.44–0.84 (0.68) mm; PL 0.52–0.96 (0.79) mm; EW 0.60–1.10 (0.90) mm; EL 1.20–2.23 (1.78) mm; BL 1.72–3.19 (2.57) mm; PL/PW 1.09–1.21 (1.17); EL/EW 1.79–2.10 (1.97); EL/PL 2.10–2.36 (2.25); EW/PW 1.23–1.42 (1.33). Female (n = 12): PW 0.49–0.79 (0.68) mm; PL 0.58–0.90 (0.79) mm; EW 0.64–1.09 (0.95) mm; EL 1.30–2.25 (1.89) mm; BL 1.88–3.15 (2.69) mm; PL/PW 1.13–1.20 (1.16); EL/EW 1.91–2.10 (2.00); EL/PL 2.23–2.55 (2.39); EW/PW 1.29–1.48 (1.39).

**Type locality.** Shanmei, Chiayi County, Taiwan.

**Distribution.** Japan (Iriomote-jima and Ishigaki-jima; Honshu, Miyake-jima, Shikoku, Kyushu, Amami-Ōshima, Tokunoshima, and Okinawa-jima — new record); Taiwan (Fig. 37).

*Biological notes.* Adults of this species were collected from polypores (KAWADA, 1999) and a blight of *Quercus miyagii* (NAKANO & OGATA, 2019) on Irimote-jima, and from *Trametes versicolor* in Tokyo (SAKAI, 2002).

*Remarks.* Of those color variations of this species, F1 precisely corresponds with the original description. F2 was subsequently recorded as a color variation from Ishigaki-jima (SATÔ, 1998; SAKAI, 2005) and Iriomote-jima (KAWADA, 1999; NAKANO & OGATA, 2019), respectively. F3 from Amami-Ôshima and Tokunoshima, and F4 from Okinawa-jima were recently collected. F5 from Honshu and Kyushu, and F6 from Miyake-jima had long been recognized as *I. (I.) pictus* since LEWIS (1892). After close examination, however, I concluded that F3, F4, F5, and F6 are included in variations within *I. (I.) disinlei*, and therefore newly recorded for the distribution.

### Key to Japanese and Taiwanese Species of the Genus *Isoclerus*

1. Body unicolored brown; elytra without markings. .... *I. (I.) paralleus* (LEWIS, 1892)
- Body multicolored; elytra with yellowish markings. .... 2
2. Antennomere VII relatively wide, wider than VIII; pronotum with three depressions; posterior of elytral humeri with black round spot; EL/PL 2.52–2.70 (2.60) in male, 2.53–2.71 (2.62) in female; EW/PW 1.50–1.56 (1.53) in male, 1.53–1.57 (1.55) in female. .... *I. (I.) pictus* LEWIS, 1892
- Antennomere VII relatively narrow, same width as VIII; pronotum with two depressions; posterior of elytral humeri without black round spot; EL/PL 2.10–2.36 (2.25) in male, 2.23–2.55 (2.39) in female; EW/PW 1.23–1.42 (1.33) in male, 1.29–1.48 (1.39) in female. .... *I. (I.) disinlei* KOLIBÁČ, 1992

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### 要 約

村上広将：日本および台湾産チビカッコウムシ属(鞘翅目サビカッコウムシ科)の再検討。——— これまでに日本および台湾産チビカッコウムシ属には以下の3種が知られていた：1) ホソサビカッコウムシ *I. (I.) paralleus* (ベトナム；インドネシア；中国；日本：大阪，長崎)，2) ヨツモンチビカッコウムシ *I. (I.) pictus* (日本：北海道，本州，三宅島，四国，九州)，3) タイワンチビカッコウムシ *I. (I.) disinlei* (日本：西表島，石垣島；台湾)。しかしながら，*I. (I.) pictus* には原記載以降2つの色彩型が認められていたため，今回ロンドン自然史博物館に所蔵されている2個体のシントタイプと既産地の標本を比較検討したところ，これら2型は別種であることが判明した。そのため，原記載とタイプラベルに基づき，1個体をレクトタイプ，もう1個体

をパラレクトタイプに指定し、後者を *I. (I.) disinlei* の色彩変異として扱った。また、奄美大島や徳之島、沖縄島から本属の不明種が採集されていたが、これらは前述のパラレクトタイプと同様に、*I. (I.) disinlei* の色彩変異であると結論付けた。結果として、*I. (I.) pictus* と *I. (I.) disinlei* は以下のように整理された：キマダラチビカッコウムシ (和名新称) *I. (I.) pictus* (日本：北海道，本州)；台湾チビカッコウムシ *I. (I.) disinlei* (日本：本州，三宅島，四国，九州，奄美大島，徳之島，沖縄島，西表島，石垣島；台湾)。なお，本論文では，本属の日本および台湾産種の分布図と検索表を付した。

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