

A Review of the Genus *Cucujus* Fabricius (Insecta: Cucujoidea: Cucujidae) from Taiwan, Japan, and China, with Descriptions of Two New Species and the Larvae of *Cucujus mniszechi* Grouvelle

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Chi-Feng Lee and Masataka Satô (2007) A review of the genus *Cucujus* Fabricius (Insecta: Cucujoidea: Cucujidae) from Taiwan, Japan, and China, with descriptions of two new species and the larvae of *Cucujus mniszechi* Grouvelle. *Zoological Studies* 46(3): 311-321. Species of the genus *Cucujus* from Taiwan, Japan, and China are reviewed. Three known species are recognized: *Cucujus coccinatus* Lewis (1881), *C. haematodes* Erichson (1845), and *C. mniszechi* Grouvelle (1874). *Cucujus imperialis* Lewis (1879) is a junior synonym of *C. mniszechi* Grouvelle. *Cucujus opacus* Lewis (1888) is regarded as a subspecies of *C. haematodes* Erichson. *Cucujus chinensis* Lee and Satô, sp. nov. from China and *C. nigripennis* Lee and Satô, sp. nov. from Taiwan are described. The larvae of *Cucujus mniszechi* Grouvelle are described for the first time. <http://zoolstud.sinica.edu.tw/Journals/46.3/311.pdf>

Key words: Taxonomy, *Cucujus*, Taiwan, Japan, China.

As presently understood, the Cucujidae excludes the Silvanidae, Laemophloeidae, and Passandridae (Pakaluk et al. 1994). Lawrence and Newton (1995) included *Cucujus* Fabricius (North America and Eurasia), *Palaestes* Perty (Neotropical), *Pediacus* Shuckard (North and Central America, Eurasia, and Australia), and *Platysus* Erichson (Australia) in the Cucujidae. Thomas (1999) listed 45 species and 1 subspecies in the family, of which 10 species and 1 subspecies are in the genus *Cucujus*. All those species were described 100 yr ago or more, and their taxonomy has not recently been reviewed. In the present paper, we review species from Taiwan, Japan, and China together with specimens collected from the Oriental region, and describe 2 new species from Taiwan and China.

Larvae and adults are found under the bark of dead trees. Larvae of the North American species of *Cucujus* are reported to be predacious (Smith and Sears 1982), but otherwise there is little infor-

mation of the biology of these beetles (Lawrence 1991). Larvae of *Cucujus clavipes* Fabricius (Böving and Craighead 1931) and *C. coccinatus* Lewis (Hayashi 1986) have been described. Larvae of *C. mniszechi* Grouvelle were recently collected from Laos, and they are described in the present paper.

MATERIALS AND METHODS

The terminology of adult genitalia follows that of Wilson (1930) and Thomas (1999), and that of larvae follows Lawrence (1991). Genitalia of *Cucujus* species are so similar to each other that only diagnostic characters are illustrated, including the median lobe, median strut, and parameres. Specimens examined are deposited in the following museums or institutions (letter codes follow Arnett et al. 1993): BMNH, The Natural History Museum, London, UK; CMS, Collection of

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Masataka Satô, Nagoya, Japan (notw transferred to EUMJ); DEI, Deutsches Entomologisches Institut in ZALF, Munchenberg, Germany; EUMJ, Ehime University, Matsuyama, Japan; FSCA, Florida State Collection of Arthropods, Gainesville, FL, USA; NMNS, National Museum of Natural Science, Taichung, Taiwan; NSMT, National Science Museum, Tokyo, Japan; RCBAS, Research Center for Biodiversity, Academia Sinica, Taipei, Taiwan; and TARI, Taiwan Agricultural Research Institute, Taichung, Taiwan. To clarify the identities of *Cucujus coccinatus* Lewis (1881), *C. opacus* Lewis (1888), and *C. mniszewski* Gourville (1874), lectotypes and paralectotypes are designated for those species.

SYSTEMATIC ACCOUNTS

Genus *Cucujus* Fabricius, 1775

Cucujus Fabricius 1775: 204. Type species: *Cucujus clavipes* Fabricius, 1775.

Description: Moderate in size, 6-25 mm; elongate, parallel-sided, strongly flattened dorsoventrally; brightly colored, red or blue and black; pubescence inconspicuous.

Head large, transverse, often distinctly triangular with well-developed temples; densely punctate; glabrous or pubescent (*C. chinensis*); antennae with 11 antennomeres, filiform to nearly moniliform, without a distinct club, antennomere III longest; antennae inserted laterally, insertion hidden; labrum very small, transverse, fused to clypeus; mandibles large, robust, with two apical and one subapical teeth, mola not ridged; maxillary palpi with four palpomeres, terminal palpomere truncate apically; mentum transverse; ligula strongly V-shaped and membranous; labial palpi with three palpomeres, terminal palpomere truncate apically; eyes moderate, round, convex.

Pronotum quadrate, usually smaller than head (except *C. chinensis*), without anterior angles, laterally margined, dentate or denticulate, densely punctate, disc usually with depressions (without depressions in *C. mniszewski* and *C. chinensis*); prosternum broad, prosternal process moderately to relatively narrow; procoxal cavities narrowly separated, open posteriorly, with an anterolateral extension exposing trochantins; mesocoxal cavities open laterally; metasternum elongate; trochantins visible on pro- and mesocox-

ae; anterior coxae globose, middle coxae globose, hind coxae transverse; trochanters normal; femora pedunculate; tibiae slender, apical spurs small, subequal; tarsal formula 5-5-5 in females, 5-5-4 in males; protarsi on males with tarsomeres somewhat expanded laterally compared to those of female; claws simple; scutellum pentagonal; elytra irregularly punctate, not striated; scutellary striae absent; epipleural fold complete; metendosternite of a normal hylecetoid type (Crowson 1938 1944).

Abdomen with five visible sterna, sutures entire; intercoxal process acute; surface nearly impunctate. Male genitalia inverted, with parameres ventrad to median lobe and with a flagellum. Female genitalia with membranous proctiger, paraprocts and valvifers reduced to baculae, coxite two-segmented, and stylus typical.

Cucujus chinensis sp. nov.

(Figs. 1A, 2A, 3A, 4A, 5A)

Holotype ♂: "Entsu Dong Cave, elev. 2400 m, Schennongjia, Hubei, China 9 June 2004, M. Satô" (NSMT).

Description: Length 13.0-15.7 mm. Color black, but with red elytra and margin of pronotum (Fig. 1A). Head smaller than prothorax, covered with yellowish-brown pubescence. Pronotum oval with irregular tubercles and yellowish brown pubescence (Fig. 2A). Elytra with prominent punctures, covered with wax (Fig. 3A); long setae scattered over entire elytra. Apical process of median lobe rounded. Median strut relatively shorter, about 2.0 times as long as median lobe (Fig. 4A). Parameres with scattered short setae on ventral surface (Fig. 5A).

Etymology: The specific name is in general reference to the type locality.

Diagnosis: This new species is characterized by the presence of yellowish-brown pubescence on the pronotum, the shape and structure of the pronotum, and the absence of long setae on the parameres.

Distribution: It is known only from the type locality.

Cucujus coccinatus Lewis, 1881

(Figs. 1B, 2B, 3B, 4B, 5B)

Cucujus coccinatus Lewis 1881: 198 (Japan); Reitter 1882: 68 (as a putative synonym of *C. grouvellei* Reitter, 1877); Lewis 1883: 261 (stat. rev.).

Type series: Lectotype ♂ (herewith designat-

ed): “Yokohama 20.iii.-14.iv.80 / Japan G. Lewis 1910-320 [12.4.80 written under card]” (BMNH). Paralectotypes: 1 ♂: “Miyanoshita / Japan. G. Lewis 1910-320 / Type (circle, with red margin) / *Cucujus occinatus* Lewis ♂ Type” (BMNH); 1 ♀: “Miyanoshita 20.xii.-23.xii.80 / Japan g. Lewis 1910-329 [22.12.80 written under card]” (BMNH); 2 pairs (♂ and ♀ mounted on same card): “Miyanoshita 20.xii.-23.xii.80 / Japan G. Lewis 1910-329 [22.12.80 written under card]”; 1 ♂: “Nr Nikko 28.10.'80 / Japan. G. Lewis 1910-320 / Type (circle, with red margin) / *Cucujus occinatus* Lewis ♂ Type” (BMNH); 1 ♂: “Mira / Japan G. Lewis 1910-320” (BMNH); 2 ♂♂: “Japan 82.17 / (one specimen has “*Cucujus coccinatus* Lewis”)” (BMNH); 1 ♀ (mounted upside down): “Kiga / Japan G. Lewis 1910-329” (BMNH); 1 ♂: “Japan G. Lewis / *Cucujus coccinatus* Lewis Co-Type / Sharp Coll. 1905-313” (BMNH); 1 ♂: “Japan G. Lewis / *Cucujus coccinatus* Japan Lewis / Sharp Coll. 1905-313” (BMNH); 1 pair (♂ and ♀ mount-

ed on same card): “Japan G. Lewis / *Cucujus coccinatus* Japan Lewis (written on card by Sharp)” (BMNH); 1 ♂: “Type / *Cucujus coccinatus* Lewis, det. T. Shiraki” (TARI); 3 ♂♂, 1 ♀, same data as for lectotype (CMS, TARI).

Description: Length 12.9-14.0 mm. Color black, but with red elytra (Fig. 1B). Head with two long setae behind each eye close to each other and several pairs of setae on anterior area of clypeus; mandibles with scattered short setae, long setae along base of apical teeth; temples with scattered setae. Pronotum with lateral depressions, punctures reduced halfway between depressions, prominent on depressions; with short setae along lateral margins (Fig. 2B). Elytra with prominent punctures, without wax (Fig. 3B); several long setae near apices, one pair of long setae on bases; pubescence on apices prominent. Apical process of median lobe reduced. Median strut relatively shorter, about 1.8 times as long as median lobe (Fig. 4B). Parameres with dense long setae



Fig. 1. Habitus of *Cucujus* species. (A) *Cucujus chinensis*; (B) *C. coccinatus*; (C) *C. haematodes haematodes*; (D) *C. haematodes opacus*; (E) *C. mniszечи*; (F) *C. nigripennis*.

on apices and outer sides; tiny setae on ventro-internal surfaces (Fig. 5B).

Other materials examined: 1 ♂, 1 ♀, Japan: Aomori Pref. Nurukawa, 2 June 1956, leg. K. Shimoyama (NMNS); 2 ♂♂, 2 ♀♀, Aomori Pref. Kuzukawa, 2 July 1956, leg. K. Shimoyama (RCBAS, CMS); 1 ♂, 1 ♀, Aomori Pref. Ohbokutai, 2 June 1961, leg. K. Shimoyama (TARI); 3 ♂♂: "G. Lewis (in Grouvelle writing) / Grouvelle coll. 1903-123" (BMNH); 1 ♂, 1 ♀: "*Cucujus coccinatus* Japan (in Grouvelle writing) / Grouvelle coll. 1903-123" (BMNH); 1 ♀: "Japan G. Lewis / Japan Lewis / *COCCINATUS* Lewis / Andrewes Bequest 1922-221" (BMNH); 2 ♂♂: "Japan G. Lewis 1926-369 / Suyama / one specimen has *Cucujus coccinatus* Lewis" (BMNH).

Diagnosis: *Cucujus coccinatus* is similar to *C. chinensis* and *C. haematodes opacus* in color pattern, but differs by having the elytral punctures not covered with wax.

Distribution: Japan.

***Cucujus haematodes haematodes* Erichson,
1845**

(Figs. 1C, 2C, 3C, 4C, 5C, 5F)

Cucujus haematodes Erichson, 1845: 308 (Germany).

Description: Length 15.0 mm. Color reddish-brown, but with black antennae, eyes, apical teeth of mandibles, mesepisterna, mesepimera, metepisterna, sides of metaventrite, and legs (Fig. 1C). Head with dense, short, black pubescence and two pairs of long setae behind eyes. Pronotum with lateral depressions, punctures reduced halfway between depressions, prominent on depressions; surface with short, dense, black pubescence (Fig. 3C). Elytra with fine punctures, covered with wax, several long setae near apices, one pair of long setae on bases. Apex of median lobe tube-like, apically rounded; ventral sclerite present, basolateral apophyses densely setose (Fig. 4F). Median strut relatively longer, about 3.3 times as long as median lobe (Fig. 4C).



Fig. 2. Head and pronotum of *Cucujus* species. (A) *Cucujus chinensis*; (B) *C. coccinatus*; (C) *C. haematodes haematodes*; (D) *C. haematodes opacus*; (E) *C. mniszechi*; (F) *C. nigripennis*.

Parameres with dense, long setae on apices, tiny setae scattered along ventral surface (Fig. 5C).

Materials examined: 1 ♂, China: Sichuan, Mt. Wahui, elev. 3930 m, Jiulong, 28 Sept. 1996, leg. M. Satô (RCBAS); 1 ♂: Sichuan, Jiuzhaigou, 29 Aug. 1998, leg. M. Satô (NSMT); 2 ♀♀, Slovakia: Harmanec, 1950, leg. A. Olexa (RCBAS, EUMJ).

Diagnosis: *Cucujus haematodes* is similar to *C. chinensis* with wax on the elytra, but differs by its small elytral punctures and the presence of impressions on the pronotum.

Distribution: Central Europe to Siberia and China (new record).

***Cucujus haematodes opacus* Lewis, 1888 stat. nov.**

(Fig. 1D, 2D, 3D)

Cucujus opacus Lewis 1888: 84 (Japan).

Cucujus coccinatus: Miwa 1931: 65 (Taiwan; misidentification); Lien et al. 1999: 80 (Taiwan, misidentification).

Distribution: Length 13.0–15.7 mm. Color black, but with red elytra (Fig. 1D). Head with two long, closely set, setae behind each eye and several pairs of setae on anterior area of clypeus; mandibles with scattered short setae, long setae along base of apical teeth; temples with scattered

setae. Pronotum with lateral depressions, punctures reduced halfway between depressions, prominent on depressions; with short setae along lateral margins (Fig. 2D). Elytra with fine punctures, covered with wax; several long setae near apices, one pair of long setae on bases (Fig. 3D).

Variation: Individuals from Japan lack long setae on elytra.

Materials examined: 1 ♂, 1 ♀, Japan: Hokkaido, Jozankei, 22 July 1950, leg. Y. Nishio (CMS); 1 ♀, Gifu Pref. Amagodani, 28 July 1951, leg. K. Ohbayashi (EUMJ); 1 ♂, Gifu Pref., Idani, Kawai, Hida, 8 May 1954, leg. H. Torigai (CMS); 1 ♂, 2 ♀, Aomori Pref. Hiraka-cho, 14 Aug. 1958, leg. K. Shimoyama (CMS); 1 ♀, same locality and collector as preceding (RCBAS), 22 May 1958; 1 ♀, Aomori Pref. Hiraka-cho, Kuzukawa, 16 June 1960, leg. K. Shimoyama (NMNS); 1 ♂, 1 ♀, Aomori Pref. Ohbokutai, 26 June 1960, leg. K. Shimoyama (RCBAS); 1 ♀, Aomori Pref. Nurukawa, 19 June 1961, leg. K. Shimoyama (NMNS); 1 ♀, Gumma Pref. Ozagahara, 5 June 1979, leg. Y. Notsu (CMS); 1 ♂, Taiwan: Chiayi, Alishan (= Arisan), 22 Oct. 1931, leg. M. Chûjō (TARI); 1 ♀, same locality as preceding, leg. Y. Miwa (TARI); 3 ♀♀, Nengkaoshan (= Nokosan), 11 May 1919, leg. O. Sonan (TARI).

Diagnosis: This subspecies differs from the nominotypical subspecies by its black head, thorax, and abdomen.

Distribution: Taiwan, Japan.

***Cucujus mniszzechi* Grouvelle, 1874**

(Figs. 1E, 2E, 3E, 4D, 5D, 6)

Cucujus mniszzechi Grouvelle 1874: 35 (Japan); Grouvelle 1876: 489 (Japan); Lewis 1881: 198 (China).

Cucujus imperialis Lewis 1879 (India); Grouvelle 1908: 460 (list, key); Grouvelle 1913: 57 (Taiwan). **syn. nov.**

Cucujus davidi Grouvelle 1881: 89 (China), synonymized by Lewis (1883).

Type series: Lectotype ♂ (herewith designated): “Co-type (circle, with yellow margin) / *Cucujus mniszzechi* Grouv. Japan G. Lewis / Grouvelle Coll. 1903-123”. Paralectotypes: 1 ♂: “Co-type (circle, with yellow margin) / *Cucujus* ... (unreadable) / Grouvelle Coll. 1903-123”; 1 ♂: “Co-type (circle, with yellow margin) / *Mniszzechi* / G. Lewis / Grouvelle Coll. 1903-123”; 1 ♀: “Co-type (circle, with yellow margin) / G. Lewis / Grouvelle Coll. 1903-123” (all at the BMNH).

Synonym: We examined the holotype ♂ of *Cucujus imperialis* (automatically fixed by monotype): “Type (circle, with red margin) / Assam 1898

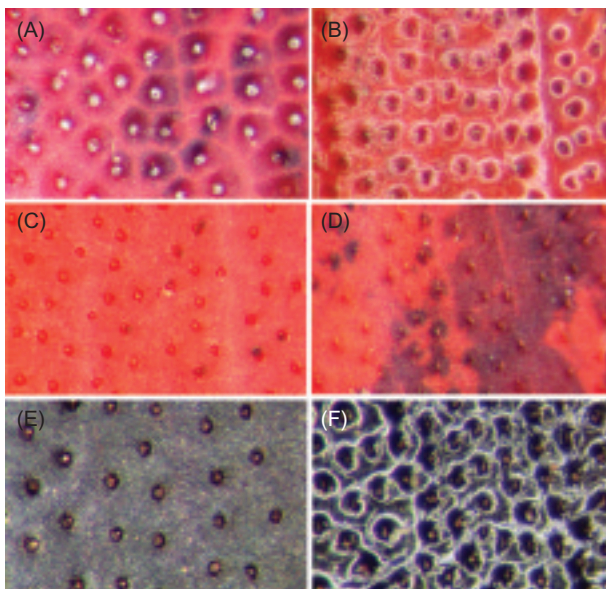


Fig. 3. Details of punctures on the elytra of *Cucujus* species. (A) *Cucujus chinensis*; (B) *C. coccinatus*; (C) *C. haematodes haematodes*; (D) *C. haematodes opacus*; (E) *C. mniszzechi*; (F) *C. nigripennis*.

/ Assam. G. Lewis. 1900-31. / *Cucujus imperialis* Lewis type" (BMNH).

Description of adults: Length 19.6-24.7 mm. Color black but with metallic-blue elytra (Fig. 1E). Head with two pairs of long setae behind eyes close to each other and several pairs of setae on anterior area of clypeus; mandibles with scattered short setae, and with long setae along base of apical teeth; temples with scattered setae. Pronotum usually without depressions, with prominent punctures, and lateral depressions in some individuals; punctures reduced halfway between depressions,

prominent on depressions; with short setae along lateral margins (Fig. 2E). Elytra with fine punctures, covered with wax (Fig. 3E); several long setae near apices, one pair of long setae on bases. Median lobe with a small apical process. Median strut very long, about 3.0 times as long as median lobe (Fig. 4D). Parameres with several long setae on apices, and scattered and sparse short setae on ventral surface (Fig. 5D).

Diagnosis: *Cucujus mniszehi* is characterized its blue elytra.

Description of larvae: Body up to 33 mm long,

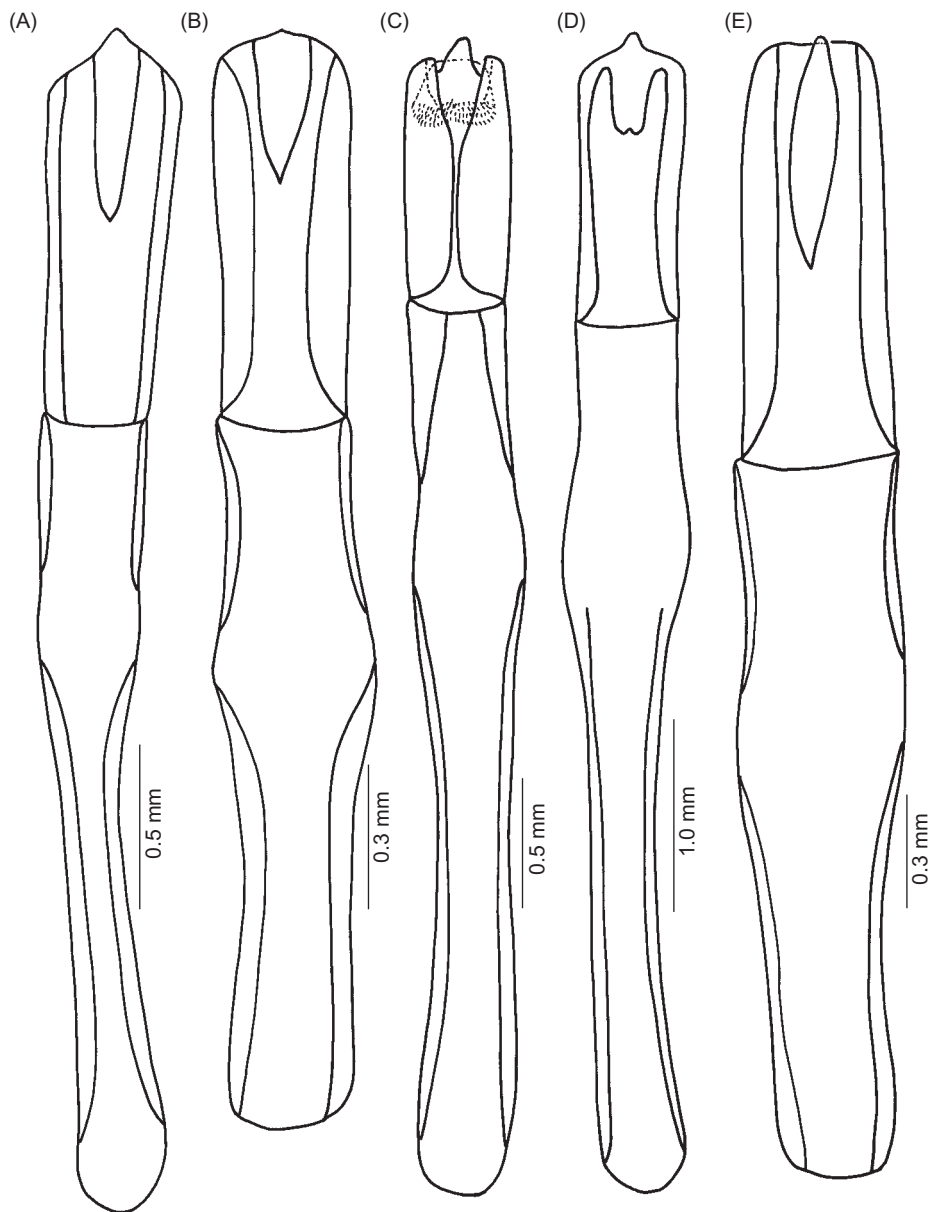


Fig. 4. Median lobe and median strut. (A) *Cucujus chinensis*; (B) *C. coccinatus*; (C) *C. haematodes*; (D) *C. mniszehi*; (E) *C. nigripennis*.

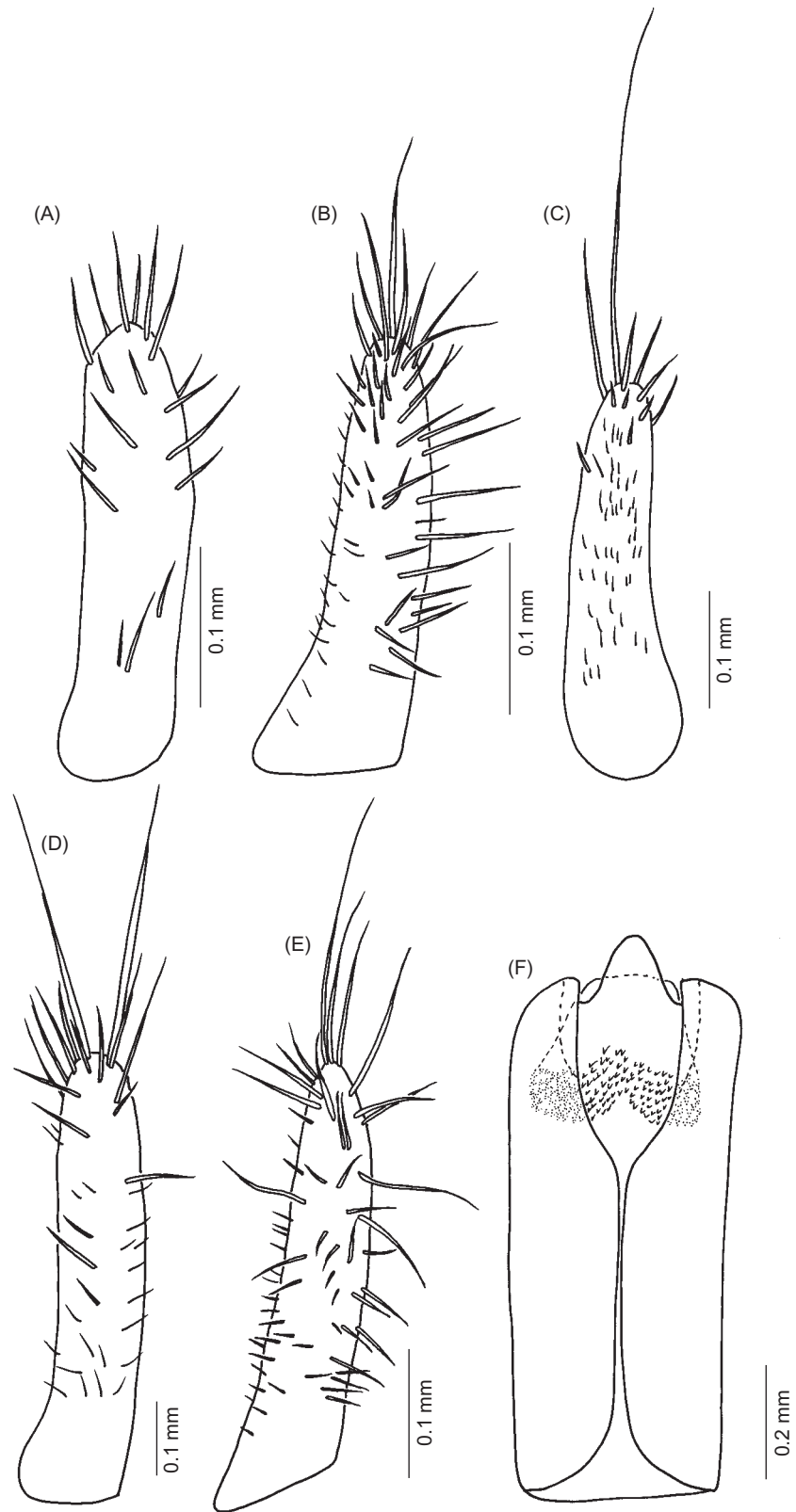


Fig. 5. Right ventral paramere (A-E) and median lobe (F). (A) *Cucujus chinensis*; (B) *C. coccinatus*; (C) *C. haematodes*; (D) *C. mniszechi*; (E) *C. nigripennis*; (F) *C. haematodes*.

elongate, subparallel, strongly dorsoventrally flattened with strongly forked median process at abdominal apex (Fig. 6C). Head and abdominal segment 8 moderately sclerotized, orange-brown to brown; thorax and abdominal segments 1-7 weakly sclerotized and yellowish-brown, tergum 9 strongly sclerotized and brown to dark brown.

Head (Fig. 6A, B): prognathous, strongly transverse and dorsoventrally flattened. Sides slightly curved, posterior margin extending posteriorly. Epicranial plate with one prominent seta near

hind angle, one posterior and one anterior to stemmata, two setae arising from between stemmata. Stemmata well developed, six present on each side. Epicranial stem short, frontal arms lyriform. Frontoclypeal suture absent. Frontoclypeal region with one long seta anterior to angles of frontal arms. Clypeolabral suture complete, V-shaped. Labrum transverse, widest at base, with 4 anteriomedial setae on each side. Epipharynx covered with fine hair-like setae, glabrous medially, with a roughly circular group of sensory pits (ante-

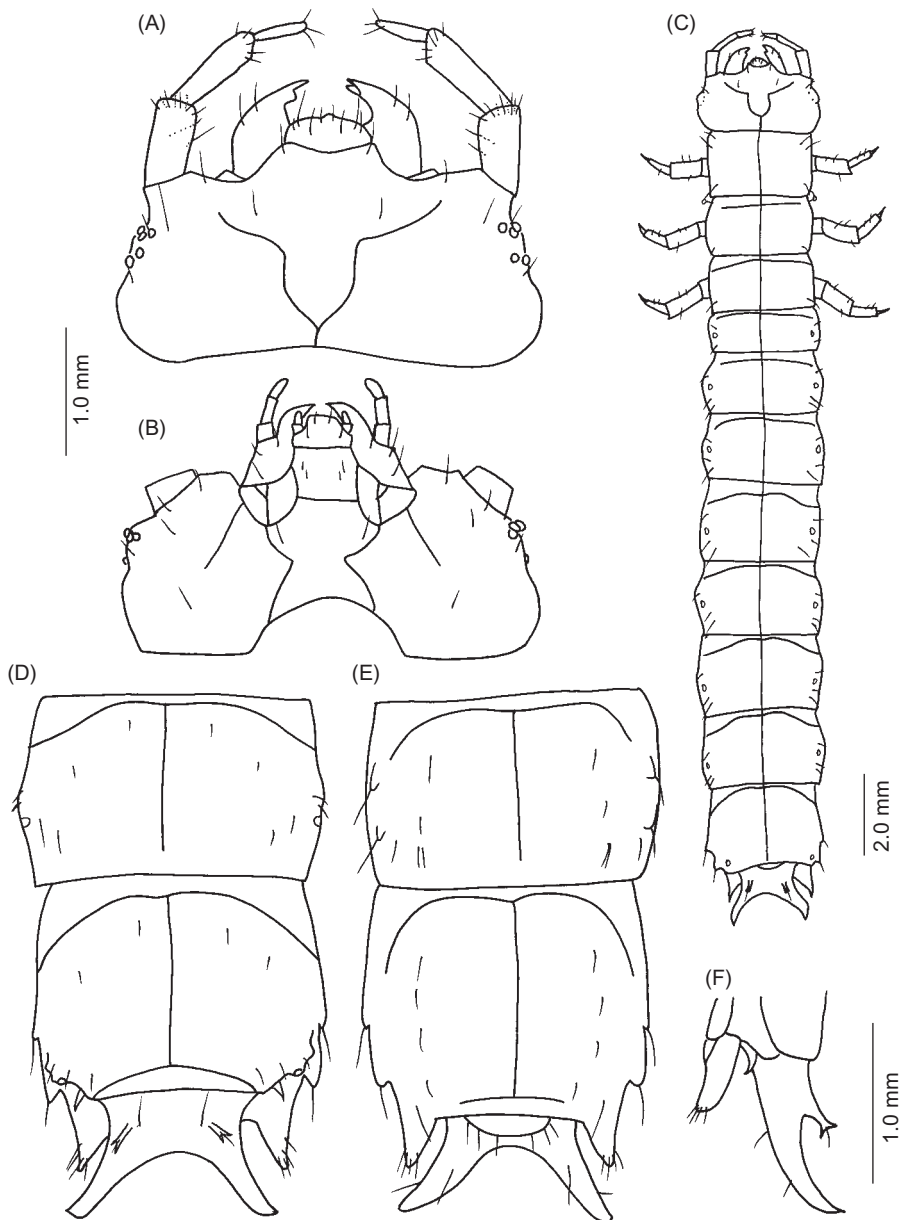


Fig. 6. Larva of *Cucujus mniszewski*. (A) Head, dorsal view; (B) same, ventral view; (C) dorsal habitus; (D) abdominal segments 7-9, dorsal view; (E) same, ventral view, (F) tergum 9, lateral view.

riorly) and pegs (posteriorly). Antennae 3-segmented, setae confined to antennomere 1 and apices of antennomeres 2 and 3, ratio of lengths of antennomeres 1, 2, and 3 about 1: 1.3: 0.6. Mandibles symmetrical, dorsoventrally flattened, bidentate, with two apical teeth and one subapical tooth on dorsal surface; two dorsolateral setae present; prostheca glabrous, forming a broad-based, flattened, blunt tooth, sclerotized basally; mola subtriangular, flattened, dorsal surface with transverse rows of microtrichia, basal 1/2 of molar margin with elongate, proclinate asperities; ventral accessory process absent. Maxilla with cardo oblique, divided by an internal ridge, basal portion trapezoidal, with one moderate seta near basal margin; stipes moderately elongate; mala falci-form, apex divided into three spurs; base of spurs and inner margin of stipes bearing stout, medially directed bristles; maxillary palpus 3-segmented, ratio of lengths of palpomeres 1, 2, and 3 about 1: 2.2: 1.7. Labium free to base of mentum, submentum fused to gula; mentum about as long as wide, with two discal pairs of proclinate setae, anterior 1/2 lightly sclerotized; prementum transverse, short, bearing a pair of setae level with palpiger bases; ligula transverse, short, bearing a pair of discal, proclinate setae; labial palps 2-segmented. Hypopharynx simple, membranous, glabrous.

Thorax: Dorsal surfaces of meso- and metathoraces, abdominal segments 1-8, and ventral surfaces of abdominal segments 1-8 with one transverse ridge close to anterior margin, ridge on ventral surface of abdominal segment 1 lightly sclerotized. Prothorax subquadrate, transverse, 0.6 times as long as wide, slightly shorter and narrower than meso- and metathorax; surface of prosternum smooth, two prominent setae at anterolateral angles and one prominent seta at posterolateral angles; prosternum trapezoidal, sides oblique, posterior margin straight, sternum with a pair of medial setae posterior to posterior margin of presternum. Mesothorax and metathorax transverse, 0.5 times as long as wide, sides curved, dorsal surface smooth with one prominent seta on posterolateral angle; sternum without well-defined subdivisions, smooth with a pair of discal setae near anterior margin; spiracular sclerite projecting strongly from lateral margin, spiracles annular-biforous, angled posterolaterally. Legs moderately long, 5-segmented, sparsely setose, tarsungulus with a pair of ventrobasal setae side by side.

Abdomen (Fig. 6D-F): segments 1-7 transverse, widest at about posterior 1/3, dorsal surface

smooth with one or two setae anterior to spiracles and two posterior to spiracles, two pairs of short discal setae posterior to transverse ridges, ventral surface with two prominent setae at lateral margin, one short seta posterior to lateral setae, three pairs of discal setae present. Segment 8 slightly enlarged, lateral margin with two processes bearing setae, posterolateral angles acute, with dense short setae. Tergum 9 forming a basally forked process, directed upwardly; base of process with a pair of short, apically forked processes, one short seta on apex of forked process; anterior margin with lateral curved processes projecting from tergum 8; sternum 9 reduced and concealed above.

Materials examined: 1 ♂, India: W. Bengal, Pasibhanjang, elev. 3410 m Singaila Ridge, 4 Nov. 1981, leg. M. Sakai (CMS); 1 ♀, W. Bengal, Thakham, elev. 3350 m Singaila Ridge, 3 Oct. 1983, leg. M. Sakai (EUMJ); 6 ♂♂, 1 ♀, Laos: XamNeua, PhuPan, elev. 1750 m, 16-20 May 2004, leg. M. Sato (CMS, NMNS, RCBAS); 1 ♀, same locality and collector, 16-21 June 2003 (RCBAS); 1 larva, same locality and collector, 16 Oct. 2005 (RCBAS); 1 ♀, N. Thailand: Doi Inthanon, 4 July 1990 (CMS); 1 ♀, Japan: Gifu Pref. Hirugano, 9 July 1947, leg. K. Ohbayashi (EUMJ); 1 ♂, Gifu Pref. Kude, 5 June 1949 (CMS); 1 ♂, Japan: Gifu Pref. Hirayu, 3 Aug. 1955, leg. M. Sato (CMS); 1 ♂, Aomori Pref. Towada, 22 Aug. 1956, leg. K. Shimoyama (RCBAS); 1 ♀, Aomori Pref. Hiraka-cho, 22 May 1958, leg. K. Shimoyama (RCBAS); 1 ♂, Fukushima Pref. Hinoemata, Oze, 11 Oct. 1966, leg. N. Ohbayashi (EUMJ); 2 ♀♀, Iwate Pref. Mt. Hayachinesan, 17 June 1969 (EUMJ); 1 ♂, Yamanashi Pref. Daibosatsu-toge, 3 Aug. 1986, leg. M. Satô (CMS); 2 ♀♀, Taiwan: Hsinchu, Wufeng (= Satono), Feb.-Mar. 1939, leg. T. Mitono (TARI); 1 ♂, Taichung, Anmashan, 25-28 June 2002, leg. M. Satô (CMS); 3 ♂♂, same locality as preceding, 2-5 July 2005, leg. S.T. Hisamatsu (EUMJ); 3 ♂♂, same locality and date as preceding, leg. H. Y. Lee (RCBAS); 1 ♂, 1 ♀, 1 larva, same locality as preceding, 1 July 2005, leg. C. F. Lee (RCBAS); 1 ex., Nantou, Sungkang-Meifeng (elev. 2044-2127 m) 19 May 1969, leg. S. Hisamatsu (EUMJ); 1 ♀, Nantou, Weishangshan, 19 June 1989; 1 ♂, Chiayi, Alishan (= Arisan), July 1929, leg. M. Chûjô (TARI); 1 ♀, same locality and collector, 25 May 1933 (TARI); 1 ♂, Ilan, Taipingshan (= Taiheizan), 26 Apr. 1935, leg. Y. Miwa (TARI); 1 ♀, same locality and collector as preceding, May 1935 (TARI); 1 ♂, same locality and collector as preceding, 6 May 1935 (TARI); 1

ex., same locality as preceding, 5 Apr. 1987, leg. C. F. Lee (RCBAS); 1 ♂, Kaohsiung, Chiah sien (= Kosempo), 22 May, leg. H. Sauter (DEI).

Distribution: India, Laos (new record), Thailand (new record), China, Taiwan, Japan.

***Cucujus nigripennis* sp. nov.**

(Figs. 1F, 2F, 3F, 4E, 5E)

Holotype ♂: "Holuan, TAIWAN Nantou Hsien 20-X-2002 M. Sato leg." (NMNS).

Paratypes: 1 ♂: "TAIWAN: Nantou Shitou, 14.XII.2004 leg. C. F. Lee" (RCBAS); 1 ♀: "TAIWAN: Ilan Taipingshan, 1.IV.2004, leg. C. F. Lee" (CMS); 1 ♂: "Miyama, Taito (= Taitung, Taiwan) III.20.1934 Col. R. Takahashi" (TARI); 1 ♂: "TAIWAN: Hualien Co. 0.4 Km S. 0.9 Km W. Lo-ma-wang-shan ~1850 M 10.V.1974 F.J. Santana" (FSCA).

Description: Length 15.3-17.2 mm. Color dark brown, but with black elytra (Fig. 1F). Head with two pairs of long setae behind eyes close to each other and several pairs of setae on anterior area of clypeus; mandibles with scattered short setae, long setae along base of apical teeth; temples with scattered setae. Pronotum with median depression, punctures reduced in center of depression, prominent in depressions, with short setae along lateral margins (Fig. 2F). Elytra with prominent punctures, without wax (Fig. 3F), several long setae near apices, one pair of long setae on bases. Apex of median lobe tube-like. Median strut relatively shorter, about 1.7 times as long as median lobe (Fig. 4E). Parameres with dense long setae on apices, tiny setae scattered in ventral surface (Fig. 5E).

Etymology: The name refers to the coloration of the elytra.

Diagnosis: This new species is characterized by its black elytra.

Distribution: Taiwan.

Key to species of *Cucujus* from Taiwan, Japan, and China

1. Elytra blue or black 2
- Elytra red 3
2. Elytra blue (Fig. 1F) *C. mniszehi*
- Elytra black (Fig. 1E) *C. nigripennis*
3. Head smaller than prothorax, pronotum with tubercles (Fig. 1A) *C. chinensis*
- Head equal or longer than prothorax, pronotum with depressions 4
4. Elytra without wax (Fig. 3B) *C. coccinatus*
- Elytra covered with wax (Fig. 3C, D) 5
5. Pronotum and head reddish-brown *C. h. haematodes*

- Pronotum and head black *C. h. opacus*

Species removed from Taiwan fauna

***Cucujus bicolor* Smith, 1851**

Cucujus bicolor Smith 1851: 2. (replacement name: *Cucujus sanguinolentus* Hope).

Cucujus sanguinolentus Hope 1831: 27. (nec Linneaus 1767).

This species was illustrated and recorded from Taiwan by Katô (1933); however, based on the Nepalese one in "Shiraki's specimens", the record seems to be incorrect. The problem was earlier pointed out by Kurosawa (1980).

Distribution: Nepal.

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