Zootaxa 5410 (3): 301–316
https://www.mapress.com/zt/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

https://doi.org/10.11646/zootaxa.5410.3.1
http://zoobank.org/urn:lsid:zoobank.org:pub:7E049611-EC64-4B90-9256-63C9CF9E888A

Revision of the rare *Buprestis* subgenus *Akiyamaia* Kurosawa, 1988 (Coleoptera: Buprestidae: Buprestinae), with description of two new species

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Abstract

In this paper, two new species of *Buprestis* subgenus *Akiyamaia* Kurosawa, 1988 are described: *B*. (*A*.) *gengmini* Qi & Song, **new species** from Yunnan Province, China and *B*. (*A*.) *wenii* Qi & Song, **new species** from Yen Bai Province, Vietnam. The descriptions and illustrations of two new species are provided, and the diagnostic characters are provided to distinguish the two new species from other related species. A key is given for identification of all *Akiyamaia* species.The holotype of *B*. (*A*.) *costipennis* (Fairmaire, 1891) and pictures of living individuals are illustrated for the first time.

Key words: jewel beetle, taxonomy, new species, key, China, Vietnam

Introduction

Akiyamaia Kurosawa, 1988 is a small subgenus of the genus *Buprestis* Linnaeus, 1758 with only five species, all distributed in Asia: *B*. (*A*.) *costipennis* (Fairmaire, 1891), *B*. (*A*.) *intercostata* Huang & Pan, 2015, *B*. (*A*.) *lebisi* Descarpentries, 1956, *B*. (*A*.) *mirabilis* Kurosawa, 1969 and *B*. (*A*.) *samanthae* (Hattori & Tanaka, 2007) (Kurosawa, 1988; Bellamy, 2008; Huang & Pan, 2015; Kubáň, 2016; Peng *et al.*, 2021). Huang & Pan (2015) collated a detailed research history of the subgenus and provided an annotated list.

Material and methods

All specimen habitus and living individuals photographs were taken using a Canon 5D mark IV digital camera with Canon EF 100 mm USM macro lens. A Canon MT-26EX twin flash was used as the light source. Photographs of detail features were photographed using a Keyence VHX-5000 digital microscope with a Keyence VH-Z20R zoom lens (20–200×). Figure 10 were taken using a Mi 11 Pro smartphone. The images were processed and combined into figures using Adobe Photoshop CC 2019. All photographs were taken by the authors except those with different captions. The morphological terminology follows Huang & Pan 2015, but “carina” is replaced by “costa”.

Abbreviations for collections in this study are:
CHTS—personal collection of Hai-Tian Song, Fuzhou, China;
CWIC—personal collection of Wen-I Chou, Taitung, China;
FAF—Fujian Academy of Forestry, Fuzhou, China;
MNHN—National Museum of Natural History, Paris, France.

Accepted by B. Levey: 16 Jan. 2024 published: 14 Feb. 2024

Measurement criteria are:
Body length: length between the apex of mandible and the elytral apex along the midline
Elytral length: length between the basal border and the apex of elytra along suture
Elytral width: widest part of the elytra
Head length: length between the apex of mandible and the anterior margin of pronotum along the midline
Head width: widest part of head
Pronotal length: length of the pronotum along the midline
Pronotal width: widest part of pronotum

Taxonomy

Family Buprestidae, Leach, 1815

Subfamily Buprestinae, Leach, 1815

Tribe Buprestini Leach, 1815

Genus *Buprestis* Linnaeus, 1758

Subgenus *Akiyamaia* Kurosawa, 1988

Type species of the subgenus: *Buprestis mirabilis* Kurosawa, 1969

Buprestis (*Akiyamaia*) *gengmini* Qi & Song, new species

(Chinese common name: 耿民吉丁)
Figs. 1A–C; 2A–J; 5A–B; 8A–B

Type locality. China, Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County, Zhonglu Township, Shuibaluo.

Type material. Holotype: ♀ (FAF), CHINA, Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County, [维西傈僳族自治县], Zhonglu Township [中路乡], Shuibaluo [水把洛], 27°14'44.2"N, 99°3'3.2"E, alt. 2260 m, 30.V.2022, Lin-Qiang Feng leg.

Description of the holotype. ♀ (Fig. 1A–C), body length 25.0 mm. Length of particular body parts: head (2.5 mm), pronotum (4.3 mm), elytra (18.1 mm); width: head (4.5 mm), pronotum (7.3 mm), elytra (8.7 mm).

Habitus (Fig. 1A–C). Dorsal surface of the body (Fig. 1A) tricoloured (mostly metallic red while head and pronotum somewhat metallic purple, and two metallic blue stripes on the elytra) with lustrous, head and pronotum moderately setose, elytra glabrous. Ventral surface of the body (Fig. 1C) metallic blue to metallic purple with lustre, covered with long white pubescence, pubescence on metacoxal plates, both sides of abdomen and all femora markedly denser and longer than on other areas. All femora and tibiae metallic purple with a hint of bronze; tarsi metallic blue to purple and black; all femora, tibiae and tarsi densely covered with white setae.

Head (Fig. 5A) transverse, about 0.6 times as wide as pronotum, not wider than anterior pronotal margin; vertex reticulately punctate with a narrow longitudinal median groove extending to frons; frons nearly 2.4 times as wide as eye, reticulately punctate, and with long white setae apically; clypeal suture indistinct; clypeus transverse with an arcuate anterior margin; anteclypeus yellowish-brown, exposed and glabrous; labrum subrectangular, transverse, covered with a few puncture and white setae near anterior margin; labium with a nearly flat anterior margin; mentum with an arcuate anterior margin; eye nearly 1/4 times as wide as head in dorsal view and nearly 1/7 times as wide as head in ventral view; maxillary palpus metallic blue to metallic purple. Antenna (Fig. 2A–F) nearly as long as the combined head and pronotum; scape longest, pear-shaped, 2.8 times as long as wide; pedicel ovoid, 1.4 times as long as wide; 3rd antennomere weakly triangular, bilaterally flattened, distinctly protruding at inner apex and 2.8 times as long as wide; antennomeres 4–10 subtriangular, bilaterally flattened, similarly shaped and longer than

wide; terminal antennomere (Fig. 2C–D) somewhat ovoid, notched triangularly at tip and 2.2 times as long as wide; antennomeres 4–11 with apical organs and lateral organs formed by fossae and fields of sensilla; apical organs (Fig. 2B) large, restricted to apical portion of ventral side of antennomeres 4–11; lateral organs (Fig. 2A–B) visible on dorsal and ventral sides of antennomeres 4–11, the ventral portions always larger than dorsal portions.

Pronotum (Fig. 5A) transverse, moderately convex, about 1.6 times as wide as long and widest near basal 1/3; anterior margin about 0.7 times as wide as posterior margin, slightly bisinuate, and weekly convex at middle; posterior margin bisinuate forming transverse arcuate elevation with smooth surface (relief) and interrupted at middle; posterior angles obtuse; lateral margins widely curved; an irregular longitudinal costa feebly marked along midline; lateral depressions shallow not obvious; punctures on pronotum denser and more irregular than on head, sparser on disc, denser on lateral side, and sparsely bearing longer white setae near anterior and lateral margins.

Scutellum (Fig. 5A) small, flat, obtusely pentagonal, without punctures, slightly wider than long; mostly metallic purple with a hint of metallic green.

Elytra (Fig. 1A) 4.6 times as long as pronotum, about 2.1 times as long as wide, widest at middle, with lateral margins parallel for more than half the length; humeral angles rounded; each elytron with six elevated costae, among them five usually presented in the same positions in most other species of the subgenus *Akiyamaia* (except *B*. (*A*.) *intercostata* Huang & Pan, 2015), and one short and inconspicuous additional costa (the blue circle in Fig. 5B) between the 5th costa and lateral margin near apical 1/3; all costae abruptly elevated and sparsely covered with very fine punctures; all intervals between suture, costae and lateral margins irregular granulate and glabrous. Elytra mostly metallic red with two metallic blue stripes extending from nearly the base to the apices, most parts of the stripes between 3rd costa and 4th costa, widest near apical 1/3, and the part from here to the apices between near end of 2nd costa and 5th costa.

Legs (Fig. 1A, C). Protibia abruptly dilated externally near apex and flattened there, with outer apex triangular and rounded, with two spurs and a setal tuft at apex of internal margin, and without hook or emargination at internal margin. Mesotibia gradually and slightly widened at apex, with outer apex rectangular and with two spurs at apex of internal margin. Metatibia hardly widened at apex, with outer apex rectangular and with two spurs at apex of internal margin.

Hindwing (Fig. 2G) dark at apical half. Terminology of venation follows that of Kukalová-Peck & Lawrence (1993). The vein MP_{3+4} with an obvious trace of root directed toward base of wing, form a branch and the lower one longer than the upper one; vein MP_{3a} attached to vein MP_{3b}.

Ventral side (Fig. 1C). Prosternum slightly convex, declivous from the lateral margins to midline, punctures on the anterior and lateral parts larger and denser, on the prosternal process smaller and sparser; anterior margin slightly curved; anterior angles weakly produced and obtuse; prosternal process (Fig. 2H) V-shaped, apex rounded. Metasternum with a complete longitudinal groove along midline and with an inconspicuous arcuate transverse groove, and a pair of deep depressions on the transverse groove. First ventrite with rather flat surface between metacoxae; apical margin of last visible ventrite (Fig. 2I) rounded.

Female genitalia. Ovipositor of the holotype illustrated on Fig. 2J.

Differential diagnosis. The new species is close to *Buprestis* (*Akiyamaia*) *lebisi* Descarpentries, 1956 , but can be clearly distinguished by the following combination of characters: 1) terminal antennomere with an obvious triangular notch at tip (Fig. 2C–D), rather than without an obvious triangular notch at tip (Fig. 2M–N); 2) elytra mostly metallic red with a pair of metallic blue stripes (Fig. 1A), rather than mostly metallic green with a pair of brownish red stripes (Fig. 1D, H); 3) each elytron with a short and inconspicuous additional costa (the blue circle in Fig. 5B) between the 5th costa and lateral margin near apical 1/3, rather than without an additional costa (the red circle in Fig. 5D); 4) vein MP_{3+4} of hindwing with an obvious root directed toward base of wing, forming a branch and the lower tip longer than the upper one (Fig. 2G), rather than vein MP_{3+4} extending a little toward base of wing to form a branch, and the lower one shorter than the upper one (Fig. 2Q); 5) the difference between the new species and *B*. (*A*.) *mirabilis* ovipositors are shown in Fig. 2J, T.

Etymology. The species is named in memory of Mr. Geng-Min Song (宋耿民, Fuzhou, Fujian, China), the father of the corresponding author, who recognized the corresponding author's interest in insects and accompanied him in collecting and learning. The name "Geng-Min" in Chinese means "loyal to the people", and the magical red color of the species fits well with this symbolism.

Distribution. China (Yunnan).

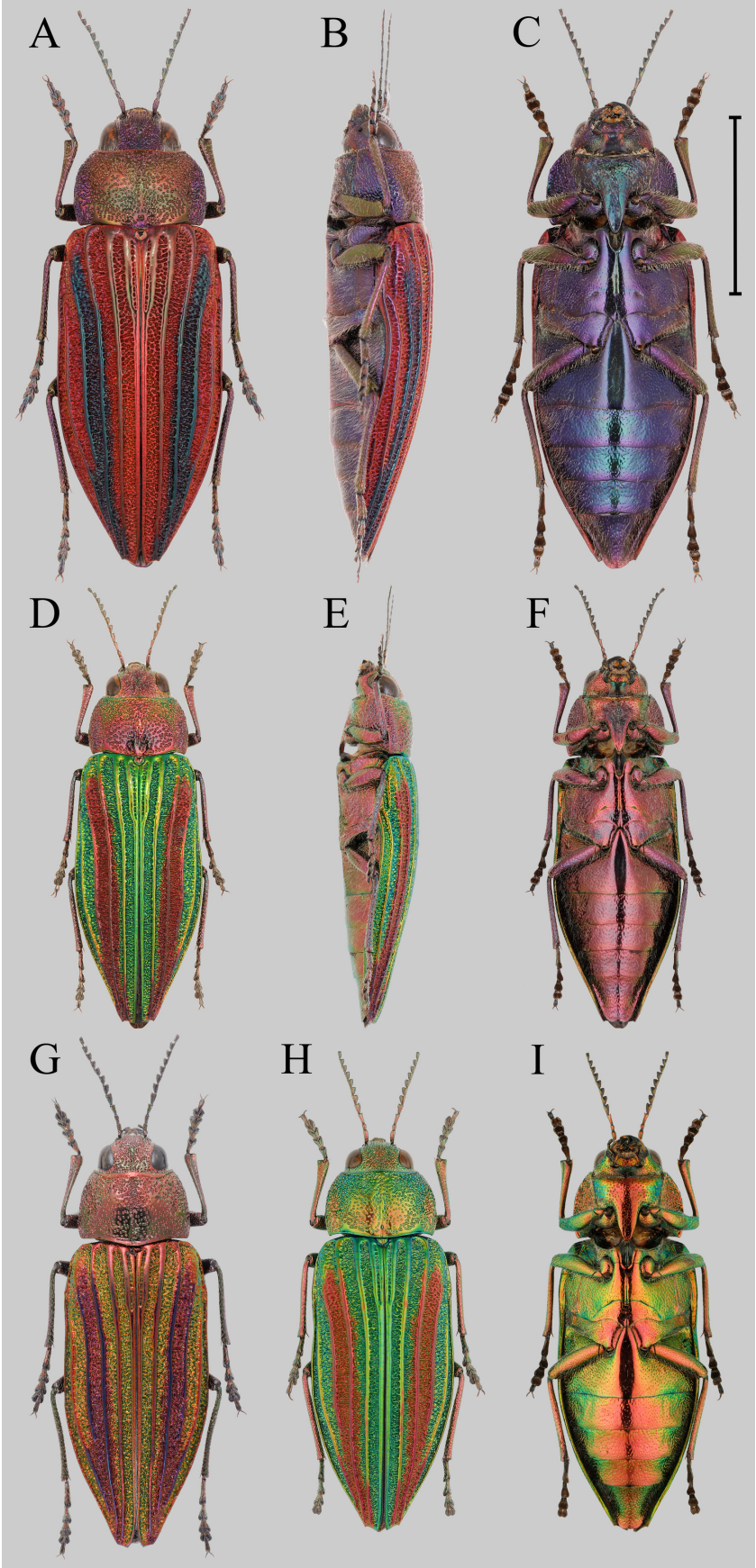

FIGURE 1. Female habitus of *Buprestis* subgenus *Akiyamaia* species. **A–C,** *B.* (*A.*) *gengmini* Qi & Song, **new species** (holotype, 25.0 mm, Weixi, Yunnan); **D–I,** *B.* (*A.*) *lebisi* Descarpentries, 1956 (19.6–22.4 mm, Weixi, Yunnan). **A, D, G–H,** dorsal view; **B, E,** lateral view; **C, F, I,** ventral view. Scale bar = 10.0 mm.

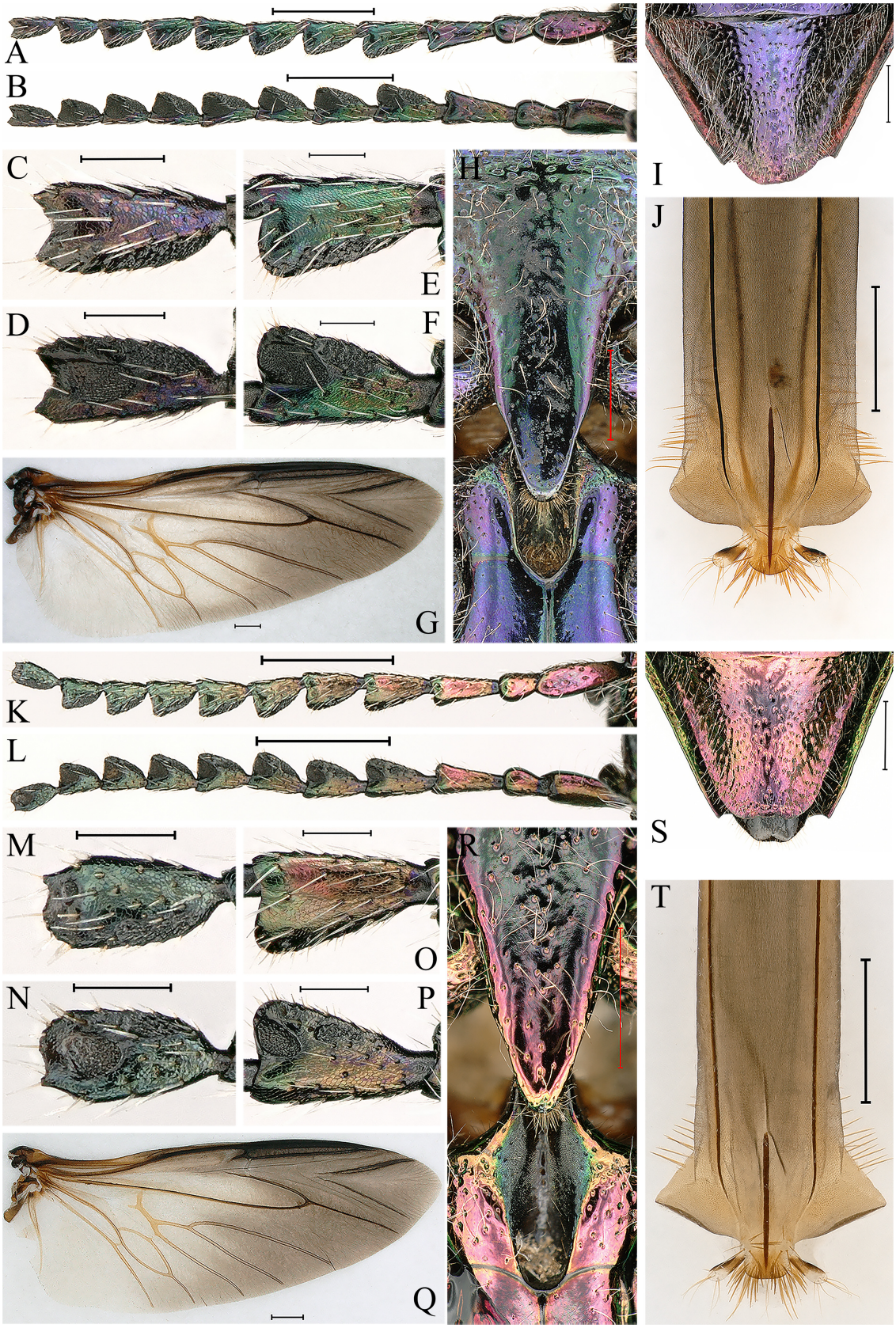

FIGURE 2. Female details of *Buprestis* subgenus *Akiyamaia* species. **A–J,** *B.* (*A.*) *gengmini* Qi & Song, **new species** (holotype, Weixi, Yunnan); **K–T,** *B.* (*A.*) *lebisi* Descarpentries, 1956 (Weixi, Yunnan); **A–B, K–L,** right antenna; **C–D, M–N,** right terminal antennomere; **E–F, O–P,** right antennomere 4; **G, Q,** right hindwing; **H, R,** prosternal process; **I, S,** last visible ventrite; **J, T,** ovipositor. **A, C, E, G, K, M, O, Q,** dorsal view; **B, D, F, H–J, L, N, P, R–T,** ventral view. Scale bars for C–F, M–P = 0.2 mm, for the others = 1.0 mm.

***Buprestis* (*Akiyamaia*) *wenii* Qi & Song, new species**
(Chinese common name: 文一吉丁)
Figs. 3D–F; 4K–T; 5G–H

Type locality. Vietnam, Yen Bai Province, Mu Cang Chai District.

Type material. Holotype: ♀ (FAF), VIETNAM, Yen Bai Province, Mu Cang Chai District, alt. 1700 m, VI.2021, local collector leg.

Description of the holotype. ♀ (Fig. 3D–F), body length 22.6 mm. Length of particular body parts: head (2.3 mm), pronotum (3.9 mm), elytra (16.9 mm); width: head (3.9 mm), pronotum (6.1 mm), elytra (7.8 mm).

Habitus (Fig. 3D–F). Dorsal surface of the body (Fig. 3D) multicoloured and lustred, mostly part metallic green to metallic purple, with three pairs of orange spots on the elytra. Head densely setose, pronotum (except disc) moderately setose, elytra glabrous. Ventral surface of the body (Fig. 3F) metallic purple with lustre, covered with long white pubescence, pubescence on prosternum, sides of abdomen and all femora markedly denser and longer than on other areas. All femora and tibiae metallic green to metallic purple with a hint of metallic blue; tarsi metallic green to metallic blue with a hint of metallic purple and black; all femora, tibiae and tarsi densely covered with white setae.

Head (Fig. 5G) transverse, about 0.6 times as wide as pronotum, not wider than anterior pronotal margin; vertex reticulately punctate with a white seta in most punctures, and with a narrow longitudinal median groove extending to frons, there are a pair of irregular oblique ridges that begin in the middle of the groove and slope to the sides and end near the eye; frons nearly twice as wide as eye, reticulately punctate, and with long white setae laterally and apically (Fig. 5G, see red frame); clypeal suture indistinct; clypeus transverse with a nearly straight anterior margin; anteclypeus yellowish-brown, exposed and glabrous; labrum subrectangular, transverse, covered with a few punctures and yellow setae near anterior margin; labium with a nearly flat anterior margin; mentum with an arcuate anterior margin; eye nearly 1/4 times as wide as head in dorsal view and nearly 1/5 times as wide as head in ventral view; maxillary palpus metallic green to metallic blue. Antenna (Fig. 4K–P) slightly shorter than the combined length of head and pronotum; scape longest, pear-shaped, three times as long as wide; pedicel ovoid, 1.6 times as long as wide; 3rd antennomere weakly triangular, bilaterally slightly flattened, moderately protruding at inner apex and 2.7 times as long as wide; antennomeres 4–10 subtriangular, bilaterally flattened, similarly shaped and longer than wide; terminal antennomere (Fig. 4M–N) somewhat ovoid, not notched at tip and 2.2 times as long as wide; antennomeres 4–11 with apical organs and lateral organs formed by fossae and fields of sensilla; apical organs (Fig. 4L) large, restricted to apical portion of ventral side of antennomeres 4–10, and restricted to near apical 1/6 of ventral side of terminal antennomere; lateral organs (Fig. 4K–L) visible on dorsal and ventral sides of antennomeres 4–11, the ventral portions always larger than dorsal portions.

Pronotum (Fig. 5G) transverse, moderately convex, about 1.6 times as wide as long and widest near basal 1/5; anterior margin about 0.7 times as wide as posterior margin, bisinuate, and moderately convex at middle; posterior margin bisinuate and not carinate; posterior angles acute; lateral margins widely curved; longitudinal carina absent; lateral depressions on sides with convex disc, shallow and not obvious; punctures on pronotum denser, more irregular, and bearing white sparse setae near anterior and lateral margins.

Scutellum (Fig. 5G) small, flat, sub-round, without punctures, as wide as long; metallic purple.

Elytra (Fig. 3D) 4.5 times as long as pronotum, about 2.2 times as long as wide, widest near middle, with lateral margins parallel for more than half the length; humeral angles rounded; each elytron with five elevated costae, that are usually found in the same positions in most other species of the subgenus *Akiyamaia* (except *B*. (*A*.) *intercostata* Huang & Pan, 2015 and *B*. (*A*.) *gengmini* Qi & Song, **new species**); all costae abruptly elevated and sparsely covered with very fine punctures; all intervals between suture, costae and lateral margins irregularly granulate and glabrous; the sutural angle of elytron significantly extended (the red circle in Fig. 5H). Elytra mostly metallic green to metallic purple and with three pairs of orange spots, the upper pair oblique, broad and largest, near basal 1/4, between 3rd costa and 5th costa; the middle pair wider, slightly transverse, behind the mid-length, between 3rd costa and 5th costa; the lower pair small and narrow, near the apices, between 3rd costa and 5th costa.

Legs (Fig. 3D, 3F). Protibia abruptly dilated externally near apex and flattened there, with outer apex triangular and rounded, with two spurs and a setal tuft at apex of internal margin, and without hook or emargination at internal margin. Mesotibia gradually and slightly widened toward apex, with outer apex rectangular and with two spurs at apex of internal margin. Metatibia gradually and slightly widened toward apex, with outer apex rectangular and with two spurs at apex of internal margin.

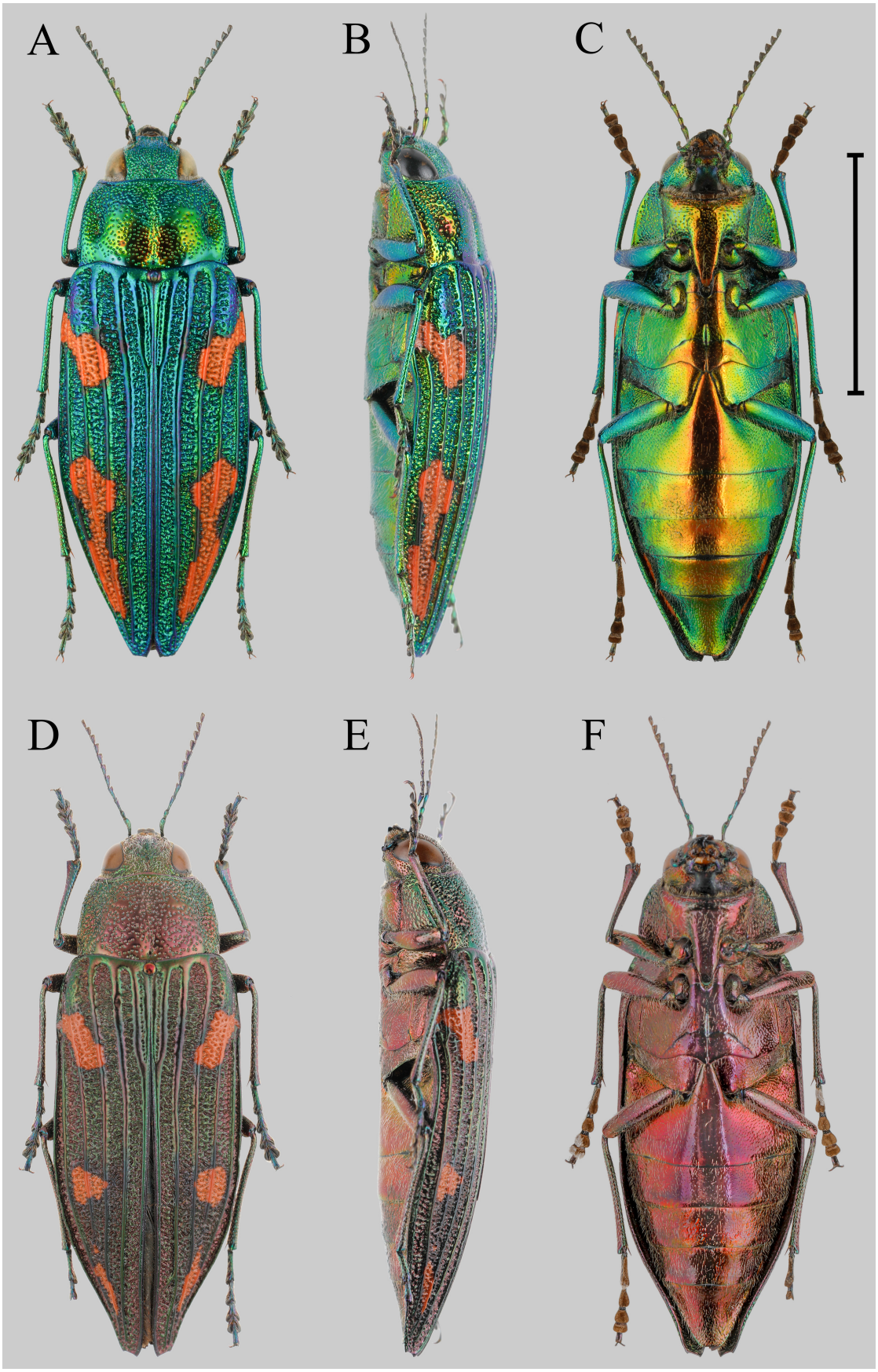

FIGURE 3. Female habitus of *Buprestis* subgenus *Akiyamaia* species. **A–C,** *B*. (*A*.) *mirabilis* Kurosawa, 1969 (22.3 mm, Nantou, Taiwan); **D–F,** *B*. (*A*.) *wenii* Qi & Song, **new species** (holotype, 22.6 mm, Mu Cang Chai, Yen Bai). **A, D,** dorsal view; **B, E,** lateral view; **C, F,** ventral view. Scale bar = 10.0 mm.

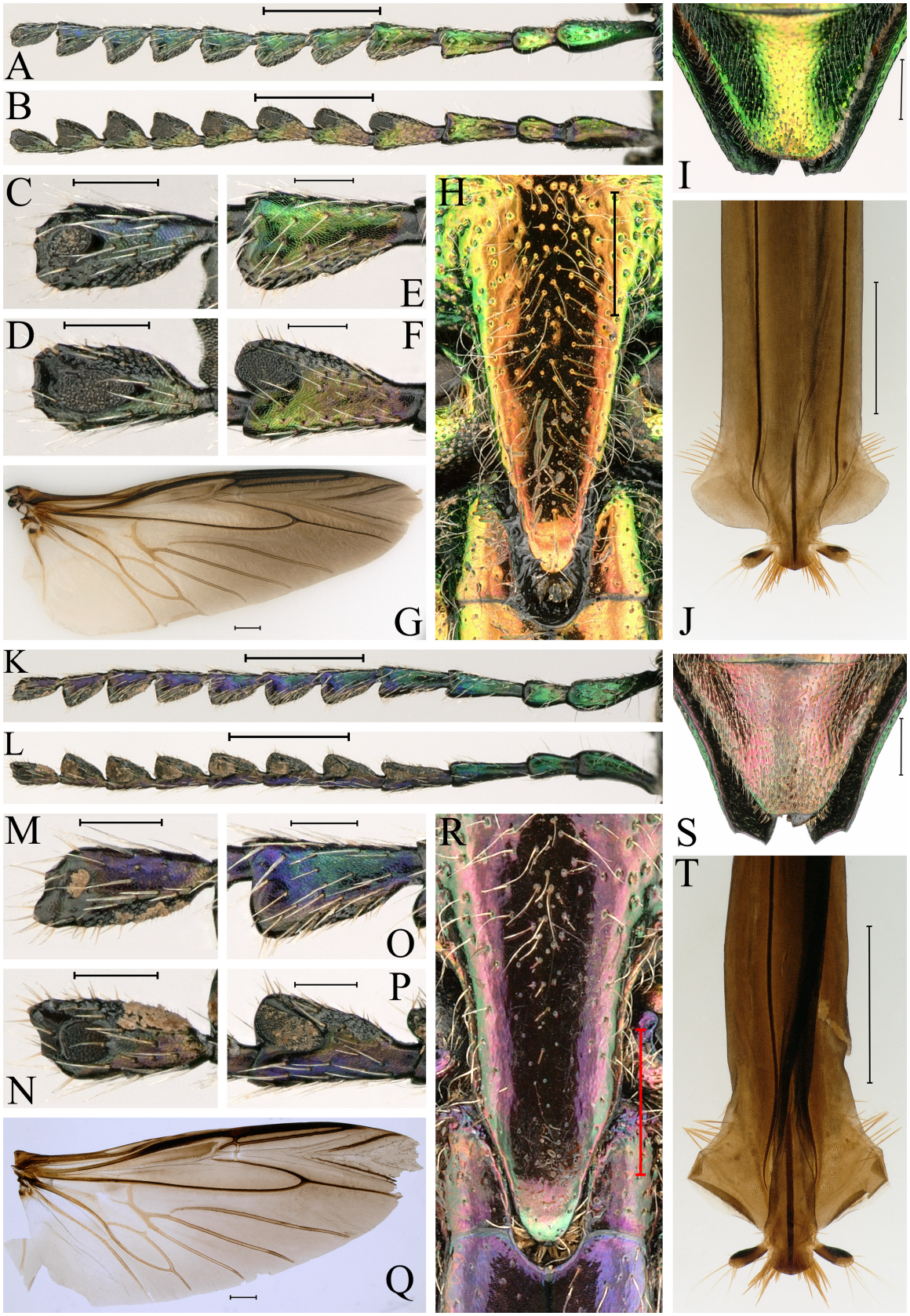

FIGURE 4. Female details of *Buprestis* subgenus *Akiyamaia* species. **A–J,** *B.* (*A.*) *mirabilis* Kurosawa, 1969 (Nantou, Taiwan); **K–T,** *B.* (*A.*) *wenii* Qi & Song, **new species** (holotype, Mu Cang Chai, Yen Bai); **A–B, K–L,** right antenna; **C–D, M–N,** right terminal antennomere; **E–F, O–P,** right antennomere 4; **G, Q,** right hindwing; **H, R,** prosternal process; **I, S,** last visible ventrite; **J, T,** ovipositor. **A, C, E, G, K, M, O, Q,** dorsal view; **B, D, F, H–J, L, N, P, R–T,** ventral view. Scale bars for C–F, M–P = 0.2 mm, for the others = 1.0 mm.

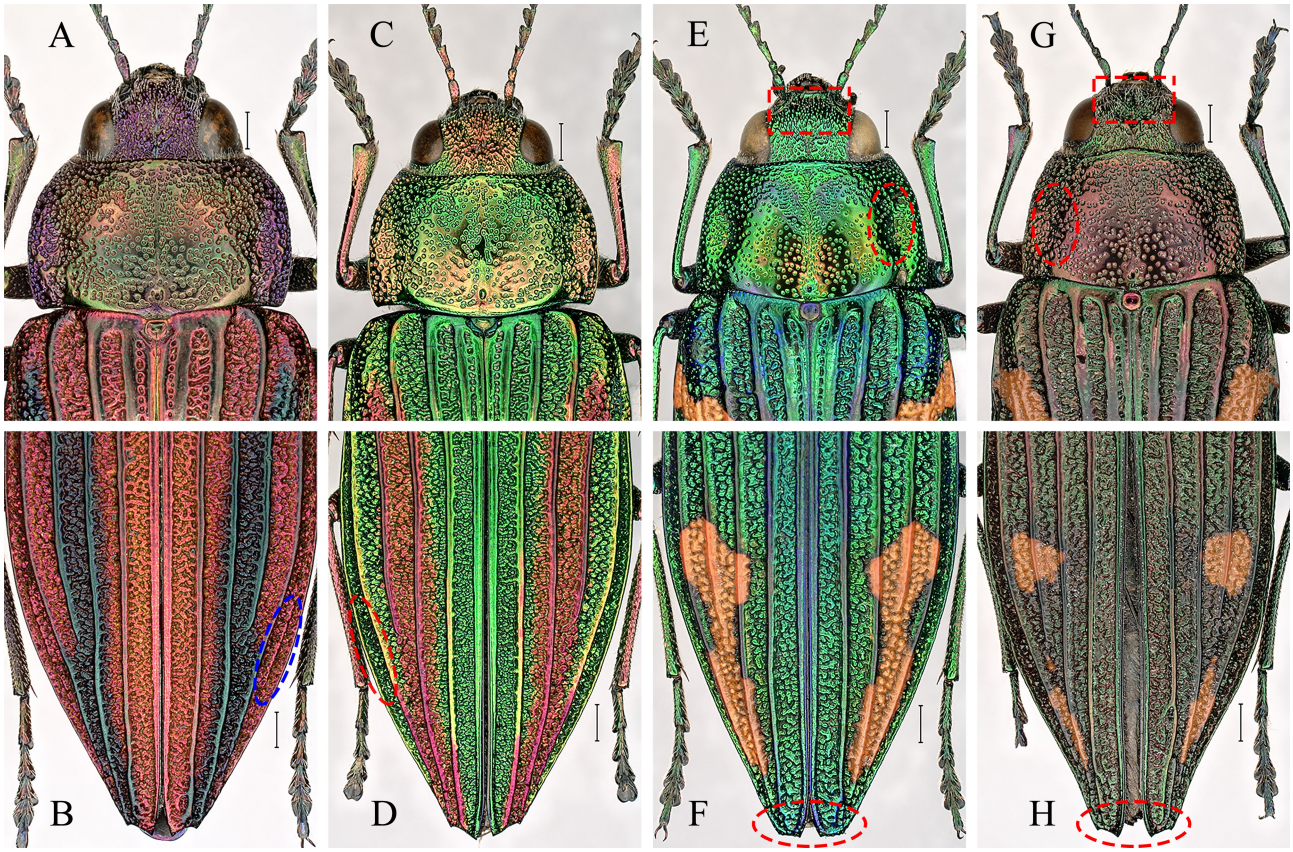

FIGURE 5. Female details of *Buprestis* subgenus *Akiyamaia* species (dorsal view). **A–B,** *B*. (*A*.) *gengmini* Qi & Song, **new species** (holotype, Weixi, Yunnan); **C–D,** *B*. (*A*.) *lebisi* Descarpentries, 1956 (Weixi, Yunnan); **E–F,** *B*. (*A*.) *mirabilis* Kurosawa, 1969 (Nantou, Taiwan); **G–H,** *B*. (*A*.) *wenii* Qi & Song, **new species** (holotype, Mu Cang Chai, Yen Bai); **A, C, E, G,** details of head, pronotum and scutellum; **B, D, F, H,** details of elytra. Scale bar = 1.0 mm.

Hindwing (Fig. 4Q) slightly brown at apical 2/3. The vein MP_{3+4} with an obvious trace of root directed toward base of wing, form a branch and the lower one as long as the upper one; vein MP_{3a} joined to MP_{3b} but not sclerotised at the joint.

Ventral side (Fig. 3F). Prosternum slightly convex, declivous from the lateral margins to midline, punctures on the anterior and lateral parts larger and denser, on the prosternal process smaller and sparser; anterior margin slightly curved; anterior angles produced and acute; prosternal process (Fig. 4R) V-shaped, apex rounded. Metasternum with a complete longitudinal groove along midline, basal 2/3 deeper, and with an obvious arcuate transverse groove. First abdominal ventrite with rather flat surface between metacoxae; apical margin of last visible ventrite (Fig. 4S) nearly straight.

Female genitalia. Ovipositor of the holotype illustrated on Fig. 4T.

Differential diagnosis. This new species is similar to *Buprestis* (*Akiyamaia*) *mirabilis* Kurosawa, 1969, but can be easily distinguished from the latter by the following combination of characters: 1) frons with dense long white setae (the red frame in Fig. 5G) rather than with sparse short white setae (the red frame in Fig. 5E); 2) lateral depressions of pronotum shallower and not obvious (the red circle in Fig. 5G), rather than lateral depressions deeper and obvious (the red circle in Fig. 5E); 3) elytra moderately lustrous with three pairs of spots (other patterns may exist), rather than strongly lustrous, mostly with two pairs of stripes (vide Hattori, 2001); 4) the sutural angle of elytron significantly extended (the red circle in Fig. 5H), rather than the sutural angle almost not extended (the red circle in Fig. 5F); 5) the differences of ovipositors between the new species and *B*. (*A*.) *mirabilis* are shown in Fig. 4J, T.

Etymology. The species is named after Dr. Wen-I Chou (周文一, Taitung, Taiwan, China), who kindly provided many important specimens for our research.

Distribution. Vietnam (Yen Bai).

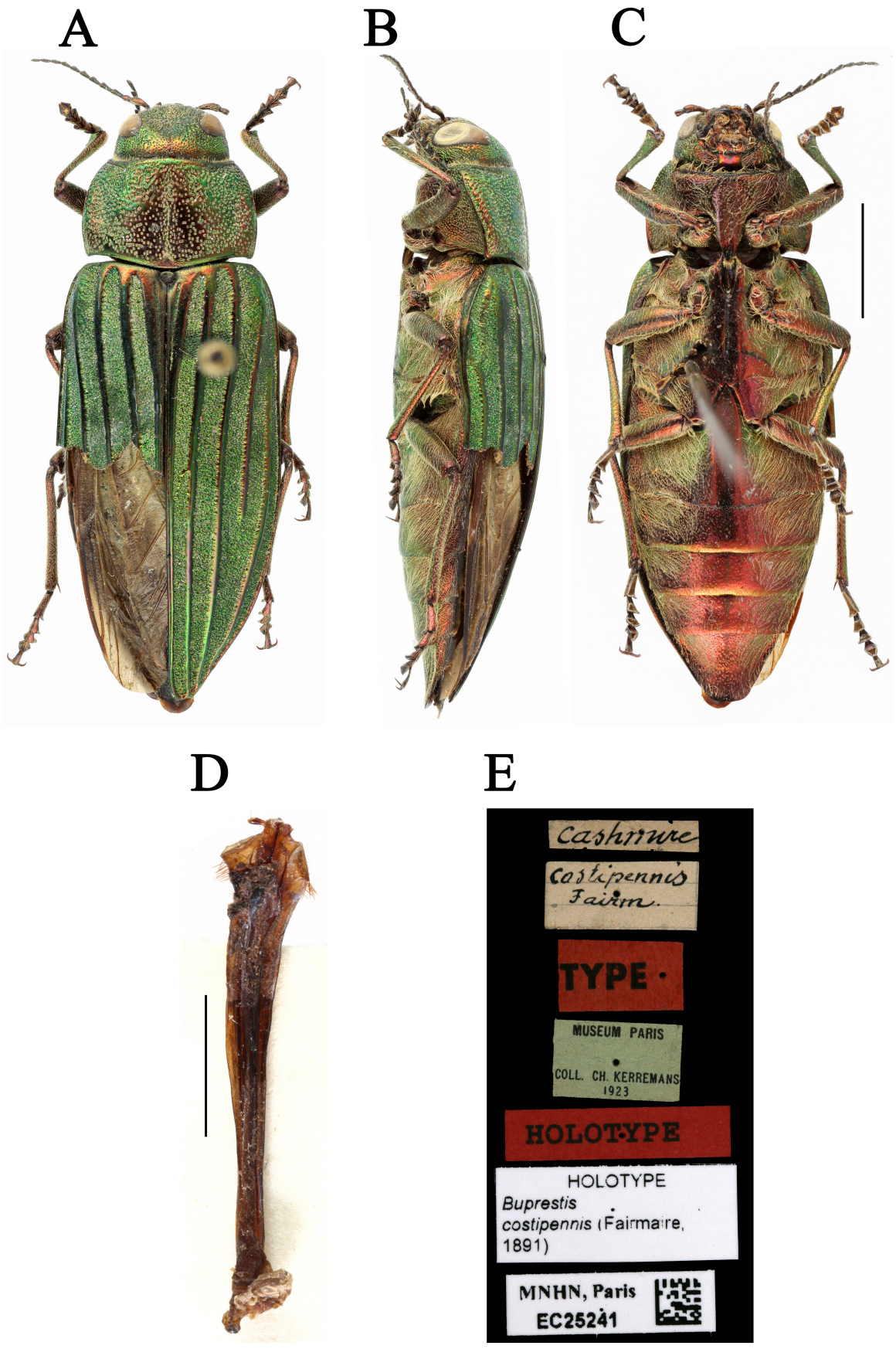

FIGURE 6. The holotype of *Buprestis* (*Akiyamaia*) *costipennis* (Fairmaire, 1891) (female, Kashmir, MNHN, photo by Antoine Mantilleri). **A–C,** habitus; **D,** ovipositor; **E,** labels. **A,** dorsal view; **B,** lateral view; **C–D,** ventral view. Scale bars for A–C = 5.0 mm, for D = 2.0 mm.

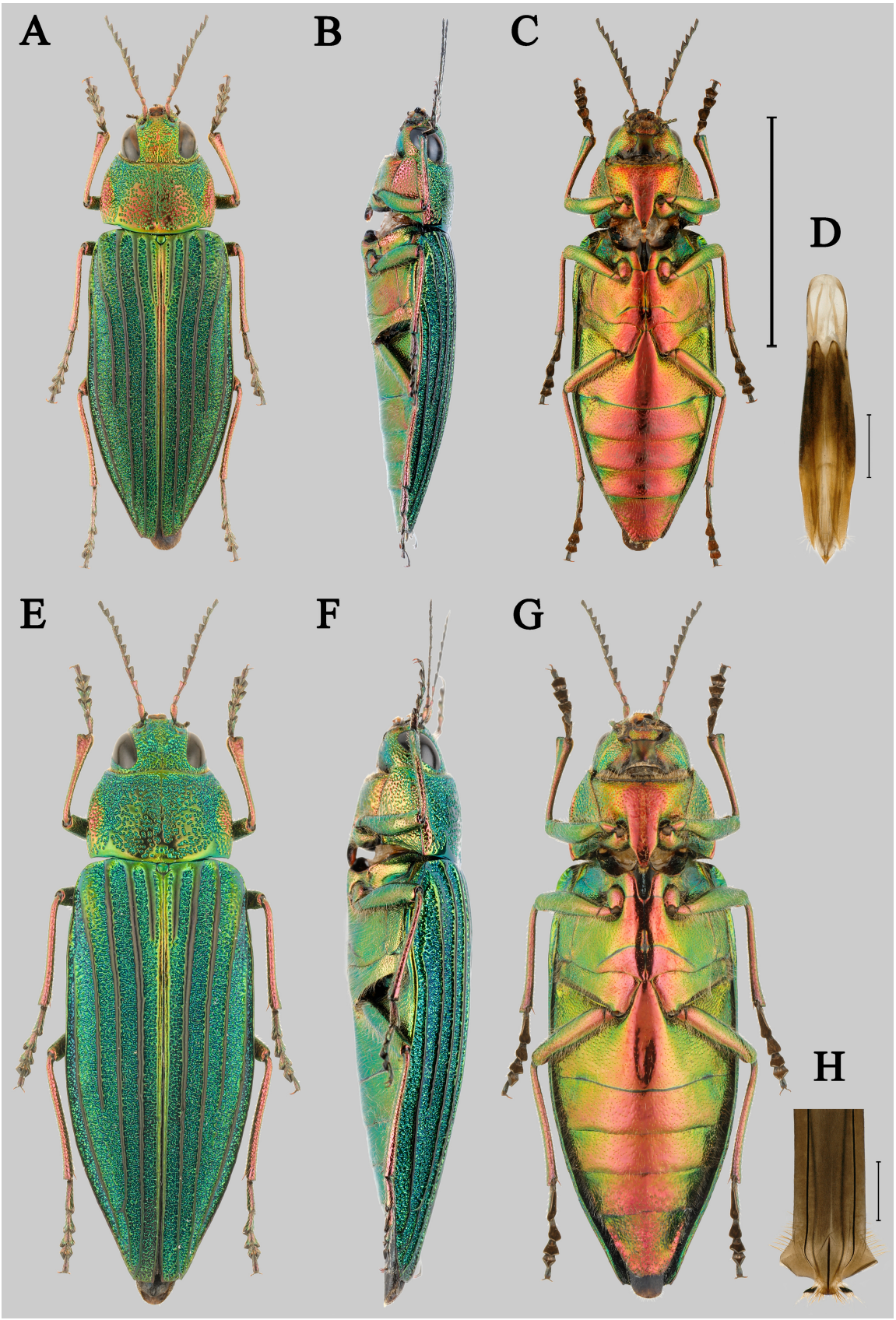

FIGURE 7. Habitus and genitalia of *Buprestis* (*Akiyamaia*) *samanthae* (Hattori & Tanaka, 2007). **A–C,** male (18.8 mm, Weixi, Yunnan); **D,** aedeagus; **E–G,** female (24.9 mm, Weixi, Yunnan); **H**, ovipositor. **A, D, E** dorsal view; **B, F,** lateral view; **C, G–H,** ventral view. Scale bars for D, H = 1.0 mm, for the others = 10.0 mm.

Buprestis (*Akiyamaia*) *costipennis* (Fairmaire, 1891)

Fig. 6A–D

Ancylocheira costipennis Fairmaire, 1891: cxxvii.
Buprestis impressicollis Kerremans, 1892: 172.
Buprestis kashmirensis Stebbing, 1914: 212.
Cypriacis (*Himalobuprestis*) *costipennis*: Kurosawa, 1988: 266.
Buprestis (*Akiyamaia*) *costipennis*: Kubáň, 2006: 41.
Akiyamaia (*Himalobuprestis*) *costipennis*: Hattori & Tanaka, 2007: 328, fig. 3.

Type locality. Kashmir.

Material examined. 1♀ (holotype, MNHN), Kashmir, the labels showed in Fig. 6E.

Distribution. Afghanistan; India; Pakistan.

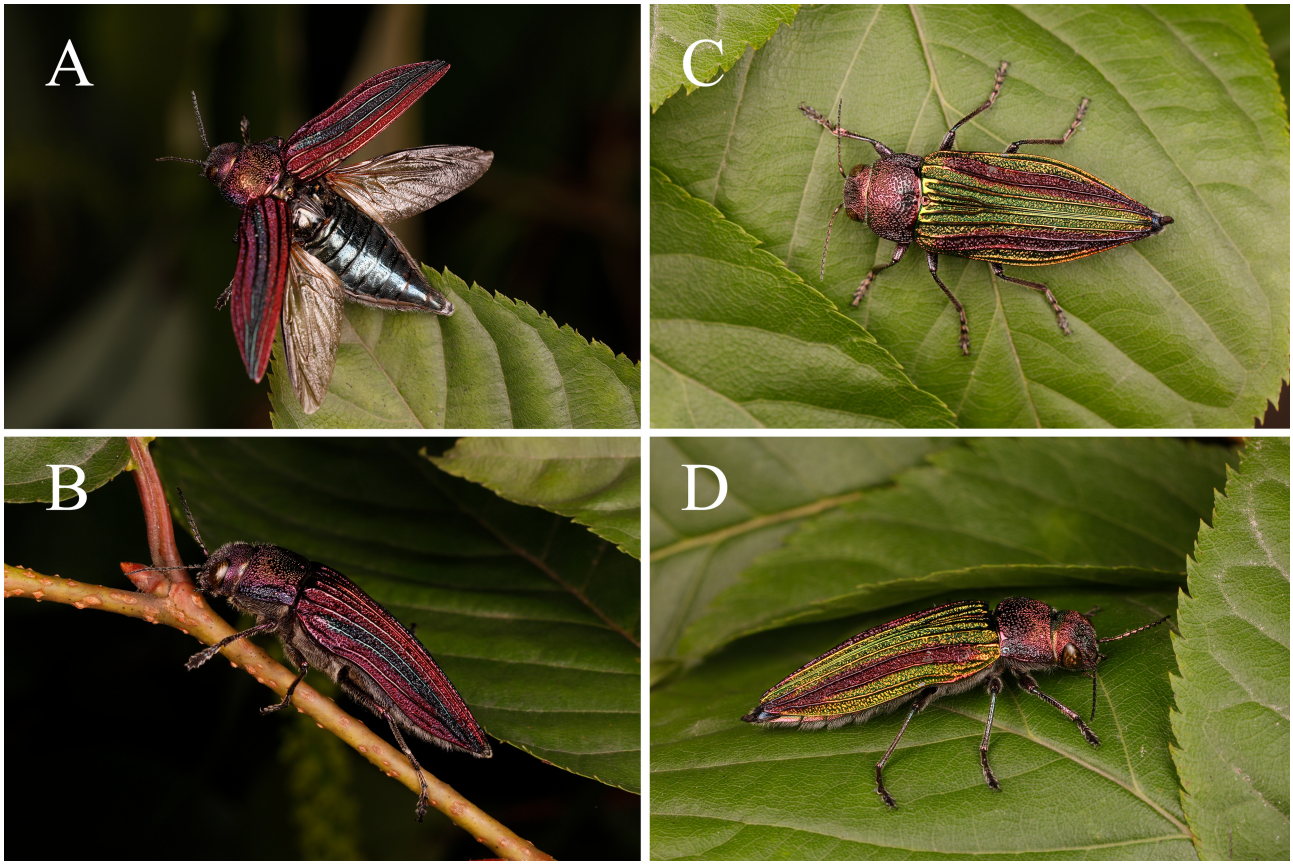

FIGURE 8. The living individuals of *Buprestis* subgenus *Akiyamaia* species. **A–B,** *B*. (*A*.) *gengmini* Qi & Song, **new species** (female, holotype, Weixi, Yunnan); **C–D,** *B*. (*A*.) *lebisi* Descarpentries, 1956 (female, Weixi, Yunnan). **A, C,** dorsal view; **B, D,** lateral view.

Buprestis (*Akiyamaia*) *intercostata* Huang & Pan, 2015

Fig. 9C–D

Buprestis (*Akiyamaia*) *intercostata* Huang & Pan, 2015: 389.

Type locality. China, Tibet, Linzhi City, Chayu County.

Material examined. Not examined, but with a reliable photographic record. CHINA: 1 (sex unknown), Tibet, Linzhi City, Bomi County [波密县], Yigong [易贡], 18. IV.2020, by Ri-Na Su and Wa Da.

Distribution. China (Tibet).

FIGURE 9. The living individuals of *Buprestis* subgenus *Akiyamaia* species. **A,** *B*. (*A*.) *samanthae* (Hattori & Tanaka, 2007) (male, Weixi, Yunnan); **B,** *B*. (*A*.) *samanthae* (Hattori & Tanaka, 2007) (female, Weixi, Yunnan) **C–D,** *B*. (*A*.) *intercostata* Huang & Pan, 2015 (sex unknown, Bomi, Tibet, by Ri-Na Su and Dawa). **A–C,** dorsal view; **D,** lateral view.

Buprestis (*Akiyamaia*) *lebisi* Descarpentries, 1956

Figs. 1D–I; 2K–T; 5C–D; 8C–D

Buprestis (*Cypriacis*) *lebisi* Descarpentries, 1956: 230.
Cypriacis (*Akiyamaia*) *lebisi*: Kurosawa, 1988: 265.
Buprestis (*Akiyamaia*) *lebisi*: Kubáň, 2006: 41.
Akiyamaia (*Akiyamaia*) *lebisi*: Hattori & Tanaka, 2007: 328, fig. 4.

Type locality. China, Northern Yunnan.

Material examined. CHINA: 1♀ (CHTS), Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County [维西傈僳族自治县], Zhonglu Township [中路乡], Shuibaluo [水把洛], 27°14'44.2"N, 99°3'3.2"E, alt. 2260 m, 24.V.2022, Lin-Qiang Feng leg.; 1♀(CHTS), Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County [维西傈僳族自治县], Zhonglu Township [中路乡], Luopuju [倮普咀], alt. 2600–2800 m, 5.VI.2022, Bai-Jun Li leg; 1♀(CHTS), Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County [维西傈僳族自治县], Zhonglu Township [中路乡], Shuibaluo [水把洛], alt. 2250 m, 15.VII.2022, Guo-Cheng Feng leg.; 1♀(CHTS), same collection data as for preceding but 16.VII.2022, Guo-Xiang Feng leg. (in the spider web).

Distribution. China (Yunnan), Nepal.

Remarks. In the specimens of *B*. (*A*.) *lebisi* we have examined, the elytra are usually metallic green with a pair of brownish red stripes. However, we observed that the elytra of two other specimens appeared metallic yellow with a pair of purple stripes (Fig. 1G), which are not significantly different from the species in other features. We identified that these two specimens were also *B*. (*A*.) *lebisi*. Since they were already in the mummified state when collected in the wild, we believe that the different elytral colour might be caused by the long-term exposure to strong sunlight.

FIGURE 10. Natural habitat of *Buprestis* (*Akiyamaia*) *gengmini* Qi & Song, **new species**, *B*. (*A*.) *lebisi* Descarpentries, 1956 and *B*. (*A*.) *samanthae* (Hattori & Tanaka, 2007) in Yunnan Province, Weixi Lisu Autonomous County, Zhonglu Township, Shuibaluo.

Buprestis (*Akiyamaia*) *mirabilis* Kurosawa, 1969

Figs. 3A–C; 4A–J; 5E–F

Buprestis (*Cypriacis*) *mirabilis* Kurosawa, 1969: 191, pl. 1, fig.1.
Cypriacis (*Akiyamaia*) *mirabilis*: Kurosawa, 1988: 265, fig 4.
Cypriacis mirabilis: Akiyama & Ohmomo, 2000: 207, pl. 78, no. 945.
Buprestis (*Akiyamaia*) *mirabilis*: Kubáň, 2006: 41.
Akiyamaia (*Akiyamaia*) *mirabilis*: Hattori & Tanaka, 2007: 328, fig. 5.

Type locality. China, Taiwan, Tachien.

Material examined. CHINA: 1♀ (CWIC), Taiwan Province, Nantou County [南投县], Renai Township [仁爱乡], Songcyuangang[松泉岗] alt. 2500 m, 2.VII.2014, Wen-I Chou leg.

Adult host plant. *Abies kawakamii* (Ong & Hattori, 2019), *Chamaecyparis formosensis*, *Chamaecyparis obtusa*, *Pinus taiwanensis* and *Tsuga chinensis* (Hai-Tian Song's personal communication with Wen-I Chou in 2023)

Distribution. China (Taiwan).

Buprestis (*Akiyamaia*) *samanthae* (Hattori & Tanaka, 2007)

Figs. 7A–H; 9A–B

Akiyamaia (*Akiyamaia*) *samanthae* Hattori & Tanaka, 2007: 328, figs. 1-2.
Buprestis (*Akiyamaia*) *samanthae*: Bellamy, 2008: 1069.

Type locality. Myanmar, Kachin, Chudu-Razi.

Material examined. CHINA: 2♀♀ (CHTS), Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County [维西傈僳族自治县], Zhonglu Township [中路乡], Labuduo [拉布朵], alt. 2400–2800 m, XI.2022, Bai-Jun Li leg. (in the wood); 1♂ (CHTS), Yunnan Province, Diqing Tibetan Autonomous Prefecture, Weixi Lisu Autonomous County [维西傈僳族自治县], Weideng Township [维登乡], 7.V.2023, Bai-Sheng Li leg. (in the wood of Pinaceae); 1♂, 1♀ (CHTS), same collection data as for preceding but 12.V.2023.

Distribution. China (Yunnan), Myanmar (Kachin).

Key to species of *Buprestis* subgenus *Akiyamaia*

1. Elytra monochromatic without bright stripes or spots 2
- Elytra bicolorous with bright stripes or spots 4
2. Each elytron with five costae (as Fig. 7A, D) 3
- Each elytron with eight costae (Fig. 9C–D) . . . . . *B.* (*A.*) *intercostata* Huang & Pan, 2015
3. Whole pronotum metallic green with a depression along midline (Fig. 6A); abdominal surface with significantly longer and denser pubescence (Fig. 6C) . . . . . *B.* (*A.*) *costipennis* (Fairmaire, 1891)
- Pronotum metallic green with lateral sides purple-red and with a costa along midline (Fig. 7A, D); abdominal surface with shorter and sparser pubescence (Fig. 7C, F) . . . . . *B.* (*A.*) *samanthae* (Hattori & Tanaka, 2007)
4. Each elytron with one continuous stripe 5
- Each elytron with two or more discontinuous stripes or spots 6
5. Terminal antennomere without an obvious notch at tip (Fig. 2M–N); elytra mostly metallic green with a pair of brownish red stripes (Fig. 1D, H) . . . . . *B.* (*A.*) *lebisi* Descarpentries, 1956
- Terminal antennomere deeply triangularly notched at tip (Fig. 2C–D); elytra mostly metallic red with a pair of metallic blue stripes (Fig. 1A) . . . . . *B.* (*A.*) *gengmini* Qi & Song, **new species**
6. Frons with sparse short white setae (Fig. 5E); lateral depressions of pronotum deep and obvious (Fig. 5E); the sutural angle of elytron almost not extended (Fig. 5F) . . . . . *B.* (*A.*) *mirabilis* Kurosawa, 1969
- Frons with dense long white setae (Fig. 5G); lateral depressions of pronotum shallow and not obvious (Fig. 5G); the sutural angle of elytron markedly extended (Fig. 5H) . . . . . *B.* (*A.*) *wenii* Qi & Song, **new species**

Discussion

Some species of subgenus *Akiyamaia* Kurosawa, 1988 have intraspecific variation in prosternal and abdominal colors and antenna details. Therefore, the above characters sometimes cannot be used as stable diagnostic characters.

All species of *Akiyamaia* have long been difficult to collect, which caused the lack of specimens available for study. However, over the past year, the local collectors in Weixi County, Yunnan Province, China, have collected a number of *B*. (*A*.) *lebisi* and *B*. (*A*.) *samanthae* by collecting wood samples and using other methods. More need to be done to find the host plant and habits of *Akiyamaia* species.

Acknowledgements

We are grateful to Dr. Wen-I Chou (Taitung, Taiwan, China) for providing an important specimen and the host plant information from Taiwan for this study; to Mr. Ming-Zhi Zhao (South China Agricultural University, Guangdong, China), Prof. Yu-Feng Hsu (National Taiwan Normal University, Taiwan, China), Dr. Chia-lung Huang (Minjiang University, Fujian, China) and Mr. Feng-Yi Sun (Yongan, Fujian, China) for their help in obtaining some important specimens; to Dr. Antoine Mantilleri (MNHN, Paris, France) for providing the holotype pictures of *B*. (*A*.) *costipennis*; to associate researcher Wa Da (Xizang Plateau Institute of Biology, Xizang, China) and Dr. Ri-Na Su (Northwest Agriculture and Forestry University, Shaanxi, China) for providing valuable pictures of the living individual from Tibet. This research was supported by the National Natural Science Foundation of China (grant no. 31900354), the Key Laboratory of State Forestry and Grassland Administration on Timber Forest Breeding and Cultivation for Mountainous Areas in Southern China, the Fujian Key Laboratory of Forest Cultivation and Forest Products Processing and Utilization, and the Fujian Science and Technology Museum, the Museum of Forest Pests of Fujian Academy of Forestry.

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