Notes on Buprestid Beetles (Coleoptera, Buprestidae) from Thailand, VIII.
Supplement to the Revision of the Genus Coraebina OBENBERGER, 1923 from Thailand with Descriptions of Two New Species

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Abstract The genus Coraebina OBENBERGER, 1923 in Thailand is supplementary reviewed, and two new species, C. pisuthi sp. nov. and C. azureus sp. nov., are described. C. bilyi AKIYAMA et OHMOMO, 1993 recorded from Thailand for the first time, and its male is described. A key for the Thai species of the genus Coraebina is given.

Introduction The tribe Coraebini BEDEL, 1921 is one of the large tribe in the subfamily Agrilinae LAPORTE, 1835, and is subdivided into 10 subtribes according to the latest classification of the tribe Coraebini (KUBÁN et al., 2001). Among them, the subtribe Amorphosomina MAJER, 2001 is composed of 13 genera including the genus Coraebina OBENBERGER, 1923.

Coraebina was established by OBENBERGER (1923) for three new species, C. maderi, C. birmaniae, and C. nickerli, and subsequently OBENBERGER (1958) revised this genus. DESCARPENTRIES and VILLIERS (1967) studied the Southeast Asian species and then only one species, C. ikomai DESCARPENTRIES et CHÚTÍ, 1961, was known from Thailand. After that, AKIYAMA and OHMOMO (1994) reported additional three species from Thailand and described one new species, C. komiyai AKIYAMA et OHMOMO, 1994. After that, author had several opportunities to collect many specimens of the genus Coraebina from various localities in Thailand and compared them with the type specimens in detail. Now-a-days, 24 species of this genus are known. In this study, I recognized eight species including two new species and one species newly recorded from Thailand. In this paper, I summarize the results of the taxonomic study of the Thai Coraebina and describe two new species, C. pisuthi sp. nov. and C. azureus sp. nov.

The abbreviations used in this study are as follows: NSMT (National Museum of Nature and Science, Tokyo) and COTJ (Collection of S. OHMOMO, Tsukuba, Japan). The holotype is deposited in the collection of NSMT.

Genus Coraebina OBENBERGER


Type species: Coraebina maderi OBENBERGER, 1923 [=gentilis (KERREMANs, 1890)], deposited in National Museum, Prague, Czech Republic (NMPC).

The members of Coraebina are similar to some small species of the genus Coraebus and is the inter-mediate shape of the genera Coraebus and Meliboeus. For that reason, the genus Coraebina is sometimes confused with them. However, Coraebina is clearly different from Coraebus and
Meliboeus as follows: 1) body is slenderer than Meliboeus and/or small size Coraebus, 2) pronotum with distinct crenulations on lateral sides like to Coraebus, whereas in Meliboeus, it is smooth, 3) antennae serrate from 5th segment, whereas in Coraebus, it is from 4th segment.

Key to the Species of the Genus Coraebina from Thailand

1. Elytral apices forming a small and acute spine at center ...
   — Elytral apices not forming a spine, rounded with fine denticles ...
2. Body blue, elytra with distinct two white pubescent bands at apical half; frons reddish purple in female. Body length 6.5–6.7 mm in male, 8.1–8.5 mm in female. Distribution: China (Yunnan), Thailand .................. C. bilyi AKIYAMA et OHMOMO, 1993 (Fig. 1-b)
   — Body black, elytra with silver-white undulate markings at the basal half and two distinct oblong hairy bands at the apical half. Body length 6.4–7.0 mm in male, 6.9–7.7 mm in female. Distribution: Laos, Thailand .................. C. rondoni BAUDON, 1965
3. Body blue, elytra with distinct two white pubescent bands at apical half. Body length 6.4–6.5 mm in male. Distribution: Thailand .................. C. azureus sp. nov. (Fig. 1-a)
   — Body black or blackish brown ........................................ 4
4. Elytra ornamented with only silver-whitish hairs ........................................ 5
   — Elytra ornamented with olivaceous or moss green hairs and silver-whitish hairs ........ 6
5. Elytra with silver-white undulate markings on basal half and two distinct oblong hairy bands at apical half. Body length 7.6 mm in male, 7.8–8.0 mm in female. Distribution: Laos, Thailand .................. C. ikomai DESCARPENTRIES et CHUÔ, 1961
6. Elytral apices covered with silver-white setae. Body length 6.1–6.2 mm in male, 6.6–6.7 mm in female. Distribution: Thailand .................. C. pisuthi sp. nov. (Fig. 1-c)
   — Elytral apices black, not covered with silver-white setae ........................ 7
7. Frons rounded, inner sides of eyes weakly convergent to below; pronotum moss green in male or reddish violet in female, elytral apices strongly red. Body length 6.1–6.5 mm in male, 6.3–6.9 mm in female. Distribution: Cambodia, Thailand .......................... C. cambodiensis DESCARPENTRIES et VILLIERS, 1967 (Fig. 1-e)
   — Frons transversely oblong, inner sides of eyes strongly convergent to below; pronotum olivaceous in male and cupreous red in female, elytral apices slightly red. Body length 6.8–7.0 mm in male, 7.1–7.4 mm in female. Distribution: Myanmar, Thailand .......................... C. birmaniae OBENBERGER, 1923 (Fig. 1-d)

Coraebina azureus sp. nov.
(Figs. 1-a, 2-a, 3-a)

Type locality. Klong Wang Chao (alt. 200 m), Wang Chao, Kamphen Phet Prov., N-Thailand.


Description. Length, 6.4–6.5 mm (holotype 6.5 mm). Width, 2.2–2.3 mm (holotype: 2.3
mm). Rather small-sized, slender (Fig. 1-a); frons and dorsal surface uniformly brilliant deep blue; elytra ornamented with silver white hairs forming two transverse bands at apical one-third and one-fifth and coupling along suture and two or three small patches near apical two-fifths; antennae and legs shining black with aeneous tinge; ventral surface black with aeneous tinge.

Head with a deep median groove running from vertex to the middle of frons and forming V-shape in dorsal aspect; frons large and transversely oblong from the frontal aspect (Fig. 2-a), with a shallow longitudinal depression, densely rugoso-punctate, covered with pale-yellow long but inconspicuous hairs, bottom margin of frons widely and smoothly rimmed, separated from clypeus with a deep transverse groove along antennal cavities; eyes elliptical, moderately convex, inner margins convergent below; clypeus transverse, connecting with a distinct longitudinal ridge formed between antennal cavities, anterior margin bisinuate with spinous outer at both edge, supra-antennal groove bisinuate; antennae short, serrate from 4th segment, 1st segment stout and
3.5 times as long as 3rd one, 2nd segment subglobular and 1.5 times as long as 3rd one, 4th segment equal length to 3rd one, 4th to 10th segments triangle with 1.5 times oblong, 11th segment axe form.

Pronotum transverse, widest at basal one-third (L/W = 0.52); anterior margin bisinuate with a distinct median lobe; sides evenly arcuate, densely and uniformly crenulate at anterior four-fifths, excavated at basal one-fifth, prehumeral carinae arcuate from base to basal half along each side; posterior margin strongly bisinuate, with a median lobe broadly produced and moderately excavated just before scutellum; disc strongly convex in the middle; surface strongly imbricate-punctuate at center area and wrinkled at anterior, lateral and basal areas, covered sparsely with long yellow-brown hairs. Prosternal process lingiform, flattened, densely wrinkled and clothed sparsely with inconspicuous pale-yellow setae.

Elytra widest at humeri and at apical three-fifths (L/W = 2.83), base wider than posterior margin of pronotum, anterior margin bisinuate, lateral margins obliquely expanded at humeri, feebly sinuate in apical one-third, then obliquely narrow to apices, uniformly crenulate from apical one-fifth to apices, forming acute spine at each center; disc depressed shallowly at humeri; surface strongly punctuate, wrinkled along lateral margin, clothed with short inconspicuous pale yellow hairs. Scutellum subtriangular with a median spinous projection at posterior center, surface rugoso-punctate. Ventral surface finely punctuate and clothed with silver white setae, shape of last abdominal sternite feebly arcuate.

Legs short, rugoso-punctuate; pro-tibiae distinctly arcuate, outer margin distinctly dentate-serrate, inner margin densely clothed with golden yellow bristle-like setae along apical half; meso-tibiae feebly arcuate, meta-tibiae feebly arcuate and coarsely clothed with golden yellow bristle-like setae. Tarsi stout with ventral pulvilli. Claws double cleft with four teeth.

Aedeagus (Fig. 3-a) long, slender, dorsoventrally bent; parameres enlarged apically.

Female. Unknown.

Etymology. This species name derived from the body coloration.

Notes. This blue colored new species is similar to Coraebina bilyi Akiyama et Ohmomo, 1993, described from Yunnan, however, easily distinguished from the latter in elytral apical spine.

Coraebina bilyi Akiyama et Ohmomo, 1993

(Figs. 1-b, 3-b, 4-b)


Description. Length, 6.5–6.7 mm in male, 8.1–8.5 mm in female. Width, 1.8–2.0 mm in male, 2.5–2.7 mm in female. Large-sized, rather robust (Fig. 1-b); frons and dorsal surface uniformly brilliant deep blue; elytra ornamented with silver-white hairs forming two transverse bands at apical one-third and one-fifth and coupling along suture and two or three small patches near apical two-fifths; antennae and legs shining black with aeneous tinge; ventral surface blackish brown with aeneous tinge.

Head with a deep median groove running from vertex to the middle of frons and forming V-shape in dorsal aspect; frons large and transversely oblong from the frontal aspect (Fig. 3-b), with a shallow longitudinal depression, densely wrinkled, covered with pale-yellow long but inconspicuous hairs, bottom margin of frons widely and smoothly marginated, separated with a
deep transverse groove from clypeus; eyes elliptical, moderately convex, inner margins feebly convergent below; clypeus transverse, connecting with a distinct longitudinal ridge formed between antennal cavities, anterior margin bisinuate with spinous outer at both edge, supra-antennal groove bisinuate; antennae short, serrate from 4th segment, 1st segment stout and 3.0 times as long as 3rd one, 2nd segment subglobular, 4th segment triangular, 2nd and 3rd segments equal length to 4th one, 5th to 10th segments triangular with 1.5 times oblong, 11th segment axe form.

Pronotum transverse, widest at basal one-third (L/W = 0.68); anterior margin bisinuate with a distinct median lobe; sides evenly arcuate, densely and uniformly crenulate at anterior four-fifths, excavated at basal one-fifth, prehumeral carinae arcuate from base to basal half along each side; posterior margin strongly bisinuate, with a median lobe broadly produced just before scutellum; anterior angle rounded, disc strongly convex in the middle; surface strongly imbricate-punctuate at center area and wrinkled at anterior, lateral and basal areas, covered sparsely with long yellow-brown hairs. Prosternal process lingiform, flattened, densely wrinkled and clothed sparsely with inconspicuous pale-yellow setae.

Elytra widest at humeri and at apical three-fifths (L/W = 2.56), base wider than posterior margin of pronotum, anterior margin bisinuate, lateral margins obliquely expanded at humeri, feebly sinuate in apical one-third, then obliquely narrow to apices, uniformly crenulate from apical one-fifth to apices, forming acute spine at each center; disc with a small oblique gibbosity at humeri and a shallow depression inside of gibbosity; surface strongly imbricate-punctuate and wrinkled along lateral margin, clothed with short inconspicuous pale-yellow hairs. Scutellum subtriangular with a median spinous projection at posterior center, surface rugoso-punctate. Ventral surface finely punctuate and sparsely clothed with pale-yellow hairs, pigidium densely punctuate; apical margin of the last abdominal sternite finely crenulate.

Legs short, rugoso-punctuate; pro-tibiae distinctly arcuate, outer margin distinctly dentate-serrate, inner margin densely clothed with golden yellow bristle-like setae along apical half; meso-tibiae feebly arcuate, meta-tibiae feebly arcuate and coarsely clothed with golden yellow bristle-like setae on inner margin. Tarsi stout with ventral pulvilli. Claws double cleft with four teeth.

Aedeagus (Fig. 4-b) rather large and flattened; parameres enlarged with edge.

Notes. This species was described based on a female specimen from Yunnan, China. The male specimen was found for the first time and is compared with the female specimen. The male
was very similar to the female except the coloration of the golden orange frons. This species is recorded from Thailand for the first time.

**Coraebina birmaniae** Obenberger, 1923

(Fig. 1-d)


**Description.** Body size (length, width): 6.8–7.0 mm, 1.6–2.1 mm in male and 7.1–7.4 mm, 2.1–2.3 mm in female. Body large-sized, rather robust (Fig. 1-c); frons and pronotum olivaceous in male and cupreous red in female; elytra black with violet tinge and ornamented with silver-whitish hairs forming two transverse bands coupling along suture at apical one-fourth and olivaceous hairs forming undulate markings at basal three-fifths, antennae and legs shining black.

**Distribution.** Myanmar, Thailand.

**Notes.** Male and female are different in color. Frons is metallic green in male but reddish violet in female. Pronotum is olivaceous in male but reddish violet in female. This species is very resemble to *C. cambodiensis* Descarpentries et Villiers, 1967, but distinguished from it by body coloration and shape of frons and male genitalia.

**Coraebina cambodiensis** Descarpentries et Villiers, 1967

(Fig. 1-e)


Additional materials examined. 2♂♀, Klong Wang Chao (alt. 200 m), Wang Chao,

**Description.** Body size (length, width): 6.1–6.5 mm, 1.8–1.9 mm in male (holotype 6.5 mm, 1.9 mm) and 6.3–6.9 mm, 1.9–2.1 mm in female. Body medium-sized, rather robust (Fig. 1-e); frons and pronotum moss green in male and reddish violet in female; elytra clothed with moss green hairs at basal three-fifths and ornamented with silver-whitish hairs forming two transverse bands coupling along suture at apical one-fourth, apices strongly red; antennae and legs shining black.

**Distribution.** Cambodia, Thailand.

**Notes.** Habitat of this species is overlapped with that of *C. birmaniae* OBENBERGER, 1923.

**Coraebina ikomai** DESCARPENTRIES et CHUO, 1961


**Description.** Body size (length, width): 7.6 mm, 2.2 mm in male and 7.8–8.0 mm, 2.3–2.5 mm in female (holotype 8.0 mm, 2.5 mm). Body large-sized, rather robust, black; frons and pronotum golden green in male and cupreous red in female; elytra ornamented with silver-whitish hairs forming two transverse bands coupling along suture at apical one-fourth and undulate markings at basal half; antennae and legs shining black with golden green tinge.

**Distribution.** Laos, Thailand.

**Coraebina komiyai** AKIYAMA et OHMOMO, 1994


**Description.** Body size (length, width): 4.7 mm, 1.4 mm in female. Body small-sized, slender.

**Notes.** Only holotype (female) has been known.

**Distribution.** Thailand.

**Coraebina rondoni** BAUDON, 1965


**Additional materials examined.** 1♂, 1♀, Phu Rua (alt. 1300 m), Loei Prov., NE-Thailand, 24 to 27–V–2004, S. OHMOMO leg. (COTJ); 1♀, Phu Rua (alt. 1300 m), Loei Prov., NE-Thailand, 26 to 30–IV–2006, S. OHMOMO leg. (COTJ); 2♀, Phu Rua (alt. 900 m), Loei Prov., NE-Thailand, 21 to 23–V–2004, S. OHMOMO leg. (COTJ); 3♀♂, Klong Wang Chao (alt. 200 m), Wang Chao, Kamphen Phet Prov., C-Thailand, 24 to 27–V–2005, S. OHMOMO leg. (COTJ).

**Description.** Body size (length, width): 6.4 mm, 2.0 mm in male (holotype 7.0 mm in length) and 6.9–7.7 mm, 2.1–2.3 mm in female. Body medium-sized, rather robust, black with blue green tinge on pronotum; vertex reddish violet; frons golden green in male and cupreous red in female; elytra ornamented with silver-white hairs forming undulate markings at basal half and two distinct transverse hairy bands at apical half, apices blackish violet; antennae and legs shining black with dark blue tinge. Frons rather large and globular from frontal aspect, with bottom margin narrowly and smoothly rimmed.

**Distribution.** Laos, Thailand.
Notes. This species, as well as C. azureus sp. nov., is characterized by having an apical spine on each elytron. The frons of these two species are with a flattened, transverse and smooth margin at the bottom just above the deep groove. By these characteristics, C. rondoni Baudon, 1965 and C. azureus sp. nov. are consisting a group separable from the other species.

Coraebina pisuthi sp. nov.

(Figs. 1-c, 2-c, 3-c)

Type locality. Klong Wang Chao (alt. 200 m), Wang Chao, Kamphen Phet Prov., N-Thailand.


Description. Length, 6.1–6.2 mm (holotype 6.1 mm) in male, 6.6–6.7 mm in female. Width, 1.7–1.8 mm (holotype 1.8 mm) in male and 1.8–1.9 mm in female.

Male. Small-sized, rather slender (Fig. 1-c); dorsal surface uniformly blackish brown clothed with moss-green semi-recumbent hairs; elytra ornamented with undulate hairless markings at basal three-fifths and apical one-fifth, and covered with silver white setae apically; antennae and legs aeneous with greenish tinge; ventral surface aeneous with moss green tinge.

Head small, with an obsolete median groove running from vertex to the middle of frons; frons rather small and globular from frontal aspect (Fig. 2-c), with a shallow longitudinal depression, strongly wrinkled at basal half and strongly and largely punctuated at above half, sparsely covered with ivory setae, separated with a deep transverse groove from clypeus; eyes moderately convex, inner margins slightly convergent to below; clypeus transverse, connecting with a distinct longitudinal ridge formed between antennal cavities, clothed with long ivory hairs; antennae serrate from 4th segment, 1st segment stout and 2.0 times as long as 2nd one, 2nd segment ovate and 1.2 times as long as 3rd one, 3rd segment stout, 4th to 9th segments triangle, 10th and 11th segments oblong.

Pronotum transverse, widest at the middle (L/W =0.67); anterior margin bisinuate with a distinct median lobe; sides evenly arcuate, uniformly and finely crenulate at anterior five-sixths, excavated at basal one-sixth; posterior margin bisinuate, with a median lobe strongly excavated just before scutellum; disc convex in the middle; surface strongly and concentrically punctuate, wrinkled around the center area, sparsely covered with short pale yellow hairs; prehumeral carina distinctly rounded at proximal one-third. Prosternal process lingiform, flattened, rimmed, densely wrinkled.

Elytra widest at humeri and at apical two-fifths (L/W =2.61), base wider than posterior margin of pronotum, anterior margin bisinuate, lateral margin obliquely expanded at humeri, feebly sinate in apical two-fifths, then obliquely narrowed to apices, uniformly crenulate from apical one-fifth to apices; disc moderately convex, surface strongly punctuate and partly wrinkled, ornamented with hairless changeable markings at basal three-fifths and apical one-fifth. Scutellum trapezoidal, with a median spinous projection posteriorly. Ventral surface finely punctuate and sparsely clothed with pale yellow long hairs; shape of last abdominal sternite feebly arcuate with a longitudinal deep groove along lateral margins and strongly punctuate at center area.

Legs short, rugoso-puntuate; each tibiae weakly arcuate, outer margin distinctly crenulate. Tarsi stout with ventral pulvilli. Craws cleft two teeth.

Aedeagus (Fig. 3-c) relatively short and flattened.
Female. Larger than male, similar to male except frons bronzy red, pronotum bronze sometimes with yellow tinge and elytra ornamented with distinct band and markings and with purple tinge in all.

Distribution. Thailand.

Etymology. This species is dedicated to my friend, Mr. Pisuth EK-AMNUAY, Bangkok, for his contribution to investigate the Thailand fauna.

Notes. This species is very similar to *C. birmaniae* OBENBERGER, 1923 (Fig. 1-d) and *C. cambodiensis* DESCARPENTRIES et VILLIERS, 1967 (Fig. 1-e), however, it is easily distinguished from the latters by the body size and the ornamentation of the elytral apices shown in the key. The colorations between the male and female are different as follows: the frons and pronotum in male are olivaceous, whereas in female, the frons is bronze red, and the ponotum is bronze.

References


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