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A NEW GENUS CHRYSONASMA (LEPIDOPTERA, GELECHIOIDEA, LECITHOCERIDAE), WITH DESCRIPTION OF A NEW SPECIES FROM THE PHILIPPINES

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ABSTRACT

A new genus, Chrysonasma Park, of Lecithoceridae (Gelechioidea) is described based on C. cassiterota (Meyrick) and a new species, C. caliginosa, from the Philippines. The genus is separable from its allies by the colorful wing-pattern with leaden metallic longitudinal streaks. A key to the 2 species of the genus is given. Illustrations of the imagos, forewing venation, and male and female genitalia are provided.

Key Words: taxonomy, Lepidoptera, Lecithoceridae, Chrysonasma, new genus, new species

RESULTS

Genus Chrysonasma Park, gen. nov.

Type species: Chrysonasma cassiterota Meyrick, 1923, Exot. Microlep. 3: 40 (Lecithocera).

The genus Chrysonasma is related to Torodora Meyrick, but it is differentiated from the latter by the following characters: forewing elongate, with metallic blue longitudinal streak on the forewing; termen strongly oblique, concave medially, with black scales along margin; forewing venation with R₅ absent, CuA₁ and CuA₂ coincident. The male genitalia of Chrysonasma are separable from those of the latter by the heavily sclerotized, beak-like gnathos, which is similar to that of Epharmonia Meyrick. However, the latter has different venation from this new genus by the presence of R₅ in the forewing and absence of M₂ in the hindwing.

Adults: Head with appressed scales, shining metallic blue with golden yellow erect scales laterally. Basal segment of antenna grayish brown dorsally; flagellum pale grayish orange with pale brown annulations. Second segment of labial palpus thickened, light orange on outer and inner surfaces, black ventrally; 3rd segment as long as 2nd. Hind tibia with long tufts dorsally. Forewing light orange to golden yellow, sparsely speckled with dark brown scales; basal third of wing with 3 metallic blue, longitudinal streaks: first streak

MATERIALS AND METHODS

Examined material was borrowed from the Zoological Museum, Copenhagen, collected in the Philippines by O. Karsholt and his colleagues in 1961, and from the Museum für Naturkunde, Berlin, collected by W. Mey and his colleagues in 2000. The color standard for the description of adults was Kornerup & Wanscher (1978). The genus is described by the first author and the species is described by both authors.
runs between costa and R vein, rounded apically; 2nd median, dilated, truncate apically; 3rd narrower, between cell and dorsum; median zone broad, trapezoidal, gently dilated towards dorsum, uniform metallic blue or partly; distal 3rd of wing golden yellow or pale brownish orange, speckled with dark brown scales, with 2 metallic blue, longitudinal streaks: a long one below costa, terminated before apical patch, and shorter one beyond cell, not so much extended; a large, oval, metallic blue patch at apex and larger one at tornus. Abdominal tergites II-VII with broad spinylose zones.

Male Genitalia (Figs. 5, 6): Uncus slender, relatively straight beyond curved base. Gnathos heavily sclerotized, beak-like; acute apically. Valva short, extremely broad at base and strongly narrowed towards apex; costa with a long, digitate process beyond middle (in the type species) or without (in this new species); ventral margin slightly concave medially. Juxta gently concave on caudal margin, with slender, acute, latero-caudal lobes. Aedeagus stout, cylindrical, longer than valva; cornutus a long sinuate blade, serrated on ventral margin posteriorly, with pointed apex.

Female Genitalia (Figs. 7, 8): Eighth sternite deeply or slightly incised at middle, sometimes with long sclerotized plates latero-ventrally. Ostial bursae with nearly straight caudal margin; antrum cup-shaped, heavily sclerotized or not. Ductus bursae narrowed beyond antrum, then expanded; ductus seminalis arising before middle. Corpus bursae, ovate; sigum a round plate with short conical spines on surface.

Distribution. Oriental Region (the Philippines)

Etymology. The genus name is derived from Greek, chrysos (= gold) + nasmos (= stream).

KEY TO SPECIES OF THE GENUS CHRYSONASMA PARK

1. Forewing ground color golden yellow; fringe pale orange, but distal part metallic blue; hind tibia with long hair-tufts dorsally. Valva of male genitalia with digitate process on costa beyond middle . . . cassiterota Meyrick

2. Forewing ground color light orange to grayish orange; fringe pale orange, but distal part shining orange gray; hind tibia without long hair-tufts dorsally. Valva of male genitalia without digitate process on costa . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . caliginosa sp. nov.

Chrysonasma cassiterota (Meyrick, 1923), comb. nov.
(Figs. 1, 3, 5a, 7)

Lecithocera cassiterota Meyrick, 1923. Exot. Microlep. 3: 40; 1925: 240; Meyrick, 1925: 240; Clarke, 1955: 74; 1965: 115pl. 57, figs 4-4d; Diakonoff, 1967: 135, Figs. 176, 200, 201, 606. TL: Luzon, Philippines. [BMNH].

Diagnosis. Wingspan, 16.0-17.0 mm. The forewing venation differs from species of Torodora by the absence of R5, and the coincidence of CuA1 and CuA2, and the termen that is strongly concave medially (Fig. 3). This species can be distinguished from the following new species by the broad valva of the male genitalia with a digitate process at the middle of the costa.

Material Examined. Three males & 1 female, Philippines, Luzon, Mt. Makiling 400 m, 14-16 III 2000, LF (W. Mey & K. Ebert), gen. prep. no. CIS-5023/Park, -5042/Park (female); 1 male, Santa Fe, Bald Mts 1150 m, 11-13 XI 1997 (W. Mey & K. Ebert) 7; 3 males, Luzon, Quezon, NP, LF, 20 III 2000 LF(W. Mey & K. Ebert). All specimens deposited in Museum für Naturkunde, Berlin.

Distribution. The Philippines (Luzon).

Remarks. The species was originally described as a species of Lecithocera, based on a female from Luzon, Philippines. The male genitalia subsequently illustrated by Diakonoff (1967). Meyrick (1922) noted that he had an undescribed species from the Philippines that was closely allied to lamprodesma Meyrick. Diakonoff (1967) considered that the undescribed species mentioned by Meyrick (1922) to be same as what Meyrick described in 1923 as cassiterota. Diakonoff further noted that cassiterota was allied with lamprodesma and that he knew of “two closely allied, undescribed species” from Java and Borneo, but it
is unclear if the 2 undescribed species by Diakonoff’s notes are members of the new genus. We had no chance to examine lamprodesma Meyrick and cannot define its generic status in this paper. However, we can expect additional species of this new genus because of the presently limited collecting in the Oriental Region.

**Chrysonasma caliginosa** Park and Byun, *new species* (Figs. 2, 4, 6, 6a, 8)

**Diagnosis.** The new species is superficially similar to *C. cassiterota* (Meyrick) in color pattern and markings, with metallic, longitudinal streaks at the basal part of the forewing. *Chrysonasma caliginosa* has a light orange to grayish orange ground color of the forewing, a fringe that is shining orange gray at distal half, and the male genitalia with valva lacking a costal process, whereas *C. cassiterota* has a golden yellow color of the forewing, a fringe that is metallic colored at distal half, and male genitalia with a costal process of the valva.

**Description.** Male and Females. Wingspan, 15.0-16.0 mm. Head dark brown dorsally, with orange gray erect scales laterally. Tegula dark brown. Second segment of labial palpus moderately thickened, pale grayish orange suffused with dark scales on basal half on outer surface, paler on inner surface; 3rd segment shorter than 2nd; dark brown ventrally. Antenna with basal joint brown dorsally; flagellum pale grayish orange with dark brown annulations. Hind tibia dark brown scales, without long hair-tufs dorsally; mid spur very long, outer one nearly twice length of the inner one. Forewing elongate; ground color light orange to grayish orange; costa nearly straight; apex more or less acute; basal 2/5 of wing light orange to grayish orange, with three shining metallic blue, longitudinal streaks; first streak along subcosta, narrowed to apex; 2nd median, dilated apically; 3rd shorter, runs between cell and dorsum; median line almost vertical, light orange, narrow, with blackish scales along proximal side; median zone trapezoidal between median and postmedian line with oblique outer margin followed by a crescent blackish mark beyond upper corner of cell; a narrow leaden longitudinal streak between costa and R, vein and the other broad similar streak beyond cell in distal 3rd of wing; a large triangular metallic blue patch at
apex, edged by black scales along outer margin, and the other larger one at tornus. Venation with R₃ closer to R₄ than R₁ at base; R₁ and R₂ stalked about 2/5 of R₂; R₃ reaching to costa before apex; Rₛ absent; CuA₁ and CuA₂ coincident; CuA₁₊₂ arising from near lower corner of cell; apex acute (Fig. 4); termen strongly concave medially, slightly sinuate, with dense black scales along margin; fringe pale orange at basal half, shining orange gray at distal half. Hindwing with costa slightly expanded before termination of Sc vein; Rs and M₁ stalked well beyond end of cell; M₂ present; M₃ and CuA, shortly stalked; cell opened.

Male Genitalia (Figs. 6, 6a): Gnathos similar to that of Epharmonia ardua (Meyrick), which was described from N. India, but valva somewhat similar to that of Hygroplasta lygaea Meyrick. Uncus slender, gently bent downward. Gnathos beak-like, heavily sclerotized, strongly bent at basal 1/4. Valva elongate; costa slightly concave medially, with dense long setae along ventral margin beyond middle, and with a thin row of short spines near along ventral margin, reaching to middle of apical margins; apex right angled dorso-apically; ventral margin slightly emarginated near middle. Juxta with digitate lateral lobes, about 1/3 length

Figs. 7-8. Female genitalia of Chrysonasma species. (7) C. cassiterota (Meyrick); (8) C. caliginosa sp. nov. Scale bar: 1 mm.
of uncus. Aedeagus longer than valva; cornuti consist of a pair of needle-like spines, about 3/4 length of aedeagus.

Female Genitalia (Fig. 8): Eighth sternite slightly incised medially. Antrum short, weakly sclerotized, about same width as posterior part of ductus bursae. Ductus bursae with broad expansion medially. Corpus bursae as long as ductus bursae; signum elliptical, with dense conical spines on surface.

Holotype: male, Palawan, Mantalingajan, Pingisan 600 m, 17 IX 1961, Noona Dan Expedition. 61-62, gen. prep. No. CIS-5408/Park. Paratype: 2 males, same locality, 16 IX 1961, Noona Dan Exp. 61-62, gen. prep. no. CIS-5409/Park; 1-, same locality, 19 IX 1961; 4 males and females, 23 & 24 IX 1961. The holotype and paratypes are deposited in the Zoological Museum, Copenhagen.

Distribution. The Philippines (Palawan).

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