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Two New Species of the Genus *Hieromantis* (Lepidoptera, Stathmopodidae) from Japan

Koji YASUDA

Okinawa Branch, Tropical Agriculture Research Center,
Ishigaki, Okinawa, 907 Japan

Abstract Two new species of the genus *Hieromantis*, *H. makiosana* and *H. kurokoi*, are described and illustrated. The genus is recorded from Japan for the first time.

The genus *Hieromantis* MEYRICK is mainly distributed in the Indo-Australian region and is represented by fourteen species recorded from India, Sri Lanka, some Pacific islands, New Guinea and Australia. However, the genus has not previously been reported from Japan.

Recently, the author found two species of *Hieromantis* in Japan and concluded that they were new to science. Their descriptions are given in this paper.

Genus *Hieromantis* MEYRICK

Hieromantis MEYRICK, 1897, Proc. Linn. Soc. N. S. W., 22: 315. Type species: *Hieromantis ephodophora* MEYRICK, 1897.

Antenna ciliated in male, simple in female; scape forming an eye-cap. Forewing with R consisting of 5 veins; CuA preserved distally or extinct. Hindwing with Rs divided into R_{2+3} and R_{4+5} ; M_2 and M_3 sometimes coincident; CuP invisible.

Male genitalia: Sacculus indistinct, not projecting. Fovea on inner wall of valva (KASY, 1973, called ampulla) fully reduced. Thickened part visible on outer wall of valva.

This genus is related to the genus *Stathmopoda*. The ciliated antenna in the male common to both the genera separates them from other genera of the family. And *Hieromantis* differs from *Stathmopoda* in the scape forming an eye-cap. Genitalic character of *Hieromantis* is within the range of variation in *Stathmopoda*; as KASY (1973) stated, this is not helpful in distinguishing the genus from others.

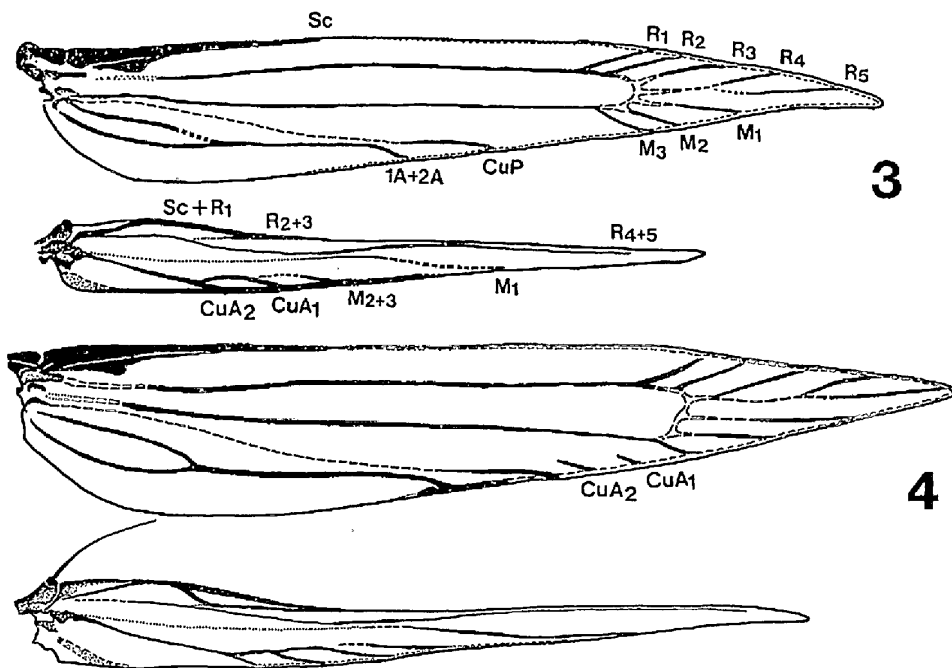
Hieromantis makiosana n. sp.

(Figs. 1, 3, 5-7, 11)

♂, ♀. Wing expanse 7.5-9 mm. Labial palpus shining white; apical segment suffused with light yellowish ochre on external side. Antenna with whitish



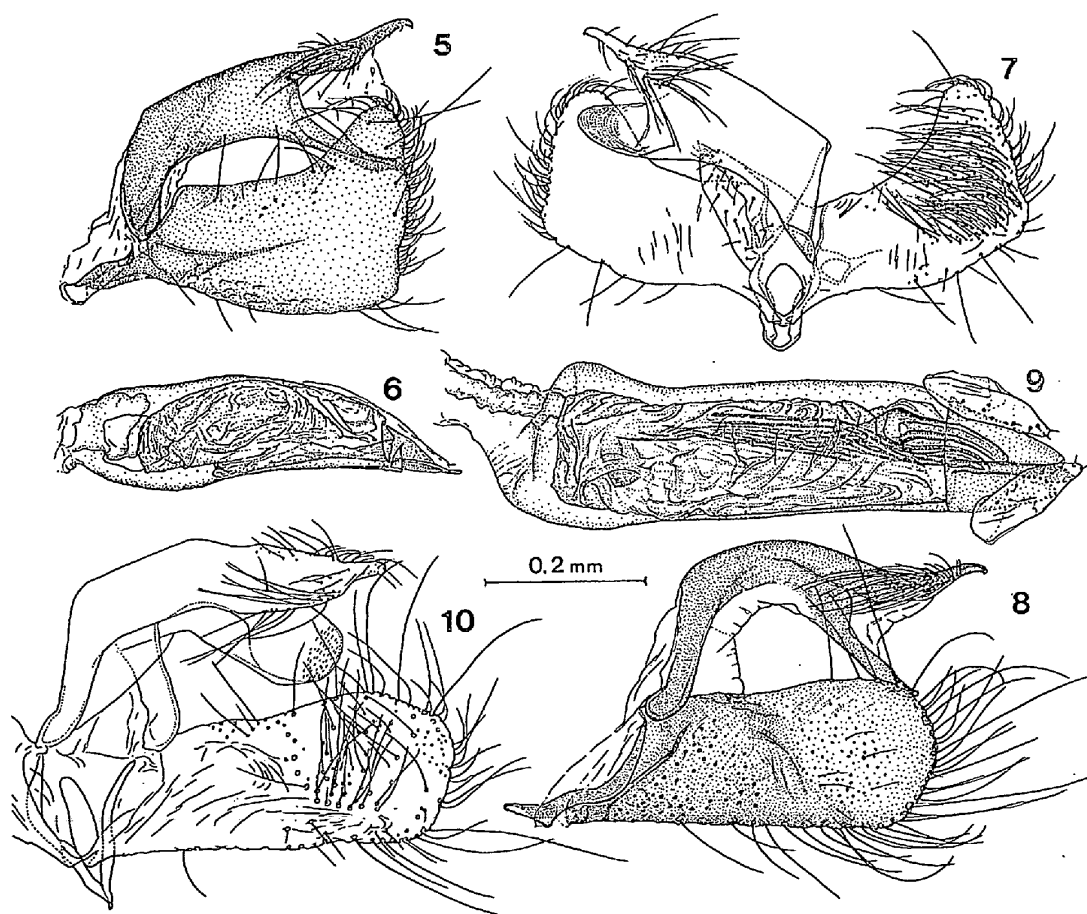
Figs. 1-2. Adults. — 1, *Hieromantis makiosana* n. sp., paratype, ♀; 2, *Hieromantis kurokoi* n. sp., paratype, ♂.



Figs. 3-4. Wing venations. — 3, *Hieromantis makiosana* n. sp.; 4, *H. kurokoi* n. sp.

scape partly suffused with light ochre, and with flagellum having ochreous scales on each segment. Frons whitish; vertex tinged with light ochre. Thorax white, with pale ochreous shade laterally. Forewing lanceolate, widest near base; 11 veined; Sc strong, connected with costal margin of wing on basal $2/5$; R_3 and R_4 separated; R_4 and R_5 stalked; M_2 from angle; CuA_1 and CuA_2 absent; ground color whitish; a pale ochreous yellow transverse fascia at $1/6$, sometimes shading into basal area; before middle an ochreous yellow band, its anterior edge indistinct, fading into ground color, posterior edge outwardly oblique; from $1/2$ to $3/4$ on costa an inverted triangular pale ochreous yellow patch present with deep colored edge posteriorly, followed by a silvery streak; near apex to tornus a pale ochreous yellow streak present, terminal area being tinged with ochreous yellow; from $1/5$ to $3/7$ a leaden golden metallic semioval blotch on dorsum, not reaching half across

wing, an anterior white spot surrounded with black scales especially thick posteriorly; cilia ochreous. Hindwing narrow, lanceolate; 7 veined; R_{2+3} very short, basally obsolescent; M_2 and M_3 coincident; M_{2+3} , CuA_1 and CuA_2 connected with each other on dorsal margin of wing; ochreous grey; cilia pale ochreous grey. Legs whitish; fore femur and tibia suffused with ochre and irregularly infuscated; fore tarsus with two fuscous rings in middle of first segment and at junction of second and third segments; mid tibia with two ochreous or fuscous dorsal spots; mid tarsus with a fuscous ring at junction of second and third segments; hind tibia with an ochreous or fuscous mark at the origin of medial spurs and another one near distal end; hind tarsus suffused dorsally with ochre, infuscated on second and third segments. Abdomen greyish faintly tinged with pale ochre dorsally, whitish ventrally; on second to fourth or fifth abdominal segments light brownish spines exposed; anal tuft, in male, pale fuscous dorsally and whitish ventrally, in female, entirely ochreous.



Figs. 5-10. Male genitalia of *Hieromantis* spp. — 5-7. *H. makiosana* n. sp.; 5, lateral view, paratype; 6, aedeagus, lateral view, paratype; 7, ventral view, holotype. — 8-10. *H. kurokoi* n. sp.; 8, lateral view, holotype; 9, aedeagus with anellar lobes, ventral view, holotype; 10, ventral view, paratype.

Male genitalia (Figs. 5-7): Uncus slender with pointed apex, bent ventrally. Gnathos rounded, becoming narrower toward tip. Valva with dorso-caudal angle protruding dorsally; narrow thickness of outer wall of valva arising from about junction with tegumen. Juxta almost ovate. Vinculum rather small. Anellar lobes semimembranous and conical. Aedeagus large, with apical patch of stimuli, without cornuti.

Female genitalia (Fig. 11): Ostium with minute spines. Corpus bursae scobinated near inception of ductus seminalis. Broadened part of ductus seminalis (second part of corpus bursae of KASY, 1973) rather long, originating from junction of ductus bursae and corpus bursae.

Holotype: ♂, Mt. Makio, Osaka Pref., Honshu, Japan, 13. VIII. 1979 (K. YASUDA), in the collection of the Entomological Laboratory, University of Osaka Prefecture.

Paratypes: 1 ♂, Ikegami-shi, Aichi Pref., 29. V. 1979 (S. MIURA), deposited in the Zoological Laboratory, Meijo University; 1 ♂, Nose, Osaka Pref., emerged 19. V. 1979 (M. WATANABE), from a gall of *Castanea pubinervis* SCHNEID made by *Dryocosmus kuriphilus* YASUMATSU; 1 ♂, Minoo, Osaka Pref., 29. V. 1981 (K. YASUDA), 1 ♀, 24. V. 1983 (T. SAITO); 1 ♀, Kishiwada, Osaka Pref., 31. V. 1979 (H. INAGAKI); 2 ♂, same locality as holotype, 13. VIII. 1979 (K. YASUDA), 2 ♀, 13. VIII. 1981 (K. YASUDA), 1 ♀, 18. VI. 1981 (T. SATO), 1 ♂, 20. VI. 1981 (K. YASUDA), 2 ♂, 14. VIII. 1982 (K. YASUDA), 1 ♂, 7. IX. 1982 (K. YASUDA); 1 ♂, Totsukawa, Nara Pref., 25. V. 1979 (K. YASUDA). Unless otherwise stated, paratypes are deposited in the Entomological Laboratory, University of Osaka Prefecture.

Distribution. Honshu.

Biology. Little known. The author examined one specimen emerged from a gall of *Castanea pubinervis* SCHNEID made by *Dryocosmus kuriphilus* YASUMATSU.

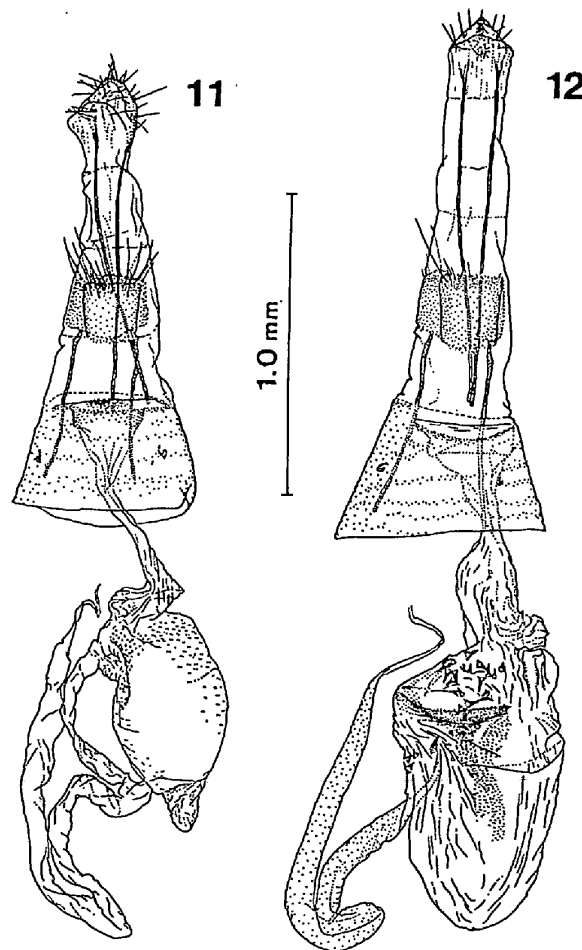
Remarks. This species is similar to *H. chrysoleuca* MEYRICK, 1913, *ephodophora* MEYRICK, 1897, *fibulata* MEYRICK, 1906, *ioxysta* MEYRICK, 1913, *munerata* MEYRICK, 1924, *praemiata* MEYRICK, 1921, *resplendens* BRADLEY, 1957, and *tribolopa* MEYRICK, 1924, in having a golden-metallic spot on dorsum, but obviously differs from them in other markings of the forewing.

Hieromantis kuwokoi n. sp.

(Figs. 2, 4, 8-10, 12)

♂, ♀. Wing expanse 9-10 mm. Labial palpus ochreous. Antenna with scape pale ochreous and with flagellum pale greyish ochreous. Frons light brassy; vertex yellowish ochreous. Thorax pale ochreous grey, with a pair of orange yellow longitudinal lines laterally; tegula pale ochreous white, largely suffused with orange yellow. Forewing narrow, lanceolate; 13 veined; Sc strong, connected with costal margin of wing on basal 1/3; R₃, R₄ and R₅ from a common stalk; M₃ from angle; CuA₁ and CuA₂ distinct distally; 1A+2A connected with dorsal margin

of wing; basal 1/6 orange yellow except greyish shade on base; a white transverse patch from 1/6 to 1/3, slightly tinged with brownish ochre; before middle present an orange yellow band, irregularly edged with brownish grey anteriorly, posterior edge vertical; a shining white median fascia vertical, somewhat broadened toward dorsum; apical 2/5 orange yellow with a dark brownish line from 2/3 of costa to near tornus and curved apically along termen, a shining white, inwardly oblique streak from costa along the dark line emitted from costa, and a short subapical white streak along termen; dorsal metallic blotch irregularly mixed with black scales, reaching nearly half across wing, an anterior white spot smaller than that of the preceding species, thickly surrounded with black scales; cilia pale ochreous grey, mixed with orange yellow on apical and terminal cilia. Hindwing narrow, lanceolate; 8 veined; R_{2+3} separated from $Sc+R_1$ and R_{4+5} ; ochreous grey; cilia pale ochreous grey. Legs whitish ochreous; foreleg more or less infuscated on inner side; mid tarsus with a fuscous spot; hind tibia with light ochreous mark before the origin of median spurs and with pale fuscous one near apical end; hind tarsus



Figs. 11–12. Female genitalia. — 11, *Hieromantis makiosana* n. sp., ventral view, paratype; 12, *H. kurokoi* n. sp., ventral view, paratype.

largely suffused with light ochreous and having an elongate fuscous blotch on first segment and a small fuscous spot on second and third segments respectively. Abdomen ochreous grey above, whitish ochreous beneath; light brownish spines exposed on dorsum from second to fourth segments; anal tuft whitish ochreous.

Male genitalia (Figs. 8–10): Tegumen strongly curved caudally. Uncus with apical part short and slender. Gnathos broad, with posterior end rounded. Valva more or less broadened distally, with rounded distal margin; narrow thickness arising from proximal end of sacculus. Vinculum narrow; saccus very short. Juxta elongate. Anellar lobes weakly sclerotized. Aedeagus very large, with a sclerotized structure near base; cornuti comprising several long thin sclerites and a strong one knotted in center.

Female genitalia (Fig. 12): Ductus bursae rather broad. Corpus bursae with a transverse serrated signum and longitudinal patch of denticles just below signum and another one on the other side of corpus bursae; small thorns scattered anteriorly. Broadened part of ductus seminalis not so long, granular.

Holotype: ♂, Mt. Rokusho-san, Toyota, Aichi Pref., Honshu, Japan, 24. VI. 1978 (Y. ARITA), in the collection of the Entomological Laboratory, University of Osaka Prefecture.

Paratypes: [Honshu] 1 ♀, Todai, Ina, Nagano Pref., 3. VII. 1975 (T. KUMATA), deposited in the Entomological Laboratory, Hokkaido University; 1 ♀, same locality as holotype, 3. IX. 1977 (Y. ARITA), deposited in the Zoological Laboratory, Meijo University; 3 ♂, 17 ♀, Mt. Makio, Osaka Pref., VI–IX. 1979–1982 (K. YASUDA); 1 ♂, 2 ♀, Totsukawa, Nara Pref., 14. VI. 1980 (K. YASUDA). [Kyushu] 1 ♀, Mt. Hiko-san, Fukuoka Pref., 26. VIII. 1954 (H. KUROKO). Unless otherwise stated, the paratypes are deposited in the Entomological Laboratory, University of Osaka Prefecture.

Distribution. Honshu and Kyushu.

Biology. Unknown.

Remarks. This species resembles *H. ephodophora* in the forewing and the genitalia. However, judging from the figure and description given by KASY (1973), it can be distinguished from the latter by the round dorsal margin of valva (obtusely protruding dorsally in *ephodophora*) and the broadened part of ductus seminalis which is shorter than that of *ephodophora*. Also, this species is easily distinguished from *makiosana* by the round dorsal margin of valva and the corpus bursae with a transverse signum.

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