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日米科学協力研究：太平洋地域の昆虫類の地理的分布と生態
Japan-U. S. Co-operative Science Program : Zoogeography and
Ecology of Pacific Area Insects

THE NOCTUIDAE FROM TOKUNOSHIMA, THE AMAMI ISLANDS (Lepidoptera)

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This short list is based on the material collected in summer of 1963 by the entomologists visited Tokunoshima, the Amami islands, for zoogeographical survey planned under the project of Japan-U. S. Co-operative Science Program. A few specimens from the same source have been included in a separate paper by Inoue (1965, *Kontyû*, 33: 131-141) and are therefore omitted from the list below. In writing this paper I owe much Dr. H. Inoue, Fujisawa, and Prof. Y. Hirashima, Entomological Laboratory of Kyushu University, Fukuoka, who under the agreement of Dr. S. Asahina, National Institute of Health, Tokyo, kindly submitted me the whole collection of the Noctuidae through the expedition for my study.

NOCTUIDAE

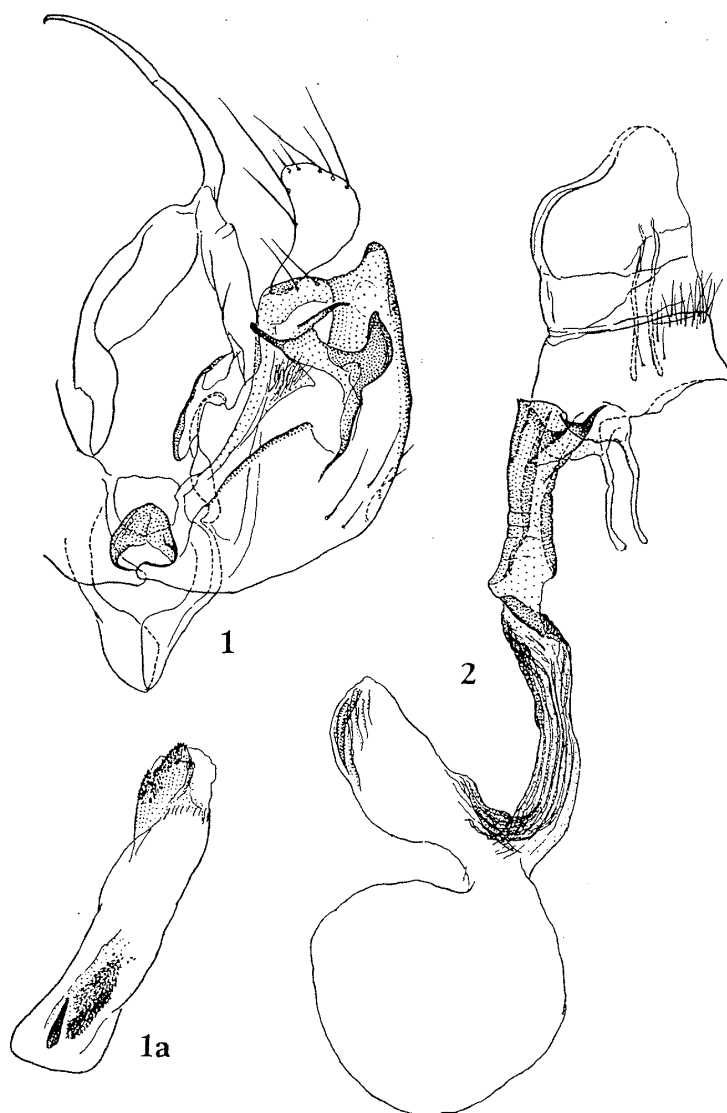
Agrotis ipsilon (Hufnagel)

Kametsu, 1♂ 1♀, 11-13. viii. 1963 (T. Okada).

Leucania inouei sp. nov.

Expanse 32-33 mm. Head and thorax pale ochreous yellow with some olivaceous tint, sparsely mixed with black brown; palpus pale ochreous yellow, the second joint with a mixture of dark scales at sides; abdomen above greyish yellow. Forewing pale olivaceous grey yellow, dusted with fine fuscous striae, costa pale to near apex, subbasal line practically wanting or represented by very faint fuscous stria below costa; antemedian line indistinct, only represented by a slight fuscous stria below costa and dark points on median nervure and on vein 1; orbicular absent, reniform a slight dark point at near lower angle of cell, with obscure pale annulus; postmedian line fuscous, strongly indented just below costa, then sinuous and practically an irregular double row of fuscous points on and between veins to submedian fold, ending in a distinct dark spot just before hind margin; a diffuse oblique stria from below apex to postmedian line; a blackish terminal dot series between veins, cilia pale yellow. Hindwing uniformly fuscous brown, veins infuscated, avoid-

ing in and around cell, with terminal series of dark points between veins, cilia pale yellow. Underside: forewing with costal and terminal area pale ochreous grey, a distinct blackish lunar spot below costa before apex, inner surface darker, veins infuscated; terminal points and cilia as above. Hindwing pale grey, slightly dusted with fuscous at costal and marginal area, discoidal spot dark, postmedian fuscous band nearly straightish from costa to vein 3 and indented towards tornus, veins tinged with blackish on it; terminal series of fuscous points and cilia like as above.



Figs. 1-2. Male and female genitalia of *Leucania inouei* sp. nov.
1. male, 1a. aedeagus, 2. female.

Male and female genitalia as figured in Figs. 1 and 2.

Holotype ♀, Yuwandake, Amami-Oshima, 16-17. vii. 1963 (H. Inoue).

Paratypes. The type-locality, 1 ♀, 16-17. vii. 1963 (H. Inoue); Nishinakama, Amami-Oshima, 2 ♀, 19-20. vii. 1963 (H. Inoue). Inogawa, Tokunoshima, 1 ♂ 2 ♀, 13. vii. 1939 (M. Sakae).

The holotype will be deposited in the collection of Entomological Laboratory of Kyushu University, and the paratypes in British Museum (Nat. Hist.), in H. Inoue's and my collection.

This interesting new species is at present limited to the Amami Islands, since no further specimens could not be obtained in any part of the Ryukyus.

Spodoptera mauritia acronyctoides Guenée

Kametsu, 1 ♀, 13. viii. 1963 (T. Okada).

Spodoptera cilium Guenée

Kametsu, 1 ♂, 11. viii. 1963 (T. Okada).

Prodenia litura (Fabricius)

Kametsu, 1 ♀, 13. viii. 1963 (T. Okada).

Callopietria maillardi (Guenée)

Kametsu, 2 ♂, 11-12. viii. 1963 (T. Okada).

Oruza mira (Staudinger)

Mikyo, 200 m, 1 ♂, 27. vii. 1963 (J. L. Gressitt)

Xanthodes transversa Guenée

Mikyo, 150 m, 1 ♀, 25. vii. 1963 (C. M. Yoshimoto).

Narangodes haemorranta Hampson

Kametsu, 1 ♂, 13. viii. 1963 (T. Okada).

This species, described from two females taken in Okinawa Is. (Hampson, 1910, Cat. Lep. Phal., 10: 633), ranges north to the Amami Islands, where it occurs also in Okino-erabu and Amami-Oshima (Inoue, loc. cit.: 136), but it is not discovered from the southern part of the Ryukyus. Its distribution abroad extends to North Vietnam and Chung-King, Szechwan (de Joannis, Ann. Soc. ent. France, 97: 328).

Abrostola trigemina (Werneburg)

Kametsu, 1 ♂, 12. viii. 1963 (T. Okada).

The specimen represents the unique record of the genus *Abrostola* in the area south of the mainland of Japan.

Erebus ephesperis (Hübner)

Kametsu, 1 ♀, 14. viii. 1963 (T. Okada).

Parallelia curvata (Leech)

Kametsu, 1 ♂ 1 ♀, 11-13. viii. 1963 (T. Okada).

Achaea janata (Linnaeus)

Kametsu, 1 ♂, 13. viii. 1963 (T. Okada).

Arcte coerulea (Guenée)

Kametsu, 1♂, 13. viii. 1963 (T. Okada).

Oraesia excavata (Butler)

Kametsu, 1♂, 11. viii. 1963 (T. Okada).

Cosmophila flava flava (Fabricius)

Kametsu, 1♂ 1♀, 11-13. viii. 1963 (T. Okada).

Hypena sp.

Mikyo, 150 m, 1♀, 25. vii. 1963 (C. M. Yoshimoto).

Bocana manifestalis Walker

Mikyo, 150 m, 8♂ 1♀, 25. vii. 1963 (C. M. Yoshimoto).

New to the fauna of Japan, but it also inhabits Okinawa I. (Yona, 1♂, 26. xi. 1963, H. Inoue) and the Yaeyama Islands. The records from the latter locality where it was captured abundantly, will be detailed in my separate paper. The genitalia of this species were recently illustrated by Zimmerman (1958, *Insects of Hawaii*, 7: 350-352).

Badiza notigera (Butler)

Mikyo, 150 m, 1♂ 1♀, 25. vii. 1963 (C. M. Yoshimoto).

Badiza simplex (Butler)

Mikyo, 150 m, 5♂ 3♀, 25. vii. 1963 (C. M. Yoshimoto).

Simplicia pseudoniphona sp. nov.

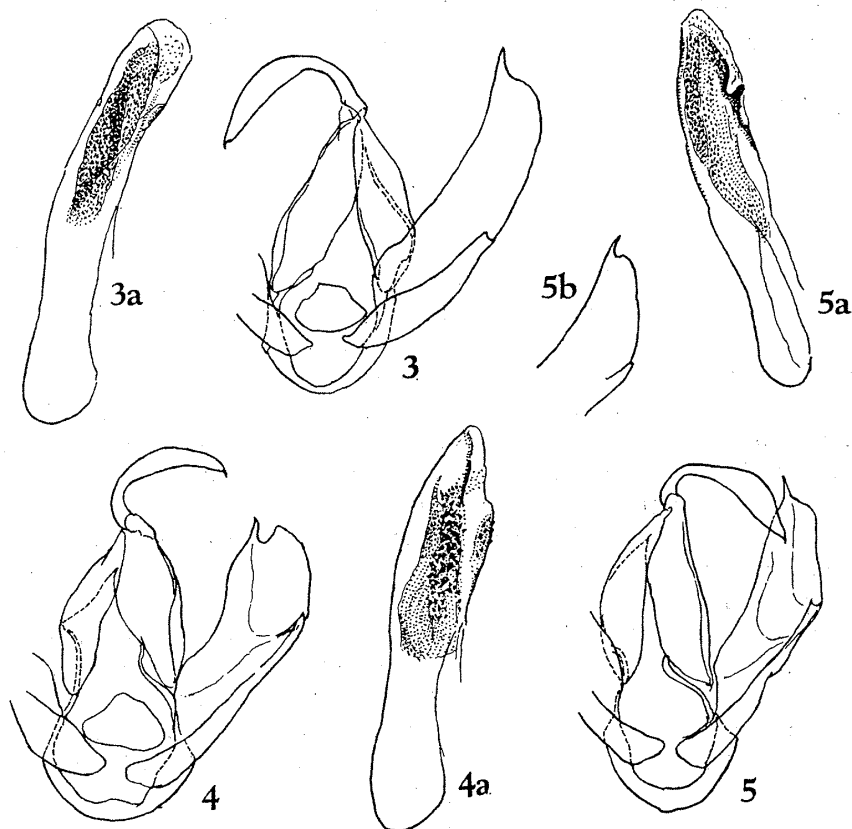
Expanse 31-34 mm. Smaller in size than *S. niphona* Butler (expanse 34-40 mm), to which this new species is very closely allied. Male antenna basically similar to that in *niphona*, but fine bristle on each segment is markedly longer than in *niphona*, measuring about one and half times as long as the diameter of shaft in basal segments. The third segment of labial palpus thickly clothed with hair above in the male, looking in appearance thicker and blunter at apex, contrasting with that in *niphona* it is relatively naked and slender, with the apex pointed; no marked difference between them in the female. Forewing relatively shorter and broader, with longitudinal narrow areole as in *niphona*, the ground colour somewhat brighter, but fuscous median lines almost similar; reniform represented by obscure point; subterminal line pale yellow, straightish or very slightly incurved, more or less defined with darker diffusion before it, which is weaker or absent in *niphona*. Hindwing uniformly fuscous grey, subterminal band as in *niphona* but more definitely marked and defined with dark shade interiorly.

The Amami and the Ryukyu Islands specimens are markedly smaller than the mainland population, with the expanse of about 26-31 mm.

Male genitalia (Fig. 4). Basically similar to those of *niphona* (Fig. 3), but the differences are definite in having a slight emargination at the apex of valva and a small scobinate patch on the wall of aedeagus at near distal end.

Holotype ♂, Obaru, Izu, Shizuoka Pref., 13-14. vi. 1959 (S. Sugi).

Paratypes. The type-locality, 9♂ 1♀, 2-4. v. 1959; 4♂ 1♀, 13-14. vi. 1959; 2♂ 1♀, 26. vii. 1959; 1♂, 10. vi. 1960; 1♀, 24. viii. 1958 (S. Sugi). Takao-san, Tokyo, 1♂, 2. vi. 1951 (S. Sugi). Tokyo, 1♂, 25. v. 1951 (S. Sugi).



Figs. 3-5. Male genitalia of the *Simplicia* species.
 3, 3a. *S. niphona* Butler, 4, 4a. *S. pseudoniphona* sp. nov. 5, 5a. *S. ryukyuensis* sp. nov., 5b. showing a variation of apical portion of right valva in the same species.

Yakushima: Ambō, 1 ♀, 10. viii. 1956 (K. Ishizuka).

Amami-Oshima: Yuwandake, 1 ♂, 11. viii. 1961 (A. Kawazoe); 1 ♂, 16-17. vii. 1963 (H. Inoue).¹⁾

Tokunoshima: Mikyo, 150 m, 1 ♂ 5 ♀, 25. vii. 1963 (C. M. Yoshimoto).

Okinawa: Hentona, 1 ♂ 1 ♀, 12. vi. 1955 (R. Kawasaki); Nago, 2 ♀, 8. vii. 1961 (S. Higashihirachi).

Ishigaki: Mt. Omoto, Mt. Banna, Barubido, 2 ♂ 21 ♀.

Iriomote: Mt. Ushiku, Shirahama, Komi, 11 ♂ 9 ♀.

The exact data from the last two localities will be stated in a separate paper I am preparing. The holotype is preserved in my collection.

This species is very common in the mainland of Japan, where it is frequently mixed up with *niphona* Butler in a same locality. The both and the following new

1) The record of *S. rectalis* from Amami-Oshima (Inoue, loc. cit: 137) must correctly be referred to my *pseudoniphona*. I have re-examined his specimen.

species apparently belong to an unestablished complex widely spread over the Indo-Malayan region towards the Pacific, and I am not mature to deal with them in relation with the known species. A critical revision of this difficult group will be required in future.

***Simplicia ryukyuensis* sp. nov.**

Expanse 22–29 mm. A small species. Male antenna nearly identical with *niphona*. The third segment of labial palpus slender, pointed at extremity in the both sexes. Forewing markedly narrower than both in the preceding species and in *niphona*, the apex slightly acuter in the male, missing the areole in venation; ground colour paler, antemedian line hardly dentate, evenly excurved to below cell, then nearly erect to hind margin; subterminal line thinner, pale yellow and nearly straightish, not defined insides with darker colour. Hindwing markedly paler than the related species, suffused with fuscous in outer two-thirds above submedian fold, avoiding costal area; subterminal line pale yellow white, well defined.

Male genitalia (Fig. 5). Nearly similar to those of *niphona*, but easily separable from it in having a distinct, well sclerotized hook-like process on the ventral surface of aedoeagus at near orifice.

Holotype ♂, Mikyo, 150 m, Tokunoshima, 25. vii. 1963 (C. M. Yoshimoto).

Paratypes. The type-locality, 6♂ 29♀, 25. vii. 1963 (C. M. Yoshimoto).

Amami-Oshima: Yuwandake, 1♂ 1♀, 7. viii. 1961 (A. Kawazoe).

Okinawa: Shuri, 1♂, 22. iv. 1960; 1♀, 29. iv. 1960; 1♀, 10. vi. 1963 (S. Higashihirachi); Koza, 1♂ 1♀, 11. viii. 1961; 1♀, 7. ix. 1961; 1♀, 26. vii. 1962 (S. Higashihirachi); Yona, 1♀, 1. iv. 1964 (I. Kishida).

Minami-Daito: 1♀, 9. vi. 1964 (S. Higashihirachi).

Miyako: Taira, 3♀, 26. vii. 1962; 1♀, 13. vi. 1963 (S. Higashihirachi).

The holotype will be deposited in the collection of Bishop Museum, Honolulu.

This new species is also an ally to the mainland *niphona* Butler, which does not range to the Amami and the Ryukyu Islands,²⁾ but in appearance it rather resembles *S. rectalis* Eversmann in paler ground colour, narrower forewing and evenly curved median lines, though the last mentioned species has the simple male antenna. On the other hand, it will be noteworthy that this new species is remarkably identical in appearance with a Hawaiian moth illustrated by Zimmerman (loc. cit.: 394–397) and determined by him *Simplicia lautokiensis* A. E. Prout.³⁾ In the male genitalia it also fits relatively well with *lautokiensis*, except the presence of a small hook on the wall of aedoeagus in *ryukyuensis* sp. nov.

***Hydrillodes repugnalis* (Walker)**

Mikyo, 150 m, 2♀, 25. vii. 1963 (C. M. Yoshimoto).

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- 2) The distribution of *S. niphona* extends abroad to high altitude of Formosan mountains. The examples I have examined are: Alishan, 2200 m, 4♂ 6♀, 9–11. vii. 1964 (H. Inoue); Fenchihu, 1600 m, 2♀, 12–13. vii. 1964 (H. Inoue).
- 3) For the photograph of the female type from Fiji see: Tams, 1935, Insects of Samoa, 3: 232, pl. 12: 13.

摘 要

日米科学協力による昆虫相調査の一部として、奄美群島の徳之島で採集されたヤガ科 23 種をここに記録した。これらは、岡田豊日博士、J. L. Gressitt 博士および C. M. Yoshimoto 博士の採集品である。この中には次の新種および日本未記録種を含んでいる。

Leucania inouei Sugi アマミキヨトウ (新称)。本種は奄美大島と徳之島の 2 島のみで採集されており、他の琉球列島からは全く得られていない。

Bocana manifestalis Walker クロジャノメアツバ (新称)。日本未記録種で、徳之島のほかに沖縄本島でも採れ、石垣島には多産するが、それについては別の報文で記録図示する予定である。

Simplicia pseudoniphona Sugi ニセアカマエアツバ (新称)。本種は少なくとも関東以西の日本本土にはきわめて普通で、従来 *S. niphona* Butler オオアカマエアツバと混同されていたものである。屋久島、奄美大島、沖縄本島、石垣島、西表島の標本を調査した。私は以前に誤つて本種をアカマエアツバとして解説したが(杉, 1959, 原色昆虫大図鑑, 1: 156, pl. 105: 24), 真の *S. rectalis* Eversmann アカマエアツバは北海道・本州に産し、♂の触角に結節をもたないことで他の近似種と容易に区別される。

Simplicia ryukyuensis Sugi リュウキュウアカマエアツバ (新称)。本種もまた前種と近縁であるが、本種は本土には産しないらしく、私が調査した産地は、奄美大島、徳之島、沖縄本島、宮古島、南大東島の各島で、八重山群島からは未発見である。