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TWO NEW SPECIES OF *PANGRAPTA* FROM SOUTH CHINA (LEPIDOPTERA: NOCTUIDAE: PANGRAPTINAE)

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ABSTRACT

Two new species, *Pangrapta paralasiophora* **sp. nov.** and *Pangrapta neorecusata* **sp. nov.**, are described from South China. Each of them is superficially similar to *Pangrapta lasiophora* (Hampson, 1926) and *Pangrapta recusata* (Walker, 1859), but they can easily be distinguished by their genitalia. Illustrations of external features and genitalia are provided.

Key Words: Noctuidae, Pangraptinae, *Pangrapta*, new species, China

RESUMEN

Se describen dos nuevas especies, *Pangrapta sublasiphora* **sp. nov.** y *Pangrapta subrecusata* **sp. nov.** del sur de China. Cada uno de ellas está cerca de *Pangrapta lasiophora* (Hampson, 1926) y *Pangrapta recusata* (Walker, 1859), pero se pueden distinguir fácilmente por la morfología de sus genitales. Se proveen ilustraciones de las características externas y los órganos genitales.

Palabras Clave: Noctuidae, Pangraptinae, *Pangrapta*, nuevas especies, China

The genus *Pangrapta* Hübner, 1818 was established on the basis of the type species *Pangrapta decoralis* Hübner, 1818 and initially placed in Pangraptinae (Grote 1882). However recently the genus had been placed in various subfamilies by different authors, i.e., in Ophiderinae (Kononenko et al. 1998; Chen 1999); in Catocalinae (Holloway 2005; Kononenko & Pinratana 2005); in Eublemminae (Fibiger & Lafontaine 2005; Kononenko & Han 2007; Park et al. 2007) and in Pangraptinae (Holloway 2011; Kishida 2011). Zahiri et al. (2011, 2012) confirmed by DNA sequencing that Pangraptinae is a good subfamily.

Pangrapta is a large genus with 86 known species in the world (Poole 1989). The species are widely distributed and recorded in Asia, i.e., 15 known species in Korea (Kononenko et al. 1998; Kononenko & Han 2007); 24 known species in China (Chen 1999); 7 known and 4 unnamed species in Thailand (Kononenko & Pinratana 2005); 13 known and 9 new species in Borneo (Holloway 2005); 4 known species in Vietnam (Park et al. 2007); 22 known species in the complete checklist in Borneo (Holloway 2011); 1 new species (Kishida 2010) and 15 known species in Japan (Sugi 1982; Kishida 2011). Until now, the total species of *Pangrapta* number about 100.

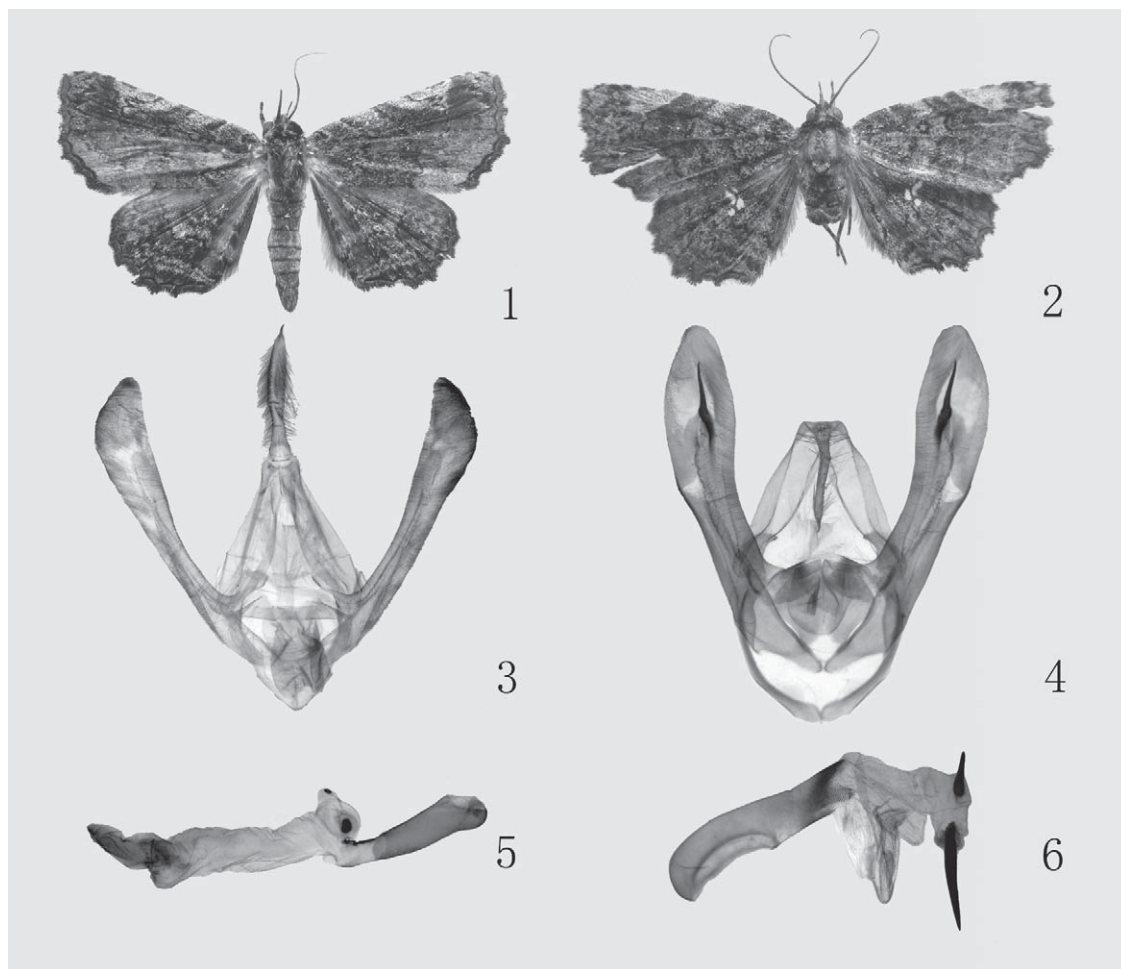
MATERIALS AND METHODS

The new species were collected by light trap in Nanling National Nature Reserve (Guangdong, China), Mt. Wuyishan (Jiangxi, China) and Hainan Island. Specimens were cleared in 10% sodium hydroxide (NaOH), and mounted in glycerin (C₃H₈O₃). Photographs of adults were taken by a Sony T100 digital camera and those of the genitalia were taken by a Carl Zeiss Discovery V12 stereo microscope. The plates were compiled by use of Adobe Photoshop software 6.0. All specimens are deposited in Department of Entomology, College of Natural Resources and Environment, South China Agricultural University, Guangzhou, China.

PANGRAPTA PARALASIOPHORA **SP. NOV.** (FIGS. 1, 3 AND 5)

Diagnosis

The new species is very similar to *Pangrapta lasiophora* (Hampson, 1926) in its external features, but can be distinguished in that the new species has a darker wing ground color, a broader cucullus, V-shaped saccus and the straight and long vesica compared to *lasiophora*.



Figs. 1-6. New *Pangrapta* species. 1. Adult *Pangrapta paralasiophora* **sp. nov.**; 2. Adult *P. neorecusata* **sp. nov.**; 3. and 5. Genitalia of *P. paralasiophora* **sp. nov.**; and 4. and 6. Genitalia of *P. neorecusata* **sp. nov.**

Description

Adult (Fig. 1). Wingspan 35 mm. Head, thorax and collar blackish brown; antenna brown, filiform; labial palpus white with black, stretched beyond the vertex. Abdomen grayish brown. Forewing ground color blackish brown with an obviously triangular patch between medial and subterminal lines; basal line black, just represented at front part; antemedial line black and wavy, inconspicuous, excurved to orbicular spot, then incurved to inner margin; medial line black, poorly discernible and sinuated, excurved to reniform spot, then incurved to inner margin; postmedial line black, sinuated and strongly excurved to M_1 , then incurved to inner margin; subterminal line poorly discernible, black and zigzag; terminal line black and wavy; cilia blackish brown; reniform spot short and small, wedge-shaped; orbicular spot black circle. Hindwing ground color dark brown; medial line poorly obvious, relatively broad;

postmedial line black, sinuous; several black strips at outside of postmedial line; terminal line black, wavy; cilia blackish brown; discal spot poorly developed.

Male genitalia (Figs. 3 and 5). Uncus almost as long as tegumen, slightly shrunk at base, pointed at top; tegumen relatively broad near the base; valve thin, long, shrunk near the base; cucullus round, broad, knife-shaped; costa and saccus narrow, without process; saccus small, V-shaped. Aedeagus short, straight, 1/1.5 times as long as vesica; vesica membranous, with small grains, diverticulum with 2 flat spurs.

Type Material

HOLOTYPE: Male, China, Hainan Island. PARATYPES: 1 male, same date as holotype; 1 male, Guangxi.

Etymology

The specific name is derived from the name of the sister species, *P. lasiophora* (Hampson, 1926).

PANGRAPTA NEORECUSATA **SP. NOV.**

(FIGS. 2, 4 AND 6)

Diagnosis

The new species is very similar to the species, *P. paralasiophora* **sp. nov.** and *Pangrapta lasiophora* (Hampson, 1926) in its external features, but it is similar to *P. recusata* (Walker, 1859) in the male genitalia. *Pangrapta neorecusata* **sp. nov.** differs from *P. recusata* as follows: the color of the wing blackish brown; an obviously triangular patch between postmedial and subterminal lines; discal spot wedge-shaped with white around; harpe short and strongly sclerotized; saccus arc-shaped. Comparing to *paralasiophora* and *lasiophora*, the new species has the triangular patch between postmedial and subterminal lines, discal spot with white around, broader valva and robust harpe.

DESCRIPTION

Adult (Fig. 2). Wingspan 33 mm. Head, collar and thorax blackish brown; antenna brown, filiform; labial palpus grayish yellow, stretched beyond the vertex. Abdomen brown. Forewing ground color blackish brown; a white triangular patch at costal margin between postmedial and subterminal lines; basal line black, poorly discernible; antemedial line black, excurved to orbicular spot, then incurved to inner margin; medial line black, excurved to reniform spot, then incurved to inner margin; postmedial line black and wavy, excurved to M_2 , then arc-shaped and incurved to inner margin; subterminal line poorly discernible, similar zigzag; terminal line black and wavy; cilia blackish brown; reniform spot short and small, wedge-shaped; orbicular spot black and round. Hindwing ground color blackish brown; medial line black, relatively broad; postmedial line black, sinuous; some dark brown strips outside of postmedial line; terminal line black brown, wavy; cilia blackish brown; discal spot wedge-shaped with white around.

Male genitalia (Figs. 4 and 6). Uncus thin, long, hook-shaped at top; tegumen common; valve long, somewhat broad distally; cucullus round; costa narrow; harpe thin, long, strongly sclerotized, point at top; sacculus narrow; saccus arc-shaped. Aedeagus straight, many small spurs near the top; vesica with 2 cornuti.

Type Material

HOLOTYPE: male, Guangdong, Shaoguan, Nanling, 17-V-2009. **PARATYPES:** 1 male, same data as holotype; 1 Male, Jiangxi, Wuyishan Mts, 19-V-2011, leg. Xiao-Hua DENG and Hou-Shuai WANG.

Etymology

The specific name is derived from the name of the similar species *P. recusata* (Walker, 1859).

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REFERENCES CITED

- CHEN, Y. X. 1999. Fauna Sinica. Science Press, Beijing, pp. 1235-1247.
- FIBIGER, M., AND LAFONTAINE, J. D. 2005. A review of the higher classification of the Noctuoidea (Lepidoptera) with special reference to the Holarctic fauna. *Esperiana* 11: 23-26.
- HOLLOWAY, J. D. 2005. The Moths of Borneo, Parts 15 & 16. *Malayan Nature J.* 58(1-4): 325-336.
- HOLLOWAY, J. D. 2009. The Moths of Borneo, Part 13. *Malayan Nature J.* 62: 1-240.
- HOLLOWAY, J. D. 2011. The Moths of Borneo, Part 2. *Malayan Nature J.* 63(1-2): 380.
- KISHIDA, Y. 2010. Descriptions of new species and new subspecies of Japanese Macrolepidoptera (2), with descriptions of 2 new genera. *Tinea* 21(3): 129-135.
- KISHIDA, Y. 2011. Subfamily Pangraptinae, pp. 219-221, pl. 40-41 *In* Y. Kishida [ed.], The standard of moths in Japan II. Gakken Education Publishing Co. Pp, Tokyo, 416 pp. and 105 pl.
- KONONENKO, V. S., AHN, S. B., AND RONKAY, L. 1998. Illustrated Catalogue of Noctuidae in Korea (Lepidoptera), pp. 99-104 *In* K. T. Park [ed.], *Insects of Korea* 3, Junghaeng-Sa, 507 pp.
- KONONENKO, V. S., AND PINRATANA, B. A. 2005. Moths of Thailand, Vol. 3. Brothers of Saint Gabriel in Thailand, Bangkok. pp. 70-71 and 147.
- KONONENKO, V. S., AND HAN, H. L. 2007. Atlas Genitalia of Noctuidae in Korea (Lepidoptera), pp. 35-36 *In* K. T. Park [ed.], *Insects of Korea* 11. Seoul: Korean Natl. Arboretum & Ctr. Insect Syst. 461 pp. and 306 pl.
- LAFONTAINE, J. D., AND SCHMIDT, B. C. 2010. Annotated check list of the Noctuoidea (Insecta, Lepidoptera) of North America North of Mexico. *Zookeys* 40: 118.
- PARK, K. J., BAE, Y. S., CUONG, N. N., NHA, P. V., AND VUONG, P. T. 2007. Moths of North Vietnam. Center for Insect Systematics, Korea, pp. 16-17.
- POHL, G. R., ANWEILER, G. G., SCHMIDT, B. C., AND KONDLA, N. G. 2010. An annotated list of the Lepidoptera of Alberta, Canada. *Zookeys* 38: 245.
- POOLE, R. W. 1989. Fascicle 118, Noctuidae, Part 2, pp. 761-764 *In* J. B. Heppner [ed.], *Lepidopterorum Catalogus* (New Series). E. J. Brill, Flora and Fauna Publications, New York, 1314 pp.

- SUGI, S. 1982. Noctuidae, pp. 398, pl. 218 *In* H. Inoue, S. Sugi, H. Kuroko, S. Moriuti and A. Kawabe [eds.], *Moths of Japan Vol. 2: Plates and Synonymic Catalogue*. Kodansha Co. Ltd., Tokyo. 552 pp. and 392 pl.
- ZAHIRI, R., KITCHING, I. J., LAFONTAINE, J. D., MUTANEN, M., KAILA, L., HOLLOWAY, J. D., AND WAHLBERG, N. 2011. A new molecular phylogeny offers hope for a stable family level classification of the Noctuoidea (Lepidoptera). *Zoologica Scripta* 40 (2): 158-173.
- ZAHIRI, R., HOLLOWAY, J. D., KITCHING, I. J., LAFONTAINE, J. D., MUTANEN, M., AND WAHLBERG, N. 2012. Molecular phylogenetics of Erebidae (Lepidoptera, Noctuoidea). *Systematic Entomol.* 37: 102-124.