



SHILAP Revista de Lepidopterología

ISSN: 0300-5267

avives@eresmas.net

Sociedad Hispano-Luso-Americana de
Lepidopterología
España

Ren, Y. D.; Li, H. H.

Indomalayia Roesler & Küppers, 1979 new to China, with description of one new species
(Lepidoptera: Pyralidae, Phycitinae)

SHILAP Revista de Lepidopterología, vol. 43, núm. 170, junio, 2015, pp. 331-336

Sociedad Hispano-Luso-Americana de Lepidopterología
Madrid, España

Available in: <http://www.redalyc.org/articulo.oa?id=45541421020>

- How to cite
- Complete issue
- More information about this article
- Journal's homepage in redalyc.org

redalyc.org

Scientific Information System

Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal

Non-profit academic project, developed under the open access initiative

Indomalayia Roesler & Küppers, 1979 new to China, with description of one new species (Lepidoptera: Pyralidae, Phycitinae)

Y. D. Ren & H. H. Li

Abstract

The genus *Indomalayia* Roesler & Küppers, 1979 is recorded for the first time in China. *Indomalayia hirsuta* Ren & Li sp. n. is described based on the specimens collected in Guangxi, Guizhou and Hainan provinces. Comparison of the new species with its closely related species *I. flabellifera* (Hampson, 1896) is given. Photographs of adults and genitalia are provided.

KEY WORDS: Lepidoptera, Pyralidae, Phycitinae, *Indomalayia* new species, China.

Indomalayia Roesler & Küppers, 1979 nuevo para China, con descripción de una nueva especie
(Lepidoptera: Pyralidae, Phycitinae)

Resumen

Se registra por primera vez para China el género *Indomalayia* Roesler & Küppers, 1979. Se describe a *Indomalayia hirsuta* Ren & Li sp. n., basado en ejemplares colectados en las provincias de Guangxi, Guizhou y Hainan. Se compara la nueva especie con la especie próxima *I. flabellifera* (Hampson, 1896). Se proporcionan fotografías del adulto y de la genitalia.

PALABRAS CLAVE: Lepidoptera, Pyralidae, Phycitinae, *Indomalayia* nueva especie, China.

Introduction

The genus *Indomalayia* was established by ROESLER & KÜPPERS (1979) with *Indomalayia flabellifera* (Hampson, 1896) as the type species. It is a small genus consisting of two named species: *I. flabellifera* is distributed in Australia, India, Indonesia (Sumatra), Malaysia, New Zealand, Singapore, Sri Lanka and Fergusson Island (ROESLER & KÜPPERS, 1979; ROESLER, 1983); *I. melanella* Roesler, 1983 is distributed in Indonesia (Sumatra) and Malaysia (Cameron Highlands) (ROESLER, 1983).

Indomalayia is characterized by the male flagellum with a small notch and a bunch of scales on the 4th and the 5th segment respectively; the male labial palpus with the 3rd segment swollen in fan shape (Fig. 1a); the long and narrowed forewing with a costal fold enclosing scale tufts, much stronger in male than in female, membrane thickened along costa about half length of Sc (Figs 1-2); the arched transtilla fused terminally, the distally spinose or setose clasper with an elongate distally forcipiform process extending from its base to end of the valva, and the paired culcita in the male genitalia (Figs. 5, 5a); in the female genitalia the membrane between the ovipositor lobes and the 8th segment is short and not extendible, apophyses short, reaching proximal border of 8th segment, antrum concave, sclerotized, ductus bursae more or less sclerotized, ductus seminalis originating from transition of ductus bursae (Fig. 6).

Indomalayia resembles *Dioryctria* Zeller, 1846, but they can be easily separated by the superficial characters: in *Indomalayia*, the male flagellum has a small notch on the 4th segment and a bunch of scales on the 5th segment, the male labial palpus with the 3rd segment swollen, and the forewing with a costal fold enclosing scale tufts; whereas in *Dioryctria*, the male flagellum has a gentle sinus from the 3rd segment to the 8th segment, the 3rd segment of the male labial palpus is not swollen, and the forewing has no costal fold.

Prior to this study, no *Indomalayia* species has been recorded in China. We herein newly record this genus in China and describe one new species, *I. hirsuta* Ren & Li, sp. n. The type specimens are deposited in the Insect Collection, College of Life Sciences, Nankai University, Tianjin, China.

***Indomalayia hirsuta* Ren & Li, sp. n. (Figs. 1-6)**

Type material: Holotype ♂, CHINA, Mt. Pinglong, Shangsi (22° 09' N 107° 59' E), Guangxi Zhuang Autonomous Region, 510 m, 6-IV-2002, coll. Shulian Hao and Huaijun Xue, gen. slide No. RYD04638. Paratypes: 2 ♂♂, 5 ♀♀, same data as for holotype; 1 ♂, Mt. Fanjing (27° 55' N 108° 41' E), Guizhou Province, 2100 m, 31-VII-2001, coll. Houhun Li; 3 ♂♂, Shuimanxiang, Mt. Wuzhi, Hainan Province, 630 m, 16,17-IV-2009, coll. Qin Jin and Bingbing Hu, gen. slide No. LHX14072; 1 ♂, Maoyangzhen, Mt. Wuzhi, Hainan Province, 225 m, 19-IV-2009, coll. Qing Jin and Bingbing Hu; 1 ♀, Mt. Yingge, Hainan Province, 4-IX-2010, coll. Bingbing Hu; 1 ♀, Mt. Jianfeng, Hainan Province, 5-VI-2007, coll. Zhiwei Zhang and Weichun Li.

Description: Wingspan 18.5-20.0 mm (Figs 1-4). Male (Figs 1, 3). Vertex concave, black in concavity, margined with white; frons white, proboscides normally developed. Antenna with scape twice longer than wide, bearing black scale tufts on basal half of anterior margin; flagellum with a small notch on the 4th segment and a bunch of scales on the 5th segment, blackish brown except yellowish white near notch. Labial palpus (Fig. 1a) upturned, 1st segment white; 2nd segment white on inner surface, light yellowish brown on outer surface; 3rd segment swollen in fan shape in lateral view, black on inner surface and along margin of outer surface, yellowish brown on outer surface. Maxillary palpus minute and filiform, yellowish white. Patagium, tegula and thorax yellowish brown. Forewing ground color yellowish brown, blackish brown in cell; costa with a costal fold enclosing dense brown scale tufts in basal 2/5, covered with thick, ochreous brown tinged with black scales, with a row of long, reddish brown scales along Sc; antemedian line and discal spot absent; postmedial line grayish white, from 5/6 of costa slightly oblique inward to 5/6 of dorsum; terminal line reddish brown; cilia grayish brown; cell about 5/9 length of forewing. Hindwing grayish brown, semihyaline; cilia grayish brown; cell about 1/5 length of hindwing. Abdominal segments yellowish brown. Legs reddish brown, mixed with white and black scales; midleg with femur broad, flattened, tibia bearing a long yellowish white scale tuft on inner surface, with long yellowish brown scales on outer surface, inner spur 2.0 times length of outer ones; hindleg with tibia having long yellowish brown scales on outer surface, inner spur 1.7 times length of outer ones.

Female (Figs 2, 4): Vertex rounded, covered with smooth, yellow scales; antenna yellowish brown, notch and scale bunch on 4th and 5th segments of flagellum absent; labial palpus (Fig. 2a) yellowish brown, upturned over vertex, 3rd segment not swollen; costal fold in forewing much less apparent; other characters as in the male.

Wing venation (Figs 3-4): Forewing quadrifine, R_2 free, R_{3+4} stalked with R_5 in basal half, from upper angle of cell, M_2 and M_3 stalked for about 1/4 length, from lower angle of cell, CuA_1 and CuA_2 free, CuA_1 near M_{2+3} at base; hindwing quadrifine, R_s stalked with Sc for basal length of R_s , M_1 and $Sc + R_s$ stalked for half length of M_1 , M_2 and M_3 from lower angle of cell, shortly stalked, CuA_1 and CuA_2 free.

Male genitalia (Fig. 5): Uncus quadrate, lateral sides folded, setose, distal border flattened; gnathos slightly sclerotized and almost invisible; gnathos arms fused, band-like, with a small

hollow at middle. Anales tube sclerotized on ventral surface in gourd shape. Transtilla weakly sclerotized, fused terminally, arched. Valva broad basally, slightly narrowed distally; costa with basal 1/3 strongly sclerotized, triangular, distal 2/3 slender, clubbed, arched dorsad, departed from valva and extending to end of valva apically; sacculus about 1/3 width of valva, almost uniformly broad in basal half, slightly narrowed in distal half, not extending to end of valva; clasper arising from near base of costa, narrowed medially, dilated to a setose, discoid plate distally; a wide band-shaped process from base of clasper extending toward valva, its apex concave inward, forcipiform, exceeding end of valva apically. Juxta large, inverted gourd-like, its posterior 2/3 broad and rounded, anterior 1/3 narrowed and elliptic; lateral lobe globular, with sparse setae distally. Vinculum extremely elongate, about half length of whole genitalia. Aedeagus slender, straight; cornuti comprising a large sinuate plate in basal half, and a tuft of stout spines at distal 2/5, 1/5 and apex respectively. Culcita two pairs (Fig. 5a).

Female genitalia (Fig. 6): Eighth tergite with anterior margin slightly concave at middle, convex laterally. Antrum rectangular, twice wider than long. Ductus bursae with posterior 2/3 strongly sclerotized, concave in broad V shape on posterior margin, anterior 1/3 membranous, curved circularly. Corpus bursae with posterior 1/3 partly sclerotized, crimped longitudinally, anterior 2/3 broad and membranous; signum consisting of a row of strongly sclerotized nail-like spines at posterior 1/3 of corpus bursae, each spine located at a sclerotized round or ovate plate. Ductus seminalis incepted at junction of ductus bursae and corpus bursae.

Diagnosis: This new species is similar to *Indomalayia flabellifera* (Hampson, 1896), but can be distinguished from the latter by the elongate clasper distally dilated to a setose, discoid plate, the large inverted gourd-like juxta with posterior 2/3 broad and rounded, anterior 1/3 narrowed and elliptic in the male genitalia, and the corpus bursae sclerotized posteriorly and the signum represented by a line of nail-like spines in the female genitalia. In *I. flabellifera*, the short clasper is not dilated distally, but bears dense spines at base, the juxta is smaller, with posterior half somewhat heart shaped, anterior half cup-like in the male genitalia, and the corpus bursae is sclerotized medially and the signum consists of three spinous plates.

Distribution: China (Guangxi, Guizhou, Hainan).

Etymology: The specific name is derived from the Latin *hirsutus* (hirsute), referring to the clasper of the valva bearing dense long setae distally in the male genitalia.

Acknowledgements

We express our thanks to Dr. H. X. Liu for dissecting specimens and those who took part in the field work. This research was supported by the National Natural Science Foundation of China (No. 31172141 and No. 31093430) and the Basic Scientific research project of Henan Academy of Agricultural Sciences.

BIBLIOGRAPHY

- HAMPSON, G. F., 1896.— *The fauna of British India, including Ceylon and Burma. Moths*, **4**: 1-594.
 HEINRICH, C., 1956.— American moths of the subfamily Phycitinae.— *United States National Museum Bulletin*, **207**: viii + 581 pp., 1138 figs.
 RAGONOT, E. L., 1901.— Monographie des Phycitinae et des Gallerinae.— In N. M. ROMANOF. *Mémoires sur les Lépidoptères*, **8**: XLI + 602 pp., pls. 24-57. St. Pétersbourg.
 ROESLER, R. U., 1983.— Die Phycitinae von Sumatra (Lepidoptera: Pyralidae).— In E. W. DIEHL *et al.* *Heterocera Sumatrana*, **3**: 1-136, pls. 1-69.
 ROESLER, R. U. & KÜPPERS, P. V., 1979.— Beiträge zur Kenntnis der Insektenfauna Sumatras. Teil 8. Die Phycitinae (Lepidoptera: Pyralidae) von Sumatra; Taxonomie Teil A.— *Beiträge zur Naturkundlichen Forschung in Südwestdeutschland Beihefte*, **3**: 1-249.

ZELLER, P. C., 1846.– Die knotenhornigen Phyciden nach ihren Arten beschrieben.– *Isis von Oken*, **1846**(10): 730-788.

Y. D. R.
College of Life Sciences
Nankai University
Tianjin 300071
R. P. CHINA / P. R. CHINA

*H. H. L.
College of Life Sciences
Nankai University
Tianjin 300071
R. P. CHINA / P. R. CHINA
E-mail: lihouhun@nankai.edu.cn

y / and

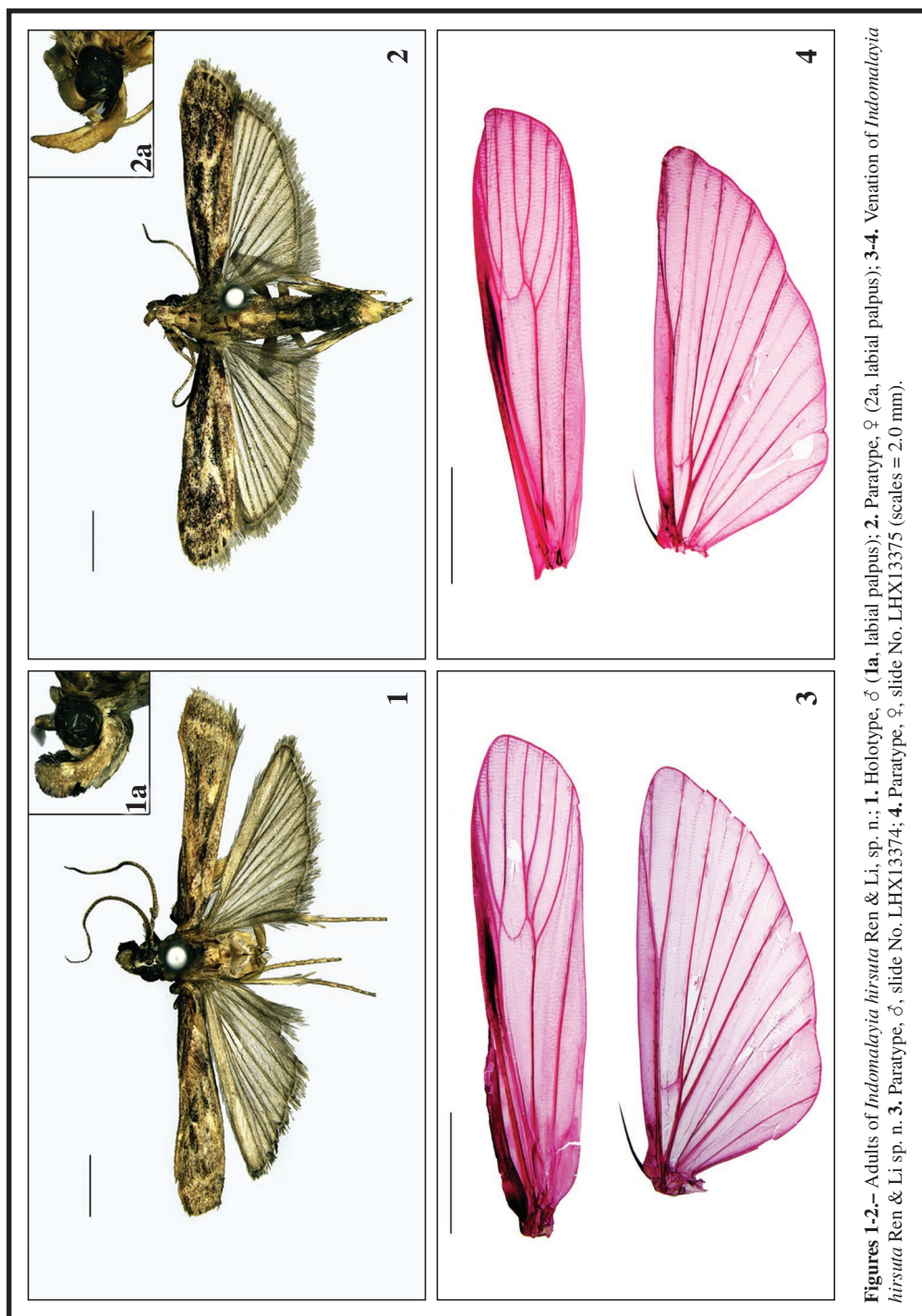
Institute of Plant Protection
Henan Academy of Agricultural Sciences
Zhengzhou 450002
R. P. CHINA / P. R. CHINA

*Autor para la correspondencia / *Corresponding author*

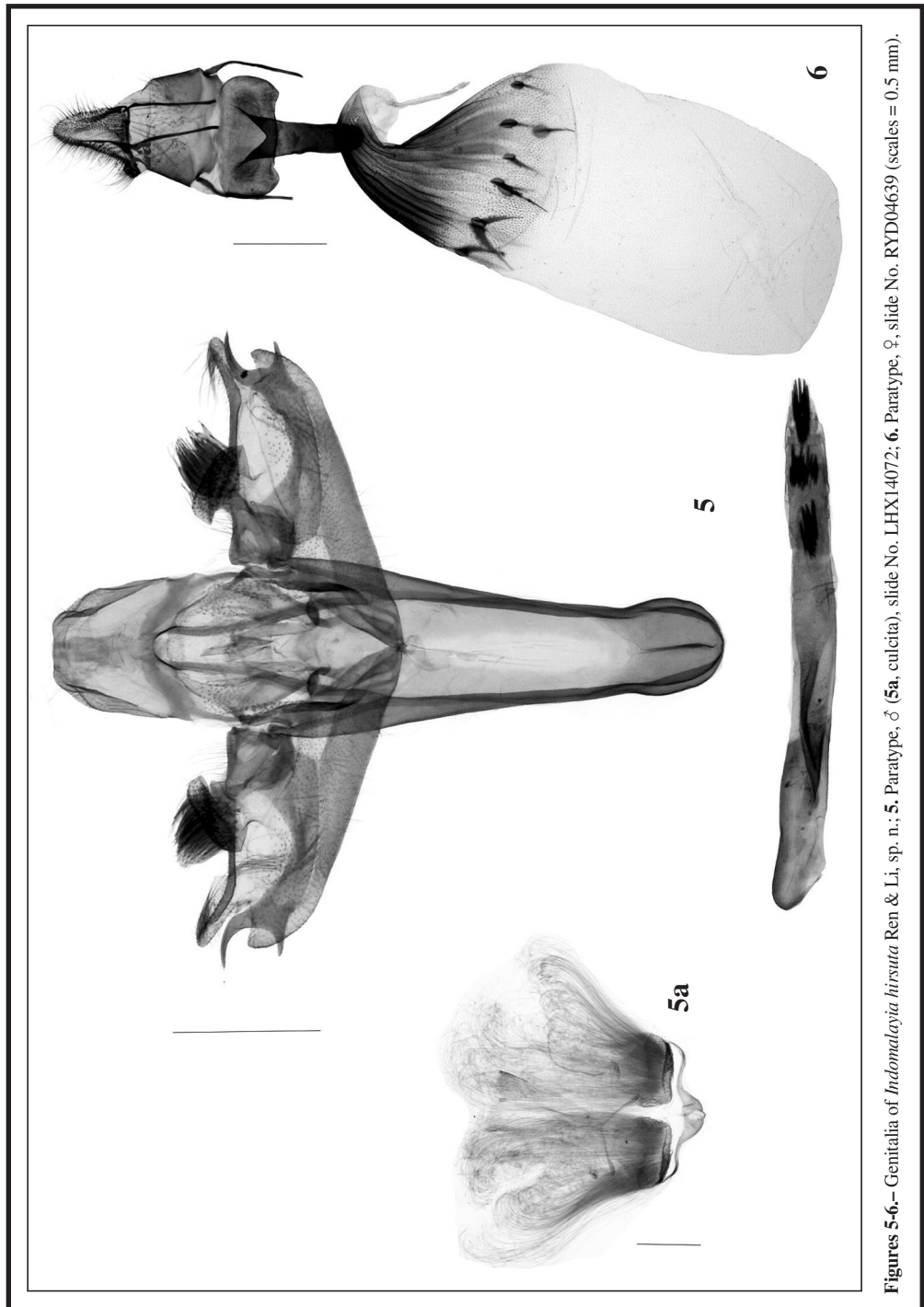
(Recibido para publicación / *Received for publication* 16-V-2014)

(Revisado y aceptado / *Revised and accepted* 15-VIII-2014)

(Publicado / *Published* 30-VI-2015)



Figures 1-2.— Adults of *Indomalaya hirsuta* Ren & Li, sp. n.; **1.** Holotype, ♂ (**1a**, labial palpus); **2.** Paratype, ♀ (**2a**, labial palpus); **3-4.** Venation of *Indomalaya hirsuta* Ren & Li sp. n. **3.** Paratype, ♂, slide No. LHX13374; **4.** Paratype, ♀, slide No. LHX13375 (scales = 2.0 mm).



Figures 5-6.— Genitalia of *Indomalaya hirsuta* Ren & Li, sp. n.; **5**, Paratype, ♂ (**5a**, culcita), slide No. LHX14072; **6**, Paratype, ♀, slide No. RYD04639 (scales = 0.5 mm).