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# Revision of the genus *Nephelobotys* Munroe & Mutuura, 1970 (Lepidoptera, Crambidae, Pyraustinae)

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## Abstract

The genus *Nephelobotys* Munroe & Mutuura, 1970 is revised to include eight species. Three species, *N. apiculata* **sp. nov.**, *N. semicircularis* **sp. nov.** and *N. brevis* **sp. nov.** are described as new to science. Two new combinations, *N. habisalis* (Walker, 1859) **comb. nov.** and *N. flavicilialis* (Snellen, 1890) **comb. nov.**, are proposed. *N. forcipatus* Ko & Bae, 2022 **syn. nov.** is found to be identical with *N. habisalis* (Walker, 1859). Diagnoses for all species are provided, with illustrations of external features and genitalia.

**Key words:** *Nephelobotys*, *Torulisquama*, *Limbobotys*, *Anamalaia*, morphology, taxonomy, new species

## Introduction

The genus *Nephelobotys* was established by Munroe and Mutuura in 1970 for a single species: *Pionea nephelistalis* Hampson, 1913 from southern China and India. In appearance, the genus and species can be easily recognized from other pyraustine species by the chocolate brown forewing with the predominantly yellow base, costa and termen, and dark brown hindwing with yellow termen and pale yellow vannus. Ko *et al.* (2022) added two new species, *N. denticulatus* and *N. forcipatus*, from Laos and transferred *Torulisquama evenoralis* (Walker, 1859) into *Nephelobotys*. The genus currently consists of four species.

In this paper, having compared the external and genitalic morphology based on examination of the types of *Botys habisalis* Walker, 1859 and *Crocidophora flavicilialis* Snellen, 1890, we move these two species into *Nephelobotys*. And three species from China need to be described as new to science. The taxonomy of *Nephelobotys* is revised based on appearance and genitalia.

## Material and methods

The material studied, including the types of the newly described species, is all deposited in the Museum of Biology, Sun Yat-sen University, China (**SYSBM**) except those specified with the Insect Collection of the College of Life Sciences, Nankai University, Tianjin, China (**NKU**), the Natural History Museum, London, United Kingdom (**NHMUK**, formerly BMNH) and the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (**IZCAS**). Slides of genitalia dissections were prepared according to Robinson (1976) and Li & Zheng (1996), with some modifications. Genitalia terms follow Klots (1970), Munroe (1976), Maes (1995) and Kristensen (2003). Specimen images at different focal levels were made using the Canon EOS 1DX camera in combination with the Helicon Remote; the genitalia pictures were taken using Zeiss Axio Scope A1 in combination with a Zeiss Axio Cam camera

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and the Axio Vision SE64 program on a Windows PC; source images were then aligned and stacked on Helicon Focus to obtain a fully sharpened composite image.

## Taxonomy

### *Nephelobotys* Munroe & Mutuura, 1970

*Nephelobotys* Munroe & Mutuura, 1970. Type species: *Pionea nephelistalis* Hampson, 1913, by original designation.

**Diagnosis.** Superficially, *Nephelobotys evenoralis*, *N. habisalis*, *N. apiculata* **sp. nov.** and *N. denticulatus* are similar to species of *Torulisquama* Zhang & Li, 2010 and *Limbobotys* Munroe & Mutuura, 1970 in sharing the yellow ground color with the brown subterminal band of wings. *N. semicircularis* **sp. nov.**, *N. brevis* **sp. nov.** and *N. flavicilialis* are similar to species of *Anamalaia* Munroe & Mutuura, 1969 in the forewings nearly brown or yellowish brown. And almost all four genera have the small glandular fovea on the upper surface of the forewings and a scale-tuft on the under surface at the position of the fovea in male. But *Nephelobotys* can be distinguished from them by the column-shaped uncus dorsally clothed setae short, thick and terminally forked, folded sella composed of a membranous inside part and sclerotized outside part, inside sella dorsally bearing simple setae, outside sella usually with a dorsal process bearing dense spines and a ventral hook-shaped process; sacculus with an inflated distal protrusion; deciduous cornuti (if present) multi-furcated in male genitalia; a pair of plate-shaped lamellae postvaginales densely covered with minute spines, much shorter colliculum and lack of the second signum in female genitalia.

**Description.** Frons weakly rounded. Labial palpus porrect, exceeding head by about same length or 2/3 of latter. Maxillary palpus moderately prominent, with dilated distal scale-tuft. Antenna smoothly scaled dorsally. Hindleg with outer spurs very minute in male. Forewing narrowly triangular, some species with basal part of forewing bearing a small glandular fovea closely beyond the cell in male, beneath with a scale-tuft on the position of the fovea. Hindwing fan-shaped, apex, termen and tornus rounded.

**Male genitalia**. Uncus columnar, covered with setae laterally and dorsally, dorsal setae short, thick and terminally forked. Transtilla sparsely setose, with slender and long process extending to juxta. Valva elongated tongue-shaped; costa nearly straight to slightly concaved; ventral margin slightly convex, sometimes with basal half slightly sinuate; weakly tapering from base to more or less rounded apex; inner side of distal valva densely setose; sella folded, composed of a membranous inside sella and sclerotized outside sella, inside sella bearing thick and simple setae, outside sella bearing a hook-shaped process ventrally, and inner or distal margin of process dentate or bearing spines, outside sella usually bearing a process dorsally and extending inward, densely bearing spines; sacculus with a broadly distal protrusion. Juxta bifid, with elongate dorsal arms. Phallus cylindrical; vesica sometimes bearing a bundle of deciduous cornuti with anterior half muti-furcated.

**Female genitalia**. Ovipositor lobes densely covered with long setae. Posterior apophysis straight, anterior apophysis longer and usually curved medially. Lamella postvaginalis developed, composed of a pair of plate-shaped sclerites, surface densely covered with minute spines. Lamella antevaginalis sometimes developed, nearly band-shaped, closely surrounding the posteroventral margin of antrum. Sinus vaginalis membranous, sometimes partly sclerotized or developed. Ductus bursae distorted or looped, moderately wide, approximately 3–4 times length of corpus bursae; antrum shallowly funnel-shaped, membranous or sclerotized, with posteroventral margin sclerotized, more or less winkled; colliculum short, ductus seminalis originating from its anterior end. Corpus bursae globular or oval; signum rhomboidal, moderately large; appendix bursae arising from lateral side of corpus bursae.

**Biology.** Larvae of *N. evenoralis* were reported as damaging bamboo.

**Distribution.** Southern China, Korea, Japan, Vietnam, Laos, Myanmar, Malaysia, Indonesia, India, Russia (Sahalin).

### Key to species of *Nephelobotys*

1 Ground color of forewing and hindwing yellow or pale yellow, with contrasting subterminal band brown or dark brown . . . . 2
Ground color of wings brown or ochreous yellow, subterminal band (if present) more or less darker than ground color and indistinct . . . . 5

2 Wingspan 27.0–30.0 mm; inside sella folded (Fig. 14) . . . . . *N. evenoralis*
Wingspan less than 26.0 mm; inside sella not folded. . . . . 3
3 Valva with a finger-shaped process on costa subapically; outside sella absent dorsal process; distal protrusion of sacculus with dorsal margin smoothed and with inner angle extending into a point process (Fig. 11) . . . . . *N. apiculata* **sp. nov.**
Valva without process on costa; outside sella possessing a dorsal process; distal protrusion of sacculus with dorsal margin serrated and without process on inner angle. . . . . 4
4 Postmedial line of forewing curved at $M_1$; inner margin of subterminal band of forewing undulating (Fig. 2); ventral process of outside sella rather wide; distal protrusion of sacculus nearly rectangular (Fig. 12). . . . . .*N. habisalis*
Postmedial line of forewing with anterior half straight; inner margin of subterminal band of forewing relatively straight (Fig. 5); ventral process of outside sella slender; sacculus with distal protrusion asymmetrically semicircular (Fig. 15) . . . . . *N. denticulatus*
5 Body color yellow, chocolate brown forewing with the predominantly yellow base, costal and terminal bands; dark brown hindwing with yellow terminal band and pale yellow vannus (Fig. 3); outside sella with ventral process excurved (Fig. 13) . . . . . .*N. nephelistalis*
Body color and forewing ochreous yellow, brown or yellowish brown; outside sella with ventral process nearly straight or incurved . . . . . 6
6 Forewing ochreous yellow, termen without brown spots on veins end (Fig. 6); outside sella absence of dorsal process (Fig. 16). . . . . .*N. semicircularis* **sp. nov.**
Forewing brown or yellowish brown, termen yellow and with brown spots on veins end; outside sella possessing a dorsal process . . . . . 7
7 Outside sella with dorsal process shorter than half length of ventral process, and ventral process extending beyond ventral margin of inside sella (Fig. 17). . . . . *N. brevis* **sp. nov.**
Outside sella with dorsal process longer than half length of ventral process, and ventral process not extending beyond ventral margin of inside sella (Fig. 18). . . . . .*N. flavicilialis*

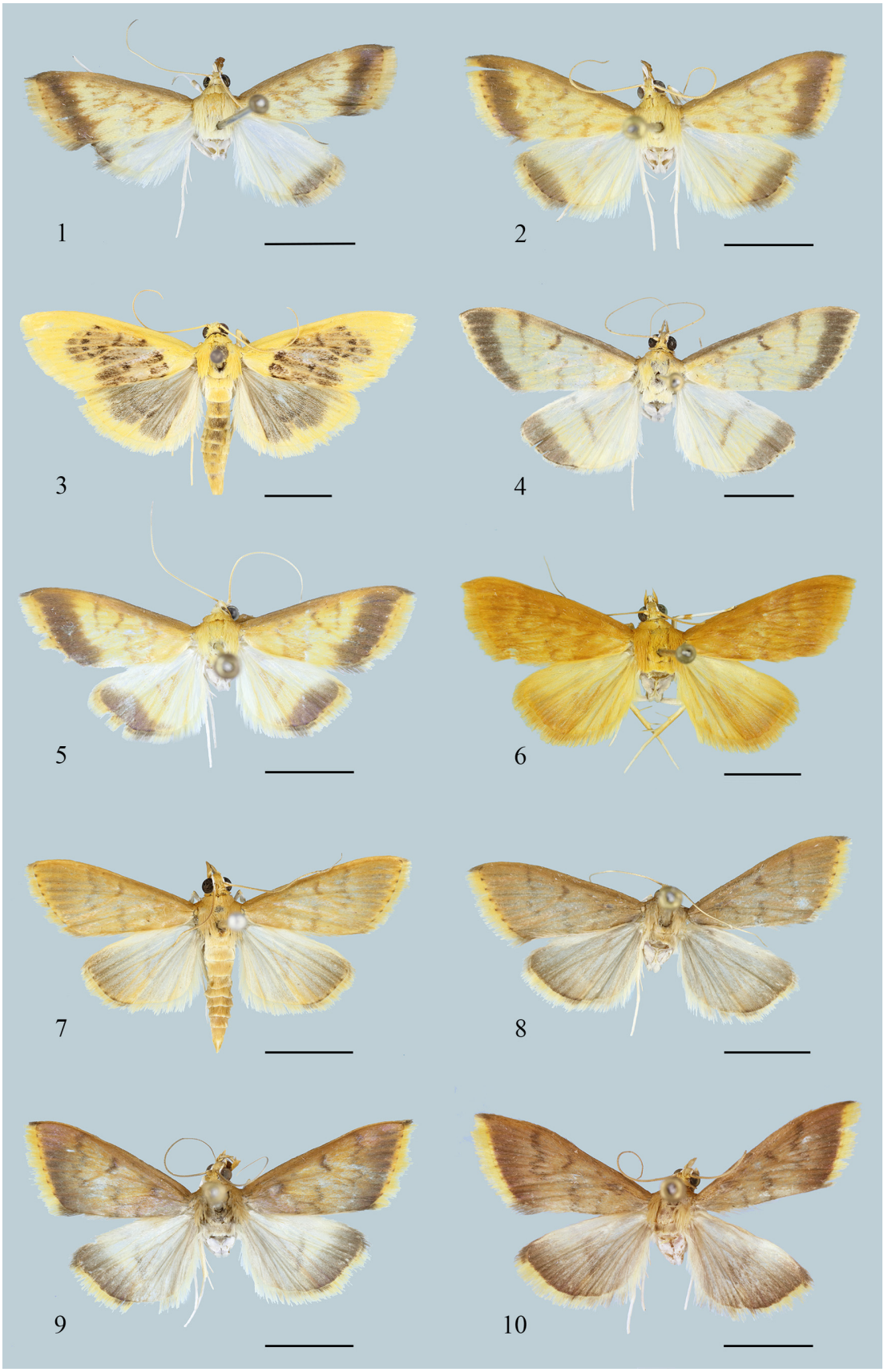
### *Nephelobotys apiculata* Zhang, sp. nov.

Figs 1, 11

**Diagnosis.** The new species is similar to *Nephelobotys habisalis* and *N. denticulatus*, but differs from them by forewing bearing much rougher and sparser scales forming markings and the postmedial line with anterior half intermittent in external appearance (Fig. 1). In the male genitalia, *N. apiculata* can be distinguished from them by a finger-shaped process on the costa of the valva placed subapically, the outside sella lacking a dorsal process and bearing a slender and straight ventral process, and by the distal protrusion of the sacculus with dorsal margin smoothed and with inner angle extending into a point process (Fig. 11).

**Material examined. Holotype ♂, CHINA, Yunnan:** Botanic Garden No. 55 site, Xishuangbanna, alt. 659 m, 29.V.2015, leg. Tao Manfei, genitalia slide No. SYSU0707. **Paratype: CHINA, Yunnan:** 1 ♂, Jinghong, 22.01°N, 100.48°E, alt. 630 m, 19.IV.1995, leg. Wang Hongjian, genitalia slide No. ZDD02227 (NKU).

**Description** (Fig. 1). Male. **Head.** Frons pale yellow, with white stripes laterally. Vertex pale yellow. Labial palpus deep clay brown, with white scales at base beneath. Maxillary palpus clay brown, pale yellow terminally. Basal scales of proboscis creamy white. Antenna pale brown, dorsally covered with pale yellow scales; with white longitudinal line on scape and first few flagellomeres. **Thorax.** Yellow dorsally, and gradually paler backward, ventral side creamy white. Legs creamy white, tibia of foreleg with pale clay brown ring terminally. **Wing.** Wingspan 21.0 mm. Forewing pale yellow, lines and stigmata formed by rough and sparse, clay brown scales; costal band clay brown; antemedial line from 1/5 of costa, strong oblique outwardly to half of 1A, then deeply angled to nearly half of posterior margin; orbicular stigma distinct; reniform stigma slightly curved, streak-shaped; postmedial line from 2/3 of costa, intermittent running close to posterior angle of cell, bending inward to 1/3 of $CuA_2$, deeply serrated, almost meet with antemedial line, then to dorsum 3/5; posterior of cell with a streak-shaped spot connected antemedial line with postmedial line; subterminal band dark brown, sinuated, with inner margin undulating and diffused clay brown scales; termen clay brown, with brown dots on veins end; dorsum basal 1/3 with a faint, streak-shaped spot; fringe yellowish brown, brown at apex and tornus. Hindwing pale yellow, with costal half translucently white; along basal half of $CuA_2$ covered with a faint, pale brown, streak-shaped spot; postmedial line indistinct; subterminal band dark brown, only extending to $CuA_2$; termen pale yellowish brown, with brown dots on veins end; fringe pale yellowish brown, brown in middle, and translucently white at anal area. **Abdomen.** Pale yellow dorsally, creamy white ventrally.




**FIGURES 1–10.** Adults of *Nephelobotys* spp. 1 *N. apiculata* **sp. nov.**, holotype, male (Yunnan). 2 *N. habisalis*, male (Guangxi). 3 *N. nephelistalis*, male (Zhejiang). 4 *N. evenoralis*, male (Hunan). 5 *N. denticulatus*, male (Guangxi). 6 *N. semicircularis* **sp. nov.**, paratype, male (Yunnan). 7 *N. brevis* **sp. nov.**, paratype, male (Guangdong). 8–10 *N. flavicilialis*, male (8–9 Yunnan, 10 Sichuan). Scale bars: 5.0 mm.

**Male genitalia** (Fig. 11). Uncus width uniform except the slightly inflated base and the rounded apex, distal 1/3 covered with setae laterally and dorsally, dorsal setae short, thick and terminally forked. Valva gradually tapering from base towards middle part, distal half with width uniform, apex bluntly rounded; costal margin slightly concaved, with a finger-shaped process placed subapically; inside sella nearly arc-shaped and with dorsal half densely bearing thick and simple setae; outside sella without dorsal process, ventral process slender and roughly straight except the bent apex; sacculus with distal protrusion wider than 1/3 length of sacculus, protrusion with dorsal margin smoothed and inner angle extending into a point and slightly curved process. Juxta with dorsal 2/3 widely divided into two curved arms. Phallus straight and tapered.

**Female**. Unknown.

**Distribution.** China (Yunnan).

**Etymology.** The specific name is derived from the Latin *apiculatus* (= pointed), corresponding to the inner angle of distal protrusion of sacculus extending into a pointed process.

### *Nephelobotys habisalis* (Walker, 1859) comb. nov.

Figs 2, 12, 19

*Botys habisalis* Walker, 1859: 702.
*Rhodaria maevialis* Walker, 1859: 925.
*Crocidophora habisalis* (Walker): Hampson, 1899: 193.
*Monocrocis habisalis* (Walker): Swinhoe, 1906: 295.
*Sinibotys habisalis* (Walker): Yamanaka & Yoshiyasu, 1992: 81.
*Nephelobotys forcipatus* Ko & Bae, 2022: 267. **syn. nov.**

**Diagnosis.** Wingspan 20.0–26.0 mm. This species is closely related to *Nephelobotys apiculata* **sp. nov.** in body size and markings of wings, particularly the yellow ground color of wings with the brown subterminal bands and undulating inner margin of subterminal band of forewing, but can be distinguished by the forewing bearing much slimmer and denser scales forming markings and the postmedial line not broken in external appearance (Fig. 2). Males have a smooth costa of the valva, a thick dorsal process and wide ventral process of the outside sella, and distal protrusion of the sacculus with dorsal margin thickly serrated and inner angle not extending into a process in male genitalia (Fig. 12). This species is also similar to *N. denticulatus* in body size and having a similar yellow ground color with the brown subterminal band of wings, but can be separated by the antemedial line with posterior half deep angled, postmedial line concave between $R_5$ and $M_3$, inner margin of subterminal band undulating in forewing (Fig. 2), a broad ventral process of the outside sella, and a nearly rectangular distal protrusion of the sacculus and wide dorsal arms of the juxta (Fig. 12).

**Material examined. Type material.** Type of *Botys habisalis*: ♂, Sarawak, Borneo, Pyralidae Brit. Mus. Slide No. 9733 (NHMUK); type of *Rhodaria maevialis*: ♂, Sarawak, Borneo, Pyralidae Brit. Mus. Slide No. 9734 (NHMUK).

**Other material examined. CHINA, Jiangxi:** 1 ♂, Doushui, Youjiang, 8.VII.1975, leg. Song Shimei (IZCAS); 1 ♂, Dayu, 13.VIII.1985 (IZCAS); 8 ♂, 2 ♀, Daqiutian, Mt. Jiulianshan, Longnan, alt. 500 m, 30–31.VIII.2007, leg. Zhang Dandan, genitalia slide No. SYSU0760 (♂), HFX08054 (♂), HFX08055 (♂), SYSU0794 (♀); 1 ♂, Mt. Jiulianshan, Longnan, 24.54°N, 114.46°E, alt. 625 m, 28.IV.2012, leg. Li Jinwei; 1 ♂, 1 ♀, Xiangzhou, Mt. Jinggangshan, 26.IV., 31.V.2011, leg. Yu Yali, Yang Lijun, genitalia slide No. SYSU0730 (♂); 1 ♂, Xiaoxidong, Mt. Jinggangshan, 1.VII.2011, leg. Yang Lijun; 7 ♂, 5 ♀, Guanyinyan, Jing'an, 29.03°N, 115.25°E, alt. 195 m, 20.VII.2014, leg. Chen Kai, genitalia slide No. SYSU0695 (♂), 1241 (♀); 2 ♂, 1 ♀, Mt. Wugongshan, Anlu, 27.33°N, 114.23°E, alt. 400 m, 24.VII.2014, leg. Chen Kai; **Fujian:** 1 ♂, Letu Rainforest, Hexi, Nanjing, 24.90°N, 117.22°E, alt. 270 m, 10.VII.2014, leg. Zhang Dandan, genitalia slide No. SYSU0708; **Hunan:** 1 ♂, Tourist Center, Taoyuandong, 26.47°N, 114.04°E, alt. 870 m, 20.V.2014, leg. Chen Xiaohua, genitalia slide No. SYSU0640; 2 ♂, Shigang, Taoyuandong, 26.56°N, 113.99°E, alt. 621 m, 24.V.2014, leg. Liu Xiaolin; 1 ♂, Zhulian Waterfall, Taoyuandong, 26.50°N, 113.99°E, alt. 500 m, 26.V.2014, leg. Liu Xiaolin, genitalia slide No. SYSU0771; **Guangdong:** 10 ♂, 12 ♀, Tangpeng Village, Lianjiang, 12.VIII.2008, genitalia slide No. SYSU0759 (♂); 1 ♂, Lianjiang, 26.IX.2008; 7 ♂, 12 ♀, Heshan, 28–29.V., 15.VII., 26.VIII.2002, 22.VII.2008, leg. Liu Guilin, genitalia slide No. SYSU0758 (♂), ZDD03264 (♂); 3 ♂, 2 ♀, Mt. Danxiashan, Renhua, alt. 408 m, 17.IV., 31.V., 3–

4.VI.2008, leg. He Fengxia, Jia Fenglong, Wang Yun, Li Jiahui, genitalia slide No. SYSU0688 (♂), SYSU0757 (♂); 27 ♂, 19 ♀, Mt. Danxiashan, Shaoguan, 25.04°N, 113.64°E, alt. 96 m, 30.V.–8.VI.2008, 6–7.VI.2012, 29.V.2013, leg. He Fengxia, Chen Haidong, Li Jinwei, Chen Xiaohua, genitalia slide No. SYSU0689 (♂), SYSU0690 (♂), SYSU0723 (♂), SYSU0756 (♂); 4 ♂, 7 ♀, He'erkou, Fengkai, 3.VI., 3.VIII.2011, leg. Chen Haidong, Tong Bo, Li Yun, genitalia slide No. SYSU0696 (♀); 4 ♂, 4 ♀, Yanshuitian, Fengkai, 3.VI., 3.VII., 3.VIII., 6.IX.2011, leg. Chen Haidong, Tong Bo, Li Yun, Yang Lijun, Liao Junlei; 2 ♂, 4 ♀, Mt. Heishiding, Fengkai, 23.27°N, 111.54°E, alt. 191 m, 14–15.VI.2009, 5.X.2011, 25.V.2013, leg. He Fengxia, Tong Bo, Li Yun, Chen Xiaohua; 1 ♀, Mt. Dadongshan, Lianzhou, 24.56°N, 112.44°E, alt. 770 m, 18.IV.2013, leg. Li Jinwei; 1 ♂, 3 ♀, Mt. Dinghushan, Zhaoqing, 20.13°N, 112.32°E, alt. 35 m, 27.V.2013, leg. Chen Xiaohua; 24 ♂, 7 ♀, Shimentai, Yingde, 27.V.2012, leg. Yang Lijun, Jia Qianju, genitalia slide No. SYSU0693 (♂), SYSU0703 (♂), SYSU0792 (♀); 1 ♂, Sun Yat-sen University campus, Kangle, Guangzhou, 29.VI.1959; 1 ♀, Kangle, Guangzhou, 3.V.1963; 1 ♂, Lingnan University campus, Guangzhou, 1948; 1 ♂, Loh Kong Tung, S. E. of Canton, 17.VII.1932, genitalia slide No. ZDD03040; 1 ♂, Chebaling National Nature Reserve, Shixing, 24.72°N, 114.26°E, alt. 496 m, 28.V.2017, leg. Duan Yongjiang; 1 ♀, Dawuling, Xinyi, alt. 900 m, 11.VIII.2003, leg. Zhang Dandan, Li Zhiqiang; **Hainan:** 1 ♀, Mt. Jianfengling, 17.VI.1982, leg. Liang Shaoying, genitalia slide No. ZDD03038; 1 ♂, Mt. Bawangling, 19.05°N, 109.07°E, alt. 592 m, 9.V.2013, leg. Li Jinwei, genitalia slide No. SYSU0769; 4 ♂, Mt. Limushan, 19.10°N, 109.44°E, alt. 662 m, 20.V.2013, leg. Chen Xiaohua, genitalia slide No. SYSU0694, SYSU0704; 4 ♂, Bangxi Reserve, 19.22°N, 109.06°E, alt. 97 m, 2.IX.2013, leg. Chen Xiaohua, genitalia slide No. SYSU0772; 6 ♂, Yinggeling Reserve, 19.05°N, 109.50°E, alt. 954 m, 4.IX.2013, leg. Chen Xiaohua, genitalia slide No. SYSU0770; **Guangxi:** 2 ♂, Fulong, Fangcheng, 200 m, 25.V.1999, Li Wenzhu (IZCAS); 1 ♂, Huawang Mountain Villa, Jinxiu, 24.08°N, 110.11°E, alt. 550 m, 14.IV.2002, leg. Hao Shulian, Xue Huaijun, ZDD02326 (NKU); 3 ♂, 1 ♀, Milv, Nanping, alt. 770 m, 3.IV.2002, leg. Hao Shulian, Xue Huaijun (NKU); 2 ♀, Hongqi Forestry Station, Shangsi, alt. 260 m, 2.IV.2002, leg. Hao Shulian, Xue Huaijun (NKU); 3 ♂, Pinglang Village, Hengxian, 18.VII.2002, leg. Du Yanli (NKU); 1 ♂, Jinxiazhai, Mulun Reserve, alt. 288 m, 20.VII.2015, leg. Xu Dan, genitalia slide No. SYSU0721; 1 ♂, Nonggang, Longzhou, alt. 188 m, 27.VII.2011, leg. He Guiqing; 2 ♂, 1 ♀, Mt. Shiwandashan, Shangsi, 22.VIII.2011, leg. Zhang Dandan, Cheng Muchun, Yang Lijun, genitalia slide No. SYSU0747 (♂), SYSU0793 (♀); 1 ♂, 2 ♀, Gaozhai, Xing'an, 28.VIII.2011, leg. Zhang Dandan, Li Jinwei, genitalia slide No. SYSU0746 (♂); **Guizhou:** 1 ♂, 1 ♀, Maolan, Libo, 31.VIII.2011, leg. Li Jinwei, genitalia slide No. SYSU0768 (♂); **Yunnan**: 9 ♂, 12 ♀, Mt. Baihualing, Baoshan, alt. 1520 m, 11, 13.VIII.2007, leg. Zhang Dandan, Xue Dayong, genitalia slide No. SYSU0692 (♂), SYSU0748 (♂), SYSU0697 (♀); 1 ♂, 1 ♀, Dahaoping, Tengchong, alt. 2020 m, 6.VIII.2007, leg. Zhan Dandan, genitalia slide No. SYSU0766 (♂), SYSU0782 (♀); 2 ♂, 1 ♀, Bawan, Baoshan, alt. 1040 m, 9–10.VIII.2007, leg. Zhan Dandan, genitalia slide No. SYSU0751 (♂); 1 ♀, Laiyanghe Reserve, 20.VII.2011, leg. Li Jinwei; 2 ♂, Hanlongzhai, Mangkuan, Baoshan, alt. 1537 m, 20–21.VIII.2015, leg. Wei Xueli, genitalia slide No. SYSU0749, SYSU0750; 1 ♂, Nabang, Yingjiang, 24.75°N, 97.56°E, alt. 239 m, 7.V.2016, leg. Duan Yongjiang, genitalia slide No. SYSU0734.

**Remarks.** Based on similarity in the appearance and genitalia between *Nephelobotys habisalis* (Walker, 1859) and *N. forcipatus* Ko & Bae, 2022, the latter name is considered a junior synonym of *N. habisalis* (Walker). This treatment also approved by Dr. Jae-Ho Ko relying on the comparison of the type material of these two species.

**Distribution.** China (Jiangxi, Fujian, Hunan, Guangdong, Guangxi, Hainan, Guizhou, Yunnan, Taiwan), Vietnam, Laos, Malaysia, India.

### *Nephelobotys nephelistalis* (Hampson, 1913)

Figs 3, 13, 20

*Pionea nephelistalis* Hampson, 1913: 9.
*Nephelobotys nephelistalis* (Hampson): Munroe & Mutuura, 1970: 299.

**Diagnosis.** Wingspan 25.0–29.0 mm. In appearance, the chocolate brown forewing with the predominantly yellow base, costal and termen bands, dark brown hindwing with yellow termen band and pale yellow vannus (Fig. 3) can be regarded as the most distinct characters for this species in *Nephelobotys*. In the male genitalia, this species is somewhat similar to *N. apiculata* **sp. nov.** in distal protrusion of sacculus with inner angle extending into a process, but can be distinguished by costal margin of valva without a process, ventral process of transtilla developed and thick, outside sella with pointed and excurved ventral process, distal protrusion of sacculus with dorsal margin

thickly bearing spines and inner angle extending into a stout process (Fig. 13). In the female genitalia, the well sclerotized, inversely trapezoidal antrum with posteroventral margin straight, and ductus bursae with a sclerite near seminalis ductus (Fig. 20) can separate *N. nephelistalis* from all other species in the genus.

**Material examined. Type material.** Type, ♀, Ichang [Yichang, China], Mrs Pratt Coll., June 1888 (NHMUK).

**Other material examined. CHINA: Zhejiang:** 1 ♂, Mt. Tianmushan, Lin'an, 30.31°N, 119.44°E, alt. 295 m, 11.V.2012, leg. Li Jinwei; 2 ♂, Mt. Longtang, Qingliangfeng, alt. 500 m, 22.V.2012, leg. Fu Xiaobing; **Fujian:** 8 ♂, 3 ♀, Guadun, Mt. Wuyishan, 27.74°N, 117.64°E, alt. 1220 m, 17–18.V.2012, leg. Li Jinwei, genitalia slide No. SYSU0710 (♂); 4 ♂, 1 ♀, Tongmu, Mt. Wuyishan, 27.75°N, 117.68°E, alt. 759 m, 19–20.V.2012, leg. Li Jinwei, genitalia slide No. SYSU0784 (♀); 1 ♀, Chishuizhan, Mt. Daiyunshan, 25.64°N, 118.14°E, alt. 1015 m, 22.V.2012, leg. Li Jinwei, genitalia slide No. SYSU0796; 1 ♂, 1 ♀, Daiyun Village, Mt. Daiyunshan, 25.64°N, 118.21°E, alt. 902 m, 23.V.2012, leg. Li Jinwei, genitalia slide No. SYSU0762 (♂); **Jiangxi:** 2 ♂, Luofu, Mt. Jinggangshan, 27.IV.2011, leg. Liu Ping, Mei Yan, genitalia slide No. SYSU0761, SYSU0786; 1 ♀, Main Peak, Mt. Jinggangshan, 28.V.2011, leg. Yang Lijun, Li Jinwei; 1 ♂, 1 ♀, Xiaoxidong, Mt. Jinggangshan, 30.V.2011, leg. Li Jinwei, genitalia slide No. SYSU0797 (♀); **Hubei:** 4 ♀, Taohuachong, Mt. Dabieshan, 30.59°N, 116.19°E, alt. 661 m, 24.VI.2014, leg. Chen Xiaohua, Pan Chang, genitalia slide No. SYSU0785; 1 ♂, Qingtaiguan, Luotian, 31.11°N, 115.41°E, alt. 524 m, 2.VII.2014, leg. Liu Zhenhua, Pan Chang, genitalia slide No. SYSU0754; **Hunan:** 5 ♂, 4 ♀, Jiashui, Taoyuandong, 26.59°N, 113.99°E, alt. 420 m, 19.V.2014, leg. Chen Xiaohua, genitalia slide No. SYSU0764 (♂); 2 ♂, 2 ♀, Tourist Center, Taoyuandong, 26.47°N, 114.04°E, alt. 870 m, 20.V.2014, leg. Chen Xiaohua, genitalia slide No. SYSU0753 (♂), SYSU0783 (♀); 2 ♀, Shigang, Taoyuandong, 26.56°N, 113.99°E, alt. 621 m, 24.V.2014, leg. Liu Xiaolin; 2 ♂, 1 ♀, Mihua Village, Taoyuandong, 26.50°N, 114.07°E, alt. 598 m, 25.V.2014, leg. Lin Renchao, Pan Chang, genitalia slide No. SYSU0639 (♂); 5 ♂, Zhulian Waterfall, Taoyuandong, 26.50°N, 113.99°E, alt. 500 m, 26.V.2014, leg. Liu Xiaolin, genitalia slide No. SYSU0711; 1 ♂, Mt. Huilongshan, Zixing, 26.08°N, 113.39°E, alt. 886 m, 8.VI.2016, leg. Chen Kai, Duan Yongjiang; 8 ♂, 7 ♀, Gaowangjie National Natural Reserve, Guzhang, 28.66°N, 110.08°E, alt. 890 m, 18–20.VI.2017, leg. Zhang Dandan; **Guangdong:** 2 ♂, Mt. Dadongshan, Lianzhou, 24.56°N, 112.43°E, alt. 690 m, 19.IV.2013, leg. Li Jinwei, genitalia slide No. SYSU0752, SYSU0763; 1 ♀, Chebaling National Natural Reserve, Shixing, 24.72°N, 114.26°E, alt. 496 m, 29.V.2017, leg. Duan Yongjiang, genitalia slide No. SYSU1242; **Guangxi:** 1 ♀, Jinxiu, alt. 1100 m, 10.V.1999, leg. Li Wenzhu (IZCAS); 1 ♂, 1 ♀, Mt. Shengtangshan, Jinxiu, alt. 900 m, 17–18.V.1999, leg. Han Hongxiang, Li Wenzhu (IZCAS).

**Distribution**. China (Zhejiang, Fujian, Jiangxi, Henan, Hubei, Hunan, Guangdong, Guangxi, Sichuan), India.

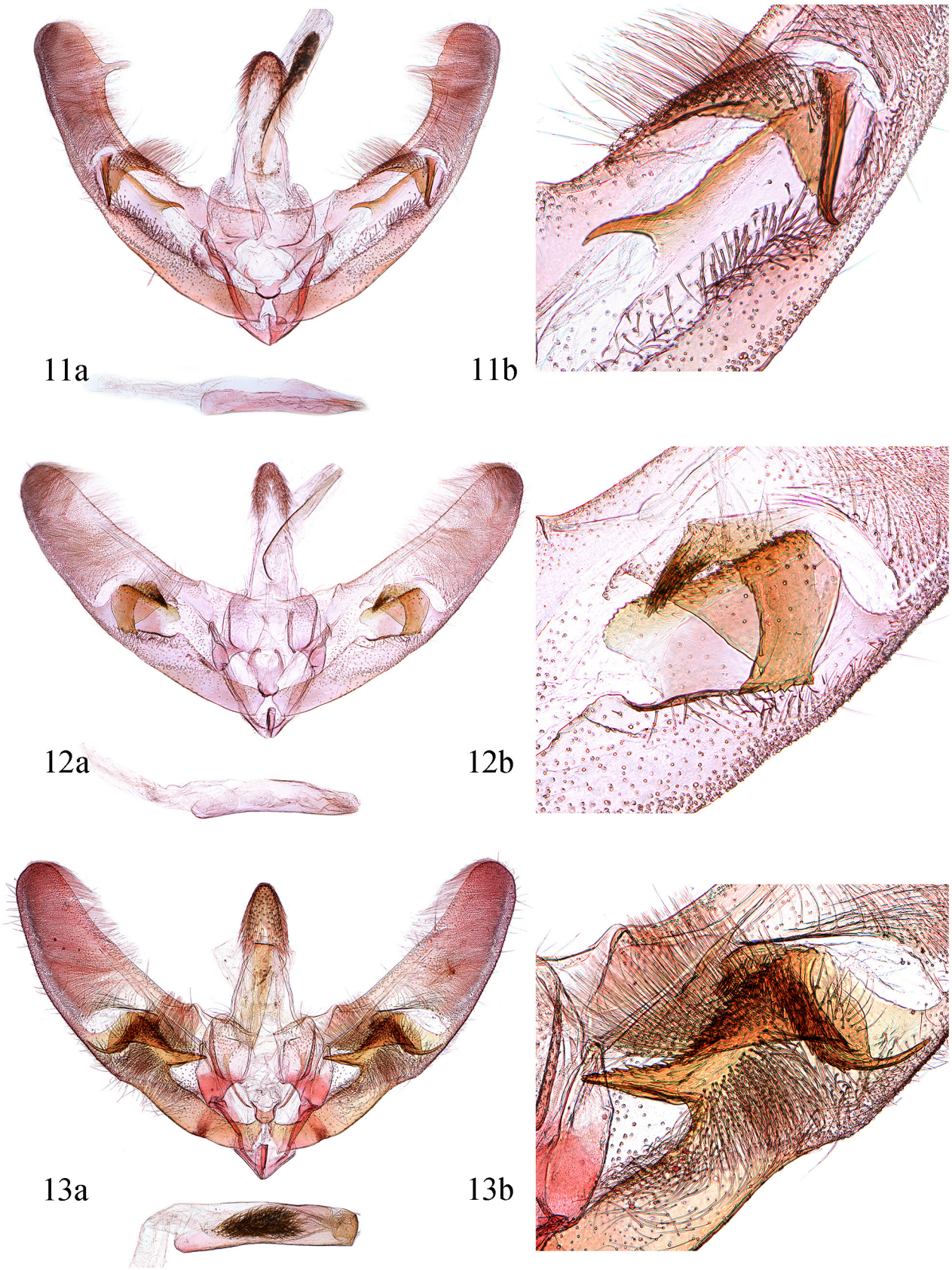
### *Nephelobotys evenoralis* (Walker, 1859)

Figs 4, 14, 21

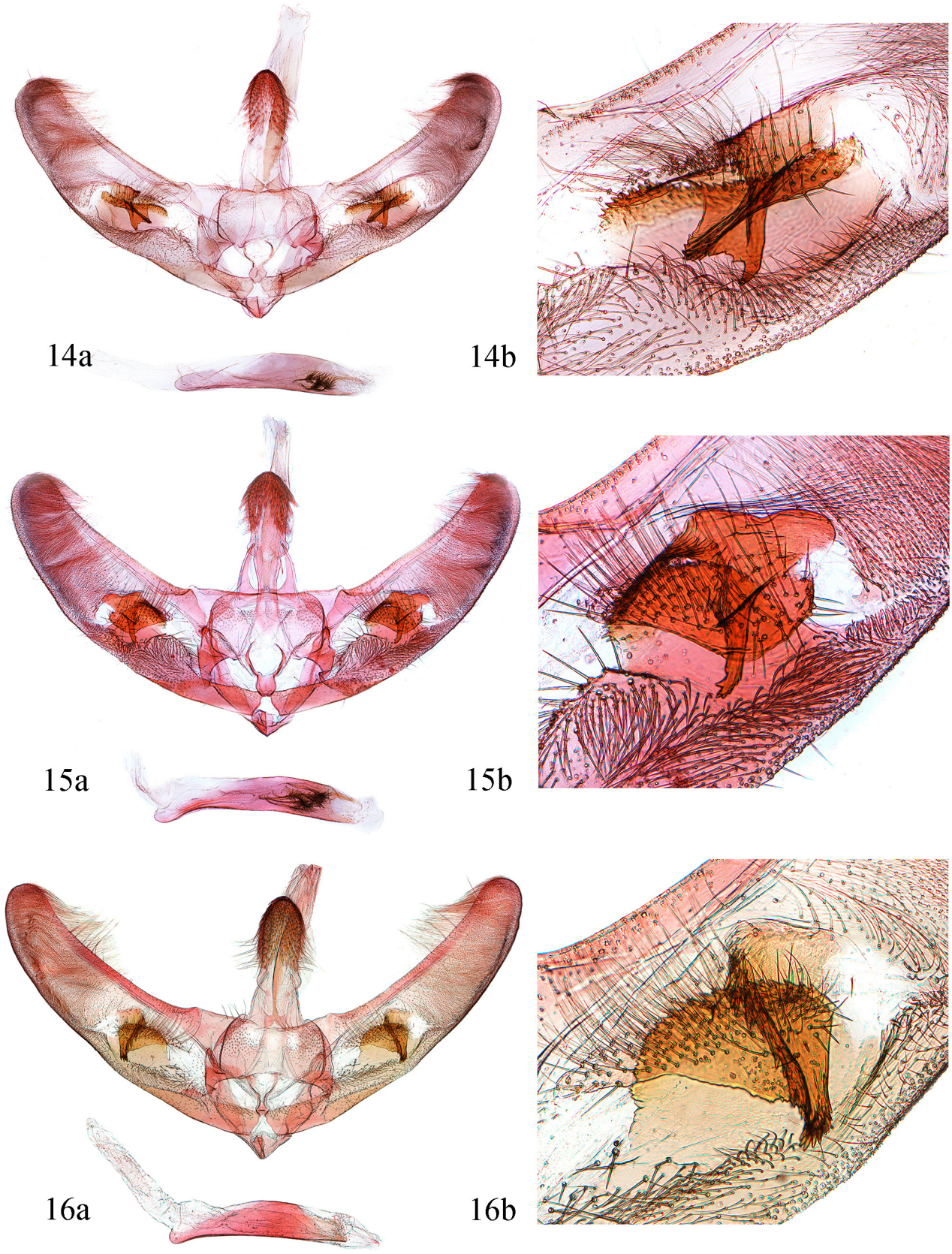
*Pionea evenoralis* Walker, 1859: 1012.
*Scopula evenoralis* Walker, 1859: 1015.
*Botys mandarinalis* Leech, 1889: 68.
*Crocidophora evenoralis* (Walker): Hampson, 1896: 391.
*Sinibotys evenoralis* (Walker): Inoue, 1982, **1**: 351, **2**: 236.
*Torulisquama evenoralis* (Walker): Yamanaka, 2013: 416.
*Nephelobotys evenoralis* (Walker): Ko, Bayarsaikhan, Lee & Bae, 2022: 265.

**Diagnosis.** This species resembles *Nephelobotys habisalis*, *N. apiculata* **sp. nov.**, and *N. denticulatus* in the yellow ground color and the brownish subterminal band of wings in appearance, but wingspan is much larger (27.0–30.0 mm), blackish brown lines and stigmata are more distinct (Fig. 4) in *N. evenoralis*. In the male genitalia, *N. evenoralis* differs from all other species in the genus by the ventral part of inside sella folded, distal protrusion of sacculus with dorsal margin slightly wavy (Fig. 14).

**Material examined. Type material.** Type of *Pionea evenoralis*: ♀, N. China, Pyralidae Brit. Mus. Slide No. 9735 (NHMUK); type of *Botys mandarinalis*: ♂, Ningpo [Ningbo, China], July1886, Native Coll., Pyralidae Brit. Mus. Slide No. 8694 (NHMUK).




**FIGURES 11–13.** Male genitalia of *Nephelobotys* spp. 11 *N. apiculata* **sp. nov.**, holotype, Yunnan (genitalia slide No. SYSU0707). 12 *N. habisalis*, Fujian (genitalia slide No. SYSU0708). 13 *N. nephelistalis*, Guangdong (genitalia slide No. SYSU0763). a Whole genitalia. b Enlarged detail of base part of valva.




**FIGURES 14–16.** Male genitalia of *Nephelobotys* spp. 14 *N. evenoralis*, Yunnan (genitalia slide No. SYSU0706). 15 *N. denticulatus*, Guangxi (genitalia slide No. SYSU0699). 16 *N. semicircularis* **sp. nov.**, paratype, Yunnan (genitalia slide No. SYSU0788). a Whole genitalia. b Enlarged detail of base part of valva.

**Other material examined. CHINA: Jiangxi:** 2 ♂, 1 ♀, Yifeng, 31.V.1959, 7.VI.1959 (IZCAS); **Hunan:** 2 ♂, Gaowangjie National Nature Reserve, Guzhang, 28.66°N, 110.08°E, alt. 890 m, 19, 21.VI.2017, leg. Zhang Dandan, genitalia slide No. SYSU0800; **Guizhou:** 4 ♂, Mt. Fanjingshan, Heiwan, alt. 530 m, 3.VI.2002, leg. Wang Xinpu (NKU); 1 ♀, Chishui, alt. 390 m, 27.V.2000, leg. Du Yanli (NKU); **Guangdong:** 2 ♂, 2 ♀, Mt. Dadongshan, Lianzhou, alt. 650 m, 2.VI.1995, leg. Duan Min, 21, 22, 25.VI.2004, leg. Zhang Dandan, genitalia slide No. SYSU0705 (♂), SYSU0709 (♀); 2 ♂, Chebaling National Nature Reserve, Shixing, 24.72°N, 114.26°E, alt. 496 m, 29.V.2017, leg. Duan Yongjiang; 2 ♀, Babaoshan Reserve, Mt. Nanling, alt. 1070 m, 23.VIII.2010, leg. Du Xicui; **Yunnan:** 2 ♂, Longmen Village, Xishuangbanna, alt. 850 m, 8–9.V.2015, leg. Wei Xueli, genitalia slide No. SYSU0706, SYSU0765.

**Biology.** Larvae of *N. evenoralis* was reported as damaging bamboo, including *Arundinaria* sp. (Wang, 1980), *Phyllostachys edulis* (Carr.) Lehaie (Piao *et al.*, 2010), *P. bambusoides* Sieb. *et* Zucc. f. shouzhu Yi, *P. bissetii* (McClure) (Zeng *et al.*, 1987; Xu, 1989), *P. reticulata* (Rupr.) K. Koch, *Pleioblastus amarus* (Keng) keng (Huang, 2011), *Dendrocalamopsis oldhami* (Munro) Keng f. (Huang, 2011; Song, 2014).

**Distribution.** China (Zhejiang, Jiangsu, Fujian, Jiangxi, Hubei, Hunan, Guangdong, Guizhou, Sichuan, Yunnan, Taiwan), Korea, Japan, Russia (Sahalin), Vietnam, Myanmar, India.

### *Nephelobotys denticulatus* Ko & Bae, 2022

Figs 5, 15, 22

*Nephelobotys denticulatus* Ko & Bae, 2022: 266.

**Diagnosis.** *Nephelobotys denticulatus* is similar to *N. habisalis* and *N. apiculata* **sp. nov.**, but differs from them by shallowly sinuate antemedial line, nearly straight anterior half of postmedial line and wider subterminal band of forewing, and relatively straight inner margin of subterminal band of forewing in external appearance (Fig. 5), by slender and curved ventral process of outside sella extending beyond ventral margin of inside sella, asymmetrically semicircular distal protrusion and the hairy median protrusion of the sacculus in the male genitalia (Fig. 15).

**Material examined. CHINA, Yunnan:** 1 ♂, Ganlanba, Jinghong, 22.01°N, 100.48°E, alt. 630 m, 19.IV.1995, leg. Wang Hongjian, genitalia slide No. ZDD02227 (NKU); **Guangxi:** 2 ♂, 2 ♀, Nonggang, Longzhou, 22.47°N, 106.96°E, alt. 271 m, 19.IV.2012, leg. Li Jinwei, genitalia slide No. SYSU0691 (♂), SYSU0722 (♂), SYSU0700 (♀), SYSU0781 (♀); 2 ♂, Tengmao Village, Jingxi, alt. 672 m, 9, 11.VII.2015, leg. Xu Dan, Wan Jiping, genitalia slide No. SYSU0699, SYSU0767.

**Distribution.** China (Guangxi, Yunnan), Laos.

**Remarks**. This species is recorded in China for the first time.

### *Nephelobotys semicircularis* Zhang & Chen, sp. nov.

Figs 6, 16, 23

**Diagnosis.** The ochreous yellow body and wing color can distinguish *Nephelobotys semicircularis* **sp. nov.** from all other species in the genus. *Nephelobotys semicircularis* **sp. nov.** is also similar to *N. brevis* **sp. nov.** and *N. flavicilialis* in the male genitalia, but differs from them by the outside sella lacking a dorsal process and inside margin of the ventral process strongly sclerotized and bearing long spines (Fig. 16).

**Description** (Fig. 6). **Head.** Frons ochreous yellow, with creamy white stripes laterally. Vertex ochreous yellow. Labial palpus ochreous yellow, whitish at base beneath. Maxillary palpus ochreous yellow, paler terminally. Basal scales of proboscis creamy white and pale yellow. Antenna ochreous yellow, basal part with anterior surface white. **Thorax.** Tegula and thorax ochreous yellow above, pale yellow beneath except the whitish most anterior part. Forelegs pale yellow or pale ochreous yellow; tibia base pale yellow and apex white, outside with a white spot, with ochreous yellow band near apex; tarsus white with 3rd tarsomere tip and last two tarsomeres pale yellow. Midleg pale yellow; tibia and tarsus white ventrally, tibia ochreous yellow dorsally, tarsus pale brown or pale yellow. Hindleg pale yellow; with outer spurs about 1/8–1/6 length of inner spurs in male. **Wing.** Wingspan 22.0–29.0 mm. Forewing ochreous yellow, with markings deep ochreous yellow and indistinct; antemedial line with posterior

half visible, serrated and obliquely extending nearly to half of dorsum; orbicular stigma almost invisible; reniform stigma lunate; postmedial line stretching from costal 3/4, weakly concave to middle of $M_3$, retracted to near base of $CuA_2$, then sinuated to dorsal 3/5; subterminal band sinuated; fringe ochreous yellow. Hindwing pale ochreous yellow, gradually darker near termen; postmedial line indistinct, ochreous yellow, only with the part between $M_1$ and 1A visible, somewhat S-shaped; fringe ochreous yellow. **Abdomen.** Ochreous yellow above and posterior margin of each segment paler, pale yellow beneath.

**Male genitalia** (Fig. 16). Uncus with width uniform except the slightly inflated base and the narrowly rounded apex, mostly setose laterally and dorsally, dorsal setae short, thick and terminally forked. Valva narrow, gradually tapering from base to the rounded apex; costal margin slightly concave, ventral margin slightly convex, with basal half slightly wavy; inside sella nearly trapezoidal and mostly setose, dorsal part bearing thick, long and simple setae; outside sella absent dorsal process, ventral process with inner margin densely bearing long spines together with apex; sacculus with a nearly semicircular distal protrusion, the protrusion approximately 1/3 length of sacculus and with dorsal margin thickly bearing spines. Juxta narrow and small, with basal and lateral margins slightly ridged, bifid from basal 1/4, arms slim and with basal part paralleled and then widely separated and curved. Phallus slightly curved at base.

**Female genitalia** (Fig. 23). Posterior apophysis as wide as anterior apophysis, anterior apophysis longer than 1.5 times length of posterior apophysis. Sinus vaginalis membranous medially, lateral side with a pocket structure posteriorly and partly sclerotized anteriorly. Antrum shallowly funnel-shaped, mostly membranous, with posteroventral margin nearly V-shaped and well sclerotized, widely surrounded by sinuated lamella antevaginalis; ductus bursae approximately three times length of corpus bursae; colliculum slightly narrowed posteriorly. Corpus bursae globular, the accessory sac small; signum about half length of corpus bursae, with carinate angles slightly acute, other two angles slightly produced.

**Material** exam**ined. Holotype** ♂**, CHINA, Yunnan:** No. 55 site, Xishuangbanna Botanic Garden, alt. 659 mm, 29.V.2015, leg. Tao Manfei, genitalia slide No. SYSU0789.

**Paratypes: CHINA, Yunnan:** 2 ♂, same data as holotype, genitalia slide No. SYSU0787, SYSU0790; 1 ♂, 30.V.2015, other data same as holotype, genitalia slide No. SYSU0778; 1 ♀, Longmen Village, Xishuangbanna, alt. 850 m, 9.V.2015., leg. Wei Xueli, genitalia slide No. SYSU0780; 1 ♂, Yaoqu Town, Xishuangbanna, alt. 1300 m, 11.V.2015, leg. Wei Xueli; 1 ♂, 1 ♀, Yaoqu Town, Xishuangbanna, alt. 780 m, 27.V.2015, leg. Tao Manfei, genitalia slide No. SYSU0777 (♂), SYSU0779 (♀); 3 ♂, 55 kilometers site, Xishuangbanna Reserve, 25.V.2015, leg. Zhang Zhenguo, genitalia slide No. ZDD12032 (NKU); 1 ♂, Dazhong Mountain Villa, Xishuangbanna, alt. 840 m, 25.V.2015, leg. Tao Manfei, genitalia slide No. SYSU0788; 2 ♂, Baihualing, Boshan, 1520 m, 11, 13.VIII.2007, leg. Zhang Dandan, genitalia slide No. CXH12157.

**Distribution.** China (Yunnan).

**Etymology.** The specific name is derived from the Latin *semicircularis* = semicircular, referring to the sacculus with a distal protrusion inflated into a semicircular shape.

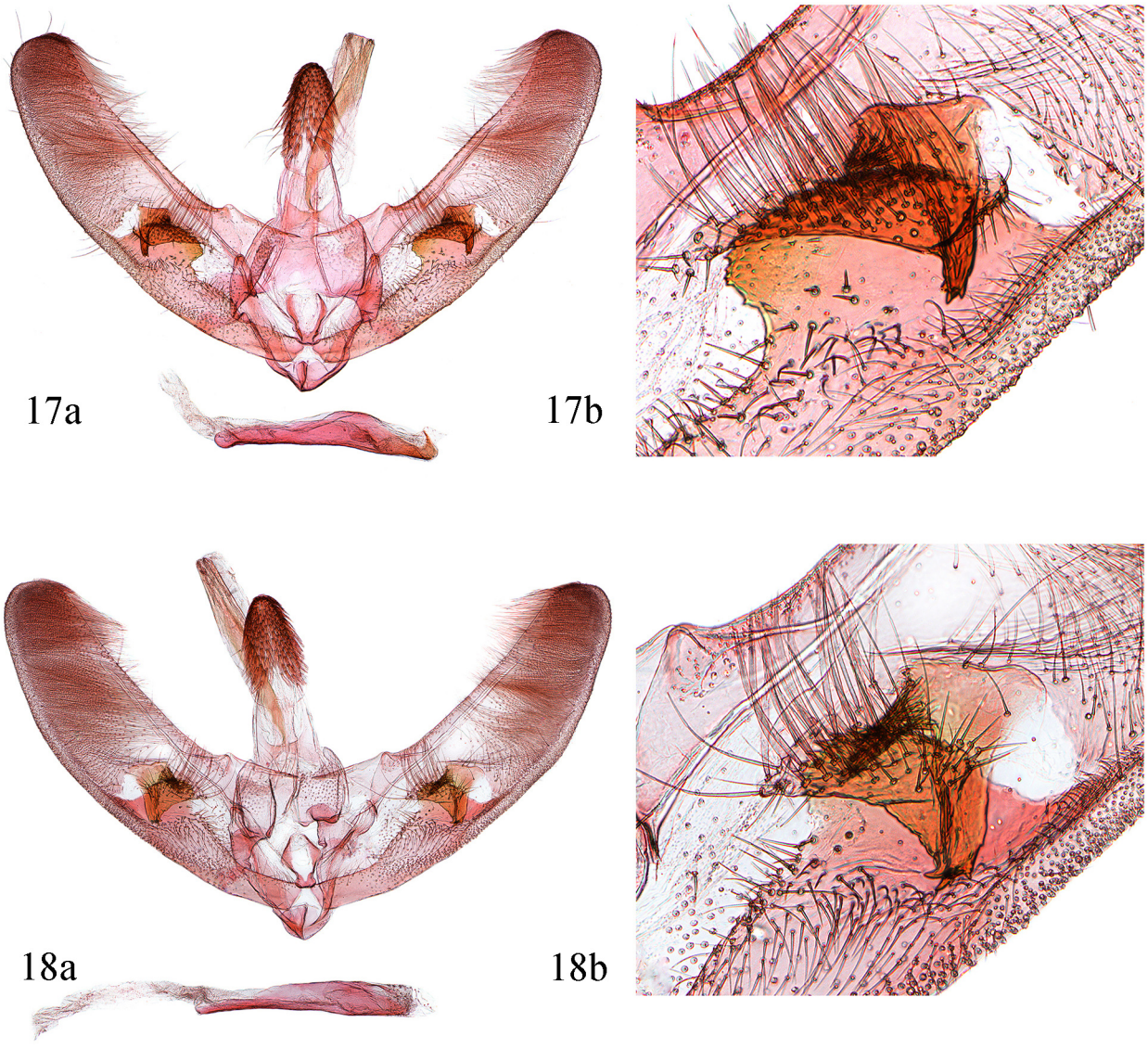
### *Nephelobotys brevis* Zhang, sp. nov.

Figs 7, 17, 24

**Diagnosis.** This species is similar to *Nephelobotys flavicilialis* in appearance, but can be distinguished from it by yellowish brown body and forewing (Fig. 7), by much thicker setae of uncus, outside sella with dorsal process distinctly shorter than half length of ventral process and ventral process extending beyond ventral margin of inside sella, wider distal protrusion approximately 1/3 length of sacculus in male genitalia (Fig. 17).

**Description** (Fig. 7). **Head.** Frons yellowish brown, with white stripes laterally. Vertex yellowish brown, sometimes paler. Labial palpus yellowish brown, whitish at base beneath. Maxillary palpus yellowish brown, paler terminally. Basal scales of proboscis white. Antenna yellowish brown; basal part with anterior surface white or pale yellow. **Thorax.** Tegula and thorax yellowish brown above, creamy white or light yellow beneath except the whitish most anterior part. Foreleg pale brown or yellowish brown, tibia with apex white and outside with a white spot near base; tarsus white with 3rd tarsomere tip and last two tarsomeres pale brown or yellowish brown. Midleg pale brown, outside of tibia and tarsus white. Hindleg creamy white and pale yellow, with outer spurs about 1/8–1/6 length of inner spurs in male. **Wing.** Wingspan 20.0–25.0 mm. Forewing yellowish brown, with markings brown; antemedial

line extending from costal 1/4 and weakly oblique to distal 2/5; orbicular stigma invisible; reniform stigma bent, streak-shaped; postmedial line stretching from costal 3/4, weakly concave to $M_3$, retracted to 2/5 of $CuA_2$, forming a convex angle between $CuA_2$ and 1A, then almost straight to dorsal 3/5; subterminal area scattered pale brown scales between veins forming indistinct subterminal band; termen yellow, usually with brown dots on veins end; fringe yellow, weakly brown at apex and tornus. Basal part of forewing absent small glandular fovea in male, but beneath with a greyish brown scale-tuft on the position of the fovea. Hindwing pale brown, scattered with brown scales and gradually dense towards to apex and termen; postmedial line brown, only with part from $M_1$ to $CuA_2$ visible, nearly straight; anterior half of termen with brown dots on veins end; fringe yellow, gradually pale yellow to tornus, weakly brown at apex and middle part. **Abdomen.** Yellowish brown above, gradually deep to the end, and posterior margin of each segment white; whitish yellow beneath.




**FIGURES 17–18.** Male genitalia of *Nephelobotys* spp. 17 *N. brevis* **sp. nov.**, paratype, Yunnan (genitalia slide No. SYSU0714). 18 *N. flavicilialis*, Yunnan (genitalia slide No. SYSU0719). a Whole genitalia. b Enlarged detail of base part of valva.

**Male genitalia** (Fig. 17). Uncus gradually narrow to the rounded apex, with base slightly inflated, almost entirely setose laterally and dorsally except the base, dorsal setae shorter and thicker than all other species in the genus, terminally forked. Valva with basal 1/2–2/3 width evenly and distal 1/2–1/3 gradually tapering to the rounded apex; costal margin nearly straight, ventral margin evenly convex; inside sella almost a parallelogram and dorsal part with inner angle produced, almost entirely setose, dorsal part bearing thick, long and simple setae; outside sella with dorsal process thick, remarkably shorter than half length of ventral process, ventral process moderately

thick, and roughly straight or slightly curved, extending beyond ventral margin of inside sella; sacculus with an asymmetrically semicircular distal protrusion approximately 1/3 length of sacculus and with dorsal margin thickly bearing spines. Juxta with basal and lateral margins slightly ridged, bifid vary from 1/5 to 1/3, arms thick and nearly straight or slightly curved. Phallus with base slightly curved and distal half stout, apical wall of phallus partly sclerotized and forming a transversely hook-shaped sclerite.

**Female genitalia** (Fig. 24). Posterior apophysis as wide as anterior apophysis, anterior apophysis about 1.5 times length of posterior apophysis. Antrum developed and sclerotized, bearing crisscross wrinkled markings, most anterior part membranous; ductus bursae approximately 3–4 times length of corpus bursae; colliculum with width evenly. Corpus bursae oval or globular, the accessory sac small; signum slightly longer than half length of corpus bursae, with carinate angles acute or nearly square, other two angles slightly produced.

**Material examined. Holotype** ♂, **CHINA**, **Guangdong:** Mt. Heishiding, Fengkai, 23.47°N, 111.90°E, alt. 214 m, 9.VII.2017, leg. Zhang Dandan.

**Paratypes: CHINA**, **Guangdong:** 12 ♀, same data as holotype, genitalia slide No. SYSU1201; 3 ♂, 16 ♀, Mt. Heishiding, Fengkai, 23.47°N, 111.90°E, alt. 214 m,14.VI.2009, 13.VIII.2010, 1–2.V., 2.VIII., 3.XI.2011, 19–24.VII.2018, leg. He Fengxia, Chen Haidong, Jia Fenglong, Tong Bo, Zhang Dandan, Li Yun, Xie Jiaqin, genitalia slide No. SYSU0701 (♀), SYSU0712 (♂), SYSU0791 (♀); 4 ♂, 2 ♀, Mt. Dawuling, Xinyi, alt. 900–1400 m, 8, 11–12.VIII.2003, leg. Zhang Dandan, Jian Yuening, Pang Hong, Lin Meiying, Deng Kebo, genitalia slide No. ZDD03048 (♂), SYSU0649 (♂), SYSU0732 (♂), SYSU0776 (♀); **Guangxi:** 3 ♂, Jinxiu, 24.08°N, 110.11°E, alt. 550 m, 15.IV.2002, leg. Hao Shulian, Xue Huaijun, genitalia slide No. ZDD02240 (NKU); 2 ♂, Shangsi, alt. 510 m, 6.IV.2002, leg. Hao Shulian, Xue Huaijun (NKU); 1 ♂, Dalongping, Mt. Cenwanglaoshan, alt. 1290 m, 6.VIII.2014, leg. Wei Xueli, Ran Chao, genitalia slide No. SYSU0727; 1 ♂, Langping, Mt. Cenwanglaoshan, alt. 1450 m, 7.VIII.2014, leg. Wei Xueli, Ran Chao, genitalia slide No. SYSU0735; **Sichuan**: 3 ♂, 1 ♀, Qingyin'ge, Mt. Emeishan, alt. 891 m, 25, 28.VII.2011, leg. Cao Jianbo, genitalia slide No. SYSU0798 (♂), SYSU0799 (♀); **Yunnan**: 1 ♂, Dahaoping, Tengchong, alt. 2020 m, 6.VIII.2007, leg. Zhan Dandan, genitalia slide No. SYSU0720; 1 ♂, Mt. Baihualing, Baoshan, alt. 1520 m, 13.VIII.2007, leg. Zhang Dandan, genitalia slide No. SYSU0728; 3 ♂, Mt. Daweishan, Honghe, alt. 2363 m, 18–19.V.2015, leg. Wei Xueli, genitalia slide No. SYSU0731, SYSU0737, SYSU0739; 10 ♂, 1 ♀, Mt. Gaoligongshan, Baoshan, 24.82°N, 98.78°E, alt. 1700 m, 22–23.V.2016, leg. Duan Yongjiang, genitalia slide No. SYSU0698 (♂), SYSU0713 (♂), SYSU0714 (♂), SYSU0724 (♂), SYSU0725 (♂), SYSU0726 (♂), SYSU0740 (♂), SYSU 0743 (♂), SYSU0744 (♂), SYSU0755 (♂), SYSU0774 (♀); 1 ♂, Taiyanghe Reserve, Pu'er, 9.VI.2015, leg. Zhang Zhenguo, genitalia slide No. ZDD12029 (NKU).

**Distribution.** China (Guangxi, Guangdong, Sichuan, Yunnan).

**Etymology.** The specific name is derived from the Latin *brevis* (= short), corresponding to the short dorsal process of the outside sella.

### *Nephelobotys flavicilialis* (Snellen, 1890) comb. nov.

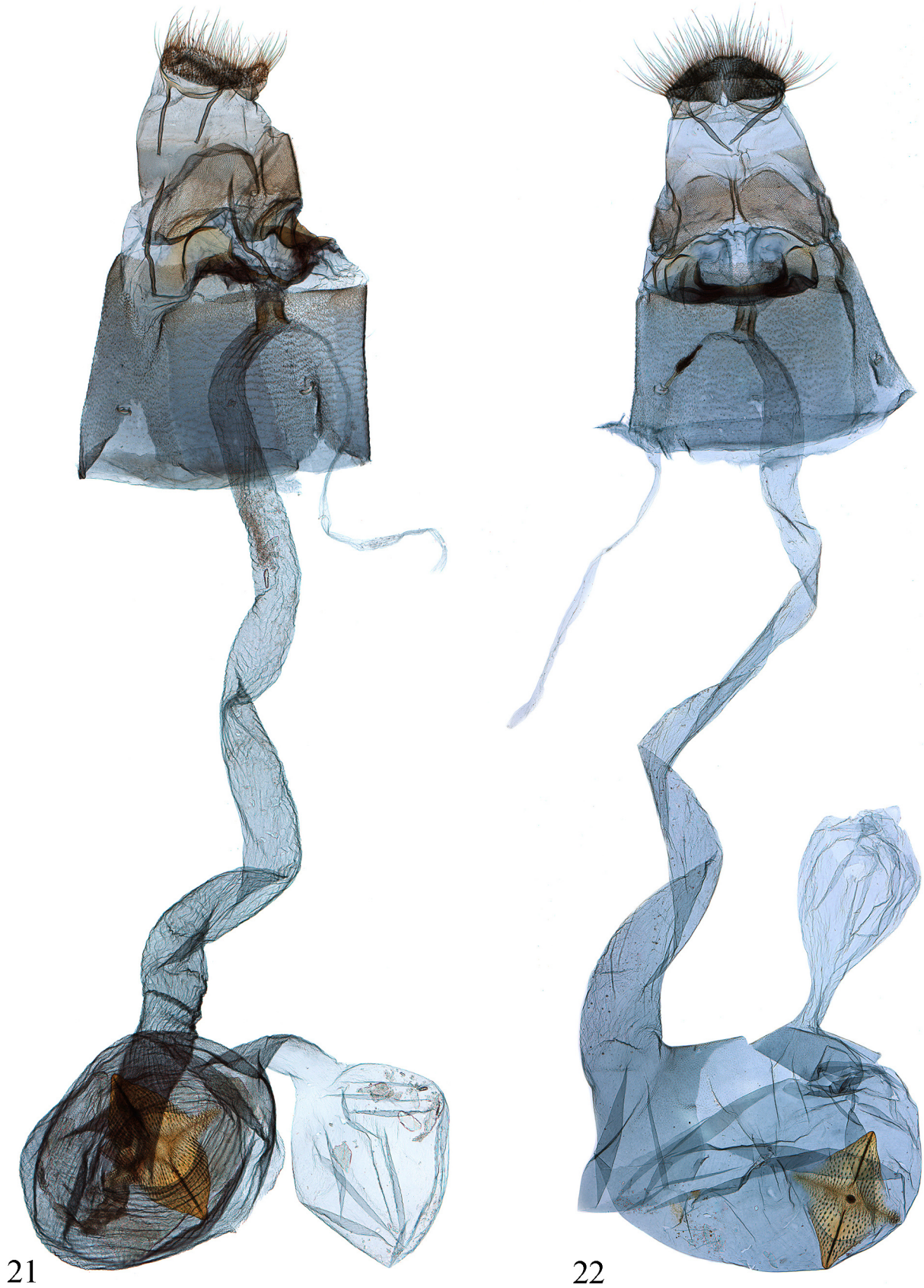
Figs 8–10, 18, 25

*Crocidophora flavicilialis* Snellen, 1890: 596.
*Pionea flavicilialis* (Snellen): Hampson, 1899: 241.

**Diagnosis.** Wingspan 20.0–26.0 mm. This species is closely related to *Nephelobotys brevis* **sp. nov.**, similar in both appearance and genitalia, but can be distinguished from it by the much thinner setae of uncus, the outside sella with dorsal process nearly the same length as the ventral process, the ventral process not extending beyond the ventral margin of the inside sella in the male genitalia (Fig. 18), and by the shallowly funnel-shaped antrum with posteroventral margin shallowly U-shaped and well sclerotized, surrounded by sinuated lamella antevaginalis (Fig. 25).

**Material examined. Type material.** Type, 1 ♂, Sikkim, H. J. Elwes, Pyralidae Brit. Slide No. 8660 (NHMUK).


**FIGURES 19–20.** Female genitalia of *Nephelobotys* spp. 19 *N. habisalis*, Guangxi (genitalia slide No. SYSU0793). 20 *N. nephelistalis*, Fujian (genitalia slide No. SYSU0784).




**FIGURES 21–22.** Female genitalia of *Nephelobotys* spp. 21 *N. evenoralis*, Guangdong (genitalia slide No. SYSU0709). 22 *N. denticulatus*, Guangxi (genitalia slide No. SYSU0781).


**FIGURES 23–24.** Female genitalia of *Nephelobotys* spp. 23 *N. semicircularis* **sp. nov.**, paratype, Yunnan (genitalia slide No. SYSU0779). 24 *N. brevis* **sp. nov.**, paratype, Guangdong (genitalia slide No. SYSU0791).

**FIGURE 25.** Female genitalia of *N. flavicilialis*, Sichuan (genitalia slide No. SYSU0775).

**Other Material examined. CHINA, Fujian:** 1 ♂, Yong'anyan, Mt. Daiyunshan, Dehua, alt. 1300 m, 12.IX.2002, leg. Wang Xinpu (NKU); **Hubei:** 1 ♀, Wufeng, alt. 1100 m, 11.VII.1999, leg. Li Houhun (NKU); **Guizhou:** 1 ♂, 1 ♀, Jinding, Mt. Fanjingshan, alt. 2100 m, 31.VII.2001, leg. Li Houhun and Wang Xinpu, genitalia slide No. ZDD01989 (♂) (NKU); 1 ♂, Huguosi, Mt. Fanjingshan, alt. 1300 m, 1.VIII.2001, leg. Li Houhun and Wang Xinpu (NKU); 1 ♂, Mt. Fanjingshan, 27.85°N, 108.77°E, alt. 927 m, 5.VIII.2017, leg. Zhu Jiang, genitalia slide No. SYSU1053; **Sichuan:** 3 ♂, 1 ♀, Zima Reserve Station, Liziping Natural Reserve, Shimian, Ya'an, 28.99°N, 102.28°E, alt. 1942 m, 27.VII.2016, leg. Duan Yongjiang, genitalia slide No. SYSU0715 (♂), SYSU0733 (♂), SYSU0745 (♂), SYSU0775 (♀); 2 ♂, Gongyihai Reserve Station, Liziping Natural Reserve, Shimian, Ya'an, 29.03°N, 102.38°E, alt. 2065 m, 24.VII.2016, leg. Duan Yongjiang, genitalia slide No. SYSU0702; **Yunnan:** 1 ♂, Yaoqu, Xishuangbanna, alt. 1300 m, 11.V.2015, leg. Wei Xueli, genitalia slide No. SYSU0717; 1 ♂, Yaoqu, Xishuangbanna, alt. 780 m, 26.V.2015, leg. Tao Manfei, genitalia slide No. SYSU0729; 8 ♂, 1 ♀, Dahaoping, Tengchong, alt. 2020 m, 5–6.VIII.2007, leg. Zhang Dandan, genitalia slide No. SYSU0675 (♂), SYSU0716 (♂), SYSU0736 (♂), SYSU0738 (♂), SYSU0741 (♂), SYSU0773 (♀); 1 ♂, Dahaoping Reserve Station, alt. 2020 m, 11.VIII.2015, leg. Zhao Jingxia, Wei Hao, genitalia slide No. SYSU0719; 1 ♂, Daxichang, Malipo, alt. 1465 m, 5.VI.2015, leg. Tao Manfei, genitalia slide No. SYSU0718.

**Distribution.** China (Fujian, Hubei, Guizhou, Sichuan, Yunnan), India (Sikkim).

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