

ON THE PLUME MOTHS (LEPIDOPTERA, PTEROPHORIDAE) OF VIETNAM

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[Устюжанин П.Я., Ковтунович В.Н. Пальцекрылки (Lepidoptera, Pterophoridae) Вьетнама]

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¹Сибирское отделение Русского энтомологического общества. Домашний адрес: г. Новосибирск, ул. Энгельса, 23, кв. 106,

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²Moscow Society of Nature Explorers. Home address: Malaya Filevskaya str., 24/1, app. 20. E-mail: vasko-69@mail.ru²Московское общество испытателей природы. Домашний адрес: Россия, Москва, ул. Малая Филевская, 24/1 - 20. E-mail: vasko-69@mail.ru**Key words:** Pterophoridae, plume moths, Vietnam, new species**Ключевые слова:** Pterophoridae, пальцекрылки, Вьетнам, новые виды**Summary.** Two new species of Pterophoridae are described from Vietnam: *Ochyrotica zolotuhini* sp. n. and *Heptaloba tanglong* sp. n. Three synonyms have been established: *Pterophorus chionadelpha* (Meyrick, 1929) syn. n., *Pterphorus attenuatus* Hao, Kendrick, Li, 2008 syn. n., *Pterophorus maolanensis* Li, 2002 syn. n. To the fauna of Pterophoridae of Vietnam, another two (2) species, previously unknown, have been added: *Platyptilia chosokeiella* Strand and *Pterophorus elaeopus* (Meyrick).**Резюме.** Описываются два новых вида Pterophoridae из Вьетнама: *Ochyrotica zolotuhini* sp.n. и *Heptaloba tanglong* sp.n. Выявлено три синонима: *Pterophorus chionadelpha* (Meyrick, 1929) syn. n., *Pterphorus attenuatus* Hao, Kendrick, Li, 2008 syn. n., *Pterophorus maolanensis* Li, 2002 syn. n. К фауне Pterophoridae Вьетнама, неизвестных ранее, добавились еще 2 вида: *Platyptilia chosokeiella* Strand и *Pterophorus elaeopus* (Meyrick).

INTRODUCTION

The present article is a continuation of studies in the Pterophoridae fauna of Vietnam. The first survey article was published in 2009 [Ustjuzhanin & Kovtunovich, 2009]. In the present article, new material is presented, collected by the Russian entomologists. Two new species are described: *Ochyrotica zolotuhini* sp. n. and *Heptaloba tanglong* sp. n. Three synonyms have been revealed: *Alucita chionadelpha* Meyrick, 1929 and *Pterphorus attenuatus* Hao, Kendrick, Li, 2008 are junior synonyms of *Pterophorus chosokeialis* (Strand, 1922); *Pterophorus maolanensis* Li, 2002 is a junior synonym of *Pterophorus leucadactylus* (Walker, 1864). Two species: *Platyptilia chosokeiella* Strand and *Pterophorus elaeopus* (Meyrick) are recorded as new for the fauna of Vietnam.

RESULTS

Ochyrotica yanoi Arenberger, 1988*Ochyrotica yanoi* Arenberger, 1988: 276. (Type locality: Japan).**Material:** N. Vietnam, Vinh Phuc Prov. Me Linh biol. station, 60 m, 21°23'N, 105°43'E, 1-4.05.2009 – 1 ♀, S. Nedoshivina leg.**Distribution:** Japan, China, Vietnam, Taiwan, Philippines, China, India, Indonesia.*Ochyrotica zolotuhini* sp. n.**Material:** Holotype, ♂, BMNH, gen. pr. № - 22892. C. Vietnam, Thua Thien Hue Prov., Bach Ma N.P., 1250 m, 16°12'N 107°51'E, 20-22.04.2009, leg. V. Zolotuchin.

Paratypes: 1 ♀, BMNH, gen. pr. № - 22893. C. Vietnam, Nghe An Prov Pu Mat NP Tam Dinh vill., 170 m., 4-5.X. 2008, 19°10'N, 104°37'E., V. Zolotukhin leg.; 1 ♂, N. Vietnam, Ninh Binh Prov. Nho Quan Distr. Bong-Cuc Phuong vill. 360 m, 6-9.10.2008, 20°21'N, 105°36'E,

V. Zolotukhin leg.; 1 ♀, N. Vietnam, Vinh Phuc Prov. Ngoc Thanh vill. Me Linh biological station, 60 m, 11-13.10.2008, 21°23'N, 105°43'E, V. Zolotukhin leg.; 10 spec., C. Vietnam, Thua Thien Hue Prov., A Lubi, 460 m, 16°16'N, 107°14'E, 20-29.04.2009, V. Zolotukhin, S. Nedoshivina leg.; 1 ♂, N. Vietnam, Vinh Phuc Prov. Ngoc Thanh vill. Me Linh biological station, 60 m, 16.12.2009, 21°23'N, 105°43'E, A. Solovjev leg.; 2 ♀♀, N. Vietnam, Lao Cai Prov, Lao Cai city, on light, 7-11.04.2009, A. Lastukhin leg.

External characters (Col. pl. I: 1, 2). The head is covered with brown upright hair. The labial palps are thin, straight, 1.5 times longer than the eye diameter. The antennae are slender, pale brown. The thorax is glossy silver. The wingspan is 16-18 mm (holotype - 16 mm). On the forewings there is a broad white band, broadening closer to the apex, where it forms irregular triangle. On the border of the distal and the middle third of the wing, there is a dark bridge. The costal edge of the wing is brown. The hindwings are uniform brown. The fringe on both wings is brown. On the abdomen segments, there are glittering silver areas (Fig. 2). The hind legs are pale brown and bright white ringed.**Male genitalia** (Col. pl. I: 3). The valvae are symmetric, narrow. The harpae are slightly concave, about to reach the valvae apices. The sacculus has a well-developed sclerotized process, directed towards the valva base. The uncus is thin, pointed towards the apex. The saccus has an excavation on the inner edge. The aedeagus is long, arcuate, with a hook-like appendix extending from its base.**Female genitalia** (Col. pl. I: 4). Papillae anales are narrow, in the form of oblong triangles. Apophyses posteriores are thin, narrow; apophyses anteriores are short. The antrum is short, tubulated. The plate on the VII sternite is V-shaped, with well-developed horn-like processes. The ductus is

relatively broad and short, with a broad pigmented plate at the base. The bursa copulatrix is large, oval. The signum is large, has a form of oblong leaf-shaped plate.

Diagnosis. By external characteristics and by the structure of the genitalia of both sexes, the new species is close to *Ochyrotica celebica* Arenberger, 1988. In male genitalia, the new species differs from *Ochyrotica celebica* by longer harpae and a different shape of aedeagus. In female genitalia, the new species is distinguishable by a V-shaped VII sternite and shorter apophyses anteriores.

Etymology. The species is named after noted Russian lepidopterologist, Vadim Zolotukhin (Russia, Ulyanovsk), who studied the fauna of insects of Vietnam in many expeditions to this country.

Heptaloba tanglong sp. n.

Material: Holotype, ♂, BMNH, gen. pr. № - 22896. S. Vietnam, Dong Nai Prov., Cat Tien Nat. Park., 11°25'N, 107°25'E, 13.03.2008, P. Kwartalnov.

External characters (Col. pl. I: 5, 6). The head, thorax, and tegulae are brown. The antennae are pale brown. The wingspan is 15 mm. The forewings are reddish-brown. The forewing is split in four (4) lobes. The cleft between the first and the second lobes is not deep, slightly less than 1/3 of the wing. The cleft between the second and the third lobes is deep; it goes beyond the middle of the wing. The cleft between the third and the fourth lobes equals 1/3 of the wing. Along the costal edge, in the distal part of the wing, there are 4 pale spots. The hindwings are monotonous pale brown. The third lobe is framed with dark oblong scales; at the apex of the third lobe, these scales form a broad area. The legs are pale brown, darkened at the base of spurs. The spurs are thin and long. The abdomen is reddish-brown, with a pattern of triangles and rectangles.

Male genitalia (Col. pl. I: 7). The uncus is narrow, oblong. (The valvae description is impossible, for they have been damaged). The plate of VIII sternite is narrow, oblong, split at the end. The aedeagus is thin, poker-like bent at the apex; in the basal part slightly bent in the direction opposite to that at the apex.

Diagnosis. By external characteristics and male genitalia, the new species resembles *Heptaloba argyriodactyla* (Walker, 1864), (Col. pl. I: 8-13), but differs well by the shape of aedeagus and the plate of VIII sternite.

Ecology. The moth has been collected in long-boled forest with the predominance of *Lagerstroemia* sp., various legumes (Fabaceae sensu lato) including *Afzelia xylocarpa* (Kurz) Craib.

Notes. The only representative of genus *Heptaloba*, with the forewings split in four lobes, was known only from Sri Lanka Island (Ceylon). The discovery of the new species on the Continent is a very interesting scientific fact, proving the common origin of the faunas of Hindustan and Indo-China peninsulas.

Etymology. In Vietnamese mythology: (thăng) – to fly, (long) – dragon. Literally – “flying dragon”.

Platyptilia chosokeiella Strand, 1922

Platyptilia chosokeiella Strand, 1922: 15. (Type locality: Taiwan).

Material: C. Vietnam, Thua Thien Hue Prov., A Ruang,

663 m, 16°04'N, 107°29'E, 24-29.04.2009, 2 ♂♂, A. Gurkovich leg.

Distribution. Taiwan, Vietnam, Cambodia.

Notes. Recorded for the first time for the fauna of Vietnam.

Platyptilia ? eberti Gielis, 2003

Material: N. Vietnam, Cao Bang Prov., Phi Oak Mts. Nguyen Binh Distr. Phia Den. Vill., 1030m, 22°34'N, 105°52'E, 11.11.2009 – 1 ♂, 1 ♀, V. Zolotukhin leg.

Notes. Our specimens bear resemblance with *Platyptilia eberti* Gielis, 2003, both in habitus and in female genitalia. However, the species of genus *Platyptilia* are very similar in habitus and genitalia structure, therefore the question of their generic status requires special studies and additional material and data.

Platyptilia sp.

Material: Lam Vien Plato, Nui Ba Nat. Reserve, 12°10'N, 108°40'E, 9-18. 11. 2008, h 1500m, 1 ♀, V. Sinyaev leg.; C. Vietnam, Thua Thien Hue Prov., A Ruang, 663 m, 16°04'N, 107°29'E, 24-29.04.2009, 1 ♂, A. Gurkovich leg.

Notes. In habitus and in genitalia structure resembles *Platyptilia farfarella* Zeller. Due to lack of additional material, we have no possibility to identify the species.

Stenoptilodes taprobanes (Felder & Rogenhofer, 1875)

Amblyptilia taprobanes Felder & Rogenhofer, 1875: Pl. 140, fig. 54. (Type locality: Sri Lanka).

Platyptilia brachymorpha Meyrick, 1888: 240. (Type locality: India).

Platyptilia seeboldi Hofmann, 1898: 33. (Type locality: Syria).

Platyptilia terlizzii Turati, 1926: 67. (Type locality: Libya).

Amblyptilia zavatterii Hartig, 1953: 67. (Type locality: Italy).

Platyptilia legrandi Bigot, 1962b: 86. (Type locality: Seychelles).

Stenoptilodes vittata Service, 1966: 11. (Type locality: Nigeria).

Material: N. Vietnam, Ninh Binh Prov. Nho Quan Distr. Bong-Cuc Phuong vill. 360 m, 6-9.10.2008, 20°21'N, 105°36'E., 1 ♂, V. Zolotukhin leg.; N. Vietnam, Vinh Phuc Prov. Ngoc Thanh vill. Me Linh biological station, 60 m, 15-16.11.2008, 21°23'N, 105°43'E, 1 ♂, V. Zolotukhin leg.; Lam Vien Plato, Nui Ba Nat. Reserve, 12°10'N, 108°40'E, 9-18. 11. 2008, h-1500m, 1 ♂, V. Sinyaev leg.

Distribution. Everywhere in tropical and subtropical regions.

Lantanophaga pusillidactyla (Walker, 1864)

Oxyptilus pusillidactyla Walker, 1864: 933. (Type locality: Jamaica).

Platyptilia tecnidion Zeller, 1877: 13. (Type locality: Virgin Islands).

Platyptilia hemimetra Meyrick, 1886: 18. (Type locality: Reunion Isl.).

Platyptilia amphiloga Meyrick, 1909: 365. (Type locality: Western Cape, Rep. S. Africa.).

Platyptilia lantana Busck, 1914: 103. (Type locality: Hawai'i Islands).

Platyptilia teleactna Meyrick, 1932: 250. (Type locality: Indonesia, Java).

Platyptilia lantanadactyla Amsel, 1951a: 66. (Type

locality: Morocco).

Material: N. Vietnam, Cao Bang Prov., Phi Oak Mts. Nguyen Binh Distr. Phia Den. Vill., 1030m, 22°34'N, 105°52'E, 11.11.2009 – 1 ♂, V. Zolotukhin leg.

Distribution. Everywhere in tropical and subtropical regions.

Stenodacma wahlbergi (Zeller, 1852)

Pterophorus wahlbergi Zeller, 1852:346-348. (Type locality: Rep. S. Africa).

Material: N. Vietnam, Vinh Phuc Prov., Me Linh Biological station, 60 m, 21°23' N, 105°43' E, 11-13.10. 2008 – 1 ♂, 1-4.05.2009 – 1 ♀, V. Zolotukhin leg.

Distribution. Saudi Arabia, Iran, Pakistan, Republic South Africa, Cameroon, St. Helena Island, Swaziland, Zimbabwe, Tanzania, Kenya, Madagascar, Comores, Reunion Island, Rodriguez Island, Mauritius, Seychelles, Vietnam.

Stangeia xerodes (Meyrick, 1886)

Trichoptilus xerodes Meyrick, 1886: 1-21. (Type locality: Australia).

Trichoptilus esakii Hori, 1936: 79. (Type locality: Japan).

Trichoptilus dryites Meyrick, 1936: 625. (Type locality: Indonesia).

Material: N. Vietnam, Cao Bang Prov., Phi Oak Mts. Nguyen Binh Distr. Phia Den. Vill., 1030m, 22°34'N, 105°52'E, 11.11.2009 – 2 ♂♂, V. Zolotukhin leg.

Distribution. Japan, China, Indonesia, Sri Lanka, Australia, New Guinea, Fiji Islands.

Sphenarches anisodactylus (Walker, 1864)

Oxyptilus anisodactylus Walker, 1864: 934. (Type locality: Sri Lanka).

Pterophorus diffusalis Walker, 1864: 945. (Type locality: Australia).

Sphenarches synophrys Meyrick, 1886: 17. (Type locality: New Hebrides, Tonga).

Megalorhipida rishwani Makhan, 1994: 353. (Type locality: Suriname).

Material: C. Vietnam, Nghe An Prov Pu Mat NP Tam Dinh vill., 130 m., 18°49'N, 104°58'E, 29.09 – 3. 10. 2008 – 1 ♀, V. Zolotukhin leg.

Distribution. Sri Lanka, India, Taiwan, Thailand, Vietnam, Nepal, Japan, China, Malaysia, Indonesia, Solomon Islands, New Guinea, Bismarck Islands, Australia, Cameroon, Seychelles, Reunion Island, Madagascar, Kenya, Tanzania, Zaire, Gambia. Guinea, Nigeria, Tchad, Malawi, Swaziland, Cote d'Ivoire, U.S.A., Brazil, Dominica, Grenada, Panama, Virgin Islands, Bahamas, St. Thomas, Puerto Rico, Peru, Paraguay, Fiji Islands, New Hebrides, Tonga Islands, New Caledonia, Palau, Bonin Island, Guam.

Nippoptilia cinctipetalis (Walker, 1864)

Oxyptilus cinctipetalis Walker, 1864: 30: 935. (Type locality: "Moreton Bay" [Australia]).

Nippoptilia minor Hori, 1933: 68, 70, fig. 4. (Type locality: Japan).

Trichoptilus eochrodes Meyrick, 1935: 45. (Type locality: "Hunan, Hoeng-Shan", [China]).

Oxyptilus caryornis Meyrick, 1935: 46. (Type locality:

"Tien-Mu-Shan" [China]).

Material: C. Vietnam, Thua Thien Hue Prov., Bach Ma NP office, 30 m, 16°15'N, 107°53'E, 19.04.2009, 1 ♂, V. Zolotukhin leg.

Distribution. Australia, Japan, China, Vietnam, Micronesia.

Hellinsia sp.

Material: N. Vietnam, Cao Bang Prov., Phi Oak Mts. Nguyen Binh Distr. Phia Den. Vill., 1030m, 22°34'N, 105°52'E, 11.11.2009 – 1 ♀, V. Zolotukhin leg.

Notes. In habitus, very similar to *H. kuwayamai* Mats; however, from the latter, it differs well in female genitalia. Due to lack of additional material, the species has not been identified so far.

Pterophorus elaeopus (Meyrick, 1908)

Alucita elaeopa Meyrick, 1908: 490. (Type locality: India: Khasi Hills).

Material: N. Vietnam, Cao Bang Prov., Phi Oak Mts. Nguyen Binh Distr. Phia Den. Vill., 1030m, 22°34'N, 105°52'E, 11.11.2009 – 1 ♀, V. Zolotukhin leg.; N. Vietnam, Vinh Phuc Prov. Ngoc Thanh vill. Me Linh biological station, 60 m, 21°23'N, 105°43'E, 11-13.10.2008 – 1 ♀, V. Zolotukhin leg.; C. Vietnam, Quang Binh Prov.

Distribution. Vietnam, India, Thailand, Laos, Malaysia, Indonesia.

Notes. Recorded for the first time for the fauna of Vietnam.

Pterophorus chosokeialis (Strand, 1922)

Alucita chosokeialis Strand, 1922:15. (Type locality: Taiwan).

Pterophorus chionadelpha (Meyrick, 1929) **syn.n.**

Alucita chionadelpha Meyrick, 1929: 708. (Type locality: Vietnam).

Pterophorus attenuatus Hao, Kendrick, Li, 2008: 38. (Type locality: China, Hainan) **syn.n.**

Material: C. Vietnam, Thua Thien Hue Prov., A Lubi, 460 m, 16°16'N, 107°14'E, 23.04.2009, 1 ♀, A. Gurkovich leg. Distribution: Vietnam, Thailand, China (Hong Kong, Hainan, Fujian).

Notes. When comparing the holotype of *Alucita chosokeialis* Strand with *Alucita chionadelpha* Meyrick and *Pterophorus attenuatus* Hao, Kendrick, Li, it has been found out, that the latter are junior synonyms.

Pterophorus leucadactylus (Walker, 1864)

Acipitilus leucadactylus Walker, 1864: 949. (Type locality: Sri Lanka (Ceylon)).

Pterophorus maolanensis Li, 2002: 373. (Type locality: China, Guizhou) **syn. n.**

Material: C. Vietnam, Thua Thien Hue Prov., A Lubi, 460 m, 16°16'N, 107°14'E, 23.04.2009, 1 ♂, V. Zolotukhin leg.; N. Vietnam, Vinh Phuc Prov. Me Linh biol station, 60 m, 21°23'N, 105°43'E, 1-4.05.2009 – 1 ♀, V. Zolotukhin leg.

Distribution. Sri Lanka, India, Indonesia, China, Vietnam, Thailand.

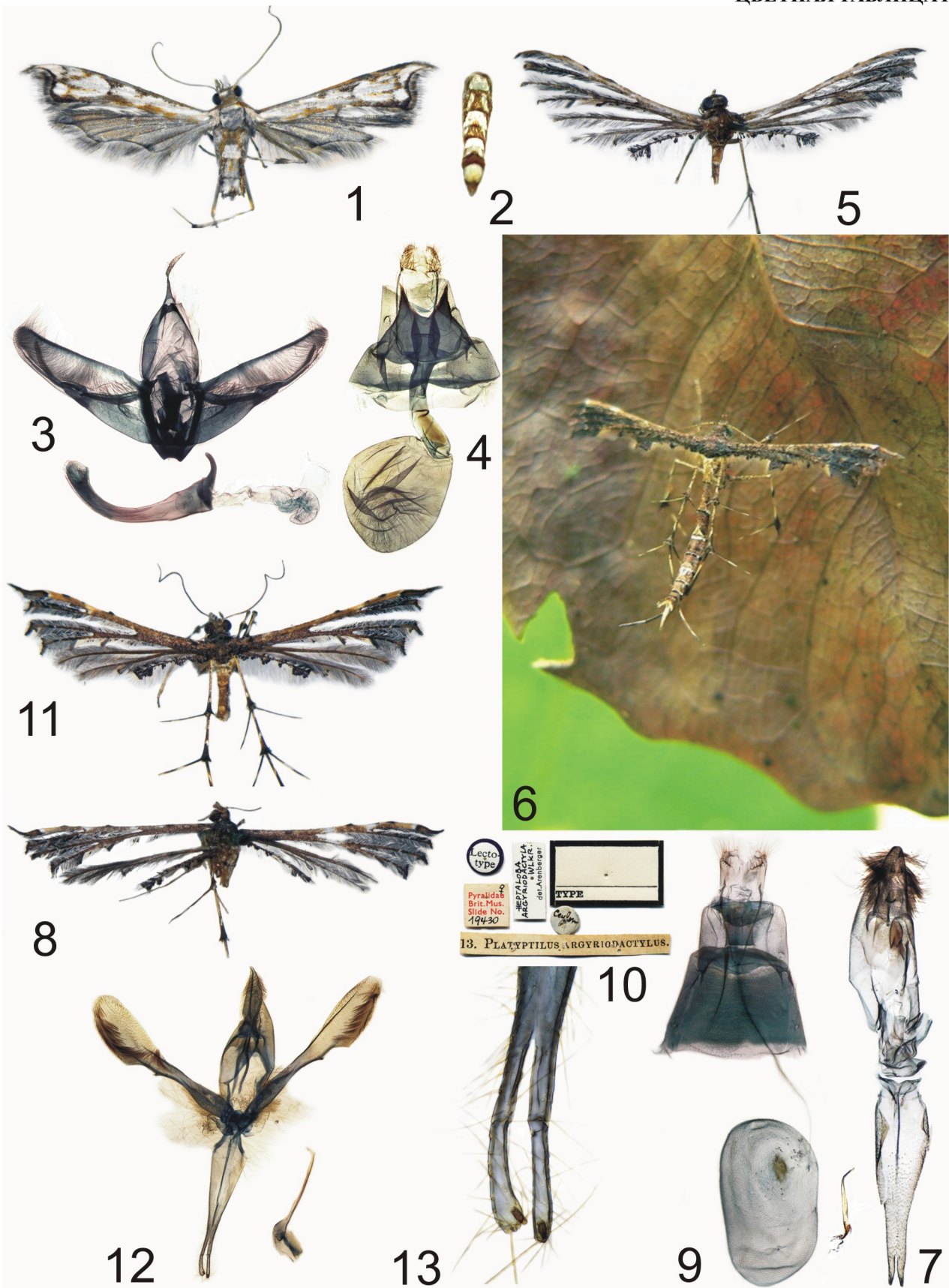
Notes. When comparing the lectotype of *Acipitilus leucadactylus* Walker with *Pterophorus maolanensis* Li, the latter has been found out to be a junior synonym.

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A plume moths: 1-4 – *Ochyrotica zolotuhini* sp. n.; 5-7 – *Heptaloba tanglong* sp. n.; 8-13 – *Heptaloba argyriodactyla*. 1, 5, 8, 11 – imago; 2 – abdomen; 3, 7, 12 – male genitalia; 13 – plate of VIII sternite; 4, 9 – female genitalia; 6 – photo in nature; 1, 3, 5-7 – holotype; 4 – paratype; 8, 9, 10 – lectotype; 10 – labels.

Пальцекрылки: 1-4 – *Ochyrotica zolotuhini* sp. n.; 5-7 – *Heptaloba tanglong* sp. n.; 8-13 – *Heptaloba argyriodactyla*. 1, 5, 8, 11 – имаго; 2 – брюшко; 3, 7, 12 – гениталии самца; 13 – пластинка VIII стернита; 4, 9 – гениталии самки; 6 – фото в природе; 1, 3, 5-7 – голотип; 4 – паратип; 8, 9, 10 – лектотип; 10 – этикетки.