

## NOTES ON THE SYSTEMATICS OF FAR EASTERN PHYCITIN MOTHS (LEPIDOPTERA: PYRALIDAE, PHYCITINAE) WITH DESCRIPTION OF TWO NEW GENUS

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## ЗАМЕТКИ ПО СИСТЕМАТИКЕ ДАЛЬНЕВОСТОЧНЫХ ФИЦИТИН (LEPIDOPTERA: PYRALOIDEA, PYRALIDAE, PHYCITINAE) С ОПИСАНИЕМ ДВУХ НОВЫХ РОДОВ

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**Key words:** *Lepidoptera*, *Pyraloidea*, *Phycitidae*, *Pyla*, *Metiostola*, new genus, *Manipyla* Streltzov, gen. n., *Atralepis* Streltzov, gen. n., fauna of Far East of Russia

**Summary.** Established two new genera in the subfamily Phycitidae (Lepidoptera, Pyraloidea: Pyralidae) – *Manipyla* Streltzov, gen. nov. for *Pyla manifestella* Inoue, 1982 and *Atralepis* Streltzov, gen. nov. for *Metriostola atratella* Yamanaka, 1986.

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**Ключевые слова:** *Lepidoptera*, *Pyraloidea*, *Phycitidae*, *Pyla*, *Metiostola*, new genus, *Manipyla* Streltzov, gen. n., *Atralepis* Streltzov, gen. n., фауна Дальнего Востока России

**Резюме.** Устанавливаются два новых рода в подсемействе Phycitidae (Lepidoptera, Pyraloidea: Pyralidae) – *Manipyla* Streltzov, gen. nov. для *Pyla manifestella* Inoue, 1982 и *Atralepis* Streltzov, gen. nov. для *Metriostola atratella* Yamanaka, 1986.

## INTRODUCTION

The fauna of the phycitin moth (Pyraloidea, Pyralidae: Phycitinae) south of the Far East of Russia studied adequately in species composition is reflected in the reviews [Sinev, 2008; Kirpichnikova, 2009; Lantukhova, Streltzov, 2012] and numerous articles on new finds of the moth of this group within the region [Streltzov, Dubatolov, 2009; Lantuhova, Streltzov, 2010; Streltzov, 2010, 2011a, 2011c, 2012a, 2012b, 2012c, 2013a, 2013b, 2013c, 2014]. Publications of recent years have made it possible to clarify the systematic position of a number of species [Streltzov, 2011b, 2012c, 2013a; Streltzov et. al., 2012]. At the same time, the systematic position of some species and their taxonomic status remain largely provisional. In this article, two such species are considered – *Pyla manifestella* Inoue, 1982 and *Metriostola atratella* Yamanaka, 1986 for which new genera are being established.

## RESULTS AND DISCUSSION

*Manipyla* Streltzov, gen. n.

**Type species:** *Pyla manifestella* Inoue, 1982

*Pyla manifestella* Inoue, 1982: 1: 400; 2: 252, pl. 48: fig. 18, pl. 311: fig. 7, pl. 314: fig 5.

**Diagnosis.** The taxon *manifestella* was described by H. Inoue [1982] in the genus *Pyla* Grote, 1882 and in the combination *Pyla manifestella* Inoue, 1982 was known in modern literature until recently. However, sharp differences in the external morphology and structure of the genital apparatus of males and females from representatives of this genus have always raised doubts about the correctness of this combination [Streltzov, 2012a]. In 2013, H. Yamanaka introduced a new combination *manifestella* attributing taxa to the genus *Sciota* Hulst, 1888. With this combination it is difficult to agree, despite the external similarity of *Manipyla* gen. nov. significantly differ from the genus *Sciota* in the structure of the genitalia

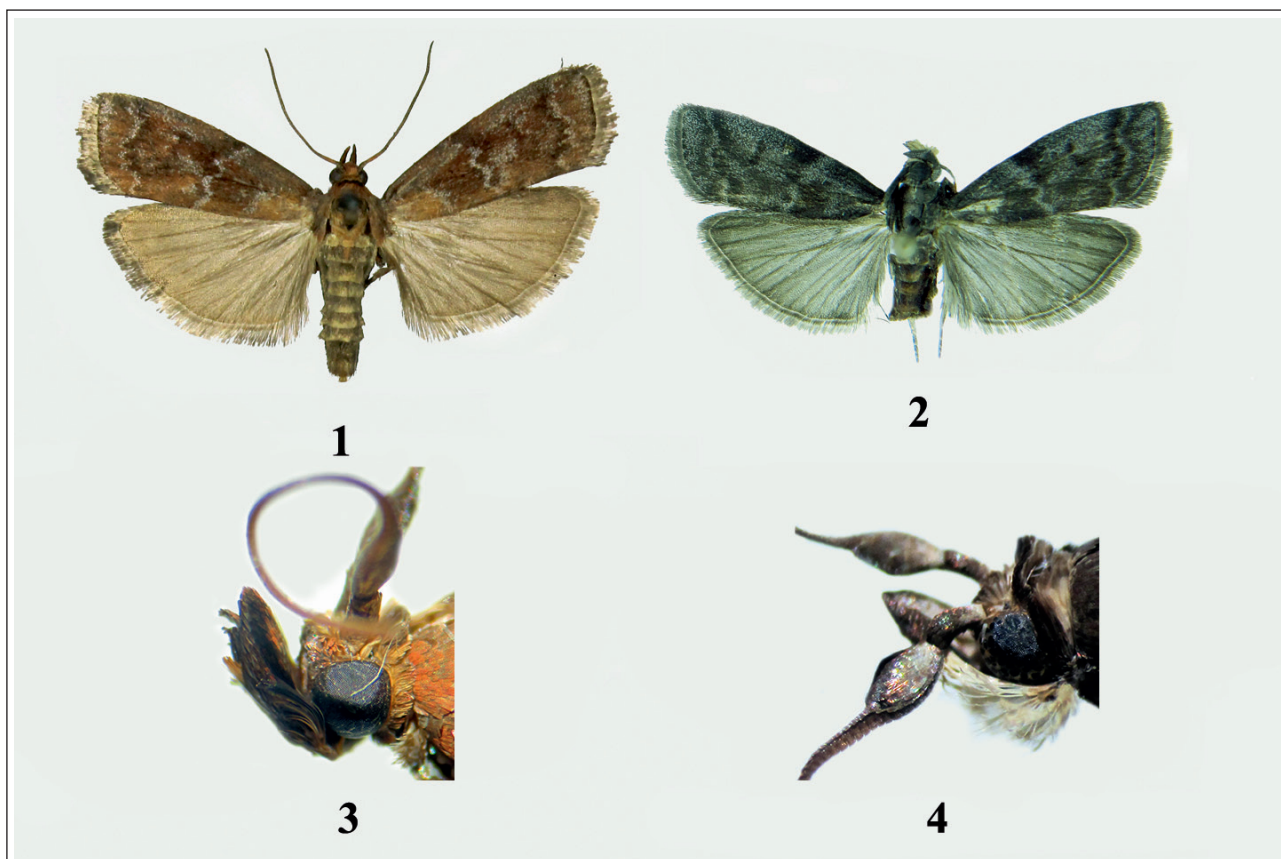


Fig. 1. Typical species of new genera: 1, 3 – *Manipyla manifestella* (Inoue, 1982); 2, 4 – *Atralepis atratella* (Yamanaka, 1986). 1, 2 – adults; 3, 4 – head

Рис. 1. Типовые виды новых родов: 1, 3 – *Manipyla manifestella* (Inoue, 1982); 2, 4 – *Atralepis atratella* (Yamanaka, 1986). 1, 2 – имаго; 3, 4 – голова

of males – a different form of uncus, the absence of harp on the valva, the presence of a lock of long hairs on the sacculus, the arrangement of large spiny cornutus on the tube of the aedeagus (in *Sciota* they are located on the vesica); on the structure of the female genitalia of – the absence of sclerotized areas on the bursa copulatrix [Streltsov, 2001b]. From species of the genus *Pyla* Grote, 1882 (type species: *Nephopterix scintillans* Grote, 1881) [Heinrich, 1956] differs in the genitalia of males: the form of uncus, valva and cornutus on the tube of aedeagus (in *Pyla* cornutus small, serrated); in the female genitalia: the presence of sclerotization of the ductus bursae. Monotype genus, includes one species – *Manipyla manifestella* (Inoue, 1982).

***Manipyla manifestella*** (Inoue, 1982)

Inoue, 1982: 1: 400; 2: 252, pl. 48: fig. 18, pl. 311: fig. 7, pl. 314: fig. 5. (*Pyla*); Kirpichnikova, 2005: 538 (*Pyla*); Kirpichnikova, 2009: 169 (*Pyla*); Streltsov, 2012a: 78 (*Pyla*); Yamanaka et al., 2013:

353 (*Sciota*, comb. nov.).

**Type locality:** Japan.

**Description.** The length of the forewing is 10–12 mm, the wingspan is 20–22 mm. Antennae males: flagellum curved base and with a roller of dark dense scales, antennae females: simple filiform. The labial palpus of males are thick, tightly pressed to the forehead, brown, in their inner groove are placed maxillary palpus in the form of long light hairs. The labial palpus of females are long, thin, directed forward and upward, brownish-brown. Proboscis, ocellus and hetozema are present. Forehead, crown and nape of male forehead adjacent scales, bright red. Crown and nape females bright yellow, protruding scales (fig. 1: 3). Forewings are black, with bright white scales, especially densely located in the basal and external areas, with two transverse light fuzzy transverse antemedial and postmedial lines (fig. 1: 1).

**Male genitalia:** uncus long, near apex with lateral lobes; the gnathos are small, sharp; Valva long, very narrow, with a pointed apical part and

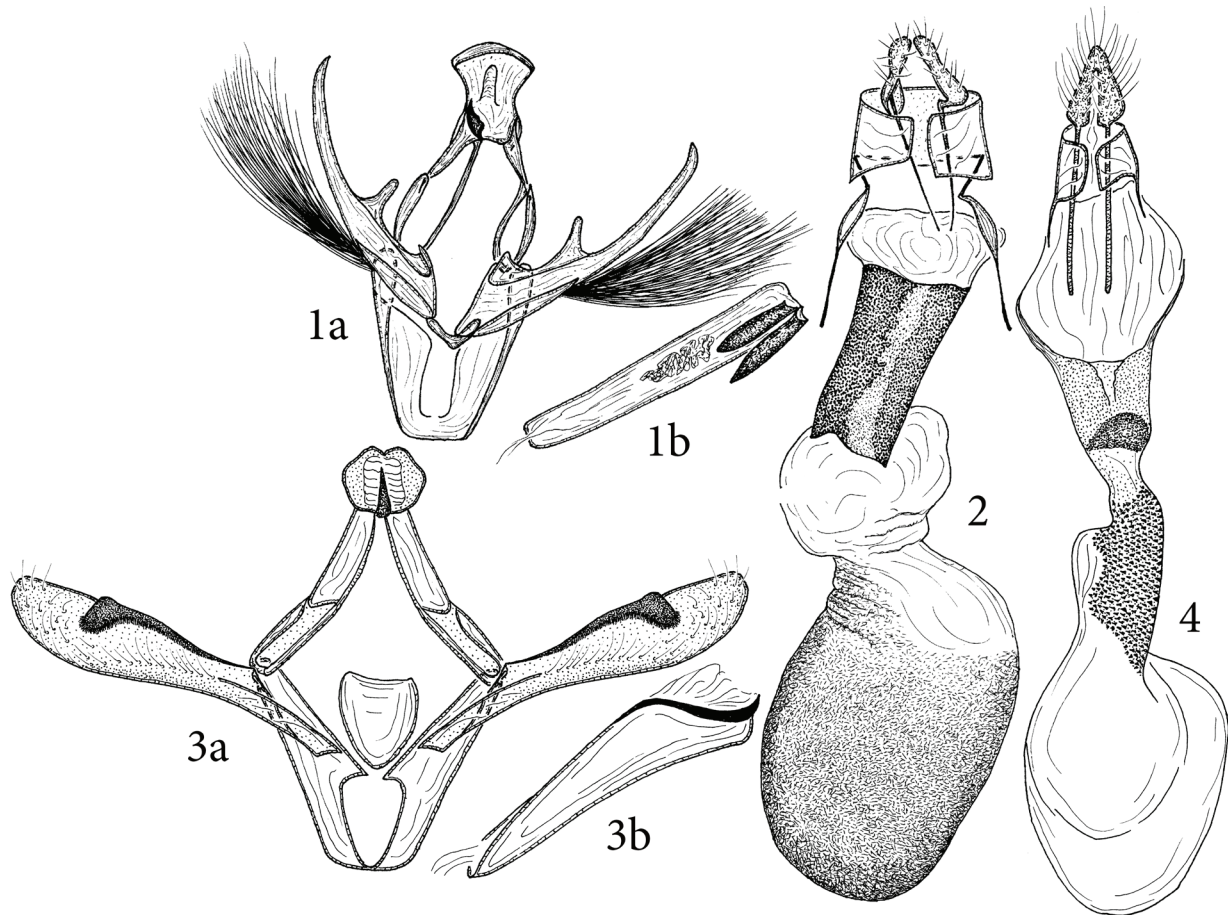


Fig. 2. Typical species of new genera: 1, 2 – *Manipyla manifestella* (Inoue, 1982); 3, 4 – *Atralepis atratella* (Yamanaka, 1986). 1, 3 – male genitalia; 2, 4 – female genitalia; a – armature of genitals; b – aedeagus

Рис. 2. Типовые виды новых родов: 1, 2 – *Manipyla manifestella* (Inoue, 1982); 3, 4 – *Atralepis atratella* (Yamanaka, 1986). 1, 3 – гениталии самцов; 2, 4 – гениталии самок; а – арматура гениталий; б – эдеагус

a large costal arm, sacculus sclerotized and with a lock of long hairs reaching the apex of the valva; juxta small, carved; vinculum narrow, long (fig. 2: 1a); Aedeagus thin, long, equal to the length of the valva, with two acicular large cornutus on apex (fig. 2: 1b).

**Female genitalia:** papilla analis oblong; apophyses short, of equal length, apophyses posterior thin, apophyses anterior with medial an extension; ductus bursae moderate, its caudal part sclerotized, middle curved and membranous; bursa copulatrix large, oblong, finely sculpted, without signum (fig. 2: 2).

**Material:** 1♀ – Vladivostok, Okeanskaya, 10.07.1959 (M.I. Falkovich); 3♀ – Vladivostok, Okeanskaya, Biostation (Botsad) 07.23.1963 (M.I. Falkovich); 5♀ – Vladivostok, Okeanskaya, Biostation (Botsad), Park Quarter 7, 07.27.1963 (M.I. Falkovich); 2♂, 9♀ – Ussuri-

ysk distr., Gornotajezhnoe, Mountain-taiga station: 1♀ – 12.07.1966 (Zabello), 1♀ – 19.06.1983 (S.Yu. Sinev), 1♂ – 23.07.1983 (S.Yu. Sinev), 1♀ – 29.07.1983 (S.Yu. Sinev), 1♀ – 9.07.1983 (S.V. Seksyayeva), 1♀ – 2.07.1985 (S.Yu. Sinev), 1♀ – 3.07.1985 (S.Yu. Sinev), 1♂, 1♀ – 4.07.1985 (S.Yu. Sinev), 2♀ – 7.07.1985 (S.Yu. Sinev); 1♂, 2♀ – Primorsky Krai, Nadezhdinsky distr., Kedrovsky (M.M. Omelko): 1♀ – 11.07.1976, 1♂, 1♀ – 13.07.1976; 1♂, 1♀ – Primorsky Krai, Khasansky Distr., Kedrovaya Pad Reserve: 1♀ – 31.07.1988 (S.Yu. Sinev), 1♂ – 3.08.1988 (S.Yu. Sinev).

**Distributions.** Russia: the south of Primorye, Japan, ?Korea.

*Atralepis* Streltsov, gen. n.

**Type species:** *Metriostola atratella* Yamanaka, 1986. *Metriostola atratella* Yamanaka, 1986: 188.

**Diagnosis.** Taxon *atratella* was established in the genus *Metriostola* Ragonot, 1893 (type species: *Epischnia vacciniella* Zeller, 1846) [Yamanaka, 1986] it was later revealed that *Metriostola* is synonymous *Ortholepis* Ragonot, 1887 (type species: *Ortholepis jugosella* Ragonot, 1887) [Heinrich, 1956]. In the male genitali this is a form of the uncus (in *Atralepis* uncus is almost square, and in *Ortholepis* is triangular), valva (in *Atralepis* the valva is short with a sclerotized long outgrowth, the inner margin of which is covered with short dense hairs, and in *Ortholepis* the valve with a small harpe in the basal part). Aedeagus in the *Atralepis* with a long curved cornutus on the vesica, and in *Ortholepis* with a large straight. A significant difference in the female genitalia is the bursa copulatrix, which is covered in the caudal part with small denticles.

Monotype genus, includes one species – *Atralepis atratella* (Yamanaka, 1986).

***Atralepis atratella*** (Yamanaka, 1986)

Yamanaka, 1986: 188 (*Metriostola*); Kirpichnikova, Yamanaka, 1999: 538 (*Metriostola*); Kirpichnikova, 2005: 538; Kirpichnikova, 2009: 166; Streltsov, 2012b: 78 (*Ortholepis*); Streltsov, 2012d: 352 (*Ortholepis*); Yamanaka et al., 2013: 352 (*Ortholepis*).

**Type locality:** Japan.

**Description.** Forewing length 9-11 mm, wingspan 19-22 mm. The antennae of the males in the base of the flagellum are curved with a roller of shiny dark gray scales, the females are simple threadlike. The labial palpus of the males are thick, flagellate, tightly pressed to the forehead, in the grooves on their inner side are maxillary palpus with a bundle of long bright yellow hairs; in females of moderate size, they are bent forward and upward, maxillary palpus whitish and short. Forehead, crown and nape light cream in the slinky scales. Proboscis, ocellus and hetozema are present (fig. 1: 4).

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Forewings are dark gray with two thin grayish-white transverse antemedial and postmedial lines. Antemedial line indistinct slightly curved, postmedial line curved outward in the area of medial-cubital veins, fringes grayish. Hindwings monochrome, gray, fringes lighter than on the forewings (fig. 1: 2).

**Male genitalia:** uncus almost square, with slightly bloated sides, apex concave; gnathos short with rounded apex; valva short with sclerotized long outgrowth, inner margin of which is covered with short dense hairs; sacculus covered with sparse and short hairs; juxta rounded, slightly sclerotized; vinculum broad, long, with flat apex (fig. 2: 3a); The aedeagus is cylindrical, long with a long curved cornutus on the vesica (fig. 2: 3b).

**Female genitalia:** papilla anal oblong; posterior apophyses long, straight; anterior apophyses thin, 3 times shorter than posterior apophyses; ostium wide, membranous; ductus short wide, with a sclerotization area in the medial part; bursa copulatrix of pear-shaped form, in caudal part covered with small denticles, signum is absent (fig. 2: 4).

**Material:** 1♂ – Vladivostok, Okeanskaya, 23.07.1963 (M.I. Falkovich); 2♂, 2♀ – Furugelma Island, 17.07.2012 (E.A. Belyaev, M.G. Ponomarenko); 1♂ – Bolshoy Pelis Island, 19.07.2012 (E.A. Belyaev, M.G. Ponomarenko); 1♂, 1♀ – Bolshoy Pelis Island, 18-21.07.2012 (E.A. Belyaev, M.G. Ponomarenko).

**Distributions.** Russia: the south of Primorye. Japan (Honshu, Ava).

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