

New species of pyraloid moths from the Centre of European Russia (Lepidoptera: Pyraustidae)

Новый вид огнёвки из центра Европейской России (Lepidoptera: Pyraustidae)

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КЛЮЧЕВЫЕ СЛОВА: Lepidoptera, Pyraustidae, *Udea*, новый вид, Тульская область.

ABSTRACT: The description of *Udea sviridovi* sp.n. (Lepidoptera: Pyraustidae) from the Center of European Russia is presented.

РЕЗЮМЕ: Дано описание *Udea sviridovi* sp.n. (Lepidoptera: Pyraustidae) из Центра Европейской России.

Introduction

During long-term entomological research in Tula Area the series of moths from the genus *Udea* Guenée, 1845 (fam. Pyraustidae) was collected. Their identification appeared to be difficult, and the species was not included into regional ecofaunistic works [Bolshakov, 1999; Bolshakov, Shmytova, 2000]. According to external characters the moths of this species resemble intensively whitened specimens of *Udea elutalis* ([Denis et Schiffermüller], 1775) and *U. decrepitalis* (Herrich-Schäffer, 1847), being similar in the structure of genitalia with *U. lutealis* (Hübner, [1809]). Examination of modern keys of Palaearctic *Udea* [Hannemann, 1964; Gaedike, 1980; Martin, 1986; Kirpichnikova, 1999] reveals that the species studied is new for science. Its description is provided herein.

Udea sviridovi Bolshakov, **sp.n.**

Figs. 1, 2, 8, 12.

Description. GENERAL APPEARANCE (Figs. 1, 2). Head, labial palpus, thorax, abdomen and upper side of forewing whitish with very light cream shade. Labial palpus almost 3 times longer than eyes diameter. Habitus similar to close congeners.

Wingspan 22–27 mm. Forewing costa more saturated yellowish than basic background. Separate elements of pattern in some specimens slightly differing by pale yellowish discal spot and sometimes incomplete thin line instead of external bandage gradually bent on side of root near costal edge and in medio-cubital cell. Subtermen and termen lines

and also accumulation of more dark scales against basic background almost missing. Lower side of wing slightly darkened and greyish-shaded with more expressed greyish pattern elements similar to upper side, differing from the latter by yellowish-grey termen spots on veins.

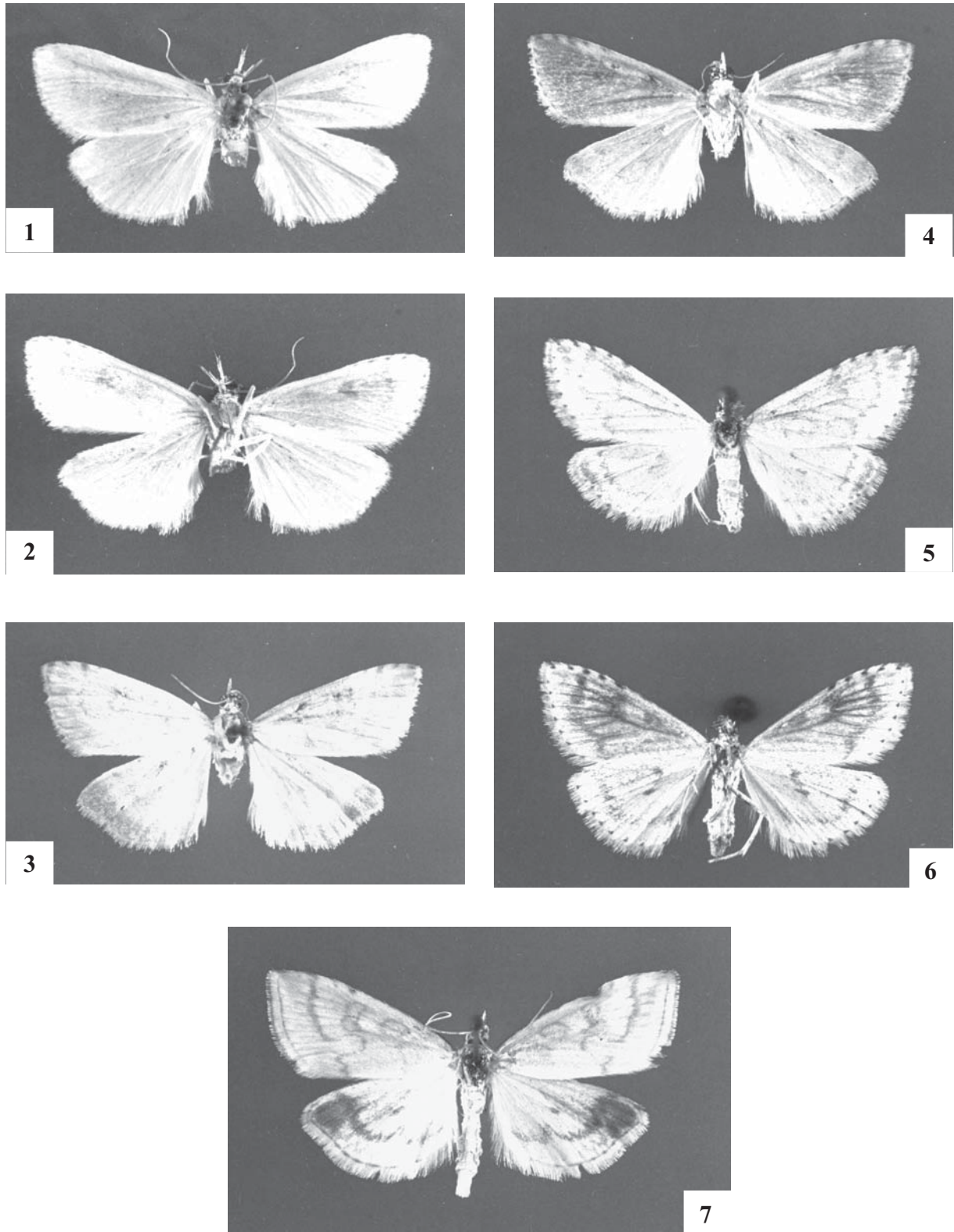
Hindwing purely white-coloured, without pattern. White cilia and veins on both pairs of wings poorly expressed against basic background.

MALE GENITALIA (Fig. 8). New species practically not differing from *U. lutealis* and *U. elutalis* by shape of tegumen, uncus, vulva, harpe, vinculum and juxta, but reliably distinguishing by aedeagus construction. Narrow, more flattened and hardly bent cornutus situated closer to aedeagus apex; the former being ca. 2.5 times longer than aedeagus diameter and gradually widened to apex. Aedeagus apex slightly widened, one of its sides (conditionally upper) distinctly flattened out and, when viewing laterally, looking like longitudinally elongated oval. Both lateral walls with poor visible insertions; their depth subequal to apex diameter. 3–4 very short lateral teeth at right side of both lobes.

FEMALE GENITALIA (Fig. 12). Shapes of papillae annales, apophyses, VIII tergite and antrum very similar to respective characters of *U. lutealis*. Apophyses anteriores rather straight and thin, being identical to apophyses posteriores. Antrum and back part of ductus bursae sclerotized. Antrum trapezoid, slightly narrowed to front edge, ostial edge ca. 3 times wider than ductus bursae. The latter noticeably swollen at small distance apart from antrum. Bursa copulatrix comparatively small, in shape of strongly elongated leaf-like thorn plate with more or less rounded apices and clear middle transversal break.

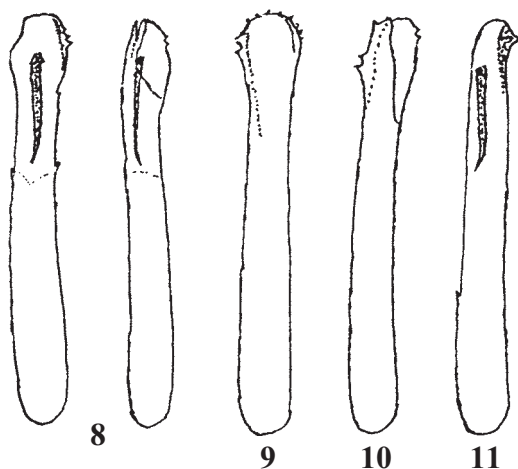
DEFINITION. By the external characters and genitalia the new species differs quite distinctly from the most similar species showing no transitional forms. By the external characters it coincides with very whitened specimens of *U. elutalis* (Fig. 3, 4) and *U. decrepitalis* (Fig. 5, 6), but in typical locality *U. sviridovi* sp.n. can be confused only with the latter — both being on fly at the same time.

When looking through the series, *U. sviridovi* sp.n. is obviously characterized by more monotonous coloration of wing upper side lacking evident yellowish-brown (*U. elutalis*) or grey (*U. decrepitalis*) scales. Specific elements of forew-



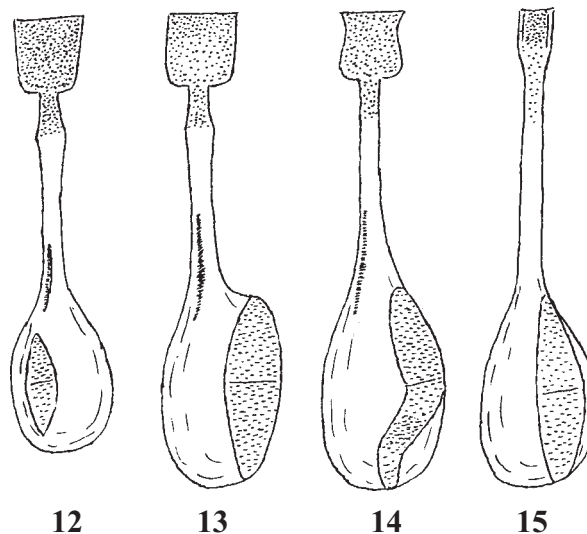
Figs. 1-7. General appearance of *Udea* species: 1-2 — *U. sviridovi* sp.n., 3-4 — *U. elutalis* (Den. et Schiff.), 5-6 — *U. decrepitalis* (H.-S.), 7 — *U. lutealis* (Hbn.). Upper side (1, 3, 5, 7), lower side (2, 4, 6).

Рис. 1-7. Внешний вид бабочек рода *Udea*: 1-2 — *U. sviridovi* sp.n., 3-4 — *U. elutalis* (Den. et Schiff.), 5-6 — *U. decrepitalis* (H.-S.), 7 — *U. lutealis* (Hbn.). Верхняя сторона (1, 3, 5, 7), нижняя сторона (2, 4, 6).



Figs. 8–11. Male genitalia of *Udea* species (aedeagus): 8 — *U. sviridovi* sp.n., two projections, 9 — *U. lutealis*, 10 — *U. decrepitalis*, 11 — *U. elutalis*.

Рис. 8–11. Гениталии самцов вида рода *Udea* (эдеагус): 8 — *U. sviridovi* sp.n., два ракурса, 9 — *U. lutealis*, 10 — *U. decrepitalis*, 11 — *U. elutalis*.



Figs. 12–15. Female genitalia of *Udea*-species (ostium bursae, ductus bursae, bursa copulatrix): 12 — *U. sviridovi* sp.n., 13 — *U. lutealis*, 14 — *U. decrepitalis*, 15 — *U. elutalis*.

Рис. 12–15. Гениталии самок вида рода *Udea* (остиум, дуктус, копулятивная сумка): 12 — *U. sviridovi* sp.n., 13 — *U. lutealis*, 14 — *U. decrepitalis*, 15 — *U. elutalis*.

ing pattern of the new species are poorly expressed (if any); subterminal line and terminal points (or strikes) are completely absent. Lower side of forewing in both above mentioned similar species is darkened more heavily, veins are also dark. Hindwings of *U. sviridovi* sp.n. are monotonous, without darkish emargination more or less visible in similar species.

By the structure of male and female genitalia the new species is more similar to *U. lutealis* (Fig. 7), differing crucially by external characters and biology (flying period, at least in typical locality).

Aedeagus of *U. lutealis* (Fig. 9) is without cornutus, its widened apex is less distinctly flattened on (conditionally) upper side and covered with large quantity of small thorns on lower side. Besides, in *U. lutealis* aedeagus apex is splitted not very clearly (as weak sclerotization) and unevenly: on left side — depth is 3 times more than its diameter and on right — only 1.2. Upper (flattened) blade of *U. lutealis* is supplied with 2 short lateral teeth not from right, but from left side.

In *U. decrepitalis* aedeagus (Fig. 10) is without cornutus, its apex is widened weakly and very clearly splitted from both sides at depth of 2 times more than diameter. Lower blade carries several very small thorns on right side and narrowed upper one — 2 teeth on left side. In *U. elutalis* aedeagus (Fig. 11) bears cornutus, but its apex is narrowed, actually not splitted and carries on its right side cornutus-like formation with large lateral thorn.

In *U. lutealis* female genitalia (Fig. 13) antrum is rectangular, bursa copulatrix is 1.3–1.5 times and signum — 2 times longer than in *U. sviridovi* sp.n. In *U. decrepitalis* (Fig. 14) apophyses anteriores are different (widened at back part), antrum with concave lateral sides, ductus bursae is not swollen, bursa copulatrix is almost like in *U. lutealis*, but signum is longer and broken in bursa copulatrix. In *U. elutalis* (Fig. 15) apophyses anteriores are wider and more bent than in previous species, antrum is only a few wider than ductus bursae, the latter is not swollen, neck of bursa copulatrix is without cestum; bursa copulatrix itself and signum subequal in length to *U. lutealis*, but signum is narrower, only 1.5 times wider than in *U. sviridovi* sp.n.

BIOLOGY. Immature stages and food plants are not known. Moths are on fly from 3rd decade of May up to 3rd decade of June. Occur not very often, in the course of our study up to 25 specimens were found (5 specimens and lesser in one catch). Active not only at night, but often in day time, sometimes frightened from grass and bushes. The species inhabits different open biotopes, can be met also in rural and suburb communities. All localities are characterized by typical polydominant leaved forests, artificial forest plantations, meadows and weed-grasslands. Can be characterized as moderate euritropical field mesoxerophilous species.

DISTRIBUTION. Material studied was collected in Tula Area in forest-steppe zone and in extreme southern part of forest zone (Fig. 16). Undoubtedly, *U. sviridovi* sp.n. must be widely distributed in neighbouring zones of East and, probably, Central Europe. It should be represented in some collections being labelled as similar species listed above. Female genitalia are possibly figured by H.-J. Hannemann [1964: 325, fig. 243b] under the name of *U. elutalis*.

ETYMOLOGY. The species is named after Dr. Andrey V. Sviridov, famous Russian lepidopterologist (Zoological Museum, Moscow State University, Moscow — ZMMU).

MATERIAL. Holotypus, ♂, "Тульская обл., Болохово, 11.VI.2000, Д.Сафронов" [Tula Area, Bolokhovo, 11.06.2000, D. Safronov] (in the ZMMU collection; supplied with the geographical label and the label on the red paper with the black ink inscription "Holotypus ♂, *Udea sviridovi*, Bolschakov").

Paratypes (8 ♂♂, 6 ♀♀, localities — Fig. 16): ♀, Tula Area, Novomoskovsk, 16.06.1978, S. Andreev; ♂, environs of Tula [El'kino], field, 11.06.1984, S.A. Ryabov; ♀, Tula Area, Agroles, 5 km NE of Plavsk, 9.06.1990, L. Bolshakov; ♀, Tula Area, Yasnaya Polyana, 13 km S of Tula, 23.06.1997, L. Bolshakov; ♂, Tula, Krasniy Perekop, 18.06.1998, L. Bolshakov; ♀, Tula Area, Skuratovskiy, 10 km S of Tula, 14.06.1998, L. Bolshakov; 2 ♂♂, 1 ♀, Tula Area, Inshinskiy, 24.05.1999 and 20–21.06.1999, V. Krylov; ♂, Dedilovskie Vyselki, 30 km NE of Tula, 13.06.1999, L. Bolshakov; 3 ♂♂, Tula Area, Donskoi, 5.06.2000, S. Andreev; ♀, Tula Area, Yasnaya Polyana, 7.06.2000, L. Bolshakov.

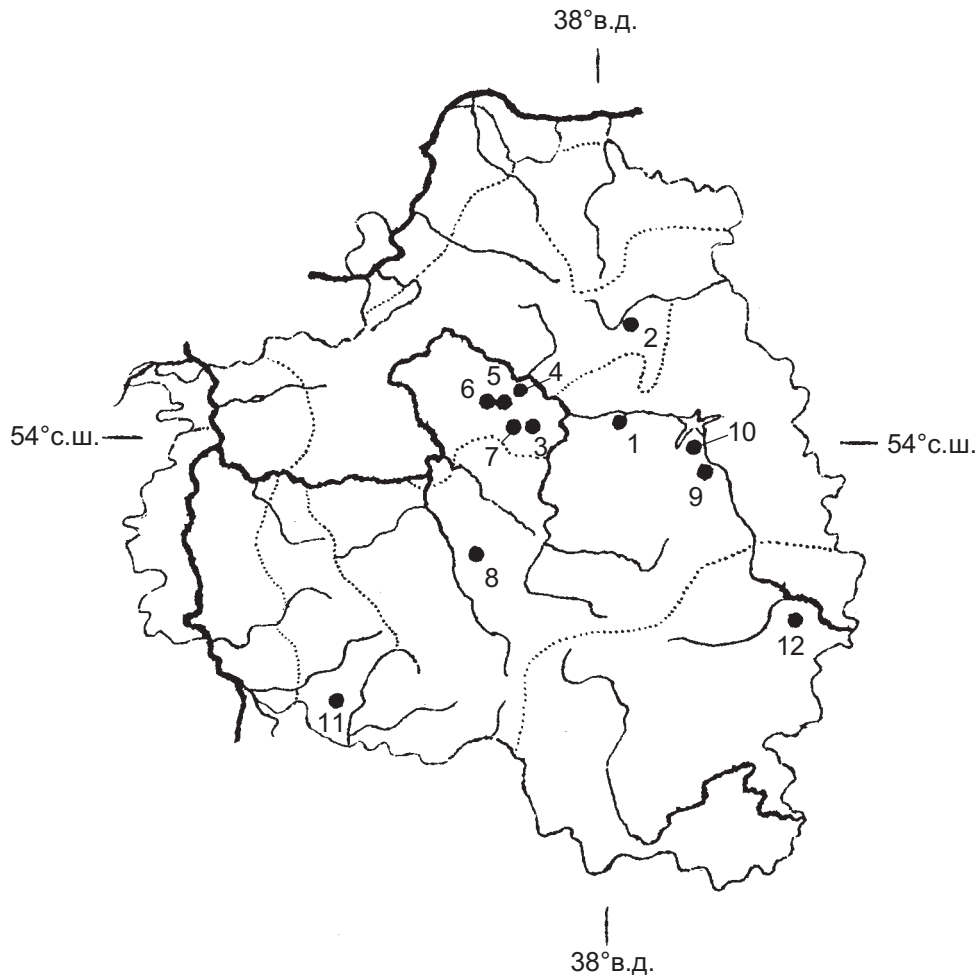


Fig. 16. Localities of *Udea sviridovi* sp.n. in Tula Area: 1 — Bolokhovo, 2 — Dedilovskie Vyselki, 3 — Skuratovski, 4 — Tula, 5 — El'kino, 6 — Inshinski, 7 — Yasnaya Polyana, 8 — Agroles, 9 — Donskoi, 10 — Novomoskovsk. 11 — Medvezhka, 12 — Ivanovka.
 Рис. 16. Местонахождения *Udea sviridovi* sp.n. в Тульской области: 1 — Болохово, 2 — Дедиловские Выселки, 3 — Скуратовский, 4 — Тула, 5 — Елькино, 6 — Иншинский, 7 — Ясная Поляна, 8 — Агролес, 9 — Донской, 10 — Новомосковский, 11 — Медвежка, 12 — Ивановка.

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