

DESCRIPTION OF *PARORNIX ALTAICA* SP. N. WITH NEW DISTRIBUTIONAL DATA ON *PARORNIX MIXTA* (TRIBERTI), *P. TENELLA* (REBEL) AND *P. KUGITANGI* NOREIKA (LEPIDOPTERA, GRACILLARIIDAE)

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Abstract. *Parornix altaica* sp. n. from the Altai region (Russia) is described. New distributional data for *Parornix mixta* (Triberti), *P. tenella* (Rebel) and *P. kugitangi* Noreika are provided. The moths and male genitalia of all species are figured.

Key words: Gracillariidae, *Parornix*, new species, Altai, Russia, Transbaikalia, Crimea, Ukraine

INTRODUCTION

The genus *Parornix* Spuler, 1910 comprises 71 Holarctic species, 44 of which inhabit Europe, Central (Afghanistan, Iran, Kazakhstan, Pakistan, Tadzhikistan, Turkmenistan, Uzbekistan) and Eastern (Far East of Russia, Japan) Asia. Twenty four species are found in North America (Nearctic region), mainly in the USA and Canada (De Prins & De Prins 2005). Only two species (*Parornix errantella* Walsingham, 1897 and *P. micrura* Walsingham, 1914) are known from the Neotropical region, while *Parornix concussa* (Meyrick, 1933) – from India (Oriental region).

All species belonging to this genus have very similar external characters, so their identification is based on analysing quite a complex male genital structure. The genus is divided into five subgenera according to the male genital characters: *Alfaornix* Kuznetsov, *Betaornix* Kuznetsov, *Gammaornix* Kuznetsov, *Deltaornix* Kuznetsov and *Parornix* Spuler (Kuznetsov 1979). Most of the species of this genus are trophically related to woody plants belonging to Rosaceae, Betulaceae, Fagaceae and Aceraceae families, but the majority of species are poorly studied and there are very little data concerning their biology. Some of the species are considered to be garden pests (Ermolaev 1993).

The aim of this article is to describe a new species belonging to *Parornix* Spuler genus (Gracillariidae) and to present the original data about the distribution of other three species belonging to the same genus including pictures of moths and their genitalia. The pre-

sented material will supplement the already known data with new details and will make the identification of these moths easier.

MATERIAL AND METHODS

Material was collected by Dr Yu. Budashkin, Dr A. Bidzilya, I. Kostjuk and O. Kostjuk in the Crimea Peninsula, Altai and Transbaikalia regions from 1988 to 1997. In addition, the collection of the Zoological Institute of the Russian Academy of Sciences in St. Petersburg (ZIAS) was studied.

As a result of investigations, *Parornix tenella* (Rebel 1919) has been recorded for the first time for Ukraine (Crimea Peninsula), *P. mixta* (Triberti 1980) for Russia (Transbaikalia region) and *P. kugitangi* Noreika, 1991 for Uzbekistan (Central Asia). Both species were previously known only from western, central and southern Europe (Triberti 1979, 1980; Kuznetsov 1981; Laštůvka & Laštůvka 1990; Buszko 1996). The external appearance of *Parornix tenella* and *P. kugitangi* here are figured for the first time.

Methods for the preparation of the genitalia largely follow Falkovitch and Stekolnikov (1978). The terminology used for morphological structures follows Triberti (1998b) and Kuznetsov and Baryshnikova (2003). The genitalia were studied under a Biolam microscope and MBS-10 stereomicroscope.

Locality names are spelled according to the Times Atlas of the World (1994).

The type specimens of the new species are deposited in the collections of Vilnius Pedagogical University (VPU) and Zoological Museum of Kiev University (ZMKU).

DESCRIPTIVE PART

Parornix altaica Noreika & Bidzilya, sp. n.

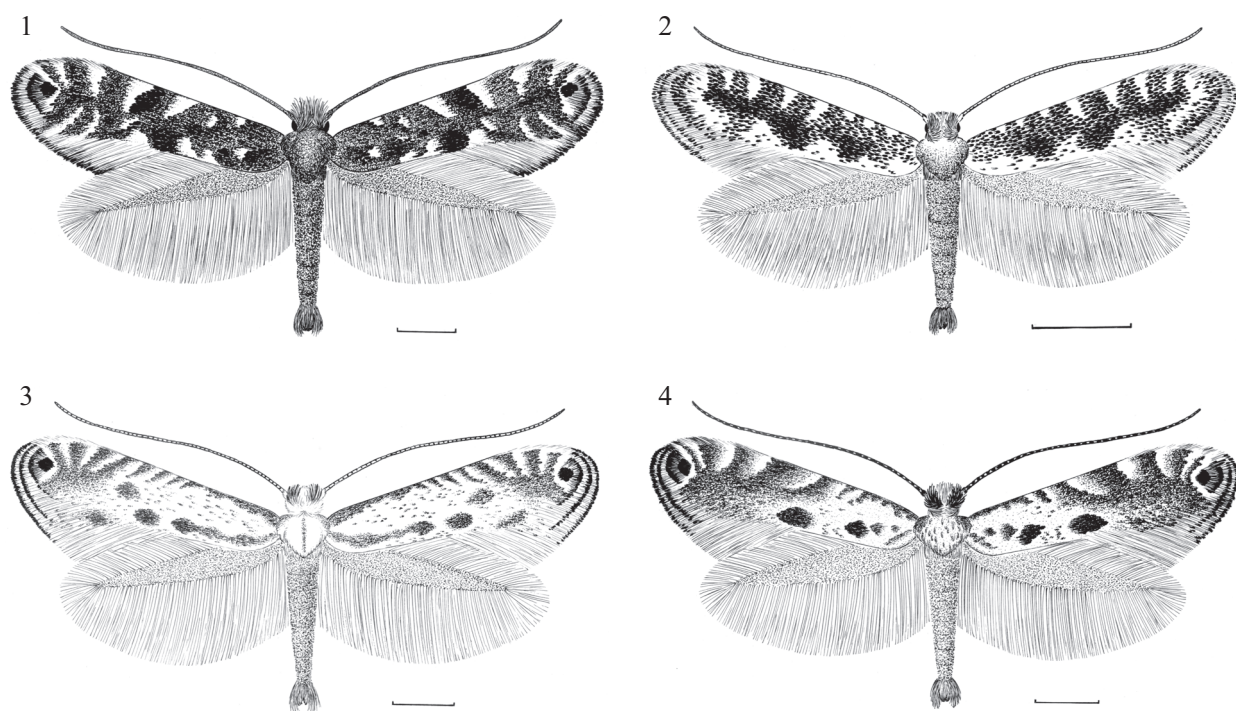
(Figs 1, 5–9)

Type material. Holotype 1 ♂: Russia, Altai, Ukok plateau, 2,200 m, 27 June 1995, A. Bidzilya (ZMKU). Paratypes: 1 ♂, same locality, 27 June 1995, A. Bidzilya (VPU); 1 ♀, same locality, 3 July 1995, A. Bidzilya (VPU) (head missing); 1 ♀, same locality, 17 July 1995, A. Bidzilya (ZMKU).

Diagnosis. Externally closely resembles *Parornix maura* Triberti and *Parornix ornatella* Triberti, from which it is separated by the presence of six dorsal (four in *P. maura*) (Triberti 1998a) and six costal strigulae (8–9 in *P. ornatella* Triberti) (Triberti 1981). Male genitalia resemble those of *P. anglicella* (Stainton) and *P. ornatella* Triberti, but differ in almost straight aedeagus shortly bent ventrally at almost 90° near base without penial apophysis, and very large posterior process of anellus. In females, antrum is very large and

sclerotised, ductus bursae shorter, apophyses the same in length, bursa without signa.

External characters (Fig. 1). Wingspan 8.5–10.0 mm. Face grey. Head on vertex brown grey, with two yellowish grey tufts laterally near thorax. Maxillary palpi pale yellowish grey. Labial palpi yellowish, the second segment on its distal part margined by blackish brown scales. Scapus and antennae yellowish grey without clear annulation. Thorax and tegulae brown grey. Forewing background pale brown grey, with scattered dark grey brown scales on the whole surface of wing, forming usual indistinct pattern of *Parornix*: six–seven white wedge-shaped strigulae align along costal wing margin; first three–four almost straight, directed outward; the other three slightly bent, directed inward. Five–six white strigulae extend along dorsal wing margin; third is widest of all, placed right in the middle of wing. There are two distinguishable subdorsal blotches. Apical spot brown black, round. Cilia around apex of wing yellowish grey with two dark grey brown lines. Hindwing and its cilia yellowish grey. Abdomen brownish grey, with yellowish grey tufts on apical segment. **Male genitalia** (Figs 5–7). Symmetrical. Tegumen short, rounded apically. Tuba analis moderate in length, without setaceous areas at base. Valva slightly bent basally, subtriangular, costal margin convex. Anterior



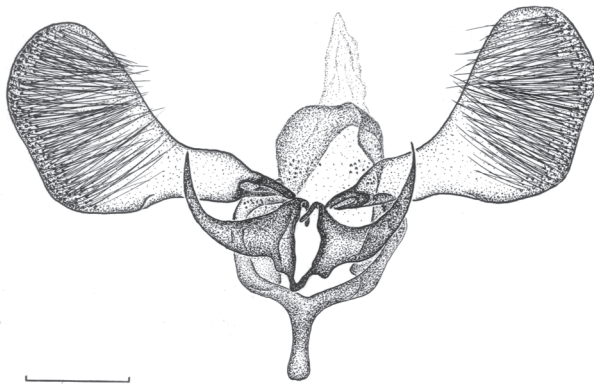
Figures 1–4. The imago of *Parornix* Spuler: 1 – *Parornix altaica* sp. n., 2 – *Parornix kugitangi* Noreika, 1991, 3 – *Parornix mixta* (Triberti, 1980), 4 – *Parornix tenella* (Rebel, 1919). Scale bar 1.0 mm.

process of anellus thin and short. Posterior process of anellus very large, horn-shaped, about 1/2 as long as valva, rather broad basally, directed dorsally and pointed apically. Saccus slender, about 1/3 as long as aedeagus. Aedeagus slender, shortly bent ventrally at almost 90° near base, then straight, tapering distally and pointed at apex; penial apophysis missing. Sternite eight rather short, tapering distally and triangular in apical third.

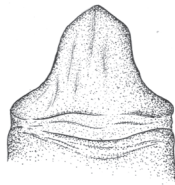
Female genitalia (Figs 8–9). Apophyses posteriores thin, the same length as apophyses anteriores. Sterigma complicate, with lamella antevaginalis produced over ostium bursae into a semicircular lobe. Antrum and terminal half of ductus bursae sclerotised. Corpus bursae almost the same length, as long as membranous part of ductus bursae, without visible signa.

Biology. Unknown.

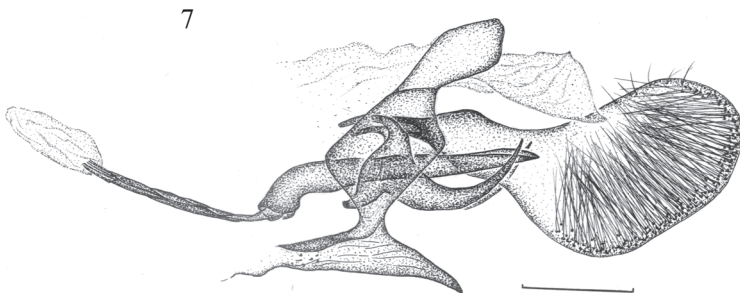
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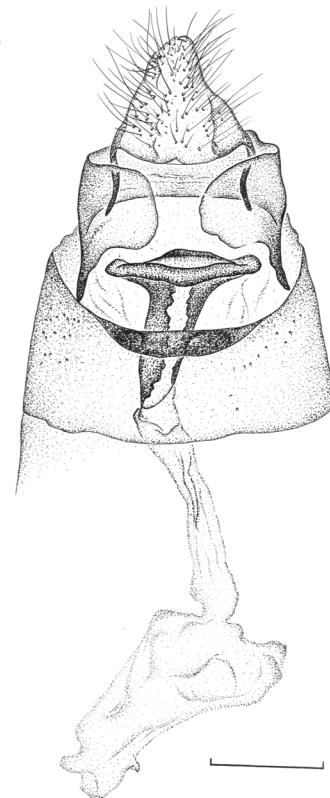
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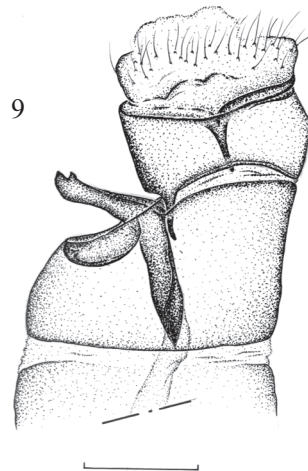
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Figures 5–9. Genitalia of *Parornix altaica* sp. n.: 5–7 – male genitalia: 5 – caudal view, without saccus and aedeagus, 6 – eighth sternite, 7 – lateral view, without left valva. 8–9: female genitalia: 8 – ventral view, 9 – lateral view (without distal part of ductus bursae and bursa copulatrix). Scale bar 0.2 mm.

Distribution. Known from the type locality only.

Etymology. The species is named after the type locality.

***Parornix kugitangi* Noreika, 1991**

(Figs 2, 10)

Parornix kugitangi Noreika, 1991: 433. Puplesis, Diškus, Noreika & Saparmamedova, 1996: 194.

Known from Central Asia only: eastern Turkmeniya, Kugitangtau mountains, env. Svintsovy Rudnik (Noreika 1991) and Uzbekistan (Kuznetsov &

Baryshnikova 2003). The figure of the imago (Fig. 2) is provided for the first time.

Material examined: 1 ♂. Uzbekistan, Dehkanabad distr., 13 May 1985, R. Puplesis leg. (ZIAS) (labelled in Russian).

***Parornix mixta* (Triberti, 1980)**

(Figs 3, 11)

Callisto mixta Triberti, 1980: 165.

Parornix mixta. Laštůvka & Laštůvka 1990; Buszko 1996: 51.

The present records from Transbaikalia are far away from earlier known localities in Italy, Slovakia and Yugoslavia.

Material examined: 1 ♂. Transbaikalia [Russia], Chitinskaya oblast', env. Kyra, 900 m, 4 July 1997, A. Bidzilya, I. Kostjuk, O. Kostjuk. leg. (VPU) (labelled in Russian).

***Parornix tenella* (Rebel, 1919)**

(Figs 4, 12)

Ornix tenella Rebel, 1919: 131.

Parornix tenella. Triberti 1979: 267; Kuznetsov 1981: 222; Buszko 1996: 51.

Earlier reported from western and southern Europe: northeastern Spain, Italy, Sicilia (Triberti 1979), Hungary (Kuznetsov 1981), Austria, Slovakia and Yugoslavia (Buszko 1996). The figure of the imago (Fig. 4) is provided for the first time.

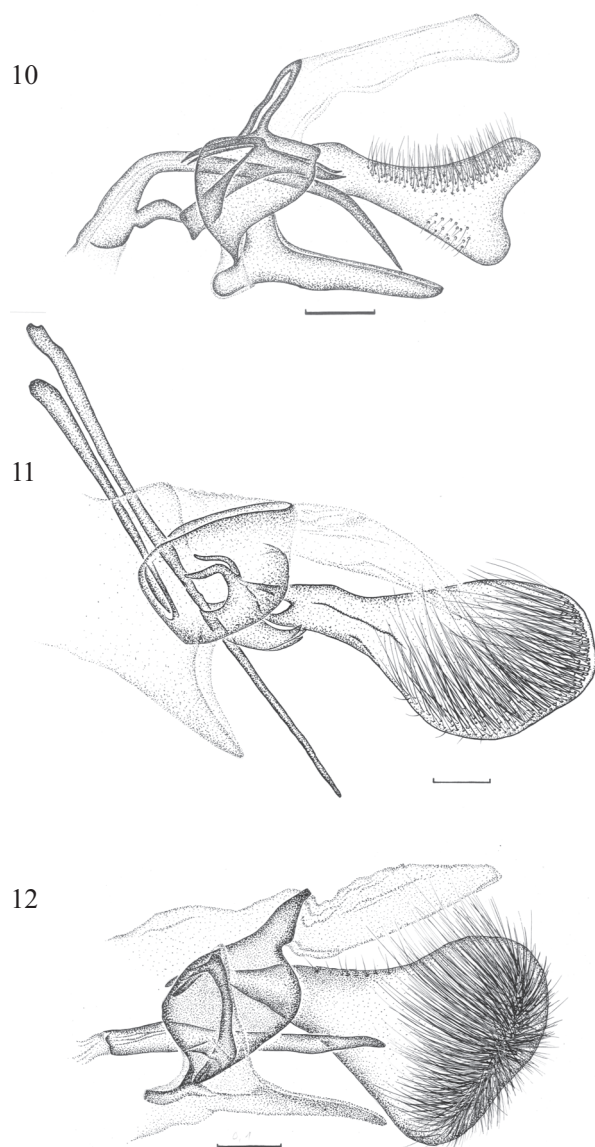
Material examined: 1 ♂. Crimea, Karadag Reserve, 27 April 1988, Yu. Budashkin (VPU); 1 ♂, 1 ♀, same locality, 13 June 1988, Yu. Budashkin (VPU); 1 ♂, same locality, 29 May 1989, Yu. Budashkin (VPU); 1 ♂, same locality, 25 July 1989, Yu. Budashkin (VPU) (labelled in Russian).

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Figures 10–12. The male genitalia of *Parornix* Spuler (lateral view, without left valva): 10 – *Parornix kugitangi* Noreika, 1991, 11 – *Parornix mixta* (Triberti 1980), 12 – *Parornix tenella* (Rebel 1919). Scale bar 0.1 mm.

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NAUJOS MOKSLUI RŪŠIES *PARORNIX ALTAICA* SP. N. APRAŠYMAS IR NAUJI DUOMENYS APIE *PARORNIX MIXTA* (TRIBERTI), *P. TENELLA* (REBEL) BEI *P. KUGITANGI* NOREIKA (LEPIDOPTERA, GRACILLARIIDAE) PAPLITIMĄ

A. Bidzilya, Yu. Budashkin, R. Noreika

SANTRAUKA

Straipsnyje aprašoma nauja mokslui *Parornix* Spuler genčiai (Lepidoptera, Gracillariidae) priklausanči rūšis iš Altajaus krašto (Rusija). Taip pat pristatomi nauji duomenys apie rūšių *Parornix mixta* (Triberti), *P. tenella* (Rebel) bei *P. kugitangi* Noreika paplitimą. Pateikiami visų rūšių originalūs patinėlių išorės ir genitalinių struktūrų piešiniai; naujai aprašomai rūšiai pateikiami ir patelės genitalijų piešiniai, *P. tenella* (Rebel) bei *P. kugitangi* Noreika drugių išorės piešiniai spaudoje pateikiami pirmą kartą.

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