



Description of the female of *Gnophopsodos ravistriolaria* (Wehrli, 1922) (Lepidoptera: Geometridae)

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The genus *Gnophopsodos* Wehrli, 1945 has recently been under revision (Erlacher & Erlacher 2016). For three out of nine species belonging to the taxon, the females have hitherto been unknown, one of them being *G. ravistriolaria*. Material collected in the Sayan Mountains in 2015, about 25 km away from the locus typicus of *G. ravistriolaria*, and recently received, contained two males of that species and a single unknown female. The latter could clearly be assigned to the genus *Gnophopsodos* by their genitalia. We conclude that the female belongs to *G. ravistriolaria* based on the following: (1) it belongs to a small series further comprising two males that proved to be *G. ravistriolaria* based on genitalia characters; (2) all of the three specimens have been collected close to the locus typicus of *G. ravistriolaria*, where no sympatric *Gnophopsodos* species are known from; (3) the new female clearly differs from females of other *Gnophopsodos* species concerning its genitalia characters and (4) its habitus matches that of the known males, including the holotype. The female of *G. ravistriolaria* is now illustrated for the first time.

In Erlacher & Erlacher (2016) the subspecies *G. ravistriolaria pantherinus* was described as new. The description was based on the allopatric distribution (with a distance between locations of about 1000 km) as well as the remarkably vivid wing pattern of *G. ravistriolaria pantherinus* with typically brightened medial area and broad ante- and postmedial lines, in contrast to *G. ravistriolaria ravistriolaria*, where the medial area is slightly darkened and ante- and postmedial lines are rather indistinct. Besides, the genitalia of the male holotype of *G. ravistriolaria ravistriolaria* had been largely destroyed during preparation, making it hard for the authors to compare the remaining valva-fragment with the genitalia of *G. ravistriolaria pantherinus*. The lack of appropriate comparative material as well as the absence of detailed descriptions, illustrations or high quality photographs of the genitalia of *G. ravistriolaria* left open the question, whether *G. ravistriolaria pantherinus* might actually be a separate species. However, the comparison of the male genitalia of *G. ravistriolaria pantherinus* and the new material of *G. ravistriolaria ravistriolaria* revealed no constant differences, so we now confirm its status as a subspecies.

Measurements of the female genitalia were conducted as described in Erlacher & Erlacher (2016). The examined material is deposited in the following private collection: MRJ: Rando Müller, Jena, Germany.

Gnophopsodos ravistriolaria (Wehrli, 1922)

(adults Pl. 1, Figs 1, 2; male gen. Pl. 2, Fig. 3, female gen. Pl. 2, Fig. 4)

Gnophos ravistriolaria Wehrli, 1922, *Deutsche Entomologische Zeitschrift Iris*, 36: 23, pl. 1, fig. 23, pl. 2, fig. 35, 51. Type locality: Russia / Mongolia, Sayan Mountains, Munko-Sardyk, 3400 m.

Material examined. Holotypes of both *G. ravistriolaria ravistriolaria* and *G. ravistriolaria pantherinus*, and 15 paratypes of *G. r. pantherinus* (details in Erlacher & Erlacher, 2016). The following material of *G. ravistriolaria ravistriolaria* has recently been received: **Russia:** 2♂, West Buryatia, 24 km N Sagan Shuluta, River Irkuta, 51°(53–56)'36"N / 100°(43–46)'41"E, 1850–1950 m, 14.–18.vii.2015, ad luc., leg. A. Steidel and O. Czadec, gen. prep. SE–728 (adult Pl. 1, Fig. 1) and SE–742 (male gen. Pl. 2, Fig. 3); 1♀, same data, gen. prep. SE–741 (adult Pl. 1, Fig. 2; female gen. Pl. 2, Fig. 4), MRJ.

Description of *Gnophopsodos ravistriolaria ravistriolaria*.

Adults (Pl. 1, Figs 1, 2): Wings: Wingspan: 27–30 mm (♂), 26 mm (♀); ground color yellowish, erratically and densely scattered with darker scales; wing pattern with medial lines and discal spot indistinct or mingled with background; underside pale and dull.

Male genitalia (Pl. 2, Fig. 3): for a detailed description see Erlacher & Erlacher (2016).

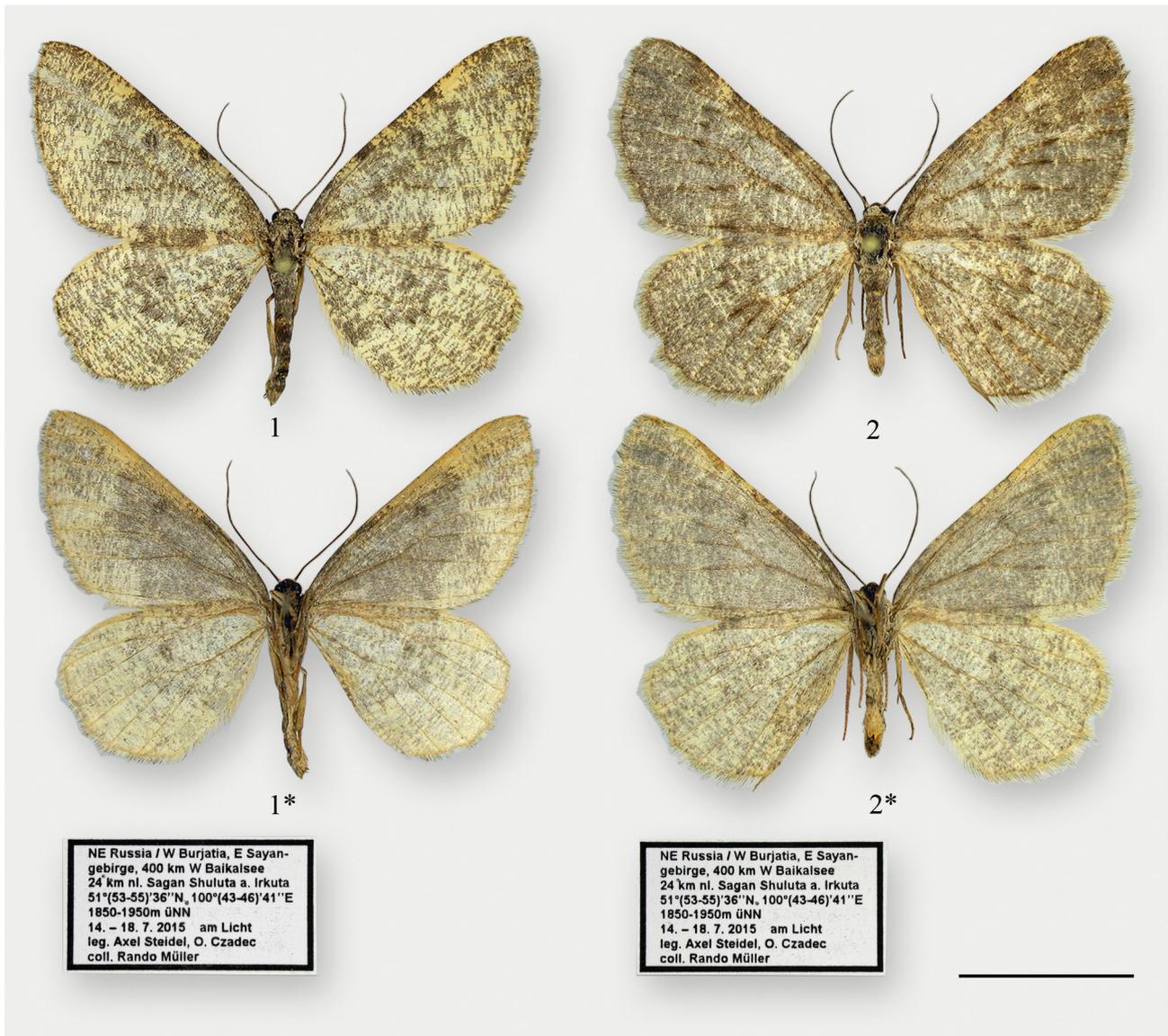


PLATE 1. Adults of *Gnophopsodos ravistriolaria*. 1: male; 2: female. Undersides of specimens are denoted by '*'. Scale bar: 10 mm.

Female genitalia (Pl. 2, Fig. 4): Papillae anales densely covered with strong setae; posterior apophysis longer than anterior apophysis; antrum bulbously distended, sclerotized, antrum length 0.8 mm, width 0.45 mm, ostium area dorsally bulging and folded, internal portion of the partially everted antrum well sclerotized and visible halfway down the antrum; corpus bursae hyaline; total length of female genitalia: 3.19 mm.

Diagnosis. In the female genitalia, *G. ravistriolaria* resembles *G. puengeleri* (Bohatsch, 1910) and *G. sabine* Erlacher & Erlacher, 2016 (detailed description of the two latter species in Erlacher & Erlacher (2016)). However, in *G. puengeleri* the antrum is smaller than in *G. ravistriolaria*, and in *G. sabine* the antrum is more pear-shaped and the internal portion is totally sclerotized.

Biology. The three examined specimens were captured in the river valley where the river Sasar enters the main river Irkut (Fig. 1). Adjacent moraine slopes consisted of rubble debris of various rocks, overgrown with mostly crippled *Larix* trees and thick bush vegetation consisting of *Spiraea* sp., *Betula nana*, *Alnus viridis*, *Salix* spp., *Corylus avellana*, *Lonicera altaica*, *Grossularia reclinatum* and yellow-blossomed *Dasiphora fruticosa*. Open slope areas were swampy, covered with *Sphagnum*, *Vaccinium*, Orchidaceae and others. Moist sites of the river valley were vegetated with *Rheum*, more open and dry sites with a large-growing *Astracantha* species, *Geranium* and *Anemone* species and others. The river bank as well as the plateau was overgrown with *Anemone*, *Geranium*, *Astragalus* and grasses (A. Steidel pers. comm.).

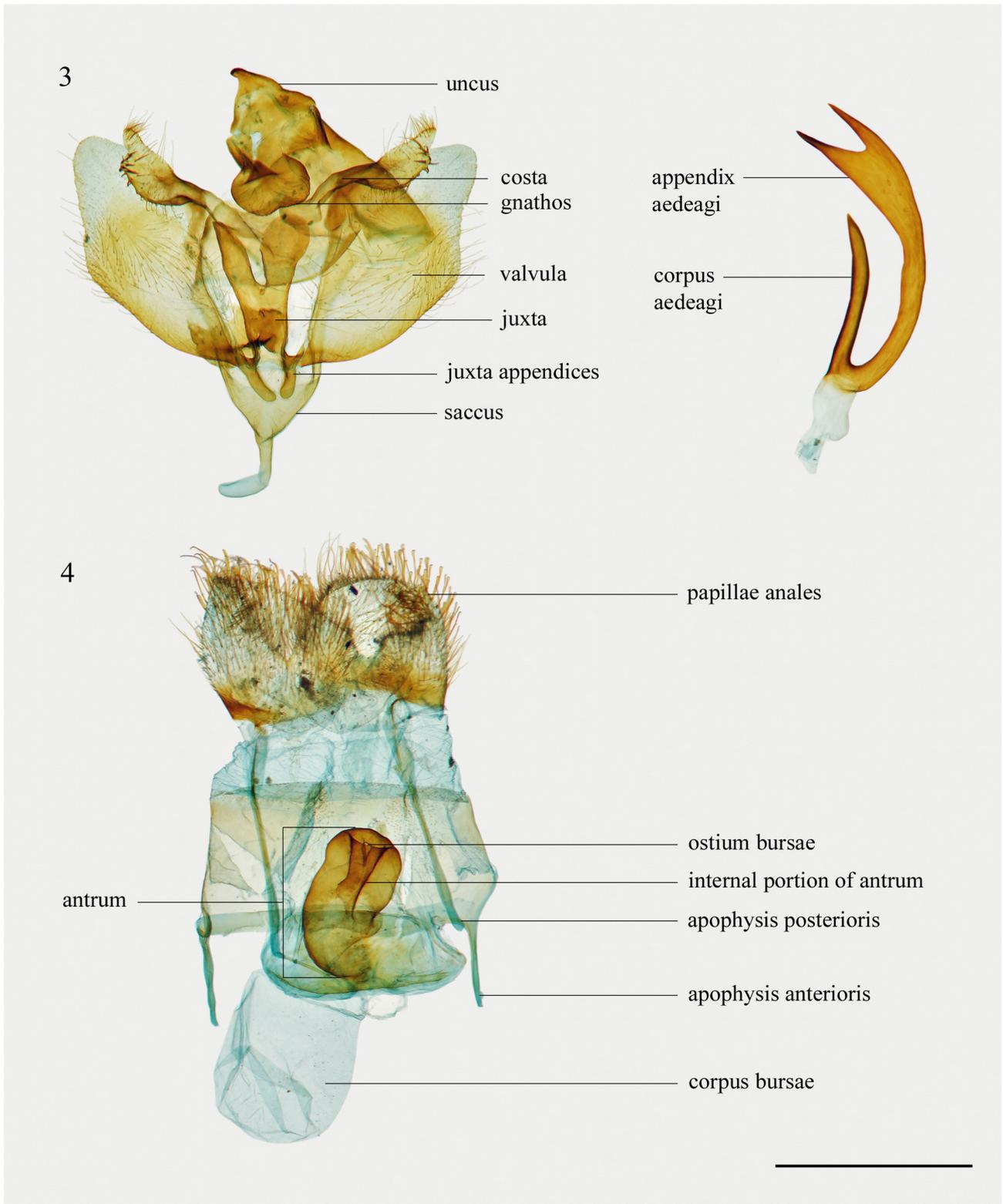


PLATE 2. Genitalia of *Gnophopsodos ravistriolaria*. 3: male; 4: female. Scale bar: 1 mm.



FIGURE 1. Habitat of *Gnophopsodos ravistriolaria* at the confluence of the mountain river Sasar into main river Irkut, 21.06.2013, Photo: A. Steidel.

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