

**THE FIRST FINDING OF THE SPECIES *CARPOSINA SCIRRHOSELLA*  
HERRICH-SCHÄFFER, 1854 (LEPIDOPTERA, COPROMORPHOIDEA,  
CARPOSINIDAE) IN SERBIA**

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**ABSTRACT:** The species *Carposina scirrhosella* Herrich-Schäffer, 1854 is recorded for the first time for the fauna of Carposinidae in Serbia and Montenegro. Several specimens were found in Fruška Gora National Park Fruška gora (province of Vojvodina) and in Eastern Serbia. To judge from the data of KARSHOLT AND RAZOVSKI (1996), this is the first finding of the given species in the area of former Yugoslavia.

**KEY WORDS:** Carposinidae, Lepidoptera, *Carposina scirrhosella*, fauna, Serbia

## INTRODUCTION

The position of the family Carposinidae in Microlepidoptera classification has been contestable for a long time. Currently, it is considered to have the closest relations with the family Piralidae according to data of KARSHOLT, RAZOVSKI (1996). It is also known to share similarity with the family Tortricidae (HANNEMAN, 1964).

There are two species of the genus *Carposina* (Lepidoptera, Copromorphoidea, Carposinidae) in Europe. At the same time, they are the sole representatives of the superfamily Copromorphoidea in Europe. The species *Carposina berberidela* Herrich-Schäffer, 1854 has been recorded in former Yugoslavia. It is unknown to us why KARSHOLT AND RAZOVSKI (1996) did not use the data of KLIMEŠ (1968), who cited the presence of this species in the fauna of Macedonia. ZEČEVIĆ (2002) did not record *C. scirrhosella* in Timočka Krajina. Furthermore, MIHAJLOVIĆ AND JAKŠIĆ (1996) did not cite it for the Lepidoptera fauna of Mt. Durmitor. We can therefore say that the species *Carposina scirrhosella* Herrich-Schäffer, 1854 is here recorded in Serbia and former Yugoslavia for the first time. The species was found in Fruška Gora National Park (province of Vojvodina) and in East-

ern Serbia. Besides data for *Carposina scirrhosella*, in this study there are also data for the species *Carposina berberidella*, because of the fact that these are until now the only known species of the superfamily Copromorphaidea.

## AREA EXAMINED

Localities of findings are marked on a map with UTM grids and appropriate scale (Fig. 1).

The locality Brestovačka Banja is marked as EP87. The altitude is about 350 m.

Another locality, Ledinci-Stokuća, in Fruška Gora National Park, is marked on the same map as DR00. Its altitude is 360 m.

## MATERIALS AND METHODS

The specimens were caught with a light trap employing a 400 W mercury bulb. The given species were identified on the basis of genital armature of the male and female, using the key of HANNEMAN (1964). All shown specimens and their genital armatures are deposited in author collection.

Precise photos of male and female imagoes of the species *Carposina scirrhosella* (Herrich-Schäffer, 1854) were made by the technique of scanning in a high vacuum with secondary electron emission (SEI) at the Faculty of Science, Novi Sad. For that purpose, the specimens were prepared in BAL-TEC ISCD005-Sputter coater (Figs. 8 and 9).

## RESULTS

The results of our research are summarized in Tables 1 (*Carposina scirrhosella*, Herrich-Schäffer, 1854) and 2 (*Carposina berberidella*, Herrich-Schäffer, 1853). The tables contain the main data about characteristics of the collected specimens: dates and places of findings, sex, and numeration of figures shown in this paper. There are three kinds of figures: morphological photos of imagoes, photos and drawings of genital preparations, and photos of imago heads in detail.

## DISCUSSION

*Carposina scirrhosella*, Herrich-Schäffer, 1854. Distribution: Germany, Austria, Czech Republic and Slovakia, Hungary, Romania, and Bulgaria to the Middle-East. Rare and local. Flight period: VI-VIII.

Main morphological characteristics: *Labial palpi* of male erected from head and triangle-shaped (Fig. 8). *Labial palpi* of female elongated relative to the head and relaxed (Fig. 9). Fore-

Table 1. Main research results for the species *Carposina scirrhosella* Herrich-Schäffer, 1854

Date and Place	Sex	Imagoes, Fig. Nos.	Gen. preparations, Collection Nos.	Gen. preparations, Fig Nos.	Imago heads, Fig. Nos.
Aug 5, 1998, Brestovačka Banja	Male	Fig. 2 / B	STOJANOVIĆ N 60/182	-	-
	Male	Fig. 2 / C	STOJANOVIĆ N 61/183	-	-
	Male	Fig. 2 / D	STOJANOVIĆ N 62/184	Fig. 5 F, H	Fig. 8
Jun 16, 1999, Brestovačka Banja	Male	Fig. 2 / A	STOJANOVIĆ N 59/181.	-	-
Aug 12, 1999, Brestovačka Banja	Male	Fig. 2 / K	STOJANOVIĆ N PI/94	Fig. 3 and 4	-
July 17, 1999, Brestovačka Banja	Male	Fig. 2 / E	STOJANOVIĆ N 63/185	Fig. 5B, D	-
	Male	Fig. 2 / F	STOJANOVIĆ N 64/186	Fig. 5E, G	-
July 7, 2004 Ledinci-Stokuća, Fruška Gora N. Park	Male	Fig. 2 / G	STOJANOVIĆ N 66/188	Fig. 5A, C	-
Aug 5, 2004, Ledinci-Stokuća, Fruška Gora N. Park	Male	-	STOJANOVIĆ N 32/191	-	-
	Female	Fig. 2 / I	STOJANOVIĆ N 68/190	Fig. 6 (right), Fig. 7	Fig. 9

Table 2. Main research results for the species *Carposina berberidella* Herrich-Schäffer, 1853

Date and Place	Sex	Imagoes, Fig. No.	Gen. preparations, Collection No.	Gen. preparations, Fig No.	Imago heads scanned
Aug 10, 2004, Ledinci-Stokuća, Fruška Gora N. Park	Female	Fig. 2 / H	STOJANOVIĆ N 67/189	Fig. 6 (left)	-

wing of this species whitish; middle part of wing less intensively and broadly dusted (Fig. 2 A-K, except H). External transverse stripe of female intensively dusted (Fig. 2 I), while male's is slightly dusted (Fig. 2 A-K, except H and I). Internal transverse stripe and specific slanting spot after wing median slightly dusted. Basal transverse stripe like a dark band. Male's hindwing whitish (Fig. 2 A-K, except H and I), female's hindwing somewhat darkened (Fig 2I).

Description of male's genital armature (Figs. 3, 4, and 5): *Uncus* reduced, slightly bulging in the middle part and with knobs on both sides. *Cucullus* elongated, at *apex* slightly bent to the costal side. *Sacculus* stout. At the end of the *sacculus* is a strong chitinized finger, rounded on the top and turned to the dorsal side. *Clavus* long, thin, with several hairs on *apex*. *Juxta* rounded on the bottom side, V-shaped on top. On the dorsal side of the *sacculus* is a bulging chitinized excrescence. *Saccus* elongated to a finger. *Penis* an elongated spear with three rows of *cornuti*. *Coecum penis* rounded. Head of *labides* a minute bent thorn. *Gnathos* consisting of two incurved blunt arms, scobinated, with a specific shape; base shoulder-shaped, with strong elbow and elongated feler-like forearm, with many hairs on top.

Description of female's genital armature (Figs. 6-right and 7): *Ductus bursae* elongated. *Bursa copulatrix* baggy. *Signa* consisting of two bipartite, linked, chitinized teeth. All teeth finely dentated (Fig. 7).

*Carposina berberidella*, Herrich-Schäffer, 1853. Distribution: Spain, Italy, Germany, Austria, Poland, Czech Republic, Slovakia, Former Yugoslavia, and European part of Russia to the Middle

East. Rare and local species. Flight period: VII-VIII.

Main morphological characteristics: Forewing brown-gray. External transverse stripe of female intensively dusted (Fig. 2H). Internal transverse stripe and typical slanting spot after wing median intensively dusted. Basal transverse stripe like a dark band. Hindwing darkened.

Description of female's genital armature (Fig. 6, left): *Ductus bursae* elongated. *Bursa copulatrix* slightly thickened. *Signa* consisting of two bipartite, linked, thin teeth (smooth and spined).

In July of 2005, two additional specimens of *Carposina scirrhosella* Herrich-Schäffer, 1854 were also found at the Grgurevački Hunting Lodge locality in Fruška Gora National Park. Processing of the newly found specimens is ongoing. The locality is marked as CQ99, the altitude is 300 m.

It is expected that further research will show wider distribution of the given species in Serbia and Montenegro.

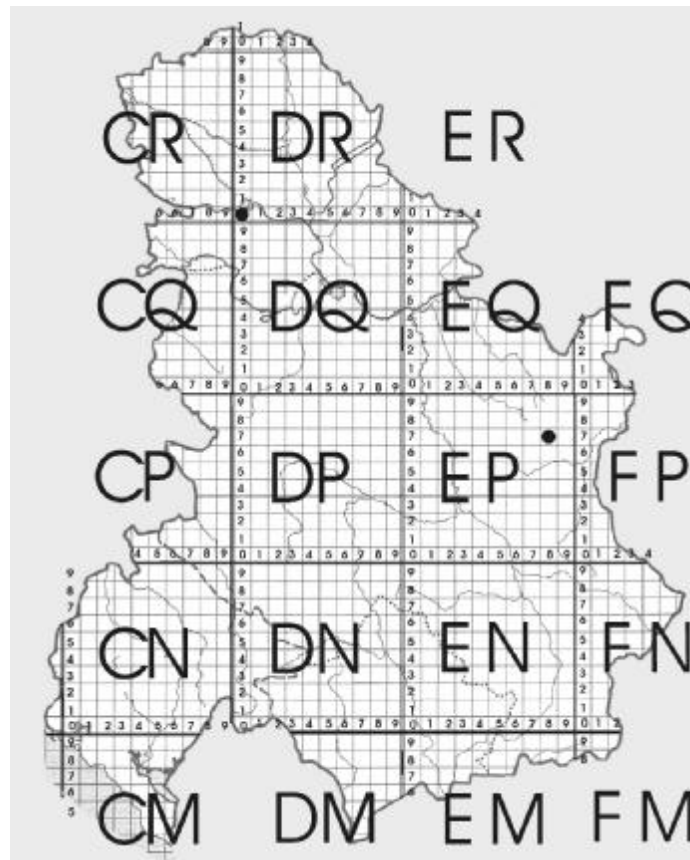


Fig. 1. Map of localities with UTM grids *Carposina scirrhosella* Herrich-Schäffer, 1854

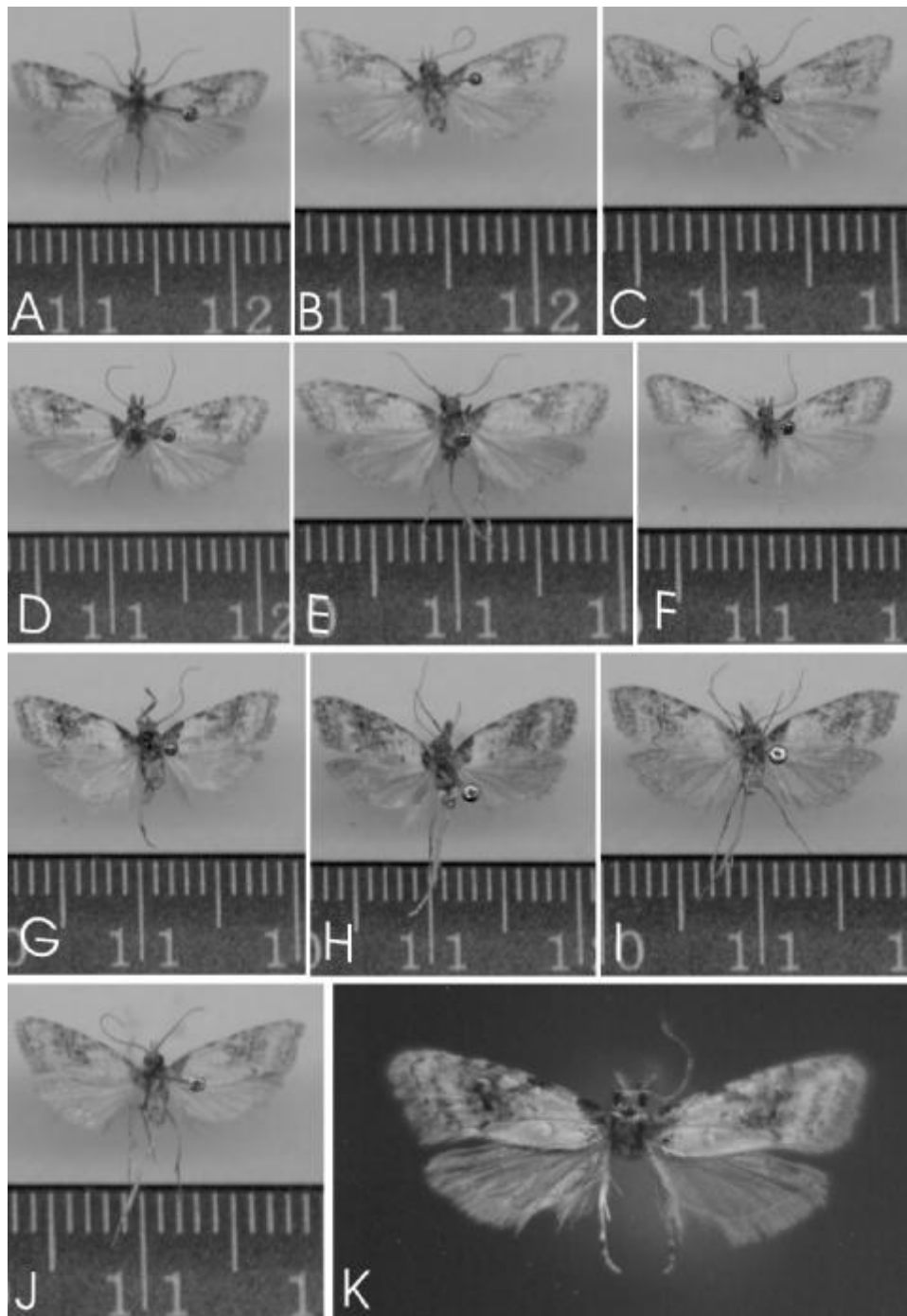


Fig. 2. *Carposina scirrhosella* imagoes.

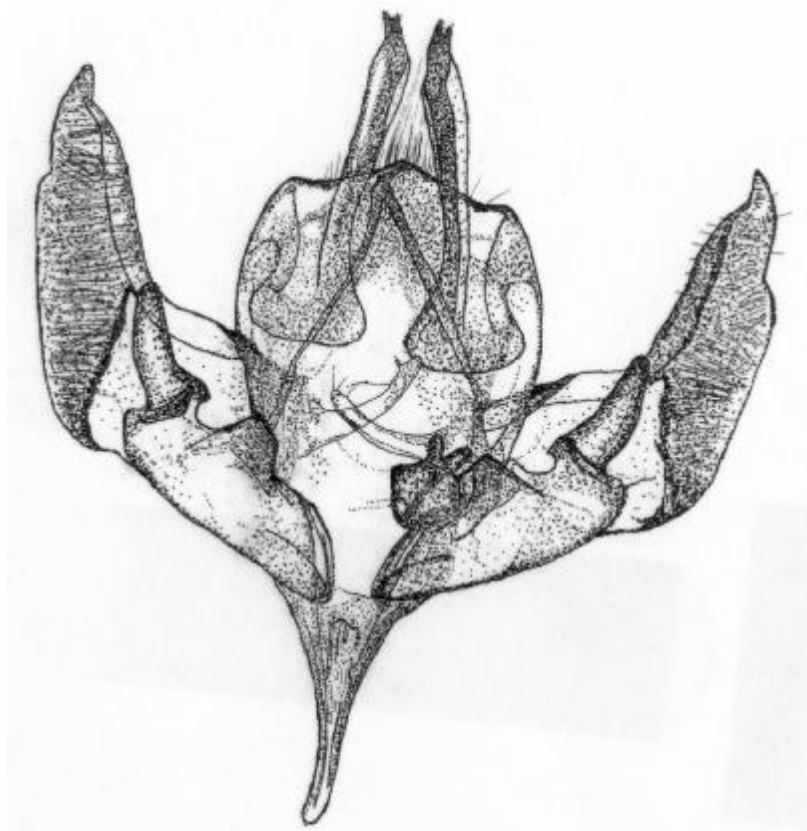


Fig. 3. *Carposina scirrhosella*: genital preparation – male.

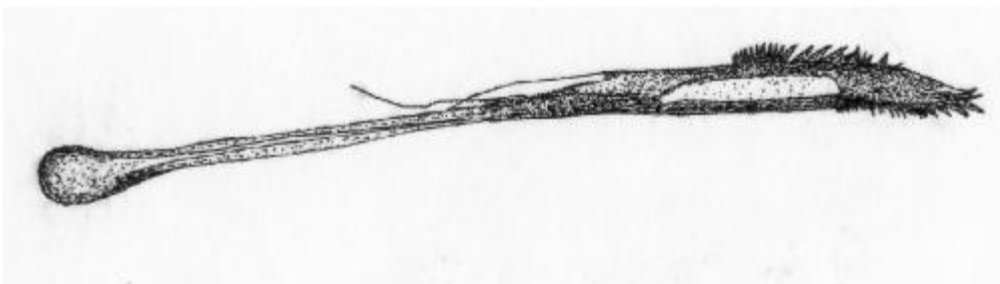


Fig. 4. *Carposina scirrhosella*: genital preparation – penis.

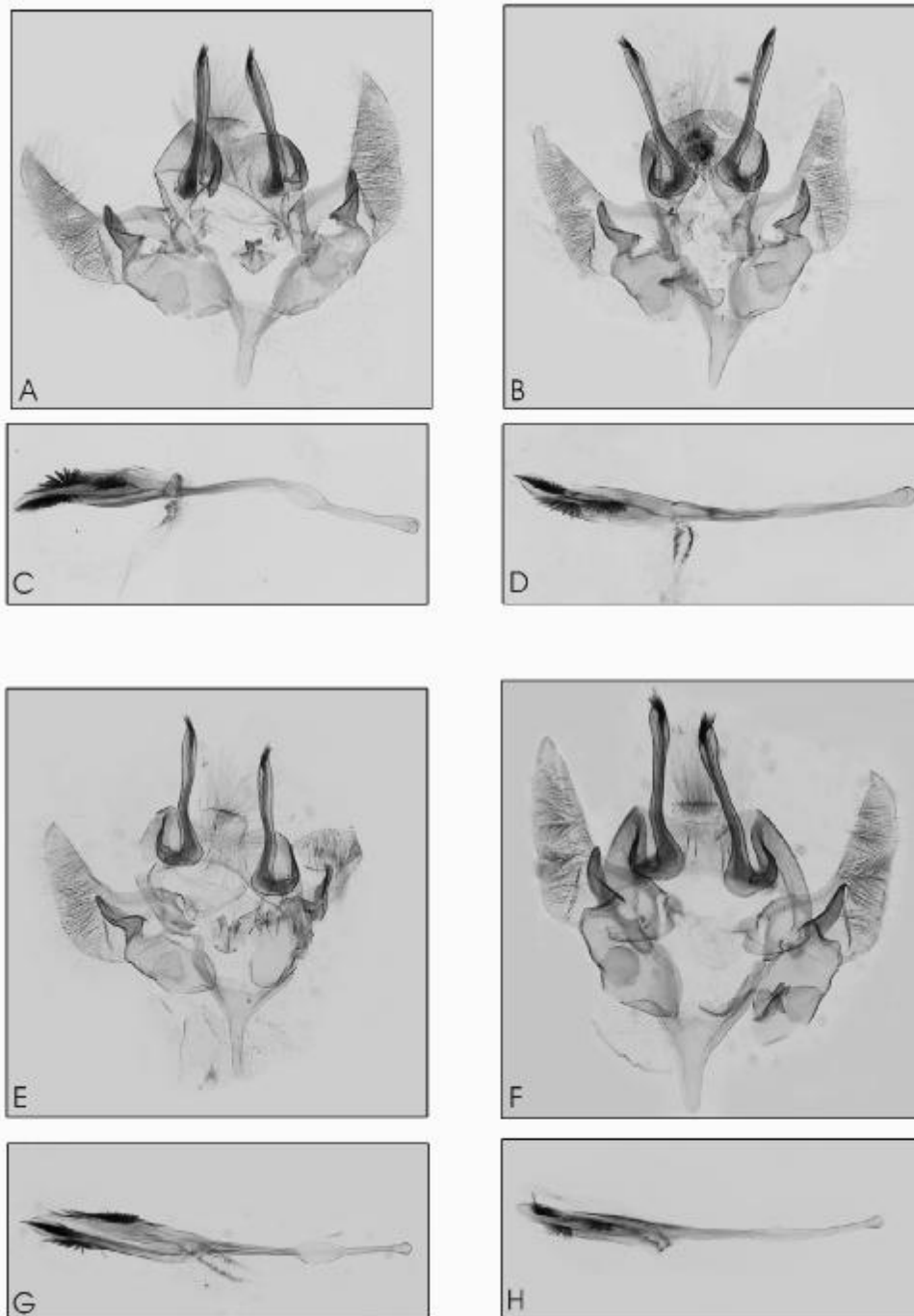


Fig. 5. *Carposina scirrhosella*: genital armature (comparison of males).



Fig. 6. *Carposina scirrhosella*: genital armature (comparison of females).





Fig. 7. *Carposina scirrhosella*: female (detail of genital armature showing complex structure of *signa*).

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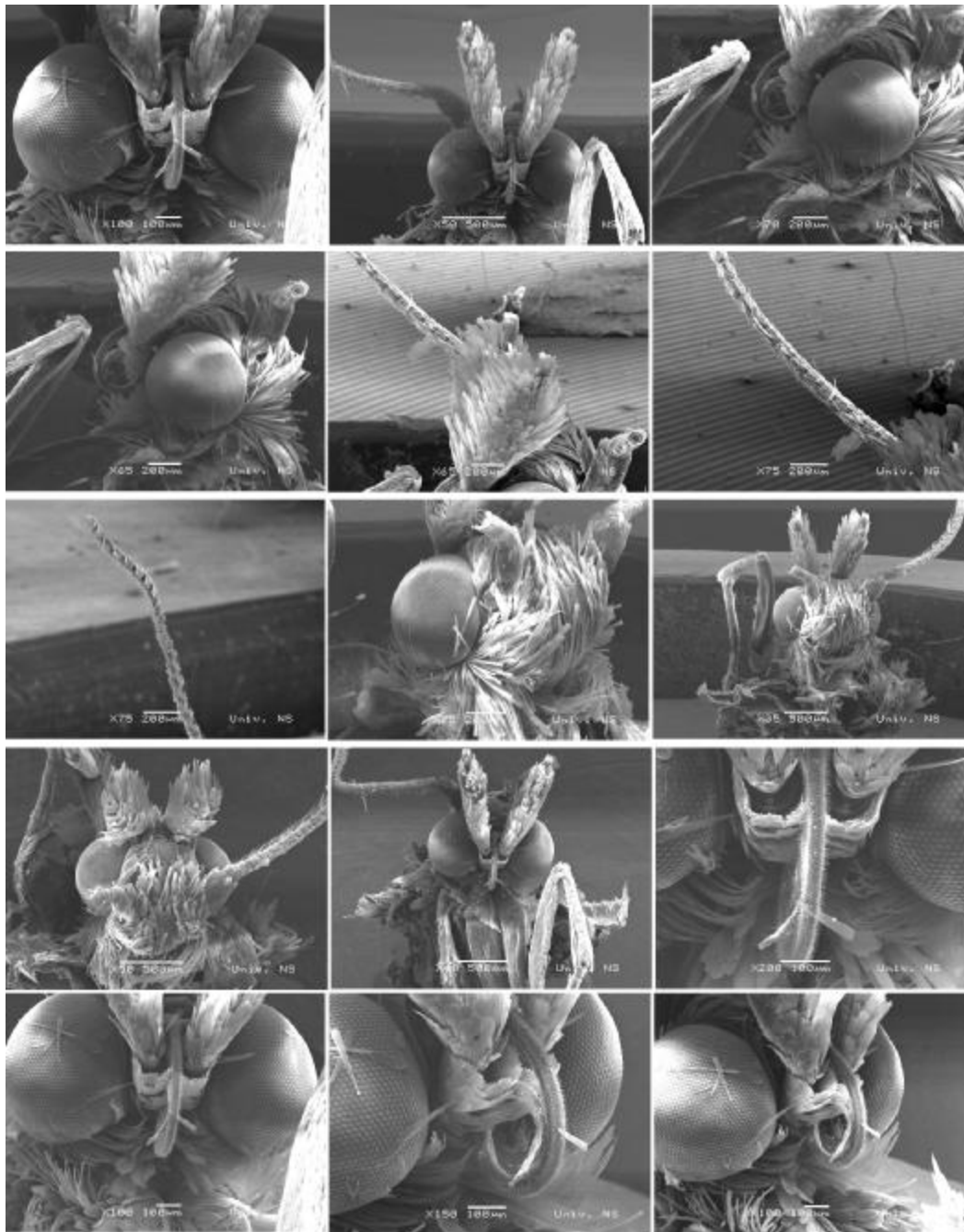


Fig. 8. *Carposina scirrhosella*: semimicroscopic photos of male.

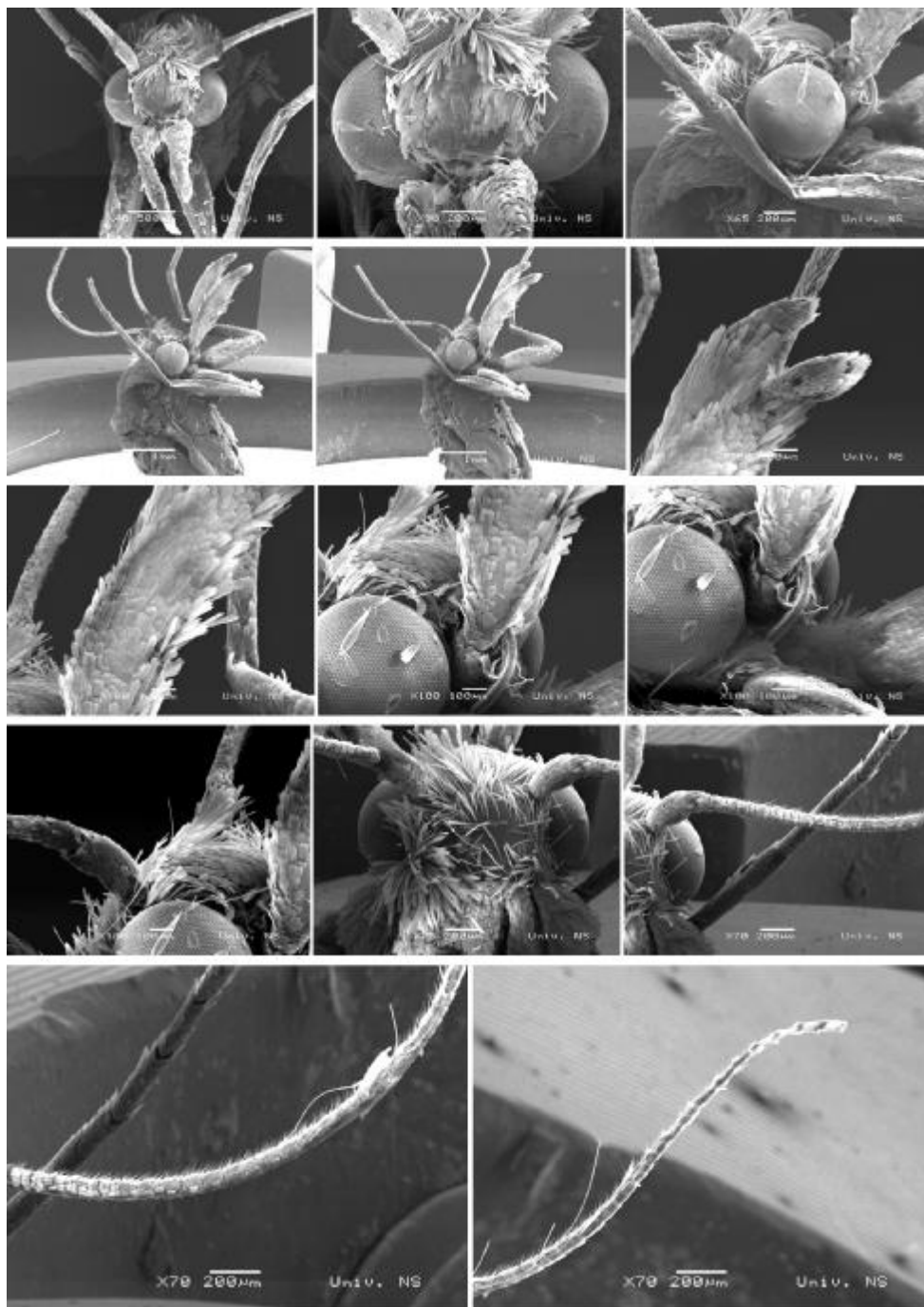


Fig. 9. *Carposina scirrhosella*: semimicroscopic photos of female.

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**ПРВИ НАЛАЗ ВРСТЕ *CARPOSINA SCIRRHOSSELLA*  
(HERRICH-SCHÄFFER, 1854) (LEPIDOPTERA,  
COPROMORPHOIDEA, CARPOSINIDAE) У СРБИЈИ**

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Врста *Carposina scirrhosella*, Herrich-Schäffer, 1854 први пут је забележена за фауну Carposinidae Србије и Црне Горе. Нађено је више примерака ове врсте у Националном парку Фрушка гора (Војводина) и у Брестовачкој бањи (источна Србија). *Carposina scirrhosella* представља у односу на податке KARSHOLT & RAZOVSKI (1996) први налаз ове врсте на простору претходне Југославије. У раду су дати опширни описи врста рода *Carposina*, прикази мушких и женских гениталних арматура, фотографије и периоди сакупљања.

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