Study on the Trichoptera fauna in the Romanian section of the River Crişul Alb catchment area

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Abstract

On the catchment area of the upper part of the river Crişul Alb 19 caddisfly species belonging to 7 families were collected by the author in 3 sites in the year 1994. List of material is presented. Short faunistical and taxonomical comments are also given. Rare Trichoptera species from the research area are presented.

Keywords: Trichoptera, Crişul Alb catchment area, rare species.

Introduction

The first trichopterological data of the river Criş catchment area were published around the turn of the century by Mocsáry (1900) and Kempny (1905). No further results have been published for almost fifty years. The next step was taken in the fifties by Murgoci (1953) and Botoşaneanu (1957, 1959, 1961, 1975) as well as Botoşaneanu and Novák (1965) and Botoşaneanu and Schneider (1978).

A check list of entire Romanian fauna was presented first time in the year 1993, then Constantin Ciubuc compiled together the entire Romanian trichopterological literature and presented a list of the caddisflies occuring in Romania. The Ciubuc-list contains 267 taxa at all, mentioning 17 entities from river Criş catchment area (Ciubuc, 1993). Ujvárosi (1995) published some new and rare species from this area.

Material and methods

Two customary collecting methods were applied in our research. Daytime sweeping resulted unsignificant material in all three collecting sites, but a few species were collected only by this way. Night collecting were usually very fruitful. We always used mercury vapour bulbs (250 Watt). These lamps were powered by a portable generating set (Honda EG 550 typ).

The collecting sites was located only along the tributaries of the river Crişul Alb. The collected sites are presented below:

1. Blăjeni, Crişul Alb river
2. Avram Iancu, Tăcăşele stream, tributary of Crişul Alb river
3. Aciuţa, Crişul Alb river

Results and discussions

List of material

The system and nomenclature is based on Botoşaneanu's and Malicky's paper (1978). All data with collecting sites, date and number of specimens by sex are given.

The material is deposited in the collection of Natural History Department of Janus Pannonius Museum, Pécs, Hungary, and in Lujza Ujvárosi's collection, Cluj, Romania.

HYDROPTILIDAE

Hydroptila forcipata Eaton, 1873 - Avram Iancu, Tăcăşele stream, July 11, 1994: 2m; Aciuţa, Crişul Alb, July 12, 1994: 3m, 1f; rC

Hydroptila lotensis Mosely, 1930 - Avram Iancu, Tăcăşele stream, July 11, 1994: 1m, 5f; Aciuţa, Crişul Alb river, July 12, 1994: 11m, 44f; rC

HYDROPSYCHIDAE

Hydropsyche bulbifera McLachlan, 1878 - Avram Iancu, Tăcăşele stream, July 8: 2m; July 10: 2m; July 11, 1994: 10m; C

Hydropsyche contubernalis McLachlan, 1865 - Avram Iancu, Tăcăşele stream, July 10: 1m; July 11: 6m; Aciuţa, Crişul Alb, July 12, 1994: 2m; C

Hydropsyche modesta Navás, 1925 - Avram Iancu, Tăcăşele stream, July 11: 4m, K

Hyropsyche pellucidula Curtis, 1824 - Avram Iancu, Tăcăşele stream, July 10: 1m; July 11: 2m; Aciuţa, Crişul Alb, 8m; C

Cheumatopsyche lepida Pictet, 1834 - Avram Iancu, Tăcăşele stream, July 10: 2m; July 11: 6m; Aciuţa, Crişul Alb, 25m, 25f, rC

POLYCENTROPODIDAE
Cyrnus trimaculatus Curtis, 1834 - Avram Iancu, Tăcăşele stream, July 11: 1f; rC

LIMNEPHILIDAE
Limnephilus extricatus McLachlan, 1865 - Avram Iancu, Tăcăşele stream, July 8: 1f; C
Limnephilus hirsutus Pictet, 1834 - Aciuţa, Crişul Alb, July 12: 1m, C

GOERIDAE
Goera pilosa Fabricius, 1775 - Avram Iancu, Tăcăşele stream, July 8: 1m; July 10: 1m, 7m; July 11: 10f; C
Silo graellsi E. Pictet, 1865 - Blăjeni, Crişul Alb, July 6 2m; C

LEPIDOSTOMATIDAE
Lepidostoma hirtum Fabricius, 1781 - Avram Iancu, Tăcăşele stream, July 8: 4f; July 10: 1f; July 11: 1f; rC

LEPTOCERIDAE
Ceraclea dissimilis Stephens, 1836 - Blăjeni, Crişul Alb, July 6: 1m; Avram Iancu, Tăcăşele stream, July 8: 1m; July 10: 4m; July 11: 2m, 3f; Aciuţa, Crişul Alb, July 12: 121m, 54f; C
Setodes punctatus Fabricius, 1793 - Avram Iancu, Tăcăşele stream, July 11; 3m; ?
Oecetis notata Rambur, 1842 - Aciuţa, Crişul Alb, July 12: 3m, 3f; ?
Oecetis testacea Curtis, 1834 - Avram Iancu, Tăcăşele stream, July 11; 35m, 6f; R

SERICOSTOMATIDAE
Oecismus monedula Hagen, 1859 - Avram Iancu, Tăcăşele stream, July 8, 1f; V

PSYCHOMYIDAE
Psychomyia pusilla Fabricius, 1781 - Avram Iancu, Tăcăşele stream, July 10: 1m, 1f; July 11: 24 m, 179f; Aciuţa, Crişul Alb, July 12: 37m, 212f; C

Some faunistical comments

Setodes punctatus Fabr. It is a rare species in the Romanian trichoptera fauna, only 8 collected sites was known till now, and it is a new species for the Western Carpathians. It is a common species in other European countries (Botoşaneanu and Malicky, 1978).

Oecetis notata Ramb. has a wide-spread in Europe, especially along the slow water courses, and rivers in the hilly, and plain region. This species is proved to be new for the Romanian fauna, and the sampling-site at Aciuţa along the Crişul Alb river is the only one for this species. More faunistical data about this species was published by Ujvárosi (1995). The absence of this species for the Romanian fauna could be explained by the existence of some less studied area in our country from trichopterological point.

Oecetis testacea Curt. This species was recorded for the first time in Romania by Kempny (1905) at Măcin, Tulcea district. Ciubuc (1993) expresses some doubt about the presence of this species in the Romanian fauna. The relative high number of specimens collected by us at Avram Iancu, along the Tăcăşele stream confirm the presence of this species in our country's fauna. This species appear in the red list of endangered species in some European countries, due to the high sensibility of this species for the abiotic conditions.

Conclusions and proposals

The systematical study of the collected material (a number of 19 species with 955 specimens of adult trichoptera) show the existence in the river Crişul Alb and tributaries a rich fauna of trichoptera.

The ecological diversity of the collected material is reflected with the presence in the research area beside the common, eurybionte species like Psychomyia pusilla Fabr., Hydrophsyche bulbifera McL., H. contubernalis McL., H. pellucigula Curt. a number of rare species: Oecetis testacea Curt., Setodes punctatus Fabr., Oecismus monedula Hagen with high sensibility for the abiothical conditions.

In the Tăcăşele stream, tributary of the Crişul Alb river develop a relative stabile community of trichoptera. The presence of Oecetis testacea Curt. (35m, 6f) known all over Europe, with few reduced populations (a single collected site in Hungary, at Magyarszombatfa, described by Nógrádi S. in 1985) express the necessity to propose this region a protected area, which could became a refuge for other threatened species too, from the polluted or perturbed surrounding area.

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