

THE TRICHOPTERA OF THE BAKONY MOUNTAINS AND ENVIRONS II. (HUNGARY)

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ABSTRACT: The Trichoptera of the Bakony Mountains and Environs II. (Hungary). 2236 males and 5214 females of 74 species were collected in 38 sites. The number of species increased just to 100. The composition of fauna of "Meleg-víz" is very unusual, it is due to the permanent water-temperature.

Introduction

Until recently two papers have been published on the Trichoptera fauna of the Bakony Mountains (ÚJHELYI 1979, NÓGRÁDI-UHERKOVICH 1985). 87 species were known from 52 localities, and the fauna seemed not particularly rich. It was established that the polluted and drying-out streams are unfavourable for the caddisflies.

We have almost put aside the examination of caddisfly fauna, when our colleague, Mr. L. ÁBRAHÁM called our attention to the upper branches of river Marcal. Our first experiences were exceptional, and then we decided to come to know this region as far as possible. Naturally all materials coming from the other parts of the Bakony Mts. were elaborated, too.

Collecting sites and methods

We are presenting caddisfly data from 38 localities. 23 of them have not been included in the previous papers. From the bulk of sites only one or few data are known (Fig. 1, 2).

Large material of two light-traps (Gógánfa and Tés) was elaborated.

Our most important collecting activity spread over the upper branches of river Marcal and its tributaries (Fig. 2).

The stream Meleg-víz ('Warm Water') is one of the upper tributaries of river Marcal: it is longer than the spring branch of Marcal. Its length is 25.5 km, the catchment area is 143.6 sq. km. Formerly it was a small stream fed by native springs. For almost 3 decades a very large quantity of warm karst water have been pumped up to the surface because of bauxite mines set up around village Nyírád. This water coming permanently to 80 cu. m. per minute is lead by stream Meleg-víz. The temperature of stream does not fall under 17 degrees from 10-12 km away from the sources in winter, too. Because of the permanent water vegetation of bed and close bank is green all round the year. The gradient of stream is 75 m along 25.5 km, namely 3 per mille in average. Therefore it runs very quickly, the bed is formed by limestone, calcareous tufa and pebble, along the slow branches, by silt.

The water is not polluted generally, but sometimes domestic outlet water or faeces is emptied into the riverbed, probably illegally.

The water of river Marcal is determined by "Meleg-víz": its water output is permanent along long branches, and the fluctuation of its temperature is moderate.

The other, right tributary, stream Kigyós-patak is also dammed up by karst water. It is ordinary, cold water. The length of stream is 24.4 km, the catchment area is 126.4 sq. km.

The spring branches of Marcal are unimportant, short (8-10 km), often dry creeks.

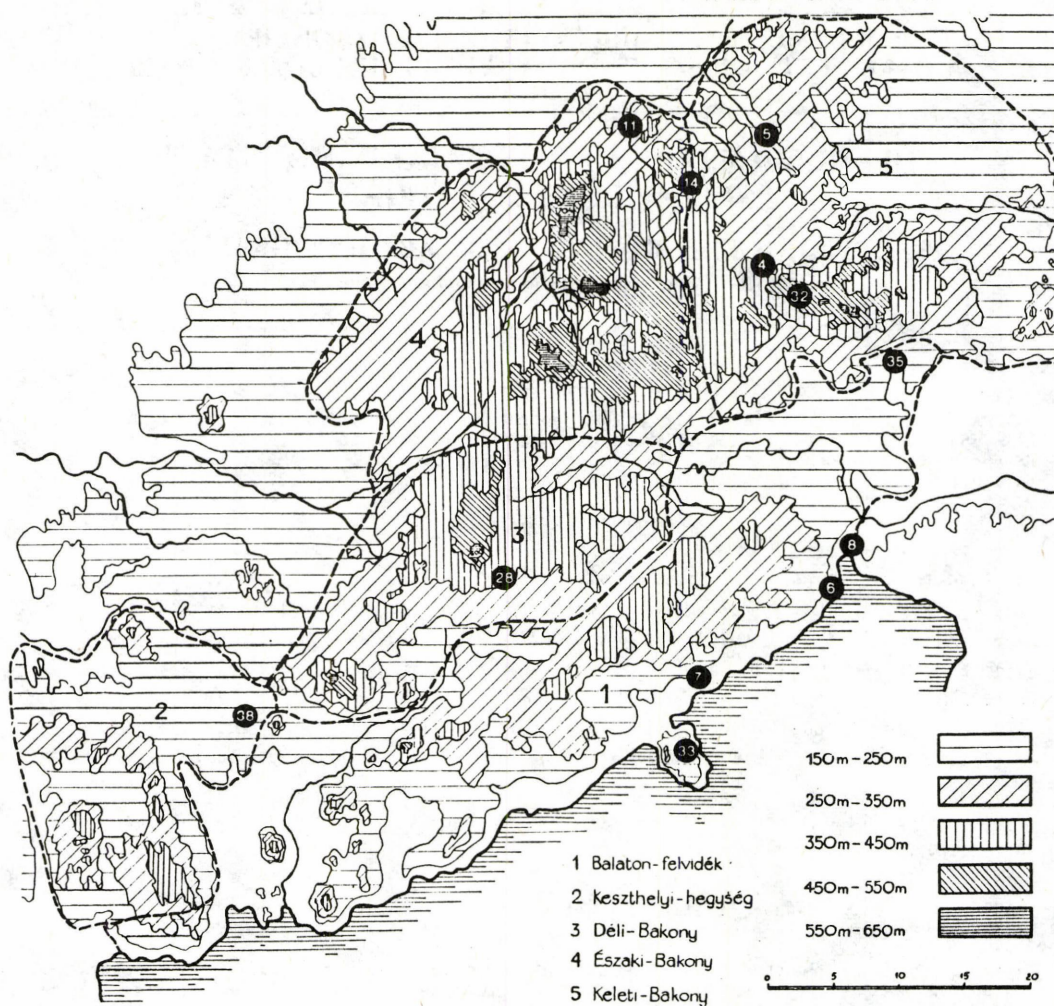


Fig. 1. Collecting sites in the Eastern and Southern part of the Bakony Mts.

- | | |
|----------------------|-------------------|
| 4 Bakonyháza YN23 | 14 Dúdar YN24 |
| 5 Bakonyoszlop YN24 | 28 Pula YN00 |
| 6 Balatonalmádi BT71 | 32 Tés BT73 |
| 7 Balatonfüred YN10 | 33 Tihany YM19 |
| 8 Balatonfűzfő BT71 | 35 Várpalota BT83 |
| 11 Csesznek YN14 | 38 Zalahaláp XN80 |

1. ábra. Gyűjtőhelyek a Bakony hegység keleti és déli részén.

In the past three years (1986-1988) we made very fruitful collections along the Meleg-víz and Marcal. Mr. L. ÁBRAHÁM also collected here.

At 3 sites (Csabrendek, Gyepükaján and Zalagyömörő) along the Meleg-víz 959 ♂♂ and 1975 ♀♀ of 37 species were collected by lamp and sweeping (see Table 1). Along the stream a light trap was operated from May till December, 1987. We could not manage to find time for the elaboration of its material because of the exceptionally large quantity counting at least 50 000 specimens (or more). It is hoped that this most interesting material will be written up within a few years.

Along the upper branches of river Marcal, between the Meleg-víz and stream Torna 536 ♂♂ and 1030 ♀♀ of 39 species were captured in 4 sites (Dabronc, Megyer, Nemeskeresztúr and Rigács). (See Table 2 also.)

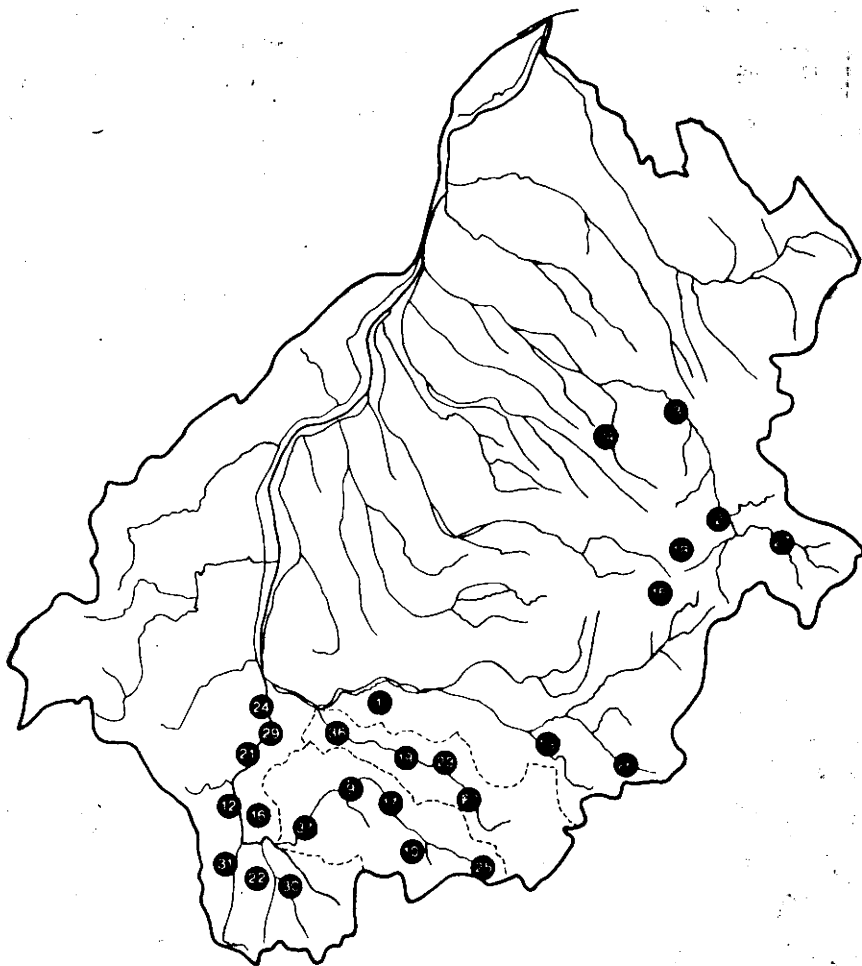


Fig. 2. Collecting sites in the water system of river Marcal.

- | | |
|--------------------------------------|------------------------|
| 1 Apácatorna XN71 | 21 Megyer XN61 |
| 2 Bakonybél YN03 | 22 Mihályfa XN60 |
| 3 Bakonykoppany YN03 | 23 Nemesahany XN81 |
| 9 Csabrendek XN71 | 24 Nemeskeresztúr XN61 |
| 10 Csabrendek-Nagytárkánypuszta XN70 | 25 Nyírad XN80 |
| 12 Dabronc XN61 | 26 Padragkút XN91 |
| 13 Devecser XN81 | 27 Pénzesgyőr YN13 |
| 15 Farkasgyepű XN93 | 29 Rigács XN61 |
| 16 Gógánfa XN61 | 30 Sümeg XN70 |
| 17 Gyepükaján XN71 | 31 Szalapa XN60 |
| 18 Iharkút (Bakonyjákó) YN03 | 34 Ugód XN94 |
| 19 Káptalanfa XN71 | 36 Veszprémgalsa XN71 |
| 20 Káptalanfa-Sárosfő XN81 | 37 Zalagyömörő XN70 |

2. ábra. Gyűjtőhelyek a Marcal folyó vízrendszerében.

We used 125 Watt mercury vapour lamps during our night capturings. The light trap of Gyepükaján (along Meleg-víz) was installed with a 250 Watt bulb. We swept by insect net on several points of water sides.

Results of our collection and elaboration were 2236 males and 5214 females (altogether 7450 specimens) of 74 caddisfly species from the territory of the Bakony Mountains.

Acknowledgements

Authors express their sincere thanks to Mr. L. ÁBRAHÁM for a most valuable material and for organizing of light trap collections, to Dr. S. TÓTH for the financial help of their examinations and for the materials collected by himself.

List of material

All species are listed with their localities, dates and numbers of specimens. The collector's name is abbreviated in general as follows:

(Á)	Levente ÁBRAHÁM	(T)	Sándor TÓTH
(N)	Sára NÓGRÁDI	(U)	Ákos UHERKOVICH
(R)	Pál REMETÉY	(lt)	light trap

The material is deposited in the collection of the Janus Pannonius Museum, Pécs and some specimens (REMETÉY's material mostly) in the HHNM, Budapest.

Rhyacophilidae

Rhyacophila fasciata HAGEN - Bakonyháza Nov. 9, 1985 1 ♂ 1 ♀, Nov. 10, 1985 5 ♂ 12 ♀ (lt); Káptalanfa Apr. 20, 1988 2 ♂ 1 ♀ (U); Nemeshány Apr. 20, 1988 3 ♂ 6 ♀ (U); Pénzesgyőr Aug. 7, 1986 1 ♀ (Malaise trap); Pula Oct. 6, 1987 1 ♂ (T); Veszprémgalsa Apr. 20, 1988 3 ♂ (U); Zalahaláp June 13, 1987 12 ♂ 5 ♀ (U, Á), July 24, 1987 3 ♂ (Á), June 8, 1988 1 ♀ (Á).

Hydroptilidae

Orthotrichia angustella McLACHLAN - Csabrendek Aug. 24, 1987 1 ♂ 9 ♀ (U, Á); Megyer June 6, 1988 1 ♀, Aug. 20, 1988 19 ♂ 171 ♀ (U); Nemeskeresztúr June 14, 1987 22 ♂ 12 ♀, Aug. 22, 1987 7 ♀, June 1, 1988 8 ♂ 2 ♀, June 2, 1988 2 ♂, Aug. 20, 1988 7 ♂ 3 ♀ (U).

Orthotrichia costalis CURTIS - Csabrendek Aug. 24, 1987 5 ♀ (U, Á); Gyepükaján June 14, 1987 1 ♀ (U); Nemeskeresztúr Aug. 22, 1987 1 ♀ (U).

Orthotrichia tragetti MOSELY - Nemeskeresztúr June 14, 1987 1 ♀ (U).

Ithytrichia lamellaris EATON - Nemeskeresztúr June 14, 1987 1 ♂ (U).

Oxyethira falcata MORTON - Csabrendek June 12, 1987 2 ♂ 1 ♀ (U); Aug. 24, 1987 1 ♀ (U, Á), May 4, 1988 7 ♀ (Á), June 1, 1988 57 ♂ 101 ♀ (U), June 4, 1988 1 ♂ 13 ♀ (Á); Gyepükaján June 12, 1987 72 ♂ 690 ♀ (U, Á), June 14, 1987 1 ♂ (U); Megyer Aug. 20, 1988 1 ♀ (U); Zalahaláp June 13, 1987 2 ♀ (U, Á).

Hydroptila lotensis McLACHLAN - Nemeskeresztúr Aug. 22, 1987 1 ♂ (U).

Hydroptila simulans MOSELY - Csabrendek May 7, 1987 2 ♂ 1 ♀ (U), June 12, 1987 2 ♂ (U), Aug. 24, 1987 3 ♂ 19 ♀ (U, Á), May 4, 1988 19 ♂ 42 ♀ (Á), June 1, 1988 10 ♂ 22 ♀ (U), June 4, 1988 2 ♂ 13 ♀ (Á), Aug. 11, 1988 1 ♀ (Á); Gyepükaján May 7, 1987 1 ♂ (U), June 12, 1987 56 ♂ 101 ♀ (U, Á), June 14, 1987 9 ♂ 6 ♀ (U), Aug. 20, 1988 2 ♀ (U); Nemeskeresztúr Aug. 22, 1987 1 ♂ (U), Aug. 20, 1988 1 ♂ (U); Nyirád July 24, 1987 1 ♀ (Á); Zalagyömörő June 22, 1987 1 ♀ (N, U), June 1, 1988 2 ♂ 4 ♀, Aug. 19, 1988 5 ♂ 1 ♀ (U).

Hydroptila sparsa CURTIS - Csabrendek May 4, 1988 1 ♂ (Á), June 1, 1988 4 ♀ (U); Gyepükaján June 12, 1987 1 ♂ (U, Á); Megyer Aug. 20, 1988 28 ♂ 475 ♀ (U);

Nemeskeresztúr June 14, 1987 5 ♀♀, Aug. 22, 1987 20 ♂♂ 40 ♀♀, Aug. 20, 1988 5 ♂♂ 1 ♀ (U); Zalagyömrő Apr. 20, 1988 1 ♂ 2 ♀♀, June 1, 1988 3 ♀♀ (U).

Hydroptila vectis CURTIS - Zalahaláp June 13, 1987 2 ♀♀ (U, Á).

Agraylea sexmaculata CURTIS - Csabrendek Aug. 24, 1987 1 ♂ (U, Á); Gyepükaján June 12, 1987 1 ♂ (U, Á); Zalahaláp June 13, 1987 2 ♂♂ (U, Á).

Hydropsychidae

Hydropsyche angustipennis CURTIS - Apácatorna June 12, 1988 1 ♂ (U); Gógánfa July 19, 1986 1 ♂ (lt); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♂ (Á); Megyer Aug. 20, 1988 4 ♂♂ (U); Mihályfa June 13, 1987 2 ♂♂ (U); Nemeskeresztúr June 14, 1987 2 ♂♂, Aug. 22, 1987 1 ♂ (U); Rigács Apr. 20, 1988 7 ♂♂ (U); Sümeg June 2, 1988 1 ♂ (U).

Hydropsyche bulbifera McLACHLAN - Csabrendek Aug. 24, 1987 5 ♂♂ (U, Á), May 4, 1988 1 ♂ (Á), June 1, 1988 1 ♂ (U), June 4, 1988 24 ♂♂ (Á), Aug. 11, 1988 11 ♂♂ (Á); Csabrendek-Nagyvárkánypuszta June 13, 1987 1 ♂ (U); Gyepükaján June 26, 1987 1 ♂ (N, U); Rigács Apr. 20, 1988 8 ♂♂ (U); Zalagyömrő Apr. 20, 1988 1 ♂ (U).

Hydropsyche bulgaromanorum MALICKY - Balatonalmádi June 21, 1931 2 ♂♂ (R); Balatonfüred June 22, 1927 2 ♂♂, June 21, 1928 1 ♂ (R); Gógánfa June 17, 1986 1 ♂ (lt); Tés July 23, 1987 1 ♂, Sept. 23, 1987 1 ♂ (lt); Zalahaláp July 24, 1987 1 ♂ (Á).

Hydropsyche contubernalis McLACHLAN - Bakonyháza July 30, 1988 35 ♂♂ (Á); Balatonfüred June 22, 1927 1 ♂ (R); Csabrendek Aug. 24, 1987 1 ♂ (U, Á), Aug. 11, 1988 2 ♂♂ (Á); Dudar July 30, 1987 1 ♂ (Á); Gógánfa June 22-Aug. 12, 1986 9 ♂♂ (lt); Gyepükaján June 12, 1987 2 ♂♂ (U, Á); Megyer Aug. 20, 1988 1 ♂ (U); Nemeskeresztúr June 14, 1987 5 ♂♂, Aug. 22, 1987 3 ♂♂ (U); Nyírad July 24, 1987 1 ♂ (Á); Tés June 28-Sept. 16, 1987 79 ♂♂ (lt); Várpalota Aug. 1, 1987 2 ♂♂ (Á); Zalahaláp June 13, 1987 1 ♂ (U, Á).

Hydropsyche instabilis CURTIS - Csabrendek Aug. 11, 1988 1 ♂ (Á); Gyepükaján June 12, 1987 1 ♂ (U, Á); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♂ (Á); Nyírad Aug. 12, 1988 2 ♂♂ (Á); Zalahaláp June 13, 1987 87 ♂♂ (U, Á), July 24, 1987 23 ♂♂ (Á), June 8, 1988 1 ♂ (Á).

Hydropsyche modesta NAVÁS - Csabrendek Aug. 24, 1987 9 ♂♂ (U, Á), June 4, 1988 4 ♂♂ (Á), Aug. 11, 1988 4 ♂♂ (Á); Gógánfa July 5-Aug. 18, 1986 7 ♂♂ (lt); Káptalanfa-Sárosfő Aug. 13, 1988 14 ♂♂ (Á); Megyer Aug. 20, 1988 1 ♂ (U); Nemeskeresztúr June 14, 1987 1 ♂, Aug. 22, 1987 1 ♂ (U); Nyírad Aug. 12, 1987 1 ♂, Sept. 13, 1988 2 ♂♂ (Á); Tés June 16, 1987 1 ♂ (lt).

Hydropsyche ornatula McLACHLAN - Nemeskeresztúr June 14, 1987 1 ♂ (U); Tés July 8, 1987 1 ♂, July 17, 1987 1 ♂ (lt).

Hydropsyche pellucidula CURTIS - Csabrendek May 4, 1988 1 ♂ (Á), June 4, 1988 1 ♂ (Á); Gógánfa Aug. 8, 1986 1 ♂, Aug. 12, 1986 1 ♂ (lt); Nemeskeresztúr June 14, 1987 2 ♂♂ (U).

Hydropsyche saxonica McLACHLAN - Bakonyháza July 31, 1987 1 ♂, July 30, 1988 10 ♂♂ (Á); Balatonfüred June 22, 1927 1 ♂ (R); Káptalanfa June 14, 1987 2 ♂♂, Apr. 20, 1988 1 ♂ (U), Nemesvágy Apr. 20, 1988 2 ♂♂ (U); Tés Sept. 6, 1987 1 ♂ (lt); Tihany June 22, 1927 3 ♂♂ (R); Zalahaláp June 13, 1987 117 ♂♂ (U, Á), July 24, 1987 5 ♂♂, June 8, 1988 27 ♂♂ (Á).

Polycentropodidae

Neureclipsis bimaculata LINNAEUS - Megyer Aug. 20, 1988 1 ♀ (U); Nemeskeresztúr June 14, 1987 2 ♀♀ (U); Tés July 17, 1987 1 ♂ 8 ♀♀, July 18, 1987 12 ♀♀, July 19, 1987 1 ♀ (lt); Zalahaláp June 13, 1987 2 ♀♀ (U, Á).

Electrocnemia conspersa CURTIS - Dudar July 29, 1987 1 ♂ (Á).

Polycentropus irroratus CURTIS - Zalagyömrő Apr. 20, 1988 1 ♂ 1 ♀, June 1, 1988 1 ♂ (U).

Holocentropus dubius RAMBUR - Nemeskeresztúr June 14, 1987 1 ♀ (U).

Holocentropus picicornis STEPHENS - Balatonalmádi June 21, 1931 1 ♀ (R); Csabrendek Aug. 24, 1987 2 ♀♀ (U, Á); Káptalanfa-Sárosfő Aug. 13, 1988 3 ♀♀ (Á); Megyer Aug. 20, 1988 1 ♀ (U); Nemeskeresztúr June 14, 1987 4 ♂♂ 10 ♀♀ (U); Zalahaláp June 13, 1987 1 ♀ (U, Á).

Cyrnus crenaticornis KOLENATI - Balatonalmádi June 21, 1931 1 ♂ 3 ♀♀ (R); Zalahaláp June 13, 1987 2 ♂♂ (U, Á).

Psychomyiidae

Psychomyia pusilla FABRICIUS - Csabrendek May 2, 1987 2 ♀♀ (Á), June 12, 1987 8 ♂♂ 1 ♀ (U), Aug. 24, 1987 60 ♂♂ 143 ♀♀ (U, Á), Oct. 25, 1987 7 ♂♂ 4 ♀♀ (U), Apr. 20, 1988 13 ♂♂ 5 ♀♀ (U), May 4, 1988 137 ♂♂ 166 ♀♀ (Á), June 1, 1988 2 ♂♂ 2 ♀♀ (U), June 4, 1988 5 ♂♂ 1 ♀ (Á), Aug. 11, 1988 28 ♂♂ 32 ♀♀ (Á), Aug. 20, 1988 1 ♂ (U), Sept. 9, 1988 3 ♂♂ 1 ♀ (Á); Csabrendek-Nagyvárkonypuszta June 13, 1987 4 ♂♂ (U); Gyepükaján May 7, 1987 1 ♀ (U), June 12, 1987 122 ♂♂ 79 ♀♀ (U, Á), June 26, 1987 30 ♂♂ 7 ♀♀ (N, U), Apr. 20, 1988 1 ♂ 1 ♀ (U); Nemeskeresztúr June 14, 1987 2 ♂♂, Aug. 22, 1987 4 ♀♀ (U); Nyírád July 24, 1987 1 ♀ (Á); Veszprém-galsa June 1, 1988 1 ♀ (U); Zalagyömrő Apr. 20, 1988 10 ♂♂ 5 ♀♀, Aug. 19, 1988 1 ♂ (U).

Lype reducta HAGEN - Rigács Apr. 20, 1988 1 ♀ (U); Zalagyömrő Apr. 20, 1988 1 ♂, June 1, 1988 3 ♂♂ (U); Zalahaláp June 13, 1987 1 ♂ (U, Á).

Ecnomidae

Ecnomus tenellus RAMBUR - Balatonfüred June 21, 1928 1 ♂ (R); Csabrendek May 7, 1987 2 ♂♂ (U), Aug. 24, 1987 63 ♂♂ 129 ♀♀ (U, Á), Apr. 20, 1988 1 ♂ (U), May 4, 1988 45 ♂♂ 9 ♀♀ (Á), June 1, 1988 3 ♀♀ (U), June 4, 1988 1 ♂ 5 ♀♀ (Á), Aug. 11, 1988 8 ♂♂ 9 ♀♀ (Á); Gyepükaján June 12, 1987 5 ♂♂ 8 ♀♀ (U, Á); Káptalanfa-Sárosfő Aug. 13, 1988 8 ♀♀ (Á); Megyer Aug. 20, 1988 2 ♂♂ 3 ♀♀ (U); Nemeskeresztúr June 14, 1987 4 ♀♀, Aug. 22, 1987 5 ♀♀ (U); Zalahaláp June 13, 1987 17 ♂♂ (U, Á).

Phryganeidae

Trichostegia minor CURTIS - Csabrendek Aug. 11, 1988 1 ♀ (Á); Gógánfa July 6, 1986 1 ♂ (lt); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♀ (Á).

Agrypnia varia FABRICIUS - Bakonyháza July 30, 1988 3 ♂♂ 2 ♀♀ (Á); Csabrendek Aug. 11, 1988 6 ♂♂ 3 ♀♀ (Á); Káptalanfa-Sárosfő Aug. 13, 1988 20 ♂♂ 2 ♀♀ (Á); Megyer Aug. 20, 1988 3 ♀♀ (U); Nyírád Aug. 12, 1988 7 ♂♂ (Á).

Phryganea grandis LINNAEUS - Bakonyháza July 30, 1988 2 ♂♂ (Á); Dudar July 30, 1987 1 ♂ (Á).

Oligostomis reticulata LINNAEUS - Ugod Apr. 22, 1987 2 ♂♂ (T).

Limnephilidae

Ironoquia dubia STEPHENS - Tés Sept. 22, 1987 2 ♀♀ (lt).

Limnephilus affinis CURTIS - Bakonyháza July 30, 1988 1 ♂ (Á); Csabrendek June 4, 1988 1 ♀ (Á); Gógánfa Sept. 15, 1986 1 ♂, Oct. 7, 1986 1 ♂ (lt); Nyírád May 5, 1988 1 ♂ 2 ♀♀ (Á); Tés June 1-Oct. 8, 1987 4 ♂♂ 4 ♀♀ (lt); Várpálota May 21, 1987 1 ♂ (Nyírád); Zalahaláp June 13, 1987 2 ♂♂ 3 ♀♀ (U, Á).

Limnephilus auricula CURTIS - Bakonyháza July 30, 1988 2 ♂♂ 2 ♀♀ (Á); Balatonfűzfő May 25, 1987 1 ♂ (T); Csabrendek May 4, 1988 12 ♂♂ 8 ♀♀ (U); Nemeskeresztúr June 14, 1987 1 ♂ (U); Nyírád May 5, 1988 18 ♂♂ 46 ♀♀ (Á); Tés June 19-Oct. 26, 1987 6 ♂♂ 2 ♀♀ (lt); Zalahaláp June 13, 1987 5 ♂♂ 3 ♀♀ (U, Á).

Limnephilus binotatus CURTIS - Tés June 3, 1987 1 ♀ (lt).

Limnephilus bipunctatus CURTIS - Nyírád May 5, 1988 2 ♀♀ (Á); Szalapa June 13, 1987 1 ♀ (U); Tés Oct. 17, 1987 1 ♀ (lt).

Limnephilus decipiens KOLENATI - Bakonyháza July 30, 1988 2 ♂♂ 4 ♀♀ (Á); Gógánfa June 14, 1986 1 ♂ (lt).

Limnephilus extricatus McLACHLAN - Tés Aug. 17, 1987 1 ♀ (lt).

Limnephilus flavicornis FABRICIUS - Bakonyháza July 30, 1988 6 ♂♂ 3 ♀♀ (Á), Balatonfűzfő June 21, 1928 3 ♂♂ 2 ♀♀ (R); Csabrendek Aug. 24, 1987 3 ♂♂ 1 ♀ (U, Á), June 4, 1988 10 ♂♂ 18 ♀♀ (Á), Aug. 11, 1988 1 ♂, Sept. 9, 1988 1 ♂ (Á); Gógánfa Oct. 6, 1986 1 ♂ (lt); Nemeskeresztúr June 14, 1987 2 ♂♂ 1 ♀ (U); Nyírád July 24, 1987 2 ♂♂ 1 ♀, Aug. 12, 1988 1 ♂, Sept. 18, 1988 1 ♂ 1 ♀ (Á); Sümeg June 2, 1988 1 ♂ (U); Szalapa June 13, 1987 1 ♂ (U); Tés Sept. 6, 1987 1 ♂, Oct. 11, 1987 1 ♂ (lt); Zalahaláp June 13, 1987 1 ♂ (U, Á).

Limnephilus griseus LINNAEUS - Bakonyháza July 30, 1988 3 ♂♂ 2 ♀♀ (Á); Csabrendek May 4, 1988 1 ♂ 1 ♀ (Á); Gógánfa Oct. 22, 1986 1 ♂ (lt); Nyírád May 5, 1988 2 ♂♂ 2 ♀♀, Sept. 18, 1988 1 ♂ (Á); Tés May 25-Oct. 17, 1987 14 ♂♂ 10 ♀♀ (lt); Zalahaláp June 13, 1987 1 ♂ (U, Á).

Limnephilus hirsutus PICTET - Bakonyháza July 30, 1988 3 ♂♂ (Á); Csabrendek Aug. 11, 1988 1 ♀ (Á); Megyer Aug. 20, 1988 1 ♀ (U); Tihany June 22, 1927 1 ♂ (R).

Limnephilus ignavus McLACHLAN - Bakonyháza July 30, 1988 3 ♂♂ 3 ♀♀ (Á); Tés June 24-Oct. 26, 1987 6 ♂♂ 2 ♀♀ (lt).

Limnephilus lunatus CURTIS - Bakonyháza July 30, 1988 22 ♂♂ 7 ♀♀ (Á); Csabrendek May 4, 1988 3 ♂♂, June 4, 1988 1 ♂ 1 ♀ (Á); Dabronc Apr. 20, 1988 1 ♂ (U); Devecser Oct. 25, 1987 4 ♀♀ (U); Nemeskeresztúr June 14, 1987 1 ♂ (U); Sümeg June 6, 1988 2 ♂♂ (U); Tés May 4-Oct. 17, 1987 22 ♂♂ 25 ♀♀ (lt); Zalahaláp June 8, 1988 1 ♀ (Á).

Limnephilus rhombicus LINNAEUS - Bakonyháza July 30, 1988 3 ♂♂ (Á); Csabrendek Aug. 24, 1987 1 ♂ (U, Á); Csesznek-Gézaháza May 24, 1957 1 ♀ (Sólymosné), Mihályfa June 2, 1988 1 ♂ (U); Szalapa June 13, 1987 2 ♂♂ 1 ♀ (U); Tés June 15-Aug. 15, 1987 4 ♂♂ 3 ♀♀ (lt); Ugod June 24, 1986 1 ♀ (T); Várpalota Aug. 1, 1987 2 ♂♂ (Á).

Limnephilus sparsus CURTIS - Bakonyháza July 30, 1988 1 ♀ (Á); Nyírad Sept. 18, 1988 1 ♀ (Á); Tés June 24-Sept. 23, 1987 24 ♂♂ 14 ♀♀ (lt).

Limnephilus vittatus FABRICIUS - Csabrendek June 4, 1988 1 ♂ (Á); Gógánfa Oct. 1-29, 1986 6 ♂♂ (lt); Nemeskeresztúr June 14, 1987 1 ♀ (lt); Nyírad May 5, 1988 1 ♂ 1 ♀ (Á); Tés June 14, 1987 1 ♂, Aug. 24, 1987 1 ♂, Oct. 16, 1987 2 ♀♀, Oct. 17, 1987 1 ♂ 1 ♀ (lt); Zalahaláp June 13, 1987 1 ♂ 1 ♀ (U, Á), June 8, 1988 1 ♀ (Á).

Colpotaulius incisus CURTIS - Csabrendek Aug. 24, 1987 1 ♀ (U, Á); June 4, 1988 1 ♀ (Á); Dudar July 29, 1987 1 ♀ (Á); Megyer Aug. 20, 1988 2 ♂♂ (U); Nemeskeresztúr June 14, 1987 37 ♂♂ 39 ♀♀ (U); Tés July 15, 1987 1 ♂ (lt); Zalahaláp June 13, 1987 3 ♂♂ 2 ♀♀ (U, Á), July 24, 1987 1 ♂ (Á).

Grammotaulius nigropunctatus RETZIUS - Bakonyháza July 30, 1988 3 ♂♂ (Á); Csabrendek May 4, 1988 4 ♂♂ 3 ♀♀ (Á); Gógánfa Oct. 9, 1986 1 ♂ (lt); Gyepükaján June 12, 1987 1 ♂ (U, Á); Nemeskeresztúr June 14, 1987 3 ♂♂ 2 ♀♀ (U); Nyírad May 5, 1988 1 ♂ 2 ♀♀ (Á); Tés May 26-Oct. 6, 1987 3 ♂♂ 5 ♀♀ (lt); Zalahaláp June 13, 1987 4 ♂♂ 4 ♀♀ (U, Á).

Glyptotaulius pellucidus RETZIUS - Csabrendek May 4, 1988 1 ♀ (Á); Zalahaláp June 12, 1987 2 ♂♂ 2 ♀♀ (U, Á).

Anabolia furcata BRAUER - Nyírad Oct. 6, 1987 5 ♂♂ (T).

Potamophylax nigricornis PICTET - Bakonyháza July 30, 1988 1 ♂ (Á).

Halesus tessellatus RAMBUR - Bakonyháza Nov. 8, 1985 1 ♀, Nov. 10, 1985 1 ♂ 1 ♀ (lt).

Stenophylax permistus McLACHLAN - Bakonyháza Nov. 9, 1985 1 ♂ (lt); Bakonyoszló Ördög-árok May 29, 1988 1 ♂ 1 ♀ (T); Csabrendek May 4, 1988 1 ♂ 3 ♀♀, June 4, 1988 1 ♀ (Á); Dudar July 29, 1987 1 ♂ (Á); Farkasgyepű June 1988 2 ♂♂ 4 ♀♀ (lt); Gógánfa Oct. 1, 1986 1 ♂, Oct. 2, 1986 1 ♀ (lt); Gyepükaján June 12, 1987 5 ♀♀ (U, Á); Iharkút Pénzlyuk May 28, 1988 1 ♂ 5 ♀♀ (T); Nyírad May 5, 1988 1 ♂ 1 ♀ (Á); Sümeg Apr. 20, 1988 2 ♂♂ (U); Tés May 26-Sept. 22, 1987 19 ♂♂ 19 ♀♀ (lt); Zalahaláp June 13, 1987 2 ♂♂ 1 ♀ (U, Á).

Stenophylax vibex CURTIS - Iharkút Pénzlyuk May 28, 1988 3 ♂♂ 4 ♀♀ (T); Padragkút May 30, 1988 1 ♂ 1 ♀ (T).

Micropterna sequalis McLACHLAN - Dudar July 29, 1987 1 ♂ (Á).

Micropterna testacea GMELIN - Tés, Oct. 6, 1987 1 ♂ (lt).

Chaetopteryx fusca BRAUER - Bakonyháza Nov. 8, 1985 1 ♂, Dec. 8, 1985 2 ♂♂ (lt); Devecser Oct. 25, 1987 11 ♂♂ 4 ♀♀ (U); Káptalanfa Oct. 25, 1987 20 ♂♂ 21 ♀♀ (U); Tés Oct. 17, 1987 2 ♂♂, Oct. 26, 1987 1 ♂ (lt).

Chaetopteryx major McLACHLAN - Bakonyháza Dec. 8, 1985 1 ♂ (lt); Tés Sept. 25, 1987 1 ♂ (lt).

Goeridae

Goera pilosa FABRICIUS - Csabrendek June 4, 1988 1 ♀, Aug. 1, 1988 1 ♂ 2 ♀♀ (Á); Káptalanfa June 14, 1987 1 ♂ (U); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♀ (Á); Megyer Aug. 20, 1988 1 ♀ (U); Nemesahany Apr. 20, 1988 1 ♀ (U); Nemeskeresztúr June 14, 1987 1 ♀, Apr. 20, 1988 1 ♂ (U); Szalapa June 13, 1987 1 ♂ (U); Veszprémgalsa Aug. 20, 1988 1 ♂ (U); Zalagyömörő Apr. 20, 1988 5 ♂♂ (U).

Leptoceridae

Athripsodes aterrimus STEPHENS - Balatonfüred June 21, 1928 2 ♀♀ (R); Mihályfa June 2, 1988 3 ♂♂ (U); Nemeskeresztúr June 14, 1987 1 ♀, June 1, 1988 2 ♀♀ (U); Zalahaláp June 13, 1987 3 ♀♀ (U, Á).

Athripsodes cinereus CURTIS - Balatonalmádi June 21, 1931 8 ♂ 4 ♀ (R); Balatonfüred June 21, 1928 1 ♀ (R); Megyer Aug. 20, 1988 1 ♂ 1 ♀ (U); Nemeskeresztúr June 14, 1987 8 ♂ 4 ♀, Aug. 22, 1987 1 ♂ 1 ♀, June 1, 1988 1 ♂, Aug. 20, 1988 1 ♂ (U).

Ceraclea alboguttata HAGEN - Káptalanfa-Sárosfő Aug. 13, 1988 1 ♂ 2 ♀ (A); Nemeskeresztúr June 14, 1987 3 ♂ 2 ♀ (U); Zalahaláp June 13, 1987 2 ♀ (U, A); July 24, 1987 1 ♂ (A).

Ceraclea annulicornis STEPHENS - Zalahaláp June 13, 1987 1 ♂ (U, A).

Ceraclea dissimilis STEPHENS - Bakonyháza July 30, 1988 1 ♂ 1 ♀ (A); Balatonalmádi June 21, 1931 1 ♀ (R); Csabrendek Aug. 24, 1987 3 ♂ 1 ♀ (U, A), May 4, 1988 3 ♂ 3 ♀ (A), June 4, 1988 7 ♂ 3 ♀, Aug. 11, 1988 1 ♀ (A); Gógánfa June 16, 1986 1 ♂, July 3, 1986 1 ♂, July 5, 1986 2 ♂, July 6, 1986 1 ♂ (lt); Gyepükaján June 12, 1987 3 ♂ 1 ♀ (U, A); Megyer Aug. 20, 1988 6 ♂ 10 ♀ (U); Nemeskeresztúr June 14, 1987 31 ♂ 26 ♀, Aug. 22, 1987 3 ♂ 2 ♀ (U); Tés July 18, 1987 1 ♀ (lt); Zalahaláp June 13, 1987 2 ♂ 2 ♀ (U, A), July 24, 1987 2 ♂ 1 ♀ (A).

Mystacides longicornis LINNAEUS - Balatonalmádi June 21, 1931 2 ♂ 2 ♀ (R); Balatonfüred June 21, 1928 2 ♂ 9 ♀ (R); Nemeskeresztúr Aug. 22, 1987 1 ♀ (U); Zalahaláp June 13, 1987 1 ♂ 12 ♀ (U, A).

Mystacides nigra LINNAEUS - Dabronc April 20, 1988 4 ♂ (U); Megyer June 6, 1988 3 ♂ (U); Mihályfa June 2, 1988 1 ♀ (U); Nemeskeresztúr June 14, 1987 1 ♂ 13 ♀, Aug. 22, 1987 3 ♂, June 1, 1988 3 ♂ (U).

Oecetis furva RAMBUR - Csabrendek Aug. 24, 1987 1 ♀ (U, A); Gyepükaján June 12, 1987 1 ♀ (U, A); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♂ 2 ♀ (A); Megyer Aug. 20, 1988 6 ♀ (U); Nemeskeresztúr June 14, 1987 1 ♂ 16 ♀ (U); Zalahaláp June 13, 1987 7 ♀ (U, A).

Oecetis lacustris PICTET - Csabrendek Aug. 24, 1987 1 ♂ (U, A); Káptalanfa-Sárosfő Aug. 13, 1988 13 ♀ (A); Nemeskeresztúr June 14, 1987 3 ♂ 21 ♀ (U); Nyirád Aug. 12, 1988 1 ♂ (A); Zalahaláp June 13, 1987 2 ♂ 30 ♀ (U, A).

Oecetis notata RAMBUR - Tés July 19, 1987 1 ♀ (lt); Zalahaláp July 24, 1987 1 ♀ (A).

Oecetis ochracea CURTIS - Balatonalmádi June 21, 1931 1 ♀ (R); Csabrendek Aug. 24, 1987 23 ♂ 4 ♀ (U, A); May 4, 1988 1 ♂ 2 ♀ (A); Gógánfa June 21, 1986 1 ♂ (lt); Gyepükaján June 12, 1987 11 ♂ 6 ♀ (U, A); Megyer Aug. 20, 1988 2 ♂ (U); Nemeskeresztúr June 14, 1987 84 ♂ 134 ♀, Aug. 22, 1987 29 ♂ 18 ♀ (U); Nyirád May 5, 1988 1 ♂ 15 ♀, Aug. 12, 1988 1 ♂ (A); Tés June 15, 1987 2 ♀ (lt); Várpalota Aug. 1, 1987 1 ♀ (A); Zalahaláp June 13, 1987 6 ♂ 4 ♀ (U, A), July 24, 1987 1 ♀ (A).

Leptocerus tineiformis CURTIS - Csabrendek June 4, 1988 1 ♀ (A); Gógánfa June 16, 1986 1 ♀ (lt); Káptalanfa-Sárosfő Aug. 13, 1988 1 ♀ (A); Nemeskeresztúr June 14, 1987 2 ♂ 17 ♀ (U); Tés June 15, 1987 1 ♀ (lt).

Sericostomatidae

Notidobia ciliaris LINNAEUS - Bakonybél May 21, 1959 2 ♀ (Móczár), May 19, 1960 1 ♂ 1 ♀ (Mihályi); Bakonykoppány May 20, 1959 1 ♀ (Móczár); Csesznek Cuhavölgy May 23, 1957 1 ♂ 1 ♀ (Móczár), 1 ♀ (Bajári).

Discussion

In this paper data of 74 species are presented. 13 of them have not been published from the Bakony Mountains yet, therefore now we know 100 species together with the 87 species published in our previous paper (NOGRÁDI-UHERKOVICH 1985).

Our most important collecting sites were the Western part of the Bakony Mountains and the Southern part of the basin of river Marcal. The most interesting materials were captured along the stream "Meleg-víz" and river Marcal.

Rare species in the Western Bakony Mountains

On this area several interesting species were taken, big mass of some of them. *Orthotrichia angustella* McL. The first Hungarian specimen was collected at Kisdobsza, South Transdanubia (NOGRÁDI 1986). Along the Meleg-víz and mostly along river Marcal it lives in very large mass, more than 250 specimens were captured (Table 1 and 2). In the year 1987 it was collected at Sármellék, West of Balaton (Fig. 4). BOTOSÁNEANU and MALICKY (1978) indicates it from the Danube Basin with question mark.

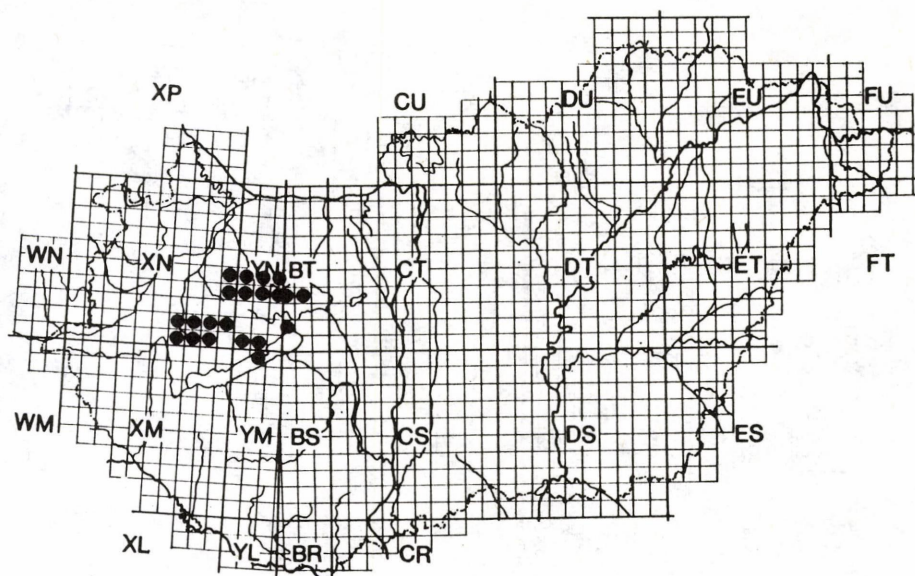


Fig. 3. Locality data of present paper on the UTM grid map.

3. ábra. A jelen dolgozatban szereplő lelőhelyi adatok UTM rendszerű hálótérképen.

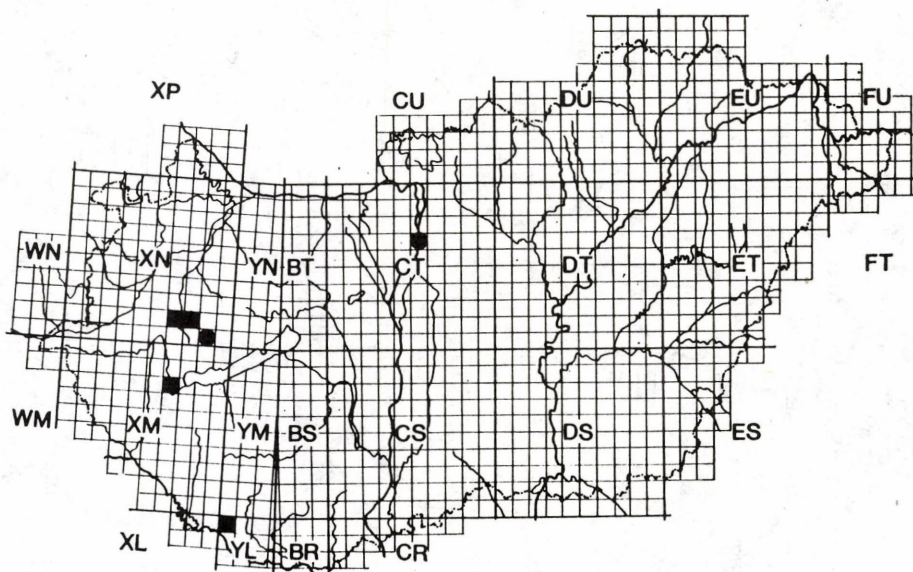


Fig. 4. Distribution of *Orthotrichia angustella* McL. (full circle) and *Hydroptila vectis* CURT. (black square).

4. ábra. Az *Orthotrichia angustella* McL. (telt kör) és a *Hydroptila vectis* CURT. (fekete négyzet) magyarországi elterjedése.

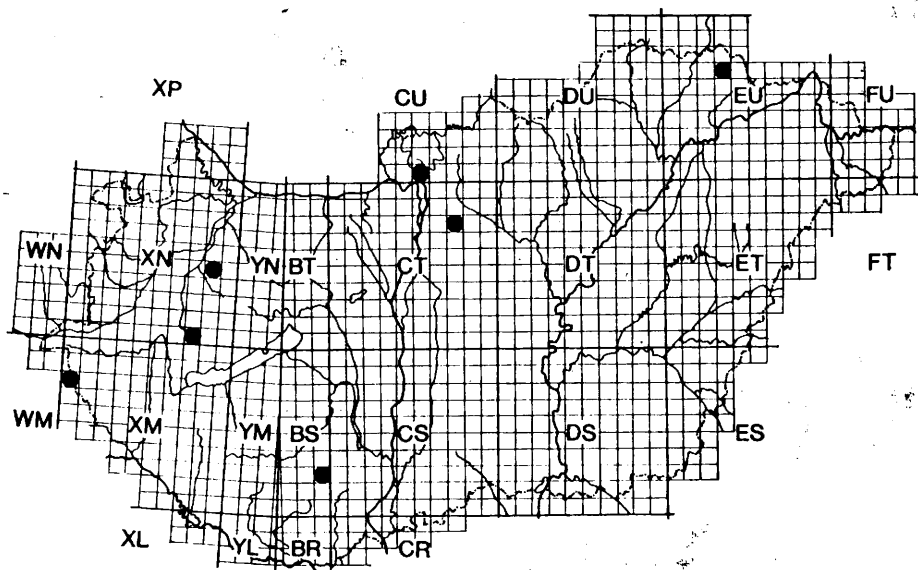


Fig. 5. Distribution of *Polycentropus irroratus* CURT. in Hungary.
5. ábra. A *Polycentropus irroratus* CURT. magyarországi elterjedése.

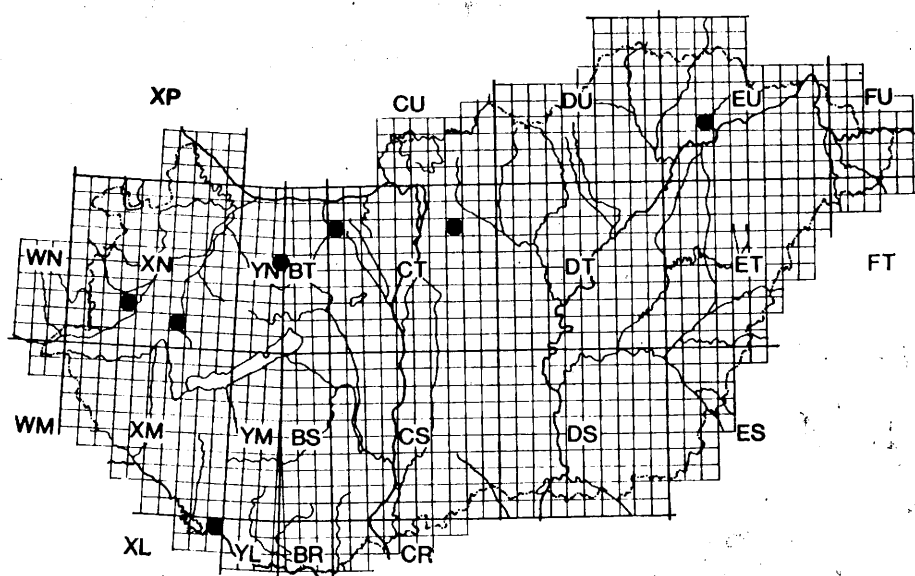


Fig. 6. Distribution of *Holocentropus dubius* RAMB. in Hungary.
6. ábra. A *Holocentropus dubius* RAMB. magyarországi elterjedése.

Hydroptila vectis CURT. The only reference is in Fauna Regni Hungariae to this species (MOCSÁRY 1900). During 87 years no specimen was captured in Hungary. Two females came to light along the Viszló Stream at Zalahaláp.

Polycentropus irroratus CURT. It is a rare species, collected in Mecsek Mountains at Vékény, at Magyarszombatfa (NÓGRÁDI 1987), in the Zemplén Mountains (OLÁH 1967) and around Veregyház (coll. HHNM Budapest). It was taken twice along the Meleg-víz (Fig. 5).

Holocentropus dubius RAMB. Until recently 6 localities became to be known (NÓGRÁDI-UHERKOVICH 1988b, coll. HHNM Budapest). One of them is along river Marcal, at Nemeskeresztúr (Fig. 6).

Fauna composition of two biotops

In the past years the composition of Trichoptera fauna of several streams was examined and published (NÓGRÁDI 1987, 1989, NÓGRÁDI-UHERKOVICH 1988a).

The mountainous streams have several species characteristic only of these fast running and cold ones. The frequent species of the stream of Pásztor spring (in Eastern Mecsek Mountains) are *Rhyacophila fasciata* HAG., *Wormaldia occipitalis* PICT., *Tinodes unicolor* PICT., *Stenophylax meridionalis* MAL., *Potamophylax nigricornis* PICT., *Chaetopteryx major* McL., *Chaetopteryx schmidtii* mecsekensis NÓGRÁDI etc. These species do not occur in the streams of lowland and low, hilly regions.

At Kisdobsza, along the Gyöngyös stream *Hydropsyche* species (mostly *H. saxonica* McL., *H. modesta* NAVAS, *H. contubernalis* McL., *H. ornatula* McL.), *Ceraclea dissimilis* STEPH., *Neureclipsis bimaculata* L. proved to be dominant species.

The characteristic feature of the fauna of Szőce stream (West Hungary) is the diversity: 84 species were captured there (Kisdobsza: 64 species). The dominant species are *Agapetus fuscipes* CURT., *Chaetopteryx fusca* BRAU., *Ch. rugulosa* KOL., *Rhadicoleptus alpestris* KOL., *Lithax obscurus* HAG., *Notidobia ciliaris* L., etc.

The composition of the fauna of Meleg-víz and upper branches of river Marcal is different from other types of waters. We drew up the summarized list of these water courses (Table 1, 2).

The composition and quantity of Trichoptera fauna of Meleg-víz is the most unusual have been found until now. One third of the material is composed by *Oxyethira falcata* MORTON. An other hydroptilid, *Hydroptila simulans* MOS. reaches 10 p. c. The number of specimens of *Psychomyia pusilla* F. is strikingly high, it almost reaches 30 p. c. These three species mount up to more than 72 p. c. together. The *Hydropsyche* females reach 8, *Ecnomus tenellus* RAMB. almost 10 p. c. The rest 10 p. c. is divided amongst the other 33 species, their percentage is between 0.03 and 1.46.

This strange composition is due to the practically permanent water-temperature and its quick run.

After the elaboration of light trap material derived from here we will get more exact data about the quantitative relations.

The most frequent species of river Marcal is also a hydroptilid, *Hydroptila sparsa* CURT. Its dominance is over 36 p. c. Another hydroptilid, *Orthotrichia angustella* McL. reach 16 p. c. These two species - together with *Oecetis ochracea* CURT. count 70 p. c. It is interesting that *Colpotaulius incisus* CURT., *Athripsodes cinereus* CURT. and *Mystacides nigra* L. belong to the more frequent species, too.

The water temperature of the Marcal is not permanent, but the fluctuation is relatively moderate along the examined branches.

Summary

The number of caddisfly species known from the Bakony Mountains and its environs increased to 100. The focus of our examinations was the upper part of the catchment area of river Marcal. Here the composition of caddisfly fauna was very unusual because of permanent water temperature (Meleg-víz) or of the moderate temperature-fluctuation (river Marcal). If we had the possibility to continue to examine this water system in the future, we should certainly get further interesting results.

Anyway elaboration of considerable light-trap material of the field is pressing and urgent.

Table 1. Caddisflies and their quantity collected at 3 sites (Csabrendek, Gyepükaján, Zalagyömörő) along the stream Meleg-víz.

1. táblázat. A Meleg-víz 3 pontján (Csabrendek, Gyepükaján, Zalagyömörő) gyűjtött tegzesek és mennyiségük.

<i>Orthotrichia angustella</i>	1 ♂	9 ♀
<i>O. costalis</i>		6 ♀
<i>Oxyethira falcata</i>	133 ♂	813 ♀
<i>Hydroptila simulans</i>	107 ♂	214 ♀
<i>H. sparsa</i>	3 ♂	9 ♀
<i>Agraylea sexmaculata</i>	2 ♂	
<i>Hydropsyche bulbifera</i>	44 ♂	
<i>H. contubernalis</i>	5 ♂	
<i>H. instabilis</i>	2 ♂	
<i>H. modesta</i>	17 ♂	
<i>H. pellucidula</i>	2 ♂	
<i>H. sp. indet. females</i>		239 ♀
<i>Polycentropus irroratus</i>	2 ♂	1 ♀
<i>Holocentropus picicornis</i>		2 ♀
<i>Psychomyia pusilla</i>	399 ♂	447 ♀
<i>Lype reducta</i>	4 ♂	
<i>Ecnomus tenellus</i>	125 ♂	163 ♀
<i>Trichostegia minor</i>		1 ♀
<i>Agrypnia varia</i>	6 ♂	3 ♀
<i>Limnephilus affinis</i>		1 ♀
<i>L. auricula</i>	12 ♂	8 ♀
<i>L. flavicornis</i>	19 ♂	15 ♀
<i>L. griseus</i>	1 ♂	1 ♀
<i>L. hirsutus</i>		1 ♀
<i>L. lunatus</i>	4 ♂	1 ♀
<i>L. rhombicus</i>	1 ♂	
<i>L. vittatus</i>	1 ♂	
<i>Colpotaulius incisus</i>		2 ♀
<i>Grammotaulius nigropunct.</i>	5 ♂	3 ♀
<i>Glyptotaelius pellucidus</i>		1 ♀
<i>Anabolia furcata</i>	5 ♂	
<i>Stenophylax permistus</i>	1 ♂	9 ♀
<i>Goera pilosa</i>	6 ♂	2 ♀
<i>Ceraclea dissimilis</i>	16 ♂	9 ♀
<i>Oecetis furva</i>		2 ♀
<i>Oe. lacustris</i>	1 ♂	
<i>Oe. ochracea</i>	35 ♂	12 ♀
<i>Leptocerus tineiformis</i>		1 ♀
altogether	959 ♂	1975 ♀

Table 2. Caddisflies and their quantity collected at 4 sites (Dabronc, Megyer, Nemeskeresztúr, Rigács) along the river Marcal.

2. táblázat. A Marcal 4 pontján (Dabronc, Megyer, Nemeskeresztúr, Rigács) gyűjtött tegzesek és mennyiségük.

<i>Orthotrichia angustella</i>	196 ♂	58 ♀
<i>O. costalis</i>		1 ♀
<i>O. tragetti</i>		1 ♀
<i>Ithytrichia lamellaris</i>	1 ♂	
<i>Oxyethira falcata</i>		1 ♀
<i>Hydroptila lotensis</i>	1 ♂	
<i>H. simulans</i>	2 ♂	
<i>H. sparsa</i>	53 ♂	521 ♀
<i>Hydropsyche engustipennis</i>	14 ♂	
<i>H. bulbifera</i>	8 ♂	
<i>H. contubernalis</i>	9 ♂	
<i>H. modesta</i>	3 ♂	
<i>H. ornatula</i>	1 ♂	
<i>H. pellucidula</i>	2 ♂	
<i>H. sp. indet. females</i>		111 ♀
<i>Neureclipsis bimaculata</i>		3 ♀
<i>Holocentropus dubius</i>		1 ♀
<i>H. picicornis</i>	4 ♂	11 ♀
<i>Psychomyia pusilla</i>	2 ♂	4 ♀
<i>Lype reducta</i>		1 ♀
<i>Ecnomus tenellus</i>	2 ♂	12 ♀
<i>Agrypnia varia</i>		3 ♀
<i>Limnephilus auricula</i>	1 ♂	
<i>L. flavicornis</i>	2 ♂	1 ♀
<i>L. hirsutus</i>		1 ♀
<i>L. lunatus</i>	2 ♂	
<i>L. vittatus</i>		1 ♀
<i>Colpotaulius incisus</i>	39 ♂	39 ♀
<i>Grammotaulius nigropunct.</i>	3 ♂	2 ♀
<i>Goera pilosa</i>	1 ♂	2 ♀
<i>Athripsodes aterrimus</i>		3 ♀
<i>A. cinereus</i>	12 ♂	6 ♀
<i>Ceraclea alboguttata</i>	3 ♂	2 ♀
<i>C. dissimilis</i>	40 ♂	38 ♀
<i>Mystacides longicornis</i>		1 ♀
<i>M. nigra</i>	14 ♂	13 ♀
<i>Oecetis furva</i>	1 ♂	22 ♀
<i>Oe. lacustris</i>	3 ♂	2 ♀
<i>Oe. ochracea</i>	115 ♂	152 ♀
<i>Leptocerus tineiformis</i>	2 ♂	17 ♀
altogether	536 ♂	1030 ♀

Table 3. Caddisflies and their quantity collected at Tés in 1987 by light trap.

3. táblázat. A tési fénycsapda által 1987-ben fogott tegzesek és mennyiségük.

<i>Hydropsyche bulgaromanorum</i>	2 ♂	
<i>H. contubernalis</i>	79 ♂	
<i>H. modesta</i>	1 ♂	
<i>H. ornatula</i>	2 ♂	
<i>H. saxonica</i>	1 ♂	
<i>H. sp. indet. females</i>		260 ♀
<i>Neureclipsis bimaculata</i>	1 ♂	21 ♀
<i>Ironoquia dubia</i>		2 ♀
<i>Limnephilus affinis</i>	4 ♂	4 ♀
<i>L. auricula</i>	6 ♂	2 ♀
<i>L. binotatus</i>		1 ♀
<i>L. bipunctatus</i>		1 ♀
<i>L. extricatus</i>		1 ♀
<i>L. flavicornis</i>	2 ♂	
<i>L. griseus</i>	14 ♂	10 ♀
<i>L. ignavus</i>	6 ♂	2 ♀
<i>L. lunatus</i>	22 ♂	25 ♀
<i>L. rhombicus</i>	4 ♂	3 ♀
<i>L. sparsus</i>	24 ♂	14 ♀
<i>L. vittatus</i>	3 ♂	3 ♀
<i>Colpotaulius incisus</i>	1 ♂	
<i>Grammotaulius nigropunct.</i>	3 ♂	5 ♀
<i>Micropterna testacea</i>	1 ♂	
<i>Stenophylax permistus</i>	19 ♂	19 ♀
<i>Halesus tessellatus</i>	11 ♂	2 ♀
<i>Chaetopteryx fusca</i>	3 ♂	
<i>Ch. major</i>	1 ♂	
<i>Ceraclea dissimilis</i>		1 ♀
<i>Oecetis notata</i>		1 ♀
<i>Oe. ochracea</i>		2 ♀
<i>Leptocerus tineiformis</i>		1 ♀
altogether	210 ♂	380 ♀

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A BAKONY HEGYSÉG ÉS KÖRNYÉKE TEGZES FAUNÁJA

A Bakony hegység tegzesfaunájáról eddig megjelent 2 cikk (ÚJHELYI 1979, NÓGRÁDI-UHERKOVICH 1985) 52 lelőhelyről 87 fajt ismertet. Ezek a korábbi vizsgálatok azt mutatták, hogy a hegységnek kiterjedéséhez képest viszonylag szegény a tegzes faunája. Kétségtelen, hogy az elszennyeződött illetve kiszáradó vizek miatt a vízi fauna pusztulóban van.

1987-ben kezdtük meg a Nyugati-Bakony és közvetlen környéke tegzes faunájának vizsgálatát. ÁBRAHÁM Levente hívta fel figyelmünket a Marcal vízrendszerének felső szakaszára, itt is különösképpen a Meleg-vízre.

Ez utóbbi mai állapotában mesterséges képződmény. A bauxitbányák művelése miatt többhelyütt igen nagy mennyiségű karsztvizet szivattyúznak a felszínre folyamatosan. Nyírad környékén a Meleg-víz medrébe mintegy 80 m³-nyi percenkénti, kb. 20 °C-os karsztvizet szivattyúznak. A gyors folyású, tiszta patak vízhőmérséklete a forrásoktól 10-12 km-re sem süllyed 17 °C alá még a leghidegebb télen sem, s még 40-50 km-re - már a Marcal medrében - is érződik ez a hatás.

Az állandó vízhőmérséklet és az egyenletes vízjárás miatt igen különös a Meleg-víz tegzesfaunája (és általában vízi faunája). Eddigi vizsgálataink azt mutatják, hogy az anyagnak mintegy harmadát az *Oxyethira falcata* MORTON teszi ki, és egy másik hydroptilida, a *Hydroptila simulans* MOS. is 10 %-os gyakoriságú. Csaknem 30 %-kal részesedik a másutt mindig kis példányszámú *Psychomyia pusilla* F., s az *Ecnomus tenellus* RAMB. 10 %-ot ér el.

A Marcal leggyakoribb faja ugyancsak egy hydroptilida (*Hydroptila sparsa* CURT.) 36 %-os tömegrészesedéssel. Rendkívül magas a Magyarországon közelmúltban felfedezett *Orthotrichia angustella* McL. aránya is (16 %).

A két vízfolyás mellől származik az anyag zöme. Emellett azonban feldolgoztunk máshonnan származó anyagokat is. Végeredményben 74 faj 2236 ♂ és 5214 ♀ példányát közöljük 37 lelőhelyről. Ezzel a Bakonyból és közvetlen környékéről ismert fajok száma 100-ra emelkedett.

A Meleg-víz mellett 1987-ben fénycsapdát is működtettünk. Azonban az anyag egészen rendkívüli nagy mennyisége - legalább 50 000 példány, de ennek akár kétszerese is lehet - miatt ezt feldolgozni eddig még nem tudtuk. Személyes gyűjtéseinkkel pedig szeretnénk még tovább vizsgálni a Marcal felső szakaszát.

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