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THE TRICHOPTERA IN THE ILONA VALLEY OF THE MÁTRA MOUNTAINS (HUNGARY)

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ABSTRACT: Larvae, pupae and imagos of Trichoptera were collected in the higher region of the Ilona Valley. There were seven sampling localities marked out with the mosaic-pattern theory. The profile diagrams of the localities were also made indicating the species collected as well. *Crunoecia irrorata* CURTIS and *Silo nigricornis* PICTET have been found there for the first time.

Data concerning the Trichoptera of this area can be found in the papers by SÁTORI (1939 b) and UJHELYI (1974). SÁTORI collected both larvae, pupae and imagos, UJHELYI only collected imagos and processed the data obtained by light-trapping. Some species indentified by SÁTORI e.g. *Rhyacophila hungarica* SÁTORI and *Wormaldia triangulifera* MAC LACHLAN have been revised in accordance with the latest taxonomic works, and rectified as *Rhyacophila polonica* MAC LACHLAN and *Wormaldia occipitalis* PICTET, respectively by UJHELYI. UJHELYI' s opinion has also been vindicated by the results of the author' s collecting work.

METHODS

Larvae, pupae and imagos of Trichoptera were collected in the higher rvgion of the Ilona Valley from July 1977 to October 1979 applying the mosaic eattern theory and using the methods of KAMLER AND MACAN. Taking the paried substrate mosaics of the stream bed into consideration there were 7 sampling localities marked out. Observations on ecology included measuring the temperature of both the air and water, depth and velocity of water, determining pH value and indentifying the flora on the banks. Profile diagrams of the sampling stations were also made indicating the characteristics of the bed, the depth of water and water velocity as well as the species inhabiting the substrate mosaics. The investigations carried out are a part of the research project entitled 'The Natural History of the Cserhát and Mátra Mountains' promoted by the Mátra Museum. The substantdial proportion of the sampled material is in the Mátra Museum and the rest with the author. The indentification of species was done by uksing the works of HICKIN (1967), LEPNYEVA (1966), MAC LACHLAN (1968, Reprinted) and STEINMANN (1970).

THE DESCRIPTION OF THE SAMPLING LOCALITIES AND THE TRICHOPTEROUS FAUNA

The Ilona Valley having the andesite as its rock-forming mineral and looking to the south from Parádfürdő is a part of the Eastern region of the Mátra Mountains. Headlong blocks of stone with crumblings are characteristic of the higher region of the valley being at a height of 420—450 m above sea-level (Fig.1.)

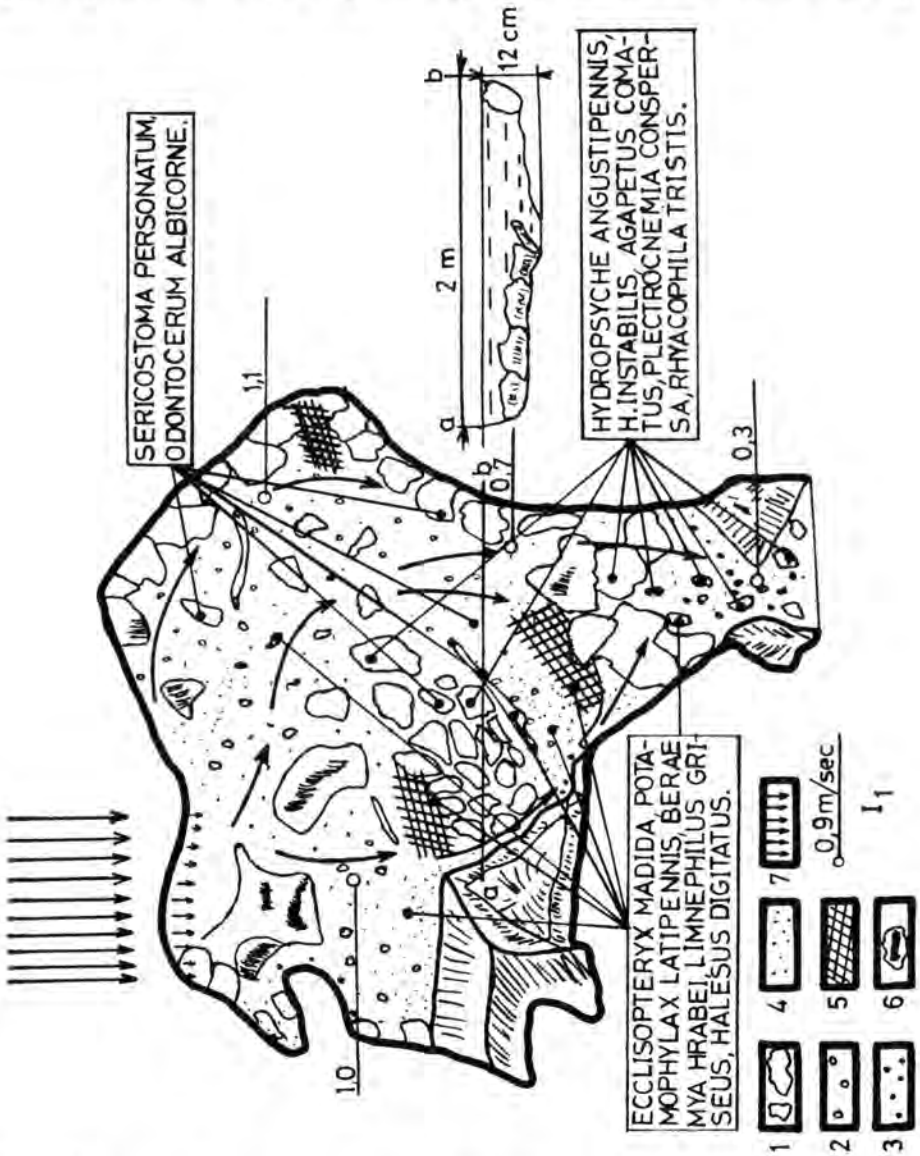

Fig. 1. The area under investigation in the Ilona Valley of the Mátra Mountains. I_1—I_7 Sampling localities. Ve = Waterfall

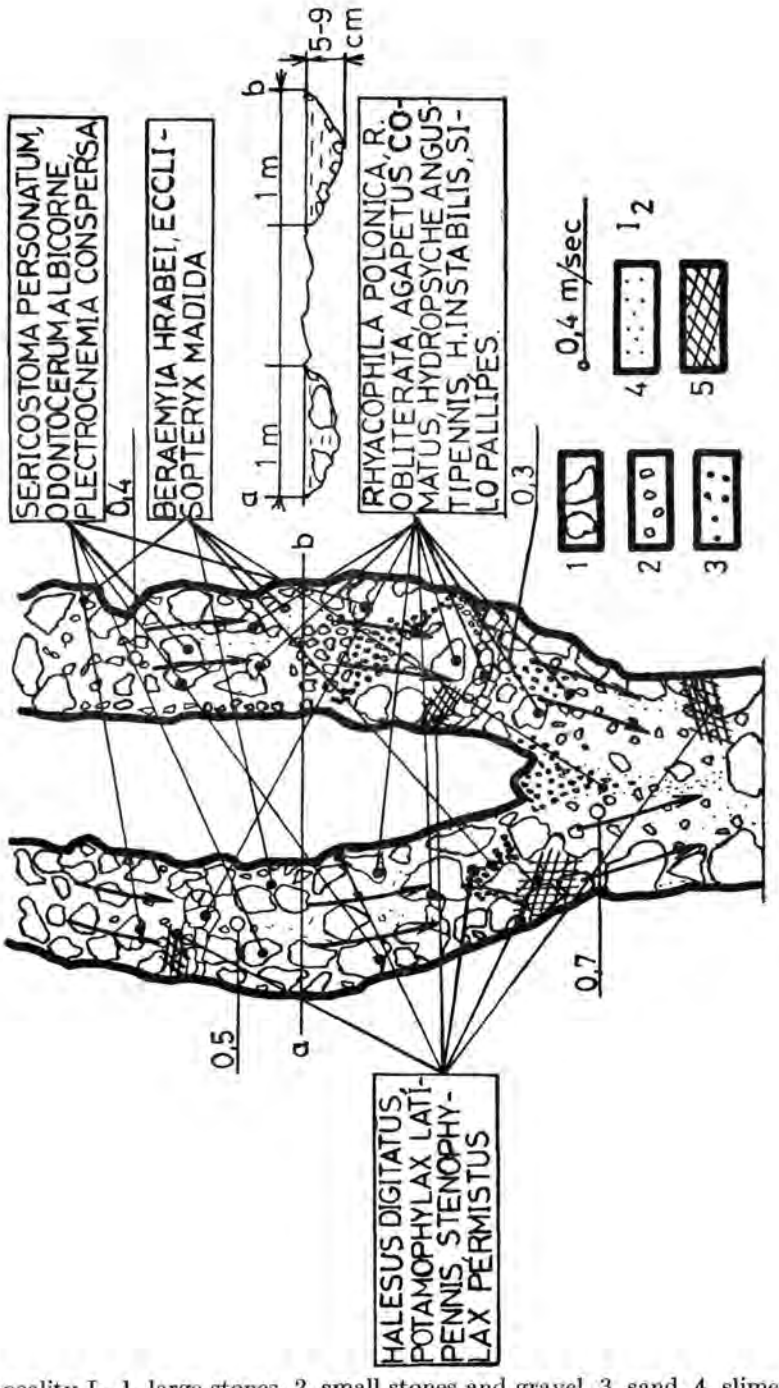

Fig. 2. Locality I_1. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus, 6. moss, 7. waterfall.

Locality I_1 Waterfall (Fig. 2.): The water of the stream falls over a 5 m high wall rock covered with a thick, 4 m wide coating of *Rhynchostegium riparioides* (HEDW.) CARD. and *Conocephalum conicum* (HEDW.)B. S. G. moss species.

The water falling down into a small round basin and spreading over there gives rise to a bryomadicola zone (F. WAILLANT, 1956) existence. From the basin the water continues its way downhill as a rill. The area is shaded. Water temperature was 13,0 °C on 18th July, 1977 and 12,5 °C on 2nd Oct., 1977.

In the round basin there are large and small stones, gravel, detritus and sand accumulation. On the surface of the large stones larvae of *Hydropsyche angustipennis* CURTIS, H. *instabilis* CURTIS and *Agapetus comatus* PICTET occur in large numbers. Other species occurring are the net spinning *Plectrocnemia conspersa* CURTIS and the ones constructing their cases from mineral substances, e. g. *Ecclisopteryx madida* MAC LACHLAN, *Potamophylax latipennis* CURTIS, *Beraemyia hrabei* MAYER, *Odontocerum albicorne* SCOPOLI and *Sericostoma personatum* PENCE. In the quiet coves of the basin *Halesus digitatus* SCHRANK and *Limnephilus griseus* LINNE can be found. A free-living species, *Rhyacophila tristis*, had not been collected there before.

Locality I_2 50m away from the waterfall (Fig. 3.): Water flows rapidly over the large and rough stones of the meandering rill bed, and forms micro-waterfalls. The area is shaded by *Fagus silvatica* only a little sunshine filters through the foliage. The vegetation on the banks is poor, the steep rocky bank on the right is 1 m high. The depth of water is 5 cm, water temperature was 12.6 °C on 18th July, 1977 and 7.8 °C on 2nd October, 1977.

The trichopterous species are: *Rhyacophila polonica* MAC LACHLAN, *R. obliterata* MAC LACHLAN, *Agapetus comatus* PICTET, *Hydropsyche angustipennis* CURTIS, *H. instabilis* CURTIS, *Silo pallipes* FABR., *Odontocerum albicorne* SCOPOLI, *Sericostoma personatum* PENCE, *Beraemyia hrabei* MAYER, *Potamophylax latipennis* CURTIS, *Plectrocnemia conspersa* CURTIS, *Halesus digitatus* SCHRANK, *Stenophylax permistus* MAC LACHLAN and *Ecclysopteryx madida* MAC LACHLAN.

Locality I_3 150 m away from the waterfall (Fig. 4.): The rill fed by some lateral rills changes into a stream and passes over rapids. In the stream bed there are large stones; the rocky stream wall is of blocks of stone with crumblings and a thrown down tree spans the stream. The area is shaded by *Fagus silvatica*, the depth of the water is between 5—10 cm, water temperature was 12.9 °C on 18th July, 1977, and 7.9 °C on 2nd Oct., 1977.

The species occurring there are: *Rhyacophila obliterata* MAC LACHLAN *Wormaldia occipitalis* PICTET, *Polycentropus flavomaculatus* PICTET, *Hydropsyche angustipennis* CURTIS, *H. instabilis* CURTIS, *Odontocerum albicorne* SCOPOLI, *Halesus digitatus* SCHRANK, *Beraemyia hrabei* MAYER, *Potamophylax latipennis* CURTIS, *Sericostoma personatum* PENCE, *Silo pallipes* FABR. and *Crunoecia irrorata* CURTIS; this latter one had not been discovered before.

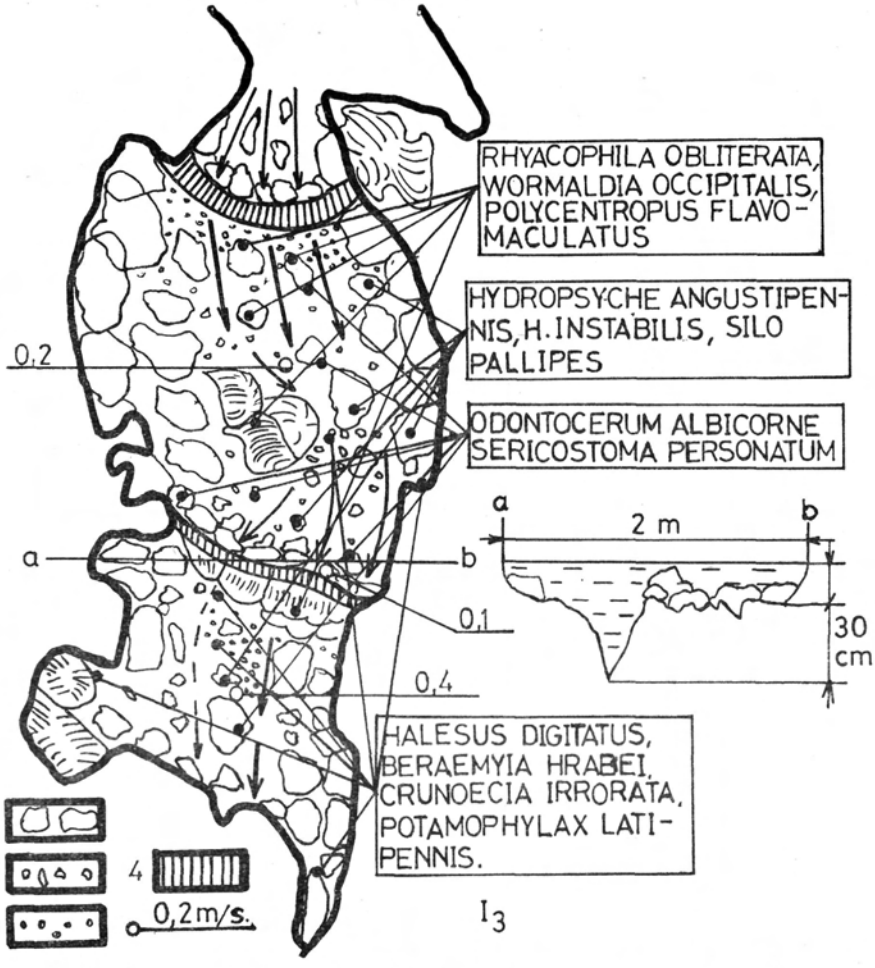

Fig. 3. Locality I_2. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus.

Locality I_4 250 m away from the waterfall (Fig. 5.): The valley is widening out, the water runs over large stones and rapids between the rocky stream walls. This reach of the stream is sunlit, the vegetation on the banks is rich *(Urtica dioica, Petasitetum hybridi, Euphorbia cyparissias)*. The depth of the water is 4—5 cm, at some places varies between 15—20 cm. Water temperature was 14.5 °C on 18th July, 1977 and 7.4 °C on 2nd Oct., 1977.

The species collected there include: *Rhyacophila polonica* NAC LACHLAN, *R. obliterata* MAC LACHLAN, *Polycentropus flavomaculatus* PICTET, *Agapetus comatus* PICTET, *Plectrocnemia conspersa* CURTIS, *Hydropsyche angustipennis* CURTIS, *Hydropsyche instabilis* CURTIS, *Beraemyia hrabei* MAYER, *Odontocerum albicorne* SCOPOLI, *Halesus digitatus* SCHRANK, *Potamophylax latipennis* CURTIS, *Sericostoma personatum* PENCE and *Silo pallipes* FABR.

Locality I_5 near the plot for making a fire (Fig. 6.) The stream bed of 2—2,5 m width is shady with rapid water flow and vaoried substrate mosaics; its depth is 10—15 cm at some places. On the banks *Urti dioica* is found. The temperature of the water was 13.0 °C on 18th July, 1977 and 9.4 °C on 2nd October, 1977.

The species collected there are: *Rhyacophila polonica* MAC LACHLAN, *R. obliterata* MAC LACHLAN, *Agapetus comatus* PICTET, *Beraemyia hrabei* MAYER, *Plectrocnemia conspersa* CURTIS, *Hydropsyche angustipennis* CURTIS, *Odontocerum albicorne* SCOPOLI, *Halesus digitatus* SCHRANK, *Potamophylax latipennis* CURTIS, *Stenophylax permistus* MAC LACHLAN, *Sericostoma personatum* PENCE, *Silo pallipes* FABR., *Crunoecia irrorata* CURTIS and *Athripsodes bilineatus* LINNE

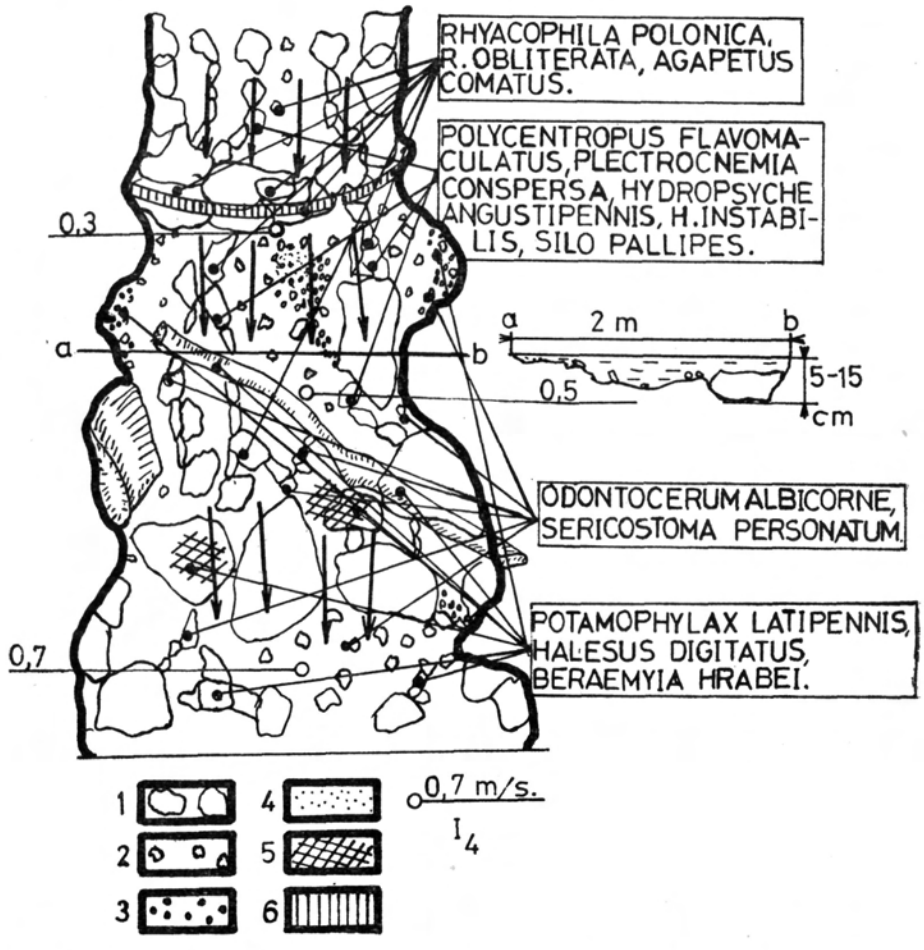

Fig. 4. Locality I_3. 1. large stones, 2. small stones and gravel, 3. sand, 4. micro-waterfall.

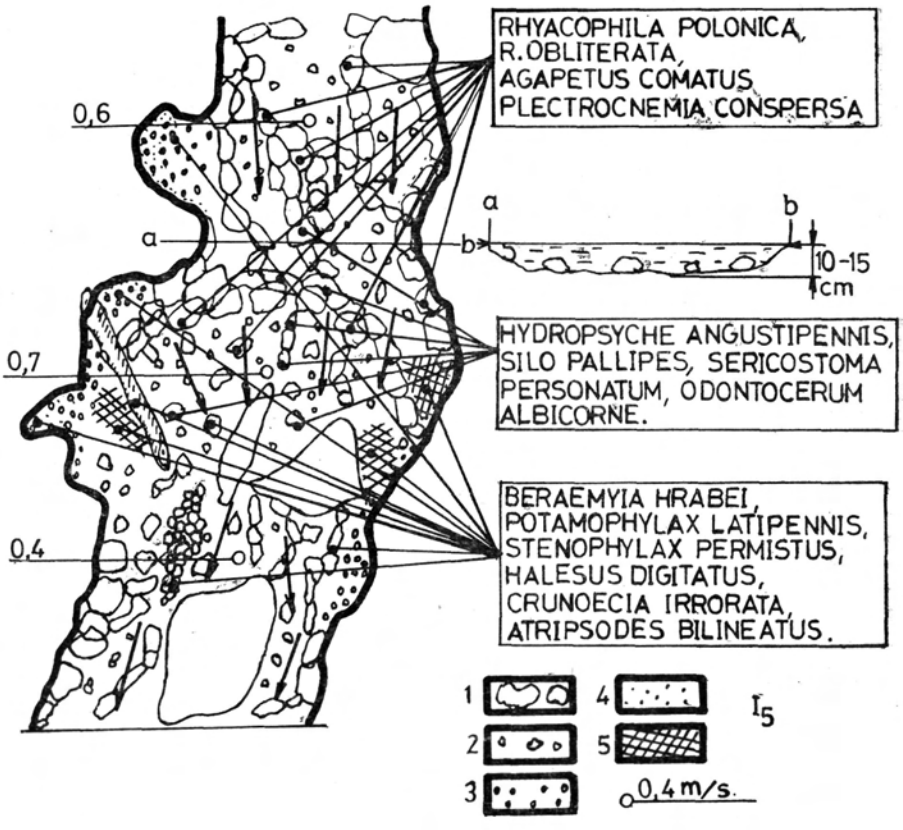

Fig. 5. Locality I_4. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus, 6. micro-waterfall.

Locality I_6 at the bridge (Fig. 7.): The stream bed is widening out to 3 m, with slow water flow, large stones on its bottom and detritus accumulations on its edges. The depth of the water ranges between 15—20 cm. The banks are lined with *Petasitetum hybridi* DOST., it is a half shaded plot. The water temperature was 15.6 °C on 18th July, 1977 and 8.9 °C on 2nd October 1977.

The species found there are: *Rhyacophila obliterata* MAC LACHLAN, *Polycentropus flavomaculatus* PICTET, *Agapetus comatus* PICTET, *Plectrocnemia conspersa* CURTIS, *Hydropsyche angustipennis* CURTIS, *H. instabilis* CURTIS, *Ecclysopteryx madida* MAC LACHLAN, *Odontocerum albicorne* SCOPOLI, *Halesus digitatus* SCHRANK, *Potamophylax latipennis* CURTIS, *Stenophylax permistus* MAC LACHLAN, *Sericostoma personatum* PENCE, *Silo pallipes* FABR. and *S. nigricornis* PICTET; this latter one had not been collected in the Ilona Valley before.

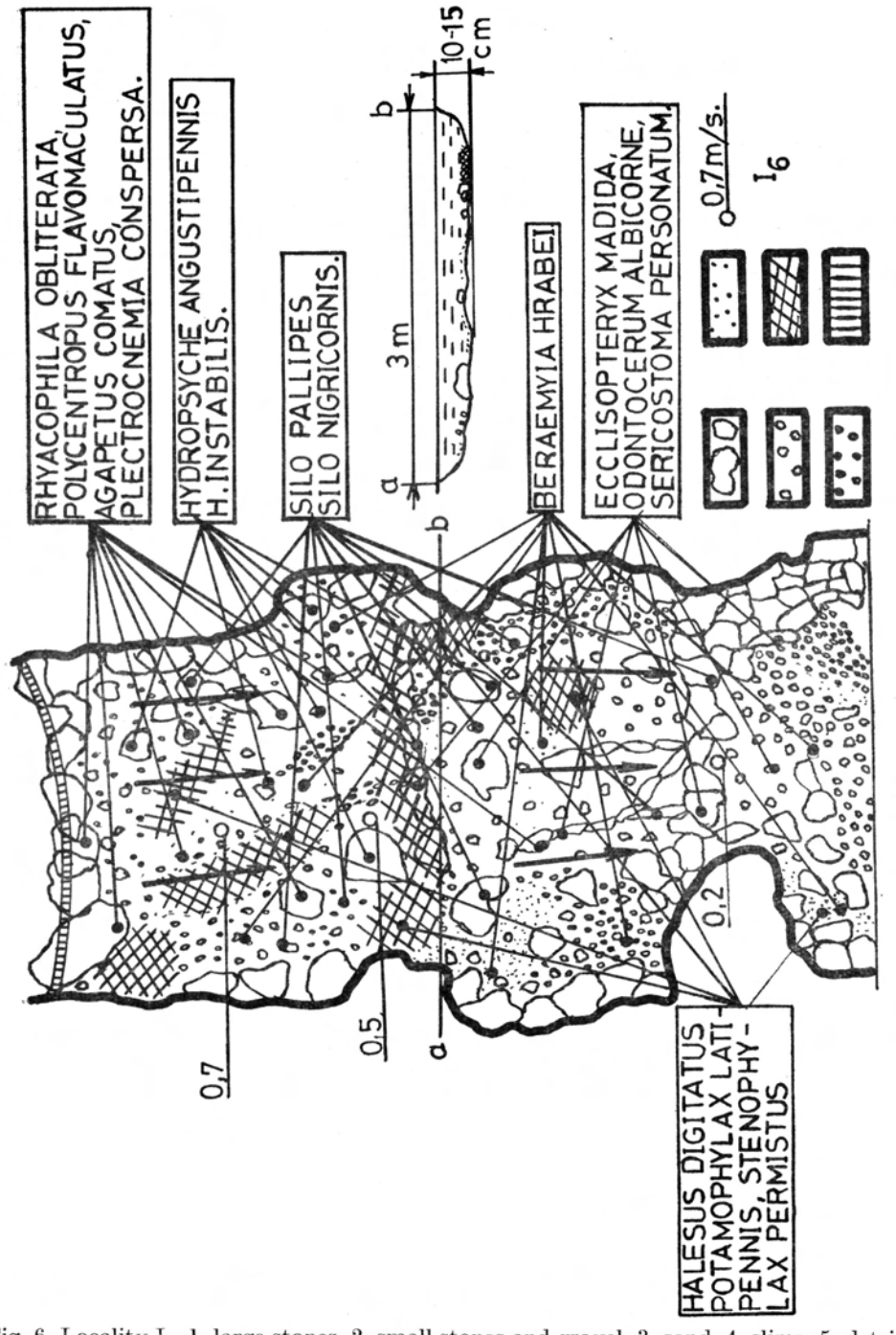

Fig. 6. Locality I_5. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus, 6. micro-waterfall.

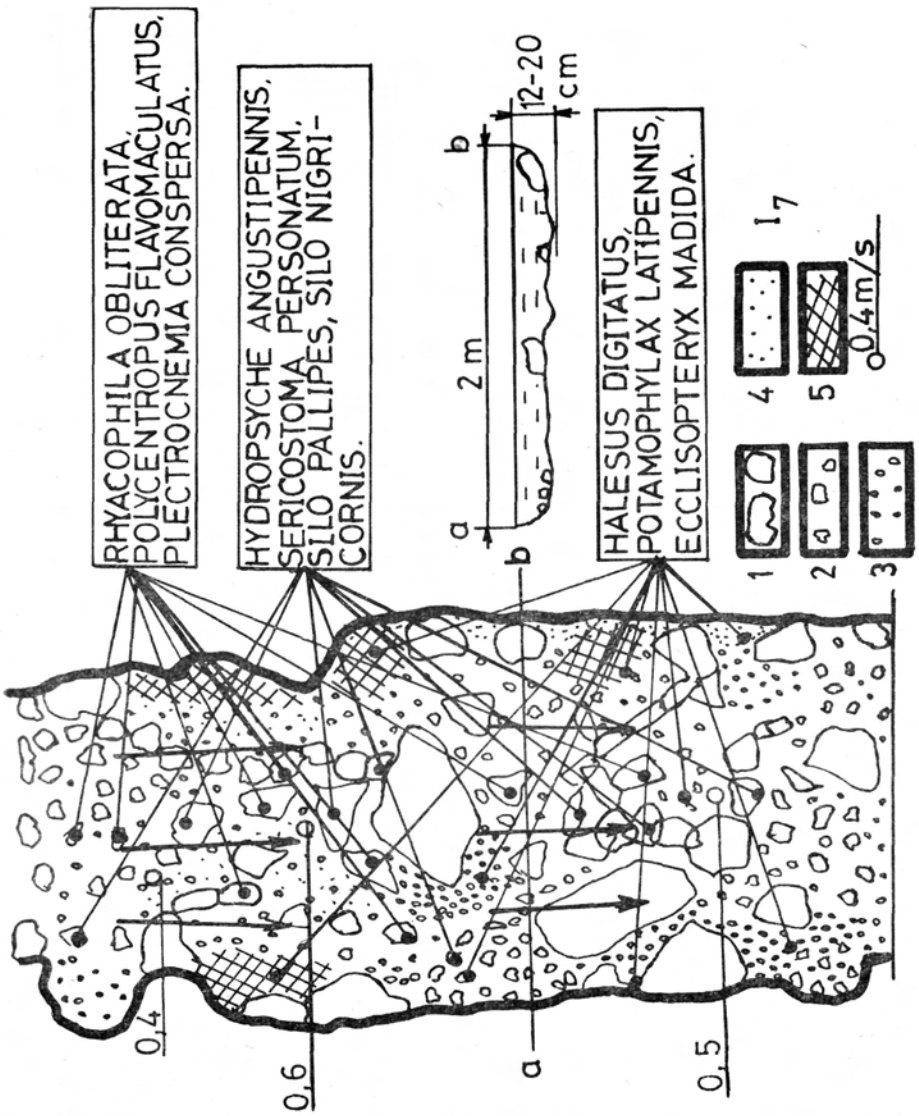

Fig. 7. Locality I_6. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus, 6. micro-waterfall.

Locality I_7 at the sign-board 'Nature conservation area' (Fig, 8.): The bed is of 2 m width, with rapid water flow and is completely shaded by *Fagus silvatica*. Large stones and stones, gravel, sand and detritus accumulations are on the bottom. The average depth of water is 12 cm, at some places it ranges to 20 cm. The water temperature was 15.8 °C on 18th July, 1977 and 9.0 °C on 2nd Oct. 1977. The species collected are as follows: *Rhyacophila obliterata* MAC LACHLAN, *Polycentropus flavomaculatus* PICTET, *Plectrocnemia conspersa* CURTIS, *Ecclysopteryx madida* MAC LACH-

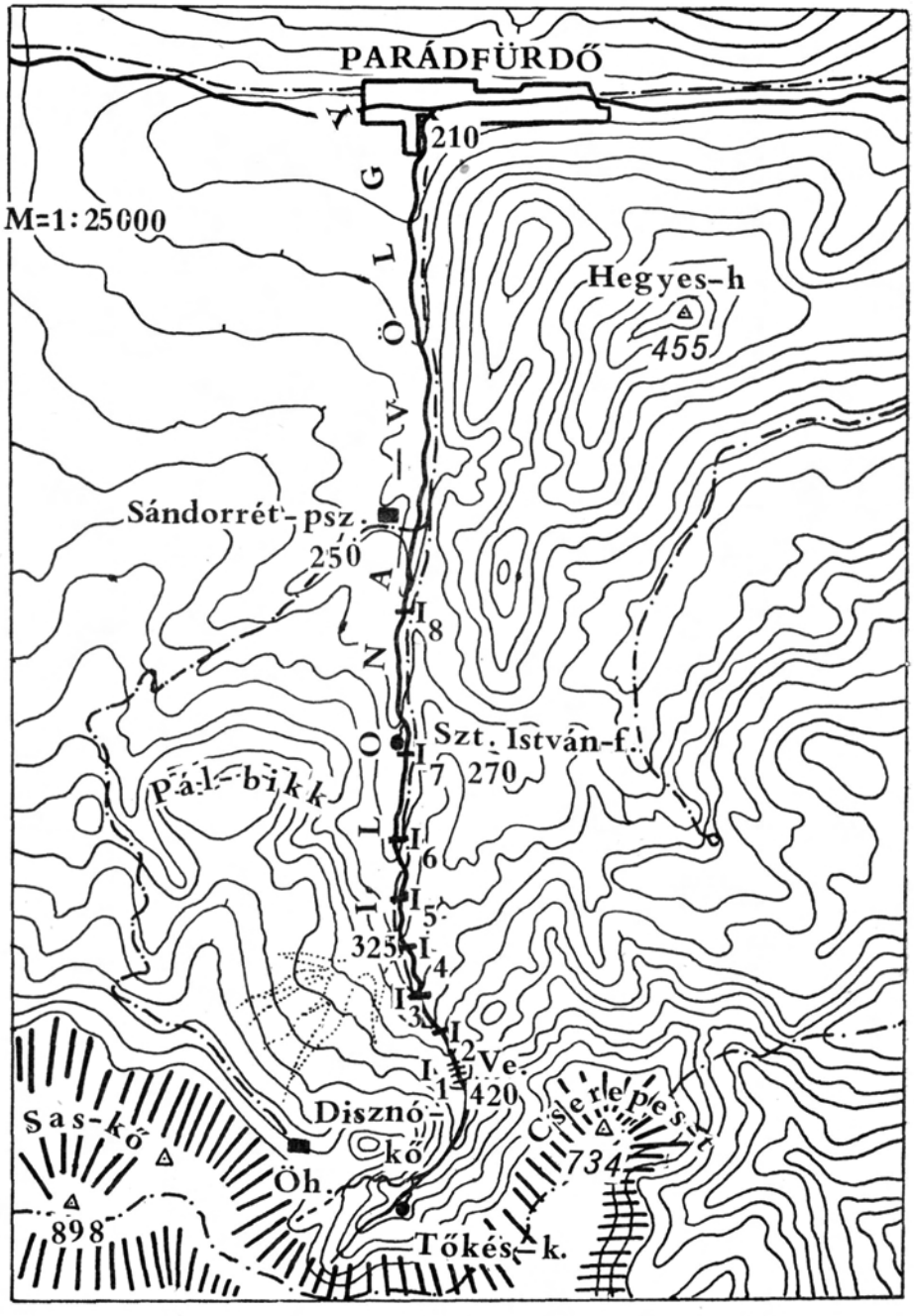

Fig. 8. Locality I$_7$. 1. large stones, 2. small stones and gravel, 3. sand, 4. slime, 5. detritus.

LAN, *Hydropsyche angustipennis* CURTIS, *Potamophylax latipennis* CURTIS, *Sericostoma personatum* PENCE, *Silo pallipes* FABR. and *S. nigricornis* PICTET.

Hydropsyche angustipennis CURTIS, *Odontocerum albicorne* SCOPOLI, *Sericostoma personatum* PENCE, *Potamophylax latipennis* CURTIS were collected at every station of the stream under investigation.

Crunoecia irrorata CURTIS and *Silo nigricornis* PICTET can be considered a rare species and were collected there for the first time.

KISS, O.: A MÁTRAHEGYSÉG ILONA-VÖLGYÉNEK TRICHOPTERÁI

A Mátrahegység Ilona-völgyének felső szakaszán a következő fajokat gyűjtöttem be: *Rhyacophila polonica* MAC LACHLAN, *R. obliterata* MAC LACHLAN, *R. tristis* PICTET, *Agapetus comatus* PICTET, *Polycentropus flavomaculatus* PICTET, *Plectrocnemia conspersa* CURTIS, *Wormaldia occipitalis* PICTET, *Hydropsyche angustipennis* CURTIS, *H. instabilis* CURTIS, *Beraemyia hrabei* MAYER, *Odontocerum albicorne* SCOPOLI, *Sericostoma personatum* PENCE, *Ecclisopteryx madida* MAC LACHLAN, *Halesus digitatus* SCHRANK, *Potamophylax latipennis* CURTIS, *Stenophylax permistus* MAC LACHLAN, *Athripsodes bilineatus* LINNÉ, *Silo pallipes* FAGR. A *Silo nigricornis* PICTET és a *Crunoecia irrorata* CURTIS fajok a területre újak.

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