Fol. Hist.-Nat. Mus. Matr. 5. 1978-79.

Occurence of Melampophylax nepos Mc LACHLAN (syn. Halesus nepos Mc LACHLAN, Trichoptera) in Hungary

KISS Ottó
Ho Si Minh Teachers' College, Eger

ABSTRACT: (Occurence of Melampophylax nepos Mc LACHLAN (syn. Halesus nepos Mc LACHLAN, Trichoptera) in Hungary.) - The stream Sebesviz in the Bükk Mountains has been sampled for two years and larvae of Melampophylax nepos Mc LACHLAN, a species of Trichoptera characteristic of high altitudes only and being new to the fauna of Hungary were found. The ecological characteristics of their habitat and the description of the larva are given as well as their values of dominance.

INTRODUCTION

Trichopterous larvae were collected at three sampling stations monthly from the stream Sebesviz in the Bükk Mts from July 1974 to June 1975 then bi-monthly from July 1975 to June 1976. On 17 Aug. 1974 the author was informed of the occurence of Melampophylax nepos Mc LACHLAN in the Bükk Mts both by J. OLÁH and Z. VARGA. First and second instar larvae of this species, which is new to Hungary were collected from the spring region of the stream (eucrenon, spring Huba) on 8 March 1975 for the first time, and in the succeeding months they were found also in other reaches of the stream. On 25 Sep. 1975 its imago was light-trapped.

Occurence of Halesus nepos Mc LACHLAN (which is a synonim to Melampophylax nepos Mc LACHLAN) in the Paring Reteza is mentioned by S. PONGRÁCZ (1914). On 3 Oct. 1955 Melampophylax nepos Mc LACHLAN was captured by L. BOTOSANEANU in the valley Olaresei a Predeal Bucegi Mts, South Carpathians. In accordance with SCHMID Melampophylax nepos Mc LACHLAN occurs at high altitudes in the northern mountains of Central Europe, in the Eifel and Huge Mts, in the Polish Carpathians, in Transylvania and the South Carpathians as well.

Neither its occurence in Hungary has been recorded in the literature nor the description of the larva has been published yet. Diagrams of genitals of its imago were published both by SCHMID (1951) and L. BOTOSANEANU (1957).

HABITAT

Larvae of Melampophylax nepos Mc LACHLAN occuring in the Bükk Mts belong to the "petricolous" fauna found on the edges of the safer undersides of stones in the cold and rapid reaches of springs and streams of the valley Sebesviz.

The stream Sebesviz rises from the spring Huba with two branches. Its height is 560 m above sea level. The water originates from Triassic limestone, the average water output is 4,6 l/sec. The water temperature range is 7,4-10,8 °C. The area under investigation is found in a valley with steep slopes which is of nearly high altitudinal characteristic. The valley is shady with cool microclimate, and is covered with Melitti Fagetum Subcarpaticum SOÓ. On the large stones being of limestone there is a thin coating of alga and moss which are preferred by the species of litho-rheotactic (SHELFORD, 1915. p. 4.)

and bryofluicol (F. VAILLANT, 1956, p. 5.) habits.

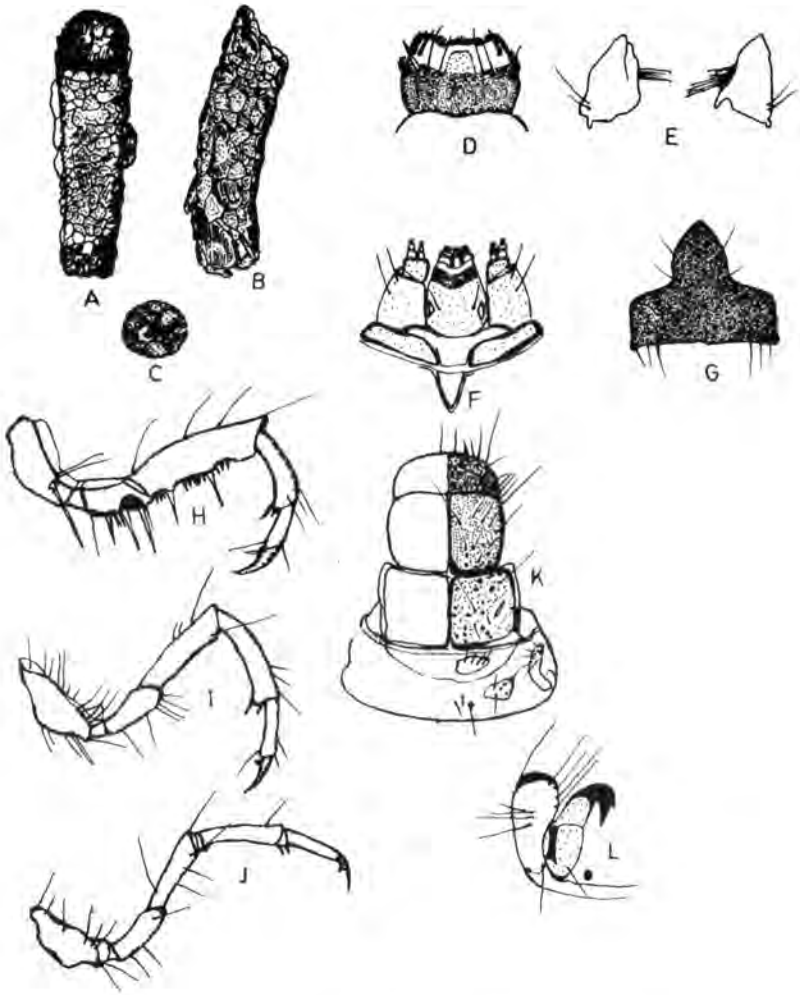

Fig. 1.
Melampophylax nepos Mc LACHLAN (original)
A: Larval case from below; B: Larval case from the side;
C: Posterior end of case; D: Labrum dorsal view; E: Mandibles ventral side;
F: Maxillae and labium ventral view; H: Prothoracic leg; I: Mesothoracic leg;
J: Metathoracic leg; K: Head and thoracic nota from above;
L: Anal claw and hook ventral view.

DESCRIPTION OF LARVA

The larval case is distinctly arched, narrows only very slight from front to rear. It reaches a length of 16-18 mm and a width of 4-5 mm. Its ventral surface, which is smaller than the other ones is composed of globular sand-grains, these latter are of grains, flattened pebbles and larger pieces of stone (Fig. 1.). On the surface of the case there is a thin coating of tuffaceous limestone.

The larva measures 15-16 mm in length and the sclerotized areas are dark-coloured, usually dark brownish red.

The head is relatively broad, its fronto-clypeus is dark brown without any spots to be seen. At the oral margin of the clypeus there are six setae. The vertex has no spots, the setae over the eyes are the longest, this latter being characteristic of the family Limnephilidae.

The broadening anterior part of the labrum is concave with setae on its margin, its one third at anterior is light-coloured the rest is chestnut brown.

The blackish and slightly curved mandibles possess four teeth. The internal brush of setae is short and composed of only a few setae; the larvae are algophagous.

On the lateral part of the maxillae there are two long setae, at the base of the labrum a triangular sclerotized plate as well as a setae can found on both sides.

Thorax: Pronotum sclerotized, dark brown in colour. Patterns of dark spots form lines on mesonotum, its posterior corner is light in colour. The anterior median sclerotized patches of metanotum are large and at a long distance from each other, on the surface of the lateral sclerotized patches there are some setae.

Legs: Prothoracic legs are thick and relatively long, coxa has three long setae, on ventral side of femur there are some tiny spines with two long ones among them, tarsal claw is strong. Mesothoracic legs are shorter than methathoracic ones, on the ventral side of coxa there are six setae and from the distal end of tibia two short spines arise.

Abdomen is yellowish white in colour. Gill filaments are present on abdominal segments two to seven. Lateral line is running from beginning of third to the beginning of ninth abdominal segment. The claw of anal clasper bears a tiny hook on its dorsal side.

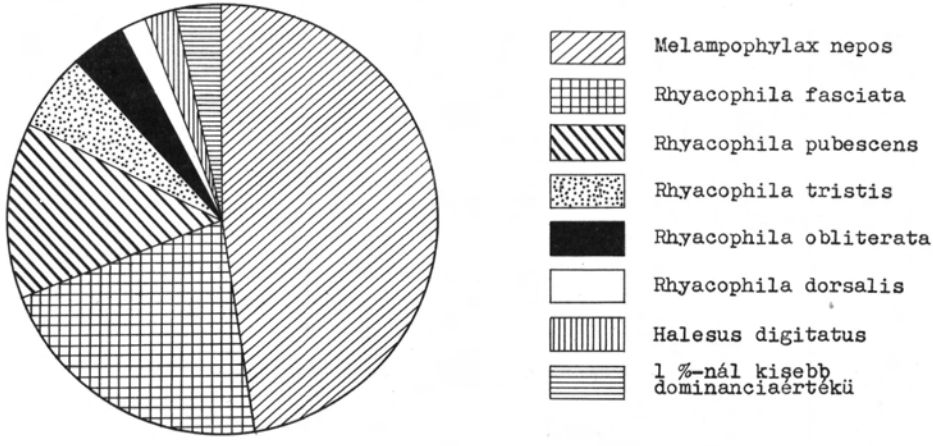

Fig. 2.
Values of dominance for trichopterous larvae in the stream Sebesviz

Quantitative measurements in the stream Sebesviz were made by the method of KAMLER and RIEDEL. In the case of a stony substrate the method of MACAN was also used. It was Melampophylax nepos Mc LACHLAN that had the highest annual individual number. It can be explained both with the rich coating of periphyton on the stones and the presence of microorganisms (Fig. 2.).

Species	Total number of individuals	Dominance %
1. Melampophylax nepos	290	47,7
2. Rhyacophila fasciata	138	22,7
3. Rhyacophila pubescens	80	13,1
4. Rhyacophila tristis	38	6,3
5. Rhacophila obliterata	24	3,9
6. Rhyacophila dorsalis	14	2,4
7. Halesus digitatus	14	2,4
8. Halesus radiatus	6	0,9
9. Limnephilus rhombicus	2	0,3
10. Crunoecia irrorata	2	0,3

The author is grateful to Dr. JÁNOS OLÁH and Dr. ZOLTÁN VARGA who informed him of the occurence of Melampophylax nepos Mc LACHLAN in the stream Sebesviz and helped to identify the larva as well.

KISS O.: Melampophylax nepos Mc LACHLAN (syn. Halesus nepos MC LACHLAN, Trichoptera) előfordulása Magyarországon

A szerző két éven keresztül gyüjtött Trichopterákat a Bükk-hegységi Sebesviz-patakban. Ennek eredményeként a magyar faunára nézve új, a magashegységekben előforduló Melampophylax nepos Mc LACHLAN lárváját és imágóját találta meg. Az élőhely ökológiai jellemzése után a lárvák morfológiai leirását és kvantitativ előfordulását adja meg.

REFERENCES - IRODALOM

1. BOTOSANEANU, L. (1957): Recherches owiles Trichopteres imagos de Roumanie. Polskie Pismo Entomologiczne, 26. p. 25. Wroclaw.
2. KISS, O. (1977): Trichoptera ökológiai vizsgálatok jellegzetes Bükk-hegységi forrás- és patakvizekben (Szalajka-, Disznóskút-, Sebesviz). - Doktori értekezés. Debrecen.
3. PONGRÁCZ, S. (1914): Magyarország Neuropteroidái. - Rovartani Lapok, 21. p. 153.
4. SCHMID, F. (1951): Monographie du genere Halesus (Trich.). Trabajos del Museo de Ciencias Naturales de Barcelona. p. 63-65.
5. STEINMANN, H. (1970): Tegzesek - Trichopterák. Fauna Hungariae XV. p. 193.
6. ÚJHELYI, S. (1974): Adatok a Bükk- és a Mátra-hegység tegzesfaunájához. Fol. Hist. Mus. Matr. 2. p. 99-115.

Érkezett (Received): 1978. márc. 1.

Dr. KISS Ottó
Tanárképző Főiskola
Állattani Tanszék
H-3300 EGER