

TERRESTRIAL OLIGOCHAETES OF THE AGGTELEK NATIONAL PARK

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The faunistic investigation in the Aggtelek National Park revealed 8 Enchytraeidae genera and 22 species. In the family Lumbricidae the presence of 22 species belonging to 11 genera has been shown, furthermore, the occurrence of one species of the family Criodrilidae has also been proved.

The area of the subsequent Aggtelek National Park has been in the centre of interest of scientists since the beginning of this century due to the presence of the Baradla cave (Dudich 1932, 1933). Those investigations concerned mainly the cave fauna itself. It has been shown that the animals found in the cave belong to three groups according to their linkage to the environment: The *troglophil* animals are only temporary visitors of the cave. The *trogloxen* animals spend their lifetime mainly in the cave, while the *troglobiont* animals occur exclusively in the cave.

The terrestrial Oligochaetes living in the Baradla cave belong to the first group, i.e. to troglophil animals, excluding two Enchytraeidae (Dózsa-Farkas 1990) and one Lumbricidae species (Zicsi 1974).

Comprehensive investigations have been carried out not only in the cave but in the largest Hungarian karstic area and in the nearby territory of the Aggtelek National Park as well. As a part of these surveys earthworms were also collected regularly for more than three decades. These activities became more intensive after discovering a real troglobiont earthworm species by the Mozsáry brothers in the cave siphons numbered 4 and 5, situated some 190 m from the entrance of the cave. According to the explorers' findings these strange creatures live upside down in the bottom mud and secure their oxygen demand by circular motion of tail end. This earthworm species was named *Allolobophora mozsariorum* and now belongs to the genus *Helodrilus*. In spite of the intensive investigations it has not been proved either from other part of the cave nor from the surface. Therefore this species has to be regarded as the first troglobiont earthworm of the Baradla cave. The origin of this species is still unknown and requires further investigation.

It is regrettable that the siphons, where these earthworms lived, were dried up by intensive pumping resulted in the extinction of these animals (Kessler and Mozsáry 1985, p. 129).

It has to be mentioned that in the cave laboratory of the Eötvös Loránd University, founded in 1959, feeding ecological researches have been carried out. Since the early sixties different native and foreign species were involved in these experiments. Consid-

ering the fact that in spite of the careful handling some animals might have escaped from the experiments, here is a list of the introduced species (Zicsi 1982).

Family Enchytraeidae: *Fridericia galba* (Hoffmeister, 1843), *F. ratzeli* (Eisen, 1872)

Family Lumbricidae: *Allolobophora rosea* (Sav., 1826), *A. caliginosa* (Sav., 1826), *A. chlorotica* (Sav., 1826), *A. leoni* Mich., 1891, *A. dacica* (Pop, 1938), *A. jassyensis* Mich., 1891, *A. georgii* Mich., 1890, *A. gestroides* Zicsi, 1970, *A. mehadiensis* Rosa, 1895, *A. hrabei* (Cern., 1935), *A. handlirschi* Rosa, 1897, *Proctodrilus antipai* (Mich., 1891), *P. tuberculatus* (Cern., 1935), *Octolasion. lacteum* (Örley, 1881), *O. lacteovicinum* Zicsi, 1968, *O. montanum* (Wessely, 1905), *Fitzingeria platyura platyura* (Fitzinger, 1833), *F. p. depressa* (Rosa, 1893), *F. p. montana* (Cern., 1932), *Eisenia foetida* (Sav., 1826), *E. lucens* (Waga, 1857), *E. spelaea* (Rosa, 1901), *Lumbricus rubellus* (Hoffmeister, 1843), *L. castaneus* (Sav., 1826), *L. terrestris* Linnaeus, 1758, *L. polyphemus* (Fitzinger, 1833), *Dendrobaena octaedra* (Sav., 1826), *D. hortensis* (Mich., 1890), *D. veneta* (Rosa, 1886), *D. auriculata* (Rosa, 1897), *D. clujensis* Pop, 1938, *Dendrodrilus rubidus* (Sav., 1826), *Dd. r. subrubicundus* (Eisen, 1874), *Dd. r. tenuis* (Eisen, 1874), *Octodrilus transpadanus* (Rosa, 1884), *Oc. pseudotranspadanus* (Zicsi, 1971), *Oc. gradinescui* (Pop, 1938), *Oc. lissaensoides* (Zicsi, 1971), *Oc. argoviensis* (Bretscher, 1899), *Oc. rucneri* (Plisko et Zicsi, 1970)

RESULTS

The faunistic investigation in the Aggtelek National Park revealed 8 Enchytraeidae genera and 22 species (Dózsa-Farkas 1970, 1990). In the family Lumbricidae the presence of 22 species belonging to 11 genera has been shown, furthermore, the occurrence of one species of the family Criodrilidae has also been proved (Zicsi 1968, 1991).

LIST OF SPECIES

ENCHYTRAEIDAE

Achaeta Vejdovsky, 1877

Achaeta eiseni (Vejd, 1877) — Aggtelek: Baradla cave, Vörös lake

Buchholzia Michaelsen, 1887

Buchholzia appendiculata (Buchholz, 1862) — Aggtelek: Baradla cave, Vörös lake at the shore.

Buchholzia simplex Nielsen et Christensen, 1963 — Aggtelek: Baradla cave.

Cernosvitoviella Nielsen et Christensen, 1959

Cernosvitoviella aggtelekiensis Dózsa-Farkas, 1970 — Aggtelek: Baradla cave.

Enchytraeus Henle, 1837

Enchytraeus buchholzi Vejd, 1879 — Aggtelek: Baradla cave, Vörös lake grass. Jósavő forest soil.

Enchytraeus lacteus Nielsen et Christensen, 1961 — Aggtelek: Baradla cave.

Enchytronia Nielsen et Christensen, 1959

Enchytronia christenseni Dózsa-Farkas, 1970 — Aggtelek: Baradla cave

Fridericia Michaelsen, 1889

Fridericia bisetosa (Levinsen, 1884) — Aggtelek: Baradla cave.

Fridericia bulboides Nielsen et Christensen, 1959 — Aggtelek: Vörös lake, grass.

Fridericia bulbosa (Rosa, 1887) — Aggtelek: Baradla cave, Vörös lake in the mud and in the grass at the shore of the lake. Jósavfő: forest soil.

Fridericia galba (Hoffmeister, 1843) — Aggtelek: Baradla cave; Above the cave entrance.

Fridericia leydigii (Vejd., 1877) — Aggtelek: Above the cave entrance.

Fridericia paranemoralls Dózsa-Farkas, 1982 — Aggtelek: Vörös lake in the mud. Jósavfő: forest soil.

Fridericia paroniana Issel, 1904 — Aggtelek: Baradla cave.

Fridericia ratzeli (Eisen, 1872) — Aggtelek: Baradla cave; Vörös lake in the mud. Jósavfő: forest soil.

Fridericia reducata Dózsa-Farkas, 1974 — Aggtelek: Baradla cave.

Fridericia rensinata Dózsa-Farkas, 1972 — Aggtelek: Above the cave entrance. Jósavfő: moist moss.

Fridericia semisetosa Dózsa-Farkas, 1970 — Aggtelek: Baradla cave.

Henlea Michaelsen, 1889

Henlea nasuta (Eisen, 1878) — Aggtelek: Above the cave entrance.

Henlea perpusilla Friend, 1911 — Aggtelek: Baradla cave; Above the cave entrance. Jósavfő: forest soil.

Henlea ventriculosa (Udekem, 1954) — Aggtelek: Vörös lake grass. Jósavfő: forest soil.

Marionina Michaelsen, 1889

Marionina argentea (Mich., 1889) — Aggtelek: Baradla cave; Above the cave entrance.

LUMBRICIDAE

Allolobophora Eisen, 1874

Allolobophora caliginosa (Savigny, 1826) — Aggtelek: rocky meadow, Aggteleki lake. Bódvaszilás. Jósavfő. Szalonna: Melegforrás. Szendrő. Szinpetri: arable soil.

Allolobophora chlorotica (Savigny, 1826) — Aggtelek: Rocky meadow, Aggteleki lake, Baradla cave. Jósavfő: near to the lake. Szendrőlád: wet meadow.

Allolobophora georgii Michaelsen, 1890 — Szalonna: Near to the water reservoir. Szendrőlád: wet meadow. Szin: at the bank of Bódva stream.

Allolobophora jassyensis Michaelsen, 1891 — Aggtelek: Rocky meadow. Szinpetri

Allolobophora leoni Michaelsen, 1891 — Szendrőlád

Allolobophora rosea (Savigny, 1826) — Aggtelek: Karstic meadow; Baradla cave, Aggteleki lake; Vörös lake. Bódvaszilás: Alsó Acskó spring. Jósavfő: at the lake, bank of the stream. Szalonna: wet meadow; water reservoir; at the bank of the Bódva stream. Szendrő. Szendrőlád: wet meadow. Szinpetri: arable soil.

Dendrobaena Eisen, 1884

Dendrobaena auriculata (Rosa, 1897) — Aggtelek: meadow, rock face. Jósavfő: bank of the stream.

Dendrobaena octaedra (Savigny, 1826) — Aggtelek: rock face, Aggteleki lake, Vörös lake. Bódvaszilás. Jósavfő: at the shore of the lake. Szalonna: Meleg spring. Szinpetri. Szin.

Fitzingeria Zicsi, 1978

Fitzingeria platyura depressa (Rosa, 1893) — Aggtelek: meadow. Szin: bank of the Bódva stream.

Fitzingeria platyura montana (Cernosvitov, 1932) — Aggtelek: meadow, karstic meadow. Bódvaszilas. Jósvalfő: at the lake shore. Szalonna: Meleg spring, water reservoir. Szendrő. Szendrőlád

Dendrodrilus Omodeo, 1956

Dendrodrilus rubidus (Savigny, 1826) — Aggtelek: meadow, Baradla cave. Jósvalfő: lower cave. Szinpetri: arable soil.

Dendrodrilus rubidus tenuis (Eisen, 1874) — Aggtelek: meadow.

Eisenia Malm, 1877

Eisenia foetida (Savigny, 1826) — Aggtelek: meadow. Jósvalfő: at the lake shore.

Eiseniella Michaelsen, 1900

Eiseniella tetraedra hercynia (Michaelsen, 1890) — Aggtelek: Aggteleki lake.

Eiseniella tetraedra tetraedra (Savigny, 1826) — Aggtelek: Aggteleki lake, Baradla cave, meadow. Bódvaszilas. Jósvalfő. Szin.

Helodrilus Hoffmeister, 1845

Helodrilus mozsaryorum (Zicsi, 1974) — Jósvalfő: lower cave szifon.

Lumbricus Linnaeus, 1758

Lumbricus rubellus Hoffmeister, 1843 — Aggtelek: karstic meadow, Vörös lake. Bódvaszilas. Jósvalfő. Szalonna: Meleg spring, bank of the Bódva stream. Szendrőlád: wet meadow. Szin: bank of the Bódva stream. Szinpetri.

Octodrilus Omodeo, 1956

Octodrilus gradinescui (Pop, 1938) — Bódvaszilas.

Octodrilus transpadanus (Rosa, 1884) — Aggtelek: arable soil, meadow, karstic meadow, Aggteleki lake, Vörös lake. Bódvaszilas. Jósvalfő. Szalonna: wet meadow, bank of the Bódva stream. Szendrő. Szendrőlád: wet meadow. Szin: bank of the Bódva stream. Szinpetri: arable soil.

Octolasion Örley, 1885

Octolasion lacteum (Örley, 1881) — Aggtelek: karstic meadow, meadow, Aggteleki lake, Vörös lake. Bódvaszilas: Alsó Acskó stream. Jósvalfő: at the lake shore. Szalonna: wet meadow, water reservoir, bank, of the Bódva stream. Szendrő. Szendrőlád: wet meadow. Szin: bank of the Bódva stream. Szinpetri: arable soil.

Proctodrilus Zicsi, 1985

Proctodrilus antipai (Michaelsen, 1891) — Aggtelek: meadow, Baradla cave. Szendrőlád. Szinpetri: arable soil

Proctodrilus tuberculatus (Cernosvitov, 1935) — Szalonna.

CRIODRILIDAE

Criodrilus Hoffmeister, 1845

Criodrilus lacuum Hoffmeister, 1845 — Szalonna: wet meadow.

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