

Water beetle fauna of the moors at Lake Balaton (Coleoptera: Hydraenidae)

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LÓKKÖS, A: *Water beetle fauna of the moors at the Lake Balaton (Coleoptera: Hydraenidae)*.

Abstract: Results of faunistic investigations on the moors along the Southern cost of the Lake Balaton is published. We have data on the water beetle fauna of Kis-Balaton and Nagyberek only. 64 species and subspecies of 7 families are recorded. Samples were taken at 6 places near Lake Balaton between 2003 and 2009. Most of the collected species are common throughout the country only *Laccobius gracilis* Motschulsky, 1855, is rare.

Keywords: faunistical records, Coleoptera, Hydraphaga, Hydrophiloidea, Balaton, Hungary

Introduction

The investigated moors were originally bays of the lake which were separated by sand-barriers. Now, these areas are strongly degraded, some of them were drained, or fish ponds are established there. Only few of them are remained in natural condition but they are seriously endangered. Between 2003 and 2009, I took several trips in the Southern cost of the lake collecting water beetles. The Hungarian aquatic beetle fauna is poorly studied, this is why so important each paper on this group, including the present study. Only few papers deal with this group, altogether 72 species were published from Kis-Balaton (KONDOROSY et al. 1996, CSABAI et al. 2001) and 80 species from Nagy-berek (LÓKKÖS 2006).

Material and methods

For the sampling, we used a circle shaped 40 cm diameter, 0.5 mm mesh, and also a smaller one called "tee filter". Collecting beetles on light was an auxiliary method, for this, I used a white sheet lightened with a mercury lamp. The collected specimens were killed with ethyl-acetate, and conserved dry. For identification, CSABAI (2000), CSABAI et al. (2002), HEBAUER (1989), JÄCH (1992, 1998), JÄCH et al. (2008) and LOHSE (1971) were consulted.

Helophorus minutus/paraminutus could be differentiated only by chromosomes; therefore we discuss them as species-group.

Sampling sites and geographical co-ordinates

Balatonboglár, Boglári berek	46°46'15.79" N	17°38'12.94"E
Balatonlelle, Lellei bozót	46°47'20.52"N	17°44'43.92"E
Balatonőszöd, Őszödi berek	46°48'25.10"N	17°48'46.48"E
Siófok, Töreki	46°50'47.40"N	18° 1'8.57"E
Siófok, Töreki halastavak	46°51'34.82"N	18° 0'44.08"E
Szántód, Brettyó	46°52'32.20"N	17°54'49.24"E

Results and discussion

64 species of 7 families were collected in the investigated areas. Siófok-Töreki proved to hold the most diverse beetle fauna with 46 species. Most of the captured species are common throughout Hungary. The dominant species are usually stagnophiles, and common in moors and wetlands. These are: *Hydroglyphus geminus*, *Cercyon sternalis*, *Anacaena limbata*, *Cymbiodyta marginella* and *Helochares obscurus*. *Laccobius gracilis* Motschulsky, 1855 is rare in Hungary.

Table 1: The collected material

Species	Siófok Töreki	Siófok Töreki-halastavak	Balatonőszöd Őszödi-berek	Balatonboglár Boglári-berek	Szántód Brettyó
Haliplidae					
<i>Haliphus fluviatilis</i> Aubé, 1836	+				
<i>Haliphus immaculatus</i> Gerhardt, 1877			+		
<i>Haliphus ruficollis</i> (De Geer, 1774)	+		+		
<i>Haliphus lineatocollis</i> (Marsham, 1802)				+	
<i>Peltodytes caesus</i> (Duftschmid, 1805)			+		+
Dytiscidae					
<i>Copelatus haemorrhoidalis</i> (Fabricius, 1787)		+	+		
<i>Hydroglyphus geminus</i> (Fabricius, 1792)	+	+	+	+	+
<i>Graptodytes bilineatus</i> (Sturm, 1835)	+				
<i>Hydroporus angustulatus</i> Sturm, 1835	+	+	+		+
<i>Hydroporus planus</i> (Fabricius, 1781)			+		
<i>Suphrodytes dorsalis</i> (Fabricius, 1787)		+			
<i>Hydrovatus cuspidatus</i> (Kunze, 1818)	+		+		
<i>Hygrotus decoratus</i> (Gyllenhal, 1808)	+	+	+		
<i>Hygrotus inaequalis</i> (Fabricius, 1776)	+		+		
<i>Hygrotus impressopunctatus</i> (Schaller, 1783)	+	+	+		+
<i>Hygrotus paralellogrammus</i> (Ahrens, 1812)	+				
<i>Hyphydrus ovatus</i> (Linnaeus, 1761)	+		+		
<i>Laccophius minutus</i> (Linnaeus, 1758)	+	+		+	
<i>Laccophius poecilus</i> Klug, 1834					+
<i>Agabus bipustulatus</i> (Linnaeus, 1767)	+				
<i>Ilybius fenestratus</i> (Fabricius, 1781)	+				
<i>Ilybius fuliginosus</i> (Fabricius, 1792)	+				
<i>Ilybius quadriguttatus</i> (Lacordaire, 1835)	+				
<i>Colymbetes fuscus</i> (Linnaeus, 1758)	+	+		+	+

Table 1. continued: The collected material

Species	Siófok Tőreki	Siófok Tőreki- halastavak	Balatonöszöd Öszödi-berek	Balatonboglár Boglári-berek	Szántód Brettyó
<i>Rhantus frontalis</i> (Marsham, 1802)	+				
<i>Rhantus suturalis</i> (MacLeay, 1825)	+				
<i>Rhantus grapii</i> (Gyllenhal, 1808)			+		
<i>Graphoderus austriacus</i> (Sturm, 1834)	+	+			
<i>Graphoderus cinereus</i> (Linnaeus, 1758)	+	+			
<i>Cybister latalimarginalis</i> (De Geer, 1774)		+			
<i>Hydaticus seminiger</i> (De Geer, 1774)		+		+	
<i>Hydaticus transversalis</i> (Pontoppidan, 1763)		+			
Noteridae					
<i>Noterus clavicornis</i> (De Geer, 1774)	+	+	+	+	
<i>Noterus crassicornis</i> (O.F.Müller, 1776)		+	+		
Helophoridae					
<i>Helophorus minutus</i> Fabricius, 1775	+				
<i>/ paraminutus</i> Angus, 1986					
<i>Helophorus granularis</i> (Linnaeus, 1761)	+				
Hydrophilidae					
<i>Coelostoma orbiculare</i> (Fabricius, 1775)		+	+		
<i>Cercyon marinus</i> Thomson, 1853	+				
<i>Cercyon laminatus</i> Sharp, 1873	+				
<i>Cercyon sternalis</i> Sharp, 1918	+	+	+	+	+
<i>Cryptopleurum subtile</i> Sharp, 1884	+				
<i>Anacaena limbata</i> (Fabricius, 1792)	+	+	+	+	+
<i>Laccobius bipunctatus</i> (Fabricius, 1775)	+				
<i>Laccobius gracilis</i> Motschulsky, 1855	+				
<i>Laccobius minutus</i> (Linnaeus, 1758)			+		
<i>Laccobius striatulus striatulus</i> (Fabricius, 1801)	+				
<i>Cymbiodyta marginella</i> (Fabricius, 1792)	+	+	+	+	+
<i>Enochrus melanocephalus</i> (Olivier, 1792)	+				
<i>Enochrus bicolor</i> (Fabricius, 1792)	+				+
<i>Enochrus ochropterus</i> (Marsham, 1802)	+				
<i>Enochrus quadripunctatus</i> (Herbst, 1797)	+		+		
<i>Enochrus testaceus</i> (Fabricius, 1801)	+				
<i>Enochrus coarctatus</i> (Gredler, 1863)	+	+	+		+
<i>Helochares obscurus</i> (O.F.Müller, 1776)	+	+	+	+	+
<i>Hydrobius fuscipes</i> (Linnaeus, 1758)	+	+			+
<i>Hydrochara caraboides</i> (Linnaeus, 1758)	+				+
<i>Limnoxenus niger</i> Zschach, 1788	+				
<i>Berosus frontifoveatus</i> Kuwert, 1888	+				
Hydraenidae					
<i>Hydraena paganettii</i> Ganglbauer, 1901				+	
<i>Hydraena palustris</i> Erichson, 1837				+	
<i>Ochthebius minimus</i> (Fabricius, 1792)	+		+	+	
<i>Limnebius atomus</i> (Duftschmid, 1805)					+
<i>Limnebius papposus</i> (Mulsant, 1844)	+			+	

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