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The Trichoptera fauna of the Lakes District in southern Turkey, with the description of a new species (Hydroptilidae)

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Abstract. A faunistic list of Trichoptera species found in the Lakes District in the Taurus Mountains (Turkey) is given. The list contains 75 species belonging to 17 families. *Stactobia bademli* sp.n. (Hydroptilidae), discovered from this region is described and illustrated.

Key Words. Trichoptera, new species, *Stactobia*, faunistics, Lakes Districts, Turkey

Introduction

The Lakes District in southern Turkey is located between Civril in the west (38° 17' N; 29° 46' E) and south of Konya (Sugla Lake) in the east (37° 15' N, 31° 57' E). The lakes of the district can be divided into two groups. The first group of lakes is located north of the Sultan Mountains (Aksehir, Eber, Cavuscu and Karamik Lakes) and in the south Egirdir, Beysehir, Burdur and Acıgöl Lakes. The last two lakes and Aksehir lakes have brackish water. The two important lakes of the Lakes district are located in the western Taurus Mountains at approximately 1000 m altitude. Both lakes have a karstic character originated from Pliocene and partly Quaternary (LAHN, 1948). In this paper, the results of the faunistic investigations in the two large lakes of the Lakes District and the surrounding mountainous area are presented, based on the material collected between 1993-2002.

The Trichoptera fauna of the Lakes District was poorly known until publication of the first list (SIPAHILER & MALICKY, 1987), which contained 11 species from this region. Later, some new species and subspecies with new records for the area were published, so that the number of known species increased to 20 (SIPAHILER, 1996). Since that time, many faunistic studies were carried out in this area (Tab. 1), which increased the known species to 75 belonging to 44 genera and 17 families (Tab. 2). Among them 19 species are endemic (25 %). The list includes also the species, *Micropterna malaspina* SCHMID, 1957, recorded formerly from this region (SIPAHILER & MALICKY, 1987) but not found during the field studies.

The large lakes in the south, namely Beysehir (650 km²) and Egirdir (500 km²) lakes have an endemic subspecies *Phryganea grandis serti* SIPAHILER (SIPAHILER, 2000). According to present knowledge both lakes have a similar fauna. The best-investigated Egirdir Lake has 10 species. Most of the endemic species of Lakes District are found in the south part of the lakes, in the Taurus Mountains, which were important refuge areas in past geological times. Some species, like *Ecclisopteryx delacarlina*

KOLENATI, distributed through northern Europe and found in northern Turkey (Sipahiler, 1999), were recently discovered in this region. Similarly, *Anabolia anatolica* SIPAHILER is found south of Beysehir Lake, and the relative species are found in northern Europe (SIPAHILER, 2001).

***Stactobia bademli* sp.n. (Hydroptilidae)**

Antennae, legs, wings, head and thorax dorsally dark brown blackish; abdomen ventrally pale brown, the sides pale yellowish; length of the anterior wing of males 2.5 mm. Male genitalia (Figs. 1-4): Tergite 9 is broad on the dorsal part and narrow on the ventral margin; lateral prolongations are long; the sclerotized part of segment 10 is long, almost triangular in shape. In ventral view, the superior appendages are small, triangular in shape and broader than the inferior appendages. The inferior appendages are rather thin and elongated, in ventral view, they are parallel to each other, narrowing through the anterior edges; posterior edges are strongly sclerotized. The aedeagus with two long internal spines; one spine is simple, the basal half is broader than the distal part; the second one is divided to three branches on the apical part; the two branches are almost smooth, while the third one is sinuate.

Holotype male and paratype male: Beysehir, Yenisarbademli, direction to Aksu, 5. km, 1350 m, (37° 50' N, 31° 19' E), 17.6.2002; other paratypes: Same place, 21.7.1998, 1 male, 4 females, Leg. & coll. Sipahiler.

Stactobia bademli sp.n. is related to *S. forsslundi* SCHMID, *S. marlieri* SCHMID, *S. mayeri* SCHMID (SCHMID, 1959) and *S. urania* MALICKY (MALICKY, 1976). All these related species belonging to the *martyнови*-group have a distal sclerite and a long basal sclerite in the aedeagus. In *S. urania* the basal sclerite is broad and the inner side is engraved. *S. bademli* sp.n. possesses no separate distal sclerite and the basal sclerite is longer than those of the related species, reaching to the subdistal portion. The second sclerite of the new species is also long, dividing to three branches on the subdistal part.

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Table. 1: The list of the localities in the Lakes District.

No	Localities
1.	Isparta, Sütcüler Yazlı Kanyon, Aksu river, 30.5.1993
2.	Beyşehir, Kurucuova, 7 km S, Genek, 11.6.93; 20.8.1999
3.	Beyşehir, Yenisarbademli, Pınargözü Cave, 5.8.1993
4.	Konya Akşehir, Saray Köyü, Sultan Mountains, 1450 m, 7.5.1994
5.	Akşehir, Saray Köyü, Sultan Mountains, 1800m, 11.6.1994
6.	Isparta, Yalvac, 9 km, NE, Beldibi, 12.6.1994
7.	Beyşehir, Yesildag, direction to Beyşehir, 15. km, Ilirmak, 1100m, 20.7.1998
8.	Egirdir, Aksu, the source of Aksu river, 17.6.2002
9.	Egirdir, Aksu, 10 km to Kasımlar, 1470 m, Tota Dagı, 3.8. 2002
10.	Beyşehir, 20 km W, Eflatun Pınarı, 7.5.1995
11.	Beyşehir, direction Konya, 21. km, Sarıköy, 22.7.1998
12.	Beyşehir, Kurucuova, direction Sütcüler, 1350 m, 21.7.1998
13.	Beyşehir Lake, 19.7.1998
14.	Beyşehir, Yesilbag Köyü, Güldürhacı Mah. 20.7.1998
15.	Isparta, Egirdir Lake, 2.8.2001
16.	Beyşehir, 18 km S, Üstünler Köyü, 1100 m, 20.7.1998
17.	Beyşehir, Yenisarbademli, direction to Aksu, 5. km, 1000 m, 17.6.2002
18.	Afyon, Cay, Eber, Sultan Mountains, 1400 m, 29.10.1996
19.	Beyşehir, Dedegöl Mountains, 2350 m, Karagöl, 7.8.1993
20.	Afyon, Cay, Karamik Lake, 20.6.1981, 7.5.1983
21.	Egirdir, Aksu, 7 km before the source of Aksu river, 17.6.2002
22.	Egirdir, from the canal between Egirdir and Kovada lakes, 20.7.1999
23.	Isparta, Gelendost, direction to Akşehir, 37. km, 4.6.1993
24.	Beyşehir, Dedegöl Mountains, 1700 m, 6.8.1993
25.	Beyşehir, direction Konya, 21 km E, Sarıköy cayı, 22.7.1998
26.	Same place, 25. km, Ücparlar, 22.7. 1998
27.	Isparta, Aksu, above the source of Aksu river, 1300 m, 30.7.2001
28.	Isparta, Egirdir, direction Sütcüler, 30. km, Aksu river, 2.8.2002
29.	Egirdir, Aksu, Aksu river 1200 m, 2.8.2002
30.	Beyşehir, Samlar yolu, Laleli dağı, 29.5.1998
31.	Beyşehir, Dolana sırtı, 29.5.1998
32.	Beyşehir, Camlıktepe, 26.5.1998
33.	Beyşehir, 46 km SW of Beyşehir, Akcabelen Pınarı 3.10-2.11. 1997

Table 2: The list of the species found in the Lake District. Distribution Reference: Botosaneanu & Malicky, 1978; Sipahiler & Malicky, 1987; Mirmoayedi & Malicky, 2002. E: Endemics.

Rhyacophilidae	Localities	Distribution
<i>Rhyacophila nubila</i> Zetterstedt, 1840	2,4,5,16	Europe, Israel, Iran
<i>R. isparta</i> Sipahiler, 1996	1,8	E
Glossosomatidae		
<i>Agapetus caucasicus</i> Martynov, 1913	1,4,5,6,7,8,9	Caucasus, Levant, Iran
<i>Glossosoma develi</i> Malicky, 1972	1,2,8	E
<i>Synagapetus anatolicus</i> Cakin, 1983	3,5,6,9	E
<i>S. sarayensis</i> Sipahiler, 1996	5	E
Ptilocolepidae		
<i>Ptilocolepus granulatus dilatatus</i> Martynov, 1913	4	Caucasus
Hydroptilidae		
<i>Agraylea sexmaculata</i> Curtis, 1834	2,14,15	Europe, Iran, Turkestan
<i>Allotrichia teldanica</i> Botosaneanu, 1974	2	Levant
<i>Hydroptila aegyptia</i> Ulmer, 1963	1,10,15	N-Africa, Greece, Egypt, Crete
<i>H. angustata</i> Mosely, 1939	1,11,13,15	E- Mediterranean
<i>H. occulta</i> Eaton, 1874	1,2	Europe-Central Asie
<i>H. vectis</i> Curtis, 1834	2	Europe, Pakistan, Levant
<i>Ithytrichia bosniaca</i> Murg. & Botn. & Bots., 1948	2	Balkans, Italian Alps
<i>Orthotrichia costalis</i> Curtis, 1834	15	Europe-Iran, Levant
<i>Oxyethira falcata</i> Morton, 1893	10,13	Europe-Pakistan, Levant, Cyprus
<i>Stactobia bademli</i> sp.n.	12	E
Philopotamidae		
<i>Philopotamus achemenus</i> Schmid, 1959	4,5,6	Iran, Greece, Bulgaria
<i>P. variegatus</i> Scopoli, 1763	4,5	Europe
<i>Wormaldia balcanica</i> Kumanski, 1979	4,18	Bulgaria, Greece
Hydropsychidae		
<i>Cheumatopsyche capitella</i> Martynov, 1927	2	Greece, Iran-Turkestan
<i>Diplectrona atra</i> McLachlan, 1878	4	S-Europe, Iran
<i>Hydropsyche bulbifera</i> McLachlan, 1878	22	Europe
<i>H. kebab</i> Malicky, 1974	1,21,23,24	E
<i>H. instabilis</i> Curtis, 1834	2,24	Europe-Iran
Polycentropodidae		
<i>Holocentropus picicornis</i> Stephens, 1836	19,20	Holarctic
<i>Polycentropus flavomaculatus</i> Pictet, 1834	1	N-Africa, Europe
<i>P. ierapetra isparta</i> Sipahiler, 1996	1	E
Psychomyiidae		
<i>Psychomyia pusilla</i> Fabricius, 1781	2	Europe-Iran, N-Africa, Levant
<i>Tinodes beysehirensis</i> Sipahiler, 1999	12	E
<i>T. kadiellus</i> Botosaneanu & Gasith, 1971	2	Levante, Rhodos
<i>T. kemerensis</i> Sipahiler, 1989	2	E
<i>T. pluvialis</i> Malicky, 1987	12,17	E
<i>T. popovi</i> Kumanski, 1975	4	Bulgaria, Samos
<i>T. valvatus</i> Martynov, 1913	4	Caucasus
Ecnomidae		
<i>Ecnomus tenellus</i> Rambur, 1842	13,15,20	Europe to Ceylon and Taiwan
Phryganeidae		
<i>Agrypnia pagetana</i> Curtis, 1835	20	Holarctic
<i>A. varia</i> Fabricius, 1793	2	Europe-Iran
<i>Phryganea grandis serti</i> Sipahiler, 2000	13,15	E
Brachycentridae		
<i>Micrasema bifoliatum</i> Martynov, 1925	1,4,5,6	Iran, Caucasus
Limnephilidae		
<i>Anabolia anatolica</i> Sipahiler, 2001	33	E
<i>Drusus botosaneanui</i> Kumanski, 1968	4	Bulgaria
<i>D. gueneri</i> Sipahiler, 1995	3	E

<i>Ecclisopteryx dalecarlica</i> Kolenati, 1848	29	Europe
<i>Grammotaulius nigropunctatus</i> Retzius, 1783	3,30	Palaearctic
<i>Limnephilus affinis</i> Curtis, 1834	2	Palaearctic
<i>L. flavospinosus</i> Stein, 1874	2,30,31,32	S-Europe
<i>L. hirsutus</i> Pictet, 1834	2,4,23	Europe
<i>L. lunatus</i> Curtis, 1834	2	Europe-Iran
<i>L. incisus</i> Curtis, 1834	15	Palaearctic
<i>L. ponticus</i> McLachlan, 1898	2,3,4,5	E
<i>L. vittatus</i> Fabricius, 1798	2	Europe, Siberia
<i>Micropterna caesareica</i> Schmid, 1959	4	SE-Europe
<i>M. malaspina</i> Schmid, 1957	(Sipahiler & Malicky, 1987)	SE-Europe, Levant
<i>M. nycterobia</i> McLachlan, 1875	2	Europe
<i>Stenophylax meridionalis</i> Malicky, 1980	3	SE-Europe, Levant
Goeridae		
<i>Lithax genek</i> sp.n.	2,8	E
Lepidostomatidae		
<i>Lasiocephala holzschuhi</i> Malicky, 1977	1,4,5,6	E
Leptoceridae		
<i>Adicella hypseloknossoios</i> Malicky, 1977	7,25,26	Cyprus
<i>A. syriaca</i> Ulmer, 1907	25	Bulgaria, Levant, Greece
<i>A. thalia</i> Malicky, 1976	6	E
<i>Athripsodes longispinosus</i> Martynov, 1909	12,13,14,15	SE-Europe, Iran
<i>Ceraclea senilis</i> Burmeister, 1839	15,20	Europe-Siberia, Iran
<i>Leptocerus interruptus</i> Fabricius, 1775	7,26,27,28	Europe
<i>L. aksu</i> sp.n.	27,28	E
<i>L. tineiformis</i> Curtis, 1834	7	Europe
<i>Mystacides nigra</i> Linnaeus, 1758	15	Palaearctic
<i>Oecetis ochracea</i> Curtis, 1825	13,15,20	Holarctic
<i>Setodes anatolicus</i> Schmid, 1964	25	Iran
<i>S. bulgaricus</i> Kumanski, 1976	25	Bulgaria
<i>Ylodes conspersus</i> Rambur, 1842	27	Europe
Sericostomatidae		
<i>Schzopelex anatolica</i> Schmid, 1964	4,5	E
<i>Sericostoma flavicorne</i> Schneider, 1845	1,3,4,5,6	Europe
Beraeidae		
<i>Beraea walteri</i> Malicky, 1975	12	Cyprus
<i>Ernodes articularis</i> Pictet, 1834	4,5	Europe

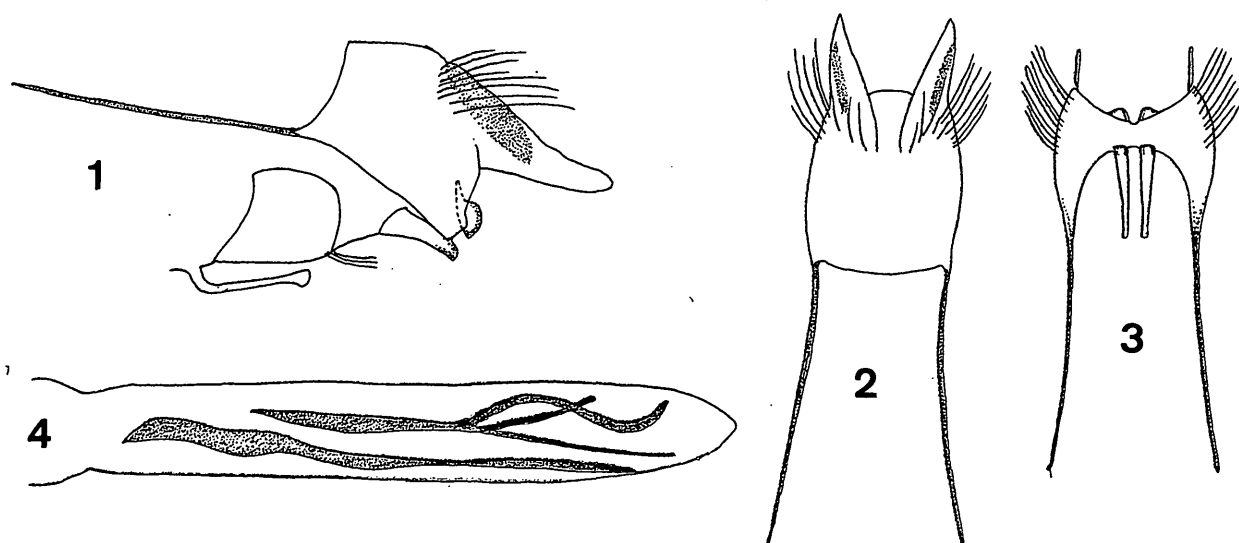


Fig. 1-4: *Stactobia bademli* sp.n. male genitalia; 1, lateral; 2, dorsal; 3, ventral; 4, aedeagus, dorsal.