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A review of Turkish Leiodinae (Coleoptera: Leiodidae)

Přehled brouků podčeledi Leiodinae (Coleoptera: Leiodidae) Turecka

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Abstract. Records of 19 species of Leiodinae from Turkey are presented. One species - *Leiodes turcica* sp. n. from Turkey and Abkhazia is described as new to science, eight species - *Leiodes polita* (Marsham, 1802), *L. subtilis* (Reitter, 1885), *Liocyrtusa vittata* (Curtis, 1840), *Colenis immunda* (Sturm, 1807), *Anisotoma humeralis* (Fabricius, 1792), *A. glabra* (Kugelann, 1794), *Agathidium nigripenne* (Fabricius, 1792) and *A. tenuicorne* Reitter, 1884 are recorded from Turkey for the first time. All fifty species of Leiodinae known from Turkey are listed.

INTRODUCTION

Except of the tribe Agathidiini Westwood, 1838 which was recently studied by Angelini (1989, 1990, 1995) and Angelini & De Marzo (1988) and except of the genus *Ansibaris* Reitter, 1883 which was studied by Daffner (1989), Leiodinae of Turkey are insufficiently known. Only 41 species have been recorded from the territory till now. In the present paper, nine additional species are recorded as new for Turkey, among them one species new to science. The complete list of all 50 species known from the area is given below.

MATERIAL

The study is based on 50 specimens belonging to 19 species, which were mostly collected by Czech entomologists in Turkey in recent years; a small series comes from the collection of the Hungarian Natural History Museum, Budapest. The material was determined by the author if not stated otherwise. It is deposited in the author's collection (SC), coll. Jiří Vávra, Ostrava (VC), coll. Petr Zahradník, Praha (ZAC) and in the collection of the Hungarian Natural History Museum, Budapest (HNHM).

The specimens were collected on the following localities (the localities are shown in Fig. 1):

1 a) Turkey bor., Bolu prov., Abant Gölü, 23.-24.vi.1996, P. Zahradník lgt. Abbreviation used in this work: Abant a).
1 b) The same data as 1 a) except: 4.-23.vi.1996, J. Vávra lgt. Abbreviation: Abant b).
1 c) The same data as 1 a) except: 1200 m, 4.vi.1996, M. Knížek lgt. Abbreviation: Abant c).
1 d) The same data as 1 a) except: 20.v.1994, Z. Švec lgt. Abbreviation: Abant d).
1 e) The same data as 1 a) except: 4.vi.1996, V. Švihla lgt. Abbreviation: Abant e).
2. Turkey bor., Borçka - Hopa [near road from Borçka to Hopa], 12.vi.1996, Z. Švec lgt. Abbreviation: Hopa.
3. Turkey bor., Zonguldak prov., Safranbolu, 1000 m, 4.-5.vi.1996. V. Švihla lgt. Abbreviation: Safranbolu.
4. Turkey bor., Zonguldag prov., 20 km E of Karabük, 22.-23.vi.1996, J. Vávra lgt. Abbreviation: Karabük.
5. Turkey bor., Köyü near Erzincan, Ganiefendi, Ciflik, 1200 m, 27.-28.vi.1996, A. Podlussány lgt. Abbreviation: Ciflik.
6. Turkey bor., Kastamonu prov., 56 km NNW Kastamonu, Agli, 22.vi.1996, V. Švihla lgt. Abbreviation: Agli.
7. Turkey bor., Harcbeli Geçidi, 19.vi.1996, Z. Švec lgt. Abbreviation: Harcbeli Geçidi.
8. Turkey bor., Susuz near Çankiri, 1200 m, 9.vii.1996, A. Podlussány lgt. Abbreviation: Susuz.
9. Turkey bor., Cancurtalan near Artvin, 800 m, 1.-2.vii.1996, A. Podlussány lgt. Abbreviation: Cancurtalan.
10. Turkey bor., Maçka env. near Trabzon, 27.-30.vi.1997, P. Průdek & M. Říha lgt. Abbreviation: Maçka.



Fig. 1. Map of Turkish localities: 1 - Abant Gölü; 2 - Borçka - Hopa [near road from Borçka to Hopa]; 3 - Safranbolu; 4 - Karabük, 20 km E; 5 - Köyü near Ganiefendi, Ciflik; 6 - Agli, 56 km NNW Kastamonu; 7 - Harcbeli Geçidi; 8 - Susuz near Çankiri; 9 - Cancurtalan near Artvin; 10 - Maçka near Trabzon.
Obr. 1. Mapa tureckých lokalit: 1 - Abant Gölü; 2 - Borçka - Hopa [u silnice mezi Borçka a Hopa]; 3 - Safranbolu; 4 - Karabük, 20 km E; 5 - Köyü u Ganiefendi, Ciflik; 6 - Agli, 56 km severo-severozápadně od Kastamonu; 7 - Harcbeli Geçidi; 8 - Susuz pr. Çankiri; 9 - Cancurtalan pr. Artvin; 10 - Maçka pr. Trabzon.

RESULTS

Leiodes polita (Marsham, 1802)
Material examined. Abant b), 1 spec. (VC); Abant e), 2 spec. (SC); Safranbolu, 1 spec. (SC).
New species for Turkey.

Leiodes subtilis (Reitter, 1885)
Material examined. Ciflik, 4 spec. (HNMB, SC).
New species for Turkey.

Leiodes turcica sp. n.
(Fig. 2)

Type material. Holotype, male, "Turkey, vil. Trabzon, Maçka env., 27.-30.vi.1997, P. Průdek & M. Říha lgt."; paratype, female, the same; paratype, female, "USSR, Abchazia - Caucasus occ., Achalšeni pr. Suchumi (500 m), 9.6.1981, J. Strejček leg."; all deposited in SC.
Description. Oblong oval. Reddish-brown, antennae red, its club yellow-red. Surface of venter red.

Length of body 2.5-3.1 mm, in holotype 2.5 mm, length of head in holotype 0.3 mm, pronotum 0.6 mm, elytra 1.6 mm, antenna 0.7 mm. Maximal width of head in holotype 0.7 mm, pronotum 1.2 mm, elytra at first third of their length 1.3 mm.

Head. Distinctly irregularly punctate, punctures spaced by 0.5-4.0 times their own diameters. Some very fine, minutious punctures interposed. Clypeal line slightly developed. Four large setigerous punctures placed in transverse row at posterior level of eyes. Ratio of length of anten-

nal segments 2 to 11 (segment 2 equal to 1.0): 1.0 - 1.2 - 0.8 - 0.7 - 0.7 - 0.6 - 0.4 - 1.1 - 1.2 - 2.1. Ratio of width of club segments 7 to 11 (segment 7 equal to 1.0): 1.0 - 0.8 - 1.4 - 1.6 - 1.4. Ratio of width : length of the antennal club segments: 2.8 - 2.8 - 2.0 - 2.1 - 1.0.

Pronotum. Similarly punctate as on head, punctures distributed more regularly, separated by about 1-5 times their own diameters. Before base along posterior margin and at hind angles numerous large, densely arranged punctures. Interstices without microsculpture. Pronotum widest at base, posterior angles rectangular, broadly rounded in dorsal view. Posterior angles very blunt and broadly rounded in lateral view. Margins of pronotum slightly emarginate before hind angles in lateral view.

Scutellum. Punctation of scutellum similar to that on pronotum, interstices smooth.

Elytra. Widest at anterior third of their length. With regular rows of punctures. Row 9 oblique, short, joining lateral channel at anterior third of elytral length. All rows composed by coarse large punctures separated by 0.5-2.0 times their own diameters. Odd intervals with sparsely distributed punctures a little smaller than those in rows. Beside it all intervals distinctly, sparsely punctate, punctures nearly as large as on pronotum and head, spaced by about 4-8 times their own diameters. Interstices smooth in elytral intervals 1 to 4. Transverse scratches developed in intervals remaining on lateral parts of elytra. Scratches connect punctures placed in rows with some smaller punctures present in intervals. Lateral parts of elytra with several erected pale setae.

Mesosternum. Carina of type A sensu Daffner (1983).

Metathoracic wings fully developed.

Legs. Segments 1 to 4 of pro- and mesotarsi slightly but distinctly dilated, posterior femora roundly lobe shaped at their posterior apex in male.

Genitalia. Aedeagus as in Fig. 2.

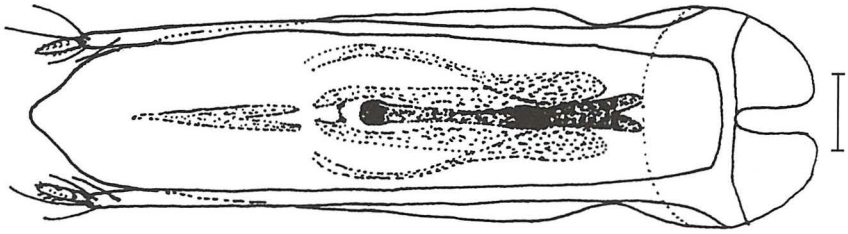


Fig. 2. *Leiodes turcica* sp. n., aedeagus dorsally. Scale = 0.1 mm.
Obr. 2. *Leiodes turcica* sp. n., aedeagus, dorzální pohled. Měřítko = 0,1 mm.

Bionomy. Not known.

Derivatio nominis. The specific name is derivated from the name of one of the countries where the species was discovered.

Differential diagnosis. *Leiodes turcica* sp. n. closely resembles *L. hybrida* (Erichson, 1845) by the body shape, by the presence of elytral scratches, by the type of mesosternal carina and by the widely rounded posterior angles of pronotum. *Leiodes turcica* sp. n. differs from the latter species by the pale antennal club (mostly dark in *L. hybrida*), by the scarcely and simply punctate elytral

intervals (densely double punctate in *L. hybrida*), by the shape of aedeagal apex and by the shape of the endophallic structures. Male genitalia of *L. hybrida* were figured by Daffner (1983: Figs 125, 126). Tegmen ends by a short rounded bump in *Leiodes turcica* sp. n. while it ends by a slim process in *L. hybrida.*

Liocyrtusa vittata (Curtis, 1840)
Material examined. Ciflik, 1 spec. (HNMB).
New species for Turkey.

Colenis immunda (Sturm, 1807)
Material examined. Karabük, 1 spec. (VC).
New species for Turkey.

Anisotoma glabra (Kugelann, 1794)
Material examined. Abant a), 4 spec. (SC, ZAC).
New species for Turkey.

Anisotoma humeralis (Fabricius, 1792)
Material examined. Abant a), 9 spec. (SC, ZAC).
New species for Turkey.

Anisotoma orbicularis (Herbst, 1792)
Material examined. Maçka, 1 spec. (SC).
The species has been already mentioned from Turkey by Angelini & De Marzo (1988).

Amphicyllis globus (Fabricius, 1792)
Material examined. Agli, 1 spec. (SC); Susuz, 1 spec. (HNHM).
The species has been already mentioned from Turkey by Angelini (1990).

Agathidium (Neoceble) filicorne Reitter, 1888
Material examined. Cancurtalan, 6 spec. (HNHM).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium (Neoceble) nigripenne (Fabricius, 1792)
Material examined. Hopa, 1 spec. (SC); Abant c), 1 spec. (SC).
New species for Turkey.

Agathidium (Neoceble) plagiatum (Gyllenhal, 1810)
Material examined. Abant d), 4 spec., F. Angelini det. (SC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium (Neoceble) tenuicorne Reitter, 1884
Material examined. Hopa, 1 spec., F. Angelini det. (SC).
New species for Turkey.

Agathidium (Agathidium) brignolii Angelini et De Marzo, 1983
Material examined. Abant b), 1 spec. (VC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium* (*Agathidium*) *caucasicum Reitter, 1884
Material examined. Hopa, 1 spec. (SC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium* (*Agathidium*) *leonhardianum Roubal, 1915
Material examined. Abant b), 1 spec. (VC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium* (*Agathidium*) *pisanum Brisout, 1872
Material examined. Harcbeli Geçidi, 1 spec. (SC); Abant b), 3 spec. (VC, SC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium* (*Agathidium*) *seminulum (Linnaeus, 1758)
Material examined. Harcbeli Geçidi, 1 spec. (SC).
The species has been already mentioned from Turkey by Angelini (1995).

Agathidium* (*Agathidium*) *tibiellum Hlisnikovský, 1972
Material examined: Cancurtalan, 1 spec. (HNHM).
The species has been already mentioned from Turkey by Angelini (1995).

LIST OF LEIODINAE KNOWN FROM TURKEY

The species recorded as new for Turkey are marked with *; the remaining species treated in this paper are marked with !. *Agathidium* (*A.*) *obenbergeri* was recorded as doubtful from Turkey by Angelini (1995). The record is based on a single specimen labelled "Turcia". The locality is probably non correct as all known specimens of this species come from Italy.

Sogdini Lopatin, 1961

Hydnobius Schmidt, 1841
H. punctulatus Hampe, 1861 — S and E Europe, Turkey, Mongolia

Leiodini Fleming, 1821

Leiodes Latreille, 1796
L. cribricollis (Portevin, 1943) — Turkey
**L. polita* (Marsham, 1802) — N Africa, Europe, Turkey, Caucasus
**L. subtilis* (Reitter, 1885) — E Europe, Turkey, Saudi Arabia, Afghanistan, Turkestan, Mongolia, Siberia
**L. turcica* sp. n. — Turkey, Abkhazia

Liocyrtusa Daffner, 1982
**L. vittata* (Curtis, 1840) — Europe, Turkey, Caucasus, Afghanistan

Pseudoliodini Portevin, 1926

Agaricophagus Schmidt, 1841
A. caucasicus Hlisnikovský, 1964 — Turkey, Caucasus

Ansibaris Reitter, 1888
A. claudei Daffner, 1989 — Turkey
A. glabricollis Daffner, 1989 — Turkey
A. latistriatus Daffner, 1989 — Turkey

Colenis Erichson, 1842	
**C. immunda* (Sturm, 1807)	Europe, Turkey, Caucasus, Iran
Agathidiini Westwood, 1838	
Anisotoma Panzer, 1797	
**A. humeralis* (Fabricius, 1792)	Europe, Turkey, Caucasus, USA, Canada
**A. glabra* (Kugelann, 1794)	Palaearctic
!A. orbicularis (Herbst, 1792)	Europe, Turkey, Caucasus, Iran, E Siberia
Amphicyllis Erichson, 1845	
!A. globus (Fabricius, 1792)	Europe, Turkey, Caucasus, Mongolia, Siberia
Agathidium Panzer, 1797	
!A. (Neoceble) filicorne Reitter, 1888	Turkey, Caucasus
A. (N.) fronticorne Reitter, 1897	Turkey, Azerbaidjan
A. (N.) immaculatum Angelini et DeMarzo, 1983	Turkey
A. (N.) levantinum Angelini et DeMarzo, 1983	Turkey
A. (N.) marginatum Sturm, 1807	Algeria, Europe, Turkey, Caucasus, Syria
**A. (N.) nigripenne* (Fabricius, 1792)	Europe, Turkey, Caucasus
A. (N.) osmanicum Hlisnikovský, 1972	Turkey
!A. (N.) plagiatum (Gyllenhal, 1810)	Europe, Turkey, Caucasus, Iran
A. (N.) pseudobescidicum Angelini et DeMarzo, 1983	Bulgaria, Ukraine, Turkey, Caucasus
A. (N.) sahlbergi Reitter, 1900	Greece, Turkey, Cyprus, Israel
A. (N.) temporale Sahlberg, 1908	Greece, Crete, Turkey, Cyprus, Israel, Iran, Central Asia, Mongolia, Siberia
**A. (N.) tenuicorne* Reitter, 1884	Turkey, Caucasus
A. (Agathidium) anatolicum Angelini et DeMarzo, 1983	Turkey
A. (A.) antiochense Angelini et DeMarzo, 1983	Turkey
A. (A.) atrum (Paykull, 1798)	Europe, Turkey, Caucasus, Siberia
A. (A.) badium Erichson, 1845	Europe, Turkey, Caucasus, Iran
!A. (A.) brignolii Angelini et DeMarzo, 1983	Turkey
A. (A.) burckhardti Angelini, 1989	Turkey
A. (A.) bythinicum Angelini et DeMarzo, 1983	Turkey
!A. (A.) caucasicum Reitter, 1884	Turkey, Caucasus
A. (A.) cotarelli Angelini et De Marzo, 1983	Turkey
A. (A.) denticulatum Hlisnikovský, 1972	Turkey, Caucasus, Syria, Lebanon, Israel
A. (A.) laevigatum laevigatum Erichson, 1845	Europe, Turkey, Caucasus, Cyprus, Israel, Iran, Siberia, Mongolia, Himalaya
!A. (A.) leonhardianum Roubal, 1915	S and E Europe, Turkey
A. (A.) loebli Angelini et DeMarzo, 1983	Turkey
A. (A.) mequignoni Roubal, 1911	Turkey, Caucasus, Iran, Kirghizia, Siberia, Korea
A. (A.) obenbergeri Hlisnikovský, 1964	Italy, ?Turkey
A. (A.) olympicum Angelini et DeMarzo, 1983	Turkey
A. (A.) osellai Angelini et DeMarzo, 1983	Turkey
!A. (A.) pisanum Brisout, 1872	Europe, Turkey, Caucasus
!A. (A.) seminulum (Linnaeus, 1758)	Algeria, Europe, Turkey, Caucasus, Turkmenistan
A. (A.) suturale Reitter, 1877	Turkey, Caucasus
!A. (A.) tibiellum Hlisnikovský, 1972	Turkey
A. (A.) turcicum Reitter, 1898	Turkey
A. (A.) winkleri Hlisnikovský, 1964	Crimea, Turkey

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SOUHRN

V práci je zpracován materiál sbíraný v poslední době českými entomology v Turecku a materiál pocházející ze sbírky Maďarského přírodovědeckého musea v Budapešti. Je popsán nový druh *Leiodes turcica* sp. n. z Turecka a Abcházie a poprvé je z Turecka hlášeno následujících 8 druhů podčeledi Leiodinae: *Leiodes polita* (Marsham, 1802), *L. subtilis* (Reitter, 1885), *Liocyrtusa vittata* (Curtis, 1840), *Colenis immunda* (Sturm, 1807), *Anisotoma humeralis* (Fabricius, 1792), *A. glabra* (Kugelann, 1794), *Agathidium nigripenne* (Fabricius, 1792) a *A. tenuicorne* Reitter, 1884. Práce obsahuje seznam všech padesáti dosud známých tureckých druhů podčeledi Leiodinae.