

## ARTIGO / ARTÍCULO / ARTICLE

Contribution to the knowledge of the click-beetles  
(Coleoptera: Elateridae) from Kurdistan Region - Iraq,  
with description of three new species.Giuseppe Platia<sup>1</sup> & Halgurd Rashed Ismael Akrawi<sup>2</sup><sup>1</sup> Via Molino Vecchio, 21/a 47043, Gatteo (FC), ITALY. e-mail: pinoplatia@teletu.it<sup>2</sup> University of Duhok (UOD). Faculty of Agriculture & Forestry. IRAQ. e-mail: Halgurd.Ismael@uod.ac

**Abstract:** In this paper, the first contribution about the Elateridae (Coleoptera) from the Iraqi Kurdistan, 17 species are recorded. Four species belonging to genera *Lanelater* Arnett, 1952, *Lacon* Laporte de Castelnau, 1838, *Haterumelater* Ohira, 1968 and *Dicronychus* Brullé, 1832 are recorded for the first time from Iraq. Three new species belonging to genera *Agriotes* Eschscholtz, 1829 and *Dicronychus* Brullé, 1832 are described for the first time: *Agriotes kurdistanus* n. sp., *Agriotes duhokensis* n. sp. and *Dicronychus truncatus* n. sp.

**Key words:** Coleoptera, Elateridae, new species, new records, Kurdistan Region, Iraq.

**Resumen:** Contribución al conocimiento de los elatéricos (Coleoptera: Elateridae) de la región de Kurdistán - Iraq, con la descripción de tres nuevas especies. En este trabajo, la primera contribución sobre los Elateridae (Coleoptera) de la región de Kurdistán - Iraq, se aportan citas de 17 especies. Cuatro especies pertenecientes a los géneros *Lanelater* Arnett, 1952, *Lacon* Laporte de Castelnau, 1838, *Haterumelater* Ohira, 1968 y *Dicronychus* Brullé, 1832 son citadas por primera vez de Iraq. Se describen por primera vez tres especies nuevas pertenecientes a los géneros *Agriotes* Eschscholtz, 1829 y *Dicronychus* Brullé, 1832: *Agriotes kurdistanus* n. sp., *Agriotes duhokensis* n. sp. and *Dicronychus truncatus* n. sp.

**Palabras clave:** Coleoptera, Elateridae, especies nuevas, nuevas citas, región de Kurdistán, Iraq.

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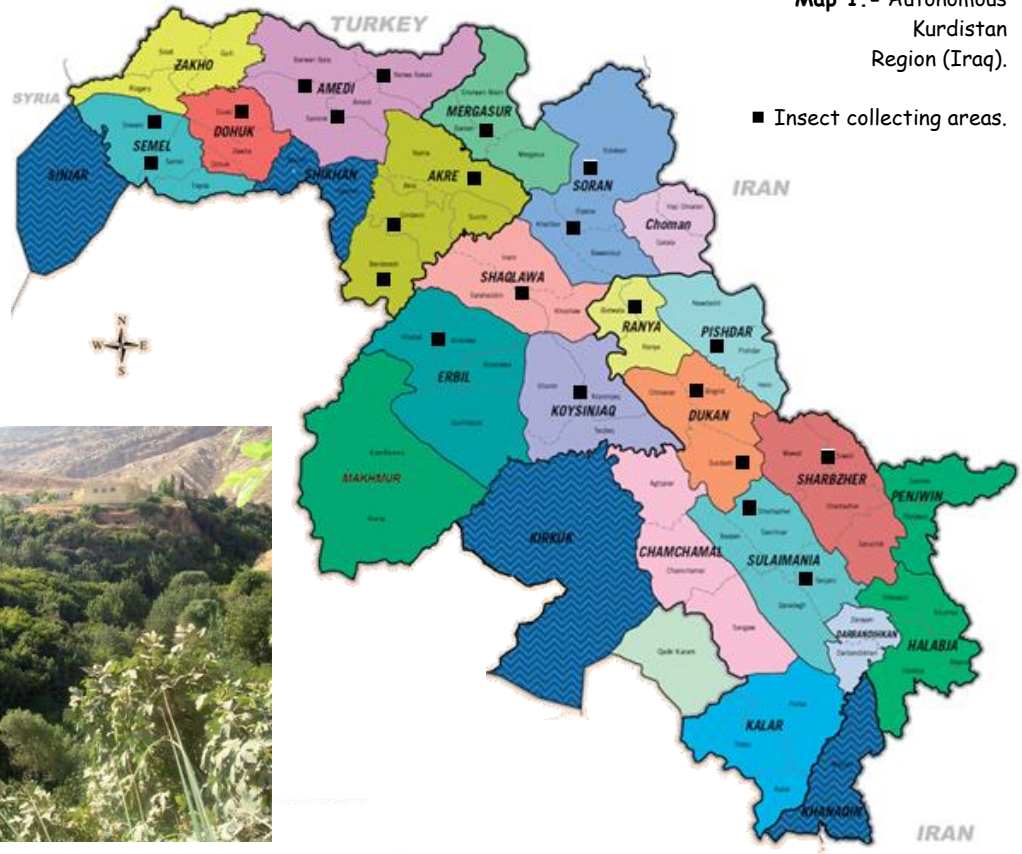
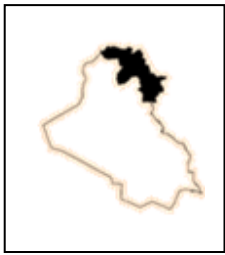
## Introduction

According to the latest catalogue of Palaearctic Coleoptera (Cate, 2007) thirty species of Elateridae (Coleoptera) have been so far recorded from Iraq. Akrawi (2010) recently carried out a taxonomic study of this family in Iraq, where twelve species are reported. Previously, Derwesh (1965) mentioned the occurrence of twelve species, Shalaby *et al.* (1966) recorded two species in Baghdad, Swailem *et al.* (1974) recorded one species belonging to the genus *Melanotus* in Mosul, and Abdul-Rassoul (1976) and Al-Ali (1977) mentioned that there are four and three species in Iraq, respectively.

In this paper we discuss about species from the Kurdistan Region of Iraq. The study of new material, collected mostly by light trap, has given us the opportunity to recognize 17 species of which four were never recorded before for Iraq and three species are new and described here for the first time. These species were collected during the period 2009-2012 in different places from Iraq's Kurdistan Region (see Map 1, figs. 1-5), mainly in mountainous and semi-mountainous areas, using light traps and an aspirator within fields, orchards, crops, forests and also on the weed's flowers.

**Map 1.** - Autonomous Kurdistan Region (Iraq).

■ Insect collecting areas.



**Figs. 1-5.** - Pictures of Kurdistan Region - Iraq. (photos by H.R. Akrawi).  
 1.- Bjil. 2.- Grbish. 3.- Akre. 4.- Soran. 5.- Mergasur.

The species of family Elateridae spread across different areas of Iraq but have a bigger presence in Kurdistan because of the density of orchards and forests that characterizes this region increases the biodiversity of plants and animals. Despite of this abundance of insects in different areas in Kurdistan, there are many species not recorded yet because the few studies of insects from these areas.

## Material and methods

*Measurements* - Body length is measured along the midline from the anterior margin of frons to apex of the elytra; width is measured across the broadest part of the body. Pronotal length is measured along the midline; the width is at the broadest part, usually at hind angles.

*Abbreviations* - The names of collections providing material for this study are abbreviated as follows: CPG, collection of G. Platia, Gatteo (Italy); (UOD) University of Duhok Faculty of Agriculture & Forestry Plant Protection Department, Kurdistan Region - Iraq.

The subfamilial and tribal placement of genera listed below follows Bouchard *et al.* (2011).

## Results

Subfamily **Agrypninae** Candèze, 1857

Tribe **Agrypnini** Candèze, 1857

*Lanelater persicus* (Candèze, 1874)

**Material examined.** 2 specm. (♂) - Iraq: Kurdistan Region, Erbil-Shaqlawa, Mergasor, 1.VII-1.IX.2009, at light.

**Distribution.** **Europe:** Turkey; **Asia:** Iran (Cate, 2007). New to Iraq.

*Lacon modestus* (Boisduval, 1835)

**Material examined.** 35 specm. (♂♀) - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran, Mergasor; Duhok-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Asia:** Iran, Japan (Iwo-jima), Oman, Qatar, Saudi Arabia, Taiwan, Afrotropical Region, Australian Region, Neotropical Region, Oriental Region (Cate, 2007); United Arab Emirates (Platia, 2007); Israel (Platia, 2010); Yemen (Socotra) (Platia, 2012). New to Iraq.

Tribe **Oophorini** Gistel, 1848

*Aeoloides grisescens* (Germar, 1844)

**Material examined.** 6 specm. (♂♀) - Iraq: Kurdistan Region, Duhok-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Europe:** Azerbaijan, Armenia, Georgia, Greece, Russia: Central and Southern European Territory, Turkey, Ukraine; **North Africa:** Egypt, Lybia, Morocco; **Asia:** Afghanistan, Cyprus, Iran, Iraq, Kyrgyzstan, Kazackhstan, Mongolia, Oman, Nei Mongol, Pakistan, Qatar, Russia: W Siberia, Saudi Arabia, Syria, Tadzhikistan, Turkmenistan, Uzbekistan, Afrotropical Region (Cate, 2007); United Arab Emirates (Platia, 2007); Jordan, Yemen (Platia, 2011).

*Aeoloides figuratus* (Germar, 1844)

**Material examined.** 3 specm. - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran, VI-IX.2011, at light.

**Distribution.** **Europe:** Azerbadjian, Armenia, Georgia, Russia: Southern European Territory, Turkey; **Asia:** Afghanistan, Iraq, Iran, Kyrgyzstan, Kuwait, Kazakhstan, Pakistan, Qatar, Saudi Arabia, Syria, Tadjhikistan, Turkmenistan, Uzbekistan, "Palestine" (Cate, 2007).

*Drasterius bimaculatus* (Rossi, 1790)

**Material examined.** 93 specm. (♂♀) - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran; Duhok-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Europe:** Azerbadjian, Albania, Armenia, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czechia, France, Germany, Georgia, Greece, Hungary, Italy, Macedonia, Malta, Moldavia, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Russia: Central and Southern European Territory, Serbia and Montenegro, Switzerland, Turkey, Ukraine; **North Africa:** Algeria, Canary Islands (Lanzarote), Egypt, Lybia, Morocco, Tunisia; **Asia:** Afghanistan, Cyprus, Iran, Iraq, Israel, Jordan, Lebanon, Kyrgyzstan, Kazakhstan, Syria, Turkmenistan, Uzbekistan (Cate, 2007).

Subfamily **Dendrometrinae** Gistel, 1848

Tribe **Melanotini** Candèze, 1859

*Melanotus fusciceps* (Gyllenhal, 1817)

**Material examined.** More than 100 specm. - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran; Duhok-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Europe:** Azerbadjian, Armenia, Bulgaria, Croatia, Georgia, Greece, Macedonia, Moldavia, Romania, Russia: Central and Southern European Territory, Turkey, Ukraine; **Asia:** Cyprus, Kazakhstan, Iran, Iraq, Israel, Lebanon, Syria (Cate, 2007); **Europe:** Albania (Pedroni & Platia, 2010).

*Melanotus fulvus* Reitter, 1891

**Material examined.** 25 specm. - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran; Dohuk-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Asia:** Iran, Iraq, Turkmenistan (Cate, 2007); Israel (Platia, 2010); Syria (Platia, 2011). **Europe:** Turkey (Mertlik & Platia, 2008).

Tribe **Pomachiliini** Candèze, 1859

*Idotarmonides bicolor* Platia & Gudenzi, 1999  
(Figs. 6, 6a, 13)

**Material examined.** 24 spcm. (♂♀) - Iraq: Kurdistan Region, Duhok-Akre, district, VI-IX.2011, at light. Male genitalia as in fig. 6, 6a (length 0,8 mm).

**Distribution.** **Asia:** Iraq (Cate, 2007); Syria (Platia & Gudenzi, 2007).

Subfamily **Elaterinae** Leach, 1815

Tribe **Elaterini** Leach, 1815

*Mulsanteus guillebelli* (Mulsant & Godart, 1853)

**Material examined.** 6 specm. ♂ - Iraq: Kurdistan Region, Sulaymania-Koyesenjq, Rania; Erbil-Shaqlawa, Hajiomanan, Harir, Xabat; Duhok- Akre, Grbish, 1.VII-1.IX.2009, at light.

**Distribution.** **Europe:** Bulgaria, France, Greece, Italy, Spain (Balearic Islands), Turkey; **Asia:** Cyprus, Iran, Iraq, Syria, Israel (Cate, 2007).

Tribe **Ampedini** Gistel, 1848

*Haterumelater fulvago* (Marseul, 1868)

**Material examined.** 4 specm. ♂ - Iraq: Kurdistan Region, Duhok-Akre, Bjil, 1.VII-1.IX.2009, at light.

**Distribution.** **Europe:** Bulgaria, Greece, Italy, Turkey **Asia:** Cyprus, Israel, Lebanon (Cate, 2007). **Europe:** Spain (Zapata & Sánchez-Ruiz, 2012). New to Iraq.

Tribe **Agriotini** Laporte, 1840

*Agriotes kurdistanus* n. sp.

(Figs. 7, 7a, 11, 14)

**Material examined.** Holotype ♂ - Iraq: Kurdistan Region, Dohuk-Akre, Bjil, district, VI-IX.2011, at light (UOD). 26 Paratypes ♂ - same data as HT (CPG; UOD).

**Diagnosis.** Species of the *nuceus* Fairmaire -group related to *A. emaciatius* Platia & Gudenzi, 1997, it can be separated by the smaller body, punctures of pronotum clearly umbilicate on the disk, posterior angles of pronotum with very fine, just visible carina and male genitalia.

#### **Description.**

Male. Entirely yellow-ferruginous, generally darker on head and at the margins of body; covered with short, dense, yellow-fulvous vestiture.

Frons flat between the eyes, slightly impressed before the anterior margin, the latter not thickened and substraight; suprantennal carinae reaching the anterior margin; punctures coarse, umbilicate, with very short intervals.

Antennae exceeding by nearly three articles the apices of posterior angles of pronotum, slightly serrated from fourth article on; second article subcylindrical, third subconical, subequal in length or the third just longer than second, taken together, as long as fourth; fourth-tenth subtriangular, on average twice longer than wide, last a little longer than penultimate, subellipsoidal.

Pronotum 1.15x wider than long, widest at the apices of posterior angles, very convex, with a very narrow and shallow, impressed mid-longitudinal line before and at the basal slope; sides briefly subparallel at the middle, dilated forward and very shortly tapering before the anterior margin; sinuate before the posterior angles, the latter, long, acuminate, divergent, with a very fine, just visible carina parallel to the lateral margins, these complete or briefly obsolescent at the middle; punctures on the disk umbilicate, with variable intervals, on average smaller than their own diameters, gradually denser towards the sides, contiguous at the lateral extremities.

Scutellum shield-shaped, ridged at base, flat, densely punctured.

Elitra 3x longer than pronotum and as wide as it, convex; sides subparallel from base to behind

the middle then gradually tapering to the apices, these rather acute and just divergent; striae regularly marked and punctured; interstriae flat, punctured, with wrinkled surface.

Aedeagus as in figs. 7, 7a (length 1,12 mm).

Female unknown.

Size. Length 7,8-8,8 mm; width 2,1-2,4 mm.

**Etymology:** The name is derived from the region where the species was collected: Kurdistan.

*Agriotes duhokensis* n. sp.

(Figs. 8, 8a, 12, 15)

**Material examined.** Holotype ♂ - Iraq: Kurdistan Region, Duhok-Akre, Amydi, Bjil, district, VI-IX.2011, at light (UOD).

**Diagnosis.** Species of the *nuceus* Fairmaire -group related to *Agriotes constrictus* Reitter, 1900 it can be separated by the second and third antennal articles, taken together, a little shorter than fourth, pronotal punctures coarser and clearly umbilicate on the disk, carina of posterior angles well apparent and male genitalia.

**Description.**

Male. Entirely yellow-ferruginous, darker on head and at the margins of body; covered with short, dense, yellow-fulvous vestiture.

Frons convex between the eyes, slightly impressed before the anterior margin, the latter not thickened and substraight; suprantennal carinae reaching the anterior margin; punctures coarse, umbilicate, with very short intervals.

Antennae exceeding by about 1,5 articles the apices of posterior angles of pronotum, serrated from fourth article on; second article subcylindrical, third subconical, subequal in length, taken together, just shorter than fourth; fourth-tenth subtriangular from twice to more, the apical, longer than wide, last as long as penultimate, subellipsoidal.

Pronotum 1,2x wider than long, widest at the apices of posterior angles, convex, with a trace of mid-longitudinal depression at basal slope; sides subparallel from the middle to the anterior margin, sinuate before the posterior angles, the latter long, acuminate, divergent, with a very fine, just visible carina parallel to the lateral margins, these briefly obsolescent at the middle; puncturation rather uniformly distributed; punctures on the disk umbilicate, with variable intervals, on average smaller than their own diameters, gradually denser towards the sides, nearly contiguous at the lateral extremities.

Scutellum shield-shaped, ridged at base, flat, densely punctured.

Elytra 3,3x longer than pronotum and as wide as it, convex; sides subparallel from base to behind the middle then gradually tapering to the apices, these rather acute and divergent; striae regularly marked and punctured; interstriae flat, punctured, with wrinkled surface.

Aedeagus as in figs. 8, 8a (length 1,02 mm).

Female unknown.

Size. Length 9,0 mm; width 2,3 mm.

**Etymology:** The name is derived from the Duhok province where the species was collected.

Subfamily *Cardiophorinae* Candèze, 1860

*Cardiophorus carnosus* Platia & Gudenzi, 2002

(Figs. 9, 9a, 16)

**Material examined.** 16 specm. (♂♀) - Iraq: Kurdistan Region, Duhok-Akre, Amydi, Kanitoz, 15.IV.-1.VI.2010; VI-IX.2011, at light. Bursa copulatrix sclerified as in figs. 9, 9a.

**Distribution.** Europe: Turkey; Asia: Iran, Iraq (Cate, 2007).

*Cardiophorus sacratus* Erichson, 1840

**Material examined.** 2 specm. ♂ - Iraq: Kurdistan Region, Duhok-Akre, Kanitoz, 15.IV.-1.VI.2010, on the weed's flowers.

**Distribution.** **Europe:** Azerbadjian, Armenia, Georgia, Russia: South European Territory, Turkey; **North Africa:** Egypt, Lybia; **Asia:** Cyprus, Iraq, Iran, Israel, Jordan, Lebanon, Syria, Turkmenistan (Cate, 2007); Uzbekistan (Platia, 2010).

*Dicronychus houschkai* Platia, 2011

**Material examined.** 5 spcm. ♂ - Iraq: Kurdistan Region, Dohuk-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Asia:** Syria (Platia, 2011). New to Iraq.

*Dicronychus truncatus* n. sp.

(Figs. 10, 10a, 10b, 17)

**Material examined.** Holotype ♀ - Iraq: Kurdistan Region, Duhok-Akre, Sumel; Erbil-Shaqlawa, Hajiomaran, VI-IX.2011, at light (UOD).

**Diagnosis.** A species comparable to *D. mossulensis* (Pic, 1912), it can be separated by the truncate apices of posterior angles of pronotum and different sclerites of bursa copulatrix.

**Description.**

Female. Entirely brown-ferruginous darker on head and sides of pronotum, covered with a short and dense yellowish vestiture.

Frons convex between the eyes, just impressed before the anterior margin, the latter moderately thickened, regularly arcuate and protruding above the clypeus; punctures very fine, approximately of the same size, very dense, nearly contiguous.

Antennae mutilated.

Pronotum as long as wide, widest at middle of the sides, very convex, very abruptly sloping at sides and base; sides very arcuate, from middle regularly narrowing forward, more strongly narrowing posteriorly, angles slightly divergent with apices truncate and short carina; lateral margins moderately curved and complete; puncturation double; very fine and dense punctures are regularly mixed with deep, and a little larger punctures on all the surface, intervals between the larger punctures are approximately formed by two or three smaller.

Scutellum heart-shaped as long as wide, emarginate at middle of base and impressed.

Elytra 2,35x longer than pronotum and as wide as it, convex; sides ovaliform, widest at middle, striae well marked and deeply punctured; interstriae moderately convex with very fine, few apparent, punctures.

Bursa copulatrix sclerified as in figs. 10, 10a, 10b with two large symmetrical plates and two small pieces, one as a small u-shaped.

Male unknown.

Size. Length 7 mm; width 2,06 mm.

**Etymology:** The name is derived from the truncate apices of posterior angles of pronotum.

*Craspedostethus linnavuorii* Platia & Gudenzi, 1999

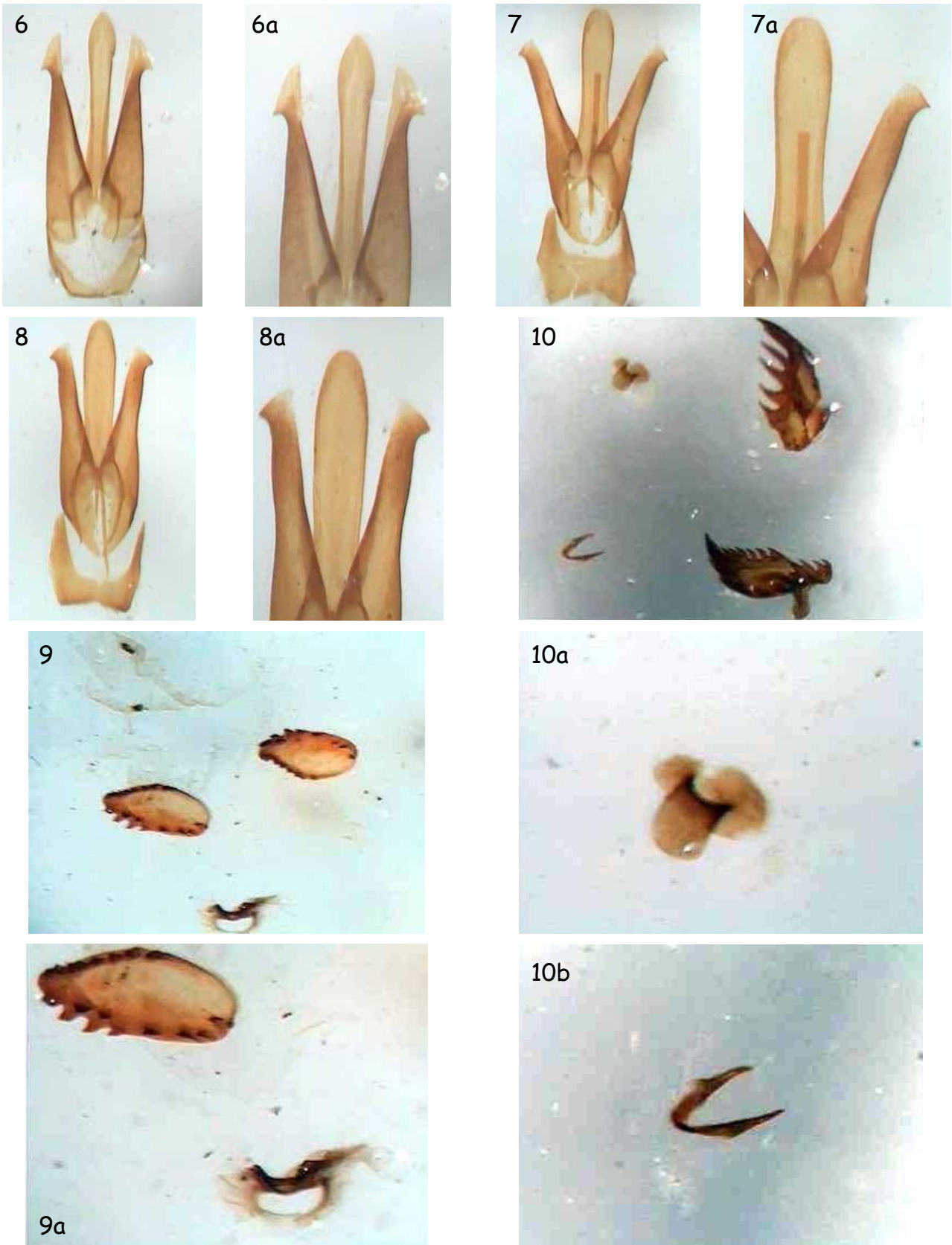
**Material examined.** 12 specm. (♂♀) - Iraq: Kurdistan Region, Erbil-Shaqlawa, Rawandiz, Soran, Mergasor; Duhok-Akre, Sumel, Amydi, VI-IX.2011, at light.

**Distribution.** **Asia:** Iraq (Cate, 2007); Israel (Platia, 2010); **Europe:** Turkey (Platia & Gudenzi, 2009).

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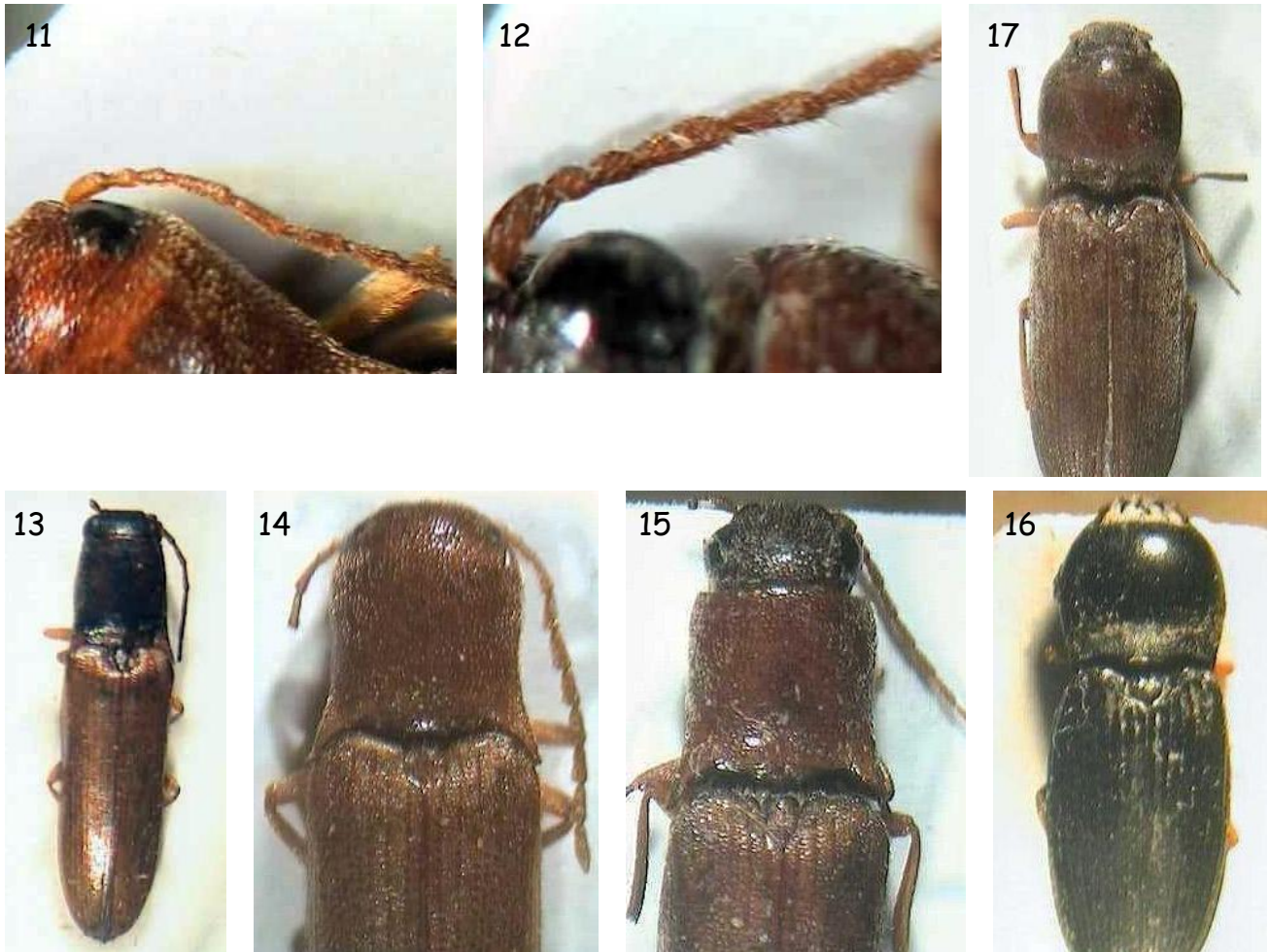
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Figs. 6-8.- Male genitalia in dorsal view. 6, 6a.- *Idotarmonides bicolor* Platia & Gudenzi. 7, 7a.- *Agriotes kurdistanus* n. sp.; 8, 8a.- *Agriotes duhokensis* n. sp.

Figs. 9-10.- Sclerites of bursa copulatrix. 9, 9a.- *Cardiophorus carnosus* Platia & Gudenzi. 10, 10a, 10b.- *Dicronychus truncatus* n. sp.



**Figs. 11-12.** - First articles of antennae. **11.** - *Agriotes kurdistanus* n. sp. **12.** - *Agriotes duhokensis* n. sp.

**Figs. 13-17.** - Habitus in total or partial view. **13.** - *Idotarmonides bicolor* Platia & Gudenzi. **14.** - *Agriotes kurdistanus* n. sp. **15.** - *Agriotes duhokensis* n. sp. **16.** - *Cardiophorus carnosus* Platia & Gudenzi. **17.** - *Dicronychus truncatus* n. sp.