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ARTICLE REVIEW

CHECKLIST OF DARKLING BEETLES (COLEOPTERA, TENEBRIONIDAE) IN IRAQ

Razzaq Shalan Augul and Hanaa H. Al Saffar*
Iraq Natural History Research Center and Museum, University of Baghdad, Baghdad, Iraq.
*Corresponding author: dr.hanaa66@nhm.uobaghdad.edu.iq

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ABSTRACT

In the current review, an updated list of dark beetle species (Coleoptera, Tenebrionidae) recorded in Iraq was given. The current paper is based on previous studies in the literature and contains all dark beetles referred to in Iraq, except for the species within the Pimelinae subfamily.

The investigation of this review showed the presence of 89 species belonging to 34 genera within five subfamilies. This work included mentioning the basionyms and synonyms for genera and species with their global distribution, as well as, correcting the scientific names that were mentioned in the previous checklists.

Keywords: Basionym, Checklist, Diversity, Investigation, Tenebrionid beetles.

INTRODUCTION

In the last few years, many researchers have sought to conduct many studies that include the preparing of surveys and checklists of insect species belonging to different orders. These investigations have contributed to updating databases and treating synonyms in order to avoid mistakes in taxonomic issues and contribute to knowing the insect diversity in Iraq, for example: Shugran *et al*. (2018); Augul (2018, 2019); Augul and Al-Saffar (2019); Hassan *et al.* (2020); Al-Saffar and Augul (2015, 2021) and Al-Saffar *et al.*(2021).

As regard dark beetles (Tenebrionidae), there are some previous studies (such as checklists for example) that indicate that their species are recorded in Iraq, which are relatively few in comparison to the wide diversity of this family (e.g. Gebien, 1910; Reitter, 1916; Holdhaus, 1919; Blair,1923; Khalaf, 1959; Derwesh, 1963,1965; Hussein, 1963; Kaddou,1967; El-Haidari *et al*.,1972; Swailem *et al*.,1974; Khalaf and Al-Omar, 1974; Abdul-Rassoul, 1976; Abdul-Rassoul *et al*.,1988; Al-Ali, 1977; Abul-Hab,1980; Carl, 1990 a and b, 1991, 1992); recently, there are several attempts to survey, and taxonomic studies including Ismail and Husain (2018), they recorded five species: *Balps plana* Solier, 1848; *Balps hispnica* Solier,

1848; *Tenebrio opacus* Duftschmid, 1812 and *Scaurus striatus* Fabricius,1792; as well Omar *et al*. (2018) added *Opatroides punctulatus* Brullé, 1832 as a new record.

Despite these investigations that are referred to above, information about the diversity of these beetles is still incomplete. It needs a comprehensive revision of the scientific names and determining their legitimacy. Therefore, this paper suggested revising the scientific names and providing an updated checklist of Tenebrionidae (with the exception of the subfamily Pimelinae).

MATERIALS AND METHODS

The known darkling beetles recorded in Iraq were combined and listed. Information about the recorded species' general distribution was gathered from the selected relevant literature.

Classification and nomenclature, basionym and valid names of the species are given based on the last taxonomic modification (Carl, 1990 a and b, 1992; Iwan *et al*., 2010, 2011; Elshewy *et al.*, 2016; Bouchard *et al*., 2021; GBIF Secretariat, 2022; Lillig and Pavlíček, 2023). The subfamilies, genera, and species are listed and presented alphabetically in the present paper.

RESULTS AND DISCUSSION

In the present review, the data show that there were 89 tenebrionid species belonging to 34 genera under 19 tribes and five subfamilies, in addition, synonyms of species, distribution, and recent taxonomic status are included as follows:

(A)Subfamily, Alleculinae Laporte, 1840
Tribe, Alleculini Laporte, 1840
Genus, *Hymenalia* Mulsant, 1851
Hymenalia reticulata Seidlitz, 1896
Distribution: Iraq and Iran (Seidlitz, 1896)

Genus, *Podonta* Solier, 1835
Podonta biformis Reitter, 1889
Synonym: *Podonta ruficollis* Seidlitz, 1896
Distribution: Iran (Seidlitz 1896); Iraq, Syria (Novák and Ghahari, 2015); Armenia, and Turkey (Novák, 2016).

Podonta carbonaria Kiesenwetter, 1873
Distribution: Iran (Seidlitz 1896); Iraq, and Syria (Novák and Ghahari, 2015).

Tribe, Cteniopodini Solier, 1835
Genus, *Cteniopus* Solier, 1835
Synonyms: *Cistela* Fabricius, 1775
Cistella Gistl, 1848
Ctenioposomus Reitter, 1906

Ctenoposomus Reitter, 1906
Rhinobarus Reitter, 1906
Sarandonyx Des Gozis, 1881
Telacis Poey, 1854

Cteniopus angustatus Pic, 1905
Distribution: Iraq (Pic, 1905); Iran (Borchmann, 1910).

Cteniopus pallidus (Küster, 1850)
Basionym: *Cistela pallida* Küster, 1850
Synonym: *Cteniopus intrusus* Seidlitz, 1896
Distribution: Iran (Seidlitz, 1896); Cyprus, Iraq, Syria, and Turkey (Novák and Ghahari, 2015); Saudi Arabia (Abdel-Dayem *et al*., 2017).

Cteniopus persicus Ogloblin, 1950
Distribution: Iraq (Löbl *et al*., 2008 a). Afghanistan, Iran, Syria, and Turkey (Novák and Ghahari, 2015).

Genus, *Omophlus* Dejean, 1834
Synonyms: *Euomophlus* Yablokov-Khnzoryan, 1983
Micromophlus Znojko, 1950
Odontomophlus Seidlitz, 1896
Omophlus Solier, 1835
Paromophlus Iablokoff-Khnzorian, 1983
Paurodontomophlus Muche, 1979
Phibalus Gistel, 1856
Pleuromophlus Reitter, 1906

Omophlus falsarius Kirsch, 1869
Synonym: *Omophlus pilifer* Seidlitz, 1896
Distribution: Iran (Seidlitz, 1896); Iraq (Löbl *et al*., 2008a); Armenia, Bulgaria, Iran, Romania, Syria, and Turkey (Novák and Ghahari, 2015).

Omophlus flavipennis Küster, 1850
Synonyms: *Cistela quadricollis* Brullé, 1932
Omophlus atripes Küster, 1850
Omophlus dalmatinus Kirsch, 1869
Omophlus basicornis Reitter, 1890
Distribution: Iraq (Löbl *et al*., 2008a); Iran (Samin *et al*., 2014); Armenia, Azerbaijan, Bulgaria, Croatia, Georgia, Greece, Moldavia, Romania, Russia, Syria, Turkey, and Ukraine (Novák and Ghahari, 2015).

Omophlus kalalae Maran, 1935
Distribution: Iraq (Löbl *et al*., 2008a). The information available about this species is very limited.

Omophlus kurda Znojko, 1950
Distribution: Iraq (Löbl *et al*., 2008a). The information available about this species is very limited.

Omophlus nasreddini Reitter, 1890
Synonym: *Omophlus conicicollis* Reitter, 1906
Distribution: Iran (Seidlitz 1896); Iraq (Löbl *et al*., 2008a); Syria, and Turkey (Novák and Ghahari, 2015).

Omophlus nigripes Küster, 1850
Distribution: Iran (Reitter 1906). Iraq (Löbl *et al*., 2008a); Greece, Iran, Syria, and Turkey (Novák and Ghahari, 2015).

Omophlus nitidicollis Seidlitz, 1896
Synonym: *Erodius nitidicollis* Solier, 1849
Distribution: Iran (Seidlitz, 1896); Iraq, it was listed under the synonym name by Andres (1931); Armenia and Turkey (Novák and Ghahari, 2015).

Omophlus pilosellus Kirsch, 1869
Distribution: Iraq (Löbl *et al*., 2008a); Turkey, Italy, and Greece (Yildirim and Kiliç, 2008).

Omophlus sandneri Reitter, 1906
Distribution: Iran (Novák and Pettersson, 2008). Iraq (Löbl *et al*., 2008a); Syria, and Turkey (Novák and Ghahari, 2015).

Omophlus scutellaris Mulsant, 1856
Distribution: Iraq (Shalaby *et al*., 1966); Egypt (Elshewy *et al*., 2016).

(B) Subfamily: Blaptinae Leach, 1815
Tribe, Blaptini Leach, 1815
Genus, *Blaps* Fabricius, 1775
Synonyms: *Acanthoblaps* Reitter, 1889
Agroblaps Motschoulsky, 1860
Arenoblaps Medvedev, 1999
Blapidurus Fairmaire, 1891
Blapimorpha Motschoulsky, 1860
Blapisa Motschoulsky, 1860
Dineria Motschoulsky, 1860
Leptocolena Allard, 1881
Lithoblaps Motschoulsky, 1860

Plaps Zschachi, 1778
Platyblaps Motschoulsky, 1860
Prosoblapsia Skopin & Kaszab, 1978
Rhizoblaps Motschoulsky, 1860
Uroblaps Motschoulsky, 1860

Blaps batesi Allard, 1880
Distribution: Iraq (Kaszab, 1982; Kareem *et al*., 2022); Kuwait (Amr, 2021).
Note: There is not enough information about this species in the available literature.

Blaps convexa Reiche, 1857
Distribution: Iraq (Holdhaus, 1919).
Note: There is not enough information about this species in the available literature.

Blaps fascinosa Seidlitz, 1893
Distribution: Iraq (Gebien, 1910).
Note: There is not enough information about this species in the available literature.

Blaps gigas (Linnaeus, 1767)
Basionym: *Tenebrio gigas* Linnaeus, 1763
Distribution: Iraq (Holdhaus, 1919); cosmopolitan (Bunalski *et al*., 2014a).

Blaps hispanica Solier, 1848
Distribution: Iraq (Ismail and Husain, 2018); Portugal, and Spine (GBIF Secretariat, 2022).

Blaps iraquensis Kaszab, 1959
Distribution: Iraq (Kaszab, 1959).
Note: There is not enough information about this species in the available literature.

Blaps judaeorum Miller, 1861
Distribution: Iraq (Löbl *et al*., 2008b).

Blaps kaifensis Seidlitz, 1893
Distribution: Iraq (Löbl *et al*., 2008b); Mediterranean Basin (Soldati *et al*., 2017).

Blaps kollarii Seidlitz, 1893
Distribution: Iraq (Löbl *et al*., 2008b); Mediterranean Basin (Soldati *et al*., 2017); KSA, and UAE (GBIF Secretariat, 2022).

Blaps mortisaga (Linnaeus, 1758)
Basionym: *Tenebrio mortisaga* Linnaeus, 1758
Distribution: Iraq (Holdhaus, 1919); wide-distributed in Europe, and USA (GBIF Secretariat, 2022).

Blaps plana Solier, 1848
Distribution: Iraq (Ismail and Husain, 2018); Tunisia (Soldati *et al*., 2017).

Blaps polychresta (Forskl, 1775)
Basionym: *Tenebrio polychresta* Forskl, 1775
Distribution: Iraq (Shalaby *et al*., 1967); Australia, Egypt, Jordon, and Portugal (GBIF Secretariat, 2022).

Blaps spinosa Allard, 1880
Distribution: Iraq (Löbl *et al*., 2008b).
Note: No more information about this species is in the available literature.

Blaps taeniolata Menetries, 1832
Distribution: Iraq (Derwesh, 1965); Kuwait (Katbeh-Bader *et al*., 2022); (Cyprus (GBIF Secretariat, 2022).

Genus, *Dila* Fischer von Waldheim, 1844
Synonym: *Caenoblaps* König, 1906
Dila kulzeri (Schuster, 1928)
Basionym: *Caenoblaps kulzeri* Schuster, 1928
Distribution: It was recorded in Iraq by Schuster (1928) under the name *Caenoblaps kulzeri* Schuster, 1928; Turkey (Chigraya *et al*., 2019).

Tribe, Dendarini Mulsant & Rey, 1854
Genus, *Dendarus* Dejean, 1821
Synonyms: *Dendaroscelis* Reitter, 1904
Dichromma Seidlitz, 1893
Pandarinus Mulsant & Rey, 1854
Pandarus Agassiz, 1846
Pandarus Dejean, 1834
Pandarus Mulsant, 1854
Paroderus Mulsant & Rey, 1854
Phylax Brullé, 1832
Rhizalemus Reitter, 1904
Rhizalus Mulsant & Rey, 1854
Dendarus simplex Seidlitz, 1893
Distribution: Iraq (Löbl *et al*., 2008b); Syria, and Turkey (GBIF Secretariat, 2022).

Dendarus tenellus (Mulsant and Rey, 1854)
Basionym: *Pandarinus tenellus* Mulsant & Rey, 1854
Distribution: Iraq (Gebien, 1910); Greece, and Turkey (GBIF Secretariat, 2022).

Tribe, Opatrini Brullé, 1832
Genus, *Clitobius* Mulsant & Rey, 1859

Synonyms: *Apithesis* Waterhouse, 1881
Apteroclitobius Koch, 1960
Halonomus Wollaston, 1861

Clitobius oblongiusculus (Fainrmaire, 1875)
Basionym: *Halonomus oblongiusculus* Fairmaire, 1875
Distribution: Iraq (Holdhaus, 1919); Moreover, Löbl *et al*. (2008b) indicated the presence of subspecies *C. oblongiusculus oblongiusculus* Fainrmaire, 1875 in Iraq. Bahrain, Egypt, Jordon, Turkey, and Greece (GBIF Secretariat, 2022).

Genus, *Gonocephalum* Solier, 1834
Synonyms: *Dasus* Motschoulsky, 1845
Hasticollinum Kaszab, 1939
Hopatrum Blackburn, 1907
Megadasus Reitter, 1904
Myladanesthes Skopin, 1961
Opatropis Reitter, 1904

Gonocephalum consobrinum Blair, 1923
Distribution: Iraq (Blair, 1923); Afghanistan, India, Iran, Eritrea, Ethiopia, Myanmar, Pakistan, Saudi Arabia, and Yemen (Hegde *et al*., 2018).

Gonocephalum granulatum (Fabricius, 1791)
Basionym: *Opatrum granulata* Fabricius, 1792
Synonym: *Melyris granulatum* Fabricius, 1791
Distribution: It was listed in Iraq under the name *Gonocephalum pusillum* Fabricius, 1871 by Holdhaus (1919). Afghanistan, Bulgaria, France, Greece, Italy, Portugal, Russia, Serbia, Spain, Turkey, and Ukraine (GBIF Secretariat, 2022).

Gonocephalum mesopotamicum Blair, 1923
Distribution: Iraq (Blair, 1923).

Gonocephalum zoltani Iwan, Ferrer and Raś, 2010
Synonym: *Gonocephalum parallelum* Kaszab, 1952
Distribution: Afghanistan, India, Iraq, and Pakistan (Iwan and Löbl, 2008); Sri Lanka (Iwan *et al*., 2010).

Gonocephalum perplexum (Lucas, 1849)
Basionym: *Opatrum perplexum* Lucas, 1849
Distribution: Iraq (Abdul-Rassoul *et al*., 1988). Greece, Morocco, Syria, and Tunisia (GBIF Secretariat, 2022).

Gonocephalum pubiferum Reitter, 1904
Distribution: Iraq (Kaszab, 1982). UAE (Lillig and Bremer, 2002); Afghanistan, Armenia, Azerbaijan, China, Iran, Kazakhstan; Mongolia, Oman, Pakistan, Russia, KSA, Tajikistan, Turkmenistan, and Uzbekistan (Iwan and Löbl, 2008).

Gonocephalum rusticum (Olivier, 1811)
Basionym: *Opatrum rusticum* Olivier, 1811
Distribution: Iraq (Holdhaus, 1919); Mongolia, and China (Löbl and Smetana, 2008). Afghanistan, Algeria, Cyprus, Djibouti, France, Greece, Israel, Italy, Kazakhstan, Morocco, Mozambique, Netherlands, Portugal, Spain, Syria, Turkey, and Uzbekistan (GBIF Secretariat, 2022).

Gonocephalum setulosum (Faldermann, 1837)
Basionym: *Opatrum setulosum* Faldermann, 1837
Distribution: Iraq (Iwan *et al*., 2010); Afghanistan, Cyprus, Egypt, Greece, Italy, Spain, Turkmenistan, and Uzbekistan (GBIF Secretariat, 2022).

Gonocephalum strigosum (Reiche, 1850)
Basionym*: Opatrum strigosum* Reiche, 1850
Synonym: *Hopatrum strigosum* Reiche, 1850
Distribution: Iraq (Holdhaus, 1919); Eritrea, and Ethiopia (Iwan *et al*., 2010); Algeria, Israel, Egypt, and Tunisia (Iwan and Löbl, 2008).

Genus, *Opatroides* Brulle, 1832
Synonym: ***Hopatroides*** Agassiz, 1846
Opatroides punctulatus Brulle, 1832
Distribution: Iraq (Holdhaus, 1919); Afghanistan, Algeria, Cyprus, Egypt, Greece, Israel, Italy, Malta, Morocco, Oman, Spain, Tunisia, Turkey, Turkmenistan, USA, and Uzbekistan (GBIF Secretariat, 2022).

Opatroides vicinus (Fairmaire, 1896)
Basionym: *Penthicus vicinus* Fairmaire, 1896
Synonym: *Opatroides vicinus* Kaszab 1960
Distribution: Lobl *et al*. (2008b) reported the subspecies *Opatroides vicinus angulatus* Baudi de Silve 1876 in Iraq. Afghanistan, Bahrain, Egypt, India, Iran, Kuwait, Nepal, Oman, Pakistan, KSA, and Yemen (Ferrer, 2005; Löbl and Smetana, 2008); Qatar (Soldati, 2009). Cyprus, and Turkey (GBIF Secretariat, 2022).

Genus, *Opatrum* Fabricius, 1775
Synonyms: *Colpopatrum* Reitter, 1904
Colpophorinus Escalera, 1914
Colpophorus Mulsant & Rey, 1859
Hopatrum Agassiz, 1846
Opatum Thunberg, 1821
Thoracon Gistl, 1848
Opatrum obesum Olivier, 1811
Distribution: Iraq (Gebien, 1910); Greece, and Turkey (GBIF Secretariat, 2022).

Genus, *Penthicus* Faldermann, 1836
Penthicus dilectans Faldermann, 1836
Distribution: Shalaby *et al*. (1967) reported this species for Iraq under the name *Lobothorax dilectans* Fldermann, 1836. Also, it distributes in Transcaucasia, European Russia, and Central Asia (Abdurakhmanov and Nabozhenko, 2011; Iwan *et al*., 2020); Turkey (Nabozhenko *et al*., 2022).

Penthicus oblongopunctatus (Reitter, 1904)
Distribution: Afghanistan, Iraq, Iran, Jordan, Pakistan, KSA, and Turkmenistan (Löbl and Smetana, 2008); Qatar (Soldati, 2009).

Genus, *Scleropatroides* Löbl & Merkl, 2003
Scleropatroides hirtulus (Baudi de Selve, 1876)
Distribution: Iraq (Lobl *et al*., 2008b); Turkey (Nabozhenko *et al*., 2022).

Genus, *Scleropatrum* Reitter, 1890
Scleropatrum hirtulum (Baudi, 1875)
Basionym: *Opatrum hirtulum* Baudi, 1875
Distribution: Iraq (Gebien, 1910). According to Lillig (2015), this species distributes from Egypt or Sinai to Iraq or Iran.

Genus, *Sclerum* Dejean, 1834
Synonyms: *Anticlia* Gistel, 1848
Chlamydion Gistel, 1848
Scleron Hope, 1841
Sclerum Blanchard, 1845
Sclerum carinatum Baudi, 1875
Distribution: Iraq (Lobl *et al*., 2008b). Palearctic Region as *Scleron carinatum* (Reichardt 1936); Turkmen, and Russia, it was recorded as *Scleron carinatum* by Kryzhanovskij (1961); Iran (Grimm, 2015); Saudi Arabia (Abdel-Dayem *et al*., 2017).

Sclerum evansi (Blair, 1923)
Distribution: Iraq (Lobl *et al*., 2008b); it was reported in the Palearctic Region under the name *Scleron evansi* by Reichardt (1936); United Arab Emirate, and Oman (Grimm, 2013).

Sclerum fossulatum Mulsant & Wachenru, 1852
Distribution: In Iraq, it was recorded as *Scleron fossulatum* Mulsant, 1852 by Holdhaus (1919); it was reported by Reichardt (1936) as *Scleron fossulatum* in the Palearctic Region.

Sclerum sulcatum Baudi, 1876
Distribution: It was recorded in Iraq as *Scleron sulcatum* Baudi, 1876 by Shalaby *et al*. (1967), Egypt (Elshewy *et al*., 2016); KSA (Abdel-Dayem *et al*., 2017). In Kuwait, it was listed by Amr (2021) as a *Scleron sulcatum*.

Tribe, Pedinini Eschscholtz, 1829
Genus, *Cabirutus* Strand, 1929
Synonyms: *Asiobirus* Medvedev, 1968
Cabinus Mulsant & Rey, 1853
Cabirus Mulsant & Rey, 1853
Cabirutus sp.
Note: Note: In Iraq, Shalaby *et al*. (1967) listed it without specifying the species.

Genus, *Leichenum* Dejean, 1834
Leichenum canaliculatum (Fabricius, 1798)
Basionym: *Opatrum canaliculatum* Fabricius, 1798
Distribution: In Iraq, it was registered under the name *Leichenum gebieni* Reitter, 1906 by Derwesh (1965). Later, the subspecies *L. canaliculatum canaliculatum* (Fabricius, 1798) was reported by reported under the name *Leichenum foveistrium* Marseul, 1876 by Gebien (1910), as well Kaszab (1982) was reported *Leichenum pulchellum pumilum* Baudi, 1876; this subspecies was listed in Iraq by Gebien (1910) under the name *Leichenum incisum* Reitter, 1899. Generally, *Leichenum canaliculatum* was recorded for many countries, including Angola, Australia, Botswana, India, Kenya, Martinique, Mauritius, Mozambique, Réunion, Senegal, Sierra Leone, Sri Lanka, South Africa, Spain, Thailand, USA, and Zambia (GBIF Secretariat, 2022).

Leichenum mucronatum Kuster, 1849
Distribution: Iraq (Gebien, 1910). North Africa (Penrith, 1988).

(C) Subfamily, Diaperinae Latreille, 1802
Tribe, Diaperini Latreille, 1802
Genus, *Alphitophagus* Stephens, 1832
Synonyms: *Phyletes* Redtenbacher, 1845
Phylethus Dejean, 1821
Phylethus Redtenbacher, 1849
Alphitophagus bifasciatus (Say, 1824)
Basionym: *Diaperis bifasciatus* Say, 1824
Synonyms: *Alphitophagus quadripustulatus* Stephens, 1832
Alphitophagus unifasciatus Donisthorpe, 1925
Phylethus populi L. Redtenbacher, 1849
Distribution: Iraq (Derwesh, 1965); Turkey (Özgen, 2020).

Tribe, Phaleriini Blanchard, 1845
Genus, *Phtora* Germar, 1836
Synonyms: *Cataphronetis* Dejean, 1834
Cataphronetis Lucas, 1846
Clypeophtora Soldati & Soldati, 2003
Pseudostene Wollaston, 1861

Phtora millingeni (Reitter, 1899)
Distribution: In Iraq, it was reported by Gebien (1910) under the name of *Cataphronetis millingeni* Reitter, 1899.

(D) Subfamily, Lagriinae Latreille, 1825
Tribe, Belopini Reitter, 1917
Genus, *Centorus* Mulsant, 1854
Synonyms: *Belopomerus* Reitter, 1920
Calcar Latreille, 1829
Calcar Mulsant, 1854
Nanocalcar Skopin, 1974
Centorus csikii Reitter, 1920
Synonym: *Belopus csikii* Reitter, 1920
Distribution: Iraq (Reitter, 1920). Afghanistan, Iran, Jordan, Cyprus, Kazakhstan, KSA, Russia, Turkmenistan, and Yemen (Iwan and Löbl, 2020).
Note: It's listed under the name *Belopus csikii* Reitter, 1920; as well as, the subspecies of *B. csikii bagdadensis* Reitter, 1920 was recorded in Iraq by the same author.

Centorus filiformis Motschulsky, 1872
Synonym: *Belopus filiformis* Motschulsky, 1872
Distribution: In Iraq, listed under the name of *Belopus filiformis* Motschulsky, 1872 (Derwesh, 1965); China (Zhang and Ren, 2009); Russia (Nabozhenko and Chigray, 2014); Afghanistan, Azerbaijan, Armenia, Iran, Kazakhstan, and Turkmenistan (Iwan and Löbl, 2020).

Centorus heydeni (Zoufal, 1893)
Basionym: *Belopus heydeni* Zoufal, 1893
Distribution: Iraq (Derwesh, 1965); Egypt, KSA, Syria, Iran, and Turkey (Iwan and Löbl, 2020).

Centorus pilosus Skopin, 1974
Distribution: Iraq (Skopin, 1974).

Tribe, Cossyphini Latreille, 1802
Genus, *Cossyphus* Olivier, 1791
Synonyms: *Acanthodactylus* Desbrochers des Loges, 1894
Acantodactylus Desbrochers, 1894
Acontodactylus Desbrochers, 1894
Paracossyphus Viñolas & Cartagena, 2005
Cossyphus tauricus Stevens, 1829
Distribution: Iraq (Derwesh, 1965). Bulgaria, Greece, Italy, and Russia (GBIF Secretariat, 2022).

Tribe, Lagriini Latreille, 1825
Genus, *Lagria* Fabricius, 1775
Synonyms: *Ammocera* Borchmann, 1941
Apteronympha Seidlitz, 1898
Microlagria Seidlitz, 1898
Lagria hirta (Linnaeus, 1758)
Basionym: *Chrysomela hirta* Linnaeus, 1758
Distribution: Iraq (Löbl *et al*., 2008a). Austria, Belarus, Belgium, Bulgaria, China, Czech, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Hong Kong, Ireland, Italy, Jersey, Latvia, Lithuania, Luxembourg, Montenegro, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Spain, Sweden, Switzerland, UK, and Ukraine (GBIF Secretariat, 2022).

(E) Subfamily, Stenochiinae W. Kirby, 1837
Tribe, Stenochiini W. Kirby, 1837
Genus, *Strongylium* Kirby, 1819
Synonyms: *Afrostrongylium* Robiche, 2019
Allostrongylium Kolbe, 1896
Anomoearthrum Maklin, 1867
Bionesus Kulzer, 1966
Coelolophus Maklin, 1867
Dolichoplerus Murray, 1862
Ebenolus Fairmaire, 1897
Eustrongylium Kolbe, 1894
Falsolophocnemis Pic, 1917
Gibbostrongylium Pic, 1917
Messalia Pascoe, 1883
Microstrongylium Pic, 1917
Notostrongylium Carter, 1915
Pedostrongylium Pic, 1916
Poecilesthostrongylium Pic, 1918
Pseudocaelophus Pic, 1922
Pseudostrongylium Carter, 1915
Reminisce Casey, 1924
Saerangodes Dejean, 1834
Saerangodes Sturm, 1843
Strongyliastrum Fairmaire, 1894
Styrax Westwood, 1875
Xanthopopeia Maklin, 1867
Xanthothopia Gemminger, 1870
Xanthothopia Lucas, 1920
Xanthothopia Maklin, 1864
Zuercheria Reitter, 1908
Strongylium mesopotamicum Gebien, 1911
Distribution: Iraq (Gebien, 1911).

(F) Subfamily, Tenebrioninae Latreille, 1802
Tribe, Alphitobiini Reitter, 1917
Genus, *Alphitobius* Stephens, 1829
Synonyms: *Heterophaga* Dejean, 1834
Cryptops Solier, 1851
Proselytus Fåhraeus, 1870
Microphyes W. J. MacLeay, 1872
Latetribolium Lepesme, 1943
Alphitobius diaperinus (Panzer, 1797)
Basionym: *Tenebrio diaperinus* Panzer, 1797
Synonym: *Alphitobius piceus* (Olivier, 1792)
Distribution: Cosmopolitan (Löbl and Smetana, 2008; Grimm, 2015); Iran (Bunalski *et al*., 2014b).

Alphitobius laevigatus (Fabricius, 1792)
Basionym: *Opatrum laevigatus* Fabricius, 1781
Synonyms: *Alphitobius piceus* (Olivier, 1792)
Alphitobius picipes (Panzer, 1794)
Aphitobius piceus (Olivier, 1792)
Distribution: Iraq (Kaszab, 1982); Cosmopolitan (Schawaller, 2010).

Tribe, Dissonomini G.S. Medvedev, 1968
Genus, *Dissonomus* Jacquelin du Val, 1861
Dissonomus substriatus Reitter, 1898
Distribution: Iraq (Abdul-Rassoul *et al*., 1988); Turkey (Tezcan *et al*., 2004); Iran (Ghahari *et al*., 2009).

Tribe, Helopini Latreille, 1802
Genus, *Entomogonus* Solier, 1848
Synonyms: *Delonurops* Reitter, 1922
Eutelogonus Reitter, 1922
Entomogonus duchoni Reitter, 1903
Distribution: Iraq (Löbl *et al*., 2008b). Turkey (Nabozhenko *et al*., 2018).

Entomogonus saphyrinus Allard, 1876
Distribution: Turkey (Ferrer and Soldati, 1999). Iraq (Löbl *et al*., 2008a).

Genus, *Hedyphanes* Fischer von Waldheim, 1820
Synonyms: *Coelophanes* Iablokoff-Khnzorian, 1964
Microhedyphanes Nabozhenko & Lillig, 2013
Hedyphanes cordicollis Seidllitz, 1896
Distribution: It was recorded for Iraq under *Heydyphanes cordicollis* Seidllitz, 1896 by Gebien (1910).

Hedyphanes mesopotamicums Nabozhenko, 2005
Distribution: Iraq (Löbl *et al*., 2008a). No more information is available about this species.

Genus, *Physohelops* Schuster, 1937
Physohelops freyi Schuster, 1937
Distribution: Iraq (Schuster, 1937)

Tribe, Melanimonini Seidlitz, 1894
Genus, *Anemia* Laporte de Castelnau, 1840
Anemia hauseri Reitter, 1894
Distribution: Iraq (Shalaby *et al*., 1967).
Note: The information about this species is not enough in the available literature.

Genus, *Cheirodes* Gené, 1839
Synonyms: *Ammidanemia* Reitter, 1904
Anaemia Horn, 1870
Anemia Reitter, 1904
Anemiadena Ardoin, 1971
Anemiadena Bouchard & Bousquet, 2021
Cheirodes Dejean, 1834
Chirodes Agassiz, 1846
Eremonomus Wollaston, 1861
Cheirodes brevicollis (Wollaston, 1864)
Basionym: *Pseudanemia brevicollis* Wollaston, 1864
Synonym: *Anemia brevicollis* (Wollaston, 1864)
Distribution: In Iraq listed under the name *Anemia brevicollis* (Wollaston, 1864) by Derwesh (1965). Spain, Egypt, Oman, Turkmenistan, Uzbekistan, Tunisia, UAE, Senegal, and Gambia (GBIF Secretariat, 2022).

Cheirodes drurei (Pic, 1923)
Basionym: *Anemia drurei* Pic, 1923
Distribution: Iraq (Löbl *et al*., 2008a).

Cheirodes hauseri (Reitter, 1894)
Basionym: *Anemia hauseri* Reitter, 1894
Distribution: Iraq (Shalaby *et al*., 1967).

Cheirodes sardous Gené, 1839
Synonym: *Anemia sardoa* (Géné, 1839)
Distribution: Shalaby *et al*. (1967) listed it for Iraq under the name *Anemia sardous* Gene, 1839. Furthermore, Löbl *et al*. (2008a) recorded the subspecies with the misspelling *Cheirodes sardus sardous* Gené, 1839 (correct name is *Cheirodes sardous sardous* Gené, 1839) for the insect fauna of Iraq. Algeria, Australia, Cabo Verde, Ethiopia, France, Gambia,

Spain, Turkey, KSA, Oman, Senegal, Turkmenistan, Tunisia, and Uzbekistan (GBIF Secretariat, 2022).

Tribe, Palorini Matthews, 2003
Genus, *Palorus* Mulsant, 1854
Synonyms: *Caenocorse* C. G. Thomson, 1859
Circomus Fauvel, 1904
Circomus Fleischer, 1900
Eba Pascoe, 1863
Platyotus Gerstaecker, 1871
Stenopalorus Blair, 1930
Palorus ratzeburgi (Wissmann, 1848)
Basionym: *Hypophloeus ratzeburgii* Wissmann, 1848
Synonym: *Caenocorse ratzeburgi* (Wissmann)
Distribution: Iraq (Hussain, 1963). Austria, Australia, China, France, Gambia, Germany, Guam, Italy, Japan, Mexico, Netherlands, Norway, Syria, Sweden, Turkey, UK, and the USA (GBIF Secretariat, 2022).

Palorus subdepressus (Wollaston, 1864)
Basionym: *Hypophloeus subdepressus* Wollaston, 1864
Synonyms: *Caenocorse* subdepressa (Wollaston)
Circomus subdepressus (Wollaston, 1864)
Distribution: Iraq (Kaszab, 1982). Australia, China, France, Gambia, Germany, Japan, Lithuania, Luxembourg, Morocco, Netherlands, Poland, Réunion, Russia, Spain, South Africa, Taipei, Turkey, UK, and the USA (GBIF Secretariat, 2022).

Tribe, Scaurini Billberg, 1820
Genus, *Scaurus* Fabricius, 1775
Synonym: *Scauris* Rafinesque, 1815
Scaurus aegyptiacus Solier, 1838
Distribution: Iraq (Shalaby *et al*., 1967). Algeria, Egypt, Libya, Sudan, and Tunisia (Lillig, 1995); Italy (GBIF Secretariat, 2022).

Scaurus puncticollis Solier, 1838
Distribution: Iraq (Holdhaus, 1919; Abdul-Rassoul, 1976), as well Gebien (1910), was reported the subspecies *Scaurus puncticollis macricollis* Allard, 1882 in Iraq. Furthermore, this species distributes in Cyprus, and Spain (GBIF Secretariat, 2022).

Scaurus striatus Fabricius, 1792
Distribution: Iraq (Ismail and Husain, 2018). Malta (Lillig *et al*., 2012).

Scaurus tristis Olivier, 1795
Distribution: Iraq (Derwesh, 1965). France, Italy, and Tunisia (GBIF Secretariat, 2022).

Tribe, Tenebrionini Latreille, 1802
Genus, *Tenebrio* Linnaeus, 1758
Synonyms: *Afrotenebrio* Gridelli, 1951
Menedrio Motschoulsky, 1872
Tenenrio Schönherr, 1806
Tenebrio obscurus Fabricius, 1792
Distribution: Iraq (Shalaby *et al*., 1967). Canada (Majka *et al*., 2008), Malta (Lillig *et al*., 2012), Iran (Bunalski, 2014), Egypt (Elshewy *et al*., 2016), North America (Bousquet *et al*., 2018), Kuwait (Amr, 2021).

Tenebrio opacus Duftschmid, 1812
Distribution: Iraq (Ismail, and Husain, 2018); Sweden, France, Croatia, Switzerland, Poland, and Denmark (GBIF Secretariat, 2022).

Tribe, Triboliini Gistel, 1848
Genus, *Tribolium* W. S. Macleay, 1825
Synonyms: *Aphanotus* Leconte, 1862
Eusemostene Gebien, 1940
Leanum Uyttenboogaart, 1934
Margus Dejean, 1834
Margus Redtenbacher, 1842
Stene Stephens, 1832
Tribolium Mulsant, 1854
Tribolium castaneum Herbst, 1797
Basionym: *Collydium castaneum* Herbst, 1797
Synonyms: *Scleron ferrugineum* (Fabricius), 1801
Tenebrio ferrugineum Fabricius, 1781
Tribolium navale (Fabricius, 1775)
Distribution: Iraq (Hussain, 1963). Canada (Majka *et al*., 2008); Malta (Lillig *et al*., 2012); Egypt (Elshewy *et al*., 2016); North America (Bousquet *et al*., 2018); Kuwait (Katbeh-Bader *et al*., 2022).

Tribolium confusum Jacquelin Du Val, 1868
Distribution: Iraq (Khalaf, 1959). Canada (Majka *et al*., 2008); Iran (Grimm, 2015), Egypt (Elshewy *et al*., 2016), North America (Bousquet *et al*., 2018), Kuwait (Katbeh-Bader *et al*., 2022).

Genus, *Latheticus* C. O. Waterhouse, 1880
Latheticus oryzae C. O. Waterhouse, 1880
Distribution: Iraq (Löbl *et al*., 2008 c). Australia, Colombia, Egypt, Estonia, France, Gambia, Germany, Japan, KSA, Mexico, Mozambique, Netherlands, Poland, Réunion, Spain, Sweden, South Africa, UK, USA, and Yemen (GBIF Secretariat, 2022).

CONCLUSIONS

In conclusion, the darkling beetle fauna of Iraq represents a high diversity of species, which provides an interesting and incomplete diversity with questions about its identification and distribution in the different ecosystems. However, thanks to this updated checklist, we expect it to provide an important basis for resolving most of the issues related to the species belonging to this group in Iraq. As well, it serves researchers in various studies related to the taxonomy, environmental diversity, and others. Therefore, we recommend conducting further investigations about them in the different regions of Iraq to determine the extent of the diversity of this group.

CONFLICT OF INTEREST STATEMENT

The authors explain no conflict of interest concerning the work in a manuscript.

LITERATURE CITED

Abdel-Dayem, M. S., Fad, H. H., El-Torkey, A. M., Elgharbawy, A. A., Aldryhim, Y. N., Kondratieff, B. C., Al Ansi, A. N. and Aldhafer, H. M. 2017. The beetle fauna (Insecta, Coleoptera) of the Rawdhat Khorim National Park, Central Saudi Arabia. *Zookeys*, 653: 1-78. [CrossRef]

Abdul-Rassoul, M. S. 1976. Checklist of Iraq natural history museum Insects Collection. Natural History Research Center, Iraq, Publication 1, No. 30, 41pp.

Abdul-Rassoul, M. S., Dawah, H. A., Othman, N. Y. and Al-Gailany, H. B. 1988. Records of insect collection, Part II, in Iraq Natural History Museum. *Bulletin of the Iraq Natural History Museum*, 8(1): 1-10.

Abdurakhmanov, G. M. and Nabozhenko, M. V. 2011. Keys and catalogue to darkling beetles (Coleoptera: Tenebrionidae s. str.) of the Caucasus and south of European part of Russia. KMK Scientific Press Ltd, Moscow, 361 pp. (in Russian).

Abul-Hab, J. K. 1980. A list of Arthropoda of medical and veterinary importance recorded from Iraq. *Bulletin of Biological Research Center*, 12(1): 9-39.

Al-Ali, A. S.1977. Phytophagous and entomophagous insects and mites of Iraq. Natural History Research Center Publication, No. 33, 142pp.

Al-Saffar, H. H. and Augul, R. S. 2015. Survey of Brachycera; Diptera from several regions of Iraq. *Bulletin of the Iraq Natural History Museum*, 13(2): 59-69. [Click here]

Al-Saffar. H. H. and Augul, R. S. 2021. Survey of insects in some southern Iraqi Marshes. *Bulletin of the Iraq Natural History Museum*, 16(4): 571-621. [CrossRef]

Al-Saffar, H. H., Augul, R. S. and Ali, Z. A. A. 2021. Survey and revision of leaf miners to some plants from different localities of Iraq. *GSC Biological and Pharmaceutical Sciences*, 17(3): 124-136. [CrossRef]

Amr, Z. S. 2021. The state of biodiversity in Kuwait. IUCN Gland, Switzerland and the Environmental Public Authority, State of Kuwait, Kuwait, 248 pp. [CrossRef]

Andres, A.1931. Catalogue of the Egyptian Tenebrionidae. *Bulletin de la Société Royale Entomologique d'Égypte*, 15: 74-125.

Augul, R. S. 2018. Study on diversity of bees (Hymenoptera, Apoidea) from different regions of Iraq. *Bulletin of the Iraq Natural History Museum*, 15(1): 57-75. [CrossRef]

Augul, R. S. 2019. Revision of the family Sphecidae (Hymenoptera, Apoidea) in Iraq. *Bulletin of the Iraq Natural History Museum*, 15(4): 491-504. [CrossRef]

Augul, R. S. and Al-Saffar. H. H. 2019. Survey with checklist of the invasive insects to Iraq. *Bulletin of the Iraq Natural History Museum*, 15(3): 343-361. [CrossRef]

Blair, K. G.1923. New species of heteromerous Coleoptera from Mesopotamia. *The Entomologist's Monthly Magazine*, 59: 118-126.

Bousquet, Y., Thomas, D. B., Bouchard, P., Smith, A. D., Aalbu, R. L., Johnston, M. A. and Steiner Jr, W. E. 2018. Catalogue of Tenebrionidae (Coleoptera) of North America. *ZooKeys*, 728: 1-455. [CrossRef]

Bouchard, P., Bousquet, Y., Aalbu, R. L., Alonso-Zarazaga, M. A., Merkl, O. and Davies, A. E. 2021. Review of genus group names in the family Tenebrionidae (Insecta, Coleoptera). *ZooKeys*, 1050: 1-633. [CrossRef]

Borchmann, F. 1910. Pars 3: Alleculidae. *In*: Junk, W. and Schenkling, S. (Eds.), Coleopterorum Catalogus. W. Junk, Berlin, 80 pp. (Cited in: Novák and Ghahari, 2015)

Bunalski, M., Samin, N. and Ghahari, H. 2014a .Contribution to the knowledge of darkling beetles (Coleoptera: Tenebrionidae) from the cotton fields of Iran. *Wiadomości Entomologiczne*, 33(2): 117-125. [ResearchGate]

Bunalski, M., Samin, N. and Ghahari, H. 2014 b. Contribution to the knowledge of darkling beetles (Coleoptera: Tenebrionidae) of Khorasan and Semnan Province, Iran. *Wiadomości Entomologiczne*, 33(3): 188-193.

Carl, M. 1990 a. Ubersicht uber die Irakischen *Adesmia*-Arten und Neubeschreibung von *Adesmia microgranulata* sp. n. (Coleoptera, Tenebrionidae). *Mitteilungen Muenchener Entomologischen Gesellschaft*, 80: 71-83. [Click here]

Carl, M. 1990 b. Eine neue *Dichillus*-Art aus dem Irak (Coleoptera, Tenebrionidae). Entomofauna, 11(4): 105 - 108. [Click here]

Carl, M. 1991. Die Gattungen *Adelostomoides* gen. n. und *Adelostoma* Dup. aus Mesopotamien (Coleoptera: Tenebrionidae). *Nachrichtenblatt der Bayerischen Entomologen*, 40: 23-27.

Carl, M. 1992. Neue und bemerkenswerte Tenebrionidae (Coleoptera) aus dem Vorderen Orient. *Linzer Biologische Beiträge*, 24(1): 331-337. [Click here]

Chigray, I., Nabozhenko, M., Abdurakhmanov, G. and Keskin, B. 2019. A Systematic Review of the Genus *Dila* Fischer von Waldheim, 1844 (= *Caenoblaps*, syn. n.) (Coleoptera: Tenebrionidae) from the Caucasus, Turkey and Boundary Territories of Iran . *Insect Systematics and Evolution*, 51(4):1-30. [CrossRef]

Derwesh, A. I. 1963. A preliminary list of from Coleoptera Iraq. Directorate General of Agricultural Research and Projects, Baghdad,Technical Bulletin, No.13, 38pp.

Derwesh, A. I. 1965. A preliminary list of identified insects and some arachnids of Iraq. Bulletin No. 112. The Government Press, Baghdad, 123 pp.

El – Haidari, H. S., Fattah, Y. M. and Sultan, J. A. 1972. Contribution to the insect fauna of Iraq. Part 4. Directorate General of Plant Protection, Baghdad, Bulletin, No . 18, 17 pp.

Elshewy, D. A., Salem, M. M. and Elmetwally, N. E. 2016. Checklist of the Family Tenebrionidae (Coleoptera) in Egypt. *Egyptian Journal of Agricultural Research*, 94 (1): 39-57. [CrossRef]

Ferrer, J. 2005. Révision du genre Opatroides Brullé, 1832 (Coleoptera,Tenebrionidae: Opatrinae: Opatrini). *Annales Zoologici*, 55: 11-22.

Ferrer, J. and Soldati, L. 1999. Contribution ä l'etude des Tenebrionidae de Turquie (Insecta, Coleoptera). *Entomofauna*, 20(4): 53-92. [Click here]

GBIF Secretariat. 2022. GBIF Backbone Taxonomy. Checklist dataset accessed via GBIF.org on 2023-05-06. [CrossRef]

Gebien, H. 1910. Coleopterorum Catalogus auspiciis et auxilio W. Junk editus a S. Schenkling. Pars 15: Tenebrionidae I. W. Junk, Berlin, 166 pp.

Gebien, H. 1911. Tenebrionidae IV. Pars 37. *In*: Schenkling, S. (Ed.) Coleopterorum catalogus.Volumen XVIII. W. Junk, Berlin, p. 587-742. [Click here]

Grimm, R. 2013. A new species of *Sclerum* Dejean, 1834 from the United Arabic Emirates and Oman (Coleoptera: Tenebrionidae: Tenebrioninae: Opatrini). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 103: 81-84. [Click here]

Grimm, R. 2015. Tenebrionidae (Insecta: Coleoptera) from Iran. *Vernate*, 34: 299-318. [Click here]

Ghahari, H., Havaskary, M., Tabari, M., Ostovan, H., Sakenin, H., Satar, A. 2009. An annotated catalogue of Orthoptera (Insecta) and their natural enemies from Iranian rice fields and surrounding grasslands. *Linzer biologische Beiträge*, 41(1): 639-672. [Click here]

Hassan, F. R., Ismael, H. R., Assaf, L. H., Ahmed, D. S. and Youns, J. H. 2020. Survey of true bugs (Hemiptera) in Duhok Province- Kurdistan Region of Iraq. *Journal of Duhok University*, 23(2): 114-117. [CrossRef]

Hegde, V. D., Manthen, S. V. and Kulkarni, B. 2018. The genus *Gonocephalum* Solier, 1834 (Coleoptera: Tenebrionidae: Tenebrioninae) from Maharashtra with some new records. *Indian Forester*, 144(5): 465-470. [CrossRef]

Holdhaus, K. 1919. Ergebnisse der wissenschaftlichen Expedition nach Mesopotamien, 1910. Koleopteren aus Mesopotamien. *Annalen des Naturhistorischen Museums in Wien*, 33: 39-58.

Hussain, A. A. 1963. Provisional list of insect pest and bibliography of insect fauna of Iraq. *Iraqi Journal of Science*, 7: 43-83.

Ismail, S. I. and Husain, R. J. 2018. Description of five new species registered for Iraq for Family (Coleoptera: Tenebrionidae). *Journal of Misan Researches*, 14(27-4): 85-113.

Iwan, D. and Löbl, I. 2008. Family Tenebrionidae Latreille, 1802: tribe Melanimini Seidlitz, 1894; tribe Opatrini Brullé, 1832; tribe Pedinini Eschscholtz, 1829. *In*: Löbl I, Smetana A (Eds) Catalogue of Palaearctic Coleoptera. Volume 5. Tenebrionoidea. Apollo Books, Stenstrup, 670 pp.

Iwan, D. and Löbl, I. (Eds). 2020. Catalogue of Palaearctic Coleoptera. Tenebrionoidea. Revised and updated second edition. Volume 5. Brill, Leiden and Boston, 945pp. [Click here]

Iwan, D., Ferrer, J. and Raś, M. 2010. Catalogue of the world *Gonocephalum* Solier, 1834 (Coleoptera, Tenebrionidae, Opatrini). Part 1. List of the species and subspecies. *Annales Zoologici*, 60(2): 245-304. [CrossRef]

Iwan, D., Merkl, O. and Ferrer, J. 2011. Catalogue of the world *Gonocephalum* Solier, 1834 (Coleoptera: Tenebrionidae: Opatrini). Part 2. Comments, additions and references. *Annales Zoologici*, 61(2): 259-276. [CrossRef]

Iwan, D., Löbl, I., Bouchard, P., Bousquet, Y., Kamiński, M. J., Merkl, O., Ando, K. and Schawaller, W. 2020. Family Tenebrionidae Latreille,1802, pp. 104–475. *In*: Iwan, D. and Löbl, I. (editors).Catalogue of Palaearctic Coleoptera. Volume 5, Revised and updated second edition. Tenebrionoidea. Brill, Leiden, 945 pp. [CrossRef]

Kaddou, I. K. 1967. Check-list of some insects fauna of Iraq. *Biological Research Center Publication*, 1: 1-44.

Kareem, A., Aljaafari, R. K., Abaas, M. A., Al-Zurfi, S. M., Fazaa, N. A., Al-Sheikhly, O. F., Haba, M. K. and Whittingham, M. J. 2022. Study of insect diversity in areas surrounding, The Central Marsh in southern Iraq. In *IOP Conference Series: Earth and Environmental Science*, 1002(1): 012002. [CrossRef]

Khalaf, K. T. 1959. A collection of insects from Iraq. *Iraq Natural History Museum, Publication*, 17: 1-26.

Khalaf, A. N. and Al-Omar M. A. 1974. A second list of insects of Iraq. *Biological Research Center Publication*, 2: 1-14.

Kryzhanovskij, O. L. 1961. On the zoogeographical features of the Coleopterous fauna of the deserts of Turkmen SSR. *Beiträge zur Entomologie*, 11(3-4): 426-445. [Click here]

Kaszab, Z. 1959. Neue Leptodes-Arten aus Asien, nebst einer Revision der Leptodini (Coleoptera, Tenebrionidae). *Acta Zoologica Academiae Scientiarum Hungaricae*, 4(3-4): 349-368.

Kaszab, Z. 1982. Insect of Saudi Arabia, Coleoptera: Fam. Tenebrionidae (Part 2). *Fauna of Saudi Arabia*, 4: 124-243.

Katbeh-Bader, A., Amr, Z. and Maraf, M. A. J. 2022. Field guide to the common insects of the State of Kuwait. IUCN, Gland, Switzerland and Environment Public Authority, Kuwait, State of Kuwait, 138 pp. [Click here]

Lillig, M. 1995. Die Gattung *Scaurus* Fabricius, 1775 im Sudan (Coleoptera, Tenebrionidae). *Mitteilungen der Münchner Entomologischen Gesellschaft*, 85: 51-55. [ResearchGate]

Lillig, H. 2015. Zur zoogeographie westpaläarktischer Tenebrionidae (Insecta: Coleoptera). Universität Basel, 368 pp. [Click here]

Lillig, M. and Bremer, H. J. 2002. Tenebrionidae der nördlichen Provinzen der Republik Sudan. (Coleoptera: Tenebrionidae).*Coleoptera*, 6: 35-90.

Lillig, M., Borg Barthet, H. and Mifsud, D. 2012. An identification and informative guide to the Tenebrionidae of Malta (Coleoptera). *Bulletin of the Entomological Society of Malta*, 5:121-160.

Lillig, M. and Pavlíček, T. 2023.The Darkling Beetles of the Sinai Peninsula, Coleoptera: Tenebrionidae. CRC Press, 148 pp. [Click here]

Löbl, I. and Smetana, A. 2008. Catalogue of Palaearctic Coleoptera. Volume 5.Tenebrionoidea, p. 105-352. Apollo Books, Stenstrup, Denmark, 670pp. [Click here]

Löbl, I., Merkl, O., Ando, K., Bouchard, P., Egorov, L.V., Iwan, D., Lillig, M., Masumoto, K., Nabozhenko, M., Novák, V., Petterson, R., Schawaller, W. and Soldati, F. 2008 a. Family Tenebrionidae Latreille, 1802. (Cited in: Löbl and Smetana, 2008)

Löbl, I., Nabozhenko, M. and Merkl, O. 2008 b. Tribe Blaptini Leach, 1815. *In*: Löbl I, Smetana, A. (Eds) Catalogue of Palaearctic Coleoptera. Volume 5. Tenebrionoidea. Apollo Books, Stenstrup, p. 219-238.

Löbl, I., Merkl, O., Ando, K., Bouchard, P., Lillig, M., Masumoto, K. and Schawaller, W. 2008c.Tenebrionidae. *In*: Löbl, I. and Smetana, A. (Eds.), Catalogue of Palaearctic Coleoptera. Vol. 5. Tenebrionoidea. Apollo Books, Stenstrup, p. 105-352

Majka, C.A., Bouchard, B. and Bousquet, Y. 2008. Tenebrionidae (Coleoptera) of the Maririme Provinces of Canada. *Canadian Entomology*, 140:690-713.

Nabozhenko, M. V. and Chigray, I. A. 2014. Halobiontic darkling beetles (Coleoptera: Tenebrionidae) of Manych valley (south of Russia). *Caucasian Entomological Bulletin*, 10(1): 243-244. (In Russian with English abstract). [CrossRef]

Nabozhenko, A. V., Doğan, D. and Yildirim, E. 2022. Additions to the knowledge of the diversity of darkling beetles (Coleoptera: Tenebrionidae) from Turkey with new records and taxonomic notes. *Journal of Insect Biodiversity*, 032(1): 005-025. [CrossRef]

Nabozhenko, M. V., Özgen, I. and Ivanushenko, Y. 2018. A new species of the genus *Entomogonus* Solier, 1848 (Coleoptera: Tenebrionidae) from Eastern Anatolia. *Zootaxa*, 4441: 549-554. [CrossRef]

Novák, V. 2016. New *Podonta* Solier species (Coleoptera: Tenebrionidae: Alleculinae) from the Palaearctic Region. *Studies and Reports, Taxonomical Series*, 12(2): 449-470. [Click here]

Novák, V. and Ghahari, H. 2015. A checklist of comb-clawed beetles (Coleoptera: Tenebrionidae: Alleculinae) from Iran. *Zootaxa*, 4027(1): 101-116. [CrossRef]

Novák, V. and Pettersson, R. 2008. Alleculinae. *In*: Löbl, I. and Smetana, A. (Eds.), Catalogue of Palaearctic Coleoptera. Vol. 5. Tenebrionoidea. Apollo Books, Stenstrup, p. 319-339.

Omar, Z. Z., Mawlood, N. A. and Omar, G. T. 2018. Description of darkling beetle, *Opatroides punctulatus* Brulle, 1832 from Erbil Province -Iraq (Coleoptera: Tenebrionidae: Opatrinae). *Polytechnic Journal*, 8(3): 165-172. [CrossRef]

Özgen, I. 2020. Bestimmungstabelle der Tenebrioniden, enthaltend die Zopherini, Elenophorini, Leptodini, Stenosini und Lachnogyini aus der paläarktischen Fauna. *Wiener Entomologische Zeitung*, 35: 129-171.

Pic, M. 1905. Coléoptères nouveaux Provenant de France, Grèce, Algérie et Turquie d´Asie. *L'Échange, Revue Linnéenne*, 21: 161-163.

Reichardt, A. N. 1936. Revision des Opatrines (Coleoptera, Tenebrionidae) De La Region Paléiarctique. *Tableaux Analytiques de La Faune de L'URSS*, Publies Par L'Institut Zooloqique de L'Academie Des Sciences, Moscou-Léningrad, 19, 224pp.

Reitter, E. 1906. Uebersicht der Coleopteren-Unterfamilie: Omophlini der Alleculidae aus Europa und den angrenzenden Ländern. *Verhandlungen des Naturforschenden Vereins in Brünn*, 44: 115-175. (Cited in: Novák and Ghahari, 2015)

Reitter, E. 1916. Tenebrionidae. 8. Teil. Phaleriini. Bestimmungs-Tabelle der palaearctischen Coleopteren. LXXVIII. Heft. Edm. Reitter, Paskau., 10 pp

Reitter, E. 1920. Bestimmungs-Tabellen der europaeischen coleopteren. Heft 87 Tenebrionidae. XV Teil: Beolopinae, Borinae, Tenebrioninae und Coelometopinae aus der palaearktischen Fauna. [Privately published], 24 pp.

Samin, N., Sakenin Chelav, H. and Hawkeswood, T. J. 2014. A preliminary study on Iranian Alleculidae (Coleoptera). *Calodema*, 300: 1-3. [ResearchGate]

Schawaller, W. 2010. Order Coleoptera, family Tenebrionidae (with exception of the subfamily Alleculinae). Arthropod fauna of the UAE, 3: 253-278. (Cited in: Abdel-Dayem *et al*., 2017)

Schuster, A. 1928. Die Gattung *Caenoblaps* König. (Col. Tenebr.). *Koleopterologische Rundschau*, 14:122-125. (Cited in: Chigray *et al*., 2019)

Schuster, A.1937. Eine Tenebrionden-Ausbeute von Mesopotamien, Palästina, Syrien und Aegypten. *Koleopterologische Rundschau*, 23: 44-52. [Click here]

Seidlitz, G. C. M. von.1896. Alleculidae. *In*: Erichson, W. F., Schaum, H., Kraatz, G., Kiesenwetter, H. V., Weise, J., Reitter, E. and Seidlitz, G. (Eds.), Naturgeschichte der Insecten Deutschlands. Erste Abteilung Coleoptera. Fünfter Band. Zweite Hälfte. Nicolaische Verlags-Buchhandlung, R. Stricker, Berlin, 968 pp. (Cited in: Novák and Ghahari, 2015)

Shalaby, F., El-Haidari, H. S. and Derwesh, A. I. 1966. Contribution to the insect fauna of Iraq (Part I). Directorate General of Agricultural Research and Projects, Technical Bulletin no. 143, 11pp.

Shalaby, F., El-Haidari, H. and Derwesh, A. I. 1967. Contribution to insect fauna of Iraq (Part 2). Directorate General of Agricultural Research and Projects, Baghdad, Bulletin, No. 165, 13pp.

Shugran, A. H. M., Augul, R. S. and Al-Khesraji, T. O. 2018. List of insects associated with macrofungi in Tikrit City, Salahadin Governorate, Iraq. *Bulletin of the Iraq Natural History Museum*, 15(1): 41-55. [CrossRef]

Skopin, N. G. 1974. Zur Revision der eurasiatischen Arten der Gattung *Belopus* Gb. Entomologische Abhandlungen des Staatlichen Museum für Tierkunde in Dresden, 40: 65-103. (Cited in: Löbl and Smetana (2008))

Soldati, L. 2009. The Darkling Beetles (Insecta: Coleoptera: Tenebrionidae) of Qatar. Natura optima dux Foundation, Warszawa, 101 pp.

Soldati, L., Condamine, F. L., Clamens, A. L. and Kergoat, G. 2017. Documenting tenebrionid diversity: progress on *Blaps* Fabricius (Coleoptera, Tenebrionidae, Tenebrioninae, Blaptini) systematics, with the description of five new species. *European Journal of Taxonomy*, 282: 1- 29. [Click here]

Swailem, S. M., Selim, A. A. and Amin, A. H. 1974. A contribution to the study of the insect fauna of Hammam Al-Alil. *Mesopotamia Journal of Agriculture*, 9(1-2): 119-141.

Tezcan, S., Karsavuran, Yu., Pehlivan, E., Keskin, B., and Ferrer, J. 2004. Contributions to the knowledge of the Tenebrionidae (Coleoptera) from Turkey Part II. Opatrinae, Tenebrioninae, Adeliinae. *Türkiye Entomoloji Dergisi*, 28(3): 163 - 180.

Yildirim, E. and Kiliç, E. 2008. Distributional checklist of the species of genus Omophlus (Insecta: Coleoptera; Alleculidae; Omophlinae) of Turkey, *Linzer biologische Beiträge*, 40 (1): 961-967. [Click here]

Zhang, Ch.-L. and Ren, G.-D. 2009. Chinese species of the genus *Centorus* Mulsant, 1854 (s. str.) (Coleoptera: Tenebrionidae: Belopini) with description of two new species. *Caucasian Entomological Bulletin*, 5(2): 211-216. [Click here]

Bull. Iraq nat. Hist. Mus.
(2023) 17(4): 699-724.

قائمة مرجعية للخنافس الداكنة (Coleoptera, Tenebrionidae) في العراق

رزاق شعلان عكل و هناء هاني الصفار
مركز بحوث و متحف التأريخ الطبيعي-جامعة بغداد، بغداد، العراق

تأريخ الاستلام: 2023/4/29، تأريخ القبول: 2023/8/24، تأريخ النشر: 2023/12/20

الخلاصة

خلال المراجعة الحالية، تم تقديم قائمة محدثة بأنواع الخنافس الداكنة (عائلة Tenebrionidae، رتبة Coleoptera) المسجلة في العراق. استند البحث الحالي إلى دراسات سابقة في الأدبيات ويحتوي على جميع الخنافس الداكنة المشار اليها في العراق، باستثناء أنواع عويلة Pimelinae.

بينت خلاصة المراجعة تواجد 89 نوعًا يعود الى 34 جنسا و خمسة عويلات؛ تضمن هذا العمل الاشارة الى الأسماء الأساسية والمرادفات للأجناس والأنواع مع توزيعها الجغرافي وتصحيح الأسماء العلمية المذكورة في قوائم المراجعة السابقة.