

A Checklist of *Dichagyris* Lederer, 1857 (Lepidoptera: Noctuidae, Noctuinae) of Iran

Asghar SHIRVANI

Mohammad Ali SHOGHALI

Department of Plant Protection, Faculty of Agriculture, Shahid Bahonar University of Kerman, 76169-133 Kerman, IRAN, e-mail: shirvani@uk.ac.ir

ABSTRACT

Using published records and original data from the very recent expeditions, a checklist of 40 species and subspecies of *Dichagyris* Lederer, 1857 is given together with the Iranian records in different provinces of Iran. Besides the original combination, citation of the original description and type locality of each species is presented. Map illustration shows the location of the provinces.

Key words: Fauna, Moth, *Dichagyris*, Iran.

INTRODUCTION

Beside the comprehensive expeditions and investigations, which have been carried on by foreign scientists, many efforts have been done by native experts, in the few recent years, to investigate the fauna of family Noctuidae in Iran. The results of those efforts (e.g. Bytinsky-Salz and Brandt, 1937; Barou, 1967; Gyulai and Ronkay, 2006; Ronkay and Gyulai, 2006; Shirvani and Shoghali, 2010; Shoghali *et al.*, 2010; Shirvani *et al.*, 2008a etc.) reveal the great importance of such expeditions from either taxonomic or faunistic perspectives. *Dichagyris* Lederer, 1857 contains some rare species and is represented in almost all geographic regions with wide range of distribution in Palaearctic region. There are species of this genus that have been established only by few specimens and species that are endemic only to their type localities. Main characteristics of this genus are crater-like bulge on frons and many spines on forelegs, beside the structure of male genitalia is remarkably similar throughout the genus (Fibiger, 1990). The genus *Yigoga* Nye, 1975 having some similar traits is the closest relative for genus *Dichagyris*, the traits that make some authors to consider *Yigoga* as a synonym for *Dichagyris* (e.g. Fibiger and Lafontaine, 2005). The differences in the genitalia structure of two genera are elements to distinguish them. The genitalia of *Yigoga* differs from that of *Dichagyris* by having narrower base of cucullus, the longer harpe, the shorter or absent ampulla, in female, by having long papillae and apophyses (Fibiger, 1997).

The present paper contains a checklist of 40 species and subspecies of *Dichagyris* (*sensu* Fibiger, 1990) distributed in different provinces of Iran. Original combination,

type locality and synonymy of each taxon are given. Adult and female genitalia of newly recorded subspecies are illustrated.

MATERIAL AND METHODS

Materials of *Dichagyris* were collected by mobile light trap systems powered by batteries (12 volt 8 watt Black light UVB tubes) in south of Iran. Genitalia were extracted and then stained in eosin yellowish and mounted in euparal. Arc GIS 9.2 software was used to make the geographical map of the Iran (Fig. 1).

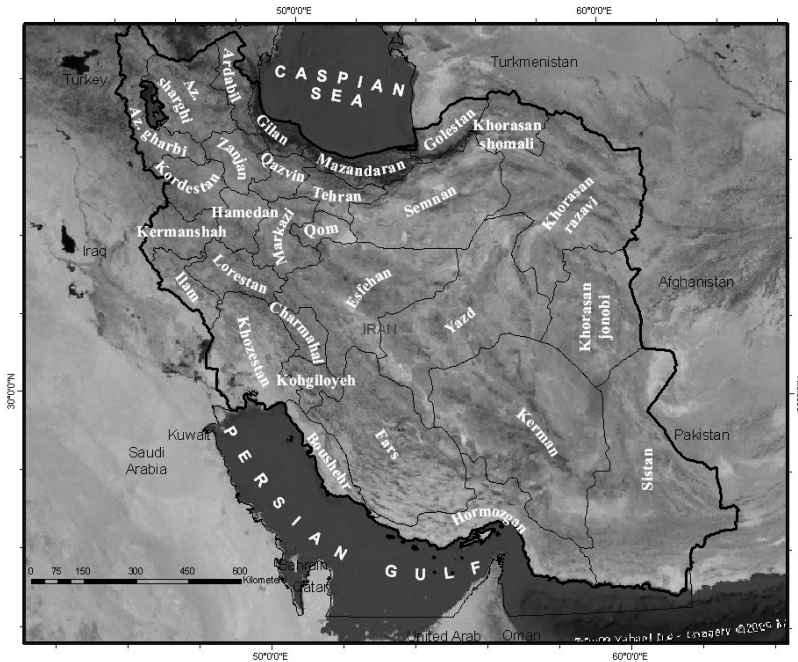


Fig. 1. Geographical map showing provinces in Iran.

CHECKLIST

Genus *Dichagyris* Lederer, 1857

Dichagyris Lederer, 1857, *Die Noctuiden Europa's* 45: 206. Type Species: *Agrotis melanura* Kollar, 1846. L. t.: Yugoslavia, Dalmatia, Dubrovink (Ragusa).

[Synonymy: *Dichagyria* Walker, 1866 (misspelling)]

Dichagyris candelisequa rana (Lederer, 1853)

Agrotis rana Lederer, 1853, *Verh. Zool. Botan. Ges. Wien*.1853: 367. L. t. (Locus typicus): Vorberge Altai.

Iranian records: Elburz Mountains (Hacker, 1990); Kerman.

***Dichagyris elbursica* (Draudt, 1937)**

Rhyacia elbursica Draudt, 1937, *Die Palaearkt. Eulenart. Nachtf.* Suppl. 250. L. t.: Iran, Elburz Mts.

Iranian records: Fars (Hacker and Kautt, 1999); Tehran, Kordestan, Lorestan, Kermanshah (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010); Sistan va Balouchestan (Brandt, 1941).

Taxonomic notes: Ebert and hacker, 2002 listed a species as *Dichagyris* sp. n. nahe *eremicola* (Staudinger, 1888) from Kordestan and Lorestan provinces. As they mentioned that species was very close to *eremicola* and most probably *D. wilsoni* Fibiger, the sister species of *eremicola* must be ascribed to these specimens.

***Dichagyris vallesiaca subsqualorum* Kozhanchikov, 1930**

Dichagyris vallesiaca subsqualorum Kozhanchikov, 1930, *Bull. Mus. Georgie* 92. L. t.: U.S.S.R., Transcaucasia, Borzhom, Tbilisi.

Iranian records: Tehran, Mazandaran, Khorasan, Kordestan (Ebert and Hacker, 2002).

***Dichagyris vallesiaca opulenta* Brandt, 1941**

Dichagyris subsqualorum? opulenta Brandt, 1941, *Mitt. Münch. Ent. Ges.* 31: 842. L. t.: Iran, Balouchestan.

Iranian records: Sistan va Balouchestan (Brandt, 1941), Fars, Kordestan (Ebert and Hacker, 2002).

***Dichagyris tyrannus beluchus* Brandt, 1941**

Dichagyris tyrannus beluchus Brandt, 1941, *Mitt. Münch. Ent. Ges.* 31: 843. L. t.: Iran, Balouchestan.

Iranian records: Fars (Hacker and Kautt, 1999); Sistan va Balouchestan (Brandt, 1941); Kerman (Shoghali *et al.*, 2010).

***Dichagyris squalorum* (Eversmann, 1856)**

Agrotis squalorum Eversmann, 1856, *Bull. Soc. Imp. Nat. Moscow* 29: 221. L. t.: U.S.S.R., Volga, Ural.

[Synonymy: *nigrolineata* Kozhantshikov, 1930]

Iranian records: Tehran, Azarbayjan-e-Gharbi, Kordestan, Fars, Kermanshah, Lorestan, Zanjam (Ebert and Hacker, 2002).

***Dichagyris squalidior* (Staudinger, 1901)**

Agrotis squalorum var. *squalidior* Staudinger, 1901, *Catalog der Lepidopteren des Palaearctischen Faunengebietes*: 1: 146. L. t.: Central and Eastern Turkey.

Iranian records: Fars, Kerman (Hacker and Kautt, 1999); Tehran, Zanjan, Kordestan, Azarbayjan-e-Gharbi, Azarbayjan-e-Sharghi, Lorestan, Kermanshah, Khorasan (Ebert and Hacker, 2002).

***Dichagyris multicuspis* (Eversmann, 1852)**

Hadena multicuspis Eversmann, 1852, *Bull. Soc. Imp. Nat. Moscow* 25 (1): 152. L. t.: U.S.S.R., Volga, Ural steppe.

Iranian records: Khorasan (Ebert and Hacker, 2002).

***Dichagyris taftana* Brandt, 1941**

Dichagyris taftana Brandt, 1941, *Mitt. Münch. Ent. Ges.* 31: 844. L. t.: Iran, Sistan va Balouchestan.

Iranian records: Sistan va Balouchestan (Brandt, 1941).

***Dichagyris boursini* Brandt, 1941**

Dichagyris boursini Brandt, 1941, *Mitt. Münch. Ent. Ges.* 31: 844. L. t.: Iran, Sistan va Balouchestan.

Iranian records: Kerman, Fars, Hormozgan (Ebert and Hacker, 2002); Sistan va Balouchestan (Brandt, 1941).

***Dichagyris humilis humilis* (Boursin, 1940)**

Agrotis humilis humilis Boursin, 1940, *Mitt. Münch. Ent. Ges.* 30: 488. L. t.: Iran, Elburz Mountains.

Iranian records: Elburz Mountains, Tehran (Boursin, 1940).

***Dichagyris humilis elvendi* (Boursin, 1940)**

Agrotis humilis elvendi Boursin, 1940, *Mitt. Münch. Ent. Ges.* 30: 490. L. t.: Iran, Hamadan.

Iranian records: Hamadan (Boursin, 1940).

***Dichagyris pfeifferi* (Corti and Draudt, 1933)**

Agrotis pfeifferi Corti and Draudt, 1933, *Die Palaearkt. Eulenart. Nachtf. Suppl.* 58. L. t.: Turkey, Maras.

Iranian records: Markazi (Ebert and Hacker, 2002).

***Dichagyris fredii* (Brandt, 1938)**

Agrotis fredii Brandt, 1938, *Ent. Rdsch* 55: 503. L. t.: Iran, Fars.

Iranian records: Fars (Brandt, 1938); Tehran (Ebert and Hacker, 2002).

***Dichagyris melanura hyrcanica* (Boursin, 1963)**

Ochropleura melanura hyrcanica, *Bull. Soc. Linn. Lyon* 1963: 256. L. t.: North Iran.

Iranian records: North of Iran.

***Dichagyris korshunovi* Varga, 1996**

Dichagyris korshunovi Varga, 1996, *Acta Zool. Hung.* 42 (6): 195. L. t. Turkmenistan.

Iranian records: Karaj (Gachsar) (Ebert and Hacker, 2002).

***Dichagyris melanuroides* Kozhantshikov, 1930**

Dichagyris melanuroides Kozhantshikov, 1930, *Revue Russe d'Ent.* 24. 18. L. t.: Bukhara.

Iranian records: Tehran, Kordestan, Sistan va Balouchestan (Ebert and Hacker, 2002).

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***Dichagyris leucomelas* Brandt, 1941**

Dichagyris leucomelas Brandt, 1941, *Mitt. Münch. Ent. Ges.* 31: 843. L. t.: Iran, Khorasan, Balouchestan.

Iranian records: Tehran, Kermanshah, Kordestan, Lorestan (Ebert and Hacker, 2002); Fars (Hacker and Kautt, 1999); Khorasan, Sistan va Balouchestan (Brandt, 1941); Kerman (Shoghali *et al.*, 2010).

***Dichagyris grisescens* Staudinger, 1879**

Dichagyris melanura var *grisescens* Staudinger, 1879, *Horae soc. Ent. Ross.* 14: 427. L. t.: North of Iran, Shahrud.

Iranian records: Tehran, Kordestan, Fars, Lorestan (Ebert and Hacker, 2002).

***Dichagyris terminicincta* (Corti, 1933)**

Agrotis terminicincta Corti, 1933, *Dt. Ent. Z. Iris.* 47: 70. L. t.: Libanongebirge.

[Synonymy: *Agrotis terminicincta maraschi* Corti and Draudt, 1933; *Agrotis terminicincta phaenotaenia* Boursin, 1940]

Iranian records: Azarbayjan-e-Gharbi, Mazandaran, Tehran, Kordestan, Semnan, Khorasan (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010).

***Dichagyris paisa* (Brandt, 1938)**

Agrotis paisa Brandt, 1938, *Ent. Rdsch.* 55: 502. L. t.: Iran, Fars.

Iranian records: Fars (Brandt, 1938).

***Dichagyris celebrata* (Alphéraky, 1897)**

Agrotis celebrata Alphéraky, 1897, *In Romanoff Mem. Lep.* 9: 209. L. t.: U.S.S.R., Turkmenia, Kopet Dagh.

[Synonymy: *persiaca* Kozhantshikov, 1929 L. t.: Iran, Sargad]

Iranian records: Fars (Hacker and Kautt, 1999); Tehran, Sistan va Balouchestan (Ebert and Hacker, 2002).

***Dichagyris celebrata armeniaca* Kozhantshikov, 1929**

Dichagyris armeniaca Kozhantshikov, 1929, *Bull. Mus. Georg. Tiflis* 5: 93. L. t.: Armenia, Migry.

[Synonymy: *assimilate* Kozhantshikov, 1929; *tyrannus striatus* Kozhantshikov, 1930. L. t.: Iran, Semnan]

Iranian records: Semnan (Hacker, 1990).

***Dichagyris psammochroa psammochroa* (Boursin, 1940)**

Agrotis psammochroa Boursin, 1940, *Mitt. Münch. Ent. Ges.* 30: 486. L. t.: Iran, Elburz mountains.

Iranian records: Elburz mountains (Boursin, 1940).

***Dichagyris psammochroa dichroa* (Boursin, 1940)**

Agrotis psammochroa dichroa Boursin, 1940, *Mitt. Münch. Ent. Ges.* 30: 487. L. t.: Iran, Fars.

Iranian records: Fars (Boursin, 1940).

***Dichagyris argentea darius* (Boursin, 1940)**

Agrotis argentea darius Boursin, 1940, *Mitt. Münch. Ent. Ges.* 36: 485. L. t.: Elburz Mountains.

Iranian records: Tehran, Markazi (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010).

***Dichagyris singularis* (Staudinger, 1877)**

Orbifrons singularis Staudinger, 1877, *Stett. Ent. Z.* 38: 187. L.t: Krasnowodsk.

Iranian records: Tehran, Khorasan, Lorestan (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010).

***Dichagyris erubescens* (Staudinger, 1891)**

Agrotis renigera var.? *erubescens* Staudinger, 1891, *Dt. Ent. Z. Iris* 4: 268. L. t.: Central Turkey; U.S.S.R.; Caucasus.

Iranian records: Southwest Iran (Zagros Mountain).

***Dichagyris forficula* (Eversmann, 1851)**

Agrotis forficula Eversmann, 1851, *Bull. Soc. Imp. Nat. Moscow* 24: 629. L. t.: Georgia.

[Synonymy: *Agrotis renigera* var. *turana* Staudinger, 1892; *Agrotis renigera* var. *intemedi*a Staudinger, 1892; *Agrotis hadjina* var.? *zeituna* Staudinger, 1900; *Agrotis renigera caerule*scens F. Wagner, 1931; *Agrotis devota eremica* Amsel, 1935]

Iranian records: Tehran, Azarbayjan-e-Gharbi, Azarbayjan-e-Sharghi, Kermanshah, Khouzestan, Boushehr, Hormozgan (Ebert and Hacker, 2002); Fars, Esfahan (Hacker and Kautt, 1999); Kerman (Shoghali *et al.*, 2010).

***Dichagyris poecilopetala* (Varga, 1979)**

Ochropleura poecilopetala Varga, 1979, *Z. Arab. Gem. Oster. Ent.* 31: 5. L. t.: North of Iran.

Iranian records: Fars, Lorestan (Hacker and Kautt, 1999); Esfahan, Tehran (Ebert and Hacker, 2002).

***Dichagyris devota* (Christoph, 1884)**

Agrotis devota Christoph, 1884, *In Romanoff Mem. Lep.* 1: 116. L. t.: Achal Tekke.

Iranian records: Tehran, Fars (Ebert and Hacker, 2002).

***Dichagyris amoena* (Staudinger, 1892)**

Agrotis amoena Staudinger, 1892, *Dt. Ent. Z. Iris.* 4: 267. L. t.: Turkey, Amasia.

[Synonymy: *Rhyacia flavida* Corti and Draudt, 1933]

Iranian records: Gilan, Fars, Tehran (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010).

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***Dichagyris anastasia* (Draudt, 1936)**

Agrotis anastasia Draudt, 1936, *Ent. Rdsch.* 53: 462. L. t.: Turkey, Iraq.

Iranian records: Markazi (Ebert and Hacker, 2002); Kerman (Shoghali *et al.*, 2010).

***Dichagyris gyulaiivani* Gyulai and Varga, 2002**

Dichagyris gyulaiivani Gyulai and Varga, 2002, *Esperiana* 9: 211. L. t.: Iran, Esfahan.

Iranian records: Esfahan (Varga *et al.*, 2002); Kerman (Shoghali *et al.*, 2010).

***Dichagyris eureteocles* (Boursin, 1940)**

Agrotis eureteocles Boursin, 1940, *Mitt. Münch. Ent. Ges.* 30: 482. L. t.: Armenia, Elburz gebirge.

Iranian records: Markazi (Ebert and Hacker, 2002); Sistan va Balouchestan, Kerman (Shoghali *et al.*, 2010); Tehran (Boursin, 1940).

***Dichagyris danilevskiyi* (Stshetkin, 1965)**

Ochropleura danilevskiyi Stshetkin, 1965, *Akad. Nauk. Tadzik. USSR* 1965: 135. L. t.: Russ. Turkistan.

Iranian records: Sistan va Balouchestan (Shirvani *et al.*, 2008b).

***Dichagyris zagroica zagroica* Hacker and Ebert, 2002**

Dichagyris zagroica zagroica Hacker and Ebert, 2002, *Esperiana* 9: 252. L. t.: Iran, Hamadan.

Iranian records: Hamadan (Ebert and Hacker, 2002).

***Dichagyris zagroica azerica* Gyulai and Varga, 2006**

Dichagyris zagroica azerica Gyulai and Varga, 2006, *Esperiana* 12: 274. L. t.: Iran, Azarbayjan e Sharghi.

Iranian records: Azarbayjan-e-Sharghi (Gyulai and Varga, 2006).

***Dichagyris sureyae* (Rebel, 1931)**

Agrotis sureyae Rebel, 1931, *Ann. Nat. Hist. Mus. Wien.* 46: (5). L. t.: Turkey, Ankara.

Iranian records: Kohkiluyeh va Boyer-Ahmad (Ronkay and Gyulai, 2006); Kerman.

***Dichagyris latipennis occidentalis* (Hacker, 1986)**

Yigoga latipennis occidentalis Hacker, 1986, *Atalanta* 17: 13. L. t.: Turkey.

Iranian records: Tehran, Fars, Sistan va Balouchestan (Ebert and Hacker, 2002); Ardabil.

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