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Second record of *Hirmoneura kunchuy* Kemal & Koçak in Van Province (East Turkey) (Diptera, Nemestrinidae)

Muhabbet Kemal¹ Ahmet Ömer Koçak

Abstract: Second record of *Hirmoneura kunchuy* Kemal & Koçak in Van Province (East Turkey) (Diptera, Nemestrinidae). *Misc. Pap.* 194: 1-2, 2 figs.

This paper contains the faunistic record of *Hirmoneura kunchuy* from Van Province (East Turkey). Some complementary notes on its behaviour and habitat are also added.

Key words: *Hirmoneura kunchuy*, *Nemestrinidae*, *Diptera*, fauna, Turkey, Van, Gürpınar.

The species *kunchuy* of the genus *Hirmoneura* was described by Koçak & Kemal (2012) from Kurubaş Pass (Van Province), 20km SE of Van city. This species has not been reported since then from anywhere (Koçak & Kemal, 2013; Kemal & Koçak, 2018). Several days ago, the authors could find an opportunity to visit Başet Mount in the Gürpınar district (Van Province). On 10th July, 2019 two specimens of this species were captured during flight in the midday (**Fig.1**). The habitat is dry degraded mountain steppe on the rocky slopes (**Fig.2**). The species is strong flier, found singly, and rarely observed in the area. The second locality is at 2225m above sea-level and about 24.5km SE from the type-locality, Kurubaş Pass (2160m). Its flight period is mid July, single annual generation.

***Hirmoneura* Meigen, 1820**

Hirmoneura Meigen, 1820, Syst. Besch. zweifl. Insekt., 2, 132. Type-species: *Hirmoneura obscura* Wiedemann in Meigen, 1820, *ibid.* 2: 132-133, by monotypy.

This genus is represented by the following species in East Turkey.

***Hirmoneura kunchuy* Koçak & Kemal, 2012**

Original reference: *Hirmoneura kunchuy* Koçak & Kemal, 2012, *Misc. Pap.* 158: 1-3, 6 figs. Holotype ♂. East Turkey, Van Province, Kurubaş Pass 2160m, 17-18.vii.2011, leg. M. Kemal & A.Ö.Koçak (coll. Cesa).

Material studied: 2 specimens. East Turkey: Van Province, Gürpınar District, a locality with the code "65Gğ", Başet Mt., 2.7km. NW Bağrıyanık 2225m, 10.vii.2019, M. Kemal & A.Ö.Koçak leg. (Cesa).

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Figs 1, 2 – *Hirmonneura kunchuy*. Dorsal side of the specimen (above). Habitat of the species. Degraded mountain steppe on stony slopes, 2.7km NW Bağrıyanık 2225m, 10.vii.2019 (below). M. Kemal (Cesa)

<http://zoobank.org/References/A99E39E4-99EF-4D7D-800E-272C0FF015CB>

On the synonymy of two subspecific names of *Polyommatus eumedon* from East Turkey (Lepidoptera, Lycaenidae)

Muhabbet Kemal² Ahmet Ömer Koçak

Abstract: On the synonymy of two subspecific names of *Polyommatus eumedon* from East Turkey (Lepidoptera, Lycaenidae). *Misc. Pap.* 194: 3-4, 2 figs.

In this paper, the synonymy of two names, *namus* and *bercelemensis* of the species *Polyommatus eumedon* (Lycaenidae, Lepidoptera) is discussed.

Key words: *Polyommatus eumedon*, *namus*, *bercelemensis*, Lycaenidae, Lepidoptera, synonymy, Van, Hakkari, Turkey.

Schurian *et al.* (2014) described a subspecies of *Eumedonia eumedon* from Hakkari Province with the name *bercelemensis*. They also stated: “...Provinz Van, Karabel geçidi, 2900m. Diese Tiere wurden nicht in die Paratypenserie mit einbezogen, obwohl sie morphologisch von *bercelemensis* ssp. n. nicht zu trennen sind” (Schurian *et al.*, 2014: 4). This means that the *bercelemensis* populations of Hakkari and Van (Karabel [*recte* Karabet]³) are same morphologically. Schurian *et al.* omitted⁴ the paper on the Çatak Lepidoptera, published by Koçak & Kemal (2002), which contains several descriptions of new taxa. Among them, the new subspecies *namus* of the species *Polyommatus eumedon* was described and illustrated from Karabet (see also Kemal & Koçak, 2017: 181, 203, figs. 44, 45; 2018: 60 “as *eumedon*”). The subspecies *namus* is currently valid, inhabiting Karabet and also Bercelem according to expression by Schurian *et al.* (2014). Under these conditions, two nomenclaturally available scientific names *namus* Koçak & Kemal, 2002 and *bercelemensis* Schurian *et al.*, 2014 are synonyms. According to the priority rule, the name *namus* is valid for the subspecies, described 12 years earlier than *bercelemensis*. The latter name is considered here as junior subjective synonym of *namus*. The result is briefly given below:

***Polyommatus eumedon* ssp. *namus* Koçak & Kemal, 2002**

Original reference: *Polyommatus (Aricia (Eumedonia)) eumedon* ssp. *namus* Koçak & Kemal, 2002, *Misc. Pap.* 82/85: 20, footnote 12. Holotype ♂. “Türkiye, Van, Çatak, [Karabet] geçidinin doğu yamaçları, 2700-3000m, M. Kemal leg. (coll. Cesa)” [Turkey, Van, Çatak, eastern slopes of [Karabet] Pass, 2700-3000m, M.Kemal leg. (coll. Cesa)].

=*bercelemensis* Schurian *et al.*, 2014 (**syn.n.**)

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³ This mountain pass is called as Karabel, Krapet or Karabet in older road maps or in various media.

⁴ Ten Hagen & Schurian (2009) published taxonomic and faunistic paper on *Polyommatus crassipunctus*. They took the paper by Koçak & Kemal (2002) into account. On the same page footnote 11, the subspecies *mehmetcik* was described by Koçak & Kemal (2002) from [Karabet] Pass. The taxa *mehmetcik* and *namus* fly sympatrically at [Karabet] Pass (**Figs 1,2**).

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Figs 1, 2 – *Polyommatus eumedon* ssp. *namus*. At rest. East Turkey: Van Pr. Karabet Pass 3000m, 17.vii.2017 (topotype) (left). *Polyommatus crassipunctus* ssp. *mehmetcik*. From the same place and time (topotype) (right). M. Kemal (Cesa)

<http://zoobank.org/References/24D699B8-2329-44F5-910F-078A6D092332>

Molecular evaluations of some *Altenia* populations in Turkey (Lepidoptera, Gelechiidae)

Sibel Kızıldağ⁵ Muhabbet Kemal Ahmet Ö. Koçak

Abstract: Molecular evaluations of some *Altenia* populations in Turkey (Lepidoptera, Gelechiidae). *Misc. Pap.* 194: 5-6, 1 fig. 1 tab.

Present paper deals with some *Altenia anamuria* populations in Turkey. They are evaluated for the first time from the molecular standpoint. Faunistically, this species is reported here from Şirvan (Siirt Province), and Çatak (Van Province) for the first time.

Key words: *Altenia anamuria*, Gelechiidae, Lepidoptera, fauna, mtCOI barcoding, Turkey

Kemal & Koçak (2017, 2018) called attention to and described *Altenia anamuria* from Anamur, South Turkey, İçel Pr. After morphological description of *Altenia anamuria*, a molecular evaluation has not been realized by the authors so far. As in the previous papers of the authors on the molecular comments and review on various Lepidoptera groups (Kızıldağ, S. & M. Kemal, 2019a-d), *Altenia* populations of Turkey are briefly discussed here within the framework of existing resources and DNA barcoding of the Lepidoptera of Cesa Collection (DBLCC)⁶

In the present paper, some *Altenia anamuria* populations in Turkey are evaluated for the first time from the molecular standpoint (**Fig. 1, Table 1**). Neighbour-joining analysis shows *A. scriptella* as the nearest neighbour to *Altenia anamuria* with range 4.79 to 4.96% p-distance, while genetic distances of *A. perspersella* are found 8.0-8.41%. The populations of *A. anamuria* presented in this study are distinctly different from these two species.

The genetic distance between Anamur and Şirvan/Çatak populations is 1.70%. Anamur population (*Altenia anamuria*) is evaluated here as a distinct species. Although the genetic distance (1.70%) between different populations of the same species seems remarkable, detailed morphological studies and further faunistical investigations are needed.

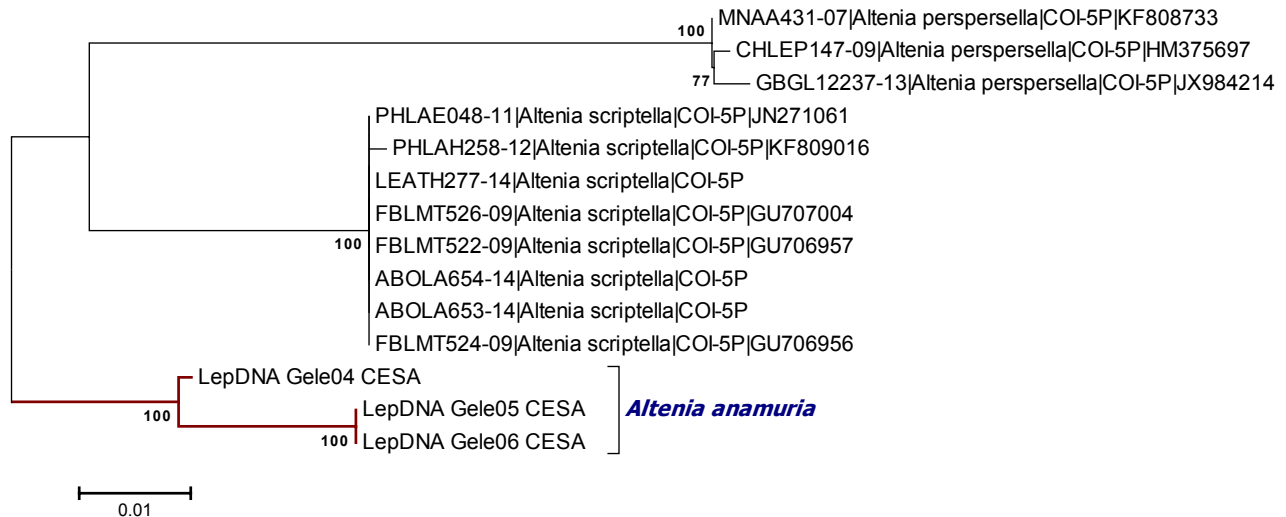


Fig. 1 – Neighbour-joining tree of *Altenia anamuria* from Turkey and related species.

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⁶ <https://www.researchgate.net/project/DNA-Barcoding-of-the-Lepidoptera-of-Cesa-Collection-DBLCC>

Table 1 – Molecular evaluations of some *Altenia* populations in Turkey

DNA codes	Current name, status	Locality	Notes
Gele04 Cesa	<i>Altenia anamuria</i> , valid	TR, İçel: Anamur	molecular investigation proves that it is a distinct species
Gele05 Cesa	<i>Altenia anamuria</i> , valid	TR, Van: Çatak	It needs more investigations on these populations
Gele06 Cesa	<i>Altenia anamuria</i> , valid	TR, Siirt: Şirvan	

Faunistic remarks: Kemal & Koçak (2017) declared their temporary idea about the identity of Şirvan populations of *Altenia* as “*Altenia* aff. *modesta*”. Now it is clear that Şirvan and Çatak (Van Pr.) populations belong to *Altenia anamuria* with some distance. Of course, further investigations on this point are necessary. For the time being, it can be said that the species *Altenia anamuria* is faunistically new record for Siirt Pr. (Şirvan) and Van Pr. (Çatak) in East Turkey.

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On the evaluations of some populations of *Axylia* in SE Asia (Lepidoptera, Noctuidae)

Sibel Kızıldağ⁷ Muhabbet Kemal Ahmet Ö. Koçak

Abstract: On the evaluations of some populations of *Axylia* in SE Asia (Lepidoptera, Noctuidae).
Misc. Pap. 194: 7-8, 1 fig. 1 tab.

In the present paper, some *Axylia* populations of Pakistan and the Philippines are evaluated and discussed for the first time from the molecular standpoint.

Key words: *Axylia putris*, *triseriata*, Noctuidae, Lepidoptera, fauna, mtCOI barcoding, Pakistan, Philippines, Mindanao, Caragan Mt.

Koçak & Kemal (2014: 47) reported “*Axylia putris*” from Pakistan (Alpurai, Hazara: Chatter Hills, Swat: Karakar Pass, Shangla Forest).

Kemal, Kızıldağ & Koçak (2019: 26-27) mentioned *Axylia* sp. from the Philippines (Mindanao Is., Caragan Mt.) with comments about its specific status. Furthermore the necessity of the DNA analysis has been emphasized.

A molecular paper on SE Asiatic species of *Axylia* has not been published so far. The status of some *Axylia* populations in North Pakistan and the *Axylia* species in Mindanao Island (Philippines) were uncertain. As in the previous papers of the authors on the molecular comments and review on various Lepidoptera groups (Kızıldağ, S. & M. Kemal, 2019a-d), *Axylia* populations of SE Asia are briefly evaluated from the molecular standpoint and discussed here within the framework of existing resources and DNA barcoding of the Lepidoptera of Cesa Collection (DBLCC)⁸.

In the present paper, some *Axylia* populations from Pakistan and Mindanao Is. (Philippines) are compared with the typical *Axylia putris* from Europe in order to understand better their taxonomic belonging.

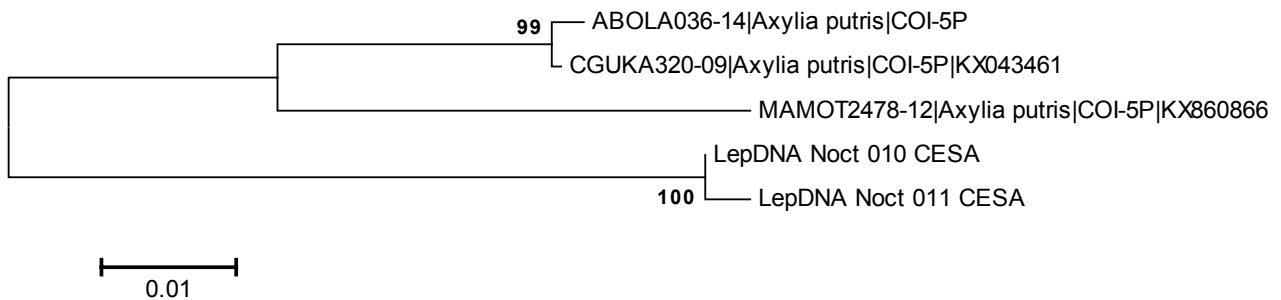


Fig. 1 – Neighbour-joining tree of the presented *Axylia* populations.

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⁸ <https://www.researchgate.net/project/DNA-Barcoding-of-the-Lepidoptera-of-Cesa-Collection-DBLCC>

Table 1 – Molecular evaluations of some *Axyليا* populations in Europe and SE Asia (see also remarks on the next page)

DNA codes	Current name, status	Locality	Notes
ABOLA036-14	<i>Axyليا putris</i> , valid	Austria	ex Bold Systems
CGUKA320-09	<i>Axyليا putris</i> , valid	England	ex Bold Systems
MAMOT2478-12	<i>Axyليا</i> sp.	Pakistan-Kashmir	ex Bold Systems and cited as " <i>Axyليا putris</i> "
Noct 010 Cesa	<i>Axyليا triseriata</i> , temporary	Pakistan, Swat: Shangla	The species <i>Axyليا triseriata</i> Moore,1888 is represented in Pakistan and the Philippines.
Noct 011 Cesa	<i>Axyليا triseriata</i> , temporary	Philippines, Mindanao: Caragan Mt.	

***Axyليا triseriata* Moore,1888**

Original reference: *Axyليا triseriata* Moore,1888, Proc. Zool. Soc. Lond. 1888: 409. Type: India: Himachal Pradesh, Kangra (BMNH).

Range: Russia: Siberia, Ussuri; Japan; Pakistan (Alpurai, Hazara: Chatter Hills, Swat: Karakar Pass, Shangla Forest) [present evaluation]; India: Assam, Himachal Pradesh; Nepal; Vietnam; Laos; Thailand; Taiwan; Philippines: Mindanao, Caragan Mt [present evaluation].

Remarks:

The genetic distance between Pakistan (Swat) and the Philippines (Mindanao) is very low (0.3%). Whereas, *Axyليا* from Pakistan and the Philippines and the European *Axyليا putris* have a very large genetic distance [9-10%]. Therefore, it should be a distinct species. Holloway (1989) mentioned two closely related *Axyليا* species in SE Asia, i.e., *putris* (type-species of *Axyليا*) and *triseriata* Moore. The taxon *mundipennis* Warren,1912 may be conspecific with the latter. Finally, an undescribed taxon from Sulawesi. We consider here that *triseriata* Moore may occur in Mindanao, as the oldest name among the candidates.

Finally, determined as "*Axyليا putris*" from Pakistan-Kashmir ex Bold Systems with the code "MAMOT2478-12" does not belong to *putris*, due to its high genetic distance, e.g., 5.53-5.87% from typical *putris* from Europe (Fig. 1, Tab. 1).

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⁹ <http://www.cesa-tr.org/Pri.htm>

¹⁰ <http://www.cesa-tr.org/Miscell.htm>

¹¹ <http://www.cesa-tr.org/Memoirs.htm>

¹² <http://www.cesa-tr.org/CDF.htm>

¹³ <http://www.cesa-tr.org/Icon.htm>

¹⁴ <http://www.cesa-tr.org/CPAL.htm>

¹⁵ <http://www.cesa-tr.org/Cesanews.htm>

¹⁶ <http://www.cesa-tr.org/Cesabooks.htm>