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## Description of a new species of the genus *Wehrliola* Strand in East Turkey (*Lepidoptera*, *Geometridae*)

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**Abstract:** Description of a new species of the genus *Wehrliola* Strand in East Turkey (*Lepidoptera*, *Geometridae*). *Misc. Pap.* 168: 1-4, 11 figs.

In this paper, a new *Ennominae* species is described from Hakkari Province in East Turkey. Complementary preparations male, female genitalia and tympanal organs are also illustrated.

**Keywords:** *Lepidoptera*, *Geometridae*, *Wehrliola*, description, new species, fauna, Hakkari, Yüksekova, Dağlıca, Turkey.

### ***Geometridae* Leach,[1815] *Ennominae* Duponchel,[1845]**

#### ***Wehrliola* Strand,1932**

*Wehrliola* Strand,1932, Folia zool. hydrobiol. 4: 147 (proposed as an objective replacement name for *Pfeifferia* Wehrli,1932 nec *Pfeifferia* Gray,1853). Type-species: *Aspitates revocaria* Staudinger,1892, by original designation.

<http://zoobank.org/urn:lsid:zoobank.org:act:C9A59765-BFD4-411C-8D14-8EA3C82D0991>

The genus *Wehrliola* was established by Strand in 1932 as a replacement name for *Pfeifferia* Wehrli (1932), which is preoccupied. The genus was monotypic in the subfamily *Ennominae*, with the type-species *revocaria* Staudinger (1892: 203-204) in Lebanon and Turkey (Koçak & Kemal,2015). The species *revocaria* was described from Beirut (Lebanon) with hesitation in the genus “*Aspilates*” (now *Aspitates*), and very little known faunistically in Turkey (*cf.* Figs. 10, 11 of *Aspitates gilvaria* below).

In Turkey, Wagner (1931) reported *revocaria* from Akşehir (Konya), and Wehrli (1934) from Kahramanmaraş. Kemal & Koçak (2018) recorded it from upper heights of Anamur (İçel). Last authors illustrated also its male genitalia and tympanal organs.

Uçak collected a large number of lepidopteran material from Dağlıca (Hakkari, SE Turkey) in the last year. Among these materials, several worn specimens look like a *Wehrliola* species, but differing from *revocaria* in some respects. After taking the differences between *revocaria* from Akşehir and the species from Dağlıca into consideration, the authors came to the conclusion that the species from Dağlıca is surprisingly the second species of *Wehrliola*, and new to the science.

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***Wehrliola inexpectata* sp.n. (Figs. 1-9)**

<http://zoobank.org/urn:lsid:zoobank.org:act:BD669EFD-8D64-4910-9823-ACCB7FEE159D>

Holotype (male).

**Description:**

Forewing: 20.5mm wingspan: 37mm.

Antenna bipectinate. Upperside of wings (**Fig.1**): Dark greyish brown, with numerous blackish small dots and striae. Markings similar to those of *revocaria* Staudinger however, discal spots greatly reduced. Postdiscal line dark brown partly indistinct, almost straight on hindwing and anal part of forewing, undulate on median part, curved strongly to costal margin of forewing. Outer part of postdiscal line with partly indistinct darker band on both wings. Margins undulated on both wings. Cilia brownish, lighter at base.

Male genitalia (GP2862) (**Fig.2**); uncus well developed, very long and curved. Valva similar to that of *revocaria*. Gnathos and its lateral arms well developed, rather different in shape than that of *revocaria*. Lateral arms of juxta better developed than *revocaria*. Inner margin of saccus protuberant, not flat as in *revocaria*. Aedeagus remarkably short, stout, strongly curved at base; its terminal spine very large, also curved.

Paratypes (3♂♂ 1♀):

Males similar to holotype. Lateral view of head is illustrated below. Proboscis developed. Frons smoothly scaled. Labial palpi small (**Fig.3**). Forewing 19-21mm, wingspan 35-37mm (GP2851).

Female with filiform antenna, and more distinct discal spots on both wings (**Fig.4**). Forewing 17mm, wingspan 31mm (GP2859).

Female genitalia (**Fig.5**); papillae anales, apophyses anteriores and posteriores well developed. Ductus bursae well chitinized, connected with a semicircular chitinous ring. Corpus bursae membranous, with a large stellate signum.

**Differentiating characters:** The new species is the second one of the genus *Wehrliola* Strand. It is distinguishable externally from *revocaria* by absence or reduced discal spots especially in males, shape of the postdiscal stria on apical part of forewing upperside. In the male genitalia, it is also distinguishable by shape of gnathos and its arms, lateral arms of juxta, inner margin of saccus, as well as size and shape of aedeagus.

Tympanal organ dimorph sexually. Especially shape of ansa is remarkable (**Figs. 6-9**).

**Distribution and flight period:** The new species is probably confined to the mountainous region of SE Turkey, flying by night in September-October in a single generation.

**Material studied:** Holotype (♂) SE Turkey, Hakkari Province, Yüksekova, Dağlıca 1520m (30Df), light trap, 20 10 2017, H.Uçak leg. (Cesa).

Paratypes 1♂ from same place 1515m, 19 9 2017 H.Uçak leg. (YYUIRC); 1♂ (GP2851) from same place, 1505m, 15 10 2017 H.Uçak leg. (Cesa); 1♂ from same place 1505m, 16 10 2017 H.Uçak leg. (Cesa); 1♀ (GP2859) from same place 1520m 22 9 2017, H. Uçak leg. (YYUIRC & Cesa).

Holotype and some paratypes are preserved in the biorepository Centre for Entomological Studies Ankara (Cesa),<sup>2</sup> and paratypes in the Yüzüncü Yıl University, Insect Research Collection of the Department of Biology (YYUIRC).<sup>3</sup>

For comparison: *Wehrliola revocaria*: Forewing 19-21mm, wingspan 37-38mm (2♂ from Anamur). The male genitalia and the tympanal organ of *Aspitates gilvaria* are also added for comparison (**Figs. 10-11**).

**Acknowledgement**

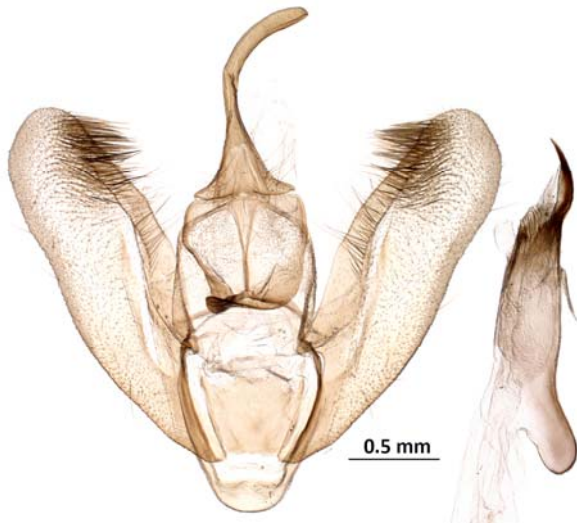
We thank to Ahmet Ömer Koçak (Turkey) for his valuable comments and help in identification of this species.

<sup>2</sup> Cool URI: <http://grbio.org/cool/eaaz-xyfc>

<sup>3</sup> Cool URI: <http://grbio.org/cool/390t-itxm>

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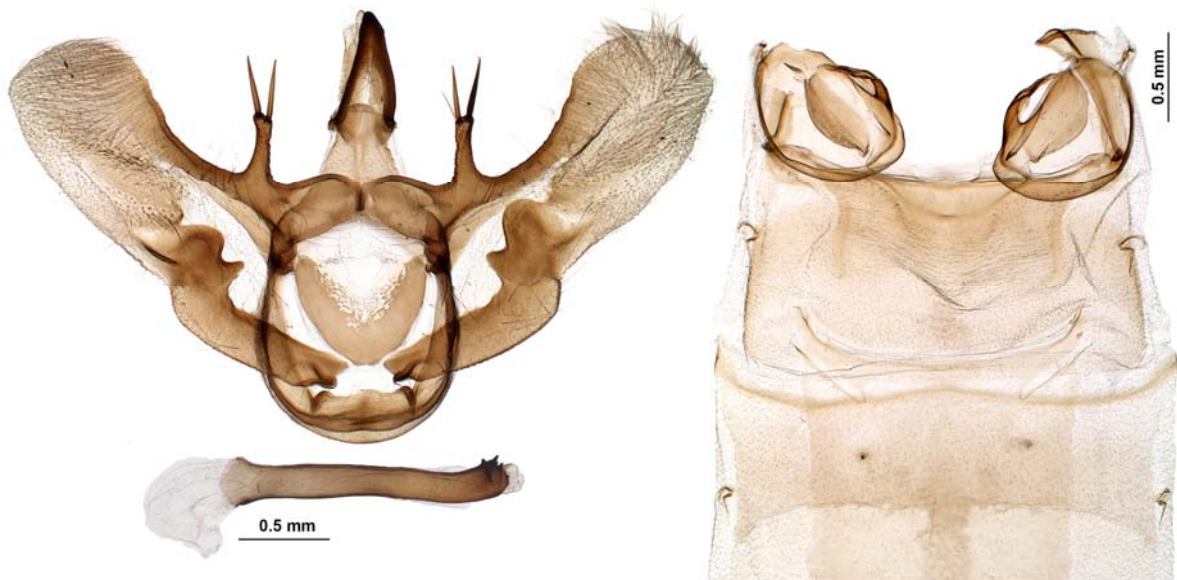
**Figs. 1-3** – *Wehrliola inexpectata* sp.n. Holotype (♂). Upperside of wings (top left). Male genitalia, GP 2862 (holotype). Lateral view of head of male (paratype). M. Kemal (Cesa)



**Figs. 4, 5** – Upperside of female (paratype) of *Wehrliola inexpectata* sp.n., and its genitalia with enlarged signum, GP2859 (paratype), M. Kemal (Cesa)



**Figs. 6-9** – Tympanal organs of *Wehrliola inexpectata* sp.n. (before & after preparation). Male (paratype), GP2851 (left), female (paratype), GP2859 (right), M. Kemal (Cesa)



**Figs. 10, 11** – *Aspitates gilvaria* ssp. *orientaria*. Male genitalia and tympanal organ. East Turkey, Bitlis Prov. Adilcevaz, Kızdağı (Süphan) 2460m (13Ac2), GP2712, M. Kemal (Cesa)

**C o n t e n t s : Kemal,M. & H.Uçak**, Description of a new species of the genus *Wehrliola* Strand in East Turkey (*Lepidoptera, Geometridae*), p.1 - **editorial**, p.5.

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