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A new species of Pseudohadena Alphéraky, 1889 from Iran (Lepidoptera, Noctuidae: Xyleninae)

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Abstract – Description of *Pseudohadena zahedana* sp. n. from Iran is given. The formerly unknown male of *P. deserticola* RONKAY, VARGA et FÁBIÁN, 1995 is described and illustrated. With 7 figures.

Key words – Noctuidae, *Pseudohadena*, new species, Iran.

INTRODUCTION

The *Pseudohadena* generic complex is one of the large trifine lineages, comprising more than 50 described species. The genus *Pseudohadena* ALPHÉRAKY, 1889 as a monophyletic unit have been redescribed by RONKAY *et al.* (1995), and divided into three subgenera, *Pseudohadena* ALPHÉRAKY, 1889, *Jaxartia* PÜNGELER, 1914 and *Pseudopseustis* HAMPSON, 1910. The generic apomorphies indicating the monophyly of the lineage are the armature of the fore tibiae consisting of 4–7 strong, thorn- or claw-like spines, the sclerotised, finger-shaped or bar-like editum being close to posterior end of clasper, a most often narrow cone-shaped membranous diverticula positioned subapically on the vesica, and the basally heavily sclerotised, plate-like ovipositor lobes, with a circumferrand band of long hair-like setae medially on the ovipositor lobes.

The distinctive features that separate the two large subgenera, *Pseudohadena* and *Jaxartia*, are as follows (RONKAY *et al.* 2002): the subgenus *Pseudohadena* has well-developed proboscis, ciliate male antennae, short clasper, very large, sclerotised juxta with long and strong, handle-like dorsoapical process, narrow, cuneate pollex, narrow triangular digitus, fully developed diverticular structure of the vesica (with five membranous diverticula) with absence of the terminal cornutus; cup-like, heavily sclerotised ostium-antrum complex, rather membranous ductus bursae with only slight sclerotisation, and four long signa-bands. The subgenus *Jaxartia* can be characterised by the reduced proboscis, the broadly bipectinate male antenna, the shield-like juxta with much shorter but broader dorsal process, the much broader digitus, the simplified diverticular structure of the vesica (having two or three diverticula) with the terminal cornutus most often present, the shorter conical ovipositor, the weaker antrum, the less separated corpus bursae and appendix bursae and the differently developed signa (they are either completely missing or appearing as distinct, rather short signum patches instead of the four long signum-stripes).

This paper contains the description of a new species discovered in early November close to Zahedan city. An interesting although small material was collected on those nights despite the windy weather conditions. It seems that the regions similar to the place mentioned above are still less explored and require more intensive faunistic studies in order to get a better picture of the highly specialised and stenochorous members of their fauna. The species has been compared with all known relatives. Fortunately, an old, formerly overlooked male specimen of *P.* (*J.*) *deserticola* RONKAY, VARGA et FÁBIÁN, 1995 was found in the collection of the BM(NH), thus, the authors had the opportunity to describe and compare the unknown genitalia of this species with the other taxa of the *P.* (*J.*) *evanida* group.

Abbreviations – BMNH = The Natural History Museum, London (formerly British Museum, Natural History); BUK = Bahonar University, Kerman; HNHM = Hungarian Natural History Museum, Budapest.

Pseudohadena (Jaxartia) zahedana SHIRVANI et RONKAY sp. n.
(Figs 1–2, 4–5)

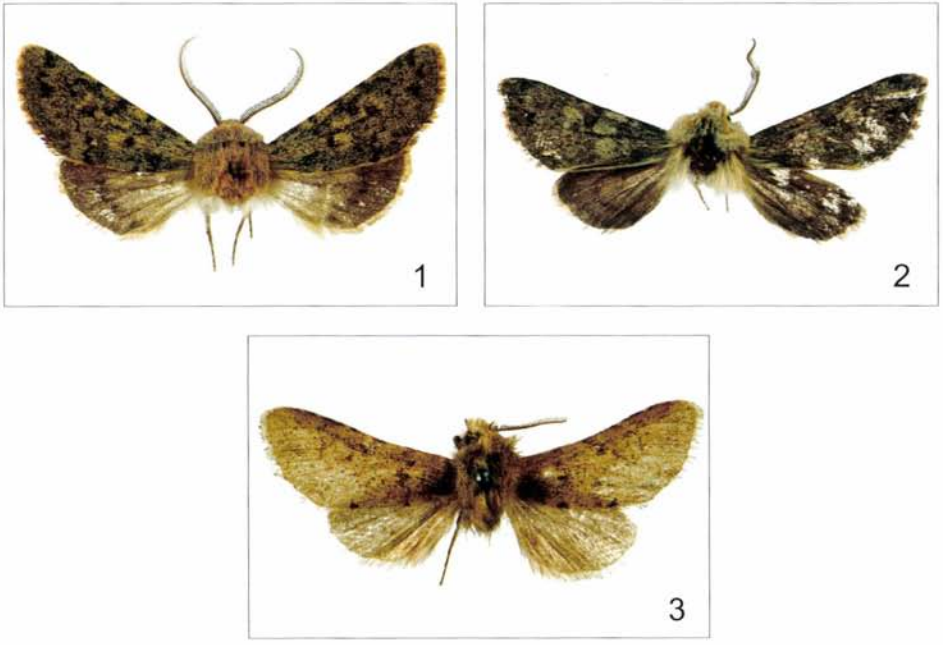
Type material – Holotype: male, Iran, Prov. Sistan & Balouchestan, 10 km S of Zahedan, 1400 m, 29°24'207"N, 60°54'690"E, 3. XI. 2006, leg. A. SHIRVANI, slide No. 330 m SHIRVANI (HNHM). Paratype: 1 male, Iran, Prov. Sistan & Balouchestan, 10 km N of Zahedan, 1600 m, 29°37'710"N, 60°46'385"E, 1. XI. 2006, leg. A. SHIRVANI, slide No. 331 m SHIRVANI (BUK).

Diagnosis – The new species belongs to the *P.* (*J.*) *evanida* group, its closest relatives are *P.* (*J.*) *evanida* and *P.* (*J.*) *magnitudinis*. PÜNGELER (1914) who described *Jaxartia* as a genus first discussed the taxonomy of this lineage. Subsequently, a number of species were discovered and described from the arid regions of Western and Central Asia, see BOURSIN (1943, 1954), EBERT & HACKER (2002), RONKAY & VARGA (1989*a*, 1989*b*), RONKAY, VARGA & FÁBIÁN (1995) and RONKAY, VARGA & GYULAI (2002). The *P.* (*J.*) *evanida* group represents a separate lineage within *Jaxartia* consisting of *P.* (*J.*) *evanida* (PÜNGELER, 1914), *P.* (*J.*) *magnitudinis* HACKER et EBERT, 2002, *P.* (*J.*) *leucochlora* RONKAY, VARGA et GYULAI, 2002, *P.* (*J.*) *deserticola* RONKAY, VARGA et FÁBIÁN, 1995, and *P.* (*J.*) *pseudamoena* (BOURSIN, 1943). The new species differs externally from *Pseudohadena* (*Jaxartia*) *evanida* and *P.* (*J.*) *magnitudinis* by its smaller size (that of *P.* (*J.*) *zahedana* 37–38 mm, those of *P.* (*J.*) *evanida* and *P.* (*J.*) *magnitudinis* are 44 mm and 45–53 mm, respectively), generally darker colouration with almost ochreous pinkish head, thorax and cilia, and more prominent noctuid pattern; from *P.* (*J.*) *deserticola* and *P.* (*J.*) *pseudamoena* by its smaller size, darker fore wing colouration with stronger, more conspicuous noctuid pattern, and, finally, from *P.* (*J.*) *cymatodes* (BOURSIN, 1954) by its darker ground color, more reduced crosslines and stigmata.

The ground plan of the male genitalia is very similar to *P.* (*J.*) *evanida* but the new species has longer and more pointed uncus, apically more pointed valva with stronger subapical dilatation, more deltoidal juxta with longer dorsal process, longer, basally less dilated clasper with more arcuate, apically more pointed and somewhat recurved clasper, straighter digitus, basally more dilated vesica with smaller, conical medial and with longer terminal diverticulum, and the terminal cornutus is also stronger. The male genitalia of the new species differs from *P.* (*J.*) *magnitudinis* by their longer valvae with stronger subapical dilatation, longer, more pointed clasper,

weaker and smaller digitus and weaker sclerotized basal plate at ventral edge of the carina. The distinctive genital characters of the new species, compared with *P. leucochlora*, are the weaker digitus, the more elongated and thicker clasper, the medially more constricted juxta, the less tubular vesica with longer diverticulum, and the stronger cornutus. The comparison of *P.* (*Jaxartia*) *zahedana* and *P.* (*J.*) *deserticola* is given below in the description of the male genitalia of *P.* (*J.*) *deserticola*.

Description – Wingspan 37–38 mm, length of fore wing 17 mm. Male. Head small, eyes large, globular, palpi short, porrect, laterally black, third segment very short, proboscis very short. Antenna widely bipectinate, with rows of long fasciculate cilia on each segment. Pubescence of head and thorax unicolorous, pinkish, mixed with a few blackish hairs in first half of thorax. Fore tibiae with four large, curved claw-like spines and a smaller one nearby them. Fore wing rather short, narrow and triangular with apex acute. Ground colour greenish-ochreous, noctuid pattern pinkish. Antemedial and postmedial crosslines reduced to traces of simple, sinuous lines; subterminal line represented by wedge-shaped darker spots running from costa to middle of wing.



Figs 1–3. Adults. 1 = *Pseudohadena* (*Jaxartia*) *zahedanica* sp. n., holotype, male, Iran; 2 = *P.* (*J.*) *zahedanica* sp. n., paratype, male, Iran; 3 = *P.* (*J.*) *deserticola* RONKAY, VARGA et FÁBIÁN, 1995, male, Turkmenistan

Orbicular and claviform stigmata pinkish-ochreous, reniform stigma represented by its ochreous-pinkish outline. Terminal line absent, cilia yellowish. Hind wing shining brownish-grey, ochreous at base, outer half darker brownish, discal spot and terminal line absent, cilia as in fore wing. Underside of wings pattern less shining, fore wing suffused densely with dark grey scales, blackish discal spot present. Female unknown.

Male genitalia (Figs 4–5): uncus rather short, hairy, with apex rounded or finely spatulate, tegumen high, penicular lobes small, weakly hairy. Juxta deltoidal, with apical process rounded. Vinculum sclerotized. Valvae elongated, subapical dilatation strong, costal margin weakly concave. Cucullus long, triangular, with apex strongly pointed, corona weak. Sacculus short, its dorsal edge rounded, setose; clavus reduced, editum conspicuous, sclerotized, setose. Clasper very long, slender, arcuate, apex finely pointed and recurved. Costal plate strong, narrow, sclerotized, with broadly triangular digitus, its pointed tip reaching ventral margin. Aedeagus cylindrical, carina with two lateral laminae, one of them larger, with ventro-lateral dentate bar. Vesica broadly tubular, especially in basal third, recurved 90° ventro-laterally. Medial diverticulum large, projecting forward, terminal one smaller, conical, positioned oppositely with basal one. Terminal cornutus very long, strong, with rounded tip, it may reach base of basal diverticulum.

Bionomy and distribution – Univoltine species with autumnal adults: the moths were collected at the beginning of November. An eremic taxon, inhabiting the border zone of the low altitude desert and open area connected to low altitude mountains in SE Iran, Balouchestan. The adults come to light at the late night. The early stages are as yet undescribed; the larval food plant is unknown.

Etymology – The specific name refers to the type locality of the species.

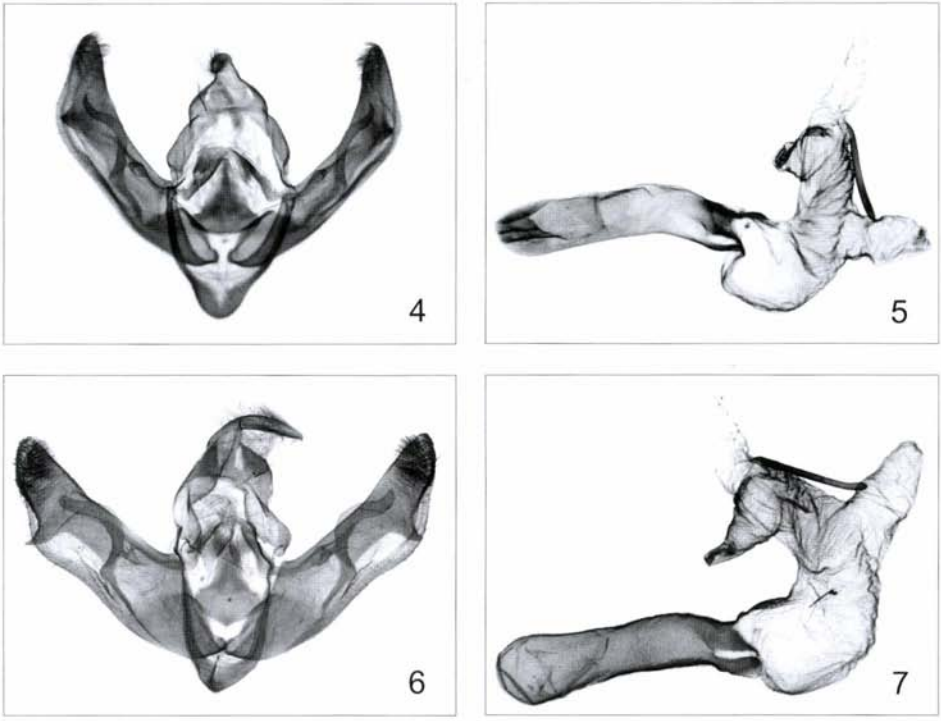
Pseudohadena (Jaxartia) deserticola RONKAY, VARGA et FÁBIÁN, 1995 (Figs 3, 6–7)

Material examined – 1 male, [Turkmenistan], Tekke, G. J. SIEV, 21.1872, ex coll. CHRISTOPH, slide No. RL9027m (BMNH).

Description of the male – Similar to female but smaller in size (wingspan 35 mm, length of fore wing 14 mm; those of the known females 39–40 mm and 18–19 mm, respectively), antennae widely bipectinate, fore wings somewhat narrower, apically more rounded, and the wing pattern slightly stronger, better visible than in the females.

Male genitalia (Figs 6–7): uncus rather short, hairy, with apex finely hooked; penicular lobes small, narrow, setose; juxta deltoidal with rounded edges, apical process long, broad tringular with rounded tip; vinculum shortly V-shaped. Valvae elongated, narrow, dilated below cucullus forming rounded ventral lobe; costal margin finely concave. Cucullus long triangular, with apex pointed, corona well-developed, coronal setae relatively short. Sacculus short, clavus reduced; editum strong, triangular. Clasper long and slender, flattened, medially strongly arcuate and finely dilated, apical third slightly recurved, with apex weakly pointed. Costal plate strongly sclerotised, with apically finely

curved and acute digitus. Aedeagus medium-long, cylindrical, carina with two sclerotised ventro-lateral laminae, right one prolonged into dentate bar. Vesica broadly tubular, tapering continuously towards ductus ejaculatorius. Vesica everted forward, then recurved ventro-laterally; both diverticula large, tubular-conical, medial one larger, projecting forward, terminal one slightly smaller, directed oppositely with medial one. Terminal cornutus very long, strong, with rounded tip.



Figs 4–7. Male genitalia. 4–5 = *Pseudohadena* (*Jaxartia*) *zahedanica* sp. n., holotype; 6–7 = *P.* (*J.*) *deserticola* RONKAY, VARGA et FÁBIÁN, 1995, male, Turkmenistan

The male genitalia of *P.* (*J.*) *deserticola* are very similar in type to those of *P.* (*J.*) *zahedana*, the mentionable differences can be found in the shape of the juxta, the clasper and the digitus (see Figs 4–7). Comparing the two species, *P.* (*J.*) *deserticola* has less regularly deltoidal juxta with rounded edges and concave dorso-lateral margins (the juxta of *P.* (*J.*) *zahedana* is regularly triangular with acute lateral angles and straight margins, the dorsal tip is also more pointed); more flattened and medially more dilated, apically less pointed clasper and thinner, longer, more acute digitus.

*

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Checklist of the Diptera of Hungary

Edited by L. Papp

This is an international undertaking of 20 authors: a checklist of the dipterous species found through the end of 2000 in Hungary, with references to their first reliable records in the territory of modern Hungary. The "minimum requirements" for a "first record" are to have the name of the identifier and the place of deposition, and to have evidence that the site is a locality of present-day Hungary. The starting point for most parts is Thalhammer's *Fauna Regni Hungariae* in 1900 and every family part has a short introduction. These parts contain data on the number of recorded species and on the number of species expected to occur in Hungary. Most of the voucher specimens are deposited in the Diptera collection of the Department of Zoology, Hungarian Natural History Museum, Budapest (HNHM); in exceptional cases the name of the relevant institution is given. There are numerous species new to Hungary reported here for the first time, however, the dipterous fauna of Hungary is still poorly known with 5550 species in this book. According to our present knowledge no less than 10000 species may occur in the country.

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