

## Order Orthoptera

### Additions to the Orthoptera fauna of the UAE

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#### INTRODUCTION

The Orthoptera of UAE were recently summarized by Massa et al (2010). We here report additional records of species collected by Antonius van Harten during 2004–2007 using different methods and by F.M. Buzzetti in March 2010 during a collecting expedition to the UAE, within the framework of the UAE Insect Project.

#### MATERIALS AND METHODS

Sound recording were made by the first author with a Edirol R09 set and sampled at 44.1 kHz and 16 bit.

Collectors are abbreviated as follows: FMB: F.M. Buzzetti; AvH: A. van Harten.

#### SYSTEMATIC ACCOUNT

##### Family Tettigoniidae

*Trigonocorypha angustata* Uvarov, 1922

Specimens examined: Fujairah, 5.iii–6.iv.2005, light trap, leg. AvH.

Distribution: Species described from Iraq, already recorded from Sharjah by Popov (1981).

##### Family Gryllidae

*Trigonidium cicindeloides* Rambur, 1839

Specimens examined: Al-Wathba wetland reserve, 1♀, 23.viii.2004, leg. AvH.

Distribution: Recorded in the UAE only by Massa et al. (2010).

##### Family Trydactilidae

*Xya* sp.

Specimens examined: Al-Ajban, 1 ex., 26.v–26.vi.2006, Malaise trap, leg. AvH. SSW of ad-Dhaid, 1 ex., 24–30.v.2006, light trap, leg. AvH. Al-Wathba wetland reserve, 1 ex., 23.viii.2004, leg. AvH.

Distribution: This taxon had already been reported from the UAE by Massa et al. (2010).

##### Family Pyrgomorphidae

*Tenuitarsus angustus* (Blanchard, 1836)

Specimens examined: SSW of ad-Dhaid, 25.iii.2006, light trap, leg. AvH.

Distribution: This species, widespread in sandy soils of the Sahara from Morocco to Egypt, Sudan, Somalia, Eritrea, SW Asia and Arabian Peninsula, has been recorded in the UAE by different authors; it is interesting to point out that it is active during the night and attracted by light.

Family **Acrididae*****Heteracris annulosa annulosa*** Walker, 1870

Specimens examined: Al-Ajban, 1♀, 21.viii–19.ix.2006, Malaise trap, leg. AvH. N of Ajman, 1♂, 1♀, 16.ix–18.x.2006, water traps, leg. AvH. Wadi Bih Dam, 1♂, 1–8.iii.2007, light trap, leg. AvH. Wadi Madaq, 1♀, 24.ix–22.x.2006, water trap, leg. AvH. Wadi Shawkah, 1♂, 31.x–27.xi.2006. water trap, leg. AvH.

Distribution: Widespread in N and C Africa, S Italy (islets of the Sicilian Channel), SW Asia, Middle East, including the Arabian Peninsula. Its capture by light traps, Malaise as well as water traps is noteworthy.

***Heteracris adspersa adspersa*** (Redtenbacher, 1889)

Specimens examined: Wadi Ghayl, 1♂, 29.xi.2006, leg. AvH. Wadi Madaq, 1♂, 24.ix–22.x.2006, water trap, leg. AvH.

Distribution: Widespread in S Europe, N and E Africa, Malta, Arabia, Cyprus, Turkey, Middle East, C Asia and ex-USSR, it has previously been listed from the UAE by Popov (1980) and by Gillett (2000), but was unrecorded in our first contribution.

***Clomacris omanica*** (Uvarov, 1936)

Plates 1–4

Specimens examined: Wadi Shawkah, 1♂, 31.x–27.xi.2006, water trap, leg. AvH.

Remarks: The genus *Clomacris* was erected by Popov (1981) for this Arabian species, originally considered an atypical species of *Heteracris* Walker, 1870 (Uvarov, 1936) and later a species of *Cyclopternacris* Ramme, 1928 (Popov, 1980). Characterized by much reduced tegmina and male cerci flattened but not folded as in *Heteracris* (Plates 1–3); the structure of its genitalia (Plate 4) allowed Popov (1981) to erect a distinct genus for this species.

Distribution: Records of this species are very few and it previously had not been recorded from the UAE.

***Dericorys albidula*** Serville, 1838

Specimens examined: Digdaga, 1♀, 14.iv.2007, leg. AvH.

Distribution: Known from Egypt, Middle East and Arabian Peninsula. Popov (1980) and Gillett (2000) reported it from Manama, Ra's al-Khaimah and Sharjah.

***Dericorys cyrstosterna*** Uvarov, 1933

Specimens examined: Sharjah Desert Park, 1♂, 8–15.iv.2007, light trap, leg. AvH.

Remarks: According to Ingrisch (1999), *D. cyrstosterna* is one of four species of this genus living in Arabia.

Distribution: Occurs in SW Asia and Arabia. In the UAE it had been reported by Popov (1980), Tigar & Osborne (1999) and Gillett (2000).

***Anacridium melanhorodon arabafrum*** Dirsh, 1953

Specimens examined: Sharjah Desert Park, 1♀, 6–28.xii.2006, pitfall trap, leg. AvH. Wadi Bih dam, 1♂, 30.v–3.vi.2007, leg. AvH. Wadi Bih dam, 90 m, 25°48'00.5"N 56°4'23.3"E, 1♀, 25.iii.2010, leg. FMB.

Distribution: This species, occurs in the Arabian Peninsula and N Africa; in the UAE it has previously been recorded from Sharjah by Popov (1980) and from al-Ain by Gillett (2000). *A. m. arabafrum* has been listed as a pest in the UAE by Gassouma (1991).

***Hilethera arabica*** Uvarov, 1952

Plates 5–7

Specimens examined: Sharjah–Khor Kalba, near tunnel, 1♀, 31.v–7.vi.2006, light trap, leg. AvH.



Plates 1–4. *Clomacris omanica* (Uvarov). 1: Head and pronotum, lateral view; 2: Male cerci, lateral view; 3: Male tip of abdomen, dorsal view; 4: Phallic complex.

Remarks: Measurements (in mm): Total length: 16.2; length of pronotum: 4.0; height of pronotum: 4.3; length of hind femora: 10.7; width of hind femora: 3.6; length of tegmina: 19.7. This species has been described by Uvarov (1952) based on one female collected in the Hadrhamaut, near Mukallà (Yemen). Later, Popov (1980) described the male from Oman and now we record it for the first time from the UAE. Our female matches very well the characters listed by Uvarov (1952) (Plates 5–7), with the exception of the length of tegmina, in the holotype as long as the abdomen, in our specimen much longer than the abdomen. However, we consider this difference to be within the variability of the taxon.

***Morphacris fasciata*** (Thunberg, 1815)

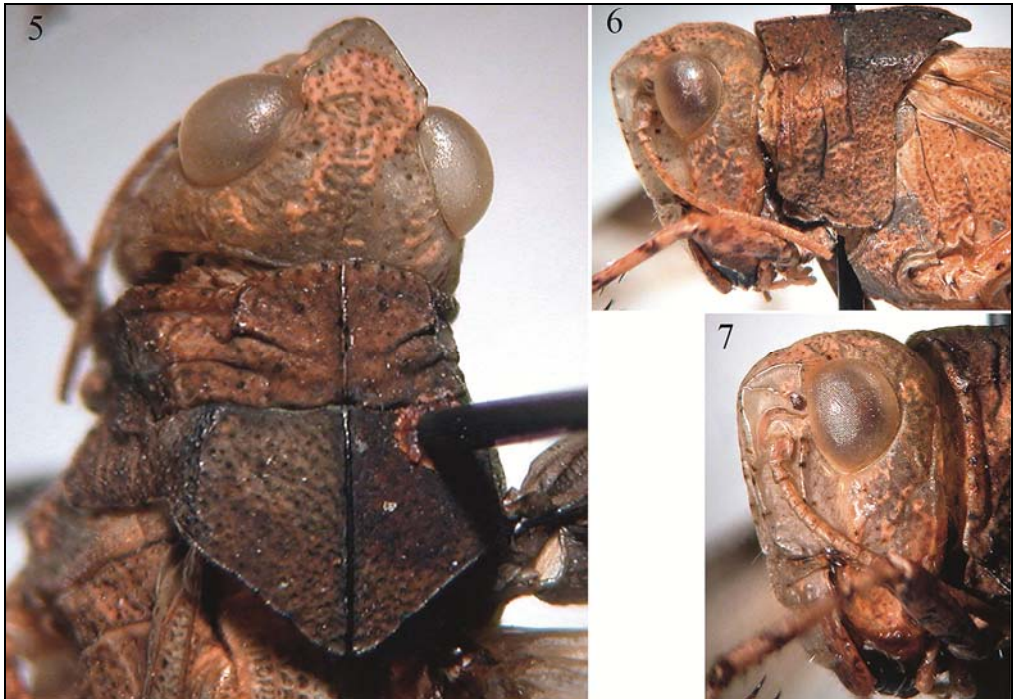
Specimens examined: Sharjah Desert Park, 70 m, 25°16'51.2"N 55°41'25.8"E, 1♂, 22.iii.2010, leg. FMB.

Distribution: Occurring in Africa, SW Asia and Arabian Peninsula, it has been previously listed from the UAE by Walker & Pittaway (1987).

***Sphingonotus savignyi*** (Saussure, 1884)

Specimens examined: Al-Ain, 316 m, 24°06'32.4"N 55°45'54.2"E, 3♂, 2♀, 30.iii.2010, leg. FMB.

Distribution: Widespread from Canary Is., N and E Africa, Arabian Peninsula, and Middle East to Asia. Previously recorded in the UAE by Wingate (1992) and Gillett (2000) from



Plates 5–7. *Hilethera arabica* Uvarov. 5: Head and pronotum dorsal view; 6: Head and pronotum lateral view; 7: Head lateral view.

al-Ain, and by Howarth & Gillett (2004) from Jebel Hafit; it has been also listed by Walker & Pittaway (1987).

***Stenohippus mundus*** (Walker, 1871)

Material examined: Ar-Rafa, 3♂, 2♀, 29.iii.2010, FMB.

Already recorded by Massa et al. (2010). The song of a male has been recorded in the field and is here presented (Fig. 1).

Figure 1

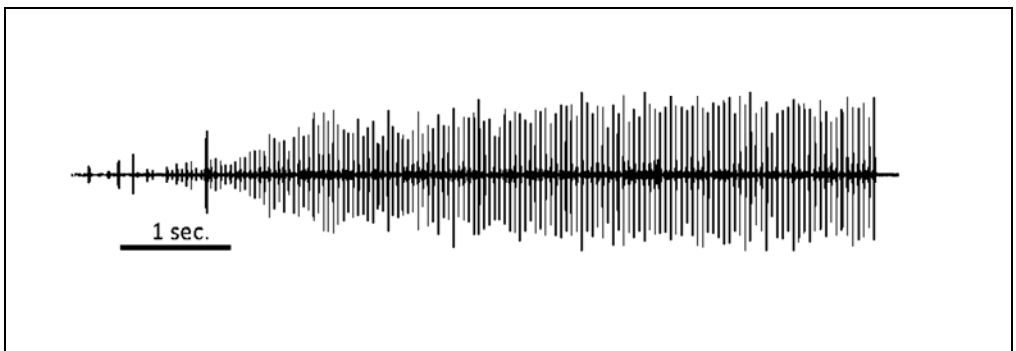


Figure 1. Calling song of *Stenohippus mundus* (Walker).

***Aiolopus simulatrix simulatrix*** (Walker, 1870)

Specimens examined: Al-Ajban, 1♂, 22.xi.2006, Malaise trap, leg. AvH. Sharjah–Khor Kolba, near tunnel, 3♂, 31.v–7.vi.2006, light trap, leg. AvH. Sharjah Desert Park, 1♂, 17.ii–3.iii.2007, light trap, leg. AvH.

Distribution: Widespread in Africa, Sardinia (Italy), SW Asia, Middle East and Cyprus, it has been previously recorded in the UAE only by Gillett (2000).

***Ochrilidia filicornis*** (Krauss, 1902)

Specimens examined: Wadi Ghayl, 1♂, 29.xi.2006, leg. AvH. Wadi Maidaq, 2♂, 2♀, 7.iii.2006, leg. AvH.

Remarks: Gillett (2000) recorded in the UAE *O. tibialis* (Fieber, 1853), which is a Greek species. As it has been pointed out by Massa et al. (2010), following the key to species of Jago (1977), all *Ochrilidia* with not much flattened antennal segments should belong to *O. tibialis*, but according to Mistshenko (1986) at least seven species listed by Jago (1977) as synonyms of *O. tibialis* have to be considered as valid species; among them *O. filicornis* (Krauss, 1902), a species widespread in North Africa and the Middle East. The comparison of UAE and N Africa specimens (cf. Massa, 2009) with Greek specimens consented us to establish definitively that the former belong to *O. filicornis*.

***Truxalis longicornis*** (Krauss, 1902)

Specimens examined: Masafi, 535 m, 25°21'40.5"N 56°09'33.1"E, 1♀, leg. FMB.

Distribution: Known from Somalia, Niger, S Iran and Arabian Peninsula, it has been previously recorded from Jebel Hafit and al-Ain (Gillett, 2000; Howarth & Gillett, 2004).

**REFERENCES**

- Gassouma, M.S.S. (1991): [Agricultural pests in the United Arab Emirates. Part 1. Fruit trees] (in Arabic). UAE Ministry of Agriculture, 148 pp.
- Gillett, M.P.T. (2000): Grasshopper biodiversity in the UAE. An annotated and illustrated list of short horned grasshopper species (Orthoptera – Acridoidea). *Tribulus*, 9 (1): 5–15.
- Howarth, B. & M. Gillett (2004): The insects of Jebel Hafit. Pp. 94–143 in: S. Aspinall & P. Hellyer (eds.), *Jebel Hafit, a Natural History*. Emirates Natural History Group, Abu Dhabi.
- Ingrisch, S. (1999): Orthopteroid Insects of Yemen. *Esperiana*, 7: 349–376.
- Jago, N.D. (1977): Revision of the genus *Ochrilidia* Stål, 1873, with comments on the genera *Sporobolius* Uvarov, 1941 and *Platypternodes* I. Bolivar, 1908 (Orthoptera, Acrididae, Gomphocerinae). *Acrida*, 6: 163–217.
- Massa, B. (2009): Annotated check-list of Orthoptera of Libya. *Journal of Orthoptera Research*, 18: 75–93.
- Massa, B., F.M. Buzzetti & P. Fontana (2010): Order Orthoptera. *Arthropod fauna of the UAE*, 3: 70–112.
- Mistshenko, L.L. (1986): On the knowledge of grasshoppers of the genus *Ochrilidia* Stål (Orthoptera, Acrididae). *Revue d'Entomologie de l'URSS*, 65: 709–718 (in Russian).
- Popov, G.B. (1980): Acridoidea of Eastern Arabia. *Journal of Oman Studies, Special Report*, 2: 113–148.
- Popov, G.B. (1981): Insects of Saudi Arabia. Orthoptera: Fam. Tettigoniidae (bush crickets). *Fauna of Saudi Arabia*, 3: 114–148.
- Tigar, B.J. & P.E. Osborne (1999): Patterns of biomass and diversity of aerial insects of Abu Dhabi's sandy deserts. *Journal of Arid Environments*, 43: 159–170.

- Uvarov, B.P. (1936): Studies in the Arabian Orthoptera – I. Descriptions of new genera, species and subspecies. *Journal of the Linnaean Society of London*, 39 (268): 531–554.
- Uvarov, B.P. (1952): Studies in the Arabian Orthoptera – III. New genera, species and subspecies collected by the Anti-Locust Mission. *Journal of the Linnaean Society of London*, 42 (284): 176–194.
- Walker, D.H. & A.R. Pittaway (1987): *Insects of Eastern Arabia*. MacMillan, London, UK, xvi + 175 pp.

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