
Notes on two Orthoptera of the Maltese Islands (Acridoidea).

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ABSTRACT

The presence of *Oedipoda caerulescens* (Linnaeus 1758) on the Maltese Islands is confirmed while the occurrence of *Sphingonotus obscuratus* (Walker 1879) is recorded here for the first time

Keywords: *Oedipoda caerulescens*, *Sphingonotus obscuratus*, Orthoptera, Maltese Islands.

INTRODUCTION

There are a couple of publications relating to Maltese Orthoptera . The checklist currently contains 49 species. Only a few studies deal with the ecology of the Maltese Orthoptera species as most were on listing of the species. The main works were by Borg(1939), Valletta (1954, 1955), Lanfranco (1955, 1957) Baccetti(1973), Cilia(1975) Schembri & Ebejer (1983, 1984), Schembri(1984), Cassar (1990,2008). The present paper adds another species to the list of Maltese Orthoptera and confirms the presence of another species.

Oedipoda caerulescens (Linnaeus 1758).

The species has been first mentioned by Borg (1939), who lists the latter and four other species of Orthoptera as common in the 'rocky wastes' of both Malta and Gozo. This species is repeatedly mentioned again in Valletta`s work (1954, 1955) without any indication that he ever collected it himself. The documentation might refer to records from the previous work. Naturalists after Valletta did not list this species either because it was never collected again or because they regarded Borg`s as a misidentification. On 3 July 2004, one male specimen was collected by the author from the east side of Cominotto Island (**Fig 1**). It was found on bare rock and continued searches on that day and other visits proved fruitless in obtaining other specimens. Its identification was done by the author and confirmed by Dr. Axel Hochkirch. Three other specimens were caught and observed between 16 and 18 August 2004 at Dahlet ix-Xilep,Ahrax Malta. All three specimens were females and identification was done by the author. On 13 November 2004 fragments of another specimen were collected from Marsa Race Course. It is curious to note that one day before, a large migration of *Schistocerca gregaria* (Forsk., 1775) took place (Sciberras, 2004) along with several other Coleoptera species. This specimen might have immigrated with this swarm and was possibly attracted to bright light which is lit during night horse racing hours.

What follows are some measurements of the Cominotto`s specimen:

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Head length:2, pronotum length:4, pronotum width:3, tegmen length:21, wing length:18, wing width(longest area facing abdomen):11, wing span:46, abdomen length:12, hind leg length :17, total body length(head to tip of hind leg);29.

All measurements taken from dorsal view and in millimeters.

Sphingonotus obscuratus (Walker 1879).

A female specimen of this species was collected under a street lamp just outside Valletta Waterfront on 4 July 2009. The specimen was in an advanced state of decomposition, squashed and in several pieces. Every measure was taken to mount and conserve the specimen as complete as possible (**Fig 2**). The measurements of this specimen are:

Head length:NR, pronotum length:9, pronotum width:NR, tegmen length:42, wing length:38, wing width(longest area facing abdomen):29, wing span:86(approx calculated due partial of pronotum being damaged), abdomen length:26, hind leg length:34, total body length(head to tip of hind leg);NR.

All measurements taken from dorsal view and in millimeters. Where NR (Not reliable) - is present, length is not reliable due to specimen being severely damaged.

DISCUSSION

Borg's record of *Oedipoda caerulescens* is truly dubious because he mentions that it was very common at that time on the Maltese archipelago while recent records of this species are much rarer. It is possible that this record was correct and that the species declined or disappeared due to anthropogenic or natural changes. However raises the question why such changes have not affected other closely related species. On the other hand this species it can be misidentified in the field with *Oedipoda miniata* (Pallas, 1771) or with *Sphingonotus caerulans* (Linnaeus 1758) while in flight. It should be noted that wing color alone is not helpful for identifying *Oedipoda* species. North African *Oedipoda caerulescens* have yellow or pink hind wings, while European specimens have usually blue (rarely pink) wings (Hochkirch pers. comm.). If the pink wing morph occurs on Malta, it might easily be confused with *Oedipoda miniata*. The shape of the pronotum is very useful to distinguish both species, as the pronotum of the latter species is very rugose with a steep suture. *Sphingonotus caerulans* has blue hind wings, but no dark wing band and the pronotum is smooth and slightly depressed anteriorly. The current rarity of *Oedipoda caerulescens* explains why other authors deleted the species from their lists. Although the author believes it is a rare but a native species, there is also a possibility that the specimens collected and observed were either migrants or introduced with yachts or merchandise. However the case, the present records confirms the presence of this species in the Maltese islands. This species has a wide distribution in Europe and is absent only from the northeastern -most countries. It is also present in North Africa, Near East and East Palearctic (faunaeur.org).

The presence of *Sphingonotus obscuratus* on the Maltese islands is an interesting one. This species is rather large when compared to other occurring *Sphingonotus* species. Since it has never been recorded locally, this raises doubt whether this species reproduces locally or the particular specimen was a migrant. The author has never found another specimen through the years of observing and collecting and is unaware if any are present in Maltese collections. Its finding locality also raises the question if the specimen had naturally migrated to Malta or arrived with human cargo. Very close to the locality is the Sicily -Malta Sea-craft terminal and according to published records this species is known from Sicily (faunaeur.org). The identification of the specimen was done by Dr. Axel Hochkirch. It was also suggested by the latter that this specimen belongs to the subspecies *lameerei* (Finot, 1902). The second pair of leg (right) of the locally collected specimen where sent to Dr. Hochkirch for a molecular research project on this genus. Also the taxonomy of the local *S. caerulans* is also currently under study to determine if the present species known is truly *S. caerulans*. (Sciberras, unpublished data.)The distribution of *S. obscuratus* in

Europe is restricted to Sicily (Incl. adjacent Italian islands ie; Lipari Is., Ustica Is., Egadi Is., Pantelleria Is., Pelagie Is.). It occurs also nearly all over North Africa, Near East and East Palearctic.

The proposal of Maltese names is based on the naming of genus level in Maltese (adapted after Sultana & Falzon 1996, 2002) and the characters of the species, therefore *O. caerulescens* Maltese vernacular name should be “Ruxxan Rari Kahlan” and that of *S. obscuratus* should be “Kahlan Kbir Tal-Faxx.”

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Fig1

Fig 2

Fig1- *Oedipoda caerulescens* specimen collected on 3/vii/2004 from Cominotto Island.

Fig2 *Sphingonotus obscuratus* specimen collected on 4/vii/2009 from Valletta Waterfront, Malta (Photo credits – A.Sciberras)

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