NEW RECORDS OF *DOLICHOPODA* (ORTHOPTERA, RHAPHIDOPHORIDAE) FROM PELOPONNISOS, GREECE

Claudio Di Russo¹(*) Giannis Kofinas-Kallergis² Sotiris Alexiou¹ & Mauro Rampini¹

¹ Cave Life-Gruppo di Ricerca, Rome, Italy  
² Speleo Club POSEIDON, Molai, Laconia, Greece  
³ Deutsches Institut für Lebensmitteltechnik e.V., Prof.-von-Klitzing-Str. 7, D-49610, Quakenbrück, Germany  
(*) Corresponding author: beagle.amb@inwind.it

Published online: November 15, 2019

**Abstract**

Three species of *Dolichopoda* cave crickets are presently described from subterranean habitats of Peloponnisos. The species are only known from a total of seven localities on four prefectures, Achaia, Argolida, Messinia and Laconia. New data here reported significantly increase the knowledge on the geographic distribution of the genus in this area of Greece reaching the total number of 37 localities, in all seven prefectures (Achaia, Korinthia, Argolida, Arcadia, Messinia, Laconia and Ilia). Some noteworthy and interesting records are briefly discussed.

**Key words**: Orthoptera, Rhaphidophoridae, Dolichopodainae, cave crickets, checklist, Peloponnisos, Greece.

**Introduction**

Three species belonging to the genus *Dolichopoda* Bolivar, 1880 are known so far from the Peloponnisos, all endemic to the area (Fig.1) (Boudou-Saltet 1972, Alexiou et al. 2013, Di Russo et al. 2014). *Dolichopoda matsakisi* Boudou-Saltet, 1972 is confined to two mountains of N. Peloponnisos, Mt. Chelmos and Mt. Panachaiko of the prefecture of Achaia. *Dolichopoda dalensi* Boudou-Saltet, 1972 is only known from its type locality at the East side of Peloponnisos, Kefalovrisso cave in Argolida (Rampini et al. 2008). The third species, *D. unicolor* Chopard, 1964, described from specimens collected in the Katafygi Selenista, is confined to the south Peloponnisos, inhabiting caves on Mt. Taygetos and Mani Peninsula.

Several scattered records, based on observations, thus ambiguous and doubtful, exist in literature sources dating many decades ago and refer to the existence of ‘*Dolichopoda petrochilosi*’at Peloponnisos. All those records are well summarized by Economou (2008). For instance, for the whole west side of Peloponnisos only one record of cave cricket exists, that of *Dolichopoda petrochilosi* from Spilia Propanti at Ilia (Petrochilou 1969). According to the same doubtful records the same species seems to extent even to the extreme south ends of Peloponnisos, Mani and Malea peninsulas.
New Dolichopoda records from Peloponnisos

Certainly all the above records are incorrect. Dolichopoda petrochilosi Chopard, 1954 is endemic to a small area of Attiki, E Sterea Ellas (Alexiou et al. 2013, Di Russo et al. 2014). A few more observations refer solely to cave crickets without applying any specific name. This is the case from a few caves of Arcadia, most importantly that from Spilaio Kapsia, first reported at the 1st Panhellenic Speleological Symposium, back at 1981, and some more from around the villages of Kollines and Kosmas (Economou 2008). Nevertheless, we tried to visit all the localities involved and collect specimens for the first time in order to correctly assign their populations to a species.

The involvement of members of Speleo Club Poseidon during recent years, proved very fruitful, allowing for investigation of a large number of caves. As a result we greatly improved our knowledge on the Rhaphidophoridae cave crickets of Peloponnisos. In the present paper we summarize the distribution of the three known species, also providing eleven additional localities for them. More than that, we present 19 new locations of Dolichopoda populations whose taxonomic evaluation is currently under investigation. We restrain ourselves from revealing the complete coordinates of most of the visited caves, for reasons of protecting them from harmful behavior of malicious visitors, a phenomenon unfortunately not uncommon. Of course full coordinates have been provided to the responsible Ephorate and are available to researchers upon request.

Material and Methods

All the studied specimens were collected by hand on the wall of the caves or by pitfall traps, during several field trips conducted in the years between 2002 and 2019. To complete data set, some samples previously collected were included. Specimens were preserved in 70% ethanol and deposited in the collection of the Museum of Zoology of the University “La Sapienza” of Rome, Italy (MZUR). Permissions for collection of samples were obtained by the Ephorate of Palaeoanthropology and Speleology of the Ministry of Culture, Education and Religious Affairs, Athens. The specimens
were studied using a Leica MZ12.5 stereomicroscope. For the morphological analysis six external body characters were utilized: lobes of the IX terga; median process of the epiphallus; amount of spinulation of the hind tibia; shape of the female subgenital plate and ovipositor; number of denticles on the inner valvae of the ovipositor.

**Results**

**List of Dolichopoda (Rhaphidophoridae) of Peloponnisos**

*Dolichopoda matsakisi* Boudou Saltet, 1972

**Type locality: Achaia**: Mt. Chelmos, Castria, Spiláio Limnon (‘Cave of the Lakes’), 14.08.2005, M. Rampini leg., 37°57.571′ N, 22°8.400′E, 843 m.

**Other known localities: Achaia**: Mt. Panachaiko, Pititsa, Spiláio Analipsi, 13.08.2005, M. Rampini leg., 37°58.XXX′N, 22°8.XXX′E, 912 m.


*Dolichopoda dalensi* Boudou Saltet, 1972

**Type locality: Argolida**: Képhalovrisso, 18.08.2006, M. Rampini leg., 37°41.835′ N, 22°28.333′E, 790 m.

**New localities: Arcadia**: Nestani, Kat'avothra Nestani, 08.08.2016, G. Kofinas leg., 37°37.XXX′N, 22°27.XXX′E, 630 m; **Korinthia**: Nemea, Dérvenaki cave, 19.05.2018, C. Di Russo leg., 37°47.XXX′N, 22°44.XXX′E, 331 m - Nemea, Kaliakoudotripa, 08.12.2018, G. Kofinas leg., 37°46.XXX′N, 22°38.XXX′E, 813 m.

*Dolichopoda unicolor* Chopard 1964


*Dolichopoda sp.* (in the bracket the locality number as seen on Fig.2).

New *Dolichopoda* records from Peloponnisos

The three known *Dolichopoda* species of Peloponnisos were known only from seven localities, including the type localities, from four prefectures. In this paper we significantly increase the knowledge on the geographic distribution of this genus in Peloponnisos by adding thirty new localities. Thus the known localities now reach the total number of 37, spread in all seven prefectures, Korinthia, Argolida, Achaia, Laconia, Messinia, Arcadia and Ilia.
In particular we add one new locality to *D. matsakisi*, three localities to *D. dalensi* and seven new localities to *D. unicolor* (Fig. 1). Noteworthy is the significant expansion of the known distribution of *D. dalensi*, known so far only from the type locality, now proven to be present in three prefectures.

Other 19 cave cricket populations, whose specimens are not ascribed to any species yet, have been collected, some from remote areas of Peloponnisos, such as the Maleas peninsula at the extreme SE of Peloponnisos (caves from Kosmas-Leonidio to Neapoli, localities 4-8 and 10). Of great interest are the three populations collected in the caves located north of Kardamyli (localities 9, 15 and 16). Interesting is the collection of specimens from cave Propanti (Ilia, Andritsena, locality number 14), the only record from the west side of Peloponnisos, as well as the one from Spilaio Ermi, the only record from NE Peloponnisos and the one from the highest altitude. Interestingly our repetitive samplings from Kapsia-Tousi system, at the center of Peloponnisos, revealed only female individuals, suggesting the existance of a stable parthenogenetic population, a phenomenon that if is confirmed will be unique among Greek cave crickets.

The altitude range of the known cave cricket populations at Peloponnisos ranges between 11 m (Dirou cave at Mani peninsula) and 1674 m (Ermi cave, Mount Killini).

### Acknowledgements

Several friends and colleagues kindly provided us with cave cricket samples: S. Zoia, L. Dell’Anna, P.M. Giachino, D. Vailati, Grigoris Rousiotis, F. Ballarin and Konstantinos Bakolitsas. They are greatly appreciated. We are indebted to our speleologists friends Kostas Laganas, Giannis Farsarakis, Valerio Cenni, Giorgio Pintus and Vasilis Trizonis for their help in the field. Finally we are particularly grateful to all the nice people of Kastorio, especially Giannis Arfanis, for their friendly hospitality in the Taygetos area.

### Literature


Table 1


Appendix
Table 2

Table II. 1 cave Spilia Skreti, Kastorio; 2, Dolichopoda dalensi (male), Katavostra Nestani; 3, Terminal room in cave Spilaio Koukouri, Kafiona; 4, Natural entrance of cave Spilaio Limnon.
New *Dolichopoda* records from Peloponnisos

Table 3

1 cave Spilaio Kapsia; 2, *Dolichopoda* sp. female, cave Spilaio Kapsia; 3, Stalagmitic column in Spilaio Kapsia.

Table III. 1 cave Spilaio Kapsia; 2, *Dolichopoda* sp. female, cave Spilaio Kapsia; 3, Stalagmitic column in Spilaio Kapsia.
Table IV. 1 Entrance of Spilaio Analipsi with homonymous chapel, Pitiitsa; 2, entrance of Spilaio Propanti, Andritsena; 3, on the way to cave Spilia Dionysou, Leonidio; 4, Spilia Dionysou, Leonidio.