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Earthworm (Clitellata; Megadrili) Records from Adana Province

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Abstract

The current study deals with earthworm biodiversity of Adana Province. Identification was made by examining the earthworm specimens collected in 6 different localities. At the end of the study, 5 species belonging to 3 genus were found: *Allolobophora chlorotica* (Savigny, 1826), *Aporrectodea caliginosa* (Savigny, 1826), *Aporrectodea rosea* (Savigny, 1826), *Aporrectodea trapezoides* (Dugès, 1828) and *Octodrilus transpadanus* (Rosa, 1884).

Keywords: Clitellata, Earthworms, Lumbricidae, Megadrili, Fauna of Turkey.

1. INTRODUCTION

Eightythree taxa were registered from Turkey so far. According to this result, Turkey is one of the richest country in terms of earthworm biodiversity in the region. But our knowledge about distribution of the species in Turkey is still limited because there are unsampled areas in the country [7].

Our knowledge about earthworm fauna of the Mediterranean, East and South-East regions of Turkey is also very limited. Also, there is no comprehensive study include earthworm records from Adana and its surroundings. So, this area has been selected as a study area because of scarce information about earthworm biodiversity.

Adana is a city of Turkey located in the south part of the country (Mediterranean region). The whole plain which has very fertile agricultural areas is called Adana Ovası, but the remaining part in the southern part is called Çukurova and the part on the north side is called Upova or Anavarza. The city is located at 350-380 north latitude and 340-360 east longitude on both sides of Seyhan River and has Mediterranean climate which the winters are mild and wet and summers are long, hot and dry [1].

So, the aim of the current study is to present some earthworm records from Adana province.

2. MATERIAL AND METHODS

The earthworms were collected from localities written below by digging and handsorting.

Loc. 1. Adana, Şahintepe quarter, edge of stream Sarıçam, altitude 100 m a.s.l. 06.10.2015.

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Loc. 2. Adana, Yüreğir, Ali Hocalı village, edge of an irrigation canal near the transformer side, altitude 48 m a.s.l., 19.01.2016.

Loc. 3. Adana, Yüreğir, Mustafa Kemal Paşa Boulevard, altitude 57 m a.s.l. 19.01.2016.

Loc. 4. Adana, Yüreğir, altitude 55 m a.s.l., 10.01.2017.

Loc. 5. Adana Sarıçam altitude 95 m a.s.l. 10.01.2017.

Loc. 6. Adana, Sofulu, altitude 108 m a.s.l. 11.01.2017.

The specimens were killed in 85% ethanol in the field. After that in the laboratoty they were transferred to 96% ethanol. Specimens were described and dissected under stereo microscope. The materials are deposited in Soil Invertebrates Laboratory of Eskişehir Osmangazi University, Faculty of Science and Letters, Biology Department by senior author.

Sims & Gerard 1999, Csuzdi & Zicsi 2003, Mısırlıoğlu 2011 were used for identification.

3. RESULTS

At the end of the study, 5 species belonging to 3 genera were found in Adana Province as follow.

Systematic

Genus: *Allolobophora* Eisen 1873

***Allolobophora chlorotica* (Savigny, 1826)**

Fig.1: *Allolobophora chlorotica.*

Localities species found: Loc. 2.

Distribution in Turkey: Aegean [2, 3, 4, 5]; Inner Anatolia [6]; Marmara [5].

Zoogeographical distribution type: A widely introduced peregrine species, native to the Palearctic [7, 8, 9].

Genus: *Aporrectodea* Orley 1885

***Aporrectodea caliginosa* (Dugès, 1828)**

Fig 2: *Aporrectodea caliginosa.*

Previously *Aporrectodea caliginosa* and *Aporrectodea trapezoides* were considered as a unique species as *Aporrectodea caliginosa trapezoides*. But now they are two separate species. So, probably some of the past records of *Aporrectodea caliginosa trapezoides* were *Aporrectodea caliginosa*.

Localities species found: Loc. 1, loc. 2, loc. 3, loc. 4, loc. 5.

Distribution in Turkey: According to [10, 11] this species is probably distributed in all regions of Turkey.

Zoogeographical distribution type: One of the most widely distributed peregrine earthworms [9].

***Aporrectodea rosea* (Savigny, 1826)**

Fig. 3: *Aporrectodea rosea.*

Localities species found: Loc. 3.

Distribution in Turkey: Distributed in all regions of Turkey [10, 11].

Zoogeographical distribution type: A common peregrine species, native to the Palearctic [9].

***Aporrectodea trapezoides* (Dugès, 1828)**

Fig 4: *Aporrectodea trapezoides.*

Localities species found: Loc. 1, loc. 6.

Distribution in Turkey: Distributed in all regions of Turkey [10, 11].

Zoogeographical distribution type: One of the most widely distributed peregrine earthworms [9].

Genus: *Octodrilus* Omodeo, 1956

***Octodrilus transpadanus* (Rosa, 1884)**

Fig. 5: *Octodrilus transpadanus.*

Localities species found: Loc. 4.

Distribution in Turkey: Marmara [2, 5, 12, 13, 14]; North Anatolia [2, 15] Aegean [4, 15]; Inner Anatolia [6]; Mediterranean [13, 4]; South-East Anatolia [16, 17].

Zoogeographical distribution type: Trans-Aegean [7, 9].

4. DISCUSSION

Among the 5 recorded species from Adana province, four of them are peregrine: *Allolobophora chlorotica, Aporrectodea caliginosa, Aporrectodea rosea, Aporrectodea trapezoides* and one of them is Trans-Agean species: *Octodrilus transpadanus.*

Aporrectodea caliginosa, Aporrectodea rosea, Aporrectodea trapezoides are common species in Turkey [10, 11]. *Aporrectodea rosea* was recorded from Adana Pozantı and Adana Kandil Sırtı previously [15].

Octodrilus transpadanus was recorded from Aegean, Mediterranean, Marmara and Inner Anatolia regions of Turkey [10, 11].

Allolobophora chlorotica is a relatively rare peregrine species in Turkey. It was recorded in several localities in Marmara, Aegean and Inner Anatolia [10, 11]. Now, it is found in Adana-Mediterranean region.

Surely, more comprehensive studies are needed to understand the earthworm fauna of Adana province but it is thought that these results are important because they are additional records from a region which its earthworm fauna is very little-known.

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