

## ***Araneus angulatus* Clerck, 1757 (Araneae: Araneidae), new for the fauna of the Sicilian and Maltese archipelagos**

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**Abstract:** The first records of the widespread Palearctic orb-weaver spider *Araneus angulatus* Clerck, 1757 (Araneae, Araneidae) from the Sicilian and Maltese islands are reported.

**Key words:** Araneae, Araneidae, *Araneus angulatus*, faunistics, new records, Sicilian islands, Maltese islands.

***Araneus angulatus* Clerck, 1757 (Araneae: Araneidae), nueva para la fauna de los archipiélagos de Sicilia y Malta**

**Resumen:** Se presentan las primeras citas para las islas de Sicilia y Malta de la araña *Araneus angulatus* Clerck, 1757 (Araneae, Araneidae), de amplia distribución paleártica.

**Palabras clave:** Araneae, Araneidae, *Araneus angulatus*, faunística, nuevas citas, archipiélago de Sicilia, archipiélago de Malta.

### **The islands of Sicily and Malta.**

Sicily is located in the centre of the Mediterranean, separated from mainland Europe only by the narrow Strait of Messina, and separated closest from African continent by the Pantelleria Shoal. Sicily comprises a number of satellite islands and archipelagos - the main are: the Stagnone Lagoon with four islands, namely Longa, Scuola, Mozia (or San Pantaleo) and Santa Maria. Ustica Island is a small volcanic island, about 9 km<sup>2</sup>, situated 52 km north of Capo Gallo, part of Palermo, in the Tyrrhenian Sea. The Aeolian Islands are a volcanic archipelago in the Tyrrhenian Sea north of Sicily, part of Messina, including Lipari, Vulcano, Salina, Stromboli, Filicudi, Alicudi, Panarea and Basiluzzo. The Pelagic Islands (part of Agrigento) constitute of three small islands of Lampedusa, Linosa, and Lampione, located in the Mediterranean Sea between Malta and Tunisia. To the northwest lies the island of Pantelleria (part of Trapani). The Aegadian Islands (part of Trapani) are a western Sicilian archipelago 9 km away from the nearest point to the mainland Sicily. The archipelago consists of three main islands Favignana, Marettimo and Levanzo. Several satellite islets occur within the main Sicilian archipelagos and around mainland Sicily. The Maltese islands are located in the centre of the Mediterranean, just 96 km south of Sicily, 290 km from North Africa, 1836 km from Gibraltar, and 1519 km from Alexandria Egypt (Schembri, 1993). The Maltese archipelago is made up of three major inhabited islands: Malta, the largest; Gozo and Comino. Besides, around these, there are other scattered uninhabited islets and rocks. The main islets are Filfla Island, Fungus Rock, Selmunett Island, Malta, Manuel Island, Ta' Fraben Islet and Cominotto. The smaller other islets and rocks are Large Blue Lagoon Rock, Small Blue Lagoon Rock, Halfa Rock, Tač-Ċawl Rock, Cheirolophus, Ta' Taht il-Mazz Rock, Fesseg Rock and Barbaganni Rock. The total surface area of the Maltese islands is 316 km<sup>2</sup>. This geographical location of the Maltese islands gives them unique ecological characteristics (Sciberras & Sciberras, 2010; Sciberras, Sciberras & Pisani, 2012).

### **Distribution of *Araneus angulatus***

*Araneus angulatus* (Clerck, 1757) is a species of orb-weaving spider found in the Palearctic with distinctive tubercles on its abdomen. The species was first described in Aranei Svecici in 1757, where it was the first species described, making *Araneus angulatus* the earli-

est scientific name of an animal that is still in use. According to Baldacchino et al. (1993) and Dandria et al. (2005) this species is not known from the Maltese archipelago. In Europe the species has records from almost all countries. Out of the main islands of the Mediterranean, it is known from the Balearic Islands (Cardoso & Morano, 2010), but not from Corsica (Le Peru, 2007), Sardinia (Stoch, 2003; Trotta, 2005; Pantini & Isaia, 2008; Pantini et al., 2013), Sicily (Stoch, 2003; Trotta, 2005), Crete (Bosmans et al., 2013) or Cyprus (Nentwig et al., 2013). It has to be noted that Nentwig et al., (2013) list the species for Sicily, based on the personal communication of P. Pantini, but no published record is known for the occurrence of *A. angulatus* on the island.

### ***Araneus angulatus* on Sicily and Malta**

A collection of Arachnids from Malta and Sicily was studied recently (2010-2012) by the authors. This collection was compiled between 1997 and 2012 by several Maltese naturalists. The bulk of the material was collected and maintained by the authors (A.S., J.S.). Four specimens of *Araneus angulatus* were present in the material. These represent new records for the Sicilian and Maltese archipelagos:

- 1 female; urban habitat with woodland dominated by *Pinus sylvestris* L.; Rosolini in the Province of Syracuse, Sicily; 6 May 2001; coll. A. Sciberras.

- 1 female; on shrubs; Halfa Islet, Maltese archipelago; 8 October 2007; coll. A. Sciberras & J. Sciberras. Notes: another five specimens were noted on the same day including one egg sac. This female was found on the largest specimen of *Pistacia lentiscus* L. on the islet (Sciberras & Sciberras, 2010) (Figure 1).

- 1 female; "ermes habitat" (a degraded form of scrubland; Shrubbery transitioned to a steppe habitat (Pasta et al., 2014) dominated mainly by *Foeniculum vulgare* Miller; Favignana Island, Aegadian archipelago, Sicily; 15 October 2010; coll. A. Sciberras & J. Sciberras.

- 1 female; matorral/maquis habitat with *Pistacia lentiscus* L.; Ustica Island, Sicily; 5 November 2011; coll. A. Sciberras & J. Sciberras.

These data of this wild-spread spider are of interest because they give the species very southern distribution records in Europe. It



**Fig. 1.** Female *Araneus angulatus* from Halfa Islet, Maltese Archipelago. **2a-c.** Epigyne of the specimen (Photos M. Freudenschuss, Leg. A. Sciberras)

is quite unusual that such a conspicuous species has been overlooked in Sicily where the arachnid fauna is quite well studied. The distribution in the Maltese islands is of particular interest as it was until now only noted on an islet (Halfa Islet) with a distance of 70 meters away from the main island of Gozo with an area of about 4750 m<sup>2</sup> (AS unpublished record). The species on this small, species-poor islet is accompanied by at least seven other arachnids species (authors' unpublished data): *Euscorpius sicanus* (Koch, 1837), *Dysdera crocata* (C.L. Koch, 1838), *Cryptophora citricola* (Forsskål, 1775), *Argiope lobata* (Pallas, 1772), *Steatoda paykulliana* (Sundevall, 1833) and 2 Salticidae spp.

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