

Araneofauna (Arachnida Araneae) from Isola delle Femmine Nature Reserve (north-western Sicily, Italy)

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ABSTRACT

The species of spiders (Arachnida Araneae) found in the “Isola delle Femmine Nature Reserve” (Sicily, Italy) are reported here. The checklist provided is the result of some excursions carried out between 2021 and 2023 and aimed at studying the invertebrate fauna that lives on this small island. In total, up to date, 42 species, belonging to 38 genera and 19 families, are listed, among these *Diplostyla concolor* (Wider, 1834) is reported for the first time for Sicily.

KEY WORDS

Isola delle Femmine Nature Reserve; Spiderfauna; *Diplostyla concolor*.

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INTRODUCTION

The present study is the result of a series of naturalistic excursions, held between 2021 and 2023, on the Isola delle Femmine Nature Reserve (Sicily, Italy) (Fig. 1), aimed at improving the state of knowledge on invertebrate fauna. Particularly, this study analyzes the data relating to the spider group (Arachnida Araneae) living in Isola delle Femmine. A first contribution to the knowledge of this population with a checklist of the sampled species and other faunal and biogeographic data are provided.

MATERIAL AND METHODS

Study area

Isola delle Femmine Nature Reserve (38°12'36

“N - 13°14'10” E) is located to the northwest of Sicily (Italy), near Palermo, along a stretch of coast between Capo Gallo and Punta Raisi, in the Gulf of Carini. A 2 meter deep and 400 meter long arm of sea separates the island from the mainland.

For a detailed description of this biotope see Caldarella et al. (2010), Sparacio et al. (2021) and Viviano et al. (2021).

Sampling

All samples were collected on sight on plants, under the rocks or in their web. They were taken in laboratory, treated with ethyl acetate and observed with binoculars for identification, stored in centrifuge tubes of different sizes, depending on the size of the sample, and were fixed in 75% ethanol (Levi, 1966). The samples are preserved in the A. Dentici collection (Palermo, Italy).

The chorotype is reported for each species. The chorological categories are based on La Greca (1962) subsequently elaborated by Vigna Taglianti et al. (1993, 1999) and Parenzan (1994):

ASE (Asiatic-European), ASM (Asiatic-Mediterranean), AME (African-Mediterranean), AWP (Afrotropical-W-Palearctic), CAE (Centrasian-European), CEM (Centrasian-European-Mediterranean), CME (Central Mediterranean), COS (Cosmopolitan), EUM (European-Mediterranean), EUR (European), ITE (Italian Endemic), MED (Mediterranean), OLA (Holartic), PAL (Palearctic), SCOS (Subcosmopolitan), SEU (South-European), TEM (Turanic-European-Mediterranean), TUM (Turanic-Mediterranea), WME (W-Mediterranean).

The classification, taxonomic order and nomenclatural arrangement for spiders follow Roberts (1995), Trotta (2004), Pantini & Isaia (2019), and World Spider Catalog (2024).

RESULTS

In total, 42 species, belonging to 38 genera and 19 families, are listed for this biotope; among these *Diplostyla concolor* (Wider, 1834), for which further biological and faunal data are provided, is reported for the first time for Sicily.

Systematics

Classis ARACHNIDA Cuvier, 1812
Ordo ARANEAE Clerck, 1757

Familia AGELENIDAE C.L. Koch, 1837

Lycosoides Lucas, 1846
Lycosoides coarctata (Dufour, 1831) TUM

Familia ARANEIDAE Clerck, 1757

Argiope Audouin, 1826
Argiope lobata (Pallas, 1772) - SCOS

Neoscona Simon, 1864
Neoscona adianta (Walckenaer, 1802) - SCOS (Fig. 1)

Zygiella F.O. Pickard-Cambridge, 1902

Zygiella x-notata (Clerck, 1757) - SCOS

Familia CHEIRACANTHIIDAE Wagner, 1887

Cheiracanthium C.L. Koch, 1839
Cheiracanthium erraticum (Walckenaer, 1802) - PAL

Familia CLUBIONIDAE Wagner, 1887

Porrhoclubiona Lohmander, 1944
Porrhoclubiona vegeta (Simon, 1918) - TUM

Familia DYSDERIDAE C.L. Koch, 1837

Dysdera Latreille, 1804
Dysdera ancora Grasshoff, 1959 - ITE
Dysdera crocata C.L. Koch, 1838 - SCOS (Fig. 3)

Familia ERESIDAE C.L. Koch, 1845

Stegodyphus Simon, 1873
Stegodyphus lineatus (Latreille, 1817) - TUM (Fig. 4)

Familia FILISTATIDAE Ausserer, 1867

Filistata Latreille, 1810
Filistata insidiatrix (Forsskal, 1775) - SCOS

Familia GNAPHOSIDAE Pocock, 1898

Gnaphosa Latreille, 1804
Gnaphosa dolosa Herman, 1879 - CAE

Haplodrassus Chamberlin, 1922
Haplodrassus kulczynskii Lohmander, 1942 - CAE

Nomisia Dalmas, 1921
Nomisia exornata (C.L. Koch, 1839) - CEM

Zelotes Gistel, 1848
Zelotes callidus (Simon, 1878) - WME
Zelotes egregius Simon, 1914 - EUR

Familia LINYPHIIDAE Blackwall, 1859

Diplostyla Emerton, 1882
Diplostyla concolor (Wider, 1834) - OLA
Species widespread in North America, Europe, Turkey, Caucasus, Russia (Europe to Far East),

Iran, Korea. Only a female specimen was found in Isola delle Femmine (7 May 2021). This genus and species are new for Sicily.

Erigone Audouin, 1826

Erigone dentipalpis (Wider, 1834) - CEM

Gonatium Menge, 1868

Gonatium hilare (Thorell, 1875) - EUR

Walckenaeria Blackwall, 1833

Walckenaeria corniculans (O.P.-Cambridge, 1875)
- EUM

Familia OECOBIIDAE Blackwall, 1862

Oecobius Lucas, 1846

Oecobius maculatus Simon, 1870 - TUM

Familia PALPIMANIDAE Thorell, 1870

Palpimanus Dufour, 1820

Palpimanus gibbulus Dufour, 1820 - CME (Fig. 5)

Familia PHILODROMIDAE Thorell, 1870

Philodromus Walckenaer, 1826

Philodromus aureolus (Clerck, 1757) - CAE

Familia PHOLCIDAE C.L. Koch, 1850

Holocnemus Simon, 1875

Holocnemus pluchei (Scopoli, 1763) - SCOS

Familia SALTICIDAE Blackwall, 1841

Evarcha Simon, 1902

Evarcha jucunda (Lucas, 1846) - MED

Heliophanus C.L. Koch, 1833

Heliophanus apiatus Simon, 1878 - SEU



Figure 1. Isola delle Femmine Nature Reserve (Sicily, Italy).

Heliophanus rufithorax Simon, 1868 - CAE

Menemerus Simon, 1868

Menemerus semilimbatus (Hahn, 1829) - TEM

Familia SCYTODIDAE Blackwall, 1864

Scytodes Latreille, 1804

Scytodes thoracica (Latreille, 1802) - SCOS

Familia SEGESTRIIDAE Simon, 1893

Ariadna Audouin, 1826

Ariadna brignolii Wunderlich, 2011 - ITE

Familia SICARIIDAE Keyserling, 1880

Loxosceles Heineken et Lowe, 1832

Loxosceles rufescens (Dufour, 1820) - SCOS (Fig. 6)

Familia THERAPHOSIDAE Thorell, 1869

Ischnocolus Ausserer, 1871

Ischnocolus valentinus (Dufour, 1820) - WME

Familia THERIDIIDAE Sundevall, 1833

Enoplognatha Pavesi, 1880

Enoplognatha mandibularis (Lucas, 1846) - CEM

Euryopsis Menge, 1868

Euryopsis episinoides (Walckenaer, 1847) - SCOS

Kochiura Archer, 1950

Kochiura aulica (C.L. Koch, 1838) - TEM

Platnickina Koçak et Kemal, 2008

Platnickina tincta (Walckenaer, 1802) - CAE

Steatoda Sundevall, 1833

Steatoda grossa (C.L. Koch, 1838) - COS

Steatoda paykulliana (Walckenaer, 1806) - CEM

(Fig. 7)

Familia THOMISIDAE Sundevall, 1833

Monaeses Thorell, 1869

Monaeses paradoxus (Lucas, 1846) - AME

Ozyptila Simon, 1864

| CHOROTYPE | species | % |
|---|-----------|-------------|
| AME (African-Mediterranean) | 1 | 2.38 |
| ASE (Asiatic-European) | 1 | 2.38 |
| CAE (Centrasiatic-European) | 6 | 14.28 |
| CEM (Centrasiatic-European-Mediterranean) | 4 | 9.54 |
| CME (Central Mediterranean) | 1 | 2.38 |
| COS (Cosmopolitan) | 1 | 2.38 |
| EUM (European-Mediterranean) | 1 | 2.38 |
| EUR (European) | 2 | 4.76 |
| ITE (Italian Endemic) | 2 | 4.76 |
| MED (Mediterranean) | 2 | 4.76 |
| PAL (Palearctic) | 1 | 2.38 |
| OLA (Holartic) | 1 | 2.38 |
| SCOS (Subcosmopolitan) | 9 | 21.42 |
| SEU (South-European) | 2 | 4.76 |
| TEM (Turanic-European-Mediterranean) | 2 | 4.76 |
| TUM (Turanic-Mediterranean) | 4 | 9.54 |
| WME (W-Mediterranean) | 2 | 4.76 |
| | 42 | 100% |

Table 1. Chorotypes of the Araneae from the Isola delle Femmine Nature Reserve (north-western Sicily, Italy).

Ozyptila confluens (C.L. Koch, 1845) - SEU

Runcinia Simon, 1875

Runcinia grammica (C.L. Koch, 1837) - CAE

Synema Simon, 1864

Synema globosum (Fabricius, 1775) - ASE

Xysticus C.L. Koch, 1835

Xysticus nubilus Simon, 1875 - MED

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Figures 2–7. Some spiders found on Isola delle Femmine Nature Reserve (Sicily, Italy). Fig. 2: *Neoscona adianta*. Fig. 3: *Dysdera crocata*. Fig. 4: *Stegodyphus lineatus* Fig. 5: *Palpimanus gibbulus*. Fig. 6: *Loxosceles rufescens*. Fig. 7: *Steatoda paykulliana*.

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