

Review of the distribution of the Mediterranean black widow *Latrodectus tredecimguttatus* (Rossi, 1790) and the false widow spider *Steatoda paykulliana* (Walckenaer, 1806) in Italy with new records (Araneae: Theridiidae)

FILIPPO CECCOLINI

Via Europa 16/A, I-52016 Rassina (Arezzo), Italy; ceccolinif@virgilio.it

<https://orcid.org/0000-0002-1476-914X>

CECCOLINI, F. 2024: Review of the distribution of the Mediterranean black widow *Latrodectus tredecimguttatus* (Rossi, 1790) and the false widow spider *Steatoda paykulliana* (Walckenaer, 1806) in Italy with new records (Araneae: Theridiidae) - *Natura Somogyiensis* 44: 51-66.

Abstract: The current faunistic knowledge on *Latrodectus tredecimguttatus* (Rossi, 1790) and *Steatoda paykulliana* (Walckenaer, 1806) in Italy are summarized and new records for both species are given. First occurrences of *L. tredecimguttatus* from Basilicata and *S. paykulliana* from Veneto, Marche, Abruzzo, Molise, and Basilicata are given. In addition, many records for new provinces are cited for both the species, improving considerably the knowledge of the distribution of these two spiders in Italy.

Keywords: faunistic, first records, theridiids

Introduction

The knowledge of the spider fauna in Italy is still far from being satisfactory and complete and even the distribution of some impressive species are known through scattered records. Within the most recognizable species of Italian fauna thanks to their distinct morphological and chromatic features there are *Latrodectus tredecimguttatus* (Rossi, 1790) and *Steatoda paykulliana* (Walckenaer, 1806), which are two of the 116 species of Theridiidae known in Italy (PANTINI & ISAIA 2019), but even for these spiders the occurrence records in the country are scarce and their distribution seems to be very scattered (see PANTINI & ISAIA 2019).

The Mediterranean black widow *Latrodectus tredecimguttatus* has a wide distribution from the Iberian Peninsula to southeastern Europe and Central Asia (WCS 2024). It is one of the few Italian spiders that can be dangerous to humans (see BARRA 1958, TRENTINI et al. 1993) and its poison results in latrodectism (see BETTINI 1963a, DI PAOLA et al. 2020, FUSTO et al. 2020). Despite many contributions on the consequences of its bite and cases of latrodectism described in certain areas of Italy, especially in Latium (see PAMPIGLIONE 1958, BETTINI 1954, 1960a, 1960b, 1961, 1963b, BETTINI & FINIZIO 1960), these works cannot give precise information about the occurrence of *L. tredecim-*

guttatus in the territory. Surprisingly, there are relatively few works providing information on the actual distribution of this spider in Italy, summarized in PANTINI & ISAIA (2019). For each region where the species is reported, there are few records in the literature and sometimes the only ones available date back to the XIX century. So far, this spider is known from 14 Italian regions, but only in Sardinia the available records give quite satisfactory (although surely not completed) information on its the real distribution (MAGRETTI 1880, COSTA 1884, GARNERI 1902, BARRA 1958, PANTINI et al. 2013), that including Asinara island (TROTTA 2009)—*L. tredecimguttatus* is also one of the only three species of spiders reported for Sardinia in the oldest catalogue of Italian spiders, although without precise localities (CANESTRINI & PAVESI 1868).

In the other regions only 31 occurrence records with a precise locality or indicating at least the province are available from the literature and 12 concern minor islands—Elba (PAVESI 1876, DI CAPORIACCO 1950) and Isola del Giglio (de DALMAS 1922) in the Tuscan Archipelago, Caprara (DI CAPORIACCO 1951) and Pianosa (CECCONI 1910) in the Tremiti Islands, Capri (COSTA 1841), and Lampedusa (PAVESI 1878, FAILLA TEBALDI 1887, ROEWER 1960, PESARINI 1995, NICOLSI et al. 2024). Therefore, only 19 localities are reported for the whole of mainland Italy and the other main island: four in Apulia (PEPE & INGUSCIO 1999, PEPE 2005), two in Tuscany (ROSSI 1790, PALAU 1878), LATIUM (STRAND 1909, BRIGNOLI 1967) and Sicily (CANTONI 1881, BRIGNOLI 1968), one in Liguria (BERTKAU 1890), Emilia-Romagna (PESARINI 1991), Umbria (DI CAPORIACCO 1936), and Abruzzo (PONTUALE et al. 1998).

Steatoda paykulliana is widespread in Europe, from the Mediterranean to Central Asia, and India (WCS 2024). Also for this species the occurrences in Italy are scarce and scattered, with the main islands being the more documented regions. In Sardinia the presence of this spider is reported for all provinces (MAGRETTI 1880, COSTA 1882, 1884, GARNERI 1902, TROTTA 2011, PANTINI et al. 2013) and there are several records also from some minor islands—Asinara (MAGRETTI 1880, GARNERI 1902, TROTTA 2009, PANTINI & SASSU 2009), Caprera (PAVESI 1878), and Sant'Antioco (GARNERI 1902). In Sicily, in addition to the records from Lampedusa (FAILLA TEBALDI 1887, ROEWER 1960, PESARINI 1995, NICOLSI et al. 2024) and Pantelleria (HANSEN 1991), occurrence records are reported by CANTONI (1881), DENTICI & GALASSO (2021), DENTICI (2022), DENTICI & AMATA (2024), and DENTICI et al. (2024). The Tuscan Archipelago is also quite investigated — with records from Elba (DI CAPORIACCO 1950), Isola del Giglio (DE DALMAS 1922) and Capraia (DI CAPORIACCO 1928), reported also in BRIGNOLI (1975) — while data from the continental part of Tuscany are scarce (RIZZARDI 1898, CECCONI 1898, CIANFERONI et al. 2010, PICCHI 2020).

In the other regions where *S. paykulliana* is known, there are very few records. In Trentino-Alto Adige, in addition to the general report by CANESTRINI (1875) for the province of Trento, this theridiid is cited from two localities in South Tyrol (see NOFLATSCHER 1991, STEINBERGER 2008) four localities are reported from Emilia-Romagna (see ZANGHERI 1966, PESARINI 1991, GIOVANNELLI 2002) three old records are from Lombardia (SORDELLI 1868, PAVESI 1879), just two localities are reported for Liguria (BERTKAU 1890, JACKSON 1926), Umbria (DI CAPORIACCO 1936), Latium (CANESTRINI & PAVESI 1868, THALER & ZAPPAROLI 1993), Campania (CANESTRINI & PAVESI 1870, ILJAND & VAN HELSDINGEN 2014), and Calabria (KRITSCHER 1960, PANTINI et al. 2020), and only one precise locality is given for Apulia (DI CAPORIACCO 1951).

This paper provides new records for these two species and fills some of the major gaps in their distribution.

Material and methods

The material examined consists of photographed specimens from websites (see abbreviations below).

All listed records were confirmed by the author. Both *L. tredecimguttatus* and *S. paykulliana* can be recognised from photographs due to specific characters (NENTWIG et al. 2024). The colour pattern of *L. tredecimguttatus* is black with 3 longitudinal series of red spots on dorsal opisthosoma in female or more whitish in male blotches - sometimes these blotches are absent and the opisthosoma is completely black - even if in subadult specimens the outlines of the red spots are white. The colouration of *S. paykulliana* is also predominantly black, but the female opisthosoma has a red or yellow band around the front - sometimes with a median longitudinal series of chevrons - and the male has a whitish band around the front and a strongly dentate median longitudinal band. Only photos in which the specimens with these features were well visible are selected.

For each site, the following information is given (when available): locality, coordinates, date of collecting, number of specimens, photographer, source. Geographical coordinates are in decimal degrees (datum WGS84). The uncertainty (in meters) of data is indicated according to the point-radius method (WIECZOREK et al. 2004).

Abbreviations used under material examined are the following:

AP = Acta Plantarum (<https://www.actaplantarum.org/>)

FEI = Forum Entomologi Italiani (<http://www.entomologiitaliani.net/>)

IN = iNaturalist (<https://www.inaturalist.org/>)

OB = Observations.org (<https://observation.org/>)

Results

Latrodectus tredecimguttatus (Rossi, 1790)

Liguria: Savona: Ceriale, 44.08775°N 8.21915°E (un. = 7250 m), 16.IX.2021, 1 female, photo by Pierpaolo Pessano (IN) (<https://www.inaturalist.org/observations/112076063>).

Tuscany: Grosseto: Grosseto, 42.81218°N 11.08684°E (un. = 357 m), 17.X.2023, 1 female, photo by Pamela Rustici (IN) (<https://www.inaturalist.org/observations/188008964>); idem, Alberese, 42.66591°N 11.10702°E (un. = 578 m), 19.VII.2021, 1 female, photo by Pono Pucci (IN) (<https://www.inaturalist.org/observations/87687624>).

Latium: Viterbo: Tuscania, 42.42905°N 11.85454°E (un. = 1200 m), 15.VII.2021, 1 female, photo by Germano De Simoni (IN) (<https://www.inaturalist.org/observations/87176409>); Barbarano Romano, 42.24253°N 12.05129°E (un. not recorded), 13.XI.2022, 1 female, photo by Adriano Biressi (IN) (<https://www.inaturalist.org/observations/187878271>); Metropolitan City of Rome Capital: Tolfa, 42.093056°N 11.998611°E (un. not recorded), 12.XI.2011, 1 female, photo by Agostino Letardi (IN) (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=28766&hilit=latrodectus>); idem, 42.04793°N 11.96691°E (un. = 366 m), 7.VIII.2021, 1 female, photo by “codazzurro09” (IN) (<https://www.inaturalist.org/observations/133591731>); idem, La Scaglia, 42.03831°N 11.96482°E (un. = 401 m), 11.VIII.2023, 1 female, photo by “pluvialfern” (IN) (<https://www.inaturalist.org/>)



Fig. 1: Female of *Latrodectus tredecimguttatus* from Sperlonga, Latium
(photo by Paolo Mazzei).

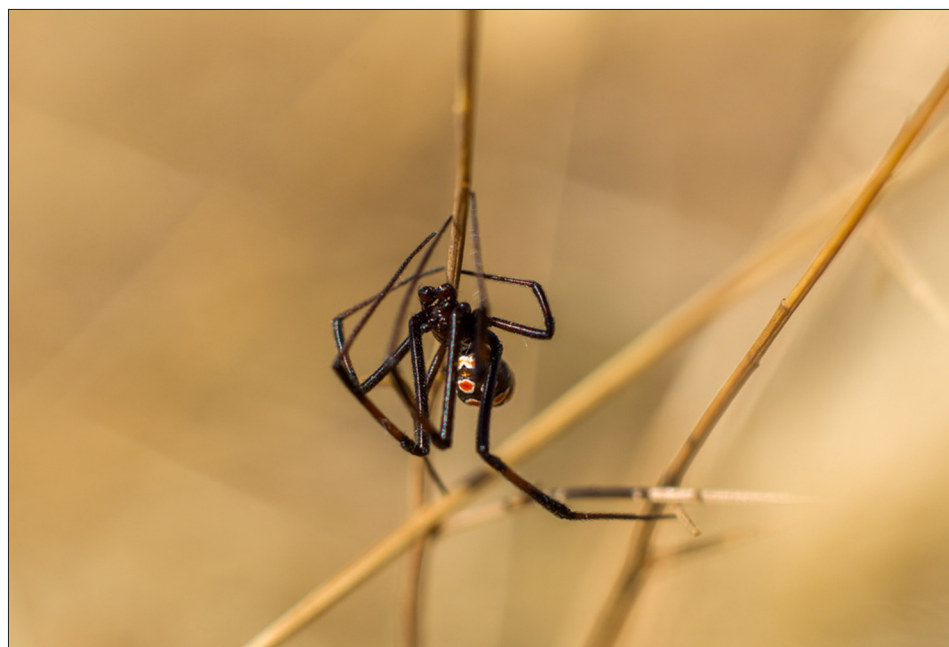


Fig. 2: Male of *Latrodectus tredecimguttatus* from Salerno, Campania
(photo by “lucatr98”).

observations/187881104); Fiumicino, near Ospedale Pediatrico Bambino Gesù, 41.91924°N 12.13713°E (un. = 411 m), 11.VI.2021, 1 female, photo by “emi_c” (IN) (<https://www.inaturalist.org/observations/82581489>); Latina, Pontinia, 41.3905°N 13.14919°E (un. not recorded), 20.VIII.2021, 1 female, photo by Daniel Pizzoni (IN) (<https://www.inaturalist.org/observations/91861737>); Sperlonga, 41.25591°N 13.46823°E (un. = 92 m), 4.IX.2008, 1 female, photo by Paolo Mazzei (IN) (<https://www.inaturalist.org/observations/20368214>); idem, 41.25556°N 13.46775°E (un. = 54 m), 29.VIII.2008, 1 female (Fig. 1), photo by Paolo Mazzei (IN) (<https://www.inaturalist.org/observations/21321509>); idem, 41.25518°N 13.46787°E (un. = 33 m), 29.VIII.2008, 1 female, photo by Paolo Mazzei (IN); idem, 41.25552°N 13.46838°E (un. = 54 m), 21.VI.2008, 1 female, photo by Paolo Mazzei (IN) (<https://www.inaturalist.org/observations/20384078>).

Campania: Avellino: Mugnano del cardinale, 40.94847°N 14.65727°E (un. = 5 m), 6.VIII.2023, 1 female, photo by Marina Guglielmi (IN) (<https://www.inaturalist.org/observations/194020066>); Salerno: Sarno, 40.81364°N 14.66523°E (un. = 229 m), 13.VI.2023, 1 specimen, photo by Giuseppe Paudice (IN) (<https://www.inaturalist.org/observations/190887983>); Salerno, 40.73621°N 14.85525°E (un. = 15 m), 3.VIII.2020, 1 male, photo by “lucatr98” (IN) (<https://www.inaturalist.org/observations/55585635>); idem, 40.73557°N 14.85761°E (un. = 61 m), 1 male (Fig. 2), photo by “lucatr98” (IN) (<https://www.inaturalist.org/observations/55585284>).



Fig. 3: Female of *Latrodectus tredecimguttatus* with cocoon from Villaputzu, Sardinia (photo by Francesco Tarantino).

Apulia: Foggia: San Giovanni Rotondo, 41.72213°N 15.76485°E (un. = 5580 m), 24.VIII.2019, 1 female, photo by Mirko Galuppi (IN) (<https://www.inaturalist.org/observations/31397132>); Metropolitan City of Bari: Gravina in Puglia, 40.92887°N 16.33959°E (un. = 1400 m), 8.VIII.2021, 1 female and 1 male, photo by Mirko Galuppi (IN) (<https://www.inaturalist.org/observations/90511934>); Valenzano, 41.01444°N 16.90639°E (un. not recorded), 16.IV.2023, 1 female, photo by Leonardo Ancillotto (IN) (<https://www.inaturalist.org/observations/155132789>); Altamura, 40.83944°N 16.68°E (un. not recorded), 18.VII.2022, 1 female, photo by Leonardo Ancillotto (IN) (<https://www.inaturalist.org/observations/127113479>); Gioia del Colle, 40.80569°N 16.97379°E (un. = 3 m), 14.VI.2024, 1 male, photo by “maurizio9812” (IN) (<https://www.inaturalist.org/observations/222729085>); Taranto: Laterza, 40.71724°N 16.74838°E (un. = 4 m), 3.IX.2022, 1 female, photo by “philodendronjoe” (IN) (<https://www.inaturalist.org/observations/134608707>); Castellana, Riva dei Tessali, 40.45387°N 16.90526°E (un. = 1410 m), 2.X.2020, 1 female, photo by Annalisa Lucibello (IN) (<https://www.inaturalist.org/observations/61471860>); Lecce: Gallipoli, near Punta della Suina, 40.00246°N 18.01801°E (un. = 8 m), 23.VII.2015, 1 female, photo by Karol Tabarelli de Fatis (IN) (<https://www.inaturalist.org/observations/238385184>).

Basilicata: Matera: Matera, 40.67417°N 16.49469°E (un. = 122 m), 21.VIII.2022, 1 female, photo by “philodendronjoe” (IN) (<https://www.inaturalist.org/observations/132193344>); Scanzano Jonico, Camping Le Due Barche, 40.24733°N 16.74852°E (un. = 5 m), 5.V.2024, 1 female, photo by Andrea Battisti (IN) (<https://www.inaturalist.org/observations/220755344>); Potenza: Guardia Perticara, 40.33811°N 16.1543°E (un. = 8 m), 10.VII.2018, 1 female, photo by Rocco Labadessa (IN) (<https://www.inaturalist.org/observations/67248445>).

Calabria: Cosenza: Orsomarso, 39.79638°N 15.86440°E (un. = 2950 m), 22.VII.2024, 1 female, photo by Luigi Torino (IN) (<https://www.inaturalist.org/observations/231669051>); idem, 39.79516°N 15.86324°E (un. = 6600 m), 21.VII.2024, 1 female, photo by Luigi Torino (IN) (<https://www.inaturalist.org/observations/231667252>).

Sardinia: Sassari: Santa Teresa Gallura, Valle dell'Erica, 11.VII.2012, 1 male, photo by Luigi Lenzini (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=37341&hilit=latrodectus>); Arzachena, 7.VIII.2012, 1 female, photo by Caterina Azara (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=37258&hilit=latrodectus>); Tempio Pausania, 41.14322°N 9.28703°E (un. = 244 m), 23.VIII.2018, 1 female, photo by Luigi Lenzini (IN) (<https://www.inaturalist.org/observations/78820559>); Sedini, 40.86597°N 8.80093°E (un. = 24 m), 5.VII.2021, 1 female, photo by “walter1980” (IN) (<https://www.inaturalist.org/observations/85747527>); Berchidda, 40.73385°N 9.25248°E (un. = 2960 m), 21.VII.2021, 1 female, photo by “lateralus” (IN) (<https://www.inaturalist.org/observations/88141139>); Alghero, Spiaggia Mugoni, 40.61864°N 8.19661°E (un. = 1 m), 17.IV.2013, 1 female, Peter de Lange (IN) (<https://www.inaturalist.org/observations/2931822>); idem, Pischina Salida, 40.58152°N 8.16286°E (un. = 100 m), 29.VII.2020, 1 male, photo by “fededepa” (IN) (<https://www.inaturalist.org/observations/58480536>); Nuoro: Galtelli, 40.38703°N 9.59425°E (un. = 395 m), 7.VII.2020, 1 female, photo by Serafino Fronteddu (IN) (<https://www.inaturalist.org/observations/54717540>); Sud Sardegna: Villaputzu, 39.4387°N 9.57426°E (un. = 1030 m), 28.VII.2019, 1 female with cocoon (Fig. 3), photo by Francesco Tarantino (IN) (<https://www.inaturalist.org/observations/36642015>);

Steatoda paykulliana (Walckenaer, 1806)

Piedmont: Sondrio: Novate Mezzola, 46.22570°N 9.47950°E (un. = 2 m), 9.V.2021, photo by Fabio Bianchini (IN) (<https://www.inaturalist.org/observations/78046882>); Torino: Caselette, 45.10445°N 7.46269°E (un. = 78 m), 25.III.2023, 1 female [+ 4 specimens annotated], photo by Alessandro Bona (IN) (<https://www.inaturalist.org/observations/153181861>); Alessandria: Bosio, 44.55368°N 8.77762°E (un. = 2750 m), 29.X.2018, 1 female, photo by “luca-20” (IN) (<https://www.inaturalist.org/observations/17933201>).

Lombardy: Bergamo: Palazzago, 45.77694°N 9.52511°E (un. = 2 m), 22.II.2018, photos by Alessandro Mazzoleni and Fausto Leandri (IN) (<https://www.inaturalist.org/observations/9977063>); Pavia: Zavattarello, Rossone, 44.85008°N 9.24482°E (un. = 28 m), 13.VIII.2022, 1 specimen, photo by Myriam Rutigliano (IN) (<https://www.inaturalist.org/observations/130671511>).

Veneto: Belluno: Ponte nelle Alpi, Arsie, 46.17093°N 12.32838°E (un. = 3 m), 5.V.2023, 1 female, photo by “khamul87” (IN) (<https://www.inaturalist.org/observations/159891557>); Vicenza: Crespadoro, 45.65743°N 11.21927°E (un. = 1520 m), 1.IX.2019, 1 male, photo by Marco Vicariotto (IN) (<https://www.inaturalist.org/observations/32184362>); Valdagno, 45.63918°N 11.2925°E (un. = 15 m), 13.XI.2021, 1 female, photo by Marco Vicariotto (IN) (<https://www.inaturalist.org/observations/101144445>); idem, 45.60605°N 11.29287°E (un. = 61 m), 25.IV.2021, 1 female, photo by Marco Vicariotto (IN) (<https://www.inaturalist.org/observations/75333158>).

Liguria: Savona: Albenga, 44.0916°N 8.19423°E (un. = 6 m), 19.II.2017, 1 female, photo by Daniele Baroni (IN) (<https://www.inaturalist.org/observations/5136160>); idem, 44.10596°N 8.22902°E (un. = 172 m), 27.IV.2019, 1 female, photo by Marco Bonifacio (IN) (<https://www.inaturalist.org/observations/25064708>); Cairo Montenotte, 44.41563°N 8.30837°E (un. = 8 m), 26.V.2020, 1 female, photo by Elan Zucchetti (IN) (<https://www.inaturalist.org/observations/47737216>); Genova: Santo Stefano d'Aveto, Allegrezze, 44.53275°N 9.43296°E (un. = 4 m), 27.I.2024, 1 female, photo by “lola96” (IN) (<https://www.inaturalist.org/observations/197680522>).

Emilia-Romagna: Modena: Lama Mocogno, 44.26512°N 10.64435°E (un. = 4 m), 19.VIII.2024, 1 female, photo by “lpcasacci” (IN) (<https://www.inaturalist.org/observations/236885046>); Metropolitan City of Bologna: Bologna, Portico di San Luca, 44.48966°N 11.30955°E (un. = 18 m), 16.II.2024, 1 female, photo by Claudio Famigni (IN) (<https://www.inaturalist.org/observations/199469876>); idem, 44.4889°N 11.30878°E (un. = 20 m), 22.XII.2023, 1 female, photo by Claudio Famigni (IN) (<https://www.inaturalist.org/observations/194594440>); idem, 44.48831°N 11.30778°E (un. not recorded), 15.II.2024, 1 female, photo by Francesco Martoni (IN) (<https://www.inaturalist.org/observations/199359753>); idem, 44.48656°N 11.30352°E (un. = 20 m), 16.II.2024, 1 female, photo by Claudio Famigni (IN) (<https://www.inaturalist.org/observations/199469886>); idem, 44.48508°N 11.30198°E (un. = 32 m), 15.III.2023, 1 female, photo by Claudio Famigni (IN) (<https://www.inaturalist.org/observations/151214527>); idem, 44.48263°N 11.30275°E (un. = 20 m), 22.XII.2023, 1 female, photo by Claudio Famigni (IN) (<https://www.inaturalist.org/observations/194594452>); Pianoro, 44.39764°N 11.38666°E (un. = 183 m), 21.III.2023, 1 female, photo by Andrea Piccinini (IN) (<https://www.inaturalist.org/observations/188054998>); Ravenna: Brisighella, 44.24523°N 11.81537°E (un. not recorded), 18.IV.2023, 1 male, photo by Mirco Gruppi (IN) (<https://www.inaturalist.org/observations/155934038>); Forlì-Cesena: Bertinoro, 44.11415°N 12.12191°E (un. = 20



Fig. 4: Female of *Steatoda paykulliana* from Monterotondo, Latium (photo by Luigi Lenzini).



Fig. 5: Male of *Steatoda paykulliana* from Bazzano, Abruzzo (photo by Emanuele Santarelli).

m), 19.IV.2023, 1 male, photo by Claudio Danesi (IN) (<https://www.inaturalist.org/observations/155630371>); Talamello, Cava, 43.91012°N 12.27845°E (un. = 6 m), 24.X.2023, 1 female, photo by “tcsenpai” (IN) (<https://www.inaturalist.org/observations/189257038>).

Reggio Emilia, Vetto d'Enza, Spigone, IX.2009, 1 female photo by Villiam Morelli (AP) (<https://www.actaplantarum.org/forum/viewtopic.php?t=14266&p=90029#p90029>).

Tuscany: Lucca: Lucca, 43.88513°N 10.52205°E (un. = 8 m), 7.IX.2020, 1 female, photo by Alessandra Rossi (IN) (<https://www.inaturalist.org/observations/58825991>); idem, 43.82921°N 10.44705°E (un. not recorded), 11.IX.2023, 1 male, photo by “agosti” (IN) (<https://www.inaturalist.org/observations/182934670>); idem, 43.7861°N 10.4599°E (un. = 2 m), 3.V.2024, 1 female, photo by Jan Eerbeek (OB) (<https://observation.org/observation/307634202/>); Firenze: Lamporecchio, 43.7985°N 10.89586°E (un. = 914 m), 12.VII.2021, 1 female, photo by Harald Peleman (IN) (<https://www.inaturalist.org/observations/86777310>); Reggello, 43.66994°N 11.52676°E (un. = 24 m), 21.VI.2021, 1 female, photo by “p-france” (IN) (<https://www.inaturalist.org/observations/83915812>); idem, 43.6764°N 11.5544°E (un. = 5 m), 8.VII.2024, 1 female, photo by Kasper Verhelst (OB) (<https://observation.org/observation/318102311/>); Siena: Casole d'Elsa, 43.34122°N 11.17571°E (un. = 189 m), 25.IV.2014, 1 female, photo by Andrea Benocci (IN) (<https://www.inaturalist.org/observations/125299526>); Grosseto: Monterotondo Marittimo, 43.14524°N 10.86001°E (un. not recorded), 12.IV.2024, 1 male, photo by Giorgio Brunialti (IN) (<https://www.inaturalist.org/observations/206784513>); Roccastrada, Montemassi, 42.9931°N 11.06424°E (un. = 263 m), 20.V.2020, 1 female, photo by “joarha” (IN) (<https://www.inaturalist.org/observations/47239862>); Santa Fiora, 42.83242°N 11.58461°E (un. = 16 m), 18.IX.2013, 1 female, photo by Emiliano Mori (IN) (<https://www.inaturalist.org/observations/534010>); Arcidosso, 42.82766°N 11.52432°E (un. = 7 m), 29.X.2022, 1 female, photo by Simone Meacci (IN) (<https://www.inaturalist.org/observations/140379356>); Semproniano, 42.71774°N 11.54023°E (un. = 4 m), 7.XI.2014, 1 male, photo by Luca Passalacqua (IN) (<https://www.inaturalist.org/observations/39445236>).

Marche: Pesaro-Urbino: Pesaro, Collina Barattoff, 18.XII.2013, 1 female, photo by Marco Paglialunga (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=50718&hilit=steatoda+paykulliana>); Fermo: Ortezzano, 43.02546°N 13.59249°E (un. = 10 m), 17.IX.2023, 1 female, photo by “antonioinoky” (IN) (<https://www.inaturalist.org/observations/223960006>).

Umbria: Perugia: Scheggia e Pascelupo, 27.X.2011, 1 female, photo by Maura Bocci (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=31111&hilit=steatoda+paykulliana>); San Giustino, 43.50488°N 12.17996°E (un. = 5 m), 1.IV.2024, 1 female, photo by “mattia_qcc” (IN) (<https://www.inaturalist.org/observations/204998399>); Magione, 43.12849°N 12.16934°E (un. not recorded), 11.VIII.2023, 1 female, photo by “pippo84” (IN) (<https://www.inaturalist.org/observations/177814414>); Perugia, 43.10402°N 12.36947°E (un. = 129 m), 3.X.2024, 1 female, photo by Schelly Cramer (IN) (<https://www.inaturalist.org/observations/245375492>); idem, Ponte San Giovanni, 43.09198°N 12.42893°E (un. not recorded), 15.II.2024, 1 female, photo by “ubpizzoli” (IN) (<https://www.inaturalist.org/observations/199391841>); Paciano, 43.02557°N 12.0774°E (un. = 13 m), 8.IV.2024, 1 male, photo by “moondragonitaly” (IN) (<https://www.inaturalist.org/observations/206099949>).

Latium: Viterbo: Bassano Romano, 42.22063°N 12.18806°E (un. = 1380 m), 5.II.2022, 1 female, photo by Ludovica Liberati (IN) (<https://www.inaturalist.org/>

observations/106182022); Rieti: Fiamignano, Lake of Rascino, 42.34945°N 13.14336°E (un. = 98 m), 7.IV.2024, 1 female, photo by Luca Tringali (IN) (<https://www.inaturalist.org/observations/206232296>); Petrella Salto, near Lake of Petrella, 42.32429°N 13.11014°E (un. = 77 m), 13.XI.2024, 1 female, photo by Luca Tringali (IN) (<https://www.inaturalist.org/observations/251668689>); Metropolitan City of Rome Capital: Civitavecchia, 42.06772°N 11.84222°E (un. = 121 m), 11.III.2023, 1 female, photo by “babunco” (IN) (<https://www.inaturalist.org/observations/150978950>); Cerveteri, 42.01671°N 12.11959°E (un. = 190 m), 9.IV.2022, 1 male, photo by Leonardo Villa (IN) (<https://www.inaturalist.org/observations/110854163>); Riofreddo, 42.06°N 13.00083°E (un. not recorded), 4.I.2024, 1 female, photo by Leonardo Ancillotto (IN) (<https://www.inaturalist.org/observations/196018928>); Monterotondo, 42.04804°N 12.6585°E (un. = 244 m), 27.IV.2024, 1 female (Fig. 4), photo by Luigi Lenzini (IN) (<https://www.inaturalist.org/observations/211706851>); Roma, Oasi LIPU Castel di Guido, 41.88482°N 12.29302°E (un. not recorded), 3.IX.2022, 1 female, photo by “robertovi” (IN) (<https://www.inaturalist.org/observations/133450380>); Anzio, 15.II.2012, 1 female (photo by Vittorio Risoldi (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=32314&hilit=steatoda+paykulliana>); Frosinone: Trevi nel Lazio, 41.8574°N 13.22475°E (un. = 13 m), 4.II.2020, 1 female, photo by Edoardo Di Russo (IN) (<https://www.inaturalist.org/observations/38290925>); idem, Altipiani di Arcinazzo, 41.84069°N 13.19719°E (un. = 526 m), 18.IV.2019, 1 female, photo by Edoardo Di Russo (IN) (<https://www.inaturalist.org/observations/24159933>).

Abruzzo: L’Aquila: Campotosto, 42.56109°N 13.34769°E (un. = 8 m), 5.IX.2021, 1 female, photo by Emanuele Santarelli (IN) (<https://www.inaturalist.org/observations/93790744>); L’Aquila, Bazzano, 42.33686°N 13.45353°E (un. = 232 m), 12.IV.2024, 1 male (Fig. 5), photo by Emanuele Santarelli (IN) (<https://www.inaturalist.org/observations/207557912>); Pacentro, 42.0372°N 13.97917°E (un. no recorded), 16.VI.2023, 1 female, photo by Riccardo Novaga (IN) (<https://www.inaturalist.org/observations/168035129>).

Molise: Isernia, Pozzilli, 41.50023°N 14.06512°E (un. = 8 m), 19.III.2012, 1 female, photo by Daniele Ritella (IN) (<https://www.inaturalist.org/observations/88715492>); 41.50033°N 14.06567°E (un. = 15 m), 16.II.2017, 1 female, photo by Daniele Ritella (IN) (<https://www.inaturalist.org/observations/18896754>).

Campania: Avellino: San Michele di Serino, 40.87009°N 14.84317°E (un. = 220 m), 10.XI.2021, 1 female, photo by “vincedreux” (IN) (<https://www.inaturalist.org/observations/123763928>);.

Apulia: Foggia: Bovino, 41.2489°N 15.346°E (un. = 9 m), 10.V.2020, 1 male, photo by “fra_21” (IN) (<https://www.inaturalist.org/observations/45534844>); Taranto: Martina Franca, 40.70287°N 17.33926°E (un. = 1840 m), 29.III.2020, 1 female, photo by “parrmigiana” (IN) (<https://www.inaturalist.org/observations/40972938>).

Basilicata: Potenza: Calvello, 40.46971°N 15.84977°E (un. = 947 m), 17.X.2018, 1 female, photo by Federico Biguzzi (IN) (<https://www.inaturalist.org/observations/142767243>); Terranova di Pollino, 39.9786°N 16.29632°E (un. = 540 m), 15.XI.2023, 1 female, photo by Luca Sattin (IN) (<https://www.inaturalist.org/observations/193210324>).

Calabria: Cosenza: Santa Domenica Talao, 39.79399°N 15.83009°E (un. = 267 m), 12.II.2019, 1 female, photo by “Golfopolikayak” (IN) (<https://www.inaturalist.org/observations/57813576>); Catanzaro: Catanzaro, Viale Pio X, 38.92571°N 16.58144°E (un. = 13 m), 1.X.2022, 1 female, photo by “marekko” (IN) (<https://www.inaturalist.org/observations/137294434>); San Pietro a Maida, 38.83624°N 16.34706°E (un. = 8 m), 4.IX.2022, 1 female, photo by Domenico Spanò (IN) (<https://www.inaturalist.org/>

observations/138368703); Reggio Calabria: Bovalino, 38.15171°N 16.17886°E (un. not recorded), 23.II.2024, 1 female and 1 male, photo by “sofiacena2” (IN) (<https://www.inaturalist.org/observations/200210263>).

Sicily: Messina: Gioiosa Marea, 38.16469°N 14.93029°E (un. = 320 m), 24.XI.2016, 1 female, photo by Mario Bassini (IN) (<https://www.inaturalist.org/observations/155946324>); Ragusa: Ragusa, Donnafugata, 12.XII.2019, 1 female, photo by Riccardo La Placa (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=88204&hilit=steatoda+paykulliana>); Siracusa: Palazzolo Acreide, 23.X.2019, 1 male, Riccardo La Placa (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=87319&hilit=steatoda+paykulliana>); Trapani: Alcamo, 37.90968°N 13.01348°E (un. = 977 m), 7.IV.2009, 1 female, photo by Geir Drange (IN) (<https://www.inaturalist.org/observations/39095259>); idem, 37.90751°N 13.01004°E (un. = 977 m), 7.IV.2009, 1 female, photo by Geir Drange (IN) (<https://www.inaturalist.org/observations/39095258>).

Sardinia: Sassari: Golfo Aranci, Nodu Pianu, 40.96078°N 9.58788°E (un. = 523 m), 27.IX.2021, 1 male, photo by “chris19921” (IN) (<https://www.inaturalist.org/observations/96372643>); Tissi, 40.67656°N 8.56661°E (un. = 2100 m), 12.XI.2023, 1 male, photo by “spiderock” (IN) (<https://www.inaturalist.org/observations/190885831>); Alghero, 40.52575°N 8.35556°E (un. = 25 m), 22.III.2023, 1 female, photo by Anna Rosa Carboni (IN) (<https://www.inaturalist.org/observations/151944934>); Cagliari: Villaputzu, 39.44072°N 9.57576°E (un. = 777 m), 13.XII.2019, 1 female and 1 male, photo by Francesco Tarantino (IN) (<https://www.inaturalist.org/observations/36628241>); Quartucciu, Mela Murgia, 5.I.2011, 1 male, Pier Francesco Murgia (FEI) (<http://www.entomologiitaliani.net/public/forum/phpBB3/viewtopic.php?f=421&t=15861&hilit=steatoda+paykulliana>).

Discussion

The knowledge of the distribution in Italy of *L. tredecimguttatus* and *S. paykulliana* is significantly increased, with 39 precise occurrence records for the first species (compared to 28 localities available from literature - see Introduction and PANTINI & ISAIA 2019) and 80 for the second (compared to 57 localities available from literature - see Introduction and PANTINI & ISAIA 2019). For *L. tredecimguttatus*, the first records are reported from Basilicata, while for *S. paykulliana* the first records are documented from Veneto, Marche, Abruzzo, Molise and Basilicata. In addition, many records for new provinces are given for both species (10 new provinces for *L. tredecimguttatus* and 24 for *S. paykulliana*). Figures 6 and 7 show the updated distribution of these theridiids in Italy.

The new records of the present contribution improve the faunistic knowledge in the country for these spiders, which was extremely poor up to now. However, there are still gaps due to lack of research. Further studies will be necessary to obtain a satisfactory knowledge of the distribution of these spiders.

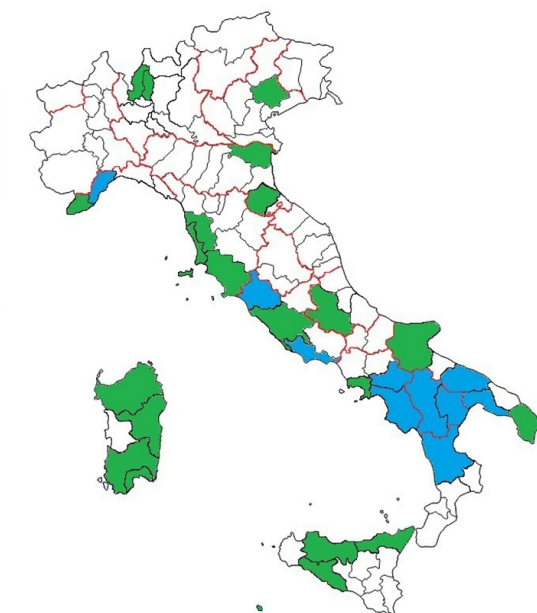


Fig. 6: Update distribution of *Latrodectus tredecimguttatus* in the provinces of Italy.
Green = regions where the species known; azure = regions with new records;
white = regions with no records. The borders of the regions are marked with red lines.

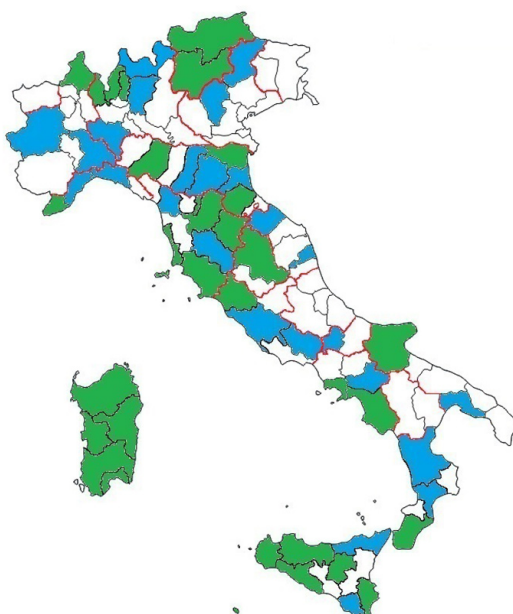


Fig. 7: Update distribution of *Steatoda paykulliana* in the provinces of Italy.
Green = regions where the species known; azure = regions with new records;
white = regions with no records. The borders of the regions are marked with red lines.

Acknowledgements

I would like to thank all the photographers who uploaded observations on the web. I am particularly grateful to Fabio Bianchini, Alessandro Bona, Mirko Galuppi, Alessandro Mazzoleni, Fausto Leandri, Luigi Torino, and Germano De Simoni (IN) for allowing me to use their records.

References

- BARRA, S. 1958: Un caso di morte per morso di *Latrodectus malmignatus*. - *Rassegna di Medicina Industriale e di Igiene del Lavoro*, 6: 539–543.
- BERTKAU, P. 1890: Arachniden gesammelt vom 12 November 1888 bis zum 10 Mai 1889 in San Remo von Prof. Dr. Oskar Schneider, 1–11.
- BETTINI, S. 1954: Distribuzione dei casi di latrodectismo in Italia durante gli anni 1949–51. - *Rendiconti dell'Istituto Superiore di Sanità*, 17 (4): 333–342.
- BETTINI, S. 1960a: Indagine sui casi di Latrodectismo verificatisi negli anni dal 1938 al 1958 in alcune province d'Italia. Nota I. Provincia di Viterbo. - *Rivista di Parassitologia*, 21: 1–18.
- BETTINI, S. 1960b: Indagine sui casi di latrodectismo verificatisi negli anni dal 1938 al 1948 in alcune province d'Italia. Nota III. Provincia di Roma. - *Rivista di Parassitologia*, 21: 307–317.
- BETTINI, S. 1961: Indagini sui casi di Latrodectismo verificatisi negli anni dal 1938 al 1958 in alcune province d'Italia. Nota IV. Provincia di Latina. - *Rivista di Parassitologia*, 22: 137–147.
- BETTINI, S. 1963a: Considerazioni su di un fenomeno epidemico di latrodectismo in Italia. - *Rivista di Parassitologia*, 24 (2): 105–118.
- BETTINI, S. 1963b: Indagine sui casi di Latrodectismo verificatisi negli anni dal 1938 al 1958 in alcune province d'Italia. V. Nota riassuntiva. - *Rivista di Parassitologia*, 24: 31.
- BETTINI, S. & FINIZIO, E. 1960: Indagine sui casi di latrodectismo verificatisi negli anni dal 1938 al 1958 in alcune Province d'Italia. Nota II. Provincia di Grosseto. - *Rendiconti dell'Istituto Superiore di Sanità*, 23 (12): 1276–1287.
- BRIGNOLI, P.M. 1967: Notizie sui Theridiidae del Lazio (Araneae). - *Fragmenta entomologica*, 4 (10): 177–196.
- BRIGNOLI, P.M. 1968: Su alcuni Araneidae e Theridiidae di Sicilia (Araneae). - *Atti dell'Accademia Gioenia di Scienze Naturali in Catania*, serie 6, 20: 85–104.
- BRIGNOLI, P.M. 1975: Ragni d'Italia XXII. Considerazioni biogeografiche sui Ragni dell'Arcipelago Toscano (Araneae). - *Lavori della Società italiana di Biogeografia* (n.s.), 5: 397–412.
<https://doi.org/10.21426/B65110058>
- CANESTRINI G., 1875: Catalogo degli Araneidi del Trentino: in *Intorno alla fauna del Trentino*. - *Atti della Società Veneto-Trentina di Scienze Naturali*, 3: 27–35.
- CANESTRINI, G. & PAVESI, P. 1868: Araneidi italiani. - *Atti della Società Italiana di Scienze Naturali*, 11: 738–872.
- CANESTRINI, G. & PAVESI, P. 1870: Catalogo sistematico degli Araneidi Italiani. - *Archivio per la Zoologia, Anatomia e Fisiologia*, 2 (2): 1–44.
- CANTONI, E. 1881: Aracnidi delle Madonie. - *Bullettino della Società Entomologica Italiana*, 13: 278–289.
- CECCONI, G. 1898: Contributo alla fauna Vallombrosana. - *Bullettino della Società Entomologica Italiana*, 29: 145–224.
- CECCONI, G. 1910: Contributo alla fauna dell'isole di Pianosa nell'Adriatico. - *Bollettino dei Musei di zoologia e anatomia comparata della R. Università di Torino*, 25 (627): 1–9.
- CIANFERONI, F., MAZZA, G. & ZINETTI, F. 2010: Ragni. - In: PETRI, L. (ed.) *Biodiversità in Provincia di Prato*. Volume 6 - Insetti e Ragni. Effigi Edizioni, Arcidosso, Grosseto. pp. 213–245.
- COSTA, A. 1841: Sur le travaux entomologiques de l'Académie de Naples. - *Annales de la Société Entomologique de France*, 10: XXXV–XXXVI.
- COSTA A., 1882: Notizie ed osservazioni sulla geofauna sarda. Memoria Prima. - *Atti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli* 9: 1–42.

- COSTA A., 1884: Notizie ed osservazioni sulla geofauna sarda. Memoria Terza. - Atti della Reale Accademia delle Scienze Fisiche e Matematiche di Napoli, 1 serie, 2: 1–64.
- DE DALMAS, R. 1922: Catalogue des araignées récoltées par le Marquis G. Doria dans l'île Giglio (Archipel toscan). - Annali del Museo civico di Storia naturale di Genova, 50: 79–96.
- DENTICI, A. 2022: Araneofauna (Arachnida Araneae) of Mount Pellegrino (Sicily, Italy). Fourth contribution to knowledge of the Sicilian spider fauna. - Biodiversity Journal, 13 (3): 641–650.
- DENTICI, A. & AMATA, C. 2024: New data on the Arachnofauna (Arachnidae Araneae Opiliones) of Enna and surrounding areas (Sicily, Italy) with some first reports for Sicily. - Biodiversity Journal, 15 (2): 363–375.
<https://doi.org/10.31396/Biodiv.Jour.2024.15.2.363.375>
- DENTICI, A. & GALASSO, P. 2021: Checklist of spiders and opiliones (Arachnida Araneae, Opiliones) of Sicilian southest swamp lakes “Pantano Cuba”, “Pantano Longarini” and “Pantano Bruno” (Italy). Fifth contribution to knowledge of Sicilian spider fauna. - Biodiversity Journal, 12 (3): 695–703.
<https://doi.org/10.31396/Biodiv.Jour.2021.12.3.695.703>
- DENTICI, A., SURDO, S., VIVIANO, R. & SPARACIO, I. 2024: Araneofauna (Arachnida Araneae) from Isola delle Femmine Nature Reserve (north-western Sicily, Italy). - Biodiversity Journal 15: 377–382.
<https://doi.org/10.31396/Biodiv.Jour.2024.15.2.377.382>
- DI CAPORACCO, L. 1928: Aracnidi della Capraja. - Bollettino della Società Entomologica Italiana, 60: 124–127.
- DI CAPORACCO, L. 1936: Saggio sulla fauna aracnologica del Casentino, Val d'Arno Superiore e Alta Val Tiberina. - Festschrift zum 60. Geburtstag von Professor Dr. Embrik Strand, Riga, 1: 326–369.
- DI CAPORACCO, L. 1950: Aracnidi dell'Isola d'Elba e della Capraia. - Monitore Zoologico Italiano, 58: 8–15.
- DI CAPORACCO, L. 1951: Aracnidi pugliesi raccolti dai Signori Conci, Giordani-Soika, Gridelli, Ruffo e dell'autore. - Memorie di Biogeografia Adriatica, 2: 63–94.
- DI PAOLA, G., CIRRONIS, M., SCARAVAGGI, G., CASTORANI, L., PETROLINI, V.M. & LOCATELLI, C.A. 2020: Latroductism in Italy: first report of successful treatment of *L. tredecimguttatus* envenomation using *L. mactans* antivenom from North America. - Toxicon, 179: 107–110.
<https://doi.org/10.1016/j.toxicon.2020.03.002>
- FAILLA TEDALDI, L. 1887: Escursione entomologica all'isola di Lampedusa. - Il Naturalista Siciliano, 6: 157–162.
- FUSTO, G., BENNARDO, L., DEL DUCA, E., MAZZUCA, D., TAMBURI, F., PATRUNO, C. & NISTICÒ, S.P. 2020: Spider bites of medical significance in the Mediterranean area: misdiagnosis, clinical features and management. - Journal of Venomous Animals and Toxins including Tropical Diseases, 26: e20190100 [11 pp.]
<https://doi.org/10.1590/1678-9199-JVATITD-2019-0100>
- GARNERI, G.A. 1902: Contribuzione alla fauna sarda. Aracnidi. - Bollettino della società zoologica italiana, 3 serie, 2: 57–103.
- GIOVANNELLI, D. 2002: Manuale pratico per conoscere i ragni che vivono negli ambienti del Parco del Taro. - Collana naturalistica Parchi e Riserve dell'Emilia-Romagna, 4: 1–47.
- HANSEN, H. 1991: Ricerche faunistiche del Museo civico di Storia Naturale di Venezia nell'Isola di Pantelleria. XI - Arachnida: Scorpiones, Pseudoscorpiones, Araneae. - Bollettino del Museo Civico di Storia Naturale di Venezia, 40 (1989): 7–19.
- IJLAND, S. & VAN HELSDINGEN, P.J. 2014: On some spiders (Arachnida, Araneae) from the surroundings of Castellabate, Italy. - Nieuwsbrief SPINED, 34: 16–33.
- JACKSON, A.R. 1926: A list of spiders found by Mr. H. Domishsthorpe at Bordighera in northern Italy. - Entomologist's Record, 38: 26–28.
- KRITSCHER, E. 1960: Ein Beitrag zur Kenntnis der Spinnentiere Calabriens. - Memorie del Museo Civico di Storia Naturale di Verona, 8: 101–110.
- MAGRETTI, P. 1880: Una seconda escursione zoologica all'isola di Sardegna. - Atti della Società italiana di Scienze Naturali, 23: 18–41.
- NENTWIG, W., BLICK, T., BOSMANS, R., HÄNGGI, A., KROPF, C. & STÄUBLI, A. 2024: Spiders of Europe. Version november.2024. - Available from: <https://www.araneae.nmbe.ch> [accessed on 22 November 2024].
<https://doi.org/10.24436/1>
- NICOLOSI, G., PANTINI, P., DEVINCENZO, P., GUARIENTO, L.A., ITALIANO, V., ZANCA, L., SARÀ, M. & ISAIA, M. 2024: New data on spiders (Arachnida, Araneae) from the islands of the Strait of Sicily (Southern Italy) with taxonomic notes on *Poecilochroa loricata* Kritscher, 1996 (Araneae, Gnaphosidae) and eight new records for Europe. - The European Zoological Journal, 91 (2): 1009–1034.

- NOFLATSCHER, M.T. 1991: Beiträge zur Spinnenfauna Südtirols - III: Epigäische Spinnen an Xerotherm-
Standorten am Mitterberg, bei Neustift und Sterzing (Arachnida: Aranei). - Berichte des Naturwissenschaftlich-
Medizinischen Vereins in Innsbruck, 78: 79–92.
- PALAU, C. 1878: Catalogo degli Araneidi dei dintorni di Fauglia. - Tipografia Vigo, Livorno. 8 pp.
- PAMPIGLIONE, S. 1958: Il latroectismo nella zona di Cerveteri (Roma). - Nuovi Annali d'Igiene e
Microbiologia, 9: 1–11.
- PANTINI, P. & ISAIA, M. 2019: Araneae.it: the online Catalog of Italian spiders with addenda on other Arachnid
Orders occurring in Italy (Arachnida: Araneae, Opiliones, Palpigradi, Pseudoscorpionida, Scorpiones,
Solifugae). - Fragmenta Entomologica, 51 (2): 127–152. Available from: www.araneae.it [accessed on 20
November 2024].
<https://doi.org/10.4081/fe.2019.374>
- PANTINI, P. & SASSU, A. 2009: I ragni dell'Isola dell'Asinara (Sardegna NW) (Arachnida, Araneae). - Annali
del Museo Civico di Storia Naturale Giacomo Doria, 100: 619–647.
- PANTINI, P., BONELLI, D. & BONACCI, T. 2020: I ragni epigei (Arachnida, Araneae) di un ambiente litoraneo
della Calabria. - Rivista del Museo civico di Scienze Naturali "E. Caffi", 32: 25–32.
- PANTINI, P., SASSU, A. & SERRA, G. 2013: Catalogue of the spiders (Arachnida Araneae) of Sardinia. -
Biodiversity Journal, 4 (1): 3–104.
- PAVESI, P. 1876: Le prime crociere del Violante, comandato dal Capitano-Armatore Enrico d'Albertis. Risultati
aracnologici del Prof. P. Pavesi dell'Università di Pavia. - Annali del Museo Civico di Storia Naturale
Giacomo Doria, 8: 407–451.
- PAVESI, P. 1878: Nuovi risultati aracnologici delle crociere del Violante. Aggiunto un catalogo sistematico degli
aracnidi di Grecia. - Annali del Museo civico di Storia naturale di Genova, 11: 337–396.
- PAVESI, P. 1879: Saggio di una fauna aracnologica del Varesotto. - Atti della Società italiana di Scienze Naturali,
21: 789–817.
- PEPE, R. 2005: Basi zoologiche-naturalistiche del tarantismo nel Salento. - Thalassia salentina 27 (2004):
47–62.
- PEPE, R. & INGUSCIO, S. 1999: Contributo alla conoscenza dei ragni di grotta del Salento. - Itinerari
Speleologici, 2 (8): 46–51.
- PESARINI, C. 1991: Primo contributo per una fauna araneologica del ferrarese (Arachnida: Araneae). - Quaderni
della stazione di ecologia del civico museo di storia naturale di Ferrara, 4: 5–34.
- PESARINI, C. 1995: Araneae. - In: MASSA, B. (ed.) Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di
Sicilia, Mar Mediterraneo). - Il Naturalista Siciliano, 19 (suppl.): 51–62.
- PICCHI, M.S. 2020: Spiders (Araneae) of olive groves and adjacent semi-natural habitats from central Italy. -
Arachnologische Mitteilungen, 60: 1–11.
<https://doi.org/10.30963/aranmit6001>
- PONTUALE, G., MAIORI, G. & MAROLI, M. 1998: New finding about the altitudinal range of *Latrodectus tredecim-*
guttatus Rossi, 1790 (Araneae, Theridiidae). - Parassitologia, 40 (suppl. 1): 140.
- RIZZARDI, U. 1898: Aracnidi di Vallombrosa (Pr. di Firenze), raccolti dal Dr. G. Cecconi. - Pavia, 18 pp.
- ROEWER, C.F. 1960: Araneina. - In: ZAVATTARI E. (ed.) Biogeografia delle isole Pelagie. - Rendiconti
dell'Accademia Nazionale dei XL, 4 (11): 412–418.
- ROSSI, P. 1790: Fauna etrusca: sistens insecta quae in Provinciis Florentina et Pisana praesertim collegit. Tomus
secundus. - Thomae Masi & Sociorum, Livorno. 348 pp. + 10 tavv. [Araneae: pp. 126–140].
<https://doi.org/10.5962/bhl.title.128484>
- SORDELLI, F. 1868: Sui Ragni Lombardi. - Atti della Società italiana di Scienze Naturali, 11: 459–476.
- STRAND, E. 1909: Erstes Verzeichnis der bei Rom von Adolfo Rossi gesammelten Spinnen. - Archiv Für
Naturgeschichte, 75 (1): 129–138.
- STEINBERGER, K. H. 2008: Spinnen und Weberknechte im Naturpark Schlern - Rosengarten (Arachnida:
Araneae, Opiliones) (Italien, Südtirol). - Gredleriana, 8: 255–286.
- THALER, K. & ZAPPAROLI, M. 1993: Epigeic spiders in a olive-grove in central Italy (Araneae). - Redia, 76 (2):
307–316.
- TRENTINI, M., MARINI, M. & FALICA, M. 1993: Ragni italiani di interesse medico: alcune osservazioni su
Latrodectus tredecimguttatus Rossi 1790 e *Chiracanthium punctorium* (Villers, 1789) (Arachnida,
Araneae). - Biologia Oggi, 7: 125–132.
- TROTTA, A. 2009: Ricerche zoologiche della nave oceanografica "Minerva" (C. N. R.) sulle isole circumsarde.
XXXII. Araneae. - Annali del Museo Civico di Storia Naturale Giacomo Doria, 100: 481–500.

- TROTTA, A. 2011: Second contribution to the knowledge of the spiders of Sardinia (Arachnida, Araneae). In: Nardi G., Whitmore D., Bardiani M., Birtele D., Mason F., Spada I. & Cerretti P. (eds.) Biodiversity of Marganai and Montimannu (Sardinia). Research in the framework of the ICP Forest network. - *Conservazione Habitat Invertebrati*, 5: 137–161.
- WIECZOREK, J., GUO, Q. & HUMANS, R.J. 2004: The point-radius method for georeferencing locality descriptions and calculating associated uncertainty. - *International Journal of Geographical Information Science*, 18 (8): 745–767.
<https://doi.org/10.1080/13658810412331280211>
- World Spider Catalog—WSC 2024. World spider catalog, version 21.5. - Natural History Museum Bern. Available from: <http://wsc.nmbe.ch> [Accessed on 20 November 2024]. doi: 10.24436/2
- ZANGHERI, P. 1966: Repertorio sistematico e topografico della flora e fauna vivente e fossile della Romagna. Tomo II. - Museo Civico di Storia Naturale di Verona. Memorie Fuori Serie n. 1: 538–589.