

SPIDER RECORDS FROM SERRA DA ESTRELA NATURAL PARK (PORTUGAL): II. FAMILIES SPARASSIDAE AND THOMISIDAE (ARACHNIDA, ARANEAE)

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Abstract: Records are presented of three species of Sparassidae and 12 species of Thomisidae new to Serra da Estrela Natural Park (northern central Portugal). *Xysticus kempelini* Thorell, 1872 is recorded from Portugal for the third time.

Key words: Araneae, Sparassidae, Thomisidae, faunistics, new records, Portugal, Serra da Estrela Natural Park.

Registros de arañas del Parque Natural de la Sierra de la Estrella (Portugal): familias Sparassidae y Thomisidae (Arachnida, Araneae)

Resumen: Se presentan citas de tres especies de Sparassidae y doce de Thomisidae nuevas para el Parque Natural de la Sierra de la Estrella (centro-norte de Portugal). *Xysticus kempelini* se registra por tercera vez de Portugal.

Palabras clave: Araneae, Sparassidae, Thomisidae, faunística, nuevos registros, Portugal, Parque Natural de la Sierra de la Estrella.

Introduction

Serra da Estrela Natural Park (PNSE) is the largest protected area in Portugal, and is located in northern central part of the country. The Park presents a great variety of habitats that are occupied by a very diverse flora and fauna (Jansen, 2002; Grosso-Silva, 2005).

The spider fauna recorded from the Park comprises 72 species, many of them with a poorly known distribution (Sousa, 2006).

With this contribution we aim to continue improving the knowledge of the Park's and the country's araneofauna. This work derives from a study of the invertebrate fauna of PNSE whose main goals were the inventory, cartography and ecological characterization of the species that occur in the protected area (for further details see Grosso-Silva, 2005).

The data presented here was collected between April 2003 and August 2005. Specimens were captured directly by means of active search, or indirectly using a beating net or a tray and a beating stick.

Although no species was identified from the Park without voucher specimens being identified under the stereomicroscope (Nikon SMZ-10), for those species clearly identifiable in the field, most of the animals, once captured and identified, were subsequently released.

The identification of the material to genus level was made with the criteria adopted in Barrientos (2004, unpublished). Identification to species level was made with Nentwig *et al.* (2005), Roberts (1995), Simon (1932), and Urones (2004, 2005). Nomenclature follows Platnick (2007).

The location of the studied area is shown in Fig. 1 whereas the 1 km UTM squares from which specimens are recorded here are represented in Fig. 2.

List format

The records are presented in a list with the species arranged alphabetically within each family. The specimens are deposited in CIBIO's collection (Centro de Investigação em Biodiversidade e Recursos Genéticos, Universidade do Porto, Portugal). Specimens not collected by the author are indicated with "JGS *leg.*" (J. M. Grosso-Silva *leg.*) or "JGS and SF *leg.*" (J. M. Grosso-Silva and Sónia Ferreira *leg.*).

The "MATERIAL EXAMINED" section includes the collecting data for each record: site name, 1 km UTM square, altitude (in meters above sea level), date and specimen(s) information. The data is arranged by municipality. Specimen information includes number of specimens and state of development: ♂ - adult male, ♀ - adult female, ♂ juv. - immature male, ♀ juv. - immature female and juv. - juvenile. All specimens identified in the field and not collected are signalled with "obs."

The "COMMENTS" section provides information on the status of the species within the PNSE, its known distribution in Portugal and in the world and some additional information.

Species list

Sparassidae Bertkau, 1872

Eusparassus dufouri Simon, 1932

MATERIAL EXAMINED: **Covilhã:** Road to Unhais, in the water canal (29TPE1960, 1319 m), 13-07-2005, 1 ♂; **Manteigas:** Poço do Inferno (29TPE2570, 1080 m), 30-07-2003, 1 ♀ and 1 juv.

COMMENTS: First record for the Park. Mediterranean species (Platnick, 2007) whose distribution is very poorly known in Portugal, with records from Algodôr, Castelo Branco, Celorico da Beira, Coimbra, Douro, Mértola, Serra da Arrábida, Solteiras and S. Martinho de Anta (Becker, 1881; Bacelar, 1928; Cardoso, 2004, 2007; Urones, 2005). Bacelar (1933) and Bristowe (1935) also recorded this species for the country without further remarks.

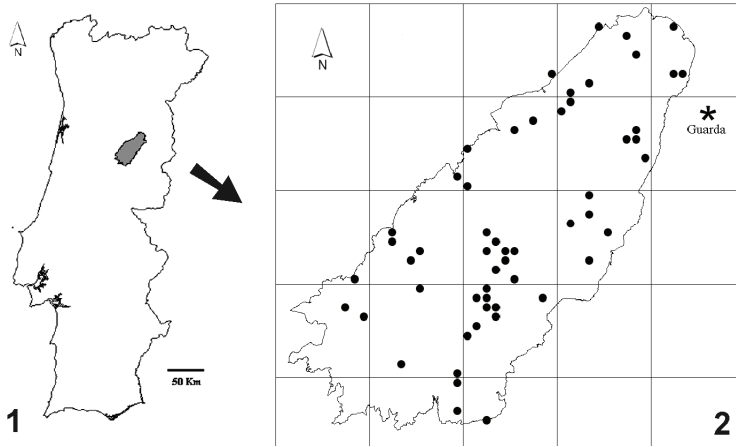


Fig. 1. Location of the PNSE in continental Portugal. **Fig. 2.** Map of the PNSE, with the 10 km UTM grid and the city of Guarda represented. Black circles symbolize the species records presented here within a 1 km scale.

Micrommata ligurina (C. L. Koch, 1845)

MATERIAL EXAMINED: **Gouveia:** Costeiras bridge (29TPE2080, 925 m), 11-05-2004, 1 ♂. **Guarda:** Quinta das Conheiras (29TPE3575, 525 m), 22-03-2004, 1 ♂. **Manteigas:** Albarcães (River Zêzere banks) (29TPE2268, 1079 m), 21-04-2003, 1 ♂; Near Pracota (29TPE2273, 1058 m), 03-05-2005, 1 ♂.

COMMENTS: First record for the Park. Species with a distribution that ranges from the Mediterranean to Central Asia (Platnick, 2007), distributed throughout continental Portugal, with records from Algarve, Algodôr, Aveiro, Coimbra, Falagueira, Fôia, Guarda, Herdade do Esporão, Lousa, Mértola, Monte Gordo, Ofir, Paúl do Boquilobo, ribeira de Limas (Serpa), S. Martinho de Anta, Terras do Risco, and Valongo (Simon, 1881, 1898; Vieira, 1893a; Bacelar, 1927, 1928; Nobre & Meierrose, 2000; Cardoso, 2004, 2007; Urones, 2004).

Olios argelasius (Walckenaer, 1805)

MATERIAL EXAMINED: **Celorico da Beira:** Muxagata (29TPE3796, 591 m), 13-06-2005, 1 ♀ (carrying an egg sac).

COMMENTS: First record for the Park. Mediterranean species (Platnick, 2007) distributed throughout continental Portugal, with records from Bruçó, Coimbra, Herdade do Esporão, Mata do Vidal, Mértola, Monserrate, Paul do Boquilobo, Picote, Serro Ventoso and S. Domingos (Vieira, 1893a, 1893b; Bacelar, 1928; Schenkel, 1938; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Thomisidae Sundevall, 1833

Heriaeus melloteei Simon, 1886

MATERIAL EXAMINED: **Manteigas:** Near Fonte da Jonja (29TPE2064, 1451 m), 12-07-2004, 1 ♀; Near Pedrão (29TPE2275, 1357 m), 13-07-2004, 1 ♂. **Seia:** Portela do Arão (29TPE0966, 989 m), 14-07-2004, 1 ♀.

COMMENTS: First record for the Park, where it was collected beating thistles and low, dense, shrubs. Palaearctic species (Platnick, 2007) previously recorded from Cabo da Roca Felgueiras, Guarda, Serra do Reboredo and S. Martinho de Anta (Seoane, 1877; Oliveira, 1900; Bacelar, 1928, 1934; Schenkel, 1938; Machado, 1941).

Misumena vatia (Clerck, 1758)

MATERIAL EXAMINED: **Celorico da Beira:** Reservoir near Salgueirais (29TPE3391, 942 m), 13-06-2005, 1 ♀; **Covilhã:** Near Cortes de Baixo (29TPE1956, 557 m), 20-05-2005, 1 ♂.

COMMENTS: First record for the Park. Holarctic species (Platnick, 2007) distributed throughout continental Portugal, with records from Barro, Cete, Coimbra, Damaia, Figueira da Foz, Fonte de Aldeia, Freixiosa, Herdade do Esporão, Joane, Lisboa, Mata do Solitário, Mértola, Oliveira de Azeméis, S. Martinho de Anta and Valongo (Vieira, 1893a; Simon, 1898; Nobre, 1899; Kulczyński, 1911; Franganillo, 1919; Bacelar, 1927, 1928; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Runcinia grammica (C. L. Koch, 1837)

MATERIAL EXAMINED: **Celorico da Beira:** Reservoir near Salgueirais (29TPE3391, 942 m), 29-07-2004, ♀ juv.; Muxagata (29TPE3796, 591 m), 13-06-2005, 1 ♂ obs. **Guarda:** Quinta das Conheiras (29TPE3575, 525 m), 22-03-2004, 1 juv.; Quinta do Fragusto (29TPE3377, 983 m), 25-05-2004, 1 obs. **Manteigas:** Carvalheira (29TPE2374, 1100 m), 01-08-2003, 1 ♂; River Zêzere banks (below Costa Limpo) (29TPE2267, 1100 m), 13-08-2003, 1 ♀; Road to Mata do Fragusto (29TPE3176, 807 m), 25-05-2004, 1 ♂ obs.; Videeiro (29TPE2367, 1393 m), 26-07-2004, 1 ♂ obs.; Covões (29TPE2168, 1331 m), 30-07-2004, 1 ♂ juv. obs.; S. Gabriel (Manteigas) (29TPE2573, 652 m), 04-07-2005, obs.; **Seia:** Near Sabugueiro (29TPE1573, 1080 m), 22-06-2004, 1 ♂ obs.; Senhora do Espinheiro (29TPE1274, 1019, 14-07-2004, 1 ♂; Above Aldeia da Serra (29TPE1275, 885 m), 28-07-2004, 1 ♀ and 1 ♂ obs.; Southwest of Sabugueiro (29TPE1472, 1100 m), 14-06-2005, 1 ♂ obs.

COMMENTS: First record for the Park, where it is an abundant species, occurring in a wide range of habitats. Palaearctic species (Platnick, 2007) distributed throughout continental Portugal, with records from Alcácer do Sal, Cete, Coimbra, Herdade do Esporão, Damaia, Foz do Douro, Mértola, Paúl do Boquilobo, Picote, Sines, Senhora da Hora, S. Mamede de Recesinhos, S. Martinho de Anta, S. Pedro da Cova, Tô and Valongo (Simon, 1898; Nobre, 1899; Franganillo, 1917; Bacelar, 1927, 1928; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Synema globosum (Fabricius, 1775)

MATERIAL EXAMINED: **Celorico da Beira:** Oak woodland near Linhares (29TPE3189, 701 m), 24-03-2004, 1 juv.; Near Quinta do Lagueirão (29TPE3894, 581 m), 24-03-2004, 1 juv. obs.; Reservoir near Salgueirais (29TPE3391, 942 m), 29-07-2004, 1 ♀ obs.; Quinta dos Corgãos (29TPE4297, 447 m), 19-05-2005, obs.; Linhares stream banks (29TPE2992, 495 m), 13-06-2005, obs.; Vilhagre bridge (29TPE3497, 481 m), 13-06-2005, 1 ♂; Reservoir near Salgueirais (29TPE3391, 942 m), 13-06-2005, obs.; **Covilhã:** Near Muro Novo (29TPE1455, 682 m), 12-05-2004, 1 ♂; Reservoir in Beijames stream (29TPE2868, 599 m), 27-07-2004, 2 juv.; Quinta do Vale de Águas (29TPE2255, 650 m), 15-08-2005, 1 juv. obs.; **Gouveia:** Near Fonte do Lagarto (29TPE1981, 823 m), 13-05-2004, 1 obs.; Near Quinta do Pinheiro (29TPE2586, 646 m), 13-05-2004, 1 ♂; Quinta da Fazenda (29TPE2787, 605 m), 13-05-2004, obs.; Burrachota (C.E.R.V.A.S.) (29TPE2084, 708 m), 28-07-2004, 1 juv. obs.; Quinta da Fazenda (29TPE2787, 605 m), 29-07-2004, 1 ♀ obs.; **Guarda:** River Mondego banks (near the bridge between Videmonte and Trinta) (29TPE3785, 737 m), 30-07-2003, 1 ♀; Quinta do Fragusto (29TPE3377, 983 m), 14-08-2003, 1 juv.; 25-05-2004, 1 obs.; Near Aldeia Viçosa (29TPE4292, 497 m), 26-05-2004, 1 obs.; Near Moinho do Bufo (29TPE3885, 709 m), 27-05-2004, 1 ♂ obs.; Near Barroca do Nascente Grande (29TPE3379, 1002 m), 04-05-2005, 1 juv. obs.;

Ramalhosa (29TPE4392, 482 m), 19-05-2005, obs.; Near Meios (29TPE3983, 933 m), 17-08-2005, 1 juv. obs.; Rio Mondego banks, near Quinta da Taberna (29TPE3482, 835 m), 17-08-2005, 1 ♀ and 1 juv. obs.; **Manteigas**: Albarcãs (River Zêzere banks) (29TPE2268, 1079 m), 11-08-2003, 1 ♀; Road to Mata do Fragusto (29TPE3176, 807 m), 25-05-2004, 1 ♂ and 1 ♀ obs.; Fonte Santa (29TPE2371, 849 m), 26-05-2004, 1 obs.; Moitas (29TPE2472, 1014 m), 21-06-2004, 1 obs.; Malhada do Carvalho (29TPE2366, 1490 m), 26-07-2004, obs.; Above Covão Caldeira (29TPE2269, 1270 m), 30-07-2004, 1 ♀; Covões (29TPE2168, 1331 m), 30-07-2004, 1 juv. obs.; Road to Mata do Fragusto (29TPE3176, 807 m), 02-05-2005, 1 juv. obs.; **Seia**: Portela do Arão (29TPE0966, 989 m), 14-07-2004, 1 juv. obs.; Above Aldeia da Serra (29TPE1275, 885 m), 28-07-2004, 1 juv. obs.; Sazes da Beira (29TPE0767, 610 m), 27-10-2004, 1 juv.; Alvoco da Serra (29TPE1361, 759 m), 28-10-2004, 1 juv. obs.; Vila Cova à Coelheira hydroelectric power station (29TPE0870, 329 m), 05-07-2005, obs.

COMMENTS: First record for the Park, where it is one of the most recognisable and abundant species, occurring in a wide range of habitats. Palaearctic species (Platnick, 2007) distributed throughout continental Portugal, with known records from Alcácer do Sal, Algarve, Algozinho, Barca de Alva, Bemposta, Cete, Coimbra, Constantim, Douro, Felgueiras, Fonte de Aldeia, Foz do Douro, Freixiosa, Guarda, Herdade do Esporão, Joane, Lamoso, Lisboa, Marinha Grande, Mazouco, Mértola, Moledo do Minho, Monte Gordo, Paúl do Boquilobo, Picote, Sintra, S. Mamede de Recesinhos, S. Martinho de Anta, S. Pedro da Cova, Terras do Risco, Tô, Valença and Valongo (Becker, 1881; Vieira, 1893a; Simon, 1881, 1898; Nobre, 1899; Franganillo, 1919; Bacelar, 1927, 1928; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Thomisus onustus Walckenaer, 1805

MATERIAL EXAMINED: **Celorico da Beira**: Near Assanhas (29TPE3190, 750 m), 30-07-2003, 1 juv.; Near Quinta do Lagueirão (29TPE3894, 581 m), 24-03-2004, ♂ juv.; Muxagata (29TPE3796, 591 m), 13-06-2005, 1 ♂; Linhares (29TPE3088, 795 m), 13-06-2005, 1 ♂ obs.; **Covilhã**: Reservoir in Beijames stream (29TPE2868, 599 m), 27-07-2004, obs.; Near Cortes de Baixo (29TPE1956, 557 m), 20-05-2005, 1 ♂ obs.; Quinta do Vale de Águas (29TPE2255, 650 m), 15-08-2005, 1 juv. obs.; **Gouveia**: Near Fonte do Lagarto (29TPE1981, 823 m), 13-05-2004, ♀ juv.; Quinta da Fazenda (29TPE2787, 605 m), 29-07-2004, 1 juv. obs.; Guarda: Quinta do Fragusto (29TPE3377, 983 m), 14-08-2003, 1 ♀; Near the reservoir in River Mondego (west of Fojo) (29TPE3886, 736 m), 27-05-2004, 1 ♀; Near Meios (29TPE3983, 933 m), 17-08-2005, 1 juv. obs.; **Manteigas**: Manteigas (village) (29TPE2473, 760 m), 23-08-2001, 1 obs.; Albarcãs (River Zêzere banks) (29TPE2268, 1079 m), 11-08-2003, 1 ♂ and 1 juv.; Vidoeiro (29TPE2367, 1393 m), 26-07-2004, 1 ♂; Road to Mata do Fragusto (29TPE3176, 807 m), 02-05-2005, 1 juv. obs.; River Zêzere banks (near Beijames stream mouth) (29TPE3372, 524 m), 11-07-2005, 1 ♀ (JGS and SF leg.); **Seia**: Southwest of Sabugueiro (29TPE1472, 1100 m), 31-07-2003, 1 juv.; Portela do Arão (29TPE0966, 989 m), 14-07-2004, 1 juv. obs.; Lagoa Comprida north banks (29TPE1569, 1610 m), 27-07-2004, 1 juv. obs.

COMMENTS: First record for the Park, where it is an abundant species, occurring in a variety of habitats. Palaearctic species (Platnick, 2007) distributed throughout continental Portugal, with records from Algarve, Algozinho, Barca de Alva, Benfica, Coimbra, Constantim, Esmoriz, Figueira da Foz, Foz do Douro, Guarda, Herdade do Esporão, Lisboa, Mata Nacional do Urso, Mazouco, Mértola, Moledo do Minho, Monte Gordo, Palão, Paúl do Boquilobo, Porto, Serra do Gerês, S. Martinho de Anta, S. Pedro da Cova, Terras do Risco, Valongo and Vimioso (Simon, 1881, 1898; Nobre, 1899; Vieira, 1893a, 1893b; Franganillo, 1919; Bacelar, 1927, 1928; Cardoso, 2004).

Tmarus piger (Walckenaer, 1802)

MATERIAL EXAMINED: **Covilhã**: Near Muro Novo (29TPE1455, 682 m), 12-05-2004, 1 ♂ (JGS leg.). **Guarda**: Near Moinho do Bufo (29TPE3885, 709 m), 27-05-2004, 1 ♂ and 1 ♀.

COMMENTS: First record for the Park. Palaearctic species (Platnick, 2007) apparently uncommon in the country, recorded from Mata de Leiria, S. Mamede de Recesinhos and S. Pedro da Cova (Simon, 1898; Nobre, 1899; Bacelar, 1928, 1934; Cardoso, 2007).

Xysticus acerbus Thorell, 1872

MATERIAL EXAMINED: **Manteigas**: Fonte Santa (29TPE2371, 849 m), 21-04-2003, 1 ♂.

COMMENTS: First record for the Park. Species with a distribution that ranges from Europe to Central Asia (Platnick, 2007). Its range is very poorly known in Portugal, with only a small number of known localities, Coimbra, Lousa, Monte Gordo, Póvoa de St. Adrião and Paúl do Boquilobo (Vieira, 1893b; Franganillo, 1919; Bacelar, 1927, 1928; Cardoso, 2004, 2007).

Xysticus cristatus (Clerck, 1758)

MATERIAL EXAMINED: **Guarda**: Near Moinho do Bufo (29TPE3885, 709 m), 27-05-2004, 1 ♂.

COMMENTS: First record for the Park. Palaearctic species (Platnick, 2007), with records from Braciais, Coimbra, Figueira da Foz, Herdade do Esporão, Joane, Monte Gordo, Paúl do Boquilobo, Serra do Gerês, Serra do Marão, S. Mamede de Recesinhos, S. Martinho de Anta, S. Pedro da Cova and Vila Chã de Braciosa (Simon, 1898; Nobre, 1899; Bacelar, 1928, 1940; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Xysticus ferrugineus Menge, 1876

MATERIAL EXAMINED: **Gouveia**: Ponte das Costeiras (29TPE2080, 925 m), 11-05-2004, 1 ♂; Near Fonte do Lagarto (29TPE1981, 823 m), 13-05-2004, 1 ♂.

COMMENTS: First record for the Park. Palaearctic species (Platnick, 2007), with known records from Buçaco, Coimbra, Mata de Leiria, Fonte de Aldeia, Lousa, Mazouco, Mértola, Palão, Paúl do Boquilobo, Picote, Quinta do Alambre, Serra de Minde, Serra do Reboredo, Sintra, S. Martinho de Anta, S. Pedro da Cova, Terras do Risco, Tô and Vila Chã de Braciosa (Simon, 1932; Bacelar, 1940; Cardoso, 2004, 2007).

Xysticus kempelini Thorell, 1872

MATERIAL EXAMINED: **Guarda**: Near Moinho do Bufo (29TPE3885, 709 m), 27-05-2004, 2 ♂♂.

COMMENTS: First record for the Park, which is the third for the country. Species with a distribution that ranges from Europe to Central Asia (Platnick, 2007), the two other known localities for the country are Mazouco and Santiago de Riba Ul (Machado, 1949; Cardoso, 2004).

Xysticus kochi Thorell, 1872

MATERIAL EXAMINED: **Guarda**: Near Aldeia Viçosa (29TPE4292, 497 m), 26-05-2004, 1 ♂.

COMMENTS: First record for the Park. Species with a distribution that ranges from Europe to Central Asia (Platnick, 2007), with a poorly known distribution in Portugal. It has been recorded from Guarda, Picote, Vila Chã de Braciosa and Zebras, (Bacelar, 1928; Cardoso, 2004, 2007).

Xysticus nubilis Simon, 1875

MATERIAL EXAMINED: **Manteigas**: Fonte Paulo Luís Martins (29TPE2165, 1318 m), 12-07-2004, 1 ♂.

COMMENTS: First record for the Park. Mediterranean species (Platnick, 2007), it has a central distribution in Portugal with records from Alfarelos, Algodôr, Cabeção, Coimbra, Lisboa, Fontalva Herdade do Esporão, Monte Gordo and Pombal (Simon, 1932; Schenkel, 1938; Bacelar, 1940; Nobre & Meierrose, 2000; Cardoso, 2004, 2007).

Discussion

In the present work 15 species are added to the Park's araneofauna, raising the number of recorded species to 87. No Sparassidae was known from the Park and only one species of Thomisidae, *Ozyptila simplex* (O. P.-Cambridge, 1862) (not collected in this study), had been previously found in the Park, the material being deposited in Barros Machado collection (Cardoso, 2007).

The presence of *X. kempelini* in the Park is very interesting, this being a species with only two previous records for the country. This species was first recorded from the Iberian Peninsula by Machado (1949) with a specimen collected in 1942 in Santiago de Riba Ul (Oliveira de Azeméis). The only subsequent Portuguese record is from Mazouco (Mogadouro) (Cardoso, 2004), making our record the southernmost for the country.

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