

FIRST IRISH RECORD OF *EPISINUS MACULIPES* CAVANNA, 1876 (ARANEAE, THERIDIIDAE)

Myles Nolan

c/o The Natural History Museum, Merrion Street, Dublin 2, Ireland.

e-mail: <mylesnolan@hotmail.com>

Abstract

A specimen of *Episinus maculipes* Cavanna, 1876 was found in a house in an urban location in County Dublin, the first record of the species in Ireland. The species is spreading northwards through Europe from the Mediterranean area.

Key words: Araneae, Theridiidae, *Episinus maculipes*, Ireland, first record.

The first Irish record of *Episinus maculipes* Cavanna, 1876

A female spider was found in the author's flat, 48 Rathmines Road Upper, Rathmines, Dublin 6 (O157314) on a wall close to an open window late in the evening on 30 August 2012. It was identified as *Episinus maculipes* Cavanna, 1876 using Hillyard (1983), Locket *et al.* (1974), Roberts (1993) and Knoflach *et al.* (2009). The species is not listed in Helsdingen (1996) nor in any subsequent publications on Irish spiders. The present record is therefore the first one for the species in Ireland.

The window opens onto a small yard and this into a garden. Examination of ivy *Hedera* on walls and trunks of apple-trees *Malus* and, of some shrubs in the garden on the morning of 1 September 2012 failed to reveal further specimens. A torchlight search that evening and on the evening of 2 September, principally of *Hedera*, also proved negative.

The epigyne of *E. maculipes* is easily distinguished from those of *E. angulatus* (Blackwall, 1836) and *E. truncatus* Latreille, 1809, the two other species from the genus known from Ireland and Britain. Knoflach *et al.* (2009) distinguish the species from similar ones occurring much further south and into Africa. Rather than showing a longitudinal median sternal stripe

(Hillyard, 1983) which has been suggested distinguishes it from the two other British species (Roberts, 1993), the sternum had a relatively large pale spot in the anterior area followed by a nearly conjoined smaller pale spot. Stevens and Smithers (1991) noted that a median band was also present in some specimens of *E. truncatus*. The carapace had a very clear dark median band and thin dark margin, the area in-between being otherwise very pale but for some small dark patches. The other Irish species have a uniformly darkish brown carapace.

The specimen has been presented to the National Museum of Ireland, Natural History.

The distribution of *Episinus maculipes*

Originally probably limited to Mediterranean Europe and North Africa, this expansive species is spreading northwards and eastwards through Europe and into Russia (Knoflach and Thaler, 2000; Knoflach *et al.*, 2009; Platnick, 2012). *Episinus maculipes* has been recorded from the following European countries and islands: Austria, Belgium, Bulgaria, Corsica, Crete, Croatia, France, Germany, Great Britain, Italy, Portugal, Sardinia, Sicily, Slovenia, Spain, Switzerland and the Ukraine (Helsdingen, 2012). It has been recorded for the first time within the last twenty-five years in a significant number of European countries, including Belgium, 2010 (Arnaud, 2010); Bulgaria, 1995-1998 (Lazarov *et al.*, 2001); Crete, 1999 (Knoflach and Thaler, 2000); Germany, 1991 (Kilchling, 1994); Hungary, 2009 (Pflieger *et al.*, 2012); Slovenia, 1995 (Kuntner, 1997); Switzerland, 1987 (Centre Suisse de Cartographie de la Faune, 2012) and the Ukraine, 2004 (Kovblyuk *et al.*, 2008). The species was however recorded in Austria in 1905 (Kulczynski, 1905). Its presence in Britain was first noted in 1934 (Hull, 1934) and it was subsequently considered very rare there. However, collecting over the past 20 years has shown it to occur along much of the southern coast (Stevens and Smithers, 1991; Smithers, 1998; Harvey *et al.*, 2002). In France, it is known from two areas: the Mediterranean area from Var inland to the Ardeche and, Atlantic zone France in eastern Brittany and southern départements of the Pays de la Loire; it is suggested that the spider probably occurs throughout the country (Peru, 2006).

It is uncertain if the first records from countries with Mediterranean climates are indicative

of recent colonisation or of previous under-sampling; the species being uncommon. The few records of the spider north of the Mediterranean area are reflected in its absence from a review of central European spiders and their habitats (Hänggi *et al.*, 1995). The Irish occurrence is surely part of the pattern of northern expansion and the Dublin record at latitude 53°21' N would seem to be the northernmost European record to-date. The author is certain that he cannot have introduced the specimen himself.

Preferred habitat and microsite

Woodland; low branches of trees and tall shrubs, occurring in a wide variety of woodland types varying from country to country (and with climate). Overgrown vertical surfaces (natural and artificial and perhaps preferring insolated areas) – ivy on walls, tree-trunks, cliff/quarry faces. Riparian, lacustrine, littoral situations – quite a few records are from coastal situations (possibly indicating recent colonisation?). If locally resident on trees, the species seems also to occur on local field-layer and at ground level.

In a study of a forest in Slovenia, most specimens were caught by hand-collecting above knee-level by night and by beating lower branches of trees onto a collecting sheet. Specimens were also swept with a net (relatively even numbers night and day) and fewer again were collected by hand near ground level (Kuntner and Kostanjsek, 2000). Stevens and Smithers (1991) collected it from canopy and field-layer respectively in two disjunct British localities.

In Britain, often occurring on sycamore *Acer pseudoplatanus*, holm oak *Quercus ilex*, amongst tall sturdy shrubs and bushes and in ivy on tree trunks (Hillyard, 1983). Smithers (1998) suggests that coastal woodlands are the best targeted habitat in the south of England. Holm oak in France (Peru, 2006); Spruce *Picea* and Douglas fir *Pseudotsuga menziesii* in Germany (Kilchling, 1994); *Pinus* in Italy (Knoflach and Thaler, 2000); deciduous forest in Hungary (Pfliegler *et al.*, 2012), *Prunus-Pinus-Carpinus* forest in Bulgaria with well-developed understorey (Lazarov *et al.*, 2001), Beech forest *Luzulo-Fagetum* and, hornbeam *Carpinus* forest with Autumn moor-grass *Sesleria autumnalis* in Slovenia (where it was abundant) (Kuntner, 1997; Kuntner and Kostanjsek, 2000 respectively), oak *Quercus*, tree heath *Erica*

arborea and scrub in Italy (Knoflach *et al.*, 2009), scrub in Greece and Crete (Knoflach *et al.*, 2009). On field-layer; long grasses in Britain (Smithers, 1998), *Juniperus* in France (Peru, 2006) and the Ukraine (Kovblyuk *et al.*, 2008), Mediterranean scrub vegetation (Kuntner and Kostanjsek, 2000; Knoflach *et al.*, 2009), garrigue in France (Peru, 2006). It is far less frequent at ground level but has been found amongst mosses, under stones (Lazarov *et al.*, 2001 (in forest); Pflieger *et al.*, 2012) or under discarded artefacts.

Observations of the species in anthropogenic situations are made by Stevens and Smithers (1991) who found it in and around Plymouth town, England; from uncut grassland in a city park and underneath rubbish on an old railway line. Smithers (1998) also found an immature specimen under rubbish. The former authors found specimens on vegetation in two areas close to Plymouth. Braud (2007) observed the species in a dwelling in north-western France and Arnaud (2010) collected it from a wooden sign post in Belgium. Occurrences in anthropogenic habitats suggest that the species can disperse by human agency but it is not a truly synanthropic species. In northern climates, *Episinus maculipes* may prefer the artificially elevated temperatures occurring in built-up environments. Braud (2007) and Hillyard (1983) both note the southern aspect of some of the locations in which the spider was captured.

Given the broad habitat spectrum that the species can occupy, and the relative abundance of such, the spider's rarity must be related to factors other than availability of appropriate habitat. In Britain, Hillyard (1983) found *E. maculipes* not to be particularly abundant (two specimens were collected per tree) and Smithers (1998) echoes this, noting that only one or two specimens were taken during each collecting expedition and that a large sampling effort is required to locate extra specimens.

Habits and seasonality

The spider can be most easily observed at dusk/night when it emerges to build a web which consists of two bifurcating strands in the form of an inverted Y (Hillyard, 1983), from which the spider hangs upside down. The egg-sac is white, pear-shaped and hangs from a short stalk (Jones, 1989).

Adult females occur usually from June to September, males in the same period but they are generally less abundant than females by end of August and less common still through September (Harvey *et al.*, 2002).

Conservation status

The species has RDB3 (Nationally rare) status in Britain, however this classification may soon change in view of its spread. It is obviously misguided to pretend that the species has conservation status in Ireland simply because it is still absent from a significant area of Europe. It should be considered an immigrant spider, most probably recently arrived, which has a good prospect of building a resident community in Ireland. Populations or specimens could well remain undetected elsewhere in Ireland, especially along the east and south coasts.

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