

Contribution to the knowledge of *Tegenaria domestica* (Clerck, 1757) (Araneae: Agelenidae) in Southern Patagonia

Contribución al conocimiento de *Tegenaria domestica* (Clerck, 1757) (Araneae: Agelenidae) en la Patagonia Austral

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Abstract

The presence of the spider *Tegenaria domestica* in southern Patagonia is revised and analyzed. New records are provided from Santa Cruz and Tierra del Fuego Province Argentina, and its presence is confirmed in Magallanes Region, Chile. The significance of the historical records and the new ones is discussed. Illustrations are provided to correctly identify the species.

Key words:

Arachnida, synanthropic, South America.

Resumen

Se revisa y analiza la presencia de la araña *Tegenaria domestica* en la Patagonia austral. Se entregan nuevos registros para las provincias de Santa Cruz y Tierra del Fuego en Argentina y se confirma su presencia en la región de Magallanes en Chile. Se discute la significancia de los registros históricos y los nuevos aquí entregados. Se proveen ilustraciones para identificar correctamente esta especie.

Palabras clave:

Arachnida, sinantrópica, Sudamérica.

INTRODUCTION

Tegenaria Latreille, 1804 is a genus of spiders that currently contains 112 valid species (World Spider Catalog, 2019). Members of this genus are usually referred as funnel web spiders or grass spiders, and these usually inhabit in grasslands and open areas (Levi *et al.* 1968). *Tegenaria*

species are usually very fast predators that rely more on its speed rather than their webs to catch preys. Several species on this genus are also considered synanthropic as they inhabit human habitations (World Spider Catalog, 2019).

Tegenaria domestica (Clerck, 1757) (Fig. 1), commonly called domestic spider because of its synanthropic habits, is a large member of this genus ranging from 7 to 13 mm the adult females and 6 to 10 mm the males (Roth, 1968). It is characterized by a light brownish cephalotorax and a brown abdomen with irregular darkened patches. This species is naturally distributed from Europe to China, Japan, and it was introduced to Australia, New Zealand, and the Americas (World Spider Catalog, 2019). Although *T. domestica* has a wide distributional range in South America, the available information from Southern Patagonia is scarce and confuse, mainly because the cites give little information. The purpose of this contribution is to review the presence of this species in Southern Patagonia, as well as provide new records to establish its current distributional range.

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Fig. 1. *Tegenaria domestica*. a. Specimen from El Calafate, habitus; b. Specimen from Ushuaia, habitus; c. Female from Punta Arenas, outside its funnel; d. Female epigynum; e. Male pedipalp, ventral view; f. Male pedipalp, lateral view.

MATERIALS AND METHODS

A compilation of records has been made in literature and local collections (Instituto de la Patagonia, Universidad de Magallanes, Punta Arenas; Museo Maggiorino Borgatello, Punta Arenas), and new records have been obtained by prospections of the authors, plus records from the citizen science platform “Insectos y Arácnidos de importancia médica y sanitaria en Patagonia”. For specimen identification we follow Roth (1968) and for systematics to WSC (2019). Photos of genitalia were taken with a digital camera adapted to a stereoscopic microscope.

RESULTS

Historical distribution of Tegenaria domestica in Southern Patagonia

The presence of this species in the Southern part of Patagonia has been first recorded by Simon (1904), from Punta Arenas. However, after this contribution there is a long silence in both literature

and museums. Even, Cekalovic (1976) did not include this species in his catalog of Magallanes spiders. Only more recently, Carvajal & Faúndez (2017) mentioned that it is common in houses of Punta Arenas and that it can be confused with the Chilean recluse *Loxosceles laeta* (Nicolet, 1849). On the other hand, there are no records of this species in the Argentinean southern provinces, and only Ramírez *et al.* (2004) recorded it in northern Patagonia, including the provinces of Neuquén, Río Negro and Chubut.

Current distribution

In current days, this spider has become one of the most common arthropods in homes of Southern Patagonia, according records in the collection of the Instituto de la Patagonia, and surveying of the authors. Since 2005 it has been frequently observed in Punta Arenas and more recently we have confirmed its presence in the Argentinean provinces of Santa Cruz and Tierra del Fuego, and its further in Magallanes as is detailed below:

Material examined: ARGENTINA. Santa Cruz Province: Puerto Deseado, 7-II-2017, 1♀ I. Gabucci leg. El Calafate, 2-II-2017, 2♀, F. Raffo leg.; Río Gallegos, 23-II-2017, 2♀, J. Vivallo leg.; Río Gallegos, 3-IV-2018, 1♂, A. Muñoz leg. Tierra del Fuego Province: Ushuaia, 25-IX-2018, 1♂, J. Ameglio leg.; Ushuaia, IX-2018, 2♀, N. Asplanato leg.; Ushuaia, 19-X-2018, 1♂, N. Asplanato leg. CHILE: Punta Arenas, I-2005, 10♀9♂, E. Faúndez leg.; Puerto Natales, XII-2017, 3♂4♀; Puerto Natales, I/III-2018, 4♀. Puerto Williams, XII-2017, 2♀1♂, J. González leg.

DISCUSSION AND CONCLUSION

The current presence of *T. domestica* in Punta Arenas is interesting, because it was recorded in the early 1900's (Simon, 1904) and

then seem to have disappeared from the area. It is good to mention that local museum or collection did not register any specimen until the present days. Also, the authors did not found any specimen before 2002. Moreover, its absence in Cekalovic (1976) catalog seems to confirm its disappearance from the area, since Cekalovic was a remarkable collector who hardly surveyed the area. A similar case has been observed with the butterfly *Vannessa carye* (Hübner, 1812) (Lepidoptera: Nymphalidae), which disappeared from Punta Arenas for 40 years and got back in 2005, presumably by temperature fluctuations (Pérez *et al.* 2005). Although *T. domestica* is not a flying arthropod as *V. carye*, it can travel with humans, which may explain the two separate arrivals.

For the rest of Southern Patagonia, we provide the first records for Santa Cruz (El Calafate,

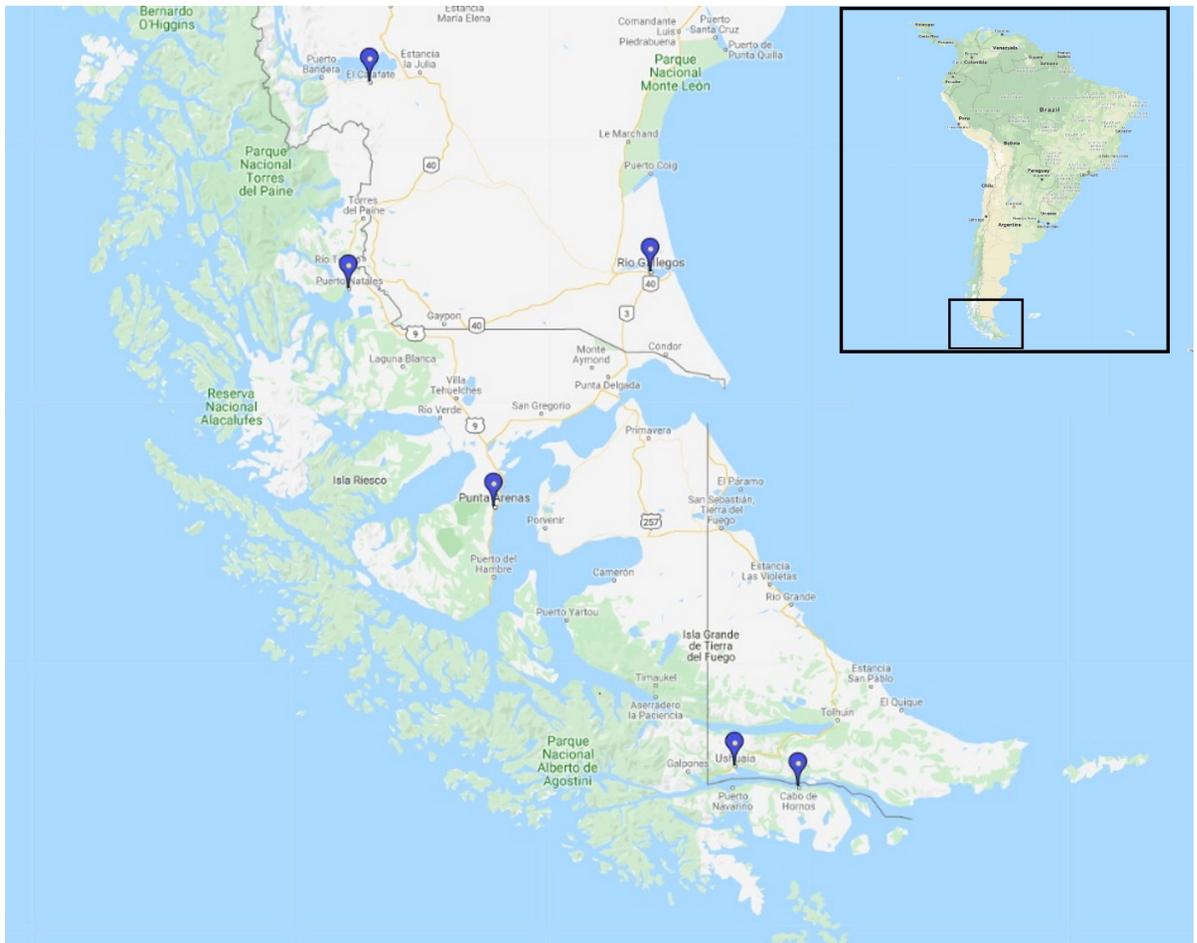


Fig. 2. Distribution of *Tegenaria domestica* in Southern Patagonia.

Puerto Deseado, Río Gallegos) and Tierra del Fuego (Ushuaia) provinces in Argentina and for Puerto Natales and Puerto Williams cities in Chile (Fig. 2). Ushuaia and Puerto Williams become the southernmost known localities for this species in each country, and the records of Puerto Natales and Santa Cruz province fills the distributional gap with the rest of Patagonia. The only area of Patagonia that remains without records of this species is the Aysén Region in Chile, in which this species may have already reach, but has not been yet collected.

The recent records and expansion of this species in Southern Patagonia, may be part of a series of synanthropic spider arrivals to the area, which have been associated with current global change (Faúndez, 2007; Carvajal & Faúndez, 2017; Faúndez *et al.* 2017).

The presence of this species in the area does not represent a health or sanitary problem. Although the bite of another agelenids like *Eratigena agrestis* (Walckenaer, 1802) has been considered medically important for decades, recent studies have concluded that these are not dangerous and there have been a lot of misidentifications and misdiagnoses on the alleged necrotic cases. In the case of *T. domestica*, its bite may generate local pain lasting for a few hours and a very tiny erythema, which does not require medical attention unless of an allergic reaction (Gaver-Wainwright *et al.* 2011; E. Faúndez, *pers. obs.*). However, because of its coloration and general body shape, plus myths regarding the speed of the spider it has been widely confused the Chilean recluse *L. laeta*, a dangerous species recently arrived to the zone (Carvajal & Faúndez, 2017). However, both species can be easily told apart by the number of eyes (six in *L. laeta* and eight in *T. domestica*). In the examined material a wide range of chromatic variation was observed, especially in the abdominal pattern (Figs., a, b, c); therefore, examination of male pedipalp and female epigynum (Figs., d, e, f) may be useful to fully confirm the identification; and thus avoid any confusion with other spiders in the area. Finally, up to this point, all the specimens have been collected in human habitations, and there are no records of this species outside of synanthropic environments.

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