Scientific Note

A new record of *Steatoda porteri* (Simon, 1900) (Araneae: Theridiidae) in Chile

Nuevo registro de *Steatoda porteri* (Simon, 1900) (Araneae: Theridiidae) en Chile

Mariom A. Carvajal[1,3,4], Fernando Téllez[2] and Eduardo I. Faúndez[1*]

[1]*Laboratorio de entomología y salud pública, Instituto de la Patagonia, Universidad de Magallanes, Av. Bulnes, 01855 Punta Arenas, Chile.* *ed.faundez@gmail.com. [2]*Centro de Salud Familiar Nueva Imperia, Gorostiaga 258, Nueva Imperial, Chile.* [3]*University of Maryland. Entomology Department. 4112 Plant Sciences Building College Park, MD 20742-4454, USA.* [4]*Smithsonian Institution, National Museum of Natural History. 10th St. & Constitution Ave. NW, Washington, DC 20560, USA.*

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Abstract. *Steatoda porteri* (Simon, 1900) was described from Atacama Region, Chile; later recorded for Coquimbo Region. The first record after more than 50 years, from the Araucanía Region, is reported in this work. A more detailed description of the female genitalia is provided. The disjunct records are discussed, and it is hypothesized that it might be present along the distribution range established here.

Key words: Andean Region; Araucanía; false widow; faunistic.

Resumen. *Steatoda porteri* (Simon, 1900) fue descrita de la Región de Atacama en Chile y posteriormente registrada en la contigua Región de Coquimbo. En este trabajo se reporta por primera vez a esta especie para la Región de La Araucanía, cerca de 1.000 km al sur del registro más meridional previamente conocido. Se incluye una descripción detallada de la genitalia femenina y se discute la distribución disyunta, hipotetizando que probablemente se encuentra presente a todo lo largo del rango de distribución establecido aquí.

Palabras clave: Araucanía; falsa viuda; faunística; Región Andina.

False widow spiders of the genus *Steatoda* Sundevall, 1833 are a group of 121 species (World Spider Catalog 2021). As its common name suggests, *Steatoda* species resemble *Latrodectus* Walckenaer, 1805 spiders in shape and external appearance. However, when it comes to clinical conditions steatodism has been considered less severe than latrodectism, and never causing death (Isbister and White 2004; Dunbar *et al.* 2021; Faúndez *et al.* 2021). Because of this, extensive research on the medical aspects of the genus has not been done until recent years. Currently, because of the recent expansion of the noble false widow *Steatoda nobilis* Thorell, 1875, and the multiple reports of envenomations caused by this species, the genus has been gathering attention. The most recent study by Dunbar *et al.* (2021) focused on *S. nobilis*, provided a better understanding of the overall situation, demonstrating that the medical importance of these spiders is potentially greater than previously thought, not limiting steatodism to symptoms like headaches, nausea, debilitating pain, tremors,

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reduced or elevated blood pressure and fever Dunbar *et al.* (2020a), but extending it to severe symptoms including necrosis and bacterial infections. Furthermore, Dunbar *et al.* (2020b) found that *S. nobilis* venom is composed of two thirds of *Latrodectus-like* toxins, this might explain the newfound severity of *S. nobilis* bites. The phylogenetic placement of *Latrodectus* within *Steatoda* (Liu *et al.* 2016) also supports these findings.

In Chile, this genus contains 7 species distributed all over the territory. Of these, three are considered introduced (*Steatoda grossa* (Koch, 1838), *Steatoda triangulosa* Walckenaer, 1802 and *Steatoda nobilis* (Thorell, 1875); whereas four are considered native (*Steatoda ancorata* (Holmberg, 1876), *Steatoda andina* (Keyserling, 1884), *Steatoda porteri* (Simon, 1900) and *Steatoda sabulosa* (Tullgren, 1904)) (Faúndez *et al.* 2021). In the country, most of the research has been done on the introduced species as they expand to new areas and biting events occurred as these are also synanthropic (Faúndez & Téllez 2016; Faúndez *et al.* 2018, 2020, 2021).

Steatoda porteri Simon, 1900 is a Chilean species described from the Atacama Region, later recorded in the contiguous Region of Coquimbo, and no further data has been published since then (Levi 1962). The purpose of this work is to provide the first record of this species for the Araucanía Region.

Identification was made following Levi (1962) and Faúndez *et al.* (2021). Genitalia was dissected and clarified in a saturated KOH solution at 100 °C for an hour. Terminology follows Levi (1962). The map was developed in the site www.simplemappr.net.

Figure 1. *Steatoda porteri*. **A-B.** *In situ* females from Cautín Province. **C-D.** Epigynum, ventral and dorsal views (dissected). Scale: 0.5 mm. / **A-B.** Hembras *in situ* de la Provincia de Cautín. **C-D.** Epiginio, vistas ventral y dorsal (disectada). Escala: 0,5 mm.

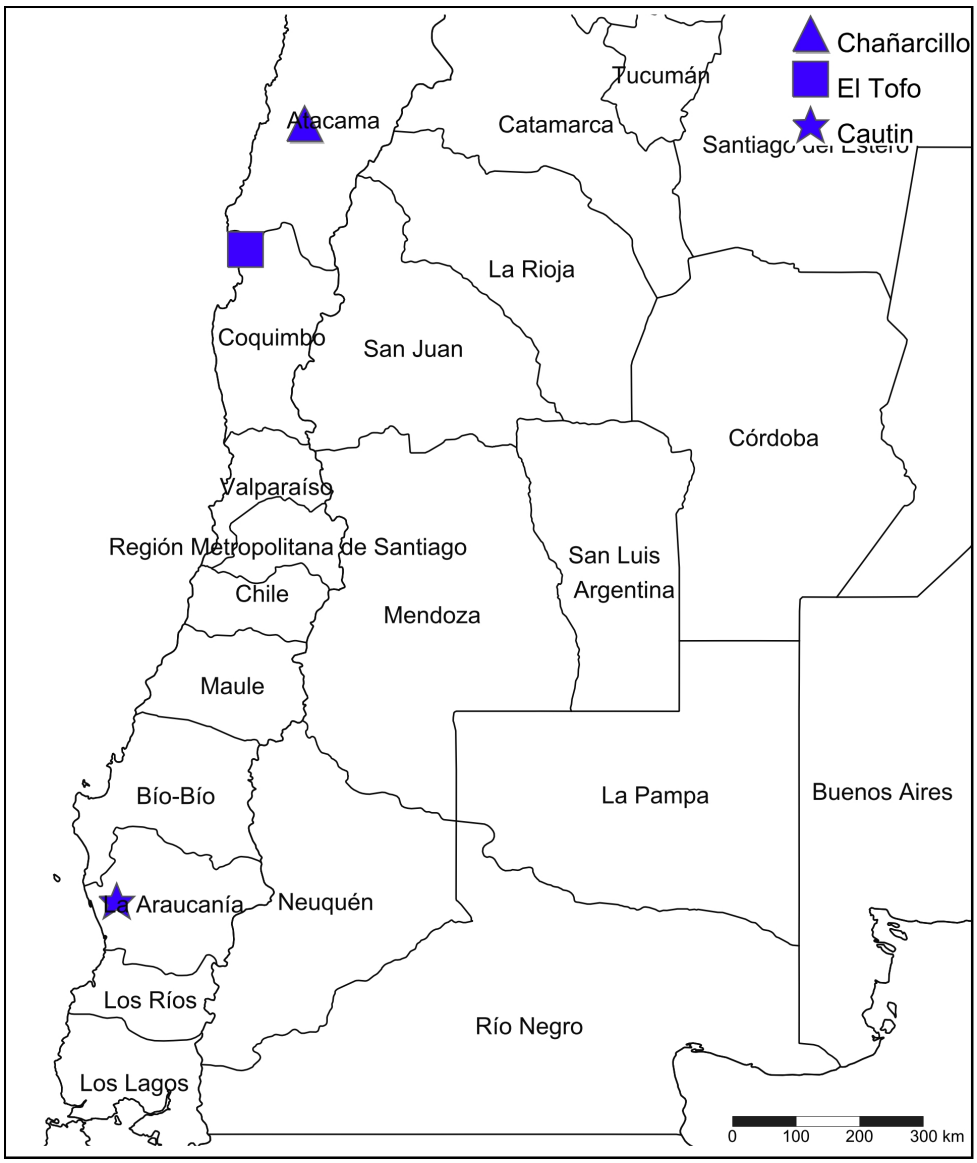

Figure 2. Distribution of *Steatoda porteri* in Chile. / Distribución de *Steatoda porteri* en Chile.

Material examined. CHILE, Araucanía Region, Cautín, 26-I-2016, F. Téllez leg. 1 female; idem 25-X-2016 (deposited in Instituto de la Patagonia, Universidad de Magallanes, Punta Arenas, Chile). Full photosets of the specimens *in situ* are available in Téllez (2022).

In addition to the distribution record, Levi (1962) provides a short description of *S. porteri* with drawings of the female genitalia. These; however, are general and lack some detail. Here we provide an actualized description of the female genitalia of *S. porteri* with illustrations:

Epigynum with a single "U" shaped flap covering the opening entrance. Spermathecae shaped as two globular structures connected in the middle. Fertilization ducts symmetrical, posteriorly attached, each side shaped similar to a question mark mirroring each other. Ducts thicker towards the spermathecae. Additionally, one of the collected specimens showed some variability from the typical abdominal design known for this species, which

includes an interrupted median whitish line and two lateral inclined lines on each side near the median region of the abdomen. Although the records here provided are far away from what is currently known, genitalia seem to be very stable and corroborate the identification. This variation has been largely observed on different species of the genus (Faúndez *et al.* 2017, 2018; Dugon *et al*. 2017). This has been explained mostly as the ontogeny happens, specimens tend to darken and even losing all the abdominal design (Faúndez *et al*. 2017, 2018, 2021; Dugon *et al.* 2017), thus it is possible that the specimen illustrated by Levi (1962) and Faúndez *et al.* (2021) was older than the ones here reported.

The new record of *S. porteri* in Araucanía Region is located far from its known distribution (*i.e*., nearly 1000 k towards the south), in a different environment and climate conditions. The northern regions of Atacama and Coquimbo are dry with warm climate and sparse vegetation. On the contrary, the Araucanía Region is a temperate and humid forest. We believe; however, this is an extension of its distribution and *S. porteri* might be located along the regions that fill in the gap. More collecting of this species is needed to determine so.

In general, the *Steatoda* species considered of medical importance are synanthropic, which causes the chances of envenomation to be higher. In contrast, *S. porteri* is a native and relatively rare species found away from the urban area. Thus, we believe *S. porteri* does not possess the potential to be considered of high medical importance.

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