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On the presence of *Steatoda nobilis* (Thorell, 1875) (Araneae: Theridiidae) in Southern Chile

Sobre la presencia de *Steatoda nobilis* (Thorell, 1875) (Araneae: Theridiidae) en el sur de Chile

https://zoobank.org/References/39AF01F2-F294-409A-A573-157F612D87A8

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Abstract.- The distribution of *Steatoda nobilis* in Southern Chile is clarified and commented. New records are provided for Los Ríos and Los Lagos Region, and Chiloé Island is considered the southernmost locality in the country. Additional comments about specimens reared in captivity are included.

Key words: *False widow, faunistics, Araucanía, Andean Region.*

Resumen.- Se clarifica y comenta la distribución de *Steatoda nobilis* en el sur de Chile. Se entregan nuevos registros para las regiones de Los Ríos y Los Lagos con la Isla de Chiloé como localidad más austral; además se incluyen comentarios sobre ejemplares criados en cautiverio.

Palabras clave: *Falsa viuda, faunística, Araucanía, Región Andina.*

Steatoda (Sundevall, 1833) is a genus of theridiid spiders that currently contains 119 species distributed worldwide (World Spider Catalog, 2025). Species in this group resemble those in the genus *Latrodectus* Walckenaer, 1805, hence the common name false widow spiders. In addition to the resemblance, false widow bites also cause a clinical condition known as Steatodism. However, Steatodism is less severe than Latrodectism and never causes death (Isbister & White 2004; Dunbar *et al.* 2021; Faúndez *et al.* 2021).

Due to its rapid expansion in distribution in the last decades, the noble false widow *Steatoda nobilis* (Thorell, 1875) has sparked interest among researchers. Originally in Macaronesia, *S. nobilis* current distribution includes several countries from Europe, Middle East, North and South America (WSC, 2025; Faúndez *et al.* 2018; Dunbar *et al.* 2020).

In Chile, *S. nobilis* was first reported from localities in Bio-Bio and Araucania Regions (Taucare-Rios et al. 2016). Since then, multiple sightings and/or bites have been reported (Faúndez & Téllez, 2016a,b; Faúndez *et al.* 2020a, 2021; Pizarro-Araya *et al.* 2021) as well as in online platforms such as iNaturalist (Faúndez, 2025). With time, records have increased exponentially. Currently the distribution of this species in Chile has been recorded between Coquimbo and Araucanía Regions. The objective of this work is to update the distribution of *S. nobilis* in southern Chile and provide comments about its expansion process.

Materials and methods

Identification was made following Levi (1962) and Faúndez et al. (2021). Genitalia were dissected and clarified in a saturated KOH solution at 100°C for an hour. Terminology follows

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Levi (1962). The map was developed with the iNaturalist project "false widows from Chile" (Faúndez, 2025) reviewed and curated by the authors.

Results, discussion and conclusions

Steatoda nobilis (Thorell, 1875)

(Figs. 1-2)

Material examined: CHILE, Araucanía Region, Temuco, 12-XII-2024, F. Téllez & E.Faúndez leg. 5♀; Los Ríos Region, Valdivia, 8-XI-2017, J. Reyes leg. 1♀; Los Lagos Region, Osorno 9-XII-2017, A. Martinez leg. 2♀; Osorno, 7-XII-2017, M. Lazo leg. 2♀1♂. All the material is deposited in Ninfa Center Arthropod Collection (NCAC), Chile.

Distribution: Authors have observed individuals of *S. nobilis* in the city of Puerto Montt, Los Lagos Region, since 2017, with increased populations becoming relatively common around the city by 2024. Additionally, in 21-II-2024 4♀ a female with spiderlings was observed in Castro, Chiloé Island, Los Lagos Region. These records are also supported by observations uploaded on iNaturalist (Faúndez, 2025) and these become the southernmost observed populations in the country. There is an additional record from Futaleufú, Palena Province in Los Lagos. Whether this is an isolated or recurrent case remains to be confirmed (Fig. 1).

Captivity Observations and Comments: On December 12th of 2024, authors collected and transported five female specimens from Temuco, Araucanía Region to Puerto Montt, Los Lagos Region and two weeks later to Punta Arenas, Magallanes Region, in the southern tip of the continent, where *S. nobilis* still has not invaded. A single female (F1) was collected with an egg sac laid in the previous hours.

Average temperatures among the locations were subsequently decreasing, going from maximum of 23°C in Temuco to 20°C in Puerto Montt, and 15°C in Punta Arenas. Regardless of this environmental change, all specimens have survived. Furthermore, two females have had

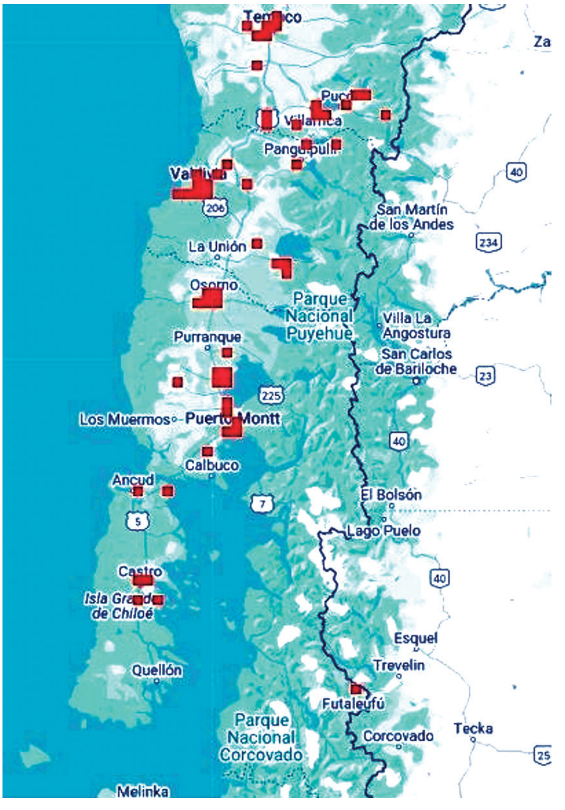

Figure 1. Distribution of *Steatoda nobilis* in Southern Chile (map developed with iNaturalist). //Distribution de *Steatoda nobilis* en el sur de Chile (mapa desarrollado con iNaturalist).

successful offspring. The eggs from specimen F1 hatched on December 31st, 3 days after arrival in Punta Arenas and 19 days after collection, with an approximate total of 200 hatchlings. This observation aligns with the established 18 days average for egg hatching of *S. nobilis* kept in captivity (Dugon *et al.* 2017).

However, another specimen (F2) laid eggs on January 1st 2025, from which 45 days after about 50 hatchlings emerged (Fig.2). F2 hatchlings are bigger than F1. Dugon *et al.* (2017) mention that hatchlings molt once while still in the egg sac. A possible explanation could be that F2 immatures molted twice while in the egg sac which could also explain the inferior number of hatchlings because of cannibalism. More observations are needed to confirm if this change in development and behavior is related

Figure 2. *Steatoda nobilis* specimen with spiderlings and ootheca in Punta Arenas, Chile. Ejemplar de *Steatoda nobilis* con ooteca y spiderlings en Punta Arenas.

to the drop in temperature and environmental change.

The success of *S. nobilis* as an invasive species seen through the rapid expansion and increase in population size is evident. Existing studies on invasion history (Dugon et al. 2017, Bauer et al. 2019) and numerous new country records have evidenced these patterns . Moreover, the latest research has revealed that *S. nobilis* bites, even if not lethal, can cause severe symptoms which can lead to hospitalization (Dunbar *et al.* 2020). This, coupled with the increased occurrence inside homes, raises public health concerns that exhibit the need for in-depth research on this species.

Since it has been noted that *S. nobilis* can live even in the southern tip of the continent, and as there is a recent case of expansions with another synanthropic spider in the area, *Loxosceles laeta* (Nicolet, 1851) (Faúndez *et al.* 2020b) surveillance for further invasions in both Aysén and Magallanes Regions is recommended.

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