

The European spider *Steatoda nobilis* (Thorell, 1875) (Araneae: Theridiidae) becoming widespread in California

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Source: Pan-Pacific Entomologist, 91(1):98-100.

Published By: Pacific Coast Entomological Society

DOI: <http://dx.doi.org/10.3956/2014-91.1.098>

URL: <http://www.bioone.org/doi/full/10.3956/2014-91.1.098>

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Scientific Note

The European spider *Steatoda nobilis* (Thorell, 1875) (Araneae: Theridiidae) becoming widespread in California

Vetter & Rust (2012) reported on the first specimens of the moderately-sized, non-native European spider *Steatoda nobilis* (Thorell, 1875) in California. At the time, this species was only known from a few locations in Ventura County and was considered to be a unique focal establishment of the species in California. However, within just a few years and with greater awareness by the arachnological community, specimens were collected in locations separated by great distance. We report here that this spider is much more widespread than previously known, such that it can no longer be considered to be a local establishment. It appears to be already on its way to becoming a well-dispersed resident of California. *Steatoda nobilis* is now firmly established in the San Francisco-Monterey area and San Diego County, as well as Ventura County, with a single specimen each found in Los Angeles, Orange and San Benito Counties. This spider has now been collected in nine California counties.

As an indication of how strongly established this spider is now in California, we did surveys for *Steatoda* spiders at two locations. In Monterey on 8 May 2014, a 30-min survey by a single collector (R.J.A.) starting at 1430h was performed on the Seaside High School campus. The buildings were constructed of mostly concrete. The spiders were most often found near the cracks and holes in the walls and in eaves of buildings. In this survey, 11 *S. nobilis* (four females and seven immatures, including one penultimate male) and three immature *S. grossa* (C. L. Koch, 1838) were collected. In addition, another 13 *S. nobilis* were observed but not collected because they either hastily escaped to their retreats or they were located out of reach in the eaves of two-story buildings. In the San Ysidro area of San Diego near the Mexican border, a survey by one collector (J.E.B.) at four locations with about 15 minutes of active collecting effort yielded one male, four females and one immature *S. nobilis*.

The timing of discovery is curious. Several *S. nobilis* spider images were submitted to the first author due to a page on the University of California Riverside's Center for Invasive Species Research website regarding tracking the spread of the recently-established and urban-invasive brown widow spider, *Latrodectus geometricus* C. L. Koch, 1841, in California. This website has been in existence for several years with continuous, active submissions of spiders and images but only recently have people been submitting *S. nobilis* evidence. In addition, the people submitting the spiders have been from the general public as opposed to arachnologists or naturalists who were actively seeking out *S. nobilis* and had greater interest in spiders. The most curious aspect is that spider and image submissions have contemporaneously originated from the widespread areas shown in Fig. 1. Typically an infestation of a non-native organism starts at one focal point and spreads gradually to new locations over a period of years instead of simultaneous long-distance saltation.

Specimens were either collected by or sent to the authors with additional data being provided from digital images sent by e-mail. The coloration of the dorsal abdomen is so diagnostic for the California spider fauna that we did not request specimens from all of the citizen scientists who contacted us as long as we were assured of the



Figure 1. Distribution of *Steatoda nobilis* in California as of 2014.

identification through the electronically transmitted images. In addition, some citizens were willing to take pictures but were not comfortable collecting the spider. Listed below are new locations since the publication of Vetter & Rust (2012), however, Fig. 1 contains all known localities so far. GPS data is provided for a few non-residential collection sites but not residential sites in order to maintain privacy.

Voucher specimens from Vetter & Rust (2012) have already been deposited at the California Academy of Sciences in San Francisco. Current abbreviations of deposition include: LVC – Leonard Vincent collection, SDNHM – San Diego Natural History Museum, UCR – University of California Riverside Entomology Research Museum.

Specimens examined. CALIFORNIA. Alameda Co.: Castro Valley, under outdoor barbeque grill cover, 17 Nov 2014, 1 ♂, D. Nobori (e-photo); Oakland, 1 Dec 2013, 1 ♀, M. Montana (e-photo). Contra Costa Co.: Bay Point, on shed, 2 Dec 2014, M. Dame (e-photo). Los Angeles Co.: Santa Clarita, on front porch, 3 Dec 2014, 1 ♀, J. Brice (e-photo). Monterey Co.: Marina, on car tire, 4 Nov 2012, on sliding glass door, 1 Jul 2014, H. Peterson (e-photos); under deck, 1 Jul 2014, N. Waters (e-photo); Salinas, 10 Apr 2014, 1 penult. ♂, R. J. Adams (UCR); Toro Park Elementary School, 36° 35' 43" N, 121° 42' 19" W, 20 Mar 2014, 1 ♀, R. J. Adams (UCR); Seaside, Seaside High School, 36° 37' 23" N, 121° 50' 14" W, 20 Mar 2014, 1 ♀, R. J. Adams (UCR); 8 May 2014, 4 ♀, 6 immatures, 1 penult. ♂, R. J. Adams (UCR). Orange Co.: Fullerton, Fullerton College campus near bookstore, on side of building, 33° 52' 26" N, 117° 55' 5" W, 27 Mar 2012, 1 ♀, S. Valle (LVC). San Benito Co.: Hollister, on front porch, 19 Oct 2014, 1 ♂, D. Gaban (e-photo). San Diego Co.: Coronado, 26 Jul 2013, 1 ♂,

V. Roccoforte (UCR); El Cajon, 10 Mar 2014, 1 ♀, J. Gorman (e-photo); Skyline Lane, 8 Nov 2013, 1 ♀, M. Mellish (UCR); Julian, Vallecito campground on bathroom wall, 24 Nov 2013, 1 ♂, R. Gorman (e-photo); La Jolla, under barbecue grill cover, 20 Apr 2014, J. Gorman (e-photo); La Mesa, 31 Aug 2014, D. Kinser (e-photo); Lakeside Lakes, Lakeside River Park Conservancy, 32° 51' 33" N, 116° 56' 00" W, on roof eave of porta-potty, 4 Oct 2014, 1 ♀, J. Berrian (SDNHM); National City, E18th St. & Palm Ave, 32° 40' 19" N, 117° 5' 13" W, 16 Oct 2014, 1 ♀, 1 immature, A. Gomez (SDNHM); San Diego, North Park area, 32° 44' 20" N, 117° 7' 24" W, in *Opuntia* sp. (Cactaceae) cactus, 22 Jun 2013, 1 ♀, J. Berrian (SDNHM); same location 13 Sep 2014, 1 penult. ♂, J. Berrian (SDNHM); San Ysidro area, 32° 33' 12" N, 117° 5' 3" W, on power poles and road signs, 24 Sep 2014, 1 ♂, 4 ♀, 1 immature, J. Berrian (SDNHM); Sunset Cliffs area N of Point Loma, 0.75 km east of the shoreline, on back porch, 13 May 2014, J. Cieslak (e-photo); Bamboo Gardens area, in folds of patio shade, 14 Sep 2014, 1 ♀, R. Mason (SDNHM); same location, in house, 27 Sep 2014, 1 ♂, R. Mason (e-photo). Santa Clara Co.: Mountain View, on outside wall of house, 9 Oct 2014, 1 ♂, R. Ziegler (e-photo); Sunnyvale, eave of house, 15 Nov 2013, 1 ♂, 1 ♀, S. Packer, (e-photos). Ventura Co.: Santa Paula, 6 Aug 2013, 1 ♀, J. Prado (e-photo); Simi Valley, under plate on brick mailbox support, 30 Apr 2014, M. Dickerson (e-photo); Ventura, crawling on ceiling inside house, 10 Nov 2014, 1 ♀, T. Hudak (UCR).

We thank the citizen scientists who e-mailed photos to us, especially those who subsequently sent the spiders to us for in-person examination.

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Received 7 Oct 2014; Accepted 5 Jan 2015 by C. K. Taylor; Publication date 31 Mar 2015