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**A South American spider, *Falconina gracilis* (Keyserling 1891)  
(Araneae: Corinnidae), newly established in southern California**

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## Scientific Note

### **A South American spider, *Falconina gracilis* (Keyserling 1891) (Araneae: Corinnidae), newly established in southern California**

The spider *Falconina gracilis* (Keyserling 1891) (Corinnidae) is native to South America and has become established in the southeastern United States (Ubick et al. 2005). Recent collections by the first author in southern California revealed multiple specimens of this spider in urban Orange and Los Angeles counties, with simultaneous finds by the second author in her backyard in San Diego County. These are the first known collections of this species in the state as well as the western United States. Bonaldo (2000) lists *F. gracilis* as being found in Argentina, Bolivia, Brazil, Paraguay and Uruguay in South America and in Texas, Louisiana and Mississippi in the United States. In Texas, *F. gracilis* appears to be associated with the red imported fire ant, *Solenopsis invicta* Buren, 1972 (J. Cokendolpher, pers. comm. cited in Ubick et al. 2005). The spider genus *Falconina* was revalidated by Bonaldo (2000); prior to that, species were in the genus *Corinna*.

All life stages of *F. gracilis* are similar in coloration. They typically have a dark brown, almost black, carapace. The abdominal color for both sexes is slightly less dark brown to magenta colored and is marked by eight light brown splotches. The abdominal pattern of markings makes the spider easy to recognize; there is nothing else in southern California that looks similar. There is a single median anteriodorsal abdominal splotch followed toward the posterior by three pairs of progressively smaller lateral splotches and ending in a large, posterior dorsal median symmetrically-forked marking that is longer and wider than the others (Fig. 1). Leg color is consistent among the four pairs but can vary among specimens from light to medium orange-brown. Body lengths for males range from 4.6–6.4 mm and females from 5.9–8.9 mm (Bonaldo 2000). Ventral and lateral views of the left male palp with ornate retrolateral tibial apophysis are presented in Fig. 2. The epigynum of the spider is diamond-shaped with a rolled ridge on the posterior margin (Fig. 3).

Currently in southern California, *F. gracilis* is only known from several locations in Orange and Los Angeles counties and one location in San Diego County (Fig. 4). The distance between furthest collection locales is about 130 km. *Falconina gracilis* may have become only recently established in this new environment. A few specimens were collected in early 2013 in damp habitats such as the underside of cinder blocks, rocks, water meter covers, wooden boards, and logs. One of us (L. S. V.) teaches a spider course at Fullerton College (which is located close to known *Falconina* locales) every semester, for nearly two decades, where students are required to make a spider collection. As of the end of the spring 2013 semester, no student had submitted *F. gracilis*. Searches under trash cans in several parks in cities adjacent to Fullerton and La Habra produced no specimens, and it has not been collected inside homes in those areas. In the San Diego County backyard where *F. gracilis* is known to occur, we sifted leaf litter without success. With the majority of specimens being collected around homes, *Falconina gracilis* is probably a synanthropic species.

This species is the latest non-native spider to become established in southern California in the last two decades. Others include the South American *Metaltella*



Figure 1. Female *Falconina gracilis*.

*simoni* (Keyserling 1878) (Amphinectidae) (Vetter 2000, Vetter et al. 2008), the bridge spider *Larinioides sclopetarius* (Clerck 1757) (Araneidae) (Martinez 2006), the pantropical brown widow *Latrodectus geometricus* C. L. Koch 1841 (Theridiidae) (Vincent et al. 2008), and the western European *Steatoda nobilis* (Thorell 1875) (Theridiidae) (Vetter & Rust 2012). *Falconina gracilis* may have exhibited a similar pathway to establishment as the brown widow and *M. simoni* in that all three species first colonized the southeastern United States before becoming established in California.

Many of the collected immatures of *F. gracilis* died in captivity before reaching maturity. Several became shriveled and were no longer useful for museum specimens. Others disappeared, eaten by the intended prey put in the vials. Therefore, not every specimen listed below has been deposited at a museum. Prior to the realization of the significance of this find, additional *F. gracilis* spiders were photographed *in situ* from the Escondido residence but not collected.

Voucher specimens will be deposited in the California Academy of Sciences in San Francisco, California (CAS) and the University of California Riverside Entomology Research Museum (UCR).

*Specimens Examined.* CALIFORNIA. Los Angeles Co.: Whittier, Arroyo Pescadero Trail, under rock, 18 May 2013, S. Valle, 1 penultimate male, 1 immature (UCR). Orange Co.: Fullerton, Hiltcher Park Trail, underneath log, 11 January 2013, S. Valle, 1 female, 1 immature female (raised to maturity in captivity) (CAS); wedged between gravel, 11 January 2013, S. Valle, 1 immature (UCR). La Habra, 500 W. 4th Ave., underside of board between gravel, 8 January 2013, S. Valle, 2 males (UCR); between stacked cinder blocks, 8 January 2013, S. Valle, 1 penultimate male; underneath water meter cover, 8 January 2013, S. Valle, 1 immature; under wooden board,

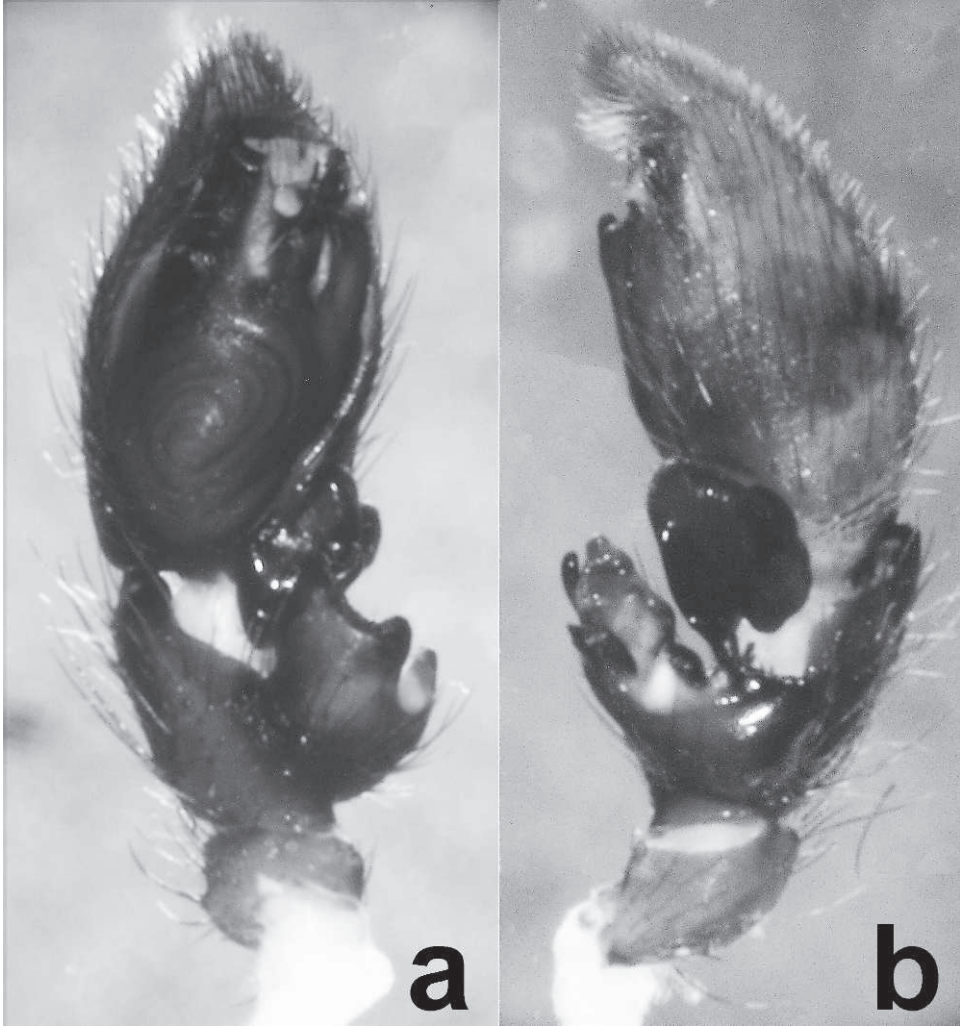


Figure 2. Left palp of male *Falconina gracilis*, a) ventral view, b) lateral view.

17 March 2013, S. Valle, 1 female; 10 August 2013, S. Valle, 1 female (UCR). 611 N. McPherson St., beneath stepping stone, 14 April 2013, S. Valle, 2 immatures; under brick, 13 April 2013, S. Valle, 1 penultimate male, 1 immature. La Habra Children's Museum, scurrying on gravel, 16 March 2013, S. Valle, 1 female. Las Lomas Park, beneath rock, 9 January 2013, S. Valle, 1 immature male (raised to maturity in captivity), (CAS), 1 immature (UCR). San Diego Co.: Escondido, Rimrock Drive, under outdoor mat, 20 May 2013, C. Bingham Keiser, 1 male (CAS); 10 June 2013, on patio, C. Bingham Keiser & K. Avery, 1 penultimate female (raised to maturity in captivity) (UCR).

#### ACKNOWLEDGMENT

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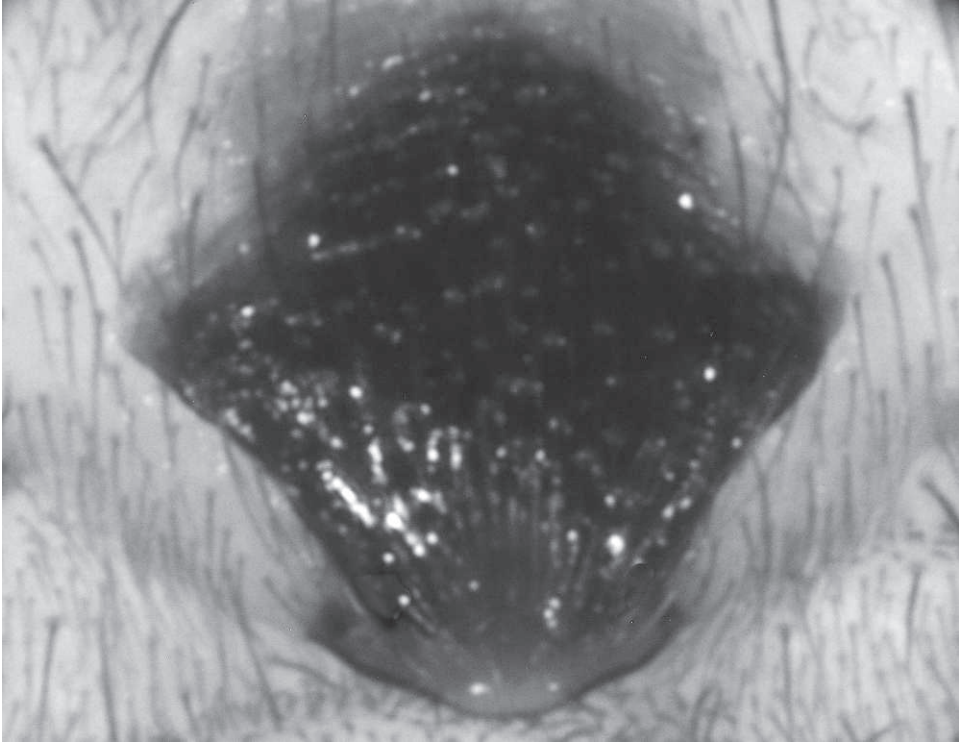


Figure 3. Epigynum of *Falconina gracilis*, ventral view.

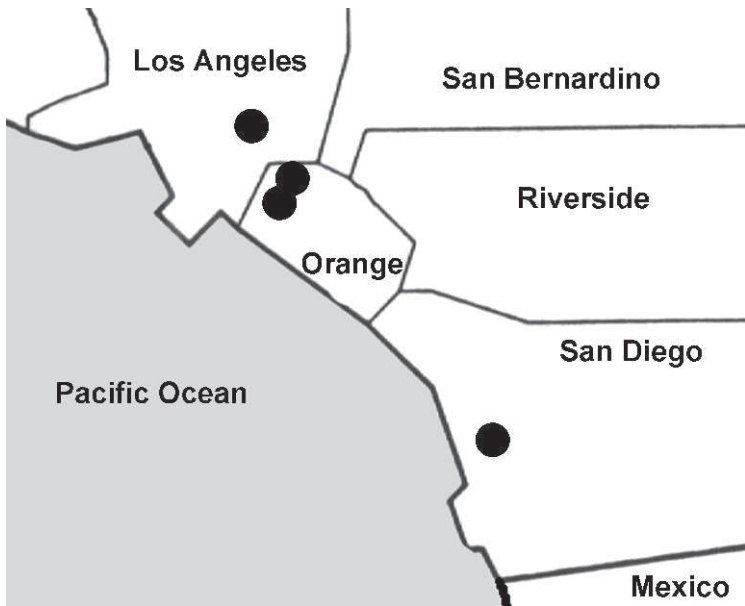


Figure 4. Map of southern California counties with the distribution of *Falconina gracilis*.



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