

Sicariidae: *Loxosceles*

G. J. Binford, Mar. 2011

Loxosceles are native to Africa, Mediterranean Europe, Asia, and the Americas. They are separated into four species groups in South America, and the *reclusa* species group that includes all species native to North America and the described species from the Caribbean. Gertsch & Ennik (1983) describe six species endemic to the Caribbean: *L. caribbaea*, *L. virgo*, *L. cubana*, *L. jamaica*, *L. jarmila*, and *L. taino*. These have been sporadically collected, and molecular data are only available from *L. caribbaea* – Dominican Republic; *L. taino* - Dominican Republic; and a juvenile from Cayman Islands. An undescribed member of the *laeta* species group has been collected on Bonaire.



Monophyly: Species-level relationships of Caribbean *Loxosceles* have not yet been tested. *L. caribbaea* is supported as sister to monophyletic North American *Loxosceles*. Gertsch & Ennik (1983) argue that close morphological similarities among species suggest monophyly. The South American *laeta* group is consistently supported as sister to the *reclusa* group (Binford et al., 2008; Duncan et al., 2010).

Amber Species: Fossil *Loxosceles* have been documented in Dominican amber (Wunderlich, 2004). The fossil specimens examined to date share morphological similarity with *L. caribbaea*.

Dispersal: *Loxosceles* do not balloon and disperse by walking. We categorize them as intermediate dispersers because they are wide-ranging in dry habitats and are not confined to small microhabitats.

Search Strategy: *Loxosceles* are found in caves or cave entrances, in surface habitats that afford cracks and crevices, or under structures/debris that have been undisturbed for a long time including rock and wood debris, crevices in hillsides, and abandoned structures. They produce webs in crevices that are stretchy and have a bluish hue in sunlight. The molts are distinctive with legs sticking straight out, nearly flat against surfaces. The best way to find *Loxosceles* is by looking under rocks and debris. They are patchily distributed and often at highest densities in dry, shaded areas.

Similar Genera: *Loxosceles* are easily identified by their brown coloration and distinctive carapace patterning. They are haplogynes with 6 eyes in three dyads. Related genera *Scytodes* and *Drymusa* also have this eye pattern, are found in the Caribbean and are on our targeted list. *Scytodes* are distinguished by an arched carapace, and *Drymusa* by differences in color patterns. There are no clear apomorphies that distinguish *Drymusa*.

Needed Collecting: All areas require thorough collecting. Individuals have been collected from scattered locations in the Dominican Republic and Puerto Rico. Preliminary analyses suggest nominal species may need to be split, and we anticipate more species will be discovered.

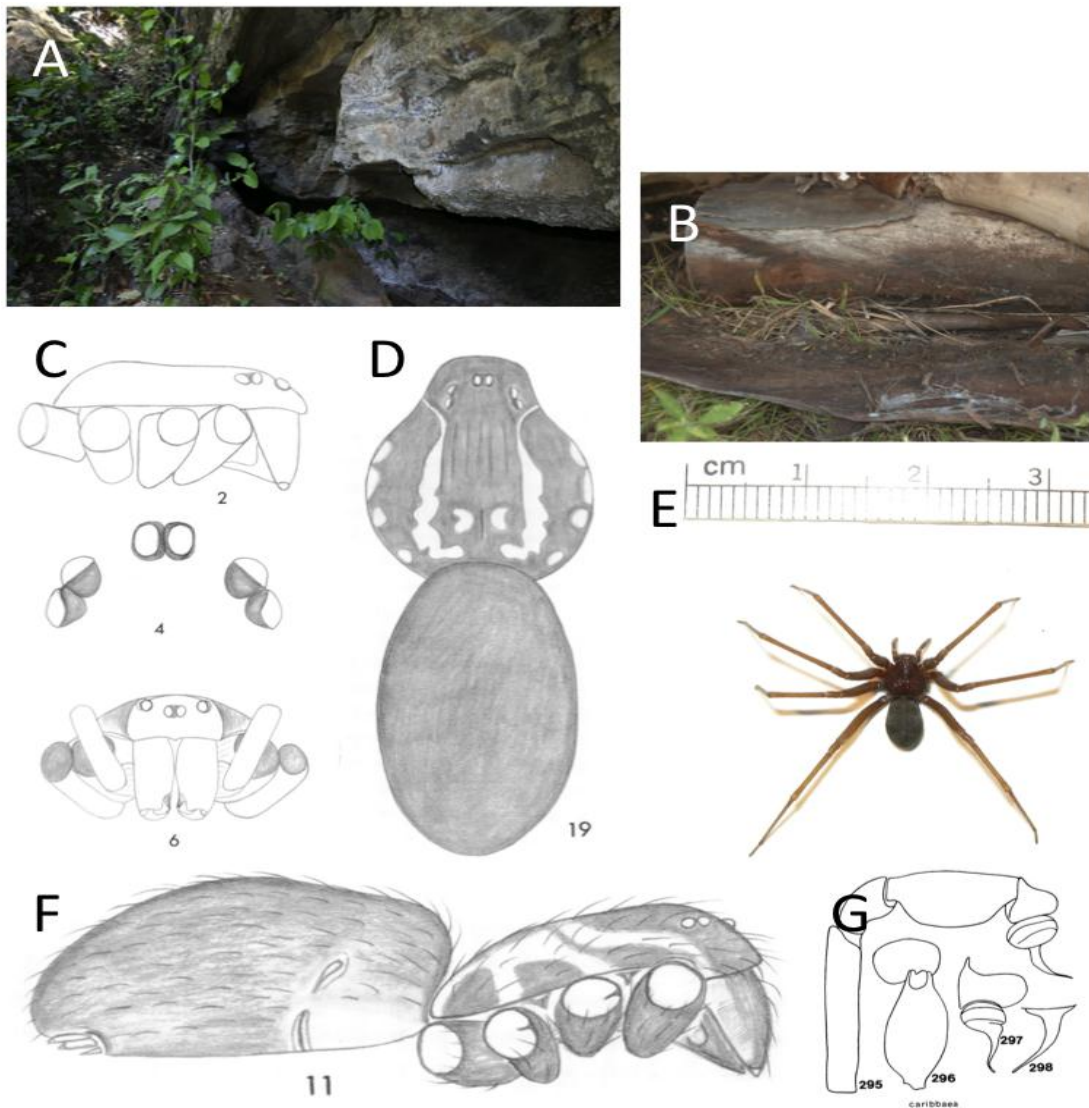


Figure 2. A, B: *Loxosceles* habitats (Central America). C: carapace, eye pattern, and chelicerae of *L. devia*. D: Cephalothorax carapace patterning of *L. caribbaea*. E: *L. taino* from the Dominican Republic (Villa Vasquez). F: *L. reclusa* lateral view. G: *L. caribbaea* palp. C, D, F, and G from Gertsch and Ennik (1983).

References: Binford et al., (2008) *Mol. Phy. Evol.* 49:538-553
 Gertsch & Ennik (1983). *Bull. Am. Mus. Nat. Hist.* 175 (3):264-360.
 Wunderlich (2004) *Araneol.*, 3 (vol. 3A), pp. 703-704.