

Rafting by *Peckhamia americana* (Araneae: Salticidae: Synagelina)

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It is well-known that the semi-aquatic pisaurid spiders *Dolomedes* and *Thalassius* make use of the surface tension of water to support their locomotion and to detect prey (Bleckmann & Barth 1984; Sierwald 1988). Many insects have evolved behaviors that allow them to swim or even aggregate into a raft to transport themselves across water (Bush & Hu 2010; Mlot et al. 2011). Although those familiar with salticid spiders may have observed some difficulty in confining these spiders with a water barrier, the swimming or rafting abilities of salticids have not been documented. Here we report the ability of *Peckhamia americana* (Peckham & Peckham 1892) to traverse a water surface by rafting on a floating leaf (Figure 1).



Figure 1. Adult male *Peckhamia americana* rafting a leaf across a water surface by paddling with its front legs while holding that leaf with its rear legs. The grey area in each photo (out of focus) represents the bottom of the shallow pan in which this spider and leaf were floating. Photos by G. Beaton.

An adult male *Peckhamia americana* was captured in Emanuel County, Georgia on 8 October 2015 and placed onto a leaf in a shallow pan of water to facilitate photography, otherwise difficult because of the almost constant movement of these small ant-mimics. This spider repeatedly went to one side of the leaf, anchored its rear legs on that leaf, and stroked the water rapidly with its front legs to move directly, with the leaf, across the water surface to the edge of the pan at a distance of about 7-8 cm. The water in the pan was about 25 mm in depth. The same behavior was observed in a second trial with a water depth of 6-7 mm. Similar behavior had been observed with *Peckhamia* previously, but with a secured leaf that could not be moved when the spider made a similar effort.

Presently we know nothing about the importance of this rafting behavior for the survival of *Peckhamia* in nature. *Peckhamia americana* has been seen running "in files" with the ant *Camponotus planatus* (Peckham & Peckham 1909). The related *P. picata* (Hentz 1846) is thought to be a mimic of the ant *Camponotus nearcticus*, and this mimicry appears to protect them from other salticids, from the ants that they mimic, and from sphecid wasps of the genus *Sceliphron* (Durkee et al. 2011; Uma et al. 2013).

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