

Orb-weaving spiders living in urban areas may be larger

August 20 2014



An orb-weaving spider. Credit: Elizabeth Lowe

A common orb-weaving spider may grow larger and have an increased ability to reproduce when living in urban areas, according to a study published August 20, 2014 in the open-access journal *PLOS ONE* by Elizabeth Lowe from the University of Sydney, Australia and colleagues.

Urbanization may drastically alter the landscape, [local climate](#), and consequently the organisms that inhabit it. Some will no longer have the resources they need to survive in the [urban environment](#), while others may thrive, possibly more so than in their native habitat; one way in which this may be evident is in marked changes in the organism's size. The authors of this study investigated changes in the [physical attributes](#) of the orb-weaving spider, commonly found in both urban and natural landscapes, using multiple environmental variables. The researchers quantified the degree of urbanization at multiple sites in Sydney, Australia, and investigated changes in the orb-weaving spider's body size, fat reserves, and ovary weight.

Results show that the spiders had smaller bodies in areas with more vegetation cover and larger bodies in areas associated with urban development, indicated by the presence of hard surfaces. Additionally, the authors found that the spiders' reproductive ability, measured by increased ovary weight, may have increased in higher socioeconomic areas, such as in areas with hard surfaces or leaf litter. According to the authors, the larger size and increased reproductive capacity of orb-weaving spiders in [urban areas](#) further support the idea that some species may benefit from habitat changes associated with urbanization.

More information: Lowe EC, Wilder SM, Hochuli DF (2014) Urbanisation at Multiple Scales Is Associated with Larger Size and Higher Fecundity of an Orb-Weaving Spider. *PLoS ONE* 9(8): e105480. [DOI: 10.1371/journal.pone.0105480](https://doi.org/10.1371/journal.pone.0105480)

Provided by Public Library of Science

Citation: Orb-weaving spiders living in urban areas may be larger (2014, August 20) retrieved 19 April 2024 from <https://phys.org/news/2014-08-orb-weaving-spiders-urban-areas-larger.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.