

# Testing Pollination Syndromes in *Oenothera* (Onagraceae)

by Kyra N. Krakos & Matthew W. Austin

Across the globe, there are a stunning variety of flowering plants. Botanists - long perplexed by what accounts for this diversity - have posited that natural selection for pollination by different pollinators is the cause of this diversity. Formally defined as the *pollination syndrome concept*, this idea predicts that flowers with similar characteristics (e.g., morphology, colour, scent), will be pollinated by the same type of pollinator (e.g., bee, bird, moth).

In a recent paper published in the *Journal of Pollination Ecology*, Krakos and Austin test the pollination syndrome concept in *Oenothera*, a group of evening primrose species. *Oenothera* species exhibit a remarkable diversity of floral characteristics, with different *Oenothera* species being pollinated by different types of pollinators. To test the pollination syndrome concept in this group, Krakos and Austin measured floral characteristics and recorded the pollinators for 54 species of *Oenothera* native to North America.

To the contrary of the pollination syndrome concept, Krakos and Austin do not find that *Oenothera* with similar flowers share similar pollinators. Rather, in *Oenothera*, a flower's characteristics do not reliably indicate what that flower will be pollinated by. While the pollination syndrome concept has been supported in other species, this study suggests that floral traits do not always predict pollinators across flowering plants.



The diversity of flowers among *Oenothera* species.