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January 25, 2021

To: Daniel Bolnick, Editor-in-Chief, *The American Naturalist*

Dear Dr. Bolnick,

We are writing to submit an original research article entitled “*Plant-pollinator specialization*: *Origin and measurement of curvature*” for review as a Synthesis and Perspective at *The American Naturalist*.

This paper has two goals. First, to review the current state of knowledge of the role of curvature in plant-pollinator systems. There are over 40 plant-pollinator studies focused on curvature, beginning in the 1970’s, but no overview of the results yet exists. This paper gives a ‘bird’s eye view’ on what has been discovered over the last 50 years, providing a unique perspective on the role of curvature in plant-pollinator co-evolution. Second, this paper serves to clarify what is meant by ‘curvature’ and to provide new insights into the use of curvature metrics in biological systems. We identify five different curvature metrics in use, and note the absence of a consensus definition of curvature. We draw from the differential geometry literature to provide a well-established conceptual framework that greatly clarifies the discussion of curvature in the context of plant-pollinator interactions. Because this paper integrates a wide range of disciplines (evolutionary ecology, morphometrics, field biology), the synthetic nature of the ideas discussed here will be of interest to the readership of *The American Naturalist*.

We confirm that this work is original and is not under consideration for publication elsewhere. All authors have agreed to submit this manuscript to *The American Naturalist*, and have no conflicts of interest to disclose.

Thank you for considering this manuscript.

Sincerely,

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