**Mannfred Boehm**

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To: Pamela Diggle, Editor-in-Chief, *American Journal of Botany*

Dear Dr. Diggle,

We are writing to submit an original research article entitled “*Floral phenology of an Andean bellflower (Centropogon granulosus) and pollination by Buff-tailed Sicklebill (Eutoxeres condamini)*” for consideration as a Brief Communication in *American Journal of Botany*.

The goal of this manuscript is to demonstrate how field studies of fine-scale ecological processes (i.e. biotic interactions, daily rates of flowering) are crucial for validating macroevolutionary models of diversification in mega-diverse clades of angiosperms. In this study, we test predictions from a model of plant-pollinator evolution in the Andean bellflowers (Lobelioideae) by photo-documenting floral visitation, experimentally testing the role of visitation on fruit set, and examining daily rates of flowering in the context of pollinator behaviour.

Currently, macroevolutionary models focusing on pollinator shifts rely heavily on the pollination syndrome concept. Studying clades with hundreds of species (as in the Lobeliodeae) necessitates the use of the syndrome concept because the pollination biology of most species has not been studied empirically. The resulting models thus contain assumptions about the effective pollinator(s) of each plant species. In this manuscript we attempt to ‘close the loop’ by employing an observational and experimental study of the pollination biology of the Andean bellflower *Centropogon granulosus*. This plant has long been predicted to be specialized for pollination by Sicklebill hummingbirds, and in Peru specifically, the Buff-tailed Sicklebill, of which there is yet any published information on its natural history. Moreover, we develop a protocol for measuring an overlooked trait, phenological type, and assert that coding this trait into future models will allow us to assess the contribution of phenological types in promoting pollinator specialization.

We posit that in the era of advanced statistical methods for testing pollinator-mediated diversification, field studies are a core component of a larger framework for understanding the generation and maintenance of plant diversity. For this reason, we believe that this study will be of broad interest to the readership of *American Journal of Botany*.

Thank you for considering this manuscript.

Sincerely,

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