Floral herbivory affects female reproductive success and pollinator visitation in the perennial herb Alstroemeria Ligtu (Alstroemeriaceae)

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Floral damage can reduce flower attractiveness for pollinator service. However, the reproductive impact of flower herbivory may be contingent on a petal that is damaged. Flowers having nectar guides are expected to suffer reduction in reproductive success when damage is concentrated on these structures compared to petals less involved in pollinator attraction. In this study, we recorded the reflectance pattern of distinctive yellow tepals of Alstroemeria ligtu and examined their functional role for pollinator attraction and reproductive success. We quantified the richness and abundance of pollinator species attracted to flowers and estimated fruit set and seed production in flowers subject to (1) nectar guide removal, (2) lateral red tepal removal, and (3) unmanipulated flowers. Results indicate that nectar guide removal reduced pollinator visitation rate but did not affect community-level descriptors such as pollinator species richness and flower diversity. The reduction in visitation