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Pollen placement on petals

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Pollen placement on petals

Many flowers attract pollinators with traits that stimulate animals' visual, olfactory, acoustic, gustatory, or tactile senses. Attractiveness often changes as floral traits develop, at times owing to the activities of interacting animals (eg floral herbivory, nectar robbery, pollen deposition or removal, etc).

Hibiscus aculeatus is one such flower. We observed *H aculeatus*, which is distributed throughout the southeastern US, in restored long-leaf pine savannas, where contrasting red pollen often dusts the light yellow petals below the anthers, especially in older flowers. Various events could cause pollen to appear on these petals, including wind, visits by pollinators, or anything else that shakes the flower. If starkly contrasting pollen on petals makes flowers more attractive to pollinators, the sensitivity of pollen release may be adaptive. Alternatively, if pollen is deposited on petals by visitors that have already removed some nectar, then freckled petals may dissuade subsequent pollinators seeking virgin flowers. Do some of *H aculeatus*' potential pollinators learn to avoid flowers with telltale signs of previous visitation, or have some evolved to do so instinctively? If so, is a dusting of pollen



on petals adaptive and under the plant's basic control (eg pollen release), or simply an exploitable result of imperfect or messy pollination?

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