

Efficiency in Pollen Foraging by Honey bees: Time, motion and pollen depletion on flowers of *Sisyrinchium palmifolium* Linnaeus (Asparagales: Iridaceae)

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Honey bees depend on flower resources to supply individual and colony needs. Despite its well-known biology and ecology, none study assessed honey foraging patterns. We used the plant species *Sisyrinchium palmifolium* L. (Iridaceae), a low growing and abundant anthophilous grassland flower to check whether *Apis mellifera* bees change their foraging patterns depending on the quality and quantity of pollen available during the day.

We measured the bees' activities while gathering pollen in both opened-all-morning and opened-half morning plots. We expected that with the depletion of pollen, bees would spend more time, visit more flowers and travel more in the plot opened-half-morning than in the one opened-all-morning.



An opened flower of Sisyrinchium palmifolium.

As expected, the *A. mellifera* bees spent more time, visited more flowers and travelled more flowers in the opened-half-morning plot than in the opened-all-morning plot. This indicates honey bees may detect the most promising period to gather resources on *S. palmifolium* flowers. Given its wide-distribution range and its importance within pollinators communities, we support additional studies to be done with *A. mellifera*'s foraging behaviour to better understand how it explores flower resources.