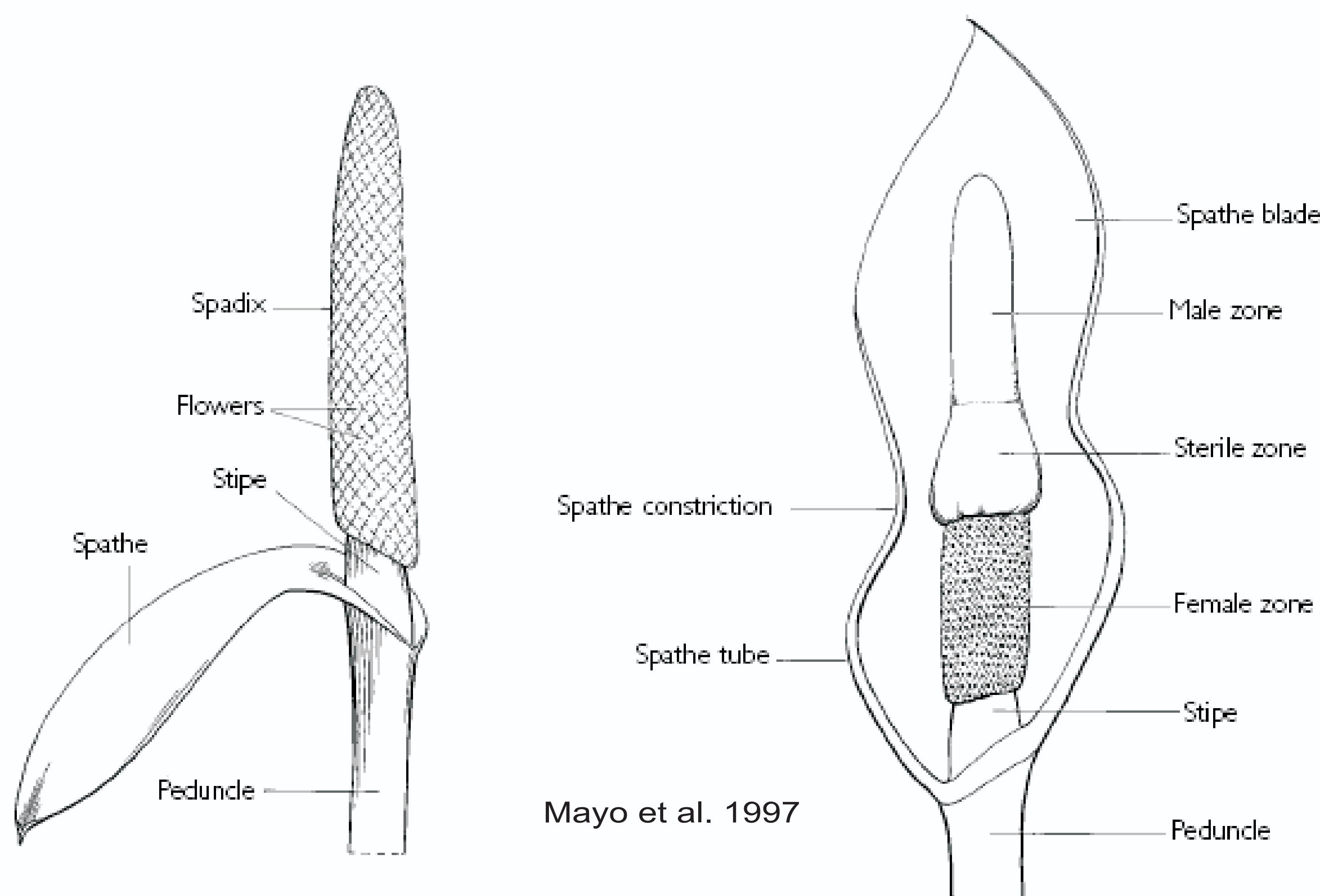


Pollination of *Monstera obliqua*

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Introduction: There are two types of inflorescences in aroids



A) bisexual flowers

- Long flowering cycle (5-7 days)
- Pollinated by diurnal bees
- Simple pollination mechanisms
- No floral chambers, no spathe movement, no thermogenesis

B) unisexual flowers

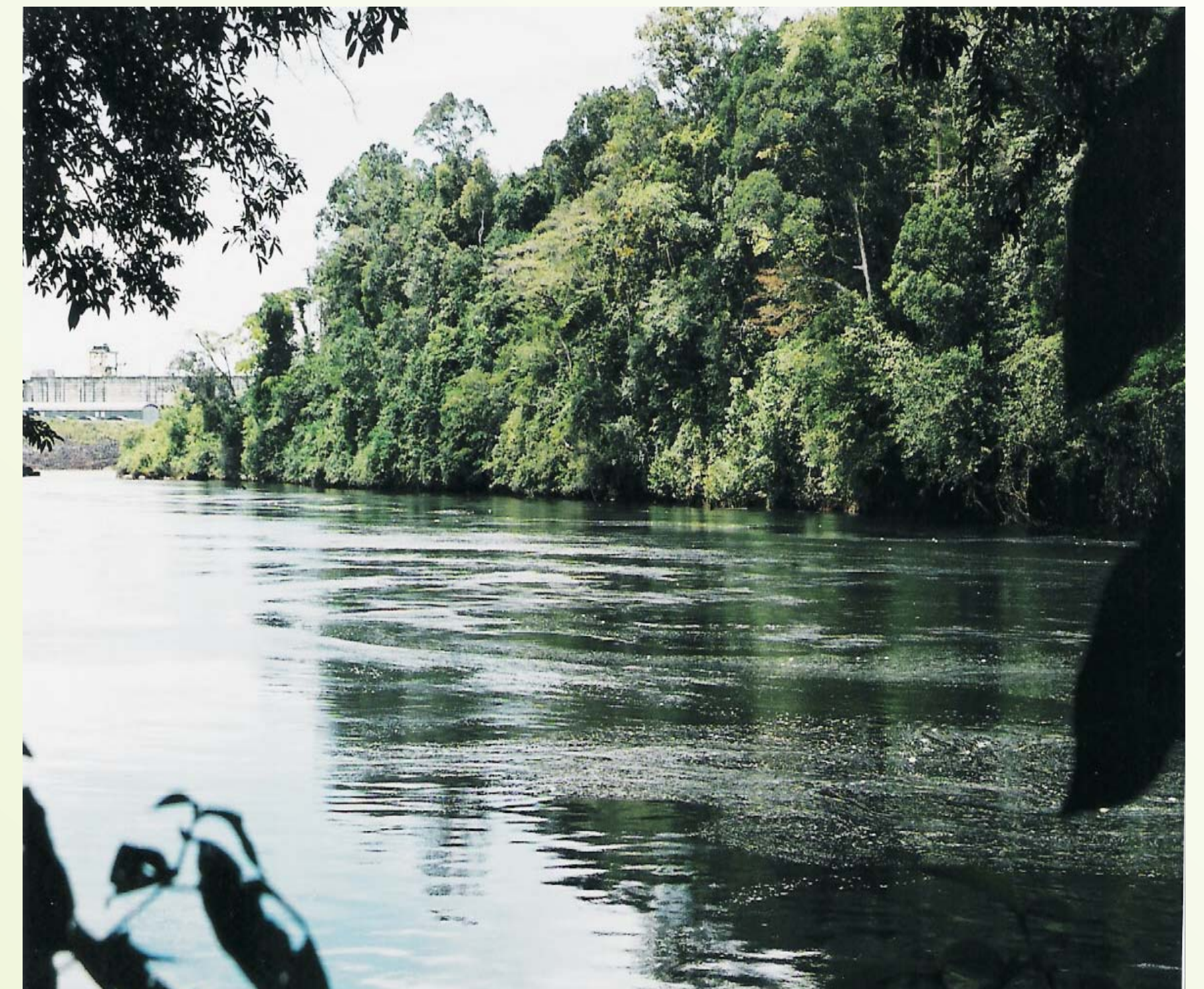
- Short flowering cycle (24-48h)
- Pollinated by nocturnal beetles
- Complex pollination mechanisms
- Spathe movement, floral rewards, resin, heat and odours



Monstera obliqua Miquel is a Neotropical understory hemiepiphyte vine growing near freshwater habitats (i.e. temporary ponds and river margins). Inflorescences are composed of **bisexual flowers**.

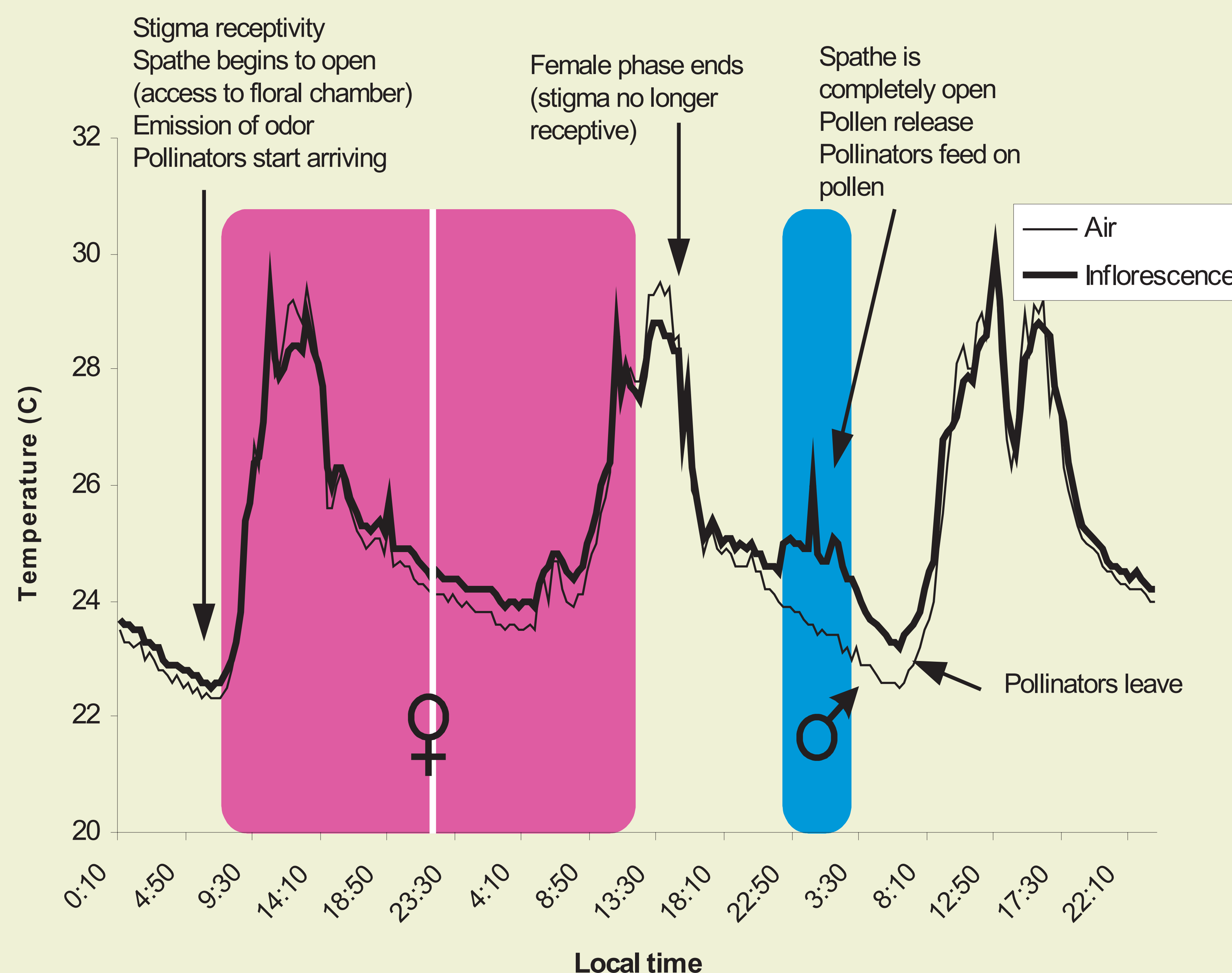
Objective: Describe the pollination biology of *M. obliqua*.

Study site: Petit-Saut dam, French Guiana (5°00'N, 53°00'W)



Experimental design:

We observed the flowering cycle of 20 inflorescences
We collected insects from 15 inflorescences
We bagged 15 inflorescences for tests of self-pollination
We measured the temperature of 5 inflorescences at 20 min intervals



Conclusion:

M. obliqua is unable to self-pollinate due to temporal separation of the sexes and *Colopterus amputatus*, a small (4-5 mm) nitidulidae, is the pollinator. The pollination process displays aspects typical of inflorescences of unisexual flowers such as: heat production and odour, the presence of a food reward (pollen), and the presence of a copulation chamber. Although inflorescences of bisexual flowers are more primitive, this study demonstrates that they can display complex pollination mechanisms and future research should explore to what extent this is linked to the pollinator and/or lineage.

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