

Nothing hidden, nothing hot — **the spadix works in the open, by daylight, for weeks**. Your job: mornings, a brush, patience.

THE CYCLE — PUBLIC, SLOW, ALL MORNING

Female phase	The spathe opens white and the female phase begins at once — every flower on the bare spadix has a receptive stigma, and there is no drop or shine to wait for (none is reported in this genus). It runs 3–4 days in the one Panama species timed closely, 6–8 days in the two Mexican species.
Male phase	Pollen arrives as pale, powdery ribbons draped along the spadix — unmissable. This phase is long: 7–8 days up to 24 by species, roughly three times the female phase . Stigmas are done once the ribbons show.
The hours	Everything runs in the morning . A strong sweet scent for about five hours after sunrise where it has been timed; the bees keep the same hours; nothing happens at night — no scent, no visitors, no heat ever reported.
After	The spathe greens as the show ends. Fruit took about 72 days in the one species measured — call it ten weeks.

WHAT YOU NEED

- Two plants, or two inflorescences opened days apart
 - Soft brush, or a fingertip
 - Small airtight tube
- Fridge space — see the pollen clock overleaf
 - Labels, and a morning routine
 - **No torch, no scalpel, no night shift**

READING THE INFLORESCENCE

Spathe fresh and white, spadix bare — no pollen anywhere	Female phase — this is the target . Receptive from the day it opens; work it each morning.
Powdery ribbons draped on the spadix	Male phase. Collect here; apply elsewhere . This spadix is a donor now, not a target.
Strong sweet smell in the morning	The plant advertising — it runs in both phases in at least one species. Read the phase off the pollen, never the smell .
Spathe turning green	Ageing — the working window is closing or closed.
Bees stripping pollen all morning	The wild system, working as measured — in the field the pollen thieves do most of the pollinating . Not a failure.
Berries on a bagged, untouched spadix	Not proof of anything — some species self by gravity, one is reported to set seed with no fertilisation at all. See overleaf.

THE METHOD

- 01 **Stagger your inflorescences**. The male phase is long — up to three weeks — so donors are easy; female windows are the scarce thing. Two plants, or inflorescences opened about a week apart.
- 02 **Pick the target**: the freshest spathe with a pollen-free spadix. It is receptive from day one — start immediately.
- 03 **Collect from a ribboned spadix**: brush or tap the pollen into a dry tube. Use it fresh, or bank it — this genus's pollen **keeps for months cold** (overleaf).
- 04 **Brush pollen over the whole spadix**, top to bottom — every flower is bisexual, so the stigmas are everywhere, not in a zone.
- 05 **Repeat on the following mornings** through the female window — three to eight days by species. Repeats cost nothing; the system is built for many visits.
- 06 **Label and wait about ten weeks**. In the field, bee-served plants set fruit in **100% of flowers** in two species — a well-made hand cross has every chance.

WILL ONE PLANT SELF? THE GENUS ANSWERS EVERY WAY — TEST YOURS

Bagged alone: *S. croatii* and *S. ortgiesii* set essentially nothing; *S. friedrichsthali* set 2.4% (though its own pollen works fine by hand); and *S. grandifolium* set 100% — it pollinates itself by gravity. One more species is reported to seed with no fertilisation at all.

No commercial peace lily has ever been tested. Bag one untouched inflorescence as your control, record what happens — that number does not exist in the literature.

Sources: Williams & Dressler 1976; Montalvo & Ackerman 1986; Díaz Jiménez et al. 2019 (Ecotropica), 2019 (Ann. Missouri Bot. Gard.), 2021; Henny 1978; Lewis et al. 1988; Zuluaga et al. 2015.

Full guide, with the evidence behind every line: aroidpedia.com/spathiphyllum-pollination

Everything on this side contradicts something you will read elsewhere. Each one changes what you actually do.

1 • THE ORCHID BEES ARE NOT THE WORKHORSES

The classic story – iridescent male euglossines collecting the perfume, orchid-fashion – is real, and it is **not who moves most of the pollen**. In the species counted hardest, **pollen-robbing stingless bees made 87% of visits** and set most of the seed: they work male spadices **40:1** over female ones, and the rare “mistake” landings on a female spadix do the pollinating.

Why you care: bees stripping your spadix are not spoiling the cross – robbery *is* the genus’s delivery service. Your brush is simply a more reliable thief.

2 • SCENT IS ADVERTISING, NOT INFORMATION

Both Mexican species emit **textbook euglossine-attractant chemistry** – and euglossines were under 10% of their visitors. In at least one species the scent runs in **both** phases; in another, planted in Old-World orchards, the same perfume moonlights as a commercial **fruit-fly lure**.

Why you care: perfume is advertising, not information. The only honest phase signal on this plant is the **pollen itself**: none yet means female phase, ribbons mean donor.

3 • BERRIES IN A BAG PROVE NOTHING

In this genus a bagged, untouched inflorescence can fruit **without any cross**: one species drops its own clotted pollen onto still-receptive stigmas by gravity, and another is reported – at second hand – to set seed **with no fertilisation at all**.

Why you care: fruit after your cross is not, by itself, proof the cross took. **Run a bagged no-pollen control beside every deliberate cross** – seedlings that match only the mother tell you what really happened.

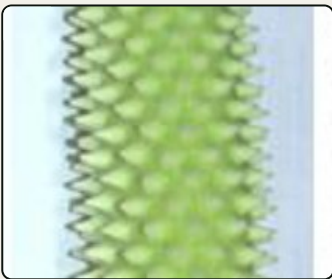
POLLEN – SIX MONTHS, COLD AND NOT TOO DRY

Fresh	80% germination in the one cultivar measured (‘Mauna Loa’)
Room temperature	Effectively dead within a month at every humidity tested
7 °C · 65% RH	Above 70% at three months; still 57% at 24 weeks – enough to cross plants that flower half a year apart
The odd part	Most pollen stores best bone-dry; this one wanted 65% humidity – refrigerate, but do not desiccate

THE NUMBERS THAT FRAME EVERYTHING

4 / 76 Species with a proper wild pollination study – the family’s best-watched bisexual genus, and still one in twenty. The peace lily itself is not among the four.	40 : 1 The pollen bees’ preference for male-phase spadices (<i>S. friedrichsthalii</i>) – the mistake-pollination system in a single ratio.	3× Male phase versus female, across every species timed. Donors are everywhere and last for weeks; receptive targets are the brief, precious thing.
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WHAT IT LOOKS LIKE



The target

Female phase (*S. ortgiesii*) – no pollen anywhere, receptive everywhere



The robbers at work

Bees stripping a male-phase spadix – the delivery service, mid-shift



The famous minority

A male euglossine at the styles – the 1976 story in the flesh, under 10% of visits



The prize

A natural hybrid (*S. croatii* × *S. ortgiesii*) – the genus crosses willingly