



These two genera are Old World (Paphs) & New World (Phrags) 'cousins'. Paphs flowers last 6-12 weeks. Phrags flowers last abt 2 weeks, but most bloom sequentially with many flowers on each spike. The two groups have very similar requirements, and are easily grown together. There are some minor differences, so it is necessary to define the sub-groups:

- P1** *Fairrieanum, insigne, helenae, villosum* and their hybrids, incl. complex hybrids (aka 'Bulldog' types).
- P2** Maudiae types: *Barbatum, callosum, sukhakulii, venustum, wardii* and their hybrids.
- P3** Brachypetalum *Bellatulum, concolor, niveum, godefroyae, leucochilum & thaianum*.
- P4** Parvisepalum *Armeniacum, delenatii, emersonii, hangianum, malipoense, micranthum*
- P5** Cochlopetalum Sequential multi-florals (*primulinum, chamberlainianum, liemieanum, etc.*)
- P6** Multi-Florals *Dayanum, haynaldianum, lowii, rothschildianum, sanderianum, etc.*
- P8** *Phragmipedium Caudatum, sargentianum, longifolium* & their hybrids
- P9** All other *Phragmipedium* species and their hybrids.

HUMIDITY:

40-60% relative humidity suits the slippers fine. This can be achieved with a humidity tray (pan with pebbles & 1/2" of water) when growing in the house.

LIGHT:

P1-P5 need low light, similar to Phalaenopsis (1,000-1,500 foot candles).

P6-P9 need higher light, similar to Cattleya (2,500-3,500 foot candles).

TEMPERATURE:

P1, P8 & P9 are intermediate = 55-90°F (13-32°C).

P2, P3, P5 & P6 prefer temperatures 5-10°F (3-6°C) warmer than the others.

P4: Look up each species. Some come from a warm & humid environment. Some need those conditions in summer, but require cool, bright & rather dry conditions in winter (*micranthum*).

In north/central NJ plants can be outdoors from Memorial Day through Oct 1-15 (depending on how cold

it gets at night).

WATERING:

- P3 group:** Need to dry out between waterings.
- P4 group:** Check each species, some vary seasonally.
- P1, 2, 5 & 6:** Do NOT let these dry out. Drench when watering. Water again when still moist. Cut back only slightly in Dec-Jan.
- P8:** Similar to P1, but wants even more water.
- P9:** These plants do best when standing permanently in a tray with 2-3" deep water.

FERTILIZER:

I use Peters 20:20:20 at slightly less than 1/2 dose every 2 weeks from Feb through October. Nov-Jan they only get a single application.

POTTING:

If the root crown (& roots) is visible, **the plant is too high in the pot**. The root crown (**blue line**) should be 3/8" below the surface of the potting mix (**red line**).

With heavy watering, the potting mix breaks down quickly. **Phrags** should be repotted every 12 months, and **Paphs** every 18-24 months, depending upon the condition of the potting mix.

- If you can push a finger into the potting mix, it is time to repot.
- You can repot at any time of the year, even if the plant is in bud or bloom (take care not to break the spike).



POTTING MIX:

You can use almost any mix (DON'T use ProMix). I use:

- Paphs < 3 1/2" pot: Spaghnum + fine bark & charcoal, in 10:4:2 ratio
- Paphs 3 1/2" & up: Waldor Paph mix (bark, charcoal, perlite & some coconut husk).
- Phrags: Same as for Paphs.

POTS:

I use exclusively plastic pots, as these hold moisture longer than clay pots. For Phrags, I usually use a relatively deep pot, and drill holes half way up the side to get air circulation in the upper half of the pot.

BUD INITIATION:

Requires 2-3 weeks with cooler night temperatures. If you grow outdoors in summer, this happens automatically in late September = blooms in February/March.