TERRESTRIAL ORCHIDS FOR SOUTH FLORIDA

preparation by John McLaughlin* and Joe Garofalo*

Orchids can be broadly categorized into three basic types depending on their growth characteristics: (1) epiphytic orchids survive attached to trees (or rocks - lithophytes) producing a sequence of shoots from a basal rootstock. (2) Climbing orchids also attach to trees, but form much longer stems and are therefore not as compact. (3) Less well known in cultivation are orchids that grow with their roots in the ground (terrestrial orchids), which do not produce aerial roots or long climbing stems. Many of this latter group such as the hyacinth orchid, Brassia tankervilliae, and the slipper orchid, Cypripedium spp., are found in warm to cool-temperate climates, and do not perform well as perennials in South Florida. Brassia is well adapted to shady locations in North Florida, but Cypripedium is best much farther north.

Another group of terrestrial orchids, the jewel orchids, are grown mainly for their attractively coppery-red reticulate venation. Outdoors it is therefore seen more often in cultivation. There are, however, tropical to sub-tropical perennials in South Florida. Cypripedium spp. is best much farther north.

One of 30 members of the genus Phaius. They produce large, thin pleated leaves, usually few in number, which grow to about 3' in height. The inflorescence arises from a pseudobulb (a short, fleshy shoot found in most orchids) or rhizome, and consists of an erect four foot raceme of showy, fragrant flowers. Individual flowers of the nun's orchid are large, up to 5' across, rusty brown with a purplish lip. Flowers are believed to be initiated in response to short daylength, mainly late Winter and Spring. Each inflorescence opens over a period of up to six weeks. Nun's orchid will withstand temperatures to 35°F, but are severely damaged below 32°F.

To grow this orchid in the landscape, choose a location that does not routinely flood, with light shade during the hottest part of the day. Allow room for development of a vigorous root system. Organic matter (peat, well rotted compost and partially decomposed pine bark) should be worked into the soil to about 60-70%. Add perlite and sand to improve drainage. Alternative, you can use a commercial potting mix. Soil pH should be in the range of 5.5 - 6.3. Maintain soil moisture at an even level, allowing the soil to dry out. (Keep the area immediately next to the stem clear of mulch.) New racemes are produced from basal leaf axils. The bamboo orchid grows best in full sun, with at most some light midday shade. Use a rich, free draining, organic soil as described above for Nun's Orchid. Provide support by loosely tying several stems together with a metal stake. Maintain a 3'-covering of mulch at all times, and do not allow the soil to dry out. (Keep the area immediately next to the stem clear of mulch.) In the absence of rainfall, water should be provided every 3 days. Use a slow release or organic fertilizer every 6-8 weeks.

Bamboo orchid can be propagated by division of established beds, cutting the stems back by half before replanting. Alternatively, the side shoots that develop at the base of the inflorescence can be used. These side shoots should be removed when the base forms a firm swelling, then rooted in damp sand.

Spathoglottis spp.

A genus of at least 40 species of slow - moderate growing terrestrial orchids well adapted, palm-like foliage which arises from one of many large pseudobulbs. Slender stems, up to 20'' tall, are produced from basal leaf axils. Each bears a raceme of small, non-fragrant flowers that can be white through various shades of yellow, pink and purple. Each inflorescence lasts 2-3 months, with individual flowers opening from the top down. New racemes are produced year round in a warm climate like ours.

When night temperatures fall below 60°F expect a reduction in growth and flowering. Below 40°F plants may lose foliage and go dormant if exposed for more than a day. Spathoglottis will withstand a few hours at 30°F with loss of foliage, but more prolonged exposure or lower temperatures can cause severe damage.

In the landscape, Spathoglottis needs a site that is not prone to flood, receives full sun and possesses excellent drainage. As with Nun's Orchid, allow space for a deep and extensive root development. Enrich the site to a depth of 10-12" and use a soil rich in organic matter. A slow release fertilizer can also be incorporated into the soil at a rate of ½ lb per cu ft. It is important to install each plant at or slightly above the soil line since Spathoglottis is prone to rot if planted too deep. Place mulch and a light

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application of a slow release or organic fertilizer on the surface.

It is critical not to over water, and the top 1” of soil should be allowed to dry out between waterings. Once a month apply liquid compost, and every 2-3 months a slow release or organic fertilizer.

There are a number of Spathoglottis species/cultivars available, but the nomenclature can be confusing. A few of the more common are mentioned below. These may be available as container grown plants, or as individual pseudobulbs ready for potting.

S. plicata is the most widely available species. It produces attractive pleated (plicate) foliage and a receme of purple flowers on an 18” stem. In areas where these plants have naturalized (e.g., in Hawaii) they often revert to a wild form, becoming self-pollinating with the flowers cleistogamous (never opening), and therefore of less landscape value.

The cv ‘Grapeaid’ is a compact plant with striking magenta flowers. Hybridization of S. plicata and S. aurea (a yellow-flowered species) has produced the ‘Primrose’ hybrids with mauve to pink flowers. More common is the pink/mauve Philippine variety ‘S. Parsonsii’ and the yellow to orange ‘S. Peach’. Another Philippine species, S. vanoverberghei, has impressive golden yellow blooms from Winter through Spring. Two species from Thailand produce yellow flowers: S. affinis (yellow/golden), and S. eburnae (creamy yellow), and go dormant, losing their foliage, after flowering.

SOIL, DISEASE, AND INSECT PROBLEMS.

With nun orchids growing on calcareous soils a magnesium deficiency can develop, and on sandy soils nematodes can be a problem. With all the terrestrial orchids, thrips, aphids, scales, and spider mites, including broad mites, can be occasional problems, but are rarely serious.

Disease is of more potential concern, particularly fungal and/or bacterial crown and root rots. Other disease problems include stem rots, rust, and petal blight. Anthracnose, and to a lesser extent, other leaf spotting diseases also may develop, particularly on Phaius and Spathoglottis. To reduce disease incidence water at times when moisture can dry quickly from foliage and blooms, be careful not to over water, and provide adequate exposure to sun and good air circulation. If pesticide use seems necessary, contact the Extension office for current recommendations.

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