



Cultural Requirements of Vanda

By Robert F. Fuchs

The most popular vandaceous orchids fall into three genera: *Vanda* (VAN-da), *Ascocentrum* (ass-koh—SEN-trum), and *Ascocenda* (ass-koh-SEN-da), an intergeneric hybrid genus between *Vanda* and *Ascocentrum*. *Euanthe sandariana*, the species from which most of our common vandaceous hybrids originated, was originally classified as a *Vanda*. It has similar cultural requirements.

All vandaceous orchids are monopodial: growth is from the tip, or crown of the plant. Lateral buds are present on the main stem, and these may develop into plantlets (keikis) when the plant has attained sufficient size and strength to support them. In accordance with the growth habit of the main stem, each keiki will also continue to grow indefinitely from its tip.



The bloom spikes of vandaceous orchids are produced from the axils of the leaves, which are arranged in two rows. Blooms, which vary in size up to 6 inches, appear in a vast spectrum of colors, and may be clear or marked with checkered or mosaic patterns (tessellations) or spots. The frequent flowering habit of vandaceous hybrids makes them desirable.

Based on their leaf shape, vandaceous orchids can be classified into three groups which have different cultural needs:

- Strap-leaved plants have flat, leathery leaves. This category includes several *Vanda* species—*coerulea*, *dearei*, *luzonica*, *merrilli*, *tricolor* and *sanderiana* (syn. *Euanthe sandariana*) – as well as ascocentrums.
- Terete vandas have tapering, pencil-shaped leaves which are circular in cross section. The most common species in this group are *Vanda teres* and *Vanda hookeriana*.
- Semi-teretes are hybrid combinations with some terete species in their background. Their leaves are somewhat pencil-shaped and tapered but not always completely round in cross section.

Temperature and Humidity-Vandaceous orchids thrive when the temperature during the day is 65°F or higher and night temperatures are not lower than 55°F. Warm temperatures and bright light promote active growth year-round. These orchids tolerate long periods of hot weather and short periods of cold. Some vandaceous plants can withstand temperatures as low as 38°F for two to three hours, suffering damage to root tips and flower buds, but not the plant itself. Humidity around 80 percent is appropriate on hot sunny days.

Light -Vandaceous orchids require strong light. Provide full morning sun when possible. Semi-terete and terete types can be grown in full sun all day in tropical areas where the humidity is high. Strap-leaved plants need additional protection during the hottest part of the day.

Air Movement -In the greenhouse, under summer sun, vigorous air movement from a fan is important to keep leaf temperature down and avoid cell damage from heat. For more open conditions – outdoors, in shade houses or lath houses – the natural breeze will balance light, temperature and moisture for healthy growth and flowering. It is important to restrict air movement under colder temperatures.

Watering-A high daytime humidity is essential, especially on sunny days, and vandaceous plants outdoors may need watering and misting several times daily during the growing season when the sun is bright. Somewhat less watering is required indoors, although on sunny days plants should be misted once or twice.

Limit watering during cooler weather, on cloudy days or after repotting.

Fertilizing-Vandaceous orchids require copious quantities of nutrients. Give plants in the greenhouse a solution of a complete fertilizer, such as 20-20-20, weekly during the growing season. Outdoor plants require a heavier concentration of the same fertilizer. During winter, when growth is slower, apply the same proportions every two weeks rather than weekly. In addition, substitute a fertilizer high in phosphorus (10-30-20) at every third feeding. Further, vitamin and hormone solutions may be added to the fertilizer once a month. To remove built-up salts, flush plants with plain water once a month. Whatever feeding plan is followed, it is important to be faithful to the regimen established.

Potting-The best months for potting or repotting vandaceous plants are April and May. Vandaceous plants grow well in any porous medium. Tree fern chunks, coarse bark and charcoal are good choices. Wooden baskets are preferred, but pots can be used if drainage is provided. Suspend plants so that the roots hang freely. Outdoors, grow vandaceous plants in large clay pots or in beds filled with lava rock, tree fern chunks or charcoal. Maintain recently potted specimens under slightly more shaded conditions until they are established.

Because vandaceous plants have large aerial roots, they do not like to be disturbed by removal from their container. Plants may be moved from smaller to larger baskets. Soak the roots briefly in water until they become pliable, then coil roots around the existing smaller basket and place it in the larger basket. Add a few large pieces of charcoal to hold the smaller basket securely within the larger one. This method minimizes shock to the plant and permits continued, uninterrupted growth.

There are occasions, however, when disturbing the roots cannot be avoided; for example a rotten basket, or repotting of plants grown in pots. Soak in water, remove as carefully as possible, and place in a solution of vitamins/hormones and fungicide, and allow to soak for five minutes. Then pot in a new basket.

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