

Vanda sanderiana (Rchb. f.) Schlechter

SYNONYMS: *Euanthe sanderiana* , *Esmeralda sanderiana* Rchb. f.

ORIGIN/HABITAT: The Philippine Islands, where it is endemic to Mindanao Island in the provinces of Davao, Cotabato, and Zamboanga. Plants are normally found on the trunks of dipterocarp trees at low elevations, usually below 1650 ft. (500 m). This species has been over-collected and is considered rare in nature. However, plants are available from the many improved, line-bred strains in cultivation.

CLIMATE: Station #98754, Davao, Philippines, Lat. 7.1N, Long. 125.6E, at 88 ft. (27 m). Temperatures are calculated for an elevation of 1000 ft. (310 m), resulting in probable extremes of 94F (34C) and 62F (17C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	84	85	87	88	87	85	85	85	85	86	86	85
F AVG MIN	69	69	69	70	71	70	70	70	70	70	70	69
DIURNAL RANGE	15	16	18	18	16	15	15	15	15	16	16	16
RAIN/INCHES	4.8	4.5	5.2	5.8	9.2	9.1	6.5	6.5	6.7	7.9	5.3	6.1
HUMIDITY/%	81	82	78	79	82	83	84	83	83	82	82	82
BLOOM SEASON	**	**	*	*	*	*	**	**	***	***	***	**
DAYS CLR @8AM	5	7	9	9	6	4	5	4	5	7	6	6
DAYS CLR @2PM	3	1	3	4	2	2	3	2	2	2	2	2
RAIN/MM	122	114	132	147	234	231	165	165	170	201	135	155
C AVG MAX	28.9	29.4	30.6	31.1	30.6	29.6	29.5	29.4	29.4	30.0	30.0	29.4
C AVG MIN	20.6	20.6	20.6	21.1	21.7	21.1	21.1	21.1	21.1	21.1	21.1	20.6
DIURNAL RANGE	8.3	8.8	10.0	10.0	8.9	8.5	8.4	8.3	8.3	8.9	8.9	8.8
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

Cultural Recommendations:

The following recommendations are based on averages in the habitat. They may be used as a guide for newly acquired plants whose requirements are unknown, or for plants that are not growing or flowering as well as they should. Reports from growers are included when they indicate success with conditions in cultivation that are outside the range found in the habitat.

LIGHT: 3000-4000 fc. Plants require very bright light, but direct sunlight should be avoided. Strong air movement should be provided at all times.

TEMPERATURES: Throughout the year, days average 84-88F (29-31C), and nights average 69-71F (21-22C), with a diurnal range of 15-18F (8-10C). The narrow seasonal range with extreme temperatures that are only a few degrees different than the averages indicate that plants may not tolerate wide temperature fluctuations.

HUMIDITY: 80-85% year-round.

WATER: Rainfall is moderate to heavy all year. Cultivated plants should be kept moist with only slight drying allowed between waterings.

FERTILIZER: A balanced fertilizer should be mixed at 1/4-1/2 recommended strength. Plants benefit from weekly fertilizer applications during periods of active growth. Many growers use a fertilizer with lower nitrogen and higher phosphate in autumn. This improves blooming the next season and encourages new growth to fully mature. The medium should be leached every few weeks to prevent salt buildup, especially if your water supply is hard or if fertilizer is being applied heavily. To flush a pot, plants should be watered normally to dissolve any accumulated salts. An hour or so later, the medium should be flushed with water equal to about twice the volume of the pot. Year-round leaching is important in areas with heavily mineralized water.

REST PERIOD: Growing temperatures should be maintained year-round. Water may be reduced slightly in winter, especially if your plant is cultivated in the temperate latitudes where light may be low and days are short. Plants should never dry out completely, however. If water is reduced in winter, then fertilizer should be reduced until water is increased in spring.

GROWING MEDIA: Plants are usually grown in hanging pots or slatted wooden baskets filled with a very open, fast draining medium. Some plants are grown with only enough chunky medium, such as charcoal or large cork chips, to anchor the plant until it becomes established. The roots should be allowed to grow and hang down as far as they choose and they should not be trimmed to make things look neat. Growers indicate that anything more than minimum root trimming will set the plant back 2-3 years. Continuous air movement around the roots is very important to plant health.

MISCELLANEOUS NOTES: The bloom season shown in the climate table is based on cultivation report. In nature, plants bloom in autumn. Although these plants grow to be very large, it is not unusual for them to bloom when they are only 8-12 in. (20-30 cm) tall with 4-5 sets of leaves.

Plant and Flower Information:

PLANT SIZE AND TYPE: A large monopodial epiphyte.

STEM: Plants often measure 39 in. (100 cm) long by 24-31 in. (60-80 cm) wide. The stem is usually solitary, but sometimes several branches are produced near the base.

LEAVES: Numerous. Leaves, which are closely arranged, curved, strap-shaped, and distichous, are 12-16 in. (30-40 cm) long. They are leathery with unequally notched tips. The oldest leaves are deciduous after several years.

INFLORESCENCE: To 12 in. (30 cm) long. The stout, erect or ascending inflorescence emerges at the base of the leaves.

FLOWERS: 4-10 per inflorescence. Blossoms are large, flat opening or somewhat reflexed along the edges, long lasting, and fragrant. Flowers may be attractively spaced or somewhat crowded on the inflorescence. Flowers vary in size, but they are usually 3.5-4.5 in. (9-11 cm) wide. The broad, normally flat sepals and petals have rounded tips. The blossom's dorsal sepal is a delicate rose color suffused with white, and the somewhat larger lateral sepals are tawny-yellow with prominent brownish-red veins arranged in a net-like pattern. The smaller petals are similar to the dorsal sepal except for a tawny yellow blotch with red spots on the part adjacent to the lateral sepals. The rather small, fleshy, concave lip is about 1 in. (2.5 cm) long. It is variable in color but is usually a dull tawny-yellow streaked with red on the inner side. The buff-yellow column is very short. An alba strain has white flowers stained with green. Vegetatively, the plant resembles many Vandas, but when in bloom, it is easy to identify.

HYBRIDIZING NOTES: Chromosome count is $n = 19$ and $2n = 38$. *Vanda sanderiana* has been used extensively for hybridizing. In fact, it is the dominant parent in most of the modern intrageneric *Vanda* hybrids as well as intergeneric hybrids with such genera such as *Renanthera*, *Vandopsis*, *Arachnis*, *Ascocentrum*, etc.

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