

Vanda testacea (Lindley) Rchb. f.

SYNONYMS: *Aerides testacea* Lindley, *Aerides wightiana* Lindley, *Vanda parviflora* Lindley, *Vanda vitellina* Kränzlin.

ORIGIN/HABITAT: Widespread in India from Ceylon to Himachal Pradesh and all through the Himalayas eastward to Manipur. Distribution continues eastward through Burma into southern Yunnan Province in China and into the mountains of northern Thailand. In northern India, collections have been made in Garhwal near Dehra Dun as well as at several other locations, in Kumaun near Pithoragarh, and in Himachal Pradesh near Nahan. Plants have been found in eastern Nepal at about 1500 ft. (460 m). In eastern India, collections have occurred in Sikkim, Meghalaya, Manipur, Chota Nagpur, and in western and southern India. Plants have been found in Konkan, Hassan, West Ghats, and all over southern peninsular India. Throughout southern and eastern India, plants are found in the tropical and subtropical zones at 1000-3950 ft. (300-1200 m). In Thailand, collections have been made near Chiangmai on Doi Suthep, near Mae Hong Song, near Pang Mapha at 2600 ft. (800 m), and near Huay Mae Surin.

CLIMATE: Station #42398, Baghdogra/Shiliguri, India, Lat. 26.7N, Long. 88.3E, at 412 ft. (126 m). Temperatures are calculated for an elevation of 2600 ft. (800 m), resulting in probable extremes of 97F (36C) and 29F (-2C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	67	70	78	83	83	82	82	82	81	80	75	70
F AVG MIN	43	47	53	61	66	69	70	70	69	63	53	46
DIURNAL RANGE	24	23	25	22	17	13	12	12	12	17	22	24
RAIN/INCHES	0.3	0.7	1.3	3.7	11.8	25.9	32.2	25.3	21.2	5.6	0.5	0.2
HUMIDITY/%	73	68	57	58	74	84	86	85	85	79	75	76
DAYS CLR @ 7AM	21	18	15	11	5	0	1	1	4	13	23	19
DAYS CLR @ 1PM	23	16	16	11	2	2	0	1	2	10	21	18
RAIN/MM	8	18	33	94	300	658	818	643	538	142	13	5
C AVG MAX	19.3	21.1	25.6	28.3	28.3	27.8	27.8	27.8	27.2	26.7	23.9	21.1
C AVG MIN	6.0	8.3	11.7	16.1	18.9	20.6	21.1	21.1	20.6	17.2	11.7	7.8
DIURNAL RANGE	13.3	12.8	13.9	12.2	9.4	7.2	6.7	6.7	6.6	9.5	12.2	13.3
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

Cultural Recommendations:

LIGHT: 3500-4500 fc. Plants require bright light but may need some protection from direct midday sun. In the habitat, heavy summer cloud cover dramatically reduces light. This suggests that some shading is appropriate for cultivated plants at midday, especially in summer. Strong air movement should be provided at all times.

TEMPERATURES: Summer days average 82F (28C), and nights average 69-70F (21C), with a diurnal range of 12-13F (7C).

HUMIDITY: Near 85% in summer and autumn. Average humidity then declines slowly to 55-60% for about 2 months in early spring before increasing rapidly with the start of the summer monsoon.

WATER: Rainfall in the habitat is very heavy from late spring into autumn. Monthly averages then decline abruptly and stay low during the very dry, 3-4 month dry season that lasts until early spring. Cultivated plants need frequent watering while actively growing, but the roots must dry rapidly after watering, and conditions around the roots should never become stale or soggy. Water should be reduced after new growths have matured in autumn.

FERTILIZER: 1/4-1/2 recommended strength, applied weekly when plants are actively growing. Many growers use a high-nitrogen fertilizer from spring to midsummer, then switch to one high in phosphates in late summer and autumn.

REST PERIOD: Winter days average 67-70F (19-21C), and nights average 43-47F (6-8C), with a diurnal range of 23-24F (13C). Conditions in the habitat may drop below freezing, but cultivated plants are probably healthier if not exposed to such extreme conditions. Plants should never be watered if cold temperatures are expected. If temperatures are below freezing, a plant is less likely to suffer damage if it is dry at the time. Rainfall in the habitat is low in winter, but additional moisture often is available from heavy dew and late-night mist. Water should be dramatically reduced for cultivated plants in winter, but they should not stay dry for very long. Occasional early morning mistings between infrequent light waterings should provide enough moisture in most growing areas. Fertilizer should be eliminated until new growth starts and heavier watering is resumed in spring. In the habitat, the brightest conditions occur during the clear weather of the winter dry season. In winter, cultivated plants need as much light as possible, short of burning the foliage.

GROWING MEDIA: Plants are usually grown in hanging pots or slatted wooden baskets filled with a very open, fast-draining medium. Some are grown with only enough open, chunky medium, such as charcoal or large cork chips, to anchor the plant until it attaches to the container. Many growers prefer relatively large chunks of tree-fern fiber or coarse fir bark mixed liberally with broken crock and/or charcoal. Others successfully use only broken crock, cracked brick, chunks of volcanic pumice, vermiculite, or even coarse sand. Plants are sometimes placed in an empty clay pot and allowed to grow with nothing around the roots but air. Plants grown in this manner should be tied or wedged firmly in place until new root growth has anchored them to the side of the pot. However the plants are grown, their roots need to grow and hang down as far as they choose. They should never be trimmed to make things look neat. Vanda growers report that anything more than minimum root trimming may set the plant back 2-3 years. Continuous air movement around the roots is critically important.

MISCELLANEOUS NOTES: The bloom season shown in the climate table is based on cultivation records.

Plant and Flower Information:

PLANT SIZE AND TYPE: A 4-12 in. (10-30 cm) monopodial epiphyte.

STEM: 4-12 in. (10-30 cm) long. The thick stem is enclosed by distichous, overlapping, longitudinally folded sheaths located at the base of each leaf. These sheaths are persistent, continuing to cover the lower part of the stem after the older leaves have fallen.

LEAVES: Up to 3.0-4.3 in. (7.5-11.0 cm) long by 0.5 in. (1.2 cm) wide. Only a few distichously arranged, leathery leaves are carried toward the apex of each stem. They are linear-oblong to lanceolate with unequal blunt bilobes at the apex. The longitudinal folds along the midvein result in a channeled top surface and strongly keeled lower side.

INFLORESCENCE: 3.0-4.3 in. (7.5-11.0 cm) long. Approximately as long as the leaves. The erect flower spikes emerge from the stem below the lowest leaves. Flowers are produced in a rather loose raceme on the upper half of the spike, each is carried on a long, slender pedicellate ovary.

FLOWERS: 6-10 per inflorescence. Flowers have yellow sepals and petals and a lavender or pink to purple lip and spur. They are rather small, measuring up to 0.6 in. (1.5 cm) across, with spreading, somewhat spoon-shaped sepals and petals which have narrow bases, rounded tips. Sepals are up to 0.3 in. (0.8 cm) long with the obliquely spreading lateral sepals being a little shorter but wider than the dorsal sepal. Each spreading, somewhat sickle-shaped petal is up to 0.3 in. (0.8 cm) long and may be twisted about 90 near the bases so that the front surface faces more or less downward. The 3-lobed lip, which is attached to the foot of the column, is about 0.3 in. (0.8 cm) long, and has erect, broadly oblong lateral lobes with broadly rounded tips. The fleshy, tongue-shaped midlobe projects forward for most of its length but bends downward near the somewhat widened, broadly rounded apex. The apical margin of the midlobe is finely fringed with short, irregularly spaced notches. The spur at the base of the lip is slender, conical, about half as long as the lip, and is hairy on the inside. The thick, stout column is about 0.1 in. (0.3 cm) long and has a very short foot.

HYBRIDIZING NOTES: Chromosome count is $n = 19$ and $2n = 38$.

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PHOTOS/DRAWINGS: Dassanayake, M., and E. Fosberg. 1981. Flora of Ceylon. A revised handbook. vol. 2. Oxford and IBH Publishing Co., New Delhi, India. (Drawing)

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