

Vanda alpina (Lindley) Lindley

SYNONYMS: *Luisia alpina* Lindley, *Trudelia alpina* (Lindley) Garay, *Stauroopsis alpina* (Lindley) Tang & Wang.

ORIGIN/HABITAT: The Himalayan Region from Nepal to Bhutan including the Khasia Hills in northeast India. Plants grow at 3000-6000 ft. (910-1830 m) in regions where frost is not uncommon in winter, and occasionally even snow occurs.

CLIMATE: Station #42516, Shillong, India, Lat. 25.6N, Long. 91.9E, at 4921 ft. (1500 m). The record high is 87F (31C), and the record low is 24F (-4C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	60	63	71	75	75	75	75	75	74	71	66	62
F AVG MIN	39	44	51	57	60	63	65	64	62	55	46	40
DIURNAL RANGE	21	19	20	18	15	12	10	11	12	16	20	22
RAIN/INCHES	0.6	1.1	2.3	5.4	12.8	21.5	15.6	13.2	12.6	8.7	1.4	0.2
HUMIDITY/%	74	64	51	56	73	83	82	83	84	80	75	75
BLOOM SEASON			*	*	*	*		*		*		
DAYS CLR	N/A											
RAIN/MM	15	29	59	136	325	545	395	335	319	220	35	6
C AVG MAX	15.6	17.2	21.7	23.9	23.9	23.9	23.9	23.9	23.3	21.7	18.9	16.7
C AVG MIN	3.9	6.7	10.6	13.9	15.6	17.2	18.3	17.8	16.7	12.8	7.8	4.4
DIURNAL RANGE	11.7	10.5	11.1	10.0	8.3	6.7	5.6	6.1	6.6	8.9	11.1	12.3
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

Cultural Recommendations:

LIGHT: 3000-4500 fc. Plants need bright light but may need protection from direct midday sun. Strong air movement should be provided at all times.

TEMPERATURES: Summer days average 75F (24C), nights average 63-65F (17-18C), and the diurnal range is 10-12F (6-7C).

HUMIDITY: 80-85% from summer to early autumn. Averages drop to 70-75% in late autumn and early winter, then drop further to 50-55% at the end of the dry season in late winter and early spring.

WATER: Rainfall is very heavy during the growing season from midspring to early autumn. Monthly averages drop rather rapidly to the 3-4 month winter dry season. During the early part of the dry season, humidity remains high enough and the daily temperature range is large enough so that heavy dew is common. Cultivated plants should be watered often while actively growing, but their roots must be allowed to dry out between waterings. Conditions around the roots should remain well aerated, and the medium never be allowed to become stale or soggy. Water should be gradually reduced after new growth matures 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 60-63F (16-17C), nights average 39-44F (4-7C), and the diurnal range is 19-22F (11-12C). Rainfall is low for 3-4 months in winter, but during most of this time, considerable additional moisture is available from frequent heavy deposits of dew. Water should be reduced for cultivated plants, allowing them to dry out between waterings. They should not remain completely dry for long periods of time, however. Fairly regular light mistings between waterings given every 3-4 weeks should provide sufficient moisture in most growing areas during winter. Water should be increased if the leaves start to shrivel and wrinkle or show other signs of stress. Fertilizer should be reduced or eliminated until growth starts and 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 are grown with only enough open chunky medium, such as charcoal, wine corks, or large cork chips, to anchor the plant until it becomes established. The roots should grow and hang down as far as they choose and should not be trimmed to make things look neat. Growers indicate that anything more than minimum root trimming can set the plant back 2-3 years. Good air movement around the roots at all times seems to be very important.

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

Plant and Flower Information:

PLANT SIZE AND TYPE: Up to 7 in. (18 cm) tall. *Vanda alpina* is a dwarfish, densely leafy monopodial epiphyte.

STEM: Up to 7 in. (18 cm) long. The rather thick stem is completely enclosed by the distichous, overlapping bases of leaves.

LEAVES: 4-5 in. (10-13 cm) long by about 0.5 in. (1.2 cm) wide. The thickly leathery leaves are linear to strap-shaped and are typically horizontal or down-curving. They are prominently and unequally bilobed at the tip.

INFLORESCENCE: Very short. The flower spike emerges from the base of the leaves and is distinctly jointed, often somewhat zigzag.

FLOWERS: 1-4 per inflorescence. . The nodding, long-lived flowers are faintly fragrant, waxy, and about 1.0-1.5 in. (2.5-3.8 cm) across. Sepals and petals are pale yellow-green to almost emerald-green. The midlobe of the lip is marked with longitudinal stripes of black-purple and pale yellow and is usually green along the margins. The lateral lobes of the lip are black-purple on the inside and pale yellow or greenish yellow on the outside. The sepals and petals are narrow and curve inward. The dorsal sepal is egg- to spoon-shaped, bluntly tipped, and up to 0.5 in. (1.3 cm) long by 0.2 in. (0.5 cm) wide. The lateral sepals are egg-shaped to sickle-shaped and are about the same size as the dorsal sepal. The petals are oblong-elliptic, bluntly pointed at the tip, and 0.4-0.5 in. (1.0-1.2 cm) long by 0.2 in. (0.4 cm) wide. The fleshy lip, which lacks a spur but is saccate at the base, is up to 0.5 in. (1.2 cm) long by 0.2 in. (0.6 cm) wide. It is 3-lobed with erect, somewhat concave, triangular lateral lobes and an egg-shaped midlobe that is slightly reflexed, rather heart-shaped at the base, and has a pair of hornlike tendrils at the apex. The short, semiterete column is about 0.2 in. (0.5 cm) long.

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

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