

## ***Vanda cristata*** Wall. ex Lindl.

**SYNONYMS:** *Aerides cristata* (Wallich ex Lindley) Wallich, *Trudelia cristata* (Wallich ex Lindley) Senghas, *Luisia striata* (Rchb. f.) Kränzlin

**ORIGIN/HABITAT:** The Himalayan region across northern India eastward from Dehradun and Mussourie to Sikkim and Bhutan at elevations up to 4250 ft. (1300 m). Plants have also been found in central and eastern Nepal at 2000-7000 ft. (610-2135 m), and distribution is reported to extend northward into Tibet.

**CLIMATE:** Station #42289, Katmandu, Nepal, Lat. 27.7N, Long. 85.4E, at 4223 ft. (1287 m). The record high is 99F (37C), and the record low is 27F (-3C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	65	68	77	84	85	85	84	83	83	80	73	66
F AVG MIN	36	40	45	53	60	67	69	68	66	56	46	38
DIURNAL RANGE	29	28	32	31	25	18	15	15	17	24	27	28
RAIN/INCHES	0.6	1.6	0.9	2.3	4.8	9.7	14.7	13.6	6.1	1.5	0.3	0.1
HUMIDITY/%	79	79	60	53	65	75	83	84	83	84	85	83
BLOOM SEASON		*	**	***	***	***	*	*	*			*
DAYS CLR @ 6PM	25	15	10	14	12	3	0	1	6	11	21	19
RAIN/MM	15	41	23	58	122	246	373	345	155	38	8	3
C AVG MAX	18.3	20.0	25.0	28.9	29.4	29.4	28.9	28.3	28.3	26.7	22.8	18.9
C AVG MIN	2.2	4.4	7.2	11.7	15.6	19.4	20.6	20.0	18.9	13.3	7.8	3.3
DIURNAL RANGE	16.1	15.6	17.8	17.2	13.8	10.0	8.3	8.3	9.4	13.4	15.0	15.6
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 83-85F (28-29C), and nights average 67-69F (19-21C), with a diurnal range of 15-18F (8-10C). The range in habitat elevation indicates that plants should adapt to temperatures as much as 6-8F (3-4C) warmer or cooler than indicated in the preceding climate table.

**HUMIDITY:** 80-85% 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 rest period 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 65-68F (18-20C), and nights average 36-40F (2-4C), with a diurnal range of 28-29F (16C). Conditions in the habitat often drop below freezing, particularly at higher elevations. Cultivated plants are probably healthier if not exposed to such extreme conditions, however, and 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 remain completely 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, 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:** An 8 in. (20 cm) monopodial epiphyte.

**STEM:** Up to 8 in. (20 cm) long. The stout, densely leafy stem is covered by distichous, overlapping, longitudinally folded, leaf-bearing sheaths on the upper part of the stem with the lower portions covered by old, leafless sheaths.

**LEAVES:** 3-6 in. (7-15 cm) long by 0.4-0.6 in. (1.0-1.5 cm) wide. Numerous narrowly oblong or linear to strap-shaped leaves are distichously arranged on each stem. They are rigidly leathery, horizontally spreading or arching slightly downward, longitudinally folded along the midvein so that they are channeled on the top surface and keeled on the lower, blunt with 3 distinct, irregular teeth at the apex, and slightly dilated at the base.

**INFLORESCENCE:** Usually shorter than the leaves. The erect flower spikes emerge at the base of the leaves on the upper part of the stem. More than one inflorescence may be produced simultaneously by each stem. Flowers are carried on rather long, twisted, 6-ribbed pedicellate ovaries. .

**FLOWERS:** 2-6 per inflorescence. The fragrant, waxy blossoms are about 2 in. (5 cm) across, long-lived, and rather variable in color. The sepals and petals are mostly yellow-green but may sometimes be almost cream-yellow. The lip is green underneath, but on the upper side the lateral lobes are dark blood-red and the midlobe is dark, tawny-yellow marked with blood-red, longitudinal, irregular stripes and spots. The column is white. The rather cupped flowers have oblong to spoon-shaped sepals and rather sickle-shaped linear-oblong petals that curve inward along their length. The dorsal sepal is about 1.1 in. (2.8 cm) long. The lateral sepals are a bit smaller, and the petals are about the same length as the sepals but a little narrower. The fleshy lip is 1.4 in. (3.3 cm) long, has a pair of small, erect, blunt, almost kidney-shaped lateral lobes at the base and a large wedge-shaped to egg-shaped apical lobe that is divided into 2 widely diverging oblong lobes at the apex with a hornlike, fleshy beak that is directed downward a little behind the apex. There is a triangular or cone-shaped spur at the base that is about 0.2 in. (0.6 cm) long. The short, stout column is about 0.2 in. (0.6 cm) long.

**HYBRIDIZING NOTES:** Chromosome count is  $2n = 38$  and  $2n = 76$ .

**REFERENCES:** These cultural notes are written by Charles and Margaret Baker  
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