

Vanda dearei Rchb. f.

ORIGIN/HABITAT: Borneo. Plants grow in lowland forests and rocky places between sea level and 1000 ft. (0-300 m) in Kalimantan, Sabah, and Sarawak. Collections are reported from Kalimantan Barat (western Kalimantan) in the Sekayan River area and from Kalimantan Timur (northeastern Kalimantan) near Kutai. In Sabah, plants are found in the Kinabatangan District, the Sapulut area, the Tenom District, and the Tomani area. In Sarawak, plants grow in the Kuching area.

CLIMATE: Station #96413, Kuching, Sarawak, Borneo, Lat. 1.5N, Long. 110.3E, at 85 ft. (26 m). Temperatures are calculated for an elevation of 500 ft. (150 m), resulting in probable extremes of 96F (35C) and 63F (17C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	87	87	88	89	90	90	90	91	89	89	89	87
F AVG MIN	71	71	71	71	71	72	71	71	71	71	71	71
DIURNAL RANGE	16	16	17	18	19	18	19	20	18	18	18	16
RAIN/INCHES	27.1	19.7	14.2	9.7	9.0	8.5	6.9	8.8	9.5	12.6	13.1	20.1
HUMIDITY/%	89	88	86	85	85	83	82	83	84	85	87	88
BLOOM SEASON				*			*	*	*	*		
DAYS CLR @ 9AM	1	0	1	2	3	2	4	1	2	1	1	1
DAYS CLR @ 1PM	0	0	0	0	0	1	1	1	0	0	0	0
RAIN/MM	688	500	361	246	229	216	175	224	241	320	333	511
C AVG MAX	30.4	30.6	31.1	31.7	32.2	32.2	32.2	32.8	31.7	31.7	31.7	30.6
C AVG MIN	21.5	21.7	21.7	21.7	21.7	22.2	21.7	21.7	21.7	21.7	21.7	21.7
DIURNAL RANGE	8.9	8.9	9.4	10.0	10.5	10.0	10.5	11.1	10.0	10.0	10.0	8.9
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: Throughout the year, days average 87-91F (30-33C), and nights average 71-72F (22C), with a diurnal range of 16-20F (9-11C).

HUMIDITY: Near 85% most of the year, dropping to near 80% for a month or so in summer. Humidity averages about 90% for 2-3 months in winter.

WATER: Rainfall is very heavy all year. Cultivated plants should be watered heavily while actively growing, but drainage must be excellent, and conditions around the roots should never become stale or soggy.

FERTILIZER: 1/4-1/2 recommended strength, applied weekly when plants are actively growing. Many growers use a balanced fertilizer throughout the year. Others prefer a higher nitrogen fertilizer from spring to midsummer, and switch to a high-phosphate formula in late summer and autumn.

REST PERIOD: In the habitat, seasonal variations in temperature, rainfall, and diurnal range are very slight with no apparent rest period. Therefore, cultivated plants need growing conditions all year. Cultivated plants may need less water in winter, particularly those grown in the dark, short-day conditions common in temperate latitudes, but they should never dry out completely.

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: A large, up to 39 in. (100 cm) monopodial epiphyte.

STEMS: The erect to semipendulous stem may be up to 39 in. (100 cm) long which produces thick, robust roots. Older stems may have one or more new growths emerge from the leafless part at the base. These eventually form a cluster of new plants which are completely enclosed in leaf sheaths.

LEAVES: 14-18 in. (35-45 cm) long by 1.2-1.5 in. (3.0-3.8 cm) wide. The distichous, arching, strap-shaped leaves are closely spaced along the stem. Each stem normally carries 10-15 leaves at a time, with new leaves growing at the apex of the stem, and older leaves falling away at the base. The leaves are thick, leathery, bilobed, irregularly toothed at the tip, longitudinally folded, and attached by overlapping bases that cover the stem.

INFLORESCENCE: Up to 6 in. (15 cm) long. Each growth usually produces 1-2 horizontal to slightly arching flower spikes at a time and new spikes are produced at regular intervals throughout the year.

FLOWERS: 4-6 per inflorescence. The heavily textured blossoms are fleshy, long-lasting, and fragrant. Sepals and petals may be pale cream, yellow, or pale yellow with a salmon or dull brown flush toward the tips and along the margins. A few rare clones are yellow with a brown suffusion all over. The lip has white lateral lobes. The midlobe is white at the base, has red lines at the junction with the lateral lobes, and is dark yellow at the apex. Sepals and petals have spoon-shaped blades that are fairly narrow at the base becoming broadly rounded near the apex. On most plants, the overlapping sepals and petals become strongly reflexed about 2 days after opening. The dorsal sepal is 1.4-1.6 in. (3.5-4.0 cm) long by 0.8-1.2 in. (2-3 cm) wide near the rounded apex. Lateral sepals are 1.2-1.6 in. (3-4 cm) long by 0.8-1.2 in. (2-3 cm) wide. Petals are 1.2-1.4 in. (3.0-3.6 cm) long by 0.7-1.0 in. (1.8-2.5 cm) wide. The 3-lobed lip, which is attached to a very short column-foot and is not flexible, is 0.9-1.0 in. (2.2-2.5 cm) long by 0.6-0.7 in. (1.5-1.7 cm) wide. Lateral lobes are 0.3 in. (0.7 cm) long by 0.2 in. (0.6 cm) wide and are curved upward and inward. The midlobe is broad at the base but toward the apex the margins are turned downward. The spur at the base of the lip is 0.3-0.4 in. (0.7-1.0 cm) long with 2 small calli at the entrance. The column is 0.4 in. (1 cm) long with a very short, indistinct foot. Each flower is carried on a pedicellate ovary that is 2.4-3.5 in. (6-9 cm) long.

HYBRIDIZING: *Vanda dearei* is the major source of yellow flowers in the modern, strap-leaf *Vanda* hybrids. When used in hybridizing, however, *Vanda dearei* tends to produce offspring which develop into large plants that are not cold hardy and produce a small number of flowers.

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PHOTOS/DRAWINGS: Chan, C., A. Lamb, P. Shim, & J. J. Wood. 1994. Orchid of Borneo Vol. 1, Introduction and a Selection of Species. The Sabah Society, Kota Kinabalu and the Royal Botanic Gardens, Kew, England. (Color photo and drawing)

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