

Vanda hindsii Lindley

SYNONYMS: *Vanda whiteana* Herbert & Blake, *Vanda truncata* J. J. Smith. Some writers also include *Vanda suavis* F. Mueller as a synonym, but the Kew Data Base makes no mention of this name.

ORIGIN/HABITAT: Australia, New Guinea, and the Solomon Islands. In Australia, this orchid is found in northeastern Queensland, ranging from the Carron Valley to the McIlwraith Range and growing on trees and rocks in humid but exposed situations. Jones (1988) reported that, "Often the plants grow high in large trees and their presence can be detected by the very thick white roots which grow for many meters down the trunk." In New Guinea, this epiphytic orchid widespread throughout Papua New Guinea at elevations between sea level and 1500 ft. (450 m). It grows in both strong light and filtered sun on high forks and branches of tall trees in rainforest or semideciduous forest as well as in bright situations in coastal forest, and colonies may also be found scrambling over exposed rocky outcrops. Collections have been reported from the Central Province. In Irian Jaya (Western New Guinea), plants have been found on the south coast at the mouth of the Merauke River where they were growing in medium-heavy shade. In the Solomon Islands, plants have been found in rainforests on both Guadalcanal and Bougainville.

CLIMATE: Station #97980, Merauke, Irian Jaya (Indonesian New Guinea), Lat. 8.5S, Long. 140.4E, at 10 ft. (3 m). Record extreme temperatures are 97F (36C) and 58F (14C).

| | | | | | | | | | | | | |
|----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| N/HEMISPHERE | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
| F AVG MAX | 84 | 85 | 87 | 89 | 91 | 89 | 89 | 87 | 88 | 88 | 87 | 85 |
| F AVG MIN | 70 | 71 | 69 | 71 | 73 | 74 | 74 | 74 | 74 | 74 | 73 | 71 |
| DIURNAL RANGE | 14 | 14 | 18 | 18 | 18 | 15 | 15 | 13 | 14 | 14 | 14 | 14 |
| RAIN/INCHES | 1.3 | 0.7 | 1.1 | 1.6 | 3.0 | 7.4 | 10.3 | 9.0 | 10.0 | 7.2 | 4.9 | 1.7 |
| HUMIDITY/% | 88 | 85 | 85 | 85 | 79 | 87 | 89 | 91 | 88 | 88 | 85 | 88 |
| BLOOM SEASON | N/A | | | | | | | | | | | |
| DAYS CLR | N/A | | | | | | | | | | | |
| RAIN/MM | 33 | 18 | 28 | 41 | 76 | 188 | 262 | 229 | 254 | 183 | 124 | 43 |
| C AVG MAX | 28.9 | 29.4 | 30.6 | 31.7 | 32.8 | 31.7 | 31.7 | 30.6 | 31.1 | 31.1 | 30.6 | 29.4 |
| C AVG MIN | 21.1 | 21.7 | 20.6 | 21.7 | 22.8 | 23.3 | 23.3 | 23.3 | 23.3 | 23.3 | 22.8 | 21.7 |
| DIURNAL RANGE | 7.8 | 7.7 | 10.0 | 10.0 | 10.0 | 8.4 | 8.4 | 7.3 | 7.8 | 7.8 | 7.8 | 7.7 |
| S/HEMISPHERE | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN |

Cultural Recommendations:

LIGHT: 2500-4000 fc. Light should be filtered or diffused, and plants should not be exposed to direct midday sun. Strong air movement should be provided at all times.

TEMPERATURES: Throughout the year, days average 84-91F (29-33C), and nights average 69-74F (21-23C), with a diurnal range of 13-18F (7-10C).

HUMIDITY: 85-90% year-round.

WATER: Rainfall is moderate to heavy from late spring through autumn. This wet season is followed by a 4- to 5-month drier season in winter and early spring. Cultivated plants should be watered heavily while actively growing, but the roots must be able to dry rapidly after watering. Water should be reduced gradually in late 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 Growing temperatures should be maintained all year. Rainfall is lower in winter, but humidity remains high, and additional moisture is available from the frequent heavy dew and late-night mist. In the rainforest habitat in the Solomon Islands, however, rainfall remains fairly heavy throughout the year. Water should be reduced somewhat for cultivated plants in winter, allowing them to become somewhat dry between waterings. This is especially true for plants grown in the dark, short-day conditions common in temperate latitudes. They should never remain without water for long periods, however. Fairly regular early morning mistings between occasional waterings should provide sufficient moisture in most growing areas. In the habitat, light is brightest during the mostly clear weather of winter dry season, so as much light as possible, short of burning the foliage, should be provided for cultivated plants. Fertilizer should be reduced anytime water is restricted or plants are not actively growing, especially if light is low or temperatures are cool.

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: In the Central Province of Papua New Guinea, the main flowering period is during the dry season, but flowering also occurs sporadically at other times of the year.

Plant and Flower Information:

PLANT SIZE AND TYPE: A large, up to 78 in. (200 cm) monopodial epiphyte or lithophyte. The erect to drooping stems branch from the base to form extensive, spreading, straggly clumps. A few roots are carried by each stem, with one formed every 2-3 nodes below the leaves. The roots are very long, green to white, stiff, and up to 0.3 in. (0.8 cm) in diameter. They are branching to form a network of small feeding roots if in contact with humus.

STEM: 8-78 in. (20-200 cm) long by 0.3-0.6 in. (0.8-1.4 cm) in diameter. The cylindrical stem is only slightly compressed with nodes 0.6-1.2 in. (1.5-3.0 cm) apart. The leafy upper portion of the stem is enclosed by the distichous, overlapping, longitudinally folded bases of the leaves. The lower portion of the stem is mostly bare, woody, and gray to orange-brown. The overlapping sheaths at the base of the leaves are not persistent. When young, they are green, less than 1 in. (2.5 cm) longer than the internode, and are tubular with a loose apex. After the leaves fall, the sheaths become dry and gray-brown.

LEAVES: 6-16 in. (15-40 cm) long by 0.7-1.4 in. (1.8-3.5 cm) wide. Numerous closely spaced leaves are distichously arranged on the upper part of the stem. The arching, strap-shaped leaves are deeply V-shaped at the base, becoming flatter and curving downward toward their tips. They are stiff, leathery, green to yellow-green, and are unequally bilobed at the apex where the tip is eroded, leaving the outer margins and the midnerve extended as small, sharply pointed projections.

INFLORESCENCE: Up to 8 in. (20 cm) long. The horizontal to pendulous flower spikes emerge from the axils of lower leaves. Several inflorescences may be produced simultaneously on each stem. The peduncle, which is shorter than the rachis, is green but is suffused and spotted with purple. Each flower is carried on a pedicel-ovary that is 1.6-2.6 in. (4.0-6.5 cm) long. The pedicel is cream to yellow with purple markings, and the 6-winged ovary is white to cream.

FLOWERS: 5-12 per inflorescence. The spreading, wide-opening flowers are 1.2-1.8 in. (3.0-4.5 cm) across and last about 2 weeks. Flower color is variable, but most plants have blossoms with glossy chocolate-brown or reddish brown sepals and petals with yellow margins and a varying amount of yellow in patches near their bases. Their outer surfaces are usually creamy yellow to pale olive. The lip most often has a white to cream-colored base and lateral lobes and a cream to yellow or orange midlobe with orange-red marks. The base of the lip has 3 white keels that are bordered by red, crimson, or brown lines, and there is a small lilac and white spur at the base of the lip. The column is usually white with pink to maroon markings, and the anther is white. The spoon-shaped sepals and petals have narrow bases and broadly rounded to egg-shaped blades with rounded tips. Their margins are rolled backward near the bases, but are irregular and wavy on the broadened apical portion of the blades. The erect dorsal sepal is up to 0.7 in. (1.8 cm) long by 0.6 in. (1.4 cm) wide with the claw at the base measuring up to 0.3 in. (0.8 cm) long and wide. The obliquely spreading, egg-shaped lateral sepals are up to 0.8 in. (2 cm) long by 0.6 in. (1.6 cm) wide and have a very short, broad claw at the base. The petals are up to 0.8 in. (2 cm) long by 0.6 in. (1.4 cm) wide and have a very narrow claw at the base that is about 0.3 in. (0.7 cm) long by 0.2 in. (0.4 cm) wide. The widely expanded, 3-lobed lip is up to 0.6 in. (1.6 cm) long by 0.4 in. (1.1 cm) wide and is very thick and fleshy. The somewhat 4-sided lateral lobes project upward and are about 0.1 in. (0.35 cm) long. The broadly fiddle-shaped midlobe is somewhat constricted in the middle and has a pair of rounded lobes at the apex that are separated by a deep V-shaped notch in the center of the apical margin. The small, backward-projecting spur at the base is somewhat conical, is about 0.2 in. (0.5 cm) long, and is strongly compressed. There are usually 3 but up to 5 diverging fleshy keels extending from the base of the lip to beyond the middle of the midlobe. The broad, footless column is up to 0.3 in. (0.7 cm) long and has a blunt apex.

REFERENCES: These cultural notes are written by Charles and Margaret Baker
ORCHID SPECIES CULTURE <http://www.orchidculture.com/>

Hooker's Journal of Botany and Kew Garden Miscellany 2: 237. 1843.

Jones, D. 1988. Native orchids of Australia. Reed books Pty. Ltd., 2 Aquatic Drive, Frenchs Forest, NSW 2086, Australia.

Kew Data Base. 2007. <http://apps.kew.org/wcsp/home.do>

Lewis, B., and P. Cribb. 1991. Orchids of the Solomon Islands and Bougainville. Royal Botanic Gardens, Kew, England.

Millar, A. 1978. Orchids of Papua, New Guinea: an introduction. University of Washington Press, Seattle, Wash.

Motes, M. R. 1997. Vandas their botany, history, and culture. Timber Press, Portland, OR.

O'Byrne, P. 1994. Lowland orchids of Papua New Guinea. SNP Publishers Pte Ltd., Singapore.

Simmons, J., ed. 1985. Some orchids of west New Guinea a translation of J. Van Bodegom's *Einge orchideeën van West Nieuw Guinea* by G. Nieuwenhoven. Australian Orchid Foundation, 107 Roberts st. Essendon, Victoria, Australia 3040.