Vanda brunnea Rchb. f.

SYNONYMS: Vanda denisoniana Benson & Rchb. f. fma hebraica (Rchb. f.) Hawkes, Vanda hebraica hort., Vanda denisoniana Benson & Rchb. f. var. hebraica Rchb. f. For many years Vanda denisoniana was considered to have two forms. The typical form has yellow-green flowers, and plants with dark brown flowers were thought to be variety hebraica. Seidenfaden (1988), however, reported that after reexamining the literature and herbarium specimens he concluded that plants previously known as Vanda denisoniana var. hebraica are probably Vanda brunnea. See Seidenfaden (1988) for a comprehensive discussion on the history and confusing synonymy of this species.

ORIGIN/HABITAT: Burma and China. Vanda brunnea. was first found near Ta-ok in the Tenasserim region of Burma. Plants have since been found near Moulmein and at other locations in the Tenasserim region of southeast Burma. Hawkes (1965) reported that Vanda denisoniana var. hegraica occurs in Arrakan Mountains of southwest Burma, which is the same region where Vanda denisoniana is found. This orchid is also known to occur in China where it grows in southwest Yunnan Province at 3300-5250 ft. (1000-1600 m). In the past, this species has also been listed as occurring in Thailand, but Seidenfaden (1988) indicated that it is questionable as to whether or not these collections are actually Vanda brunnea. Habitat elevation for Vanda brunnea and its synonyms has not been reported in the Burma habitat, but Vanda denisoniana grows at 2000-2500 ft. (610-760 m) in southwest Burma, and we have elected to use a habitat elevation for Moulmein that results in conditions similar to those habitats. Growers should use the resulting temperatures somewhat cautiously, however.

CLIMATE: Station # 48103, Moulmein, Burma, Lat. 16.4N. Long. 97.7E, at 150 ft. (46 m). Temperatures are calculated for an elevation of 4250 ft. (1300 m), resulting in probable extremes of 89F (32C) and 38F (4C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	75	78	80	81	75	71	69	69	71	74	75	73
F AVG MIN	52	54	59	62	62	61	61	61	61	61	59	54
DIURNAL RANGE	23	24	21	19	13	10	8	8	10	13	16	19
RAIN/INCHES	0.3	0.2	0.4	3.0	20.3	35.6	46.3	43.4	28.1	8.5	2.1	0.1
HUMIDITY/%	66	68	68	70	81	91	92	93	91	81	75	64
BLOOM SEASON			*					*		*	*	
DAYS CLR @ 7AM	12	7	5	6	1	0	0	0	0	3	7	12
DAYS CLR @ 1PM	20	13	10	8	3	0	0	0	0	4	12	17
RAIN/MM	8	5	10	76	516	904	1176	1102	714	216	53	3
C AVG MAX	23.9	25.6	26.7	27.2	23.9	21.8	20.6	20.6	21.7	23.3	23.9	22.8
C AVG MIN	11.1	12.5	15.3	16.9	16.9	16.4	16.4	16.4	16.4	16.4	15.3	12.5
DIURNAL RANGE	12.8	13.1	11.4	10.3	7.0	5.4	4.2	4.2	5.3	6.9	8.6	10.3
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

Cultural Recommendations:

LIGHT: 3000-4000 fc. Visitors to the habitat report that plants grow well in almost full sunlight. In the habitat, however, heavy summer cloud cover dramatically reduces light. This suggests that some shading is appropriate for cultivated plants at midday in summer. Strong air movement is recommended at all times. Long, deep green leaves indicate light levels are too low. Short, pale, yellow-green leaves that do not spread fully open indicate light levels are too high.

TEMPERATURES: Summer days average 69-71F (21-22C), and nights average 61F (16C), with a diurnal range of 8-10F (4-5C). The warmest temperatures of the year occur in spring before the start of the rainy season. Spring days average 75-81F (24-27C), nights average 59-62F (15-17C), and the diurnal range decreases from 21F (11C) to 13F (7C) during the season.

HUMIDITY: Greater than 90% in summer and early autumn, dropping slowly to 65-70% in winter and early spring.

WATER: Rainfall in the habitat is exceptionally heavy from late spring into autumn. Averages than drop rapidly, resulting a dry season lasting about 4 months in winter and early spring. Cultivated plants should be watered heavily while actively growing, but drainage around the roots must be excellent. Water should be reduced after growth is completed in late autumn.

FERTILIZER: 1/4-1/2 recommended strength, applied weekly when plants are actively growing. Many growers prefer to use a balanced fertilizer throughout the year; but others 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 73-78F (23-26C), and nights average 52-54F (11-13C), with a diurnal range of 19-24F (10-13C). Rainfall in the habitat is low in winter, but the relatively high humidity and large temperature range causes considerable moisture from heavy dew and late-night mist to be available. Water should be reduced for cultivated plants in winter, but they should not remain without water for long periods. Light early-morning mistings every few days should provide sufficient moisture in most growing areas if humidity is kept high. Fertilizer should be reduced or eliminated until new growth starts and heavier watering is resumed in spring.

GROWING MEDIA: Plants are usually grown in hanging pots or slatted wooden baskets filled with a very open, chunky, fast-draining medium. Some are grown with only enough medium, such as charcoal, wine corks, or large cork chips, to anchor the plant until it becomes established. Roots should be allowed to grow and hang down as far as they choose and should not be trimmed to make a plant look neat. Growers indicate that anything more than minimum root trimming may set the plant back 2-3 years. Continuous brisk air movement around the roots is very important.

MISCELLANEOUS NOTES: The bloom season shown in the climate table is based on cultivation records. Grant (1895) reported that in Burma Vanda denisoniana variety hebraica blooms in summer.

Plant and Flower Information:

PLANT SIZE AND TYPE: We have been unable to find a precise description of this orchid, but Hawkes (1965) reported that its synonym Vanda denisoniana form/variety hebraica is similar to Vanda denisoniana in all parts, differing significantly only in the color of the flowers. Vanda denisoniana is a monopodial epiphyte with a stout, rather abbreviated stem that is densely leafy throughout and is completely enclosed by the overlapping bases of the leaves.

LEAVES: To 12 in. (30 cm) long by less than 1 in. (2.5 cm) wide. Several pairs of arching leaves are distichously arranged along the stem. They are bilobed at the apex, grooved longitudinally along the midvein on the top surface with a corresponding keel on the bottom side for most of their length, and more sharply folded along the midvein toward the base where they are folded to clasp the stem.

INFLORESCENCE: To 6 in. (15 cm) long. The arching to horizontal flower spike emerges from the stem along the axil of one of the lower leaves.

FLOWERS: 4-6 waxy, fragrant, long-lasting blossoms are carried on each inflorescence. The flowers are approximately 2 in. (5 cm) across with sepals and petals that are sulfur-yellow on both surfaces, but the inside is more or less covered with numerous spots and transverse bars of brown or purple brown. These mottlings often simulate certain letters of the Hebraic alphabet, hence the name hebraica. On some clones, the inside to the sepals and petals may be almost completely brown to reddish brown with only slightly lighter colored mottling. The lip is yellow to white at the base with large, spreading, rather rounded lateral lobes, olive green at the spreading, 2-lobed apex, and the acutely conical spur is orange inside. The stout column has the same white-yellow color as the base of the lip. The long, slender pedicel and ovary are also white-yellow.

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

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PHOTOS/DRAWINGS: Seidenfaden, G. 1988. Orchid genera in Thailand XIV. Fifty-nine vandoid genera. Opera Botanica 95, Copenhagen, Denmark. (Drawing of flower)

Yang Zenghong, Zhang Qitai, Feng Zhizhou, Lang Kaiyong, and Li Heng. 1993. Orchids. China Esperanto Press, P. O. Box 77, Beijing, China. (Color
photo)