

## *Vanda falcata* (Thunb.) H.H. Hu

**SYNONYMS:** Neofinetia falcate, Orchis falcata Thunb., Oeceoclades falcata (Thunb.) Lindl., Angraecum falcatum (Thunb.) Lindl., Aerides thunbergii Miq., Angraecaopsis falcata (Thunb.) Schltr., Finetia falcata (Thunb.) Schltr., Nipponorchis falcata (Thunb.) Masamune, Holcoglossum falcatum (Thunb.) Garay & Sweet. In Japan, *Vanda falcata* has been known as Fuki-ran (Rich and Noble Orchid), and is known in some localities as Fu-ran (Wind Orchid).

**ORIGIN/HABITAT:** Northeast Asia. Originally detected by Thunberg in southern Japan, plants were growing on hills near the port city of Nagasaki on Kyushu Island. It is now known to be more widespread in Japan where it grows on the islands of Honshu, Shikoku, and Kyushu. Plants are also found on the small islands of Yakushima and Tanegasima off the southern coast of Kyushu, on Okinawa in the Ryukyu Islands, and in China and Korea. *N. falcata* may grow on rocks, but is usually found growing epiphytically on rather small branches of deciduous trees where strong light is received in winter and early spring. Plants normally grow at an angle on the branch so that water drains away and does not collect at the base of the leaves. A grower in Japan reported that *Vanda falcata* does well mounted on the coarse bark of a persimmon tree in his garden in Yokohama.

**CLIMATE:** Station #47827, Kagoshima, Kyushu, Japan, Lat. 31.6N, Long. 130.6E, at 19 ft. (6 m). Record extreme temperatures are 97F (36C) and 20F (-7C).

N/HEMISPHERE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
F AVG MAX	53	54	60	68	74	78	85	87	83	75	65	56
F AVG MIN	37	38	43	52	58	66	73	74	69	59	49	40
DIURNAL RANGE	16	16	17	16	16	12	12	13	14	16	16	16
RAIN/INCHES	3.4	4.0	6.4	8.7	8.2	17.1	12.2	7.4	8.7	5.2	3.7	3.4
HUMIDITY/%	76	73	74	77	79	82	82	80	80	76	77	77
BLOOM SEASON		*			*	**	**	**	*	*	*	*
DAYS CLR @ 9AM	9	8	9	7	5	3	4	9	9	12	14	13
DAYS CLR @ 3PM	8	9	9	8	5	3	5	6	6	13	13	13
RAIN/MM	86	102	163	221	208	434	310	188	221	132	94	86
C AVG MAX	11.7	12.2	15.6	20.0	23.3	25.6	29.4	30.6	28.3	23.9	18.3	13.3
C AVG MIN	2.8	3.3	6.1	11.1	14.4	18.9	22.8	23.3	20.6	15.0	9.4	4.4
DIURNAL RANGE	8.9	8.9	9.5	8.9	8.9	6.7	6.6	7.3	7.7	8.9	8.9	8.9
S/HEMISPHERE	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN

### Cultural Recommendations:

The following recommendations are based on averages in the habitat. They may be used as a guide for newly acquired plants whose requirements are unknown, or for plants that are not growing or flowering as well as they should. Reports from growers are included when they indicate success with conditions in cultivation that are outside the range found in the habitat.

**LIGHT:** 2000-3600 fc.

**TEMPERATURES:** Summer days average 78-87F (26-31C), and nights average 66-74F (19-23C), with a diurnal range of 12-13F (7C).

**HUMIDITY:** 80-85% in summer, dropping to near 75% during the remainder of the year.

**WATER:** Rainfall is moderate to heavy throughout the year with the wettest season occurring from spring into autumn. Heavy water should be provided for cultivated plants when they are actively growing, and they should never be allowed to dry out completely.

**FERTILIZER:** A balanced fertilizer, mixed at 1/4-1/2 recommended strength, should be applied weekly during periods of active growth. Many growers use a fertilizer with lower nitrogen and higher phosphate in autumn. This improves blooming the next season and encourages new growths to harden before winter. Pots should be leached every few weeks to prevent salt buildup, especially when fertilizer is being applied most heavily. Plants should first be watered normally to dissolve any accumulated salts. An hour or so later, the medium is flushed with water equal to about twice the volume of the pot. Year-round leaching is important in areas with heavily mineralized water.

**REST PERIOD:** Winter days average 53-56F (12-13C), and nights average 37-40F (3-4C), with a diurnal range of 16F (9C). The actual winter temperatures are probably not that critical since average winter minimums on Okinawa are 50-55F (10-13C), while in Yokohama the lows are 32F (0C) or below for 3 months. Conditions are even colder for a longer period in Korea. Winter rainfall is lower in the habitat, and water should be reduced for cultivated plants during this time. Even less water should be given plants that are grown in very cool conditions. Even these plants should not be allowed to become completely dry, however. The necessary conditions may be met in most growing areas by occasional early morning misting, with a light watering given every two weeks or so. Water is especially beneficial during bright, sunny weather. The clearest, brightest weather in the habitat occurs in autumn and winter. Light is highest in winter, so for cultivated plants, shading should be removed from the growing area and as much light as possible, short of burning the foliage, provided during this time of year. Fertilizer should be reduced or eliminated until conditions become warmer and watering is increased in the spring.

**GROWING MEDIA:** Plants may be mounted on slabs of cork or tree-fern fiber, with a small pad of osmunda or sphagnum moss. If grown on slabs, high humidity must be maintained, and water must be applied at least once daily during the summer. If potted, small pots and a very open, fast draining medium should be used. Hawkes recommends osmunda or shredded tree-fern fiber tightly packed in small pots. In his American Orchid Society Bulletin article, Kichigoro Suszuki reported that this species loves moving air across its roots and must have a well-aerated medium. He recommended repotting in late winter or early spring, using fresh sphagnum moss. The roots should be wrapped with sphagnum and then screwed gently into a pot. The base of the plant should be left above the rim of the pot. While potting, the roots are easily broken. Never cut or tear off the broken or damaged roots because they are still alive. However, all dead or diseased roots should be removed before potting.

**MISCELLANEOUS NOTES:** The bloom season in the table based on cultivation reports. In nature, *N. falcata* usually blooms summer-autumn. Cultivated plants are very susceptible to rot if grown in a vertical position. It is preferable to mount or pot the plant at an angle so that water on the foliage is able to drain away.

### **Plant and Flower Information:**

**PLANT SIZE AND TYPE:** A miniature, monopodial epiphyte that is usually less than 2.5 in. (6.4 cm) tall, but may grow as tall as 6 in. (15 cm). In general, the plant resembles a dwarf, strap-leaf vanda.

**STEAM:** There is a short stem, and the plant branches freely with new plants growing from leaf axils near the base.

**LEAVES:** There are several pairs of distichous, fleshy, pointed, keeled leaves on each stem. They are 2-4 in. (5-10 cm) long, and are often gracefully curving. The leaves are usually light green, but may rarely be variegated with cream-white longitudinal stripes.

**INFLORESCENCE:** About 3 in. (7.5 cm) long, but usually shorter than the leaves. Several erect inflorescences at a time emerge from near the top of the plant, usually from the base of the third leaf down from the top. On mature plants, if no inflorescence is produced, there is a good chance that a new growth will be initiated instead.

**FLOWERS:** Each inflorescence bears 3-7 pure white flowers that are about 1.25 in. (3 cm) in diameter. They are commonly longer than wide, and are usually very fragrant, especially at night. Each flower has a curved, awl-like spur about 1.5 in. (3.7 cm) long. The dorsal sepal and petals flare upward, the lateral sepals curve down and outward, and the short, three-lobed lip turns down from beneath the column.

**HYBRIDIZING NOTES:** Chromosome count is  $2n = 38$ . *N. falcata* has been used with *Vanda* and *Ascocentrum* species in recent years to create charming miniature hybrids. The dwarf growth habit is passed on to the offspring, but we do not know if the cold-tolerance is passed on. However, it seems entirely likely that *N. falcata* could be used to breed cold-tolerance into hybrids with *Vanda*, *Ascocentrum*, *Phalaenopsis* and other members of the Sarcantinea subtribe.

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