BIRD-OF-PARADISE

Beth Arvidson, Student and Jay S. Koths, Professor of Floriculture

Strelitzia, commonly known as the Bird-of-Paradise, received its name in honor of the wife of King George III, Charlotte Sophia of the family of Mecklenburg-Strelitz, a supporter of botany (Anon., 1956). The Bird-of-Paradise (<u>Strelitzia reginae</u>) has great consumer appeal due to its unique exotic bloom with long-lasting qualities. It has relatively few pest problems. In New England it should be considered as a show plant in a retail greenhouse or in a conservatory.

Because of the high cost of cultivating Strelitzia, until the 1920's this plant was grown only on the estates of the wealthy (Anon., 1956). Now, however, the cultivation of this plant is widespread. In the U.S.A. this native plant of South Africa is grown in the fields of southern California and in conservatories throughout the country. It may be grown in pots for home use.

The genus Strelitzia consists of several species (augusta, Nicolai, parvifolia and reginae) all of which are members of the banana family (Musaceae) (Anon., 1956). The species most commonly used for ornamental use and cut flowers is Strelitzia reginae.

<u>Strelitzia reginae</u> is a large trunkless plant with oval leaves. The spike from which the flower is formed can reach a height of 5 feet or more. The flower is unusual in appearance. Green, red, and/or purple canoe-shaped bracts, which reach lengths of 4-8 inches at maturity, give rise to a bright yellow or orange floret. This brilliant floret is complemented by dark blue inner petals. <u>S. reginae</u> flowers are not only extraordinarily beautiful, they are also versatile and as a cut flower can last up to 15 days.

The flowering cycle of <u>S</u>. <u>reginae</u> is seasonal, with blooms beginning in September and ending in May. Following the general rule of peaks and declines for <u>S</u>. <u>reginae</u> the blooms first peak in December, then taper off until a second peak is reached in February or March (Anon., 1956).

^{*}Presented as a paper in Plant Science 298, Greenhouse Crop Production.

Studies have revealed that photoperiod has no effect on flower initiation (Halevy, 1976).

The seeds should be kept in a cool dry place until time for planting. It is important to protect them from mice. The seeds should be soaked in hot water ($142^{\circ}F$) prior to planting to improve germination (Besemer, 1976). This procedure may also provide sanitation benefits. The next best treatment is a five minute soak in sulfuric acid. An adequate germination medium for <u>S. reginae</u> is vermiculite with $70^{\circ}-75^{\circ}F$ bottom heat.

Seeds take two and one half months, sometimes longer, to germinate. It has been found that even at the low light (intensity of 100 footcandles (fluorescent light), a 4" seedling will attain a bright green color (Besemer, 1976). It is three more years before Strelitzia will produce blooms and then another five years before a good Strelitzia plant produces the type of flower desired for commercial sale.

The best method of propagation is either by manual division of large clumps or by propagating offshoots (Anon., 1956) in late spring to early summer. Root rot may occur more frequently in cold weather. Also, when dividing, enough of the original root should be left on the plant to assure healthy growth (Anon., 1956).

It is important that the plants not be planted too deeply. The juncture of the stems and roots should be level with the soil surface. After planting, three months may elapse before new growth begins (Anon., 1956).

<u>S. reginae</u> requires a moderate amount of water at all times, yet the soil should not reach the point of sogginess. To attain a greater number of blooms and to encourage growth, organic fertilizers such as blood and bone meal may be placed around the plant about every three months.

S. reginae has few pest problems. The more common ones are aphids, ants, a worm similar to the corn borer, mealybugs and scale insects.

A night temperature of $50-55^{\circ}$ is sufficient but they do well in conservatories at 60° or even 65° . Except for the late spring and summer when partial shade should be provided, they appreciate direct sunlight.

From September through May, flowers are cut daily as the first floret opens. Recent research has shown promising results for cutting flowers in the tight bud stage and increasing the storage period up to one month. This has been done by "pulsing", a procedure to load the flower tissue with sugar and other chemicals before shipment. The best pulsing solution has been found to be 10% sucrose, 250 ppm hydroxyquinoline citrate and 150 ppm citric acid. The tight flowers are kept in this solution for 2 or 3 days at $22^{\circ}C$ (70°F). This not only improves the opening and longevity of the flowers but also gives the added advantage of handling bud-cut flowers. Dipping or spraying blooms with 200 ppm benomyl or thiobendazole before shipping or storage overcomes the problem of bract lesions and floret browning due to botrytis. The cut flowers can withstand storage up to four days at 10°C. Prolonged storage after his point is not advisable (Halevy, 1978).

<u>S. reginae</u> is a plant with unique blooms. Because of its special qualities, retailers and consumers can take pleasure in the exotic Bird-of-Paradise.

References

Anon. 1956. The Strelitzia reginae. Florists' Review. Sept. 12. p. 29–31, 114–116.

Auman, Christina. 1980. <u>In</u> Introduction to Floriculture. R. Larson, Ed. Academic Press, Inc. New York. p. 208

Besemer, Seward. 1976. Germination methods for Bird-of-Paradise seed. Florists' Review. Nov. 18. 159(4120):84-86.

Halevy, A., A. M. Kofranek, and S. Besemer. 1978. Postharvest handling methods for Birds-of-Paradise flowers. J. Amer. Soc. Hort. Sci. 102(2):165-169.

Kawabata, O., R. Criley and S. Oshiro. 1984. Effects of season and environment on flowering of Bird-of-Paradise in Hawaii. J. Amer. Hort. Sci. 109(5):706–712.

Venter, H. and J. Small. 1980. Some characteristics of leaf and inflorescence production of Strelitzia reginae. DIS. Afr. Bot. 46(3):305–311.

•

ţ,

A TIP

Non-stop begonias are like tuberous rooted begonias in that the flowers point in the same direction as the leaves. When planting non-stops in hanging baskets, place the plants with leaves pointing out. The display of flowers will be improved significantly.