

Catasetum and Cycnoches — Part 1

— Catasetums with "Perfect" Flowers

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THUS FAR in this series, the emphasis has been on genera which grow almost continuously, though slowly. For these genera, beginners are able to adopt cultural practices which require little variation. And yet, some genera do not grow constantly, but fluctuate between a state of rapid growth and one of nearly complete inactivity — all in the course of a year. Treatment of these genera, in contrast, must vary considerably for the best growth and flowering.



Photo: Greg Allikas

FIGURE 1 — Reaching a leafy maturity, the newest pseudobulb of this plant of *Catasetum expansum* initiates four inflorescences in mid-summer.

Species and hybrids of *Catasetum* and *Cycnoches*, two closely related genera, are excellent examples of orchids which have a changeable growth rate. Their growth generally occurs in a great flush during the spring and summer, only to come to a standstill during the fall and winter. This may be disconcerting at first to the beginner. But with some experience, it soon becomes apparent that the plants follow a cycle of growth, clearly marked by changes in their behavior and appearance. Observing these changes, and altering cultural practices accordingly, the beginner should have much success with catasetums and cycnoches, for they are among the most vigorous and floriferous of orchids.

A large part of this series on catasetums and cycnoches will be devoted to

heir cycle of growth, and to how several talented growers meet the fluctuating needs of these genera. Prior to that, however, representative species and hybrids need to be introduced. Catasetums in particular offer an astounding variety of flowers, from the beautiful to the bizarre. Not every one will appeal! Just the same, those which lack conventional good-looks often compensate with a few surprises.

PLANT AND FLOWERING HABIT OF CATASETUMS

The genus *Catasetum* contains over one hundred epiphytic species native to the lower elevations of tropical America. Because of their warm origins, catasetums require warm conditions for proper growth and flowering. Though flower characteristics and presentation vary widely in this genus, plant habit is similar throughout. The plant of *Catasetum expansum* pictured in **FIGURE 1**, photographed in mid-summer, is representative of the genus. The growth begun in the springtime is already reaching maturity, producing a fleshy, cylindrical pseudobulb 6 inches (15 cm) high. This pseudobulb is fully ensheathed in a fan-like arrangement of eight thin, plicate (pleated) leaves, the largest of which measures about 12 inches (30 cm) long and 3 inches (8 cm) wide. The entire plant, excluding pot, is over 1 1/2 feet (45 cm) high.

Following closely behind the leafy pseudobulb in **FIGURE 1** are those pseudobulbs produced in previous years. Their leafless state is an indication of the deciduous nature of catasetums. Leaves produced during one growing season are usually lost by the beginning of the next. In other words, by the time an eye swells at the base of this most recently matured pseudobulb, signaling a resumption of active growth, its leaves will have yellowed and fallen, or will be in the process of doing so. The actual timing of this leaf-fall, and, consequently, the duration of the plant's leafless state, largely depends on the growing conditions and the health of the plant. This will be discussed at length in upcoming articles. Though a *Catasetum* pseudobulb will lose its leaves within a year, the bases of these leaves remain, forming a dry, papery sheathing. Older pseudobulbs may lose this covering, as well as their plumpness, becoming exposed and furrowed with age. The thin, upward-growing secondary roots emanating from the potting medium in **FIGURE 1** are a curious feature of many *Catasetum* species.

The plant of *Catasetum expansum* in **FIGURE 1** is also characteristic of the genus in that it is producing four inflorescences from the bases of its newest pseudobulbs. Though all basal in origin, the inflorescences of catasetums can differ in the position they ultimately take. Many, such as those of *Catasetum expansum* pictured in **FIGURE 1**, are upright, becoming more arching as the flowers develop and add weight to the inflorescence. A few are strictly pendulous. The initiation of inflorescences from new growth soon after it matures results in most catasetums being summer- and fall-flowering. Yet there are notable exceptions to this generalization, which should come to light upon closer examination of the species and hybrids.

CATASETUMS WITH PERFECT FLOWERS

By the title of this first article, I do not mean to suggest that the catasetums about to be discussed are flawless and therefore free from criticism! Rather, this title refers to the fact that the flowers of these catasetums have functioning male and female parts; they are, in botanical jargon, perfect, or bisexual, flowers. This is not a distinguishing feature within the orchid family, yet it is within the genus *Catasetum*. The great majority of *Catasetum* species have unisexual flowers, male flowers and female flowers, a highly unique trait within the orchid family. The ten or so *Catasetum* species with perfect flowers are different in this, as well as other floral features. So distinct are they that Dr. Calaway H. Dodson, a prominent taxonomist, has proposed separating them into

two genera of their own: *Clowesia*, to include *Catasetum roseum*, *Ctstn. warscewiczii*, *Ctstn. thylacochilum*, *Ctstn. russellianum* and *Ctstn. glaucoglossa*; and *Dressleria*, to contain *Catasetum dilectum*, *Ctstn. eburneum*, *Ctstn. suavis* and one new species (Dodson, 1975).

Beginners will find, however, that for the most part these species with perfect flowers are still occasionally called catasetums by orchid growers. Hybrids made with these species are registered as *Catasetum* hybrids. Nevertheless, from a horticultural point of view as well, these species need to be treated separately, as they offer growers quite a different look from that of most *Catasetum* species. For these reasons, I will maintain here the two separate groups set forth by Dodson, while continuing to call these species and their hybrids catasetums.

CLOWESIA

The five species classified by Dodson into the genus *Clowesia* had been set apart previously, though not to that degree, as belonging to the *Clowesia* section of the



Photo: Greg Allikas

FIGURE 2 — *Catasetum russellianum* (syn. *Clowesia russelliana*)

genus *Catasetum* (Hawkes, 1965). Species of the section, or genus *Clowesia*, differ from the majority of catasetums in a number of ways. In plant habit, they are considerably smaller. Their pseudobulbs are rarely over 4 inches (10 cm) high, often a good deal less, and are more conical than cylindrical in shape. Their inflorescences are not upright, or arching, but strongly pendulous, and tend to be shorter than most *Catasetum* species. The flowers of this group, though generally smaller, are perhaps the loveliest and most fragrant of all catasetums. They are, regrettably, quite typical of the genus in being short-lived, lasting little more than a week in most cases.

Of the group, *Catasetum russellianum* has the most in common with the genus at large. Native to southern Mexico and Central America, this species has fragrant, light green flowers striped in a darker green (FIGURE 2). Though the sepals are narrower than the petals, both segments are long and well-spaced, creating a large and fairly open flower. Measuring 2½-3 inches (6.5-8 cm) across, these flowers are comparable in size to some of the largest-flowered catasetums. Their thin, almost transparent substance, however, sets them apart from the waxy flowers characteristic of most *Catasetum* species. The pouch-shaped (saccate) lip in the lowermost position of the flower is the most

distinguishing feature of *Calasetum russellianum*. *Catasetum thylaciophilum* is very similar to *Calasetum russellianum* in flower form and coloration, but its lip is not nearly so pouched (Teuscher, 1977).

Though the inflorescences of *Catasetum russellianum*, being pendent, are typical of *Clowesia*, they are exceptional in length and floriferousness, again matching the best of the genus. Less robust plants of *Catasetum russellianum* will naturally produce fewer flowers, but 15 to 20 flowers on inflorescences approximately 15 inches (38 cm) long can be expected of mature, healthy plants (Hawkes, 1965). The flowering season of *Catasetum russellianum* is like that of most catasetums, running from late summer into fall.



FIGURE 3 — *Catasetum warscewiczii* 'Severini' HCC/AOS

Catasetum warscewiczii, native to portions of Central and South America, is another species of this group which has fragrant, greenish flowers with darker green striping (FIGURE 3), but its similarity with *Catasetum russellianum* ends there. The sepals and petals of *Catasetum warscewiczii* are equally broad and cupped, forming a full, round but small flower 1-1 1/2 inches (2.5-4 cm) across. The marvelous, trilobed labellum has two distinctly striped side-lobes which are upright, cradling the nose-like column between them. Its wonderfully fringed mid-lobe juts out like a bearded chin. The cavity formed at the convergence of the three lobes of the lip, with its darker coloration, adds depth to the flower.

Catasetum warscewiczii produces pendent inflorescences, like *Calasetum russellianum*, but they are generally much shorter, less than 6 inches (15 cm) in length. Each inflorescence also tends to carry fewer flowers, no more than 10 or 12, even for those specimen plants which have received cultural awards. Even so, the dense and uniform arrangement of flowers on the inflorescence results in a concentration of flowers near the plant. This pleasing, cascade effect is enhanced when a pseudobulb produces more than one inflorescence, as is often the case with *Catasetum warscewiczii* (FIGURE 3). Unlike *Catasetum russellianum* and most catasetums, *Catasetum warscewiczii* tends to bloom during the winter. By this time, not only have the newest pseudobulbs matured, they have lost their leaves as well. In this way, too, the flowers are shown to their full advantage, without obstruction from view by the large leaves typical of this group and the entire genus.

Catasetum roseum has much in common with *Catasetum warscewiczii*. This Mexican

species also flowers during the winter months from recently matured pseudobulbs



Grower: Lincoln Adderley Photo: Charles M. Fitch
FIGURE 4— *Catasetum roseum* 'Chico' CCM/AOS

which have since lost their leaves. Robust pseudobulbs of *Catasetum roseum*, like *Ctsm. warscewiczii*, can produce multiple inflorescences, each measuring up to 6 inches (15 cm) long and carrying a dozen flowers. The flowers of *Catasetum roseum* are also of similar size, usually 1 inch (2.5 cm) across. But unlike *Ctsm. warscewiczii*, *Catasetum roseum*, as its name suggests, has flowers which are an attractive pink overall, with the exception of a green column (FIGURE 4). These flowers, in addition, have sepals and petals which are more pointed and less cupped. The lip of *Catasetum roseum* also has a highly fringed mid-lobe, but its side-lobes are not as well developed as *Ctsm. warscewiczii*.

The specimen plant of *Catasetum roseum* in FIGURE 4 well illustrates the desirable traits of this species. In its leafless state at least, *Catasetum roseum* could certainly be classified as a miniature. The short, densely clustered pseudobulbs of this plant are contained in a 6-inch pot. At the same time, the plant is flowering profusely on equally compact, 5-inch (13-cm) inflorescences, nearly surrounding the plant and its pot in a wreath of 140 flowers. A small number of hybrids have been made using species from the *Clowesia* section of *Catasetum*. *Catasetum* Rebecca Northen (Grace Dunn [*warscewiczii* X *roseum*] X *roseum*), registered by W.W.G. Moir in 1971, is an attractive hybrid involving two of the group's most desirable species. The awarded clone of *Catasetum* Rebecca Northen illustrated in FIGURE 5 combines the more rounded, cupped shape of *Catasetum warscewiczii* with the brighter color of *Catasetum roseum*, while maintaining floriferousness and a compact flowering and plant habit. When awarded in April, 1978, this clone displayed 47 flowers on three inflorescences, all produced by the same plump, leafless pseudobulb. The flowers averaged not quite one inch (2.2 cm) across.

DRESSLERIA

The four Central and South American *Catasetum* species with perfect flowers which Dodson classified in a new genus called *Dressleria* provide a vivid contrast to the ones just discussed. In plant habit, they tend to be much larger, looking



FIGURE 5--
***Catasetum* Rebecca Northen 'Marta' HCC/AOS (Grace Dunn**
***[warceswiczii x roseum] x roseum*)**

more like typical *catasetums*. The inflorescences of these species are likewise considerably longer, and are upright, or nearly upright, not pendent. Plants of *Catasetum dilectum* (*Dressleria dilecta*), for example, often have pseudobulbs 8 inches (20 cm) long, producing inflorescences up to 14 inches (35 cm) in length (Bechtel *et al.*, 1981). It is the flowers of *Dressleria*, however, which are most distinct, bearing little resemblance to those of *Clowesia*.

The flowers of the four species classified in *Dressleria* by Dodson are very similar, a fact which has caused some confusion in their identification. The flowers illustrated in FIGURE 6, for instance, while identified as *Catasetum eburneum*, bear closer resemblance to those of *Catasetum dilectum* (*Dressleria dilecta*), as described by Dodson (1975) and pictured in Bechtel *et al.* (1981). In any event, these flowers, photographed in summer, are representative of the group. Borne approximately a dozen in number on an upright inflorescence bending under their weight, these fleshy flowers have conspicuous, helmet-shaped lips. Their uppermost position indicates that the flowers are non-resupinate, as opposed to the resupinate flowers of *Clowesia*, with their lips lowermost. The lips of *Dressleria* flowers also lack the highly fringed nature of most *Clowesia* species, and are attached (adnate) to the column, not separate. The columns of the flowers pictured in FIGURE 6 are short and wide, and like the lip, have an opening or cavity. Strongly reflexed away from the lip, the greenish sepals and petals lack the prominence these segments have in *Clowesia*. Sepals and petals of other members of *Dressleria*, however, are not as reflexed as these. The widest portion of the flowers pictured measures less than one inch (2.1 cm) across. species also flowers during the winter months from recently matured pseudobulbs.



Grower: Mr. & Mrs. Grenville Seibels, II Photography: Edwin S. Boyett, Jr.

FIGURE 6-- *Catasetum eburneum* 'Memoria Vinton Overholt', CBM/AOS

Many of the remaining 90 or so *Catasetum* species have non-resupinate flowers with helmet-shaped lips like those just described. Other *Catasetum* species have both resupinate and non-resupinate flowers, depending on whether those flowers are male or female! The unisexual *catasetums* — considered *catasetums* by everyone — will be the subject of the next article for this series

REFERENCES

- Bechtel, Helmut, Cribb, Phillip and Edmund Launert. 1981. *The Manual of Cultivated Orchid Species*. The MIT Press, Cambridge, Massachusetts.
- Dodson, C.H. 1975. *Dressleria* and *Clowesia*: A New Genus and an Old One Revived in the *Catasetinae* (Orchidaceae). *Selbyana* 1(2): 130.
- Hawkes, Alex D. 1965. *Encyclopaedia of Cultivated Orchids*. Faber and Faber, Limited, London.
- Teuscher, Henry. 1977. *Catasetum thylaciochilum* — Collector's Item. *Amer. Orchid Soc. Bull.* 46(11):