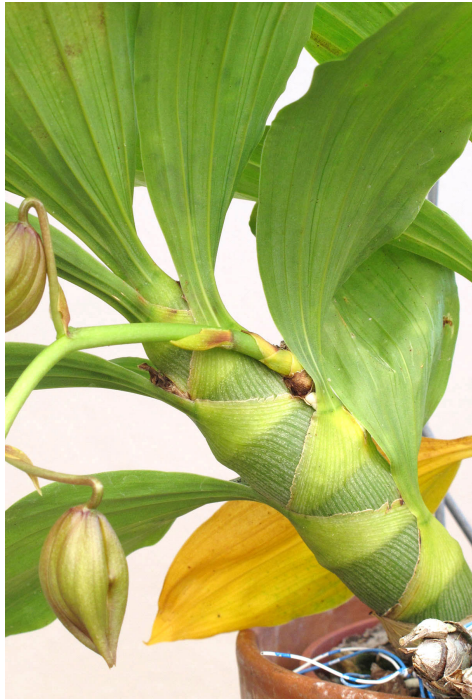


Catasetum and Cycnoches — Part 3 — The Swans of Cycnoches

STEPHEN R. BATCHELOR

THE GENUS *Cycnoches* has much in common with the *Catasetum* species bearing unisexual flowers discussed in the previous article for this series. Though far fewer in number, *Cycnoches* species are likewise native to Mexico, Central and South America, occupying similar habitats in the warm lower elevations. *Catasetums* and *cycnoches* are very much alike in plant habit. At a glance, the cylindrical pseu-



Photography: Greg Allikas

FIGURE 1 — In late summer, a newly matured pseudobulb of a *Cycnoches cooperi* produces an inflorescence from the axil of an upper leaf.

dobulb of the *Cycnoches* species illustrated in FIGURE 1, 12 inches (30 cm) in height, is indistinguishable from a *catasetum*. Its nine thin, plicate leaves, the largest measuring 12 inches (30 cm) long, are virtually identical to *Catasetum* leaves. This *Cycnoches* pseudobulb is also going through a cycle of growth which approximates that of a *catasetum*. It began growth in the spring and is pictured here reaching maturity in late summer. Typical of *cycnoches*, this pseudobulb will flower in the fall, then lose its leaves in the winter, to initiate yet another pseudobulb from its base during the following spring.

One feature of the pseudobulb illustrated does mark it for a *cycnoches*, however, and that is the inflorescence initiating in the leaf axil near the apex. While the inflo



Figure 2 — *Cycnoches loddigesii*
Photography: Greg Allikas

rescences of *Catasetum* species initiate from the bases of the pseudobulbs, those of *Cycnoches* species are apical in origin. This brings the flower display of a *Cycnoches* in large part above the base of the plant, whereas the position of the flowers on a *Catasetum* is often at or below the level of the plant's container.

The flowers of all *Cycnoches* species, like most *Catasetum* species, are unisexual: either male or female (very rarely hermaphroditic). As is the case with catasetums having unisexual flowers, it is the male flowers of *Cycnoches* species which prevail under most conditions. The male flowers of *Cycnoches loddigesii* illustrated in FIGURE 2 are typical in form and orientation of many *Cycnoches* species. These flowers, unlike the male flowers of most *Catasetum* species, are non-resupinate, their spade-shaped lips pointing upward. The spotted lateral sepals are at either side of the lip on each flower, with the curved (falcate) petals appearing below. The natural spread of these flowers is quite large, the distance from tip to tip of the petals measuring 4 1/2 inches (11.5 cm). Not terribly evident in FIGURE 2, the dorsal sepal of *Cycnoches loddigesii*, and all *Cycnoches* species, is lowermost on the flower. On the other hand, the column of male *Cycnoches* flowers is prominent and distinctive, and is responsible for the common name of the genus. In some species measuring as much as 2-3 inches (5-8 cm) in length, the column is arching and slender, swelling at the end which contains the pollinarium. Clearly, with a little imagination, this organ resembles the graceful neck and head of a swan, the lip the body of the bird, but in this non-resupinate position the swan is taking a most awkward dive! Marion Ruff Sheehan, in her fanciful drawing, depicts the metamorphosis of a cynoches from flower to swan - from the proper perspective! (see page 835)

Though *Cycnoches loddigesii* is representative of the non-resupinate position which all *Cycnoches* flowers assume, its brownish color and patterning are unique to the species. The smaller flowers (2 3/4 inches, 7 cm, in natural spread) of *Cycnoches haagii* pictured in FIGURE 3, with their green sepals and petals and ivory-white lips, are more typical in color of many *Cycnoches* species. The flowers in profile in FIGURE 3 help explain why the lip and column have assumed their particular positions. The proximity of the tip of the column containing the pollinarium to the base of the lip causes a particular species of bee which lands on the lip, attracted to the strong fragrance emitted, to brush against the anther cap, releasing the pollinarium which adheres to the insect by means of the sticky viscidium (van der Fiji and Dodson, 1966).

The most commonly sold of all the *Cycnoches*, *Cycnoches chlorochilon* also has flowers with bright green sepals and petals, but, as the species name suggests, its lip has a prominent, dark green callus located at the base (FIGURE 4). Further distinguishing it from *Cyc. haagii* and *Cyc. loddigesii*, the lip of *Cycnoches chlorochilon* is considerably more cupped, though still predominantly white. The dark green of the callus contrasts vividly with the white of the remainder of the lip, made all the more striking by the lime-green background of the sepals and petals. The flowers illustrated are nearly twice the size of those of *Cycnoches haagii*, measuring 5 inches (13 cm) from tip to tip of the petals. With this kind of natural spread, *Cycnoches chlorochilon*, and other species like it, can compete in size with some of the larger cattleyas! Impossible to convey in pictures, or even in words, the fragrance of these flowers is fabulous, almost overpowering in the warmth of morning sunshine.

Healthy plants of *Cycnoches chlorochilon* and similar species often have two separate flowerings off of the same pseudobulb. The first flowering occurs just after growth is complete in the fall, while the pseudobulb is still in full leaf. This usually means looking underneath a palm-like fan of leaves to appreciate the flowers. Typically, an unbranched inflorescence (raceme) 8-12 inches (20-30 cm) long and bearing up to 10 male flowers is produced. The second flowering of a *Cycnoches chlorochilon* pseudo-bulb occurs some time after the first, usually during the winter months. By this time a majority, if not all of the the leaves have yellowed and fallen (FIGURE 4), allowing for a less obstructed view of the flowers. This second flowering, initiated from another one of any number of nodes around the apex of the pseudobulb, generally does not match the first in number of flowers produced. This tendency to flower more than once in succession from the same pseudobulb greatly prolongs the flowering season of this and other *Cycnoches* species.



photography: Charles Rowden

Figure 3 — *Cycnoches haagii* 'Sunset Valley Orchids', HCC/AOS; Exhib: Fred Clarke

The flowers of *Cycnoches chlorochilon* may last over a week, or over two weeks, depending on conditions. Flowers produced in the winter usually last longer than those produced in the fall, because prevailing temperatures are lower. The flowers illustrated in FIGURE 4, which were open during late February and early March in New England, lasted well over two weeks, kept in temperatures for the most part in

the 50's and 60's F (13-18°C). Flower aging in *Cycnoches chlorochilon* and similar species is more like that of some green *Cattleya* hybrids than the closely related species and hybrids of *Catasetum*. The green sepals and petals of these species yellow or bronze with age, a process which is accelerated by exposure to bright light and heat. All the more reason to bring flowering plants of cycnoches out of the light and away from the heat into the interior of rooms where they can be enjoyed.



Photography: Greg Allikas
Figure 4 — *Cycnoches chlorochilon*

Inflorescences bearing male flowers of cycnoches, like those of catasetums, may be arching (FIGURE 4) or more pendent (FIGURE 5), depending on the number of flowers carried. While the reader might have gotten the impression, up until now, that cycnoches only produce one inflorescence after another, the specimen plant of *Cycnoches ventricosum* var. *warscewiczii* 'Green Glow' (FIGURE 5), awarded a CCM/AOS of 90 points for its growers Michael and Stella Roccaforte, stood 41 inches (102 cm) tall, with the most recently matured pseudobulb, bearing 42 flowers and buds on three inflorescences, accounting for nearly 2 1/2 feet, 29 inches (74 cm) of that height (Roccaforte, 1974). Comparable specimen plants of catasetums simply do not produce pseudobulbs as tall.

Despite their vigor and size, pseudobulbs of these *Cycnoches* species seldom last more than two or three years. They typically grow and flower their first year, produce another pseudobulb the next, and decline and die by the end of their third year in all but the healthiest specimens. Because of this trait, cycnoches rarely have more than three pseudobulbs at any one time. In contrast, pseudobulbs of catasetums are generally much longer lasting. As a result of these differences, specimen plants of catasetums are most impressive in the horizontal dimension, often filling large baskets, while those of cycnoches stay narrow but grow tall, fitting comfortably in moderately sized pots (FIGURE 5).



Figure 5 --
Cycnoches ventricosum var.
warscewiczii 'Green Glow', CCM/AOS

But what of the female flowers of these *Cycnoches* species? Some growers consider them more striking than the male flowers (Roccaforte, 1974). Others note that the male flowers and female flowers are very similar, except that the segments of the female flowers are all larger and wider (Vickers, 1968). One scientific study shows that this is indeed the case with *Calasetum warscewiczii*. This same study also found that plants of *Cycnoches warscewiczii* grown in full sun produced significantly more female racemes than those grown under shadier conditions, which was also true of the *Catasetum* species under investigation (Gregg, 1975). Female flowers of *Cycnoches* species, like their counterparts in *Catasetum*, are for the most part carried on separate inflorescences which are shorter, more upright, and fewer-flowered than inflorescences carrying male flowers, though "mixed" inflorescences do occur. The plant labeled *Cycnoches warscewiczii* var. *warscewiczii* in FIGURE 6 displays seven female flowers on three inflorescences. The most distinguishing feature of the female flowers of these species, however, is the column. While the column of a male *Cycnoches* flower is long and slender, the column of a female flower is much shorter and thicker, and has a notched end (FIGURE 6). These notches conveniently snag the pollinia from any bee which lands on the lip carrying a pollinarium from a male flower (van der Fijji and Dodson, 1966).

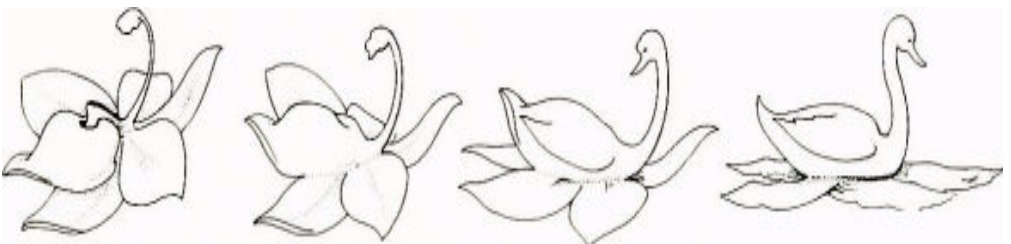
In this discussion three different species names - *chlorochilon*, *ventricosum* and *warscewiczii* - have been used for *Cycnoches* flowers which appear remarkably alike. Are there clear-cut differences between the flowers bearing these different names? In a 1952 revision of the genus, *warscewiczii* and *chlorochilon* were classified as varieties of *Cycnoches ventricosum*. *Cycnoches ventricosum* var. *warscewiczii* and *Cyc. ventricosum* var. *chlorochilon* were then separated on the basis of



Figure 6 -- *Cycnoches warscewiczii* var. *warscewiczii* 'Green Glow', CCM/AOS

differences in shape of the basal callus of the lip (Alien, 1952). These differences are subtle, however, and orchid growers will find *Cycnoches* species offered for sale, as well as awarded, under any three of these names, or combinations thereof! Hobbyists should expect, though, that any plant purchased with any one or more of these names will produce flowers resembling those pictured in FIGURES 4 and 5.

Though *Cycnoches ventricosum* is the more botanically correct name, for purposes of hybrid registration, the registration authority, the Royal Horticultural Society, has continued to use *Cycnoches chlorochilon*. *Cycnoches* Cygnet, appears in the Sander's List of Orchid Hybrids as a cross of *Cyc. chlorochilon* and *Cyc. haagii*, registered by H. L. Allan in 1970. The flowers lack the dark green callus found at the base of the labellum of *Cycnoches ventricosum-chlorochilon-warscewiczii*, and in this way appear more like their *Cycnoches haagii* parent. Spotting across the segments of the flowers illustrated is also characteristic of many clones of *Cycnoches haagii*. In all likelihood, *Cycnoches chlorochilon* is responsible for an increase in size of these flowers over those of *Cycnoches haagii*. The *Cycnoches* species discussed so far all belong to the section of the genus, containing about six species and varieties, called *Eu-Cycnoches* by most authorities (Allen, 1952; Hawkes, 1965; Bechtel et al., 1981). This section is characterized by species whose male and female flowers look alike. The other section of *Cycnoches* is named Heteranthae, because the six species and varieties which constitute this section have male and female flowers bearing little resemblance to each other. We shall consider these lesser-known *Cycnoches* species in the next article for this series. - 84 Sherman Street, Cambridge, Massachusetts 02140.



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