

Interiorscaping Can Be For The Birds

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The title might seem a bit sarcastic, a trait completely foreign to my basic personality, but it's an appropriate title for Craig Carpenter and Corinne Benbow (Figure 1). Craig is the curator of horticulture at the North Carolina Zoological Park at Asheboro and Corinne is in charge of the daily interiorscaping activities in the R. J. Reynolds Forest Aviary. Their challenges and problems are very unique in interiorscaping. Bright, attractive orchid flowers which would delight the many people who visit the aviary don't last 24 hours, as the birds immediately eat the orchid flowers and then start on the leaves. People who maintain interiorscape plants in a mall usually don't have to use binoculars to detect insects on the plant material, but Corinne borrows the ornithologist's field glasses to search for insects in the upper canopy. Once she spots them she has to be very cautious as to how she eliminates the pests. Birds and people could be adversely affected with the

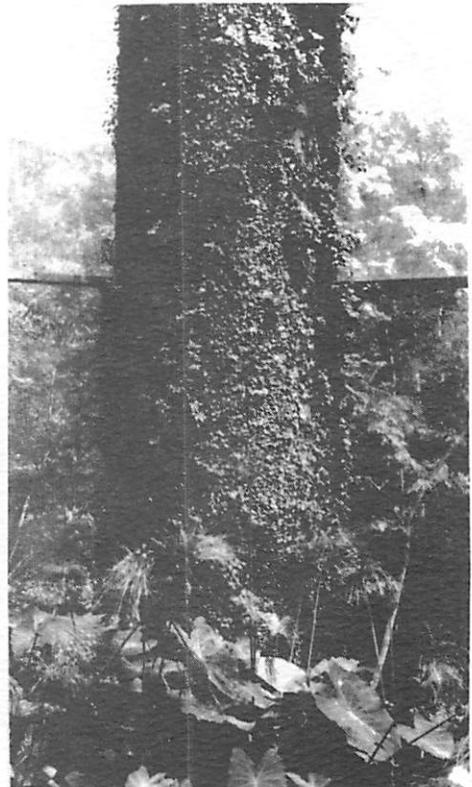


Fig. 1. Craig Carpenter and Corinne Benbow of the North Carolina Zoological Park

wrong pesticide. Watering can be difficult, as plants range in size from ground covers to creeping figs on 30 foot columns (Figure 2) to tall tropical trees and shrubs. The dome of the aviary is 55 feet high and 140 feet in diameter, so there is room for tall plant specimens. There are 2300 plants in the aviary and they are watered by hand. All plants are grown in ProGrow 300, which has proven to be very satisfactory. Bird activities cause some compaction, so the medium is cultivated once a week. On May 9th there were 12 active nests in the aviary so many plants couldn't be syringed for insect control. Birds required some plant material for those nests. Palm fronds make excellent nesting material, but Craig and Corinne would prefer that the birds use the weeping love grass specifically planted for that purpose.

The R. J. Reynolds Forest Aviary was officially opened less than 2 years ago. It was no easy task to obtain the proper sized plant material, but it was accomplished by

Fig. 2. Creeping fig plants on 30' column. Plants were started in 6" pots.



Phil and Joe Cialone of Tropical Ornamentals, Inc. of Delray Beach, Florida. Plants were installed by Tropical Plant Rentals of Prairie View, Illinois. These 2 firms also are installing the plant material in the African Pavilion,

(continued on page 9)

Interiorscaping Can Be For The Birds—(continued from page 8)

a facility nearing completion at the Park. Plant material was quarantined and acclimated for 6 months in Florida before installation in the aviary, and a 14 month acclimation period will have occurred before plants are installed in the African Pavilion.

Temperatures in the aviary range from 60 to 85°, and the light intensity can vary from 7500 foot candles in full sun to less than 100 foot candles. The aviary environment was designed for the comfort of birds and plants, and not for people. Air is readily recirculated and exhausted. Propane furnaces keep the temperatures right in winter, and evaporative cooling is effective in summer months.

Pest control is a major consideration but to date no bird has died because of pesticide applications (Figure 3). Malathion, Sevin, and insecticidal



Fig. 3. Pest control in this dense growth is a challenge.

soaps are most often used. Biological control also is attempted. A predatory wasp helps control mealy bugs, and other predatory insects and mites also are used to control some other pests. Lady bugs and praying mantis, popular control agents in organic gardening, don't work in the aviary, as the birds readily see and eat them.

Some plants have been lost because of plant pathogens. Syringing of plants for insect control has predisposed plants to crown or root rots, but the well-drained medium and subsurface drainage has helped alleviate the problems. Eight hundred to 1000 gallons of water are used daily for syringing and watering.

Fertilization can be difficult. Plants extending into the upper levels of the dome require more water and consequently more fertilizer than those at the lower light levels. Plants in the upper level are fertilized once each month, and some spot fertilizing with 20-10-20 also is practiced. All plant material had Osmocote incorporated in the medium when plants were shipped in, but top-dressings don't work, as birds immediately eat the Osmocote pellets.

Naturally flower growers should be interested in the attractive flowers they could expect to see in the aviary, but the tropical setting is not as floriferous as one might desire. The short life of orchid flowers already

(continued on page 10)

Interiorscaping Can Be For The Birds—(continued from page 9)

has been mentioned. Red and purple flowers seem to be especially tempting to birds and don't last very long. Red anthuriums are an exception (Figure 4), and bromeliad flowers also seem able to survive. One can readily see nature in action just studying the relationships of nectar-feeding birds which pollinate the flowers, and fruit-eating birds which devour the fruit. Bird-of-paradise flowers logically are pollinated by nectar-feeding tanagers. Banana plants were placed in the aviary for the nectar-feeding and fruit-eating birds (Figure 5).

As one strolls through the aviary one will not see any plant labels, as it is an aviary, not a conservatory. The welfare of birds has top priority, and the horticulturists work very closely with the zoologists. People working with the birds in the aviary, and animals in the zoological park, have the final say on aviary management.



Fig. 4. Anthuriums stay in flower in the aviary.

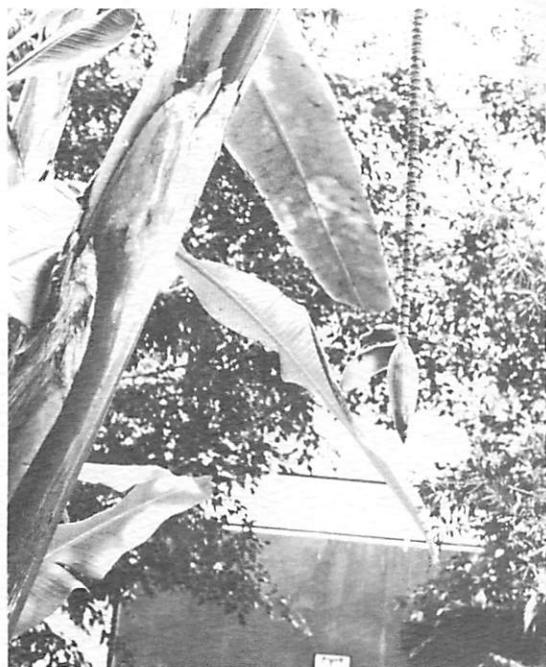


Fig. 5. Some nectar-feeding birds pollinate the flowers, and other birds eat the resulting fruit, a cooperative venture.

Groups of visitors, guided by volunteers, were going through the aviary at 10 minute intervals when Beth Thorne and I were visiting with Craig and Corinne. Attendance records are constantly being broken as word goes out about the zoological park so strategically located in the center of the state. The park is now a year-round attraction, and will be even more so when the African Pavilion opens later this summer (Figure 6). The dome of the pavilion will be 85' high, and covered with a Teflon-coated fabric developed by the Owens-Corning Company. The pavilion will cover 42,000 square feet of space, divided into rain forest, swamp and savannah. Plant material will be installed with the animals, ranging in size from 6" ground covers to 33' tall Traveler's Palms. Monkeys will scamper around on artificial hackberry trunks, as no live trees could withstand their constant assault.

Interiorscaping Can Be For The Birds—(continued from page 10)

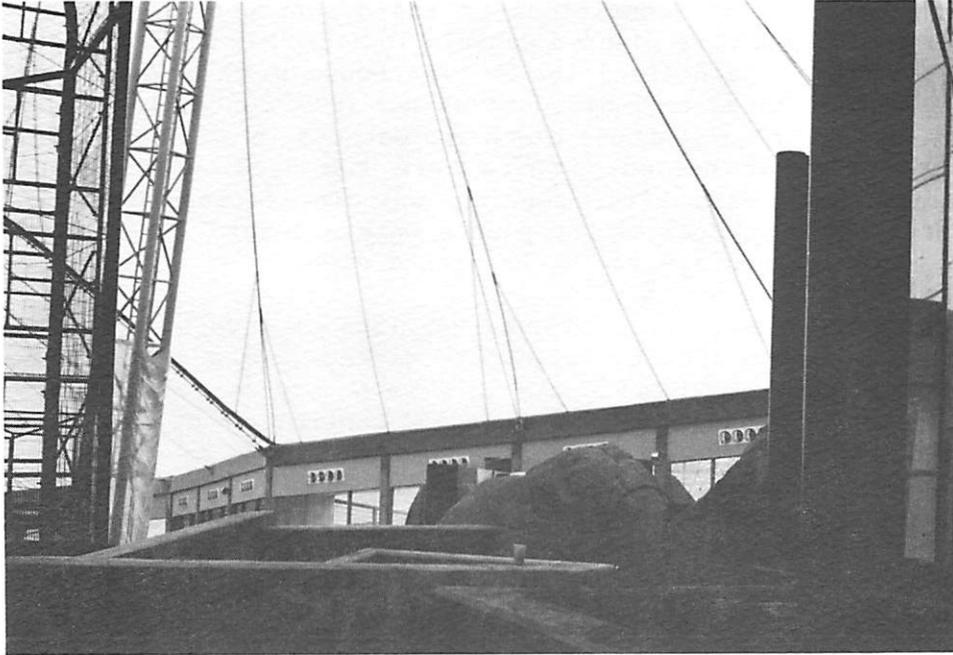


Fig. 6. African rain forest, swamp and savannah will be simulated in this new facility.

Interiorscaping in a zoological park has some frustrations and challenges not encountered by most interior landscape professionals. One frustration not encountered by Craig and Corinne was damage inflicted by people. Thousands of visitors, including small children, tour the aviary, and damage to plant material has been very minor.