Fledgling Cages: an underused tool in aviculture

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One of the most perilous times in a bird's life is the period immediately following fledging. "Departure from the nest increases vulnerability to predators and the elements. Unable to fly well, the baby bird cannot easily escape predators, and the mortality rate during this period is high." (Gill 1990, p. 383). If fledglings can survive the first few days out of the nest, their survival rate improves with increasing age and strength (Skutch 1976).

While chicks fledging in captivity don't have to contend with predators, their inexperience and general clumsiness can still get them into trouble, particularly in large planted aviaries or other mixed-species flight cages. While learning to fly (and land) safely chicks can get themselves into predicaments easily avoided by their parents, particularly if the aviary contains pools of water. Chicks are wizards at getting themselves wedged in plants, trapped behind food platforms, or tangled in hanging plants.

In addition, overly curious, friendly, or "helpful" birds in the same aviary can frighten fledglings into accidents or just keep them moving until they become exhausted. Their beleaguered parents can spend large amounts of time protecting the new fledglings, or just trying to find them. This time could be better spent feeding the chicks, teaching them how to get around the aviary, or getting themselves back into condition for their next breeding attempt.

With all of this in mind, the Brookfield Zoo Bird Department decided to try a new approach. In the past we had pulled chicks considered to be at risk during the fledging period for hand rearing. Hand rearing is of course preferable to losing the chicks, but ideally chicks should be raised and taught by their parents. A technique that kept the chicks safe and allowed them to exercise and be fed by their parents while they gained in strength and ability was what we were looking for.

After much discussion, we decided to try caging the chicks upon fledging. This technique has been used successfully in a study of wild birds, with evidence suggesting that caged chicks, after fledging, survived better than uncaged chicks (de Hamel and McLean 1989). Though this study was more concerned with determining the effects of caging on the parental care of *nestlings*, the fact that wild birds (presumably not as habituated to habitat manipulations as captive birds) continued to care for their chicks, even though they had to feed them through the mesh of a cage was heartening.

We constructed a 23 in. long x 18 in. wide x 19 in. high cage of ½ in. x 1 in. mesh, and perched it heavily so that clumsy young birds could easily get to the uppermost perches. These high perches were positioned very close to the top of the cage so that the begging youngsters could easily touch the mesh. The idea was that the parent birds would land on top of the cage when they came to investigate their chicks in the cage. The chicks would then beg excitedly and work their way to the upper perches to get closer to their parents. Meanwhile, the parents, stimulated by the begging of their offspring, would have returned with food, and would figure out how to feed their chicks through the mesh of the cage.

The first species we tried was Turquoise Tanagers *Tangara mexicana*. Brookfield Zoo has been very successful breeding this species, and the current breeding pair were very good parents, so we felt that they were the best birds to try our experiment on. The chicks fledged at 14 days old, and were clumsy enough to be fairly easily netted and placed into the fledgling cage. A food pan was placed inside the cage on the chance that the chicks would feed themselves. After the general excitement of the capture died down, the parent Turquoise Tanagers found their calling chicks quickly. The chicks fluttered and climbed up the perches to get close to their parents, just as we had hoped they would. The chicks then began to beg vigorously, just as they were supposed to do. The snag came with feeding—both parents brought beaksful of food (frugivore diet, waxworms, and newly-shed mealworms) but could not seem to figure out how to feed the chicks through the mesh.

We worried keepers watched for about one half hour, then went into the exhibit and fed the chicks a few waxworms. As a preferred diet item, we decided that the chicks would most readily accept this food item from a strange "parent." We fed them enough food to keep their strength up, but not so much as to fill them up and stop the begging response. The parent birds returned to the caged chicks as soon as we left the exhibit.

Finally, after about one hour, the first successful feeding took place. From then on the birds fed their chicks quite regularly, at much the same rate as if the fledglings were at large in the exhibit. The chicks were observed fluttering around the cage exercising their wings and developing their landing skills. They were observed eating from their food pan when they were a little over 30 days old, though they were still being fed by their parents.

Upon release from the cage at approximately 30 days old, the chicks were strong fliers and reasonably competent at landing. They readily followed their parents to the food platforms and fed themselves, though they continued to beg from their parents. The parent birds began to build another nest at about this same time, so usually only one parent was available to shepherd the chicks around the exhibit. When the breeding pair began incubation on the next

clutch the chicks were basically on their own, though they were usually found near whichever parent was not currently tending the nest. They were later trapped and removed from the exhibit when the male began to chase them.

We have used this caging technique for subsequent Turquoise Tanager clutches from various pairs with excellent results, and have had varying success using the same cage with other tanager species. Golden Tanagers *Tangaras arthus* never got very good at feeding their chicks through the mesh, and the chicks needed supplemental feeding from the keepers until they reached independence. It is possible that a larger mesh size may have accommodated this species, as they are slightly larger than the Turquoise Tanagers and may have felt more comfortable inserting their bills through larger spaces.

Blue-grey Tanagers *Thraupis episcopus* did not seem to understand the mesh of the cage and never attempted to feed their chicks. We tried a modified idea with this species, providing an open-topped Plexiglass box with tall enough sides that the chicks could not fly out. Plexiglass was chosen for the box so that the chicks could not climb the sides and escape. The parents could still see and hear their chicks, and learned fairly quickly to perch on the side of the box, hop in to the provided perches, feed the chicks, then fly out.

Purple Honeycreepers *Cyan-erpes caeruleus* adapted very well to a fledgling cage. With this tiny species we used an old Budgerigar cage. The parents learned to insert their long bills between the bars to pump nectar and fruit flies into their chicks almost immediately. In this case the birds were not housed in a mixed species exhibit with its inherent problems. Instead, the problem was an aggressive male who was a good parent until the chicks were ready to fledge, at which point he began to bully them. The cage prevented any possible harm to the chicks, and when the male could not chase them he went back to feeding them. This last case demonstrated another use for a fledgling cage, since prior to its use we had to pull all of this pair's chicks for hand rearing. As long as the male couldn't chase his offspring he took good care of them.

Fledgling cages can be a useful tool for the aviculturist. They allow the complete rearing of chicks by their parents (instead of their keepers), who are best equipped to care for them. Caging allows the rearing of several clutches of different species at the same time in the same aviary—as soon as the aviculturist is sure that the parents are feeding their young, s/he can safely leave them to it. Caging basically removes the problem of interference from other birds, allowing the parents to spend their time provisioning their young without having to find them first or defend them from cage mates. This may allow faster recycling by the parents as they build themselves up for the next clutch, thereby increasing their reproductive output during the breeding season. This is becoming vitally important for species that are not well represented in captivity, and may help to preserve these species not only in aviculture, but for the future.

Photos by Nancy Bent

A pair of Turquoise Tanagers discovers their chicks in the fledging cage.

Female tanager attempts to feed a begging chick through the cage mesh.

LITERATURE CITED

Gill, Frank B. 1990. *Ornithology*, W. H. Freeman & Co., New York.

Skutch, Alexander F. 1976. *Parent birds and their young*, University of Texas Press, Austin.

de Hamel, Richard and Ian G. McLean. 1989. Caging as a technique for rearing wild passerine birds. Journal of Wildlife Management 53:852-856.