

Notes from the Aviary . . .

Breeding the Goffin's Cockatoo

(*Cacatua goffini*)

by James J. Murphy, White Mountain Bird Farm, Graham, Washington

I was first captivated by this small white cockatoo in the late 1970s while attempting to gain some insight into their social behavior. This modest beginning left an indelible mark. I was amazed at what I observed in these birds and decided to make the Goffin's Cockatoo a long term project.

This little cockatoo is slightly sexually dimorphic. The iris of the mature male remains the juvenile black, while the adult female has a reddish brown iris. In addition, the mandibles of the male are noticeably larger than those of the hen. The larger mandibles of the male are noticeable at only a few months of age.

Although Goffin's Cockatoos are still imported in large numbers, their small island habitat is being rapidly altered by humans and their chain saws. The remaining natural habitat on the Tanimbar Islands, north of Australia, is rapidly diminishing. Captive propagation is the only way to ensure their continued long term survival.

The following information is not meant to establish a standard but rather a description of some of what we have done and observed over the past dozen years.

The little Goffin's Cockatoo has frustrated many accomplished aviculturists attempting to breed them. As with many difficult to breed species, the problems are often buried deep in the evolutionary social structure of the species. Without the minimal expression of critical social patterns, reproduction is often nil. This very complex and controversial arena is often, understandably, ignored or glossed over by many top zoological facilities.

In an effort to gain some insight in this lack of success, I placed four pairs in a large flight cage. All eight birds were surgically sexed to determine levels of maturity, as well as confirmation of their gender. All the birds were color marked with food coloring for individual identification. A remote video camera was used to monitor their behavior.



Metal lined, L-shaped nest boxes are attached at the outside rear of each breeding cage with inspection doors for easy nest checking.



The author's cockatoo breeding cages, 3 feet x 3 feet x 6 feet, are elevated three feet off the ground.

Photos by James J. Murphy

The video taping prompted more questions than it answered. Many observations were quite perplexing and are not the direct subject of this article. The video taping confirmed well developed social patterns that are the subject of a much more detailed study than will be presented here. Other behavior patterns, however, are incorporated below.

Of avicultural interest, it is worth noting that the birds chose mates of their own age-class. The oldest male bonded with the oldest female, the youngest male with the youngest female, etc. The sample size here is too small statistically, to be valid; however, the implications are worth noting.

In the first year, as the season progressed and pair bonds strengthened, the dominant or alpha pair eventually drove the next most dominant pair's male to the floor of the cage. At this point, the dominating pair was removed from the communal flight and put into a separate breeding flight.

With the alpha or original dominant pair removed, the next most dominant male and mate became the new "alpha pair" at the top of the pecking order and the cycle began all over again, until only the youngest (and lowest ranking) pair was left in the cage.

Establishing a real pair-bond is, in my opinion, a leading factor in reproductive success. Simply placing any male with any female is very chancy and likely to lead to failure. Allowing the birds to choose their own mate is crucial. Direct observation or video-monitoring is the best method for assessing the development of the pair-bond. A bonded pair sit close together, engage in mutual head and vent preening. Non-reproductive copulation is frequent.

Breeding Management

All the Goffin's Cockatoo pairs were placed in 3 ft. x 3 ft. x 6 ft. cages elevated three feet off the ground. Dark, metal-lined, L-shaped nest boxes with inspection doors were placed outside and to the rear of each cage. The nesting chambers contained two inches of white pine chips mixed with poultry dusting powder for insect and mite control.

Each elevated breeding cage was located outside but sheltered from the wind, with rain protection over the nest box, perches and food

bowls. Overhead protection was not complete, because the Goffin's Cockatoo, like the rest of their kind, love to hang upside down on the top wire and shower in the rain, be it in the cold winter or warm summer.

Few of these small, intelligent birds have been captive bred and little published information on successful breeding is available. Therefore, I was quite unaware that prevailing wisdom strongly advised against allowing the breeding pairs to have visual contact with each other.

Ignorant of this position, I placed all the Goffin's pairs within easy sight and sound of each other. I reasoned that island birds competing for a very limited resource (nesting holes) would evolve a tolerance of, and perhaps even benefit from, the stimulation of others as the breeding season drew near.

I must clarify that there is a crucial difference between a stimulating, neighboring pair, and pairs crowded too close together. Crowded pairs that have their nesting territory space continuously violated by the presence of others are unlikely to go to nest at all, and may well be responsible for the male mauling the female.

Direct and video observations clearly indicated flock excitement and simultaneous nest site defense displays among the pairs. On moonlit nights, the Goffin's Cockatoos became very active, flying back and forth between perches, landing with wings spread and crest up, uttering a sharp, two note call that resembled that of the red-tailed hawk.

Here in the mild climate of western Washington, the Goffin's Cockatoos are kept outside all year around. During the dozen or so days of freezing weather at night, all the hanging water bottles are removed each evening to avoid freezing and breaking. The bottles are replaced in their original cages at dawn the next morning.

Most of the Goffin's Cockatoos sleep in their cozy nest boxes at night. However, on a moonlit night, even in sub-freezing weather, all the cockatoos are out, flying about, squawking well into the night.

In this part of the country, Goffin's Cockatoos kept outside will breed from February to June. An occasional late summer and early winter breeding will occur.

Feeding Regime

The Goffin's are fed a mixture of

seed, soaked field corn, and soaked Hi-Pro dog food. The dog food is soaked to soften it and make it more absorbent. Horse grade wheat germ oil is added to the dog food. This product adds the much needed vitamins A, D3 and E. Dry vitamin E, sea kelp and Brewer's yeast are also added.

A parakeet-type seed mix makes up the bulk of the diet. Soaked corn (to the point of germination) is added in the fall to fatten the flock in preparation for cooler weather. Oil seeds (sunflower or safflower seeds) are added liberally when the coldest nights are forecast. Fruits, greens, and fresh grass seed heads are fed when in season. Corn-on-the-cob is never refused.

Second Generation

In 1985, we held back one female, named Ivory, for second generation breeding. She was kept as a house pet for the first winter. During this period, she was potty trained, learned to come when called and began talking. This heavy human socialization may yet prove a detriment.

In her third year, she came into a low level of breeding condition. Her cage sat next to the cage of a tame, young wild-caught male. I placed her in with the interested male, leaving the cage door open so she could leave if she became uncomfortable. Ivory would fly to the perch next to him and solicit with the bowing posture and outstretched wings, vocalizing the single syllable "Utt . . . utt" call of an inviting female. After a few moments, she would fly back to my arm, only to repeat this process several times. All was well as long as I remained close by. If I attempted to leave, Ivory would abandon the courtship and fly to my shoulder.

I went through this process every night for a week or so while she remained in breeding condition. When the hormones subsided, she discontinued solicitation. However, she still passed her toys through the cage wires to her "boyfriend" in the next cage.

This spring, at the age of four years, Ivory will go out to the breeding colony and be placed in her own new pen for her first real attempt at the all important task of passing her genes down to the next generation.

Cautious of the above implications, in 1987 we kept back an unrelated

pair of domestic babies. The youngsters are socialized with daily, but kept together next to other Goffin's Cockatoos to avoid any negative imprinting that may occur in cockatoos.

Miscellanea

Due to the careful monitoring of the pair-bond formation, and reasonable spacing of the breeding cages, we have never had any mauling or mutilation among the pairs.

Any over-active preener is given additional fresh fruit tree twigs to occupy themselves.

In 1987, four out of seven eligible pairs clutched successfully and one pair triple-clutched. One pair laid a three egg clutch. All breeding pairs were within full sight and sound of each other. Although the season stretched on, all nestings were overlapped with one another.

Each pair has their own set of toys to entertain themselves. Here, we spare no expense. Canning jar lids, cleaned stones and apple tree branches are enjoyed. All favored items end up in the food bowl for safe keeping. (Amazons also store their favorite items in the food bowl.)

Egg weights were 15.2 to 16.4 grams. Hatch weights were 10.8 to 12.2 grams.

Pet Quality

Domestic Goffin's Cockatoos can best be described as the moral equivalent of monkeys. Their great intelligence, charm and perpetually curious nature makes them a one-bird entertainment center.

Ivory, mentioned above, free-flies outside. She will swoop down from the tops of the tallest trees on command and loves to dive-bomb the bantam roosters.

Her energy for play seems boundless, and her playmates are quite unusual. Ivory plays with our Shi-Tzu house dog on the lawn. Ivory rolls over on her back and allows the shaggy but gentle dog to drag her about by her tail, on her back. When Ivory would tire of this game, she would simply fly off, only to fly back and dive-bomb the dog again, in another invitation to play.

Ivory has invented her own version of the age-old children's game of "tag." She darts by her intended victim and slaps him or her with her wing tips. This is her invitation to play. I once observed her dart after the big male Doberman racing across

the pasture, intent on enforcing his single rule of allowing no unwelcome two- or four-footed critter to remain within sight or sound of his territory. She quickly overtook the racing hound and slapped him on the back of the head as she sailed by. The dog was not impressed and pursued his quarry with the singlemindedness of his kind.

Ivory has been free flying for nearly four years now, and never leaves the main farm building area. If I should walk too far out into the pasture, she will abandon my company and fly quickly back to her favorite tree or to the house.

The mimicking ability of the Goffin's is quite variable (as with most species). Ivory speaks only a few words and phrases. However, her sister, two years her junior, speaks with amazing talent. Words and phrases heard only once are often quickly repeated. Their voices are high and soft, but quite articulate.

Their downfall has to be their immense capacity to be spoiled and demanding. Most owners find themselves well trained (before they know it) within a few weeks of "ownership" •

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