Breeding the Blue-crowned Amazon

(Amazona farinosa guatemalae)

by Mary McDonald
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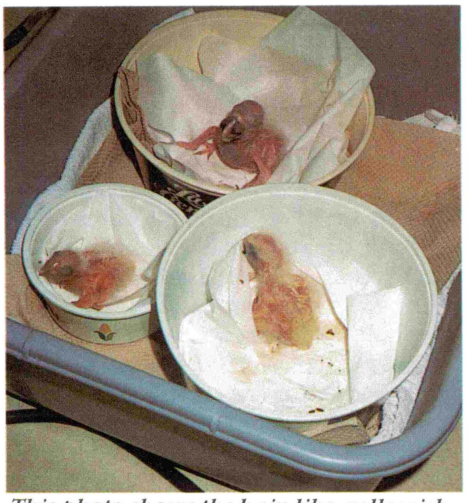
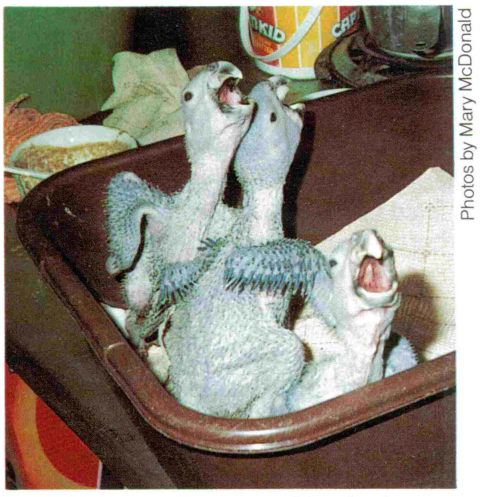


This photo shows the hair-like, yellowish down feathers of the Blue-crowned Amazon.



The feather tracts appear blue in these young guatemalae Blue-crowned Amazons. At pinfeather stage, these young Amazons are very vocal and alert.

Photos by Mary McDonald

We have had Blue-crowned Amazon *(Amazona farinosa guatemalae)* Parrots at our breeding ranch since 1978 but, until recently, our birds hadn't produced one single egg.

In February 1988, we added a beautiful pair of these birds to our collection. That started an era for us.

Description

The Blue-crowned Amazon is one of the larger Amazons. Adults measure to 38 centimeters and more, general plumage is green. Forehead and crown bright, light blue; light blue feathers extend down the back, with a yellow stripe at the base of the neck. Lores, superciliary extending down the side of the head, are blue. Pale skin ring around the eyes. Red feathers just above green heavily tinged with black primaries. Under tail coverts green, intermixed with some yellow; bill black with a light streak at the base; feet grey with black nails.

The *A. farinosa guatemalae* inhabits the Caribbean Slope from Honduras and north to southern Vera Cruz, in Mexico. The species is a fairly common resident of the area's undistrubed, humid forest of the Peten in northern Guatemala.

Large numbers of this genus, but very few of the *guatemalae* species, have been imported into the United States. Unfortunately, few of the birds have ended up in breeding collections, the majority evidently having been sold as pets.

Our Aviary

We housed the pair acquired in 1988 in a suspended pen measuring 3 x 3 x 6 feet, constructed of 16 gauge welded wire, 1/2 inch x 1 inch mesh. A 14 x 14 x 23 inch insulated nest box is attached horizontally to the outside, at the back end of the pen. We use untreated cedar shavings for nesting material.

Each of our outdoor breeding pens is a separate unit. The pens are placed amid large oak trees, shade producing plants and bushes, all of which provide privacy. Planted bushes include ligustrum, red tip photinia, loquat, persimmon, all in addition to native growth and ground cover.

An automatic sprinkler system simulates a year-round rainforest effect. Our hot Texas summers really require such an arrangement for the safety and contentment of the birds.

Feeding

Feed for our adult Amazon parrots consists of a quality cockatiel mix, Lake's Parrot Buffet pellets, carrots, fresh corn, apples and some kind of green vegetable.

We also prepare sandwiches daily.

At feathering, these young Blue-crowned Amazons have acquired their black pigmented mandibles and the bluish forehead.

These are made with a high quality (no preservatives) whole wheat bread with a spread of thoroughly cooked hard-boiled eggs (including the shell), cooked brown rice and a 7-grain cereal. After processing the rice, cereal and eggs, we add whole, cooked, fried beans or peas and raisins to the spread. As we distribute the sandwiches, we check the nest boxes and carefully observe each bird for any signs of behavioral change.

The birds do love to see us coming with the piled-high tray of sandwiches. Interestingly, our birds make a fetish of separating the whole raisins and beans before eating the sandwich.

Eggs at Last

Late in April 1989, we noted the pair of *A. farinosa guatemalae* working the nest box. As time passed, the hen appeared outside the nest box less often, clearly paying attention to the duties of parenthood.

Success

On May 5, I discovered the first egg! The sighting of that egg brought excitement and a beautiful feeling. I didn't inspect the nest box again until May 29, when there were positive sounds of a nestling inside the box. On inspection of the nest box, I found a single chick along with two more eggs.

We didn't access the nest box again for 16 days. When we checked the nest box again, we found three healthy, fat babies. We removed the babies from the nest box and started our hand-feeding program.

Hand-feeding

We used Lake's Parrot Buffet fibrous powder for the hand-feeding program for the new arrivals. We gradually weaned the fast growing babies using cooked, brown rice; cooked pinto beans; fresh corn; carrots; apple; and Lake's Parrot Buffet pellets; plus the sandwiches.

The chicks were weaned in August, three months after the hatch. Interestingly, these chicks were talking before they were fully weaned.

A Favorite

The Blue-crowned Parrot has always been one of our very favorite birds. It is calm, intelligent and has an affectionate personality. The size, color and, most particularly, its large eyes and eye rings are striking to behold. ●

The Theory of Imprinting

its implications and ramifications in raptors and all birds

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There is a growing body of evidence indicating that for young birds of many species, including most raptors, early social experience plays a major role in their subsequent sexual preferences. This socialization experience, often referred to as sexual imprinting, has critical implications for captive breeding programs, including those involving the hand-rearing of young by human caretakers, and those involving foster rearing of chicks by parents of closely related species. For example, it has been shown that when young birds of a variety of species are foster reared through the time of fledging, they will subsequently direct their sexual preferences toward the foster species. Further, this preference is *often* irreversible. That is, even large amounts of post-fledging exposure to their own species may not reverse their preference for their foster species. The amount of exposure needed for this imprinting to occur, when this exposure need occur, how irreversible this imprinting is, and whether males and females show the same effect from this experience, may vary from species to species.

Sexual imprinting may be defined as a learning process by which a young bird learns the features of the stimulus (usually members of its own species) to which it will subsequently direct its sexual behavior upon reaching sexual maturity. The learning takes place within a sensitive period which typically ends prior to sexual maturity. In altricial birds such as raptors, this sensitive period ends about the time of fledging. The learning is generally considered to be irreversible. That is, sexual preferences formed during the sensitive period are difficult if not impossible to reverse. Note that irreversibility refers to a *preference.* In other words, if a foster imprinted bird is placed with only conspecifics, it may successfully mate with them, however, if given the choice between its own species and its foster species, it will choose to mate with its foster species. This issue is of particular relevance to captive breeding programs with raptors. A raptor imprinted on humans might fail to mate with conspecifics when humans are present, but might successfully mate with conspecifics if their human caretakers avoided contact with them. The learning is generally thought to be supraindividual. Bateson (1966) states that sexual imprinting, in fact, involves individual learning, that birds learn the features of its close kin so that it will subsequently mate with similar individuals.

In 1935, Konrad Lorenz, in a paper that was to become a milestone in the study of behavior, emphasized that in some birds the preference of an individual to mate with a member of its own species is subject to learning shortly after hatching. In some species, if a bird is raised by a foster mother, either another species of bird or a human keeper, the bird will become socially attached to the foster mother and, on reaching sexual maturity, will court individuals of the foster mother's species in preference to those of its own species. As examples, Lorenz cited studies of his own and others on ducks, geese, owls, parrots, herons and other birds, including both precocial and altricial species.

The process by which these important and long lasting first social bonds were formed is termed imprinting. To distinguish the early learning of preferences that are tested by the following response to mother objects and the early learning of preferences that are tested in courtship, the former will be referred to as filial imprinting, and the latter as sexual imprinting. Warriner (1963) showed that choice of a mate within a species can be largely determined by early experience, but his work only dealt