

# Diademed Tanager

## a first U.S. breeding?

by L.C. Shelton, Curator of Birds  
Philadelphia Zoological Garden

A diademed tanager (*Stephanophorus diadematus*) with its bullfinch-like beak, and its small erectile red crest, does not have a typical thrupid appearance. In fact, when I first saw a live specimen in a cage with several blue-and-yellow tanagers at a bird importer's in the '60s, I was initially puzzled as to its identity, but purchased the single specimen anyway for my private collection. Obviously, from its very untanager appearance, the Argentines refer to the species by the vernacular name of cardinal azul (blue cardinal).

In color, the bird is basically deep blue with darker wings and tail, and a lighter blue shoulder patch. The black-fronted head is capped with a white crown (hence, "diadem" and the source of its other popular English name "white-capped tanager") at the front of which is a small red tuft. The blue of the female is duller and the crown is grayish. Not in the same class of beauty as, say, a paradise tanager, this tanager is, however, truly handsome. Sturdily built, it measures approximately 7½ inches in length.

The species occurs from coastal southeast Brazil to Uruguay, eastern Paraguay and eastern Argentina. According to Alexander Wetmore, the birds which he observed in Uruguay inhabited dense thickets where they perched often on the tops of trees and bushes. He also commented on their pleasant song, "finchlike in tone". Indeed, the species does have an exceptionally good song for a tanager — another desirable attribute for the species as an avicultural subject. The atypical tanager beak was also noted by Wetmore: "The bill in this species suggests that of *Phytotoma* (plantcutter), as it is evidently designed for cutting and crushing". And the diademed tanager does love to eat buds and leaves — a less desirable trait in an avicultural subject. However, the species does little damage

to most plants in a large exhibit or aviary. In our experience at the Zoo, the only really visible harm done to plants was the shredding of banana and *Strelitzia* leaves.

In August, 1978, the Philadelphia Zoo purchased four specimens in immature plumage from a Florida importer. After a period of quarantine, the birds were placed in Jungle Bird Walk (then called Hummingbird House). This heavily planted walk-through exhibit measures approximately 100' long, 35' deep and 20' high. The birds adjusted quite well to their new environment and soon moulted into, delight of delights, two males and two females. Housed with approximately 30 other species of birds, mostly small- and medium-sized soft-bills, they never harassed any other birds, even the tiniest species, and rarely bickered among themselves. They became exceedingly tame and would perch within two feet of visitors and burst into their cardinal-like warble. Because of this disposition, the species became a favorite with local bird photographers. At the same time, because of the above-mentioned habit of shredding banana and *Strelitzia* leaves, they did not exactly endear themselves to the Zoo horticulturist.

Despite this perfect adjustment to captive life, there were no obvious indications of breeding among the birds in 1979. During this year, one of the males died of pneumonia. In July, 1980, a replacement male was obtained from a California importer, again giving us two potential breeding pairs. However, we then lost one of the original females from an injury incurred during the night. The two original birds, which then remained, were developing a pair bond. The female would solicit copulation through a wing-fluttering submissive posture. As part of the courtship behavior, the male would feed the

female — often bits of shredded banana leaf!

In mid-May, the female built a cup-shaped nest, quite substantial for a tanager, from mostly dead material from *Ficus pumilia*, the vine in which the nest was built. The nest was at a height of about 12' and was located very near the visitor walkway. After completion of the nest, a ruddy ground dove made attempts to usurp the nest for its own purposes. This led to the desertion of the nest by the tanagers — and exile for the ruddy ground dove and its mate. It was also the end of any breeding activity for 1980.

Early in April, 1981, the same courtship display was frequently observed between the bonded pair. Soon construction of a nest was begun in the *Ficus pumilia* near the 1980 nest location. By the 17th or 18th of April, incubation had begun, and the first feeding of young was observed on the 2nd of May. Although the female performed all the incubation chores, both parents carried food to the nestling(s). They fed mostly mealworms with lesser quantities of grubs. However, actual pieces of fruit being carried in adults' beaks to the nest was also seen after five days. The feeding of "non-live food" so early was extremely unusual in comparison to other tanagers which we had bred.

Since several other tanager species, which had nested in the same exhibit, had frequently thrown their young from the nest after a week to 10 days, we decided to pull the young from the nest for handrearing at the eighth day. There was only one chick and no sign of the remains of another egg. However, we assumed that, in typical South American tanager fashion, the female had probably laid two eggs, and the second non-fertile one had disappeared.

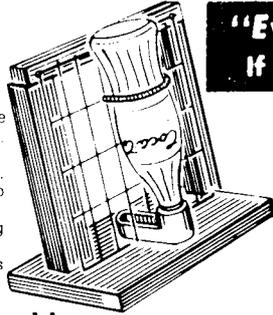
The diademed chick proved easy to handrear. It was fed hourly, from 7:00 a.m. to 7:00 p.m., a diet of approximately 75% soaked Gaines Meal and 25% chopped peeled grapes rolled in Vionate powder. In addition, a few mealworms, beheaded by a razor blade, not a guillotine, were given at each feeding. After 18 days of age, the bird was hand-fed every two hours until it was self-feeding at approximately 30 days of age. Live mealworms were placed on top of open dishes of mashed Gaines Meal and chopped grapes to stimulate the fledgling's interest in eating by itself.

Soon after removal of their nestling, the parents renewed their interest in breeding. The female began construction of a new nest, again in *Ficus pumilia*, but far from the public area.

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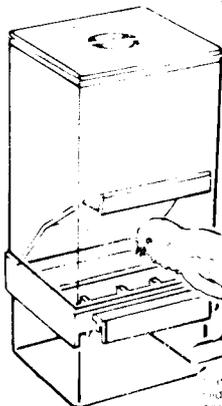
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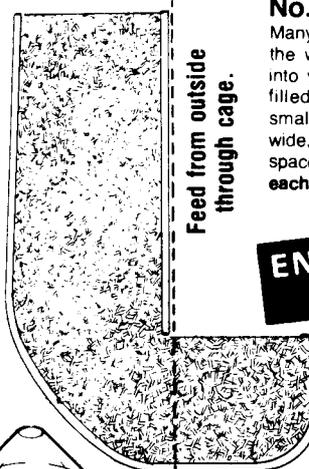
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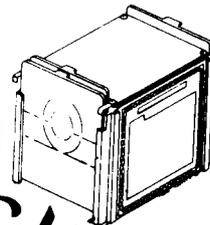
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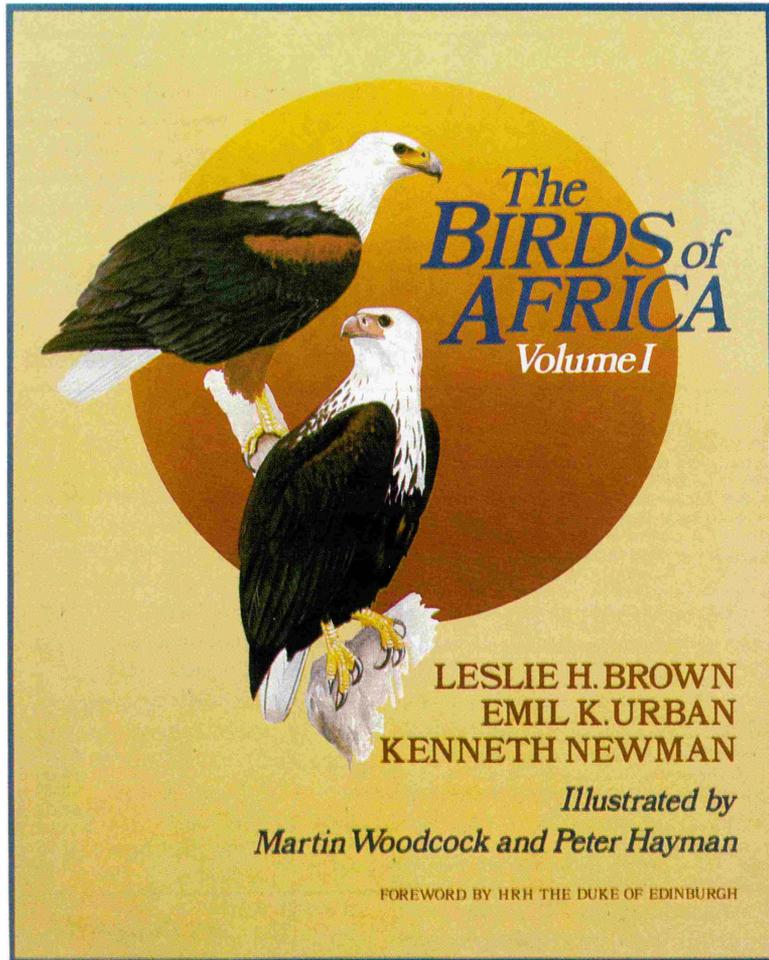


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Photos by Dixon Davis



*As this photo well reveals, the male diademed tanager is truly a handsome bird.*



*Male diademed tanager at feed dish in Jungle Bird Walk.*

On May 24th, she had begun incubation. The first feeding of young was observed on June 6th. Since the nest was located in such a secluded area, we decided to leave the nestling(s) to the parents' care. A single chick left the nest on June 24th, at approximately 18 days of age. Parental care of the fledgling was excellent, and the young bird was soon independent of its parents.

The immature plumage was more charcoal than real blue with a lighter spot on the crown, but no hint of red. Adult plumage developed at about 10 months. In our case, the hand-reared bird was a female, the parent-reared one a male.

Although we did not check the diademmed nests at the egg stage, Mrs. K.M. Scamell, who raised the species in England in 1965, described the eggs as "a large pointed egg, greeny-blue with large brown spots to halfway". Our breeding experience, like hers, reveals an incubation period of 14 days and 18 more days before fledging. The only references in avicultural literature (Delacour, Aviculture, Vol. I, and Nordgaard-Olesen, Tanagers, Vol. I) to any other breeding of the species concern a successful captive breeding by a Monsieur Decoux in France in 1923.

In addition to greenery, the diademeds thrive on the soaked dog kibbie (Gaines or Wayne), Zoocake (a Philadelphia Zoo preparation similar to commercial softbill mixes), fruit cocktail sprinkled with Vionate and nectar. Small crickets and grubs were fed daily; mealworms were given several times a day and fed ad lib when any species in the exhibit had young.

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