

# Focus on African Finches: The Fire-fronted Bishop

(*Euplectes diadematus*)

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"So! Now we're a pet store? Well gimme a couple of those \$3.95 specials!" Doug Pernikoff, our zoo veterinarian, never misses an opportunity to be clever, and an opportunity it certainly was. In the early evening of January 23, 1992, a hundred birds of sixteen species arrived simultaneously at our zoo hospital, filling a quarantine room improvised from a large animal holding cage, now hung with rows of shiny new bird cages.

As our assembled bird staff hastily unpacked shipping boxes from California and Chicago (and a cardboard carrier from the tropical fish store around the corner, containing Fischer's Whydahs astoundingly discovered there), this vault-like room increasingly brought to my mind the words of Howard Carter, on November 4, 1892, when he looked for the first time into King Tut's Tomb; "Wonderous things! Marvelous things! . . . and everywhere the glint of gold!" Though in this case it was rather the glint of reds and blues and more subtle colors.

In one cage a dozen Peter's Twinspots adjusted to new surroundings. At an angle to the six Dybowski's Twinspots were a dozen St. Helena Waxbills, next to a dozen Orange-cheeked Waxbills, across from the ten Black-cheeked Waxbills, suspended alongside the four pairs of Black-winged Red Bishops.

For the Fort Worth Zoo Bird Department, the arrival of these birds marked both a new direction and a renaissance. After nine years, we were preparing to once again exhibit birds indoors. Fort Worth's famous bird house, built in the 1920's, and brilliantly remodeled in 1957, burnt one night before Christmas, 1983. Now, in early 1992, the huge new World of Primates, its great moated atrium crowned by a pyramid of glass and surrounded by a "living wall" planted a year previously, stood ready, its public opening set for April.

At the same time, we were also making plans of an entirely different nature. While still Assistant Curator, long before his promotion in 1991, Chris Brown, our Curator of Birds, was keenly interested in establishing long-term breeding programs. In December, 1991, while making arrangements for birds for the new primate building, we were told repeatedly by prospective suppliers, that a long-talked-about embargo by commercial airlines on shipping birds from Africa was imminent. As it happened, we were just in time to partake of the last Tanzanian shipment of any size to arrive in this country. As of September, 1992, birds are still arriving from West Africa and Botswana, but all indications are that those shipments will shortly cease as well. Therefore, when I arrived at Fort Worth that same December, I was told my responsibilities would include the initiation of an African Finch breeding program, in an off-exhibit building behind the aquarium. Hence, the large number of individuals arriving in our January shipment.

Of course, our new African birds were ensconced in Dr. Pernikoff's hospital to undergo quarantine. There they stayed, largely under the care of Assistant Curator Liz Glassco, and Head Keeper Rick Tucker, while I kept busy with Black-necked Swans, Chilean Flamingos, Harpy Eagles, and Andean Condors. Finally, an interminable month went by, and birds were ready to leave. March 5 was set as the date to transfer the Black-winged Bishops to the World of Primates.

The feature that sets the Black-winged Bishop (*Euplectes hordeaceus*) apart from the other members of a genus of striking birds is commemorated by the common names for this species most in use in books on cage-birds; Fire-crowned Bishop or Crimson-crowned Weaver. Though this bird is widely distributed through Sub-Saharan Africa, it has never been common in aviculture. This is in

marked contrast to its close, but smaller and less spectacular relatives, the West Nile Red Bishop (or Orange Weaver) (*E. franciscana*) and the Yellow-crowned (or Napoleon) Bishop (*E. afer*), the two most frequently encountered weavers in private collections. I have never seen a Black-winged Bishop in a pet store, and only once in a dealer's compound. The only zoos where I've seen any were the Bronx Zoo and Cincinnati, and the only one I ever saw in private hands had been misidentified by an ornithologist as belonging to a different genus.

Therefore, I was delighted that this beautiful species had been chosen to inhabit the World of Primates, and equally undelighted to discover that one of the four females was something entirely different. In common with the sixteen other members of the genus *Euplectes*, female *E. hordeaceus* are streaky, drab, nondescript sparrow-like birds. Thus, there should not have been any bright yellow on the rump and back of the "female" I was helping Rick and Liz to band on March 4. Nor should there have been splotches of black on its chest. Bishops are polygamous birds. One male mates with many females. Ideally, we would have liked to have obtained more females than males to begin with. As it was, we had to settle for pairs from the dealer. And now, I had to disgustedly announce to our Head Keeper and Assistant Curator that we had been sent an out-of-color male Napoleon Weaver (*E. afer*), a very common species, as mentioned before.

So instead of joining his cagemates in their spacious new public exhibit, this annoying little bird was exiled to a shelf-cage in the off-exhibit breeding facility behind the Zoo's aquarium, and Chris Brown prepared to add "One Male Napoleon Weaver" to that month's list of surplus birds for the American Association of Zoological Parks and Aquariums to publish.

Like most Northern Hemisphere

Ducks, as well as Scarlet Tanagers, Ruffs, and a variety of other birds scattered over various families, male members of the genus *Euplectes* undergo an eclipse plumage, when they molt from their distinctive breeding patterns and shapes into drab ones, closely resembling females and juveniles. In the case of *Euplectes*, it corresponds to the onset of the African dry season.

© Photo by John Wise



Fort Worth Zoo's male Fire-fronted Bishop in full plumage, in the Avian Research and Reproduction Facility.

Day after day, this disgraced Bishop came more and more into color as he sat on his shelf in the Avian Research and Reproduction Facility (or ARR as the bungalow behind the aquarium is affectionately known). I'd never previously had the opportunity to watch a Bishop assume his colors, so my annoyance was tempered with interest. It was an interest that began to grow daily as I changed the papers and put new food and water in the cage. His forehead did seem rather orange. And where was the yellow on top of his head? At the same time, the black on his chest looked odd. This was becoming tantalizingly like one of those big expensive jig-saw puzzles a friend might be laying out on a table. Suddenly, what a few pieces before meant nothing becomes immediately recognizable as Jackson Pollock's "Cathedral" or Mathias Grunewald's "Temptation of Saint Anthony". This sort of occasion is usually the third dictionary definition of "Epiphany"—after "The supernatural occurrence of



The Fort Worth Zoo Fire-fronted Bishop in full plumage. The other bird is a female Pintailed Whydah (*Vidua macroura*) with atypical facial markings.

a deity or spirit" and the ancient Church Holiday more often known as the Twelfth Day of Christmas—in other words, a moment of sudden intuition or revelation. And such was the case, when, on March 20, 1992, I was able to announce to my fellow bird staff (as we assembled to capture Crowned Cranes) that the Fort Worth Zoological Park possessed the only Fire-fronted Bishop (*Euplectes dia-*

*matus*) in any American Zoo.

*Euplectes diadematus* "occurs very locally in drier parts of Southern Somalia, Eastern Kenya and North-Eastern Tanzania" but is "not uncommon in the Voi area of Tsavo National Park" (Williams, 1980). When Robin Restall (1975), the multi-talented British authority on Finches published his exhaustive book *Finches and Other Seed-eating Birds*, he had never seen



The male in full courtship display, uttering a chittering call while assuming a nearly spherical shape. Other birds in this picture are a male Dybowski's Twinspot (*Euchistospiza dybowskii*), two Black-cheeked Waxbills (*Estrilda erythronotos*), an Orange-cheeked Waxbill (*E. melpoda*), and a male Purple Grenadier (*Uraeginthus ianthinogaster*).

© Photo by John Wise



When this picture was taken in late February, 1992, it was not suspected that the bird on the right was actually the male Fire-fronted Bishop. It is interesting to note that the plumage of the male Black-winged Bishop (*Euplectes hordeaceus*) became much redder after some time in a sunlit public exhibit, without molting.

a living specimen. Two standard references on foreign finches; Bates and Busenbark (1963), and Rutgers et al (1977), do not mention this species at all.

It amuses me in retrospect that the Fire-fronted Bishop (*Euplectes diadematus*) was a bird I took quite matter-of-factly when I was a kid. I still have the (now very battered) copy of the first edition of the San Diego Zoo guidebook to be printed entirely in color (Peach, 1969), purchased on a

well-remembered visit when I was nine. There, on page 12, is a well-posed photo of a male, the image that surfaced quite suddenly while staring at a bird in a cage in Fort Worth more than twenty years later. The fact that I thus took Fire-fronted Bishops for granted unfortunately causes my memories of the one I saw at San Diego in the early 1970's to be imprecise. I think I saw more than one. They were in an aviary full of largish seed-eating birds that has long-since

been converted to other uses. The person in charge of San Diego's animal records is Marvin Jones, whose international reputation as the leading authority on the history of captive animals was established long before his appointment as Registrar to the Zoological Society of San Diego in 1974. Mr. Jones found nothing in the computerized records, but located a card cataloging a male and female that arrived June 22, 1965, from Capricorn Aviaries (of which I know nothing). The only further note on this card indicates the female died May 8, 1967. The male's death, like so many of the small doings of small birds evaded documentation and left history's page unmarked.

K.C. Lint, who recently celebrated his eightieth birthday, was Curator of Birds at the San Diego Zoo from 1947 to 1976. Over those years, more than 2,000 species and subspecies of birds lived there. I don't remember asking K.C. about any of these and not being told something about them. K.C. told me there were certainly more than two Fire-fronts at the Zoo, probably around five, mostly males, and some lived for years.

San Diego's Fire-fronted Bishops are the only ones in an American Zoo, of which I was aware, until the discovery of the Fort Worth Zoo specimen. Otherwise, I know of one published record. Dr. Roger Wilkinson (1990), Curator of Birds at the Chester Zoo in England reports, in a list of recent activities there; "A pair of Fire-fronted Bishops (*Euplectes diadematus*) were purchased in 1988 as 'out of colour' Napoleon Weavers (*E. afer*). Robin Restall (1975) notes that this is a species he had never seen so we must indeed consider it scarce in aviculture".

From recent editions of the International Species Information System Report, it appears there are no more Fire-fronts at Chester.

No longer a source of annoyance, but an object of interest and pride, Fort Worth Zoo's Fire-fronted Bishop completed his molt in a leisurely fashion, not assuming full color until very late April. Meanwhile, the question arose, like that of Charles Schultz's Snoopy (confronted by the fact that 17 shopping days remained until Beethoven's Birthday); "Now that we know this, what do we do about it?" Needless to say, Fire-fronted Bishops do



Photo by Lisa Weedin

When these pictures were taken in late April 1992, this bird was still coming into color. It has since been interesting to note that during eclipse, changes occur in reverse—the cheeks and sides of the upper chest, which were the last places to darken, are the first to become drab again.



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not appear on any price list, and by then pretty much all the birds from the final Tanzanian shipments had been dispersed far and wide through public and private aviculture. Ours is the only one listed in ISIS. The danger of hybridization among Bishop Weavers in captivity appears to be real, so it was decided not to release it in the World of Primates, where more than 70 birds of 16 species currently reside. At this point we have no other exhibits for African Finches. On May 13, it joined a community cage in the ARRF, standing out brilliantly amidst out-of-color Pin-tailed Whydahs, surplus male Peter's and Dybowski's Twinspots, and a changing array of other finches. The Fire-front soon claimed a small territory of bamboo branches, weaving a never-completed nest of shredded Georgia Cane *Arundo donaex* leaves. Its display call rang out continuously, a sharp, brief chitter. Typical of short-tailed Bishops, it displayed by erecting its feathers, becoming, at times, almost a sphere of black and yellow, its bright orange forehead drawing the eye like a beacon.

In late September, the forehead dulled overnight—the first indication of eclipse plumage. It is quite logical that the most provocative feature of this bird's plumage should be the first to go as his hormonal surge subsided, and his aggression quieted to innocuousness. Shortly, light patches appeared on his black cheeks, then the eclipse proceeded with startling rapidity. John Wise's pictures of this bird in its full glory were taken on September 15, 1992. As I write on October 5, it's now a rather sorry sight. There is now just a central zone of black on the chest and underparts, now surrounded by an upside-down "V" of drab pale feathers. Black is also largely gone from the head, and the orange forehead has disappeared entirely. Shortly it will look like any nondescript out-of-color Bishop, or a female.

While assembling the illustrations for this article, I looked for the slides, taken by Lisa Weedn back in February, in preparation for illustrated labels, of a pair of Black-winged Bishops. There was something familiar about the "female" in the picture. As best I can tell, it is our male Fire-front! It will be noted from the picture, that the male Black-wing is considera-

bly larger. The "other three" females, who did not surprise us by turning out to be male something-elses, were similarly much smaller than the male Black-wings. I had presumed there was a natural, sexually dimorphic size difference. I have not found this supported by the literature. Williams (1980) lists no size differences between male and female Bishops. On the other hand he presents measurements of 5-1/2 inches (14cm) for Black-winged Bishops, as opposed to only 4 inches (10cm) for Fire-fronted Bishops. Though the three male Black-wings in the World of Primates displayed brilliantly, and wove neat nests in low bushes, the three females never appeared to respond. According to J.G. Williams (1980), who for many years was Curator of Birds at the National Museum of Kenya, at Nairobi, female, out-of-color male, and juvenile Fire-fronted Bishops are "not identifiable in [the] field except in association with adult males". On the other hand, he does state that (true to their names) female Black-wings have black wings and tails—which ours don't have. So, it may be that what we received as eight Black-winged Bishops in January, may turn out to have actually been four male Black-wings, and a male and three female Fire-crowns. And now our male is in no condition to breed. Well, next breeding season....

In the meantime I would be most interested in hearing from anyone else with Fire-fronted Bishops. I would appreciate being written to at: Fort Worth Zoological Park, 1989 Colonial Parkway, Fort Worth, Texas 76110.

It is possible that Fire-fronted Bishops now in this country are the last that will come here. This should not be a difficult bird to breed once some are actually brought together and we know what they are.

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