

An adult male sun bittern (Eurypyga belias).

# Hand-rearing the Sun Bittern at the San Antonio Zoo

by Fawn Kunnemann and Gary Frank San Antonio, Texas

The sun bittern (Eurypyga belias) ranges from southern Mexico to southern Peru. It is about 45 cms. in length and in general appearance and movements these elegant birds somewhat resemble herons but, in fact, are much more closely related to rails. The top and sides of the head are black with a white stripe above and below the eyes. The upper part of the body is finely barred grey, brown and olive with slightly paler underparts. The tail is narrowly barred black and white with two broad bands of black and chestnut. When threatened or alarmed their wing display reveals a striking pattern of yellow, black and grey with a central patch of red-orange. The iris is deep red, the upper mandible is dark and the

Seven day old sun bittern chick begging with wings spread.



Photo by Fawn Kunnemann

lower mandible is pale orange, as are the feet and legs.

The San Antonio Zoo received a female sun bittern from the National Zoological Park in 1980 and in 1982 we acquired a male from the Bronx Zoo. This pair successfully reared three chicks in our tropical bird house before being transferred to an outdoor exhibit in February of 1986. A single chick hatched on May 20, 1986, but was found dead in the pool four days later. The adults recycled and laid a single egg on June 19, 1986. Two days prior to the estimated hatch date, the adults abandoned their nest and the decision was made to pull the egg. It was while we were removing the egg that we noticed a serious mite infestation of the nest area. We then candled the egg and found that the chick was in the air space. The egg was placed in an incubator and hatched July 18, 1986.

When we realized we would be handrearing a sun bittern chick, several phone calls were made to other zoos in order to find any information that would be helpful in formulating a diet. The National Zoological Park had tried to raise several chicks but lost them all to mealworm impaction. The Houston Zoological Garden's parent-reared chicks were fed mainly mouse pinkies, crickets, mealworms and Zupreem Bird of Prev. The parent-reared chicks at the San Antonio Zoo were fed primarily mealworms, crickets and smelt. We decided that the Houston diet would be more suitable for hand-rearing because we were concerned about using the frozen smelt; we have had problems with hand-reared chicks in the past when using smelt as a primary food item (i.e. yellow-crowned night heron, hammerkop, ibis).

The chick weighed 19 grams at hatching and was placed in a small bowl on a terry washcloth which was changed daily. We have found the terry cloth material to be effective in preventing splayed legs. A wooden brooder box (38 cm x 38 cm x 71 cm) with an electric



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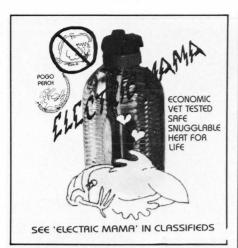
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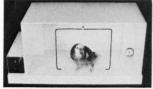


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MANION CREST 13846 KURTZ RD., GRASS VALLEY, CA 95945 (918) 272-6447 heating element and Marsh Farms Turn-X fan unit was used until the chick was fourteen days old. The initial temperature was set at 35.5 degrees C and was gradually reduced thereafter. The chick was fed primarily chopped pinky mouse every 1-1/2 hours for a total of seven feedings and was fed until it stopped begging. Night feedings were not considered necessary since the chick was showing good weight gains. One drop of Avitron and a sprinkle of bonemeal were used as nutritional supplements to the chick's diet one time per day.

The chick refused to eat at first but did take some water by eyedropper. For the second feeding, the chick took four pieces of chopped pinky from the forceps. The chick did not beg when touched on the side of its beak but did respond to sounds made by scraping the forceps along the edge of the brooder box. By the third feeding the chick seemed to be much more alert and interested in eating. We added one chopped, molted mealworm per feeding. In our experience the molted worms are more easily digested by young birds and the chance of impaction is greatly reduced.

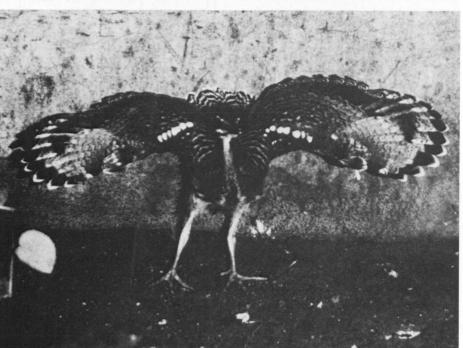
At day five the chick was starting to stand and was presenting the wing display posture when begging for food. The chick weighed 32.2 grams and was being fed two chopped pinkies and one molted mealworm every two hours (5x/day). One cricket body per feeding (with legs removed) was added to the

diet at day eight. By day ten, the chick weighed 55.8 grams and was out of the nest bowl. A piece of indoor-outdoor carpeting was cut to fit the brooder box and used as a substrate.

Small pieces of fine ground Bird of Prey were included in the diet at day twelve. At this time the chick was being fed only 4x/day and eating 4 pinkies, 2 pieces of Bird of Prey, 2 molted mealworms and 1 cricket body per feeding. At day fourteen we added two pieces of the adult softbill insectivore diet at each feeding. The chick now weighed 78.6 grams. At day fifteen we noticed that the chick's appetite was beginning to level off. The chick was not begging well and we were having to coax it quite a lot. We also began to notice several changes in the bird's behavior. The chick was starting to take food from the forceps with the tip of its beak and then tossing it back much like the adults do. It also began vocalizing like an adult bird, especially when alarmed. A small cast was found in the brooder box at day seventeen.

We then started leaving a food pan of insectivore diet, Bird of Prey and live insects in the brooder box at all times.

The chick was moved to a larger brooder box (47 cm x 67 cm x 97 cm) with natural wood perching at day twenty. We were now feeding only 3x/day and were still having to coax. The chick was observed drinking water on its own at nineteen days and at twenty-four days it was seen eating from the food pan. The chick also ate several



Adult sun bittern in wing display posture.

oto by Rainie Bish

live minnows from its water bowl. We then decided to cut the chick back to two feedings per day. We continued to hand-feed the chick twice a day until it was thirty-four days old and we were convinced that it was eating well enough on its own.

The only problem encountered while raising this sun bittern was after it was placed on rubber mats in an outdoor brooder flight pen. Twelve days after being transferred, the bird developed minor bumbles on both feet. It was then moved back into the brooder for treatment. Up until this point the bird had been kept on indoor-outdoor without any problems. The sun bittern is now being housed in one of our outdoor exhibits and doing well.

We have since learned that the Pittsburg Aviary also hand-reared a sun bittern this year which is approximately seven days older than our bird. They raised their chick on chopped pinky mouse and Vionate supplement.

Despite having been hand-reared there does not seem to be any indication that the chick is imprinted (peopleoriented), nor is it tame. The bird was surgically sexed as a male at seventynine days old by our zoo veterinarian. We hope that once this sun bittern reaches sexual maturity it can be paired up with a compatible mate.

#### References

Rutgers, A.M. and K.A. Norris. (1979): Encyclopedia of Aviculture. London, Blandford Press.

#### **Products Mentioned in Text**

Bird of Prey, Animal Spectrum, Inc., P.O. Box 6307, Lincoln, Nebraska 68506-0307.

Avitron, Liquid Vitamin Supplement for Birds, Lambert Kay Division of Carter-Wallace, Inc., Cranbury, N.J. 08512.

## **Insectivorous Mixture** (prepared at San Antonio Zoo)

Ingredients:

2-2/3 cups mockingbird chow

4 cups catfish chow (ground)

2-2/3 cups mynah pellets (ground)

1-1/3 cups dog chow (ground)

1-1/3 cups whole wheat bread crumbs

1/2 cup wheat germ

1 tbspn. Vionate

1 tbspn. Bird Booster

17 hard boiled eggs

4-1/2 lbs. Bird of Prey

Bird Booster, Blue Bonnet Milling Co., P.O. Box 2006, Ardmore, OK.

Vionate, Rich Health, Inc., Nutritional Research Laboratories, P.O. Box 18258, Irvine, CA 92713. •

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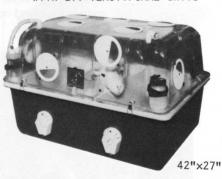


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