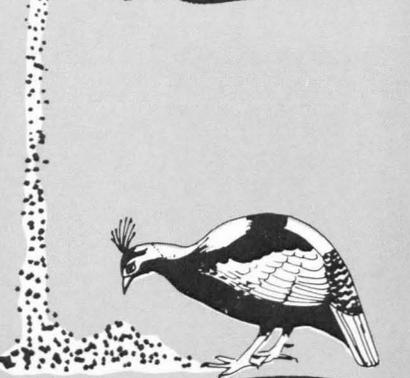


Hand Rearing Bald Crows

by
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Bald Crows or Yellow-headed Rockfowl, *Picathartes gymnocephalus*, are found in virgin African forests among the rocky cliffs from Sierra Leone to Ghana. Originally classified with the crows, they resemble starlings anatomically, but experts place them with the thrush-babblers because of their nesting habits. They are ground birds that hop about the fallen leaves. In the wild, they peck briskly in the loose ground cover for small insects and infant reptiles and also fish for amphibians in small streams. They build an open cup-shaped nest of mud in cliffs and crevices (about 6-15 feet above the ground) along vertical cliff faces. During the breeding season, the female lays two creamy white mottled eggs per clutch. Nestlings are fed by regurgitation.

The San Antonio Zoo has exhibited up to eleven Bald Crows since 1970. The artificial habitat consists of a glass-fronted semicircular enclosure 3m x 4.5m with a skylight. There is a small shallow pool in the center, 86cm long x 50cm wide x 13cm deep sloping to 4cm deep with running water. Ground cover is of wood chips, leaves and sand, and small shrublike plants surround the pool. Along the walls, artificial rockwork has been molded to resemble natural cliffs. The enclosure is cleaned in a routine fashion once a day.

The adults are fed two ounces of "insectile mix" and "meat and fruit mix" per bird once a day and supplemented with crickets and mealworms. Food is taken from a metal feeding pan placed on the ground.

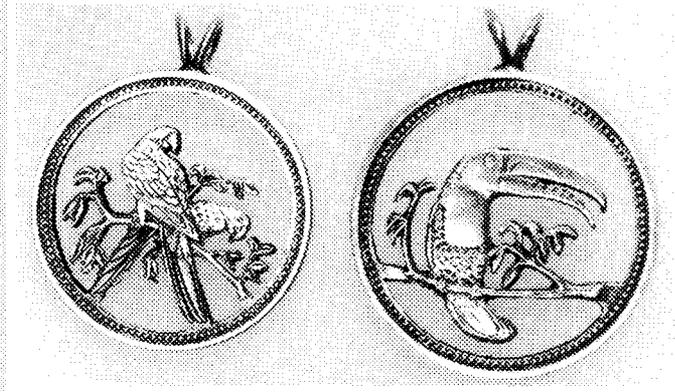
In San Antonio, the first egg was laid in February 1976 in a cup-shaped mud nest built in a crevice on a wall of the ex-

hibit. After several days in the nest it disappeared, and the keepers presumed it had been eaten. In August 1979, another egg was laid, this time on the ground beneath the brush. Because the first egg was apparently pilfered, this egg was pulled out of the exhibit and placed in a rollex incubator. The incubator was set at 99.5°F (37.5°C), wet bulb at 85°F (30°C). After a 26 day incubation period, the egg hatched and the chick was hand-reared. In 1981, two eggs were laid in a different mud nest, pulled from the enclosure and after 23 and 21 day incubation periods, both eggs hatched and the chicks were hand-reared. We will devote this paper to the detailed rearing records of the chicks raised at the San Antonio Zoo in 1981.

DIET AND FEEDING SCHEDULE

Approximately six hours after the chicks hatched, we fed one bite of cricket entrails as the first feeding. After this was tolerated, we fed one bite of cricket entrails alternating with one bite of chopped pinkie mouse dipped in a vitamin solution every hour for three days. On day four we started feeding pinkie mouse and cricket entrails each feeding and one bite of water-soaked Wayne dog food every other feeding, still on an hourly schedule. During this time the chicks gained 4-7 grams per day. On day 10 we changed them to an hour and a half feeding schedule, increasing the amount at each feeding to 2-3 bites of pinkie mouse and 2-3 bites of cricket entrails. On day 11 the chicks were fed one bite of dog food each feeding and the amount of pinkie was increased to 5-6 bites per feeding. Day 12 we started feeding cricket bodies (no head, legs or wings) and decreased the frequency to

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every 2 hours. On day 16 we introduced moulted mealworms. Also on day 16, "insectile mix" was gradually begun, starting at a ratio of $\frac{3}{4}$ chopped pinkie mouse to $\frac{1}{4}$ insectile. The pinkie content was gradually decreased until the chicks were eating only insectile. By day 23, feeding times were reduced to 4 times a day and were again reduced to 3 times a day by day 30. At this time we started offering a pan of insectile free choice, with mealworms on top. When the birds started picking up insectile on their own, and were making sufficient gains in weight, the feedings were again reduced to 2 times a day, then 1 time a day until finally we discontinued hand feeding.

BROODING

After hatching, the chicks were placed in a brooder box that measured 71.5cm x 38cm x 35.5cm. The box had a 15.5cm x 15.5cm window and a 30.5cm x 30.5cm sliding door made of plexiglass. The box was also equipped with a Marsh Farms brooder heating element that was thermostatically controlled and set at 98°F (36°C). For air circulation, a Marsh Farms Turn-X incubator lid was mounted on top of the box with the heating element turned off. The lighting in the box was subdued.

The temperature was kept at 98°F (37°C) until day 9 when the temperature was reduced to 96°F (35.5°C). On day 11 the temperature was decreased to 94°F (34.5°C), day 14 to 92°F (33°C), day 16 to 90°F (32°C), day 17 to 88°F (31°C), day 19 to 85°F (29°C), day 21 to 82°F (27°C). Because these birds were hatched during the winter, we decreased the temperature slowly.

A bowl measuring 9cm in diameter by

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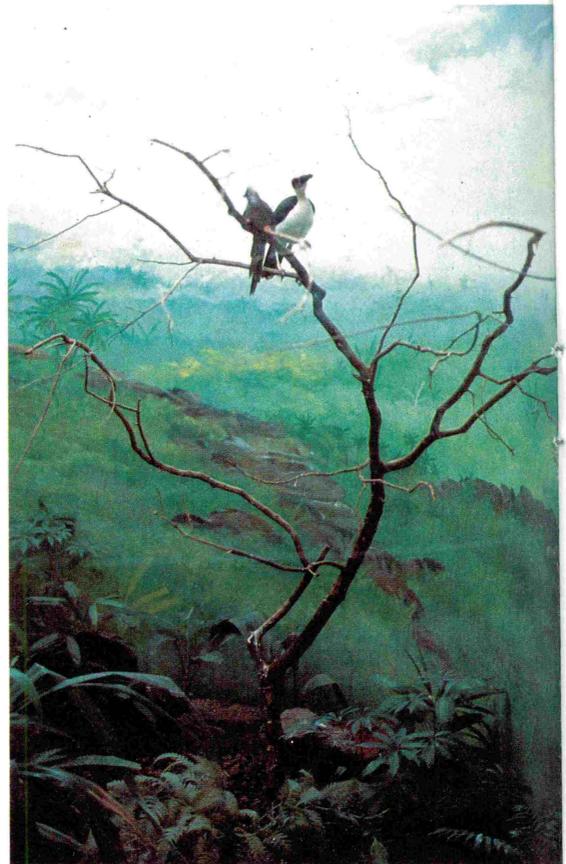
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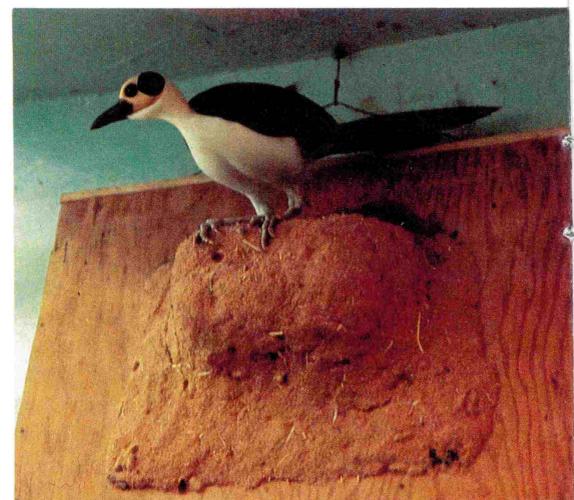
Bald crows share an exhibit with speckled mousebirds.

4.5cm high was used for a nest. The nest was lined with a piece of burlap, and after 2-3 days sticks were placed in to aid in grasping development.

When the chicks were fully fledged they were moved out of the brooder box to a wire cage with the same dimensions. It was equipped with a light bulb on top of the cage to maintain the temperature at 85°F (29°C).

DEVELOPMENT

On day 11 the chicks' eyes began to open. The pin feathers started to erupt



Adult on mud nest structure.

on day 12. On day 15 the fecals were no longer in a sac. The feathers were fully opened by day 21 and the chicks were starting to hop around the cage. By day 38 the head and neck skin started to turn yellow in color.

COMPLICATIONS

When the chicks started to stand up in the nest (day 23) we moved them from the brooder box with subdued lighting to a wire cage with a bright light bulb. In the following 4 days both chicks started to go off feed and lose weight. By day 28 the first chick was dead. The necropsy report stated the death of the chick could not be explained on morphologic grounds. The clutchmate, however, survived to maturity and was placed on exhibit at 79 days of age. We feel the death of the chick occurred because we moved it from dim to bright light, and from a box with solid walls to a wire cage. It was too stressful. If we would have gradually moved them from the brooder box with dim lighting to the same kind of box, but with a light bulb to maintain the temperature, then to the wire cage, it would not have caused as much stress. Immediately after the death of the first chick, we moved the second chick back to a brooder box with a light bulb and it



Adult Bald Crow

started to eat again and resume normal weight gains.

We have found through limiting the food intake per feeding, control of temperature while brooding and slow introduction from dim to bright lighting

that it is possible to successfully hand-rear Bald Crows. While infantile chicks adapt to new surroundings very slowly, juvenile Bald Crows adapt readily to new environments, be it with other Bald Crows or birds of some other species. ●

Photos by Gayle Katcher

Analysis per 3.5 grams (approximately one teaspoon)

A	. . . . .	600 IU
Carotene	. . . . .	0.365 mg.
Canthaxanthin	. . . . .	1.8 mgs.
D ₃	. . . . .	60 IU
Arginine	. . . . .	32 mgs.
Histidine	. . . . .	13 mgs.
Isoleucine	. . . . .	24 mgs.
Leucine	. . . . .	33 mgs.
Phenylalanine	. . . . .	30 mgs.
Tyrosine	. . . . .	33 mgs.
Methionine	. . . . .	12 mgs.
Cystine	. . . . .	8 mgs.
Threonine	. . . . .	33 mgs.
Tryptophane	. . . . .	9 mgs.
Valine	. . . . .	40 mgs.
Lysine	. . . . .	44 mgs.
Alanine	. . . . .	30 mgs.
Aspartic Acid	. . . . .	50 mgs.
Glutamic Acid	. . . . .	140 mgs.
Glycine	. . . . .	36 mgs.



E	. . . . .	10 IU
K	. . . . .	0.001 mg.
C	. . . . .	6 mgs.
Bioflavonoid	. . . . .	Complex 0.85 mg.
Hesperidine	. . . . .	Complex 0.735 mg.
Rutin	. . . . .	0.365 mg.
B ₁	. . . . .	0.5 mgs.
B ₂	. . . . .	0.5 mgs.
B ₆	. . . . .	0.5 mgs.
B ₁₂	. . . . .	0.001 mg.
Choline	. . . . .	7.8 mgs.
Inositol	. . . . .	7.8 mgs.

Niacinamide	3.7 mgs.
P.A.B.A. 2 mgs.
Biotin 0.003 mg.
Calcium 170 mgs.
Phosphorus 170 mgs.
Magnesium 7.3 mgs.
Potassium
Chloride 39 mgs.
Sodium 25 mgs.
Manganese 0.069 mg.
Cobalt Trace
Silicon Trace
Iron 0.7 mgs.
Copper 0.037 mg.
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