

Handrearing the Green Aracari

by Martin Vince,
Assistant Curator of Birds,
Riverbanks Zoo and Garden, SC

From a very uncertain beginning, this particular bird grew into a complete success. As it was hatching, the parents abandoned it. And with egg shell still attached, it was taken from the nest log and placed in an incubator at 99.5° F and relative humidity of 65%. The chick was left overnight to dry out and recover from the exertions of hatching. The following morning its yolk sac appeared to have been absorbed, and the first feed was given. Kaytee Exact (original formula) was chosen as the hand rearing food.

Day One

The chick was kept in a small bowl lined with a face-cloth to help provide traction for the legs. It remained vocal, strong, and lively throughout the day, defecating a total of three times.

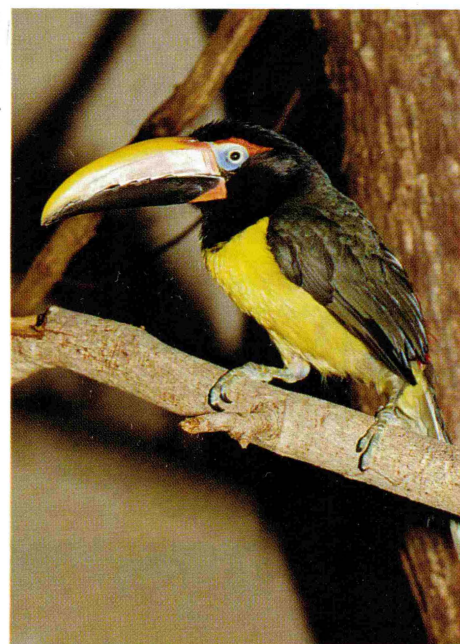
Feeding was from 7 A.M. to midnight. On the advice of Tim Kitchens and Veta Hollaway (accomplished, local aviculturists and friends of Riverbanks) the first feed was 0.1 cc, with 0.2 cc being fed every two hours thereafter. A one cc syringe was used to deliver the liquidy mixture of 70% Kaytee Exact (mixed with lactated ringers in a ratio of 1:6) plus 15% pureed papaya plus 15% applesauce.

Certain birds are particularly susceptible to Candida infections when being handreared. These fungal infections of the mouth and upper digestive tract can quickly be fatal but if they are detected in time, treatment is normally successful using Nystatin. In susceptible species such as Ramphastids and certain psittacines, a prophylactic treatment of Nystatin can be helpful. We decided to use Nystatin as a prophylaxis, treating twice a day for the first five days.

Day Two to Day Six

Feedings remained at two-hour intervals, from 7.30 A.M. to 11 P.M. We had not handraised this species from day one before, and since Ramphastids do not have a crop by which their food consumption can be judged, we wanted to proceed cautiously. Overfeeding can easily kill a young chick so food volume was increased by only 10% on day two and a further 10% on day three. On day three the strength of the Kaytee mixture was increased to 1:3 and increased again to 1:2 on day six. We continued to mix the Kaytee (in its increasing strengths) with papaya and applesauce. On day five, solid foods were eaten. Tiny pieces of papaya, banana, tomato and apple were lightly dusted with Vionate multivitamin supplement and fed with tweezers. Pieces of Red Apple Jungle pellets (Marion Zoological, Wayzata, MN) soaked in water and slices of pinkie mice were also eagerly consumed.

Photo by Martin Vince



Nine-month-old Green Aracari.

From Day Eight

The chick was fed every three hours from 7:30 A.M. to 8:30 P.M. Each feed comprised approximately 1 cc of the Kaytee/papaya/applesauce mixture and several pieces of solid food. From day 11, feeding of the Kaytee mixture was discontinued, and only solid food pieces were offered. The chick drank tap water from a syringe. A total of 15 grams of food were eaten on day 11, 46 grams on day 30, and 80 grams on day 40. From day 40, the chick was only fed four times a day, from 8:30 A.M. to 4:30 P.M. And on day 50, he was completely independent and no longer needed to be handfed.

At four weeks of age the chick had fully feathered out, and was clearly a male. The Green Aracari is one of the few clearly dimorphic Ramphastid species. The feathers covering the

Handrearing the Green Aracari (*Pteroglossus viridis*)

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Day	Weight / g	Comments
1	5.8	Fed 0.2 cc every 2 hours up to midnight. Brooder 99 F
2	6.3	Fed every 2 hours from 7.30 am to 11.00 p.m.
3	6.7	
4	6.9	Brooder 95 F
5	10.0	Pieces of solid food eaten
6	11.4	
7	12.6	
8	13.7	
9	14.7	Fed every 3 hours from 8.00 am to 8.00 p.m.
10	17.2	
11	20.4	
12	22.7	Brooder 92 F
13	25.5	
14	30.9	Fed every 3 hours from 8.00 am to 4.30 p.m.
15	34.3	
16	36.1	
17	40.6	
18	44.6	
19	48.8	Both eyes open
20	59.6	Brooder 85 F
3 weeks	65.9	
4 weeks	103.1	Chick fully feathered; visually sexed as male
5 weeks	121.7	Removed from brooder and caged at room temperature
7 weeks	119.1	Feeding independently

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throat, head and neck are a solid jet black in the male and a chestnut brown in the female. The red and yellow of the female's bill are also paler than in the male.

Conclusions and Problems

Upon hatching, the aracari's bill was mis-aligned, scissoring slightly to the left. One of its toes was slightly bent, and at eight days of age, the chick developed a most pronounced neck problem. The neck was bent back so far that the bird's head touched its shoulders and back. General neck strength and control was very poor indeed.

The minor toe defect cured itself with no corrective action and was never a cause for concern. The mis-aligned bill was more obvious, but easily cured by gentle massaging the mandibles into place several times a day for two weeks. Far more worrying was the neck condition. From day eight the bird was unable to lift or control the head, and the neck was permanently bent backwards, although the spine appeared normal. The staff veterinarian at Riverbanks, Dr. Nadine Lamberski, DVM, suggested trying to support the neck in a forward pointing position. This was achieved by totally confining the chick in a tube made out of a rolled up face-cloth. The bird's head protruded from one end, and its tail from the other. The wrapped bird was placed in a margarine tub at an angle of 45 degrees with the head uppermost. Before each feed, the cloth was removed and the chick's neck massaged to help straightened it out; the bird was re-wrapped in a fresh cloth after each feed. This routine continued for 22 days, by which time the bird was 30 days old and the neck had achieved a totally normal attitude, strength and degree of control. The youngster was then freed from the tube and allowed to stand unrestricted in its bowl.

After the chick's eyes had opened, we started wearing a hunters' face mask in the hope that the bird would not become imprinted on us. Unfortunately, that was not a success and the bird developed into a typically tame individual. He remains, tame and friendly although not aggressive. ➤

Breeding the Grey-headed Kingfisher

by Maartin de Ruiter,
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Kingfishers (*Alcedinidae*) still are rare birds in aviculture and the only places where we can see them with some regularity is in zoos. I've worked at three public zoological collections and have taken care of no less than 11 different species.

The subject of this article is the Grey-headed Kingfisher, *Halcyon leucocephala*, which has a large distribution including Africa south of the Sahara, the Cape Verdian Islands and South West Arabia. In the wild, it certainly isn't rare but in captivity only very few are kept and was fortunate enough to care for several specimens at the Birdpark of Walsrode (Germany). One of these specimens was kept together with a specimen of the very similar Woodland or Senegal Kingfisher, *Halcyon senegalensis*, and, alas, some hybrids have been produced from these two birds.

Two German aviculturists, Mr. Stefan Grün and Mr. Erich Schnitt sent me some information about a successful breeding of the Grey-headed Kingfisher and because so little published information is available about Kingfisher-breeding, I want to pass on some of their observations.

Four Grey-headed Kingfishers were obtained and placed in a combination in- and outdoor aviary. One of the birds was quite aggressive against its mate and at the end of the year, the other bird was found dead in the aviary. Now the three remaining birds were placed in an indoor-enclosure which was separated into two parts which were connected by a little door which was left open all the time.

Two birds spend most of their time together in one part, the other sat alone in the other part. In spring, all three again were moved to the combination in- and outdoor enclosure but quite soon one bird was attacked by the other two. It was therefore removed.

Although the two remaining birds weren't aggressive against each other

during the winter-period, now they became unfriendly toward each other and the dominant bird took residence in the outside-flight, the other bird staying in the smaller inside-aviary most of the time. In the outside-enclosure, a breeding-wall suitable for kingfishers had been constructed and the dominant bird started to dig one breeding-pipe after the other. After the 5th had been dug out, the second bird was allowed to return to the outside-flight and on 16 May, one of the kingfishers spent long periods of time in the nest-pipe.

On 20 May, the first egg was laid and a day later the second and last egg was laid. The female incubated well but later — after the incubation period was over — both eggs were opened and both contained chicks dead in shell.

On 28 June the first egg of the second clutch was laid, followed a day later by a second and the female started incubation. On 2 July a third egg was laid but this was taken out of the nest and placed in an incubator. After 18 days of incubation, the first egg hatched, the second egg had died-off during an early stage of incubation as did the egg in the incubator.

The Kingfishers took good care of the chick and about every 10 minutes one parent was observed to enter the nest with food-items — mainly crickets — in its bill. At 10 August the young left the nest, being 24 days old. Hopefully, more aviculturists will start to pay attention to these interesting birds so in the near future articles about successful breeding of Kingfishers will become a more regular item in avicultural literature. ➤



Grey-headed Kingfisher.

Photo by Maartin de Ruiter