

Hand-rearing Eclectus Parrots at the Franklin Park Zoo

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Hand-rearing birds has generally been avoided at the Franklin Park Zoo Aviary for a variety of reasons. First and foremost is that an animal's natural parents are, by nature's skillful design, much more adept at caring for their young than any well-intentioned keeper. Nature's subtle needs prove difficult to satisfy when attempting to hand-rear a bird. In addition, a keeper's limited and often diverted attention cannot compare with the almost compulsive devotion shown a young bird by its parents.

Almost all birds go through a phenomenon called imprinting, which is a process by which young birds learn to identify with those of their own kind. Hand-reared birds, because of their close association with humans, often become imprinted on their keepers rather than their own species. Upon reaching adulthood, human-imprinted birds sometimes have difficulty relating to other birds which lessens the chance that the bird will accept an appropriate mate and reproduce. Furthermore, these birds are often too friendly and, therefore, vulnerable to the occasional ill-intentioned zoo visitor.

Lastly, hand-rearing is both time consuming and demanding for the people involved. Much time is spent preparing food, feeding, caring for and just plain worrying about the small charges.

Despite all these drawbacks, hand-rearing does have its place in captive zoo management. Often birds, through their lack of experience, or because of the unnatural environment imposed on them by captivity, do not complete the normal sequence of incubating and

rearing their young. In such situations the young can be justifiably removed from the nest and hand-reared.

Such a situation did arise last spring when Rose and Rags, a recently established pair of grand eclectus parrots, failed for the second time to properly care for their young. This rare and beautiful species has a large number of zoos and aviculturists attempting to raise them. The number raised, though fairly extensive, is very small in comparison to the attempts being made.

The grand eclectus parrot (*Eclectus roratus*) is indigenous to Australia, New Guinea and most of the South Pacific Islands. They inhabit the dense rainforest treetops, feeding on fruits, nuts, seeds and leafbuds. The male eclectus is a brilliant soft green with red beneath his wings. The shoulders, wings and tail are tipped with blue. The female's coloration is just as outstanding. She has a bright red head fading into a deep blue neck and abdomen. The back and wings are dark maroon with a red tail outlined with orange-yellow.

In the wild, during the breeding season, they go off in pairs to find a deep nest high in a hollow tree. The female lays one to three eggs, which hatch about thirty days later. While the female does all the incubating, the male feeds her and assists in rearing the youngsters once hatched.

Success in breeding eclectus at the Metropolitan Boston Zoos has been noteworthy. Since November of 1973, 40 young have been produced. One breeding pair in particular, called Minnie and Mocher, have raised most

of these young themselves and possibly are the most successful breeding pair in captivity. What is even more important is that at least 12 of their offspring throughout the country are producing young of their own.

Although eclectus parrots have been hand raised by the hospital staff at the Metropolitan Zoos, none of the present direct care staff in the aviary had any experience in hand-rearing parrots. Previous bird house staff had had success in rearing parrot-type birds, and thanks to former staff member Gretchen Wilson, much of the experience and observations were recorded and available for reference.

The efforts of the 1983 staff centered around the rejected offspring of the aforementioned Rose and Rags. The initial hand-rearing attempt, under the guidance of Curator of Birds, Bob Wilson, began April 26, when it was decided to pull a two day old chick from the mating pair. The chick had been fed in the nest supplementally over the previous 48 hours with a formula consisting of finely ground monkey chow, peanuts, mynah pellets, sunflower seeds and vitamin supplements, all mixed into water. However, the chick did not seem to be receiving any food from the parents and was growing weaker. It also appeared that it was not being brooded by the female, as it was cold each time it was checked.

The chick was moved to a baby islette or incubator where the temperature was kept between 90-95 degrees, and a two hour feeding schedule commenced. Food was offered to the youngster in a plastic teaspoon melted and reformed into a funnel-like shape. A spoon was used as opposed to an eyedropper because there is less chance that food will accidentally enter into the chick's windpipe causing it to choke, and because it more closely resembles the natural feeding action between adult and chick. The amount of food and the frequency the chick was fed was determined by the quantity of food remaining in the crop (a small pocket-like projection used for storage at the beginning of a bird's alimentary canal).

Despite our precautions, 24 hours later the chick was dead. It had likely aspirated a too-moist or too-generous portion of formula. Thus began a long standing dread and debate over formula consistency and the amounts fed, but the immediate problem was the second nest-bound chick of the same parents, which had hatched in the interim. It too was failing, so the bird

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Photos by Mark Castle, Boston, Massachusetts

Martha on her first day with George at 23 days of age.



George 44 days old.

was pulled and hand-rearing commenced once again.

This time things proceeded more smoothly and a decision was made to transport the chick home in a portable incubator with the five staff members on a rotating basis for around-the-clock feedings. More than a few night's sleep was lost worrying, but it was soon apparent from the chick's lusty feeding response that it was growing progressively stronger. One week after hatching the chick no longer needed around-the-clock feedings.

George, as the new chick was now called, was totally blind, pink and naked, but soon could adopt a sturdy four-point stance, balancing on its feet and stubby wing-tips. It resembled nothing so much as a tiny, ferocious dinosaur as it gaped strenuously for its spoonful of formula. Its growth was astonishingly rapid. Throughout this time, the chick's weight was

monitored daily and used as an indicator of the chick's progress and health. By the time the chick was twelve days old, the midnight feeding was stopped and small adjustments were made, like adding twigs to the rag padded plastic bowl which served as a nest to help prevent splaying and deformity in the chick's legs. Temperature levels were adjusted throughout the hand-rearing process as the chick became more able to maintain its own temperature.

During all this confusion and trauma, the renowned eclectic pair,



George at 67 days and Martha at 56 days of age.

Minnie and Mocher, had been busy beginning their own family. Minnie, however, laid her clutch of two eggs ten days apart instead of the normal two to three days. This caused concern that the hatching date of the second egg would be significantly later, possibly making Minnie ignore one of the young and allowing it to die. Therefore, the most recently laid egg was removed from the nestbox and artificially incubated.

When this egg hatched in the incubator the baby that Minnie hatched in the nestbox was already 11 days old. We decided to hand feed Minnie's older chick and to let Minnie care for the tiny one. It was felt that Minnie's seasoned and experienced nurturing abilities would prevail and she would adjust her maternal care accordingly, which she did.

Although George by this time was 11 days older than the newly removed chick dubbed Martha, Martha provided us with the perfect solution to provide companionship to George and to subsequently reverse the human imprinting. Some problems were experienced during the transition from parent to hand-rearing, but Martha was already an astonishing 111 grams as compared to a weight of only 29 grams for George when he was the same age.

By the end of May both chicks had their eyes open and a good coat of grey down covered their blue-black skin. George was now over a month old. Their feeding response began to change as the birds came to "know they had enough," ending fears of overfeeding. They became more active in the isolette and Martha's "teething" cost us a temperature sensor in the incubator.

On May 27, the youngest chick was observed sneezing and it was decided to administer penicillin in the formula to both birds as a treatment and prophylactic. The birds responded well, sneezing stopped and bright red pinfeathers began to appear on George, enlightening us as to "his" true gender—female. Later, Martha confirmed our one correct guess by turning out a female as well. By this time the birds were being left on their own overnight.

Weaning began around June 7 with tentative efforts to hand-feed soft fruits. New offerings were increasingly accepted by both birds. Martha had passed George in weight, and both birds were beginning to display pretty full plumage by the last week in June.

On June 15, the older bird was

observed picking up food on its own and soon a standard parrot diet of fruits, vegetables, sunflower seeds, grouse chow and monkey chow biscuits was being left with the birds in the isolette.

Minor weight fluctuations became normal, setting the stage for confusion later when the older bird began a decline. Both chicks were moved from the isolette to a box in the brooder room, a room used to accommodate newly hatched ducklings, when George was approximately two months old. Later they were moved again to a cage in a holding area because of an outbreak of Salmonella in the brooder room. It was decided at that time not to administer to the parrots the medication being given to the afflicted ducklings for Salmonella, on the basis that the parrots were not positive for the infection and might react adversely to the drug.

For a time, both birds continued to develop normally in the final stages of fledgling, but by the first week in August, George began to lose weight steadily over the course of several days. Tragically, she died on August 11, without showing further symptoms. She was a little over two and a half months old.

The remaining youngster, Martha, was transferred to the zoo hospital where she was diagnosed and treated for Salmonella. The necropsy of the older bird revealed Salmonella as the cause of death.

Although George's death was very discouraging, the experience of raising the chicks was not without merit. The most tangible fruit of our efforts was, of course, Martha. She is now fully recuperated, a sleek and beautiful replica of her mother Minnie. She presently resides in a colony with twenty other birds, and after some initial difficulty, is adjusting well. Another less obvious product of the effort is the knowledge accumulated. Should the necessity arise again, our past experience will allow us to approach the situation with more confidence and, ultimately, reap more success. Lastly, and maybe most importantly, is the profound appreciation gained through this experience of nature's great and delicate complexity.

Some of our less famous though equally beautiful eclectus parrots can be seen on exhibit at the Stone Zoo Aviary, Stoneham, MA and in the outdoor flight cage at Franklin Park Zoo, Boston, MA during the warmer months. ●



Ken McConnell

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