

Parent Rearing the Scarlet Macaw

a Comparative Study

by Kashmir Csaky, Forest, VA

Motivation

Psittacine birds have always fascinated me. I do not think there is another animal that is as beautiful and intelligent, nor as comical as parrots. Nearly 15 years ago my devotion to parrots led to breeding macaws. Good information was difficult to obtain. Much of the information that was current at the time is no longer believed to be accurate. Fifteen years ago I was told, "Baby birds should only lose about ten percent of their peak weight." Yet, all my macaw babies lost a great deal more than that, which made me feel that I was doing a poor job. I wanted to learn how parent-raised birds thrived, compared to my hand-raised babies. I also wanted to learn at what weight and age the babies would peak, wean, and fledge. Of course, I was interested in how much of a weight loss would occur. Not least of my curiosity was the question of whether parent-raised birds could be good pets.

Procedure

To make a fair comparison, I decided to compare only parent-raised birds to their hand-raised siblings. I had raised Scarlet babies from two pairs. Mark Anthony and Cleopatra had produced more babies and their babies had been very large. I did not think it

would be meaningful to compare the weights of their offspring to chicks from Kelly and Magic. Although, I had noticed that certain aspects of development occurred at about the same time for chicks from both pairs. These included weaning, fledging, achieving peak weight and dropping down to the lowest weight after they peaked.

I began weighing the parent-raised babies when the oldest chick was six days old and the youngest was three days old. They were weighed every other morning around 7:30 A.M., until they were three weeks old. When the youngest baby reached three weeks of age, the chicks were weighed daily. During the first three weeks the parent-raised babies occasionally had a small amount of food in their crops; I never felt it was significant enough to measure.

The hand-raised babies were weighed every day between 6:30 A.M. and 8:00 A.M.. They were always weighed when their crops were empty. All hand-raised babies were fed around the clock. I must emphasize that I do not consider hand-raising babies and merely hand-feeding them to be the same. So, my babies receive a great deal of nurturing. I expect the growth rate of hand-fed babies would vary considerable depending on the methods used to raise them.

Adult birds were fed twice a day before their chicks hatched. Their diet included a diversity of fresh foods that varied according to availability. Staple components in the morning diet were sweet potatoes, corn on the cob (par cooked), a bean mix, and coconut. In addition they received two different types of fruits and vegetables. Occasionally, pasta and homemade muffins were served. Their dinner consisted of Harrison's pellets and one almond each. Snacks included two pistachios a day. Once the chicks hatched the numbers of feeding increased till the birds were being fed six times a day and were consuming seven times more food than the two adults alone.

History

Scarlet Macaws Kelly and Magic, had previously produced three chicks that were taken from the nest at various ages (7 days, 13 days and 24 days) and hand-raised. I did not hatch any of their chicks in an incubator. Kelly and Magic were not a good producing pair like Mark Anthony and Cleopatra.

Assuming that our information is correct, Kelly is a 27 years old domestic female hatched at one of the Busch Gardens. Magic is a wild bird that still had a quarantine band when I purchased him. His previous owner had acquired him directly from a quarantine station five years earlier. Kelly and Magic were not purchased as a pair. After five years their relationship with their former mates seemed platonic. So, the pairs were split up. Kelly and Magic have now been together for seven years.

In 1998 Kelly laid five eggs. The first clutch consisted of two clear eggs. The Second clutch contained three eggs. One egg was clear, one hatched on July 26 and the other hatched on July 29. Both chicks were healthy at hatch.

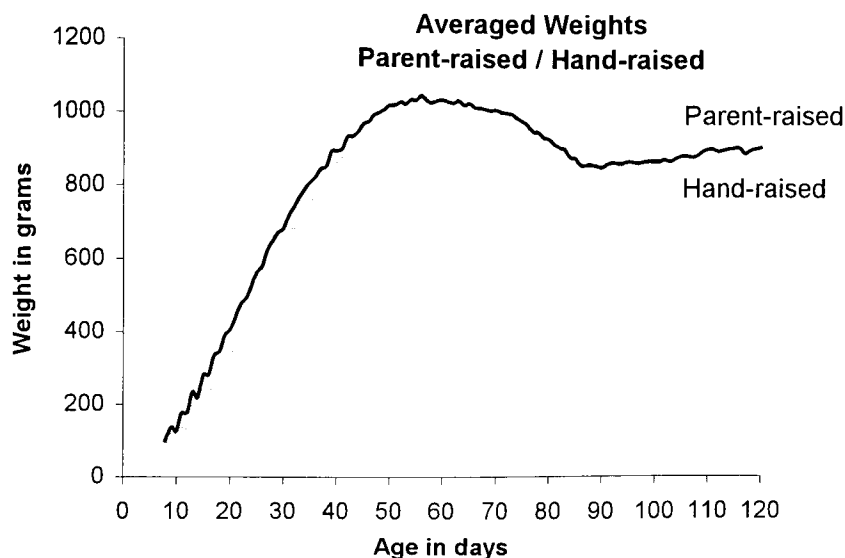
Physical Setup

Flight dimensions: 5 feet by 5 feet by 16 feet, suspended from the ceiling.

Nest box dimension: 18 inches by 18 inches by 36 inches sheet metal construction.

Nest box entrance dimensions: 6 inches by 8 inches

Inspection door opening dimen-



sions: 12 inches by 7 1/2 inches

Observation cameras: One fixed, the other mounted on a panning unit.

The Scarlet Macaw pair shares the room with a pair of Hyacinth Macaws. The flights are parallel and five feet apart. There are glass sliding doors in front of the flights that allow natural sunlight into the room.

Scarlet Macaw Parenting Partnership Diary

- July 26, 1998: Tabasco hatches

The first baby hatched today. He looks healthy and beautiful!

- July 29, 1998: Tabasco 3 days old, Cayenne hatches

Cayenne hatched today. He is just as gorgeous as Tabasco. Tabasco is noticeably larger than Cayenne and is doing well.

- August 1, 1998: Tabasco 6 days (84 g), Cayenne 3 days (38 g)

Today we removed the infertile egg from the nest.

Both birds look healthy and well cared for by their parents. It always

amazes me to see how much larger the older babies are at this age; Tabasco is more than twice the size of Cayenne.

- August 10, 1998: Tabasco 15 days (281 g), Cayenne 12 days (177 g)

Tabasco's eyes are beginning to open. Both babies are progressing well.

Kelly and Magic are eating twice the food they would normally eat. Both parents sleep in the nest box at night with the babies.

- August 19, 1998: Tabasco 24 days (522 g), Cayenne 21 days (425 g).

Kelly and Magic have always pushed the nesting material aside leaving the babies on the metal nest box bottom. In the past we have taken babies from the nest with splayed legs. When they hatched their last baby, prior to this clutch, we put a 3/4 inch thick pine board on the bottom of the box, to prevent splayed legs. They eventually chewed up the board. For this clutch we also put a thick pine board in the bottom of the box. The youngest baby is now three weeks old

and we replaced the board yesterday. The nest box has been kept amazingly clean. However, yesterday we found it necessary to remove some of the soiled nesting material.

The adult birds are fed three times a day and are eating four times the food they would normally consume.

- August 21, 1998: Tabasco 26 days (580 g), Cayenne 23 days (481 g).

Tabasco started to scream a few days ago when we took him out to weigh him. The Hyacinths were vocalizing and this upset him a great deal. Yesterday Cayenne started screaming when the Hyacinths began their loud vocalizations.

Today when I checked the nest box the babies appeared happy to see me. They both had empty crops. I expect that we will see more of that now that they are older and going for longer periods between feedings.

- August 25, 1998: Tabasco 30 days (677 g), Cayenne 27 days (603 g).

When we checked the babies, my husband was the one who blocked the



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parents out of the nest. He also removed the block when we returned the babies to the nest. Before he closes the inspection door, he slides the block away from the nest box entrance a little to let some light into the nest. Then he closes the inspection door. Today I checked on the babies unassisted. I closed the inspection door and did not concern myself with allowing light into the nest. To my surprise the babies screamed when I left them in total darkness. I quickly opened the door and spoke to them and they calmed down. I closed the door and they screamed again. I will have to leave the inspection door slightly open while removing the block.

The Hyacinths are not as upset when we take the babies out to be weighed. However, they are vocal and, surprisingly, seem more upset than the babies' parents. They are slowly calming down.

- August 27, 1998: Tabasco 32 days (741 g), Cayenne 29 days (655 g).

Both parents have been relatively calm when blocked out of the nest box. Magic was more agitated than Kelly. However, her peaceful attitude has a calming effect on him. They have become progressively less concerned about me handling and weighing the babies.

Today was the first day that the Hyacinths did not scream while we checked the babies. I gave each bird a macadamia nut before opening the nest box. If they are quiet it must make all the Scarlets more comfortable.

We have not seen either parent feed babies, however the vocalizations from the babies indicate they are being fed and the weight gains are good. Kelly fed the babies for the first week and then Magic began to assist her. We know this because we can hear babies being fed even when Kelly is not in the nest box.

- September 8 1998: Tabasco 44 days (956 g), Cayenne 41 days (887 g).

I heard noises coming from the nest box when the parents were not in the nest. This was not vocalization—the babies vocalize very little. This sounded like scratching. I think the babies

are starting to exercise their wings inside the nest. However, they do not flap their wings when I try to get a glimpse of them.

We are now taking the babies to the nursery to be weighed. They were getting into too much trouble in the aviary running about and trying to play. We keep the lights in the nursery very low. Bright lights make them more nervous.

- September 14, 1998: Tabasco 50 days (1042 g), Cayenne 47 days (980 g).

The oldest baby is over seven weeks old now. They are so cute and so very sweet! The weights have not differed significantly from that of the hand-raised babies.

The parents are now consuming about seven times the food they were eating when they did not have babies. I am feeding them six times a day.

Kelly still spends a great deal of time with the chicks. However, she will now leave the nest for hours.

The babies have made no effort to look out through the nest box entrance. They are always very happy to see us when we check on them. They run to us and step on our hands so that we can take them to the nursery to be weighed and to play.

- September 25, 1998: Tabasco 61 days (1060 g), Cayenne 58 days (1004 g).

Today when I opened the inspection door, I found both babies near the entrance of the nest. This is unusual; I normally find them at the far end of the nest box. When I returned them to the nest I put them back in the same place I found them. When the nest box was unblocked, Magic rushed in and trampled the babies. I was concerned that they might have been injured. As soon as Magic left the nest I blocked the entrance and examined the babies. Both babies were frightened yet unharmed. They had flipped on their backs, as Hyacinth babies will when they are upset. Their behavior was not as violent as that of frightened Hyacinth babies, which kick, sometimes scream and then go limp.

- October 1, 1998: Tabasco 67 days (1040 g), Cayenne 64 days (997 g).

Last night one of the babies was

looking out of the nest box entrance for the first time!

Tabasco peaked in weight (1073 g) at eight weeks and Cayenne's peak weight (1029 g) was a day before turning eight weeks. The time frame and peak weights are comparable to their hand-raised siblings.

Kelly and Magic are not sleeping in the nest box with their babies. I wonder how long this will last, since this pair prefers to sleep in their nest year-round.

- October 10, 1998: Tabasco 76 days (998 g), Cayenne 73 days (976 g).

The babies are spending more time at the opening of the nest box, quietly observing the room. When we take them to the nursery they no longer prefer dim lights. Now they want the lights bright.

- October 18, 1998: Tabasco 84 days (901 g), Cayenne 81 days (892 g).

Both babies are spending more time gazing out of the nest. They have begun perching in the opening of the nest box. Kelly has trouble getting past them when she wants to go in and out of the nest. Magic just knocks them aside if they do not move voluntarily. The first time they vocalized while at the entrance of the nest, both parents seemed very perplexed. We frequently see the parents blocking the entrance. They must feel it is too early for the babies to come out.

Yesterday, Tabasco began kissing me!

Today they were not eager to go back into the nest box. In the past I could hold them up to the inspection door and they would run in. The inspection door was not designed to remove large babies. I cannot see what I am doing when I put both hand into the nest to take a baby out. We added a large (16 inches by 16 inches) inspection door at the end of the nesting box.

The parents are consuming much less food now. At this time they are eating about three times more food than they did before the babies hatched.

- October 19, 1998: Tabasco 85

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days (901 g), Cayenne 82 days (893 g).

One of the babies came out of the nest. It was Cayenne! At first we thought he must have been pushed out. He crawled along the wire to the food bowl, where his parents were eating. Magic seemed unhappy with him being there and nipped at him. Cayenne did not eat from the bowl, yet he was intrigued by the food. I lured Magic away and kept him at bay with a net. However, it was not at all difficult. There was no need to lure Kelly away from the baby. She was not concerned when my husband reached into the flight and picked up Cayenne. We returned Cayenne to the nest box. Later this morning the baby was out again. I encouraged him back towards the nest box and he went in by himself. Cayenne came out several more times today and returned to the nest box without any help or encouragement.

- October 21, 1998: Tabasco 87 days (871 g), Cayenne 84 days (862 g).

Today it was Tabasco's turn to come out of the nest. I'm not sure he came out on his own. I heard a thud coming from the aviary and ran to check on the birds. He was on the bottom of the flight. He seemed more comfortable than Cayenne. However, once he returned to the nest box, he did not come out again.

- October 22, 1998: Tabasco 88 days (876 g), Cayenne 85 days (859 g).

Tabasco came out of the nest box again today. He looked around for a moment then he flew to the opposite end of the enclosure. After watching Tabasco fly, Cayenne also took flight. At first Tabasco flew from one side of the enclosure to the other. He grabbed the wire rather than land on a perch. Cayenne landed in the same manner. Tabasco seemed to enjoy flying while Cayenne looked unsure of himself. Later in the day I observed Cayenne eating from the food bowl. Then I saw Tabasco eating from the food bowl. I did not expect both birds to fledge and begin weaning on the same day. The hand-raised siblings fledged at approximately the same age. However, I introduce them to solid food at a much younger age.

- October 26, 1998: Tabasco 92 days (878 g), Cayenne 89 days (850 g).

We added some smaller-diameter perches to the flight so that the babies would not have difficulty landing and to provide more room for all four birds to maneuver around the food bowl. Today Tabasco can expertly land on the any of the perches. Cayenne does not fly as much as Tabasco and is not as skilled. I have not observed either baby eating again. However, the food is disappearing faster and I had to start increasing the amount fed to the birds.

We no longer need to clean the nest box as frequently. Since the babies were about three weeks old we had to remove and replace all the nesting material and the wooden floorboard once a week. Now that the babies have fledged the nest is much cleaner.

Tabasco's weight is now increasing. His lowest weight after peaking (870 g) was at 86 days with a 19% weight loss.

- November 5, 1998: Tabasco 102 days (898 g), Cayenne 99 days (861 g).

Cayenne's weight is now also increasing. He dropped to his low weight (847 g) at 88 days and had lost 18% since he peaked in weight.

Both baby birds are excellent flyers now and are able to land without difficulties. Kelly and Magic would watch the babies fly back and forth and seemed a little concerned at first. I had hoped that the babies flying would inspire the parents to take flight. Yet, there has been no effort made by either parent to fly. Magic has only flown to escape the net — Kelly will willingly step on a stick and we have never captured her with a net.

Once the babies fledged it became impossible to put them back into the nest box. They stick their heads out the inspection door and excitedly run back to us. So we put them directly into the flight. While in the flight they would not step onto our hands, although they step up with enthusiasm when taken out of the nest box. In the flight they behaved as if they were frightened of us. I do not believe they were really frightened of us so much as they were uncomfortable in a new situation. We quickly remedied this by



Tabasco and Cayenne, six weeks old, are comfortable during the daily inspection.

putting them in a cage for a short period of time everyday and having them step onto our hands.

- November 7, 1998: Tabasco 104 days (887 g), Cayenne 101 days (860 g).

The parents seem at ease with us taking the babies out the flight and putting them back in. They will, however, wait near the door for the babies to return. I always hand Magic a pistachio nut when we start to handle the babies. We have picked up babies that were perched right next to him and he was more interested in eating his pistachio than in getting upset over us playing with his offspring. Kelly has never been a problem.

Tabasco is eating well from the food bowl. Cayenne will not partake of the food right away. I have to encourage him. Magic has shown some aggression towards Tabasco when he is eating. He has nipped at Tabasco a few times and has even stepped on his head and held him down once when Tabasco tried to take Magic's almond out of the food bowl. The last time Magic nipped at Tabasco, Tabasco nipped him back. Kelly has never shown any kind of aggression towards either baby. She watches them and if she sees they are trying to get to the food bowl, she moves around to make room for them.

I have yet to see the parents feed the babies. After a meal they all retreat

into the nest box and it is probable that the parents are feeding them while inside the nest. I hear noises that indicate that the babies are being fed and I have noticed food on Cayenne's beak when he leaves the nest.

Tabasco has a great deal of confidence, not so with Cayenne. Though Cayenne seems to be slowly developing confidence.

Both babies listen to me very well. They will sit in my lap quietly. At first Tabasco tried to climb up to my shoulder. He seemed fearful and wanted to climb as high as possible and cuddle up to my face. He quickly learned to stay on my lap. However, in the last three days he has attempted to climb up to my shoulder again. This time he seems interested in exploring. Today he is beginning to understand that, shoulders are not an option.

Tabasco flies back and forth as I move around the room. He appears to be following me. When I enter the room and he is in the nest box, he comes out to greet me. Cayenne is not as gregarious as Tabasco. However, both are delightful and affectionate.

- November 13, 1998: Tabasco 110 days (916 g), Cayenne 107 days (872 g).

I saw Kelly feed Cayenne today, though she fed him very little food. I assume the babies are getting most of their nutrition on their own.

Both babies will take food from our

hands. At first they did not recognize that what we had was food. Now they are eager to take food from us.

Kelly got upset at one of the babies. She did not nip at him like his father will. She vocalized her disapproval and it was understood.

- November 19, 1998: Tabasco 116 days (918 g), Cayenne 113 days (894 g).

It is obvious to me that the parents, especially Magic, are much more at peace than they ever have been in the past 11 years. They are calm and very contented. It has brought joy into my own life to see these birds so happy. Today for the first time I handed Magic a nut through an open door. I had always handed him his treats through the wire. In the past I was afraid that he would have tried to eat my hand and not the treat. He lets me pick up his babies when they are perched next to him. It's such a joy to be trusted. These babies will never be wild; they will grow up comfortable in their environment, yet they know their parents and what it means to be a bird.

Today I was sweet talking Cayenne when Tabasco climbed up the wire and out of the flight though the open door to cuddle with me. I picked him up gave him a hug and kiss and placed him back in the flight. He came out again for more cuddling.

I see the parents feed the babies more frequently now. I do not think they are going into the nest box to feed the babies any more.

- November 30, 1998: Tabasco 127 days (927 g), Cayenne 124 days (910 g).

Kelly is spending more time in the nest box, away from the other birds. The adults have been copulating. While Kelly is in the nest box Magic plays with the babies. I have been reluctant to give the babies toys. My concern was that with four birds in the flight they could more easily hurt themselves. Until now all the toys have been small hand-held toys. I introduced them to large hanging toys today. I was concerned that they would be frightened. My fears were unfounded; they were absolutely delighted to have the new toys to play with.

The parents have resumed sleeping

in the nest with their babies.

- December 10, 1998: Tabasco 137 days (935 g), Cayenne 134 days (943 g).

Today Magic said, "Hello." This is the first time in 11 years he has ever attempted to say anything. I have also heard, "Aye Ruv Roo" coming from the aviary. I don't know if it was a baby or one of the adults. I suspect it is Cayenne. Cayenne is the more vocal of the two babies.

The parents have divided up the care of the babies between them. Kelly feeds Cayenne and Magic feeds Tabasco.

Kelly spends most of the day in the nest. I hope she is not planning to lay eggs. With four birds sleeping in the nest at night, I am sure that any eggs she laid would be broken.

There has been a decrease in the amount of food consumed by the four

birds, however the babies have maintained their weight.

- January 14, 1999: Tabasco 172 days (982 g), Cayenne 169 days (985 g).

It appears that Tabasco is weaned. My observations indicate the babies are not being fed. Tabasco had a weight loss when he was 5 1/2 months. I suspect that was when he weaned. I thought Cayenne was also weaned. However he injured the tip of his beak and Kelly started feeding him again. This continued for a few days. I do not think Kelly is feeding Cayenne at this point. Though I observed Kelly feeding Tabasco once. Until now Magic consistently fed Tabasco while Kelly fed Cayenne. This may also be the reason that Tabasco weaned earlier than Cayenne. I will continue to observe them to be certain that they are food independent from their parents.

I would have done some things differently now that I have hindsight. Though the babies are comfortable with us, they had not seen too much of the traffic on the street — the windows in the aviary face the woods behind my home. They were alarmed when they first saw dogs, cars, or baby strollers. I should have exposed them to the daily activity outside our home at a younger age. I also should have done more training with them, the same type of training I do with the hand-raised birds.

- January 28, 1999: Tabasco 186 days (968 g), Cayenne 183 days (996 g).

Tabasco's tail is slowly disappearing. I am not sure who was damaging it, yet Cayenne is a good guess. The lack of tail feathers has made it much more difficult for Tabasco to land.

These babies still have very dark eyes. Their hand-raised siblings had much lighter eyes at this age. Almost as light as an adult bird.

- February 20, 1999: Tabasco 209 days (965 g) Cayenne 206 days (1010 g).

Though I have yet to see him damage anyone's tail feathers, it appears Cayenne is the guilty party. Magic has suddenly become aggressive toward Cayenne. Chasing him away at times. This coincided with Magic's tail getting

damaged. Magic quickly forgot the incident. However, Kelly has also become aggressive towards Cayenne. She was not quick to forget that her tail was damaged. Coincidentally, she began feeding Tabasco. The first time Tabasco accepted the feeding enthusiastically. The following day he pulled away from her and ran when she tried to feed him. She will still feed Cayenne. Yet, from the time babies were about five-and-a-half and six months old the feedings have been rare. They are not even fed once a week. The babies do not want to be fed as frequently as Kelly would like to feed them. Magic stopped feeding the babies once they were five months old.

Sometimes Cayenne upsets other birds by flying into them. He is a very capable flier, so I do not understand why he does this. Cayenne was not permitted to sleep in the nest box last night. Until this time one of the birds would defecate in the nest box at night. Today we did not find any feces in the nest. Poor Cayenne seems to be doing everything wrong.

We are not handling the babies as much as we did when they were younger. Whenever we return Cayenne to the flight Kelly and Magic are aggressive towards him. However, they show no animosity towards Tabasco. Cayenne's feelings seem hurt if we take Tabasco out and play with him. To decrease the conflict both birds are only taken out occasionally.

- March 1, 1999: Tabasco 218 days, (996 g) Cayenne 215 days (1072 g).

It has been a long time since I last saw Kelly or Magic feeding the babies. However, the babies do feed each other. Minor squabbles developed during feeding time if the four birds were not around the food bowl in "proper order." Almost always it was Cayenne who was chased away. I am able to coax them to positioning themselves properly before I place the bowl into the flight. This relieves some of the tension.

- July 15, 1999: Tabasco 354 days, Cayenne 351 days.

Kelly resumed feeding Cayenne four days ago. She fed him three mornings

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Photo by Kashmir Csaky

Cayenne, Kelly, Magic and Tabasco. The babies are five months old. Note that each baby is closest to his primary caretaker.

in a row. This morning, when Cayenne solicited feeding, Magic intervened and prevented Kelly from feeding Cayenne.

- August 6, 1999: Tabasco 495 days, (915 g) Cayenne 492 days (947 g).

We removed the babies from the aviary today. The parents' aggressiveness towards Cayenne has become worrisome. They have never hurt Cayenne; yet all this aggression cannot be emotionally healthy.

- September 13, 1999: Tabasco 533 days, (933 g) Cayenne 530 days (960 g).

When the babies were removed from the flight they were uncomfortable with us, though by no means hostile. They are adjusting slowly. Cayenne is adjusting better than Tabasco. Tabasco also was being treated with more kindness from his parents than Cayenne. Yet, Cayenne calls to his parents more whenever they vocalize. The two siblings are very dependent on each other.

Magic is becoming more aggressive. His behavior indicates that he would like to go back to nest. However, it may be too late in the season for Kelly to lay.

- September 23 1999: Tabasco 543 days, (960 g) Cayenne 540 days (980 g).

Tabasco and Cayenne are adjusting well. Today we saw them playing at copulating with each other. I do not think these birds will have any trouble figuring out what to do once they are old enough to reproduce. I expect

them to be very good breeding birds.

Conclusions


Tabasco and Cayenne showed signs of physical maturity much later than their hand-raised siblings. This was something I did not expect or even consider. The hand-raised birds began molting when they were weaned, at about five months. Their eyes also turned lighter at that time. Tabasco and Cayenne still have relatively dark eyes even though they are 13 months old. I suspect this slower appearance of maturity may be nature's way of preventing unrelated adult birds from showing aggression toward immature birds. I believe that the slower change of eye color reflects the influence of the dark environment in the nest box. Although my hand-raised babies are kept in dim light for several weeks, until they are comfortable with normal lighting, their environment is not nearly as dark as the nest box. The eyes of my hand-raised Scarlet babies are exposed to much more light than the eyes of their nest raised siblings.

As demonstrated by the weight graph, the parent-raised babies developed at virtually the same rate as the hand-raised babies. They peaked in weight at the same age; they dropped to their lowest weight about two weeks earlier than the hand-raised babies — which I chased around with a syringe, trying to encourage them to eat more formula. The percent weight loss was

the same as hand-raised babies and they fledged at the same age. I never force hand-raised babies to wean; yet the parent-raised babies weaned when they were two or three weeks older. Though we did observe some feeding till the babies were eight months old, since this occurred so infrequently, I consider these feedings to be incidental. At eight months the feedings stopped (except for the incident in July). There were no significant differences in growth and growth patterns. Though the averaged weights of the parent-raised birds are slightly higher; the heaviest baby was hand-fed.

These comparisons have been of siblings. However, the unrelated Scarlet Macaws I have hand-raised progressed on a similar schedule with equivalent percent weight loss. I recognize that the data I have collected is based on one pair of Scarlet Macaws and should be corroborated by other breeders. However, I feel this data can still be very helpful to aviculturists who want to know if their hand-raised baby Macaw is progressing well.

My experience convinces me that parent-raised birds can be good pets. The only major problem I have encountered is noise. Although Tabasco and Cayenne can talk, they have learned to communicate from their parents. Consequently they scream with more enthusiasm and in more situations than hand-raised birds. I expect to eventually correct this behavior.

My study suggests that we can physically raise baby birds as well their parents if we are willing to do the necessary work. However, we cannot offer them the same quality of companionship and nurturing in their early development. This experience has been both exciting and enlightening. I hope that other breeders will also try parenting partnerships. It will enrich their lives. 

Kashmir Csaky has specialized in breeding Scarlet and Hyacinth Macaws for 15 years. Her articles have appeared in The Pet Bird Report, and Psittascene and Pet Information Pages among others. She serves on the board of directors of International Aviculturists Society and maintains a website devoted to Macaws at:

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