Care and Management of Sunbirds

(Nectariniidae)

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What bird flies like a finch, looks and eats like a hummingbird, and sings like a canary? The sunbird!

Sunbirds occur in Asia and Africa and fill the same ecological niche as the hummingbird does in the American continents. There are 115 varieties of sunbirds, but very few have been kept in captivity. In recent years, several species have been imported into the United States and are now being successfully kept and occasionally bred in captivity.

My first experience with sunbirds began about four years ago when a friend of mine had purchased a pair of Buff Throated Sunbirds *(Nectarinia adelberti)* from an importer and wanted me to pick up the birds at the quarantine station, keep them for a few days and then forward them to him in San Francisco. I had never seen a sunbird before (in fact, had never heard of them) and the idea of keeping a "hummingbird" alive for any length of time scared me to death. I spent a few frantic hours reading everything I could find on sunbirds. This reading material consisted of one small paragraph on sunbirds and several very old articles on hummingbirds.

When I received the birds they were in terrible feather, having all their feathers stuck together from being in small cages without bathing facilities. Both the male and female had reasonable weight on them, but were very stressed from being in such poor feather condition.

I put the pair into a flight cage six feet wide, two feet deep, and four feet high. This cage was indoors, with two 4-foot Vita-Lights directly overhead on a timer to provide 12 hours of supplemental light. I provided perching in the form of a large *Ficus benjamina* (weeping fig) tree and dowel perches. I included an infra-red heat lamp at one end of the cage because of their inability to maintain body heat due to their matted feathers. I gave them the same nectar mixture they had been maintained on while in quarantine, which was basically sugar water with a small amount of dry yeast and protein powder added.

Within only a day or two it was obvious the birds were not doing well. The thermal stress, from the matted feathering, was a major problem in spite of the heat lamp. They were eating the nectar mixture constantly, but eliminating it just as rapidly. The cage soon became a flooded mess on the bottom.

I decided the birds had to be allowed to bathe in order to solve the body heat regulation problem. So, I gave them a cup of warm water and also decided to hand mist them. The male immediately dived head first into the water cup, ran across the bottom of the cup under water, and emerged out the far side. I, for a split second, thought he was surely going to drown. He repeated this method of bathing over and over until he had used up an entire cup of water. The female preferred to bathe in the wet leaves of the *Ficus* after I had finished spraying the tree with the plant mister. If she did use the cup of water for bathing, she would perch on the edge of the cup and dip backwards into the water while splashing the water with the ends of her wings. They would both then sit in front of the infra-red light and groom themselves until dry. This constant bathing and drying cycle continued for weeks, until their feathers returned to a gorgeous display of iridescent color.

I later discovered that other species of sunbirds displayed this same combination of bathing procedures. The males dove head first under water and out the other side of the cup. The females always delicately dipped backwards into the water while holding onto the edge of the container, or rubbed their bodies on wet leaves.

Within only a few days their activity level increased significantly, along with their appetite. Their lovely iridescent plumage started to become very apparent. The next problem was their diet. I had read that hummingbirds eat not only flower nectar and pollen but a large number of insects in their diet. I felt the diet of straight liquid, homemade nectar was not meeting their nutritional needs. I tried collecting as many fresh flowers as I could find in the neighbors' gardens. These flowers were received with greatly increased activity and vocalization. Both birds would probe each flower deeply into the bottom of the blossom and use their beaks to open up the bloom. They also probed the bottom of each leaf and along the stems looking for insects. I found a rose bush with aphids one day, which resulted in a happy orgy of eating. I quickly discovered that spiders were a true sunbird delicacy. Fortunately, I had a horse barn full of spiders. Collecting spiders was not my favorite chore, but each spider induced the male sunbird to display his courtship dance for me as I approached the cage with the jar full of spiders. The chore of collecting spiders out of the rafters of the barn was always worth the reward of seeing the male sing and dance.

I decided that the home mixture was not supplying their nutritional needs and was very time consuming to mix each morning. A friend of mine supplied me with a sample of the Biotropic Nectar instant hummingbird mix. This commercial mix was manufactured in Germany and was advertised to be a complete food, including essential amino acids, vitamins and minerals. The birds took to the mix very readily and almost immediately picked up weight and improved feather condition. The mix was also much easier for me, since I only had to mix the powder with water, stir and serve.

I also added Zu-Preen Biscuits soaked in nectar to their diet for some roughage. I was supplying as many insects as I could find, but I quickly exhausted the spider supply in my barn and yard, and my neighbors had grown tired of me searching their flower gardens. The addition of the soaked biscuits provided enough bulk to their diet to slow down their intake of the liquid nectar by almost one-half. I also began adding a small amount of fresh fruit to their diet in the form of mashed apple, pear, peach, plum, etc.

These diced, almost pureed fresh fruits were eagerly consumed.

I tried offering very small mealworms, but the birds would not take them. I finally thought of the *Drosophila* (fruit) fly, which is so easy to propagate on overripe bananas or fruit peelings. I started a culture of fruit flies in a jar. When I had a jar full of adult *Drosophila,* I put the jar in the cage, took off the lid of the jar and released a small cloud of flies. I had a picture in my mind of fruit flies invading every room in my home, but not one of those thousands of small flies ever made it to the perimeter of the cage wire. Both the male and the female swooped, fluttered and raced around that cage gorging themselves on *Drosophila.* I am convinced to this day that they were grinning from ear to ear with gluttony when finished.

Within a few months of the improved diet, the birds were ready to ship to San Francisco. By then my dear friend, Dennis Riphenburg, knew how much I was enjoying the birds and offered them as a gift. I am truly grateful to him.

From the beginning, the female was never as healthy as the male. She would often be "puffy" and was usually much less active than the male. She rarely vocalized, although the male sang frequently. I ran several cultures on her stool, but they never demonstrated an infectious disease. After six months, she gradually deteriorated, in spite of everything I could think of. She would be fine in the morning, but when I would come home from work, she would be on the bottom of the cage in complete tetany (paralyzed). I would give her oral calcium and she would quickly recover. I added calcium and Vit. D to their liquid diet. I added more fruit flies. I did everything my veterinarian and I could think of. Her condition improved, but the episodes of tetany would continue at intervals.

During the spring, the male started to sing and display toward the hen frequently. That little bird had an incredibly loud and melodious song, not unlike a young canary. He would fly next to her on the perch, sing toward her, drop his wings and fan his tail, then lift his head straight up in the air with his beak pointed over his back toward the base of the tail. While his head was in the upright position he would puff up the iridescent purple and buff colored feathers on his gorget (throat) and shake his body at the hen. If she was receptive, she would crouch on the perch and allow him to mount. The mating took a matter of seconds, from the beginning of the chase to copulation. This mating chase and display would be repeated many, many times throughout the day. Only one in twenty of the chases and displays would result in the hen inviting him to breed with her. The rest of his efforts resulted in a look of extreme boredom on the part of the hen.

After two months of mating display, the hen began to shred the leaves of the *Ficus.* I believe she was looking for plant fiber to begin nest building. I ran back to the textbooks and found that hummingbirds used spider webs, plant bark and lichen to build their nests. All of these items were a little hard to come by in an apartment in the middle of Los Angeles!

I called every friend I knew who owned horses and asked if I could clean the rafters in their barns for them. My friends are all good and reasonable people. Not one refused, but several avoided me for several weeks, convinced, I'm sure, that I had

lost my mind! I collected spider webs from over ten barns. After two days of hard work, I managed to collect approximately one hand full. The hen was enthusiastic about my meager offer, but managed to use two days work in less than 10 minutes. She had made a nice base on which to start building a nest.

Next I offered aquarium wool. The hen waited for me to produce more spider webs, but eventually gave up and attempted to use the aquarium wool. It was not an ideal material, and I was very worried about the birds getting the fibers wrapped around their legs and toes. I also noticed the hen looking very interested in my two cats. Each time the cats would walk under the cage, she would fly down and cling to the wire above them. I offered her some cat hair, which seemed to make the best substitute for the spider webs. Again, I checked their legs and toes daily, but was fortunate in not having any problems with the hair wrapping around an extremity. I also offered moss scraped off of trees and rocks, and scraped tree bark. All these building materials were eagerly used.

After two weeks of intermittent nest building (mostly due to construction material delivery delays), the hen became broody. She also began to develop daily episodes of tetany again after three months of perfect health. Each day I would find her close to death on the bottom of the cage. I began to give her a daily morning dose of oral calcium before I left for work. After one week of this treatment she laid two eggs and began to incubate.

The male during this time became increasingly belligerent to the hen. I moved him into a small cage which was hung beside the large cage. He continued to display and sing toward the female, but she paid him no attention once nest construction began.

On day 6 of incubation, I returned home from a particularly long day at work to find the hen dead on the nest. She had been active and had eaten well early in the morning. I assume she died as a result of her inability to maintain appropriate serum calcium levels. I have always believed this hen had some type of metabolic, endocrine disorder.

I attempted to incubate the eggs artifically but they never hatched. When opened four weeks later (just to be sure) they had been fertile, but were dead in the shell.

I now keep three species of sunbirds. My original male Buff-throated male is still alive and healthy. I was able to obtain a hen which was thought to be Buff-throated from another collector; however, the hen has a larger and more curved beak than my original hen. The male displays toward the hen and she seems receptive until the last part of the mating display when he shakes the iridescent throat feathers at her. She then gives him a confused look and flies away. He offers her buff and purple; she seems to be expecting another set of colors. They cohabitate together well, but she is obviously another species of sunbird.

My pair of Splendid Sunbirds *(Nectarinia coccinigastra)* have never attempted to breed. He is very aggressive with the hen during the spring and early summer, but definite breeding displays have never taken place.

All three of my male sunbirds are very tame. I have to be very careful when feeding in the morning not to let them escape. The original Buff-throated male is allowed limited freedom outside the cage. Each morning I open the door to the cage and stand back about three feet. He flies to the edge of the cup of fresh nectar and rides back to the cage on the cup. I also allow him freedom to clean up an occasional overabundance of fruit flies that gather in my kitchen.

My diet remains simple. I now use Nekton's Nektar Plus.™ I have experienced some fading of color (especially yellow) with this product; but the overall health and vigor of the birds remains excellent. I give each pair of sunbirds one Zu-Preen biscuit soaked in the nectar daily. Fresh fruit is offered three to four times a week. The *Drosophila* are offered *ad lib.* Spiders are given as available. The birds are given fresh bath water every day.

I highly recommend sunbirds to those aviculturists who have had some experience with softbills and want a new challenge. I have found them to be very hardy in captivity, once acclimated. I find their feeding requirements easy to meet with the use of the commercially produced hummingbird nectars. Several species have been imported into the United States and Canada in the last several years. Their beauty, amusing personalities, and melodious vocalizations are a delight to enjoy in an indoor, planted aviary. They can also be very successfully maintained in a greenhouse aviary. ●