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THE RAISING OF TWO KENTUCKY CARDINALS

By Edith Kemble

Late in March, my young daughter reported a Kentucky cardinal's nest built rather low in a tiny cypress tree in our yard. It was a hazardous place to build a home as there was little cover from wind or weather and we have a good many cats about. But there seemed nothing to do about it.

My daughter watched the nest day by day during the laying and nesting period, and reported four eggs and finally three babies hatched. A remarkably short time later (I didn't count the days but it was not more than ten, I am sure.) she rushed in telling me the babies had fallen out of their nest. I hurried out and found two flopping around in the grass, the mother fluttering excitedly about them. I picked them up and put them back into the nest, but they immediately fell out again. There was nothing for them to sit on outside of the nest closer than the hibiscus hedge several feet away. The parents seemed to be trying to get them over the hedge, but once on the grass they were unable to fly more than a foot or two off the ground.

I thought of the cats and set Jean to watch that they didn't come around. The probabilities were that after a few hours of flying practice, the babies could make it to a safe height in the hedge, but the parents were making such a racket that I felt sure the cats would be attracted sooner or later. Of course, the human interference must have hindered the whole proceedings, but one can always tell when a cardinal family leaves the nest by the excited cries of the parents, even when there is no interference.

As I had come down with the chickenpox the day before, I went indoors again, leaving Jean on guard alone. About two hours later, she rushed in to tell me Betty (Editor's note: Betty evidently is the cat.) had just eaten a baby. I went out to find Betty licking her chops under the hedge. We got hold of her before she could make away with another baby fluttering on the grass nearby, and shut her in the house. I went back to bed only to be disturbed by Jean calling that the neighbor's cat had eaten the mother.

That decided me. With two cats in on what was taking place in our yard, there wasn't a chance for the rest of the family. Besides, quarantined as I was for the next two weeks, how better could I spend my time than by raising two baby birds. So we gathered up the two infants and took them inside.

We had a large, almost empty room in process of construction as an addition to our home. It had the doors, windows, and screens set in, but was unfurnished inside. This room was to be the babies' home for the next two months, although I didn't dream at the time they would stay that long.

I had an empty canary cage in which I shut them at night at first, as a protection against the possible presence of rats. After that they slept as they pleased. For a few nights they went into the cage by themselves, then they found other roosting places, at first only a foot or so from the floor, and then as their

wings strengthened higher and higher, until at the end they were roosting in the electric wires under the rafters. I set boxes, poles, and chairs around, and these with the building materials lying around provided good perching facilities.

They seemed to trust me from the beginning and were quite contented except when their father called to them from outside. He very quickly found out where they were from their cries for food, and for nearly two weeks he kept coming at intervals to the bushes outside their windows and bothering them. When they heard him call they flew from window to window trying to get out, but at other times they played about in the big room chasing each other, picking up scraps of wood, nails, screws, and nibbling on them.

At first they did not mind my touching them. Later they would hop on my finger or my head or shoulder andnibble my ears, but they did not like to be touched. After they were fed, they would sit and sing to me in a squeaky little warble of contentment.

Which brings me to their food. I had fed baby rabbits and chicks, but never a bird before. I used common sense and put together a mixture of hard boiled egg yolk, bread, and canned milk, which I fed them with a pair of tweezers; my fingers being too bulky to stuff down their throats. In the beginning they seemed to swallow half the tweezers with each mouthful, but as their beaks developed, they became more and more dainty until they were able to take the food without touching the tweezers at all.

When I saw them exercising their beaks by nibbling things, I put out canary seed for them to work on. At first the seed simply slipped out of their beaks, but when we had had them about a month, they started cracking the seed. They liked the long yellow seeds whereas the linnet we had acquired in the meantime preferred the round black peppery ones. About that time I started cracking sunflower seeds and breaking the meats into small pieces for them, as their beaks were still not strong enough to break the whole meats. Gradually I enlarged the pieces until I was giving them whole meats. Then I started mixing in a few seeds that were cracked but with the meats left in the shell. When they were able to open these with ease, I left a few uncracked seeds among the cracked ones. Not until they could open the uncracked sunflower seeds did I decide they were able to shift for themselves outdoors.

All this time fully half their diet was made up of the bread, egg yolk, and milk mixture which, toward the end, I set out in little blobs on a piece of paper, so that they could eat when they felt like it. Several times a day I replenished the supply. They also ate lettuce, and in addition, as we had seen a father cardinal carrying grasshoppers to his family, we tried the grasshoppers out on our babies. It seems grasshoppers are to a cardinal what candy is to a child. Or perhaps, their diet was deficient, and the grasshoppers supplied some needed food material. At any rate, they went over big. Ten to fifteen grasshoppers were all we could supply in a day, but they could have eaten many times that number. Incidentally, we discovered that some grasshoppers can give an unpleasantly painful nip if not held right.

Toward the end of their captivity our babies grew restless, and first one, then the other, escaped through unsuspected holes under the rafters. Each time we found the little runaway the next morning, hungry and wind-ruffled. The first one, the male, flew right in the front door when I offered him food, and rode back to his home on my wrist. When she escaped a week later, the female allowed me to catch her, but would not fly into the house herself. Each time the one left behind was excited and upset and very happy when the other returned.

Although in the beginning the little female was the bigger of the two babies, in about two weeks the male caught up with her, and from that time on his whole development was about a week ahead of hers. Of course, in the beginning we couldn't tell male from female, but their personalities were different so we could always tell them apart. One cried so hard for its food that I called it Gabby, and it turned out to be the female. The other didn't seem to have much sense about eating at first, and would either close his beak or turn his head away just as the food was about to go down, so that I had to cup his body with my hand to hold him steady. I called him Aku Head, or just plain Aku. At the end of his first month's residence, he started to turn pink.

I waited until Gabby was able to shell sunflower seeds, and then before I let them out, I put bird feeders below the front and back windows of their home, and also fixed a platform high on a clothesline pole for a pan of water and a trough of food. Then, one Sunday morning in early June, nearly two months after we had taken them in, I took the screens off the front and back windows of their home. It wasn't long before they discovered the openings and were off. However, this time, instead of disappearing as they had when they escaped, they stayed around in the hibiscus bushes and showed themselves, so that I was able to offer them some of the bread mixture with the tweezers. They took it, fluttering their wings as they had when they were babies.

I had left the windows open and a supply of food in their former home, hoping that until they were able to take care of themselves outdoors, they would go back in to feed. This, Aku did right from the first, and even spent his first two nights of freedom back in his old home. Gabby, however, did not find her way back, but depended on me to feed her with the tweezers, which was a risky business with the cats all around. So the second day I caught her and carried her back in, setting her free inside. There she ate, found her way out again, and from that time on knew her way around.

For exactly a week they both came begging at the back door to be fed at intervals, which worried me greatly on account of the cats. They made the acquaintance of other cardinals, who at first chased them. In a few days Gabby made friends with a family and seemed to be accepted, and Aku and another young male joined forces, and spent most of their time being chased by a full grown male who seemed to have nothing better to do. At the end of a week all the young cardinals disappeared and for more than a day I saw no sign of any of them. Then they returned. Gabby was friendly after that and would sit in a bush and tweeter at me, but no longer asked to be fed. She would however, accept a sunflower seed from my fingers, and still does.

On the other hand, for several weeks I caught not more than a fleeting glimpse of Aku and even then wasn't sure it was he, as his color was changing. There is one young male who does not fly away when I come in sight, and sits in the bushes around the house practicing his song, and this I think is he.

They still come inside to eat. In fact all the neighborhood cardinals do. When I opened the windows there was family of nestlings across the street and another family in a kiawe behind us. Within a week after the windows were opened, the father from across the street was flying in and out carrying food to his family. When they left the nest, he brought them across the way, and I surprised him once with his children grouped around him on the table fluttering their wings and chirping for food while he shelled sunflower seeds and fed them. There were three in his family as there were in ours. Now the young ones feed themselves indoors.

Our outdoor feeding trough and water pan is a very popular place too, not only for Kentucky cardinals, but also for Brazilian cardinals, sparrows, and even a mynah or two. It looks as if we had given a big boost to the bird population of Koko Head.

HAWAIIAN ENDEMIC FLOWERING PLANTS SUITABLE FOR CULTURE IN GARDENS

By George C. Munro

Since my arrival on these islands in 1890, my work had been more or less connected with the island forest. My chief nature study had been the native bird life, but the bird life and the plant life are so closely connected that some study of the plant life was also necessary in studying the birds. Consequently I took up botanizing and made three almost complete collections of the plants of the island of Lanai and also did some collecting on Maui, Molokai and Kauai. Mr. C. N. Forbes, at that time Botanist for the Bishop Museum, determined the first two collections and described two new species that I found. Additional new species from the same collection were after named by other botanist. Forbes was reluctant to decide a species as new to science till he had ample evidence. Another collection I made later was determined by Dr. Lyon and Mr. Caum. In this pursuit I became familiar with the principal families and genera represented on these islands. However, I am not a botanist, nor horiculturist nor gardener and consequently may make some mistakes in this paper for which I hope full allowance will be made.

In new countries people are apt to neglect many very interesting and beautiful native plants in the forests and open lands around them and beautify their homes with exotics. The purpose of this article is to draw attention to a number of endemic Hawaiian plants that are worthy of trial in gardens.

Instead of enumerating each species or kind I will use the generaic name, that is, the name for a group of species, and use "form" for subspecies or varieties of a species. The term "endemic" will be used for genera or species peculiar to or found only on these islands.

The beach vegetation of Hawaii is found generally over the tropical part of the Pacific and few if any plants are endemic to this group. Contiguous to the beach and extending up to about 1000 feet or more in elevation - except on the windward sides of the islands where near tropical conditions prevail, where the elevation combines with the heat of the lower levels - we have a dry area that gets most of its rain in the wet season. This tract is, of course, the wider the further it is from the influence of the prevailing wind. After that comes a semi-dry section between the dry country and the rain forest; this is usually a very interesting forest. At Uahi, West Maui, Rock states that there are fifty species of trees in a small area. Then we come to the rain forest; heavily wooded with tall trees, thick underbrush and masses of moss. On the Islands of Kauai, Molokai and Maui there are both within and above the rain forest, moss covered bogs with no trees or shrubs growing on them at all; that is, the ohia tree will be flowering, yet creeping close to the ground about six inches long. The reason for this is probably that near the surface there is a hardpan that prevents the roots from getting sufficient hold to keep the trees erect in the high winds that prevail on those mountain tops.

The vegetation of these open bogs is generally mosses, grasses and sedges, but there are mixed with these and also on the borders adjoining the tree covered ground many very interesting plants which are confined to the open bogs and most are represented on the bogs on the different islands. These are plants that require a certain amount of sunlight and cannot grow in the dense shade of the rain forest. Certainly the amount of sunlight they get on these foggy, rainy mountain tops is limited, but they get direct light at intervals and this seems to be necessary to their existence. These plants will grow - if they get the right conditions of sunlight - at a much lower elevation and with much less rainfall than they get on the bogs. They probably occupied a much larger area in the past before the denser vegetation arrived there to crowd them out and force them to take refuge on the open bogs, but for which, many of them would now no doubt be extinct.

The zones above mentioned merge more or less into one another according to local conditions. Many plants of the islands, for various reasons are in a decadent state in their natural habitat; others are in danger from agriculture or the grazing of livestock. These if taken into cultivation could probably be perpetuated, otherwise they may become extinct. Anyone taking an interest in native plants and experimenting with these vanishing species may do good service to science by saving them from extinction.

To be continued

NOTE: "This paper was written about 1935 and of course there have been many changes since then. ... It was written for a Garden Club, but not used by it."

G.C. Munro

FIELD NOTE: On July 11, for the first time in over a year, the Hawaii Audubon Society made a trip to the top of Pa Lehua. Five cars carrying approximately twenty-five people were granted permission to enter the area by the Board of Agriculture and Forestry. The cars were parked at the end of the private road which is close to the end of the trail.

The entire group followed the ridge to where the trail forks. Here the larger part of the birders took the path to the valley floor where they redivided into smaller groups for two hours of quiet bird watching.

The remainder of the party continued along the ridge toward the summit. The birding on the crest where the train led, would not have justified the effort, but the spectacular views that were spread out in all directions below us were sufficient inspiration for continuing. White-eyes in their usual abundance were feeding about the fruit of the shrubby lehua trees. One brilliantly colored amakihi crossed over from one valley to the other. An apapane was sighted far below in the wetter forests. Hill robins called back and forth across the slope mingling their song with those of the bush warblers and Chinese thrushes.

Our Patron Bird did his utmost to save the day from an ornithological standpoint. Individuals and pairs of elepaio appearing so frequently as to give the feeling that they were in our group.

Nests of the hill robin, ricebird and white-eye were found, but none were in active service.

The peak pleasure of the day for the upper party came when, while following a C-curve in the narrow trail, a flock of some twenty-five rock pigeons flew up from the face of the cliff on the opposite side of the C, wheeled rapidly upward to sweep low over the watchers heads on set, translucent wings. Birds of pearl against a sapphire blue sky, following their unseen leader through the usual Columbean aerial maneuvers and disappearing against the clouds over Kolekole Pass. Truly: "God's in his heaven, All's well with the world."

Ruth Porter

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SEPTEMBER ACTIVITIES:

BIRD WALK: September 12th, to Pauoa Flat. Meet at the Library of Hawaii at 8:30am.

MEETING: September 20th, at 7:30 P.M., in the auditorium of the Library of Hawaii. Mr. Spencer Tinker will show slides of native and introduced birds of Hawaii.

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