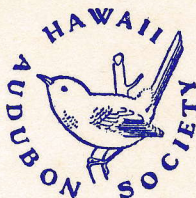


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FRIEND OR FOE? By Richard Warner

The introduction into the Hawaiian Islands seventy-four years ago of that most controversial beast, the mongoose, precipitated a conflict of opinions that has waned little in the intervening years. A great deal has been said by a large number of people concerning this secretive, low-slung omnivore, and a review of newspaper accounts and popular articles quickly reveals that most of it is not complimentary. A review of the scientific literature on this animal, known to the taxonomist as Herpestes auropunctatus, just as quickly shows a surprising paucity of reliable information, particularly as regards the mongoose in Hawaii.

A few well documented and reliable studies are available, but they are all limited in scope. A paper by Baldwin, Schwartz, and Schwartz, which was published in the Journal of Mammalogy in 1952, stands out as the most complete study of the life history of the Hawaiian mongoose that is presently available. Unfortunately the authors were unable to develop, in more than a general manner, the animal's life habits because of the press of other activities. Consequently, we are left at the present time with numerous bits and pieces of information, from which we must try to assemble a picture of the role Herpestes plays in the lives and ecology of other members of the wildlife community.

Because of the great differences in the environments of Hawaii and other mongoose-inhabited countries, studies made elsewhere are of little value here. They do, however, tend to confirm the observation made here in Hawaii that the mongoose is not, as popularly imagined, a carnivore; rather he is an omnivore of the first order, feeding on whatever is available, be it plant or animal. Indeed, there is little evidence that the mongoose seeks out any specific prey because of saporific interests or inherited motivation. He appears, rather, to spend most of his time browsing, consuming anything resembling food that crosses his path from large hairy spiders to birds' eggs. For example, Baldwin et al. report that a scat analysis made on the leeward side of the island of Hawaii revealed the food, in this area, to be mammals 39.6% (mostly mice), birds 4.1% (mostly doves), insects 27%, and plants 29.3%. His body design permits him to take among other things rats and mice, which has apparently proven advantageous to agriculturists. The question has been raised, however, concerning the indirect effects on agriculture due to the decimation of beneficial animals and insects. There is presently no clear cut answer to this, but deleterious effects of the mongoose due to this activity here in Hawaii are probably less than in other areas such as Jamaica and Trinidad, where several species of insectivorous lizards and snakes were reported radically reduced by the mongoose.

The question then arises, just what impact has the mongoose had upon the ecology of the Hawaiian Islands wildlife? Has he actually reduced the rodent population? Does he in reality seek out and destroy bird nests? The answer presently is as simple as

it is frustrating -- we just don't know. To take things one at a time; first, what about the rat situation? Has the mongoose reduced their numbers appreciably? The consensus of opinion presently is that areas with the mongoose, such as Hawaii and Maui, have consistently fewer troubles from rats than does Kauai, where the mongoose is not found. Whether this alleged lesser damage accrues from a shift in population numbers of various species of rats (there are four), or whether the total number of rats is reduced is not presently known. For example, in Kauai the rat wreaking the greatest economic damage agriculturally is the norway rat, Rattus norvegicus. A shift in population numbers to fewer R. norvegicus, as some claim the mongoose causes, would result in less damage but would not necessarily leave fewer rats in a given area. This is important to know, because each kind of animal brings certain pressures to bear on the wildlife community. Of the four species of rats in the islands, R. norvegicus, the norway rat, R. rattus, the black rat, R. alexandrinus, the yellow-bellied rat, and R. hawaiiensis, the hawaiian rat, two species are adept at climbing. These are the black rat and yellow-bellied rat, and they may be considered to some degree arboreal. That these rats at least occasionally prey upon the eggs and young of birds must be assumed; and it follows that a reduction in their numbers would subsequently decrease predation pressure upon tree-nesting birds. A corollary of this applies as well to ground-nesting birds. Rats do prey upon these species, but to just what extent we don't know. We can surmise then that the introduction of the mongoose into an area would, providing he reduces the total number of rats, produce a beneficial predation factor as regards the bird population.

The second major question, to what extent does the mongoose prey upon birds, is perhaps as much an enigma as the last. A study of the effects of mongooses on pheasant nesting activities by J.R. Woodworth of the Board of Agriculture and Forestry tended to show that the influence of Herpestes on this ground-nesting bird was measurable, but that pheasants were able to reproduce successfully in the presence of a mongoose population. Employees of the Parker Ranch, upon which the study was being conducted, stated that nesting of the Wild Turkey population in the area seemed to be more successful than before the mongoose poisoning program, which was part of the pheasant study, was undertaken. However, it is known that ground-nesting game birds are better represented in species and numbers on islands having the mongoose than on Kauai, which does not. One might deduce from this that other ecological factors play a more prominent role in the complex than does Herpestes.

It should not be assumed from this that the mongoose does not seriously effect at least some forms of birdlife. Overlooking the occasional bird that he stumbles across in the course of normal foraging activities, we still have one most important factor to weigh. There are in the islands certain species of birds whose life habits have evolved in the absence of such a predator as the mongoose. For those species whose habits place them in reach of the mongoose, and particularly those which have both a relatively low reproductive rate and other outside disturbances to cope with, the mongoose could well prove to be the limiting factor in the struggle for survival. The Hawaiian Dark-rumped Petrel and the Nene Goose are perhaps reasonable examples of this group.

Where then do we, as conservationists, stand as regards the mongoose? One item is abundantly clear; we do not know enough of this animal, of his activities, and the changes he has produced in the Hawaiian biotic community. That he has caused changes is undeniable; what they are and how advantageous or harmful they will ultimately prove to be to other wildlife and man remains to be determined.

5 March 1957

THE SAGA OF A MONGOOSE
By Betty H. Poole

Our pet mongoose came into our lives unexpectedly. It was dinner time and our older boy, then about 14, had not yet arrived home from various after-school projects. I was busy setting the table when we heard Dick ride up to the door. His bicycle clanged to the ground and he rushed in. His eyes were riveted to some small, writhing object which he clutched, rolled up in his aloha shirt.

He spread the shirt on the table, calling to all and sundry of the family to come see. Unrolled, a tiny animal inside was revealed, perhaps three or four inches long. The little brown mongoose immediately sprang to its feet and gave a very creditable snarl for a baby his size, his beady black eyes defiantly surveying the four members of the family gathered around him.

"I took it away from an old cat," cried Dick, triumphantly. "She was just going to eat it! Right by the side of the road! It was so scared that it bit and scratched me, so I took off my shirt and wrapped it around him and swung it over my handlebars where he couldn't reach me. Boy, is he spunky!"

The little mongoose braced himself on his small, wobbly legs and glared from one to another of us. Then he uttered a sudden, sharp sound, partly a throaty growl, partly a loud hiss. In spite of his absurdly small size, the hairraising sound made us all move back a little, involuntarily.

A debate began as to whether he could survive, where he should be kept, what he could eat. Both boys promised to build him a cage the next day, and Dick solved the most urgent housing problem by taking him to his room and pushing him under his bed spread. Here he seemed reasonably content during the dinner hour. By this time the boys had decided to call him "Gander", -- "because he's a male mongoose and a male goose is a gander", which seemed to be impeccable reasoning. And so Gander became a member of the family, taking his place as one of the family pets.

The problem of feeding was solved by the boys' discovery that while he would not touch solid food, he readily accepted milk from a medicine dropper. Dick became a fond parent to the unweaned baby, patiently feeding him warm milk at two-hour intervals, from a medicine dropper. (I was supposed to keep up the flow of liquid provender while the little mongoose's owner was in school.)

Even while Gander was a baby, he showed unmistakable signs of "temperment". If the milk from the dropper did not come fast enough to assuage his hunger, he would sieze the rubber end in his teeth and growl while he shook it in a real, if miniature, rage. Such a temper in an unweaned baby seemed, somehow, most amusing.

Little Gander grew rapidly on his milk diet. For a week or more, while his cage was being built, he slept under the coverlet of my son's bed and grew to regard this haven as his home. Soon, whenever he was brought into the house, he would trot down the hall, enter the right bedroom, jump up on the bed and somehow manage to creep under the spread. Sometimes the small hump under the spread would move about, sometimes it would remain drowsily in one corner for hours.

At about this time we learned of the regulation forbidding the harboring of a mongoose without a permit, and accordingly applied to the proper authorities for permission to keep him. The plan was to find out just what food mongooses would eat, and thus have a basis of fact on that subject available. So as soon as Gander would accept tidbits of various kinds, the experimentation began.

Would Gander eat cheese? He would. Cooked cereals? Crazy about them. Apples, oranges, bits of papaya? Mmmmmmm! Meat, of course; rice? Yes, indeed. He must have

heard somewhere that vegetables were good for the growing young, for he devoured scraps of peas, beans, squash, eggplant and other vegetables. In fact, during the year and a half while Gander lived with us, we found only two articles of food which he absolutely refused -- lemon and raw onions!

Of course, with all this food and care, Gander grew and grew. In a few months, he had attained the size of an adult mongoose, with a luxurious, bushy tail. He played about in the yard, would come when the boys called, jump on an extended wrist, fastening his forepaws around the boy's arm and ride there in state. By now he had a cage near the kitchen door with a long, screened runway, and plenty of room to race up and down. Intelligent enough to distinguish members of his own family from others, he often frightened the wits out of unsuspecting strangers who chanced to come near his cage. His vocal powers had waxed with his body and his snarl-growl-hiss was indeed alarming, especially when it sounded off unexpectedly.

Gander's diet now tended to center more on meat, and by all odds his favorite article of diet was dead bird. We lived near a poultry yard, where the manager was having a hard battle with marauding sparrows stealing the grain put out for the fowl, and the younger son of the family, John, was invited to bring his air rifle and "shoot all the sparrows you can". John, a skillful marksman, accepted this invitation joyfully. He set forth early each morning, usually returning with a sparrow or two before breakfast.

The first sparrow offered to Gander brought forth a curious tableau. When the bird was laid in the cage, the mongoose reconnoitred it cautiously. Soon realizing what it was, his joy expressed itself in a sort of dance around the body of the bird. Capering and jumping, he circled the corpse several times before he began his feast. Soon only a few feathers lay in the cage -- every other scrap of the bird had disappeared.

Naturally, this ritual, which was repeated with the appearance of each bird, became a spectacle for the children of the neighborhood, who watched the rather grisly scene with delight tempered with awe. A small knot of children usually hovered about the cage, mornings, waiting for John to return with Gander's breakfast, and stood fascinated, watching that breakfast being devoured! With an audience like this, it naturally became a point of honor with John not to return empty handed. His marksmanship became astonishingly accurate.

"Only two shots -- and two sparrows!" he would say, nonchalantly, as he delivered the offerings to Gander waiting in the cage.

Another item of Gander's diet was also disposed of in a manner worth watching. One day Dick placed a raw egg in the cage, the first one ever offered to Gander. Gander approached this strange white object, cocked his head and looked it over from several different angles. Then some instinct arose and took over. He straddled the egg and using his front paws as a scoop, threw the egg underneath his body toward the back wall of his cage. The egg broke, spattering the cage, and Gander ate every bit of it he could reach, meanwhile uttering the "CHEEE" sound which signified pleasure.

The mongoose had at least three different calls or sounds -- a low, contented "CHEE"; a sharper, louder one which served as a warning call; and last, when he was really aroused either by fear or anger, a loud, savage sound which combined a sibilant hiss, a guttural, throaty growl, and a vicious snarl. This last sound, a true battle-cry, was enough to awe any other animal who heard it.

Early one morning we heard Gander sounding his battle cry at intervals outside in the garden. Going to the kitchen window, we saw this scene: three cats belonging to various neighbors were on the branches of the large monkeypod tree in the center of the garden. They very much wanted to get down and return home -- but every time one of them put a paw toward the middle crotch of the tree, preparatory to springing down,

Gander, who sat watching them from the foot of the tree, would arch his back, raise his head and give his famous snarl-hiss. That was enough! Poor kitty would draw back and dig her claws in for a more protracted stay on her lofty perch.

"Wonder how long this has been going on?" said my husband. When we could stop laughing, Dick was called to come out and put Gander into his cage.

There was a fascination about this small pet which was undeniable. Perhaps it was his very wildness, combined with the readiness to accept his human family, to come when called, to ride about on the boys' shoulders, or cling to their wrists as a willing passenger, which made him a place in our affections. To see him playing about in the garden, slinking along close to the ground, then suddenly rising on his hind legs to get a better view of all that might be in his vicinity was fascinating enough. Even more so was his conduct toward the other animals in his orbit. He was the undisputed cock of the walk in the neighborhood. Cats, dogs, and small children all got out of his way.

Gander loved children and would sometimes trail them down the street. His affection, however, was not returned. The children were not sure just what sort of animal he was. "Mamma, a RAT is following us!" sobbed one three-year-old, after she had escaped from the mongoose trotting peaceably along behind her and her friends. But, on the whole, the neighborhood was understanding and sympathetic -- up to a point.

As Gander reached maturity, he became more and more restive. Daily he worked with the latch on his cage until he managed to release it and win his freedom. Then he was apt to enter other houses than his own. Perhaps he should be excused for his mistakes in this respect, as all the houses were just alike, painted the same color and set along the street like peas in a pod. But to see a mongoose stroll in through a door left ajar might well have shaken our good neighbors' nerves. Calls came in more and more frequently, sometimes in rather frantic tones.

"Please come and get your mongoose out of our bathroom!"

"We want to go to the beach and your mongoose is in our jeep!"

"The mongoose is under the sidewalk and the children are afraid -- he growls at them."

"That --- --- mongoose is in our piano. Can you get him out?"

I rushed out at least once a day, soothed Gander, coaxed him out of his hiding place, apologized and took him back to his cage. We fastened his cage door with wire. He learned to jump at the little screen door until it bent outward slightly, then he slithered out through the still locked door.

Perhaps, the climax came when Gander entered the house next door, trotted down the hall, and entering the bedroom at the end of the hall, crawled under the bedspread on the bed which he undoubtedly thought was Dick's, his first home. The master of the house, a famous and extremely goodnatured artist, made the mistake of reaching for him and pulling him out. Gander fastened his sharp teeth on the hand which wields the brush on beautiful murals, and hung on. Blood was dripping from the artist's hand when his master arrived to take him home.

This would never do! Efforts to strengthen the cage were redoubled. A new frame for the door and a heavy wire mesh reinforcement was added. For a time, we seemed to have succeeded. Gander stayed sullenly in his cage, and the neighbors lived on more quietly than for some time. Sweet peace! we said, while Gander raced up and down his cage all day, never stopping his blind search for freedom.

Soon the time came when we were to go on vacation to another island. Arrangements were readily made for the other pets. The dog, crated, would accompany us on the plane. Neighbors kindly volunteered to feed the cat. Others would take care of the tropical fish, the turtles, the sea horse. But the mongoose -- Gander. What to do about him?

Clearly, it was out of the question to expect our long-suffering neighbors to feed him, shoot sparrows for him, keep him in his cage or retrieve him if and when he broke out. By now he was so domesticated that he made for any open door or window when he wanted a nap in peace. In plain words, he had become a PROBLEM.

And was it right to keep this restless creature of the wild caged most of the time? The boys took him out to play, but most of the time he was confined to his cage, which he plainly detested now, although earlier he had seemed contented there.

Perhaps it was time for Gander and our family to part. After all, he should be living his own life, establishing his own family. In a family council held to talk over the matter, it was decided that it would be best for all parties concerned, if Gander could be released to make his own home.

The place to release him was carefully considered. It must be far away, so that he could not find his way back home again. It must not be near any houses, for he would be sure, some day, to enter one of them. We shuddered, all of us, as we imagined him beaten and chased by startled householders who had never heard of a mongoose being tamed. No, it must be far away from human habitation, near some little stream of water, with plenty of the undergrowth which mongooses love, nearby.

An ideal place, meeting all these conditions, was decided on. Gander was taken for his last automobile ride, carefully held in a shoebox. When the spot was reached, the box was lovingly placed under some shrubs, near a little brooklet. The box held various tidbits well-liked by Gander, just to tide him over until he got the knack of hunting his own food. The lid of the box was loosened and the boys and their father climbed back into the car, watching to see Gander emerge from the box and look at them.

"Goodbye, Gander. You're on your own now," said his master, blinking hard. The car gathered speed, until the little figure, motionless beside the white shoebox, was lost to sight.

A few weeks later, after we returned from vacation, the male members of the family returned to the location, miles from Honolulu, where Gander had been released.

"And, Mamma, a mongoose came out of the brush when I whistled and looked at us," reported one of the boys. "Then he ran away. I guess he's all settled there, don't you?"

I fervently hope that he is! But no one who knew our cunning, wild pet will ever forget him!

IN MEMORIAM

We are saddened by the death of one of our most faithful members, Miss Dorothea Lamb Taylor. Miss Taylor had been a member since the beginning of the Society, and her enthusiastic assistance at meetings and on walks was an important factor in the growth of our organization. Her genuine love of nature was infectious, and led many others into the enjoyment of the out-of doors. She gave loyal devotion not only to our Society, but to her chosen profession of nursing, and to her church. Those privileged to know her well delighted in her keen sense of humor, and in her generous heart. Her courage in enduring a long illness without complaint or self-pity is an inspiration to us all.

Field Trip to Kawai-iki, February 24, 1957

On February 24th a company of 11 members and guests of our Society chose the Kawai-iki trail, at the northeasterly part of Oahu, for bird observation. It proved to be, as some members had predicted, a beautiful walk. The turns of the trail brought one valley after another into view, each valley wide enough for a long look across, the opposite side far enough to give confidence to the many birds that sang with the enthusiasm of spring. We delighted too in the variety of lovely greens, the kukui, koa, the lama bushes with their new leaves of soft rose, and many other plants that taxed our knowledge of their names.

Cars did most of the climbing for us and the trail was an easy one, without much rise and fall. Now and then a little shower brought wetness to trail and persons, but not enough to dim enthusiasm. One elepaio came near and so indulged its curiosity that all had an intimate look at its well tailored little body and perky tail. It was a delight to see and hear so many birds, especially as this trail in previous years has not produced many birds.

One pleasure was to have with us two young ones, Sally and Peter King. We must try to have more young members-to-be with us. The future is just ahead of us!

Pacific Golden Plover..... 13
 Leiothrix..... 41
 White-eye..... 23
 House Finch..... 1

Elepaio.....21
 Amakihi.....21
 Apapane.....18

Margaret Titcomb

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Field Trip to Waiahole, March 10, 1957

On March 10th Mr. and Mrs. McGuire led the group of seven members and guests to the windward side of the island, where we expected to go on the Waikane Ditch trail. The dirt approach road proved wet and impassable for any car other than Mr. McGuire's Jeepster. A brief conference was held; we decided to go to Waiahole trail which is somewhat drier.

The trail was very beautiful, with interesting vegetation, lush ferns and plants, and lovely vistas. Several unusual ficus attracted attention -- ficus nota, with fruit borne in great clusters on the tree trunks, and the so-called strangler fig, which true to its name had enveloped the nearby trees. Koa trees were in full bloom, adding beauty to the landscape. Birding was not particularly good. Leiothrix were on every side, singing and calling; one apapane was heard; and nine elepaio were counted. A gayly colored tree frog in a barrel of water, and a pollywog of the same species who had sprouted bright hind legs, deserve to be listed among the day's attractions.

Grenville Hatch

FROM THE MAIL BAG:

Grace Gossard Gregg writes, "We arrived here in Tucson less than a week ago. (Feb. 20) This countryside is amazing -- dry, barren appearing, altho really fully of life, with fantastic coloring in the mountains, bringing to mind some of the Zane Grey stories I used to read as a teenager ... So far I've had little opportunity for birding except for two afternoons when I went for a walk in town ... Yesterday's walk merited me white crowned sparrow, flycatcher, (western?) cactus wren, a sweet singing cardinal which brought so vividly to my mind Hawaii nei, inca, white-winged, and

mourning doves, and Audubon warbler, brown towhee and a flock of some kind of finches.

"Mission Bay, where we stayed in San Diego for ten days was fabulous birding. We were surrounded on three sides by water, and here I saw my first blue heron, snowy egret, longbilled and Hudsonian curlews as well as a host of other water birds ... Give my regards to all."

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A note from Dr. Frank Richardson tells of having "a fine day on the Sound Jan. 12 with lots of marbled murrelets, old-squaw and harlequin ducks," in company with Bob and Billy Pyle.

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Excerpts from letter from Phyllis Hihn:

"While on the Elk Refuge, I saw my first Trumpeter Swans - 6 of them. They were living on a pond right close to the road. On leaving Wyoming, I drove down to Brigham City, Utah, outside of which is an enormous Wild Life Refuge, Bear River, where I spent a wonderful day. There were thousands of Avocets, Western Grebe and Stilts as well as the usual ducks and geese and I never knew so many coot existed until I came out west!

"In Ojai, where I have recently spent a month with a friend, I had a fine time. She has an acre surrounded by live oak trees. The California woodpecker is everywhere and the banded pigeons collect into enormous flocks as the weather gets colder. I counted (roughly) 76 that came every day, morning and evening. I am not exaggerating, but in the space of half an hour or so, when the sprinklers were on, I could see White Crowned Sparrows, Oregon Juncos, Blue Birds, Blue Jays, Audubon's Warblers, W.B. Nuthatch, Brown Towhees, Plain Titmouse, Brewers Blackbirds, the woodpeckers and Red Shafted Flickers, one Black Phoebe (I'd never seen one before but he(?) was there every day) and occasionally Green Backed Goldfinch, Bewicks Wrens and Spotted Towhees, oh! and 3 English Sparrows. That whole area seemed alive with birds, but as far as I could gather there is only one elderly spinster who is thought somewhat "odd" because she walks around with binoculars, who is really interested in them."

APRIL ACTIVITIES:

FIELD TRIPS: April 14 - Poamoho. We shall make another attempt to see the garrulax. Our records show that it has been seen most frequently in April, so perhaps we shall be successful this time. Meet at the Library of Hawaii at 6:00 a.m.

April 28 - Shore birds. This is probably the last trip for shore birds this spring, as the plover has begun to don breeding plumage and will soon be off. We plan to go to Kuliouou and Bellows Field. Meet at the Library of Hawaii at 8:00.

MEETING: April 15 - At the Aquarium Auditorium at 7:30 p.m. "Bits of Hawaiiana (birds)", by Z. Teauotalani, or Keauokalani, a contribution to an old Hawaiian newspaper, translated by Mary K. Pukui, will be read. A nature film will follow.

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