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A STUDY OF THE BREEDING BEHAVIOR OF THE MYNAH (Acridotheres tristis L.)

By Charles Robert Eddinger*

First Installment

INTRODUCTION OF THE MYNAH INTO HAWAII

The Common Mynah (Acridotheres tristis L.) was brought to the Hawaiian Islands from India in 1865 by Dr. William Hillebrand to combat the armyworms (Laphygma exempta) and cutworms (Spodoptera sp.) that were causing great destruction to young cane and grasses (Northwood, 1952). Although the mynah has been very effective in destroying the caterpillars, a difference of opinion still exists as to whether the mynah is an asset or a liability.

Lantana camara was brought to Hawaii from Mexico as an ornamental plant. The mynah has been blamed for the spread of lantana because it feeds on lantana berries. Fisher (1948) observed correlative fluctuations in the abundance of berries and mynahs. Fisher does mention that various species of doves, which also feed on the seed of the lantana, may be equally instrumental in the spread of the noxious plants. Smith (1943) places the major blame on the Chinese dove (Streptopelia chinesis (Scopoli)).

Secondly, the mynah is charged with the destruction of fruit. The mynah, with its omnivorous habits, will, in addition to insects, eat a share of avocados, papayas, mangoes, guavas, and, especially, figs. Northwood (op. cit.) relates an oldtime picture of Hawaii as given in a local Hawaiian newspaper: "Before this bird was brought here, each year an army of caterpillars marched from the mountains to the sea, eating every green thing on the ground. They were so thick on the ground that every step taken left your footprint and when these same turned into moths they filled every room with the dust from their wings, turning out all humans." If this was actually the condition in pre-mynah days, can we begrudge the mynah for the few fruits that it destroys today?

More significantly, it has been charged that the mynah is responsible for the disappearance of the native Hawaiian birds. Perkins (1901) asserts that the mynah "not only attacks and drives away other birds, but also devours their eggs and young." He adds further (p. 580) that he has himself seen the mynah "devouring both young and eggs of other species," but he does not name these species. Fisher (op. cit.) states that he and his students, working on the offshore bird islands of Oahu, "have found the mynah pecking open the eggs of Sooty and Noddy Terns."

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Henshaw (1902), Bryan (1905), Northwood (op. cit.), and Munro (1960) all feel that the introduction of the mynah has had little or nothing to do with the decrease in the numbers of native avifauna. Henshaw (op. cit.) watched the interaction of mynahs and native species for several years and never saw a mynah attack or in any way disturb a native bird. Hundreds of times he "observed the small native species feeding in the same tree with mynahs, neither paying the slightest attention to the other." The food habits of the mynah conflict very little with the native birds. The mynah shuns the denser forest in nest site selection, preferring rather to build on man-made structures. Thus there is little competition for nesting sites with the native species.

Whether the mynah is an asset or a liability, as Henshaw (op. cit.) states, "the bird is here to stay." The mynah is a wary bird, and although man may be able to check its increase, extermination is practically impossible.

GENERAL ECOLOGY

Mynahs are essentially birds of civilization. They are rarely found in thick forests unless man has prepared the way for them. They appear little affected by altitude, being found both in beach areas and in mountain parks.

During the day, mynahs are seen in pairs or in flocks, often in gardens, fields, or city parks. The female is slightly paler and smaller than the male. Those living in the city feed largely on the ground. It is common to see them searching through the city waste-cans in parks or flying onto porches to rob dogs of their provided meals. Country mynahs often ride the backs of horses and cows, eating insects as available.

The flight of the mynah is straight, usually accompanied by a shrill squeak as the bird takes off. The alarm note, signifying some danger, is a harsh prolonged kééé kééé. Mynahs may often be seen flying over cats, dogs, and mongooses. It is not uncommon to see them dive within a few feet of a cat and then fly up to repeat the action. The excitement usually draws a flock of mynahs and the entire flock emits the alarm signal and the diving action, with the result that the cat retreats to a more peaceful place.

In the evening mynahs often assemble in great numbers in large banyan and monkeypod trees. The first birds to arrive find many suitable perches and settle quietly, but as more birds arrive there is increased vocalization as competition for perches increases. Often disputes are carried past the threatening stage and two birds may fall to the ground, locked in combat. The din of a banyan filled with mynahs and the accompanying fuss and commotion must be seen and heard to be appreciated. Gradually the birds quiet down to sleep, but a passing dog or cat will start them off again. The noise resumes at daybreak when the birds leave for their feeding grounds.

It is not known if the birds pair for life, but inasmuch as they are seen in pairs even in the non-breeding season it seems quite possible.

With the onset of the breeding season there is a decrease in the number of flocks and the number of birds in individual flocks. Communal roosting trees continue to be occupied during the breeding season until incubation begins. The non-incubating parent may return to the roosting site at night while the other parent is incubating.

The following study was made from April 1966 to April 1967 at the University of Hawaii, Honolulu. A major portion of the study was carried out on the campus. The area provided an excellent habitat for nesting mynahs: large buildings with second and third floor ledges, exposed rafters, large drain pipes, exposed air conditioners in open windows, and a wide variety of trees. The number of active nests observed on the study area was 25. There is some variability in the number of observations on each nest due to the relative inaccessibility of several of the nests.

NESTING SITES AND TERRITORIES

Nest site selection may begin in late February, but generally many more pairs were seen to frequent nesting sites during March. Nesting sites are extremely variable. Of the 25 active nests, 17 were on or inside of buildings on campus; the other 8 were in trees. Nesting sites included narrow ledges, and top of an open window, the wooden framework of an air-conditioner, water drain pipes, open-ended steel rafters, traffic lights, hollows in trees, and tree forks. The "Honolulu Star-Bulletin" (April 29, 1940) describes the great difficulty encountered at Hickam Air Force Base when mynahs insisted upon nesting under the warm engine covers of the 50 or so bombers that stood in rows outside of the hangers.

The same site is used over again if the first brood is unsuccessful, and birds may return each year to the same site.

The male is the first to return to the nesting site and may be heard singing there for several days before the female visits the site.

The immediate vicinity of the nesting site comprises the "territory" as defined by Armstrong (1947): "An area defended against competing members of the same species." Mynahs have been observed nesting in close proximity to each other: an attic with an opening in each of the four corners was inhabited by four pairs of mynahs. The nesting site, once established, is, however, actively defended. Vocalization by both birds usually keeps other mynahs at a distance, but, if advances are made, an open dispute may result with both birds pecking and clawing the intruder.

I placed a mirror (one-way glass) in an air-conditioner several inches from an active nest. Both birds immediately pecked and clawed at the mirror, with much vocalization. This continued for four days. The birds deserted the nest on the fifth day. I left the mirror at the nest for 26 days. The birds visited the nest each day but would immediately fly off. On the 26th day I removed the mirror and on the 27th day the birds returned carrying new nesting material. A new clutch of eggs was begun 69 days after I removed the mirror.

There may be some territoriality in the selection of areas from which nesting material is gathered. Pairs have been seen to visit specific areas to collect nesting materials, and intrusion into these areas by another bird in search of nesting material results in expulsion of the intruder.

In all cases, there is much vocalization, often followed by pecking. Claw to claw combat is, however, not uncommon.

PAIR FORMATION, COURTSHIP, AND COPULATION

As previously mentioned, it is not known if the mynah pairs for life, but the possibility of such a phenomenon is very likely. In order to obtain conclusive data on this point, it would be necessary to continue this study of color marked birds for several years.

I observed several courtship presentations. The male bird walks up and down with a straw or a feather held in his beak, the wings slightly depressed and shaking. If the nest has already been completed, this presentation is usually a leaf, cellophane paper, or a cigarette end. The material is laid in front of the female. If the nest is under construction or has been completed, this material is added to the nest by the female.

Copulation, observed on six occasions, followed a short courting. In pre-copulatory courtship, the male bows repeatedly, the feathers on the top of his head and neck being erected. This is accompanied by singing. If the female is receptive, she crouches and is mounted. On five of the occasions copulation was performed on a branch or ledge, once on the ground. These six observations were as follows: 10 November (8:15 a.m.), 12 November (6:30 a.m.), 30 November (3:00 p.m.), 22 December (10:00 a.m.), 28 December (6:00 p.m.), and 13 February (5:00 p.m.).

Copulation occurs from two to five months before most mynahs begin active nest building. It may well be, as in the case of European Starlings, Sturnus vulgaris (Berger, 1961), that copulation may occur throughout the year and may serve to maintain the pair-bond or that copulation occurs prior to nesting as a stimulus to both sexes. Only one copulation was observed after a given precopulatory display. No post-copulatory displays were noted.

NEST BUILDING

Both sexes take part in nest construction. Straw, fine twigs, fallen leaf petioles, paper tissues, ribbons, tape stripped from electrical connections, colored paper, plastic bags, cigarette ends, and cellophane paper are common nesting materials. In all 25 nests observed, cellophane was used to line the nest. To see if there might be a color preference, I placed pieces of red, blue, and yellow cellophane where a pair was collecting nesting materials. There appeared to be no color preference in that all colors were used to about the same degree. The process of adding nesting material goes on even after the eggs have been laid. The material at this stage is usually pieces of fresh green leaves or additional cellophane. The time from the beginning of nest construction to the laying of the first egg varies from 5 to 12 days, apparently depending somewhat on the size and shape of the nest.

The shape and size of the nest depends directly upon the available space at the nesting site. In small holes the nest is simply a lining of fine straw, feathers, and cellophane. On a ledge, where considerable space is available, the nest may reach large proportions. One such nest observed measured 50 cm. x 45 cm. x 16 cm. This had a small cup at the center, with a diameter of 10 cm. and a depth of $6\frac{1}{2}$ cm. When built in branches of trees the nest is more compact and made of twigs and straw.

The same nest may be used to raise more than one brood in a single nesting season, with the addition of new material on top of the old nest. Thus, an old nest may reveal successive layers for various broods raised. One pair of mynahs nesting in an air-conditioner constructed their first nest to a depth of 11 cm. The same site was used for a second nesting when the first failed to fledge successfully. An additional 19 cm. of nesting material was added to the depth of the nest before relaying.

EGG LAYING AND CLUTCH SIZE

The date of egg-laying in the mynah varies considerably: 7 March (in nest number 20) to 25 July (in nest number 2). The eggs may be laid before the nest has been completed. Fresh leaves and cellophane are often added after egg laying. Two to five blue to blue-green eggs are laid at intervals of twenty-four hours (Table 1).

Table 1.

Time of egg laying and clutch size

nest no.	1st egg laid on	2nd egg laid on	3rd egg laid on	4th egg laid on	5th egg laid on	total clutch size
1	22/4/66	23/4/66	24/4/66	25/4/66		4
2*	24/7/66	25/7/66				2
3	24/4/66	25/4/66				2
5	25/5/66	26/5/66	27/5/66	28/5/66		4
10	24/5/66	25/5/66	26/5/66			3
12	9/5/66	10/5/66	11/5/66	12/5/66		4
13	14/5/66	15/5/66	16/5/66			3
14	28/5/66	29/5/66	30/5/66	31/5/66		4
20	1/7/66	2/7/66	3/7/66	4/7/66		4
20**	7/3/67	8/3/67	9/3/67	10/3/67	11/3/67	5

* relaying ** second season

After the laying of the first egg the pair usually remains in the vicinity of the nest throughout the day. At night, however, the nest is deserted, the pair probably returning to the communal roosting site, until the clutch has been completed.

INCUBATION

Incubation here is defined as the time lag between laying of the last egg to the hatching out of the last young, when the other eggs have hatched successively.

The mynah begins incubation with the laying of the last egg. Incubation is shared by both parents. The male and female change places frequently during the day. At times the eggs may be left uncovered during the day for short periods of time during parent change-over. It is not known if both sexes incubate at night, but both birds usually remain at the nest--one incubating and the other perching close by.

The period of incubation for Acridotheres tristis in India (Lamba, 1962) is said to vary between 16 and 18 days. I found the period of incubation in seven Hawaiian nests to be 13 days (Table 2).

Table 2.

Incubation time

nest no.	last egg laid on	last young hatched on	incubation period in days
1	25/4/66	8/5/66	13
2	25/7/66	7/8/66	13
5	28/5/66	10/6/66	13
12	12/5/66	25/5/66	13
13	16/5/66	29/5/66	13
14	31/5/66	13/6/66	13
20	4/7/66	17/7/66	13

To be continued.

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FIELD NOTES from Eugene Kridler:

These are the results of the censuses which I conducted on Kanaha and Kealia Ponds, Maui on November 23, 1967:

Species	Kanaha	Kealia
Black-crowned night heron	34	4
Snow goose	-	1
Shoveler	395	-
Pintail	74	91
Coot	62	22
Ring-billed gull	2	-
Black-necked stilt	172	57
Ruddy turnstone	10	-
Black-bellied plover	1	-
Golden plover	88	11
Wandering tattler	1	-
Sanderling	10	43
Dowitcher	3	1
Black brant	1	-

When Mike and I visited Kanaha with the National Audubon group on the 20th, we saw 3 ring-billed gulls, the brant, the 3 dowitchers, and 3 sharp-tailed sandpiper.

The snow goose, Chen h. hyperborea, is an oddity. The species was last recorded for the state on January 1959.*

On December 26 I observed a nice male ring-necked duck, Aythya collaris,* on the small pond on the south side of Kawainui Swamp near Kailua, Oahu. As far as I can determine, this is the first record for Oahu. I was accompanied by Dick Poole of Kailua, Harry Smith of Santa Cruz, California, and Albert McGrew of Kailua. The bird was in good light andhad the distinctive ring around the bill, the black back, and light crescent in front of the wing.

(Eugene Kridler, U.S. Bureau of Sport Fisheries and Wildlife, 835 Akumu Street, Kailua, Hawaii 96734)

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* Editor's Notes: For previous reports see THE ELEPAIO, Vol 21, No 7, Jan 1961, p. 48, for the snow goose and Vol 9, No 11, May 1949, p. 61 for the ring- neck duck. J. Donald Smith reported seeing 10 ring-neck ducks on Maui during the 1948-49 season.

Eugene Kridler's Notes, May 24, 1967: There have been questions about the 10 ring-necked ducks reported from Maui by J. Donald Smith in 1949. Some people wonder if they were confused with scaup, since the latter are observed in Hawaii every winter while the ring-necks never before or since (until my observation). Also questioned is why 10 should be seen only once. Smith never gave the details.

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FIELD NOTES from Leilani Pyle: Observations of Waterfowl at Kahuku, Oahu.

On January 21, 1967, W. Michael Ord, Eugene Kridler and Robert Pyle visited the Kahuku area to check on the wintering waterfowl population. Ample amounts of standing water, with wet and muddy fields in the Kahuku Plantation area, had attracted a good collection of ducks and shorebirds, and an unusual variety of species, as follows:

Kahuku Plantation area - 7:00 to 8:00 a.m.

6 Great Frigatebird - flew over in one flock
15 Black-crowned Night Heron ('Auku'u)
7 Pintail - 4 males, 3 females
3 Gallinule ('Alae-'ula)
16 Coot ('Alae-ke'oke'o)
Golden Plover (Kolea) - abundant
2 Black-bellied Plover
2 Tattler ('Ulili)
1 Lesser Yellowlegs - studied well at leisure
Ruddy Turnstone ('Akekeke) - abundant
5 Sanderling (Huna-kai)
2 Black-necked Stilt (Ae'o)
1 Short-eared Owl (Pueo) - seen twice, probably same individual
Barred Dove, Spotted Dove, Mockingbird (1), Mynah, White-eye, American Cardinal, Brazilian Cardinal

Kahuku Airstrip area - 9:00 a.m. to 1:00 p.m.

67 Pintail
30 Shoveler
12 American Widgeon
11 Green-winged Teal
4 Gadwall - seen in flight only. Identified by size, shape, dark color, and prominent wing patch.
1 Scaup - female, on large pond south of access road.
1 Hooded Merganser - female, on large pond south of access road to airstrip. Watched at leisure through scope, while standing and swimming, in close comparison with other species. Identified by size, shape, rusty head, crest, merganser bill. Apparently no previous record for Hawaii.**
1 Teal, Blue-winged or Cinnamon - seen by Ord and Kridler in flight twice, once over airstrip and once south of access road. Identified by

large wing patches and teal size and shape.
Coot - several
Golden Plover - abundant
Ruddy Turnstone - abundant
Sanderling - several
1 Tattler
1 Dowitcher - in flight over sirstrip.
1 Sandpiper, probably Least - chased and flushed several times. Smaller than accompanying Sanderlings, dingy wash across breast, pale legs, but little if any buff in plumage, and bill rather long for a Least. Probably this same bird was seen during following weeks.
1 Dunlin - with Plovers and Turnstones on the airstrip.
17 Black-necked Stilt (Ae'o)
House Sparrow, Ricebird, and most other landbird species listed for the Plantation area.

The duck count is notable both for numbers and variety of species. The party went first to the airstrip, observing and counting waterfowl on ponds along both sides of the strip. All ducks eventually flushed, most heading south to the large area across the access road. The party then proceeded to the large pond south of the access road, studied and counted the ducks there, then ventured on into the pasture and brushland beyond. This area had many small potholes and sloughs of standing water, mostly hidden from view. Finally, most of the ducks in the area flushed into the air, and the above counts of Pintail, Shoveler and Widgeon were obtained at this time as the birds wheeled about in small flocks overhead. Almost equal numbers of Pintails and Widgeon, and some Shovelers and Green-winged Teal, were seen earlier along the airstrip, but since they had flushed over to the south area they could not safely be counted as separate birds. Hence, the counts as given are very conservatively low. Undoubtedly, higher numbers were actually in the area.

**Eugene Kridler's Notes, May 24, 1967: Ernest Kosaka of Fish and Game reported one from near Hilo in January 1966...; however, Ernie did not write his record for publication.

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FOR JUNIOR MEMBERS:

This month there is no contribution from any junior member. May be the end-of-school activities kept you busy, but now that the summer vacation is here, please write about your conservation projects or your interesting observations. The ricebirds and mockingbirds are still nesting, so watch for them.

When did your plover leave? Every plover at Hickam AFB was gone by April 28, but on May 8, I spotted a lone bird on a medial strip at the Navy Housing Area near the Bank of Hawaii. Evidently it was resting, for before I turned the corner, it was calling and heading toward the ocean. Now, watch for their arrival, and let me know when you see the first plover back from Alaska.

The following news articles may be of interest:

TRIBUNE-HERALD, Hilo, Hawaii, April 2, 1967: SEEN ANY CATTLE EGRETS ROAMING AROUND ISLAND? (Alan Thistle's contribution)

...Proof of the presence...was reaffirmed by a recent sighting of three of the birds following cattle in Waiakea-uka area just below Camp 6. Until this sighting there had been no reported observation of cattle egrets on Hawaii for some time.

It is likely, according to Ernest Yoshioka, state entomologist and plant quarantine inspector, that rookeries exist in an isolated area and that the trio may be progeny of the original colony released at Keaau in 1960. The birds originally were introduced by the Entomology Division into the Territory in 1959 as a potential control for livestock pests....

Cattle egrets live throughout tropical and sub-tropical parts of the world, ranging over Africa and Asia. In the last two decades they migrated to South America and from there spread to the United States.

The cattle egrets first began to appear in Southeastern United States about 15 years ago. They are spread throughout the South, even appearing as far north as New England and Southeastern Canada.

Hawaii's egrets, however, did not make it to the islands on their own. Through the joint efforts of the State Department of Agriculture, various ranchers and the Honolulu Hui Manu organizations, the original colonies of egrets were introduced. Source of the birds was in the State of Florida.

A total of 164 was released in various localities on all islands including 12 at Keaau and 20 at Mahukona in July of 1959, and 12 at Puuwaawaa in June of 1960....

In field observations of feeding egrets, each individual would single out an animal, walking close to the head, occasionally picking flies off the neck, ears or head, but mostly from the ground, consuming an average of one fly every two seconds.

The egrets, however, are not obligated to associate exclusively with cattle. They have been observed with horses and other animals; nor are they obligated to follow animals in order to get food. They have been observed in and around shallow ponds being filled with sugarcane debris and cane wash water feeding on rat tailed fly maggots in the water and also on adults. They also have been observed following closely behind mowers cutting alfalfa, feeding on insects disturbed by the operation. Besides insects, they have been observed feeding on crayfish.

Current population of cattle egrets, mostly on Oahu, is estimated at 1,000 individuals and may be the nucleus of the natural spread of these birds to Neighbor Islands.

HONOLULU STAR-BULLETIN, May 23, 1967, page 1: Huge bird wings way from Mainland
THE GOLDEN EAGLE OF KAUAI by Harold Ching.

...The giant bird, seen by a number of people in the past few months, was definitely identified on Friday.

Gerald Swedberg, wildlife biologist of the Division of Fish and Game, Department of Land and Natural Resources, was in Koke'e with two companions when the bird came in sight and hovered close enough for easy identification....They were in the Kamuela area in Koke'e when they spotted the huge bird soaring over Waimea Canyon. Then the bird flew over them and hovered. Swedberg said the bird was within sight for about 15 minutes and was as close as 25 yards before departing....

The golden eagle in Waimea Canyon has a wingspread of about seven feet. Swedberg figured the bird to be about 3 years old. He estimated the age by the absence of the colorful golden feathers of a mature 4-year-old bird.

The first reports of the presence of a giant bird in Waimea Canyon came from Charles G. Harter of Garden Island Helicopters. Harter said his first sighting occurred about three months ago. Since then he has seen it many times....He said he almost always saw the giant bird at the end of Mohiki Ridge. The bird has kept to the Waimea Canyon area, never along the Na Pali cliffs to the west....

The golden eagle flies long distances between parts of the United States and Mexico, but this is believed to be the first report of one of them venturing so far out across the Pacific. It may have been carried out by a storm.

This is the first one ever to be reported in Hawaii. Even the zoo does not have one.

The golden eagle will be an important addition to the life of Waimea Canyon, Swedberg said, and should not upset the balance of existing birdlife. He said the big eagle is a carrion eater generally and is not agile enough to snare elusive small birds and animals.

HONOLULU STAR-BULLETIN, May 24, 1967, page 1: MAJESTIC BIRD

A golden eagle, like the one spotted flying over Waimea Canyon on Kauai, may be seen in the Honolulu Zoo. This specimen is on loan from the Los Angeles Zoo, and is about three years old. The eagle on Kauai is estimated to be about the same age. Until it was spotted recently, everyone had assumed there were no eagles in Hawaii. The Kauai eagle apparently flew from the Mainland. Federal law imposes strict penalties--with a fine of up to $500--for anyone with designs on an eagle.

Persons are not allowed to take, possess, sell, purchase, transport, barter, or offer to sell any part of either a bald or a golden eagle. This includes the feathers even after the eagle is dead.

HONOLULU STAR-BULLETIN, May 24, 1967, page A-7: Record hatch of Hawaiian geese
NATURE'S BEST FOR NENE by Jack Bryan

...Ernest Kosaka, resident wildlife biologist in charge of the project to bring back the Hawaiian goose, the official State bird, reported this week that 84 goslings, a record hatch, were added to the nene population in the brooding season just ended.

And all this with only a slight assist from man.

Up until last year the Fish and Game Division used a variety of sophisticated tricks to prod the nene into faster reproduction. These included a foster-mother scheme in which silky bantam hens took over the task of hatching eggs stolen from the nene mothers. The female goose normally lays one clutch of three to five eggs a year and sees the goslings through to self sufficiency. But she will lay a second or even a third clutch if something happens to the first. So, adopting a device used in an Oregon fowl restoration program, the nene project personnel purloined the first two clutches and turned them over to the bantam hens. But, said Ah Fat Lee, a sort of combination godfather-midwife to the nene of the Pohakuloa project, although the flock gradually grew over four or five years of this subterfuge and artificial incubation, it was apparent that something was out of balance. It was the incompatibility of breeding habits of the nene and silky bantam....

The mating period of most birds, including the bantam, comes in the spring, but the nene jumps the gun with a winter season. Thus, the bantams just weren't in the right frame of mind when they inherited the nene eggs and gosling survival rates were down around 30 to 40 percent.

Kosaka and Lee changed their approach in the past season. They allowed the nene to hatch the first clutch, then stole the goslings and disturbed the nests. As in the wild, the geese went to work andrebuilt the nests, then hatched a second clutch. These they were allowed to rear normally. The result was an 80 percent survival rate and a record hatch.

Twenty-four mating pairs produced the 84 goslings in two clutches this season, against a total of 69 by 20 pairs in three clutches last season. The record hatch brings the total population of captive geese at Pohakuloa to 168.

Kosaka estimates there are an additional 200 to 300 scattered around the mid-elevation slopes of Mauna Loa and Mauna Kea, although he points out that an accurate census is impossible because of the wide areas involved and the mobility of the birds.

In the next week or so, a number of the captive birds will be released from special pens in the Kahuku area of Mauna Loa to join the wild flocks.

Lee says these geese born in captivity sometimes take some weaning from the easy life of the Pohakuloa pens, returning for feeding for a while, but they adapt pretty quickly to the life of fending for themselves. He recalls that one goose flew all the way back from Haleakala on Maui in 1964, a distance of about 50 miles, after a release there....

Now protected and assisted by man, an old enemy, it appears to be well on the way back.

If you have any information on these birds, please write to Kojima, 725-A 8th Ave, Honolulu, Hawaii 96816.

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LETTER from Miriam N. Davis, Kaunakakai, Molokai, May 3, 1967:

...I live in the country--on the beach--in a wooded area and have many birds in my yard. First and most, the ubiquitous mynah, but many N.A. cardinals, white-eyes, ricebirds, finches, and a family of black-crowned night herons just beyond my natural fish pond near my bedroom. I see them feeding there at night and in the early morning. I called them "Wanda and Willie the Waders." And then, one day came "Wallace" who learned to fish in my pond.

I enjoy watching the mynahs feed their young with the wild cherry tomatoes from my garden. Seems to keep both mama and papa busy!...

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Excerpts from the minutes of the general meeting of the Hawaii Audubon Society, April 17, 1967:

...Presiding officer for the meeting was Vice President Jack Throp....

Richard Gauthey gave a report on the Society's Field Trip on April 9, 1967 to Ulupau Head. From 2 to 3 Masked or Blue-faced Boobies were observed through the scope on Moku Manu and also the Gray-backed Tern. There were several thousand sooties over the island. Other species seen were Common and Hawaiian Noddies, Brown and Red-footed Boobies and Frigate birds. At the Ponds, besides the usual shore birds, were the Hawaiian Noddy and a Dunlin.

...Carl Frings added that his University class also observed a Mockingbird in the area on the same day.

Jack Throp told us about the forthcoming arrival of a cougar to the Zoo, the first in the Islands. It is being used in a promotion by Pflueger-Lincoln Mercury and KGMB radio and T.V. and then will be housed at the Zoo. In the western U.S. it is more often known by the name, Mountain Lion.

Jack Throp then introduced Dr. Charles Lamoureux, Botany Professor at the University of Hawaii, who showed and narrated his slides on "New Zealand, a Botanist's Impression." Dr. Lamoureux and his family spent the 1965-66 school year on sabbatical leave in New Zealand doing research work on the anatomy of ferns....

At the close of the meeting, Norman Foster played a tape recording of the Albatross he had very recently made on Midway Island....

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ALOHA to our new members:

Mrs. Emily Howe, 45-386 Kam. Hwy, Kaneohe, Oahu 96744.
Rosalyn Phillips, 1310 Punahou St., Honolulu, Hawaii 96814
Simon Fraser University Library, Processing Div.-Serials, Burnaby 2, B.C.,Canada.

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JULY ACTIVITIES:

July 9 - Field trip to Na Laau and Koko Head to see the finches and the fairy terns respectively. Bring lunch, water, and if possible your car. Transportation cost (50¢) to be paid to the drivers. Meet at the Library of Hawaii at 7:00 a.m. (Please note TIME)
Leader: Mike Ord, telephone 968-771.

July 10 - Board meeting at the Waikiki Aquarium Auditorium at 7:30 p.m. Members are always welcome.

July 17 - General meeting at the Waikiki Aquarium Auditorium at 7:30 p.m.
Speaker: Dr. S. Arthur Reed, Visiting Zoologist from Michigan State U.
Topic: Hawaiian Marine Invertebrates (120-150 slides)

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HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

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