

TRIP REPORTS TO THE HAWAIIAN ISLANDS NATIONAL  
WILDLIFE REFUGE

March 1961- Woodside and Kramer  
Sept 1961- Woodside  
Dec 1961- Kramer  
June 1962- Kramer and Beardsley  
Feb 1963- Kramer

assembled by George H. Balazs

A REPORT ON A SURVEY TRIP  
TO  
The Hawaiian Islands National Wildlife Refuge  
February, 1963  
by  
Raymond J. Kramer

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## INTRODUCTION

The following is a report on a trip to the Hawaiian Islands National Wildlife Refuge made by five scientists from the Smithsonian Institute, and Raymond J. Kramer, biologist with the Division of Fish and Game of the State of Hawaii. Special transportation was made available for this Smithsonian group in the form of a 205 foot ocean-going tug, the A.T.F. 105, USS Mactobi, from the office of Naval Research, Washington D.C. The ship was rigged and wired to provide space for laboratory and freezer facilities.

## PURPOSE OF THE TRIP

1. To take advantage of the Smithsonian Institute trip to Pearl and Hermes Reef for the purpose of patrol and inspection of those islets not yet visited by Division of Fish and Game Staff.
2. Further examination of islands occupied by the government HIRAN project personnel for signs of disturbance or introduction of unwanted weed seeds.
3. To continue the photographic record of vegetation patterns on the islands visited.

## ITINERARY

February 1 Boarded ATF 105, USS Mactobi at 0715. Due to trouble with the anchor chain winch we did not depart as scheduled at 0800 but stood by on an hour to hour basis.

February 2 Stood by all day on hour to hour basis.

February 3 Stood by all day on hour to hour basis.

February 4 Finally sailed at 1230. At 2330 a main shaft bearing burnt out. Motor was stopped and we drifted until dawn.

February 5 Returned to Honolulu at half speed. Docked at 1830.

February 6 Stood by all day awaiting repairs.

- February 7 Tested bearing at 1300. Went to sea and tested off Waikiki for 3 hours, then departed for French Frigates Shoal about 1900.
- February 8 Enroute.
- February 9 Arrived French Frigates Shoal at 1630. Even inside atoll seas were 10 feet and winds to 35 M.P.H. Impossible to land; at 2000 we headed for Laysan.
- February 10 Enroute to Laysan.
- February 11 Landed on Laysan at 1600 via rubber raft with 10 H.P. outboard. Tricky landing.
- February 12 Onshore Laysan.
- February 13 Returned to ship at 1400 as seas were building up. Had to launch from East Shore as West lagoon had waves to 20 feet.
- February 14 Anchored off Lisianski at 0920. Went ashore on east side; returned to ship at 1700. Sailed for Pearl and Hermes.
- February 15 Too rough to land; proceeded to Midway, docking there at 1800.
- February 16 Flew back to Barbers Point, Oahu via Navy passenger flight.

#### ABSTRACT

General conditions found on Laysan and Lisianski Islands are discussed in this report. Observations on the Smithsonian Expedition research project are mentioned. Photographs of interest, and tag numbers of turtles tagged are appended.

#### CONCLUSIONS

1. Vegetation, both on Laysan and Lisianski, was drastically affected by an unusually severe winter. This may possibly have an effect on the major points of concentration of certain bird species for the coming summer.

2. The Monk Seal population remains high. The Smithsonian members experienced little difficulty in tagging considerable numbers by means of a noose, a pole to loosen the knot, and teamwork.

3. The Laysan duck was evident in large numbers on the western edge of the lagoon but very few birds were noted elsewhere. It is possible there was a considerable reduction in number of this species this past winter.

Recommendations

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1. That the Smithsonian Institute be required to give more details on their trip schedules, study plans, and reasons for visiting various islands and that such schedules be made well known in advance. If necessary, the blanket permit should be withdrawn, and one issued for each two (2) month trip.

2. That the use of any experimental tranquilizer or drug, fired by means of any propellant (dart gun, blow gun, bow and arrow, etc.) be strictly prohibited on the Monk Seal.

3. That number one priority be an intensive population survey of the Laysan duck on the next trip to the islands.

ACTIVITIES AND OBSERVATIONS

Laysan Island

Vegetation

Even though there have been very heavy rains through the months of December and January, as evidenced by the large number of inundated nests with eggs along the lagoon edge, the vegetative appearance of the island was that of a drought condition. All species excepting Sesuvium and Fimbristylus appeared to be greatly reduced in number as well as condition when compared to the extreme lushness of the island when visited in June of 1962. A close examination of each species revealed a multitude of causes. The island appears to have been subjected to intense and severe storm winds and seas from the west and south. An accompanying photograph shows the Scaevola almost completely denuded for distances up to 20 feet into these ordinarily lush patches. Nama is found only lightly scattered throughout the island, with drifting sand having once again covered most of the stand noted growing so well on the north end last June. The heavy salt spray carried by the winds have killed or hastened the "browning up" of all exposed Eragrostis seed heads; those heads protected from this wind are still green and ripening.

Various stages of competition are becoming quite evident. Ipomoea suffered heavy damage, both along the lagoon edge from inundation and along the beach edge from salt spray and wave action. Eragrostis is beginning to be a noticeable competitive factor in some of these areas, while in the Eragrostis zone, Fimbristylus is becoming one of the key plants. Cynodon (Bermuda grass) holds its own with every species except Ipomoea; in these areas it appears to be crowded out.

The large tobacco plants have seeded and are dead but many new plants are beginning to sprout. Heliotropium seems to be practically non-existent in growing form and Boerhaavia is scarcer than ever noted before. Sicyos is sprouting primarily in the zone comprised of mixtures of Ipomoea and Eragrostis and is seldom seen elsewhere.



The June report mentioned that the one Messerschmidia shrub on the island was thriving. Except for one branch with a few leaves, this plant appears to have been burnt by salt spray.

The experimental seed planting (Chenopodium, Solanum and Sicyos) made in June, 1962 shows no sign of growth whatsoever.

Monk Seal

Due to a certain lack of cooperation experienced with members of the Smithsonian group, no seal count was attempted. With the high seas, many of the seals were deep in the Scaevola, and from the continued lack of tracks, appeared to have remained ashore during the entire period of our visit. It would have been impractical for one person to have attempted to census all the seals.

One seal tagged by Woodside on Laysan in 1957 (#68) was found sleeping on the beach. The tag was in good condition but this type is difficult to locate on the animal. Mr. William Wirtz had brought a large supply of 2 piece heavy yellow plastic tags which he said had worked well in English seal studies. Wirtz tagged some 30 odd seals on the hind flipper with this marker; the tags did indeed exhibit a high degree of visibility regardless of the way the seals were sleeping.

The only possible objection to this tag was that the piercing point seemed rather large and considerable bleeding was noted on several seals immediately after tagging. Although I did not record the actual wording, the tags had large black, easily read numbers on one side, and a notation to the effect "inform the U.S. National Museum, Washington".

Wirtz seemed to be working out a relatively good method of capturing the animals with a noose, and did not, while I was with them, use the tranquilizer dart gun. Fish and Game Staff members had recommended strongly that this experimental method not be used as there was too great a possibility of mortality while experimenting with dosage.

At least 3 females gave birth to pups on the evening of February 11 and 12 as evidenced by the presence of afterbirth next to the pups. One stillborn pup was found with the mother still in attendance and displaying the usual protective attitudes. One dead male adult was found 40 feet above high water mark; the Smithsonian group salvaged the skull but the rest of the carcass was in a state of fluid decomposition. No external damage (i.e. shark bites, etc.) was noted as a possible explanation of death.

#### Turtles

6 large turtles were seen on Laysan beaches this trip. All were tagged and released (See Appendix). No small turtles were seen and no sign of egg laying was noted.

#### Laysan Duck

Due to lack of time, and the relatively inaccurate results of a one man census, no effort was made to estimate total numbers of birds. During a careful search along one third of the Cyperus - Morning Glory Association of the lagoon edge (West Side), I counted 145 birds. 83 of these were close enough to check for bands and 15 of these 83 were banded.

This count was conducted over the same strip that I covered in 1959 when I saw 152 individuals. The major difference this time was that well over 60 of these birds were in flocks of 8 to 12 swimming, resting, and bathing far out in the lagoon. There was a considerable size variation noted when flocks were seen on dry land and pairing was evident with some, but not all the birds. Males were seen chasing other birds away from their mates. No nests or chicks were seen.

Although only a short time was spent on the eastern and northern edge of the lagoon, I saw very few birds on this side, particularly in places where I had seen fair numbers before. I saw no ducks along the outer edge of the island or in the center circle of Eragrostis. A more thorough search for ducks should be made on the next trip as it seems difficult to believe there are some 400 ducks unaccounted for.

Other Birds

Laysan Finch - Population remains high.

Sooty Storm Petrel - 2 were collected by Smithsonian group from beneath the morning glory vines near the lagoon edge. No eggs seen.

Laysan Albatross - The majority were with small downy young but some were still incubating eggs.

Black Footed Albatross - With small downy young.

Wedge - tailed Shearwater - None seen on the island.

Bonin Island Petrel - The Smithsonian group banded over 300. Very few were seen during the day but began to arrive at 6:30 PM and tremendous numbers came flying in beginning at 7:40 PM.

Bulwers Petrel - None were seen.

Red - tailed Tropic Bird - Although fair numbers were seen offshore, none were seen on land.

Masked Booby - Pairing was taking place, but birds not common and only 1 pair was noted with eggs.

Brown Booby - Common. I did not note eggs, but these may have been present.

Red-footed Booby - Nest building had started but I saw no eggs.

Frigate Bird - Males were on eggs.

Sooty Tern - Large numbers were overhead but more had landed on the 11th or 12th. On the 13th from 11 to 2, one breeding colony settled to the ground on the north west end. Other birds remained aloft.

Common Noddy Tern - No eggs noted. Several hundred were banded by the Smithsonian group.

Hawaiian Noddy Tern - No eggs seen; several hundred were banded.

Fairy Tern - Paired but no eggs yet.

Golden Plover - Very common; scattered island-wide. 6 Banded by Smithsonian group.

Ruddy Turnstone - Abundant. Large numbers along lagoon edge, and singles scattered commonly throughout the openings in the vegetation. Collected by the Smithsonian group.

Bristle-thighed Curlew - Very common; scattered island wide.

Wandering Tattlers - Present in fair numbers. Several collected by Smithsonian group.

Sanderlings - Several were seen.

Gull - 1 large gull (believed to be an immature Heermann's gull) was collected by the Smithsonian group.

#### Military Operations

The HIRAH camp was again operating on Laysan. Several of the people had been there last June when Marshall and I were there, and were familiar with the purpose and extent of the refuge. The only detrimental factor noticed was the garbage dump. Winds had exposed last years dump, and little effort had been made to cover this years dump (see photo in appendix). Neither the potato or onions seen growing last June had survived the winter. The stack of about 30 empty 55 gallon drums were as noted on the last trip and will probably remain abandoned.

#### Laysan Island

##### Monk Seal

No accurate count was made, since I started in the opposite direction from the Smithsonian people, and upon meeting them about 3/4 of the way around the island, found that the best estimate they could give me of seals was "about 50". I counted 101 on a 3/4 circuit, <sup>of</sup> which only one was a newborn pup. Some 30 seals were tagged by the Smithsonian group.

Turtles

5 turtles were caught on the beach and tagged (see appendix for numbers). Several dozen more were seen swimming offshore, but did not land. Several of these were small, weighing less than 15 pounds.

Vegetation

High winter seas knocked down the vegetation on the western shores of this island also. The Scaevola on the east side appeared even more lush than on the last trip, and Boerhaavia is doing as well or perhaps better than noted before. Eragrostis is at peak abundance.

Sea Birds

Frigate Birds - Density wise this species is more abundant than on Laysan. This can probably be attributed to the greater expanse of Scaevola available for nesting. A good portion were on eggs.

Masked Boobys - Nearly all seen were on eggs and some had newly hatched.

Hawaiian Noddy Terns - Nest building but no eggs yet.

Fairy Tern - Very few were seen; no eggs yet.

Sooty Tern - Flying high overhead; no colonies on ground yet.

Bonin Petrel - Flying over the ocean; egg laying had begun; several nests found on the surface among the Eragrostis.

Gull - Another unidentified gull was collected by the Smithsonian group.

Other Observations

Dr. Harvey Fisher's party apparently left 55 gallon painted drums as channel markers for unloading albatross young. These numbered drums were found washed up high on the eastern beach.

The HERAN party abandoned its camp and rubble, consisting of 55 gallon drums, wooden pallets, and the knocked down remnants of their "fly-proof kitchen" were found on the eastern beach (see photo in appendix).

APPENDIX

March 19, 1963

MEMORANDUM

To: Kenji Ego, Chief, Fisheries Branch  
From: Ray Kramer, Wildlife Biologist  
Subject: Turtle Tagging

Between the period of 11 February 1963 and 14 February 1963 I visited Laysan and Lisianski Islands and, using tags issued by Hawaii State Division of Fish and Game, tagged on the left front flipper, and measured the following turtles:

Island: Laysan

<u>Tag No.</u>	<u>*Length (in.)</u>	<u>*Breadth (in.)</u>
1008**	32	27½
1009	33½	31½
1010	33	26-3/4
1011	34	31
1012	32	25
1013	27½	23½

Island: Lisianski

1014	31	26½
1015	34	27½
1016	15½	13½
1017	34	26½
1018	28	27

\* Point to point--not around curve of shell.

\*\* Tag upside down. Turtle must be turned over to read.



LAYSAN PHOTOGRAPHS





Laysan Island (c) FEBRUARY 1963



Green Sea Turtle, showing location of tag on front flipper



Scaevola bordering the western rim of Laysan was badly burned by salt spray and then denuded by strong winds and high waves.



HIRAN camp and one of two garbage dumps. Gasoline is poured on these from time to time and they are burnt. This hastens the rusting of the cans but creates a fire hazard.



Recent rains raised the lagoon level and here on the west shore, many nests had been inundated and deserted.



C1-1 Since the 3-foot metal pole mentioned in the March 1961 report is now gone, this station was moved to the bench mark several yards inland.



C1-2 Taken from site of old metal post.

Laysan Island (c) FEBRUARY 1963



C1-2 Taken from the bench mark.



Station C2-2

Laysan Island (c) FEBRUARY 1963



Station C2-3



Station C2-4



Station C2-5



Station C6-1 This photo is actually about 25 feet to the right of the photo stake which is shown in former pictures, since the stake was missing this trip. Photo taken from stake seen in C6-2 in knee-deep water.



Station C6-3 Note the definite variation in plant growth in the background, compared to September 1961 photo.



Station C7-1 This photo and the next one (C7-2) are among the most interesting of the entire series. Compare this station with 9/61 and 6/62 photos. Cyperus is once again dominant. This may be significant in Laysan duck nesting.



Station C7-2 See comments at C7-1.



This photo matches the extreme left shot of the "C Panorama" from North Benchmark in 9/61 photo and is seen again in 6/62 photo. Note that Nama is covered over again by sand. Eragrostis continues to spread.





This photo matches a portion of the North "C Panorama". Note that Eragrostis has crowded out most of the Tribulus patch; this area formerly had a large sooty tern colony inhabiting it and followup observations should be made to determine if Eragrostis closes out the nesting area.



LISIANSKI ISLAND PHOTOGRAPHS





Ruins of the HIRAN camp on the east shore of the island.



Station BI-1 The Scaevola has grown so high as to be impenetrable behind the refuge sign, thus eliminating the possibility of taking the same picture as is seen in the 3/61 report.



Station B2-1 This photo was taken directly from the stake seen in B2-2 and does not show the same angle as the 3/61 report. Future photos should be as in 3/61.



Station B2-2 Compare to 3/61 photo; vigorous growth of Eragrostis on areas of no competition, and Scaevola is gradually overcoming Eragrostis.



Station B4-1 The photo stake is completely lost in the dense Scaevola.



Station B4-2



Station B5-1



Station B5-2

LAYSAN ISLAND (C)



C10-5 (New)



A651

C Panorama from North  
Bench Mark to South (New)

LAYSAN ISLAND (C)



Panorama from Southern  
Rockpile Looking North (New)