

Husted, Dayle N.  
1964

Journal

June 11

Arrived by plane at 7:30 a.m. Met at airport by Mrs. Ely who took us to Hawaiian King Motel. Met Warren King and Bob Fleet.

June 12--We monkeyed around during the day and went to one of the offshore islands at night (Popoiauea or something like that). We paddled out in a life raft and left the mainland about 4 hawaiian time. Arrived at island about 30 minutes later. We looked at Wedge-tailed Shearwaters and Bulwer's Petrels. That night we banded some of each (25 of each I believe). We had to call the petrels out which was much fun, so I decided I would try to call a Wedge-tail out, after a short bit of squawking back and forth the bird came out and about took my nose off. We paddled back to the mainland and were home by 11:30 .

June 13--We picked up Mike Ord in the morning and tried to get a boat. We finally got one in the afternoon and went to Rabbit Island and looked around. Mike invited us to come out the following day with the Audubon Society. After coming back we had chow with C. A. Ely and talked and talked over the affair.

June 14--Dr. Ely, Cameron Kepler, Warren King, and myself left at 8:30' Hawaiian time to band birds (Sooty Tern chicks) on Rabbit Island. Dr. Ely left about noon and we stayed on until about 4:30 banding. We banded about 1900 birds. The water was smooth. We got back about 6.

June 15--Paid my part of the motel bill which was \$2983. We boarded the Townsend Cromwell at 0800. We were squared away and left by 0815. We went to sea and set the compasses by making circles off Oahu. We pulled into Pearl Harbor to the sub pens for fuel. We pulled out of Pearl Harbor by 1500. On the way out I saw a Brown Booby sitting on a buoy.

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Shortly after going to sea King and I started seeing Sooty Terns, Wedgetail Shearwaters, Noddy Terns, a Frigatebird, and Black-footed Albatross. The crew members tried getting the other two boys on board to get them some luminous paint for an alual.

June 16--The weather was rougher than a cab yesterday werring and last night; it was still rough today. I was amazed at how this tub will take 75<sup>0</sup>+ rolls and snap right back. More terns, shearwaters, petrels, frigatebirds, and a tropicbird were observed today. I learned how to do the Bristle-thighed and the weather reports today. I am getting where I can identify the birds fairly fast. Some (8) wedgetails were seen sitting on the water near the ship this morning. They took off when we passed. They seemed to be dabbling around feeding on something. Other birds passed far ane near. Several large flocks of feeding terns and shearwaters were observed.

June 17--The seas were still rough this morning. The bird watching was fairly slow. I saw Bonin Island Petrel, Dark-rumped Petrel and Harcourts Storm Petrel today as new species. The Wedgetail Shearwaters are becoming more and more dark the farther south we go. Many of the birds are also nothing.

June 18--Several more feeding flocks composed mainly of dark-phase Wedgetails and Sooty Terns were observed. One wedgetail landed on the ship in the early morning around 0330. She was promptly captured and put in the cooler. She was skinned this evening. Two parasites of the order Mallaphaga were collected off of her. A Red-tailed Tropicbird was observed to follow the ship at close range for some time. A bird that I was sure was not a Wedgetail followed us. Warren came out and got

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June 15, 1964

Black-footed Albatross	1
Wedgetail	45
Bulwer's Petrel	1
Red-tailed Tropicbird	1
Brown Booby	1
Red-footed Booby	6
Sooty Tern	59
Common Noddy	23
Newell's Shearwater	1

June 17, 1964

1826 - 6 Bonin Island Petrel

Traveling 2 Dark-rumped petrel

1620-25± 4 Sooty Terns

1 White-necked Petrel

2 Dark-rumped Petrel

Feeding 6 Wedgetails

6 Bonin Island Petrel

1706 9 Shearwater/petrel

Feeding

1712 3 Sooty Terns

2 Dark-rumped Petrel

Feeding 5 Wedgetails

Flocks

June 15, 1964

1552 9 Sooty Terns

2 Noddy Terns

Traveling 1 Wedgetail

1624 - 5 Sooty Terns

Traveling

1822 - 8 Noddy Terns

Traveling

1618 - 6 Sooty Terns

Traveling

1759 - 6 Noddy Terns

Traveling

1910 7 Wedgetails

Traveling

June 16, 1964

Wedgetail 135 - 2 dark

Bonin Island Petrel 11

Bulwer's Petrel 11

Great Frigatebird 1

Sooty Tern 160

Fairy Tern 9

Newell's Shearwater 4

Dark-rumped Petrel 4

Shearwater/petrel 1

Storm Petrel 1 ?

June 17, 1964

0842 - 8 Wedgetails - sitting on water

1028 - 75 Sooty Terns

50 Wedgetails

Feeding 5 Fairy Terns

1 Newell's Shearwater

1828 1 Wedgetail

Traveling 3 Bonin Island Petrel

1 Bulwer's Petrel

0920 - 30 Sooty Terns

30 Wedgetails

Feeding

1107 - 50 Sooty Terns

5 Wedgetails

Traveling 2 Fairy Terns

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June 17, 1964

Wedgetail 23 - 15 dark  
Bonin Island Petrel 25  
Bulwer's Petrel 3  
Red-tailed Tropicbird 1  
Sooty Tern 31  
Fairy Tern 1  
Shearwater/petrel 14  
Dark-rumped Petrel 12  
Petrel sp. 3  
Harcourt's Storm Petrel 2  
White-necked Petrel 5~  
Tropicbird sp. 2

June 18, 1964

Wedgetail 32  
Bonin Island Petrel 10  
Bulwer's Petrel 2  
Red-tailed Tropicbird 1  
Masked Booby 1  
Sooty Tern 2  
Dark-rumped Petrel 12  
Petrel sp. 5  
Shearwater/petrel 4  
Newell's Shearwater 2

Flocks

June 18, 1964

0620 - 6 Wedgetails  
sitting on water  
0652 - 3 Wedgetails  
Traveling 3 petrels sp.  
0715 5 Wedgetails  
Traveling

June 19, 1964

1220 5 Wedgetails traveling  
1330 25+ 5 Sooty Terns  
Feeding 25+ 5 Wedgetails  
1347 25+ 5 Wedgetails  
Feeding 2+ 1 Sooty Terns  
1725 150+ 20 Sooty Terns  
Feeding 150+ 20 Sooty Terns  
Feeding 50+ 5 Wedgetails  
1732 6 Sooty Terns Traveling

June 20, 1964

No flocks

June 23, 1964

No flocks

June 22, 1964

0530 - 30 Sooty Terns-traveling  
0938 - 30+ 2 Sooty Terns  
Feeding 1 Wedgetail  
1015 200+ 50 Sooty Terns 1033 - 5 Wedgetails  
Feeding 10 + 5 Wedgetails sitting on water  
1100 - 90+ 20 Sooty Terns 1210 - 13 Sooty Terns  
Feeding 15+ 5 Wedgetails Feeding 1 Wedgetail  
1256 0 95 Sooty Terns 13 20 - 10 Sooty Terns  
traveling traveling

June 21, 1964

1227 - 15+ 4 Sooty Terns feeding  
1 Fairy Tern  
1032 - 3 Wedgetails  
Traveling 3 Sooty Terns  
1745 60 + 15 Sooty Terns  
Feeding 25+ 5 Wedgetails  
1855 50+ 5 Sooty Terns  
Feeding 5 Wedgetails

June 24, 1964

1450 - 8 Sooty Terns  
Feeding

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June 19, 1964

Many Wedgetails wer observed today, in singles, pairs, or fours or fives all flying north west. All of the Wedgetails were the dark phase. In the afternoon, a large fueling flocks was observed. It was composed mainly of low flying wedgetails and fairly high-flying Sooty Terns. The seas calmed down somewhat today but we were in and out of rainsqualls much of the morning and some of the afternoon.

June 20, 1964

Not many birds today. Saw a funny looking molting dark Wedgetail today. The upper wings looked light to me.

June 21--We saw several flocks today composed of Sooty Terns and Wedgetails.

Many of the Wedgetails are coming to the light phase again. We also saw Bulwer's Petrel, Fairy Terns, Dark-rumped and Bonin Island Petrels. The ship broke down again and we sat on the water dead for about an hour. The Captain hitched and the motor mechanic swore. Right after I began observations this morning I heard the distinct chirp of a Sooty Tern, finally I saw them, they were about 50 feet off the water, right above the bridge.

June 22, 1964 --Saw some very large flocks of Sooty Terns and Wedgetails today. There were also some flocks of only Sooty Terns, I also saw an interesting flight pattern of a Wedgetail. If the bird hadn't been close I would have thought it was slightly flapping its wings. The bird was close to the water and was rolling from side to side. Another Wedgetail was flying high in the air.

June 23--The birds were scarce today so most of the day was spent in filling out the forms.

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June 24--Again the birds were scarce today. This morning three Red-tailed Tropicbirds were seen. This afternoon, a flock of eight Sooty Terns were seen, they were feeding flocks. Later we went out on the bow with the blunderbuss. Warren missed an overhead shot.

June 25--The day started off slow, but improved by mid-morning. Dark rumped, White-necked and Bonin Island Petrels were seen along with Wedgetails and Sooty Terns. One Sooty Shearwater was seen. During the day several large flocks were observed to be feeding. Early in the morning I saw a large flock which I think was composed mainly of Dark-rumped and White-necked Petrels. In the late afternoon, a Red-tailed Tropicbird hovered off the stern for a few minutes.

June 26--The birds were really flying this morning. There were many Bonin Island, Dark-rumped and White-necked Petrels. Some feeding flocks were also observed. About 1021 this morning I observed an all dark bird flying from the west to the east. It flew in a typical ton-like fashion with fast constant wing beats. The bill was straight and dark except at the base which appeared to be lighter, but it may have been the way the sun was shining on it. The bird flew about 60 feet above the water and flew directly over the stern of the ship. The body was fairly slender and it was about the size of a wedgetail. I cannot find a picture of this bird in Peterson's. Many of the birds that are sitting on the water (which is quite a few) are molting. Fewer birds were observed this afternoon. Late this evening, a light phase wedgetail was observed which Warren said was quite uncommon this far south. The

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June 19

Wedgetails	165
Bonin Island Petrels	9
Bulwer's Petrel	1
Sooty Tern	186
Fairy Tern	2
Petrel sp.	1
Shearwater/petrel	3
Dark-rumped Petrel	12
Newell's Shearwater	1
Skua	1
White-necked Petrel	1

June 21

Wedgetail	44 - 1 dark
Bonin Island Petrel	2
Bulwer's Petrel	2
Sooty Tern	131
Fairy Tern	3
Petrel sp.	2
Dark-rumped Petrel	2
Shearwater/petrel	1

June 23

Wedgetail	3 light
Bonin Island Petrel	14
Bulwer's Petrel	7
Wedge-tailed Tropicbird	1
Sooty Tern	6
Newell's Shearwater	1
Shearwater/petrel	2
Tropicbird sp.	1
Dark-rumped Petrel	1
Harcourt's Storm Petrel	1

June 20

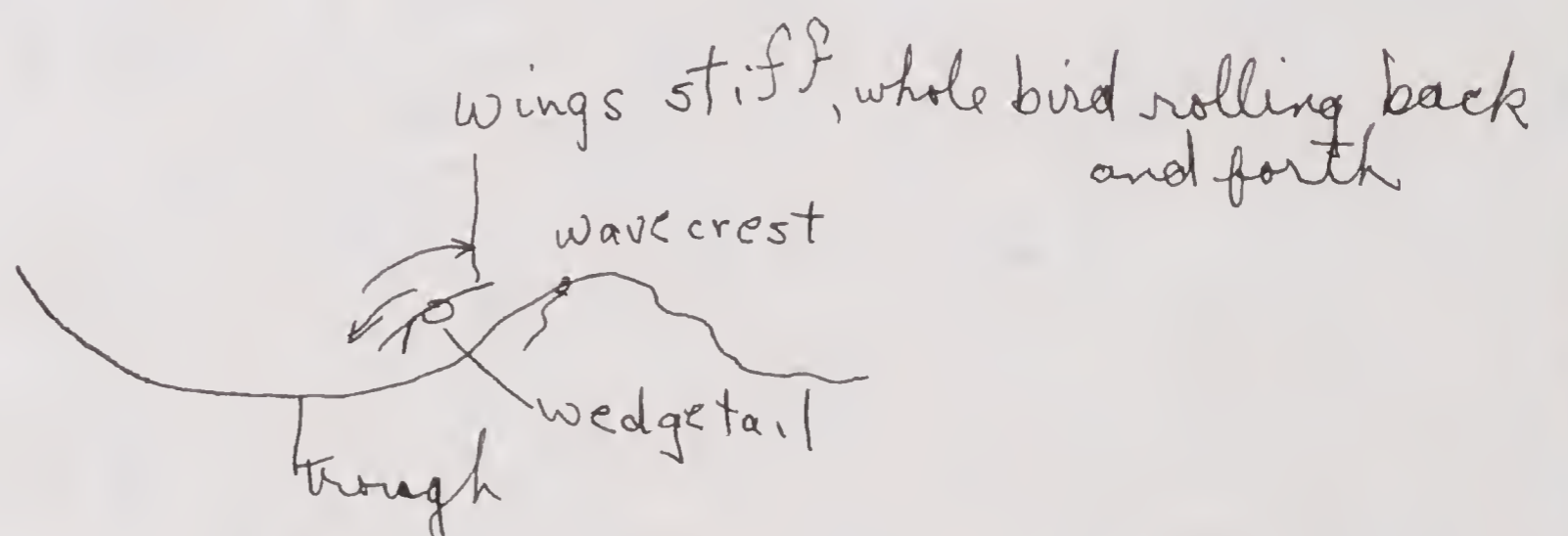
Wedgetails	11 - 4 dark
Bonin Island Petrel	3
Bulwer's Petrel	2
Shearwater/petrel	6
White-necked Petrel	6
Dark-rumped Petrel	5
Petrel sp.	3
Newell's Shearwater	1

June 22

Wedgetails	38
Bonin Island Petrel	2
Bulwer's Petrel	4
Red-tailed Tropicbird	1
White-tailed Tropicbird	1
Sooty Tern	404
Fairy Tern	2
Shearwater/petrel	4
Harcourt's Storm Petrel	2

June 24

Wedgetail	4
Bonin Island Petrel	4
Bulwer's Petrel	1
Red-tailed Tropicbird	3
Wedgetailed Tropicbird	1
Sooty Tern	10
Newell's Shearwater	1
Jaeger	1
Tropicbird sp.	3
Shearwater/petrel	3



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weather was calm enough for awhile we got out on the bow for awhile this afternoon.

June 28--The birds seemed few and far between today, but at the end of the day we had a fairly good number. One Red-tailed Tropicbird was seen sitting on the water. Yesterday and today. I noticed how many more petrels there were than Wedgetails. No large flocks were observed today. The weather was cloudy this morning with clearing this afternoon. The seas picked up today.

June 29--The day was very slow for seeing birds. I only saw one flock and it was composed of wedgetails, Dark-rumped Petrels, and Shearwater/petrel. The water was rougher today, with the spray and water breaking over the bow much of the time, some 40<sup>0</sup>+ rolls were taken. We were also in and out of rain squalls today.

June 30--Many molting Dark-rumped Petrels were seen today. They (many) of them were seen today, some of them didn't even fly. Many of them were molting heavily. Light Wedgetails were also seen today. One large flock was seen this morning, composed of Shearwater/Petrels, and Sooty Terns.

July 1--Today was the slowest day of the cruise yet. We saw 15 birds. The wedgetails were light phase.

July 2--Today was again slow. Bulwer's Petrels, Wedgetails, and Tropicbirds and a Bonin Island Petrel in new plumage was seen. The weather was fairly calm, and the sea was calm. This evening, we ran into a squall.

July 3--Early this morning, Wedgetails were seen very close to the ship. Some of them flew about 20 feet off the bow. I got the blunderbuss and ran to the bow. All the birds vanished. For the rest of the day, birds



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June 25

Wedgetails 12  
Bonin Island Petrel 8  
Bulwer's Petrel 2  
Red-tailed Tropicbird 2  
Sooty Tern 358  
Dark-rumped Petrel 14  
White-necked Petrel 10  
Shearwater/Petrel 257  
Harcourt's Storm Petrel 1  
Petrel sp. 17  
Newell's Shearwater 1  
Sooty Shearwater 1

June 27

Wedgetails 17 - 13 dark  
Bonin Island Petrel 22  
Bulwer's Petrel 1  
Sooty Tern 6  
Dark-rumped Petrel 17  
White-necked Petrel 4  
Shearwater/Petrel 7  
Petrel sp. 3

June 26

Wedgetail 6 - 3 dark  
Bonin Island Petrel 19  
Red-tailed Tropicbird 2  
Sooty Tern 30  
Newell's Shearwater 3  
Dark-rumped Petrel 18  
White-necked Petrel 10  
Petrel sp. 11  
Shearwater/Petrel 46  
Tern sp.? 1

June 28

Bonin Island Petrel 16  
Bulwer's 1  
Red-tailed Tropicbird 1  
Sooty Tern 2  
Shearwater/Petrel 11  
Dark-rumped Petrel 23  
White-necked Petrel 1  
Petrel sp. 2

Flocks

June 25

0612 - 20+ 5 Sooty Terns  
Feeding 30+ 5 Shearwater/Petrels  
0715 - 5 Petrel sp. Feeding ?  
1432 - 8 Sooty Terns  
2 Wedgetails  
Feeding 5 Dark-rumped Petrel  
2 White-necked Petrel  
1 Bonin Island Petrel

June 26

0630 - 4 Sooty Terns  
Feeding 2+ Wedgetails  
25+ 5 Shearwater-Petrel  
0732 - 6 Petrel sp. Traveling  
1150 - 15+ 5 Shearwater/Petrel  
Feeding 25+ 5 Sooty Terns

June 27

0630 - 4 Sooty Terns  
2 Wedgetails  
0702 - 3 Bonin Island Petrel  
Travelling 1 White-necked Petrel  
1 Shearwater/Petrel

June 28

No flocks

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birds came in spurts and spells. Two Frigatebirds were seen at a great distance, but gradually came closer. The weather and seas were calm. About sunset we ran into a small squall.

July 4--Many Wedgetails were seen today. Four of them were feeding within 30 feet of the ship. I am quite certain that I saw a piece of a squid in one of the Wedgetails mouths. Another Wedgetail was seen flying low over the water and dipping his bill into the water. Several large flocks were seen this afternoon. One of them came quite close to the ship and Warren shot a Frigatebird, a Sooty Tern, and a light Wedgetail. Squid was taken from the mouth of the Sooty Tern (another reason I think that was squid in the Wedgetails mouth). The birds were checked for ectoparasites. The ones that were found were placed in alcohol. The going was fairly rough today, and the seas were fairly high. The weather was clear with about an 18 mph wind. There was a squall or two this morning.

July 5--Dr. Ely met us at the dock about 0630 this morning, and then took us to the hotel. This afternoon King, Stadel, and I went to the Booby colony at the marine air base. We arrived there about 1720 and then started to band young. Estimation of young present was about 400±, this was about 90% present (of the population when we started banding). We banded 158 birds with bands numbers 597-12629, 678, 729, 767, 772 going to adults. Several adults were run to disgorge fish, even though we didn't bother them. I saw one puke four fish up on the ground. Some subadults were also seen. We finished banding when it was almost dark, and we were back at the hotel about 2100.

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June 29

Wedgetail 8  
Bonin Island Petrel 20  
Dark-rumped Petrel 27  
Petrel sp. 4  
Shearwater/Petrel 9  
Bird sp. 1

July 1

Wedgetails 11 all light  
Bulwer's Petrel 2  
Red-tailed Tropicbird 1  
Shearwater/Petrel  
Sightings 10  
Flocks 0  
Total birds 15

July 3

Wedgetails 23  
Bonin Island Petrel 3  
Bulwer's Petrel 3  
Great Frigatebird 2  
Sooty Tern 2  
Shearwater/Petrel 10  
Harcourt's Storm Petrel 1  
Sightings 22  
Flocks 0  
Total birds 44

June 30

Wedgetails 14  
Bonin Island Petrel 4  
Bulwer's Petrel 1  
Wedge-tailed Tropicbird 1  
Sooty Tern 104  
Fairy Tern 1  
Dark-rumped Petrel 33  
Shearwater/Petrel 62  
Petrel sp. 3

July 2

Wedgetail 5  
Bonin Island Petrel 1  
Bulwer's Petrel 5  
Wedge-tailed Tropicbird 2  
Shearwater/Petrel 5  
Sightings 16  
Flocks 0  
Total birds 18

July 4

Wedgetail 389  
Bonin Island Petrel 21  
Bulwer's Petrel 1  
Red-tailed Tropicbird 2  
Wedge-tailed Tropicbird 1  
Great Frigatebird 3  
Sooty Tern 922  
Fairy Tern 1  
Dark-rumped Petrel 6  
Shearwater/Petrel 11  
Tropicbird sp. 1  
Pomarine Jaeger 1  
Sightings 87  
Flocks 9  
Total Birds 1360

Flocks

June 29

1440 - 4 Dark-rumped Petrel  
Feeding 35 Shearwater/Petrel

June 30

0840 - 100+ 10 Sooty Terns  
Feeding 50+ 10 Shearwater/Petrels  
1415 - 4 Sooty Terns  
Feeding 4 Wedgetails

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Flocks

July 1

No Flocks

July 2

No flocks

July 3

No flocks

July 4

1126 - 10 Sooty Terns Feeding  
6 Wedgetails  
2 Bonin Island Petrel  
1 Dark-rumped Petrel

1700 - 300+ 50 Sooty Terns  
100+ 25 Wedgetails  
1 Dark-rumped Petrel  
1 Frigatebird

Feeding 1 Fairy Tern  
1 Pomarine Jaeger ?

1735 - 100+ 25 Sooty Terns  
Feeding 150+ 25 Wedgetails  
1 2 Frigates

1800 - 35+ 5 Sooty Terns  
Feeding 25+ 10 Wedgetails

1811 = 3 Sooty Terns  
Traveling 2 Wedgetails

1814 - 250+ 50 Sooty Terns  
Feeding 75+ 5 Wedgetails

10 Dark-rumped Petrel  
1818 - 100+ 50 Sooty Terns

Feeding 50+ 25 Wedgetails

1850 - 100+ 25 Sooty Terns  
Feeding 25+ 10 Wedgetails

1856 - 6 Sooty Terns  
Traveling 3 Wedgetails

July 7--We left the airport in Honolulu at about 1045. We were about 45 minutes late, because a bunch of important looking men (in white coveralls) were sitting around smoking cigarettes and looking at the nose wheel of our airplane. We landed in Kauai at about 1120. We rented a VW and then went to the Booby colony at Kilauea lighthouse. After looking over the situation we banded 138 Red-footed Booby chicks. Five were too young to band, 15 - 20 were already flying, and 40-50 were increased. We finished banding about 1900 and then headed for an apartment in Honolulu. Also, the Coast Guard boys told us about a Bulwer's Petrel, we found and we banded; she was sitting on an egg.

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July 8 --Today we hired a hopper to take us into Nuslolo Valley. On the Top Pali Coast on the way to the chopper, at the Plantation Hotel, we found Newell's Shearwater resting under a tree. We promptly captured the bird, were well bitten for our effort, and put her out of the misery. The bird was a female, non-breeding, and in excellent plumage. The social director at the hotel said "there birds come in here frequently." Bobby, the social director said they even come in to the lobby, especially if the nite is bad out. They are evidently attracted to the lights (?). We were set down in the valley at about 1100 and the pilot said he would pick us up about 1600. The valley is J shaped with almost sheer volcanic rolls (basalt) going up about 1500+ feet. The floor of the valley has a stream to the left side (left side when facing landward) with watercress growing in it, and tarro along it mainly at the back. On the floor there is also much lontana (wrong spelling) I think). At the landward end of the valley there are also many trees. The animals we saw were goats, 25+ hubrid pheasant, 15-20 Wedge-tailed Tropicbirds, female jungte fowl, and finshes (sp.). We covered almost every place we could get to in search of Newell's Shearwater, including some places that I don't believe would or could nest in if they are burrows. One of the places I looked was on the top of a ridge that was difficult to reach. The dirt was very cumbly, and I ruined all foot and hand holds going up one side. I had some terrible thoughts about being stranded there until I saw ahe other side. A long the ridge almost every place they could burrow was taken up by a thick cover of grass, and the sail was very cumbly besides that, not good for burrowing. I

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got off the ledge by sliding down a rather steep (rather steep hill, pardon the language) incline and grabbing a passing rock before I went over a slight cliff. Climbing down the cliff was easy. As we were returning to the mouth of the valley, we found the remains of a Newell's (?) Shearwater. If Newell's Shearwaters nests in this valley I believe it is high up on the cliffs, and it would be hard to try and reach them with ropes and come over the top. (I sure would like to try it). We were picked up by the chopper and back to the Plantation by 1600. From the Plantation we drove around the island to the Wianea district. On the way, we picked up a DOR House Finch. I wanted to skin it right there, but we were in a hurry. We drove up to the Kahee State Park, but found everything closed up. A light was spied in a cabin and we stopped. We introduced ourselves to some sweet old lady. She was very religious and we showed her the Shearwater and Finch. She wanted to know how the poor darlings had kicked off so we told her a little white lie, but I don't think she quite swallowed it because I had blood all over my pants (my own no less, from sliding down the hill). She directed us to a camp where a girl was the head cheese when there were kids there. This little redhead came out and greeted us. We flim flamed her into letting us spend the night in the girl's dorm. The girl was very different, (also a Zoo major), she really didn't care for people, but she is another story and that will have to wait. That night we skinned the birds. The Finch was very rotten and many feathers were lost. It was an immature male. We then drove up to the Kaluka Lookout and listened for birds. I believe we heard, I don't know what else they could be, Newell's Shearwaters calling. The area was very rough. It sounded as

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if there were 10-20 birds circling in one area all the time. Probably some birds were going to their nests, as others were coming in the valley. Again I think the birds were nesting in this valley, but probably in small numbers. We were back at the camp and in the sack by 2330.

July 9, 1964: We got up about 0730 and went down and had chow, and then headed for the leeward side of the Wianea District. We drove past barking Sands and headed up one of the valleys. The valley was fairly steep, but its slopes were covered with shauls and dense grass. Up higher on one side there were steep cliffs, but we couldn't reach the upper levels again, because of lack of ropes. Newells were not found again, but from what I saw at night, and previous days I would think that Newells would or could nest there in suitable places unless the area is too dry, but I see that of no hindrance. After we came out of the valley we took a quick dip and headed back to the Kokee Park. We ate some cold weiners and had a bottle of pop before we went to two more lookouts. At the cliff lookout 2-6 Newells were heard, but they were a long way off. It was about 2000 when we were in the area. At the Milolii ridge lookout 2 (?) birds. These could be seen and the area was heavily wooded. We went back to the girl's dorm at Kokee Park and sacked out for the night.

July 10, 1964: We arose and ate a pineapple that the redhead had swiped for us. At about 0740 we left the park and headed for Hanalei again. We tried to get a hold of J. Sweatling again, but couldn't make connections. Back at Honalei Apts., we cleaned up, caught up on our journals and got

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10 July, 1964 continued: ready to band adult Boobies at the Kilauea lighthouse. We left the apartments about 1930 and headed for Kauai valley to listen for Newells, none were heard. We then went to the Plantation to see if any Newells wandered by, none had, then we went to the Booby colony. At the colony we banded 32 Red-footed Boobies and 31 Wedgetailed Shearwaters. The (some of) Boobies and Wedgetails were returns. I think many more adult Boobies could have been banded if we would have had a snake catcher. The Boobies took off very quickly our second time through the colony. We quit banding at 2355 and headed back to the Plantation to see if any Newells had happened in while we were gone. There were none. In summary of our trip to Kauai - I think the Newell Shearwater is present in many of the canyons on the high cliffs, but not in any great numbers on any one cliff, because of limited nesting (burrows) spaces. If the birds we heard calling at night were not Newell Shearwaters, (maybe Harcourts Storm Petrel, but I doubt it) they were some unidentified bird as of yet, which is unlikely. The cry reminded me somewhat of a baby, it is rather hard to describe. With proper equipment (ropes) the higher cliffs could be examined. Also, more time would be needed than four days. It would be best to be in the valleys at night and try and locate the location of the birds, then try climbing to the location in the daytime. (I would like to try again sometime).

July 13, 1964: We ran into a large number of Bulwer's Petrels. We arrived on the Cromwell about 0730. Left for Pearl about 0900. Left Pearl about 1330. There was one Brown Booby sitting on a buoy 13 in the harbor. Light



Wedge-tails, Sooty Terns, Frigatebirds, Noddies, and some Petrels were seen.

14, July 1964: Much the same was seen today. Several flocks were seen. Some of the new boys **are** still sicker than a dog. The weather is fair, but this tub still rolls considerably.

15 July 1964: Weather and sea conditions are much the same. We quit seeing Noddies fairly close to land. More flocks were seen today. Also, the Wedge-tails are becoming dark phase. We also saw some White necked Petrels today. This evening Warren went out on the bow with the blunderbuss.

July 16, 1964: Today started off fairly slow with little being seen. Later on this afternoon, I saw a bird that was about the size of a large Dark-rumped Petrel, but the wings were entirely black underneath. There could have possibly been a darker back and a darker breastbone. The bird flew like a Dark rumped Petrel with high arcs and dives. It flapped its wings rather loosely. Warren also saw one later on in the day. About 1700 we got into a flock. Warren shot a dark-rumped Petrel and a Newell's Shearwater, but then our tale of woe began. The mate didn't see the dark-rumped Petrel go down, so he didn't stop the ship. When the Newell's Shearwater went down, Warren ran to get the net to retrieve it, but when he left the bird got up and flew away. Thus ends the sad story and a chance to see if some of our ideas are correct. The weather was clear this morning and the sea was almost calm. This afternoon we ran into some squalls which continued off and on until this evening. The sea began picking up

this evening.

July 17, 1964: Today was very slow, hardly anything was seen. The weather started picking up along with the sea. About 1600 a catastrophe befell me. I was on the bow gazing out in front when all of a sudden all I could see was a wall of white in front of me. I closed my eyes and held on waiting for the thrilling moment. Shore as hell (pardon) about a second later the bow and everything on it got soaked. I looked up at the bridge and everyone on it was about to split their sides laughing. Swearing mightly I drained the water from the barrel of the blunderbuss, picked up my slightly (very) soaking equipment and headed for the bridge.

July 18, 1964: More birds were seen today. Several flocks were seen at different times during the day. This evening Warren took about 10 shots at birds that were very close, he even tried putting one in the water, but to no avail. I think some were hit, but the blunderbuss was too slow to reload to get in more than one shot at a bird. I wish I had my pump over here. At one time I almost told Warren to throw the damn gun at the birds, but refrained because he was upset. We tried to get them to turn the ship around, but they wouldn't do it.

July 19, 1964: There were more birds again today, and several more flocks which were large. This morning about 0930 a shore bird was spotted flying along the ship. It was all brown, and about the size of a Golden Plover. The sea was rough today and the ship took a 50 degree roll or two. This morning we were in and out of squalls until about noon.

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July 13, 1964

Wedge-tail 169  
Bonin Island Petrel 1  
Bulwer's Petrel 32  
Red-footed Booby 11  
Sooty Tern 648  
Frigate 1  
Common Noddy 77  
Fairy Tern 1  
Shearwater Petrel 1  
Dark-rumped Petrel 3  
Sightings: 51  
Flocks: 6  
Total Birds: 944

Flocks

1550 - 15± 5 Sooty Terns  
2 Red-footed Boobies  
Feeding 1 Bulwer's Petrel  
1725 250+50 Sooty Tern  
75±25 Wedge-tails  
Feeding 3 Dark-rumped Petrels  
1 Red-footed Booby  
1728 7 Red-footed Boobies  
2 Wedge-tails  
Traveling:  
1805 250± 50 Sooty Terns  
Feeding:  
75±25 Wedge-tails  
1800 75±25 Sooty Terns  
Feeding:  
1 Fairy Tern  
2 Wedge-tails  
Traveling:  
1826 35 Sooty Terns

July 14, 1964:

Wedge-tail 56  
Dark Wedge-tail 3  
Bonin Island Petrel 14  
Bulwer's Petrel 11  
Frigatebird 3  
Sooty Tern 85  
Fairy Tern 2  
Newell Shearwater 2  
Tropicbird sp. 1  
Dark rumped Petrel 19  
Shearwater-Petrel 3  
Sightings: 60  
Flocks: 4  
Total Birds: 196

Flocks:

0750 - 8 Sooty Terns, 1 Wedgetail  
2 Dark-rumped Petrel  
Feeding: 1 Bonin Island Petrel,  
1 Frigatebird  
1215 - 50+-50 Sooty Terns,  
30+-5 Wedgetails  
Feeding: 2 Darkrumped Petrels  
2 Fairy Terns  
1305 - 6 Sooty Terns - traveling  
1455 6 Sooty Terns - traveling

July 16, 1964:

Wedge-tails 64  
Bonin Island Petrels 13  
Sooty Terns 53  
Fairy Terns 1  
Petrel sp. 2  
Dark-rumped Petrels 22  
Shearwater-Pterels 2  
Whitenecked Petrel 7  
Newell's Shearwater 5  
Sightings: 44  
Flocks: 1  
Total Birds: 171

July 15, 1964: Flocks

0710 - 12 Sooty Terns,  
5+-2 Wedgetails, 5 Dark-rumped Petrels  
10+-2 Petrel sp.  
0815 - 10 Petrels sp. - traveling  
1538 5 Wedge-tails sitting on water  
0837 25+ Sooty Terns, 60+-5 Shearwater-  
Petrels

July 16, 1964: Flocks

1645 - 50+-10 Sooty Terns  
50+-10 Wedgetails  
10+-2 Dark-rumped Petrels  
5 Whitenecked Petrels

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July 17, 1964:

Wedge-tails 5  
Bonin Island Petrels 2  
Red-tailed Tropicbird 1  
Shearwater-Petrels 5  
White-necked Petrel 1  
Dark-rumped Petrel 3  
Sightings: 15  
Flocks: 0  
Total Birds: 17

July 18, 1964:

Wedge-tails 64  
Dark Wedgetails 27  
Not known Wedgetails 15  
Bonin Island Petrels 14  
Red-tailed Tropicbird 3  
Sooty Terns 81  
Dark rumped Petrels 116  
Petrel sp. 1  
Shearwater-Petrels 4  
Sightings: 44  
Flocks: 4  
Total Birds: 283

July 19, 1964:

Wedge-tailed 71  
Dark Wedge-tails 30  
Bonin Island Petrels 24  
Red-tailed Tropicbirds 1  
Frigate 1  
White tailed Tropicbird 2  
Sooty Terns 189  
Fairy Terns 2  
White-necked Petrel 1  
Petrel, sp. 3  
Dark-rumped Petrels 37  
Shearwater-Petrels 46  
Tropicbird sp. 1  
Shorebird sp. 1  
Newell's Shearwaters 3  
Sightings: 49  
Flocks: 4  
Total Birds: 382

July 17, 1964: Flocks

No Flocks

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July 18, 1964: Flocks

0945 - 70+-10 Sooty Terns  
40+-10 Wedgetails  
Feeding: 20+-5 Dark rumped Petrels  
5 Bonin Island Petrels  
1535 10+-2 Sooty Terns  
30+-5 Dark-rumped Petrels  
Feeding: 15+-5 Wedgetails  
1712 10 darkrumped Petrels,  
1 Bonin Island Petrels  
4 Wedgetails  
Feeding  
1745 20 darkrumped Petrels Feeding

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July 19, 1964: Flocks

1005 - 75+-10 Sooty Terns  
25+-10 Dark-rumped Petrels  
40+-10 Wedgetails  
10+-5 Bonin Island Petrels  
Feeding: 2 Fairy Terns, 1 Frigate  
1055 60+-20 Sooty Terns  
Feeding: 40+-10 Shearwater-Petrels  
1255 25+-2 Sooty Terns  
Feeding: 5+-2 Wedgetails  
1505 25+-2 Sooty Terns  
14+-2 Wedgetails  
Feeding: 1 Newell's Shearwater

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July 20, 1964: Flocks

0732 125+-25 Sooty Terns  
45+-10 Wedge-tails  
Feeding: 2 Frigates  
0932 75+-10 Sooty Terns  
Feeding: 40+-10 Wedgetails  
1 dark-rumped Petrel  
1010 85+-5 Sooty Terns  
25+-10 Wedgetails  
Feeding:  
1142 8 Sooty Terns  
5 Wedgetails  
1151 25+-5 Sooty Terns, 10 Wedgetails  
10 Wedgetails  
Feeding: 8 Petrels, sp.

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July 20, 1964:

Wedge-tails 145  
Bonin Island Petrels 3  
Bulwer's Petrels 1  
Red-tailed Tropicbird 1  
White-tailed Tropicbird 1  
Frigates 3  
Sooty Tern 658  
Fairy Terns 5  
Shearwater Petrels 81  
Fairy Terns 5  
Dark-rumped Petrel 1  
Sightings: 33  
Flocks: 7  
Total Birds: 910

July 21, 1964:

Wedge-tails 16  
Christmas Island Shearwater (?) 1  
Bonin Island Petrels 7  
Bulwer's Petrels 3  
Red-tailed Tropicbirds 2  
Frigates 2  
Sooty Terns 135  
Shearwater-Petrels 15  
Dark-rumped Petrels 20  
Petrel sp. 2  
White-necked Petrels 2  
Sightings: 36  
Flocks 50  
Total Birds: 206

July 22, 1964:

Wedge-tails 17  
Bonin Island Petrel 3  
Red-tailed Tropicbird 1  
Wedge-tailed Tropicbird 2  
Sooty Tern 268  
Fairy Tern 5  
Dark rumped Petrel 103  
White necked Petrel 14  
Petrel sp. 11  
Booby sp. 1  
Newell's Shearwater 2  
Sightings: 62  
Flocks: 12  
Total Birds 427

July 20, 1964: Flocks continued

1400 250+-50 Sooty Terns  
75+-25 Shearwater-Petrels  
Feeding: 1 Frigate  
1550 85+-5 Sooty Terns  
Feeding: 4 Fairy Terns  
10+-5 Wedgetails

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July 21, 1964: Flocks

0910 2 Sooty Terns  
4 Wedgetails  
Traveling 3 Dark rumped Petrels  
2 Bonin Island Petrels  
1 Bulwer's Petrels  
0920 25+-2 Sooty Terns  
5+-2 Shearwater-Petrels  
Dispersing:  
1450 75+-10 Sooty Terns  
5+-Wedgetails  
Feeding:  
5+-Darkrumped Petrels  
1 Frigatebird  
1 Bonin Island Petrel  
0430 25+-2 Sooty Terns  
5+-2 Shearwater-Petrels  
Traveling:  
1635 3 Sooty Terns  
3 Wedgetails  
2 Dark rumped Petrels

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July 22, 1964: Flocks

0824 3 Dark rumped Petrels  
2 Petrel sp.  
Feeding:  
1110 90+-10 Sooty Terns  
2 Wedge-tails  
Feeding: 6 Dark rumped Petrels  
2 Whitenecked Petrels  
1 Fairy Tern  
1040 25+-3 Sooty Terns  
Feeding: 6 Dark rumped Petrels  
6 Wedge-tails  
1120 25 Sooty Terns  
Feeding: 5 Dark rumped Petrels  
1 Whitenecked Petrel  
1135 6 dark rumped Petrels  
1 White necked Petrel  
Sitting: 1 Wedgetail  
1246 7 Sooty Terns

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22.

July 22, 1964: Flocks continued

Traveling:  
1400 6 Dark rumped Petrels  
2 White necked Petrels  
Traveling:  
1628 6 Sooty Terns  
11 Dark rumped Petrels  
Feeding: 2 Wedgetails  
1130 20 Sooty Terns  
6 Dark rumped Petrels  
Feeding: 2 white necked Petrels  
1 Wedgetails  
1 Fairy Tern  
1235 20+-10 Sooty Terns  
Feeding:  
1320 55+-2 Sooty Terns  
5 Dark rumped Petrels  
1450 20+-2 Sooty Terns  
Feeding: 7 dark rumped Petrels  
2 white necked Petrels

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July 23, 1964: Flocks

0842 5 Dark rumped Petrels  
sitting on water  
1130 30+-1 Sooty Terns  
3 dark rumped Petrels  
Feeding:  
1131 50+-25 Sooty Terns

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July 24, 1964: Flocks

0400 50 birds feeding  
0648 3 Sooty Terns, 7 dark rumped  
Petrels  
Feeding: 3 wedge-tails  
1811 3 Sooty Terns  
1 Wedgetails  
1 Dark rumped Petrels  
dispersing.

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July 25, 1964:

1500 - 12 Dark rumped Petrels  
8 Sooty Terns  
65 ± 10 Dark rumped Petrels  
36 ± 10 Wedgetails

July 23, 1964

Wedgetails - 7  
Bonin Is. - 4  
Sooty Tern - 83  
Petrel sp. - 7  
Dark rumped Petrel - 35  
White necked Petrel - 1  
Harcourts Storm Petrel - 1

Sightings - 37  
Flocks - 3  
Total Birds = 138

July 20, 1964: Several large flocks were seen today composed mainly of Sooty Terns, Wedgetails, and Petrel sp. The weather was fairly calm, but the sea was very rough and we were headed into the swells and the ship got bounced around several times.

July 21, 1964: Today started off better, the weather and the seas calmed down and we got out on the bow. Several flocks were seen today. They were composed of Sooty Terns, Wedgetails, Petrel sp., A Bulwer's Petrel, Frigate, and Tropicbird were also seen today. Several Dark rumped Petrels and Bonin Island Petrel were also seen. About 1330 this afternoon 2 dark rumped Petrels and a wedge-tail were seen diving at a glass ball. I pulled up and shot and got one of the dark rumped Petrels which fell right beside the fish ball. While I am thinking of it, we need a shotgun out here that is worth something. The blunderbuss is a hopeless case. The pattern is too close for about 30 yards then it spreads all over and isn't worth anything. We need a pump or an automatic full choke. If I would have had a repeater I think I could have gotten the other dark rumped Petrel and the Wedgetail. The dark rumped Petrel might be a Galapagos subspecies because it had a white rump. I thought I read somewhere that the Galapagos ones had a white rump. The bird was checked for parasites and some Mallaphoag were found. It was then put in the deep freeze. Also, today one of those Petrel-Shearwater sp. was seen. I got a good look at it. It was about the size of a dark rumped Petrel. It was all white except for the all black underwing which had a very thin, very faint black line down the middle. The bird flew with few flaps, but it had some fairly high rising glides. It was kind of a cross between a wedgetail

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and a Bonin Island Petrel. I hope to be able to collect one of these birds. Warren is having a bad time with the blunderbuss, but I would too if the beast had about taken my finger off. The strap was taken off of the cannon, so that won't be any problem anymore. The rest of the day was quiet with not much being seen. While one was at the hydro there was a flock in front of us, but there was nothing that could be done about it.

July 22--Today we had some very good luck and some rather bad luck. The sea was very calm which made shooting easy. Evidently Warren calmed down because he started hitting birds today. About 0805 this morning he shot a Dark-rumped Petrel and about 5 minutes later he got a White-necked Petrel. Next I shot a Dark-rumped Petrel. Then I got lucky on a long shot and got another. About 1440 this afternoon Warren got another one. About 1630 two Dark-rumped Petrel came by and I shot one and hit him in the wing. The bird started for the water so I shot again bringing him down. The bird fell into the sun, and I lost sight of him, but Paul Shiota who was the bow also, kept track of him. Johns made a half way attempt at a U turn, but didn't complete it and took off back south. The boys on the bridge shouted at him, but it didn't do any good. If Johns didn't want to alter course he could have told me and I wouldn't have shot anything. Warren went running up to the bridge to find out what was the matter, but got no explanation. These people just don't see the importance of getting a series of birds. This is not going to happen again, because I am going to check and see each time if they are going to allow the ship to alter course.



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Bobby, the captain is very good about it, but the others don't seem too happy to do it. The birds were tagged No. 0510-11-12-13-14 and they were collected at longitude 151°, latitude 19°-17°. The birds were checked for parasites and Mallophaga and mites were found. One of the Dark-rumped Petrels had a piece of fresh squid in its mouth. The Dark-rumped Petrel had white rumps. The birds all showed some signs of molt, but were mostly in new plumage. Their brood patches were fully feathered, so I believe they will start breeding about next month. The Dark-rumped Petrels were larger than the White-necked Petrel. The White-necked Petrel also had tinges of dark on its neck, but it wasn't very pronounced. In all the birds, the distal 2/3 of the feet were black and the proximal 1/3 was pink. The outside toe was black all the way to the ankle? The legs were pinkish purple, the gape was pink with bluish edges. The bill was black and the iris was dark brown. During the day, several flocks were seen, they were composed of Sooty Terns, Dark-rumped Petrels, Wedgetails, and Petrel sp. Some small flocks were seen that were composed of Petrels sp. and Wedgetails. Also during the day, Fairy Terns and Tropicbirds were seen. Many of the Dark-rumped Petrels were seen sitting on the water and the ship got surprisingly close to them. Again I was the blunderbuss. This morning I could have shot 3 Dark-rumped Petrel, but only got one of the bunch because I couldn't get shells into that monstrosity fast enough.

July 23, 1964: Today the number of birds and flocks decreased. The number of Dark rumped Petrels decreased sharply. Some Dark rumped Petrels were seen sitting in the water this morning but with some restraint we didn't shoot them. Last night Bobby said it was oke to go ahead and shoot and he said he would tell the mates to stop. I think I will only shoot when he is at the wheel though, because good relations with the crew is a necessity. Today we mostly caught up

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on our bookwork that has fallen behind. I skinned a Dark rumped Petrel. It was a male with very small testes, 5 mm. Another thing that surprised me was how little fat there was on the bird. The ship wircled a log several times today and 19 dolphins were caught.

July 24, 1964: Today Dark rumped Petrel, White necked Petrel, Dark Wedgetails, Sooty Terns, Bonin Is. Petrel, and Harcourts Storm Petrel were seen. The off watch hours were spent finishing up the books. The sea was fairly rough this morning, but calmed down this afternoon. Squalls were frequent today. I skinned another Dark rumped Petrel today. It was a male, the testes were 7 mm by 3 mm and 9 mm by 3 mm.

July 25, 1964: The weather closed in until about noon. Visibility was 1/4 mile or less much of the time. This afternoon the skies cleared and many birds were seen. The Dark rumped Petrel numbered over 100 again. Few flocks were seen, but we got right in the middle of one. One Dark rumped Petrel hit the guy wire to the mast and flew (staggered) off wisivly shaken. Tonight we skinned 2 more Dark rumped Petrel. They were both females with ovaries 9 x 4 and 14 x 3 (I better check on that). The fallicles were well developed in the one I skinned. They were not so well developed in the one Warren skinned. Eyes were also found in one of the birds stomach (Warrens). The oceanographer (David O.) thought they might be squid eyeballs.

July 26, 1964: The visibility was good today, but the number of birds dropped off greatly. We saw 3 new birds today, the Christmas Is. Shearwater, the Kermadec Petrel, and Audubons Shearwaters. This morning a Newells Shearwater was seen off the stern, but collection was impossible.

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July 27--This morning was very slow, but the number of birds picked up this afternoon. Dark-rumped Petrels were the main bird seen. One immature Sooty Tern was seen, it was all dark. The Captain saw an all dark bird, smaller than a Wedgetail. It may have had brown spots on its underwing. It flew with high arcs and sudden flopped. It may have been a Christmas Island Shearwater. We skinned the White-necked Petrel and the last Dark-rumped Petrel. The Dark-rumped Petrel was a female with ovary 7 x 5 and the follicles well developed. The White-necked Petrel was male with testes \_\_\_\_\_. The Dark-rumped Petrel was very fat. The sea was very rough today and water was continuously breaking over the bow.

July 28--Not much happened today. Several flocks were seen and several unidentified birds were seen. The flocks were composed of Sooty Tern, Dark-rumped Petrel, Fairy Terns, Fewer wedge-tails have been noticed lately, less than last cruise. This evening I shook the boys up. I banged the BT into the side of the ship twice. That really shook the oceanographers up. Two Kermadec Petrels were seen for sure today.

July 29--Most of the birds we saw today were in a flock that was seen at 1810. We also had a fire drill that turned into a water fight.

July 30--Today was very slow, with only 17 birds being seen. We didn't cover much area today, because we had a drift station this morning and that shot all time until 1430.

July 31--We saw fewer birds today than I expected. Wedge-tails were finally seen today, all of them light. One Kermadec? Petrel was also seen. Three small feeding flocks were also observed. They were mainly composed of the Sooty Terns and Shearwater-Petrels.

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July 24, 1964

Wedgetail 17  
Bonin Is. Petrel 10  
Sooty Tern 8  
Dark-rumped Petrel 15  
Shearwater-Petrel 4  
Petrel sp. 1  
White-necked Petrel 1  
Harcourt's Storm Petrel 1  
Birds 30  
Sightings 37  
Flocks 2(3)  
Total birds 57

July 26

Wedgetail 4  
Christmas Island Shearwater 1  
Audubon's Shearwater 1  
Bonin Island Petrel 4  
Sooty Tern 4  
Dark-rumped Petrel 10  
Newell's Shearwater 1  
Shearwater-Petrel 3  
Kermadec Petrel 1  
Sightings 23  
Flocks 0  
Total birds 27 (29)

July 28

Red-tailed Tropicbird 2  
Wedge-tailed Tropicbird 1  
Sooty Tern 68  
Fairy Tern 2  
Dark-rumped Petrel 47  
White-necked Petrel 2  
Petrel sp. 13  
Shearwater-Petrel 10  
Kermadec Petrel 2  
Sightings 23  
Flocks 5  
Total birds 147

July 25

Wedgetail 51  
Bonin Island Petrel 10  
Bulwer's 1  
Sooty Tern 10  
Dark-rumped Petrel 118  
Shearwater-Petrel 11  
White-necked Petrel 3  
Sightings 59  
Flocks 2  
Total birds 204

July 27

Red-tailed Tropicbird 1  
Sooty Tern 1  
Dark-rumped Petrel 30  
Whitenecked Petrel 1  
Shearwater-Petrel 4  
Sightings 25  
Flocks 1  
Total birds 37

July 29

Bulwer's Petrel 1  
Red-tailed Tropicbird 3  
Wedge-tailed Tropicbird 1  
Sooty Tern 155  
Fairy Tern 1  
Shearwater-Petrel 51  
Dark-rumped Petrel 5  
Sightings 14  
Flocks 1  
Total birds 147

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August 1--This morning fewer flocks were seen than expected. Most of the birds seen were the Noddy Tern and Wedge-tails. Four Noddies were seen sitting on a stick in the water. We arrived in port at 1200 and spent until 1430 catching up on reports. The rest of the day was spent at the hotel.

August 2--At the hotel, most of the day. This afternoon we went to Cocoa Head in search of Fairy Terns. One bird was seen on the nest, and three others were seen at different places and together over a bunch of trees. One dived at Huber, but he didn't have his net handy. Huber was not quite fast enough to grab the one on the nest. Other birds seen were Brown Boobies, Wedgetails, Frigates, Common Noddies, and some land birds.

August 3--Today was spent at the hotel; we did go out to the Cromwell and bring the birds back to the hotel.

August 4--Today was spent running around, getting not much done.

August 5 --Not much was accomplished today. We did have a good dinner out at Docs tonight. Jan is a good cook.

August 6--I went out to Docs and skinned out birds today. Mostly from Sand Island and stuffed one Harcourt's Storm Petrel.

August 7 --I skinned out more birds today.

August 8--I spent most of the day running around with Keppler and King. Later this afternoon I looked all over for my favorite cigars, but couldn't find any. Larry Huber came up with the brilliant idea of forming a society for the prevention of cruelty to dinosaurs.

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July 30

Bonin Island Petrel 1  
Bulwer's Petrel 2  
Red-tailed Tropicbird 3  
Wedge-tailed Tropicbird 2  
Red-footed Booby 1  
Sooty Tern 5  
Shearwater-Petrel 5  
Tropicbird sp. 1  
Sightings 13  
Flocks 1  
Total birds 17 (20)

July 31

Wedgetails 12  
Bonin Island Petrel 1  
Bulwer's Petrel 1  
Red-tailed Tropicbird 2  
Wedge-tailed Tropicbird 1  
Frigatebird 4  
Sooty Tern 40  
Fairy Tern 3  
Newell's Shearwater 5  
Shearwater-Petrel 12  
Sightings 22  
Flocks 3  
Total birds 82  
Kermadec Petrel ? 1

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August 9--I got up this morning about 0500 to take Kepler to Hickum field. It was a good thing we were there about 1 1/2 hours early because he was lacking a JFT stamp. After getting some sergeant out of the sack 3 times he got bared and things were all set then. We went to the zoo this afternoon. I saw many birds I had never seen before. This evening I took Warren to the airport to catch the plane back to the mainland

August 10--I met Bob Long today. I put up a bunch of plants. The Oriental girls look very good in their tight skirts.

August 11--Put up more plants today. Some of them didn't look too hot, but Bob wanted a lot done. Many of the plants were not pressed and very good, but if I had been sea sick like Bob, I doubt that I would have done as good.

August 12 --Bob didn't show up this morning. I mounted the rest of the plants he had out. This afternoon I did some running around and got Kepler's bino's ready to send to him.

August 13--This morning was spent getting things ready to go. I left Honolulu at 1740, as usual the plane was 40 minutes late. I arrived in Kona at 2045. Since all the hotels were full because of the fishing tournament I stayed at the airport all night in a chair. It wasn't too bad though, because the boys at the airport were in a good mood. After several snorts of scotch I was in a very good mood. After they left, I listened to geckos and some sea birds, but I couldn't identify it.

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August 14--I got to the Gilbert very easy this morning. The crew of the Gilbert seems like a bunch of characters. Most of today was spent heading north of the Kena area. We were in the Kawaihøe Bay area. I thought that as close to land as we were the birds were fairly scarce, but the crew said there is not too many birds in this area. I was talking to the capt. and he said Shearwaters (he might mean Wedgetails only) were poor fish school followers because they meandered all around the first school. He also said the Terns were good to follow, because they stayed at the head of the fish school. I spotted a flock at 1625, lat  $20^{\circ} 00'N$   $156^{\circ} 02'W$ . We were in the flock at 1638. I estimated about 30 Wedgetails, but there were 41 or 42. The birds acted in about two or three ways. The most (the fish school was composed of skipjack and small flying fish) common was for the birds to fly low over the water and then suddenly drop down and stick their head under the water and feed on the small flying fish. All the time, their wings would be flapping. They could lift off the water very quickly and run along on top or fly a short distance and repeat the procedure. The birds that did this were very maneuverable. Other birds would land on the water, fold their wings and just dabble around. I also saw several birds disappear under water all except for their tails. I also saw 2 birds completely disappear under water, but they didn't stay long. They might have just caught a wave wrong. I hope the films that the chief scientist took show the birds completely disappearing under water. Some of the Wedgetails arced up high like Dark-rumped Petrels. In the flock there were four dark phase Wedgetails, but they were lighter than the southern dark phase ones. On the outskirts of



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the flock there were ten Bulwer's Petrels. I wouldn't have noticed them except we were in and out of them. They flew very close to the water. My observation were cut short because I had to help weigh and measure fish. Seventy-seven skipjack were caught.

August 15--Today we tried for bait fish in the Keauhau Bay area, Kealakekua Bay area, and the Honaunau Bay area. No bait fish was caught in any of these areas. We headed around the southern end of the island. Later in the day, some dark rumped petrel were sighted. I had to look twice to make sure they weren't Wedgetails. I am rather surprised at how many of the boys on this ship know the birds. They don't know the specific name of all of them, but they do know the groups.

August 16--We have been in almost constant rain from 0540 to 750. I have seen two travelling blocks of Noddy Terns. We have been traveling along the southeast coast of Hawaii. More rain around 1040. We are heading towards Maui. We are in a flock at 1314. Noddy terns are landing on the water, also they are just skimming around on top of the water. Sooty Terns are staying above the rest of the flock. When the Sooty Terns land. They close their wing right away. The Noddy Terns do not seem to run on the water when they take off. They rise almost vertically. The Noddies that are feeding on our bait are making a chir-all-chirp sound. There is also some Hawaiian Noddy Terns in this flock. The Noddy Terns stay close to the water, while the Sooty Terns stay up high. The fish are skipjack. The crew said the birds were fed on squid. Position of flock is  $20^{\circ} 12'N$   $155^{\circ} 04W$ . At 1445 we were in another flock. The Noddies are acting the same way. The grey on the tail of the Hawaiian Noddy really shows up. There were at least three dark Wedgetails present.

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The terns follow the fish school very closely, the shearwaters meander around more. The terns seem to stay at the head of the fish school. Position  $20^{\circ} 18' N$   $155^{\circ} 09'$ .

August 17--A very dark Dark-rumped Petrel came very close to the ship this morning. At 0610 an immature Sooty Tern circled the ship two times. No adult was present. The young bird chirped several times. We were in another flock at 0927. On way to flock I saw a very large Albatross, it was much larger than the Frigate it passed. Position of flock  $21^{\circ} 59' N$   $156^{\circ} 51' W$ . Some of the Wedgetails were sitting just dabbling around. The Sooty Terns are up above and the Noddies are down below. In another flock at 1023. Two Masked Boobies were sitting in water ducking their heads. Many Noddies and Hawaiian Noddies are sitting on the water just dabbling around. There is also a good many Wedgetails sitting on water. Boobies were seen too just collapse in air and dive into water head first. No luck in bringing fish to the surface. 1510 we are heading toward another flock. This is a very large flock. The Boobies are gliding low over the water and then diving in, others are up higher then diving in. There are many Wedgetails and Noddy Terns sitting on the water. The Noddies seem to be able to come to a stop by moving their wings in a forward motion. The Sooty Terns stay up above the flocks, the Noddies are down below. One of the crewmen just told me that a flock of Boobies indicate Mahi Mahi school. Position of flock  $22^{\circ} 06' N$   $157^{\circ} 32' W$  1620, in another flock. Several Noddies were seen swimming along with their heads under water.

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August 18--Today was spent in Hanalu Kauai Harbor. I caught up on back paper work. Then I went ashore and talked to Bobby at the hotel. He said that several Newell's had been in the hotel since we had last been there.

August 19--I woke up with the slight tinges of a hangover. The crew is looking rather rough this morning. We left the harbor at 0900. In a flock at 1010. The Sooty Terns are above, the Noddy Terns and the Hawaiian Noddies are below. Many of the Noddies are eating the bait that is being thrown over for the fish - position  $22^{\circ} 08' N 159^{\circ} 48' W$ . We are in another flock at 1200. Eight Brown Boobies are sitting on the water. A Wedgetail just flew in, landed on the water, then dived under the water. The boys aren't having much luck in finding the fish. 1300 in another flock. Several Wedgetails have been observed to dive in the water just about like the Boobies -  $22^{\circ} 06' N 159^{\circ} 52' W$ . During the day several Newell's and Harcourt's have been seen by the ship. Later this evening, I saw some Newell's and Harcourt's heading towards Niihau.

August 20--Today was spent in Nawiliwili Harbor. I spent most of the day catching up on paper work. Tonight I listened for birds, but none were heard.

August 21--In flock at 1000. Newell's Shearwater are all over the place -  $22^{\circ} 02' N, 160^{\circ} 05' W$ . Newell's feeds similar to Wedgetail, but they don't arc up as high. They stay fairly close to the water. They also tend to turn on their sides more, similar to Bonin Island Petrel flight.

Newell's is also a more manuverable bird, it does not need a long run on the water to take off, they can take off almost like a Noddy Tern. The bird keeps its wings flapping sticks its head and necks under the water, then with a short hop it is airborne again. 1720 is another flock. Fairy Tern act like Sooty Terns. They stay up above the rest of the flock and dive down, then come back up. The Booby are diving into the water many different ways high angle, low angles. This evening a Red-footed Booby has joined us in our cruise of the mast. After about 40 minutes the booby made it in. All of us were out on the bridge cheering him on. This even one of the Hawaiian crewmen told me that he used storm petrels (probably Harcourt's) as a guide for depth. He says they hang around the 100-200 fathom dropp off. He says the variation is less than 5 minutes steamint time. He says you also see them elsewhere, but you see more of them around here.

August 22--We are South of Nihoa and there are more birds than I can count. I am having to count them as they cross the bow. There sure large numbers of what must be immature Blue-gray Noddies. They have dark gray back and upper wings, white under wings, breast and head. They are smaller than the other noddies. 0810 we are in an immense flock. I estimate 3500 birds, but the crew says I am about a thousand short. The Blue-gray Noddy feeds like the other noddies; it stays low to thw water, but I think it has faster wing beats. But that may be due to its being a smaller bird. It is very manuverable and it can almost hover in one spot. The Sooty Storm Petrel and Bulwer's Petrel are very hard to tell apart. I saw two birds coming toward the ship. I thought they were both Bulwer's, but as they flared away I saw the Wedge-tail and

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the other had a forked tail. Undoubtedly I have misnamed some of these birds. Almost all the birds that were not in the flock were headed South. Position:  $22^{\circ} 29' N 162^{\circ} 08' W$

August 23--We are headed back toward Honolulu. Observations were cut short at 1200 to help clean up the ship. We are in port at 1610.

August 24--Spent day at Elys skinning birds.

August 25--Spent day at Ely's skinning birds.

August 26--Spent day at Ely's skinning birds.

August 27--Spent part of day at Ely's working on a report. This afternoon we went out and picked up the boys off the Shearwater.

August 28 --Worked on my report at the hotel.

August 29--Ran around with the boys from the Shearwater.

August 30--Spent the day dicking off.

August 31--Spent the day getting things ready to go on the Cromwell.

Also paid an outrageous hotel bill of \$68.75 or such. Had to have Jan Ely cash a hundred buck check for me.

September 1--Roger Clapp and I boarded the Cromwell at 0740. We left for Pearl about 0840. We headed for sea and began observations at 1330. Roger didn't feel too good this afternoon so I did most of the watching. Fewer Bulwer's Petrels were seen than last time. No Dark-rumped Petrel or Bonin Island Petrel were seen. All of the Red-footed Boobies seen were in good color (all appeared to have adult coloring. No Sooty Terns were seen. Six flocks were seen, composed mainly of Wedgetails, Common Noddies and Boobies.

September 2--The sea was fairly rough today, and the tub was taking quite a few  $45^{\circ}+$  rolls. Roger was feeling somewhat better, at least he ate

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this evening which was good. Two different petrels were spotted today.

I am not sure what they were. They were about the size of a Sooty Storm Petrel, flew about like a Sooty Storm Petrel. They had dark (brown?) wings above and below; the back was dark getting lighter at the head and tail ?; the underparts were white. At 1406 a tern sp. was seen. It was white underneath with medium grey on top of wings. The head may have had a dark cap. The watch said it was an arctic tern, and Termite knows his birds fairly well. I am not sure. No flocks were observed.

September 3--Today was very slow. The sea was moderate until late afternoon.

Much of today the visibility was 1 mile or less at times it was less than 100 yards because of rain squalls. This afternoon we sat in one spot for 5 hours while the boys ran a cable to the bottom of the ocean about 5300 meters down. The bird watching was very slow. Few flocks were observed and few birds were observed.

September 4--Today the seas were very calm and the wind died down considerably. The sky was clear to partly cloudy. The birding was slow, but some new ones were seen. A small Petrel was seen several times today, but the identification is not positive. It is dark on top (very dark grey or black) dark head and wings, white breast and underwing. White underwing may vary with thick black margins or thin black margins. The bird is about the size of a Bulwer's Petrel, and it flies similar to a Sooty Storm Petrel. At 1040 a Golden Plover circled the ship several times. Two Christmas Island Shearwater were seen today. Several dark phase Wedge-tails were seen. Some of the White-necked Petrel definitely have white rumps. No flocks were seen today. The birds seemed rather spooky or shy of the ship, because they

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usually stayed out of shooting range.

September 5--Today was again slow. The sea was clam, it was clear to partly cloudy, and the wind was about B-5 knots. The birds are staying low to the water which makes identification difficult. The petrels and shearwaters are not arcing up like they normally do. There is an absence of flocks and Sooty Terns.

September 6--The sea got rougher than farther north we are going. The wind also increased up to about 16 knots. This must have been for the good though, for we are finally seeing some birds. Three flocks were seen today composed mainly of Sooty Terns, Petrels (dark-rumped petrel, White-necked Petrel, Bonin Island Petrel) and some wedgetails. Some new birds were seen, but I have my doubts about one of them. Roger said he saw a Sooty Shearwater? We also saw a Golden Plover, Kermadec Petrel and some all dark Shearwater-petrel. The bird was all dark and about the size of a Dark-rumped Petrel. It flew like a Dark-rumped Petrel. It turned up on its side frequently and arced up high in the air. The shearwaters and petrels are flying more like normal now. Roger has petrel sp. X and Bonin Island Petrel mixed up. He made some sneaky comment about Petrel X is usually called Bonin Island Petrel, but he would conform to my calling petrel x. It was not petrel x because it doesn't occur this far north.

September 7--The sea was moderate and the skys clear to partly cloudy. Fewere birds were seen today. Again one of the all dark shearwater-petrels was seen. Other birds seen were the Dark-rumped Petrel, White-necked Petrel, Wedgetail, Sooty Tern, Fairy Tern, Frigate. 2 small ? flocks

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were seen today. Again today the birds are flying more like they usually do.

September 8--The sea was moderate and the sky clear to partly cloudy. Birds were again scarce today. I think part of it must be due to past breeding season. At 1700 today a skua ? was seen by Roger and Termite. Clapp said it was too big for a jaeger and it definitely wasn't a tern or gull. Termite said he could see the white underwing. Two more Sooty Shearwater were seen by Clapp. I cleared up the blunderbus again and put it in one of the plastic cases. The gun is getting in poor shape.

September 9--Today was very slow. The sky was partly cloudy to cloudy with rain squalls. The sea was moderate. Two small flocks were seen. One Kermadec Petrel was seen close by the ship today.

September 10--The weather was partly cloudy to cloudy and overcast with squalls this evening. The sea was moderate. As a whole, it was rather stoppy out. Today was our slowest day so far. Eleven birds were seen, all petrels and shearwaters. No flocks were seen.

September 11--The sky was partly cloudy all day. The sea was moderate, calming in the evening. Today was somewhat better so far as bird watching. Three flocks were observed. Roger tried to outsee one of the Hawaiians on board and found it was easier said than done. At 1410 a shearwater-petrel was observed. It was brown above, brown underwings with white towards the tips of the wings. It was about the size of a Dark-rumped Petrel, but it flew more like a wedgetail. All of the flocks observed were feeding.



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September 12--The sky was mostly clear and the sea was calm, almost flat at times. We are down in the southern end of the grid. Much more bird and other animal life was observed today. All during the day "Blackfish were observed at various times. At 1500 a Green sea turtle was seen. It was about 30+ inches in diameter. Three fishballs were picked up today that had various crustaceans growing on them. A total of 626 birds were seen. There were 15 flocks. Seventeen Harcourt's Storm Petrel were seen, six in a flock by themselves. In one of the flocks there were numerous immature Sooty Terns. Roger is still having trouble spotting birds along ways off. At 1600 a parasitic ? jaeger was spotted by Clapp and Termite in a flock (immature). It fit the discription in Peterson. It had the same overall color pattern with barred rump, small slightly pointed central tail feathers, it was definitely smaller than a Pomarine Jaeger. Light below and duskier towards the chest. Barring of the underparts was not noticeable. I think we got screwed by John's today. When I saw that we were going to have some birds I told Bobby this would be an excellent day for some shooting. Johns was standing below and behind us and he suddely<sup>n</sup> did a disappearing act. Right after that, he had the boys working on the bow, which took all day, so I didn't get to collect anything. It would have been the best day for collecting so far. The other days we could have collected, it seems rather strange, Johns had someone up on the bow then too. With him in command next trip I don't know how the collecting is going to be.

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September 13--The sky was clear to partly cloudy and the sea was moderate. Fewer birds were seen (47) today. No flocks were observed. At 0710 a Shearwater-Petrel that was about the size of a Dark-rumped Petrel was observed. The bird had entirely dark (brown) underwings. It flew just like a Dark-rumped Petrel. Johns and I had a slight difference of opinion today, but it was nothing serious, except I thought he was going to have a hemorrhage. When the crew laughed I really thought he was going to have a hemorrhage.

September 14--Damn what a long night. The sea was moderate today and the skies clear to partly cloudy. The birding was moderate today. Fair numbers of Dark-rumped Petrel, White necked Petrel, were seen. I saw one bird that was all brown except for the breast and belly which was all white. The bird fits a picture of a bird that is found in the Atlantic (Schlegeils ?) or something like that, petrel. It was about the size of a Dark-rumped Petrel. Two fairly large flocks were spotted this evening.

September 15--The skies were partly cloudy to totally cloudy this evening. The sea was moderate. A total of 72 birds was seen today. One flock (7 birds) was seen. At 1635 and 1700 on all dark Shearwater-Petrel was seen. It looked like a Kermadec Petrel except for the white under the wings which was more of a slash on the ends instead of a circle. The bird had rapid flight (maybe because of the wind) flopped seldom, and arced high up in the air.

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September 16--Today was partly cloudy with rain squalls around mid-day. The sea was moderate. Most of the birds seen were in singles, one flock was seen. More Sooty Shearwaters were seen today, and some of the all dark Shearwater-Petrels. One Golden Plover was seen flying west, at 0800 it was calling. I think Clapp is getting channel fever or about to go stir crazy. He ran out of reaching material. There are some sex books on board he hasn't read yet, but they would only make him more hard up.

September 17--The sky was partly cloudy and there were squalls around 1200. The sea was moderate. A Golden Plover was seen this morning heading southwest. We didn't see many birds today (29 total) and no flocks were observed. We are starting on our report. I hope to have it finished or nearly so when we get to port so Clapp and I can go over and suck down a few beers before going to the hotel. Come to think of it, I could damn near drink a keg of the suds. This afternoon a sperm whale was seen. It was identified by David Au.

September 18--The sky was clear, the sea was calm. We are starting to get the report ready today. At 0957 a shearwater-petrel was seen that had a black throat, marked white belly, underneath lightish. The birds were rather few and far between.

September 19--The sky was partly cloudy to cloudy with rain squalls this afternoon. The sea was moderate. Most of the birds seen today were heading south. A variety was seen. This morning several Newell's Shearwater were seen heading south. At 1644 a shearwater-petrel was seen by Termite and me. It was dark on top, dark neck and undertail,

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underwings were dark. The breast and belly was white (Salanders Petrel?).

At 1707 a small dispersing flock was seen. It contained three Jaeger sp. The Jaegers returned at 1734, as the birds flushed into the sun, a small definite rounded central tail feathers were seen. The birds were dispersing. The Jaegers were dark with some light on them.

September 20--The sea was calm and the skies clear. We saw many Sooty Shearwaters today, all heading south or southeast. We got into one immense flock. I courted a small area of it and came up with about 100 wedgetails. The flock was all spread out and covered a large area. It was almost entirely wedgetails. There was also a lack of Sooty Terns. There wasn't many Noddy Terns either. We were met at the dock by Ely and Standen. The rest of the day was spent making out the report and then sucking down a few beers.

September 21--In Honolulu recovering.

September 22--Clapp discovered he could only drink 10 boiler makers before he felt a wee bit woozy.

September 23--Helped Clapp and Hackman get things ready for the ATF and Marshall's trip.

September 24--Not much happened today, I cut my finger on a beer can while I was opening it.

September 25--Clapp had a wild dream about a falcon.

September 26--Helped Hackman this morning with the outboard motors for the ATF.

September 27--Not much went on today.

September 28--Helped load trunks on the ATF ship today. The officers on the ship look like they are going to be real hard asses.

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September 29--I spent most of the day out at the airport waiting for boys that didn't show up. Clapp told me I was a real bad ass and I enjoyed being one.

September 30--Got things ready to go for the Cromwell today.

October 1--Warren and I boarded the Cromwell at 0810. We left Pearl Harbor at 1330. We saw the ATF boys taking off. The birds were fewer this time. A Brown Booby was seen sitting in the water. A large number of Red-footed Boobies were seen near the islands in feeding flocks. Many Common Noddies were seen close to the islands also. Few Bulwer's Petrels were seen gain. The sea was fairly rough, and the sky was clear to partly cloudy.

October 2--The sea was rough last night and this morning calming towards evening. The sky was clear to partly cloudy. Fewere birds were seen today. There has been no trouble so are in the changeover of names of the Dark-rumped Petrel, White-necked Petrel, Bonin Island Petrel. Two Bonin Island Petrel were seen today. This evening a Golden Plover was seen heading south. Many of the JN Petrels were seen heading south or southwest or west. The Cook's Petrels are fairly easily told by their low flight pattern. Fewere flocks were seen today (1) and it was small. A Common Noddy was seen today also.

October 3--The sea was calm and the sky was clear to partly cloudy with squalls this afternoon. Several more flocks were seen today. Some of them were fairly large 200+. They contained mainly Sooty Terns, JFP, and Cook's Petrels. There may have been some Common Noddies in these also, because a Common Noddy was identified this afternoon. Many Golden Plovers and 1 Ruddy Turnstone was seen during the day. At 1240

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a shearwater-petrel that was seen that was entirely dark except for a white underbody. It was about the size of a Cook's or Bonin Island Petrel. It flew just like one, staying low to the water. If I had not seen the dark underwings I would have called it a Bonin Island Petrel. One flock was observed in a rainstorm. The Cook's Petrels have dark wing tips with varying dark margins on the rest of the underwing. Also, a possible Kermadec Petrel was seen today by Warren. Several Sooty Shearwaters were observed. Most of the Petrels are headed south, the Golden Plovers are headed north which is to be expected.

October 4--The sea was calm, picking up towards evening. The sky was partly cloudy with squalls this afternoon. Many Sooty Shearwaters were seen, all heading south. Many of the Sooty Shearwaters were observed to fly low when they passed the ship. Once past, they continued their high arcs. This morning we saw five Solander Petrels. This afternoon I saw what may have been a Sooty Storm Petrel. Warren saw what he thinks was a Pale-footed Shearwater. It had a long white bill and it looked different than a Sooty Shearwater. I saw another one of the birds that look like a Cook's Petrel, except that it has all dark underwings. Fewer flocks were seen today.

October 5--The sea was calm and the sky was clear to partly cloudy. Many flocks were seen today. Almost all of the Sooty Terns in the flocks were immature. I saw one flock there was seen a skua, in another there was seen a jaeger. The flock was composed mainly of Sooty Terns, JFP, and Cook's Petrels. I have noticed that few Kermadec and Solander's Petrels and Sooty Shearwater are in flocks. The Sooty Shearwaters seem to stay all by themselves. Most or many of the single birds are headed south.

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The flocks seem to be headed mostly East or North. In one flock there was seen two Fairy Terns. A petrel (?) was seen this evening that had all dark underwings. It was about the size of a Juan Fernandez Petrel, but it flew more like a Cook's Petrel. Another of the Cook's type with all dark underwings was seen also today. Warren thought he saw a slender billed shearwater, but wasn't positive. He said somehow it looked different than a Sooty Shearwater. He did not see the underwings. Many Cook's Petrels were seen sitting on the water. About 85 percent or more of the Sooty Terns are immature.

October 6 --The sea was calm to moderate today, the sky was partly cloudy. Most of the birds seen today were seen in the morning and up until the middle of the afternoon. Two flocks were seen today. Most of the birds seen today were Cook's Petrels, Juan Fernandez Petrel and Sooty Shearwaters. The Sooty Shearwater numbers dropped off this afternoon. At 1120 I saw a petrel ? that was brown on head, neck wings, back, and under tail, the breast was white. It was probably a Phoenix Island Petrel, but there is the possibility that it was a Schlegels Petrel. One Kermadec Petrel was seen today that had a light grey head.

October 7 --The sea was calm; it was cloudy this morning and clearing this afternoon. The birds were fewer in numbers today. Many Golden Plovers were seen. One flock of 24 circled the ship several times. The larger flocks of Plovers seen to fly higher than the smaller flocks or just one or two birds which seem to fly right over the water. This

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morning a definite White-necked Petrel was seen. This morning I also saw a Newell's Shearwater. A Kermadec Petrel was seen this afternoon. During the day several Leach's Storm Petrels were seen. During the day several Leach's Storm Petrels were seen. This evening while on a hydro station a Leach's Storm Petrel was seen dabbling at a cigarette but Warren saw a Dark-rumped Petrel this afternoon.

October 8--The sea was calm and the sky was clear this morning with clouding this afternoon. There were few birds today. The wind was about 20 to 25 knots, so the birds really sailed along. Two Shearwater-Petrels were seen today that were fairly large, chunky, dark brown, and they flew different than a Wedgetail. They stayed low to the water and they flopped more often. Golden Plover, Juan Fernandez Petrel, Cook's Petrels, Red-tailed Tropicbird, and others were seen today. I saw one flock today, but it was at a great distance. I think the birds in it were Juan Fernandez Petrel, Cook's Petrels, and possibly Wedgetails.

October 9--The sea was fairly calm and the sky was cloudy with squalls this morning and afternoon. This morning a skua came right by the ship. It may have been sitting on the water because I was looking towards the bow, then I looked away, then looked back towards the bow and there it was, sailing over the bow, and towards the storm. The skua was darker than others I have seen, and the white patches showed up very plainly on the wings. Not much else was seen today except for a large flock I saw this afternoon. The flock contained four Frigates, 120+ Sooty Terns many of which were immature, and many Juan Fernandez Petrel, Cook's Petrel, and some Shearwater-Petrel of which some of them may have been Dark Phase Wedgetails.



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October 10--Once again it is time for the official report of the day.

The avifauna of the area seems to be rather shy, they decline public appearance in any great numbers. The sea was calm and the sky was clear this morning, clouding up this afternoon with squalls. The birds were few and far between today. The Sooty Shearwaters were still heading south. Juan Fernandez Petrel, Cook's Petrels, and Red-tailed Tropicbird were seen today. One flock was seen today by Termite. The Golden Plovers still seem to take an interest in the ship. They usually circle it at least once or twice before they take off.

October 11--The sea was calm and the sky was cloudy or partly cloudy.

This morning many flocks were seen. They were mostly small, but two fairly large ones were seen. They were composed mainly of Sooty Terns, Juan Fernandez Petrel, and Cook's Petrels, and Shearwater-Petrels. The Shearwater-Petrels may have been dark phase Wedgetails, but it was hard to tell. Several of the flocks were very high in the air, including the petrels. In the area where the flocks were seen, there were also schools of flying fish and skipjack. While on a hydro station this morning a Brown Booby came flying by. The Booby made several circles around the ship and then took off. It was an adult. This afternoon many Cook's Petrels were seen. They seemed to be going in no particular direction. Later this afternoon I spotted a log and we made several circles around it. The boys caught Mahi Mahi, Wahoo, and skipjack. The log was covered with barnacles. This evening I saw a Sooty Shearwater that was just kind of swooping around. The bird might have been feeding. The bird also appeared to have a lighter colored spots on the tops of the wings, but it still had the silver spots on the ends of the wings.

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On one of the flocks that I saw today the petrels were flying very high, many of them above the Sooty Terns. At this height their flight is not typical of petrel or shearwater flight. The birds are also difficult to identify except for size differences unless you are close enough to distinguish their characteristics. The Cook's Petrels are also flying different when low to the calm water, they appear to spread their wings out farther and stay more level with the water. Juan Fernandez Petrel also fly more like a Wedgetail when the water is calm.

October 12--The sea was calm and the sky was cloudy this morning clearing this afternoon. This morning Juan Fernandez Petrel and Cook's Petrels were mainly seen. The Sooty Shearwaters were still heading south. Early this morning Warren saw an adult Brown Booby. Later today we ran into areas where there were many Juan Fernandez Petrel and Cook's Petrels just lingering around. Some of them could be called flocks. One of the flocks I saw was staying very low to the water. It was composed of Juan Fernandez Petrel and Cook's Petrels. They seldom get above the horizon. Because of the calm sea the Petrels are flying more like Wedgetails. They stay low to the water and more level. This afternoon a Skua came by the ship. It was lighter in color than the others I saw this trip. Later on Warren also saw a Pale-footed Shearwater and a Solander's petrel. The white bill of the Pale-footed Shearwater showed up very plainly he said.

October 13--The sea was moderate and choppy. The sky was cloudy to partly cloudy. Today we had more sightings than ever before. I added two new species to my life list. They were the Mottled Petrel and the Pale-footed Shearwater. The Mottled Petrel looked similar to a Cook's

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Petrel. It had a lighter back, white on the underwings was narrower, and there was a dark patch on the abdomen. The bird arced up much higher than the Cook's Petrel. One that I saw went up as high as a Sooty Shearwater. The flocks that were seen today were composed mainly of Sooty Terns, Juan Fernandez Petrel, and Cook's Petrels. They were fairly small. The Sooty Shearwaters were still heading south which is to be expected. The Cook's Petrels and Juan Fernandez were flying more normally (or like a petrel should) but that may have been due to the fairly high wind (20 knots). The birds except for the Sooty Shearwaters seemed to be going in about any direction. Most of the Juan Fernandez Petrel seemed to be going in a generally southern direction. I saw one all dark storm petrel this morning. I think it could have been a Sooty Storm Petrel.

October 14, 1964--The sea was moderate and choppy and the sky was partly cloudy all day. The number of sightings went down today. One large flock was seen today. It contained Sooty Terns, A Fairy Tern, Juan Fernandez Petrel, Cook's Petrels, and Shearwater-Petrels. Some of the Shearwater-Petrels were all dark. In one of the smaller flocks seen today there were four Fairy Terns. Fewere Sooty Shearwaters were seen today. Warren saw another Mottled Petrel today. He also saw two all dark Petrels. They flew too much like a Petrel to be called Park Wedgetails. This afternoon I saw a jaeger sp. It was all dark, no barring was seen, the central tail feathers were pointed and fairly long.

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October 15 --Today the sea was rough and the sky cloudy with squalls during the day. The number of birds seen were down from yesterday. Cook's Petrels were the main birds seen. Mottled Petrels were again seen. Several Leach's Storm Petrels were seen during the day. We shook up the boys at the weather bureau today. They had our area as a low pressure area with a low of 1012. We had 1018. They forecast gale winds. They radioed us and ranted and raved about our observations. Everything was correct and they had to change their low pressure area. The Sooty Shearwaters decreased to three and the Juan Fernandez Petrel decreased to four. Warren saw one Newell's

October 16--The sea was moderate, calming this afternoon and evening. The sky was cloudy, more so this evening with rain squalls in the distance. The birds were fewer in numbers today. Cook's Petrels were the main birds seen. Mottled Petrels were also seen. They can be identified at a distance by their high arcing flight and smaller size than a Sooty Shearwater. Warren saw a Herold's Petrel this afternoon. Besides the color pattern he said it was between the size of a Cook's Petrel and a Dark-rumped Petrel. This evening I saw a Leach's Storm Petrel that seemed to be picking at something in the water.

October 17--The sea was calm and the sky partly cloudy. Few birds were seen today, and most of them were Cook's Petrels. A Newell's Shearwater and Mottled Petrel were also seen. Some Leach's Storm Petrels were also seen. No flocks were observed today.

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October 18--The sky was cloudy with almost constant rain until about 1500. The sea was rough with 10-14 foot swells. This morning many Mottled Petrels were seen. In the high wind they really moved along. Their arcs were very high. Leach's Storm Petrels were seen throughout the day. Most of them were headed generally in a southern direction along with the Mottled Petrels. Several Frigates were seen hanging around today. In the high wind they didn't flop much. This afternoon Warren saw another Herald's Petrel. The few Sooty Shearwaters that were seen were leading south as usual.

October 19--The sky was partly cloudy all day. The sea was rough with swells up to 23 feet high. Few birds were seen today until we made the turn going south. A small traveling flock composed of Fairy Terns, Wedgetails, Juan Fernandez Petrel, Dark-rumped Petrel and Cook's were seen. Wedgetails were seen today for the first time in quite a while. Several Frigates were again seen. This afternoon a Booby sp. was seen by Warren, he also saw an all dark Storm Petrel. Because of the high seas the birds were difficult to see and follow in many cases. Very few Sooty Shearwaters were seen.