PRELIMINARY

AT-SEA SURVEY REPORT

SIC 14
(NON-GRID)

by

Richard S. Crossin

SIC 14 PRELIMINARY REPORT AT-SEA SURVEY

5 July to 26 August 1966

NON-GRID ONLY

This report covers the observations and collections made at sea by POBSP personnel on the Southern Island Cruise # 14 during the period 5 July through 26 August 1966. During this period 305.89 hours of diurnal observations and 3052 miles were covered. A total of 6143 birds of 34 species were recorded and 39 birds representing 15 species were collected (TABLES 1 & 3).

The Smithsonian POBSP team consisted of Richard Crossin (Biologist in Charge), Roger Clapp, Kenneth Balcomb, Walter Bulmer, David Hoff, Richard Chandler, Larry Huber, David Pearson, and Ralph Schreiber (1st half of the cruise). The SIC cruise was made aboard the U.S.N.S. SHEARWATER (T-AG 177). Good cooperation was received from the officers and crew members.

The SIC 14 cruise track differed slightly from the three previous two-month trips. During SIC cruises 9, 11, and 13 the cruises extended from Oahu to the Southern Grid, through the Phoenix Islands to Samoa and return to the Southern Grid, thence to one of the Line Islands and return to Oahu. During the present cruise the ship proceded directly to the Line Islands (Jarvis) after Samoa and thence west to the Southern Grid and return to Oahu. The normal route was changed in order to arrive at Howland Island during dark of the moon for the purpose of mass banding and

streamering Sooty Terns. Despite the slight variation in routing, for the purposes of comparing the avifauna, the present cruise has been divided into three sections comparable to that followed in the SIC 9, 11, and 13 reports as follows:

AREA A. Honolulu to Southern Grid (Howland-Baker), 5-11 July 1966.

AREA B. Southern Grid to McKean and Gardner Islands, Samoa, Jarvis Island and return to Southern Grid, 23 July to 14 August 1966.

AREA C. Southern Grid to Oahu, 20-26 August 1966.

AREA A. Total Birds	SIC 9	SIC 11	SIC 13	SIC 14
	19,542	2512	3597	2000

The lowest number of birds for the last four SIC cruises was recorded during the present cruise. This is a direct result of not routing through Johnston Atoll during the present cruise as has been done on all three previous cruises. Peak bird days were noted on 5 July from Oahu southwest and on 9 July between 10 and 8 degrees north. Large numbers of birds, usually in feeding flocks with tuna schools present, have been sighted at various points between 3° and 10° N on practically all cruises. During SIC 13, for example, huge flocks were noted on 4 April between 6° and 7°-40" N. This productive area, apparently the result of current upwellings, should be investigated further when a suitable skiff for at-sea collecting has been obtained. The presence of large numbers of dark-phase Wedge-tailed Shearwaters among the mixed feeding flocks found in the area indicate that the birds are likely from the Phoenix and perhaps the Line Islands, but collecting large numbers, especially Sooty Terns, should produce some positive band recoveries.

AREA B. Total Birds. SIC 9 SIC 11 SIC 13 SIC 14
9059 2801 3556 3460

This section of the cruise is not exactly comparable with previous cruises because Jarvis Island in the Line Islands was visited after Samoa instead of a direct return from Samoa to the Southern Grid through the Phoenix Islands. Two peak bird days were on 7 and 10 August upon approach to and departure from Jarvis Island. On these two days nearly 64% of total birds recorded during the 15 days of at sea observations in this area were sighted. Approximately 89% of the birds seen on these two peak days were Sooty Terns, undoubtedly from the large breeding colony on Jarvis Island. Bird numbers were unusually low through the Phoenix Islands and north of Samoa.

AREA C. Total Birds. SIC 9 SIC 11 SIC 13 SIC 14
6009 2483 10049 683

Shearwater-Petrels were dominant throughout Area C, accounting for over 63% of total birds. Sooty Terns made up 32% of total birds. Roughly the same percentages of both groups were recorded during the first portion of the cruise over this track from 5-11 July 1966. Total bird numbers during August were only 38% of that recorded earlier in July. The usual heavy concentrations of feeding flocks were not encountered during the return trip. Moderate numbers of Sooty Terns and dark-phase Wedge-tailed Shearwaters were noted on 20 August one day north of the Southern Grid ($3^{0}30''$ to 5^{o}N). The area through 8^{o}-10^{o}N where large numbers of dark-phase Wedgetailed Shearwaters were encountered in July was practically devoid of birds on the return trip in August. It is possible, however, to pass completely through a high density area during the night. The usual dominant species (Sooty Terns and Wedge-tailed Shearwaters) were relatively low in number, but a great variety of Petrels was encountered.

SPECIES ACCOUNTS

Black-browed Albatross A=0 B=2 C=0

Two albatrosses tentatively identified to this species were sighted on 7 August about 70 miles SW of Jarvis Island. The birds were close enough for good observation, but they showed no interest in the ship.

Wedge-tailed Shearwater A=838 B=8 C=167

The vast majority of southern hemisphere birds have moved north from the breeding grounds. Large numbers of these dark-phase birds were noted on 9 July between 8°-10° N. Light-phase birds were abundant just south of Oahu in July, but the ratio changed rapidly to dark-phase and practically all birds noted south of 14°N were dark-phase. Only a relatively few individuals were recorded on the return trip between 6° and 17°N, all dark. On 21 August some concentrations of light phase birds were noted about 17°-18°n. Six non-grid birds of this species were collected during the cruise.

Sooty/Slenderbilled Shearwaters A=4 B=8 C=11

The few individuals seen of these species are apparently early southward migrants. Numbers can be expected to increase greatly during September if the 1965 migration period was typical. Individuals of both species were tentatively identified during the present cruise. Most, however, were considered to be Slender-billed Shearwaters.

Christmas Island Shearwaters A = 2 B = 0 C= 0

Low numbers of this species have been recorded for the second consecutive trip. During the September-October 1965 and January-February 1966 cruises large concentrations were noted between 5° and 6° N.

Newell's Shearwater A= 19 B= 0 C= 7

This species was irregularly distributed during both the southward and return portions of the cruise between Oahu and the Southern Grid. Concentrations (12) were recorded on 6 July between 19°-40" and 18°N and a lesser number (6) on 10 July between 5°and 7°n. On the return trip 6 were recorded on 25 August between 17° and 18°-4° N. Moderate concentrations have been noted on previous SIC cruises between 5°and 6° N. This area apparently serves as a "wintering" area.

Pale-footed Shearwater A= 0 B= 0 C= 1

A single individual was noted on 20 August just north of the Southern Grid. A few birds, invariably singles, are noted each trip. Although low in numbers wide distribution throughout the entire at-sea area has been recorded.

Juan Fernandez Petrel	A=56	B=2	C=36
White-necked Petrel	A= 8	B=0	C= 0
Pterodroma externa	A= 0	B=2	C=73

White-necked Petrels in combination of both races were common between Oahu and the Southern Grid. Only a few sightings were recorded south of the grid. Similar distribution, but much lower numbers were recorded during April-May 1966. Collected specimens of White-necked Petrels during the present cruise had much of the dorsal neck feathers tipped with dark, thus obscuring much of the bright white neck area. This result of fresh plumage hinders separation of the two races in the field and for this reason it was considered best to refer to any doubtful birds as Pterodroma externa. A total of six specimens was collected.

Kermadec Petrel A=0 B=0 C=1

A single individual was sighted on 20 August one day north of the Southern Grid. This species is consistently recorded in low numbers, but with wide distribution.

Phoenix Island/Tahitian Petrel A=2 B=12 C=10

Practically all sightings of these species were south of 5°N. Individuals of these species have usually been recorded in lower numbers except for cruises near Christmas Island where a large breeding colony of Phoenix Island Petrels resides. At least three Phoenix Island Petrels were noted on Howland during the present cruise and one was collected. It had been tentatively agreed upon by most field personnel

that separation of Phoenix Island Petrels from Tahitian Petrels might be possible at close range in that Tahitian Petrels present a brown aspect of the dark plumage, whereas Phoenix Island Petrels are dark [redacted] coal. However, a Phoenix Island Petrel collected during early morning light showed distinctly brown lying in the water as the ship neared for the pickup. Thus the futility of attempting to separate these two in the field. A total of 3 Phoenix Island Petrels were collected during at-sea operations.

Dark-rumped Petrel A=3 B=0 C=0

Three sightings were recorded on 6 July one day southwest of Oahu. At sea records of this species are invariably of low numbers except near the breeding islands of the main Hawaiians.

Solander's Petrel A=1 B=0 C=0

Good observations of a single individual were obtained on 9 July. Sight records of this species have been taken irregularly on the project, but no specimens have as yet been collected by the POBSP.

Herold's Petrel A=0 B=0 C=2

Two individuals were observed under good viewing conditions on 21 August north of the Southern Grid. This species has been recorded irregularly in low numbers, but may be somewhat more abundant than positive sightings indicate because of the individual variation exhibited in the species creating confusion with other similar forms.

Cook's Petrel A=0 B=33 C=2

The majority of birds were seen between Swain's Island and Jarvis Island during the period 4-6 August. Most sightings of this species have been recorded south of the equator on previous SIC cruises. With the aid of collected specimens, personnel on the present cruise were able to verify certain field characters which allow fairly certain field separation of this species from similar small Pterodroma. Two specimens were collected.

Bonin Island Petrel	A= 1	B=0	C= 1
Black-winged Petrel	A=83	B=2	C=33
Pterodroma hypoleuca	A=18	B=0	C= 8

The few Bonin Island Petrels were recorded just south of Oahu. Black-winged Petrels were regularly recorded throughout the entire at-sea between Oahu and the Southern Grid. The same distribution was noted during April-May 1966, but the species was absent from the area during the January-March 1966 cruise. The majority of Pterodroma hypoleuca unidentified to race were likely referrable to Black-Winged Petrels, i.e., birds not viewed in close enough range to determine racial field characters were recorded only as P. hypoleuca. Three specimens of Black-winged Petrels were collected.

Bulwer's Petrel A=10 B=2 C=31

Scattered sightings were recorded throughout the at-sea area with unusually low numbers south of the equator. The only concentration was noted on 26 August, the day of arrival in Honolulu. During April-May these petrels were abundant from the Line Islands to Oahu.

White-throated Storm Petrel A=0 B=4 C=0

Three of the four sightings were recorded on 10 August, the first day west of Jarvis Island. One individual came aboard ship offshore Jarvis. A small breeding colony may exist on that island. The only other sighting was near McKean Island where a few have usually been recorded on previous trips.

Leach's Storm Petrel A=0 B=2 C=0
white-rumped storm petrel A=5 B=34 C=6

Storm petrel numbers were the lowest recorded on SIC at-sea since last September. This would be expected since the dominant species (Leach's) would only be represented by a few non-breeding birds during July-August. Practically all birds on the present cruise were recorded during the period 10-13 August along the equator from Jarvis to the Southern Grid. The one Leach's Storm Petrel collected was an immature suggesting that summer birds are likely subadults passing the prebreeding time in the "wintering" area. At least one good sighting occurred of a bird tentatively identified as a White-bellied Storm Petrel.

Red-tailed Tropicbird A=15 B=40 C= 8

Normal distribution of single scattered sightings was recorded over the at-sea except for concentrations upon approach to and departure from Jarvis Island where a very large breeding population exists. A total of three specimens was collected during the survey.

White-tailed Tropicbird A=10 B=16 C=3

Approximately the same distribution pattern as all previous SIC surveys was noted again this cruise, i.e., a few scattered individuals throughout the at-sea with higher numbers near Samoa and the Hawaiin Islands. Both these areas serve as breeding grounds for the species. Two specimens were collected.

Blue-faced Booby A=0 B=102 C=0

Practically all sightings (93%) were recorded on 7 and 10 August upon approach to and departure from Jarvis Island. Jarvis probably retains one of the largest breeding colonies throughout the area of interest.

Brown Booby A=0 B=6 C=1

This species is usually recorded only near islands. During the present cruise all six sightings in area B were made on 7 and 10 August approaching and leaving Jarvis Island. None were observed just north of Samoa where the species has been encountered on previous SIC cruises.

Red-footed Booby A=4 B=140 C=4

Approximately 70% of the birds in area B were recorded on 2 August throughout the day of departure from Samoa. The majority of the rest were noted near Jarvis Island on 10 August.

Great Frigatebird	A=1	B= 8	C=1
Lesser Frigatebird	A=0	B=30	C=0
frigatebird species	A=2	B=54	C=0

The majority of birds identified as Lesser Frigatebirds was seen near Mckean Island on 23 July. An enormous breeding colony is presently based on that island. Most of the unidentified frigatebirds were recorded near Jarvis Island and are likely a combination of the two species, both of which are breeding there in moderate numbers. Three Lesser Frigatebirds were collected during the cruise.

Golden Plover A=0 B=0 C=6

Two birds each were recorded on 20, 22, and 24 August enroute from the Southern Grid to Oahu. These are in all likelyhood early southward migrating individuals from the northern breeding grounds. One specimen was collected.

Ruddy Turnstone A=0 B=0 C=3

As with the previous species, the only sightings were recorded between the Southern Grid and Oahu on the return portion of the cruise.These likewise probably represent early southward migrants from the breeding grounds.

Bristle-thighed Curlew A=0 B=4 C=0

One bird was sighted south of McKean Island on 25 July and three others on 11 August one day west of Jarvis. The latter sightings were probably southward migrants since this species apparently exhibits little interisland movement except during migration.

Pomarine Jaeger A=0 B=0 C=1

A single individual was seen on 22 August between Oahu and the Southern Grid. One other unidentified jaeger was recorded on the same day.

Sooty Tern A=563 B=2543 C=215

The majority of birds in areas A and C were recorded just south of Oahu on 5 July and 25 August. Roughly 80% of the birds in area B were recorded on 7 and 10 August upon approach to and departure from Jarvis Island where a large colony (ca. 500,000) is presently in the late stages of a breeding cycle. Density was unusually low through the Phoenix Islands during the present cruise. Throughout the total at-sea Sooty Terns were the dominent species and accounted for about 54% of all birds seen. Exactly the same percentage of total birds was referrable to Sooty Terns during the April-May 1966 SIC cruise, but total number of all birds were nearly three times greater. Five Sooty Terns were collected during the present cruise.

Gray-backed Tern A=0 B=9 C=0

All 9 birds were recorded near McKean Island on 25 July. The large colony was engaged in a breeding cycle on that island during July. Numbers are generally much higher with more widespread distribution throughout the Phoenix Islands.

Common Noddy A=50 B=212 C=0

All sightings occurred near major breeding islands: Samoa and Oahu. Similar distribution has consistently been noted on all previous cruises.

White-capped (Hawaiian) Noddy A=1 B=30 C=0

This species exhibits the same type of at-sea distribution as Common Noddies. The single sighting in area A was recorded just south of Oahu; all 30 birds in area B were seen in one flock north of Samoa on 2 August.

Blue-gray Noddy A=0 B=5 C=0

All five birds were seen close to McKean Island on 23 July. The large population on McKean was in the midst of a breeding cycle at that time. Like the other two noddies, at-sea distribution has been consistently confined to within a few miles of a breeding island. One specimen was collected near McKean.

White (Fairy) Tern A=10 B=110 C=0

The majority of birds were recorded on 27 July and 2 August upon approach to and departure from Samoa. At-sea distribution is much more widespread than the noddies. Scattered sightings were recorded throughout the entire route from Oahu to the Southern Grid.

An unusual flock composed of 29 Fairy Terns, 44 Sooty Terns, one Common Noddy and two Sooty/Slender-billed Shearwaters was observed on 6 August about 210 miles southwest of Jarvis Island.

Table 1. Summary of SIC Non-Grid Pelagic Observations, 5 July to 26 August 1966.

A. Oahu to Southern Grid (Howland-Baker) 5-11 July 1966.

DIURNAL

Date	No. Miles	No. Hours	No. Birds	No. Species
5 July	26	2.33	608	7
6 July	132	13.30	224	12
7 July	136	13.12	141	8
8 July	126	12.95	238	6
9 July	138	12.82	610	10
10 July	124	12.53	118	12
11 July	128	12.40	61	8
TOTALS	810	79.45	2000	19 (9.0/day)

B. Southern Grid to Samoa and return via Jarvis Island 23 July- 13 August 1966.

23 July	38	3.95	64	9
25 July	72	5.58	127	9
26 July	63	5.40	4	2
27 July	118	11.68	142	7
28 July	107	11.60	19	4
2 August	84	7.51	380	5
3 August	73	6.30	79	6
4 August	116	11.68	11	2
5 August	104	11.30	16	6
6 August	98	11.91	221	9
7 August	87	8.60	1395	12
10 August	111	9.93	804	12
11 August	116	12.13	121	7
12 August	136	12.23	63	8
13 August	125	12.27	14	3
TOTALS	1448	142.07	3460	24 (6.7/day)

Table 1 (continued). Summary of SIC Non-Grid Pelagic Observations, 5 July to 26 August 1966.

C. Southern Grid to Oahu, 20-26 August 1966.

Date	No. Miles	No. Hours	No. Birds	No. Species
20 August	123	12.15	220	14
21 August	122	12.20	63	10
22 August	122	12.27	39	11
23 August	109	12.38	49	7
24 August	113	12.47	61	9
25 August	113	12.72	211	9
26 August	92	10.18	40	6
TOTALS	794	84.37	683	21 (9.4/day)
GRAND TOTAL	3052	305.89	6143	34

Table 2. Diurnal density of Species Groups (Non-Grid) SIC 14, 5 July to 26 August 1966.

Species Group	No. Birds	Birds/Sq. Mile	% Total Birds
Albatrosses	2	.001	.03
Shearwater-Petrel	1625	.266	26.37
Storm Petrel	58	.019	.95
Terns	3754	.411	61.11
Tropicbirds	97	.016	1.57
Boobies	262	.044	4.36
Frigatebirds	96	.008	1.56
Shorebirds	13	.004	.21
Jaegers	2	.001	.03
Miscellaneous	234	.038	3.81
TOTALS	6143	.804	100.00

Table 3. Diurnal abundance of species At-Sea (Non-Grid)
SIC 14,5 July-26 August 1966.

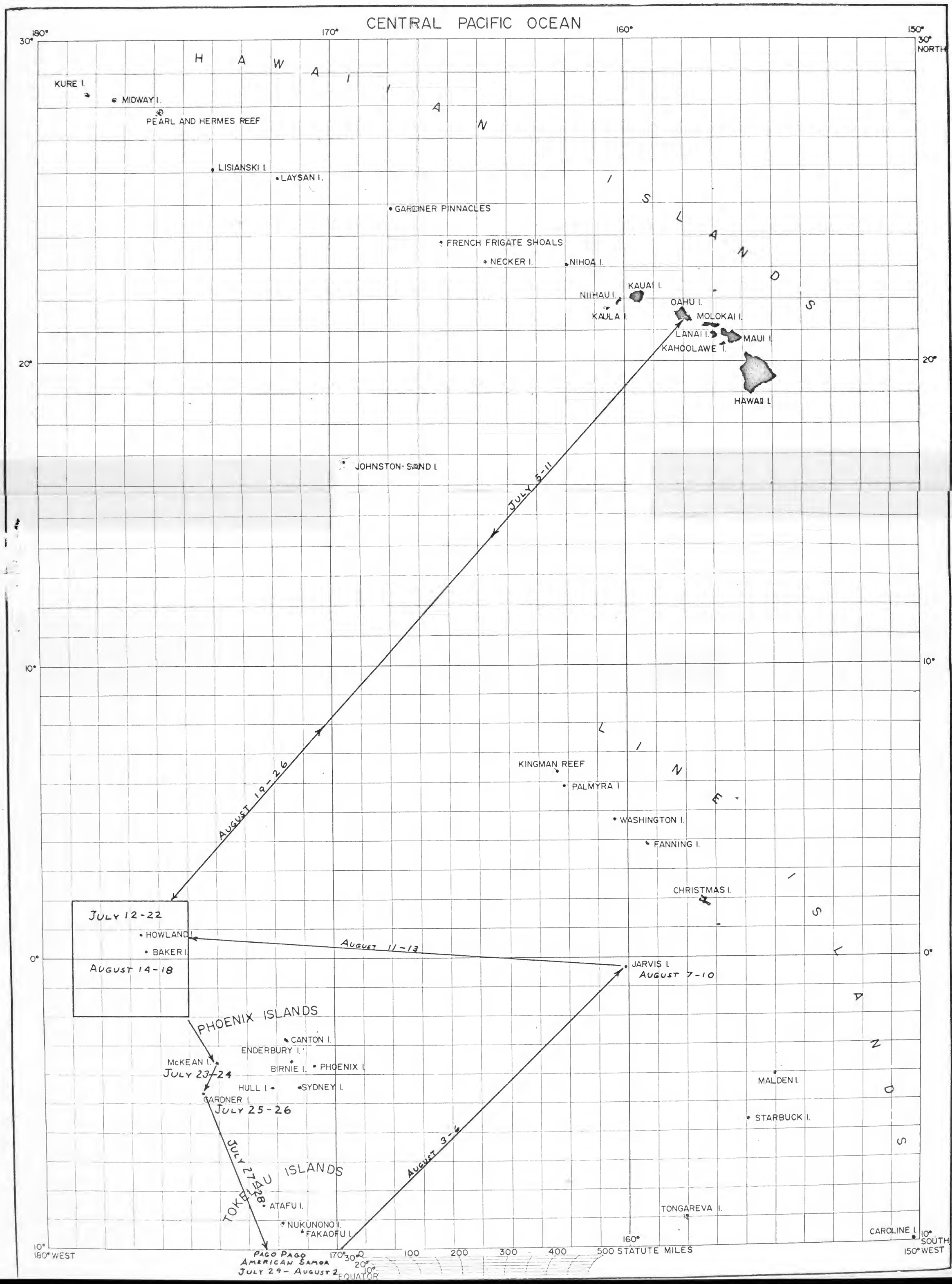
Species	No. Birds	Birds/Linear Mile	Number Collected	Status over April-May
Black-browed Albatross	2	Less than .001	0	+
Wedge-tailed Shear.	1013	.332	6	-
Sooty/Slender-billed Shear.	17	.006	0	-
Christmas Island Shear.	2	Less than .001	0	-
Newell's Shearwater	26	.009	1	-
Pale-footed Shearwater	1	Less than .001	0	-
Juan Fernandez Petrel	94	.031	0	+
White-necked Petrel	8	.003	0	-
Pterodroma externa	75	.025	6	+
Kermadec Petrel	1	Less than .001	0	-
Phoenix I./Tahitian Petrel	24	.008	3(*P.alba*)	+
Dark-rumped Petrel	3	Less than .001	0	+
Solander's Petrel	1	" " .001	0	+
Herald's Petrel	2	" " .001	0	+
Cook's Petrel	35	.011	2	+
Bonin Island Petrel	2	Less than .001	0	-
Black-winged Petrel	118	.039	3	+
Pterodroma hypoleuca	26	.009	0	-
Pterodroma species	85	.028	0	+
Bulwer's Petrel	43	.014	0	-
Shearwater-Petrel	49	.016	0	-
White-throated Storm Petrel	4	.001	1	+
Leach's Storm Petrel	2	Less than .001	1	—
white-rumped storm petrel	45	.015	0	-
storm petrel species	7	.002	0	+
Red-tailed Tropicbird	63	.021	3	+
White-tailed Tropicbird	29	.010	2	-
tropicbird species	5	.002	0	+
Blue-faced Booby	102	.033	0	+
Brown Booby	7	.002	0	-
Red-footed Booby	148	.048	0	-
booby species	5	.002	0	+
Great Frigatebird	10	.003	0	-
Lesser Frigatebird	30	.010	3	+
frigatebird species	56	.018	0	-
Golden Plover	6	.002	1	+
Ruddy Turnstone	3	Less than .001	0	-
Bristle-thighed Curlew	4	.001	0	-
Pomarine Jaeger	1	Less than .001	0	-
jaeger species	1	" " .001	0	-
Sooty Tern	3321	1.088	5	-
Grey-backed Tern	9	.003	0	-
Common Noddy	262	.086	0	-
White-capped (Hawaiin) Noddy	31	.010	0	-
Blue-gray Noddy	5	.002	1	-
White (Fairy) Tern	120	.039	1	-
tern species	6	.002	0	-
bird species	234	.077	0	±
TOTALS	6143	2.013	39	-

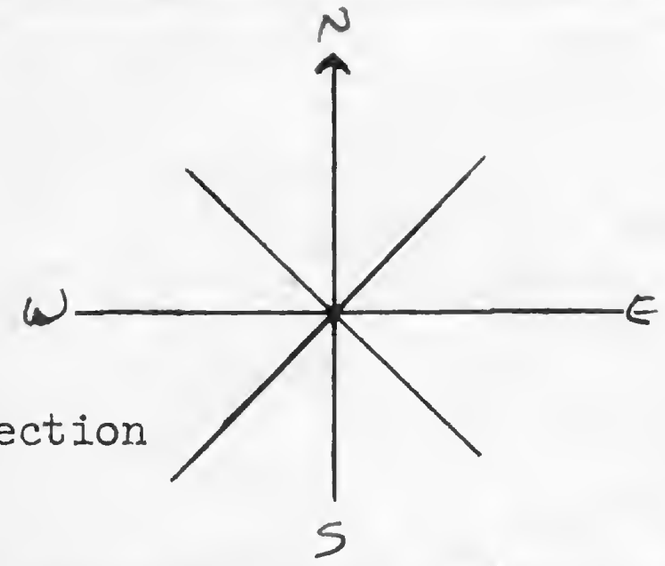
Table 4. SIC 14 At-Sea painted or color-tagged birds observed, July-August 1966.*

Species	Date	Color-tag	Latitude	Longitude	Miles from Origin
Blue-faced Booby ad.	10 August	Red paint (applied on Jarvis)	00°-22"S	160°-16"W	14
Blue-faced Booby ad.	10 August	Red paint (applied on Jarvis)	00°-19"S	160°-57"W	55

*for other streamer sightings of SIC 14, see Grid reports for July and August 1966.

Figure 1. SIC 14 Cruise Track 5 July to 26 August 1966.





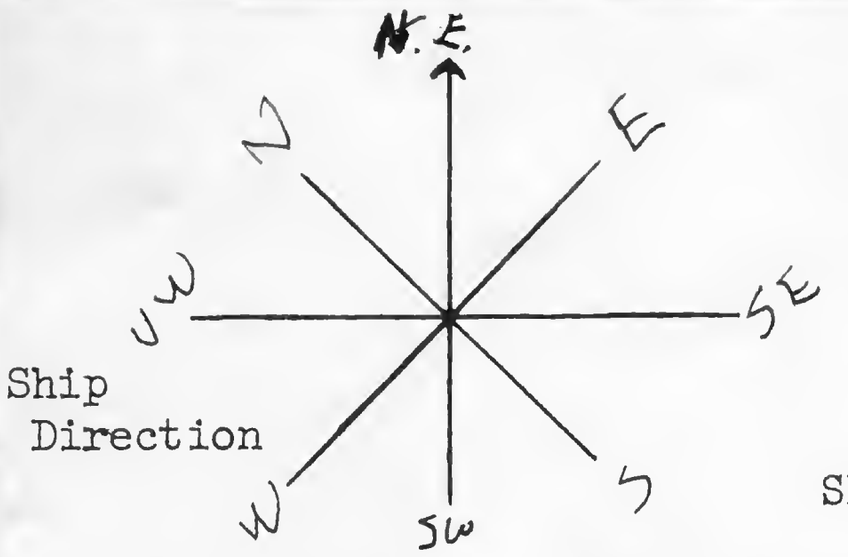
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
BULMER & BALCOMB
CHANDLER & HOFF

Date 2 AUG. 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1045					commence watch 5 mi N Samoa-Tutuila I.
	1047	Fairy tern	1	NE		
	1115	RFB	1	E		imm.
	1147	"	35			adult & imm - int [illegible] phase
FF		Fairy tern	3			
		WTTB	5			diving into water
		Common noddy	30			
	1158	RFB	1	S		dk. ph.
FF	1210	C. NODDY	60			
		RFB	16			dk ph.
		RFB	3			int. ph.
		FAIRY TERN	3			
	1343	C. NODDY	1	E		
	1353	Fairytern	3	S		
FF	1415.	RFB	35			most were dark phase
		C. Noddy	120			
		Haw. Noddy	30			
		Fairy Tern	30			
	1511	WTTB	1	N		ad.
	1619	RFB	1	S		int. phase —
	1758	WTTB	1			actively feeding.
	1816	Sunset - close observations.				



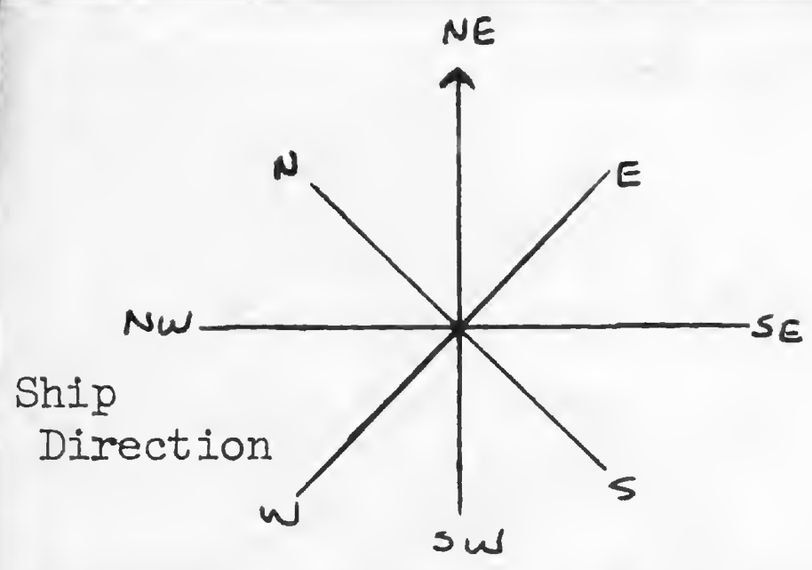
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Huber
Clapp i Pearson
Cruzero 1630 — 55

Date Aug 3, 1966
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1200	— LEAVE		SUWAINS Island.		
	1242	Frigate sp.	1	N		flying into squall
	1248	L. Frigate	1	NW		Ad ♂ in squall
	1302	RTTB	1	E		in squall
SF	1308	RFB	1	ele		all dark imm. } at edge of rain squall
		Sooty Tern	19	eee		ad. }
C	1508	WTTB	1	~~SE~~	2383	coll. R.B.e
FF	1525	Sooty Tern	13	ele		ad.
		WTTB	1	ele		
FF	1535	Sooty Tern	17	eee		ad } rain Squalls
		WTTB	1	ele		
C	1547	Cook's Petrel	1	SW		- D. Pearson
FF	1650	Sooty tern	21	W		feeding lightly, adults.
	1704	" "	1	S		ad. —
	1818					Sunset - close observations



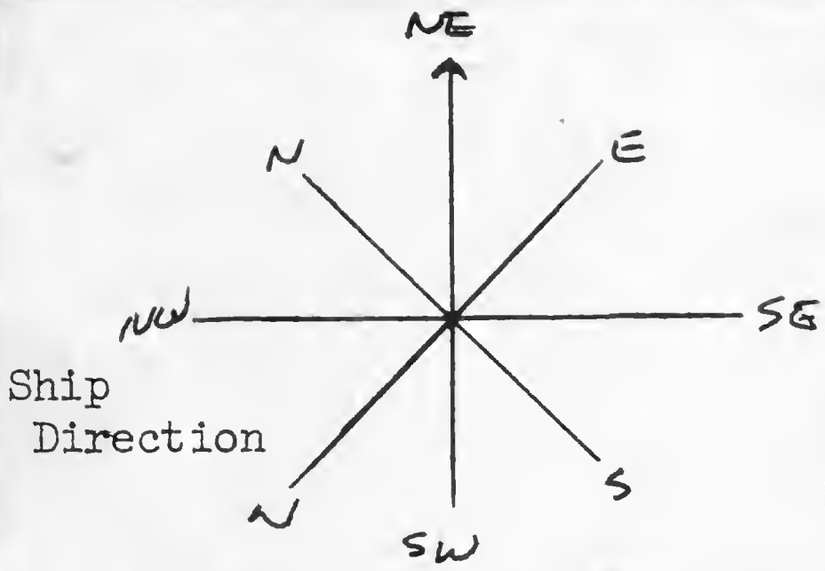
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
HUBER & BALCOMB
Butman & Pearson

Date 4 AUG., 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0629					SUNRISE. COMMENCE WATCH
0806	Pterodroma sp.	1	SE		small
~~0830~~	~~Ship sp.~~	~~1~~	SE		~~must be lost~~
0911	Cook's Petrel	1	NW		
0935	Cook's Petrel	1	SW		
1220	Pterodroma sp.	1	SW		could have been Cook's - dark above.
1256	Fairy tern	1	@		feeding
1532	Cooks Petrel	1	NE		
1610	Pterodroma sp.	1	NE		small
1624	" "	1	E		"
1629	" "	1	SE		small, white underwing (far out)
1632	" "	1	NE		small
1710	COOKS PETREL	1	NE		sitting on H2O
1810	Sunset — close observations				

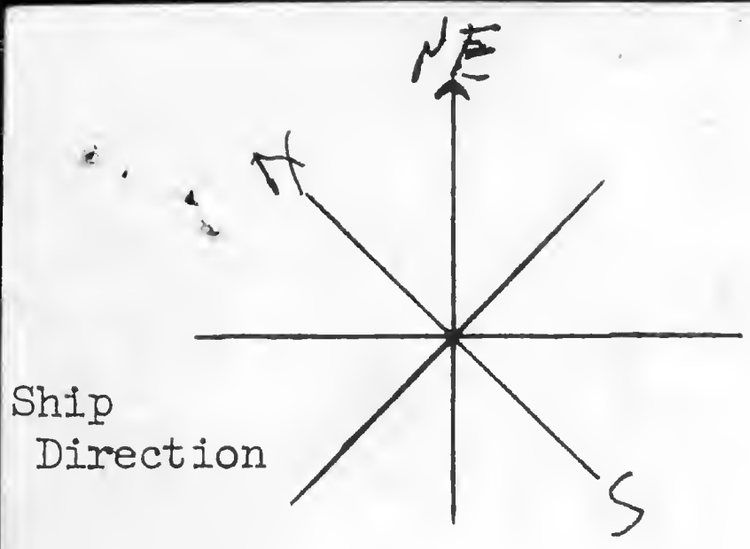


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
BULMER BALCOMB
Huber - Pearson
Crossin
Hoff - Huber
Pearson

Date 5 AUG. 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0619					Sunrise, commence watch.
0653	Cook's Petrel	1	NW		
0720	Sooty Tern	2	NE		
"	Fairy Tern	1	NE		
"	Cook's Petrel	1	NE		
0738	WTTB	1			followed ship, then dove into water
0740	Cook's Petrel	1	N.W		
0742	P/T	1	NW		
0817	Cook's Petrel	1	NW		Flushed From H2O
0900	" "	1	NE		
1042					tight school of tuna jumping - about 150-200 seen, but could have been many more - sea very rough - no birds about.
1140	Cooks Petrel	1	SE		
1418	Cook's Petrel	1	NW		coll. PBC # 2385
1600	WTTB	1	ele		following ship ~~(lower #6kp)~~ Shot out of the air but flew off again as ship neared for pickup.
1635	Cook's Pet.	1	N		
1732	Sheartail	1	ele		
1750	G. Frigate	1	ele		imm. unusually marked underside 2 white areas
1802					sunset case observations.



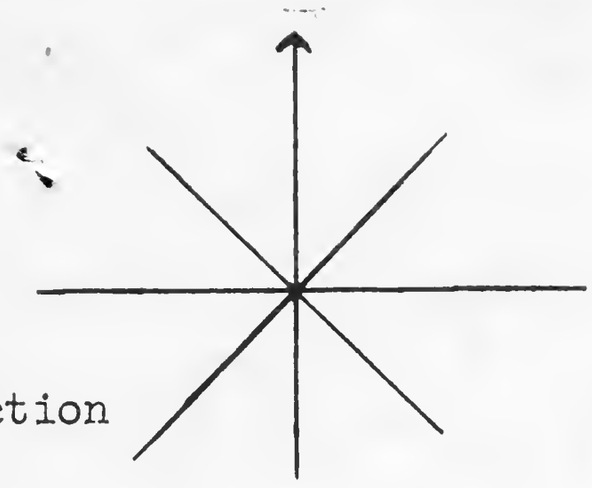
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Bulmer + Chandler
CLAPP & BACCOMB

Date 6 Aug 49
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0601					Sunrise
FF	0707	Sooty Tern	5	ese		ad Took Flying Fish.
		~~J~~ F. P	1	e		
		Cook's Petrel	4	ese		
FF	0709	SOOTY TERN	70	ese		ad
	0730	Tahit. Petrel	1	SW		definily Brown
TF	0838	Frigate sp	1			Frig seen diving once
		Sooty tern	25	NE		ad's.
	0903	Pterodroma	1	NE		cooks size
FF	0915	Sootytern	9			dispersed and P.I.P started following ship and was collected. Fairy ~~left~~ left sooty terns
		Fairy tern	1			
C		Phoenix Island Petrel	1		2386	
	0935	Bulwer's P	1	ese		
	0940	Pterodroma sp	1	SE		appeared to be Bonin Island, backed the distinct dark W on the back of Cook's, dark head O.K.
TF	1025	Sooty tern	8	E		adult captain says he saw two fairy? terns.
	1045	G. Frigate	1			adult ♂
		Sooty Tern	1			"
	1110	Cook's petrel	2	NE		
	1130	" "	2			
	1138	Phoenix I. pet	1			very close to boat
	1155	cook's pet.	1			
	1205	"	1			sitting on water
	1225	Pterodroma sp	1	NW		
	1250	Cook's pet.	1	NW		
	1530	Cook's petrel	1	SW		
FF	1540	Fairy Tern	29	ese		Feeding on flying fish
		Sooty Tern	44			ad.
		Sooty/Sladeteri	2			silverish wing linings
		Common Noddy	1			
	1622	Cooks Petrel	1	N		
	1659	Pterodroma sp	1	N		
C	1730	Fairy Tern	1	e		actively feeding coll. RBC. # 2387
	~~1755~~					Sunset

SI-MNH-958-e
Rev. 5-66



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

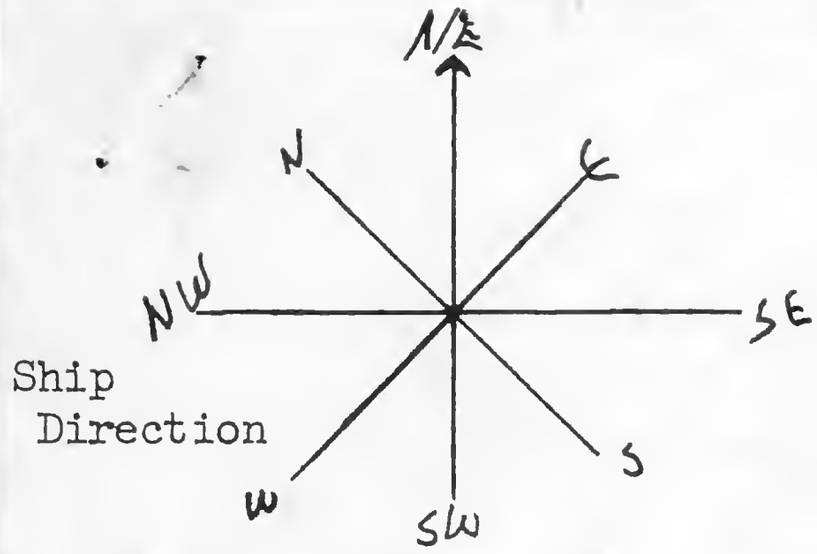
Clapp

Date 6 Aug

Pg.# pg 2

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1744	Sooty Tern	1	NE		adult
1756	Sunset				

SI-MNH-958-e
Rev. 5-66



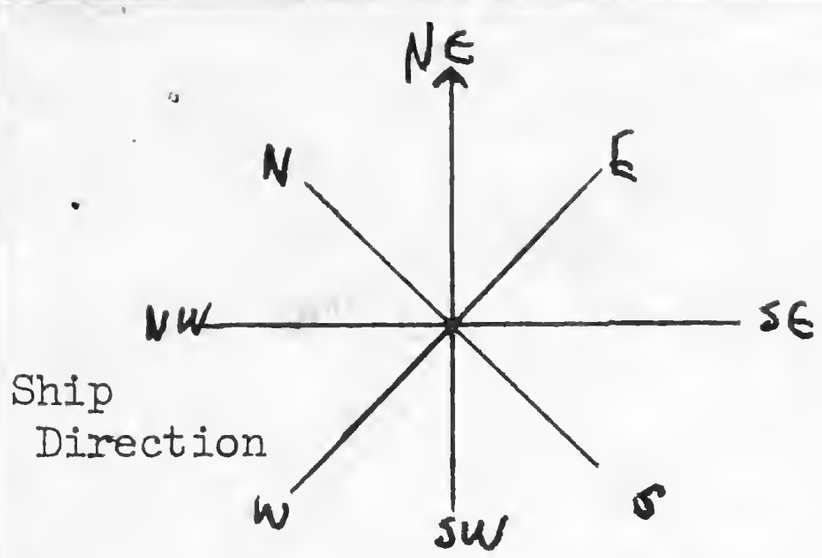
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Pearson & Hoff
Balcomb & Chandler

Date 1 August 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0549					sunrise - cloudy - rough seas
0555	Ph. Is. Pet.	2	SW		following ship for few minutes
0610	Cook's Pet	1	S		
0630	Black-browed Albatross	2	NW		Flew close to fantail of ship and then generally continued on in N.W. direction. Both birds banked frequently and sharply. Noticably smaller than Layson albat. White on rump, head, and underparts of body. Underwing all dark with narrow line of white running most of length of wing. Upperwing and across back - dark brown or black. Bill color not seen. Birds observed for only 2 or 3 minutes, but were definitely not boobies. Probably immature birds.
0635	Phoenix/ Tahitian	1	S		
0655	Pterodroma externa	2	N		
0801	RTTB	1	C		Following ship
0812	Sooty tern	2	C		ad. alt
TF 0827	" "	5	C		" started heading E at 0832
0828	Shear-pet	1	E		into sun
TF 0843	SOOTY TERN	33	NE		ads NO BIS OBS.
0845	" "	1	CC		ad. inspected the vessel (0845)
RTTB					
0852	RTTB	1	NE		following above ship NOT BANDED
0853	SOOTY TERN	1	W		ad.
0855	" "	4	CC		ad. inspected ship; calling (special code #9)
0858	WRSP	2	CC		ROMP PATCH BROAD HARCOURTS SP OR NEXT MOST SIM SP.
TF 0900	SOOTY TERN	5	CCC		ad. circling ship
0915	" "	1	CC		ad circled ship
0930	" "	4	NE		ads.
0936	GR. FRIG.	1	C		ad ♀
1002	SOOTY TERN	2	NW		ad.
1014	RTTB	2	NE		following
1040	BFB	2	NE		ad.

SI-MNH-958-e
Rev. 5-66

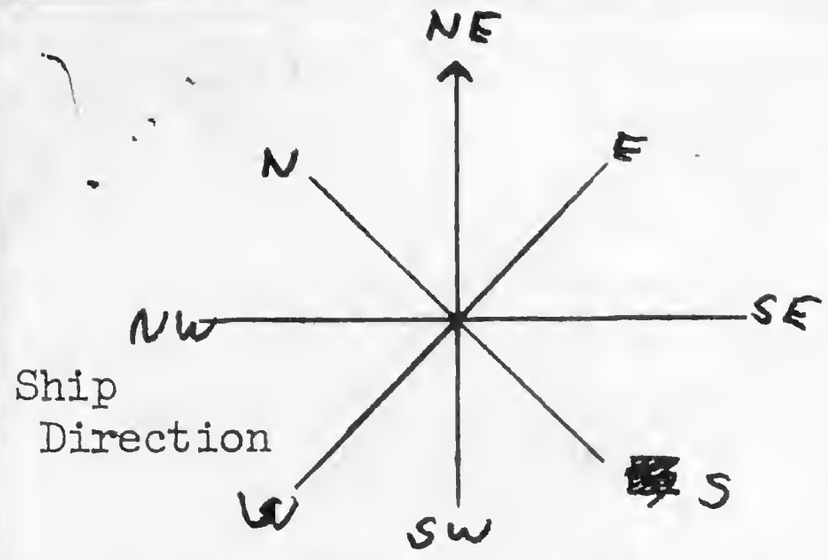


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Pearson
Clapp

Date 7 Aug. 1966
Pg.# 2

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1050	BFB	1	NE	—	Ad.
	1140	Sooty Tern	1	W	—	Ad
	1143	P.I/Tah. Petrel	1	NW		
	1146	Sooty Tern				
	1209	BFB	1	W	—	Ad. circling ship
			2	NW	—	adult
FF	1218	Sooty Tern	75	SE	—	ad
FF		Frigate sp	5	SE	—	at least 1 male hessar Frigate
		RTTB	1	SE	—	over feeding flock
		RFB	3	SE	—	adult intermediate phase
	1225	RTTB	4	E	—	following ship
	1235	Frigatesp.	2	⊙		
	1235	RTTB	2	NE	—	following ship
FF	1246	Sooty tern	50	⊙	—	ad. swirling rapidly
		BFB	1	E	—	ad
	1252	BFB	3	E	—	"
	1254	Sooty tern	4	SE	—	ad
		" "	3	"	—	"
		" "	2	"	—	"
	1257	Sooty tern	2	E	—	"
TF	1300	" "	9	W	—	"
	1305	" "	1	NE	—	"
	1305	BFB	1	NE	—	"
FF	1307	Sooty tern	80 ± 5	⊙	—	" feeding.
	1307	BFB	1	W	—	"
	1315	Frigate sp?	2	⊙		
	1316	RTTB	3	E	—	following ship
	1316	Sooty tern	1	E	—	ad.
TF	1327	" "	5	NE	—	ad.
	1329	" "	2	SW	—	ad.
TF	1330	"	6	NE	—	ad.
	1335	WEDGETAIL	1	NE	—	light ph
	1335	"	1	NE	—	dark ph
	1336	RTTB	1	NE		
TF	1337	SOOTY TERN	20	NE	—	ads
TF	1338	BFB	6	N	—	ads.
	1338	SOOTY TERN	1	SW	—	ad.

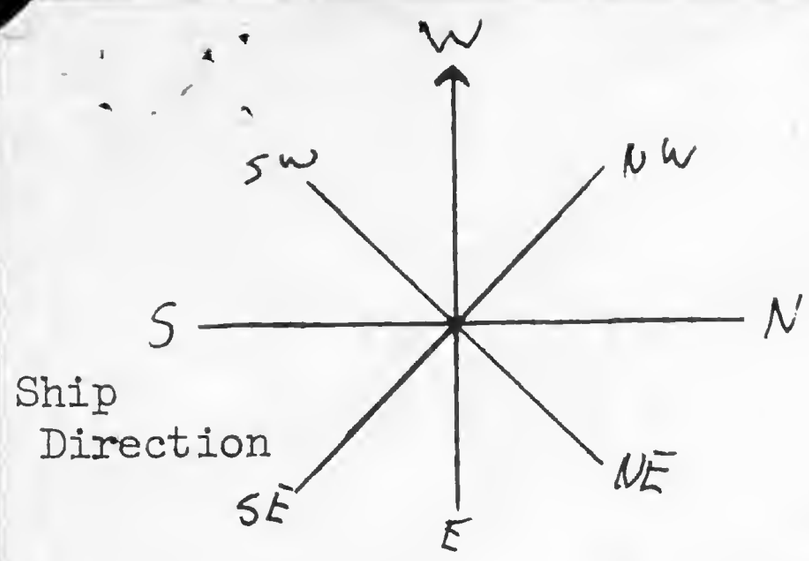


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 7 AUG. 1966
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1350	SOOTY TERN	4	E		ads
	1353	" "	3	E		ads
	1350	" "	2	N		ads
	1357	BB	1	NE		ad.
	1358	SOOTY TERN	4	N		ads
	1402	GR. FRIGATE	1	SW		ad ♀
	1406	SOOTY TERN	4	NE		ad
	1407	RTTB	1	NE		
	1408	RFB	1	NE		int. ph.
I	1409	SOOTY TERN	2	NE		ad.
	1410	WEDGETAIL	1	NE		dark ph.
	1411	SOOTY TERN	4	N		ad
TF	1416	" "	18	NE		ad,
		GR FRIG	1	NE		ad ♀
	1419	BB	2	CC		
TF	1420	SOOTY TER	400±20%	W		WAY OFF, STREAMING ALONG HIGH FROM ISLAND
	1421	COOKS PE	1	NE		
FF	1422	SOOTY TERN	500±20%	CC		not above flock
		BF B	20	C		
		FRIGSP	10	C		
		RFB	5	C		
	1425					CLOSE OBS. JARVIS 8 miles



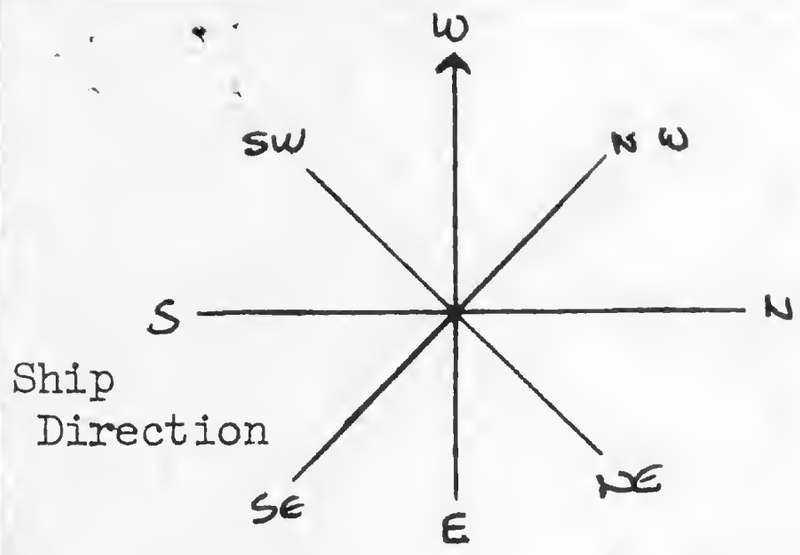
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
CHAN 0800-0900
RBC 0900-1000

Date AUG 10, 1966
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0800					JARVIS I. 2.0 MILES ASTERN - BEGIN OBS.
	0801	SOOTY TERN	1	N		ad.
	0802	" "	3	N		ad
	0803	" "	3	N		ad
	0804	BFB	1	W		ad.
	0805	FRIG SP	2	Calc		♀ ♀
	0806	RFB	1	calc		INT. PLT
	0806	BFB	2	W		ad.
	0807	SOOTY TERN	3	NW		ad.
	0808	" "	1	NW		ad.
	0809	" "	4	calc		ad
	0810	" "	1	N		ad.
	0812	GR FRIGATE	1	E		ad ♂
	0813	SOOTY TERN	1	SE		ad.
	0815	SOOTY TERN	1	E		ad
	0816	" "	1	E		ad.
	0817	WEDGETAIL	1	SE		dk. pl.
	0821	BB	2	calc		subadult - following ship (
	0822	BFB	2	calc		adult " "
	0823	SOOTY TERN	1	SE		ad.
	0830	WEDGETAIL	1	N		dk pl.
	0831	SOOTY TERN	2	N		ad.
TF	0832	" "	17	E		dd.
	0833	" "	2	E		ad
	0835	" "	2	E		ad.
SF	0840	SOOTY TERN	9	calc		ad.
TF	0843	" "	8	SE		ad.
	0845	" "	2	E		ad
	0846	" "	1	E		ad.
	0847	" "	1	E		ad.
TF	0858	SOOTY TERN	24	NE		ad
		FRIG SP.	3	NE		ad. } MERGED
		WEDGETAIL	2	NE		dk. pl. }
TF	0900	SOOTY TERN	25	E		ad
		LESSER FRIG	1	E		ad ♂
*	0903	BFB	2	E		ad. * 1 with red paint on head.
	0905	SOOTY TERN	1	S		
TF	0910	SOOTY TERN	15	NW		ad
		FRIGATE SP.	5	NW		
	0913	SOOTY TERN	4	E		ad
	0918	SOOTY TERN	1	S		ad
	0934	" "	2	E		ad
TF	0936	" "	4	G		Ad.
		RFB	3	G		Phoning phone > searching
	0937	BB	1	N		imm
	0938	SOOTY TERN	2	S		ad.

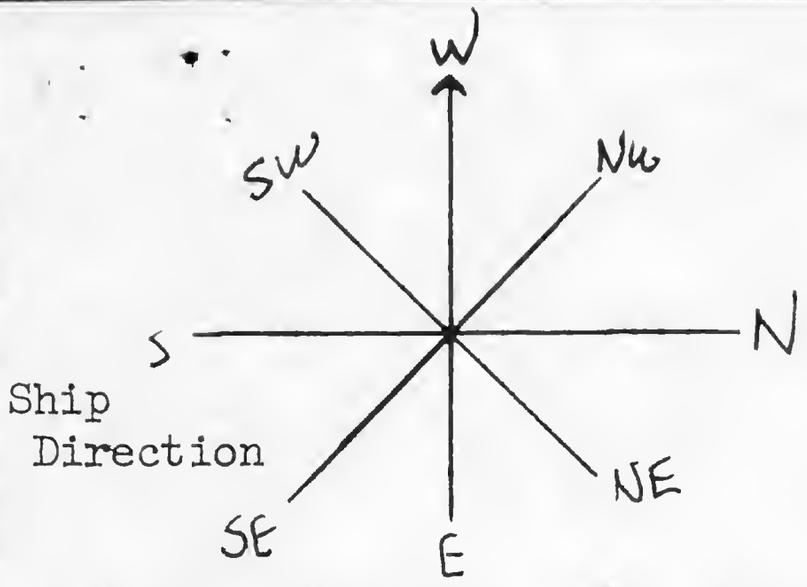


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
RBC - 0900-1000
RSC 1000-1100

Date 10 August 66
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0936	RFB	3	♀		int phase
	0936	SOOTY TERN	2	N		ad
	0937	SOOTY TERN	5	E		ad. Not a flock
	0939	LESSER FRIGATE	4	E		3♂ 1♀ (using Pearson's criterion on female - ca. 150-200 g.)
	0940	FRIGATE SP	1	NW		
	0945	RTTB	2	♀		ca 200 g.
	0945	LESSER FRIGATE ~~FRIGATE SP~~	1	SW		adult ♀
FF	0950	SOOTY TERN	15	♀		adult
		FRIGATE SP.	5	"		
		BFB	2	"		
		BOOBY SP.	1	"		too dark to know for sure - Either RFB imm. or subadult ~~of~~ or BB imm.
	0954	SOOTY TERN	1	NE		ad.
	0958	RTTB	1	SW		
	1001	BFB	1	N		ad
	1002	SOOTY TERN	1	E		ad.
	1004	SOOTY TERN	2	SE		ad.
	1019	SOOTY TERN	1	S		ad.
	1024					5 whales, dark brown, ca. 15 ft. long. only dorsal portion seen.
	1027	Sooty Tern	2	E		ad's.
	1035	BFB	1	E		ad.
	1040	BFB	1	N		ad.
	1040	Sooty Tern	1	SE		ad.
	1044	Sooty Tern	4	N		ad.
	1045	BFB	1	E		ad.
	1046	BFB	1	E		ad.
FF	1050	Sooty Tern	3	ad.		Feeding flock, Red-foot alternately going high to ca. 50 ft. + diving, Terns milling low to H2O - No fish seen, but birds far out. BFB just coming in from SE.
		RFB	1	ad.		
		BFB	1	ad		
TF	1057	BFB	5	E		ad's.
	1059	BFB	3	E		ads.
	1059	Sooty Tern	1	NE		ad.
	1100	BFB	1	E		ad.
	1103	BFB	1	SW		ad.
	1104	BFB	1	W		ad.
	1110	BFB	1	E		ad.
	1111	Sooty Tern	2	E		ad's.
	1114	Sooty Tern	1	E		ad.

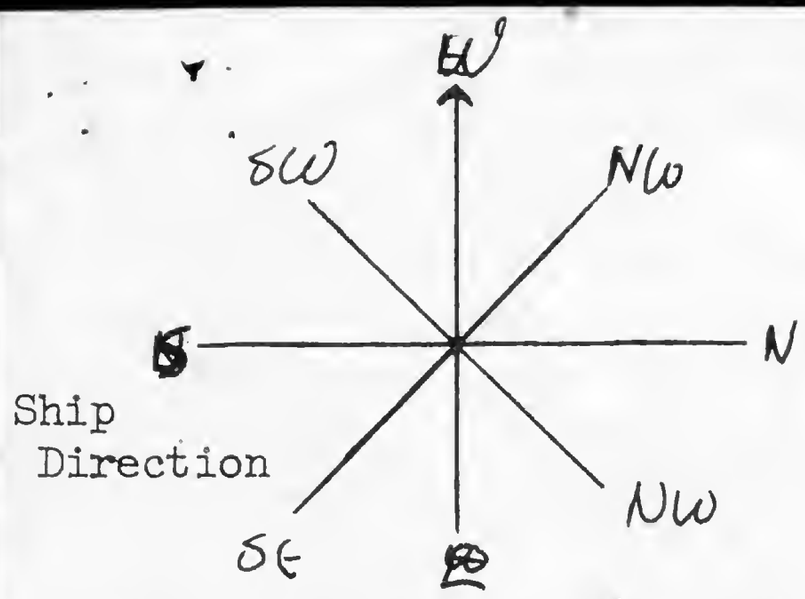


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
RSC 11-1130

Date 10 August 1966
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1116	BFB	1			ad. sitting on H_2O
	1117	RTTB	2			ad's sitting on H_2O
	1119	Sooty Tern	1	E		ad.
	1120	Sooty Tern	1	E		ad.
	1121	Sooty Tern	1	E		ad.
TF	1123	Sooty Tern	7	E		ad's.
	1123	Lesser Frigate	1	dl		ad. ♂ diving in H_2O, then flapping low + diving again,
	1126	RTTB	1	NW		ad. calling. some kind of small fish seen surfacing.
	1127	Bulwer's Pet.	1	SE		
	1128	white-th. storm Pet	1	E		
	1131	Sooty Tern	2	E		ad's.
	1134	Sooty Tern	1	E		ad.
	1135	WRSP	1	E		
	1137	RFB	1	NE		dark phase, ad.
	1139	BFB	3	E		ad.'s.
	1141	WRSP	3	E		
	1145	"	1	SE		
	1145	Sooty tern	2	E		Ad
C	1150	Leachs s.p.	2	E		collected one R.S.C. #2389
	1201	Sooty tern	3	E		Ad
	1201	BFB	1	E		Ad
	1210	white-throated sp.	2	@		Following ship
		WRSP	2	@		
	1221	BFB	3			sitting on water then flew east Adults
TF	1226	Sooty tern	8	F		Ad very loose floot
	1226	BFB	1	E		Ad
	1230	Sooty tern	1	E		Ad
	1230	RTTB	2	NW		Ad
	1240	Sooty tern	1			Ad following ship AND feeding once in awhile
	1244	" "	1			Ad found 1240 sooty tern
RP	1245	BFB	2	E		Ad one had red paint on head
TF	1226	Sooty tern	22	E		Ad
	1226	RFB	3	W		2 imm and one subad.
	1305	RTTB	1	Cl		circling ship
	1307	Sooty Tern	1	SE		ad
	1315	BFB	1	SE		ad.
	1330	BFB	1	SE		ad.
	1332	RFB	1	W		subadult - all dusky brown including tail
	1334	Sooty Tern	6	E		ad - not a flock
	1335	Sooty Tern	7	E		ad - not a flock
	1340	Sooty Tern	3	E		ad

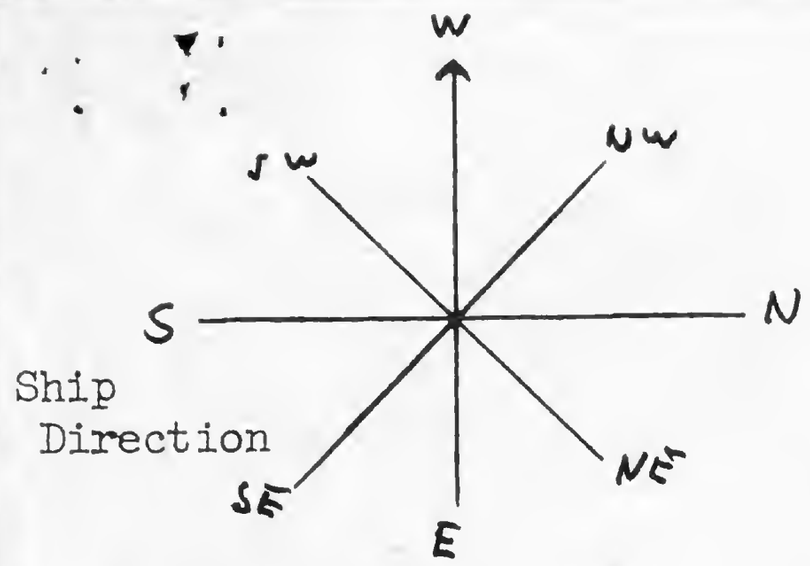


OBSERVERS: 5
Pearson
Balcomb III

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 10 Aug. 1966
Pg.# 4

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1342	Sooty Tern	4	E		ad
	1346	Sooty Tern	4	E		ad
	1350	Sooty Tern	9	E		ad
	1351	Sooty Tern	3	E		ad
	1352	BFB	4	E		ad
	1355	Sooty Tern	2	E		ad
	1356	Sooty Tern	4	E		ad
TF	1359	Sooty Tern	8	E		ad.
	1404	Sooty Tern	3	E		ad.
	1405	BFB	1	E		ad.
	1406	RFB	1	E		imm. all dusky, brown including tail
	1410	WRSP	1	W		very much white on rump.
	1415					5 goosebeak-type whales
	1423	Sooty tern	1	E		ad.
	1425	BFB	1	E		"
	1435	"	1	E		"
	1442	Sooty tern	1	E		ad.
	1453	BFB	1	E		"
	1500	Sooty tern	4	E		"
	1502	" "	3	E		"
TF	1503	" "	10	E		"
	1510	" "	4	E		"
	1510	BFB	1	E		"
TF	1515	Sooty tern	5	E		"
	"	" "	1	E		"
	"	" "	3	E		"
	1520	RTTB	1	E		not interested in ship
		BFB	1	E		ad.
		Sooty tern	1	E		ad.
TF	1525	" "	19	E		(ad) some swirling and soaring.
	1530	" "	2	E		ad.
	1547	" "	2	E		"
	1549	RFB	1	E		circled ship. subadult
FF	1551	Sooty tern	25	E		ad.
		Booby sp.	4	E		} - feeding
F	1558	Sooty Tern	16	SE		ad
		Red-footed Booby	1	SE		immature



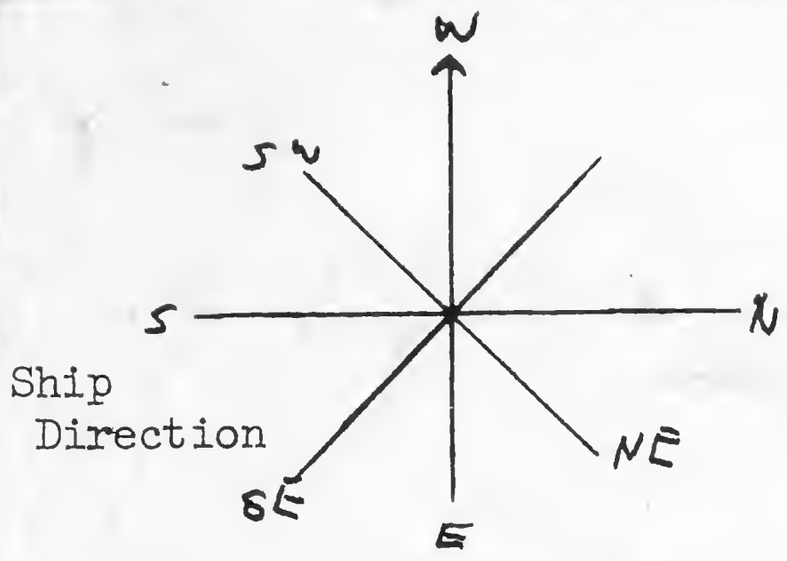
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
CHAN 1600-1700

Date 10 AUG 1966
Pg.# #5

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1602	SOOTY TERN	2	E		ad.
	1613	" "	3	E		ad.
	1623	" "	2	E		ad.
	1625	RTTB	1	ese		following
	1627	SOOTY TERN	2	ese		ad
		BFB	1	ese		subadult
	1634	RTTB	1	NW		no central tailfeathers
	1635	RTTB	2	SE		calling in conjunction with some sort of social interaction, (courtship display?)
	1643	BFB	1	NE		
	1645	SOOTY TERN	3	E		ad.
	1648	PHOENIX/TRMIT.	1	E		BLACK
TF	1706	Sooty Tern	6	E		ad.
	1708	Sooty Tern	3	S		ad.
	1715	Sooty Tern	2	E		ad.
TF	1731	Sooty Tern	68	E		ad. Spread out in long strings
	1731	BFB	3	E		subadults. all with black flockings on back
	1733	BFB	1	E		ad.
	1734	SOOTY TERN	3	E		ad.
TF	1735	" "	16	E		ad
	1735	" "	1	E		ad.
	1736	SOOTY TERN	1	E		?
	1737	" "	1	E		ad.
	1738	" "	3	E		ad.
FF	1744	" "	53	E		ad in large loose flock } BEGAN FEEDING AT 1747
		FRIGATE SP.	3	E		
		BFB	2	E		
TF	1754	SOOTY TERN	33	E		ad
TF	1755	" "	75	E		ad. loose flock steadily streaming back to Jarvis commencing after close of observations ca. 100 miles off Jarvis
		17 ~~56~~				Sunset



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
BULMER + CHANDLER SR-0300
Crossin 10-1100
Pearson 11-12

Date 11 AUG. 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
					SUNRISE (CREW REPORTS "LOTS" OF BIRDS ON NOCTURNAL)
0605					BEGIN OBS.
0635	~~White faced~~ Storm Pet. Spp.	1	C		size nasofregatte or smaller. all white below and underwing - grey on back ~~and~~ wings and tail darker facemarking? White faced Storm Petrel behavior notes (over)
	WRSP	1	C		
0728	Bird sp	1	E		Pelagodroma marina joined other petrel for short time
0747	Pterodroma sp	1	S		
0749	Wedgetail	1	S		dark phase
0801	Turtle				about 3 feet diameter, lemon-green color
0925					ca 8 DOLPHINS - TURSIOPS-LIKE EXCEPT DORSAL FIN MORE ROUNDED. MORE BROWNISH.
0930	RTTB	1	W		ad
1045	Sooty Tern	3	S		ad's.
1049	Sooty Tern	2	E		ad
1057	Cook's Petrel	1	W		
1058	Sooty Tern	2	CC		ad. circling ship.
1114	RTTB	1	CC		circling ship.
FF 1220	SOOTY TERN	92	CC		feeding and mass circling ads.
1230	" "	1	E		ad
TF 1308	" "	5	@		"
1344	BTCurlew	3	W		
1415	Pigeon's I. ~~Petrel~~	1	E		White throat
1445	dolphins	4	C		peperocephala or teresa none other
1450	~~Wilson's~~ WRSP	2	N		or Galapagus S. Petrel Wilson's ~~Storm~~ Petrel flight erratic and swallow like ~~wing~~ distinctly different from any ~~seen~~ beach seen yet. Worked over water in spirals CCCC always staying close to surface
1500 - 1600					pursue and photograph ca 35 mesoplodon
← 1600					ca 70 Glopicephala
1640					ca 400 Tagenorynchus type dolphins
1640	RTTB	1	@		circling ship
1758	Sooty tern	1	S		
1813					sunset - cease Observation

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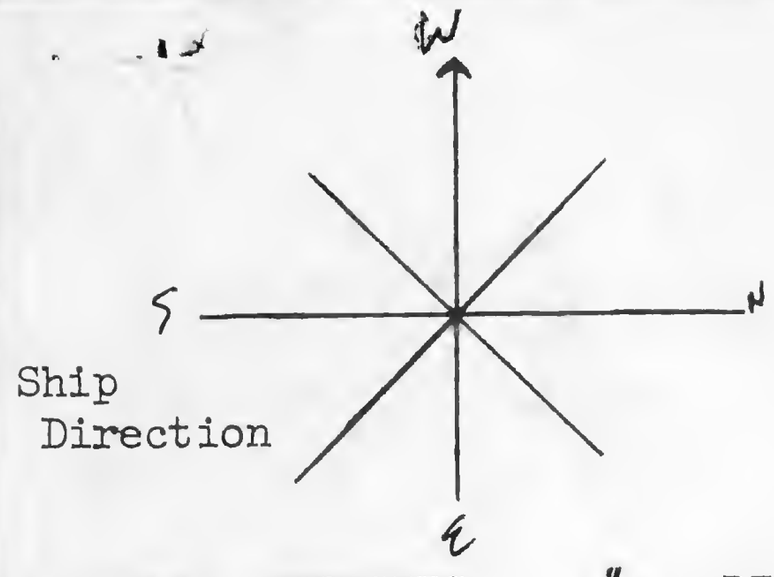
flight - slow flight little flapping - wings horizontal - close to water
fed in troughs. steered like S. Pterodroma arminjoniana when traveling.
feeding by dipping bill as it stayed motionless with wings horizontal
5 feedings in a row without moving wings.



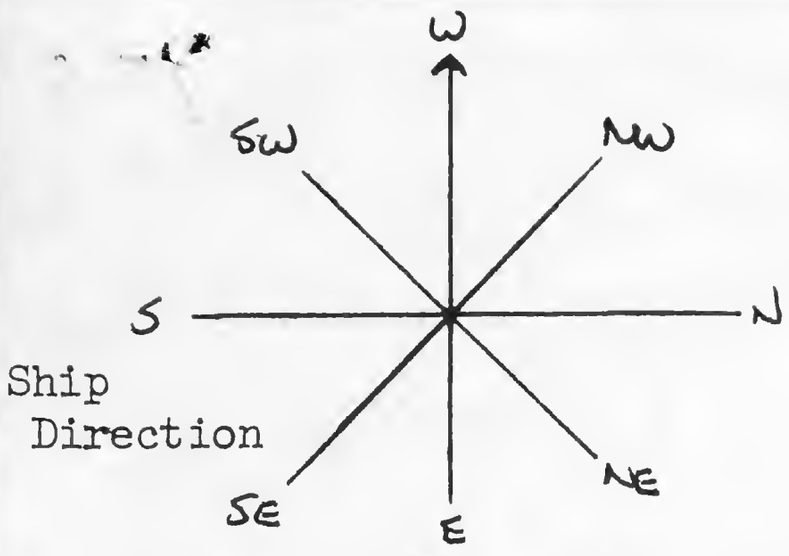
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 12 AUG
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0615					SUNRISE ON the quiet SEA
	0620	storm pet.sp.	1	N		All dark on back white underwings with black borders white belly with white stopping at neck and continuing slightly into undertail coverts, legs not hanging down, - flight - very rapid wingbeats with short glides, - size - very small probably about leaches size, definatly not as large as W.T.S.P. head appeared to be all dark, payed no attention to ship
	0645	Cook's pet.	1	S		
	0710	WRSP	1	W		probably leaches, when shot at he started flying very high probably about 50' above water, when last seen it was still at that height
	0720	Shear-pet. sp	1	N		white below - dark on top
SF	0721	Sooty tern	5	(6)		
		Frigate sp	1			
	0725	Storm pet sp.	1			like 0620 bird but this time bird was feeding. It kept hitting water with its feet and diving it's head. this was done so fast and so consecutively that sometimes the bird appeared to be struggling on the water with a broken wing. short glides between each few seconds of feeding
	0725	whales.	6			like rare ones yesterday
	0735	Shear-pet sp	1	E		white below dark on top
FF	0740	Sooty tern	23	ad's.		alternate feeding & moving
		Frigate sp	1			
	0740	Shear-Pet	1	S		dark above, light below
	0741	" "	1	W		" " " "
	0755	~~Fish and whale~~ Sooty Tern	4	(4)		ad. fish and/or porpoises surfacing below sooties. not blowing
	0810	Whale				medium sized cetacea poss. Fersa
	0850	G. Frigate	2	S		♀ · ad
	0904					Sperm whale - 2 heading E
	0948	Ph. I / Tab. Petrel	1	W		
	1040	WRSP	1	S		possibly not leaches



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Balcomb - 10-12

Clapp 1700 - Sunset

Date 12 AUG. 1966
Pg.# 2

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1228	BWP	1	S		
1232	Pterodroma sp	1	N		small
1246	RTTB	1			
1252	Sooty Tern	2	SE		flying 5' off water
1254	RTTB	2			
1525					ca. 400 STENELLA ROSEIVENTRIS (?)
1652	WRSP	3			
1659	WRSP	1	S		
1705	Cook's Petrel	1	SE		
1706	Fairy Tern	1	NE		
1810	WRSP	3	~~NE~~ SW		all first seen back of fantail
1814	WRSP	1	S		
1829					SUNSET

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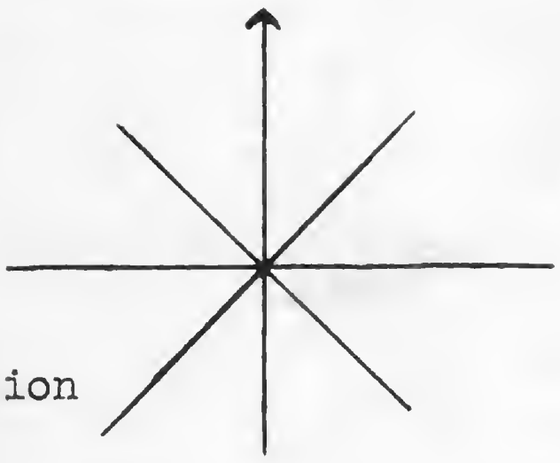

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Clapp + Huber

Date August 13, 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0631					SUNRISE
0643	Shear-pot -	1	SW		Small Pteradroma - Cook size - far out
0647	WRSP	1	NE		NESOCRETA shaped but maybe smaller nowhite underneath, slightly whitish bandacross rump.
0655	WRSP	1	S		LEACHES type
0731	WRSP	1	W		" "
0803	WRSP	1	S		" "
0810	WRSP	1	N		" "
0837	"	1	S		" "
0842	"	1			" " settled on H_2O behind ship after following for about one min, appeared again about 1 min later, left again after shot at at 0847.
0908	Juan Fernandez	1	W		
0942	Sooty tern	1	NE		adult
1120	Whales	5			Sperm 2 very large (50-60) ft 2 medium (33 ft) 1 calf (18 ft)
1142	WRSP	1			LEACH'S TYPE
1200	"	1			Sitting on water
1330	"	1			NIGHTHAWK-LIKE FLIGHT
1800	Sperm whales				minimum of 7 heading NE
1830	WRSP	1	W		Sperm whales a little mother [redacted] RED
1847					Sunset

New sheet for nocturnal

1847

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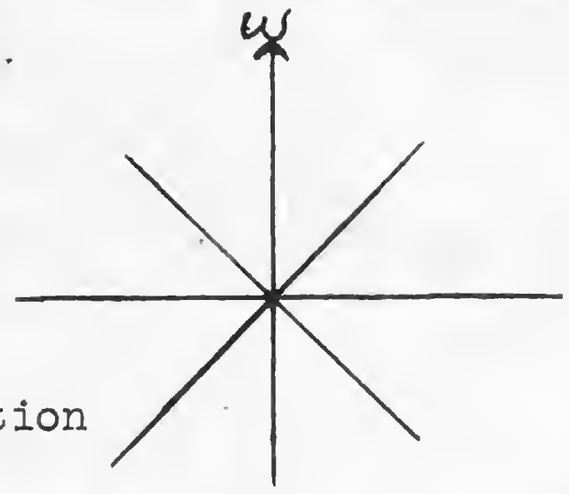


Ship Direction

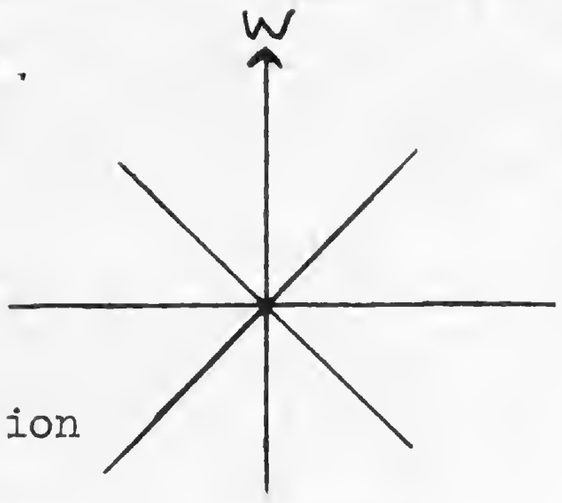
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or Nocturnal

OBSERVERS:
HOFF 6-9
BALCOMB 2100-000
PEARSON 0000-0800
CHANDLER 0300-0600

Date August 13-14
Pg.# 1

	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
	1847					sunset
	1847	WRSP	1	S		Leaches type
	2300	Bird	1			
	2322	Bird	1			
	2333	"	1	W		
	0015	"	1	ese		
	0135	"	1	ese		
	0247	SHEARWATER	1	ese		
	0249	BIRD	1	ese		
	0315	SOOTY TERN	1	NE		CALLING
	0320	" "	1	SE		ad.
	0337	" "	1	E		ad
	0350	BIRD	1	NW		WHITE BELOW
	0352	SOOTY TERN	1	E		ad ca. 100'
	0355	" "	1	E		ad.
	0356	" "	1	E		ad.
	0357	" "	2	E		ad.
	0400	" "	3	E		CALLING
	0405	" "	1	E		ad.
	0408	" "	1	E		ad.
	0414	" "	2	E		CALLING
	0420	" "	1	E		ad.
	0422	" "	1	E		ad.
	0433	" "	1	NE		ad.
	0436	BIRD	1	SE		
	0440	SOOTY TERN	1	E		ad.
	0441	" "	1	E		ad.
	0443	" "	1	E		ad.
	0450	WRSP	1	ese		
	0451	SOOTY TERN	1	E		ad
	0452	" "	1	E		ad.
	0453	" "	3	E		ad.
	0457	" "	1	E		ad.
	0459	" "	2	E		ad.
	0502	" "	1	E		ad.
	0505	" "	1	E		CALLING
	0506	" "	2	E		ad.
	0513	" "	4	E		ad.
TF	0513	" "	5	E		ad.
	0523	BIRD	1	NW		SMALL; NOT A SOOTY TERN
	0525	SOOTY TERN	1	E		ad.
	0527	" "	1	E		ad.
	0528	" "	1	E		ad.
	0530	" "	3	E		ad.
	0532	" "	2	E		ad.



Ship Direction

OBSERVERS:
CHANDLER 0300-0600
BALCOMB 0600 → Howland

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 14 AUG 1966
Pg.# 2

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0535	SOOTY TERN	1	E		ad.
0536	" "	1	E		ad.
0537	" "	3	E		ad.
0538	" "	2	E		ad.
0539	" "	1	E		ad.
0541	" "	1	E		ad.
0542	" "	1	E		ad.
0545	" "	2	E		ad.
0546	" "	1	E		ad
0548	" "	1	N		ad.
0552	" "	2	E		ad.
0600	BIRD	1	E		
0615	Brown Booby	1	E		ad
0622	Sooty tern	1	ⓞ		immature circling ship island 3mi. off. ship reduced speed.
TF 0627	" "	18	E		ad. flock ca. 150' high
0629	[redacted]				close nocturnal observations were too close to the island. Actually sunrise isn't until 0646 but we're so close to the island that this could be ridiculous trying to count all the birds that would be around and leaving the island. I don't see that many birds, but I'm tired. Besides we always stop the watch this close to the island. I really would have continued the watch until sunrise (0646) but I had to make a [redacted] SORED

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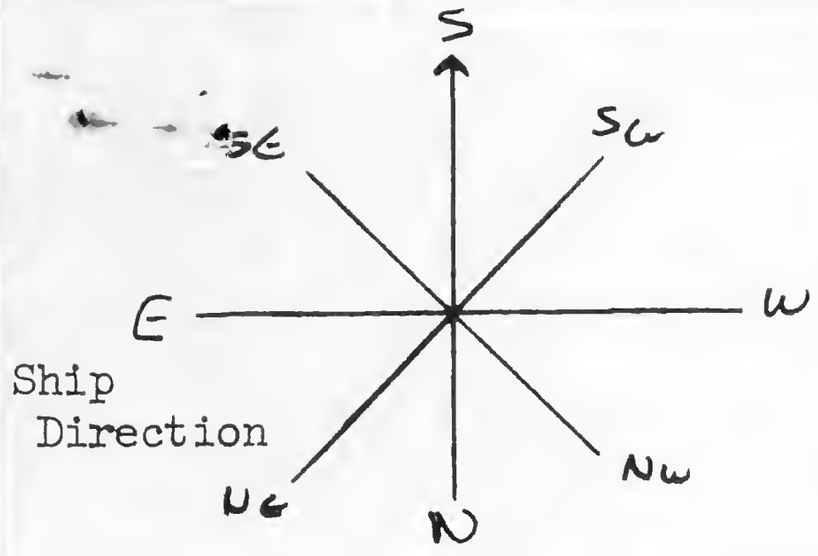
Rev. 5-66



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Clapp - 0830 - 1000

Date Aug 14, 1966
Pg.# 1

Howland to Baker

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0830					observations begun
	0831	BB	1	S		ad
	0831	Lesser Frigate	1	E		ad ♀
	0832	BFB	1	e		imm. circling ship - feeding diving into water from ca 15 ft. at angle
FF	0835	Sooty Tern	200	e		mostly adults
		Frigate sp		e		
		BFB	1			ad
		BB	1	e		
	0835	BFB	1	S		ad.
	0836	BFB	2	e		imm - actively diving + feeding by ship
	0836	RFB	1	e		subadult intermediate phase } circling ship
		~~BFB~~	+			
	0840					9+ sperm whale - around ship - movie sequence of feeding BFB imm.
	0850	BFB	1	~~ad~~ Ad.		Diving times 2 sec.
	0852	Sooty tern	3	N		ad.
	0853	" "	1	N		ad.
	0857	Frigate sp.	2	ad		up high
	0858	Sooty Tern	1	E		ad.
	0858	Phoenix I/Hull?	1	N		looked dark like phoenix (3.3 sec. submergence-time BFB imm
	0859					2 imm. Blue-faced Boobies still working along with the ship. Flying fish (small → 6") appear to be the desired prey. Often when numbers of flying fish start surfacing, both boobies would dive individual surfacing and making repeated dives without gaining more than 12-15 ft elevation.
	0900	Sooty tern	1	N		ad.
	0901	Frigate sp.	1	N	imm	1.6 sec. submergence time imm. BFB done from straight vertical. 2.5 sec " number of small fish jumped straight up from water as bird hits
	0905	Sooty Tern	1	S		adult.
	0906	Sooty Tern	1	N		"
	0907	Sooty Tern	3	S		"
	0908	Sooty Tern	1	N		"

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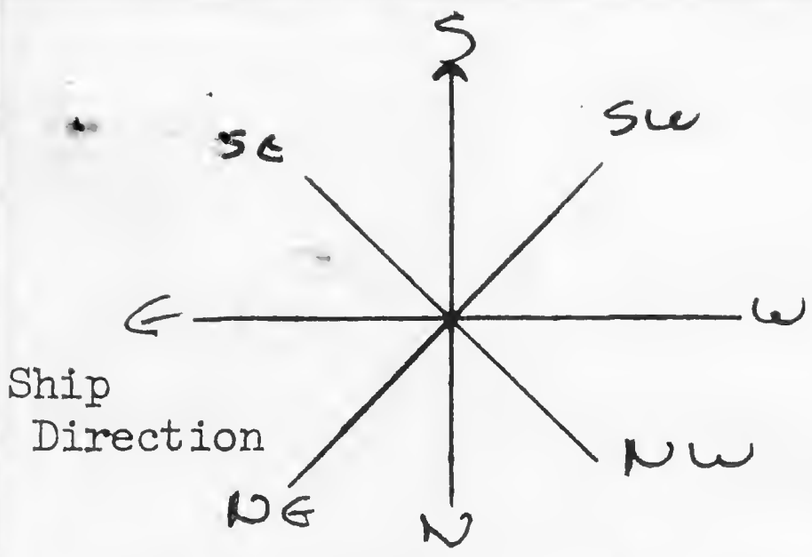
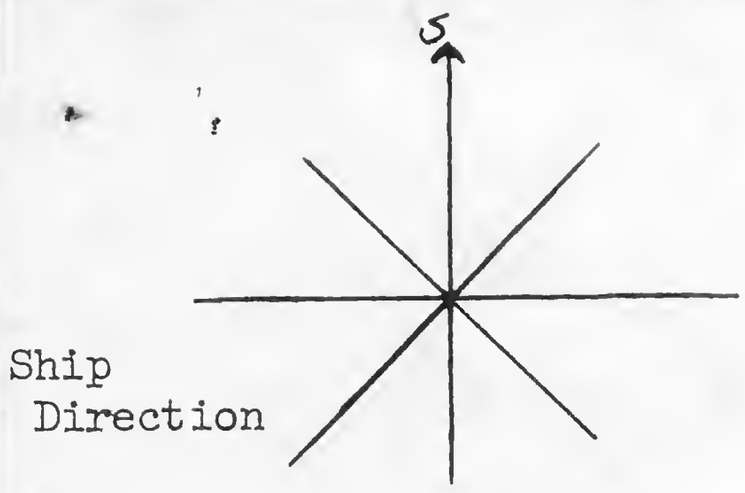


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS: Clapp - Crossin

Date Aug 14, 1966
Pg.# 2
Howland to Baker

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0910	Sooty Tern	1	SE		ad
0911	Frigate sp	1	W		
0918	Sooty Tern	1	S		ad Immature booby listed above stopped following ship ca. 0905 - Both feeding in wake of ship about 300 yds back at 0915 - 0917 imm. BFB hit surface from vertical position but immediately flattened dive mooing underwater for two-to-three feet about 10-12 inches below surface & reemerged - time of submergence 1.1 sec.
0918	BFB	1	E		imm. joining two following ship & actively feeding -
0921	Sooty Tern	2			
0922	BFB	1	S		ad
0923	Sooty Tern	1	E		imm. joining 3 following ship - feeding with or near others -
0930	Sooty Tern	1	S		ad
0931	Frigate sp	1	S		ad
0932	Sooty Tern	3	E		
0933	sooty tern	1	N		ad
	BFB	1	S		ad
		1	S		ad.
0942	Sooty tern	2	N		ad
0943	BFB	3	S		2 ad. 1 imm.
0943	RTTB	2	SE		ad. circling ship
0945	SOOTY TERN	1	~~SE~~ U		ad.
0950	Frigate sp.	9	N		at least 3 imm. way out.
0954	SOOTY TERN	1	S		ad
FF 0956	sooty tern	100			ad's both species, but numbers undetermindable. Terns
	Frigate sp.	26			4 imm. 2 ad. feeding low over the H2O, moving
	BFB	6			slightly N, apparently following a moving fish
	RFB	1			school. Frigates diving for own food, picking prey
					just off surface of H2O; a few chasing Sooties.
					Boobies diving from heights up to 40 ft. [50-60] - one ad
	SOOTY TERN	9	NE		birds wheeling in and out - very intense feeding
FF 1010	sooty tern	160 ± 10			not a flock - heading for other flock
	Frigate sp.	17		ad.	
BS	BFB	3		ad.	flock feeding intensely, then split into 2 segments, each continuing feeding. Frigates working in close & low over water with terns. one Blue-Streamered ad. ST.



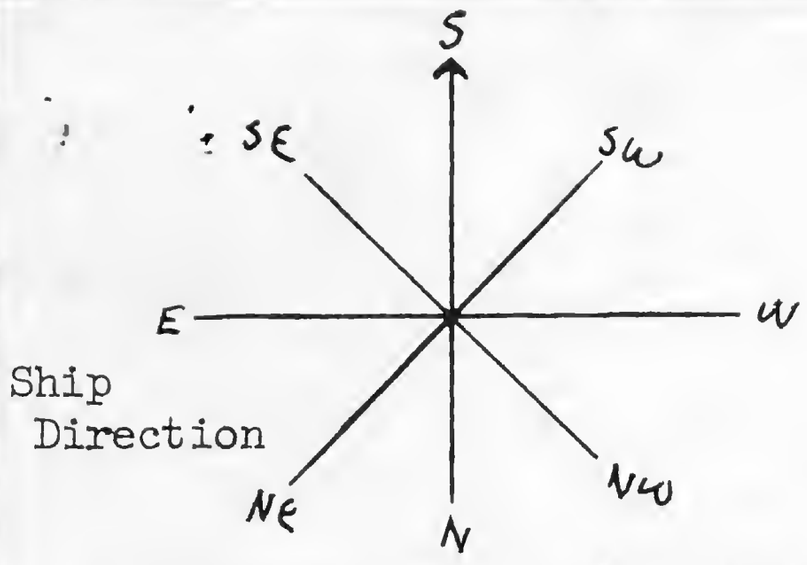
Howland → Baker.

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin & Clapp.
Huber & Pearson

Date 14 August 1966
Pg.# 3

	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
FF BS	1025	sooty tern	45		ads	Frigates mostly up high moving N., terns feeding,
		Frigate sp.	60			but not very actively + many splitting off, heading
		BB	1		imm.	N. one blue-streamed sooty ad.
	1032	L. Frigate	1	NE		ad. ♀.
TF	1033	sooty Tern	10			ad moving NE.
		Frigate sp.	11			
FF	1035	sooty tern	40	ad		terns milling low over H2O, Frigates hovering
		Frigate sp.	9			over terns about 70-100 ft up.
FF	1040	Sooty Tern	46	eeee		ad
		Frigate sp.	2	ee		
	1041	BFB	1			
	1043	Sooty Tern	1	E		ad.
	1044	Sooty Tern	2	N		ad.
	1044	WRSP	1	S		Leach's type
	1045	Sooty Tern	1	N		ad
	1055	" "	3	N		Ad
	1056	BWP	1	S		ad
TF	1103	Sooty tern	45	S		
	1104	" "	3	N		Ad
	1110	" "	2	N		Ad
	1111	" "	1	N		ad
	1112	" "	2	N		ad
	1112	Frigate sp.	2	N		
	1115	BFB	1	ee		
	1116	Sooty Tern	1	S		ad
	1116	BFB	1	N		Joined 1115 BFB - for a fish - sitting on H_2O
	1118	Sooty Tern	2	N		
	1119	BFB	2	eee		Feeding in front of ship as ship closes up
						flying fish. Searching posture with head and bill
						pointing straight down. When fish sighted bird rises
						in elevation (to 30ft from 20ft) before folding wings and diving on
						fish. While we watched only 1 out of 10 attempts
						at a fish was successful. Present for 15 minutes (DLP)
TF	1120	Sooty Tern	84	N		ad adults
	1121	"	84	N		ad
	1122	"	2	N		ad
				N		ad
	1129	"	2	eee		ad



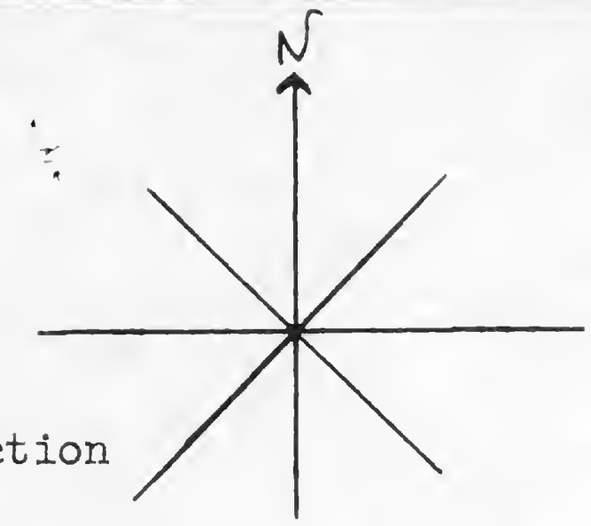
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 14 Aug. 1966
Pg.# 4

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1142	Sootytern	2	N		Ad
	1143	" "	3	N		Ad
	1145	" "	1	N		Ad
	1146	" "	1	S		Ad
TF	1153	" "	9	S		Ad
	1202	BFB	1	S		Ad
	1208	BWp.	2			
	1220	BFB	1	SE		Ad
	1227					½ miles from Baker
	1227	Golden Plover	1			towards Baker
	1228	RTTB	1			" "
TF	1232	Sootytern	6	N		Ad
	1232	Frigate sp.	1			imm
	1232	BFB	2			Ad
	1233	Golden Plover	3			
TF	1245	L. Frigate	19			
		Sootytern	4			
TF	1307	" "	7	S		Ad
	1309	" "	2	S		Ad
	1309	" "	4	S		Ad
TF	1311	" "	22	SE		
	1311	RTTB	1	W		
	1317	Sootytern	4	S		Ad
	1335	L. Frigate	2	E		1 ad ♂, 1 ad. ♀ (prob part of 1245 flock which is now feeding)
FF	1340	L. Frigate	53			
		Sooty tern	89			ad.
C	1400	" "	1		2390	ad coll KCB
C	1425	" "	1		843-38286 2391	ad. coll. KCB
CCCC CCC	1500					Skiff left us with 7 ST Ad. 2392-2398 Coll by, RSC
	1515	BFB	1	E		Ad.
	1522	"	2	SE		"
	1525	L. Frigate	1	SE		Ad ♂
C	1530	Sootytern	1		2399	collected KCB RSC

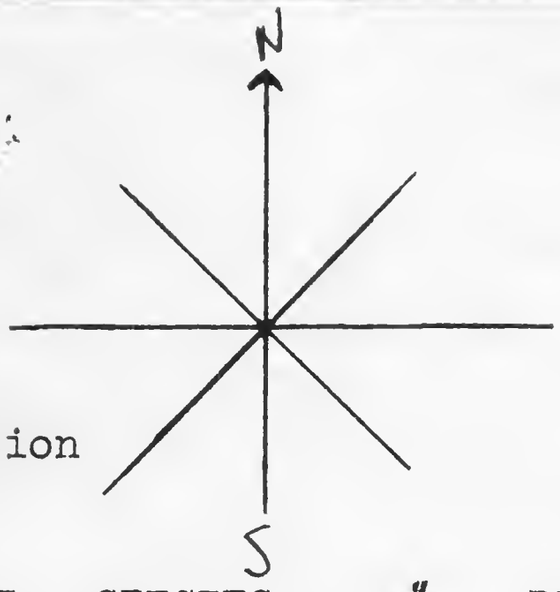


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
HoFF

Date 14 August
Pg.# 5

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1610					Baker raft returned to we are underway to Howland
	1630	BWP	1	W		
	1645	BWP	1	N		
	1646	BWP	1	N		
	1652	sooty tern	1	N		ad.
	1654	Sooty Tern	2	N		ad's.
	1657	BWP	1	N		
	1700	BWP	1	N		
	1703	Sooty Tern	1	S		ad.
	1704	Sooty Tern	2	N		ad's.
	1707	Sooty tern	3	S		ad's.
	1708	Sooty Tern	4	S		ads.
	1710	Sooty tern	1	S		ad.
	1720	" "	4	NW		ad.
	1720	BWP	1	E		
	1721	WRS P	1	E		
TF	1725	Sooty Tern	25	SE		ads.
TF	1730	" "	15	SE		
		Frigate Sp	3	SE		
	1734	Sooty Tern	4	NW	ad.	Sooty tern small, well dispersed movement
	1740	" "	3	NW	ad.	in general direction of Howland - groups
	1741	" "	4	NW	ad	of 2 - 3 predominating.
	1744	" "	3	NW		ad.
	1745	RFB	1	NW		intermediate phase
	1746	"	2	NW		"
	1800	Wandering Tattler	1	NW		calling
SF	1807	Sooty tern	75			Ad
		L. Frigate	6			
		RFB	1			intermediate phase
TF	1809	Sooty tern	5	E		Ad
	1813	" "	4	NW		Ad
	1815	" "	4	NW		Ad



Ship Direction

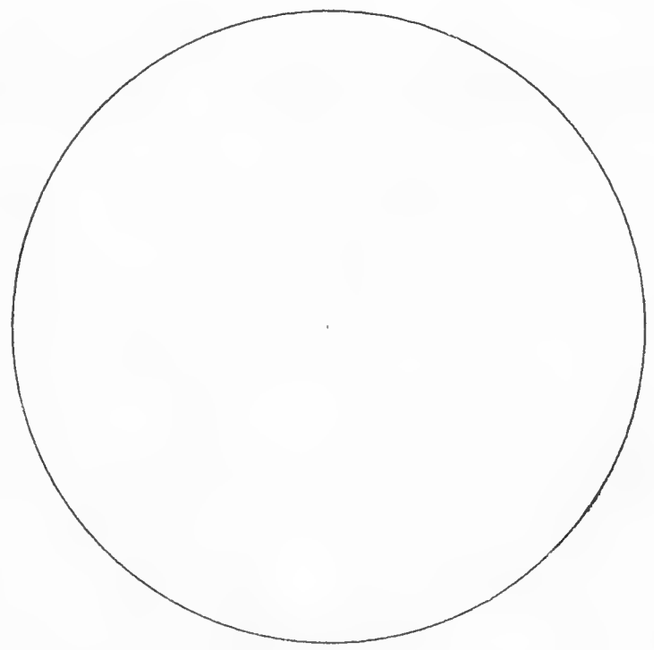
OBSERVERS:
Huber LW

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 14 Aug
Pg.# 6

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1817	Sooty tern	3	NW		ad
	1822	" "	4	NW		ad
	1827	" "	2	"		"
	1832	" "	4	"		"
TF	1837	L. Frigate	5	NW		4 ad ♂ 1 imm
TF	1839	Sooty tern	22	E		ad
	1840	" "	2	S		ad
	1855					→ sunset end watch

11



SE 125-0

Ship Direction

OBSERVERS:
Crossin 0800-1100

Southern Grid

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 15 August 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0800					Begin Observations - Howland Island 6.5 miles astern.
	0805	BFB	1	SE		ad.
	0808	BFB	1	SE		ad.
	0810	BFB	2	SE		ad.
FF	0810	Sooty tern	30			ad. } all actively feeding
		BFB	7			ad. }
	0813	BFB	1	SE		imm - moving toward FF.
	0814	BFB	1			ad. flying along, suddenly thrust upwards (was about 20 ft above H2O) to el. of ca. 40 ft. and plummeted straight into H2O after some prey.
	0815	Sooty Tern	1	SE		ad.
	0816	BFB	2	SE		ad.
	0818	BFB	2	SE		ad.
	0821	BFB	1	SE		ad.
	0822	Sooty tern	4	SE		ads. 0816 2 more boobies do same as above. 0818 - one more ad. BFB doing same - as birds reach top of el. the wings are folded + birds shoot straight down. 0819. - one more of above dives. Occasional dives w/o first gaining extra altitude.
	0825	BFB	1	SE		imm
	0827	Sooty tern	1	W		ad.
	0828	Sooty tern	3	SW		ads.
	0830	WRSP	1	S		
	0830	BFB	1			ad. Joined several other ads + 1 imm moving along approx. same speed as ships (ca. 10 knots) in SE direction feeding as they go.
	0835	BFB	1	W		ad.
	0835	Sooty Tern	3	W		ad.
	0837	Sooty Tern	4	W		ad.
FF	0845	Sooty tern	150			all ad. 1 Blue Streamer
BS		BFB	14			11 ad. 3 imm.
		RFB	19			
		G. Frigate	3			ca. 15% imm. mostly intermediate phase, but at least 2 imm. dark phase.
		L. Frigate	17			ad. ♂
		Frig sp.	4			ad. ♂ + ♀.
						1 imm.
	0852	BFB	2	S		ads.
	0853	Frigate sp.	1	S		imm.
TF	0857	Sooty tern	21	SW		ad.
		Frig. sp.	1			imm.
TF	0902	Sooty tern	7	W		age unknown.
	0910	Sooty Tern	2	W		ad.

SI-MNH-958-e
Rev. 5-66

SE 125°

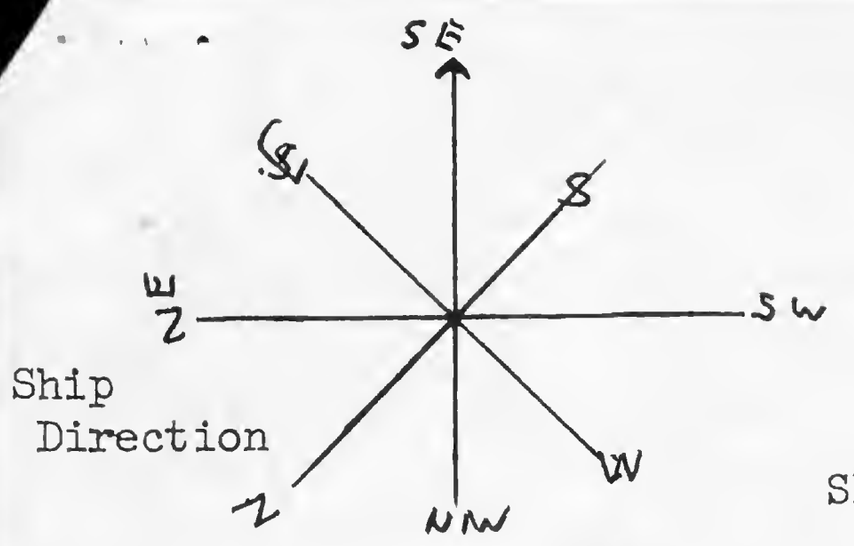
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin 0500 - 1100
Balcomb 1100 - 1400
CHANDLER 1400 - 1700

Date 15 August 1966
Pg.# 2

	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
	0913	sooty tern	1	SE		ad.
FF	0917	sooty tern	55 ± 5			ages unknown - birds far out.
		Frigate sp.	3			
	0919	BFB	2	SE		ads.
FF	0925	sooty tern	75			ads.
		lesser Frig.	13			ads mostly ♀ fish jumping, all birds occasionally
		Frig sp.	15			imm. low to H2O milling.
		BFB	4			ads.
FF	0940	sooty tern	25			all ad's seen. seas very rough since
		Frigate sp.	3			leaving Howland. visib. lt. bad due to traveling into wind,
	0950	BFB	1	SE		imm. a tewteet (ca. 20 knots)
	0957	BFB	1	E		ad. over bow - looking tired.
FF	1010	sooty tern	50 ± 5			all ad. seen.
		Frigate sp.	17			
		BFB	2			ad. in bad light, directly into sun.
		RFB	3			int. phase
	1028	~~Frigate sp.~~ Lesser Frig	4			2 ad ♂, 2 ad ♀.
	1029	Lesser Frig	3	SE		2 ad. ♀ 1 ad. ♂
FF	1132	Sooty tern	20			ad. feeding
	1140	" "	2	NW		ad
FF	1215	" "	22			ad feeding. big thunnidae jumping
		Frigate sp	2			ad
	1222	SOOTY TERN	3			ad.
FF	1237	" "	3			ad.
		FRIG. sp.	2			
	1258	Pterodroma sp.	1			uniform gray dorsally, belly & chest white, underwing white with prominent black margins. P. cooki size
TF	1317	Sooty tern	7		2400	
c	1317	BFB	1			ad. 1 coll. KCB
	1325	Frigate sp.	1	SE		ad.
FF	1337	" "	1			way out man!
		Sooty tern	5+			ad.
	1337	" "	2	SE		ad.
	1345	" "	4			ad.
TF	1351	" "	6	NW		ad
TF	1357	" "	25	S		ad.
		FRIG. sp.	3	S		



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
CHANDLER 1400 - 1700
HOFF 1700 - 1850

Date 15 AUG. 1966
Pg.# 3

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1405	SOOTY TERN	4	NE		ad.
1415	BWP	2	SE		
1428	PTERODROMA SP	1	SE		
1438	SOOTY TERN	3	NW		ad
1500			E		Eq. 50 PORPOISE (STENELLA ROSEIVENTRIS ?) 1 - 1½ MILES ABEAM; NOT SPINNING
1508	SOOTY TERN	2	COE		ad
1513	WRSP	1	COE		
1604	BWP	1	SE		
1612	RTTB	1	OE		following; tip of right wing shot off
1708	PTERO. SP.	1	OE		
1712	" "	2	NW		
1730	Cook's pet.	2	OE		
1745	Whales	~~2~~			2 - "Balleina" ? - see K.C.B.
1830	Wedgetail	1	OE		dark phase
1850					sunset

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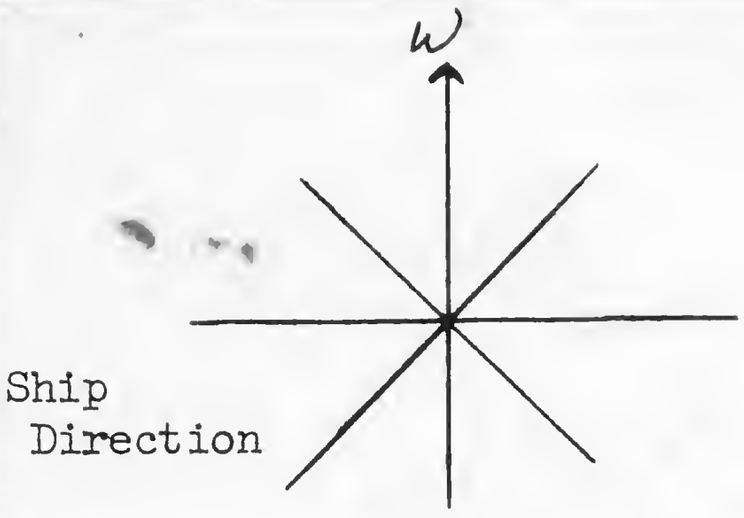


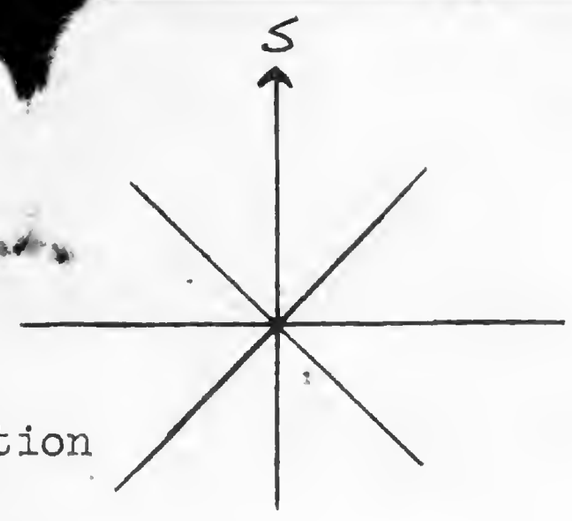
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN Nocturnal
or

OBSERVERS:
HoFF 18,50 - 2000
Cassin 2000 - 2300
Balcomb 2300 - 0200
HoFF 0200 - 0500
CHANDLER 0500 -

Date 15-16 August
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1850					Sunset - begin nocturnal observations
1905	WRSP	1			quick, erratic flight 5 to 6 feet off water
2013	RFB	1	E		probably white-throat or wilsons - very
2037	Bird Sp.	1			poor light
2042	Sooty tern	1	E		ad.
2047	Sooty Tern	1	E		ad.
2105	WRSP	1			
2106	Sooty tern	1	E		ad.
2122	" "	1			ad.
2127	" "	1	SE		ad. "
2232	WRSP	1			
2327	Bird. Sp.	1			
2357	WRSP	1			identification by flight near bow and size
0001	Bird Sp.	1			prob sooty tern
0012	Bird sp	1			" " "
0027	Bird sp	1			"
0045					Saw several clouds of feed in the water. prdo. - euphasids
0124	Sooty tern	1	NW		ad.
					0130 reduce speed to 7.2 Knots
0148	" "	1			ad.
0202	" "	1	N		"
0230	" "	1	N		ad. calling - moving toward Howland
0240	" "	2	N		ad. calling 2 note calls
0245	" "	2	N		ad. "
0330	" "	2	S		ad., "
0345	" "	1	W		4
0400	" "	1			
0455	" "	1	S		ad.
0437	" "	1			calling
0516	" "	1	S		ad.
0525	" "	1	S		ad.
0532	" "	3	S		ad.
0541	" "	1	S		ad.
0547	" "	1	W		ad.
0612	FRIG. SP	1			
TF 0613	SOOTY TERN	8	S		ad.
0617	BF13	2	S		ad.
0618	RFB	1	SE		
0624	FRIG SP.	1	S		
0630					CLOSE OBS FOR HOWLAND LANDING



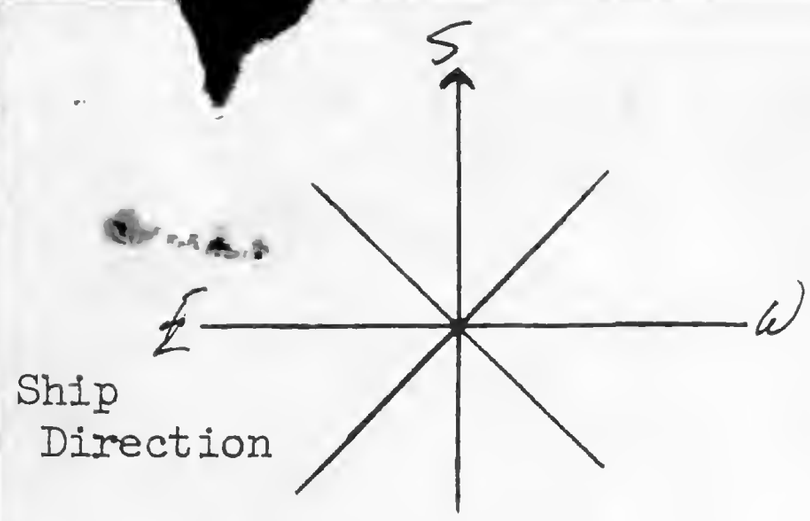
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin 0815 - 1100

Date 16 August 66
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0815					Begin Observations - Howland 6 miles astern.
	0817	BFB	4	S		imm., occasional individuals diving for ? flying fish - all 4 on the H2O like albatrosses on one occasion.
	0819	BFB	1	S		imm. Joined 3 other 4.
TF	0822	Sooty tern	40±4	S		all ad's.
	0823	sooty tern	2	E		ad's.
FF	0825	sooty Tern	25	ad's		feeding, Frigates ca. 50 ft over terns & H2O.
		Frigate sp.	7			
		BFB	1	ad.		
SF	0835	sooty Terns	7			ads.
	0837	sooty tern	1	SE		ad.
	0838	sooty tern	1	N		ad.
	0845	sooty tern	2	N		ad's.
TF C	0850	sooty tern	6	S		ad.s 1 coll. RSC.
	0859	sooty tern	1	N		ad.
	0905	sooty tern	1	S		ad.
FF	0915	sooty tern	35			ads. Feeding, frigates chasing terns.
		Frigate sp.	4			
	0924	sooty tern	1	N		ad.
	0930	Sooty tern	42			ad.'s one blue-streamer seen.
FF BS		Frig. sp.	1			
	0937	sooty tern	1	N		ad.
	0938	Pterodroma externa	1	N		too far to determine race.
	0945	Frigate	1	E		ad. ♀.
	0947	sooty tern	1	N		ad.
	1015	sooty tern	3	E		ads.
	1016	Frigate sp	1	SE		imm.
	1028	sooty tern	2	SE		ad.
	1041	WRSP	1	S		
	1051	sooty Tern	2	E		ads.
TF	1056	sooty Tern	13	SE		ads.
	1108	" "	3	SE		Ad
C	1115	" "	2	SE		Ad — coll one #2402 LNH
	1122	" "	2	SE		Ad
SF	1128	" "	15	(S)		Ad
	1142	" "	2	N		Ad
	1151	" "	1	SE		Ad
	1230	RTTB	1			Ad
	1255	WRSP	2	E		flying together
	1256	BFB	1	N		Ad

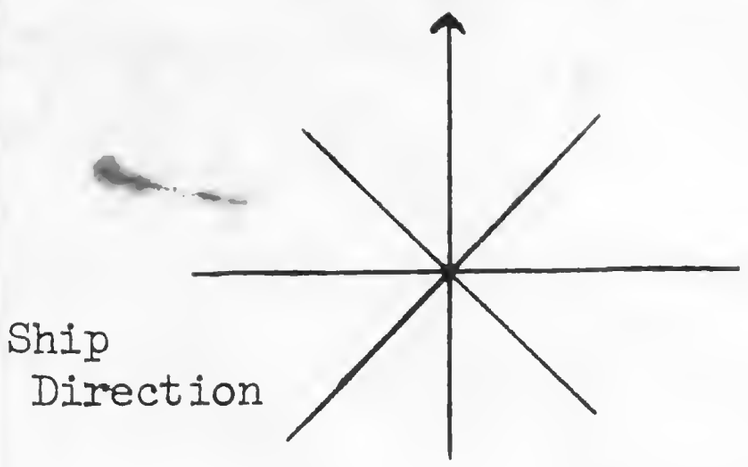


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Huber 1100 - 1400
Bulmer 1400 - 1700
HoFF 1700 - Sunset

Date 16 Aug. 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1300	BWP	1	S		
FF C	1310	Frigate sp.	80			~~Tuna~~ Tuna jumping 40 ~~Tuna~~ that I saw well were lessers but most of them I couldn't see well enough one ♀ Greater seen on ♂ Lesser Frigate collected #2403 LWH flock dispersed by 1330
		Sooty Tern	40			
	1335	BFB	1			joined one of the small dispersed groups
C	1337	G. Frigate	1			collected one ♀ #2404 LWH was in one small dispersed flock
C	1351	~~Bluegray Noddy~~ WANDERING TATTLER	1	E		#2405 LWH
	1402	RAY				About 3' across brown on top
	1405	BWP	1	SE		
	1411	Sooty Tern	2	SE		Ad
	1430	BWP	1	S		
	1435	Sooty Tern	1	SE		Ad
	1440	JFP	1	SE		
		Bulwer's Pet.	1	S		
	1442	BWP	1	S		
	1503	BWP	1	S		Sitting on H2O
	1510	BWP	1	SW		
	1520	BWP	1	SW		
	1528	BFB	1	E		Ad
	1535	BWP	1	SW		
	1544	Sooty Tern	4	W		Ad
	1616	BFB	1	E		Ad
	1632	RTTB	1			Sitting on H2O
	1634	WRSP	2	S		Leach's Type
	1635	WTTB	1	S		
	1805	WTSP	1			white-throated storm petrel
	1810	Frigate sp	9	S		flying high & breaking altitude & circling
	1830	WTTB	1	S		
	1850	Bulwer's pet	1	S		
	1855					Sunset - close diurnal observations



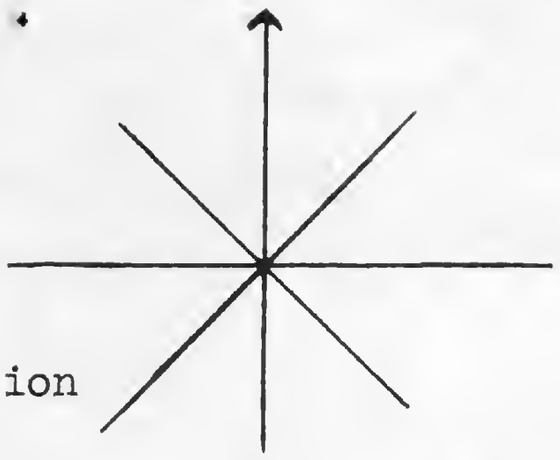
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN Nocturnal
or

OBSERVERS:
HoFF Sunset-2000
Crossin 2000-2300
Huber 2300-0200
Burmon 0200-0500
HoFF 0500-Howland

Date 16-17 August
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1855					Sunset - begin observation
2030	white-th. SP.	1			
2045	storm Petrel sp.	1			too far out to determine rump color. Stopped ship during passing rain squall 2045 - 2100, but no birds more N-NE now.
2130	WRSP	1			
2205	white-th S.P	1			
2250	"	1	NE		
2440	Bird sp	1			just caught a glimpse
2443	sooty tern	1			heard one call
2455	" "	1			" " "
2455					started drifting
0120					stopped drifting
0130	Bird sp	1			probably sooty tern
0218	Pterodroma sp	1			small, at edge of light
0300	"	1			
0304	Bird sp	1	S		small white below W-th. sp?
0306					Start drifting
0310	Sooty tern	1			Ad calling
0322	" "	1			" "
0344	" "	1			Ad
0355	" "	2			Ad Calling
0400					Stop drifting
0402	Sooty Tern	1			Ad calling
0406	" "	1			" "
0438	" "	2			Ad
0540	" "	2			Ad - calling
0610	" "	4+2			Ad - calling + 2 immature
0615	Shorebird	1			small quik flight - probably a golden plover or ruddy turnstone but light too poor to tell
0630	Sooty tern	1	SE		Ad
0645	B F B	1			Ad.
	Frigate Sp	1			♀ Ad
	Wedgetail	1			dark phase
	Sooty Tern	2			ad
0648					Sunrise - end nocturnal observations

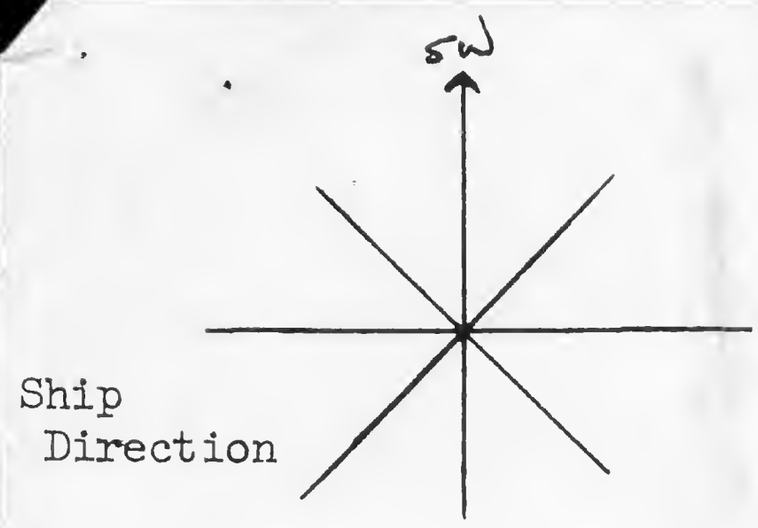


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
H of F Sunrise.

Date 17 August
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0648					Sunrise - begin diurnal observations
	0649	Sooty tern	4			Ad
B.S.		" "	1			Ad - Blue streamer
	0650	Sooty Tern	3	W		ad } numerous small groups of Sooties
		" "	3	W		ad } becoming common
		" "	3	W		ad
	0652	" "	4	W		ad.
	0655	" "	3	W		ad.
	0656	" "	3	W		ad
TF	0657	Golden plover	1			
2BS C.	0659	Sooty tern	15 ~~18~~		2406	~~ad~~ - two with Blue streamers, 13 ad + 2 immatures, one collected (HOFF-0705)
		" "	5			ad - further away
		" "	1			
TF	0715	" "	11			ad.
	0720	" "	1			ad.
TF	0723	" "	9			ad - Sooties very common - well dispersed across ~~broad~~ area.
	0725	" "	1			ad
	0730	" "	5			ad
		" "	3			ad
		" "	4			ad
	0735	RFB	1			immature - dark phase
		Frigate sp	1			very high
TF	0744	Sooty Tern	7			ad
	0742	Ruddy turnstone	1			5 mile from Howland
	0743	BFB	1			ad.
TF	0745	Sooty Tern	11			ad.
	0750					close observations
	0850					Begin observations after leaving Howland, Heading W.
FF	0851	BFB	9	W		all imm. frolicking along the ship.



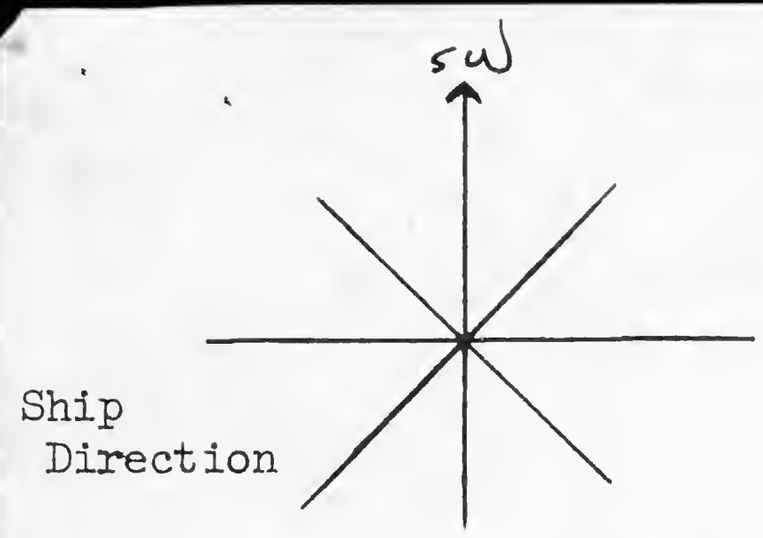
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin 0850 - 1200

Date 17 August 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0855	BFB	4	SW	imm.	Joined other 9 and all circling ship and fishing. occasionally all 13 milling and diving underwater in one spot.
TF	0855	sooty Tern	7	"		
	0902	BFB	1	SW		
TF	0906	Frigate sp.	17	NE		4 ad. 3 imm.
	0907	BFB	1	SW		up high - sp. undeterminable.
	0909	Sooty Tern	2	NE		ad.
TF	0910	sooty Tern	13	NE		all ad's.
	0911	sooty Tern	3	NE		ad's.
	0912	sooty Tern	2	NE		ad's.
	0913	sooty Tern	1	NE		ad.
	0913	Frigate sp.	4	NE		age + species undeterminable.
	0914	sooty Tern	10	NE		all ad's.
TF	0914	sooty Tern	2	SW		ad's.
	0915	Sooty Tern	1	NE		ad.
	0918					Howland Is. now 5 miles to stern - NE.
	0919	sooty Tern	2	NE		ad's
	0919	sooty tern	1	NE		ad.
FF	0923	sooty tern	18			17 ad's., 1 imm, 3 blue streamered ad's.
BS		BFB	9			all imm.
		BB	1			ad.
	0927	Sooty Tern	1	NE		ad.
TF	0928	Sooty Tern	7	E		ad's.
	0930	sooty Tern	2	NE		ad's.
	0934	sooty tern	1	SE		ad.
	0937	Sooty Tern	3	NE		ad's.
	0938	Sooty Tern	1	W		ad.
	0941	Sooty Tern	1	NE		ad.
	0943	sooty tern	1	NE		ad.
	0945	Sooty Tern	2	NE		ad.
BS	0948	Sooty Tern	3	E-NE		ads. one blue-streamered.
	0953	Sooty Tern	4	NE		ads.
	0956	sooty tern	1	NE		ad.
	0956	Sooty tern	4	NE		ads.
	0958	sooty Tern	1	NE		ad.
TF	1004	sooty tern	5	SW		ad's.
TF	1006	sooty tern	14	SE		ad's. high (ca. 50 ft. drove #10) slow flight.
	1012	Sooty Tern	2	SE		ad's.
BS	1015	sooty tern	2	NE		ads. one blue-streamered.
	1016	sooty tern	2	E		ads.
FF	1022	sooty Tern	14			all ad's. feeding lightly.
		Lesser Frigate	1			ad. ♂

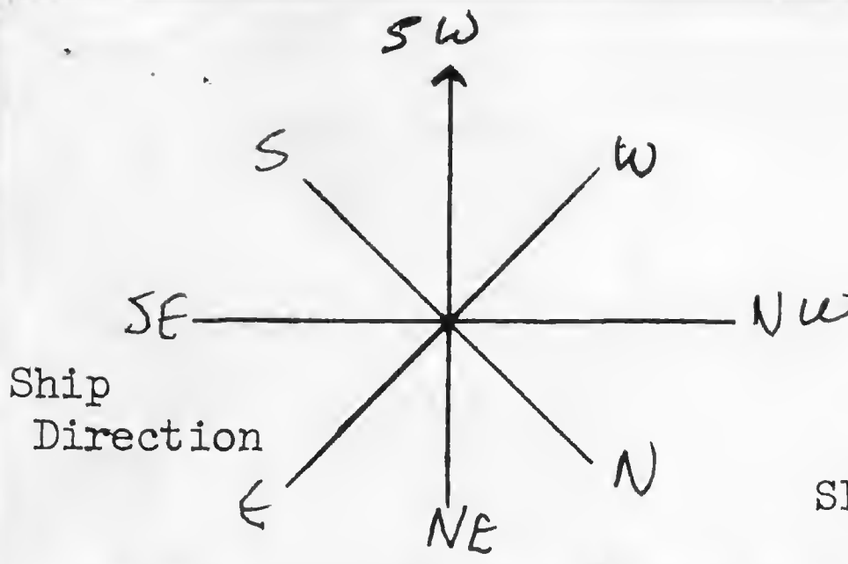


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin 0850 - 1200
H.I.F 1200 -

Date 17 August 1966
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1027	WTSP	1	SW		
	1028	Sooty Tern	3	SE		ad's.
	1035	Sooty Tern	2	E		1 ad, 1 imm.
	1040	Sooty Tern	2	NE		ad's.
TF	1042	Sooty Tern	6	NE		all ad's.
	1044	Sooty tern	1	SE		ad. blue-Streamered
BS	1045	Sooty tern	3	NE		ad's.
	1050	Sooty Tern	4	NE		ad's.
				SW		ad's.
TF	1051	Sooty Tern	6			
TF	1052	Sooty Tern	5	NE		ad's.
	1054	Sooty Tern	3	NE		ad's.
	1056	Sooty tern	4	SW		ad's.
TF	1057	Sooty Tern	8	NE		ad's.
FF 3BS	1059	Sooty Tern Frigate sp.	53 6			ad's. 3 blue-streamed.
	1107	sooty tern	1	SE		ad.
	1109	Frigate sp.	1			up high, alone.
	1115	sooty tern	1	E		ad.
	1117	sooty tern	1	NE		ad. blue-streamed.
BS	1118	Sooty tern	1	NE		ad.
3BS	1135	Sooty Tern	87			4 imm., 83 ad, 3 blue streamed.
FF		Lesser Frigate	6			4 ♂ ad., 2 ♀ ad. Tuna Tumping.
	1135	PI(f. Pet.	1			showed traces of white under wing - probably PI.
	1138	Sooty Terns	3	S		ads.
		Sooty Tern	7	ads		
PF	1142	Frigate sp.	2			way out
	1151	Sooty Tern	1	S		ad.
FF BS	1204	" "	18	S		ad. one Blue streamer
	1235	RTTB	1			following ship
	1236	Sooty Tern	1	ad		" "
	1240	" "	5	S		ad.
	1300	WTSP	1			flew out of range. - definitely a white throat
TF	1305	Cookis pet.	1	S		
BS.	1320	Sooty Tern	5			one blue streamer - another one had a peculiar bald molt as if it had been recently banded
T.F. BS.	1330	Sooty Tern	17			ads. one had a blue-streamer



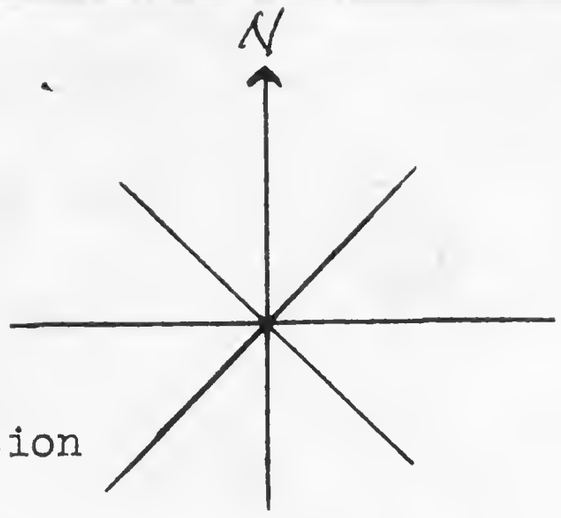
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
H. FF 1200-1500
D PEARSON 1500-1800

Date 17 August
Pg.# 4

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1335	RTTB	1			
	1400	Cook's Jet	1	S		
	1410	Sooty Tern	3	NE		ad. flying high.
FF 3BS.	1415	" "	44			2 immatures, 3 B. Streamers. the rest were adults.
		L. Frigate	4			2♂, 2♀
FF 3BS	1440	Sooty Tern	58			flock split before we were in close proximity; remaining group of about 30 birds had 3 B. Streamers. no immature were observed.
		Frigate sp.	2			
FF 2BS.	1500	Sooty Tern	29			2 Blue streamers; flock had been much all as larger - but dispersed upon our approach.
F.F. BS	1515	Sooty Tern	57	ene		1 Blue streamer; all ad.
	1520	Frigate sp.	1	ene		Joined Flock of 1515 and actively pursued ad. Sooty Tern for 1 minute.
FF	1530	Sooty Tern	78	ene		Could not get close enough to ascertain streamers or not
		L. Frigate	1			♂ actively pursuing Sooty Terns
		L. Frigate	1			♀ (ad.)
	1555	Frigate	1			
		Sooty Tern	(	N		ad
	1600	Sooty Tern	3	NE		
	1607	WRSP	1	SW		perhaps, probably, possibly, a Wilson's Petrel? Dark, no brown slash on wings, fluttery flight, legs dangling down.
	1658					whale; single high (15-20') straight spout 3/4 mile out. animal not seen (Balaenoptera ?)
	1725	Pterodroma sp.	2	SW.		Small (White-winged, hypoleuca, cooki type)
	1735	WRSP	2	SW		small - Much white on rump - quite dark overall plumage
	1740	WRSP	1	ene		
C		LEACH'S SP.	1	ene	2407	1 col. D PEARSON



Ship Direction

OBSERVERS:

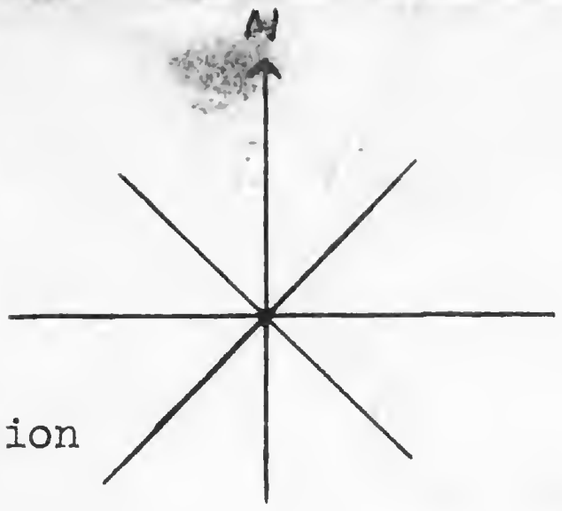
CHANDLER 1800-SS

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 17 AUG. 1966

Pg.# 5

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1820	WRSP	2	coe		
	1826	Cooks pet	1	N		
	1827	RTTB	1	N		
TF	1829	Sooty Tern	5	S	——	ad.
	1833	L-Frigate	1	N	——	ad ♀
	1835	PTERODROMA SP	1	NW	——	small type
	1845	BWP	1	N		
	1848	PTERODROMA SP	2	N	——	small type
	1859					SUNSET - CLOSE DIURNAL DATA COLLECTING ✓



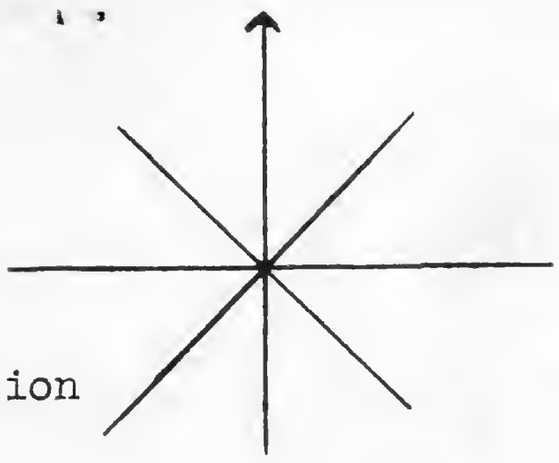
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or NOCTURNAL

OBSERVERS:
CHANDLER SS-2100
Crossin 2100-2400
HaFF 2400-0300
Pearson 0300-0600
CHANDLER 0600-SR

Date 17/18 AUG. 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
	1859					SUNSET - COMMENCE ~~BIRD-WATCHING~~ ORNITHOLOGIZING
	1922	BIRD	1	ee		
	1945	SOOTY TERN	1	?		calling ad.
	2052	" "	1	NE		
	2055	BIRD	2	SE		
	2126	Sooty Tern	1	N		ad.
	2237	" "	1	E		ad.
	2255	Bird	1	ee		
	0037	Bird sp.	1	ee		
	0100	Sooty tern	1			ad - calling - 2 note call
	0115	" "	1			ad. "
	0137	" "	1			ad. " - followed the ship directly above bridge for a short period.
	0345	" "	1			heard flying over ship - not seen (ad)
	0353	Bird	1	NE		
	0400	Sooty Tern	1	?		ad. calling
	0408	Sooty Tern	2	N		ad.
	0416	" "	1	?		ad calling
	0428	" "	1	ee		ad.
	0443	" "	1	?		ad calling
TF	0625	SOOTY TERN	4	E		ad
		" "	1	E		Imm.
	0628	SOOTY TERN	3	E		ad.
TF	0643	" "	5	NE		ad.
SF	0647	" "	6	NW		ad.
	0649					SUNRISE - HOWLAND IN SIGHT - CLOSE OBS.



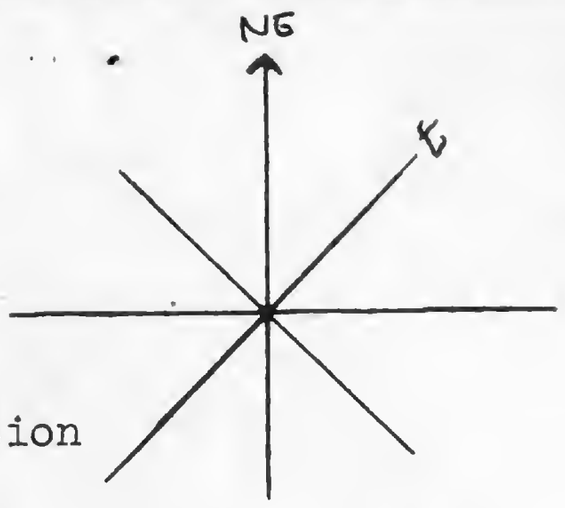
Ship Direction

OBSERVERS:
CHANDLER SR -

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 18 AUG 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0649					Sunrise - Begin Diurnal obs.
	0650	SOOTY TERN	3	E		ad
	0651	FRIGATE SP	1	ca		
TF	0657	SOOTY TERN	15	E		ad NO STREAMERS
TF	0700	SOOTY TERN	23	E		ad
TF	0701	" "	20	E		ad.
	0703					SOOTY TERNS ALL ABOUT / ca 200 NOT A FLOCK MOSTLY HEADING EAST - CLOSE OBSERVATIONS FOR HOWLAND
	0710					HOWLAND 15 MI. OBSERVATIONS BEGIN AGAIN
TF	0712	SOOTY TERN	26	NE		ado,
TF	0713	" "	6	NE		ad.
TF	0715	" "	7	E		ad NOBS,
	0716	" "	2	NE		ad
	0717	FRIGS P.	3	E		
TF	0718	SOOTY TERN	5	E		ad.
	0720	" "	1	E		ad.
TF	0726	" "	14	E		ad.
TF	0728	" "	28	NE		ad.
	0732	" "	2	N		ad. NOBS
TF	0735	" "	42	NE		ad.
*	0738	BFB	1	W		ad. 2 blue STRIPES ↑ROUND L. WING
TF	0740	SOOTY TERN	28	E		ad
		" "	1	E		imm
TF	0742	" "	19	E		ad.
TF	0743	" "	17	E		ad. NO BS
TF	0748	SOOTY TERN	3	E		ad
		BFB	2	E		ad
	0753	SOOTY TERN	2	E		ad.
	0754	" "	2	S		ad.
TF	0755	" "	19	E		ad
		FRIG SP.	1	E		
	0800	Sooty tern	1	W		ad
	0801	~~Brown B~~ BFB	1	~~SE~~ E		imm ~~immature~~ following ship
	0802	Frigate sp	3	ca		
TF	0811	SOOTY TERN	9	E		ad
		" "	1	E		imm
	0813	FRIG SP	2	ca		chasing each other
	0814					BIRDS ABUNDANT CLOSE OBS. HOWLAND 3-4 miles



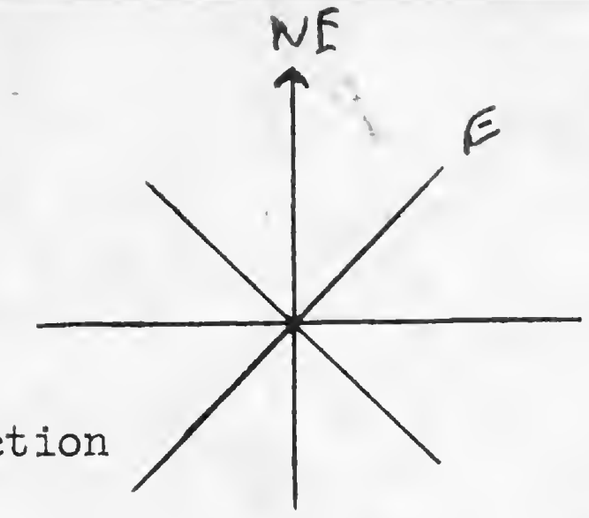
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
BALCOMB

Date 18 AUG 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1115					WATCH COMMENCETH SOME DISTANCE FROM ISLAND
	1119	BFB	1	E		Ad
	1125	L. Frigate	1	SW		ad ♂
	1126	~~Frigate~~ Frigate sp.	1	well		
	1128	BFB	1	SW		Ad.
FF	1200	"	2			Ad
		Frigate sp.	5			
		Sooty tern	27			Ad. no streamers
TF	1245	Sooty Tern	12	E		
BS	1248	BFB	1			following ship imm. Blue Streamer
	1310	"	1	SW		Ad
	1310					
	1312	Sooty tern	2	SE		Ad tursiops 1.
	1315	L. Frigate	1	NE		♀ Ad
	1358	Sooty/Slender-billed	1	S		dark underwings flew like slender-bill INH
	1440	BFB	1			Subadult
		BFB	1			Adult
	1517	WRSP	1			leaches type
	1541	BFB	1			
	1558	RTTB	2	SW		Ad
			1			" momentarily followed ship.
	1734	PTERODROMA sp	1	NW		SMALL TYPE
	1844					ca 200 Spinner porpoise Stenella roseiventris
	1851					Sunset and diurnal mats



Ship Direction

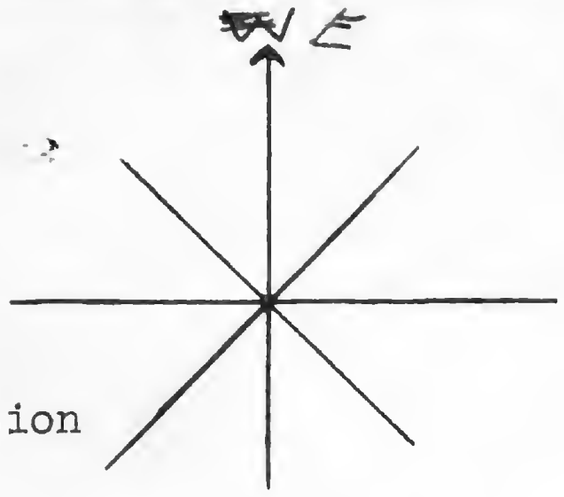
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or Nocturnal

OBSERVERS:
Huber 1800-2000
Clapp - 2200 - 0300

Date 18 Aug 1966
Pg.# 1

TIME	SPECIES	#	DIR.	BAND NO.	REMARKS
1851					sunset — changed course to W at 2000
2150	Sooty tern	1	E		Ad.
2320	Storm petrel sp.	1	NW		not seen well
0125	~~Bird sp~~ Fairy tern?	1	W		saw only underbody which was white — tern, did not call, think was most probably a fairy tern. Passed once in towards ship at or slightly above level of bridge and circled back out to sea.
0415	Sooty Tern	1	?		ad heard
0420	"	1	E		ad.
0430	"	1	?		ad heard
0448	"	1	?		ad heard
0535	"	1	?		imm. heard.
		1	E		ad.
0649	Sunrise - close				Nocturnal observations



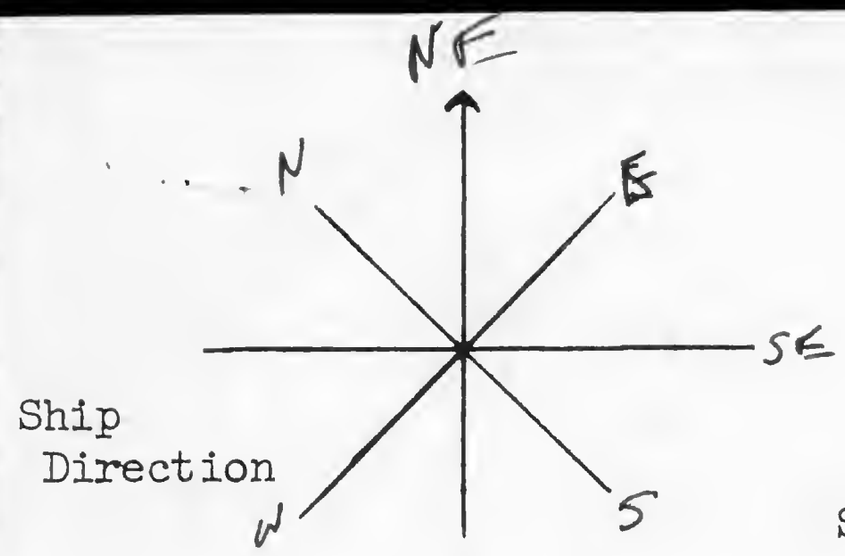
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS: CHANDLER / BULMER

Date 17 AUG. 1966
Pg.# 1

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0649					SUNRISE BEGIN OBS.
	0650	Sooty Tern	2	E		ad
	0650	Ruddy Turnstone	1	E		
	0731	Sooty Tern	4	N		Ad
	0744	BFB	1	S		Ad
	0755	Sooty Tern	1	W		Ad
	0757	" "	1	W		ad.
	0810	" "	2	N		ad.
	0817	WRSP	1	E		Leaches type
TF	0835	Sootytern	18	E		ad
	0840	WRSP	1	W		
TF BS	0850	Frigate sp	8	G		very scattered flock, out of 4 sooties seen well only 1 had Blue streamer
		Sootytern	12	G		BFB — Ad sooties — Ad
		BFB	1	G		one Frigate imm.
	0915	Sooty tern	1	W		Ad
	0936	" "	2	W		Ad
	0942	" "	2	N		Ad
	0945	" "	1	N		Ad - molt in primaries
	0946	WRSP	2	E		leeches type
FF/C	1020	Sooty Tern	100 ±3	LL		ad, I collected 1115 (R.S. Crossin)
		L. Frigate	15			8 ♂'s ad, 7 ♀'s ad.
		G. Frigate	2			1 imm. close L. Frigates; 1 ad ♂
		RFB	1			dark wings white head/breast, and tail (ad)
		Frigate sp	2			pursued for an hour
	~~1025~~	~~RTTB~~	~~1~~	~~LL~~		
C	1028	RTTB	1	LL		R.S. Crossin'
	1140	G. Frigate	1	CL		IMM.
	1239	WRSP	1	E		leaches type
	1307	WRSP	1	E		" "
	1324	RFB	1	W		followed ship briefly — non adult non light phase tail dark head light underside light above uniform dark (subadult int phase?)
	1337	BFB	1	SE		ad.
	1455	WRSP	1	CL		Leach's Type
	1515	WRSP	1	C		" "
	1530	WRSP	1	C		" "
	1531	Ruddy Turnstone	1	E		
	1541	L. Frigate	1	E		ad Female



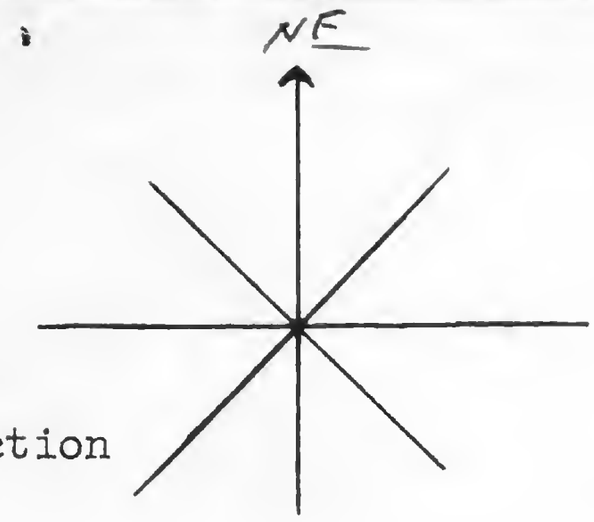
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Huber, Pearson
1600-1800

Date 19 Aug. 1966
Pg.# 2

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1615	Pterodroma sp	1	E	———	looked like A cook's but no distinct w, may be whitish on upper tail coverts, this is a screwy distription but the bird looked screwy, besides I just woke up
	1622	sooty tern	1	SE	—Ad	
	~~1648~~	~~sooty/Sh Shearwater~~				
	1648	~~Shearwater sp~~ Shear/Pet	1	SE	———	all dark - no details (sooty / Sb type?)
C	1745	L. Frigate	1	ce	———	L. Huber (ad ♂ chasing Pterodroma) ~~2409~~
		Pterodroma sp.	1			
	1810	WRSP	1	~~SE~~		
	1845	~~Shear/Pet~~ PIP/TP	1	~~SE~~ S		
	1851	Sunset - close				diurnal observations



Ship Direction

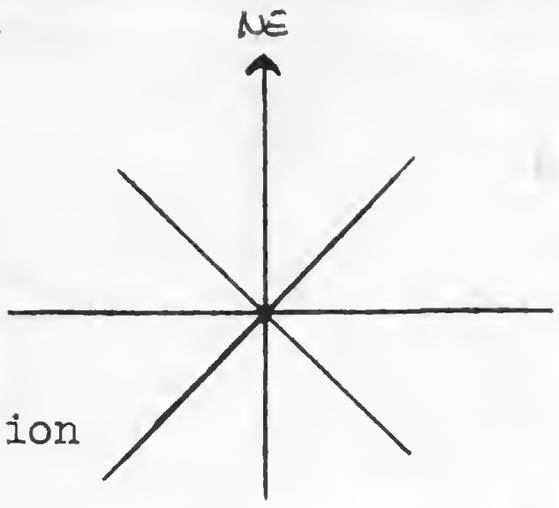
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin + Huber SR - 0800
Pearson + HoFF 0800-1000

Date 20 August 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0635					Sunrise - Begin Observations:
	0650					ship on horizon (Japanese fishing vessel ?)
	0736	wedgetail	1	#E		southern dark phase
	0810	Sooty/slender-bill	1	S		dark wing linings - flying low as slenderbill flight described by Huber. Long narrow pointed wings carried well forward - blunt tail
	0855	Juan Petrel	1	NE		dorsal wings dark - larger than a cookii - flew quite close to ship
	0942	PI/Tah Pet	1	NE		
	0946	S/SB	1	NE		silverish wing lining.
	0952	Ruddy Turnstone	1	S/1		
FF	1055	Sooty Tern	10			ad's. } feeding.
		Wedgetail	2			dark phase
		Kermadec P.	1			dark phase
TF	1114	Wedgetail	21	E		dark phase
	1119	Juan Fern.	1			
	1129	Storm pet sp.?	1	NE		possibly WRSP
	1132	Sooty tern	1	E		ad.
	1145	RTTB	1	ONE		Subadult following ship
	1155	WRSP	1	E		
	1210	Octopus				1-2 feet beneath surface - pink
	1330	Ruddy turnstone	1	NE		Spring plumage
	1335	BWP	1	NE		
FF	1345	Sooty tern	34			ad,
		RFB	1			immature dark phase
		Jaeger sp.	3			
		Pelagic shear	1			
		Wedgetail	2			dark phase
		Golden plover	1			flew overhead
	1400	Wedgetail	1	NE		light phase
	1445	Shear/Pet	1	E		all dark (bad light)
	1500	Golden Plover	1	E		Felt pleurae

SI-MNH-958-e
Rev. 5-66



Ship Direction

OBSERVERS:

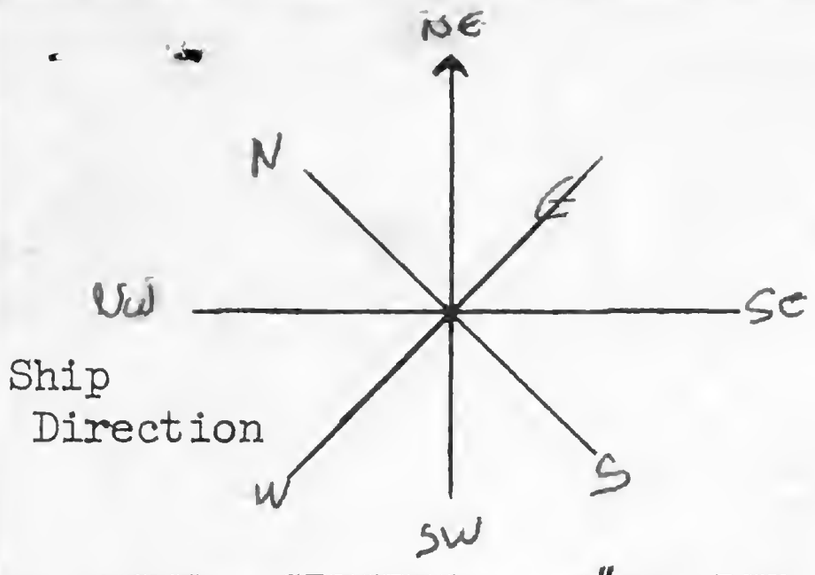
Balcomb & Clapp 1600-ss

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 20 AUG, 1966

Pg.# 2

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1505	PI / Tah Pet	1	E		
F.F. C.	1540	Phoenix Is.	1	all	2411	W. Bulmer #2411
C		J.F. Pet	1		2412	W. Bulmer # 2412
		Wedgetail	45 ±3			all dark phase
		Sooty Tern	39			all adults
		Shear/Pet	2			dark
C	1545	J.F.Pet.	1		2413	D.Pearson — #2413
	1610	Wedgetail	2	E		dark phase
	1615	~~PIP/Tah~~ Phoenix Is/Tahiti	1	O		sitting on the water, doing what he oughter
	1628	JFP	2			
	1628	wedgetail	1			sitting on water
	1638	Phoenix Is./Tah.	1	SE		dark phase
	1638	P. externa	1	E		
	1647	wedgetail	2	NE		white neck, I think.
	1702	WRSP	1	NE		dark phase
	1709	Pterodroma sp.	1	NE		Brown slashes on wing; Possibly Leach's.
	1745	WRSP	1	NE		small (hypoleucus leucopterus, cooki type)
		WRSP	2	E		
		JFP	1	SW		not together
	~~1747~~			W		
	1747	Pterodroma sp	1			
	1754	WRSP	1	W		small, white belly button
				SE		
C	1807	JFP	1			
C	1810	Phoenix I. P.	1		2415	coll. R. Clapp —
TF	1810	wedgetail	6		2414	coll. R. Clapp —
				O		dark phase
	1817	JFP	1	S		
	1817	P. externa	1	E		
	1825	Brown booby	1			circled ship. adult
	1830	JFP	1	NE		
	1834	JFP	2			
	1838	Wedgetails	3			dk. phase
	1842	JFP	1	NE		
	1843	WEDGETAIL	2	SW		dk ph.
	1844					SUNSET CLOSE OBS.



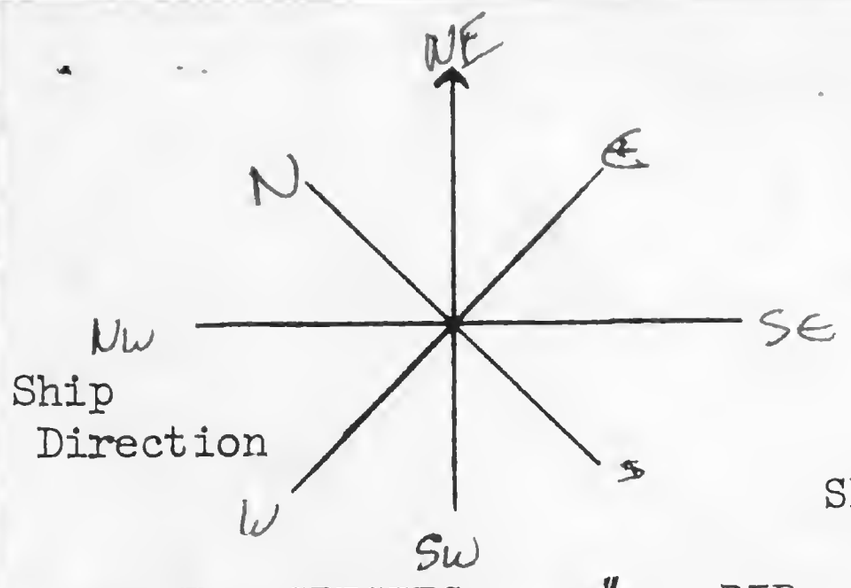
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Clapp + Huber 5R-0700
Crossin + Balcomb 0P-1000

Date Aug 21, 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0622					sunrise
0653	Pt. externa	1	SE		
0702	P. hypoleuca	1	SW		All dark above with broad black edges on the underwing with a white stripe in the middle
0709	Pt. externa	3	NE		
0717	Sooty Tern	1	SW		immature
0742	RTTB	1	E		Ad
0815	Sooty tern	2	E		flying along edge of rain ad.
0815	Shear-pet	1	E W		" " " " "
0840	BWP	1	E		
0843	WTTB	1			
0915	BWP	1			circling ship
0923	Sooty/Slb.	1	NE		
0927	BWP	1	W		
0937	WTTB	1	NE		
0937	S/Sb	2			on H2O
[illegible]	Herald's?	1			sitting w/ s/Sb.
0940	Herald's?	1			
0959	S/Sb	1	W		
1006	RTTB	1	E		
1158	JFP?	2	NE		P. EXTERNA ssp?
1159	BWP	1	NE		
1159	Pterodroma sp	1	NE		small type
1203	WEDGETAIL	1	SW		dk ph. at edge of rain squall
1205	Pterodroma sp	2	S		BWP?
1215					ENTER LARGE RAINSQUALL
1225	Shear/pet	1	W		IN LIGHT RAIN
1230	Pter. externa	1	N		
1232	RTTB	1	CC		circled
1236	Ptero. sp.	1	SE		small (hypoleuca size).
1240					LEAVE RAIN
1246	Pterodroma sp	1	SE		hyp. leuca Type
1250	" "	1	NE		"
1258	BWP	1			sitting on water
1305	Phoeny/Tahiti	1			sitting on H2O — probably Phoenix Island
1306	Pterodroma sp	1	SE		

SI-MNH-958-e
Rev. 5-66

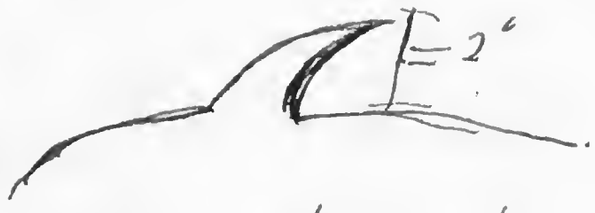


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

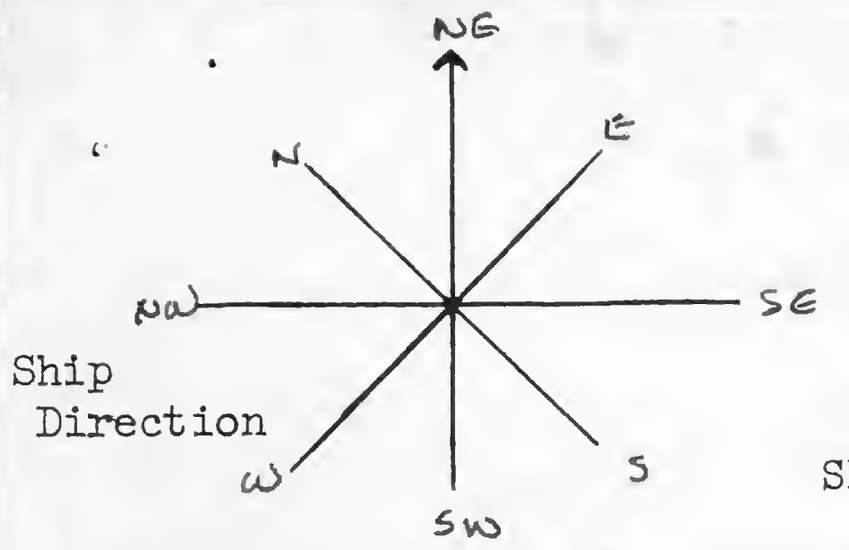
OBSERVERS:

Date 21 Aug. 1966
Pg.# 2

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
1314	Pterodroma sp	1	SE	—	Nigripennis type
1315	Pt. externa	1	SE		↓
1317	Pterodroma sp	1	SE	—	" "
1340	Bulwer's pet.	1	E	—	flew ahead of ship and set on water
1345	BWP	1	NE		
1359	BWP	1	SW		
1421	Pt. externa	1	S		
1430	Wedgetail	1	SE	—	dark
1445	BWP	1	N		
1508	Pterodroma sp.	1	SW	—	hypoleuca type
1520	Pt. externa	1	NE		
1530	Pterodroma sp.	1	SW	—	hypoleuca type
1624	BWP	1		—	sitting
1637	JF	2		—	sitting
1639	Pt. externa	1	E		
1641	" "	1	SE		
1745	Wedgetail	1	SE	—	dk. ph.
1746	JF	1	E		
1802½	BWP	1	SE	—	
TR 1818	Sooty Tern	5	SE	—	Ad
1820	Whales	4			
1834					Sunset stop observations



20' Long dark (black?) beast

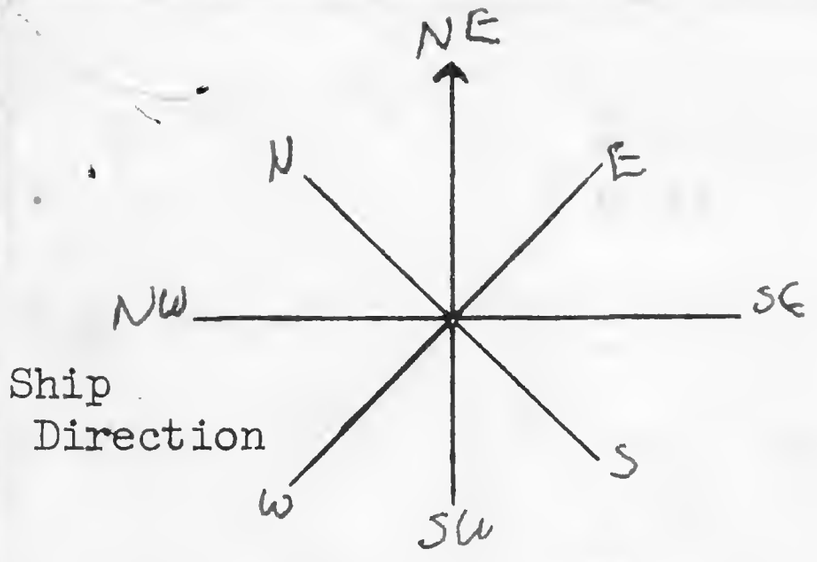


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
BULMER & BALCOMB
CLAPP

Date 22 AUG, 1966
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
0608	0608				Sunrise
	~~0647~~				
0647	Bulwers pet	1	E		
0730	Wedgetail	1	SE		dark
	S/sb	1	SE		
0752	Wedgetail	2	NE		dark
0840	BWP	1	W		
0846	Phoenic/Tahitian	1	N		saw no white in throat, rump lighter brown than chocolate-brown back
0900	BWP	1	S		
0945	PTERODROMA SP.	1	NE		SMALL BRAND
1042	JF	1	E		Following ship
1045	Golden Plover	1			" "
1115	Pomarine Jaeger	1			chased the Golden plover
1120					Storm rain squall across entire N horizon, now passing over ship.
1128	Sheer Pet	2	SW		possibly S/sb.
1148	Bulwer's	1	NE		
1149	Pterodroma sp	1	E		observed flying parallel to ship for 5' mins - then sat down on water.
					possibly cooki - W across back - dark head/wings lighter back. Underwings boardered, leading & trailing edge with black.
1200	Cook's Pet.	1	NE		Followed ship for 5 minutes
1205	BWP	1	SE		
1209	Bulwer's	1	E		
1215	Pt. externa	1	SE		
1218	Pterodroma sp	1	SE		
1220	Pt externa	1	S		
1225	Ruddy Turnstone	1	E		circling ship (Breeding plumage)
1226	BWP	1	E		
1236	BWP	1	E		
1237	Pterodroma sp.	1	NE		
1300	BWP	1	E		
1301	Shear/Pet	1	E		dk., large
1307	BWP	1	E		



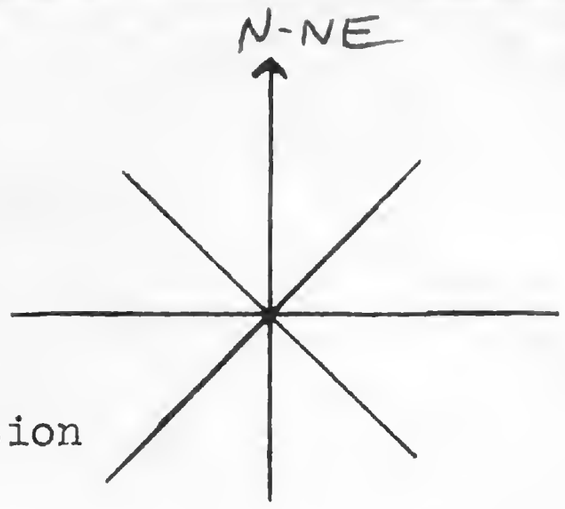
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1400 BALCOMB
1500 SS - CNAN

Date 22 AUG 1961
Pg.# 2

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	1358	Shear/Pet	1	E		all dark
	1410	Bwp	2	NE		
	1422	"	1	E		
	1450	Sooty/Sib	1	NE		sitting on water at 30 sec. intervals
C	1455	Golden plover	1	(S)	2416	swung around as if to land on back deck. call KCB 1500
	1520	Bwp	1	NE		
	1530	Jaeger	1	SW		all dark prob parasitic
	1718	NEWELL'S	1	NE		
	1802	PTERO. EXTERUM	1	S		
	1824					SUNSET CEASE OBS.



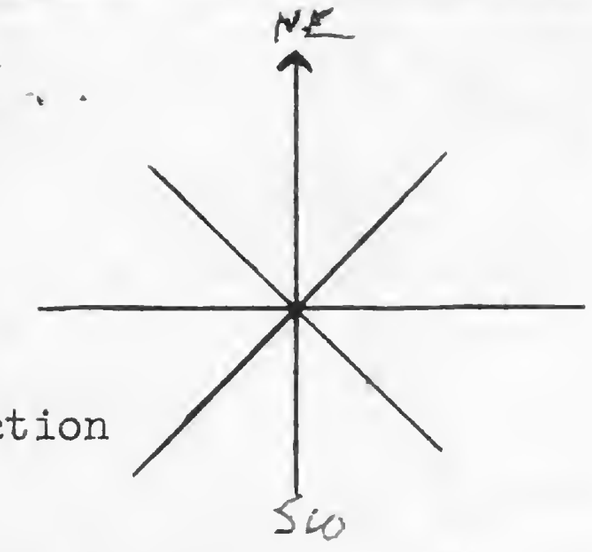
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Chandler SR - 0800
Swarth + Pearson 10-1200
Auber 1400-35

Date 23 August 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0654					Sunrise - Begin Observations
0620	JFP	1	N		
0627	P. hypoleuca	1	NW		
0628	JFP	1	E		
0658	"	1	NW		
707	"	2	W		
0710	"	1	NE		
0723	S/S6	1	SE		dk underwing
0725	BWP	1	ese		
0726	PTERO. EXTERNA	1	SE		
0820	PT pro. hypoleuca	1	Cle		
0914	BULWERS PET.	1	E		
0935	JFP	1	NW		
JF 0938	Sooty tern	16	NE		
1258	JFP	1	NE		
1307	JFP	1	NW		
1340	PTERODROMA sp	1	NW		
1353	PTERO. EXTERNA	1	S		
1355	PTERO EXTERNA	1	W		
1434	J.F	1	SW		
FF 1440	Wedgetail	2	E		dark phase
	DF	3			
1540	BWP	2	W		
1554	JF	1	E		
1608	Pteradroma sp	1	NW		
1620	RTTB	1	ese		Following above ship
1702	Shearwater sp	1	E		All dark wedge tail size
1707	JFP	1	W		
1716	"	1	W		
1737	BWP	1	E		
1817					Sunset



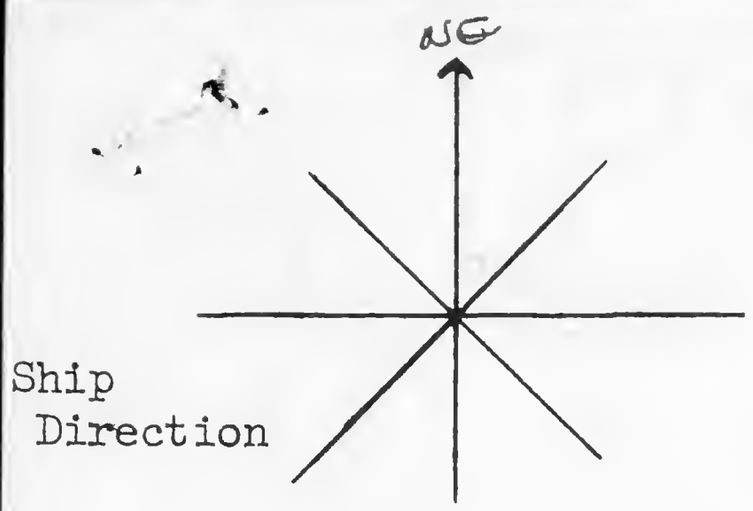
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Crossin + Huber 1R-0800

Date 24 August 1966
Pg.# 1

	TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
	0543					sunrise — begin observations. stormy, sea rough
	0610	Pterodroma sp	1	NE		Black-wing Petral size, but color unrecognizable.
	0615	JFP	1	NE		
	0643	JFP	1	NE		rain squall still continues
	0750	JFP	1	NE		" " " "
	0852	Pt. externa	1			
	0855	BWP	1	NW		
	0925	Pt. externa	1	SW		
	1025	Golden Plover	2	CC	—	circling ship
	1315	Pter. externa	1	N		
	1355	Pter. externa	1	N		
	1400	Pter. externa	1	NE		
TF	1405	Pter. externa	5	SE		
		Wedgetail	2	SG	—	dk. phase
		Cook's Pet	1	SG		
		PhI/Tah. Pe	1	SE		
	1429	Wedgetail	1	SE		
	1430	Pt. externa	1	SE	—	dk phase
	1436	Pt. externa	1	SW		
	1445	Pterodroma sp	2	SW		
	1456	Pt. externa	1	E	—	probably P. externa
	1506	PTERODROMA SP	1	SW		
	1516	PT. EXTERNA	3	SE		
	1518	PT. EXTERNA	1	SW		
	1520	" "	1	E		
	1521	" "	1	N		
	1522	PTERODROMA SP	1	SW		
	1527	PT. EXTERNA	3	CC		
	1540	" "	1	W		
	1550	" "	1	N		
	1554	BULWERS	1	CC		
	1558	PT. EXTERNA	1	S		
	1604	WTTB	1	NE	—	above ship, bullied
	1615	~~Bird~~ JFP	1	NE	—	large white bird soaring along in troughs.

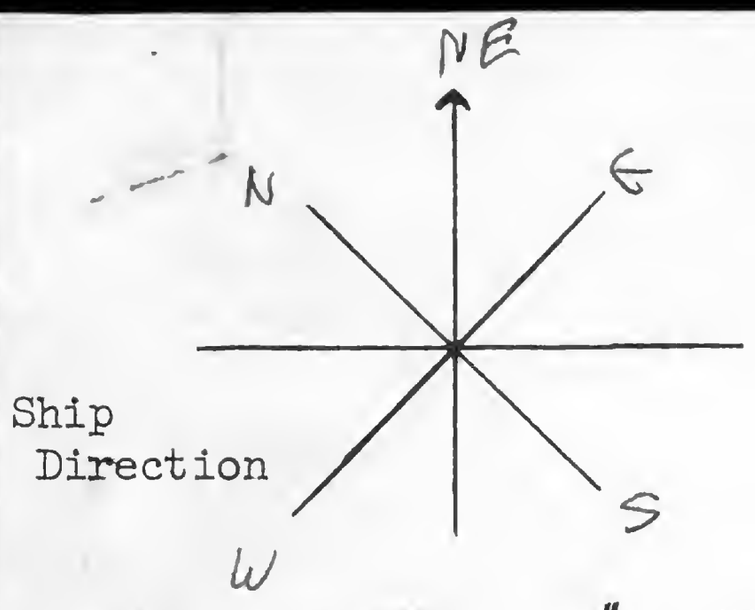


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
1608- ss Bakonb

Date 24 Aug. 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1630	P. externa	1	◎		
	1630	wedgetail	1	N		dark phase
	1635	JFP	1	◎		sitting on water
	1640	P externa	1	NE		
	1700	PT. EXTERNA	1	N		
	1702	PT EXTERNA	2	N		
SF	1708	Pt. externa	8	◎◎		circling ship for 15 minutes
	1750					ca 8 P.Externa still around ship
	1750	RTTB	1	◎		circling ship
	1805	JFP	1	◎		possibly one of previous
	1811					Sunset - close obs.



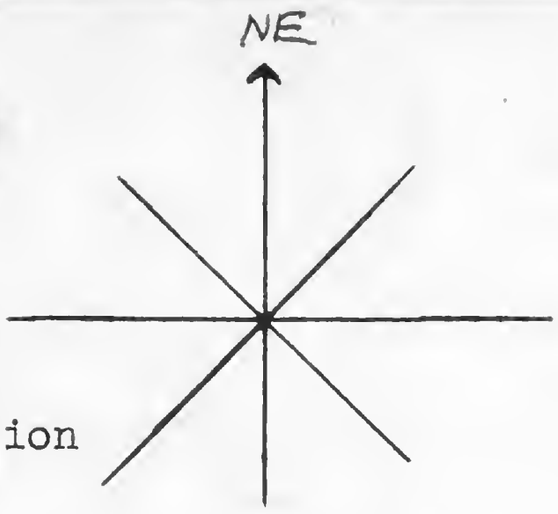
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS: Clapp & Huber SR-6602
Crossin + Balcomb 08-10

Date 25 August 66
Pg.# 1

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0530				sunwise
	0550	BWP	1	E	
	0553	Newell's Shearwater	1	SE	
	0558	BWP	1	NE	
	0559	wedgetail	1	N	intermediate phase
	0600	RTTB	1	NE	immature
	0601	Shear-pet.--	1	L	
	0603	BWP	1	N	
	0610	JFP	1	NE	
	0612	Shear/petrel	1	NE	looked like a all chocolate brown JFP and flew like one
	0625	petrel sp	1	NE	slightly smaller wingspread than BWP wing not as dark as BWP, gray back and top of head gray spot around eye. possibly immature Bonin Is.?
	0630	shear/petrel	1	SW	very dark back white underneath thick black front border to wing. dark brown crown
	0631	"	1	"	"
	0634	"	1	"	"
	0645	JFP	1	NW	
	0650	Shear/pet	1	SW	
	0651	JP	2	SW	
	0656	Shear pet	1	SW	see 0625 observation
	0709	"	1	"	"
	0724	Wedgetail	2	"	intermediate — white phase
TF	0730	sooty tern	16	SE	
		wedgetail	8	"	light phase
		JFP	2	NE	
	0734	Wedgetail	2	SW	light
	0735	Wedgetail	1	SW	light
	0755	wedgetail	1	SW	light
	0756	wedgetail	1	SW	light
	0845	Wedgetail	1	NW	light



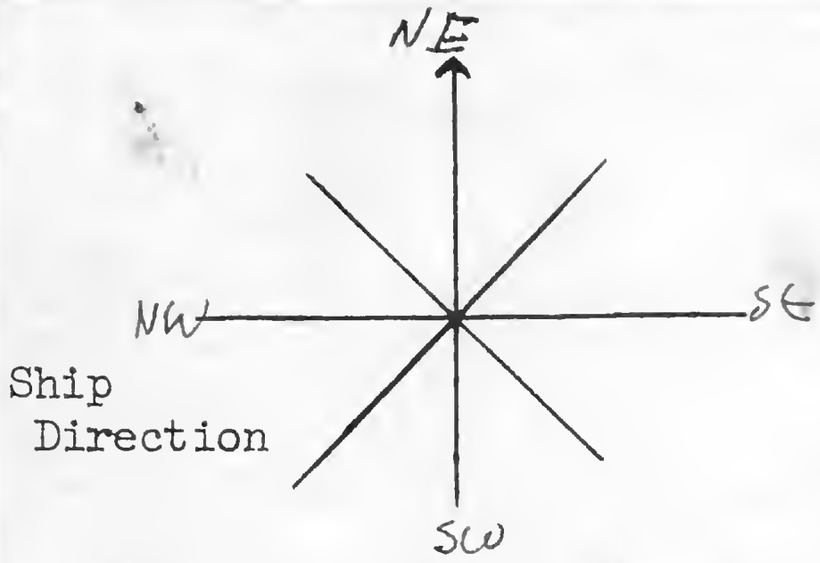
Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Cressman + Balcomb of - CO
HaFF 1000

Date 25 August 1966
Pg.# 2

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	0830	Wedgetail	1	ⓞ		lt. phase
	0834	Bird	1	SW		flying like tern
	0834	Newell's	1	SW		
	0835	Wedgetail	1	S		light phase
	0845	"	3	S		" "
	0854	"	1	S		" "
	0902	"	1	◎		" "
	0915	Bulwer's	1	NE		
	0915	Sooty tern	1	NE		ad.
	0916	wedgetail	1	◎		int.
	0920	"	1	NE		lt. phase
	0925	"	1	NE		" " joined previous bird
	0950	Sooty Tern	2	◎◎		ad's -
		Wedgetail	2	◎◎		light phase } feeding.
	1000	BWP	1	◎		~~Left Boat~~
	1020	BWP	1	NE		
	1030	Wedgetail	1	NE		dark phase
	1100	"	1	◎		light phase
	1100	Soot, Tern	2	E		
	1105	Wedgetail	13			sitting 4 to 0 - light phase
	1105	J F P	1	E		
	1115	Wedgetail	1			light phase the BWP followed the Wedgetail very closely for several minutes then the wedgetail followed the BWP just as closely. Both were close to the water and making sharp turns and short dives.
		BWP	1			
	1125	Wedgetail	1	N		light phase
FF	1145	Sooty Tern	15	◎◎		
		Wedgetail	1			light
		Newell's	1			
TF	1233	Sooty Tern	21	NE		Ad

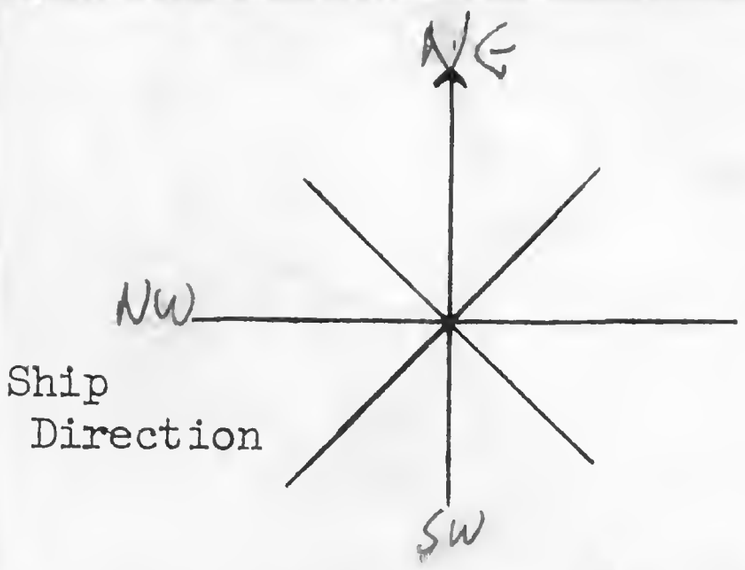


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date Aug 25
Pg.# 3

	TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
	1322	B. Frigate	1	NE	———	ad ♂
	1323	Shear/pet.	1	NW		
	1337	Sooty tern	1	NE		
	1337	Shear/pet	1	SE		
SF	1340	Sooty tern	25	NE	———	As seen
SF	1345	" "	13	G		
		Wedge-tail	1	G	———	light phase
	1355	"	2	NE	———	light phase
	1409	"	1	NE	———	"
	1416	SOOTY TERN	1	SE	———	ad.
	1417	Wedgetail	1	NE	———	lt ph.
	1423	"	1	E	———	lt. ph.
	1425	RT TB	1	SE		
	1430	P. hypoleuca	1	car	———	Bip ?
	1434	SOOTY TERN	1	SE	———	ad.
	1443	WEDGETAIL	1	NE	———	~~dk ph~~ lt. ph.
	1452	Phypoleuca	3	NE		
	1458	SOOTY TERN	2	E	———	ad.
	1515	Newell's	1	SE		
	1517	"	1	SE		
	1520	Sooty Tern	41	SE	———	ad - and the rains came!
	1530	Wedgetail	1	SW	———	lt. phase " " " ceased!
	1600	SRP	1	SW		light
	1605	Wedgetail	1	SE	———	~~dark~~ phase
	1618	"	2	SW		light
	1619	"	1	SW		"
	1642	"	1	E		"
	1646	BIP	1	S		
	1655	Sooty/SB	1	SE	———	dk. underwings
	1700	Bulwer's	1	SW		
	1715	Newell's	1	N		
	1717	Bulwer's	1	S		

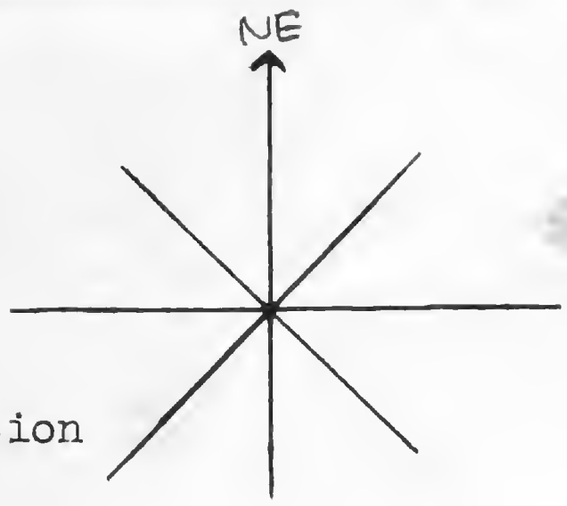


SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 25 Aug 1966
Pg.# 4

TIME	SPECIES	#	SPECIMEN or DIR.	BAND NO.	REMARKS
1720	P. hypoleuca	1	S		
1725	Bal[illegible]s	1	S		
1733	"	1	NW		
1844					Sunset close observ.



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS: BULMER & BALCOMB
Crossin + Hoff 10-12
BALCOMB & CLAPP 14-16

Date 26 AUG, 1966
Pg.# 1

TIME	SPECIES	#	DIR.	SPECIMEN or BAND NO.	REMARKS
0619					SUNRISE — COMMENCE WATCH
0643	WedgeTail	1	W		lt. ph.
0654	"	1	E		"
0654	S/Sb	1	E		heavy body = sooty ?
0735	Shear-pet	1	ⓒ		prob Sooty/S16
0812	" "	1	N		
0825	BULWER'S	2	cce		
0826	WEDGETAIL	1	NE		lt. ph.
0828	BULWER'S	1	cce		
0840	Shear/PET	1	E		
0910	BULWERS	1	cce		
0919	Shear/PET	1	N		S/Sb ?
0922	BULWERS	1	cce		
0923	WEDGETAIL	1	NE		lt. ph.
0925	BULWERS	1	NW		
0927	"	1	NW		
0930	"	1	cce		
0940	"	1	cce		
0946	WEDGETAIL	1	N		lt. ph.
0958	BULWERS	1	cce		
1013	"	1	cce		
1014	Phaeth Rubricauda	1	SW		
1018	Bulwer's	1	W		
1024	Pterodroma sp.	1	W		small; possibly Black-Wing
1032	sooty tern	1	N		ad.
1036	Bulwer's	1	SE		
1057	Bulwer's	1	SE		
1110	Bulwer's	1	SE		
1225	Bulwers	1	SW		
1240	Bulwers	1	SW		
1246	Bulwers	1	SW		
1303	Bulwers	1	N		
1408	RFB	1	N		lt phase
1410	"	2	ⓔ		1 " " , 1 SA lt. phase
1410	Wedgetail	1	ⓒ		dark phase
1437	Sooty tern	2	NW		ad.
1530	Bulwer's	1	ⓒ		
1612	WEDGETAIL	1	E		lt ph.
1630					Close obs ca 10 mi off

Wind ca. 20 knots, ocean very rough, ship pitching + pounding, visibility poor — result: bird numbers are probably much higher than sightings indicate. RSC

DATE 3 AUG. 1966

Time at sunrise = 0641 Position at sunrise = 11-06$, 171-05W

Time at sunset = 1818 Position at sunset = 10-16$, 170-16W

Miles traveled from 0000 hours to sunrise = 63-0

Miles traveled from sunrise to sunset = 73-0

Miles traveled from sunset to 2400 hours = 55-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0518	RADAR-SWAIN IS.	171-04W,	11-19$
2.				
3.				
4.				
5.				
6.				

DATE 4 Aug. 1966

Time at sunrise = 0629 Position at sunrise = 8-53$, 168-48W

Time at sunset = 1810 Position at sunset = 7-33$, 167-24W

Miles traveled from 0000 hours to sunrise = 66-0

Miles traveled from sunrise to sunset = 116-0

Miles traveled from sunset to 2400 hours = 60-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	168-52W,	8-57$
2.	1900	"	167-18W,	7-27$
3.				
4.				
5.				
6.				

DATE 5 AUGUST 1966

Time at sunrise = 0614 Position at sunrise = 6-13$, 166-03W

Time at sunset = 1802 Position at sunset = 4-54$, 164-55W

Miles traveled from 0000 hours to sunrise = 55-0

Miles traveled from sunrise to sunset = 104-0

Miles traveled from sunset to 2400 hours = 53-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	166-04W,	6-14$
2.	1800	"	164-55W,	4-54$
3.				
4.				
5.				
6.				

DATE 6 AUGUST 1966

Time at sunrise = 0601 Position at sunrise = 3-35$, 163-38W

Time at sunset = 1756 Position at sunset = 2-27$, 162-30W

Miles traveled from 0000 hours to sunrise = 56-0

Miles traveled from sunrise to sunset = 98-0

Miles traveled from sunset to 2400 hours = 55-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL ~~163-35W~~	163-38W,	3-35$
2.	1800	"	162-29W,	2-27$
3.				
4.				
5.				
6.				

DATE 7 AUGUST 1966

Time at sunrise =0549 Position at sunrise = 1-19 $, 161-07 W

Time at sunset = Position at sunset = 0-23 $, 160-02 W

Miles traveled from 0000 hours to sunrise = 53-0

Miles traveled from sunrise to sunset = 87-0

Miles traveled from sunset to 2400 hours = ——

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0500	CELLESTIAL	161-12 W,	1-23 $
2.				
3.				
4.				
5.				
6.				

DATE 10 AUGUST 1966

Time at sunrise =0542 Position at sunrise = 0-23 $, 160-00 W

Time at sunset =1756 Position at sunset = 0-18 $, 161-52 W

Miles traveled from 0000 hours to sunrise = ——

Miles traveled from sunrise to sunset = 111-0

Miles traveled from sunset to 2400 hours = 63-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1800	CELLESTIAL	161-53 W,	0-18 $
2.				
3.				
4.				
5.				
6.				

DATE 11 AUGUST 1966

Time at sunrise = 0558 Position at sunrise = 0-07S, 164-06W

Time at sunset = 1813 Position at sunset = 0-03N, 166-01W

Miles traveled from 0000 hours to sunrise = 67-0

Miles traveled from sunrise to sunset = 116-0

Miles traveled from sunset to 2400 hours = 64-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0500	CELLESTIAL	164-06W,	0-07S
2.	1800	"	165-59W,	0-02N
3.				
4.				
5.				
6.				

DATE 12 AUGUST 1966

Time at sunrise = 0615 Position at sunrise = 0-07N, 168-09W

Time at sunset = 1829 Position at sunset = 0-20N, 170-24W

Miles traveled from 0000 hours to sunrise = 64-0

Miles traveled from sunrise to sunset = 136-0

Miles traveled from sunset to 2400 hours = 61-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	168-06W,	0-07N
2.	1900	"	170-30W,	0-20N
3.				
4.				
5.				
6.				

DATE 13 AUG 1966

Time at sunrise = 0631 Position at sunrise = 0-28N, 172-31W

Time at sunset = 1847 Position at sunset = 0-36N, 174-36W

Miles traveled from 0000 hours to sunrise = 67-0

Miles traveled from sunrise to sunset = 125

Miles traveled from sunset to 2400 hours = 55-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	172-26W,	0-27N
2.	1900	"	174-38W,	0-36N
3.				
4.				
5.				
6.				

DATE 14 AUG. 1966

Time at sunrise = 0646 Position at sunrise = 0-48N, 176-38W

Time at sunset = 1855 Position at sunset = 0-40N, 176-37W

Miles traveled from 0000 hours to sunrise = 69-0

Miles traveled from sunrise to sunset = 77-0

Miles traveled from sunset to 2400 hours = ~~10-0~~ 10-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	RADAR	176-34W,	0-44N
2.	VARIOUS	FIXES WHILE MANEUVERING AROUND		
3.	HOWLAND & BAKER ISLANDS			
4.				
5.				
6.				

DATE 15 AUG. 1966

Time at sunrise = 0648 Position at sunrise = 0-48N, 176-38W

Time at sunset = 1850 Position at sunset = 0-16S, 175-38W

Miles traveled from 0000 hours to sunrise = —

Miles traveled from sunrise to sunset = 101-0

Miles traveled from sunset to 2400 hours = 52-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1900	CELLESTIAL	175-40W,	0-16S
2.				
3.				
4.				
5.				
6.				

DATE 16 AUG 1966

Time at sunrise = 0648 Position at sunrise = 0-46N, 176-38W

Time at sunset = 1855 Position at sunset = 0-35S, 176-57W

Miles traveled from 0000 hours to sunrise = 57.0

Miles traveled from sunrise to sunset = 106-0

Miles traveled from sunset to 2400 hours = 53-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0200	RADAR (BAKER)	176-24W,	0-15N
2.	0600	" (ITOWLAND)	176-37W,	0-40N
3.	1900	CELLESTIAL	176-58W,	0-35S
4.				
5.				
6.				

DATE 17 AUG. 1966

Time at sunrise = 0648 Position at sunrise = 0-41N, 176-47W

Time at sunset = 1859 Position at sunset = 0-21N, 178-03W

Miles traveled from 0000 hours to sunrise = 65-0

Miles traveled from sunrise to sunset = 107

Miles traveled from sunset to 2400 hours = 21-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0630	CELLESTIAL	176-48W,	0-37N
2.	1900	"	178-03W,	0-21N
3.				
4.				
5.				
6.				

DATE 18 AUG 1966

Time at sunrise = 0649 Position at sunrise = 0-44N, 176-54W

Time at sunset = 1851 Position at sunset = 1-15N, 175-28W

Miles traveled from 0000 hours to sunrise = 48-0

Miles traveled from sunrise to sunset = 91-5

Miles traveled from sunset to 2400 hours = 51-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0630	CIELLESTIAL	176-56W,	0-44N
2.	1900	"	175-26W,	1-15N
3.				
4.				
5.				
6.				

DATE 19 AUG 1966

Time at sunrise = 0649 Position at sunrise = 0-22N, 177-12W

Time at sunset = 1851 Position at sunset = 1-54N, 175-45W

Miles traveled from 0000 hours to sunrise = 72-0

Miles traveled from sunrise to sunset = 97-0

Miles traveled from sunset to 2400 hours = 46-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELESTIAL	177-04W,	1-22N
2.	1900	"	175-44W,	1-55N
3.				
4.				
5.				
6.				

DATE 20 AUG

Time at sunrise = 0635 Position at sunrise = 3-30N, 174-38W

Time at sunset = 1844 Position at sunset = 5-03N, 173-18W

Miles traveled from 0000 hours to sunrise = 68-0

Miles traveled from sunrise to sunset = 123-0

Miles traveled from sunset to 2400 hours = 55-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	174-42W,	3-26N
2.	1900	"	173-16W,	5-05N
3.				
4.				
5.				
6.				

DATE 21 AUGUST 1966

Time at sunrise = 0622 Position at sunrise = 6-39 N, 171-52 W

Time at sunset = 1834 Position at sunset = 7-46 N, 170-14 W

Miles traveled from 0000 hours to sunrise = 75-0

Miles traveled from sunrise to sunset = 122.0

Miles traveled from sunset to 2400 hours = 52-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1900	CELLESTIAL	170-12W	7-49N
2.				
3.				
4.				
5.				
6.				

DATE 22 AUGUST 1966

Time at sunrise = 0608 Position at sunrise = 9-08N, 169-59W

Time at sunset = 1825 Position at sunset = 10-38 167-36

Miles traveled from 0000 hours to sunrise = 59-0

Miles traveled from sunrise to sunset = 122-0

Miles traveled from sunset to 2400 hours = 56-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1900	CELLESTIAL	167-33W,	10-42N
2.				
3.				
4.				
5.				
6.				

DATE 23 AUG 1966

Time at sunrise = 0554 Position at sunrise = 11-56N, 166-21W

Time at sunset = 1817 Position at sunset = 13-17N, 165-07W

Miles traveled from 0000 hours to sunrise = 50.0

Miles traveled from sunrise to sunset = 109

Miles traveled from sunset to 2400 hours = 52-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0700	CELEST & LORAN	166-13W,	12-03N
2.	1900	CELLESTIAL	165-03W,	13-22N
3.				
4.				
5.				
6.				

DATE 24 AUG 1966

Time at sunrise = 0543 Position at sunrise = 14-31N, 163-55W

Time at sunset = 1811 Position at sunset = 15-55N, 162-39W

Miles traveled from 0000 hours to sunrise = 50.0

Miles traveled from sunrise to sunset = 113.0

Miles traveled from sunset to 2400 hours = 52-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0500	CELLESTIAL	164-02W,	14-26N
2.	1800	"	162-41W,	15-54N
3.				
4.				
5.				
6.				

DATE 25 AUG 1966

Time at sunrise = 0530 Position at sunrise = 17-11N, 161-30W

Time at sunset = 1800 Position at sunset = 18-39N, 160-15W

Miles traveled from 0000 hours to sunrise = 49-0

Miles traveled from sunrise to sunset = 113-0

Miles traveled from sunset to 2400 hours = 54-0

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0500	CELLESTIAL	161-33W,	17-08N
2.	1800	"	160-15W,	18-39N
3.				
4.				
5.				
6.				

DATE 26 AUG 1966

Time at sunrise = 0619 Position at sunrise = 19-57 N, 159-58W

Time at sunset = 1853 Position at sunset = HONOLULU

Miles traveled from 0000 hours to sunrise = 53-0

Miles traveled from sunset to 2400 hours = 102-0

Miles traveled from sunset to 2400 hours = —

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0600	CELLESTIAL	159-00 W,	19-55N
2.				
3.				
4.				
5.				
6.				

* PS Bill Perrin of BCF has collected one of these and will soon publish a note. The skeleton has not yet been examined, but from the external appearance there is no known form. I may co-author with him. 24 APR 71

11 FEB 71

K. C. BALCOMB
P. O. Box 100
FPO San Francisco Ca. 96614

DEAR ROGER,

I HAVE BEEN DOING CONSIDERABLE ANALYSIS AND RESEARCH OF PUBLICATIONS FOR A PAPER I AM PREPARING ON THE "BEAKED WHALE" OBSERVATION OF 11 AUG 1966, AND I HAVE COME TO THE POINT WHERE I NEED TO GET A LITTLE MORE DATA TO FINISH THE JOB. SPECIFICALLY, CAN YOU PROVIDE ME WITH DATA CONCERNING THE BT DROPS (SURFACE TEMP, THERMOCLINE) OF 9, 10, 11, 12, 13 AUG AS TAKEN BY "SHEARWATER"; CAN YOU EXTRACT NOTES, IF ANY, FROM VARIOUS LOGBOOKS CONCERNING THE OBSERVATION OF BEAKED WHALES WHICH WERE OBSERVED AT ca 1500; AND MAY I BORROW (DUPLICATE?) ANY MOVIES OR PHOTOGRAPHS YOU HAVE OF THOSE WHALES.

THE ENTIRE OBSERVATION IS QUITE REMARKABLE, AND IF MY CASE CAN BE PROVEN, IT WILL ADD MEASURABLY TO THE KNOWLEDGE OF ZIPHIID WHALES. DR J.C. MOORE MAY CO-AUTHOR THE PAPER WITH ME TO LEND IT MORE AUTHORITY. HE HAS TURNED ME ON TO LOTS OF GOOD REFERENCE MATERIAL, AND HAS HELPED CONSIDERABLY ON SEVERAL DRAFTS OF THE MANUSCRIPT.

I STILL AM WORKING ON ALL THE OTHER PACIFIC CETACEAN DATA YOU SENT ME SEPT 16, 1969 (BELIVE IT OR NOT). I HAVE ONLY TWO OBSERVATIONS (BEAKED WHALE, UNIDENT DELPHINID* @ 1640, 11 AUG) THAT I'VE BEEN WORKING ON FOR INDIVIDUAL PUBLICATION. THE REST OF THE DATA SHOULD BE PUBLISHED, BUT WE SHOULD LIMIT THE INPUT TO DEFINITELY IDENTIFIED SPECIES, AND THEN, MAYBE INCLUDE THE REST AS UNIDENT. CETACEANS.

HOW IS THE PROJECT DOING? I'M BANDING LOTS OF RTTB'S IN MY SPARE TIME.

SEE YOU LATER,
KEN

cc: DR HUMPHREY

PST

SOUTHERN GRID

PRELIMINARY REPORT AT-SEA SURVEY NO. 9

14-19 August 1966

by

Richard S. Crossin

SOUTHERN GRID

PRELIMINARY REPORT AT-SEA SURVEY NO. 9

14-19 August 1966

This report is based upon the observations and collections made within the Southern Grid area during the period 14-19 August 1966. The cruise track for the present survey was similar to that followed during July 1966.(Figure 1). This type of grid pattern is quite suitable when mass banding and streamering operations are being carried out on Howland in that the maximum results can be obtained from both the island and at-sea work with the limited time and man-power available. When Sooty Terns are not breeding on Howland and only a brief survey of the island is needed, an entirely different grid pattern is recommended. Since only approximately half the time as that allowed during the July survey was available for August grid work, the present survey was not nearly as adequate. An attempt was made, however, to cover as much area as time permitted in all major directions out from Howland.

The Smithsonian survey party included Richard Crossin (Biologist in Charge), Roger Clapp, Kenneth Balcomb, Walter Bulmer, David Hoff, Richard Chandler, Larry Huber, and David Pearson. The grid cruise was made aboard the U.S.N.S. SHEARWATER (T-AG 177). Some misunderstanding by the Master concerning operational procedure during grid survey work occurred, but did not affect the results of the present cruise.

Diurnal operations were maintained from sunrise to sunset, except during island operations. During the grid period a total of 534 miles and 64 hours of diurnal observations were completed (Table 1). A total of 4099 birds of 20 species

were recorded and 21 birds of 6 species were collected. Throughout the grid cruise seas were too rough to use the small skiff for collecting purposes. However, collecting was deliberately kept to a minimum throughout most of the survey because of more fruitful results obtained in the form of streamer sightings. Invariably flocks could only be approached once before scattering. During this brief approach the observer must decide whether to attempt collecting or spend the time quickly glassing as many birds as possible in search of streamers. The second course was usually followed and a total of 33 blue-streamered Sooty Terns were recorded during the six day survey (Table 5). Most of these sightings were made on 17 August W-SW of Howland. This area is not considered to be frequented by the apparent majority of Howland birds, but rather all conditions(following seas, wind and light) were favorable for approach to and surveylance of flocks throughout the morning and early afternoon of 17 August.

Nocturnal observations were maintained from sunset to sunrise or approach to islands. A total of 544 miles and 59 hours were completed during the grid period. Only 232 birds of 10 species were recorded, the majority of these were Sooty Terns upon close approach to Howland Island. The pattern appeared similar to that encountered during July in that the vast majority of Sooty Terns returned to the island at dusk from all points of the grid and left during early dawn. No birds were collected during nocturnal operations.

Density (birds/linear mile) dropped to 7.68 from a high of 10.39 recorded during July. This is considered a direct result of comparably less survey time spent in close proximity to Howland Island during the present cruise. Flocks encountered throughout the survey were entirely of Sooty Terns, frigates, and boobies. Sooty Terns represented 83.6% of all birds in flocks (Table 6); not a

single shearwater-petrel was encountered in flocks during the survey. Bird numbers (especially in the form of feeding flocks) usually dropped off drastically between 30 and 40 miles outward from Howland. The species composition, distribution of birds within the grid, direction and time of movements, and numerous sightings of Howland marked birds all point to an August grid avifauna composed almost entirely of Howland-based breeding birds. Although this might be a patently obvious and expected conclusion, I know of no other instance during the course of the project whereby at-sea operations have been able to determine the exact origin of large numbereds of Central Pacific breeding birds with any such degree of certainty. The importance of color-streamered birds cannot be overemphasized. Roughly 38,000 Sooty Terns have been streamered on Howland to date. If segments of the tern colony continue to breed as it now appears they will, banding and streamering operations should be continued during forthcoming cruises.

SPECIES ACCOUNTS

Wedge-tailed Shearwater (1 + 1 nocturnal)

Throughout the previous year, Wedge-tailed Shearwaters have consistently been one of the dominant Procellarids in the grid avifauna and such low numbers as were recorded during the present survey have not been previously noted. Their absence from the grid at this time cannot be explained since they were abundant last September and small numbers of dark-phase southern island birds were noted north of the grid at ca. 5°N on 20 August 1966. Both birds recorded in the grid were dark phase.

Sooty/Slenderbilled Shearwater (1)

A single bird tentatively identified as a Slender-billed Shearwater was noted on 18 August. If last years migration was typical, huge numbers of southward migrating birds of both species can be expected in the grid next month.

Juan Fernandez Petrel (2)

A single bird identified to this race and another Pterodroma externa unidentified to race were recorded in the grid. Only a few were noted last month. This species was recorded in low numbers during the previous year usually during migration to and from the southern hemisphere breeding grounds.

Phoenix Island/Tahitian Petrel (3)

Both species are known to occur irregularly on the grid area, but Phoenix Island Petrels are probably the more common. Specimens have now been collected on both Howland and Baker and the species appears to be an uncommon, but regular visitor to the grid area.

Black-winged Petrel (21)

Absent in the grid from January through May 1966, a considerable buildup in numbers of this species occurred in July when 87 were recorded. Reduced numbers during the present survey may indicate that the birds move leisurely through the grid to "wintering" areas farther north. Small numbers may also winter in the grid since they were present throughout last fall.

Cook's Petrel (5)

This species was first recorded in the grid during April 1966 when 2 specimens were collected. None were recorded last month, but their presence might have gone unnoticed due to confusion with races of Pterodroma hypoleuca .

Bulwers Petrel (2)

Consistently recorded in low numbers except during March 1966 when large numbers of migrating birds moved through the grid.

White-throated Storm Petrel (2 + 3 nocturnal)

Recorded in very low numbers in September 1965, May and July 1966. If distribution over the past year has been normal, a few stragglers can be expected regularly throughout summer and early fall months. During this period Leach's Storm Petrels are present in their lowest numbers.

Leach's Storm Petrel (1)
white-rumped storm petrels (27 + 7 nocturnal)

A single Leach's Storm Petrel was collected on 17 August. The bird was a subadult and is presumed to be representative of the small "summering" population in the grid which does not migrate north during the species prebreeding year (s). Most of the 34 other unidentified white-rumped storm petrels were probably Leach's. A few individuals were tentatively identified to Wilson's Storm Petrel.

Red-tailed Tropicbird (13)

Approximately the same number was recorded during the July survey. The increased numbers recorded in the grid during the July-August 1966 surveys are considered to be the result of buildup in the breeding population on Howland Island. One specimen was collected.

White-tailed Tropicbird (2)

Except for higher concentrations during October-November 1965, this species has consistently been recorded in low numbers or absent on all cruises to date.

Blue-faced Booby (131 + 3 nocturnal)

Density dropped from 0.388 in July to 0.245 during the present cruise. This reflects decreased grid activity near Howland Island rather than any decrease in bird numbers since numbers on Howland have remained much the same throughout the present breeding season. A blue painted adult was recorded approximately 10 miles NE Howland on 18 August and a blue-streamered immature on the same day at 27 miles NE Howland. The majority of grid sightings occurred in close proximity to Howland Island during the period 14-17 August as consecutive grid legs were begun each day starting from that island. Up to a dozen immature birds invariably accompanied the ship out from Howland, some remaining with it as far as 20 miles out. Some individuals may have learned that flying fish are stirred up by the ship.

Brown Booby (4 + 1 nocturnal)

Three of the four sightings were recorded on 14 August between Howland and Baker. The greater numbers recorded last month were correctly attributed to increased activity near the two islands.

Red-footed Booby (31 + 2 nocturnal)

Over 61% (19) of the sightings were recorded in one large mixed feeding flock approximately 14 miles SE Howland on 15 August. Most other birds of this species were also recorded in mixed feeding flocks.

Great Frigatebird (7)
Lesser Frigatebird (157)
unidentified frigatebirds (362 + 3 nocturnal)

Frigatebirds were invariably associated with Sooty Tern feeding flocks and practically all frigatebird sightings were in such flocks. Over 44% of frigatebirds were recorded on 14 August between Howland and Baker. Great Frigatebirds comprised less than 5% of all identified birds, a figure closely comparable to the actual numbers of the two species presently breeding on Howland Island. The large number of birds unidentified to species resulted from scanty attention during observations of feeding flocks when search for blue-streamered Sooty Terns was connsidered more important. One Great Frigatebird and two Lesser Frigatebirds were collected during grid operations.

Golden Plover (5)
Ruddy Turnstone (3)
Wandering Tattler (2)

The expected increase of shorebirds with the advent of fall migration is now becoming apparent. Only three shorebirds were recorded during July. Increased numbers can be expected during the forthcoming months. One Wandering Tattler was collected during the present cruise.

Sooty Tern (3303 + 181 nocturnal)

This species was again dominant during every day of the cruise and accounted for 80.44% of total birds (diurnal and nocturnal). This was roughly 10% lower

than during the July cruise. Density (birds/linear mile) showed a similar drop from 8.91 in July to 6.19 during the present cruise but present lower figures are considered a reflection of decreased activity in the grid, especially near the islands. Birds were abundant in all sectors of the grid with peak days on 14 August between Howland and Baker and on 17 August W-SW of Howland. The percentage of streamered birds in the Howland breeding colony is now great enough to where it is more profitable to carefully scan flocks for marked birds than to attempt collecting in hopes of taking banded birds. Of 15 birds collected, one was banded (Howland). A large portion of the chicks on Howland Island are beginning to fly and immatures were recorded in the grid for the first time during the present breeding season. Apparently immatures leave the grid area and do not return until the adult stage is reached. Immatures noted at sea during the present cruise were always accompanied by adults, presumably parent birds. This is especially noticeable when any immature leaves a feeding flock to investigate the ship in that an adult bird is sure to follow close behind, invariably calling loudly. The Sooty Tern was the only tern species recorded in the grid during the present survey, except for a questionable sighting of a Fairy Tern during nocturnal observations.

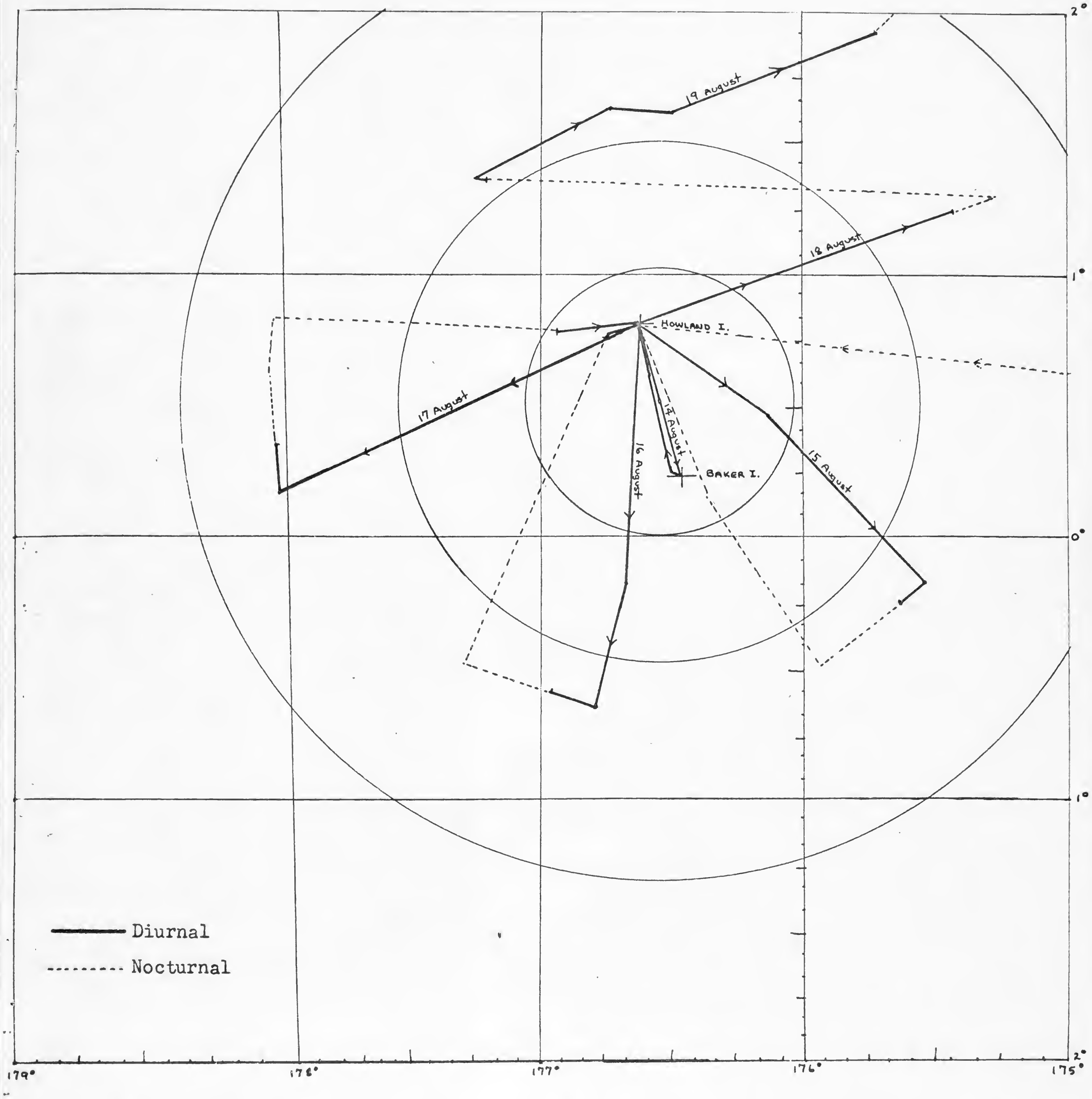


Figure 1. Southern Grid No. 9 cruise track, 14-19 August 1966.

Scale: 2 inches = 60 miles at 0° latitude.

TABLE 1. Summary of Southern Grid observations during the period 14-19 August 1966.

DIURNAL

Date	No. Miles	No. Hours	No. Birds	No. Species
14 August	68	10.42	1360	11
15 August	91	10.83	716	10
16 August	92	10.67	395	12
17 August	108	11.18	856	13
18 August	76	9.02	572	7
19 August	99	12.03	200	9
TOTALS	534	64.15	4099	20 (10.3/day)

NOCTURNAL

13-14 August	124	11.70	99	4
15-16 August	109	11.67	49	5
16-17 ~~17-18~~ August	118	11.88	36	8
17-18 August	69	11.83	39	1
18-19 August	124	11.97	9	2
TOTALS	544	59.05	232	10 (4.0/night)
GRAND TOTALS	1078	123.20	4331	20

TABLE 2. Diurnal density of Species Groups in the Southern Grid, 14-19 August 1966.

Species Group	No. Birds	Birds/Sq. Mi.	Est. Pop. for 67,600 Sq. Mi.	% Total Birds
Shearwater-Petrel	49	0.046	3110	1.20
Storm Petrel	30	0.056	3786	0.73
Terns	3303	2.062	139,391	80.58
Tropicbirds	15	0.014	946	0.37
Boobies	166	0.156	10,546	4.05
Frigatebirds	526	0.246	16,630	12.83
Shorebirds	10	0.019	1284	0.24
TOTALS	4099	2.599	175,693	100.00%

TABLE 3. Diurnal abundance of Species in the Southern Grid, 14-19 August 1966.

Species	No. Birds	Birds/Linear Mile	No. Coll.	Status over last month.
Wedge-tailed Shearwater	1	.002	0	-
Sooty/Slender-billed Shear.	1	.002	0	0
Juan Fernandez Petrel	2	.004	0	-
Phoenix Island/Tahitian Pet.	3	.006	0	+
Black-winged Petrel	21	.039	0	-
Cook's Petrel	5	.009	0	+
Pterodroma species	13	.024	0	+
Bulwers Petrel	2	.004	0	-
Shearwater-Petrel	1	.002	0	-
White-throated Storm Petrel	2	.004	0	0
Leach's Storm Petrel	1	.002	1	-
white-rumped storm petrels	27	.051	0	-
Red-tailed Tropicbird	13	.024	1	+
White-tailed Tropicbird	2	.004	0	+
Blue-faced Booby	131	.245	0	-
Brown Booby	4	.007	0	-
Red-footed Booby	31	.058	0	-
Great Frigatebird	7	.013	1	-
Lesser Frigatebird	157	.294	2	+
frigatebird species	362	.678	0	-
Golden Plover	5	.009	0	+
Ruddy Turnstone	3	.006	0	+
Wandering Tattler	2	.004	1	+
Sooty Tern	3302	6.185	15	-
Totals	4099	7.676	21	-

TABLE 4. Nocturnal abundance of species in the Southern Grid, 13-14----18-19 August 1966.

Species	No. Birds	Birds/Linear mile	No. Collected
Wedge-tailed Shearwater	1	.002	0
Pterodroma species	2	.004	0
Shearwater-Petrel	1	.002	0
White-throated Storm Petrel	3	.006	0
white-rumped storm petrels	7	.013	0
storm petrel species	2	.004	0
Blue-faced Booby	3	.006	0
Brown Booby	1	.002	0
Red-footed Booby	2	.004	0
frigatebird species	3	.006	0
Shorebird species	1	.002	0
Sooty Tern	181	.333	0
Fairy Tern ?	1	.002	0
bird species	24	.044	0
TOTALS	232	.430	0

TABLE 5. Banded and/or Color-marked birds observed or collected within the Southern Grid, 14-19 August 1966.

Species	Age	Date	Streamer or Band	Latitude	Longitude	Origin	Distance from Origin
Blue-faced Booby	Ad.	18 August	Blue Paint	00-46N	176-48W	Howland	10.0
Blue-faced Booby	Imm.	18 August	Blue Streamer	00-59N	176-14W	Howland	27.0
Sooty Tern	Ad.	14 August	Blue Streamer	00-31N	176-36W	Howland	17.5
Sooty Tern	Ad.	14 August	Blue Streamer	00-30N	176-35W	Howland	18.5
Sooty Tern	Ad.	15 August	Blue Streamer	00-40N	176-27W	Howland	15.0
Sooty Tern	Ad.	16 August	Blue Streamer	00-34N	176-40W	Howland	14.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-40N	176-48W	Howland	12.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-42N	176-47W	Howland	12.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-42N	176-47W	Howland	12.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-46N	176-43W	Howland	4.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-46N	176-43W	Howland	4.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-46N	176-43W	Howland	4.5
Sooty Tern	Ad.	17 Augusst	Blue Streamer	00-43N	176-49W	Howland	12.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-42N	176-52W	Howland	14.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-40N	176-57W	Howland	20.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-39N	176-59W	Howland	22.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-39N	176-59W	Howland	22.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-39N	176-59W	Howland	22.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-38N	177-01W	Howland	24.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-37N	177-04W	Howland	28.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-37N	177-04W	Howland	28.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-37N	177-04W	Howland	28.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-35N	177-08W	Howland	32.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-26N	177-22W	Howland	49.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-25N	177-24W	Howland	51.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-22N	177-30W	Howland	58.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-22N	177-30W	Howland	58.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-22N	177-30W	Howland	58.0
Sooty Tern	Ad.	17 August	Blue Streamer	00-21N	177-34W	Howland	62.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-21N	177-34W	Howland	62.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-21N	177-34W	Howland	62.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-20N	177-37W	Howland	65.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-20N	177-37W	Howland	65.5
Sooty Tern	Ad.	17 August	Blue Streamer	00-19N	177-39W	Howland	66.5
Sooty Tern	Ad.	19 August	Blue Streamer	01-29N	177-00W	Howland	46.5
Sooty Tern	Ad.	14 August	843-38286	00-11N	176-30W	Howland	38.0

TABLE 6. Diurnal abundance of flocks in the Southern Grid, 14-19 August 1966.

Date	No. Flocks	No. Birds	% Shearwater-Petrel	% Tern
14 August	20	1148	0	80.56
15 August	16	634	0	79.02
16 August	10	325	0	68.62
17 August	32	688	0	93.90
18 August	18	332	0	97.00
19 August	3	159	0	84.28
TOTALS	99	3286	Ave. 0%	Ave. 83.60%

Table 7. Bird Density (Birds/Linear Mile) by Square Degrees and by Concentric Circles in the Southern Grid 14-19 August 1966.

Species and/or Species Group	B	C	D	E	F	G	H	K	L	0-30	30-60	60-110	Total
Wedge-tailed Shearwater	.000	.000	.000	.000	.000	.000	.000	.000	.045	.000	.000	.005	.002
Sooty/Slenderbilled Shear.	.000	.000	.000	.000	.000	.005	.000	.000	.000	.000	.008	.000	.002
Total Shearwaters	.000	.000	.000	.000	.000	.005	.000	.000	.045	.000	.008	.005	.004
Pterodroma externa	.000	.000	.000	.000	.000	.005	.000	.020	.000	.005	.008	.000	.004
other large Pterodroma	.000	.000	.020	.000	.015	.005	.000	.000	.000	.005	.008	.005	.006
Pterodroma hypoleuca	.000	.000	.000	.071	.000	.046	.111	.140	.000	.050	.078	.005	.039
other small Pterodroma	.000	.000	.000	.071	.030	.000	.000	.000	.091	.000	.016	.015	.009
unidentified Pterodroma	.000	.014	.040	.214	.030	.000	.074	.000	.136	.000	.016	.053	.024
Bulwers Petrel	.000	.000	.000	.000	.000	.000	.000	.040	.000	.005	.008	.000	.004
Total Petrels	.000	.014	.059	.357	.076	.056	.185	.200	.227	.060	.132	.082	.086
Shearwater-Petrel	.000	.000	.020	.000	.000	.000	.000	.000	.000	.000	.000	.005	.002
White-rumped Storm Petrel	.105	.101	.040	.285	.045	.032	.037	.040	.000	.035	.031	.082	.052
other storm petrels	.000	.000	.000	.000	.015	.000	.000	.020	.000	.000	.008	.005	.004
Total storm petrels	.105	.101	.040	.285	.061	.032	.037	.060	.000	.035	.039	.087	.056
Total Procellariformes	.105	.116	.118	.643	.136	.093	.222	.260	.272	.095	.178	.180	.148
Red-tailed Tropicbird	.000	.029	.020	.071	.030	.023	.037	.020	.000	.025	.039	.015	.024
White-tailed Tropicbird	.000	.000	.000	.000	.000	.000	.000	.040	.000	.000	.008	.005	.004
Total Tropicbirds	.000	.029	.020	.071	.030	.023	.037	.060	.000	.025	.046	.020	.028
Blue-faced Booby	.053	.058	.020	.000	.000	.560	.037	.060	.000	.603	.062	.015	.245
Brown Booby	.000	.000	.000	.000	.000	.018	.000	.000	.000	.020	.000	.000	.008
Red-footed Booby	.000	.029	.000	.000	.000	.134	.000	.000	.000	.146	.000	.010	.058
Total Booby	.053	.087	.020	.000	.000	.713	.037	.060	.000	.768	.062	.024	.311
Great Frigatebird	.000	.043	.000	.000	.000	.014	.000	.020	.000	.015	.008	.015	.013
Lesser Frigatebird	.000	.232	.020	.071	.182	.588	.000	.000	.000	.633	.085	.097	.294
Unidentified Frigatebirds	.000	.145	.000	.000	.091	1.518	.333	.180	.000	1.648	.085	.112	.678
Total Frigatebirds	.000	.420	.020	.071	.273	2.120	.333	.200	.000	2.296	.178	.224	.985
Golden Plover	.000	.000	.000	.000	.000	.023	.000	.000	.000	.025	.000	.000	.009
Ruddy Turnstone	.053	.014	.000	.000	.000	.005	.000	.000	.000	.005	.000	.010	.006
Wandering Tattler	.000	.000	.000	.000	.000	.005	.000	.020	.000	.005	.008	.000	.004
Total Shorebirds	.053	.014	.000	.000	.000	.032	.000	.020	.000	.035	.008	.010	.019
Sooty Tern	1.474	1.725	.000	.357	6.364	12.213	3.185	.140	.000	13.246	2.240	1.835	6.185
Grand Total	1.684	2.391	.176	1.143	6.803	15.194	3.814	.740	.272	16.467	2.713	2.291	7.676

Table 5. Sera Samples collected on SIC 14, July and August 1966.

SPECIES	Howland Island	McKean Island	Jarvis Island	Island Total	July Grid At-Sea	August Grid At-Sea	Non-Grid At-Sea	Total At-Sea
Wedge-tailed Shearwater	-	-	-	-	1	0	1	2
Newell's Shearwater	-	-	-	-	0	0	1	1
Juan Fernandez Petrel	-	-	-	-	0	0	1	1
Black-winged Petrel	-	-	-	-	3	0	2	5
Red-tailed Tropicbird	-	-	-	-	0	0	1	1
Blue-faced Booby	238	100	125	463	0	0	0	0
Red-footed Booby	50	0	75	125	0	0	0	0
Great Frigatebird	0	10	0	10	0	1	0	1
Lesser Frigatebird	58	76	0	134	8	1	0	9
Sooty Tern	55	14	0	69	14	1	0	15
Housecat	0	0	3	3	=	=	=	=
TOTALS	401	200	203	804	26	3	6	35

Grand Total SIC 14 = 839

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DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 23 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	11-24 N	166-53 W	Pfly Cldy	20	1010	81	76	83	7	5	080-6-6	84	11	120	048 9
0200	11-31 N	166-46 W	" "	20	1009	81	76	83	8	5	080-6-6	84	12	120	048 9
0300	11-38 N	166-40 W	" " squalls	20	1009	81	76	83	6	4	080-6-6	84	12	120	048 9
0400	11-45 N	166-33 W	" "	20	1009	81	76	83	2	4	080-6-6	83	14	120	048 9
0500	11-49 N	166-26 W	O'CAST	20	1010	81	76	83	10	9	070-6-6	83	15	100	048 - 9
0600	11-56 N	166-20 W	"	20	1010	82	77	84	10	9	070-6-6	83	15	090	048 - 9
0700	12-03 N	166-13 W	"	20	1010	82	77	84	10	9	070-6-6	83	15	090	048 - 9
0800	12-09 N	166-07 W	"	20	1011	82	77	84	10	9	060-6-6	83	15	080	048 - 9
0900	12°16 N	166-00 W	Cloudy	20	1012	83	76	80	8	6	060-6-8	83	16	100	045 9
1000	12°23 N	165 54	"	20	1012	84	76	76	8	6	060-6-8	83	15	080	045 8.5
1100	12°30 N	165 48	"	20	1012	85	76	76	6	4	060-6-7	83	15	070	045 9
1200	12°36' N	165°42'	"	20	1011	83	76	80	6	4	060-6-6	83	15	075	045 8.5
1300	12-42 N	165-38 W	" w/squalls	20	1010	84	76	76	7	4	060-6-6	83	16	080	045 8.5
1400	12-48 N	165-31 W	Pfly Cldy	20	1009	83	76	80	8	3	060-6-6	83	18	065	045 8.5
1500	12-54 N	165-24 W	" "	20	1010	83	76	76	3	2	060-6-8	83	19	065	045 8.5
1600	13-00 N	165-20 W	" "	20	1010	83	76	76	5	3	060-6-8	83	18	060	045 8.5
1700	13-08 N	165-16 W	O'CAST	20	1010	82	77	84	8	7	060-6-8	83	18	070	045 - 8.5
1800	13-15 N	165-09 W	"	20	1011	81	76	83	10	9	060-6-8	83	18	070	045 - 8.5
1900	13-22 N	165-03 W	CLOUDY	20	1011	81	76	83	8	7	060-6-8	83	17	070	045 9.0
2000	13-29 N	164-57 W	"	20	1012	81	76	83	8	7	060-6-8	83	17	070	045 9.0
2100	13-35 N	164-50 W	O'CAST RAIN	10	1013	82	77	84	10	5	070-6-8	83	18	080	045 9.0
2200	13 42 N	164-45 W	" "	15	1013	82	77	84	10	4	070-6-8	83	15	105	045 9.0
2300	13 49 N	164 40 W	O'CAST	20	1013	82	77	84	10	4	070-6-7	83	16	105	045 9.0
2400	13°55' N	164°33'N	"	20	1013	82	77	84	9	5	080-6-6	83	16	110	045 9.0

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ZULU); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 24 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-02-N	164-27 W	Hzy Cldy	20	1012	81	76	83	4	3	090-6-6	83	21	090	045 9
0200	14-09 N	164-21 W	" "	20	1012	81	76	83	4	3	080-6-6	83	18	090	045 9
0300	14-15 N	164-15 W	" "	20	1012	80	76	87	5	4	080-6-6	83	18	090	045 9
0400	14-21 N	164-09 W	" "	20	1012	80	76	87	7	5	080-6-6	82	18	090	045 9
0500	14-26 N	164-02 W	O'CAST-RAIN	10	1012	79	78	96	10	10	090-6-7	82	17	090	045 - 8-8
0600	14-33 N	163-56 W	" "	10	1013	79	78	96	10	10	090-6-7	82	15	090	045 - 8-8
0700	14-40 N	163-51 W	" "	10	1013	78	78	98	10	10	090-6-8	82	22	100	045 - 8-8
0800	14-47 N	163-44 W	" "	10	1013	78	78	98	10	10	080-6-8	82	22	095	045 - 8-8
0900	14-57 N	163°35' W	Clouds	20	1014	81	77	87	8	6	080-6-7	82	17	090	045 9.0
1000	15-03 N	163 29 W	Part Cldy	20	1014	83	76	80	5	3	080-6-7	82	17	090	045 9.0
1100	15°08' N	163 25 W	" "	20	1014	84	76	76	6	4	080-6-8	82	16	090	045 9.0
1200	15°15' N	163°19 W	O'CAST	20	1014	84	76	76	9	5	080-6-7	83	15	090	045 9.0
1300	15-22 N	163-12 W	Hzy Cldy	20	1013	84	76	76	7	5	080-6-8	82	17	090	045 9
1400	15-28 N	163-07 W	" "	20	1013	83	78	84	7	5	080-6-8	82	17	090	045 9
1500	15-34 N	163-00 W	" "	20	1013	83	76	80	5	3	080-6-8	82	18	100	045 9
1600	15-40 N	162-53 W	"	20	1013	83	76	80	4	3	080-6-8	82	17	095	045 - 9
1700	15-47 N	162-47 W	Few Clouds	20	1013	80	75	80	3	2	080-6-8	82	17	095	045 - 9
1800	15-54 N	162-41 W	" "	20	1014	82	75	80	2	1	080-6-8	82	17	095	045 - 9
1900	16-01 N	162-34 W	" "	20	1014	82	75	80	2	1	080-6-8	82	17	095	045 - 9
2000	16-07 N	162-28 W	" "	20	1014	81	75	84	2	1	080-6-6	82	16	090	045 - 9
2100	16 13 N	162 23 W	" "	20	1015	81	77	87	3	1	080-6-6	82	16	080	045 9.
2200	16 20 N	162-16 W	Part Cldy	20	1015	81	77	87	6	3	080-6-6	82	17	090	045 9.
2300	16 28 N	162 10 W	" "	20	1015	81	75	83	4	1	080-6-6	82	18	090	045 9.
2400	16 35 N	162 03 W	" "	20	1015	81	77	87	6	2	080-6-6	82	16	090	045 9.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ OKAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 25 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-41 N	161-57 W	Ptly Cldy	20	1015	80	74	83	3	1	080-6-6	82	18	100	045 9
0200	16-48 N	161-51 W	" "	20	1014	80	74	83	2	1	080-6-6	82	18	100	045 9
0300	16-55 N	161-45 W	" "	20	1014	80	74	83	1	0	080-6-6	82	16	110	045 9
0400	17-01 N	161-39 W	" "	20	1014	80	74	83	1	0	080-6-6	83	15	110	045 9
0500	17-08 N	161-33 W	SCATTERED S	20	1014	80	74	83	2	1	080-6-6	83	16	115	045 - 9
0600	17-15 N	161-27 W	" "	20	1014	81	74	80	3	2	080-6-6	83	18	115	045 - 9
0700	17-22 N	161-21 W	" "	20	1015	82	74	76	2	1	080-6-6	83	14	115	045 - 9
0800	17-28 N	161-14 W	" "	20	1015	82	74	76	2	1	080-6-6	82	17	110	045 - 9
0900	17-36	161-05	" "	20	1015	82	75	80	4	2	080-6-6	82	15	110	043 9
1000	17-44	160-58	" "	20	1015	82	74	76	5	3	080-6-6	82	15	100	043 9
1100	17-50 N	160-53	" "	20	1015	82	74	76	4	2	080-6-6	82	17	100	043 9
1200	17-56 N	160° 47 W	" "	20	1015	82	74	76	4	2	080-6-5	81	15	090	043 9
1300	18-05 N	160-40 W	" "	20	1014	82	74	76	4	2	080-6-5	81	14	100	043 9
1400	18-10 N	160-37 W	" "	20	1014	82	74	76	5	2	080-6-5	81	14	110	043 9
1500	18-17 N	160-32 W	" "	20	1013	82	74	76	4	2	080-6-5	81	14	110	043 9
1600	18-24 N	160-26 W	Ptly Cldy/Hze	20	1013	82	75	80	2	1	080-6-5	82	15	110	043 9
1700	18-32 N	160-21 W	PTLY CLDY	20	1014	82	75	80	3	2	080-6-6	82	16	095	043 - 9
1800	18-39 N	160-15 W	" "	20	1014	81	75	84	3	2	080-6-7	82	17	095	043 - 9
1900	18-46 N	160-09 W	" "	20	1015	81	75	84	3	2	090-6-7	82	17	095	043 - 9
2000	18-53 N	160-03 W	" "	20	1015	81	75	84	3	2	090-6-7	82	17	095	043 - 9
2100	19° 00' N	159° 56 W	" "	20	1016	81	75	84	5	2	090-6-6	82	14	110	045 9
2200	19° 07' N	159 - 49 W	" "	20	1016	81	75	84	4	2	090-6-6	82	12	120	045 9
2300	19° 12 N	159 43 W	" "	20	1016	81	75	84	3	2	100-8-6	82	12	120	045 9
2400	19° 19' N	159 37 W	" "	20	1016	81	75	84	4	2	100-6-6	81	12	120	045 9

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 26 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	19-25 N	159-38 W	Pfly Cldy	20	1015	80	74	83	3	1	100-6-6	81	15	110	043 9
0200	19-30 N	159-26 W	" "	20	1015	81	74	80	3	1	100-6-6	80	17	100	048 9
0300	19-37 N	159-19 W	" "	20	1015	81	74	80	2	1	100-6-6	81	14	090	048 9.5
0400	19-45 N	159-12 W	" "	20	1015	81	74	80	3	2	100-6-6	81	15	090	043 9.5
0500	19-51 N	159-05 W	" "	20	1015	80	74	83	4	3	060-6-8	81	17	090	043 - 9.5
0600	19-55 N	159-00 W	" "	20	1016	80	74	83	5	4	060-6-8	81	17	090	043 - 9.5
0700	20-03 N	158-54 W	" "	20	1016	80	74	83	6	5	060-6-8	81	17	090	035 - 9.5
0800	20-10 N	158-48 W	" "	20	1016	81	74	80	3	2	060-6-8	81	17	090	038 - 9.0
0900	20-15 N	158-42 W	Clear	20	1017	81	74	80	6	5	060-6-8	81	17	090	038 9.0
1000	20 23 N	158 35 W	"	20	1017	81	74	80	5	2	050-6-8	81	18	090	038 8.0
1100	20 28 N	158 31	"	20	1018	81	74	80	8	6	050-6-8	81	16	090	038 8.0
1200	20 36 N	158 25	"	20	1017	81	74	80	6	4	050-6-8	80	19	080	038 8.5
1300	20-44 N	158-18 W	"	20	1016	81	74	80	7	5	050-6-8	80	18	070	038 8.5
1400	20-58 N	158-18 W	"	20	1016	81	74	80	6	4	050-6-8	80	18	070	040 8
1500	20-56 N	158-13 W	"	20	1015	81	74	80	5	3	050-6-8	80	19	060	048 8
1600	21-04 N	158-27 W	"	20	1015	81	74	80	5	3	050-6-7	80	18	060	048 8
1700	21-10 N	158-02 W	"	20	1015	81	74	80	7	6	050-6-6	80	16	065	VARIOUS
1800															
1900		HONOLULU	—			—			—			—			
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 1 August 1946

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-14 S	163-17 W	Scat. Clds	20	1011	82	74	83	1	0	120-8-4	82	11	130	274 11
0200	0-13 S	163-21 W	" "	20	1011	79	73	83	1	0	120-8-4	82	8	095	274 11
0300	0-13S	163-32 W	" "	20	1010	79	73	83	1	0	120-8-4	82	9	100	274 11
0400	0-12.5	163-43 W	" "	20	1010	79	73	83	1	0	120-8-4	82	9	100	274 11
0500	0-08 S	163-55 W	Few Clds	20	1011	80	74	83	2	1	120-8-3	82	11	130	274 - 11
0600	0-07 S	164-06 W	" "	20	1011	80	74	83	1	0	120-8-3	82	11	130	274 - 11
0700	0-06 S	164-17 W	" "	20	1012	80	73	79	2	1	120-8-3	82	11	130	274 - 11
0800	0-05 S	164-29 W	Scatt Clds	20	1012	81	73	76	3	2	120-8-4	81	11	120	274 - 11
0900	0-04 S	164°36' W	" "	20	1013	80	72	72	3	2	120-8-4	81	12	110	274 - 11
1000	0-03 S	164-48 W	" "	20	1013	82	74	76	1	1	130-8-4	81	10	100	274 11
1100	0° 02' S	164° 59' W	" "	20	1013	82	72	72	1	1	120-8-4	81	12	110	271 - 11
1200	0° 01' S	165° 11' W	" "	20	1013	80	72	72	2	1	120-8-4	81	12	140	271 - 11
1300	0-00 N	165-23 W	" "	20	1011	82	74	76	1	0	140-8-4	81	10	120	271 11
1400	0-01 N	165-34 W	" "	20	1010	82	72	72	2	0	140-8-4	81	9	125	271 11
← 1500	0-02 N	165-46 W	" "	20	1009	82	72	72	2	0	140-8-4	81	7	125	271 11 } MANEUVER TO OBSERVE BOTTLES
↔ 1600	0-03 N	165-57 W	" "	20	1009	82	72	72	2	0	140-8-4	82	7	125	271 11 }
↔ 1700	0-01 N	165-48 W	" "	20	1008	81	73	76	3	2	120-8-4	82	8	120	271 - 11
1800	0-02 N	165-59 W	" "	20	1009	81	73	76	3	2	120-8-4	82	8	120	271 - 11
1900	0-03 N	166-10 W	" "	20	1009	81	73	76	1	0	110-8-3	82	8	125	271 - 11
2000	0-04 N	166-21 W	" "	20	1010	80	73	79	1	0	110-8-3	82	8	125	271 - 11
2100	0-05 N	166-32 W	" "	20	1010	81	73	76	1	1	110-8-3	82	8	125	271 - 11
2200	0-06 N	166-43 W	" "	20	1010	81	73	76	1	0	110-8-4	82	8	125	271 - 11
2300	0-07 N	166-54 W	" "	20	1010	81	73	76	1	0	110-8-3	82	8	125	271 - 11
2400	0-08 N	167-05 W	" "	20	1010	80	73	79	1	0	110-8-4	82	10	125	271 - 11

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ITEM); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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Rev. 4-9-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 2 AUGUST 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.	
0100																
0200																
0300																
0400																
0500																
0600		Pago Pago														
0700																
0800																
0900																
1000	12°16 S	170°33 W	Cloudy	20	1012	83	73	73	6	2	060-6-6	84	12	050	055°	10
1100	14° 09 S	170 33	"	20	1012	86	75	70	6	2	050-6-4	84	10	050	350	9.5
1200	13°59 S	170 35	"	20	1011	86	75	70	3	2	060-6-6	84	12	060	350	9.5
1300	13-49 S	170-37 W	Hzy Cldy	20	1011	82	77	84	5	2	050-7-6	84	12	080	355	9.5
1400	13-40 S	170-39 W	" "	20	1010	82	77	84	6	5	050-7-8	84	13	080	350	9.5
1500	13-31 S	170-40 W	" "	20	1010	82	77	84	8	7	050-7-8	84	13	060	350	9.5
1600	13-22 S	170-42 W	" "	20	1010	82	77	84	8	7	050-7-8	84	12	060	355	9.5
1700	13 - 14 S	170 - 45 W	Cloudy	20	1009	82	77	84	8	7	040-6-8	83	10	050	352 -	9.5
1800	13 - 05 S	170 - 47 W	"	20	1009	80	77	91	8	7	040-6-8	83	09	050	352 -	9.5
1900	12 - 56 S	170 - 49 W	"	20	1009	80	76	87	8	7	040-6-8	83	10	050	352 -	9.5
2000	12 - 46 S	170 - 51 W	"	20	1009	82	77	84	8	7	040-6-8	84	10	040	352 -	9.5
2100	12 27 S	170°53	"	20	1010	82	78	88	6	4	050-6-8	84	10	050	355 -	9.5
2200	12 27 S	170°54	"	20	1010	82	78	88	8	2	050-6-8	84	08	050	355 -	9.5
2300	12 - 18 S	170-55	Cloudy-RAIN	10	1010	82	78	88	9	5	040-6-8	84	12	040	355	9.5
2400	12-09 S	170-56	" "	10	1010	82	78	88	9	5	040-6-8	84	14	040	355 -	9.5

REMARKS:

DEPARTED PAGO PAGO AT 0918 LOCAL TIME.

ALL TIMES LOCAL (~~WHISKEY~~ TRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 3 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12-00 S	170-58 W	Cldy w/rain	20	1010	81	77	87	9	8	040-7-8	84	15	030	355 9.5
0200	11-50 S	170-59 W	" "	15	1008	82	77	84	8	7	050-7-8	84	13	020	355 9.5
0300	11-40 S	171-00 W	" "	15	1009	82	77	84	9	7	050-7-8	84	12	010	355 9.5
0400	11-31 S	171-02 W	" "	15	1009	82	77	84	9	8	050-7-7	84	9	020	355 9.5
0500	11-22 S	171-03 W	Pty cldy	20	1009	82	77	84	5	4	030-6-6	84	10	000	355 - 9-5
0600	11-13 S	171-05 W	" "	20	1009	83	78	84	4	3	030-6-6	84	10	000	350 - 9.5
0700															
0800															
0900	SWG	IN S	ISLAND												
1000															
1100	/	/	/	/	/	/	/	/	/	/	/	/			
1200															
1300	10-57 S	170-59 W	Pty Cldy Rain	20	1011	88	77	71	7	4	060-5-3	84	0	—	046 39.5
1400	10-45 S	170-50 W	" "	20	1010	84	76	76	8	7	060-6-6	84	9	200	046 9.5
1500	10-37 S	170-41 W	" " "	20	1009	83	75	76	8	7	060-6-6	84	10	020	046 9.5
1600	10-30 S	170-31 W	" "	20	1009	83	75	76	9	7	060-6-6	84	8	020	046 9.5
1700	10-25 S	170-26 W	" " "	20	1009	83	76	80	9	8	080-6-5	84	10	070	046 9.5
1800	10-18 S	170-19 W	" " "	20	1009	83	76	80	9	8	080-6-5	84	10	070	046 9.5
1900	10-11 S	170-12 W	O'CAST-RAIN	5	1010	81	77	88	10	10	080-6-5	84	11	070	046 9-5
2000	10-05 S	170-05 W	O'CAST	15	1010	82	77	84	10	9	070-6-5	85	9	060	046 9-5
2100	9° 58' S	169-58 W	CLOUDY	20	1010	82	77	84	6	4	070-6-5	85	10	060	046 9.5
2200	9° 51 S	169-50 W	"	20	1011	82	77	84	8	6	070-6-6	85	10	060	046 - 9.5
2300	9-45 S	169-44 W	O'CAST RAIN	10	1011	83	78	84	10	5	070-6-6	85	10	060	046 9.5
2400	9-38 S	169-37 W	CLOUDY	20	1010	84	76	76	6	4	070-6-6	85	08.	045	046 - 9.5

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 4 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	9-32 S	169-30 W	Pt Cldy	20	1010	84	76	76	8	6	070-6-6	84	5	030	046 9.5
0200	9-26 S	169-23 W	" "	20	1009	84	76	76	8	6	070-6-6	84	6	000	046 9.5
0300	9-19 S	169-16 W	" "	20	1009	84	76	76	7	4	070-6-6	84	6	045	046 9.5
0400	9-13 S	169-10 W	" "	20	1009	84	76	76	6	4	085-6-6	84	6	045	046 9.5
0500	9-04 S	169-00 W	" "	20	1009	84	74	73	6	4	070-6-5	84	9	050	046 - 10.2
0600	8-57 S	168-52 W	" "	20	1010	84	74	73	6	4	070-6-5	84	9	050	046 - 10.2
0700	8-49 S	168-45 W	" "	20	1010	84	74	73	7	5	070-7-5	84	11	050	046 - 10.2
0800	8-42 S	168-37 W	" "	20	1011	85	75	73	6	4	060-6-5	85	7	050	046 - 10.2
0900	8° 34 S	168-30 W	" "	20	1011	86	75	70	5	3	070-6-6	86	8	050	046 - 10.
1000	8 30	168 22	" "	20	1011	86	75	70	4	2	070-6-6	85	12	045	046 10.
1100	8 23 S	168-14	Sct. Cloo	20	1011	87	75	67	3	2	070-6-6	85	12	050	046 10
1200	8° 17 S	168 07	" "	20	1010	87	75	67	4	2	070-6-5	85	10	060	046 10.
1300	8-10 S	168-00 W	" "	20	1010	87	76	71	7	3	070-6-5	85	13	085	046 10
1400	8-04 S	167-52 W	" "	20	1009	86	76	73	4	3	070-6-6	85	15	080	046 10
1500	7-57 S	167-45 W	" "	20	1008	86	76	73	2	1	070-6-6	85	14	080	046 10
1600	7-51 S	167-38 W	" "	20	1008	86	76	73	3	2	070-6-6	86	13	080	046 10
1700	7-41 S	167-32 W	" "	20	1008	85	75	73	4	3	080-6-5	86	11	080	046 - 10
1800	7-34 S	167-25 W	" "	20	1009	84	76	76	4	3	080-6-5	86	10	070	046 - 10
1900	7-27 S	167-18 W	" "	20	1009	84	76	76	4	3	080-6-5	86	10	070	046 - 10
2000	7-19 S	167-10 W	" "	20	1009	84	77	80	4	3	080-6-5	85	9	070	046 - 10
2100	7° 13 S	167-03 W	" "	20	1010	84	79	84	3	2	080-6-5	85	8	070	046 - 10
2200	7-06 S	166-56 W	" "	20	1010	84	77	80	3	2	080-6-5	85	10	075	046 10
2300	6-57-5	166 49	" "	20	1010	84	77	80	3	2	080-6-5	85	10	075	046 - 10
2400	6-50 S	166 42	" "	20	1010	84	77	80	4	2	080-6-5	85	10.	075	046 10

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ TRACY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 5 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	6-43 S	166-34 W	Pt Cldy	20	1010	84	76	76	3	2	080-6-5	85	15	105	046 10
0200	6-37 S	166-28 W	" "	20	1009	84	76	76	5	3	080-7-5	85	12	090	046 10
0300	6-29 S	166-21 W	" "	20	1009	84	76	76	2	1	080-7-5	85	13	090	046 10
0400	6-22 S	166-16 W	" "	20	1008	84	76	76	3	2	080-7-5	85	11	090	046 10
0500	6-21 S	166-11 W	" "	20	1009	84	76	76	3	2	080-6-5	85	12	080	046 10
0600	6-14 S	166-04 W	" "	20	1009	84	76	76	3	2	080-6-5	85	13	080	046 10
0700	6-07 S	165-57 W	" "	20	1010	86	75	70	3	3	080-6-5	85	16	080	046 - 9-4
0800	6-01 S	165-51 W	" "	20	1010	85	75	73	2	1	080-6-6	85	15	080	046 - 9-4
0900	5-55 S	165-45 W	Sct. Clds	20	1011	85	75	73	2	1	080-6-6	85	14	080	046 - 9.
1000	5-48 S	165-38 W	Pt Cldy	20	1010	85	75	73	4	2	080-6-6	85	14	080	046 - 9.
1100	5-42 S	165-31 W	Sct. Clds	20	1010	85	75	73	2	1	080-6-6	85	16	080	046 - 9.
1200	5-36 S	165-25 W	" "	20	1010	85	75	73	3	1	070-6-6	85	14	075	046 - 9.
1300	5-31 S	165-20 W	" "	20	1009	84	76	76	2	1	070-6-6	85	16	085	046 9
1400	5-25 S	165-14 W	" "	20	1008	84	76	76	2	1	070-6-6	85	14	090	046 9
1500	5-19 S	165-07 W	" "	20	1008	84	74	73	3	2	070-6-6	85	12	090	046 9
1600	5-12 S	165-01 W	" "	20	1008	84	74	73	3	2	080-6-6	85	11	090	046 9
1700	5-01 S	165-02 W	" "	20	1008	84	74	73	3	1	080-6-5	85	11	090	046 - 9
1800	4-54 S	164-55 W	" "	20	1008	84	74	73	2	1	080-6-5	85	11	090	046 - 9
1900	4-47 S	164-49 W	" "	20	1009	83	75	76	2	1	080-6-5	85	12	090	050 - 9
2000	4-41 S	164-42 W	" "	20	1009	83	75	76	3	2	080-6-5	85	12	090	050 - 9
2100	4-35 S	164-35 W	" "	20	1010	84	74	73	2	1	080-6-5	85	12	090	050 9
2200	4-29 S	164° 29 W	" "	20	1010	83	75	76	1	0	080-6-0	85	10	090	050 9
2300	4-23 S	164° 23 W	" "	20	1010	83	75	76	3	2	080-6-4	85	12	090	050 - 9.
2400	4-17 S	164° 16' W	" "	20	1010	83	75	76	3	2	080-6-4	85	10	090	050 - 9.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 6 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	4-09 S	164-08 W	Scat Clds	20	1009	82	75	80	3	2	080-6-4	85	11	090	050 9.5
0200	4-02 S	164-02 W	Mly Cldy	20	1009	82	75	80	5	4	080-6-4	85	9	090	050 9.5
0300	3-56 S	163-55 W	Cldy w/squalls	20	1008	82	77	84	7	5	080-6-4	85	13	090	050 9.5
0400	3-48 S	163-49 W	Mly Cldy	20	1008	82	78	80	4	3	080-6-4	85	12	090	050 9.5
0500	3-42 S	163-45 W	Few clouds	20	1009	82	74	76	3	2	090-6-4	85	12	090	050 - 9-3
0600	3-35 S	163-38 W	" "	20	1009	83	75	76	2	1	090-6-4	85	12	090	050 - 9-3
0700	3-29 S	163-31 W	" "	20	1010	84	76	76	4	3	090-6-4	85	12	090	050 - 9-3
0800	3-23 S	163-24 W	PTly Cldy	20	1010	85	77	77	4	3	090-6-4	85	14	090	050 - 9-3
0900	3-16 S	163-18 W	" "	20	1010	84	76	76	4	2	090-6-4	85	12	090	050 - 9
1000	3 14 S	163-14	" "	20	1010	84	76	76	4	2	090-6-4	85	14	090	050 9.
1100	3-08 S	163° 07'	" "	20	1010	84	76	76	4	2	080-6-5	85	12	090	050 9
1200	3-02 S	163° 00'	" "	20	1009	84	76	76	4	2	090-6-5	85	16	090	050 9.
1300	2-56 S	162-54 W	" "	20	1009	84	74	73	2	1	090-6-6	84	17	110	052 9.
1400	2-50 S	162-47 W	" "	20	1008	83	75	76	3	1	090-6-7	84	15	110	052 9
1500	2-45 S	162-40 W	" "	20	1008	83	75	76	2	1	090-6-7	84	15	110	052 9
1600	2-39 S	162-33 W	" "	20	1007	83	75	76	1	0	090-6-7	84	15	110	052 9
1700	2-31 S	162-34 W	Few clds	20	1008	83	75	76	2	1	090-6-6	84	16	110	052 9
1800	2-27 S	162-29 W	" "	20	1009	83	75	76	2	1	090-6-6	84	16	110	052 9
1900	2-21 S	162-23 W	" "	20	1009	82	75	80	2	1	090-6-6	84	16	110	052 - 9
2000	2-14 S	162-16 W		20	1009	83	75	76	2	1	090-6-6	84	16	110	052 - 9
2100	2-09 S	162-09 W	" "	20	1010	83	75	76	2	1	090-6-6	84	14	100	055 - 9
2200	2-03 S	162-03 W	" "	20	1010	83	75	76	2	1	090-6-6	84	14	100	055 9
2300	1-57 S	161-55 W	Ptly. Cldy	20	1011	83	75	76	4	2	090-6-6	84	14	090	055 - 9
2400	1-51 S	161-48 W	Cloudy	20	1010	83	75	76	8	4	090-6-6	84	15	090	055 - 9

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 7 August 1966

TIME	LAT	LONG 40	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	1°45'S	161°30'W	Hazy Cloudy	20	1010	82	77	84	7	5	090-6-6	84	17	100	055 8.5
0200	1-40 S	161-34 W	" "	20	1009	82	77	84	8	7	090-6-6	84	17	100	055 8.5
0300	1-35 S	161-28 W	" "	20	1010	82	77	84	8	7	090-6-6	84	17	120	055 8.5
0400	1-30 S	161-21 W	" "	20	1010	81	76	84	5	5	090-6-6	84	19	120	055 8.5
0500	1-23 S	161-12 W	" "	20	1010	82	74	76	4	3	100-6-6	84	16	110	055 - 9.0
0600	1-18 S	161-05 W	" "	20	1010	82	74	76	4	3	100-6-6	84	16	110	055 - 9.0
0700	1-12 S	160-58 W	Scat Clds	20	1011	83	75	76	3	2	100-6-6	84	19	105	055 - 9.0
0800	1-06 S	160-52 W	" "	20	1011	82	74	76	3	2	100-6-6	84	19	105	055 - 9.0
0900	1-01 S	160 44	" "	20	1011	82	75	80	3	2	110-6-6	84	15	100	055 - 9.0
1000	0-55 S	160 37	Partly Cloudy	20	1011	82	75	80	3	2	110-6-6	84	14	095	055 - 9
1100	0-49 S	160 29	" "	20	1010	82	75	80	3	2	100-6-6	84	14	100	055 - 9
1200	0-44 S	160°23W	" "	20	1010	82	75	80	3	2	100-6-6	84	14	100	055 - 9
1300	0-37 S	160-15 W	" "	22	1009	80	76	87	3	1	100-6-6	84	14	110	055 - 9
1400	0-31 S	160-09 W	" "	20	1009	80	76	87	3	2	100-6	84	13	110	050 9
1500															
1600	JARVIS	IS			—							—		—	
1700									—						
1800															
1900															
2000	—	—			—					—	—			—	
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ZULU); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 10 AUGUST 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800	0-22 S	160-05 W	PTY CLDY	20	1013	84	74	73	3	2	CONF	~~84~~ 79	6	080	274 - 10-5
0900	0° 22' S	160° 16' W	SCT. CLDS	20	1013	83	73	73	1	0	150-7-6	~~82~~ 79	8	080°	274 - 10.5
1000	0° 21 S	160° 27' W	" "	20	1013	86	76	73	1	0	160-10-5	~~84~~ 79	8	100°	274 11.0
1100	0° 20' S	160° 38' W	" "	20	1012	84	74	73	1	1	140-10-5	~~84~~ 79	8	100	274 11.0
1200	0° 20' S	160° 49 W	" "	20	1012	86	75	70	2	1	130-10-5	~~82~~ 79	8	090°	274 11.0
1300	0-19 S	161-00 W	" "	20	1011	84	73	69	1	0	130-10-5	78	7	090°	274 11
1400	0-19 S	161-11 W	" "	20	1010	84	73	69	1	0	130-10-4	79	7	080	274 11
1500	0-18 S	161-22 W	" "	20	1010	84	73	69	1	0	130-10-4	79	7	080	274 11
1600	0-18 S	161-33 W	" "	20	1009	85	74	69	1	0	130-10-4	79	6	090	274 11
1700	0-18 S	161-44 W	FEW CLDS	20	1010	84	74	73	1	0	100-8-4	~~84~~ 82	7	100	274 - 11
1800	0-18 S	161-53 W	" "	20	1011	84	74	73	1	0	090-8-4	~~84~~ 82	7	100	274 - 11
1900	0-17 S	162-04 W	" "	20	1011	80	73	79	1	0	090-9-4	82	8	090	274 - 11
2000	0-17 S	162-14 W	" "	20	1012	80	73	79	1	0	090-9-4	82	8	090	274 - 11
2100	0-16 S	162° 25' W	" "	20	1012	80	74	83	2	1	090-9-4	82	11	090	274 - 11
2200	0-15 S	162° 36' W	SCT. CLDS.	20	1013	80	74	83	2	1	100-8-4	82	11	090	274 - 11.
2300	0-15 S	162° 47 W	" "	20	1012	80	74	83	1	1	100-8-4	92	13	110	274 - 11.
2400	0° 14' S	162° 59 W	" "	20	1012	80	74	83	2	1	100-8-4	82	12.	110	274 - 11.

REMARKS:

DEPARTED JARVIS AT 0792 X 1842 Z

ALL TIMES LOCAL (~~WHISKEY~~ IRAV); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 12 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-08 N	167-16 W	Few Clds	20	1009	80	73	79	1	0	110-8-4	82	10	125	271 11
0200	0-09 N	167-27 W	" "	20	1009	80	73	79	1	0	110-8-4	82	10	125	271 11
0300	0-10 N	167-37 W	" "	20	1009	80	73	79	1	0	110-8-4	82	11	125	271 11
0400	0-11 N	167-48 W	" "	20	1008	80	72	75	1	0	110-8-4	82	11	125	271 11
0500	0-07 N	167-56 W	" "	20	1009	80	73	79	1	0	110-8-4	82	9	125	271 10.7
0600	0-07 N	168-06 W	" "	20	1010	80	73	79	1	0	110-8-4	82	8	125	271 10.7
0700	0-08 N	168-17 W	" "	20	1010	81	74	80	1	0	110-8-4	82	8	125	271 - 10.7
0800	0-08 N	168-28 W	" "	20	1011	81	74	80	1	0	110-8-4	82	8	115	271 - 10.7
0900	0° 09' N	168° 36' W	" "	20	1011	84	76	76	1	0	130-8-4	82	10	120	273 - 10.5
1000	0° 10' N	168° 49' W	" "	20	1011	84	76	76	1	0	130-8-4	82	10	120	273 - 10.5
1100	0° 11' N	168° 01' W	" "	20	1011	84	76	76	1	0	130-8-4	82	10	120	273 - 10.5
1200	0°12' N	169°12' W	" "	20	1011	83	75	76	1	0	130-8-4	82	10	120	273 - 11.
1300	0-12 N	169 22 W	" "	20	1010	83	73	73	1	0	130-8-4	82	9	125	273 11
1400	0-13 N	169-34 W	" "	20	1008	83	75	76	1	0	130-8-4	82	9	115	273 11
1500	0-14 N	169-45 W	" "	20	1008	83	75	76	1	0	130-8-4	82	9	115	273 11
1600	0-15 N	169-56 W	" "	20	1008	83	75	76	1	0	130-8-4	83	9	125	275 11
1700	0-19 N	170-08 W	" "	20	1008	82	75	80	1	0	120-8-3	83	11	110	273 - 11
1800	0-20 N	170-19 W	" "	20	1008	82	75	80	1	0	120-8-3	83	11	110	273 - 11
1900	0-20 N	170-30 W	" "	20	1009	82	75	80	2	1	120-8-3	83	10	115	273 - 11
2000	0-21 N	170-41 W	" "	20	1009	82	75	80	2	1	120-8-3	82	10	115	273 - 11
2100	0-22 N	170-52 W	Part. Cldy	20	1010	82	75	80	3	1	120-8-3	82	10	115	273 - 10.5
2200	0-22 N	171-03 W	" "	20	1011	82	75	80	3	1	120-8-4	82	12	120	273 - 11.
2300	0-23 N	171-14 W	Scat. Clds	20	1011	82	75	80	3	2	120-8-4	82	12	120	273 11.
2400	0°24' N	171-25 W	" "	20	1011	82	75	80	2	1	120-8-4	82	12	120	273 11.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ZULU); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 13 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-25 N	171-36 W	Ptly Cldy	20	1010	82	77	84	7	6	100-8-4	82	11	120	273 11
0200	0-25 N	171-47 W	" "	20	1010	82	76	76	2	1	100-8-4	82	14	125	273 11
0300	0-26 N	171-58 W	" "	20	1009	82	76	76	1	1	Calm	82	15	120	273 11
0400	0-27 N	172-09 W	" "	20	1009	82	76	76	1	0	"	82	15	120	273 11
0500	0-26 N	172-15 W	FEW CLDS	20	1009	81	74	80	2	0	120-7-4	82	14	125	273 - 11
0600	0-27 N	172-26 W	" "	20	1009	81	74	80	2	0	120-7-4	82	14	125	273 - 11
0700	0-28 N	172-36 W	" "	20	1010	82	75	80	2	0	130-7-4	82	15	130	273 - 10.5
0800	0-29 N	172-47 W	" "	20	1010	82	75	80	2	0	130-7-4	82	15	130	273 - 10.5
0900	0 29 N	172 55 W	" "	20	1011	84	74	73	2	1	130-7-5	82	15	130	273 10.5
1000	0°30' N	173 08	Sct. Cus	20	1011	84	76	76	3	1	130-7-5	82	15	130	273 10.5
1100	0°30' N	173-17	" "	20	1011	84	76	76	2	1	130-6-5	82	15	130	273 10.5
1200	0°31' N	173°28 W	" "	20	1011	85	77	76	4	1	130-6-6	82	15	120	273 10.5
1300	0-32 N	173-37 W	" "	20	1011	86	75	70	3	1	120-6-6	82	15	120	273 10.5
1400	0-33 N	173-46-W	" "	20	1010	86	75	70	2	0	130-6-6	82	13	120	273 10.5
1500	0-33 N	173-55-W	" "	20	1010	87	76	71	2	0	130-6-6	82	12	110	273 10.5
1600	0-34 N	174-05 W	" "	20	1009	88	77	71	3	1	130-6-6	83	11	100	273 10.5
1700	0-34 N	174-18 W	" "	20	1009	88	77	91	3	1	130-7-6	83	11	095	273 - 10.5
1800	0-35 N	174-28 W	" "	20	1009	87	76	71	3	1	130-7-6	83	11	095	273 - 10.5
1900	0-36 N	174-38 W	" "	20	1010	87	76	71	3	1	130-7-6	83	11	095	273 - 10.5
2000	0-37 N	174-49 W	" "	20	1010	85	74	70	3	1	130-7-6	83	11	095	273 - 10.5
2100	0°38 N	174°59 W	" "	20	1011	85	74	70	3	1	130-7-6	83	12	090	274 - 10.
2200	0°39 N	175°10 W	Clear	20	1012	84	77	80	0	0	130-6-5	83	13	080	274 - 10.
2300	0-40 N	175°20 W	"	20	1012	84	77	80	0	0	120-6-4	83	13	070	274 - 10.
2400	0-41 N	175°30 W	Sct. Clos	20	1012	84	77	80	1	0	120-6-4	83	13	070	274 - 10.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 14 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-42 N	175-40 W	Few Clds	20	1011	84	77	80	1	0	120-6-4	83	12	070	274 10
0200	0-43 N	175-50 W	" "	20	1011	82	77	84	1	0	120-6-4	83	13	070	274 10
0300	0-44 N	176-00 W	" "	20	1010	82	77	84	2	0	120-6-4	83	11	070	274 10
0400	0-45 N	176-09 W	" "	20	1010	82	77	84	4	1	120-6-4	83	12	070	274 10
0500	0-44 N	176-24	PTLY CLOUDY	20	1010	83	76	80	6	5	120-6-4	83	13	065	274 - 10
0600	0-44 N	176-34 W	" "	20	1010	83	76	80	8	7	120-6-4	83	14	065	274 - 10
0700	0-46 N	176-38 W	O'CAST-RAIN	20	1010	82	78	88	10	9	CONF	83	13	080	VARIOUS
0800		HOWLAND	ISLAND	—			—		—	—					
0900	0° 47' N	176° 38' W	Scat. Clds.	20	1010	83	76	80	3	1	110-6-6	83	15	090	165 - 10.0
1000	0° 32' N	176° 36 W	" "	20	1011	83	76	80	1	0	110-6-6	83	15	090	160 - 10.0
1100	0 27' N	176° 34	Part. Cldy	20	1010	84	77	80	4	1	110-6-6	83	13	080	160 10 0
1200	0° 15' N	176° 30'	" "	20	1010	84	76	76	2	1	110-6-6	84	15	070	160 10.
1300	0-11 N	176-30 W	" "	20	1009	84	76	76	2	1	Calm	84	17	060	Drifting
1400	0-11 N	176-30 W	" "	20	1008	84	76	76	1	0	"	84	17	060	"
1500	0-10 N	176-30 W	" "	20	1008	84	76	76	2	1	"	84	18	060	"
1600	BAKER	IS.	" "	20	1008	84	76	76	2	1	"	84	18	060	"
1700	0-20 N	176-32 W	" "	20	1007	84	76	76	3	2	070-6-4	84	16	075	350 - 10.5
1800	0-30 N	176-35 W	" "	20	1008	83	76	80	3	2	070-6-4	84	16	075	350 - 10.5
1900	0-40 N	176-37 W	" "	20	1009	83	76	80	3	2	070-6-5	84	15	070	350 - 10.5
2000	0-48 N	176-38 W	" "	20	1009	82	77	84	4	3	CONF	84	16	090	HOVE TO
2100															
2200		HOWLAND													
2300															
2400															

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 15 AUG. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400			HOWLAND												
0500															
0600															
0700															
0800	0-44N	176-35W	PTY CLDY	20	1010	83	76	80	4	3	120-6-7	84	15	110	125 - 10
0900	0°38'N	176°25'W	" "	20	1011	84	76	76	5	2	120-6-7	84°	15	115	125 - 10
1000	0°35'N	176-18W	SCT CLDS	20	1011	84	76	76	3	2	130-6-7	84	14	110	122 - 9.5
1100	0°29'N	176 08	" "	20	1011	85	75	73	3	2	130-6-8	84	14	110	125 9.5
1200	00°23'N	176°00'W	" "	20	1011	85	75	73	4	3	140-6-7	84	13	110	125 9.5
1300	0-17 N	175-56W	" "	20	1011	84	71	66	8	1	140-6-7	84	13	085	125 9.5
1400	0-11 N	175-53W	" "	20	1010	84	73	69	6	0	140-6-7	84	13	090	125 9.5
1500	0-13 N	175-46W	" "	20	1009	84	73	69	4	0	140-6-7	84	13	090	125 9.5
1600	0-05 N	175-40 W	" "	20	1008	84	73	69	4	0	140-6-7	84	9	090	125 9.5
1700	0-04 S	175-38 W	PTY CLDY	20	1008	83	76	80	4	3	140-6-7	84	9	090	125 - 9.5
1800	0-10 S	175-32 W	" "	20	1008	83	76	80	4	3	140-6-7	84	9	090	230 - 10-0
1900	0-16 S	175-40 W	" "	20	1008	83	75	76	4	3	140-6-7	84	10	090	230 - 10
2000	0-22 S	175-47 W	" "	20	1009	82	77	84	3	2	140-6-5	84	10	090	230 - 10
2100	0-29 S	175-56 W	" "	20	1010	83	76	80	2	1	120-6-5	84	10	090	335 - 10
2200	0-20 S	176 02 W	SCT. CLDS	20	1011	83	76	80	2	0	120-6-5	84	12	070	335 10
2300	0-11 S	176 06 W	CLEAR	20	1011	83	76	80	0	0	120-6-4	84	12	080	335 10
2400	0-03 S	176 11 W	SCT. CLDS	20	1011	83	76	80	1	0	120-6-4	84	14	090	335 10

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 16 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-07 N	176-20 W	Few Clds	20	1010	82	74	76	1	0	120-6-4	84	16	110	335 11
0200	0-15 N	176-24 W	" "	20	1009	82	74	76	1	0	120-6-4	84	16	120	345 7
0300	0-20 N	176-28 W	" "	20	1009	82	74	76	1	0	120-6-4	84	14	120	345 7
0400	0-27-N	176-31 W	" "	26	1009	82	74	76	3	1	120-6-4	83	15	125	345 7
0500	0-33 N	176-33 W	" "	20	1008	82	74	76	2	1	110-6-5	83	16	120	345 - 7
0600	0-40 N	176-37 W	" "	20	1008	82	74	76	2	1	110-6-5	83	18	110	345 - 7
0700	0-48 N	176-35 W	" "	20	1009	82	74	76	2	1	110-6-5	83	16	105	VARIOUS
0800	0-45 N	176-39 W	" "	20	1009	83	75	76	2	1	110-6-5 120-10-10 120-6-5	83	15	120	175 - 10
0900	0-37 N	176-40	Scat. Clds	20	1009	85	75	73	4	1	120-8-8 120-6-6	83	15	110	175 10
1000	0 31 N	176-40 W	Part. Cldy	20	1009	85	75	73	4	1	120-10-10 120-6-6	83	15	110	175 9.5
1100	0°20	176 40	" "	20	1009	85	75	73	4	2	120-6-6	83	15	110	175 9.5
1200	0°09'N	176°42	" "	20	1009	85	75	73	4	2	120-10-10 120-6-6	84	15	110	175 9.5
1300	0-00N	176-40 W	" "	20	1009	83	73	73	1	0	130-8-6	84	11	095	175 9.5
1400	0-02S	176-40 W	" "	20	1008	84	73	69	1	0	130-8-6	84	15	120	175 9.5
1500	0-12S	176-41 W	" "	20	1007	84	73	69	2	1	130-8-7	84	13	090	175 9.5
1600	0-21S	176-42 W	" "	20	1007	83	75	76	2	1	130-8-7	84	13	090	175 9.5
1700	0-29 S	176-45 W	" "	20	1007	84	77	80	3	2	150-10-9 110-6-6	84	13	090	175 - 9.5
1800	0-39 S	176-48 W	" "	20	1007	84	77	80	3	2	150-10-9 110-6-6	84	13	090	290 - 10.5
1900	0-35 S	176-58 W	" "	20	1007	86	78	77	3	2	120-7-5	84	13.	090	290 - 10.5
2000	0-31 S	177-08 W	" "	20	1008	83	77	77	4	3	120-7-5	84	12	090	290 - 10.5
2100	0-29 S	177-15	Clov. Rain	20	1009	84	77	80	3	2	120-6-5	84	12	075	DRIFTING
2200	0-20 S	177-13	" "	20	1009	84	77	80	3	0	120-6-5	84	13	090	035 - 10.
2300	00 11'S	177 08	Clear	20	1010	82	77	80	0	0	120-6-5	84	13	090	035 - 9.5
2400	0°02'S	177 05	"	20	1010	84	76	76	0	0	120-6-5	84	14	100	035 - 9.5

REMARKS:

2045 - 2105 DRIFTING

ALL TIMES LOCAL (~~WHISKEY~~ ZRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

17% 39 co A8 HOWLAND

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DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 17 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-08 N	176-59 W	Few Clds	20	1010	82	77	84	3	1	120-6-5	84	14	090	035 9.5
0200	0-13 N	176-57 W	" "	20	1010	82	77	84	1	0	120-6-5	84	13	080	035 9.5
0300	0-21 N	176-53 W	" "	20	1009	82	77	84	2	0	120-6-5	84	13	080	035 9.5
0400	0-24 N	176-52 W	" "	20	1009	82	77	84	1	0	120-6-5	84	10	100	035 9.5
0500	0-24 N	176-59 W	Pty Cldy	20	1009	82	75	80	4	2	120-6-5	84	11	090	035 - 9.5
0600	0-33 N	176-51 W	" "	20	1009	82	75	80	4	2	120-6-5	84	12	090	035 - 9.5
0700	0-42 N	176-47 W	" "	20	1009	82	77	84	3	2	120-6-5	84	12	090	045 - 9.5
0800	0-47 N	176-40 W	Scatt. Clds	20	1009	84	76	76	3	1	120-6-5	84	10	095	VARIOUS
0900	AG	HOWLAND ISD													
1000	0°43 N	176°50'	Part Cov	20	1009	85	78	80	4	2	120-6-5	84	14	110	240 10.
1100	0°39' N	176°59'	" "	20	1009	85	78	80	4	2	120-8-5	84	14	105	240 10.5
1200	0°35' N	177° 08'	" "	20	1009	86	75	70	4	1	140-8-8	84	14	105	240 10.5
1300	0-28 N	177-19 W	" "	20	1008	85	75	73	5	1	140-8-8	84	13	105	240 10.5
1400	0-23 N	177-28 W	" "	20	1008	86	75	70	3	1	140-8-8	84	13	120	240 10.5
1500	0-20 N	177-37 W	" "	20	1007	86	75	90	2	1	140-8-8	84	13	105	240 10.5
1600	0-16 N	177-44 W	" "	20	1007	86	75	90	1	1	140-8-8	84	13	105	240 10.5
1700	0-13 N	177-54 W	Scatt Clds	20	1007	85	78	81	1	0	120-7-7	84	12	115	240 10-5
1800	0-13 N	178-02 W	"	20	1007	85	78	81	1	0	120-7-7	84	12	115	000 - 10-0
1900	0-21 N	178-03 W	CLEAR	20	1007	83	76	80	1	0	100-7-7	84	12	100	000 - 10-0
2000	0-31 N	178-04 W	"	20	1007	83	76	80	1	0	100-7-7	84	12	100	000 - 10.0
2100	0°41 N	178°02' W	"	20	1008	83	78	84	0	0	100-7-6	84	12	100	020 - 10.0
2200	0°51 N	177°58 W	"	20	1009	83	78	84	0	0	110-6-6	84	12	100	095 9.0
2300	0°51 N	177°50 W	"	20	1010	83	78	80	0	0	120-6-5	84	10	100	095 9.0
2400	0°50 N	177°42 W	"	20	1010	83	78	84	3	2	120-6-6	84	12	090	095 9.0

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ XRAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 18 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	0-50 N	177-32 W	Clear	20	1010	82	75	80	1	0	120-6-6	84	11	090	095 9
0200	0-50 N	177-26 W	Scat Cbls	20	1010	82	74	76	1	0	120-6-6	84	13	090	095 9
0300	0-49 N	177-17 W	" "	20	1009	82	74	76	1	0	120-6-6	84	15	090	095 9
0400	0-48 N	177-08 W	" "	20	1009	82	74	76	1	0	120-6-6	83	15	090	095 9
0500	0-44 N	177-10 W	CLEAR	20	1008	82	74	76	1	0	100-6-5	83	14	090	095 - 8.5
0600	0-44 N	177-01 W	"	20	1008	82	75	80	0	0	100-6-5	83	13	090	095 - 8.5
0700	0-45 N	176-52 W	"	20	1008	82	75	80	0	0	100-6-5	83	13	090	075 - 8.5
0800	0-47 N	176-46 W	"	20	1009	83	76	80	0	0	100-6-5	84	14	090	075 - 8.5
0900		FOOLOAND													
1000	0° 02' N	176° 39 W	Scat Cbls	20	1010	84	76	76	1	0	100-6-5	84	15	080	070 - 9.5
1100	0° 59' N	176° 38	" "	20	1010	85	75	73	1	0	100-6-5	84	15	080	070 - 9.5
1200	0° 54' N	176° 22'	" "	20	1010	85	74	70	1	1	110-6-6	84	15	080	070 - 9.0
1300	1-00 N	176-12 W	" "	20	1009	84	76	76	1	0	110-6-6	84	15	085	070 9
1400	1-02 N	176-07 W	" "	20	1009	84	76	76	1	0	110-6-6	84	15	085	070 9
1500	1-03 N	176-00 W	" "	20	1008	84	76	76	1	0	110-6-6	84	15	080	070 85
1600	1-06 N	175-52 W	" "	20	1007	84	77	80	1	0	110-6-6	84	15	080	070 85
1700	1-09 N	175-43 W	" "	20	1007	83	75	76	1	0	100-6-6	84	13	090	070 - 8.5
1800	1-12 N	175-35 W	" "	20	1008	83	75	76	1	0	100-6-6	84	12	090	070 - 8.5
1900	1-15 N	175-26 W	" "	20	1008	83	75	76	1	0	100-6-6	84	13	090	070 — 8.5
2000	1-19 N	175-18 W	" "	20	1008	83	75	76	1	0	100-6-6	84	13	090	070 - 8.5
2100	1°20' N	175°29' W	" "	20	1009	82	75	80	1	0	100-6-6	84	13	090	275 - 10.0
2200	1°21 N	175° 39' W	" "	20	1010	82	77	84	1	0	100-6-6	84	13	080	275 10.
2300	1-22 N	175° 49' W	" "	20	1010	82	77	84	1	0	100-6-5	84	12	080	275 10.
2400	1-23 N	175° 59' W	" "	20	1010	82	77	84	2	1	100-6-5	83	13	080	275 10.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ZULU); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 19 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	1-24 N	176-10 W	Few Cbls	20	1010	81	76	83	1	0	100-6-5	83	12	080	275 10
0200	1-25 N	176-20 W	" "	20	1009	81	76	83	3	2	100-6-5	83	11	080	275 10
0300	1-26 N	176-30 W	" "	20	1008	81	76	83	2	1	100-6-5	83	11	085	275 10
0400	1-27 N	176-40 W	" "	20	1008	81	76	83	3	1	100-6-5	83	12	090	275 10
0500	1-22 N	176-53 W	" "	20	1008	81	74	80	1	0	100-6-5	83	11	090	275 - 10
0600	1-22 N	177-04 W	" "	20	1008	81	74	80	1	0	100-6-5	83	11	090	275 - 10
0700	1-22 N	177-14 W	Ptly Cldy	20	1008	82	74	76	4	3	100-6-5	83	12	105	275 - 10-5
0800	1-26 N	177-07 W	" "	20	1008	82	74	76	4	3	100-6-5	83	12	110	072 - 9.0
0900	1° 29' N	176° 58' W	" "	20	1009	83	73	78	4	2	100-6-5	83	10	110	072 9.0
1000	1° 33' N	176° 50 W	" "	20	1009	83	75	76	3	2	100-6-5	83	10	105	072 9.0
1100	1° 38' N	176° 41 W	" "	20	1008	86	78	77	3	1	100-6-6	83	10	090	072 9.0
1200	1° 38' N	176° 41 W	" "	20	1008	86	78	77	3	1	100-6-6	83	10	090	072 9.0
1300	1-37 N	176-25 W	" "	20	1007	84	73	73	3	1	100-6-6	83	12	090	072 9.0
1400	1-40 N	176-20 W	" "	20	1007	84	73	73	4	1	100-6-6	83	12	090	072 9.0
1500	1-44 N	176-12 W	" "	20	1007	84	73	73	5	2	100-6-6	83	12	090	072 9
1600	1-47 N	176-24 W	" "	20	1007	84	73	73	5	2	100-6-6	83	10	110	072 9
1700	1-49 N	175-58 W	" "	20	1007	83	73	73	4	2	100-7-6	83	11	100	072 - 9
1800	1-51 N	175-51 W	" "	20	1007	83	73	73	4	2	100-7-6	83	11	100	072 - 9
1900	1-55 N	175-44 W	" "	20	1008	82	74	76	4	2	100-7-6	84	10	105	045 - 9.5
2000	2-01 N	175-38 W	" "	20	1008	82	74	76	4	2	100-7-6	84	10	110	045 - 9.5
2100	2° 11' N	175° 32 W	Cloudy	20	1009	82	74	76	9	6	100-6-5	84	11	120	045 9.5
2200	2° 17' N	175° 24' W	O'CAST	20	1010	82	75	80	9	6	100-6-5	84	11	120	045 9.5
2300	2° 24' N	175° 18' W	O'CAST	20	1010	82	75	80	9	6	100-6-5	80	11	130	045 9.5
2400	2° 31' N	175° 12' W	"	20	1010	82	75	80	9	3	120-6-5	84	11	130	045 9.5

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ *RAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 20 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	2-38 N	175-05 W	O'cast	20	1009	82	74	76	9	8	170-6-5	84	10	140	045 9.5
0200	2-45 N	174-59 W	"	20	1009	82	74	76	9	8	120-6-5	84	11	145	045 9.5
0300	2-52 N	174-52 W	"	20	1008	82	74	76	9	8	120-6-5	84	11	145	045 9.5
0400	2-59 N	174-46 W	"	20	1008	82	74	76	9	8	120-6-5	83	10	140	045 9.5
0500	3-14 N	174-44 W	"	20	1008	82	74	76	9	8	120-6-5	83	12	150	045 - 10.0
0600	3-26 N	174-42 W	"	20	1008	83	75	76	9	8	120-6-5	83	15	160	045 - 10.0
0700	3-34 N	174-36 W	"	20	1008	83	75	76	9	8	120-6-5	83	15	160	052 - 10.0
0800	3-41 N	174-30 W	Part. Clds	20	1009	84	76	76	9	7	130-6-5	83	13	160	052 10.
0900	3-45 N	174 19 W	" "	20	1010	84	76	76	8	6	140-6-5	84	13	160	045 10.
1000	3° 50' N	174° 13' W	" "	20	1009	84	76	76	9	6	120-7-5	82	12	160	045 10.
1100	4° 00' N	174° 05	Cloudy	20	1009	84	76	76	8	4	150-8-5	84	13	160	045 10
1200	4° 08' N	173° 58'	O'cast	20	1009	84	77	80	8	2	150-8-5	84	15	160	045 10
1300	4-20 N	173-51 W	"	20	1008	84	77	80	7	5	150-8-5	84	15	150	045 10.9
1400	4-27 N	173-46 W	"	20	1007	84	76	76	7	5	150-8-5	84	11	150	045 9
1500	4-35 N	173-42 W	"	20	1007	84	76	76	7	4	150-8-5	84	11	150	045 9
1600	4-43 N	173-37 W	"	20	1007	84	76	76	5	3	150-8-5	84	9	140	045 9
1700	4-50 N	173-30 W	"	20	1007	84	76	76	9	7	130-7-5	84	11	150	045 10.5
1800	4-58 N	173-23 W	"	20	1007	84	76	76	9	7	130-7-5	84	11	150	045 10.5
1900	5-05 N	173-16 W	"	20	1009	83	75	76	9	7	135-7-5	84	9	150	045 10.5
2000	5-13 N	173-09 W	"	20	1008	83	75	76	9	7	135-7-5	85	9	150	045 10-5
2100	5-21 N	173° 02 W	"	20	1009	83	76	80	8	4	130-6-5	85	4	150	045 10.
2200	5-28 N	172 55 W	Part. Clds	20	1010	84	77	80	8	4	130-6-5	85	11	135	045 10.
2300	5° 36 N	172° 49 W	Cloudy	20	1010	84	77	80	6	4	135-6-5	85	11	135	045 10.
2400	5° 43 N	172° 42W	Pt. Cldy	20	1011	84	76	76	3	1	135-6-5	85	10	135	045 10.

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ OKAY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 21 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	5-50 N	172-36 W	Ptly Cldy	20	1010	82	77	84	2	1	135-6-5'	85	~~7~~	160	045 10
0200	5-57 N	172-29 W	" "	20	1010	82	77	84	2	1	135-6-5	85	8	160	045 10
0300	6-04 N	172-22 W	" "	20	1009	83	73	73	1	0	135-6-5	85	9	180	045 10
0400	6-12 N	172-15 W	" "	20	1009	83	73	73	3	1	135-6-5	85	9	180	045 10
0500	6-27 N	172-02 W	" "	20	1009	83	73	73	8	5	160-6-5	85	10	170	045 - 10
0600	6-35 N	171-54 W	O'CAST	20	1010	82	76	87	10	10	160-6-5	85	11	170	045 - 10
0700	6-43 N	171-48 W	" "	20	1010	80	76	87	10	10	160-6-5	85	11	170	045 - 10
0800	6-52 N	171-42 W	" "	20	1010	82	75	80	10	9	160-6-6	85	11	180	045 - 10
0900	6° 45' N	171° 37' W	" "	20	1011	81	74	80	10	6	160-6-6	85	11	180	040 - 10.5
1000	6° 52' N	171-31 W	" "RAIN	20	1011	82	74	76	10	2	160-6-6	85	11	180	040 - 10.5
1100	7° 00' N	171° 23' W	RAIN	5	1012	76	76	100	10	0	160-6-7	85	18	170	045 - 10.5
1200	7° 08' N	171° 06' W	O'CAST	15	1012	81	77	87	10	2	170-7-7	85	11	170	040 10.5
1300	7-16 N	170-58 W	" Rain	20	1011	79	73	83	10	10	140-8-5	85	Var.	Airs	240 10.5
1400	7-16 N	170-45 W	" Rain	20	1010	80	74	83	10	10	Conf.	85	13	195	040 10.5
1500	7-22 N	170-37 W	Ptly Cldy	20	1009	81	74	80	8	8	"	85	9	260	040 10.5
1600	7-33 N	170-30 W	" "	20	1009	83	75	76	6	3	"	85	8	260	040 10.5
1700	7-34 N	170-25 W	O'CAST	20	1009	83	75	76	9	8	CONF	85	Airs		040 - 10-5
1800	7-42 N	170-18 W	"	20	1010	83	75	76	9	8	"	85	Airs		040 - 10-5
1900	7-49 N	170-12 W	"	20	1010	82	74	76	9	8	"	85	Airs		040 - 10.5
2000	7-56 N	170-05 W	"	20	1010	82	74	76	9	8	"	85	5	200	040 - 9.5
2100	8-04 N	169-58 W	Cloudy	20	1011	82	74	76	7	4	Conf.	84	Airs		042 9.5
2200	8° 11' N	169-52 W	"	20	1011	82	74	76	7	4	170-6-4	84	Airs		042 9.5
2300	8° 18 N	169° 46 W	O'CAST	20	1011	82	74	76	9	6	170-6-4	84	Airs		042 9.5
2400	8° 25 N	169° 40 W	"	20	1011	82	74	76	9	6	170-6-4	84	Airs		042 9.5

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ ZULU); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA CLIMATOLOGICAL DATA

DATE 22 August 1966

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.	
0100	8-32 N	169-32 W	D'CAST	20	1010	82	74	76	8	8	170-6-4	84	6	290	042	9.5
0200	8-39 N	169-25 W	"	20	1010	82	75	80	10	10	170-6-4	84	7	290	042	9.5
0300	8-46 N	169-19 W	" "	10	1009	81	77	87	10	10	170-6-4	84	7	260	042	9.5
0400	8-53 N	169-13 W	" "	6	1009	80	76	87	10	10	170-6-4	84	ALTS		042	9.5
0500	9-00 N	169-07 W	" "	10	1011	77	76	96	10	10	CONF	84	~~7~~ 8	~~8~~ 270	042	9.5
0600	~~08~~ 9-07N	169-00 W	" "	10	1011	77	76	96	10	10	"	84	~~8~~ 8	275	042	9.5
0700	9-14N	168-53 W	" "	15	1011	78	75	91	10	10	"	84	10	285	042	9.5
0800	9-22N	168-47 W	" "	15	1011	78	75	91	10	9	"	84	10	285	042 -	9.5
0900	9-27 N	168-38	O'CAST	20	1012	80	74	83	10	6	"	84	10	285	042	9.5
1000	9-33	168-25	" RAIN	15	1012	80	74	83	10	6	"	84	12	290	042	10
1100	9-40 N	168-01	" "	15	1011	80	76	87	10	5	090-6-5	84	08	330	040	10
1200	9°45 N	165 12	" "	20	1011	80	76	87	10	5	CONFUSED	84	08	280	040	9.5
1300	9-54 N	168-10 W	" "	20	1010	80	74	83	10	9	Conf.	84	5	330	045	9.5
1400	10-02 N	168-03 W	"	20	1008	81	74	80	10	8	" -7	84	5	050	045	9.5
1500	10-08 N	167-57 W	"	20	1008	81	75	83	10	8	050-6-7	84	11	075	045	9
1600	10-14 N	167-51 W	"	20	1008	82	77	84	9	7	050-6-7	84	11	070	045	9
1700	10-27 N	167-45 W	O'CAST	20	1008	82	77	84	10	8	070-7-9	84	15	100	045 -	9.5
1800	10-35 N	167-39 W	"	20	1009	82	77	84	10	8	070 7-9	84	17	120	045 -	9.5
1900	10-42 N	167-32 W	"	20	1009	82	77	84	10	9	070-7-9	84	20	120	045 -	10-0
2000	10-50 N	167-25 W	"	20	1010	81	76	84	9	8	070-7-9	84	19	120	045 -	10-0
2100	10-57 N	167-18 W	CLOUDY	20	1010	82	77	84	6	4	070-7-8	84	19	110	048	9.5
2200	11-05 N	167-12 W	"	20	1011	82	77	84	6	4	080-6-7	84	16	125	048	9.5
2300	11° 13 N	167 05 W	"	20	1011	82	77	84	8	6	080-6-6	84	16	120	048	9.5
2400	11° 20 N	166-58 W	"	20	1011	82	74	76	7	4	080-6-6	84	15	120	048	9.5

REMARKS:

ALL TIMES LOCAL (~~WHISKEY~~ TANGO); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES; WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

Southern Grid (Part 2) Nocturnal

13-14 —— 18-19 Aug. 1966

Totals		13-14	14-15	15-16	16-17	17-18	18-19
1	Wedge-tailed Shearwater			1			
2	Pterodroma sp.			2			
1	Shearwater - Petrel	1					
3	White-throated Storm Petrel			3			
7	white-rumped storm petrel	2	4	1			
2	storm petrel sp.			1		1	
3	Blue-faced Booby		2	1			
1	Brown Booby	1					
2	Red-footed Booby		2				
3	Frigatebird sp.		2	1			
1	shorebird sp.			1			
181	Sooty Tern	85	34	22	33	7	
1?	Fairy Tern ?					1?	
24	Bird sp.	10	5	3	6		
232	TOTALS	99	49	36	39	9	

SIC 14. C. Southern Grid to Oahu
20 - 26 Aug. 1966

		20	21	22	23	24	25	26
167	Wedge-tailed Shearwater	88	3	3	2	4	60	7
11	Sooty/Slender-billed Shearwater	2	4	2	1		1	1
7	Newell's Shearwater			1			6	
1	Pale-footed Shearwater	1						
36	Juan Fernandez Petrel		5	1	16	6	8	
	White-necked Petrel							
73	Pterodroma externa	18	10	3	3	39		
10	Phoenix Island/Tahitian Petrel	6	1	1		1		1
1	Kermadec Petrel	1						
2	Herald's Petrel		2					
2	Cook's Petrel			1		1		
1	Bonin Island Petrel						1	
33	Black-winged Petrel	1	10	11	4	1	6	
8	Pterodroma hypoleuca		1		2		5	
24	~~P~~terodroma species	2	11	4	2	4		1
31	Bulwer's Petrel		1	3	1	1	5	20
25	Shearwater - Petrel	3	2	4	1		11	4
6	White-rumped Storm Petrel	6						
1	storm petrel species	1						
8	Red-tailed Tropicbird	1	3		1	1	2	
3	White-tailed Tropicbird		2			1		
1	Brown Booby	1						
4	Red-footed Booby	1						3
1	GREAT FRIGATEBIRD						1	
6	Golden Plover	2		2		2		
3	Ruddy Turnstone	2		1				
1	Pomarine Jaeger			1				
1	Jaeger species			1				
215	Sooty Tern	84	8		16		104	3
1	BIRD						1	
683	TOTALS	220	63	39	49	61	211	40

Southern Grid (2) 14-19 Aug. 1966

TOTALS		14	15	16	17	18	19
1	Wedge-tailed Shearwater		1				
1	Sooty/Slender-billed Shearwater					1	
1	Juan Fernandez Petrel			1			
3	Phoenix Island/Tahitian Petrel	1			1		1
21	Black-winged Petrel	9	3	8	1		
5	Cook's Petrel		2		3		
13	Pteradroma sp.		5		5	1	2
2	Bulwer's Petrel			2			
1	Pteradroma externa			1			
1	Shearwater-Petrel						1
2	White-throated Storm Petrel			1	1		
1	Leach's Storm Petrel				1		
27	white-~~rumped~~ storm petrels	2	2	5	7	1	10
13	Red-tailed Tropicbird	4	1	2	3	1	2
2	White-tailed Tropicbird			2			
131	Blue-faced Booby	33	47	10	25	13	3
4	Brown Booby	3			1		
31	Red-footed Booby	6	22		1		2
7	Great Frigatebird		3	1			3
157	Lesser Frigatebird	86	37	1	14	2	17
362	Frigatebird sp.	146	53	102	35	16	10
5	Golden Plover	4			1		
3	Ruddy Turnstone				1		2
2	Wandering Tattler	1		1			
3303	Sooty Tern	1065	540	258	756	537	147
4099	TOTALS	1360	716	395	856	572	200

SIC 14 B. Southern Grid to Samoa + Return ~~to~~ Jarvis
23 July – ~~7~~ August 1966

		23 July	25 July	26 July	27 July	28 July	2 Aug	3 Aug	4 Aug	5 Aug	6 Aug	7 Aug
2	Black-browed Albatross											2
3	Wedge-tailed Shearwater											3
2	Sooty / Slender-billed Shearwater										2	
1	Juan Fernandez Petrel										1	
2	Pterodroma externa											2
9	Phoenix Island / Tahitian Petrel		1							1	3	4
30	Cook's Petrel				1	1		1	4	8	13	2
1	Black-winged Petrel	1										
21	Pterodroma sp.			3	8				6		4	
1	Bulwer's Petrel										1	
4	Shearwater Petrel		2							1		1
1	White-throated Storm Petrel	1										
	Leach's Storm Petrel											
2	white-rumped storm petrels											2
3	storm petrel sp	2			1							
20	Red-tailed Tropicbird		3					1				16
16	White-tailed Tropicbird				3	1	7	3		2		
44	Blue-faced Booby	4	3									37
3	Brown Booby											3
124	Red-footed Booby	3	1		5	13	92	1				9
	Booby sp.											
5	Great Frigatebird									1	1	3
23	Lesser Frigatebird	21			1			1				
33	frigatebird sp.	6	5		1			1			1	19
1	Bristle-thighed Curlew		1									
1740	Sooty Tern	16	102	1	89	4		71		2	163	1292
9	Gray-backed Tern		9									
212	Common Noddy						211				1	
30	Hawaiian Noddy						30					
5	Blue-gray Noddy	5										
109	Fairy Tern	5			31		40		1	1	31	
2	Bird sp.				2							
2458	TOTALS	64	127	4	142	19	380	79	11	16	221	1395

SIC 14 B. cont. Jarvis to Southern Grid
10 - 13 August 1966

		10	11	12	13	Grid to Samoa + Jarvis Total	Total Grid to Grid	
	Black-browed Albatross					2	2	BBA
5	Wedge-tailed Shearwater	4	1			3	8	WT
	Sooty/Slender-billed Shearwater					2	2	S/Sb
1	Juan Fernandez Petrel				1	1	2	JFP
	Pterodroma externa					2	2	P.e.
3	Phoenix Island/Tahitian Petrel	1	1	1		9	12	PF/T
3	Cook's Petrel		1	2		30	33	CP
1	Black-winged Petrel			1		1	2	BWP
2	Pterodroma sp.		1	1		21	23	Pter. sp.
1	Bulwer's Petrel	1				1	2	BP
5	Shearwater-Petrel			4	1	4	9	S-P
3	White-throated Storm Petrel	3				1	4	W-t SP
2	Leach's Storm Petrel	2					2	LSP
32	white-rumped storm petrel	8	3	10	11	2	34	WRSP
3	storm petrel sp.		1	2		3	6	SP sp.
20	Red-tailed Tropicbird	14	3	3		20	40	RTTB
	White-tailed Tropicbird					16	16	WTTB
58	Blue-faced Booby	58				44	102	BFB
3	Brown Booby	3				3	6	BB
16	Red-footed Booby	16				124	140	RFB
5	Booby sp.	5					5	B sp
3	Great Frigatebird	1		2		5	8	GF
7	Lesser Frigate bird	7				23	30	LF
21	frigate bird sp.	19		2		33	54	F sp.
3	Bristle-thighed Curlew		3			1	4	BTC
803	Sooty Tern	662	106	34	1	1740	2543	ST
	Gray-backed Tern					9	9	GBT
	Common Noddy					212	212	CN
	Hawaiian Noddy					30	30	HN
	Blue-gray Noddy					5	5	BGN
1	Fairy Tern			1		109	110	FT
1	Bird sp.		1			2	3	B sp.
1002	TOTALS	804	121	63	14	2458	3460	Total 24 species