

DATE 1 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

1400 begin observations

1400 Brown Booby 1 fishing in harbor - adult

1415 Noddy Tern 50 ± 10  
Wedgetail 1 feeding

1420 Brown Booby 1 sitting on water - adult

1445 Sooty Tern 1

1446 Red-footed B 1 adult

1447 Wedgetail 8 no flock scattered

1500 Wedgetail 4

1504 Wedgetail 1

1510 Sooty Tern 1

1512 Wedgetail 1

1514 Noddy T. 2

1517 Wedgetail 1

1521 Red-foot Booby 1 adult

1525 Red-foot Booby 1 adult

1526 Wedgetail 1

1528 Wedgetail 1

1536 Wedgetail 1

1541 Brn. Booby 3 adult

Common Noddy 6 Feeding

1547 RFB 3 adult

Wedgetail 10 ± 2 Feeding

1557 RFB 35 ± 5 Feeding

Wedgetails 15 ± 5 Feeding

Noddy Tern 30 ± 5

1605 RFB 4 5 adults

1606 Shear. Petrel 1 E

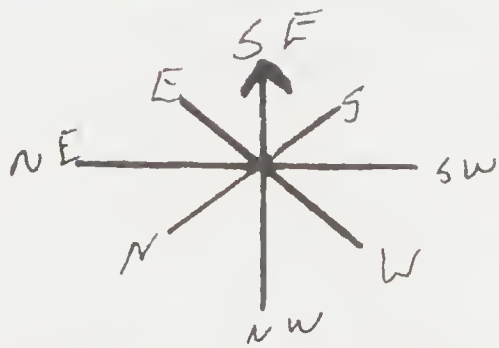
1608 Sooty Tern 1 SE

1611 Noddy Tern 1 S

1628 Shear. Petrel 1 W

1625 Common Noddy 35 ± 10  
Wedgetails 5 ± 2  
RFB 6  
Frigate 1  
adults  
Feeding

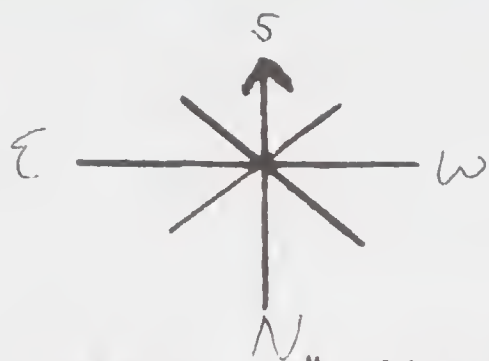
W. Miller  
Mum



DATE 1 OCT 64  
Pg. # 2

time species # dir. hgt. remarks loc.

1630	Shear-Petrel	5	SW		Feeding	
1635	Frigate	2	E			
1645	Shear-petrel	1	NW			
1700	Wedgetail	1	W			
1704	Wedgetail	1	E			
1713	Wedgetail	1	SE			
1716	Bulwer's Petrels	3	SE			
1717	Wedgetail	2	NW			
	Common Noddy	4				
1725	Wedgetail	25 ± 5			feeding flock	
	Noddy Tern	3+				
	Bonin Is P.	1				
1728	Sooty Shear	4	S			
1730	Noddy Tern	1	E			
1734	Sooty Shear	1	S			
1745	Wedgetail	4	E			
1750	Noddy Tern	3	E			
1751	<del>Bonin Is P</del>	1	NW			
1752	Wedgetail	7	E		scattered	
1755	Sooty Shear	2	S			
1803	sooty Shear	2	S			
1806	sooty Shear	4	S			
1810	sooty Shear	3	S			
1815	sooty Shear	1	S			
1816	Wedgetail	1	E			
1820	Wedgetail	1	E			
1828	Wedgetail	1	E			
1830	End observations					



DATE 2 Oct 64  
Pg. # 1

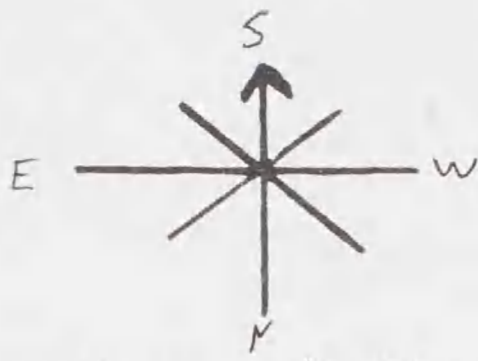
time species # dir. hgt. remarks loc.

0615	begin observations				
0622	Juan Fernandez P.	1			hint of white collar - new plumage
0642	Cook's type P.	1	NE		
0650	Wedgetail	1	E		
0649	Wedgetail	1			
	Cook's Petrel	1	NE		
0656	petrel sp	1	NE		
0658	petrel sp	1			
	wedgetail	1	NE		
0702	Wedgetail	2	NE		
0703	Wedgetail	2	E		1 dark phase
0710	Wedgetail	1	S		
0712	Shear/petrel	2	NE		
0715	Wedgetail	1	NE		
0723	petrel sp	2	S		
0730	Cook's type P.	1	W		
0750	JFP	1	W		
0765	Shear - Petrel	1	SE		light on back - dark from wrist out
0811	Cook's Petrel sp	1	W		
0813	JFP	1	SW		
0815	Cook's Petrel sp	1	N		light on back - not dark from wrist out - just dark margins
0823	Petrel sp	1	W		
0832	JFP	1	W		
0834	Wedgetail	1	W		Dark
0838	Cook's Petrel sp	1	W		light back - dark from wrist out
0845	Sooty Tern	2	SW		
	JFP	1	SW		
0847	JFP	1			
0848	Petrel sp	1	W		
0850	JFP	1	N		
0851	Wedgetail	2	SW		
0852	Cook's Petrel sp	2	N		light back - dark from wrist out
0855	Bulwers P	1	SE		
0859	Bonin L P sp	1	S		Dark back
0905	Petrel sp	1	SW		
0907	Cook's Petrel sp	1	SW		light back
0912	Sooty Tern?	1	W		
0913	Cook's Petrel sp	1	N		light back - tip of wings black
0915	<del>Fairy Tern</del> Fairy Tern	1	SW		
0920	JFP	1	N		
0929	Shear - Petrel	1	W		
0930	Cook's Petrel sp	1	N		light back - dark wing tips
0941	Sooty Tern	2			
	Cook's Petrel	1			
	Wedgetail	1			



DATE 2 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0950	shear/petrel	1	S			
0952	Wedgetail	1	N			
0957	shear/petrel	1	S			
0959	Cook's type P	1	S			
1002	Bonin Is P	1	E		dark edges underwing thick with distinct hook mark. no white in primaries	
1009	Cook type P	1	SW			
1018	Juan Fernandez P.	1	S			
1026	Cook's Petrel	1	S			
1041	Petrel sp	1	N			
1046	J. F. Petrel	1	S			
1052	J. F. Petrel	1	S			
1056	Cook's P.	1	SW		Probably flushed from water - medium grey back but pretty thick underwing edges.	
1100	JFP	1	W		Black on tips of wings, white rump light back	
1107	JFP	1	S		Black wing tips	
1110	Cook's Petrel sp	1	W			
1111	JFP	1			Sitting on water eating large red object - too big to swallow	
1134	Shear-Petrel	1	SW			
1208	JFP	1	SW			
1232	Cook's Petrel sp	1	S			
1300	Cook's Petrel	1	S		medium grey back with dark W	
1312	shear/petrel	1				
1318	Cook's Petrel	2	E		medium grey back with dark W	
1324	Cook's Petrel	2	S		"	
1352	Noddy Tern	1				
	Sooty Tern	2			1 immature	
	Wedgetail	1			light	
1354	Sooty Tern	2	W		immature	
1355	JFP	1	SW			
1409	Shear-petrel	1	NW		almost all dark underwing - light grey back	
1422	Cook's Petrel sp	1	SW			
1428	wedgetail	1	S			
1430	Sooty Tern	3	W		immature	
1442	JFP	3	SW		Tips of wings dark, light grey back	
1443	Wedgetail	1	S		Dark	
	Sooty Tern	1			immature	
1445	JFP	4	S		Dark wing tips, light grey back.	
1450	Cook's Petrel sp	1	W		Dark wing tips	
1454	JFP	1	W			
1455	Cook's Petrel sp	1	SW		Dark wing tips	



DATE 2 Oct 64  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1458	JFP	1	SW		Dark wing Tips, light <del>wing tips</del> grey back	
1459	Shear-Petrel	1	SW			
1500	Shear-Petrel	1	SW			
BWP LWP 1502	Cook's Petrel sp	1	W		Dark wing Tips, light grey back	
1507	Cook's Petrel sp	1	E		Dark wing tips - light grey back	
1513	JFP	1	SW		Dark wing Tips - light grey back.	
1515	Cook's Petrel sp?	1	S			
1516	Shear-Petrel	1	E		small, may have been a Harcourt's S.P.	
1520	JFP	2	S		One had darker wing tips than the other, both had light grey backs	
1521	Tropicbird sp?	1	Ø			
BWP 1526	Cook's Petrel sp	2	SE			
1527	JFP	1	W		Dark wing Tips, light back.	
1532	Cook's Petrel	1	SE		Dark wing Tips, light back.	
1540	Cook's Petrel	2	SE		grey back with W	
1547	Shear/petrel	1	S			
1551	Juan F Petrel	1	S			
BWP 1557	Cook's Petrel	1	SE			
1606	J. F. Petrel	1	S			
1613	J. F. Petrel	1	S			
1630	J. F. Petrel	4	SE+SW		scattered	
1640	J. F. Petrel	3	SW			
1643	J. F. Petrel	2	SW			
1646	J. F. Petrel	1	SW			
1652	Petrel sp	5+	W		small travelling flock	
1700	J. F. Petrel	1	S			
1709	J. F. Petrel	1	SE			
1710	J. F. Petrel	1	SE			
1721	Petrel sp	4	N		Probably cooks from the way they fly	
1722	JFP	1	S			
1724	Frigate	1	NE		adult ♂	
BWP 1726	Cook's Petrel	1	NE		wing tips dark.	
BWP 1737	Cook's Petrel	1	NE			
BWP 1805	Cook's Petrel	1	S			
1815	Golden Plover	1	SE			
1825	and observations					



DATE 3 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0605 begin observations

0615 Sooty Tern 1 SW

0631 Cooks Petrel 1 S

0645 Cooks Petrel 1 E

0656 Cooks Petrel 1 S

0658 JFP 1 S

0739 Cooks Petrel 1 S

0701 Cooks Petrel 1 S

0708 JFP 8 ±2 W

0708 Cooks Petrel 10 ±2

0708 Sooty Tern 5

0735 Cooks Petrel 1 S

0740 Cooks Petrel 1 S

0743 Cooks Petrel 1 S

0746 Cooks Petrel 1 S

0752 Sooty Tern 5 W

0752 Shear-Pet 30 ±10

0752 Frigate 1

0800 Sooty Tern 75 ±25

0800 J. F. Petrel 45 ±10

0800 Cooks Petrel 35 ±10

0800 Petrel sp 1

0826 J. F. Petrel 1 S

0830 J. F. Petrel 2 S

0843 Cooks Petrel 1 S

0855 Cooks Petrel 1 N

0859 J. F. Petrel 1 N

0906 Sooty Shear 1 S

0915 Shear/petrel 3

0917 J. F. Petrel 3 N

0920 J. F. Petrel 2 W

0934 JFP 2 S

0938 Shear-Petrel 1 S

1006 JFP 1 S

1040 JFP 1 NW

1045 JFP 1 W

1054 JFP 1 S

1106 Cooks Petrel 1 S

1107 Cooks Petrel 2 S

1106 Sooty Shear 1 S

1118 Golden Plover 1

1124 Petrel sp 1 N

Dark on tips of wings

Dark wing Tips

Dark wing Tips

Feeding

Feeding

feeding

dark above + below with white markings but not clearly seen. May have been Jaeger or Kermadec type

may have been a Kermadec, all dark, (white on underwing?)

sitting on water

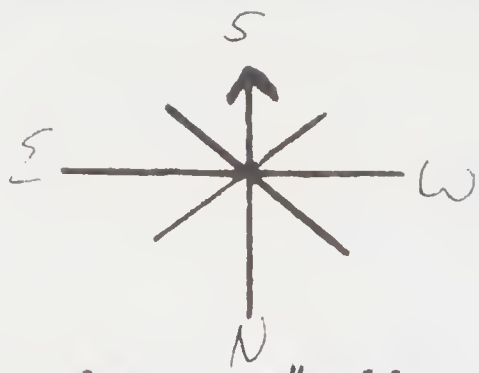


DATE 3 Oct 64

Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1132	Sooty Shear	1	S			
1137	Cook's Petrel	1	S			
1144	Cook's Petrel	1	E			
1145	Ruddy Turnstone	1	⊙			
1155	Tern sp.	2	SE		possibly Noddy Terns	
1228	J. F. Petrel	1	S			
1229	Golden Plover	4	S			
1240	Shear-Petrel	1	S		all dark except for white breast & under body - <sup>dark underwings!</sup> flew like a Cook's P	
1243	RTTB	1	S		Tail missing sitting on water - dark wing tips	
1305	Cook's Petrel	2	S			
1306	Cook's Petrel	1	S			
1347	Golden Plover	5	⊙		Travelling <sup>seen</sup>	
1356	Noddy Tern	1	S		Grey cap on head as it passed the ship	
1420	Cook's Petrel	1	SW			
1425	Cook's Petrel	1	W			
1428	Shear/petrel	1	W			
1457	Cook's Petrel	1	NW			
1510	Sooty Tern	75	±10			
	J. F. Petrel	7	±2			
	Cook's Petrel	3	±1			
	Red-tailed Tropicbird	1				
1520	Red-tailed T.B.	1			sitting in water	
1546	Cook's Petrel	1	NW			
1545	Sooty Terns	40	±10		Feeding	
	JFP	20	±10			
	Cook's Pet	20	±10			
	Shear-Petrel	20	±10			
1549	Cook's Petrel	1	S			
1558	Golden Plover	2	N			
1616	Sooty Tern	38	±5		Feeding	
	JFP	15	±5			
	Cook's Pet	10	±5			
1620	Golden Plover	3	N			
1624	Cook's Petrel	1	S		Feeding	
1626	Sooty Tern	45	±5	SE		
	JFP	20	±5			
	Cook's Petrel	15	±10			
1632	Golden Plover	1	N			
1642	Cook's Petrel	1	S			
1650	Golden Plover	5	⊙ <sup>N</sup>		Travelling	
1651	Cook's Petrel	1	S			
1655	Cook's Petrel	1	S			
1700	Cook's Petrel	1	N			





DATE 3 Oct 64

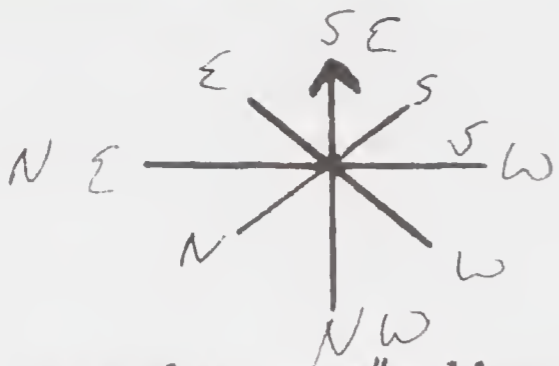
Pg. # 3

time species # dir. hgt. remarks loc.

1707	Sooty Petrel	1	W			
1712	Sooty Shear	1	S		(seemed smaller than Sooty + no silver linings discernable but view of underwings imperfect. Slender-billed?)	
1720	Sooty Tern	200+			feeding flock long way off	
1723	Sooty Shear	1	S			
1726	Tropicbird sp	1	S			
1736	Sooty Shear	1	S			
1745	Sooty Tern	5	NE		Travelling	
1748	Shear-Petrel	7	SW		Travelling	
1752	Cook's Petrel	1	S			
1755	RBTB	1	NE			
1811	Sooty Shear	1	S			
1815	Sooty Shear	1	S			
1830	and observations					
1840	Frigate	2			overship seen by 2nd mate Howard Korman	

2 54  
3 74  
7 21  
8 49

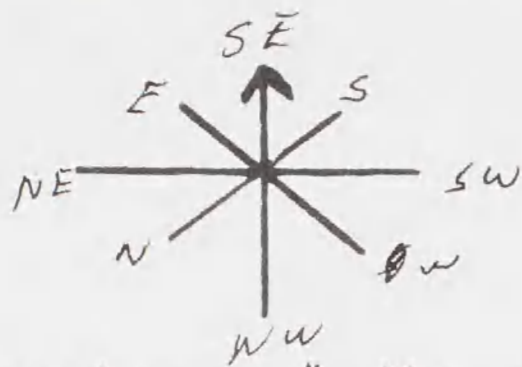
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DATE 4 Oct 64  
Pg. # 1

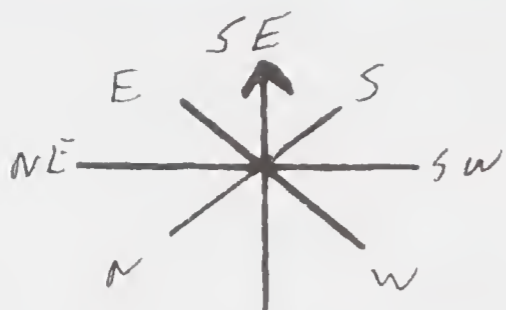
time species # dir. hgt. remarks loc.

time	species	#	dir.	hgt.	remarks	loc.
0615	begin observations					
0630	Cook's Petrel	1	SE			
	J. F. Petrel	1	E			
0643	J. F. Petrel	1			sat twice on water	
0715	Solander's Petrel	1	S		medium sized chunky petrel - grey all over except large triangular white patches underwing and possibly white patches on upper wing?	
0730	Golden Plover	3	⊙			
0815	Sooty Shear?	1				
0827	Cook's Petrel	1	NE			
0832	Cook's Petrel	1	NE			
0834	JFP	1	SE			
0845	Sooty Tern	6	E		Travelling	
0851	JFP	1	SE			
0904	JFP	1	S			
0908	Shear-Petrel	1	SE			
0911	JFP	1	SE			
0917	JFP	1	⊙		sitting on water, gets up, flies around in circles over back and lands in about same place, it must be feeding	
0925	RTTB	1	⊙			
0926	JFP	1	S			
0930	Cook's Petrel	1	S			
0932	Petrel sp	1	S			
0938	shear/petrel	1			near by water	
0942	Cook's Petrel	1			sitting on water	
0947	Golden Plover	1	⊙			
0948	Cook's Petrel	1	⊙			
0952	Cook's Petrel	1	SE			
0957	shear/petrel	1	SE			
0958	Cook's Petrel	1	SW			
1012	Solander's P.	1	S		same as 0715 - trailing edges of secondaries white + rufous large white patch underwing	
1013	Cook's Petrel	6	⊙		small feeding flock	
1017	Solander's P.	1	S			
1022	Solander's P.	1	S			
1043	shear/petrel	1				
1045	shear/petrel	1	S			
1049	Cook's Petrel	1	SE			
1053	shear-petrel	1	S			
1056	Solander's P.	1	SW			



DATE 4 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1109	Golden Plover	1	⊙			
1125	Shear-Petrel	1	S		Probably a JFP	
1129	JFP	1	S			
1131	Sooty Tern	6	NE		Feeding	
	JFP	4				
	Cook's Petrel	5				
	Shear-Petrel	3				
1135	Sooty Tern	3	NW		feeding	
	Shear-Petrel	6			probably JFP & Cook's Petrels	
	Frigate	1				
1136	Cook's Petrel	1	S			
1140	JFP	1	SE			
1142	Cook's Petrel	1	S			
1144	Sooty Tern	1	S			
1146	Cook's Petrel	1	S			
1146	Juan F. Petrel	1	SW			
1210	JFP	1	SW			
1212	Cook's Petrel	1	S			
1213	JFP	1	S			
1217	Cook's Petrel	1	SW			
1220	Cook's Petrel	1	SE			
1226	Salmon's Pet?	1	S			
1228	Cook's Petrel	1	SE			
1241	Sooty Shear	2	S		low over water - no arcs	
1245	J.F. Petrel	1	↗			
	Cook's Petrel	1				
1249	Sooty Shear	1	SE			
1251	Sooty Shear	1	SE			
1254	Sooty Shear	2	S			
	Cook's Petrel	1	↗			
1256	shear/petrel	1				
1305	Sooty Shear	1	S			
	J.F. Petrel	1	E			
1310	shear/petrel	1	N			
1319	Sooty Shear	1	S			
1323	Cook's Petrel	1	NE			
1327	Cook's Petrel	1	NW			
1333	sooty Shear	1	S			
1340	Sooty Shear	1	S			
1346	Cook's Petrel	1	SW			



DATE 4 Oct 64  
Pg. # 3

time species # dir. hgt. remarks loc.

1348	JFP	1	⊙		
1349	JFP	1	S		
1352	Sooty Shear	1	SE		
1354	Sooty Shear	1	SE		
1355	Shear-Petrel	1	SE		
1357	Sooty Shear	1	S		
1410	Sooty Shear	3	SE		
1413	JFP	1	S		
1417	Shear-Petrel	3	NE		
1424	Sooty Shear	1	SE		
1426	Sooty Shear	1	SE		
1427	JFP	1	SW		
1428	Sooty Shear	2	SE		
1440	JFP	1	SE		
1446	Sooty Shear	1	SE		
1450	Sooty Shear	1	SE		
1452	Cook's Petrel	1	S		
1456	JFP	1	SE		
1458	Sooty Shear	2	SE		
1504	Sooty Shear	1	SE		
1506	Sooty Shear	1	SE		
1510	Cook's Petrel	1	SW		
1513	Cook's Petrel	1	SW		
1517	Cook's Petrel	1	<del>SE</del> NE		
1520	JFP	1	SW		
1530	Sooty Tern	5	SE		
1531	<del>Shear-Petrel</del> Storm Petrel sp.	1	⊙		
1545	J.F. Petrel	1			
1549	Sooty Shear	1	S		
1555	Sooty Shear	4	S		
1556	Petrel sp.	1	N		
1557	Sooty Shear	1	S		
1600	<del>Sooty Shear</del> Pale-footed S.	1	S		
1602	J.F. Petrel	1			
1609	Sooty Shear	2	S		
1615	Sooty Shear	2	S		
1621	Cook's P.	1	SW		
1625	Sooty Shear	1	S		
1626	Sooty Shear	1	S		
1631	Sooty Shear	2	S		
1636	Sooty Shear	1	S		

looks just like cooke, but all dark underwing

Travelling

? no dark wing-patch seen

dark underwings - flew slower than <sup>Sooty Shear</sup> ~~normal~~. bill very light colored nearly chalk white, flapped slower than Sooty Shear & had thicker wings (wider) - flew slower - ~~took it towards 2:20 to clear base of boat (10:00 AM).~~

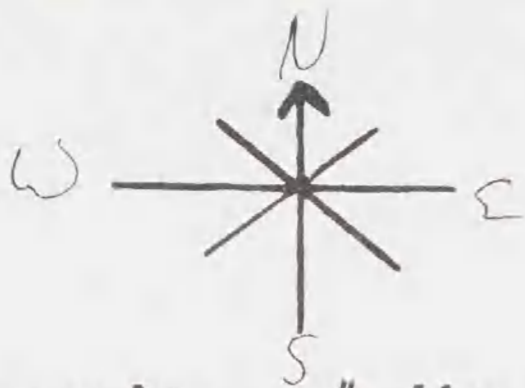
very thin ~~white~~ black underwing borders. light gray on back



DATE 4 Oct 64  
Pg. # 4

time	species	#	dir.	hgt.	remarks	loc.	
1636	Sooty Tern	10 ± 2			feeding in drizzle		
	Shear/petrel	20 ± 5					
1638	Sooty Shear	2	S				
1642	Sooty Shear	2	S				
1643	Cook's Petrel	1					
1647	J. F. Petrel	1					
1655	Sooty Tern	75 ± 15			feeding in light drizzle		
	J. F. Petrel	5					
1656	Sooty Shear	2	S				
1657	sooty shear	4	S				
1658	sooty shear	2	S				
1659	sooty shear	1	S				
1659	"	2	S				
1659	"	1	S				
1700	"	1	S				
1701	"	2	S				
1707	J. F. Petrel	1	⊙				
1708	Sooty Shear	1	S				
1712	Cook's Petrel	1	S				
1715	Sooty Shear	1	S				
1718	Sooty Terns	15 ± 3			Feeding Probably JFP and Cook's Pet.		
	Shear-petrel	10 ± 3					
1720	Sooty Shear	2	S				
1724	Sooty Shear	2	S		Travelling		
1725	Sooty Shear	5	S				
1729	sooty shear	1	S				
1730	sooty shear	2	S				
1733	sooty shear	2	S				
1740	JFP	1	⊙				
1741	sooty shear	2	S				
1743	sooty shear	2	S				
1745	Cook's Petrel	1	N				
1750	Cook's Petrel	1	NW				
1752	sooty shear	4	S				
1758	sooty shear	1	S				
1811	sooty shear	4	S				
1815	end observations						

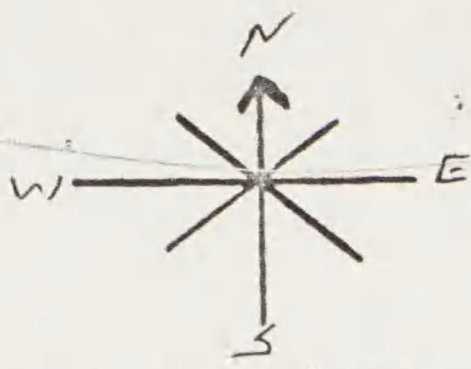
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63  
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DATE 5 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0605	begin observations					
0600	shear-pet	1	S		} seen by watch - probably cooks Petrel	
0603	shear-pet	1	S			
0605	shear-pet	1	S			
0606	JFP	1	S			
0611	Sooty Shear	1	S			
0615	Sooty Shear	1	S			
0619	Cooks Petrel	1	NW			
0622	Cooks Petrel	1	S			
0627	Cooks Petrel	1	N			
0632	Cooks Petrel	1	SE			
0636	Cooks Petrel	1	SW			
0637	Sooty Shear	1	S			
0638	Cooks Petrel	2	SW			
0639	JFP	1	S			
0642	Sooty Shear	1	S			
0643	Cooks Petrel	1	S			
0645	JFP	1	S			
0646	JFP	1	S			
0647	Cooks Petrel	1	SE			
0648	Cooks Petrel	1	S			
0649	Leach's S. Pet	1	E			
0651	JNP	1	S			
0652	JNP	2	SE			
0656	JNP	1	W			
0657	Cooks Petrel	1	W			
0658	Sooty Shear	3	S			
0659	JFP	2	SE		one almost entirely white underwing	
0700	Cooks Pet	1	S			
0701	Cooks Petrel	2	SW			
0702	JFP	1	S			
0706	JFP	1	NW			
0705	JFP	1	S			
0709	JFP	1	S			
0711	Cooks Petrel	2	NW			
0712	JFP	1	S			
0720	Cooks Pet	2	S			
0726	Cooks Pet	1	S			
0733	JFP	1	S			
0740	Cooks Pet	1	S			
0743	Sooty Shear	1	S			
0744	JFP	2	S			
0747	Sooty Tern	30 ± 5	SE			
	JFP	10 ± 5			feeding	
	Cooks Petrel	10 ± 5				
	Shear/Petrel	20 ± 5				
0759	Cooks Petrels	2	SW			

584  
271  
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DATE 5 Oct 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	0805	Sooty Shear	4	S			
WP	0806	Cook's Petrel	1	↗			
	0810	Sooty Tern	125 ± 25			dark phase feeding	
		Wedgetail	1				
		J. F. Petrel	50 ± 15				
BWP		Cook's Petrel	8 ± 3				
		Sterna	1			passed over bow of ship - white in both ventral + dorsal wing surfaces clearly seen, massive chunky, wide winged dark brown.	
	0808	Sooty Shear	5	S		scattered	
	0820	Sooty Shear	2	S			
	0823	J. F. Petrel	2	↗			
		Shear/petrel	1				
	0823	Sooty Shear	4	S			
	0824	J. F. Petrel	2	N			
	0828	J. F. Petrel	1	N			
	0830	J. F. Petrel	1	↔			
BWP	0831	Cook's Petrel	1	NW		sitting on water	
WP	0832	Cook's Petrel	1	N		"	
BWP	0835	Cook's Petrel	1	NW		"	
WP	0837	Cook's Petrel	1			" one flew, others sat back down	
	0842	Sooty Tern	30 ± 5				
		J. F. Petrel	25 ± 5			feeding	
		Cook's Petrel	5				
	0845	Cook's Petrel	1				
		Sooty Shear	1			Sooty Shear landed in water and ducked neck way under + came up with 1 1/2 inch fish in bill. Cook's flew close over his head. Sooty then took off + continued S.	
	0846	Sooty Shear	1	S			
	0849	J. F. Petrel	1	↗			
	0854	Sooty Shear	1	S			
		Cook's Petrel	1			sitting in water	
	0856	Cook's Petrel	1	↗			
	0857	Sooty Shear	1	S			
	0858	Cook's Petrel	1	↗			
	0902	Sooty Shear	1	S			
	0935	Sooty Shear	1	S			





DATE 5 Oct 64  
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
BWP	0939	Cook's Petrel	3	N			
	0940	Sooty Shear	1	S			
BWP	0941	Cook's Petrel	1	NW			
	0945	JFP	1	S			
BWP	0951	Cook's Petrel	1	E			
	0953	Sooty Tern	2	E			
	0954	JFP	1	S			
BWP	0955	Cook's Petrel	1	W			
	1004	Sooty Tern	150 ± 20	E		about 75% immatures The immature sooty Terns are staying (more of them) close to the water like Noddy Terns	
		JFP	40 ± 10			Feeding	
		Cook's Petrel	35 ± 5				
	1013	Sooty Tern	1	E			
	1020	Sooty Tern	13	E		Feeding	
BWP	1023	Cook's Petrel	3	S			
	1025	Sooty Tern	4	E		immature	
	1034	JFP	1	S			
	1041	Sooty Shear	1	SE			
	1056	Golden Plover	2	SE			
	1054	Sooty Shear	1	S			
BWP	1101	Cook's Petrel	1	W			
	1111	Sooty Shear	1	S			
	1113	Sooty Shear	1	S			
BWP	1147	Cook's Petrel	1	S			
	1150	Sooty Shear	1	S			
BWP	1155	Cook's Petrel	2	S			
	1156	Sooty Shear	1	S			
	1159	JFP	1	W			
	1201	Sooty Shear	1	S			
BWP	1202	Cook's Petrel	1	S			
	1205	Sooty Shear	1	S			
	1209	Golden Plover	1	@			
	1223	Sooty Shear	1	S			
BWP	1232	Cook's Petrel	1	NE			
BWP	1245	Cook's Petrel	1	NW			
BWP	1248	Cook's Petrel	1	S			
	1250	Sooty Tern	3	E			
	1307	Sooty Tern	15 ± 5	E		Feeding - most of sooty Terns immature	
		JFP	30 ± 10				
		Cook's Petrel	10 ± 3				
		Shear - Petrel	15 ± 5				
BWP	1316	Sooty Tern	5 ± 3	W		feeding	
		JFP	10 ± 5				
		Shear - Pet	10 ± 5				



DATE 5 OCT 64  
Pg. # 4

time species <sup>S</sup> # dir. hgt. remarks loc.

1335	J. F. Petrel	1	N		
1338	Sooty Shear	1	S		
1340	J. F. Petrel	1	↗		
1345	Sooty Terns	9	S		Feeding
	JFP	8	↘		
1401	JFP	1	S		
1403	Cook's Petrel	2	SE		
1405	Sooty Tern	25	±5 NW		feeding
	JFP	25	±5		
	Cook's Petrels	15	±5		
1420	Cook's Petrel	1	E		sat on water + snatched up fish or squid, then flushed + dropped food
1435	Sooty Shear	1	S		
1439	J. F. Petrel	1	SW		
1440	J. F. Petrel	1	NW		
1444	Cook's Petrel	2	N		
1447	J. F. Petrel	1	N		
1450	Sooty Shear	1	S		
1459	Cook's Petrel	1	N		
1500	Sooty Shear	1	SW		
1513	J. F. Petrel	2	N		
1514	shear/petrel	1	S		
1520	J. F. Petrel	1	↖		
1521	Cook's Petrel	1	S		
1527	Cook's Petrel	1	S		
1528	J. F. Petrel	2	↗		
1536	Sooty Shear	1	S		
1538	Sooty Shear	2	S		
1539	JFP	1	W		
1540	RTTB	1	⊙		
1543	Cook's Petrel	1	W		
1550	Sooty Shear	1	S		
1605	Sooty Tern	35	±5 E		Feeding then dispersing
	JFP	30	±5		Mostly immature Sooty Terns
	Cook's Petrel	15	±5		
1606	RTTB	1	⊙		
1607	Sooty Tern	20	±5 NW		
	Shear-Petrel	15	±5		- probably JFP and Cook's Petrels feeding
1617	Sooty Tern	2	E		

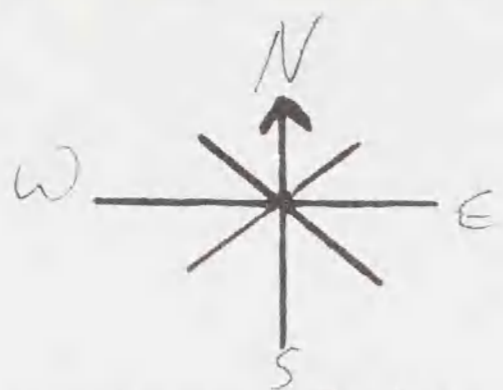


time species # dir. hgt. remarks loc.

1620	Cook's Petrel	1	E			
<del>1621</del>	<del>Fairy Tern sp</del>	<del>1</del>	<del>E</del>			
1625	RTTB	1	⊙			
1628	Cook's Petrel	1	W			
1629	Cook's Petrel	1	NE			
1635	Cook's Petrel	1	W			
1636	Cook's Petrel	1	NE			
1638	Sooty Shear	1	S			
1639	Cook's Petrels	2	NW			
1640	Cook's Petrel	1	S			
1641	Sooty Shear	1	S			
1648	Cook's Petrel	1	S			
1652	Sooty Tern	15	±3 E		Feeding - many Sooty Terns immature	
	JFP	5				
	Cook's Petrel	8	±3			
	RTTB	2				
1706	Sooty Tern	15	E		Travelling	
	RTTB	1				
1708	Sooty Shear	2	S			
1709	JFP	3	S			
1710	Cook's Petrel	2	S			
1712	Sooty Shear	2	S			
1714	Sooty Shear	3	S			
1724	JFP	4	S			
<del>1725</del>						
1726	Sooty Tern	180	±20 SW		feeding	
	JFP	75	±10 = 75			
	Cook's P	45	±10			
	Fairy Tern	2				
	Jaeger sp.	1				all dark, smaller than pomarine J. fan tail seen with protruding central retrices, very short
1740	shear/petrel	1	S		migrating, very directional flight, but smaller than Sooty Shear, wings not outstretched & reaching like SS. High arcs but no wingbeats seen, underwing not seen in bad light.	
1750	J.F. Petrel	1	S			
1751	Sooty Shear	1	S			
1755	Sooty Shear	1	S			
1800	Sooty Tern	75	±5			feeding
	J.F. Petrel	2			one with dark underwing	
	Cook's Petrel	2				
1801	Sooty Tern	125	±25		feeding	joined into one flock
	shear/petrel	25	±5			
1802	Sooty Shear	1	S			
1803	Sooty Shear	1	S			
1804	Sooty Shear	1	S			
1805	Sooty Shear	1	S			

1815 wedge tail sized bird - dark above, white below with all dark or nearly dark underwings? light band.  
1830 end observations

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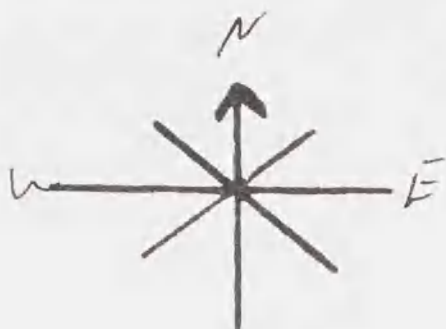
DATE 6 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0600	begin observations					
0605	Sooty Shear	1	S			
0607	shear/petrel	1	.			
0620	storm petrel sp	1	S		light bad, but appeared not to have white rump	
0627	Sooty Shear	1	S			
0628	Wedgetail	1	?		light phase	
0629	Sooty Shear	1	S			
0632	Cook's Petrel	1	S			
0637	Sooty Shear	1	SW			
0643	Sooty Shear	2	S			
0645	Sooty Tern	1	S		adult	
0647	Sooty Shear	1	SW			
0648	Sooty Shear	1	S			
0649	Golden Plover	2	NV?			
0650	Sooty Shear	1	SW			
0653	Sooty Shear	1	SW			
0655	Cook's Petrel	1	W			
0657	Wedgetail	1	S		dark phase	
0659	Sooty Shear	1	S			
0700	Sooty Shear	1	S			
0701	Sooty Shear	1	S			
0701	Sooty Shear	2	SW			
0702	Cook's Petrel	1	?			
	J.F. Petrel	1	?			
0703	Cook's Petrel	1	S			
	J.F. Petrel	1	N			
0704	Sooty Shear	1	SW			
0706	J.F. Petrel	1	NV		had fairly distinct white neck	
0708	Sooty Shear	4	S		1 flushed from water?	
0711	Sooty Shear	2	S			
0713	Sooty Shear	1	SW			
0714	J.F. Petrel	1	N			
0715	Sooty Shear	3	SW			
0719	J.F. Petrel	1	N			
0720	shear/petrel	1	S		too chunky for Sooty Shear - all dark?	
0722	Sooty Shear	1	S			
0723	shear/petrel	1	S			
0724	Wedgetail	1	S		light phase	
0726	J.F. Petrel	1	SW			



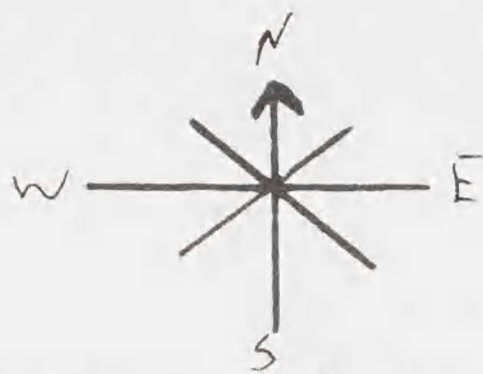
DATE 6 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0727	Cook's Petrel	1	SE			
0729	Red-tailed Tropicbird	1	NE			
0731	Sooty Shear	2	S			
0733	Sooty Shear	1	S			
0740	Sooty Shear	3	S			
0748	Cook's Petrel	1	S			
0749	Sooty Shear	1	S			
0751	Cook's Petrel	1	N			
0752	Sooty Shear	2	S			
0753	Sooty Shear	1	S			
0759	Cook's Petrel	1	S			
0800	Cook's Petrel	1	S			
0801	Sooty Shear	1	S			
0802	Sooty Shear	2	S			
0803	Sooty Shear	1	S			
0804	Cook's Petrel	1	NW			
0807	Cook's Petrel	1	S			
0812	Cook's Petrel	1	SW			
0815	Sooty Shear	1	S			
0820	Cook's Petrel	1	S			
0824	Cook's Petrel	1	S			
0826	Sooty Tern	55	±10		Feeding	
	JFP	20	±5			
	Cook's P	15	±5			
	Shear-Petrel	10	±5			
0830	Cook's Petrel	1	SW			
0831	Sooty Shear	1	S			
0832	Sooty Shear	1	S			
0833	Sooty Shear	1	S			
0834	Sooty Shear	1	S			
0835	Sooty Shear	1	S			
0836	Sooty Shear	1	S			
0838	JFP	1	S			
0840	Cook's Petrel	1	SW			
0841	Cook's Petrel	1	NW			
0842	Sooty Shear	1	S			
0843	Cook's Petrel	1	NW			
0844	Sooty Shear	1	S			
0846	Sooty Shear	1	S			
0848	Sooty Shear	1	S			
0849	Shear-Petrel	1	W			
0850	Sooty Shear	1	S			
0852	Sooty Shear	1	S			
0853	Sooty Shear	1	S			
0854	Sooty Shear	1	S			
0855	Sooty Shear	1	S			
0856	Sooty Shear	2	S			
0852	Sooty Shear	1	S			



DATE 6 Oct 64  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
0900	Shear-Petrel	1	NW			
0905	Sooty Shear	1	S			
BWP 0906	Cook's Petrel	1	W			
0907	Sooty Shear	1	S			
0925	Sooty Shear	4	S			
BWP 0945	Cook's Petrel	1	N			
0948	Sooty Shear	4	SW			
0951	Sooty Shear	4	SW			
1002	Sooty Shear	2	SW			
1007	Sooty Shear	1	S			
1008	petrel sp.	1	S			
1013	shear/petrel	1				
BWP 1014	Cook's Petrel	1	N			
1016	Sooty Shear	2	SW			
1029	Leach's Petrel	1	S			
1033	Shear/petrel	1	S		dark back, white underparts, size of Newell's. Flew in high arcs. Too far away to be sure. Underwing like Newell's.	
1035	Wedgetail.	1	S		light phase	
1046	shear/petrel	1				
1047	Sooty Shear	1	S			
1048	Sooty Shear	1	S			
1050	Sooty Shear	1	S			
1052	Sooty Shear	1	S			
1054	Sooty Shear	1	S			
BWP 1055	Cook's Petrel	1	S			
1100	Sooty Shear	1	S			
1103	Sooty Shear	1	S			
1105	Sooty Shear	2	S			
1108	Balden Plover	2	⊙			
1109	Sooty Shear	1	S			
1111	Sooty Shear	1	S			
1112	Sooty Shear	1	S			
1114	Balden Plover	4	W			
1116	Sooty Shear	1	S			
1120	Shear-Petrel	1	S		brn neck and under tail brn back, white breast (Schlegel's Pet?)	
1130	JFP	1	NW			
BWP 1131	Cook's Petrel	1	W			
1134	RTTB	1	W			
1135	Sooty Shear	3	S			
1145	JFP	1	S			
BWP 1149	Cook's Petrel	1	SE			
1150	Sooty Shear	1	S			
1151	Leach's SP	1	SW			
1156	Balden Plover	2	W			



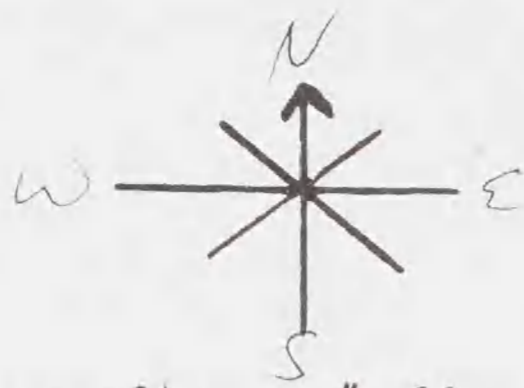
DATE 6 Oct 64  
Pg. # 4

	time	species	#	dir.	hgt.	remarks	loc.
BWP	1202	Cooks Petrel	1	S			
BWP	1207	Cooks Petrel	1	NW			
BWP	1208	Cooks Petrel	1	S			
	1215	Sooty Shear	1	S			
RWP	1216	Cooks Petrel	2	S			
	1217	Wedgetail	1	SW		light	
	1220	Sooty Shear	1	S			
	1230	<del>Fairy Tern</del>	1	NE			
	1231	Golden Plover	4	E			
	1242	Sooty Shear	1	S			
	1246	Fairy Tern	1	E			
	1300	shear/petrel	1	E			
BWP	1302	Cook's Petrel	1			dark body - light head	
	1304	Kermadec P.	1	N		light phase	
	1305	Wedgetail	1	N			
	1315	Sooty Tern	10	E		feeding	
	1326	shear/petrel	1				
BWP	1329	Cook's Petrel	1	E			
	1402	Sooty Shear	1	S			
	1405	JFP	1	W			
	1414	Cooks Petrel	1	S			
BWP	1418	Cooks Petrel	1	NE			
BWP	1500	Cooks Petrel	1	E			
	1504	Sooty Shear	1	S			
BWP	1508	Cooks Petrel	1	S			
	1510	Sooty Shear	1	S			
	1513	RTTB	1			Sitting on water	
	1540	Cooks Petrel	1				
BWP	1542	Cook's Petrel	2	NW		(with thin black edges)	
	1543	Fairy Tern	1	E			
	1544	J.F. Petrel	1	S		fairly pronounced white neck	
	1546	J.F. Petrel	2	E			
	1548	petrel sp.	1	NW			
	1601	shear/petrel	1	S			
	1608	J.F. Petrel	1	S			
	1612	J.F. Petrel	1	S			
	1614	J.F. Petrel	1	S			
	1622	J.F. Petrel	1	NW			
BWP	1714	Cooks Petrel	1	SE			
BWP	1725	Cooks Petrel	1	SW			
	1732	JFP	1	NE			
	1739	JFP	1	E			
	1743	JFP	1	NW			
	1757	RTTB	1	NE			
	1810	End Observations				1812 Cook's Petrel 1 S	

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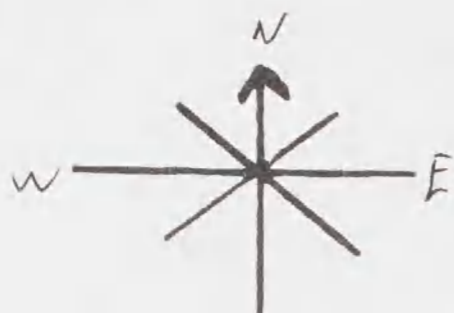


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DATE 7 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0545	begin observations					
0630	Golden Plover	2	NE			
0645	JFP	1	W			
0648	Newell's Shear	1	NW			
0655	Cook's Petrel	1	NW			
0701	Frigate	1	E			
0705	Golden Plover	2	NW			
0708	WNP?	1	NW		Band across neck at least 1 in wide. It had a white rump like the JFP?	
0715	Sooty Shear	1	S			
0810	Shear/petrel	1	SW			
0826	Wedgetail	1			light phase	
0828	Cook's Petrel	1	↔			
0920	Shear/petrel	1	S			
0930	Wedgetail	1	S			
0931	Golden Plover	7	NE			
0936	Sooty Tern	2	E			
0937	Sooty Shear	1	S			
0944	Cook's Petrel	1	W			
0948	JFP	1	SE			
0950	Cook's Petrel	1	NW			
0952	Shear/Petrel	1	W		seen by water	
1001	Leach's Storm P	1	N			
1009	JFP	1	S			
1030	Leach's Storm P	1	↔			
1038	Golden Plover	2	⊙			
1057	Wedgetail	1	S			
1111	Cook's Petrel	1	N		sat twice in water	
1118	Cook's Petrel	1	S			
1138	White-necked P?	1			sitting on water	
1139	Golden Plover	4				
1143	J.F. Petrel	1	S			
1147	Golden Plover	1	⊙			
1200	Golden Plover	4				
1208	Sooty T.B.	1	N			
1215	Shear/petrel	1	W			
1228	J.F. Petrel	2	⊙			
1236	JFP	1	NW			
1241	Golden Plover	1	⊙			
1250	Golden Plover	5	W			
1256	Cook's Petrel	1	NW			
1257	Cook's Petrel	1	↔		sitting on water	

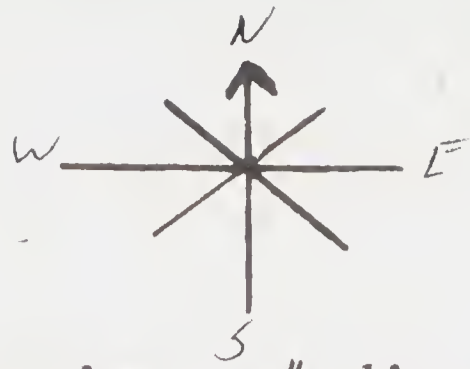


DATE 7 Oct 64  
Pg. # 2

723  
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time	species	#	dir.	hgt.	remarks	loc.
1302	Golden Plover	6	NW			
1305	Golden Plover	5	NW			
1309	JFP	1	SE			
1317	Golden Plover	8	NW		Seen by watch	
1335	Tropicbird sp	1	⊙		Seen by watch	
1337	Cook's Petrel	1	S			
1344	Sooty Shear	1	S			
1351	Sooty Shear	1	S			
1352	Golden Plover	24	⊙ NW			
1355	JFP	1	NW			
1356	Cook's Petrel	1	S			
1358	Wedgetail	1	NW			
1400	Sooty Shear	1	S			
1401	Cook's Petrel	1	W			
1405	Shear-Petrel	1	NE			
1406	Hemadec Petrel	1	S			
1408	Solander's P.?	1	S		underwing not seen but color, size, & flight were right	
1412	Leach's Petrel	1				
1420	Red-footed Booby?	1			flying E, sat in water long way off	
1421	Sooty Shear	1	S			
1425	shear/petrel	1	⊃			
1433	Cook's Petrel	1	S			
1500	Sooty Shear	1	S			
1505	Cook's Petrel	1	⊃			
	Dark-rumped P.	1	⊃		black above - thicker black edge underwing than J.F.P. but clearly same type from flight & shape. possibly molting	
1508	Sooty Shear	1	S			
1515	shear/petrel	1				
1520	J.F. Petrel	1	S			
1528	Sooty Shear	1	S			
1542	Shear-Petrel	1	E		about the size of a Wedgetail dark back and wing top except for white <del>tip</del> on tips of upper wing surface, white breast, underwing bordered by black.	
1547	JFP	1	W			
1549	Golden Plover	2	W			
1554	JFP	1	W			
1558	JFP	1	NW			
1603	Cook's Petrel	1	NW			
1615	Cook's Petrel	1	S			
1618	Cook's Petrel	1	NW			
1628	JFP	1	N			

16  
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DATE 7 Oct 64  
Pg. # 3

time species # dir. hgt. remarks loc.

1644 JFP 1 NE

1646 JFP 1 NW

1649 JFP 1 S

1650 JFP 1 SW

1651 Cook's Petrel 2 SW

1654 JFP 1 W

1715 shear/petrel 1 W

1720 Leach's Petrel 1 (9)

1730 Golden Plover 1 (9)

1736 Sooty Shear 1 S

1747 J. F. Petrel 1 S

1753 Sooty Shear 1 S

1754 J. F. Petrel 1 N

1755 Cook's Petrel 1 S

1757 Cook's Petrel 1 N

1805 End observations

dabbling in water behind ship during lagoon. Paused over cigarette butt, ran up the waves several times - tail only slightly forked.

29  
74  
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.11  
155



DATE 8 Oct 64  
Pg. # 1

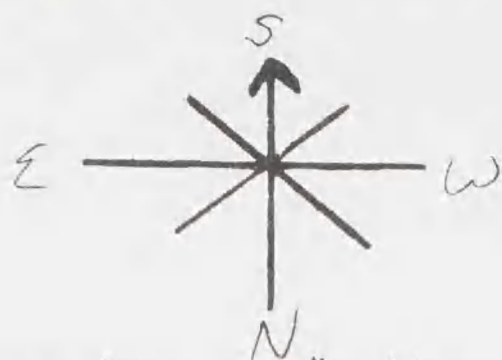
time species # dir. hgt. remarks loc.

0615	begin observations					
0620	Red-tailed T.B.	1	⊙		flushed from water	
0621	Golden Plover	1	⊙			
0625	Frigate	2	⊙		♀ both	
0630	Jaeger sp	1	SE		not pomarine - all dark	
0632	Wedgetail	1	⊃		light	
0636	Sooty Shear	4	S			
0642	Newell's S.	1	NE			
0647	Sooty Shear	1	SW			
0653	Cook's Petrel	1	⊃			
0702	Sooty Shear	4	SE			
0711	Cook's Petrel	2	NW		sitting on water	
0724	Sooty Shear	1	S			
0725	shear/petrel	1				
0730	Shear/petrel	1	E			
0738	Sooty Shear	1	S			
0739	Kermadec P	1	⊃		dark with light head	
0752	Cook's Petrel	1	E			
0802	shear/petrel	1	S			
0805	shear/petrel	1	SE			
0815	Kermadec Pet	1	SW		large, chunky all dark probable shearwater, larger & more robust than Wedgetail, slow wingbeats, lazy flight slower than wedgetail.	
0821	Cook's Petrel	1	N			
0826	Leach's S P	1	N			
0830	Sooty Shear	1	S			
0831	Is. Plover	1	NW			
0841	Frigate	1	W			
0850	Cook's Petrel	1	S			
0854	Sooty Shear	1	S			
0855	shear-petrel	1	S		← same as above ↑	
0904	Sooty Shear	1	S			
0908	Sooty Shear	1	S			
0911	Sooty Shear	1	S			
0920	Golden Plover	1	⊙			
0925	Cook's Petrel	1	SE			
0942	shear/petrel	1	S			
1004	Red-tailed tropicbird	1	⊙			



DATE 8 Oct 64  
Pg. # 2

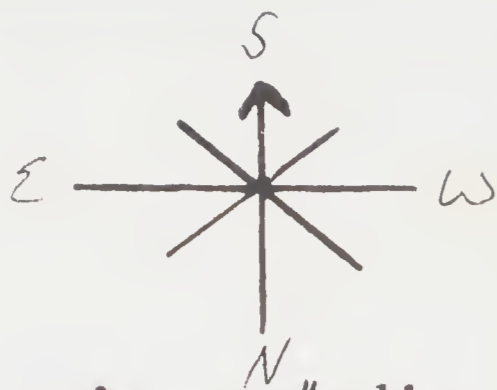
time	species	#	dir.	hgt.	remarks	loc.
1031	Golden Plover	1	⊙			
1050	Red-tailed Tropicbird	1	⊙			
1145	JFP	1	S			
1200	Shear-Petrel	1	W			
1210	Shear-Petrel	15	15 NE		Feeding	
1254	shear/petrel	1	⊙ W			
1320	bird sp	1	SW		seen by scientist	
1420	Shear-Petrel	1	N			
1436	Shear-Petrel	1	NE			
1542	J. F. Petrel	1	SE			
1602	J. F. Petrel	1	S			
1617	Golden Plover	2	⊙			
1637	Golden Plover	3	⊙			
1705	Golden Plover	2	⊙			
1722	Shear/petrel	1	N			
1731	Golden Plover	2	⊙			
1750	Golden Plover	3	⊙			
1754	RTTB	1	E			
1800	end observations					



DATE 9 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0545	begin observations					
0610	Golden Plover	1	⊙			
0620	RTTB	1	SW			
0638	cooks Petrel	1	SE			
0658	Skua	1	⊙ E		came right by ship, large chunky, very dark with white underwing	
0717	cooks Petrel	1	W			
0730	<del>Skua</del>	1	SW		seen by watch - probably a Leach's storm pet from his description	
0820	cooks Petrel	1				
0844	sooty Shear	1	S			
0904	J.F. Petrel	1	<del>SE</del>			
0925	Golden Plover	1	⊙			
0943	Red-tailed Tropicbird	1	⊙			
1000	RTTB	1	⊙		sitting on water	
1006	Sooty Shear	1	S			
1008	Golden Plover	1	⊙			
1024	Golden Plover	1	⊙			
1033	Sooty Shear	1	S			
1050	cooks Petrel	2	N			
1056	cooks Petrel	1	NW			
1105	Golden Plover	1	S			
1113	Sooty Shear	1	S			
1130	Sooty Shear	2	S			
1131	Golden Plover	1	⊙			
1141	Sooty Shear	2	S			
1147	Sooty Shear	1	S			
1200	Golden Plover	1	⊙			
1216	Sooty Shear	1	S			
1215	JFP	1	SE			
1216	cooks Petrel	1	E			
1220	Sooty Shear	1	S			
1225	Sooty Shear	1	S			
1239	RTTB	1	S			
1242	Golden Plover	1	⊙			
1256	Sooty Shear	1	S			
1311	Sooty Shear	1	S			
1336	Golden Plover	1	SE			
1345	Sooty Shear	2	S			
1353	cooks Petrel	1	SW			
1422	Sooty Shear	1	S			
1423	Sooty Shear	1	S		flushed from water	
1450	Sooty Shear	1	S			
1505	Golden Plover	1	S			





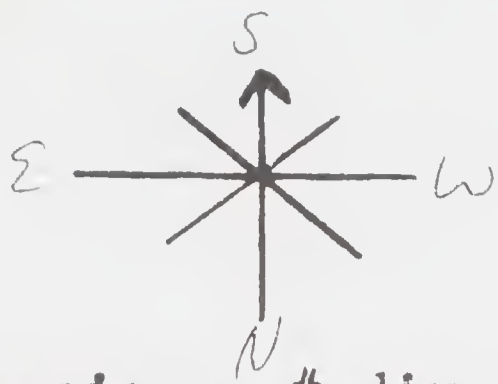
DATE 9 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1527	Cook's Petrel	2	SE	2		
1529	Sooty Shear	1	S			
1535	Sooty Shear	1	S			
1617	Cook's Petrel	1	SW			
1632	Frigate	1	W			
1641	Sooty Shear	1	S			
1710	Sooty Tern	120	±20 E		Feeding	
	JFP	35	±5			
	Cook's Petrel	25	±5			
	Shear-Petrel	25	±15		Some of them all dark, <del>may</del> probably Dark Wedgetail	
	Frigate	4				
1716	Sooty Shear	1	S			
1720	Sooty Tern	1	NW			
1722	JFP	3	SW		may be a breakoff of the block.	
	Cook's Petrel	1				
1736	Sooty Shear	1	S			
1745	Golden Plover	1	⊙			
1800	end observations					

10  
11  
121  
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269



DATE 10 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0600	shear/petrel	2			seen by wate G	
0615	begin observations					
0625	shear/petrel	1	S			
0811	Golden Plover	1			dark	
0845	Wedgetail	1	E			
0850	cooke's Petrel	1	S			
0900	cooke's Petrel	1	S			
0905	JFP	1	SW			
0932	cooke's Petrel	1	N			
0955	shear/petrel	1				
1032	cooke's Petrel	1	S			
1107	Golden Plover	1	⊙			
1230	Sooty Shear	1	S			
1240	Sooty Shear	2	S			
1245	Sooty Shear	1	S			
1340	Sooty Tern	125 ± 25				
	Shear/petrel	40 ± 20			feeding	
	Fairy Tern	2				
1343	Fairy Tern	1	NE			
1400	shear/petrel	1				
1401	Sooty Shear	1	S			
1425	Sooty Shear	1	S			
1428	cooke's Petrel	1	SE			
1431	RTTB	1	⊙			
1447	shear - Petrel	1	W			
1515	shear - Petrel	1	NE			
1530	RTTB	1	⊙		no tail	
1537	Sooty Shear	1	S			
1555	shear - petrel	1				
1610	Golden Plover	3	S			
1615	Red-tailed TB	2	⊙			
1625	Sooty Shear	1	SE			
1645	Sooty Shear	1	S			
1755	cooke's Petrel	1	N			
1800	End Observations					



DATE 11 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0550 begin observations

0605 JFP 1 SE

0615 Shear-Petrel 1 S

seen by watch

0621 Sooty Shear 1 S

0626 Cooks Petrel 1 NW

0631 Sooty Tern 3 E

Feeding

JFP 8

Cooks Petrels 5

0646 Leach's Storm P 1 S

0645 Sooty Tern 20 SE

Feeding

JFP 6

Cooks Petrel 10

0646 Cooks Petrel 1 S

0648 Cooks Petrel 1 SE

0700 Sooty Tern 50 ± 15 SW

Feeding

JFP 20 ± 5

Cooks Petrel 8 ± 3

Shear-Petrel 15 ± 5

0704 Cooks Petrel 1 N

seen by watch

0720 Shear-Petrel 3 W

0733 Leach's Storm P 1 S

0738 Cooks Petrel 1 SE

0741 Sooty Tern 8 E

Travelling - spread out over at least a mile

JFP 4

Cooks Petrel 7

0757 Sooty Tern 40 ± 10 E

This flock was kind of milling around, many of the Petrels were up high just milling around, some of the birds were down low to the water or sitting on it.

JFP 50 ± 10

Cooks Petrel 35 ± 5

Shear-Petrel 15 ± 5

Feeding  
soon after all dark

0801 JFP 3 S

0806 JFP 2 E

0810 JFP 1 S

0813 Cooks Petrel 1 E

0827 Shear/Petrel 1 E

0850 Sooty Tern 32

Feeding

Fairy Tern 1

0902 Sooty Tern 2 NW

1006 Brn Booby 1

Adult -

1035 Shear-Petrel 1 E

1125 Sooty Shear 1 S

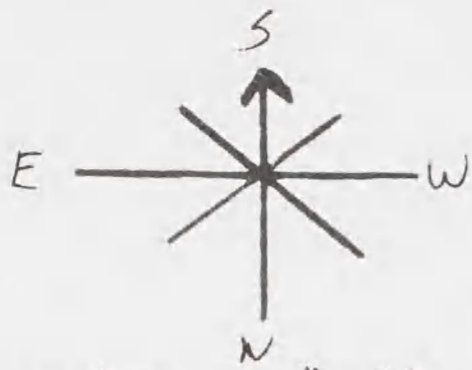
1211 Cooks Petrel 1 SW

1232 Fairy Tern 1

feeding

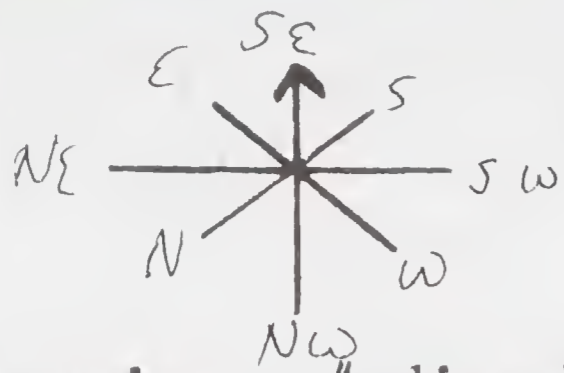
in this area many schools of flying fish and skipjack were noticed. Much of the time were small

23  
326  
96  
39  
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589



	time	species	#	dir.	hgt.	remarks	loc.
BWP	1315	Cook's Petrel	3	SW			
	1320	Red-tailed T. B.	1			satin water	
	1323	Leach's Petrel	1			Petrel like flight - wing flap not covering very large area	
	1325	Sooty Tern	100±2				
		Fairy Tern	1			feeding	
		Shear/petrel	1				
	1332	sooty Tern	1	W		seen by watch	
	<del>1335</del>	<del>Fairy Tern</del>	<del>1</del>	<del>W</del>		" " " probably someone was seen at 1320	
	1350	sooty Tern	5	E		Travelling	
BWP	1405	Cook's Petrel	1	E			
BWP	1425	Cook's Petrel	1	S			
BWP	1435	Cook's Petrel	3	⊙		flushed from water	
BWP	1445	Cook's Petrel	1	⊙			
BWP	1449	Cook's Petrel	1	W			
	1459	Shear/petrel	2	SE			
	1500	Leach's Petrel	1	E		same as above	
BWP	1504	Cook's Petrel	1	S			
	1509	Cook's Petrel	1	E			
	1518	Cook's Petrel	1	N			
	1540	Cook's Petrel	1	SW			
	1544	Cook's Petrel	1	S			
	1547	Cook's Petrel	1	E			
	1550	Cook's Petrel	1	NW			
	1558	Cook's Petrel	2	S			
	1600	Cook's Petrel	1	SW			
	1604	Cook's Petrel	1	W			
	1609	Cook's Petrel	2	⊙			
	1613	Cook's Petrel	4	SW			
	1614	Cook's Petrel	1	N			
	1615	Cook's Petrel	1	W			
	1627	Cook's Petrel	2	W			
	1655	Cook's Petrel	1				
	1659	Red-tailed T.B.	1	⊙			
	1709	Sooty Shear	1	⊙			
	1711	Cook's Petrel	1	SW			
	1722	JFP	1	SE			
	1740	Sooty Tern	65±5				
		Wedgetail	10±2				
						light feeding 1750	

365  
228  
590  
89



DATE 12 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0545	Tropicbird sp	1				
0546	Cook's Petrel	1			seen by watch before sunrise	
0550	begin observations					
0558	Sooty Tern	1	NE			
0628	Brown Booby	1	⊙		adult!	
0655	shear/petrel	1	SE			
0657	Sooty Shear	1	S			
0659	Cook's Petrel	1	⊂			
0710	Shear/petrel	1	S		large, dark above, white below, underwing not visible. flew petrel-like	
	Cook's Petrel	1	S			
0711	J.F. Petrel	1	S			
0720	Cook's Petrel	1	⊂			
0724	Cook's Petrel	1	⊂			
0734	Sooty Shear	1	S			
0805	JFP	1	SE			
0807	Cook's Petrel	1	S			
0808	Leach's Storm P	1	SE			
0810	Cook's Petrel	1	S			
0811	Cook's Petrel	1	S			
0812	Cook's Petrel	1	NE			
0817	Cook's Petrel	1	SE			
0828	Sooty Shear	1	S			
0829	Cook's Petrel	1	SE			
0835	Cook's Petrel	1	⊙			
0842	Sooty Shear	1	S			
0844	Sooty Shear	1	S			
0845	JFP	1	NE			
0847	Cook's Petrel	1	N			
0851	Sooty Shear	1	S			
0905	Cook's Petrel	1	NW			
0910	Cook's Petrel	1	N			
0915	Sooty Shear	1	S			
0921	JFP	1	NE			
0930	Leach's Storm P	1	SE			
0931	Cook's Petrel	1	S			
0939	Cook's Petrel	1	NW			
0940	Sooty Shear	1	S			
0942	Cook's Petrel	1	SE			
1010	Cook's Petrel	1	S			
1015	Cook's Petrel	1	S			
1016	J.F. Petrel	1	⊂			
1018	J.F. Petrel	1	SE			
1025	Cook's Petrel	1	⊂			
1036	Cook's Petrel	1	S			

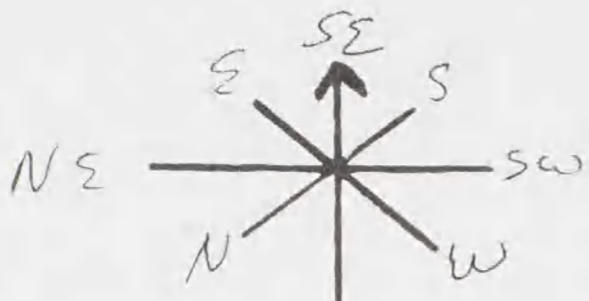


DATE 17 Oct 64  
Pg. # 2

time species # dir. hgt. remarks loc.

	1040	J. F. Petrel	1	SE		
	1050	Solander's P.	1	S		
2-58	1110	cooks Petrel	1	SE		
	1128	Sooty Shear	1	S		
	1143	JFP	1	S		
"	1147	cooks Petrel	1	SE		
	1151	JFP	2	S		
"	1152	cooks Petrels	2	SW		
	1155	JFP	1	S		
"	1200	cooks Petrel	1	S		
"	1205	cooks Petrel	1	SW		
	1207	wedgetail	1	NW	light phase	
"	1225	cooks Petrel	1	SE		
"	1246	Cook's Petrel	1	N		
	1255	Sooty Shear	2	S		
	1257	shear/petrel	2	E		
	1307	Sooty Shear	2	S		
	1308	shear/petrel	1	S		
	1318	Sooty Shear	1	S		
	1335	shear/petrel	4		satin wates, flushed - all dark - nearby water probably Sooty Shear	
"	1337	Cook's Petrel	3			
		J. F. Petrel	3		travelling	
		shear/petrel	3			
"	1357	Cook's Petrel	1	E		
	1425	J. F. P.	1	S		
"	1435	cooks Petrel	1	S		
"	1504	cooks Petrel	1	NE		
"	1512	cooks Petrel	1	E		
	1514	JFP	1	SE		
	1518	JFP	1	S		
	1523	JFP	10	SE	Feeding, right down on water	
"		cooks Petrel	10			
		Shear-Petrel	10	±5		
	1530	shear	1	SW	lighter than the others - almost got hung up on lines from mast	
"	1542	Cook's Petrel	1	E		
	1549	Golden Plover	1	SE		
"	1550	Cook's Petrel	1	SE		
"	1554	Cook's Petrel	1	NE		
	1600	J. F. Petrel	30	±5	feeding	
		shear/petrel	10	±5		





DATE 12 Oct 64  
Pg. # 3

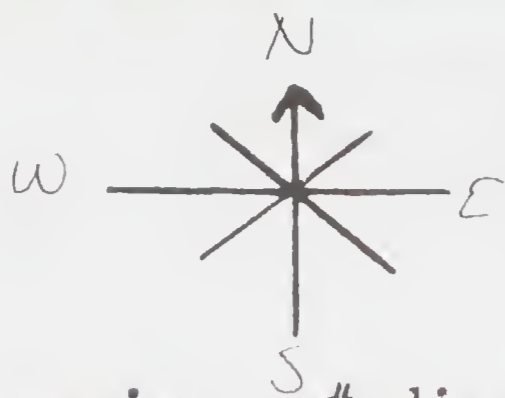
	time	species	#	dir.	hgt.	remarks	loc.
100P	1604	Cook's Petrel	1	NE			
	1605	Novell's Shear	1	S		flushed from water	
	1610	J. F. Petrel	1	SE			
	1620	J. F. Petrel	10			feeding	
	1625	J. F. Petrel	2	2			
	1625	J. F. Petrel	2	2			
	1629	J. F. Petrel	2	2S			
	1630	J. F. Petrel	2	2S			
100P		Cook's Petrel	1	2S			
	1631	J. F. Petrel	1	2			
	1635	J. F. Petrel	1	S			
100P	1635	Cook's Petrel	1	2			
	1636	J. F. Petrel	1	S			
	1640	J. F. Petrel	1	3			
	1641	J. F. Petrel	1	S			
	1642	J. F. Petrel	1	3			
	1642	J. F. Petrel	1	SE			
	1643	J. F. Petrel	1	S			
	1644	J. F. Petrel	1	S			
100P	1647	Cook's Petrel	1	2			
	1648	Pale-footed S.	1	S		large all dark Shear - slower flaps than SS - larger than SS - heavier bodied - <u>white</u> bill	
	1655	J. F. Petrel	1	2			
	1657	J. F. Petrel	1	2			
	1659	shear/petrel	1	2			
	1700	J. F. Petrel	1	NE			
100P	1706	Cook's Petrel	1	SE			
	1704	JFP	1	S			
	1710	shear - Petrel	1	SE			
	1713	JFP	6	+		chirping	
		Cook's Petrel	6	±3			
100P	1715	JFP	3	NE			
	1716	JFP	1	SE			
	1717	JFP	1	SE			
100P	1718	Cook's Petrel	2	S			
100P	1719	Cook's Petrel	1	S			
	1720	JF2	2	SE			
100P	1721	Cook's Petrel	1	S			
	1730	shear/petrel	1	SW			
	1735	J. F. Petrel	1				
	1739	J. F. Petrel	1	2			
100P	1745	Cook's Petrel	1			after sunset	
	1745	end observations					

119  
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DATE 13 Oct 64  
Pg. # 1

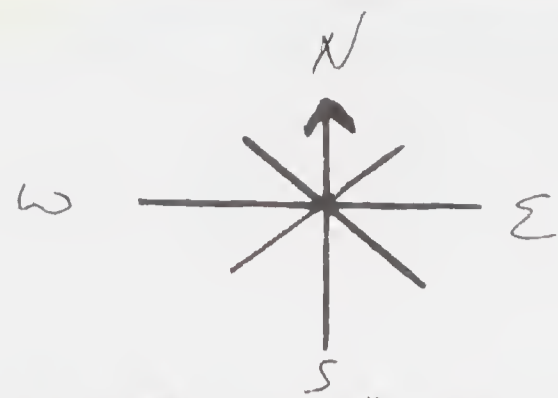
time	species	#	dir.	hgt.	remarks	loc.
0550	begin observations					
0553	shear-pet	2	@		Seen by watch	
0610	JFP	2	NW			
0612	JFP	2	N			
0613	Storm Petrel sp	1	NE		all dark	
0618	JFP	2	S			
0619	JFP	1	NW			
0625	JFP	20	±3 W		Feeding - staying low to the water	
0626	JFP	1	SW			
0630	JFP	1	N			
0632	JFP	1	NW			
0633	JFP	1	N			
0634	Cook's Petrel	1	NE			
0635	JFP	1	N			
0638	JFP	2	NW		Feeding	
0642	Sooty Tern	45	±5 SE			
	JFP	25	±5			
	Cook's Petrel	10	±5			
0645	Cook's Petrel	2	S			
0646	JFP	1	SE			
0648	JFP	1	S			
0649	shear-Petrel	1	S			
0652	Sooty Shear	1	S			
0700	Cook's Petrel	1	NE			
0701	JFP	30	±5 NW		Feeding	
	shear-Petrel	10	±5			
0710	JFP	1	S			
0711	Cook's Petrel	1	SW			
0714	JFP	1	S			
0715	Sooty Shear	1	S			
0720	Cook's Petrel	2	S			
0728	shear-Petrel	1	W		Seen by watch	
0741	Sooty Shear	1	S			
0743	JFP	1	NW			
0744	Sooty Shear	1	S			
0745	Cook's Petrel	1	E			
0746	JFP	1	S			
0749	Sooty Shear	1	S			
0750	JFP	1	SW			
0751	JFP	1	S			
0752	JFP	2	SW			
0753	Sooty Shear	1	S			
0754	JFP	1	SW			
0756	JFP	2	S			
0758	Sooty Shear	1	S			



DATE 13 Oct 64

Pg. # 2

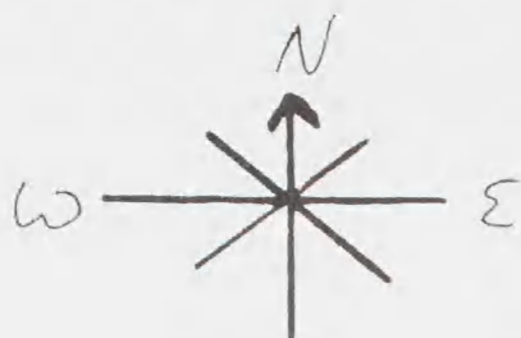
time	species	#	dir.	hgt.	remarks	loc.
0754	JFP	1	NW			
0801	Sooty Shear	1	S			
0804	JFP	1	SW			
0805	JFP	2	SE			
0806	Cook's Petrel	1	NW			
0810	Sooty Tern	15 ± 5	S		sunk	
	Wedgetail	2			scattered flock	
	Cook's Petrel	3				
	J.F. Petrel	18 ± 3				
	shear/petrel	2			possible Cook's Petrel. very light above - black underwing	
	Red-tailed T.B.	1			wings very thin - possibly mottled black on belly.	
					Possibly mottled Petrel	
0815	J.F. Petrel	2	N			
0820	J.F. Petrel	2	S			
0823	Mottled Petrel	1	S		lighter back than Cooks, with strong W-white underwing	
0826	J.F. Petrel	2	N		with thin black edges + heavy black slash mark -	
0827	Mottled Petrel	2	S		white ventral neck + breast - grey-brown belly	
0828	Newell's S.	1			same - arced much higher than typical Cooks	
	J.F. Petrel	1	N			
0831	J.F. Petrel	2	N			
0833	Sooty Shear	4	S			
0834	Sooty Shear	1	S			
0840	Mottled Petrel	2	S			
	J.F. Petrel	1	S			
0843	Sooty Shear	1	S			
0845	Sooty Shear	1	S			
0846	J.F. Petrel	1	N			
0850	Sooty Shear	2	S			
0851	J.F. Petrel	1	S			
	Cook's Petrel	1	S			
0853	Mottled Petrel	1	S			
0854	Sooty Shear	1	S			
0855	J.F. Petrel	1	S			
0857	J.F. Petrel	1	S			
0858	Sooty Shear	1	S			
0900	shear/petrel	1	S			
	Cook's Petrel	1	S			
0901	Cook's Petrel	1	S			
0903	J.F. Petrel	1	S			
0907	Sooty Shear	1	S			
0908	J.F. Petrel	1			sitting in water	
0909	Cook's Petrel	1	S			
0916	J.F. Petrel	1	S			



DATE 13 Oct 64  
Pg. # 3

time species # dir. hgt. remarks loc.

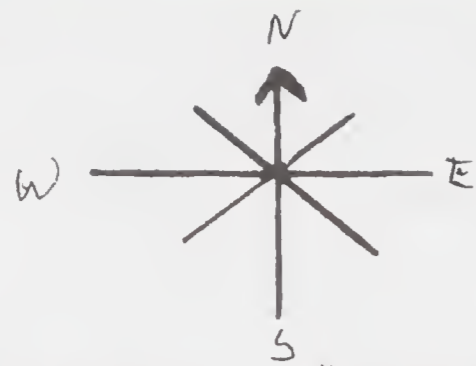
time	species	#	dir.	hgt.	remarks	loc.
0923	Cook's Petrel	1				
0924	Sooty Terns	5			feeding flock	
	Shear/petrel	30 ± 10				
0930	J.F. Petrel	1	S			
0938	JFP	1	SW			
0941	JFP	1	W			
0947	JFP	1	SW			
0956	Cook's Petrel	1	SW			
1004	JFP	1	S			
1006	Cook's Petrel	1	SW			
1007	Sooty Shear	1	S			
1008	Sooty Shear	1	S			
1009	Sooty Shear	1	S			
1010	Sooty Shear	1	S			
1012	Cook's Petrel	1	W			
1013	JFP	2	SW			
1014	Sooty Shear	1	S			
1016	JFP	2	W			
1018	sooty shear	1	S			
1019	mottled Pet	1	S			
1020	Cook's Petrel	1	SE			
1021	JFP	2	S			
1022	Wedge-tail	2	NW		Darph here.	
1024	Sooty Shear	1	S			
1025	Pale Forked Shear	1	SW			
1026	Sooty Shear	2	S			
1027	Cook's Petrel	1	W			
	Sooty Shear	1	S			
1028	Leach's Storm Pet	1	W			
1030	Sooty Shear	3	S			
1031	Cook's Petrel	1	SW			
1042	Sooty Shear	1	S			
1045	Cook's Petrel	1	SW			
1046	Sooty Shear	2	S			
1047	Sooty Shear	1	S			
1048	Cook's Petrel	1	W			
1049	Sooty Shear	1	S			
1051	Sooty Shear	1	S			
1052	Cook's Petrel	1	N			
1053	JFP	1	W			
1055	Sooty Shear	2	S			
1101	JFP	1	NW			
1102	JFP	1	W			
1110	JFP	4	SW		Travelling	
1112	Sooty Shear	2	S			
1113	J.F. Petrel	1	S			



DATE 13 Oct 64  
Pg. # 4

time species # dir. hgt. remarks loc.

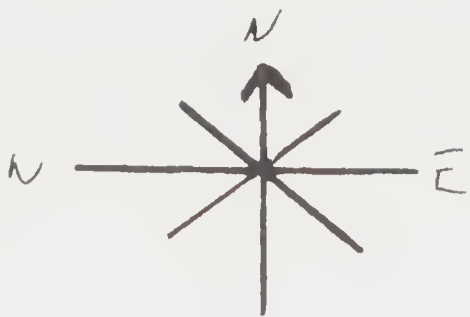
time	species	#	dir.	hgt.	remarks	loc.
1114	J. F. Petrel	1				
1115	J. F. Petrel	1				
1116	Leach's Petrel	1				
1119	Mottled Petrel	1	W			
1121	J. F. Petrel	1	SW			
1126	Sooty Tern	15 ± 10			feeding	
	Fairy Tern	1				
	Shear/petrel	10 ± 3				
1127	Sooty Shear	1	S			
1131	<del>Cook's Petrel</del>	1	W			
1137	Sooty Shear	1	S			
1138	J. F. Petrel	2	E			
1139	Shear/petrel	1				
1145	Mottled Petrel	1	SW			
1147	J. F. Petrel	3				
	<del>Cook's Petrel</del>	1	E			
1150	J. F. Petrel	1				
1151	Sooty Shear	4	S			
1154	Leach's Petrel	1	E			
1156	<del>Cook's Petrel</del>	1	N			
1158	J. F. Petrel	1				
	<del>Cook's Petrel</del>	1				
1159	Sooty Shear	1	S			
1159	J. F. Petrel	1				
1201	<del>Cook's Petrel</del>	1	W			
1202	Shear/petrel	1				
1205	J. F. Petrel	1				
	Leach's Petrel	1				
1207	Sooty Shear	1				
1213	J. F. Petrel	2				
1218	J. F. Petrel	6			travelling	
1222	Mottled P.	1	SW			
1235	JFP	1	W			
1246	JFP	3	W		Travelling	
	<del>Cook's Petrel</del>	3				
	mottled pet	1				



DATE 13 Oct 64  
Pg. # 5

time species # dir. hgt. remarks loc.

1251	JFP	1	W		
1254	JFP	3	E		
1301	Sooty Shear	1	S		
1302	Cook's Petrel	1	S		
1303	Sooty Shear	2	S		
1304	Mottled Petrel	1	SW		
1305	JFP	1	SE		
1309	Cook's Petrel	1	SE		
1309	Shear-Petrel	1	NW		
1311	JFP	1	W		
1317	JFP	3	W		
1328	JFP	2	SW		
1331	Cook's Petrel	1	SE		
1334	Sooty Shear	1	S		
1336	JFP	3	SW		
1336	Cook's Petrel	1	N		
1339	JFP	1	N		
1345	JFP	1	SW		
1406	JFP Petrel	1	-		
1409	Sooty Shear	1			flushed from water
1411	J.F. Petrel	1	NW		
1435	J.F. Petrel	1	W		
1447	Navell's S.	1			sitting in water - molting
1530	J.F. Petrel	1			
1534	Sooty Shear	1	S		
1535	JFP	1	W		
1541	Cook's Petrel	1	W		
1545	Cook's Petrel	1	NE		
1546	JFP	3	W		
	Cook's Petrel	1	SW		
1550	Shear-Petrel	2	W		
1554	JFP	1	W		
1558	JFP	1	NW		
1600	Cook's Petrel	1	S		
1616	Cook's Petrel	1	E		
1615	Cook's Petrel	1	NW		
1618	JFP	1	S		
1625	JFP	3	NW		
1628	JFP	1	NW		
1632	JFP	6	W		Feeding
	Cook's Petrels	3			
1635	JFP	1	SE		
1643	JFP	2	S		
1647	JFP	1	S		
1650	Cook's Petrel	1	SW		
1654	JFP	1	W		
1708	Cook's Petrel	1	SW		
1711	Shear-Petrel	1	NE		



DATE 13 Oct 64  
Pg. # 6

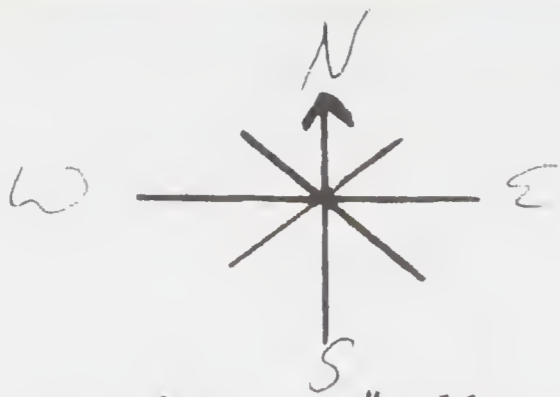
time	species	#	dir.	hgt.	remarks	loc.
1715	<del>Sooty Pet</del>	1	NE			
1719	Sooty Shear	1	S			
1722	Shear-Petrel	1	W			
1724	J.F. Petrel	1				
1727	Sooty Shear	1	S			
1728	<del>Cook's Petrel</del>	1	N			
1729	Sooty Shear	1	S		flushed from water	
1735	Sooty Shear	1	S			
1736	J.F. Petrel	1	N			
1745	Sooty Tern	7			travelling	
1746	Cook's Petrel	1	N			
1746	end observations					

69  
75  
96  
88  
186  
49  
523



13  
80  
64  
231  
62  
61  
112  
5 23

41  
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44  
29  
46  
39  
202



DATE 14 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0540 begin observations

0542 Sooty Shear 1 S

0543 J. F. Petrel 1 N

0557 J. F. Petrel 1 N

0607 J. F. Petrel 1 S

0642 shear/petrel 1 E

0644 Cook's Petrel 1 S

0652 J. F. Petrel 2 NE

Cook's Petrel 4

travelling

0657 Cook's Petrel 15

J. F. Petrel 5

petrel sp 2

feeding

and upper wings dark brown on back, head light, underparts white, black undertail coverts, thick black underwing borders so that white appeared thin and irregular in center line of underwing, flapped very loosely. slightly larger than Cook's Petrel. probably molting. Possibly Herald's Petrel but appeared smaller than birds previously thought to be Herald's.

0717 J. F. Petrel 1 N

0720 Sooty Tern 1

Fairy Tern 4

J. F. Petrel 2

feeding

0724 Sooty Shear 1 W

0725 J. F. Petrel 1 N

0728 J. F. Petrel 2 N

0729 Cook's Petrel 1 W

0740 shear/petrel 2

seen by watch

0754 Cook's Petrel 1 N

0756 J. F. Petrel 1 N

0817 Cook's Petrel 1 W

0825 Cook's Petrel 1 SE

0839 Cook's Petrel 1 S

0843 Cook's Petrel 1 W

0858 Sooty Tern 10 E

JFP 6

Cook's Petrel 4

travelling

0928 JFP 1 N

0930 Cook's Petrel 1 W

0942 Sooty Tern 15 E

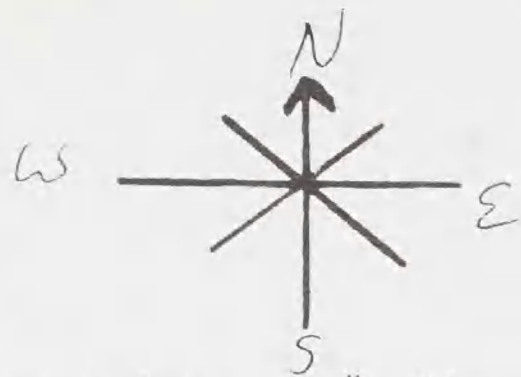
Fairy Tern 3

shear/petrel 5

feeding

0943 Pale-footed S. 1

white hound - sitting in water - flushed by ship.



DATE 14 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
BWP 0947	Cook's Petrel	1	SE			
0955	shear/petrel	1				
1039	Leach's Petrel	1	SE			
1055	Cook's Petrel	1	SE			
1101	Cook's Petrel	1	N			
1104	Cook's Petrel	1	w			
1110	JFP	3	⊙		Feeding	
	Cook's Petrel	2				
1118	Sooty Shear	1	S			
1122	JFP	1	S			
1132	JFP	2	SW			
1139	Cook's Petrel	1	S			
1141	JFP	1	SE			
1144	Cook's Petrel	1	NE			
1145	Sooty Shear	1	S			
1154	Cook's Petrel	1	SW			
1205	Sooty Tern	110	±20 E			
	Fairy Tern	1				
	JFP	45	±10		feeding	
	Cook's Petrel	23	±3			
	Shear - Petrel	23	±10			
1211	Cook's Petrel	1	SW			
1220	Cook's Petrel	1	w			
1231	White-headed Petrel	1	⊙		broad white neck	
1250	Cook's Petrel	1	SW			
1305	Cook's Petrel	1	N			
1325	Cook's Petrel	1	SW			
1336	Cook's Petrel	1	SE			
1415	Leach's Storm P.	1	S			
1440	Cook's Petrel	1	NE			
1442	Cook's Petrel	1	w			
1444	RTTB	1	⊙		sitting on water	
1446	Cook's Petrel	1	NW			
1449	JFP	6	NW		Travelling	
	Cook's Petrel	4				
1501	Shear - Petrel	1	S			
1505	Cook's Petrel	1	SE			
1513	Cook's Petrel	3	S			
1519	Cook's Petrel	1	SW			
1527	Cook's Petrel	1	NW			
1533	Sooty Shear	1	S			
1536	Jagger sp.	1	S		all dark - pointed tail feathers seen - 1 to 2 miles by probably Parasitic J. - definitely not Pomarine J. body somewhat chunky - more like Peterson's Parasitic picture than Long-tailed.	
1545	shear/petrel	1			all dark - seen by water	

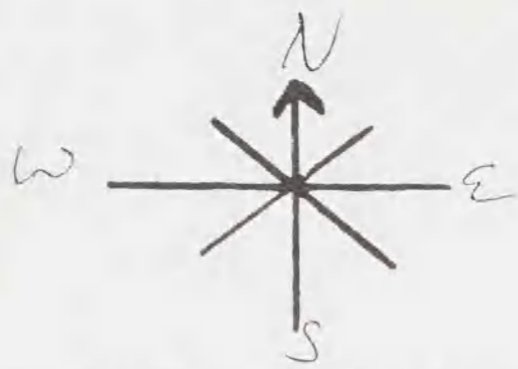
24  
136  
84  
67  
91  
402



DATE 14 Oct 64  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1547	Cook's Petrel	1	NW			
1550	Cook's Petrel	1	S			
1551	Mottled Petrel	1	W		flushed from water	
1607	shear/petrel	1				
1612	Cook's Petrel	1	N			
1614	J.F. Petrel	1				
	petrel/shear	1	NW		all dark, size of J. F. Petrel	
1615	shear/petrel	1	NW		very high arcs like Mottled Petrel - too far to tell	
1628	shear/petrel	25 ± 10			arcing very high & diving toward water, higher than typical Sooty Shear arc.	
	Frigate ♀	1			Too far to tell if frigate <del>was</del> feeding	
1643	shear/petrel	1	N			
1645	Cook's Petrel	1	S			
1648	Cook's Petrel	1	N			
1653	RTTB	1	⊙			
1700	shear/petrel	1	NW		all dark, wedgetail sized, flew like petrel - high arcs	
1701	Cook's Petrel	1	S			
1712	looks like petrel	1	E			
1727	Shear. Petrel	1	W			
1730	J.P. Petrel	1	N			
1545	End observations					

258  
101  
193  
402



DATE 15 Oct 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0530	begin observations					
0610	JFP	1	S			
0614	cooks Petrel	1	NW			
0616	cooks Petrel	1	N			
0624	cooks Petrel	1	E			
0650	Leach's Storm P	1	SW			
0651	shear. Petrel	1	S			
0653	cooks Petrel	2	S			
0655	cooks Petrel	2	S			
0658	cooks Petrel	1	S			
0745	RTTB	1	⊙			
0850	shear/petrel	2	SW		may have been Mottled Petrel	
0852	Mottled Petrel	1	SW		flight directed	
0905	Newell's Shear	1	S			
0906	Cook's Petrel	1	S			
0906	Cook's Petrel	1	↗			
0920	White tailed T.B.	1	☐			
0925	shear/petrel	1				
0937	JFP	1	SW			
0954	cooks Petrel	1	W			
1003	JFP	1	SW			
1007	cooks Petrel	1	S			
1010	cooks Petrel	1	S			
1012	cooks Petrel	4	S		→ probably small trailing flock.	
1013	cooks Petrel	3	SW			
1024	mottled Petrel	1	S			
1035	cooks Petrel	1	W			
1040	cooks Petrel	1	NW			
1050	shear - Petrel	1	S			
1110	Cook's Petrel	1	↗			
1117	Cook's Petrel	1	S			
1200	cooks Petrel	2	N			
1219	cooks Petrel	1				
1245	Leach's storm Pet.	1	E			
1253	cooks Petrel	1	S			
1302	cooks Petrel	2	W			
1305	cooks Petrel	1	S			
1344	RTTB	1	⊙			
1355	JFP	1	S			
1402	sooty Shear	1	S			
1425	cooks Petrel	1	N			
1435	cooks Petrel	1	SW			



DATE 15 Oct 64  
Pg.# 2

time	species	#	dir.	hgt.	remarks	loc.
1459	Cook's Petrel	1	N			
1509	Cook's Petrel	2	SE			
1605	Leach's Storm P	1	E			
1622	Cook's Petrel	1	E			
1630	Cook's Petrel	1	NW			
1632	Sooty Shear	1	S			
1635	Leach's Storm P	1	N			
1655	Cook's Petrel	1	W			
1708	Sooty Shear	1	S			
1725	Cook's Petrel	1	SE			
1740	Cook's Petrel	1	N			
1749	End Observations					



DATE 16 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0550 begin observations

0612 Cook's Petrel 1 S

0613 Shear/Petrel 1 S

0622 Shear/Petrel 1 S

0635 Mottled P. 1 S

0640 Cook's Petrel 1 S

0643 Cook's Petrel 1 S

0651 Shear/Petrel 1 S

possible Mottled Petrel

0653 Cook's Petrel 1 SW

0656 Cook's Petrel 1 S

0709 Cook's Petrel 1

0712 Fairy Tern? 1

0715 Golden Plover? 1

seen by watch

0719 Cook's Petrel 1 E

0726 Red-tailed T.B. 1 SW

flight directional and very swift, just a few feet over the water

0727 Sooty Shear 1 S

0728 Mottled P. 1 S

0729 Cook's P. 1 S

0730 Cook's P. 1 S

0732 Shear/Petrel 1 SW

possible Mottled Petrel

0734 Cook's Petrel 1 N

0735 Cook's Petrel 1 SW

0742 Cook's Petrel 1

0745 Cook's Petrel 1

0747 Cook's Petrel 1

0754 Mottled Petrel 1 SW

high arcs, directional flight

0820 Cook's Petrel 1 S

0825 Cook's Petrel 1 W

0827 JFP 1 N

0834 Sooty Shear 1 S

0838 Cook's Petrel 1 @

0842 mottled Petrel 1 S

0915 Cook's Petrel 1 W

0921 Cook's Petrel 1 W

0929 Cook's Petrel 1 SW

0939 Cook's Petrel 1 S

0940 Sooty Shear 1 S

0941 Cook's Petrel 2 E

1010 Cook's Petrel 8

White-headed P. 1

Harald's Petrel 1

1014 Leach's Petrel 1

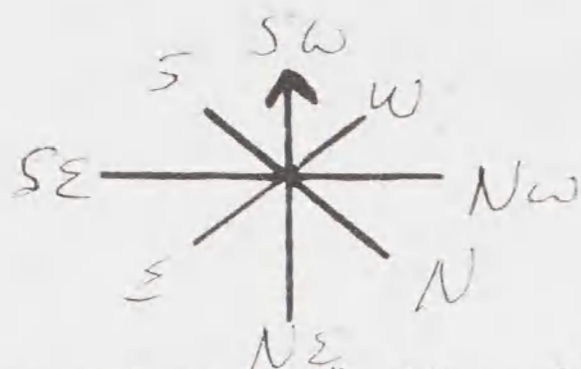
travelling  
under way in eye between Cook's & W.N.P. upperparts dark brown, underparts white, nape, breast + ~~throat~~ grey, undertail coverts dark - underwing dark, with white mottling in middle





DATE 16 Oct 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1020	Cook's Petrel	1				
1024	Cook's Petrel	1	S			
1027	Cook's Petrel	2	N		1 sitting on water	
1029	Cook's Petrel	2	E			
1052	Shear/petrel	1	SW		possible Mottled Petrel	
1107	Cook's Petrel	1	N		sitting on water	
1116	Cook's Petrel	1	S			
1120	Cook's Petrel	2	SW			
1122	JFP	1	S			
1207	Cook's Petrel	1	W			
1214	Cook's Petrel	1	SW			
1311	shear/petrel	1	SW			
1318	Mottled P.	1	E		flushed from water	
1345	Cook's Petrel	1	E			
1354	Mottled Petrel	1	S			
1402	Mottled Petrel	1	S			
1405	Cook's Petrel	1	N			
1409	Cook's Petrel	1	W			
1421	Cook's Petrel	1	NE		sitting on water	
1423	Cook's Petrel	1	E			
1425	Cook's Petrel	1	E			
1428	Cook's Petrel	1	W			
1430	Mottled Petrel	1	S			
1435	ATTB	1	E			
1440	Cook's Petrel	1	E			
1446	Mottled Petrel	1	S			
1504	Cook's Petrel	1	SW			
1506	Shear - Petrel	1	W			
1510	Mottled Petrel	1	SW			
1522	Cook's Petrel	1	SW			
1528	Cook's Petrel	1	S			
1545	Sooty Shear	1	S			
1548	Golden Plover	2	⊙			
1549	Cook's Petrel	1	N			
1555	Sooty Shear	1	S			
1636	Cook's Petrel	1	E			
1723	Cook's Storm Pet	1	SW			
1740	and observations					



DATE 17 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0550 begin observations

0634 Cook's Petrel 1 S

0651 Cook's Petrel 1 SW

0730 Cook's Petrel 2 N

0744 Cook's Petrel 1 W

0745 RTTB 1 @

0810 Cook's Petrel 1 NW

0837 Cook's Petrel 1 SE

0842 Cook's Petrel 1

0914 Cook's Petrel 1 E

0930 Leach's Petrel 1

1015 Cook's Petrel 1 NE

1020 Cook's Petrel 2 S

1022 Sooty Tern 1 SE

1228 Cook's Petrel 1 E

1229 Sooty Shear 2 S

1230 Leach's P. 1 S

1232 Shear Petrel 1 S

1240 Shear Petrel 1 NW

1245 Cook's Petrel 1 N

1300 Cook's Petrel 1 SW

1311 Newell's Shear? 1 NW

1325 Cook's Petrel 1 S

1342 Mottled Petrel? 1 W

1420 Cook's Petrel 2 N

1458 Cook's Petrel 1 E

1530 Shear Petrel 1 SW

1613 Cook's Petrel 1 NE

1616 Cook's Petrel 1 NE

1639 Leach's Storm P 1 NW

1729 Cook's Petrel 1 SE

1745 end observations

Long distance off

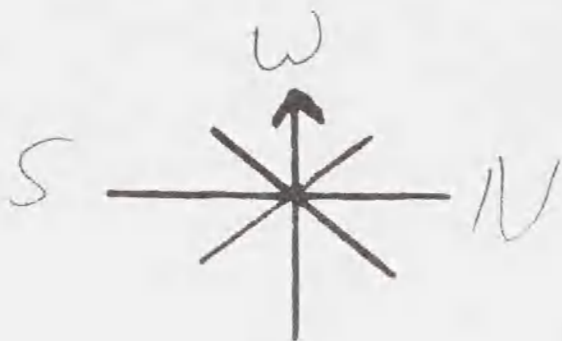


DATE 18 Oct 64

Pg. # 1

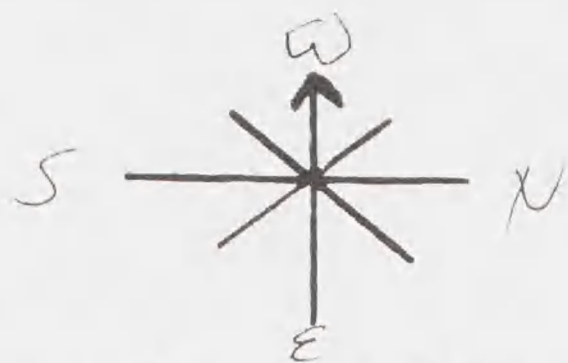
time species # dir. hgt. remarks loc.

time	species	#	dir.	hgt.	remarks	loc.
0555	begin observations					
0616	Mottled Petrel	1	S			
BLWP 0733	Cook's Petrel	1	SE			
0739	Leach's Petrel	1	S			
0740	Kermadec P.?	1	N			
0741	Mottled P.	1	↻		flushed from water	
0758	Mottled P.	1	S			
0800	Leach's Petrel	1	SE			
0803	Leach's Petrel	1	W			
0805	Cook's Petrel	1	N			
0807	Mottled P.	1	S			
0808	Mottled P.	1	S			
0817	Mottled P.	1	S			
0818	shear/petrel	1	S.			
0822	Cook's Petrel	1	W			
0824	mottled Petrel	1	W			
0825	mottled Petrel	1	W			
0830	Cook's Petrel	1	W			
0837	mottled Petrel	1	NW			
0840	Sooty Shear ?	2	S		Too big for a Mottled Petrel, but they were seen in the rain	
0842	mottled Petrel	1	W			
0845	mottled Petrel	1	W			
0848	mottled Petrel	1	W			
0852	mottled Petrel	1	SW			
0855	shear - Petrel	1	NW			
0856	mottled Petrel	1	W			
0900	mottled Petrel	1	SW			
0901	mottled Petrel	1	SW			
0902	Mottled Petrel	1	SW			
0915	Cook's Petrel	1	W			
0921	mottled Petrel	1	SW			
0925	Leach's Storm P.	1	↻SW			
0926	Leach's Storm P.?	1	NW		might be the same one, but I doubt it	
0944	Sooty Shear ?	1	S			
0945	Sooty Shear	1	S			
0950	shear/petrel	1	S		possible Pale-footed S	
0951	Sooty Shear	5	S			
0953	Mottled P.	1	SW			
0954	Wedgetail ?	1	NE			
1004	Cook's Petrel	1	SE			
1019	shear/petrel	1	SW			
1023	Cook's Petrel	1	NE			
1025	shear/petrel	1				
1029	Wedgetail	1	↻		light	
1037	Cook's Petrel	1	↻			



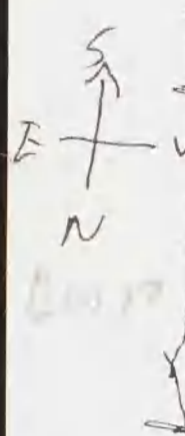
DATE 18 Oct 67  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1040	shear/petrel	1	S			
1107	Leach's Storm P	1	S			
1112	Cook's Petrel	1	S			
1115	Shear-petrel	1	S			
1117	Leach's Storm P	1	S		Flying up in the air, doing less of the usual fluttering wings, probably because of the wind	
1155	Leach's Storm P	1	E			
1201	Leach's Storm P	1	E			
1223	Mottled Petrel	1	S			
1227	Newell's Shear	1	<del>S</del> NE		flushed from aqua	
1242	Cook's Petrel	1	?			
1325	Sooty Shear	2	S			
1340	Cook's Petrel	1	?			
1354	Sooty Shear	4	S			
1404	Sooty Shear	1	S			
1412	Sooty Shear	1	S			
1415	Frigate	1	N			
1416	Mottled Petrel	1	W			
1425	Frigate	2	SW			
1430	Cook's Petrel	1	S			
1431	Leach's Storm P	1	W			
1441	Leach's Storm P	1	E			
1543	Herald's Petrel?	1	W		dark back, white underparts, dark underwing Wedgetail sized but flew more petrel-like. molting	
1600	Cook's Petrel	1	SE			
1605	Leach's Petrel	1	SE			
1614	Leach's Petrel	1	SE			
1628	shear/petrel	1				
1630	shear/petrel	1				
1631	Frigate	1	@			
1706	Frigate	1	@			
1722	Cook's Petrel	1	N			
1728	Sooty Shear	1	S			
1730	Sooty Shear	1	S			
1731	Mottled Petrel	1	SW			
1737	Petrel sp	1	W		either a Cook's or a mottled	
1755	end observations					



DATE 19 Oct 64  
Pg. # 1

time species # dir. hgt. remarks loc.



0600 begin observations

0700 WITB 1 @

0819 Storm Petrel sp 1 SE

all dark!

0900 Dark-rumped P. 1 SW

black backed. Thick <sup>dark</sup> underwing lining

1010 Shear-Petrel 1 W

1049 Cook's Petrel sp 1 S

1052 Fairy Tern 2 SW

joined up to form a loose flock

1053 Cook's Petrel 2 S

1054 Wedgetail 3 SW

travelling

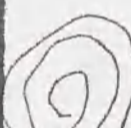
JFP 3

DRP 1

1059 mottled Petrel? 1 SW

1110 Cook's Petrel 1 NW

1125 Shear/petrel 1 NW

1146 <sup>immature</sup> ~~Black~~ <sup>White</sup> ~~Wing~~ <sup>Gull?</sup> 1 

fired at + hit once at least - light grey-brown all over - bluish bill. very large - swa sized at least.

1155 Cook's Petrel 1 SW

1201 Cook's Petrel 1 N

1221 Wedgetail 1 S

1227 Cook's Petrel 1 S

1240 Frigate 2 N

1244 Cook's Storm P. 1 SW

1320 Shear-Petrel 1 S

1345 Shear-Petrel 1 W

1414 Cook's Petrel 2 ~~W~~ S

1430 Cook's Petrel 1 ~~S~~ N

1435 Cook's Petrel 1 ~~N~~ E

1437 Cook's Petrel 1 ~~E~~ NE

1448 Cook's Petrel 1 ~~E~~ E

1504 J.F. Petrel 1 NW

1511 Cook's Petrel 1 NW

1537 Shear-petrel 1 SE

1546 Booby sp. 1 W

1551 Sooty Shear 1 S

1613 Cook's Petrel 1 S

1639 Wedgetail 1 S

1659 Wedgetail 1 NW

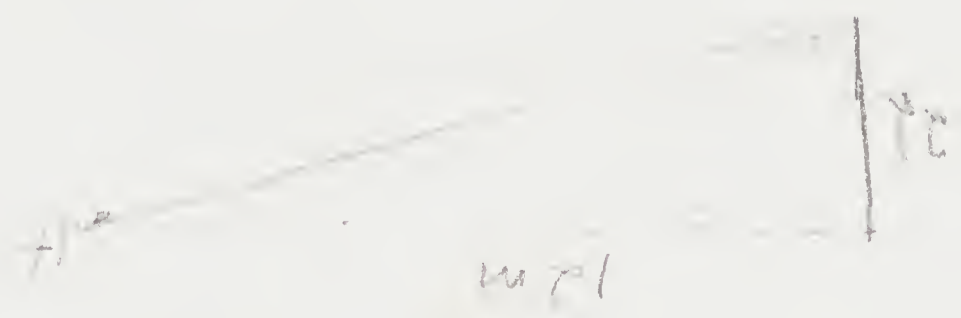
1659 Frigate 2 SW

1700 Shear-Petrel 2 SW

1704 Sooty Tern 2 W

travelling

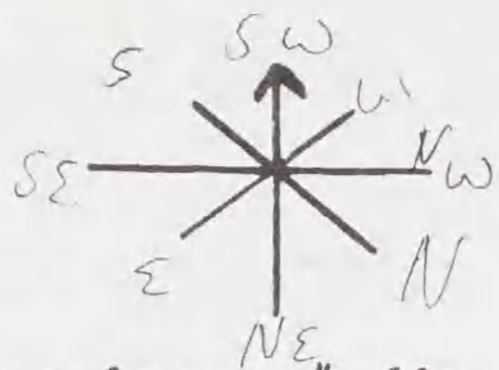
Shear-Petrel 3





DATE 19 Oct 64  
Pg.# 2

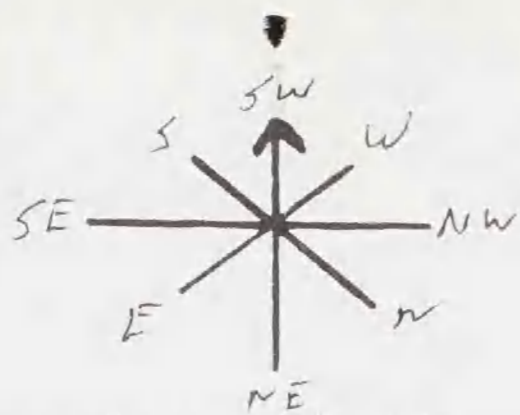
time	species	#	dir.	hgt.	remarks	loc.
1706	Shear-Petrel	1	SW			
1710	Wedgetail	1	S			
1715	Shear-Petrel	1	NW			
1722	Wedge-tail	1	W			
1758	Wedgetail	1	W		light	
1810	end observations					



DATE 20 Oct 67  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0645	Sooty Shear	1				
0700	Cook's Petrel	2				
0705	Leach's P.	1				
0710	begin observations					
0702	shear/petrel	3				
0722	Sooty Shear	1	S			
0723	Wedgetail	1	NW			
0725	shear/petrel	1	NW			
0730	Red footed Booby	1	NE			
0735	Mottled Petrel?	1	NW			
0740	Red foot Booby	1				
0741	Red foot Booby	4				
0745	shear-petrel	1			seen by watch probably Cook's Petrel	
0750	shear-petrel	1	W			
0752	Red foot B	1	NE			
0753	Red-foot B	1	NE			
0754	Frigate	1	NE			
0755	<del>Sooty Tern</del>	<del>5</del>				
	shear/petrel	25±5			feeding	
	RFB	4				
0800	Leach's Petrel	1	NE			
0807	Common Noddy	1	N			
0809	RFB	1	N			
0811	Wedgetail	1	S			
0815	Wedgetail	1	⊙			
0817	RFB	1	S			
0820	RFB	1	⊙			
0823	Cook's Petrel	1	N			
0828	RFB	1	W			
0832	Cook's Petrel	1	S			
0833	Wedgetail	1	N			
0834	Cook's Petrel	1	NW			
0835	Wedgetail	1	NW		Dark	
0836	Wedgetail	1	N			
0837	Wedgetail	1	NW			
0839	Wedgetail	1	N			
0840	Wedgetail	1	NE			
0842	Cook's Petrel	1	NW			
0848	Cook's Petrel	1	N			
0849	Wedgetail	1	N			
0850	Wedgetail	1	N			
0851	Wedgetail	1	N			
0852	Wedgetail	1	N			
0853	RFB	1	N			
0854	Wedgetail	3	N			
0855	Wedgetail	2	N			
0856	Wedgetail	3	N			
0857	Wedgetail	1	N			
1858	Wedgetail	1	NW			





DATE 20 Oct 64

Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
BWP	0859	<del>Cook's Petrel</del>	1	NE			
	0900	Wedgetail	1	N			
	0904	Wedgetail	1	SE			
	0908	Wedgetail	1	N			
ZWP	0909	<del>Cook's Petrel</del>	2	N			
	0910	MFB	1	N			
	0911	Wedgetail	1	NW			
	0913	Wedgetail	1	E			
	0914	Wedgetail	1	N			
	0916	Wedgetail	1	N			
	0917	Wedgetail	1	NE			
	0920	Wedgetail	1	N			
	0924	<del>Cook's Petrel</del>	1	NW			
	0926	Wedgetail	2	⊙			
	0927	Brown Booby	2	⊙			
	0939	Wedgetail	1	E			
	0942	shear/petrel	1	E			
	0950	Tropicbird sp	1	N			
	0951	Brown Booby	3			fishing	
		Red-foot B.	2				
	0952	Wedgetail	1	NE			
	0954	Wedgetail	2	NE		1 dark phase	
	0956	Wedgetail	2	NE		1 dark	
	0957	Frigate	1	E			
	0958	Wedgetail	6	NE		not a flock - scattered	
	0959	Wedgetail	5	NE		not a flock - scattered	
	1002	Red-footed B.	1	NE			
	1008	Frigate B.	1	NE			
	1009	Red-footed B.	1	⊙			
	1013	Wedgetail	4	⊙			
	1015	Brown Booby	4				
		Red-foot Booby	3			fishing	
	1016	Wedgetail	1	NE			
	1017	Red-foot Booby	1	NE			
	1018	wedgetail	2	NE		1 dark	
	1025	Brown Booby	1				
		Red-foot Booby	1	NE			
	1030	Brown Booby	1	⊙			
		Wedgetail	1	⊙			
	1031	Wedgetail	1	N			
	1040	Red-footed B.	1	N		immature	
	1101	Wedgetail	1	SE		1200 end observation	

10  
61  
11  
28  
11  
32  
153

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART B

DATE 1 Oct 64

Time at sunrise = 1405 Position at sunrise = 20°19'N 157°58'W  
Time at sunset = 1819 Position at sunset = 20°41'N 157°20'W  
Miles traveled from 0000 hours to sunrise = 0  
Miles traveled from sunrise to sunset = 49  
Miles traveled from sunset to 2400 hours = 50

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 2 Oct 64

Time at sunrise = 0617 Position at sunrise = 12°27'N 157°40'W  
Time at sunset = 1911 Position at sunset = 12°27'N 157°40'W  
Miles traveled from 0000 hours to sunrise = 58  
Miles traveled from sunrise to sunset = 93  
Miles traveled from sunset to 2400 hours = 53

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

437  
132  
4-1

AT SEA SURVEY CHART B

DATE 3 Oct 64

Time at sunrise = <sup>0612</sup> Position at sunrise = 15° 30' N 157° 21' W

Time at sunset = <sup>1812</sup> Position at sunset = 13° 22' N 157° 31' W

Miles traveled from 0000 hours to sunrise = 62

Miles traveled from sunrise to sunset = 133

Miles traveled from sunset to 2400 hours = 45

TIME OF FIX      TYPE OF FIX      LONGITUDE      LATITUDE

1.

2.

3.

4.

5.

6.

DATE 4 Oct 64

Time at sunrise = <sup>0616</sup> Position at sunrise = 11° 33' N 157° 23' W

Time at sunset = <sup>1710</sup> Position at sunset = 10° 34' N 157° 28' W

Miles traveled from 0000 hours to sunrise = 59

Miles traveled from sunrise to sunset = 103

Miles traveled from sunset to 2400 hours = 327

TIME OF FIX      TYPE OF FIX      LONGITUDE      LATITUDE

1.

2.

3.

4.

5.

6.

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 5 Oct 64

Time at sunrise = <sup>0657</sup> Position at sunrise = <sup>10° 22' N</sup> <sup>152° 05' W</sup>

Time at sunset = <sup>1807</sup> Position at sunset = <sup>12° 41' N</sup> <sup>154° 25' W</sup>

Miles traveled from 0000 hours to sunrise = <sup>57</sup>

Miles traveled from sunrise to sunset = <sup>120</sup>

Miles traveled from sunset to 2400 hours = <sup>50</sup>

TIME OF FIX      TYPE OF FIX      LONGITUDE      LATITUDE

1. <sup>1027</sup>  
<sup>1030</sup>  
<sup>50</sup>
- 2.
- 3.
- 4.
- 5.
- 6.

DATE 6 Oct 64

Time at sunrise = <sup>0656</sup> Position at sunrise = <sup>11° 22' N</sup> <sup>150° 05' W</sup>

Time at sunset = <sup>1801</sup> Position at sunset = <sup>14° 22' N</sup> <sup>152° 25' W</sup>

Miles traveled from 0000 hours to sunrise = <sup>50</sup>

Miles traveled from sunrise to sunset = <sup>105</sup>

Miles traveled from sunset to 2400 hours = <sup>52</sup>

TIME OF FIX      TYPE OF FIX      LONGITUDE      LATITUDE

1. <sup>1027</sup> <sup>1030</sup> <sup>1035</sup>
- 2.
- 3.
- 4.
- 5.
- 6.



SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART B

DATE 7 Oct 64

Time at sunrise = 06:07 Position at sunrise = 18° 27' N 153° 27' W  
Time at sunset = 17:59 Position at sunset = 20° 22' N 153° 07' W  
Miles traveled from 0000 hours to sunrise = 70  
Miles traveled from sunrise to sunset = 112  
Miles traveled from sunset to 2400 hours = 66

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>17:30</u>	<u>1020</u>	<u>153° 07'</u>	<u>20° 22' N</u>
2.				
3.				
4.				
5.				
6.				

DATE 8 Oct 64

Time at sunrise = 05:10 Position at sunrise = 20° 40' N 153° 10' W  
Time at sunset = 17:51 Position at sunset = 23° 29' N 152° 40' W  
Miles traveled from 0000 hours to sunrise = 62  
Miles traveled from sunrise to sunset = 120  
Miles traveled from sunset to 2400 hours = 67

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>17:51</u>	<u>1020</u>	<u>152° 40'</u>	<u>23° 29' N</u>
2.				
3.				
4.				
5.				
6.				

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 9 Oct 64

Time at sunrise = 0630 Position at sunrise = 22°N 150°W

Time at sunset = 1750 Position at sunset = 21°N 151°W

Miles traveled from 0000 hours to sunrise = 56

Miles traveled from sunrise to sunset = 116

Miles traveled from sunset to 2400 hours = 83

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>0630</u>	<u>22°N</u>	<u>150°W</u>	
2.				
3.	<u>1750</u>	<u>21°N</u>	<u>151°W</u>	
4.				
5.				
6.				

DATE 16 Oct 64

Time at sunrise = 0557 Position at sunrise = 15°N 150°W

Time at sunset = 1745 Position at sunset = 17°N 150°W

Miles traveled from 0000 hours to sunrise = 74

Miles traveled from sunrise to sunset = 94

Miles traveled from sunset to 2400 hours = 101

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	<u>0557</u>	<u>15°N</u>	<u>150°W</u>	
2.				
3.				
4.				
5.				
6.				



SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 11 Oct 64

Time at sunrise = <sup>0655</sup> Position at sunrise = <sup>13°14'N 157°24'W</sup>  
Time at sunset = <sup>1747</sup> Position at sunset = <sup>10°19'N 158°30'W</sup>  
Miles traveled from 0000 hours to sunrise = <sup>58</sup>  
Miles traveled from sunrise to sunset = <sup>115</sup>  
Miles traveled from sunset to 2400 hours = <sup>54</sup>

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE 12 Oct 64

Time at sunrise = <sup>0553</sup> Position at sunrise = <sup>11°22'N 148°11'W</sup>  
Time at sunset = <sup>1740</sup> Position at sunset = <sup>10°33'N 149°08'W</sup>  
Miles traveled from 0000 hours to sunrise = <sup>81</sup>  
Miles traveled from sunrise to sunset = <sup>117</sup>  
Miles traveled from sunset to 2400 hours = <sup>71</sup>

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 13 Oct 64

Time at sunrise <sup>0546</sup> = Position at sunrise = 10°51'N 148°02'W  
Time at sunset <sup>1734</sup> = Position at sunset = 12°54'N 147°59'W  
Miles traveled from 0000 hours to sunrise = 57  
Miles traveled from sunrise to sunset = 123  
Miles traveled from sunset to 2400 hours = 56

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 14 Oct 64

Time at sunrise <sup>0543</sup> = Position at sunrise = 14°42'N 147°57'W  
Time at sunset <sup>1731</sup> = Position at sunset = 16°30'N 148°04'W  
Miles traveled from 0000 hours to sunrise = 52  
Miles traveled from sunrise to sunset = 108  
Miles traveled from sunset to 2400 hours = 64

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART B

DATE 15 Oct 64

Time at sunrise = <sup>0546</sup> Position at sunrise = 18°39'N 147°59'W  
Time at sunset = <sup>1729</sup> Position at sunset = 20°30'N 147°59'W  
Miles traveled from 0000 hours to sunrise = 65  
Miles traveled from sunrise to sunset = 111  
Miles traveled from sunset to 2400 hours = 64

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

DATE 16 Oct 64

Time at sunrise = <sup>0549</sup> Position at sunrise = 22°27'N 147°59'W  
Time at sunset = <sup>1724</sup> Position at sunset = 24°27'N 147°58'W  
Miles traveled from 0000 hours to sunrise = 53  
Miles traveled from sunrise to sunset = 120  
Miles traveled from sunset to 2400 hours = 56

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.			
2.			
3.			
4.			
5.			
6.			

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 17 Oct 64

Time at sunrise = <sup>0552</sup> Position at sunrise = 26°32'N 148°00'W

Time at sunset = <sup>1731</sup> Position at sunset = 25°27'N 150°06'W

Miles traveled from 0000 hours to sunrise = 69

Miles traveled from sunrise to sunset = 131

Miles traveled from sunset to 2400 hours = 55

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

3.

4.

5.

6.

DATE 18 Oct 64

Time at sunrise = <sup>0608</sup> Position at sunrise = 25°00'N 152°05'W

Time at sunset = <sup>1747</sup> Position at sunset = 25°00'N 154°19'W

Miles traveled from 0000 hours to sunrise = 58

Miles traveled from sunrise to sunset = 120

Miles traveled from sunset to 2400 hours = 66

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

3.

4.

5.

6.

SI-MNH-955b  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 19 Oct 64

Time at sunrise = <sup>0627</sup> Position at sunrise = 25°00'N 156°53'W

Time at sunset = <sup>1758</sup> Position at sunset = 23°29'N 157°00'W

Miles traveled from 0000 hours to sunrise = 74

Miles traveled from sunrise to sunset = 97

Miles traveled from sunset to 2400 hours = 42

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

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4.

5.

6.

DATE 20 Oct 64

Time at sunrise = <sup>0626</sup> Position at sunrise = 25°21'N 157°08'W

Time at sunset = <sup>1200</sup> Position at sunset = 25°18'N 157°08'W

Miles traveled from 0000 hours to sunrise = 49

Miles traveled from sunrise to sunset = 67

Miles traveled from sunset to 2400 hours =                     

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
-------------	-------------	-----------	----------

1.

2.

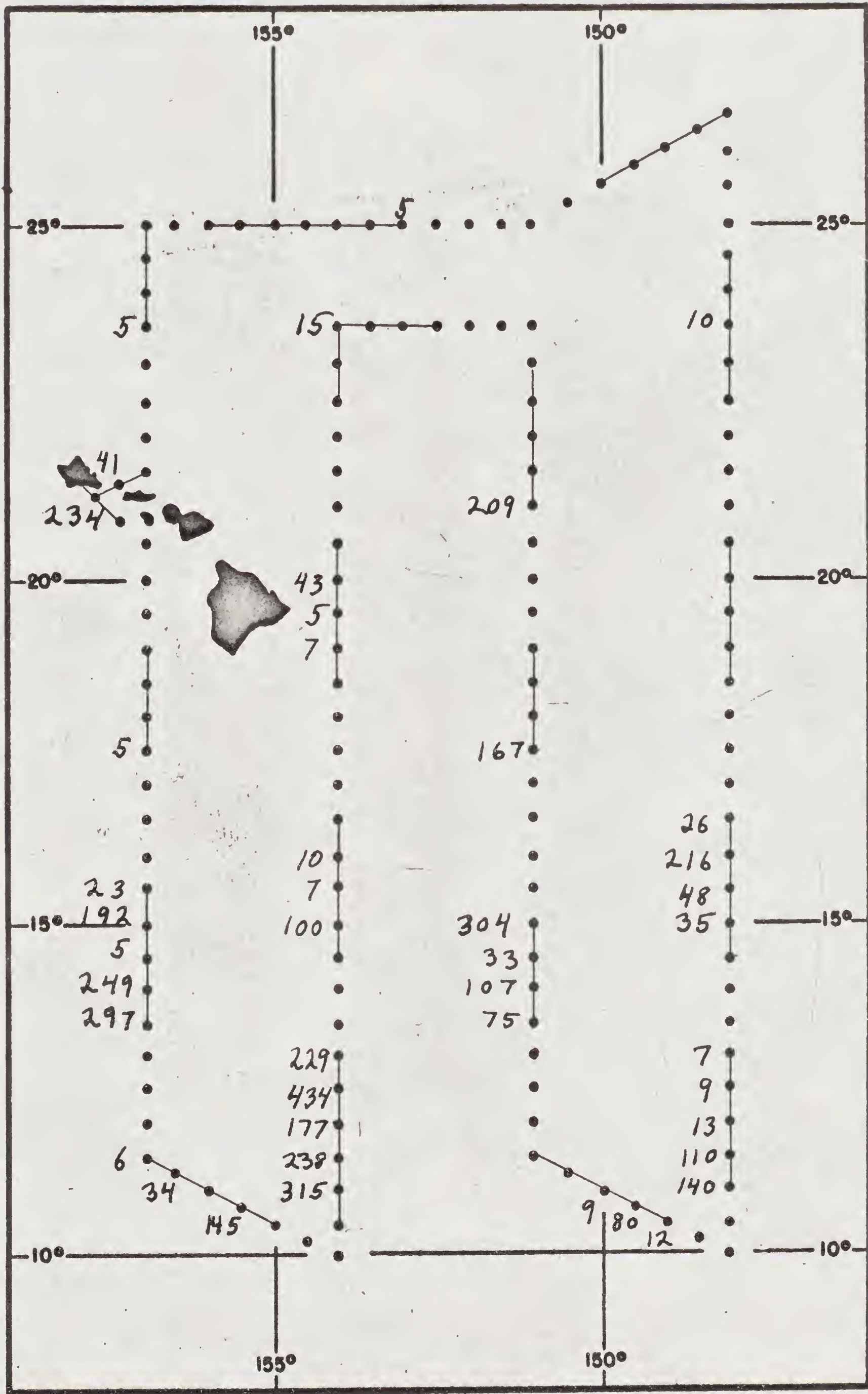
3.

4.

5.

6.

BIRDS IN FLOCKS - 4436



Birds in flocks 4436

SI-MNH-955a

3-4-64

## SMITHSONIAN INSTITUTION

DIVISION OF BIRDS

AT SEA SURVEY CHART A

DATE: 1 Oct 64Total Minutes: 255Total Miles 49

## I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>49</u>	<u>319</u>	<u>6.51</u>	<u>6.31</u>

## II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>34</u>	<u>2</u>	<u>1</u>	<u>2</u>	<u>122</u>	<u>92</u>	<u>2</u>	<u>3</u>	<u>3.59</u>	<u>4.58</u>	<u>1</u>	<u>3</u>	<u>3.17</u>	<u>1.07</u>	<u>0.50</u>	<u>1.00</u>

## III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

## IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>13</u>	<u>138</u>	<u>10.62</u>	<u>2.13</u>

## V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

## VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>10</u>	<u>-</u>	<u>7</u>	<u>3</u>	<u>56</u>	<u>-</u>	<u>51</u>	<u>5</u>	<u>5.6</u>	<u>7.29</u>	<u>1.67</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>

## VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.5</u>	<u>0.50</u>

## VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>7</u>	<u>234</u>	<u>0.14</u>	<u>7</u>	<u>234</u>	<u>0.14</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 2 Oct 64 Total Minutes: 717 Total Miles 93

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>109</u>	<u>151</u>	<u>1.39</u>	<u>1.62</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>101</u>	<u>14</u>	<u>77</u>	<u>1</u>	<u>133</u>	<u>17</u>	<u>102</u>	<u>1</u>	<u>1.32</u>	<u>1.21</u>	<u>1.32</u>	<u>1.00</u>	<u>1.43</u>	<u>2.15</u>	<u>1.12</u>	<u>1.01</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>8</u>	<u>14</u>	<u>1.75</u>	<u>.85</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.21</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.21</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>5</u>	<u>.01</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 30.7.64 Total Minutes: 715 Total Miles 128

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
79	849	10.75	6.83

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile				
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B	
6	5	0	48	0	329	0	258	0	5.06	0	5.38	-	2.97	0	2.02	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
5	4		5	4	0	1	1	-	1.04	1.03	-

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	492	44.73	3.45

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
8	22	2.75	1.9

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1.00	

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
12	766	.09	8	744	.06

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 4 Oct 64 Total Minutes: 714 Total Miles 103

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>139</u>	<u>350</u>	<u>2.52</u>	<u>3.40</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
132	0	66	-	222	-	84	-	1.68	-	1.27	-	2.16	2.582	0	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1	1	-	1	1	-	1	1	-	2.01	1.01	-

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>8</u>	<u>121</u>	<u>15.13</u>	<u>1.19</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>5</u>	<u>1.67</u>	<u>0.03</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>0.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>9</u>	<u>186</u>	<u>0.09</u>	<u>6</u>	<u>170</u>	<u>0.08</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 5 Oct 64 Total Minutes: 719 Total Miles 126

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>165</u>	<u>1591</u>	<u>9.64</u>	<u>13.26</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>153</u>	<u>1</u>	<u>103</u>	<u>0</u>	<u>729</u>	<u>1</u>	<u>520</u>	<u>0</u>	<u>4.76</u>	<u>1</u>	<u>5.83</u>	<u>0</u>	<u>6.00</u>	<u>1.00</u>	<u>1.00</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>5</u>	<u>5</u>	<u>0</u>	<u>6</u>	<u>6</u>	<u>0</u>	<u>1.2</u>	<u>1.2</u>	<u>0</u>	<u>2.05</u>	<u>0.08</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>21</u>	<u>854</u>	<u>40.52</u>	<u>7.89</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.5</u>	<u>0.3</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>16</u>	<u>1393</u>	<u>113</u>	<u>15</u>	<u>1377</u>	<u>113</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 6 Oct 64 Total Minutes: 715 Total Miles 125

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>168</u>	<u>314</u>	<u>1.87</u>	<u>2.51</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>154</u>	<u>6</u>	<u>59</u>	<u>0</u>	<u>222</u>	<u>6</u>	<u>97</u>	<u>0</u>	<u>1.44</u>	<u>1</u>	<u>1.64</u>	<u>0</u>	<u>1.16</u>	<u>.07</u>	<u>.78</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.07</u>	<u>.03</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>69</u>	<u>11.5</u>	<u>.35</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>5</u>	<u>19</u>	<u>3.8</u>	<u>.15</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>3</u>	<u>117</u>	<u>102</u>	<u>2</u>	<u>110</u>	<u>.113</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 7 Oct 64 Total Minutes: 712 Total Miles 112

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>92</u>	<u>155</u>	<u>1.68</u>	<u>1.35</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>72</u>	<u>4</u>	<u>93</u>	<u>0</u>	<u>75</u>	<u>4</u>	<u>46</u>	<u>0</u>	<u>1.04</u>	<u>1</u>	<u>1.07</u>	<u>0</u>	<u>.67</u>	<u>1.04</u>	<u>.41</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>0</u>	<u>2</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.02</u>	<u>.01</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>2</u>	<u>2</u>	<u>.02</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>15</u>	<u>74</u>	<u>4.93</u>	<u>.66</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>6</u>	<u>55</u>	<u>.33</u>	<u>0</u>	<u>0</u>	<u>0</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 8 Oct 64 Total Minutes: 701 Total Miles 180

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>53</u>	<u>76</u>	<u>1.43</u>	<u>.08</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>36</u>	<u>1</u>	<u>12</u>	<u>0</u>	<u>51</u>	<u>1</u>	<u>13</u>	<u>0</u>	<u>1.42</u>	<u>1</u>	<u>1.08</u>	<u>0</u>	<u>.43</u>	<u>.07</u>	<u>.00</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>4</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.03</u>	<u>.03</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>9</u>	<u>16</u>	<u>1.78</u>	<u>.13</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.5</u>	<u>.07</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>15</u>	<u>.13</u>	<u>1</u>	<u>15</u>	<u>.13</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 9 Oct 64 Total Minutes: 736 Total Miles 116

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
53	269	5.08	2.32

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
35	0	13	0	127	0	77	0	3.63	0	5.92	0	0.47	0	0.86	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
4	4		4	4		1	1		0.23	0.23	

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	121	60.5	1.04

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
11	11	1	0.10

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
2	5	2.5	0.21

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	209	1.01	1	209	0.01

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 10 Oct 64 Total Minutes: 707 Total Miles 94

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>31</u>	<u>202</u>	<u>6.52</u>	<u>2.15</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>14</u>	<u>1</u>	<u>7</u>	<u>0</u>	<u>65</u>	<u>17</u>	<u>0</u>	<u>0</u>	<u>2.71</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0.8</u>	<u>2</u>	<u>0.0</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>3</u>	<u>0</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>1.33</u>	<u>1.33</u>	<u>0</u>	<u>1.33</u>	<u>1.33</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>128</u>	<u>64</u>	<u>1.34</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>5</u>	<u>1.67</u>	<u>1.05</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>167</u>	<u>1.01</u>	<u>1</u>	<u>167</u>	<u>1.01</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 11 Oct 64 Total Minutes: 712 Total Miles 115

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>62</u>	<u>589</u>	<u>9.5</u>	<u>0.08</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>54</u>	<u>1</u>	<u>40</u>	<u>0</u>	<u>257</u>	<u>10</u>	<u>201</u>	<u>0</u>	<u>4.76</u>	<u>10</u>	<u>5.03</u>	<u>0</u>	<u>0.04</u>	<u>0.09</u>	<u>0.04</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>22</u>			<u>22</u>			<u>1</u>			<u>0.02</u>		

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>12</u>	<u>329</u>	<u>27.42</u>	<u>0.24</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>		

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>				<u>1</u>				<u>1</u>				<u>0.01</u>			

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>		

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>9</u>	<u>518</u>	<u>0.08</u>	<u>7</u>	<u>494</u>	<u>0.04</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 12 Oct 64 Total Minutes: 707 Total Miles 117

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>113</u>	<u>227</u>	<u>2.01</u>	<u>1.72</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>109</u>	<u>1</u>	<u>85</u>	<u>0</u>	<u>223</u>	<u>169</u>	<u>0</u>	<u>0</u>	<u>2.05</u>	<u>1</u>	<u>1.79</u>	<u>0</u>	<u>1.81</u>	<u>.01</u>	<u>1.84</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>1</u>	<u>—</u>	<u>—</u>	<u>—</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>5</u>	<u>101</u>	<u>.84</u>	<u>3</u>	<u>80</u>	<u>.68</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 13 Oct 64 Total Minutes: 708 Total Miles 123

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
202	523	2.59	4.26

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
202	2	138	0	411	4	305	0	2.18	2.00	2.21	0	3.59	.03	2.48	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
1		0	1	1	0	1.00	1.00	0	.01	.01	0

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	81	20.3	1.66

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
10	272		6	210	.05

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 14 Oct 64 Total Minutes: 708 Total Miles 108

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
80	402	5.03	3.02

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
77	0	58	0	254	0	179	0	3.30	0	3.09	0	3.30	0	3.09	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
2	2	0	2	2	0	1.00	1.00	0	1.00	1.00	0

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	144	36.00	1.33

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1.00	0.01

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
9	325	1.00	6	289	1.00

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 15 Oct 1964 Total Minutes: 703 Total Miles 111

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>52</u>	<u>63</u>	<u>1.21</u>	<u>.57</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>49</u>	<u>0</u>	<u>37</u>	<u>0</u>	<u>60</u>	<u>0</u>	<u>47</u>	<u>0</u>	<u>1.22</u>	<u>0</u>	<u>1.27</u>	<u>0</u>	<u>.54</u>	<u>0</u>	<u>.42</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.03</u>	<u>.02</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 16 Oct 64 Total Minutes: 695 Total Miles 120

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>76</u>	<u>90</u>	<u>1.18</u>	<u>.75</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>71</u>	<u>0</u>	<u>57</u>	<u>0</u>	<u>84</u>	<u>0</u>	<u>70</u>	<u>0</u>	<u>1.18</u>	<u>0</u>	<u>1.23</u>	<u>0</u>	<u>.75</u>	<u>0</u>	<u>.58</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>2</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>0</u>	<u>1.00</u>	<u>1.00</u>	<u>0</u>	<u>.07</u>	<u>.67</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.50</u>	<u>.25</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>10</u>	<u>.01</u>	<u>0</u>	<u>0</u>	<u>0</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 17 Oct 64 Total Minutes: 699 Total Miles 131

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>30</u>	<u>39</u>	<u>1.13</u>	<u>.26</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>28</u>	<u>0</u>	<u>19</u>	<u>0</u>	<u>32</u>	<u>0</u>	<u>23</u>	<u>0</u>	<u>1.14</u>	<u>0</u>	<u>1.21</u>	<u>0</u>	<u>.24</u>	<u>0</u>	<u>.18</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>	<u>.01</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1</u>	<u>.01</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 19 Oct 64 Total Minutes: 691 Total Miles 97

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>41</u>	<u>57</u>	<u>1.39</u>	<u>.59</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>35</u>	<u>6</u>	<u>13</u>	<u>2</u>	<u>46</u>	<u>0</u>	<u>23</u>	<u>0</u>	<u>1.31</u>	<u>1.33</u>	<u>1.28</u>	<u>0</u>	<u>.47</u>	<u>.08</u>	<u>.24</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>.01</u>	<u>0</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>4</u>	<u>2</u>	<u>.04</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>.01</u>	<u>0</u>	<u>0</u>	<u>0</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>4</u>	<u>2</u>	<u>.04</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>17</u>	<u>.02</u>	<u>0</u>	<u>0</u>	<u>0</u>



SI-MNH-955a  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART A

DATE: 180864 Total Minutes: 699 Total Miles 120

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>78</u>	<u>85</u>	<u>1.09</u>	<u>.71</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>74</u>	<u>2</u>	<u>39</u>	<u>0</u>	<u>80</u>	<u>2</u>	<u>39</u>	<u>0</u>	<u>1.08</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>.67</u>	<u>.17</u>	<u>.33</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>—</u>	<u>—</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>0</u>	<u>0</u>	<u>—</u>	<u>—</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>4</u>	<u>5</u>	<u>1.25</u>	<u>.04</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>5</u>	<u>.01</u>	<u>0</u>	<u>0</u>	<u>0</u>

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 1 Oct 64

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																
0900																
1000																
1100																
1200																
1300																
1400	21 19	157 58														
1500	21 09	157 48														
1600	20 59	157 38														
1700	20 49	157 28														
1800	20 39	157 18														
1900	20 29	157 08														
2000	20 19	156 58														
2100	20 09	156 48														
2200	19 59	156 38														
2300	19 49	156 28														
2400	19 39	156 18														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 2 Oct 64

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	15 42	152 50													
0200	15 47	152 50													
0300	15 52	152 50													
0400	15 57	152 50													
0500	16 02	152 50													
0600	16 07	152 50													
0700	16 12	152 50													
0800	16 17	152 50	43	10	1016.6	251	76		6		10-1-1	75.2	16	130	S-12
0900	16 22	152 50													
1000	16 27	152 50													
1100	16 32	152 50													
1200	16 37	152 50													
1300	16 42	152 50													
1400	16 47	152 50	01	10	1016.1	261	76		3		10-1-1	75.5	16	130	S-12
1500	16 52	152 50													
1600	16 57	152 50													
1700	17 02	152 50													
1800	17 07	152 50													
1900	17 12	152 50													
2000	17 17	152 50	01	10	1016.1	251	76		1		10-3-5	75.8	21	130	S-12
2100	17 22	152 50													
2200	17 27	152 50													
2300	17 32	152 50													
2400	17 37	152 50													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

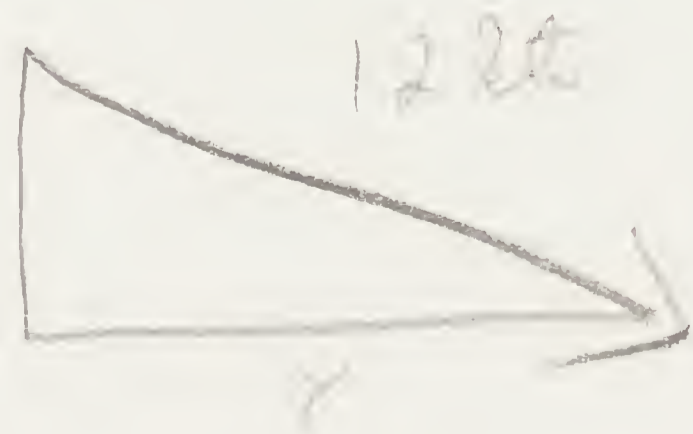
DATE 3-5-64

10 Sta  
6 1 mi 1"  
12 Sta  
60 min / hr = 12 min / mi  
5 min 1 mi = 1"

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 20	157 24														
0200	16 03	157 22	3.2		10	1015.0	26.2	23		3		100-6	26.0	19	60	S-10
0300	15 45	157 20														
0400	15 27	157 18														
0500	15 09	157 16														
0600	14 51	157 14														
0700	14 33	157 12														
0800	14 15	157 10	03		10	1018.8	26.8	23		5		100-6	26.5	18	60	S-10
0900	13 57	157 08														
1000	13 39	157 06														
1100	13 21	157 04														
1200	13 03	157 02														
1300	12 45	157 00														
1400	12 27	156 58	04		10	1018.8	26.8	23		8		100-6	26.2	18	60	S-10
1500	12 09	156 56														
1600	11 51	156 54														
1700	11 33	156 52														
1800	11 15	156 50														
1900	10 57	156 48														
2000	10 39	156 46	03		10	1018.8	26.8	23		8		100-6	26.5	21	60	S-10
2100	10 21	156 44														
2200	10 03	156 42														
2300	09 45	156 40														
2400	09 27	156 38														

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



90°W → 180°E

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 4 Oct 64

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 22	157 53													
0200	12 16	157 57	18	5	1011	255	25		3		11-16	27.5	20	7	5-12
0300	12 51	157 57													
0400	12 40	157 57													
0500	12 35	157 53													
0600	12 28	157 53													
0700	12 25	157 53													
0800	11 53	157 53	20	5	1013	253	24		8		11-18	27.5	17	10	5-12
0900	11 27	157 49													
1000	11 24	157 36													
1100	11 20	157 25													
1200	11 18	157 15													
1300	11 27	156 54													
1400	11 27	156 54	21	20	1012	258	24		8		10-17	27.5	15	10	5-12
1500	11 27	156 45													
1600	11 28	156 34													
1700	11 28	156 24													
1800	11 42	156 13													
1900	11 34	156 02													
2000	11 25	155 56	22	10	1012	267	25		9		10-18	27.5	15	10	5-12
2100	11 27	155 47													
2200	11 21	155 36													
2300	11 15	155 25													
2400	11 10	155 15													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE Sept 14

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	10 24	154 05													
0200	10 20	154 50	12	10	1012.2	215	23		5		100-5	275	14	60	SE-17
0300	10 14	155 35													
0400	10 08	156 20													
0500	10 02	157 05													
0600	10 25	157 50													
0700	10 29	158 35													
0800	10 59	159 20	12	10	1014.5	217	22		5		100-5	275	15	60	N-18
0900	11 12	159 55													
1000	11 25	160 40													
1100	11 38	161 25													
1200	11 51	162 10													
1300	12 04	162 55													
1400	12 18	163 40	12	10	1018.0	217	23		5		100-5	276	16	60	N-18
1500	12 31	164 25													
1600	12 44	165 10													
1700	12 57	165 55													
1800	13 10	166 40													
1900	13 23	167 25													
2000	13 36	168 10	12	10	1021.1	218	23		5		100-5	275	16	60	N-18
2100	13 49	168 55													
2200	14 02	169 40													
2300	14 15	170 25													
2400	14 28	171 10													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 6-28-64

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	13 28	154 05														
0200	14 25	154 05	03		10	1060	28.6	23		1		10-6-5	27	22	80	N-12
0300	14 23	154 05														
0400	14 20	154 05														
0500	14 20	154 05														
0600	14 20	154 05														
0700	14 20	154 05														
0800	14 35	154 05	03		10	1063	28.8	22		6		10-6-5	28	22	70	N-12
0900	15 07	154 05														
1000	15 15	154 05														
1100	15 20	154 05														
1200	15 22	154 05														
1300	15 24	154 05														
1400	15 25	154 05	01		25	1063	28.8	20		7		10-6-5	28	20	70	N-12
1500	15 27	154 05														
1600	15 27	154 05														
1700	15 25	154 05														
1800	15 25	154 05														
1900	16 20	154 05														
2000	17 03	154 05	03		10	1063	28.8	24		3		10-6-5	28	22	70	N-12
2100	17 20	154 05														
2200	17 18	154 05														
2300	17 28	154 05														
2400	17 30	154 05														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 7 Oct 64

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	17 46	153 51														
0200	17 53	153 58	53		8	1017.5	239	21		7		70-1-2	20.1	15	15	N-12
0300	18 00	154 05														
0400	18 07	154 12														
0500	18 14	154 19														
0600	18 21	154 26														
0700	18 28	154 33														
0800	18 35	154 40														
0900	18 42	154 47	53		8	1018.1	244	18		8		70-1-2	20.0	21	30	N-12
1000	18 49	154 54														
1100	18 56	155 01														
1200	19 03	155 08														
1300	19 10	155 15														
1400	19 17	155 22	51		8	1019.1	248	22		4		70-1-2	20.0	15	30	N-12
1500	19 24	155 29														
1600	19 31	155 36														
1700	19 38	155 43														
1800	19 45	155 50														
1900	19 52	155 57														
2000	19 59	156 04	52		8	1020.1	252	21		4		70-1-2	20.1	19	30	N-12
2100	20 06	156 11														
2200	20 13	156 18														
2300	20 20	156 25														
2400	20 27	156 32														

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



SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 8 Oct 64

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	21 30	153 18														
0200	22 22	153 20	32		10	1018	23.8	20		3		10-20	23	100		N-12
0300	22 22	153 20														
0400	22 22	153 20														
0500	22 22	153 20														
0600	22 22	153 20														
0700	22 22	153 20														
0800	22 22	153 20	31		10	1020	23.0	18		3		10-20	23	100		N-12
0900	22 22	153 20														
1000	22 22	153 20														
1100	22 22	153 20														
1200	22 22	153 20														
1300	22 22	153 20														
1400	22 22	153 20	32		10	1020	23.0	18		3		10-20	23	100		N-12
1500	22 22	153 20														
1600	22 22	153 20														
1700	22 22	153 20														
1800	22 22	153 20														
1900	22 22	153 20														
2000	22 22	153 20	31		10	1020	23.0	18		3		10-20	23	100		N-12
2100	22 22	153 20														
2200	22 22	153 20														
2300	22 22	153 20														
2400	22 22	153 20														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 9 Oct 64

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	23 27	151 24													
0200	23 26	151 13	02	10	1029.0	23.9	20		4		70-3-5	24.5	17	80	5-13
0300	23 26	151 06													
0400	23 23	151 06													
0500	23 16	151 07													
0600	22 59	151 07													
0700	22 48	151 05													
0800	22 37	151 04	14	10	1029.1	22.4	20		4		10-6-5	24.0	21	80	5-13
0900	22 25	151 03													
1000	22 15	151 01													
1100	22 05	151 00													
1200	22 00	151 00													
1300	21 54	151 00													
1400	21 44	151 00	01	10	1029.9	25.0	20		6		10-5-5	25.5	18	80	5-12
1500	21 34	151 00													
1600	21 23	151 00													
1700	21 13	151 00													
1800	21 03	151 00													
1900	20 50	151 00													
2000	20 38	150 59	02	10	1029.3	24.5	20		5		90-1-2	24.0	19	80	5-12
2100	20 32	150 59													
2200	20 26	150 59													
2300	20 22	150 59													
2400	20 10	150 50													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 10 Oct 64

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 57	150 59														
0200	19 45	150 59	02		10	1013.9	214	20		2		70-8-3	23.0	19	70	S-12
0300	19 33	150 58														
0400	19 20	150 58														
0500	19 07	150 58														
0600	18 55	150 58														
0700	18 53	150 58														
0800	18 47	150 58	53		10	1017.9	215	20		6		90-8-3	23.0	20	70	S-12
0900	18 34	150 58														
1000	18 22	150 58														
1100	18 10	150 57														
1200	17 59	150 57														
1300	17 46	150 57														
1400	17 33	150 57	14		23	1018.0	214	22		5		70-8-3	23.0	19	70	S-12
1500	17 29	150 57														
1600	17 27	150 57														
1700	17 29	150 57														
1800	17 20	150 57														
1900	17 07	150 58														
2000	16 55	150 59	01		10	1018.9	214	22		4		70-8-3	23.0	18	70	S-12
2100	16 50	150 59														
2200	16 37	151 00														
2300	16 25	151 00														
2400	16 12	151 01														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 11 Oct 64

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 00	151 02														
0200	15 59	151 02	01		10	1016.0	24.4	21		1		78-6-2	23.0	12	40	S-12
0300	15 50	151 03														
0400	15 37	151 04														
0500	15 24	151 05														
0600	15 13	151 05														
0700	15 02	151 04														
0800	14 51	151 02	01		10	1016.0	24.4	22		5		80-6-2	23.7	12	150	S-12
0900	14 40	151 01														
1000	14 35	151 01														
1100	14 30	151 01														
1200	14 20	151 01														
1300	14 08	151 00														
1400	13 55	151 00	01		15	1016.0	24.4	21		7		80-6-2	23.7	12	150	S-12
1500	13 44	151 00														
1600	13 34	151 00														
1700	13 24	151 00														
1800	13 14	151 00														
1900	13 04	151 00														
2000	12 59	150 59	02		25	1016.0	24.4	22		8		74-6-2	23.8	15	60	S-12
2100	12 59	150 59														
2200	12 49	150 58														
2300	12 38	150 58														
2400	12 25	150 57														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 12 OCT 64

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 12	150 58														
0200	12 11	150 56	02		10	1013.2	29.7	23		3		10-12	28.1	10	70	5-12
0300	12 08	150 55														
0400	12 05	150 55														
0500	12 02	150 54														
0600	12 00	150 54														
0700	12 00	150 54														
0800	12 00	150 54														
0900	11 58	150 54														
1000	11 57	150 54														
1100	11 57	150 54														
1200	11 57	150 54														
1300	11 57	149 56														
1400	11 57	149 46	02		10	1012.0	29.7	23		3		10-12	27.7	10	70	5-12
1500	11 57	149 36														
1600	11 57	149 25														
1700	11 56	149 15														
1800	11 56	149 05														
1900	11 56	148 54														
2000	11 56	148 44	01		10	1012.0	29.7	23		4		10-12	27.2	10	70	5-12
2100	11 55	148 39														
2200	11 55	148 29														
2300	11 55	148 19														
2400	11 55	148 08														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 13 Oct 64

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	10 01	148 02													
0200	10 03	148 02	02	10	1014.3	25.6	23		3		70-6-3	26.6	11	70	N-12
0300	10 16	148 02													
0400	10 29	148 03													
0500	10 42	148 03													
0600	10 54	148 02													
0700	11 06	148 01													
0800	11 17	148 00	14	10	1015.8	25.7	24		8		80-5-3	27.0	19	70	N-12
0900	11 28	147 59													
1000	11 28	147 59													
1100	11 38	147 58													
1200	11 50	147 57													
1300	12 02	147 57													
1400	12 13	147 57	01	10	1014.4	26.7	23		7		60-5-7	26.9	21	70	N-12
1500	12 25	147 58													
1600	12 36	147 58													
1700	12 47	147 59													
1800	12 57	147 59													
1900	12 57	147 59													
2000	13 09	147 59	01	10	1016.3	26.0	21		7		70-5-7	26.7	23	70	N-12
2100	13 14	147 59													
2200	13 26	147 58													
2300	13 38	147 58													
2400	13 50	147 58													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 14 Oct 64

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 01	147 58													
0200	14 13	147 58	02	10	1015.2	26.6	22		3		70-5-7	26.1	22	70	N-12
0300	14 24	147 58													
0400	14 29	147 58													
0500	14 33	147 57													
0600	14 45	147 57													
0700	14 56	147 57													
0800	15 08	147 57	03	10	1016.8	25.1	21		6		60-6-7	26.2	21	50	N-12
0900	15 20	147 57													
1000	15 32	147 57													
1100	15 44	147 57													
1200	15 56	147 57													
1300	16 00	147 57													
1400	16 01	147 59	01	10	1015.4	25.9	20		4		70-6-7	26.2	21	80	N-12
1500	16 12	148 00													
1600	16 24	148 02													
1700	16 34	148 03													
1800	16 45	148 05													
1900	16 56	148 04													
2000	17 06	148 04	01	10	1017.2	25.7	20		3		70-6-7	25.9	25	60	N-12
2100	17 11	148 04													
2200	17 24	148 04													
2300	17 28	148 03													
2400	17 34	148 03													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 15 Oct 64

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	17 47	148 02														
0200	18 00	148 01	02		10	1016.3	24.4	20		2		70-6-7	25.5	21	70	N-12
0300	18 11	148 00														
0400	18 22	147 59														
0500	18 30	147 59														
0600	18 42	147 59														
0700	18 53	147 59														
0800	18 58	147 59	14		10	1018.1	23.9	21		7		70-5-7	25.0	18	60	N-12
0900	19 04	147 59														
1000	19 15	147 59														
1100	19 26	147 59														
1200	19 37	147 58														
1300	19 48	147 58														
1400	19 59	147 58	14		10	1016.4	23.6	23		9		70-5-7	25.3	24	100	N-12
1500	20 10	147 58														
1600	20 22	147 59														
1700	20 29	147 59														
1800	20 33	147 59														
1900	20 44	147 59														
2000	20 55	147 59	14		10	1018.8	24.0	20		4		80-5-7	24.5	20	90	N-12
2100	21 01	147 59														
2200	21 12	147 59														
2300	21 23	147 59														
2400	21 34	147 59														

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



SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 16 Oct 64

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	21 45	147 59													
0200	21 56	147 59	03	5	1018.4	23.6	20		7		80-6-7	24.2	21	100	N-12
0300	22 00	147 59													
0400	22 06	147 59													
0500	22 17	147 59													
0600	22 29	147 59													
0700	22 40	147 59													
0800	22 52	147 59	02	10	1020.3	23.7	18		4		80-6-5	25.0	22	90	N-12
0900	23 04	147 59													
1000	23 15	147 59													
1100	23 26	147 59													
1200	23 31	147 59													
1300	23 36	147 59													
1400	23 47	147 59	01	10	1018.3	24.0	20		5		90-5-5	24.7	18	100	N-12
1500	23 58	147 59													
1600	24 10	147 59													
1700	24 22	147 58													
1800	24 35	147 58													
1900	24 47	147 57													
2000	24 59	147 56	03	10	1020.1	23.9	20		5		90-5-3	24.2	18	110	N-12
2100	25 00	147 56													
2200	25 00	147 56													
2300	25 11	147 56													
2400	25 23	147 56													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 17 Oct 64

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	25 26	147 55													
0200	25 49	147 55	2	10	1019.3	22.8	17		6		10-12 3	23.7	12	156	11-12
0300	26 03	147 56													
0400	26 16	147 58													
0500	26 29	148 00													
0600	26 32	148 00													
0700	26 28	148 07													
0800	26 22	148 18	2	10	1018.1	23.5	20		5		10-12 3	23.5	20	156	SW-12
0900	26 16	148 30													
1000	26 10	148 41													
1100	26 04	148 53													
1200	25 52	149 05													
1300	25 53	149 16													
1400	25 47	149 27	0	10	1016.1	24.7	30		4		10-12 3	24.6	12	156	SW-12
1500	25 41	149 32													
1600	25 36	149 49													
1700	25 30	150 00													
1800	25 24	150 12													
1900	25 18	150 23													
2000	25 12	150 35	1	10	1016.0	24.2	-1		4		10-12 3	24.4	12	255	SW-12
2100	25 10	150 40													
2200	25 04	150 53													
2300	25 00	151 00													
2400	25 00	151 00													

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 18 Oct 64

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	25 00	151 00														
0200	25 00	151 12	30		10	1014.5	211			5		140-5-3	21.7	17	210	W-12
0300	25 00	151 25														
0400	25 00	151 37														
0500	25 00	151 40														
0600	25 00	152 03														
0700	25 00	152 17														
0800	25 00	152 31	30		10	1014.8	232			8		230-5-3	24.0	21	230	W-12
0900	25 00	152 44														
1000	25 00	152 59														
1100	25 00	153 10														
1200	25 00	153 22														
1300	25 00	153 34														
1400	25 00	153 47	30		10	1015.0	232			8		230-5-3	24.0	21	230	W-12
1500	25 00	153 59														
1600	25 00	154 01														
1700	25 00	154 09														
1800	25 00	154 22														
1900	25 00	154 35														
2000	25 00	154 48	30		10	1015.0	232			8		230-5-3	24.3	21	230	W-12
2100	25 00	154 54														
2200	25 00	155 07														
2300	25 00	155 19														
2400	25 00	155 31														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 14 Oct 64

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	25 00	155 44										10-15	20.7	12	20	W-12
0200	25 00	155 56	01		10	1019.1	22.1			3						
0300	25 00	156 08														
0400	25 00	156 21														
0500	25 00	156 34														
0600	25 00	156 47														
0700	25 00	157 00														
0800	25 00	157 00	01		10	1020.0	22.8			5		30-20	21.5	13	30	W-12
0900	25 00	157 00														
1000	25 00	157 00														
1100	24 54	157 00														
1200	24 42	157 00														
1300		157 00														
1400		157 00	02		10	1020.0	23.0			6		30-20	21.0	13	30	W-12
1500		157 00														
1600		157 00														
1700		157 00														
1800	23 29	157 00														
1900	23 29	157 00														
2000	23 13	157 01	03		10	1020.6	23.1			5		30-20	21.0	13	30	W-12
2100	23 13	157 01														
2200	23 01	157 01														
2300	22 52	157 01														
2400	22 41	157 01														

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

SI-MNH-955c  
3-4-64

SMITHSONIAN INSTITUTION  
DIVISION OF BIRDS  
AT SEA SURVEY CHART C

DATE 20 Oct 64

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	22 30	157 50													
0200	22 30	157 50	02	10	1019.7	22.9	16		6		20 8-7	25.0	10	040	S-12
0300	22 30	157 50													
0400	22 30	157 50													
0500	22 30	157 50													
0600	22 30	157 50													
0700	22 30	157 50													
0800	22 30	157 50	53	10	1019.3	24.0	19		6		70-6-5	23.0	8	060	SW-12
0900	22 30	157 50													
1000	22 30	157 50													
1100	22 30	157 50													
1200	22 30	157 50													
1300															
1400															
1500															
1600															
1700															
1800															
1900															
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

27

28

29