July 22, 1963—Honolulu, Oahu Island, U. S. A. (Waikiki)

Bob Fleet and I arrived last night about 6:10 p.m. at the International airport via United. We stayed at the Waikiki International Hotel (2310 Kuhio Ave.). The island is beautiful green, cloud capped, temperate. The three most obvious (=common?) birds are all introduced species: Indian Yna, Bared Dove and English Sparrow. These are present wherever you go.

We went out to Pearl Harbor and arrived at Nimitz Gate about 9:00 a.m. after phoning mdr. Doyle of our intentions to get gate passes, etc. He promised to have us met at the gate. When we arrived we again phoned Doyle to let him know we were there and he said he was sending someone out to get us through.

By 12:30 p.m. we were tired of waiting so we again put through a call to Doyle. He was out to lunch but the man we talked to promised to call us back when he found out about our problem. In about 10 minutes he called back and apologized for our being held up. The blame was variously shoved around and ended in "draw". A Mr. LaHone picked us up and escorted us out to the ( ) where we met various members of the crew including the captain and several men from DESERT (including Mr. Bushman). It appears that we have clearance to embark on the ship, but not to board. So we phoned Maryanna Smellow (collect) and asked her to check on our orders. After coffee and small talk, and no luck in contacting Mr. Fry at Supply in Pearl City, Mr. Bushman took us out, got us temporary passes and left us off at a spot where we devoured a very late (4:00 p.m.) lunch.

My first impression is that no one really knows what is going on. The ship leaves August 1 for the grid area and we hope to get a lot of collecting
done. How, seems to be a matter of conjecture and apparently there are conflicting opinions between the Smithsonian, the Navy, and DESERT. I have not tried to air my own views but they appear to be somewhat in conflict with all three above mentioned parties. I think it best to just sit back and see how things proceed. This first run will turn out to be merely a shakedown cruise so that everyone will find out what each other has in mind. Even so I think there is a good chance to get a lot accomplished (if everyone will work together).

July 30, 1963—Waikiki, Oahu, Hawaii

We got up this morning and had breakfast with John Bushman. We went from here to the YAG 39 at Pearl Harbor. Picked up supplies at Pearl City and loaded them on the YAG. About 1:20 p.m. we met Bill Wirtz, Peter Marshall and Mike Trevor at the airport.

Later in the day I walked down the major Waikiki way until I got to the zoo. Unfortunately it was about 5:30 p.m. and the zoo was closed. Large numbers of India Mynahs, Barred Doves and Chinese Spotted Doves were present. The Indian Mynah must be the most common bird on the island. It's everywhere in large numbers. I saw one Brazilian Cardinal in the park by the zoo and heard one American cardinal. A little later on the lawn in front and to one side of the Surf Queen Hotel I saw a small flock of 6 Rice birds. English sparrows were present as I walked back to the hotel.

July 31, 1963—Pearl Harbor, Oahu Island, Hawaii

We checked out of the Waikiki Hotel today and spent all morning getting supplies stored aboard the YAG 39. We got our rooms settled, etc. Mike
Gould, E. J.
1963—At Sea

Trevor and I share a room, Bob Fleet and Peter Marshall share a room and Bill Wirtz has a double room to himself. Spent the rest of the day relaxing in Waikiki. We are supposed to leave port about 1300 tomorrow. Everything seems to be going very smoothly.

August 1, 1963—Pearl Harbor, Oahu Island, Hawaii

Ship pulled out of berth at 1330 and headed towards mouth of harbor. Warm calm day. Scattered cumulus clouds, but warm and very calm. Larger mass of darker clouds to west as we pass through harbor. All is well!

1405—entrance to Pearl Harbor—No birds were seen within Harbor. It became windy as we entered ( ) from Harbor. No rain, hot humid with scattered cumulus clouds.

1415—Brown Booby, port.

1418—Brown Booby and white-tailed tropic bird—starboard land.

1425—Brown Booby starboard, away from land.

1427—Wedge-tailed Shearwater—heading south.

1442-50—Wedge-tailed shearwater heading south.

1538—Wedge-tailed shearwater heading east.

1538—Christmas Island shearwater (?) heading east

1545—Petrel (?) heading east.

1547—Wedge-tailed shearwater starboard.

1550—Red-tailed tropicbird, heading S.

1551—ooty tern towards Oahu.

1558—Bulwer's Petrel ( )

1558—Wedge-tailed shearwater.

1603—? small
Gould, F. J.
1963—At sea

1603—Bulwer's (?) heading east
1609—Bulwer's (?) heading east
1613—White-breasted shearwater.
1622—Wedge-tailed shearwater heading east
1626—Bulwer's (?)
1628—Wedge-tailed shearwater
1634—" " " stern to port heading east.
1638—Sooty terns (3)
1643—Wedge-tailed shearwaters
1646—" " " (2) heading east
1650—Bulwer's Petrel heading NW
1710—Wedge-tailed shearwater
1711—White-tailed tropicbird—sitting on water
1713—Wedge-tailed Shearwater heading SE
1727—Petrel heading S
1730—Wedge-tailed Shearwater, port to stern
1734—Bulwer's petrel
1738—" " heading S
1739—Wedge-tailed Shearwater heading NW
1743—" " " port to stern W
1750—" " " heading NW
1800—Sooty Tern heading ESE
1805—Bulwer's Petrel starboard to port
1812—" " heading NE
1812—Masked Booby port to stern
1822--Bulwer's Petrel stern to port
1830--White-breasted shearwater heading NW
1845--Bulwer's Petrel stern to port
1848--Wedge-tailed Shearwater on water ( )
1900-1902--Dark-rumped Petrel (?) starboard to port
1915--Wedge-tailed Shearwater (?) port to starboard
191--Wedge-tailed Shearwater
1922--Bonin Island Petrel (?)
Ca. 2200 tropicbird (?)
Ca 2300 3 terns (heard)

The preceding bird identifications of Bonin Island Petrel and Dark-rumped Petrel are not to be trusted. They may have been either of these species or even Manx Shearwaters. Wedge-tailed Shearwaters are easily recognized as are the tropicbirds and Boobies. Bulwer's Petrel and Christmas Island Shearwaters are also hard to tell apart at this stage and these observations should be looked at with the proverbial grain of salt until we get to know them better.

We have not hit any rough weather and we are getting excellent cooperation from the personnel of the ship.

Sunset--1913.

August 2, 1963--1½ days out of Pearl Harbor in S and W course on ( )

We have set up a schedule of watches for this trip:

<table>
<thead>
<tr>
<th>Time</th>
<th>Wirtz</th>
<th>Gould</th>
<th>Fleet</th>
<th>Marshall</th>
<th>Trevor</th>
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<tbody>
<tr>
<td>0600-0800</td>
<td>X</td>
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<td>0800-1000</td>
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<td>1000-1200</td>
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</tbody>
</table>
We are finding that the best observation is from the helicopter deck at the bow of the ship. The sailors on watch on each deck either ring the bow phone or call (twice) and then point if they see a bird. The sailor on watch on the fan tail rings the deck 4 times and the deck rings us 4 times. This works out very well, and we are getting excellent cooperation from their watches. They are constantly spotting birds and pointing them out to us. I believe we are getting maximum coverage.

0550--Bulwers?
Gould, P. J.
1963—At Sea

0559—Wedge-tailed Shearwater (2)
0605—" " " (2) starboard
0606—" " " (2) port
0609—" " " (3) starboard
0611—Bonin Island Petrel (?)
0615—Wedge-tailed Shearwater (2)
0618—Sooty Tern (2) 250 yds.
0623—Wedge-tailed Shearwater port to aft NE
0626—" " " port to aft NE
0627—Shearwater (?)
0630—Bonin Island Petrel (?)
0634—Wedge-tailed Shearwater
0634—Grey-backed Tern (?)
0642—White Booby stern to port
0647—Wedge-tailed Shearwater bow
0649—Dark-rumped Petrel ? 2?
0653—Wedge-tailed Shearwater
0705—" " " (2) port to ( )
0706—Sooty Tern (?)
0707—Dark-rumped Petrel ?
0712—Sooty Tern (2) heading NW
0714—Wedge-tailed Shearwater one heading NW
0716—Sooty Tern (2) heading W
0718—Bulwer’s ? (1)
0723—Wedge-tailed Shearwater (1) heading NW
Gould, P. J.
1963--At Sea

0724--Wedge-tailed Shearwater (1)
0726-- " " " (3)
0726--Tern (1) heading E
0728-- " (1) heading W
0728--Wedge-tailed Shearwater (2)
0731-- " " " (1)
0732-- " " " (3) following each other
0736--Bulwer's Petrel (1) heading SW
0737--Sooty Tern (1) heading E
0745--Wedge-tailed Shearwater (1) heading E Fort
0745-- " " " (2) starboard together
0754-- " " " (1) heading N
0755--Christmas Island Shearwater (1) heading SE
0800--Wedge-tailed Shearwater (1) heading SW
0804--Shearwater ? (3) bright contrast, buzzy flight heading E
0805--Red-tailed Tropicbird on water flew south
0809--Wedge-tailed Shearwater (3)
0811-- " " " (1)
0820--Sooty Tern heading east
0822--Petrel?
0824--Large flock (over 100 birds) in water, small fish jumping
  Wedge-tailed Shearwater (15 plus)
  Sooty Terns (75 plus)
  Bonin Island Petrel (!) (3)
  Fairy Tern (2 plus)
0824—Bulwer's Petrel (behind flock) (1)
Masked Booby (?)
New Zealand Shearwater—P. J. Gould, maybe two, excellent observation.

0832—Dark-rumped Petrel (?) heading W
0832—Wedge-tailed Shearwater (1) heading NW
0833—Sooty Tern (2)
0836—Wedge-tailed Shearwater port
0838—“” “” starboard
0838—White-tailed Tropicbird on water
0840—Wedge-tailed Shearwater—heading east
0841—Dark-rumped Petrel (?) heading S
0845—Terns (5 -10 plus/minus 2) flock heading E
0845—Wedge-tailed Shearwater—heading E
0846—Bulwer's Petrel starboard
0846—White-tailed Tropicbird—high up
0846—Christmas Island Shearwater, looped into H2O
0846—Wedge-tailed Shearwater heading SE
0846—Bulwer's Petrel (2) together
0849—“” “” (1) heading E
0856—Sooty Tern heading W
0858—Wedge-tailed Shearwater heading W
0858—Sooty Tern (3) heading W
0858—? off port
0859—Wedge-tailed Shearwater
0900—“” “” “”
0902—“” “” “” port & starboard SE
2 Aug 0903—Red-tailed Tropicbird starboard to port

0914—White-tailed Tropicbird—port on water

0915—Bonin Island Petrel on bow

0916—Flock 50 plus Sooty Terns flying high (hard to see)

0919—Sooty Terns (5)

0920—Tropicbird

0925—Flock

Wedge-tailed Shearwater 13 on water

Manx Shearwater (1)

Sooty Tern (1) heading S

0930—Wedge-tailed Shearwaters (30 plus) port of last flock

0932—Sooty Tern (2) high

0935—Sooty Tern (6) high

0935—Wedge-tailed Shearwater (1)

0938—" " " (3) heading S

0941—" " " (1)

0943—Sooty Tern (2) heading E

1020—Christmas Island Shearwater heading W

1022—Sooty Tern (2) heading S

1022—Sooty T about 200—large flock far to N of ship—feeding?

1024—Wedge-tailed Shearwater heading S

1025—Red-tailed Tropicbird E to S 100° up

1026—Sooty Terns (2) heading S Low

1034—Red-tailed Tropicbird—from E circled ship

1036—" " " " " " same as above?

1040—" " " " " " diving off stern 100°
2 Aug 1057--Sooty Tern (2) heading S

1057--Christmas Island Shearwater heading S close to terns

1101--Wedge-tailed Shearwater (1)

1115-- " " " (3) 2 together

1117-- " " "

1121--Sooty Tern (2) heading E low Calling

1121--Wedge-tailed Shearwater--several astern N

1133-- " " " starboard to port NW

1143-- " " " (4) in group

1154-- " " " heading S

1154--Christmas Island Shearwater?

1156--Wedge-tailed Shearwater (1)

1156--Tern? brown back

1200--Wedge-tailed Shearwater (2)

1202--Christmas Island Shearwater? (2) bar of light and dark in wings

1205--Red-tailed Tropicbird 50' circled over 5 or 6 times

1215--Red-tailed Tropicbird 100' Followed school of large fish

1217--Wedge-tailed Shearwater

1218--Grey-backed Tern 100' circled heading E

1219--Red-tailed Tropicbird--leaves again same as 1215

1227--Wedge-tailed Shearwater (2)

1236--Sooty Terns (6) 1 heading S, 5 heading N

1236--Wedge-tailed Shearwater 4 heading south

1243-- " " "

1254--Sooty Tern
2 Aug
1254—Wedge-tailed Shearwater (2) close together
1300—Sooty Tern 4 ahead of ship
1300—Wedge-tailed Shearwater bow
1303—Sooty Tern (2)
1306—" " (5) two pairs and a single
1310—" " (11) starboard to port
1311—Christmas Island Shearwater (1) starboard
1312—Sooty Tern (7) Starboard to port
1313—" " (12 plus) " " 
1314—" " (5) " " 
1315—Grey-backed Tern (3) Starboard to port
1316—Sooty Tern (1) Starboard to port
1317—" " (3) Fly around ship
1320—Red-tailed Tropicbird
1321—Sooty Tern (1) Starboard to port
1322—Grey-backed Tern heading SW
1323—Sooty Tern heading SW
1323—Red-tailed Tropicbird heading SW
1324—Sooty Terns (175 plus/minus 25) at distance off starboard
1341—Wedge-tailed Shearwater (1) heading W
1341—" " " same as above?
1354—Sooty Tern heading S overhead
1358—" " (4) heading S
1403—Grey-backed Tern heading W
1408—2 Shearwaters, 1 large, 1 small
1417—Sooty Tern (1) high Starboard to port
1434—Wedge-tail (1)
1436—Terns (2) heading SE
1439—Wedge-tailed Shearwaters (4)
1449—Sooty Tern (3) heading S occasionally diving toward water
1451—Wedge-tailed Shearwater (1)
1458—Bulwer's Petrel heading E
1459—Wedge-tailed Shearwater
1513—Manx Shearwater (3) 15' above surface
1521—Wedge-tailed Shearwater (2)
1526—Sooty Tern (4) heading E
1536—Wedge-tailed Shearwater (2)
1532—Manx Shearwater (1) starboard to port to starboard
1551—Wedge-tailed Shearwater (1) heading approximately E
1616—Sooty Tern (2) diving
1617—" (8) heading W Calling
1622—Bulwer's Petrel Starboard to port
1626—W " same as above?
1626—Wedge-tailed Shearwater (with Bulwer's above)
1628—Sooty Tern (1) low heading SW
1628—Shearwater (1) heading W
1636—Sooty Terns (1) heading S
1645—Wedge-tailed Shearwater Starboard to port
1650—" heading E
1703—" heading S
Gould, P. J.
1963—At Sea

2 Aug
1717—Manx Shearwater (2) Pair?
1720—Wedge-tailed Shearwater
1723—Manx Shearwater (1)
1732—Wedge-tailed Shearwater
1800— " " " (2)
1803—Sooty Tern (2)
1808—Wedge-tailed Shearwater
1812—Red-tailed Tropicbird (2)
1842—Wedge-tailed Shearwater
1845— " " "
1856—Grey-backed Tern (3) heading NE
1902—Wedge-tailed Shearwater

Rain began 1935. Ship stopped moving ca 1732 (hot bearing) and drifted until 2330.
2006—Terns—heard
2010—Sooty Tern? over Bird Bath (no rain)
2020—Turned on Port light
2045—Terns—over bridge—paid no attention to light
2102—Tern heard
2248—Tern heard

Wind steadily increasing until 2400.

Excellent cooperation today from crew in helping to spot birds.

Sunrise 0617. Sunset 1922.
August 2, 1963—2¾ days out from Pearl Harbor (S & W) in YAG 39. Ca. 500 nautical miles by evening.

Above is proposed grid coverage pattern for this phase of the Pacific project. The YAG 39 will make between 9 and 11 knots until the grid is reached. There a steady (as much as possible) 8.4 knots will be held while on the grid. It is hoped that we can maintain an average of 8.4 knots so that on the first leg of the grid we will spend daylight at the Johnston Island half and night at the far end, then in the next leg to have night at the Johnston Island part. This first trip we plan to do a lot of collecting so this schedule may be hard to keep.

0641—Wedge-tailed Shearwater starboard to port
0643—" " " port
0649—Sooty Tern 1 ad and 1 juv on port, 20-25' above H2O
0720—Sooty Terns 50 plus/minus offport bow
0720—1 large bird (Frigate?) in with above terns
0728—Wedge-tailed Shearwater (2) starboard
0735—" " " (1) starboard
0745—" " " (1) port
0757—Wedge-tailed Shearwater (2) starboard
0820—Manx Shearwater (1) starboard to port
0827—Wedge-tailed Shearwater (1) port
0847— " " " (1) starboard heading east
0849—Manx Shearwater (2) separate; heading E; heading N
0857—Bulwer's Petrel (1) port
0919—Sooty Tern (1) heading E 75'
0940—Bulwer's Petrel heading E port
0945—Wedge-tailed Shearwater (2)
0950—Tropicbird (red-tailed?) sitting on water, port
1023—White-tailed Tropicbird (1) sitting on water, then circled ship
1052—Wedge-tailed Shearwater (?) sitting on water, then starboard to port
1123—New Zealand Shearwater (?) Grey back, small size, wing pattern noted
1202—White-tailed Tropicbird (1) 100-150' circled boat ca. heading E
5' calling
1207—White-tailed Tropicbird (1) on water, flew ahead and starboard, landed
(same as above?)
1218—caught up with above Tropicbird—port
1229—Dark-rumped Petrel? (w.o.w.) (?) of wedge-tailed; white only—
back of wings grey-brown, secondaries light, bird dark
1254—Wedge-tailed Shearwater (1) in water, starboard heading N
1259— " " " (2) port, stayed together
1356—Terns (4-6) starboard
1419—Sooty Terns 40 plus/minus 5 milling about off port

Christmas Island Shearwater ?(2) below flock of tern above. School of
Flying Fish noted beneath this flock. Saw Shearwater catch flying fish in air.

1436—Wedge-tailed Shearwater port
1445— " " " starboard heading E
1450— " " " starboard
1455—Bonin Island Petrel (?) small—all greyish on back, no wing pattern and no gliding, P. J. G. but rapid flapping, smaller than wedge-tail

1540—Wedge-tailed Shearwater on water ( ) settled on water again

1622— " " " (?) port

Sunrise 0627. Sunset 1908.

1624—Red-tailed Tropicbird approaching water level
1710—White-tailed Tropicbird approaching high, aft to bow
1712—Red-tailed Tropicbird—Feeding off bow, dived into water
1714—Red-tailed Tropicbird—2 ad. 1 juv.—flying together (family?), circled ship high

1719—Red-tailed Tropicbird—high off port

1731—Wedge-tailed Shearwater port

1739—Christmas Island Shearwater together off starboard, 5 yards apart

Wedge-tailed Shearwater

3rd bird probably Wedge-tailed Shearwater

1756—Wedge-tailed Shearwater (2) Starboard to port

1857— " " " (3) all together, all identical

1906— " " " (1) port heading east

1930— " " " (2) port to starboard, stayed together

Birds are definitely fewer and farther between today.
3 Aug 2017--Sooty Terns several heading SE
2145--Wedgetail?
2150--? ? call skee-skee
2154--"Wedgetail" ? Flash of white seen as it turned
2333--Sooty Tern calling overhead

August 4, 1963

0005--Sooty Tern 2 calling, nearly landed on fan tail
0105--Sooty Terns calling and circling 5 minutes
0210--Sootys " " " " "
0250-- " (2) " " " 10 minutes
0611--White-tailed Tropicbird? voice in dark
0649--Sooty Terns 3 heading SE 100' up
0653--Sooty Terns 7-9 heading E 10' up
0715--Sooty Tern 1 E heading, circled ship, heading NW 150-200' up
0716--Wedge-tailed Shearwater 1 heading S
0718--Sooty Tern 4 150' up heading N
0719--Sooty Tern 3 10-20' up heading N
0720--Bonin Island Petrel on water heading W
0726-- " " " on water heading S same as above?
0735--Wedge-tailed Shearwater, heading S
0743-- " " "
0743-- Bonin Island Petrel ?
0750--Wedge-tailed Shearwater E heading circled boat
0816--Sooty Tern 1 25' up
0825--Wedge-tailed Shearwater heading E
Gould, P. J.
1963—At Sea

4 Aug
0827—Sooty Tern 1 1-5' up heading Se
0827—Wedge-tailed Shearwater (dark phase)
0841—" " " (light phase)
0848—Sooty Terns 5 heading E 25' up
0857—Sooty Tern 1 heading ENE 30' up to 5' up
0857—Wedge-tailed Shearwater starboard heading E
0859—Sooty Tern 2 port heading SE 40-50' up

0900—Bonin Island Petrel 1
0903—Wedge-tailed Shearwater 2 starboard heading E
0930—Whales 8-12 some blowing
0953—Tern? all white—large

1015—Wedge-tailed Shearwater 1 heading NW with a second much smaller bird?
1024—Sooty Tern 9 starboard heading E
1029—Wedge-tailed Shearwater 1 starboard heading E

1034—Red-tailed Tropicbird 1 starboard heading W low, then landed on water
1047—New Zealand Shearwater? 1 heading S
1112—Bonin Island Petrel heading W
1143—" " " W heading E
1233—Wedge-tailed Shearwater 3

1239—" " " (6) 1 flying, 5 sitting in water; 1 flying dark phase, rest light phase?
1322—Sooty terns 8 heading E 50-60' up in ragged line
1410—" " ca 80 plus/minus 10
1441—Wedge-tailed Shearwater 1 heading SSW
1449—" " " 1 heading SE

1513—Bonin Island Petrel 3: 2 in flight heading W, 1 sitting, then followed
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>1544</td>
<td>4 Aug. Wedge-tailed Shearwater 1 heading W</td>
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<tr>
<td>1545</td>
<td>Bonin Island Petrel 1 heading SW</td>
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<tr>
<td>1546</td>
<td>Wedge-tailed Shearwater heading W</td>
</tr>
<tr>
<td>1550</td>
<td>? grey white above, white below, black wing edges, acting like wedge-tail</td>
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<tr>
<td>1644</td>
<td>Christmas Island Shearwater</td>
</tr>
<tr>
<td>1703</td>
<td>Wedge-tailed Shearwater</td>
</tr>
<tr>
<td>1718</td>
<td>Red-tailed Tropicbird 25' up</td>
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<tr>
<td>1734</td>
<td>Bird (shearwater?)</td>
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<tr>
<td>1753</td>
<td>Wedge-tailed Shearwater 1 heading W</td>
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<tr>
<td>1817</td>
<td>&quot; &quot; 2 light one dark, heading SE</td>
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<tr>
<td>1827</td>
<td>&quot; &quot; ? (2)</td>
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<tr>
<td>1843</td>
<td>White-tailed Tropicbird Juv. SW heading circled 6 ( )</td>
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<tr>
<td>1857</td>
<td>Red-tailed Tropicbird 1 heading NW</td>
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<td>1859</td>
<td>Bonin Island Petrel 1</td>
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<td>1910</td>
<td>Wedge-Tailed Shearwater 1</td>
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<td>1913</td>
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<tr>
<td>1913</td>
<td>Whale fine globule spray</td>
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<td>1915</td>
<td>Sooty Tern 3 ca. 100' up heading W</td>
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<td>1918</td>
<td>Wedge-tailed Shearwater 1</td>
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<tr>
<td>1919</td>
<td>Sooty Terns (30, plus, 20 plus, 25 plus) 3 groups connected by straglers</td>
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<tr>
<td>1921</td>
<td>Wedge-tailed Shearwater 2 dark and 1 light</td>
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<td>1921</td>
<td>Sooty Tern 1 heading S 100' up</td>
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<td>1924</td>
<td>&quot; &quot; 1 heading W 5-10' up</td>
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<td>1925</td>
<td>&quot; &quot; ca. 20 heading S 15-20' up</td>
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<td>1925</td>
<td>Whale</td>
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Gould, E. J.
1963—At Sea

4 Aug
1928—Wedge-tailed Shearwater heading W
2044—Sooty Terns
2044—Red-tailed Tropicbird (2)
2100—"""""" (perhaps same birds)
2103—Tropicbird (1 juv.)
2108—Tern or Tropicbird
2120—Terns (4 or 5?)
2134—Tropicbird? Terns? ca. 2
2137—Wedge-tailed Shearwater (2)
2140—""""2
2143—"""" same?
2147—Red-tailed Tropicbird (?) heard
2147—Wedge-tailed Shearwater (1)
Sunrise 0658. Sunset 1945.
2154—Tropicbird? heard
2158—Wedge-tail?
2159—Tropicbird? heard

Probable all
Sooty
Terns

2201—Red-tailed Tropicbird? (2) low over ship
2205—""""Terns?""
2210—"""""
2213—"""" (2)
2215—Wedge-tailed Shearwater (2)
2220—Tropicbird or Tern?
2227—"""
2229—Wedge-tailed Shearwater (1)
2234—W
August 5, 1963—ca. 4½ days out of Pearl Harbor, S and W, ca. 50 mi. W Johnston

We passed Johnston Island ca. 0130. This morning the sun came up ca. 0635. Strong wind and choppy seas. Warm with scattered cumulus clouds.

Strong winds prevailed until about 1600 or 1630, when it became relatively calm.

The starting point of the grid was reached at ca. 1700 (see log). In general the birds were quite scarce today and were not coming very near the ship.

0601—Sooty Tern heard off starboard

0620—3 Wedge-tailed Shearwaters—starboard

0634—Sooty Tern heard off starboard

0704—4 Sooty Terns—starboard

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Gould, P. J.

1963—At Sea

4 Aug 2234—Wedge-tailed Shearwater (7) all together

Bonin Island Petrel (1)

2248—Sooty Terns ca. 30' 10-20 birds

2255—" " ca. 40' all around

2257—Wedge-tailed Shearwater

2300—Wedge-tailed Shearwater (3)

2303—Sooty Terns 5 plus ca. 50' up—groups constantly passing overhead or circling overhead

2320—Sooty Terns—still all around ship

2322—Wedge-tailed Shearwater (4)

Sooty Terns still around

2326—Wedge-tailed Shearwater (8)

Sooty Terns still milling about 5-50' up

2336—Wedge-tailed Shearwaters 10 plus, many Sooty Terns and Wedge-tailed Shearwaters

2350—Impossible to count or keep track of them
1964—At Sea

5 Aug

0638—Sooty Tern? heading aft
0704—3 Sooty Terns (1 with orange) heading E 100'
0723—1 Wedge-tailed Shearwater
0725—" " " " heading S
0735—" " " " flying over school of tuna
0742—10 Sooty Terns—heading SSE
0744—1 Red-tailed Tropicbird on water—flew and landed again
0845—1 Wedge-tailed Shearwater
0903—" " " " ? heading S
0914—1 Bonin Island Petrel heading N
0945—1 Wedge-tailed Shearwater heading S
0947—1 Bonin Island Petrel
0953—2 Wedge-tailed Shearwaters heading S
1004—1 Bonin Island Petrel heading S
1030—Very windy, sea choppy
Sunrise 0700. Sunset 1944.
1033—1 Shearwater
1043—2 Sooty Terns heading SW, 5-30'
3 3 Sooty Terns
   1 Wedge-tailed Shearwater
   1 Bonin Island Petrel heading S
1048—1 Wedge-tailed Shearwater heading E
1202—1 Wedge-tailed Shearwater heading S
1220—1 Red-tailed Tropicbird heading S 10' up
1314—1 " " " on water
Gould, P. J.
1963—At Sea

5 Aug 1353—1 White-tailed Tropicbird S heading NE 50' up
1640—1 Tropicbird "Red-tailed"
1640—1 Bonin Island Petrel heading S
1700—Started 1st leg of grid
1738—1 Wedge-tailed Shearwater
1822—1 Bonin Island Petrel heading SSW
1830— " " " "
1842—1 " ~ " " NE
1853—1 bird? bridge.
1913—2 Bonin Island Petrel—1 SSW
1934—2 Wedge-tailed Shearwaters?
1949—1 Bonin Island Petrel ? heading ESE
2005—1 Wedge-tailed Shearwater heading SE
2016—1 " " "
2020—1 " " " heading SW
2024—1 " ~ " "
2105—1 Sooty Tern calling
2157—1 Bonin Island Petrel?

August 6, 1963—Pacific Ocean Grid Area


0054—1 Sooty Tern
0312—1 Tern
0415—Full moon, calm sea, light breeze, scattered clouds in horizon, fairly cool
0441—1 Wedge-tailed Shearwater heading NE
0555—1 Sooty Tern heading NE 40' up
6 Aug
0730--1 Shearwater very white under parts
0758--2 Christmas Island Shearwaters heading SE
0811--1 New Zealand Shearwater (PjG) heading SE
0814--Manx Shearwater heading SE
0817--1 Shearwater heading SE (white underparts)
0819--1 Bonin Island Petrel heading SE
0825--1 Christmas Island Shearwater heading E
0827--1 Wedge-tailed Shearwater ? heading SE
0830--2 " " " dark phase heading SE
0830--1 Christmas Island Shearwater heading SE
0831--1 Shearwater (white underparts) heading SE
0848--2 Christmas Island Shearwaters heading SE
  1 " " " " " "
  1 " " " " " "
  1 Wedge-tailed Shearwater heading SE
0858--1 Bonin Island Petrel 10' yds heading SE
0904--1 Sooty Tern heading SE 10' up
0904--2 Shearwater (white breast) heading SE
0907--Christmas Island Shearwater heading SSE
0931--1 Bonin Island Petrel heading SE
0936--1 Bonin Island Petrel heading EE
1001--1 Sooty Tern; juv heading SE 50' up
1004--1 Bonin Island Petrel heading SE
1018--7 " " " Flock circling over school of flying fish (someth-
thing chasing fish)
6 Aug

1025—1 Christmas Island Shearwater heading SE
1033—1 Bonin Island Petrel heading SSE
1056—1 Bonin Island Petrel ?
1115—1 Sooty Tern heading SE 40’ up
1124—1 Bonin Island?
1143—1 Wedge-tailed Shearwater
1155—1 New Zealand Shearwater?
1200—change course heading c.a. 31.5 degrees WNW
1220—1 New Zealand LShearwater
1300—3/4 overcast, wind speed increasing; flock of birds heading N;
   1 Tropicbird?; 25+ Sooty L Tern ca 50’
   2 Christmas Island Shearwaters with ( )
1315—New Zealand Shearwater heading SE
1322—1 New Zealand Shearwater heading E
1327—1 Wedge-tailed Shearwater (dark phase) heading WNW
1402—2 Sooty Tern heading WNW
1411—3 Christmas Island Shearwater sitting on HoO heading N
1440—1 Wedge-tailed Shearwater heading WNW
1430—Moved out of heavy cloud cover into clear sky.
1500—2 Sooty Tern
1540—Bird?
1600—change direction
1613—Large milling flock of terns and shearwaters, no sign of what
   they were feeding on; tendency for flock to drift SW
   20+ Christmas Island Shearwater
   5+ Wedge-tailed Shearwaters (birds)
   wind (strong)
   boat
   1 Bonin Island Petrel
Gould, P. J.
1965--At Sea

6 Aug

10+ Sooty Terns
1810--1 Wedge-tailed Shearwater heading S
1832--1 Wedge-tailed Shearwater? heading NW
1937--1 Bulwer’s Petrel heading NW
2007--1 Bonin Island Petrel heading N
2317--1-2 Sooty Tern heard

August 7, 1965--Pacific Ocean, Grid Area

0730--1 Shearwater 0
0758--1 Dark-rumped Petrel? 1 of W
0806--Flying Fish (7) heading E
0817-- " (30) heading NW
0826--1 Christmas Island Shearwater WSW heading NE
0826--1 Dark-rumped Petrel WSW heading E
0830--Flying Fish (80) heading NW
0840-- " (10) heading W
0850--1 Dark-rumped Petrel? NW heading SE
0905--Flying Fish (30) heading W
0909--1 Dark-rumped Petrel? W heading S
0910--Flying Fish (200) heading W
0929--2 Birds (Sooties?) heading W 30-40°
0937--Flying Fish (1) heading E
1030--1 New Zealand Shearwater? NE heading SW
1047--1 Bonin Island Petrel? heading NE
1145--1 Red-tailed Tropicbird SW heading SE 75°
1520--1 Bird
1530--1 Shearwater? heading SE
1559--Changed to NW course
7 Aug     1537—Flying Fish (1) heading NW

1730—1 Red-tailed Tropicbird NE heading SW 150°
1800—1 Wedge-tailed Shearwater NE heading SW
1809—1 Juv. Tropicbird NE heading E 75°
1855—1 Wedge-tailed Shearwater SE heading NW
1853—1 Shearwater (white belly) SE heading NW together
1905—2 Petrels of E
1905—1 Dark-rumped Petrel 0
1914—same bird as above heading NE
1914—4 Sooty Terns W heading E 50° (no bags)
1943—1 Frigate Bird 0  E 20°  E 100-150 yds
1943—1 small white bellied Shearwater ; 0
1943—5 Sooty Terns NW heading WSW 10° varied to 100°
1945—1 Wedge-tailed Shearwater heading SE
2033—Sooty Terns?
2052—Change course ; to 218 degrees heading SWS
2115—1 Bird heading SE
2121—1 Storm Petrel (description fits fork-tailed) heading S
2150—3 Terns?
2205—Terns? 100°
2206—2 Grey-backed Terns? heading S
2316—1 "  "  "  ? heading SW 150°
2337—5 Sooty Terns heading W? 100°
2345—3 Sooty Tern?
August 8, 1963--Pacific Ocean, Grid Area

Sighted large flock of birds (ca 100+) milling about. 75+ Sooty Terns, 25+ Shearwaters and Petrels (including 1 Wedge-tailed and 1 Christmas Island at least). 10-15 Sooty Terns flew past, none had tags.

As the ship approached the flock (ca 1000-2000 yards, all of the Sooties rose higher into the air and proceeded to fly in a ste procession to the SW. Evidently the ship had scared the school of fish and the birds left for greener pastures.

The Shearwaters broke up into 1's and 2's and scattered.

The flock was staying primarily in the area of a rain cloud shadow.

We would see no fish jumping.

0006--1 Bonin Island Petrel? O

0011--2 Sooty Terns? heading NE 75'

0024--1 " " ? heading NE 25'

0042--1 " " ? heading NE 150'

0118--1 Bonin Island Petrel?

0135--1 Bonin Island Petrel O

0138--1 Sooty Tern? heading SE 100'

0147--1 Wedge-tailed Shearwater O heading E

0205--3 " " " or Sooty Terns? 20' up

0233--1 Wedge-tailed Shearwater cNE

0240--1 " " " ?

0251--1 Laysan Albatross 10' overhead heading S

0308--1 Sooty Tern

0355--1 Sooty Tern

0612--2 " " heading NE 70'

0653--1 Tropicbird NE $\frac{1}{o}$ E 200-250'
Gould, P. J.
1963--At Sea

8 Aug 0703--1 Noddy Tern WSX heading NW 45'  
0715--1 Tropicbird Red-tailed shot off fan tail  
0725--1 Dark-rumped Petrel  
0745--1 Red-tailed Tropicbird shot off fan tail  
0745--1 Christmas Island Shearwater?  
   2 Wedge-tailed Shearwater  
0845--3 Bonin Island Petrel? SE heading NW  
0850--2  
0900--1  
0907--1  
0910--1 Wedge-tailed Shearwater heading SW  
0912--1  
0912--1 Dark rumped Petrel heading S  
0940--4 Bonin Island Petrel heading SE  
0941--3 Christmas Island Shearwaters on water heading SE  
0945--1 Wedge-tailed Shearwater heading SE  
0945--1 Bonin Island Petrel? White forehead, dark collar, grey above  
0946--1 White tailed Tropicbird on water heading SW  
1012--1  
1020--1 SW to SE same as above?  
1027--1 Bonin Island Petrel d'SW  
1031--1 heading SW  
1038--1 heading SSW  
1042--1 ? heading SSW  
1043--2 Christmas Island Shearwaters heading S
Gould, P. J.
At Sea--1963

8 Aug
1045--1 Bonin Island Petrel heading N
111 2--2 Sooty Tern 5' up heading SSE
1126--1 Bonin Island Petrel ? heading N
1140--1 Bonin Island Petrel 0 heading N
1148--Bonin Island Petrel SW heading N
1200--1 Red-tailed Tropicbird, Imm. heading NNW
1320--1 Ruddy Turnstone 40' up NE heading SW
1414--1 Shearwater 0 SW heading NE
1450--Large Flock ca 80; Wedge-tailed Shearwaters? Sooty Terns? Flock scattered as ship approached
1624--1 Red-tailed Tropicbird heading SW 0 heading NE
1642--1 Shearwater
1713--1 Bonin Island Petrel 7 of NE
1727--1 Red Tailed Tropicbird heading NE
1750--1 Bonin Island Petrel heading SW
1802--1 Christmas Island Shearwater heading S
1810--1 Red-tailed Tropicbird N $\rightarrow$ N
1840--1 Wedge-tailed Shearwater?
1945--3 Sooty Terns, NW to S varied from 5-50' up
1954--2 Wedge-tailed Shearwaters 0 heading SW
2148--1 Sooty Tern (head)
2345--3 " "

August 9, 1963
0015--1 Sooty Tern NW heading SE
0030--checked with fan-tail (no birds)
Gould, P. J.
1963—AT Sea

9 Aug 0144—1 Sooty Tern
0145—Changed course to 048
0250—1 Tropicbird
0300—course 048; wind ENE
0545—1 Bird? reported by fan tail watch
0610—1 " ?
0615—1 " ?
0645—1 Frigate? reported by fan tail watch
0650—3 Bonin Island Petrel heading W
0707—1 Shearwater sp? heading W
0715—1 Shearwater heading E
0720—19 all dark shearwaters
0735—45 plus/minus 5 all dark shearwaters heading E
0735—3 Wedge-tailed Shearwaters (Dk. Ph.0 with above flock
0735—1 Bonin Island Petrel with above flock
0750—1 Imm. Red-tailed Tropicbird S—> shot?
0751—1 Bonin Island Petrel
0754—3 Christmas Island Shearwaters NE
0759—2 Bonin Island Petrel 0 NW
0801—1 Red-tailed Tropicbird Imm. NW heading 175'
0807—1 Bonin Island Petrel ? Heading N no black
0809—3 " " " " " " mark under
0811—2 " " " " W wing—maybe
0823—2 " " " " " dark rumped
0830—Boat on course
0838—1 Bonin Island Petrel SW heading NE
083
Gould, P. J.
1963--At Sea

9 Aug 0839--1 Christmas Island Shearwater? SW heading NE
0843--1 Red-tailed Tropicbird SW heading NE ea 50'
0851--2 Sooty Tern O heading S
0855--1 Wedge-tailed Shearwater? O heading W dk. phase
0900--1 Bonin Island Petrel?
0915--" " " " heading W
0916--" " " "

0930--Flock of 20-30 mixed species heading NE: Wedge-tail?, Christmas Island, Sooty Tern; feeding

0959--1 Bonin Island Petrel heading SW 15' up
1012--1 Dark-rumped Petrel heading SW 15-20' up
1028--1 all dark shearwater NE heading SW
1029--3 Sooty Terns NE heading SW
1035--2 (1 dk., 1 lt.) Wedge-tailed Shearwaters NE heading SW.
1058--1 Wedge-tailed Shearwater heading NE
1105--1 Bonin Island Petrel SW heading Ne
1107--4 Wedge-tailed Shearwaters SW heading NE
1118--1 Wedge-tailed Shearwater NE heading SW
1120--1 Shearwater sp? New Zealand or Dark-rumped SW heading NE
1128--1 Wedge-tailed Shearwater SW heading NE
1140--1 Shearwater sp? light below grey above heading NE
1203--1 Wedge-tailed Shearwater literally blown off course
1237--2 Dark-rumped Petrel? heading SE whiteunderparts, light brownish back, dark brown dorsal, very dark and very white ventral. a lot of white in head, almost size of wedge-tail
9 Aug 1405—Flock: drifting to the NW, feeding

150 Dark phase Wedge-tailed Shearwaters, ca. 10 Dark-rumped Petrel?
1 Frigatebird, 50 plus/minus 10 Sooty Terns

School of ca. 50 flying fish jumped in middle of flock.

1412—2 Dark ph. Wedge-tailed Shearwater? heading S
1440—1 " " " " " ? heading NE
1451—1 " " " " " ? heading SE
1502—1 " " " " " ? heading E
1502—1 Bonin Island Petrel heading SE
1503—3 Sooty Terns heading SE 40' up
1510—1 Dark Ph. Wedge-tail heading SE
1512—2 " " " " "
1515—1 " " " " "
15220—1 Wedge-tailed Shearwater heading E
1550—1 Ruddy Turnstone SE heading shot 50' up
1708—1 Bonin Island Petrel? O heading SW
1720—1 Frigatebird O heading W

1 White belly Petrel S
1751—15-20 Sooty Tern N heading S 50' up
1755—1 Wedge-tailed Shearwater e heading NW
1757—1 Tropicbird right over water
1842—ca. 50? Sooty Terns heading NNW 30-100'

c. 6 Frigatebirds? in same flock as above?
1850—1 Bonin Island Petrel O heading SE
1900—1 Wedge-tailed Shearwater o heading S
Gould, E. J.
1963—At Sea

9 Aug
1915—2 Bonin Island Petrels O heading S
1954—1 Dark-rumped Petrel? O heading NW
2011—1 Bonin Island Petrel O heading S
2127—Tropicbird
2315—Rain
2325—Rain Stopped

August 10, 1963

0200—1 Tropicbird—officer on bridge
0322—1 Sooty Tern heading N on 200°
0334—1 " " " "
0350—2 " " " "
0400—Change course to 315 degrees
0402—1 Sooty Tern W heading E 75°
0435—1 Sooty Tern E heading W 20°
0440—1 Sooty Tern? heading NW
0455—1 Sooty Tern? heading SE 40°
0520—1 Sooty Tern W heading NW 75°
0527—1 Sooty Tern? heading SW 30°
0529—1 Sooty Tern? 30°
0530—1 Sooty Tern?
0531—" " "
0537—" " "
0545—1 Wedge-tailed Shearwater
0614—1 Sooty Tern heading E 50°
Go ld, F. J.
1963—At SE

10 Aug 0640—1 Wedge-tailed Shearwater?

0641—1 Sooty Tern N heading S 75'

0648—2 Wedge-tailed Shearwaters

0651—2 " " " (1 dk 1 lt)

0654—1 " " " NW heading SE

0659—1 " " " N heading S

0704—1 " " " SW heading N

0705—2 Sooty Tern NW heading SW 10-15'

0705—changed course 225 degrees SW

0717—1 Dark-rumped Petrel? NW heading SE

0725—2 Wedge-tailed Shearwaters heading S

0735—1 Sooty Tern NW heading NW 50'

0750—1 Wedge-tailed Shearwater heading SE

0753—9 Sooty Terns

0755—2 Wedge-tailed Shearwaters heading SE

0759—1 " " " " "

0802—1 " " " " "

0805—3 Sooty Terns 10' heading SE

0812—1 Sooty Tern heading SE 30'

0813—1 Tropicbird (R. T.?) 60' heading W

0815—2 Wedge-tailed Shearwaters heading SE

0818—2 " " " " "

0819—2 " " " " "

0821—1 Sooty Tern 30' heading SE
Oct 10 0837—1 Red-tailed Tropicbird NE—NE

0840—1 Bonin Island Petrel ? heading SE wing tips darker

0851—3 Sooty Terns heading SE 30' varied to 1'

0858—15 Sooty Tern NE heading SE

0858—2 Wedge-tailed Shearwaters

0915—Rain began (arrow) WNW

0930—Rain stopped

1058—10 plus Shearwaters (all dark) apparently feeding

1111—3 Wedge-tailed Shearwaters (dk. ph.)

1128—1 Dark-rumped Petrel? ventral wing

1130—1 Wedge-tailed Shearwater (Lt. Ph.) heading SE

1157—1 " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " 
10 Aug 1450--2 Sooty Terns heading S 50'
1450--1 Wedge-tailed Shearwater heading S
1455--15 Sooty Terns 15-20' surface fishing heading NE
    1 Wedge-tailed Shearwater heading NE
1503--50 plus/minus Sooty Tern heading NE surface fishing
1 511--6 Sooty Terns Limit of vision
1521--2 Wedge-tailed Shearwaters SW heading NE
1600--1 Sooty Tern 30' SW heading NE
1724--1 " 100' heading SE
1737--Large Flock: 50 plus/minus Sooty Terns 15-20' up to 100' heading NNE
1745--1 Wedge-tailed Shearwater heading N
1751--1 Wedge-tailed Shearwater heading SE
1755--1 Tropicbird (W.T.?) heading ENE 200' up
1800--Scattered School Flying Fish ca. 10-15 small ones
1810--1 Bonin Island Petrel together on water
    1 Bulwer's Petrel (shot)
1820--School of Flying Fish 30 plus in are of Bulwer's above
1825--1 Tropicbird W heading N 75'
1852--2 Tropicbirds heading N 150-200'
1855--1 Sooty Tern heading NNE 150-200'
1859--1 Tropicbird
1906--Shearwater (1)
1911--2 Wedge-tailed Shearwaters (Lt. ph.) heading NW
1930--1 " " " " W
1950--2 Sooty Tern 5' up to 20' heading W
Gould, F. J.
1963—At Sea

10 Aug 1950—1 Tropicbird 150° heading NS
2042—1 Sooty Tern 45° heading NE
2114—1 " "
2110—1 Tropicbird
2130—1 "
2207—1 " same bird?
2215—1 "
2355—2 Sooty Tern 50° heading SE

August 11, 1963
0017—2 Sooty Tern
0102—1 Petrel?
0210—1 Sooty Tern?
0315—2 Tropicbirds 35-40°
same?
0340—1 " 30-40°
0440—1 Wedge-tailed Shearwater 10° heading NW
0455—1 Tropicbird 20-50° heading NW?
0600-315 degrees NW
0720—1 Dark-rumped Petrel heading SE
0736—1 Wedge-tailed Shearwater heading S
0750—1 Frigatebird 0 E 25-100°
0755—Sooty Tern? small flock below Frigatebird heading SE
0800—3 Sooty Tern 50° heading SE
0813—3 Sooty Tern 50° heading SW
  1 " " ? " NW
  1 Shearwater? " SE
11 Aug 0814—1 Dark-rumped Petrel? N heading SW
0820—1 Wedge-tailed Shearwater SE heading NW
0822—25 plus/minus 5 Sooty Terns? 50-100'
0830—3 Dark-rumped Petrel? heading NE
0831—50 plus/minus Sooty Terns --10-50' heading NE
0846—4 Sooty Terns 5-50' heading S in line
0912—Change course 050 (NE)
1000—1 Wedge-tailed Shearwater (Lt. Ph.) o heading NE
1015—Flock:
50 plus/minus Sooty Terns heading E
20 plus/minus 3 all dark Shearwaters heading SE
4 Wedge-tailed Shearwaters (Lt. ph.) heading SE
2 Bonin Island Petrel 0
ca. 10 larger birds (Frigates?) ??
1043—3 Sooty Terns 5 10' heading SSE
between 2 rain storms
1103—1 Wedge-tailed Shearwater
1112—1 Wedge-tailed Shearwater
1142—1 Wedge-tailed Shearwater
1142—1 Red-tailed Tropicbird (no black on wings)
1150—1 Tropicbird
1150—1 Wedge-tailed Shearwater
1154—1 Tern? all white flying like shearwater
1200—1 Wedge-tailed Shearwater heading S
1241—1 Wedge-tailed Shearwater? SW heading NE
1242—1 Christmas Island Shearwater? SW heading NE
11 Aug 1308—1 Christmas Island Shearwater? N heading S

1315—2 Wedge-tailed Shearwaters NE heading SW

1316—1 Wedge-tailed Shearwater SW heading NE

1359—1 New Zealand Shearwater heading SW black ring around white neck, grey back with black "W"

1412—1 Wedge-tailed Shearwater

1 New Zealand Shearwater? SW heading NE

1425—Rain squall

1428—1 Wedge-tailed Shearwater NE heading SW

1430—2 " " " " " "

1437—2 Birds SW heading NE

1450—1 Wedge-tailed Shearwater? on water SW heading NE

1456—1 Sooty Tern 50' NE heading SW

1511—2 " " heading SE

1550—2 " " 30' E heading NW

1600—1 Bulwer's Petrel SE heading NW

1757—1 Tropicbird 0 heading SW 150 yds

1757—3 Shearwaters? fan tail crew

1820—1 Wedge-tailed Shearwater heading S

1830—1 Shearwater

1834—2 Wedge-tailed Shearwater heading SSE

1839—1 Sooty Tern 5' heading SE

1920—1 Tropicbird

1929—3 Wedge-tailed Shearwater

1930—1 Sooty Tern heading SE

2000—1 " " NE heading SE
11 Aug 2000—2 Wedge-tailed Shearwaters
2024—1 Tropicbird heading SE

August 12, 1963
0023—1 Wedge-tailed Shearwater
0050—1 Wedge-tailed Shearwater?
0015—1 Bonin Island Petrel?
0124—1 Bonin Island Petrel?
0145—1 Bird shearwater Petrel?
0215—1 Bonin Island Petrel?
0235—1 Bonin Island Petrel?
0435—1 Sooty Tern heading SW
0542—1 Wedge-tailed Shearwater
0735—1 Shearwater (by watch)
0815—1 Sooty Tern 50' heading NE
0824—1 Sooty Tern 50' heading E
0824—1 Wedge-tailed Shearwater heading E
0857—1 " " " " W
0915—1 " " " " E
1002—1 " " " 
1232—1 " " " " NW (lt. ph.)
1253—1 Sooty Tern 75' heading SW
1310—2 Wedge-tailed Shearwater heading E
1327—2 Terns 75' heading N or NE
1333—1 Sooty Tern heading SW
1335—1 Tern?
Gould, F. J.
1963—At Sea

12 Aug 1338—1 Wedge-tailed Shearwater heading S
1419—1    
1429—10 Sooty Tern 1' heading NW
1440—20    5' heading E
1440—1 Wedge-tailed Shearwater 0 heading SW
1443—1 Sooty Tern S heading N joined flock of 20 above
1451—14    W heading E 5-10'
1455—1 Wedge-tailed Shearwater 0 heading NW
1514—1 Wedge-tailed Shearwater heading S
1516—4 Sooty Tern 25' heading E
1520—10    40' heading S
1536—2 Wedge-tailed Shearwater heading E
1537—1    
1540—3 Sooty Terns 60' heading E
1550—1 Sooty Tern 20' heading SW
1550—1 Tropicbird 50' heading S, turning E
1555—1 Sooty Tern 20' heading SW
1600—1 Sooty Tern 25' heading SE shot
1608—1 Wedge-tailed Shearwater heading SE
1601—1 Wedge-tailed Shearwater heading SE
1604—10 Sooty Terns 50' heading E
1607—9 Sooty Terns 0 heading E
1607—1 Wedge-tailed Shearwater heading E
1610—2 Wedge-tailed Shearwater heading N
1615—2 Wedge-tailed Shearwater heading NE
1620—2 Sooty Tern 40' heading E
1622—1 Sooty Tern 10' heading E
12Aug 1622–2 Wedge-tailed Shearwater heading E
1623–2 Wedge-tailed Shearwaters
1630–2 " " " heading W circled in smoke of marker
1635–1 Sooty Tern 10' heading W
1635–4 Wedge-tailed Shearwaters circled in smoke of marker
1636–5 Sooty Tern 10' heading W
1645–1 Sooty Tern 50' heading E
1645–5 Wedge-tailed Shearwaters Heading E around smoke
1652–4 " " "
1652–75 plus Sooty Terns 6 - 50' heading NNE
1655–8 plus " " 30' heading NNE (1 shot)
1657–1 Tern ? 18 heading W
1704–2 Wedge-tailed Shearwater in smoke
1707–11 Sooty Tern low heading E
1708–5 Wedge-tailed Shearwaters heading S in smoke
1717–1 Sooty Tern 50' heading E
1719–6 Sooty Tern low heading N
1728–1 Wedge-tailed Shearwater heading S
1730–1 Wedge-tailed Shearwater heading S
1733–2 Sooty Tern 50' heading SW
1735–1 Wedge-tailed Shearwater heading E
1754–3 Sooty Tern just above water heading SSE
1755–1 Sooty Tern just above water heading SSE
1802–3 Shearwater 0 heading S
1809–1 Sooty Tern 40' heading S
12 Aug 1615--13 Sooty Terns 150' heading N
1814--1 Tropicbird 100' W heading W
1816--1 Sooty Tern 18 heading N
1817--1 Wedge-tailed Shearwater heading SE
1817--1 Wedge-tailed Shearwater heading N
1818--13 Sooty Tern 100' heading NE
1830--2 Sooty Tern 40' heading S
1830--1 Wedge-tailed Shearwater heading NE
1831--1 " " " heading NE
1836--2 Sooty Tern 50' heading SE
1839--1 Wedge-tailed Shearwater heading SE
1911--1 Wedge-tailed Shearwater O heading NE
1911--6 Sooty Tern 75' heading E
1915--5 " " 150' heading SW joined 6 above
1937--1 Wedge-tailed Shearwater S E
1955--2 Terns heard
2013--1 Wedge-tailed Shearwater heading NE

August 13, 1963
0725--1 Wedge-tailed Shearwater heading SSW
0758--1 " " " S
0803--2 Sooty Tern 50' heading N
0819--1 Wedge-tailed Shearwater? heading N
0839--2 " " " S same?
0842--1 " " " 0 S
0928--1 " " "
13 Aug 0952—1 Wedge-tailed Shearwater

1045—1 " " " ? seen by bridge watch

1050—1 Sooty Tern 60' heading 150°, heading E
1055—2 Sooty Tern joined by one above 5-15' circling
1250—1 ad Red-tailed Tropicbird
1321—2 Sooty Tern 50' heading SE
1602—1 Wedge-tailed Shearwater E heading W

No observations from 1645 to 1725

1749—1 Wedge-tailed Shearwater E heading W
1830—1 Wedge-tailed Shearwater N heading S
1919—1 Sooty Tern heading E 75°

No observation from 2000-2110, then no birds; No observation from 2230 on...

August 14, 1963

Observation began 0730

0750—3 Red-tailed Tropicbird 60' heading E diving from ca. 60'
0756—1 Wedge-tailed Shearwater heading E
0800—Fish jumping off port (18") tuna-like
0806—2 Wedge-tailed Shearwater heading SE
0818—1 Red-tailed Tropicbird 150' heading E
0822—15 Wedge-tailed Shearwater on water heading E
0825—30 Sooty Terns? 200' heading E
0832—1 Bonin Island Petrel heading E
0837—1 Red-tailed Tropicbird 150' heading E
0840—1 Wedge-tailed Shearwater heading E
0853—Slight rain
14 Aug 0947—1 Red-tailed Tropicbird 50-70' up heading SE
1030—1 Wedge-tailed Shearwater heading N
1057—1 " " " ?
1120—1 " " " heading NE
1133—2 " " " heading E
1136—8 Sooty Terns 5-10' heading E
1138—Flock: feeding actively
   20 Sooty Terns diving from up to 50' heading E
6 Wedge-tailed Shearwaters on H2O heading E
1151—25 plus/minus Sooty Terns 40-50' heading E
1200—Flock: stayed with ship ca 15' actively feeding
   75 plus Sooty Terns
   24 plus Wedge-tailed Shearwater landing on water
1212—1 Red-tailed Tropicbird
1235—1 Wedge-tailed Shearwater heading ENE
1236—1 Shearwater: very black on top of head all white
   neck, very light brown (tan) beak, very white below
1237—2 Wedge-tailed Shearwater on starboard
   3 " " " on port not flock
1500—1 Red-tailed Tropicbird on water
1540—1 Red-tailed Tropicbird on water heading E
1548—1 Frigatebird diving to pick up something from water
   3 Sooty Terns
1638—1 Wedge-tailed Shearwater heading E
1642—1 Wedge-tailed Shearwater ? W heading E
Gould, E. J.
1963--At Sea

14 Aug
1650-- 18 Sooty Terns at edge of rain--finally flew into rain
1730-- 5 Wedge-tailed Shearwaters heading E
1740-- 1 Wedge-tailed Shearwater heading E
1745-- 3 White-tailed Tropicbird 150' heading W
1755-- 1 Wedge-tailed Shearwater heading E
1815-- 1 " " " heading NE

started observation at 2015

August 15, 1963

0645-- 4 Wedge-tailed Shearwaters
4 " " " heading E

School of ca. 50 flying fish broke under one of above

0705-- 1 Wedge-tailed Shearwater heading E
0720-- 2 Shearwater-Petrel? heading S large, very white dorsal, below, not wedge-tail
0729--Flying Fish ca 10
0731-- " " 7
0733-- 1 Bonin Island Petrel? heading NE white head large ( )
0738-- 2 Bonin Island Petrel? heading N
0741-- 2 Wedge-tailed Shearwater
0744--Flying Fish ca. 150
0747-- " " " 30
0751-- 2 White-tailed Tropicbird 150'
0754-- 1 Wedge-tailed Shearwater
0800--
2 Tropicbirds, joined by 2 above
Gould, P. J.
1963—At Sea

15 Aug
0801—1 Brown Booby 50'
0804—2 Wedge-tailed Shearwater? heading E?
0806—1 Bonin Island Petrel
0828—1 Wedge-tailed Shearwater heading N
0830—7 " " "

One appeared to be an albino with grayish mottling on the white dorsal wing areas. Otherwise all white, flew and looked like wedge-tail.

0836—1 Brown Booby 35 plus/minus 5'
0840—1 Red-tailed Tropicbird 175 plus/minus 25'
0847—1 Wedge-tailed Shearwater
0850—1 Wedge-tailed Shearwater heading SW
0907—3 Red-tailed Tropicbird (ad.) 40' heading E
0909—1 White-tailed " 40' heading E stayed till 0930
0926—1 Wedge-tailed Shearwater heading E
0929—1 Wedge-tailed Shearwater heading E
0938—1 Bonin Island Petrel? heading E
0942—3 Shearwater-Petrel heading NE
0943—2 Sooty Tern 20 plus/ minus 5' heading NE
0944—1 Red-tailed Tropicbird heading E diving 100'

Flying Fish
0950—1 Sooty Tern 100'—10' heading E
1004—2 Frigatebirds 120' flying
1020—1 Wedge-tailed Shearwater black underside?
1022—1 " " " heading NE
1037—4 " " " " 
Gould, E. J.
1963--At Sea

1042--1 Wedge-tailed Shearwater heading NE
1044--1 " " " "  "
1050--2 " " " "  "
1051--1 " " " "  "
1055--1 Bonin Island Petrel heading NE
1100--2 White-tailed Tropicbirds 100' heading E
1110--1 New Zealand Shearwater heading E " W" on back, white underparts, blackening on throat
1118--1 Red-tailed Tropicbird 100-50' heading E
1126--2 White-tailed Tropicbird heading E
1128--1 Wedge-tailed Shearwater heading NE
1142--2 White-tailed Tropicbird 70' heading NE
1157--2 Wedge-tailed Shearwater heading E
1201--1 heading E--blackish head, brown wings and back Manx? white patch at base of tail, underparts white fringed with black
1207--1 heading E underparts white, undertail blackish head blackish, wings brown, white extends over back at either side at base of tail Manx
1224--1 Bonin Island Petrel? darkish areas in wings
1250--1 heading NE wedge-tail size
1430--3 Wedge-tailed Shearwater
1440--1 " W " " " heading SE
1444--1 Red-tailed Tropicbird W heading SE 100'
1447--1 Wedge-tailed Shearwater ENE
1525--Large flock: feeding dashing, turning and soaring over water, all birds staying very low ca. 5' above water, none ever went above horizon.
15 Aug  
Several schools (1 large school?) of flying fish leaping (   ) under
flock (ca 500 plus),
30 plus/minus 5 Sooty Tern
45 plus Wedge-tailed Shearwater
25 plus/minus 5 Shearwater-Petrels

Ship goin 8.5 knots for above

1525--1 Red-tailed Tropicbird (not in above flock)
1630--2 Wedge-tailed Shearwaters
1702--2 " " " he-ding SSW
1736--1 " " " " N
1740--1 " " " " NNE
1741--1 " " " " E
1746--1 " " " " SSW
1755--1 Sooty Tern 50' he-ding E
1756--1 Wedge-tailed Shearwater he-ding NNE
1803--2 Sooty Tern 50' he-ding SE
1803--1 Sooty Tern 75' he-ding S
1809--15 " " 50' he-ad-ing W

1 Frigatebird 200' he-ding W

1830--Flock: 1 Frigatebird

40 plus/minus 10 Sooty Terns

50 plus Wedge-tailed Shearwater

1848--1 Wedge-tailed Shearwater he-ding NE
1853--1 White-tailed Tropicbird 70' he-ding E
1859--1 Wedge-tailed Shearwater 0 he-ding N
1928--1 Wedge-tailed Shearwater 0 he-ding NE
September 5, 1963—Pearl Harbor, Oahu, Hawaiian Islands

This is the second trip of the Johnston Island grid survey. There are five of us from the Smithsonian aboard, Dr. C. Ely, myself, Robert Fleet, Roger Clepp, and Pat Elliot. The ship left its birth at 0800 and proceeded toward the Harbor entrance.

There are two graduate students from the University of Hawaii aboard this time to work on a special marine biology program. So far things have been quite hectic. We have had many problems about the radar and camera attachments. Evidently the camera that Dr. Ely brought with him will not work. So he picked up a movie camera last night and we are going to try to take manual pictures of the radar and correlate them with sight observations. It is not at all satisfactory, but I guess it's worth a try.

Had a lot of trouble about getting the University of Hawaii boys set up. Nobody had been informed (at least fully and explicitly) about the special needs, especially the winch. Therefore it was not taken care of. Evidently they are going to try using one of the ship's regular winches and make all sorts of adjustments.

0835—Entrance to Pearl Harbor

0858—1 Imm. Brown Booby? heading W 1-5'

0914—1 Tern sitting on log in water

0915—1 Frigatebird & ad heading E 75 plus/minus 25'

0943—1 Bonin Island Petrel heading SW 450-600 yds.

0950—1 Tropicbird? heading N 50-75 feet all white

1001—1 Wedge-tail he ding NE 650 yds.
Gould, F. J.
1963—At See

§ Sept 1002—1 Wedge-tail heading NE 650 yds.
1003—1 " " " " 5' up 150 yds.
1020—3 Piolet Whale heading NE surfaced 2-3 times 100 yds.
1033—2 Wedge-tails = E 200 yds.
1045—course changed to 270 (W)
1047—1 Frigatebird heading E 50' ads'
1054—1 Wedge-tail heading N 1000 yds.
1120—1 " " " " "
1120—1 Shearwater heading N 1000 yds.
1139—1 Bonin Island Petrel ? O heading E 200 yds
1139—1 Wedge-tail O heading E 250 yds.
1152—1 " " heading E 150 yd.
1153—2 " " " " dark phase
1154—1 " " "
1156—1 " " "
1158—1 " " "
1159—1 " " " dark phase
1200—1 " " "
1213—2 " " " flying fast, almost no wing beating " ina hurry"?
1217—1 " " "
1223—2 " " circling
1224—1 " " heading NW hunting
1230—Flock

150 plus/minus 25 Wedge-tails all appear to be light phases, all circling back and forth over fixed area. None in water as if deep fish school present. No other species.
5 Sept 1234--1 Christmas Island heading NE

1243--1 White-tailed Tropicbird O heading SE? 100'

1257--1 Wedge-tail O hunting

1310--1 Frigatebird heading ENE very high

1317--1 Wedge-tail heading NW

1333--1 " " heading SE

1338--1 Bulwer’s Petrel heading SSE

1347--1 Wedge-tail heading NNW

1354--1 Christmas Island? heading NNW

1410--1 Bulwer’s Petrel heading NNW

1412--3 Wedge-tails heading N

1418--1 Shearwater heading N

1418--1 Tern? heading N

1422--1 Harcourt’s Storm Petrel heading SSE

1423--1 Wedge-tail O

1425--1 Shearwater

1433--1 Dark bird heading SW

1435--1 Dark bird heading S

1443--1 Wedge-tail heading NNW

1445--1 Red-tailed Tropicbird? heading S, then W 100'

1505--1 Wedge-tail heading N

1525--1 " " NNE

1532--1 " " N

1555--2 White-tailed Tropicbird heading E 150'

1604--1 Wedge-tail heading N

1605--1 " " N
5 Sept 1607—1 Wedge-tailed Shearwater heading N
1615—1 Masked Booby heading ENE
1621—1 Bulwer's Petrel heading N
1627—1 Wedge-tail heading SE
1630—2 Wedge-tail heading SE, NW
1636—1 Bulwer's Petrel heading NE
1641—1 Wedge-tail heading W
1642—1 " " heading NW, then SE
1643—15-20 Wedge-tail 10'
1710—1 Sooty Tern? heading W 10'
1711—1 Wedge-tail heading NW
1721—1 Bonin Island Petrel? heading SE
1734—2 Wedge-tail heading NW
1734—1 Wedge-tail heading N
1751—2 White-tailed Tropicbird heading ENE 100'
1749—1 Bonin Island Petrel? heading NE
1751—1 Bonin Petrel? heading SE
1758—1 Wedge-tail heading SE
1803—1 Red-footed Booby heading N 5-10'
1809—1 Wedge-tail heading S
1810—1 " " " NW
1812—2 " " E one was halfway between light and dark
1813—1 Pink-footed Shearwater heading E
1819—1 Tern or tropicbird heading N
1820—1 Wedge-tail heading E
5 Sept 1823—2 Wedge-tail heading E
1825—1 " " " "
1829—1 " " " NE
1832—1 Littel Shearwater (P. assimilis) heading NNW
1834—1 White-tailed Tropicbird heading NNW 30'
1835—1 Bulwer's Petrel O
1840—1 Wedge-tail heading N
1842—1 Shearwater heading N
1844—1 Wedge-tail heading N
1848—1 Tropicbird heading N
1855—1 Shearwater heading N
1904—1 Small dark bird heading N
1904—1 Tropicbird heading SW
1908—1 Shearwater heading NE
1909—1 Wedge-tail heading NE
1911—1 " " " E
1920—1 Shearwater heading N
1930—ended observation period

September 6, 1963 — Pacific Ocean, 2nd day out of Oahu, Hawaiian Islands
observation began at 0600—
0620—1 Wedge-tail heading N 50 yds same?
0621—1 " " " "
0643—1 Bulwer's Petrel? heading N
0643—2 Grey-backed Tern heading N
0647—1 White-tailed Tropicbird 150' heading E
0649—1 Bulwer's Petrel heading E
0651—1 Wedge-tail heading N
Gould, F. J.
1963—At Sea

6 Sept 0658—1 Bulwer's Petrel heading N
0700—2
0709—3 Wedge-tail heading N all together
0709—1 Bulwer's Petrel heading SE
0711—2 White-tailed Tropicbirds heading E 300' called
0712—1 Wedge-tail heading SE
0712—1 Tropicbird heading WSW 200'
0715—1 Wedge-tail heading NW 150'
0716—2 Red-tailed Tropicbird? " SW 10'
0721—2 Wedge-tail heading SE " same
0723—2 " " E
0733—1 Bulwer's Petrel? heading N
0740—1 " ? " N
0748—2 White-tailed Tropicbird " 200'
0745—1 Tropicbird heading NW 200'
0758—1 Bulwer's Petrel
0753—2 Wedge-tail heading NE
0755—1 " " heading W
0755—2 White-tailed Tropicbird heading N 150' both collected
0803—1 Bulwer's Petrel heading N
0809—2 Bulwer's Petrel? heading S
0818—2 " " NW
0823—1 " " N
0825—1 " " SE
0829—1 " " E
0830—1 " " SE
6 Sept

0834--1 Bulwer's Petrel ? heading N

0834--1 White bird heading S 10-5'

0836--2 Wedge-tail heading S

0839--1 Bulwer's Petrel ? heading S

0842--1 dark bird heading NW

0844--1 Wedge-tail heading NE

0847--1 Bulwer's Petrel?? heading SW

0852--1 Wedge-tail heading NW "light shower"

0858--2 Wedge-tail heading N 1 intermediate

0854--1 Bulwer's Petrel heading E on water briefly

0904--2 Bulwer's Petrel heading E

0905--1 Wedge-tail heading S

0907--1 Bulwer's Petrel heading S

0908--1 Wedge-tail heading NE

0908--1 Masked Booby heading S wave tops

0909--1 Wedge-tail heading NE

0909--1 Wedge-tail heading NE

0914--2 Bulwer's Petrel heading N

0918--2 Bulwer's Petrel heading SW

0918--1 Tropicbird? n heading NE

0918--1 und. heading NE white below, grey above

0920--1 Red-tail? heading E 100'

0930--1 Wedge-tail heading NW

0933--2 Bulwer's heading NNW follow wave troughs

0935--1 Wedge-tail heading NNW " " "

0939--1 Bulwer's " NNW " " "

Gould, P. J.
1963--At Sea
6 Sept 0940—1 Wedgetail heading SSE follow wave troughs
0943—1 Bulwer's Petrel
0944—Flock: 5 Wedge-tail (Part of dispersing flock?)
   1 Bonin Island Petrel Followed wedge-tails
0948—1 Bulwer's ? heading NNW
0956—1 Bonin Island Petrel? heading S Follows troughs
0958—1 Wedge-tail heading NW follows troughs
1001—1 Bulwer's Petrel
1002—2 " " heading SSE follows troughs
1003—1 " " 
1004—1 " " heading SSE " 
1007—1 " " " SE " 
1013—1 " " 
1015—1 " " heading SE
1018—1 Bonin Petrel ? heading NW
1022—2 Red-tailed Tropicbird  100'
1024—2 Bulwer's Petrel
1024—2 Wedge-tail heading NW
1026—1 Ruddy Turnstone N7-30' calling
1031—2 Bulwer's Petrel
1031—1 Wedge-tail
1034—Flying Fish 200 plus
1039—3 Bulwer's Petrel at least 2 on H2O
1045—1 White-tailed Tropicbird  100'
1047—1 Wedge-tail heading NNW follow trough
6 Sept 1054--1 Wedge-tail heading NNW follow trough
1059--1 Bulwer's heading SSE follow trough
1106--2 Grey-backed Tern heading NNE 20'
1117--1 Shearwater heading SSE
1124--1 Bonin Island Petrel
1125--1 Bulwer's Petrel heading NNW
1128--1 Red-tailed Tropicbird 150'
1128--1 Wedge-tail
1131--1 Bulwer's Petrel heading SSE
1139--1 Wedge-tail heading NW
1144--1 Wedge-tail? SW
1151--1 White-tailed Tropicbird heading NNW 150'
1210--1 White-tailed Tropicbird E 75'
1229--1 Wedge-tail heading ENE
1233--1 Bulwer's Petrel heading NNW
1242--1 " " " "
1244--2 " " NW to SE 0
1250--1 White-tailed Tropicbird heading N 50-150'
1301--1 Wedge-tail heading ESE
1310--1 " " heading W
1346--1 Red-tailed Tropicbird E 100'
1356--1 Shearwater heading NW
1405--1 Wedge-tail heading NE
1416--1 Bulwer's Petrel heading SE
1418--1 Wedge-tail heading N
6 Sept 1435—1 White-tailed Tropicbird heading NE 150°
1441—1 Wedge-tail heading S
1451—1 White-tailed Tropicbird heading NE 150°
1500—1 Red-tailed Tropicbird heading SW 150°
1 Red-tailed Tropicbird heading NE (joined first
1506—3 White-tailed Tropicbird heading E 150-200°
1542—1 Frigatebird of heading E 1000°
1543—2 White-tailed Tropicbird W 300°
1553—Flock heading E
10 plus/minus Wedge-tail
5 plus/minus Bonin Island Petrels
125 plus/minus 5 Terns
1 Frigatebird

Terns drop to water, then rise, possibly feeding on intermittently rising fish; shearwaters and petrels stream along suddenly stopping and milling about

1559—1 Wedge-tail heading S
1622—1 Frigatebird
1630—1 Shearwater heading E
1639—1 Red-tailed Tropicbird heading SW 20-100°
1643—1 Puffinus australis heading SSE
1656—3 Tern
1717—1 Frigatebird feeding? or immat. heading E 200° flew down and hit water
1753—1 Wedge-tail? heading ESE
1759—1 Bird
1811—1 Wedge-tail heading S
1819—1 Shearwater heading ESE
1824—2 Bulwer's Petrels heading S and NE
6 Sept 1835--1 Bulwer's Petrel?
1835--1 Wedge-tail
1843--2 Terns heading SW 10-20'
* 1854--1 Puffinus assimilis heading SSE
1858--1 Wedge-tail heading SSE
Time change--1900 becomes 1800
1807--1 Wedge-tail? heading S
1810--1 Wedge-tail heading N
*It appears that what I have been calling Puffinus assimilis (Little Shearwater) is probably Puffinus lherminieri (Audubon's)

September 7, 1963--Pacific Ocean 3rd day out of Oahu, Hawaiian Islands observations began 0515--Crew member noted birds flying overhead from midnight on.
0607--1 Wedge-tail heading SE
0613--1 Masked Booby heading NW 30' W-T
0622--1 White-tailed Tropicbird NE 100'
0646--1 Wedge-tail? heading N very white below
0651--4 Wedge-tail? heading S
0700--2 "White" Boobies heading S 50-100'
0718--1 Wedge-tail? heading WSW
0720--1 Shearwater sp. heading NE
0725--1 Shearwater sp. heading NW
0744--1 Wedge-tail heading N
0753--1 Wedge-tail ? heading S
Gould, F. J.
1963—At Sea

7 Sept 1755—1 Tropicbird heading S
0805—1 Turnstone? heading ENE
0811—5 Shearwaters sp. heading S
0818—2 Wedge-tail heading S
0830—2 Shearwater? heading S
0832—1 Shearwater heading S
0842—1 Shorebird sp. 0 E 20'
0850—3 Bonin Petrels heading SE
0858—1 Bulwer's Petrel heading N
0924—1 Red-tailed Tropicbird heading South, 200'
0930—2 Wedge-tail heading SE
0937—1 Wedge-tail heading SW
0938—1 Wedge-tail heading S
0945—1 Tropicbird heading N 100'
1020—2 Wedge-tail heading SW
1025—1 Wedge-tail heading S
1028—2 Red-tailed Tropicbird heading E 150'
1035—2 Tropicbirds heading NE 100'
1102—2 Ruddy Turnstones heading NNE 15-20'
1132—1 Wedge-tail heading S
1141—1 Wedge-tail heading S
1236—1 Shearwater sp. (Audubon's?) heading SE
124—1 " " " SSE
1310—1 Wedge-tail heading S
1336—1 Golden Plover W>W calling
1340—1 Wedge-tail heading SSE
1344—1 Wedge-tail heading ENE 100 plus feet
1422—1 Wandering Tattler EOW 25' (Pat Elliot)
1430—1 Bird on water by bridge watch
1433—1 Bulwer's Petrel heading E
1440—9 Sooty Terns OW 200-300'
1449—1 Wedge-tail heading NW
1450—1 Imm. Red-tailed Tropicbird N-S shot by captain
1452—1 Bulwer's Petrel heading NE
1458—Flying Fish
1501—1 Bulwer's Petrel heading SE
1520—Flock: wedge-tail 40 plus feeding on flying fish

  Pink-footed Shearwater 3 plus
  Bonin Island Petrel 1
  Sooty Tern 25

1530—Flock: 1 Bulwer's Petrel

  50 plus/minus 10 Wedge-tails
  200 plus/minus 25 Sooty Terns
  3 white Terns
  2 Tropicbirds

  1 Dark-rumped Petrel (white-necked petrel)

Collected: 1 Dark-rumped Petrel, 1 Sooty Tern and 3 Wedge-tails

1745—2 Wedge-tails heading NE
1848—1 Sooty Tern heading NE 100'

Observations ended at 1900

September 2, 1963—Pacific Ocean, 4th day out of Oahu, Hawaiian Islands

2424—3 Tern (see note on next page)
8 Sept 2427--2 Terns
2431--1 Tern 2431--Tern (1)

20 minutes of observation time birds flying around ship

observation began at 0525

0525--3 Shearwater

0527--2 Wedge-tail heading NNW

0534--4 Bonin Island Petrel or Dark-rumped Petrel heading NNE hash marks

0544--10 plus/minus Wedge-tails NNW 0 Loose flock--soaring circles

0552--1 Wedge-tail heading S

0555--1 " " " NNW

0601--7 plus Wedge-tails heading NNW

0604--10 plus/minus Wedge-tail NNW heading SSE

0615--2 Wedge-tails heading NNW

0616--3 " " " WSW

0630--1 " " " SSW

0630--3 Shearwater sp. heading SSW

0632--2 Wedge-tail heading NNW

0636--1 " " " N

0643--1 " " " SE

0647--1 " " " SSW

0702--1 " " " NE

0710--1 Dark Phase Wedge Tail ? heading N

0716--1 Shearwater sp.

0735--1 Wedge-tail heading ENW

3 Wedge-tail

1 Fairy Tern seen by whale boat crew
Gould, F. J.
1963--At Sea

9 Sept
0825--1 Shearwater heading NW
0829--1 Bonin Island Petrel heading SE
0835--2 Bonin Island Petrel heading NW no hash marks
0835--1 Wedge-tail heading NW
0850--1 Petrel heading NW much white
0900--1 Wedge-tail heading ENE
0912--1 Petrel heading SSE
0940--1 Bonin Island Petrel heading S
0941--1 Wedge-tail heading WSW
0958--1 Red-tailed Tropicbird Imm.
1017--1 Wedge-tail
1035--1 Wedge-tail heading SSE
1035--1 Wedge-tail heading SSE
1035--1 Wedge-tail 0
1035--1 Wedge-tail 0
1051--1 Wedge-tail heading SSE
1053--1 Ruddy Turnstone shot but lost 20'
1100--1 Red-tailed Tropicbird ENE 100'
1156--Flying Fish 8-9
1313--6 Wedge-tail 0 circling together
1338--2 Wedge-tail heading N
1340--2 Wedge-tail heading S and 0 N
1341--2 Terns?
1342--2 Wedge-tail heading NE
1350--1 Shearwater sp. heading S
1351--1 Wedge-tail heading SE
8 Sept 1410—2 Wedge-tail heading SSE, ENE

1417—30 plus/minus Sooty Terns heading S 30-50'

5 plus Shearwater heading S

1428--3 Sooty Terns

1521--1 Wedge-tail heading NW

1524--2

1524--2

1524--

1524--

1524--

1524--

1524--

1537--1 Imm. Red-footed Booby collected

1550--1 Tropicbird

1618--2 Shearwaters heading WSW (one had markings of New Zealand--Dr. Ely)

1629--1 Shearwater sp heading NNW

1637--1 Bird

1645--1 Wedge-tail ? heading SSE

1650--1 Bird heading SSE

1658--1 Wedge-tail heading ESE

1705--3 Wedge-tail heading SSE

1708--1 Bulwer's Petrel heading NW

1735--Flock

200 plus/minus 10 Wedge-tails
Gould, P. J.
1963—At Sea

8 Sept 20 Terns
  7 Frigatebirds
  1 Ad Red-footed Booby
  9 Imm. Boobies

(Flying fish and sharks in water—shark kill seen (large area of bloody water)

(one Wedge-tail had a red tag)

1830—2 Terns? heading NNW
1833—3 Wedge-tails? heading SSW
1845—1 Wedge-tail heading NNE
1918—1 Tern heard
1926—1 Tern heard

Observations stopped at 1930

September 2, 1963—Pacific Ocean, 5 days out Oahu, Hawaiian Islands

Observation began 0515
0545—1 Wedge-tail heading E
0555—1 Wedge-tail heading E
0636—1 Shearwater sp. heading NW
0645—1 Shearwater sp. heading NW
0645—1 Wedge-tail heading NW
0712—1 Shearwater sp. heading SSE
0727—1 Red-tailed Tropicbird heading E 150-200'
0737—2 Red-tailed Tropicbirds heading SSW 200-250'
0747—1 Shearwater sp.
0753—1 Shearwater sp. heading SSE
0820—1 Bonin Island Petrel heading W
0838—1 Shearwater? Petrel? heading SSE
Gould, F. J.
1963—At Sea

9 Sept 0850—1 Bonin Petrel? heading SSE
0852—1 Bonin Island Petrel? heading SSE
0857—1 Red-tailed Tropicbird SSE heading NW 75°
0942—1 Shearwater
1005—1 Bonin Petrel? heading W hash marks
1016—1 Wedge-tail heading W
1017—1 Wedge-tail heading N
1058—1 Sooty Tern heading NE 20°
1242—1 Bonin Island Petrel NE heading SSE
1254—1 Bonin Island Petrel heading SSE
1308—1 Red-tailed Tropicbird heading NW W on water
1358—1 Wedge-tail? heading NW
1400—1 Red-tailed Tropicbird heading NW 15°
1407—1 Wedge-tail heading N
1408—1 Wedge-tail heading NW
1425—1 Wedge-tail heading NW
1427—1 Petrel? heading SE no harsh marks
1432—1 Petrel? heading ESE as above
1530—1 Petrel? heading SW
1531—1 Bulwer's Petrel heading SSE
1621—1 Petrel heading ENE
1621—1 Petrel heading ENE
1621—1 Red-tailed Tropicbird
1627—1 Bonin Petrel? heading NE
1637 1 Bonin Island Petrel? heading NE
1639—1 Wedge-tail
Gould, P. J.
1963—At Sea

9 Sept 1656—1 Shearwater sp. heading E small, not wedge-tail

1659—3 Bonin Petrel hash marks seen
1659—1 Wedge-tail
1659—1 Red-tailed Tropicbird 150-200'
172—1 Shearwater sp. heading SE

1726—1 Shearwater sp. white below grey above 2 fore wings
1728—1
1730—1 Bird heading SE

1731—1 Bird heading SW
1734—1 Wedge-tail heading N
1737—1 Bird? O S grey above
1738—2 Shearwater sp.
1740—1 Red-tailed Tropicbird heading SW
1742—1 Bonin Island Petrel? heading N no hash mark
1744—2 Bird heading SW
1745—1 Shearwater sp.
1748—1 " " " Pterodroma (PJG)
1753—2 " " "
1754—1 " " "

1756— Bird
1810— Flock

45 plus/minus 5 Wedge-tail

1 Dark-rumped Petrel dark rump seen and harsh marks
1 small Shearwater
5 plus Bonin Petrels?

150 plus/minus 25 Sooty Terns
9 Sept

No fish were visible under flock, most of the terns were high up although a small group was dashing low over the water. Several immature Terns were seen. No actual fishing noted. Shearwater streaming back and forth over large area. No milling around.

Shearwater sp. from 1745-1754 were smaller than Wedge-tails, ( )

with broad blackish borders, no conspicuous white on head, grey on back; dorsal aspect of wing with much two tone dark and grey. Wing beat generally faster than Wedge-tail.

Observations ended 1915.

September 10, 1963—Pacific Ocean, Grid Area

0554—1 Tern heading NE 50°
0638—1 Shearwater sp. heading SE
0643—1 Petrel sp.? heading SE
0657—1 Shearwater sp. heading SE same as 0638
0704—1 Bonin Island Petrel?
0710—1 Bonin Island Petrel?
0728—1 Bonin Island Petrel? heading NW
0814—1 Bonin Island Petrel? heading SE
0819—1 Bonin Island Petrel? heading SE
0831—1 Ruddy Turnstone NW 100° (Peep peep)
0841—1 Bonin Island Petrel? heading SE
0945—6 Sooty Terns
0945—1 Red-tailed Tropicbird heading NW 150°
1003—1 Bonin Island Petrel? heading NW
1011—1 Bonin Island Petrel? heading SE
1017—4 Sooty Tern heading SE 10-20°
1214—1 Shearwater sp. heading SW

1228—1 Bonin Island Petrel? heading NW

1037—1 Tropicbird sp. heading S

1042—1 Bonin Island Petrel? heading SE

1044—1 Wedge-tail heading SE

1104—1 Bonin Petrel? heading SE

1117—1 Bonin Island Petrel heading NW

1124—1 Bird sp. heading SW 40-50'

1125—1 Bird sp heading NE 26-30'

1125—1 School of flying fish

1134—1 Birds sp.

1142—1 Bonin Petrel? heading SE

1147—1 Bonin Island Petrel heading NW

1151—1 Bonin Island Petrel? heading NW

1157—1 Bonin Island Petrel? heading NW

1208—1 Shearwater sp. heading SE

1214—1 Shearwater sp. heading SW

1215—1 Wedge-tail heading NE

1216—1 Wedge-tail heading SE

1223—1 Wedge-tail heading SE

1250—1 Wedge-tail heading SE

1308—1 Wedge-tail heading SE

1317—2 Wedge-tail heading SE

1350—1 Wedge-tail heading SE

1357—1 Bonin Island Petrel? heading NE

1400—1 Red-tailed Tropicbird—heading S from water flew ahead of boat
Gould, P. J.
At Sea—1963

1408—Same bird as above floating on water by boat, collected
1442—1 Wedge-tail heading NE 30'
1511—1 Bonin Petrel? heading SE
1518—1 Bonin Island Petrel? heading W
1521—4 Terns heading NE
1532—2 Wedge-tail heading NW
1533—9 Sooty Tern heading SE
1533—1 Bonin Petrel?
1537—1 Wedge-tail
1537—1 Wedge-tail
1537—1 Wedge-tail
1537—1 Wedge-tail
1552—2 Bonin Petrel? heading SE
1555—5 Terns? SE heading S
1555—1 Shearwater sp. SE heading S
1558—1 Bonin Petrel heading NE
1603—1 Christmas Island Shearwater heading SW
1605—1 Red-tailed Tropicbird
1612—1 Wedge-tail heading NE
1620—1 Bonin Pet?
1621—1 Shearwater sp.
1623—1 Bonin Petrel?
1635—Flock: 6 plus/minus Terns
4 plus/minus Bonin Petrels
1 Dark-rumped Petrel
6 Wedge-tail
1635—(Flock, continued)

1 Shearwater sp.—white below, light brown under wings, back brown,
a little larger than Wedge-tail

1704—1 Wedge-tail

1715—1 Bonin Petrel?

1717—1 Wedge-tail?

1719—11 Sooty Tern heading SW 35–50'

1735—17 plus/minus 5 Sooty Terns heading SW 15–40'

1742—22 Sooty Terns heading SW 15–40'

1746—1 Wedge-tail heading NW

1746—35 plus/minus 5 Sooty Tern heading SW

1748—2 Wedge-tail? heading SW

1756—20 plus/minus 5 Sooty Tern heading SW

1800—1 Bonin Petrel? heading NE

1802—35 plus/minus 5 Sooty Tern heading SW 20–30'

1804—4 plus/minus 1 Sooty Tern heading SW

1806—20 plus/minus Sooty Tern heading SW

1809—1 Wedge-tail heading S

1813—1 Shearwater sp.

1814—1 Wedge-tail heading W

1819—12 Sooty Tern heading SW 30–40'

1828—1 Wedge-tail heading S

1844—8 plus/minus 1 Sooty Tern heading SW 20–30'

1849—3 plus/minus Bird sp.

Observation ended 1902
Gould, P. J.
At Sea—1963

September 11, 1963—observation began 0508

0604—1 Tropicbird heading N 150'
0621—3 Wedge-tail heading W
0640—3 Wedge-tail
0643—1 Bird sp. heading SE
0647—1 Bird sp. heading SE
0650—1 Shearwater sp. heading NW
0818—4 Sooty Tern? heading SE wt-10'
0845—2 Red-tailed Tropicbird 100' heading NE
0905—1 Shearwater-Petrel?
0949—1 Shearwater-Petrel? heading SW
0953—1 Shearwater-Petrel? heading SW
1010—1 Shearwater-Petrel?
1040—1 Wedge-tail heading NE
1054—1 Shearwater-Petrel? heading S
1122—1 Red-tailed Tropicbird heading E 100'
1152—1 Wedge-tail heading SE
1213—2 Christmas Island T heading SE
1410—14 Sooty Terns heading NW
1410—1 Dark-rumped Petrel heading E
1410—3 Wedge-tail NW and E
1443—3 Wedge-tail heading SE
1521—1 Dark-rumped Petrel heading SE
1601—1 Dark-rumped Petrel heading SE
1602—1 Wedge-tail heading E
1610—1 Red-tailed Tropicbird heading N
Gould, P. J.
At Sea—1963

1615—1 plus Sooty Terns

1635—Flock: 15 plus/minus Sooty Tern left immediately

5 plus/minus Dark-rumped Petrel

15 plus/minus Wedge-tail—3 collected

1816—1 Shearwater sp. heading NE

1817—2 Wedge-tail heading NE

1823—1 Wedge-tail ? heading SE

1826—3 Dark-rumped Petrel heading NW

1837—1 Dark-rumped Petrel heading SW

1847—1 Wedge-tail heading NE

observations ended at 1908.

September 12, 1963

observations began 0502—

0510—2 plus Sooty Tern

0507—1 Wedge-tail heading NE

0615—1 Wedge-tail heading S

0620—1 Frigate-bird heading SW ? or imm.

0653—3 Red-tailed Tropicbird heading NE 100-150'

0734—1 Red-tailed Tropicbird collected 50'

0802—1 Red-tailed Tropicbird heading W 75'

0809—1 Wedge-tail heading N

0820—1 White-tailed Tropicbird heading S 75' collected

0844—1 Wedge-tail heading SE

0847—1 Wedge-tail heading ESE

0822—1 Bonin Petrel heading N

0951
12 Sept 0951--1 Wedge-tail heading E
0955--1 Wedge-tail heading S
1006--1 Wedge-tail heading E
1011--1 Red-tailed Tropicbird heading NE 100'
1023--1 Red-tailed Tropicbird heading NW on water same as above?
1045--1 Red-tailed Tropicbird heading S on water
1112--2 Wedge-tail heading SSE both settled on water for few seconds, then took off
1139--1 Wedge-tail heading SE
1410--1 Wedge-tail heading NE
1418--Flying fish large school
1510--1 Dark-rumped Petrel SE heading NE
1511--1 Wedge-tail heading NE?
1548--2 Bonin Petrel
1622--2 Bonin Petrel? heading NE
1721--1 Red-tailed Tropicbird heading N -- defecated from 100' and again from 150'
1736--1 Red-tailed Tropicbird heading SE same as above?
1747--1 Red-tailed Tropicbird same as above?
1800--1 Red-tailed Tropicbird same as above?
1811--6 Terns? heading SW
1814--1 Wedge-tail heading N

Observations ended 1900

September 13, 1963

Observation began 0545
13 Sept 0602--1 Wedge-tail

0606--2 Wedge-tail
0610--1 Wedge-tail
0610--1 Wedge-tail
0613--1 Wedge-tail
0614--1 Wedge-tail

0632--2 Wedge-tail flying together, then
1 Dark-rumped Petrel flew alone

0705--1 Wedge-tail
0707--2 Wedge-tail heading SE joined by the one above
0710--2 Wedge-tail
0720--1 Shearwater
0721--1 Bonin Petrel
0735--1 Wedge-tail heading NE
0759--1 Shearwater heading NNE
0805--1 Dark-rumped Petrel? heading W
0855--1 Bird
0902--1 Wedge-tail heading NW
0906--2 Wedge-tail heading S
0907--7 plus Wedge-tail heading NE all these birds probably heading for flock

0907--2 Bonin Petrel heading NE
0911--1 Wedge-tail heading NE
0913--4 Wedge-tail heading NE
0923--1 Wedge-tail heading NNE
0927--1 Bulwer's Petrel heading N
0929--Flying Fish school
13 Sept 0930--1 Bird

0937--Flock: 1 Bulwer's Petrel

150 plus/minus 10 Wedge-tail 6 collected

5 Dark-rumped Petrel

15 plus/minus Sooty Tern

1 Bonin Petrel (1 collected)

1025--1 Red-tailed Tropicbird

1145--1 Wedge-tailed Shearwater

1154--1 Wedge-tailed Shearwater

1208--1 Wedge-tailed Shearwater

1220--7 Wedge-tail

35 plus/minus 5 Sooty Tern

1221--1 Red-tailed Tropicbird

1223--1 Wedge-tail heading NE

1228--1 Wedge-tail heading E

1310--1 Tropicbird

1511--1 Bulwer's Petrel ?

1524--1 Wedge-tail heading E

1529--1 Bonin Petrel heading SW

1544--1 Golden Plover heading NE

1548--1 Wedge-tail heading W

1550--2 Wedge-tail

1607--2 Dark-rumped Petrel? heading SSW seen chasing flying fish

1624--1 Dark-rumped Petrel heading S

1637--1 Shearwater heading SE

1643--1 Wedge-tail heading SE

1654--1 Pink-footed Shearwater? heading N

feeding when first observed and specimens had squid in stomachs followed until 1100

side

wedge tail and back color

wing tips brown
13 Sept 1720—1 Bonin Petrel?
1734—1 Bulwer's Petrel
1745—1 Bonin Petrel heading NW
1750—1 Bonin Petrel? heading SW
1812—1 Red-tailed Tropicbird heading SW
1828—1 Wedge-tail
observation stopped 1900

September 14, 1963—Pacific Ocean, Grid Area
observations began 0530
0540—1 Sooty Tern heading NE 100°
0601—2 Wedge-tail? heading SW
0601—1 Sooty Tern heading NE, then SW 30°
0635—1 Red-tailed Tropicbird heading NE 100°
0643—1 Wedge-tail heading SE
0704—1 Red-tailed Tropicbird heading SW 60°
0726—1 Wedge-tail heading E
0730—1 Wedge-tail heading SW
0737—1 Wedge-tail? heading S
0746—1 Wedge-tail heading NE
0754—1 Wedge-tail heading W
0800—6 Sooty Tern heading E high
0906—1 Bonin Petrel? heading NW
0917—1 Bonin Petrel? heading NNE
0930—1 Red-tailed Tropicbird heading NW
0931—1 Wedge-tail heading SE
14 Sept 0934—2 Wedge-tail heading SE
1000—1 Wedge-tail heading SE
1006—2 Sooty Tern heading S 40'
1011—3 Sooty Tern heading W
1011—1 Sooty Tern heading S
1222—1 Wedge-tail heading S
1730—1 Wedge-tail heading NE
1333—1 Wedge-tail
1340—1 Wedge-tail heading SE
1504—1 Wedge-tail heading SSE
1531—1 Wedge-tail heading SW
1603—1 Bird
1605—1 Wedge-tail heading S
1629—1 Red-tailed Tropicbird heading SE 100'
1704—1 Dark-rumped Petrel heading SE
1730—2 Wedge-tail heading SE
1746—1 Bulwer's Petrel heading SE
1802—3 Wedge-tail heading NE
1802—3 Wedge-tail heading NE
1802—2 Sooty Tern heading SSE
0818—2 Red-tailed Tropicbird 150'
1835—1 Wedge-tail heading SE
1840—1 Wedge-tail f heading SE
1915—1 Tern heard calling
observations stopped at 1915
At Sea--1963

September 15, 1963--Pacific Ocean, rid Area
observations began 0530--
0555--1 Tern heading NNW
0636--1 Red-tailed Tropicbird heading NE ad.
0639--1 Tern
0649--3 Wedge-tail
0705--Flock--number increased from 14 and 3 to final total quickly
   25 plus/minus 1 Wedge-tail flying fish beneath birds
   5 Sooty Tern
0716--1 Bonin Petrel extreme edge of above flock
0814--1 Wedge-tail heading NE
0817--1 Wedge-tail heading NNW
0837--1 Wedge-tail heading NW
0850--1 Wedge-tail heading SE
0850--1 Red-tailed Tropicbird heading ENE
0904--7 Wedge-tail heading N 1 dark phase--on water?
1018--1 Wedge-tail heading ENE
1045--1 Wedge-tail heading SE
1125--Flock--on horizon we could see:
   2 Frigatebirds
   100 plus Sooty Terns

The following were either the birds in the fringe of a widely spread flock
or part of a close flock that was breaking up.

   1 Sooty Shearwater
   50 plus Sooty Tern
15 Sept 25 plus/minus 5 Wedge-tails—3 collected—squid in stomachs

2 plus Dark-rumped Petrel

2 Bulwer's Petrel

these were between 1125-1245.

1335—1 Bulwer's Petrel heading NW

1350—1 Wedge-tail heading NNW

1357—1 Mallard Duck heading W 75' (Fly and Fleet)

1445—1 Wedge-tail

1445—1 Wedge-tail

1459—12 Wedge-tail

1459—2 Dark-rumped Petrel at extreme edge back, not with flock

1507—1 Wedge-tail heading NE

1517—1 Wedge-tail

1537—1 Bonin Petrel

1530—1 Wedge-tail

1535—1 Wedge-tail heading NNE

1539—2 Bonin Petrel one on water

1545—1 Wedge-tail heading NNE

1600—Flock

50 plus Wedge-tail

5 plus Dark-rumped Petrel

175 plus Sooty Tern

1 Red-tailed Tropicbird

1710 on way again

1720—1 Wedge-tail heading NE

1804—7 Sooty Tern he ading NE 100' 1 collected
15 Sept 1963—1 Wedge-tail heading NE
1841—7 Sooty Tern heading SSW
1852—1 Shearwater heading S
Observations ended 1900

September 16, 1963—Pacific Ocean, Grid Area
observation began 0530
0542—1 Sooty Tern calling
0600—1 Shearwater
0622—1 Bulwer's Petrel heading SE
0626—1 Wedge-tail heading S
0645—3 Sooty Tern heading NE 60'
0700—1 White-tailed Tropicbird 60-100'
0700—2 Sooty Tern heading SE
0720—5 plus/minus Wedge-tail heading S
0726—1 Bonin Island Petrel? heading SW
0800—3 Red-tailed Tropicbird apparently diving for flying fish
   1 White-tailed Tropicbird
   fish in beak as 1 rose from water
0805—1 Wedge-tail heading N
0805—1 Wedge-tail heading SW
0817—2 Tropicbirds heading NE 10-20'
0844—1 Bonin Petrel? heading W
0916—1 Wedge-tail heading NW
0917—2 Wedge-tail heading S
0950—1 Wedge-tail heading S
1018—2 Bulwer's Petrel heading S

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16 Sept

1031--1 Bulwer's Petrel heading NW
1135--1 Shearwater
1137--1 Shearwater
1217--4 Sooty Terns
1224--1 Wedge-tail
1226--1 Bulwer's Petrel?
1345--1 Bulwer's Petrel? heading W
1346--1 Wedge-tail heading W
1443--1 Bonin Petrel? heading NW
1445--1 Wedge-tail heading NE
1446--1 Bulwer's Petrel
1447--1 Wedge-tail
1451--1 Wedge-tail
1458--1 Bird
1505--1 Bonin Petrel?
1512--1 Wedge-tail heading NE
1516--1 Wedge-tail heading NE
1517--13 Wedge-tail heading SE
1522--2 Wedge-tail heading SE
1525--1 Wedge-tail heading SW
1527--2 Wedge-tail
1532--1 Bonin Petrel?
1541--1 Wedge-tail
1559--1 Bonin Petrel?
1607--1 Bird
16 Sept 1624—1 Bonin Petrel?

1639—1 Tropicbird?

1642—1 Bonin Petrel heading NNW

1647—1 Ruddy Turnstone heading NNW

1700—1 Bonin Petrel heading W

1724—1 Wedge-tail heading S

1726—1 Bulwer's heading N

1728—1 Dark-rumped Petrel heading N

1737—Pilot whales 5 plus heading SSW

1745—1 Dark-rumped Petrel heading N

1745—1 Red-tailed Tropicbird heading NSE 100'

1750—1 Wedge-tail heading E

1757—1 Wedge-tail in fringe of rain squall

1757—1 Dark-rumped Petrel in fringe of rain squall

1758—1 Wedge-tail heading E

1819—2 Wedge-tail

1 Dark-rumped Petrel heading N

1834—1 Wedge-tail heading E

Observations ended 1900

September 17, 1963—Pacific Ocean, just NE of Grid Area

Observation began 0540

0550—1 White-tailed Tropicbird heading SW 75'

0603—1 Sooty Tern heading S 40'

0608—2 Wedge-tail heading E

0608—1 Wedge-tail heading E
At Sea—1963

17 Sept 0611—1 Wedge-tail heading E
0614—1 Sooty Tern heading E 60'
0618—2 Sooty Tern ⊳ E 45'
4 Wedge-tail heading E
0635—1 Wedge-tail heading S
0638—7 Sooty Tern heading E bow
2 Wedge-tail heading E
0643—4 Wedge-tail heading E
0643—2 Wedge-tail heading E
0650—Flock: 20 plus/minus Sooty Tern
40 plus/minus Shearwaters
2 Frigates?
0657—1 Wedge-tail heading E
0718—1 Wedge-tail heading S
0732—1 Wedge-tail heading N
0740—1 Wedge-tail heading E
0745—1 Wedge-tail heading N
0746—1 Wedge-tail heading N
0747—1 Wedge-tail heading N
0804—4 Sooty Tern heading N 30'
0806—2 Red-footed Booby heading E 100'
0812—1 Wedge-tail
0826—25 plus/minus Sooty Terns ⊳ ESE 0-75'
0910—1 Bristle-thighed Curlew collected
0933—1 Brown Booby heading SE had red tag
0947—1 Bird sp. not shearwater
Quid. P. J.

At Sea--1963

12 Sept

0952--1 Christmas Island Shearwater?

1000--7 plus/minus Boobies (all white)

30 plus/minus 5 Sooty Tern

1 Frigatebird

1011--2 Wedge-tail

1015--10 plus Red-footed Booby

9 Brown Booby 1 red tag

9 Frigatebirds

40 plus/minus 5 Wedge-tails 2 without red tags

1022--30 plus Wedge-tails

1030--3 Frigatebirds 1 collected

1050--25 plus/minus 5 Terns

1 Frigatebird

1120--1 Bonin Petrel heading S

1218--1 Shearwater sp. heading S

1222--1 Wedge-tail ? heading SE

1252--1 Shearwater sp.

1300--1 Shearwater sp.

1355--2 Wedge-tail heading ENE

1400--4 Wedge-tail heading ENE

1424--1 Red-tailed Tropicbird 45'

1444--1 Wedge-tail heading S

1525--1 Wedge-tail heading E

1602--1 Shearwater sp. heading S

1609--1 Wedge-tail heading S

1613--1 Red-tailed Tropicbird heading S on water
17 Sept
1637—1 Tropicbird in water
1646—1 Bonin Petrel? heading S
1704—1 Wedge-tail heading S
1705—1 Wedge-tail heading S
1710—1 Bulwer's Petrel
1712—1 Wedge-tail heading S
1722—1 Wedge-tail heading SW
1723—1 Red-tailed Tropicbird
1729—2 Wedge-tail heading SE
1735—1 Wedge-tail heading SE
1735—2 Wedge-tail heading SE
1739—1 Wedge-tail heading N
1802—1 Wedge-tail heading
1805—1 Bonin Petrel
1812—2 Wedge-tail
observation ended 1845

September 18, 1963—Pacific Ocean, Between Johnston and Oahu
observation began 0530
0529—1 Wedge-tail ENE
0541—2 Wedge-tail NW
0543—3 Wedge-tail NNE
0545—1 Tropicbird E 200'
0546—1 Wedge-tail?
0547—1 Wedge-tail
0548—1 Wedge-tail
<table>
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<th>Event</th>
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<tr>
<td>0549</td>
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<td>Wedge-tail</td>
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<td>0553</td>
<td>Wedge-tail heading NE</td>
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<td>0554</td>
<td>Wedge-tail heading ESE</td>
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<td>0555</td>
<td>Wedge-tail heading NW</td>
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<td>Wedge-tail heading NE</td>
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<td>Wedge-tail heading SE</td>
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<td>0623</td>
<td>Wedge-tail heading N</td>
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<td>Wedge-tail heading NNE</td>
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<td>0629</td>
<td>Wedge-tail in rain squall</td>
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<tr>
<td>0634</td>
<td>Bonin Petrel</td>
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<td>0635</td>
<td>Wedge-tail heading NN E</td>
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<td>0635</td>
<td>Petrel?</td>
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<td>Dark-rumped Petrel? heading NNE</td>
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<td>0645</td>
<td>Dark-rumped Petrel? heading ESE</td>
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</tbody>
</table>
Gould, P. J.
1963—At Sea

18 Sept 0658—1 Tropicbird heading NW 200'
0722—1 Wedge-tail heading SSE
0742—7 Wedge-tail
0743—1 Wedge-tail
0750—1 Bulwer's Petrel heading NNE
0830—1 Bulwer's Petrel heading ESE
0853—1 Bulwer's Petrel
0908—1 White-tailed Tropicbird
0924—3 Bulwer's Petrel? heading S
0923—1 Wedge-tail?
1017—2 small black Shearwater or Bulwer's Petrel heading SE
1029—1 Bird
1029—1 Frigatebird 150 plus
1040—1 Shearwater
1040—1 Shearwater
1045—Flock: 40 plus/minus 5 Wedge-tail
   1 Frigatebird
   6 Sooty Tern
   3 Bonin Petrel?
1052—1 Wedge-tail? dark ph?
1112—1 Bonin Petrel
1145—2 Wedge-tail
1151—1 Wedge-tail heading SSE
1153—1 Wedge-tail heading NNE
1156—1 Wedge-tail heading NNE
1158—1 Wedge-tail heading NNE
1200—1 Wedge-tail
18 Sept 1201--1 Wedge-tail heading NNE
1203--1 Wedge-tail heading NNE
1206--1 Bonin Petrel
1207--3 Wedge-tail heading NNE on water
1210--2 Wedge-tail
1211--1 Bonin Petrel heading NNW
1250--1 Wedge-tail
1252--1 Bonin Petrel ?
1253--1 Bonin Petrel        flew together for about 5 seconds
1253--1 Bulwer's Petrel
1322--1 Bulwer's Petrel heading NNE
1323--1 Wedge-tail
1323--1 Shearwater-Petrel?
1325--1 Bonin Petrel ? heading NNW
1340--1 Red-tailed Tropicbird on water
1350--Flock: 1 Masked Booby ad.
              1 Frigatebird ad f
              50 plus/minus 10 Sooty Tern some Imm
              10 plus/minus Wedge-tail
              20 plus/minus Bonin Petrel
1421--1 Wedge-tail heading Se
1447--1 Bonin Petrel heading NW
1520--2 Wedge-tail heading NW
1536--1 Bonin Petrel heading NW
1537--1 Wedge-tail heading N
1606--1 Wedge-tail heading N
Gould, F. J.

At Sea--1963

18 Sept 1614--1 Bonin Petrel heading NW

1627--1 Bulwer's Petrel? heading NE

1710--1 Shearwater heading SE

1712--1 Wedge-tail ? heading SE

1719--1 Bird

1723--1 Wedge-tail heading N

1725--1 Wedge-tail heading NE

1729--1 Wedge-tail heading NNW

1735--1 Wedge-tail ? heading NNE

1739--1 Wedge-tail

1739--2 Wedge-tail

1747--2 Shearwater heading NE

1747--1 Wedge-tail heading NE

1751--1 Golden Plover ? heading NW

1755--1 Wedge-tail ? heading N

1756--1 Frigatebird 300 plus

1800--1 Wedge-tail heading SE

1815--1 Golden Plover

Observations stopped 1830

September 19, 1963--Pacific Ocean between Johnston and Oahu

Time change at 2400 Sept. 18, set watch ahead 1 hour--observations began 0615

0640--1 Wedge-tail? heading N

0647--1 Wedge-tail ? heading SSE

0649--1 Shearwater

0654--1 Wedge-tail? heading NW
Gould, P. J.
At Sea—1963

19 Sept 0657—1 Wedge-tail heading SSE
  0729—1 Wedge-tail
  0732—2 Wedge-tail
  0736—1 Shearwater
  0811—3 Wedge-tail
  0829—1 Wedge-tail heading SSE
  0829—1 Wedge-tail heading SSW
  0830—1 Wedge-tail heading NE
  0834—2 Wedge-tail
  0835—1 Bonin Petrel? heading NNE
  0845—0935—No observation due to testing on ship (0858 and 0913 1 wedge-tail each)
  0942—1 Wedge-tail heading SE
  0942—2 Wedge-tail heading SE
  0957—12 Wedge-tail heading SE
  1007—1 Red-footed Booby heading NE
  1027—1 Bulwer's Petrel heading SE
  1029—2 Wedge-tail heading S
  1030—1 Wedge-tail heading S
  1032—1 Wedge-tail
  1032—1 Black Shearwater heading S
  1035—1 Wedge-tail heading SE
  1037—1 Wedge-tail heading SE
  1041—2 Wedge-tail heading NE
  1116—1 Wedge-tail heading NW
  1132—1 Bulwer's Petrel heading NE
19 Sept 1142—1 Bulwer's Petrel heading SE
1207—1 Wedge-tail heading SE
1210—1 Shearwater heading SE
1222—1 Wedge-tail heading SSE  actively feeding but no fish observed
1257—Flock: 22 plus/minus 2 Wedge-tail
2 Sooty Tern  actively feeding but no fish observed
1 Fairy Tern
1310—1 Bonin Petrel heading W
1317—1 Wedge-tail heading NW
1321—1 Wedge-tail heading NE
1404—1 Wedge-tail heading NE
1430—1 Shearwater
1433—1 Red-tailed Tropicbird heading NE ad 20-60'
1438—1 Bird
1440—1 Wedge-tail heading SE
1506—1 Golden Plover heading SE 30'
1513—1 Wedge-tail Dk. phase heading SE
1518— Golden Plover (same as above?)
1521—1 Tropicbird 20-80'
1521—1 Wedge-tail
1519—1 Bonin Petrel heading S
1544—1 Bulwer's Petrel
1545—Flock: 25 plus/minus 10 Wedge-tail

20 plus Sooty Tern
5 plus Booby
2 plus Dark-rumped?
Gould, F. J.
At Sea—1963

19 Sept

10 plus birds

1549—1 Masked Booby
1550—1 Dark-rumped?
1555—1 Bulwer's Petrel heading W
1602—1 Bonin Petrel heading N
1609—1 Bonin Petrel heading N
1612—1 Bonin Petrel
1616—2 Wedge-tail? heading SE
1619—1 Golden Plover heading NNE 50°
1621—1 Bonin Petrel heading NW
1622—2 Bulwer's Petrel heading ESE
1625—1 Wedge-tail heading NNE
1634—1 Wedge-tail heading NNE
1653—1 Bonin Petrel?
1700—2 Tropicbird heading N
1726—1 Bonin Petrel
1734—1 Wedge-tail heading E
1740—1 Wedge-tail heading N
1757—1 Bonin Petrel heading NW
1800—4 Bonin Petrel? heading S
1802—1 Bonin Petrel?
1808—1 Wedge-tail heading N
1814—1 Bonin Petrel heading S
1820—1 Bonin Petrel? heading S
1824—1 Wedge-tail heading N
1847—1 Shearwater-Petrel heading S

Observations ended 1900
At Sea

September 20, 1963—Pacific Ocean, near Oahu

Observations began 0610

0620—1 Shearwater heading S

0632—1 Bird heading SE

0640—1 Wedge-tail heading SE

0641—1 Bird heading NW constant slow wingbeat low

0642—1 Bird heading SE constant slow wingbeat low

0650—1 Wedge-tail heading S

0659—1 Bird heading W as at 0641

0700—1 Bird heading W as at 0641

0705—1 Wedge-tail heading S

0720—1 Shearwater heading S

0740—2 Wedge-tail

0741—37 Wedge-tail scattered individuals steadily passing by behind ship

No more than four in any one view

to 0754

0754—1 Wedge-tail

0802—3 Wedge-tail heading S

0806—1 Wedge-tail heading E

0806—1 Wedge-tail heading SW

0808—1 Shearwater heading SW

0812—3 Wedge-tail heading SW

0814—1 Wedge-tail heading SW

0819—4 Wedge-tail heading SW

0820—1 Wedge-tail heading SW

0820—1 Shearwater
20 Sept 0827--2 Ruddy Turnstone heading SW 10°
0830--1 Wedge-tail heading WSW
0832--3 Wedge-tail heading SW
0849--1 Wedge-tail heading SW
0850--1 Bulwer's Petrel heading SW
0855--1 Wedge-tail heading N
0859--15 Wedge-tail
0907--700 plus/minus Wedge-tail about 1 mile in length and 150 yds. wide
0907--1 Booby heading SW
0911--2 Wedge-tail
0920--1 Wedge-tail heading ENE
0921--1 Wedge-tail heading ENE
0922--2 Wedge-tail heading ENE
0923--1 Wedge-tail heading N
0924--1 Wedge-tail heading N
0926--1 Wedge-tail heading N
0930--4 Wedge-tail heading N
0931--1 Wedge-tail heading N
0932--3 Wedge-tail heading E
0940--1 Wedge-tail heading SE
0941--1 Wedge-tail heading ESE
0948--2 Wedge-tail heading E
0951--6 Wedge-tail heading ENE
0954--2 Wedge-tail heading ENE
0956--1 Wedge-tail heading ENE
1009--1 Wedge-tail heading ENE
Gould, P. J.
1963--At Sea

20 Sept
1011--1 Wedge-tail heading ENE
1014--1 Wedge-tail heading ENE
1018--1 Wedge-tail heading E
1020--2 Wedge-tail heading NE
1021--1 Wedge-tail heading ENE
1021--1 Wedge-tail heading N
1022--3 Wedge-tail heading ENE
1025--4 Wedge-tail heading W
1027--3 Wedge-tail heading ENE
1030--Flock: 2 Red-footed Booby

5 Shearwater all dark with paler (yellow?) bill
1033--2 Wedge-tail heading ENE
1034--1 Wedge-tail heading NNW
1038--2 Wedge-tail heading ENE
1040--3 Wedge-tail heading ENE
1046--3 Wedge-tail heading NE
1049--3 Wedge-tail heading NE
1052--4 Wedge-tail heading NE
1100--4 Wedge-tail heading N
1102--2 Wedge-tail heading N
1104--3 Wedge-tail heading E
1106--2 Wedge-tail heading E
1108--1 Wedge-tail
1110--1 Wedge-tail heading N
1112--1 Wedge-tail heading NE
1113--1 Wedge-tail heading NE
1117--1 Wedge-tail heading NE
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<td>Wedge-tail heading ENE</td>
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<td>1121</td>
<td>Wedge-tail</td>
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<td>1122</td>
<td>Flock: 25 plus/minus Wedge-tail</td>
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<td></td>
<td>2 Red-footed Booby</td>
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<td>1 Brown or ( ) Booby</td>
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<td>1130</td>
<td>Wedge-tail</td>
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<tr>
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<td>Flock: 500 plus/minus Wedge-tail</td>
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<td>1 plus Manx Shearwater</td>
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<tr>
<td></td>
<td>5 Red-footed Boobies</td>
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<tr>
<td></td>
<td>1 Noddy Tern</td>
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<td>1142</td>
<td>Wedge-tail heading SSE</td>
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<td>1143</td>
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<td>1145</td>
<td>Wedge-tail heading SSE</td>
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<td>1207</td>
<td>Wedge-tail ? heading S</td>
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<td>1211</td>
<td>Frigatebird heading SE</td>
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<td>1214</td>
<td>Christmas Island Shearwater heading N</td>
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<td>1215</td>
<td>Manx Shearwater?</td>
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Observations ended 1220.
October 1, 1963—Pearl Harbor, Oahu, Hawaiian Islands

Today begins the third in a proposed series of five grid survey trips. Smithsonian field workers include myself plus Dr. Charles Ely, Robert Fleet, and Warren King. Also aboard are two graduate students from the University of Hawaii (working under Dr. Doly). (Stanley Oyama and David Au.) Mr. Davis from SHAD helping with observation.

We reached the entrance to Pearl Harbor at about 1045.

1101—1 Noddy Tern heading SE 15-20'
1103—1 Frigatebird
1104—1 Frigatebird
1104—1 Frigatebird
1107—1 Noddy Tern? heading E
1108—2 Tropicbirds
1110—1 Tern? heading W
1112—1 Noddy Tern heading W
1112—1 Noddy Tern heading E
1123—1 Noddy Tern heading E
1116—1 Frigatebird heading W
1125—2 Bulwer's Petrel? heading E
1139—1 Shearwater heading E
1130—2 Noddy Tern heading E
1133—1 Jaeger heading E
1146—1 Pomarine Jaeger same as above? sat on water 50 yds from ship
1146—1 Frigatebird heading W
1151—1 Wedge-tail heading SW
1 Oct
1152--1 Frigatebird heading W
1205--1 Wedge-tail heading SW
1205--1 Wedge-tail heading SW
1205--1 Wedge-tail heading SW
1205--1 Frigatebird heading N
1205--2 Noddy Tern heading S
1207--1 Wedge-tail heading E
1207--1 Wedge-tail heading E
1210--1 Wedge-tail heading S
1210--1 Wedge-tail heading S
1210--1 Pomarine Jaeger heading S
1215--1 New Zealand Shearwater? heading W
1220--1 Wedge-tail heading W
1224--1 Wedge-tail heading W
1225--1 Bird sp.
1235--1 Jaeger heading NE
1240--1 Wedge-tail ? heading SW
1258--1 Wedge-tail? dark phase
1258--1 small Shearwater dark above, light below
1258--1 small Shearwater dark above, light below
1301--1 Wedge-tail heading SE
1313--2 White-tailed Tropicbird heading S on water
1342--1 Noddy Tern heading E
1350--1 White bird heading E 50'
1429--2 Wedge-tail heading E
1439--1 Wedge-tail heading E
Gould, P. J.
At Sea—1963

1 Oct

1503—1 Wedge-tail heading SE in water
1527—1 Bonin Petrel heading W on water
1551—1 Wedge-tail heading SE
1610—1 Dark-rumped Petrel heading SW, dark neck
1621—Flock—actively feeding—no flying fish

70 plus Wedge-tail heading E -- saw 2 squabble in water
1 Bonin Petrel
1 Sooty Shearwater
1 Dark-rumped Petrel?

1626—2 White-tailed Tropicbird heading S
1629—1 Dark-rumped Petrel? heading S
1645—1 Dark-rumped Petrel?
1645—1 White-tailed Tropicbird heading S
1655—1 Bird sp. heading SE -- possibly dark phase Jaeger
1702—1 Dark-rumped Petrel heading SW
1702—1 Pomarine Jaeger heading SW 30° following above
1710—1 Pink-footed Shearwater? heading SE
1715—1 Booby (not Brown) Imm.

1 Petrel, booby following Petrel closely all the time

1734—1 Petrel heading W
1743—2 Noddy Tern heading W
1752—1 Wedge-tail heading S
1756—2 Noddy Tern heading W
1808—1 Shearwater sp. heading SSE
1820—5 Japanese White-eyes heading NE, 2 landed on ship
1830—1 Wedge-tail heading SW
1 Oct 1836—1 Tropicbird heading S
observation ended 1905

October 2, 1963—2nd day out Oahu, Pacific Ocean
observation began 0530
0606—2 Shearwater-Petrel heading S
0617—1 Booby ? heading S on water, then flew
0638—1 Wedge-tail heading W
0647—1 Wedge-tail
0656—1 Dark-rumped Petrel? heading W
0659—4 White-tailed Tropicbird (2 pairs together)
0700—1 Wedge-tail heading NW
0720—1 Bonin Petrel ? heading SSE
0721—1 Bonin Petrel? heading S
0730—1 Wedge-tail heading N
0734—1 Shearwater heading S
0734—1 Wedge-tail heading S
0744—Flock: 2 Sooty Terns
5 plus/minus Noddy Tern?
15 plus Wedge-tail at least 1 dark phase
2 plus Bonin Petrel?
0745—1 Booby (Masked? ) heading S 50'
0748—1 Wedge-tail heading S
0750—1 Whale pointed snout, dorsal fin prominent
0750—1 Bonin Petrel? heading SE
0803—1 Wedge-tail heading NW
0817—1 Bonin Petrel heading SE
Oct 2
0809—2 Wedge-tail heading SE
0810—2 Wedge-tail
0814—1 Wedge-tail heading W
0821—1 Shearwater heading W
0831—1 Wedge-tail heading W
0904—4 White-tailed Tropicbirds

1 Red-tailed Tropicbird together

0906—3 Bonin Petrel

0910—Flock: 50 plus Wedge-tail

10 plus Bonin Petrel

1 White-necked Petrel

2 Sooty Tern

0918—1 Tropicbird

0920—1 Wedge-tail

0929—Flock: 5 Bonin Petrels

0937—3 White-tailed Tropicbird heading S

0943—Flock: 4 White-tailed Tropicbird

3 Red-tailed Tropicbird

0954—1 Wedge-tail heading W

0955—1 Wedge-tail heading W

0957—1 Wedge-tail heading W

1000—Flock—flying fish were under flock, pool of blood in water

65 plus Wedge-tail during rain squall

3 plus Bonin Petrel edge of rain squall

3 Imm. Booby

2 Sooty Tern heading W
2 Oct

1015—Flock: 5 White-tailed Tropicbird heading ENE 150-200 yds

1050—1 Wedge-tail heading SE

1105—1 Shearwater—black cap, brown back, Wedge-tail size or smaller

1116—1 White-tailed Tropicbird 150'

1124—1 Bonin Petrel

1125—1 White-tailed Tropicbird

1142—1 Wedge-tail heading S

1148—1 Wedge-tail heading E

1155—7 Wedge-tail not feeding but a flock

1200—1 Petrel? pale dirty grayish below, somewhat darker gray above, size of Noddy, fligh $\frac{3}{4}$ Noddy and $\frac{1}{4}$ Shearwater

1207—1 Bonin Petrel Heading W

1208—1 Wedge-tail heading E

1209—1 Bonin Petrel heading E

1213—1 Petrel

1219—1 Bonin Petrel heading E

1244—1 Wedge-tail heading E

1307—1 Wedge-tail heading NE

1314—2 Wedge-tail heading S

1324—2 Wedge-tail heading S

1325—1 Manx Shearwater heading S

1332—1 Frigatebird heading W

1338—1 Shearwater heading S

1430—2 Red-tailed Tropicbird heading S

1450—3 Wedge-tail heading E

1450—1 Shearwater-Petrel heading S
Gould, P. J.
At Sea--1963

2 Oct
1505--20 plus small Passerines apparently not tired 100' "White-eyes"?
1516--2 Wedge-tail heading SW
1528--1 Wedge-tail heading S
1540--40 small Passerines ESE 100'
1600--1 Wedge-tail S
1607--Flock: 2 Sooty Terns
   2 Large Petrels
   4 Wedge-tails
1630--1 White-tailed Tropicbird heading SE 2-300'
1702--2 Large Petrel heading E
1711--1 Wedge-tail heading W
1716--1 Wedge-tail heading E
1720--1 Passerine Bird heading SW 50'
1738--3 Wedge-tail heading NW
1747--1 Red-footed Booby heading N
1820--1 White-eye ♂
1828--1 Bonin Petrel heading E

observation stopped 1910

October 3, 1963--3rd day out Oahu, Pacific Ocean heading WSW
(observation began 0601)
0610--1 Sooty Tern
0650--1 Bulwer's Petrel E
0657--2 Wedge-tail S
0704--2 Red-tailed Tropicbirds 50-75'
0720--1 White-necked Petrel
0720--1 Shearwater-Petrel
### 3 Oct

<table>
<thead>
<tr>
<th>Time</th>
<th>Species</th>
<th>Direction</th>
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<td>WNW</td>
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<tr>
<td>0730-1</td>
<td>Bonin Petrel</td>
<td>WNW</td>
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<td>0740-1</td>
<td>Pterodroma</td>
<td>WNW</td>
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<td>0755-1</td>
<td>Pterodroma</td>
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<td>0756-1</td>
<td>Wedge-tail</td>
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<td>0757-1</td>
<td>Sooty Shearwater</td>
<td>ESE</td>
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<td>0806-2</td>
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<tr>
<td>0807-1</td>
<td>Red-tailed Tropicbird</td>
<td>WSW on water</td>
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<td>Bonin Petrel</td>
<td>WSW</td>
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<td>0812-2</td>
<td>Flock: 25 plus Shearwaters and Petrels</td>
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<td>2 Boobies (Masked or Red-footed)</td>
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<td>Bonin Petrel</td>
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<td>Pterodroma heading</td>
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<tr>
<td></td>
<td>2 Wedge-tails heading</td>
<td>E</td>
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At Sea--1963

3 Oct

0926--1 Shearwater-Petrel heading E
0930--3 Shearwater-Petrel heading W
0940--1 White-necked Petrel heading W
0950--Flock--about 1 mile off port
  10 Terns
  8 Shearwaters
  2 Boobies?
0958--1 Wedge-tail heading E
1002--1 Bird heading E
1007--1 Shearwater-Petrel heading W
1012--1 Shearwater-Petrel heading E
1015--1 Bonin Petrel heading E
1020--1 Shearwater-Petrel heading E
1022--Flock: 1 Booby?
  3 Wedge-tail
  3 Shearwater-Petrels
1023--School of Dolphins
1025--2 Bonin Petrel Heading E
1030--1 Bulwer's Petrel heading W
1032--1 Bonin Petrel heading E
1038--1 Bonin Petrel heading E
1043--1 Bonin Petrel heading W
1047--1 Pterodroma heading E
1051--1 Bonin Petrel heading W
1102--1 New Zealand Shearwater ? heading W
1103--1 Bonin Petrel heading E
3 Oct 1130—2 Shearwater-Petrels heading W
1136—1 Christmas Island Shearwater? heading W
1235—1 Sulver's Petrel SE
1322—1 New Zealand Shearwater? NW
1408—1 Wedge-tail? N
1416—1 New Zealand Shearwater? NW
1450—1 Pterodroma
1509—1 Shearwater
1530—2 Wedge-tail
1604—1 Shearwater very white below, solid dusky gray above, rapid wing beat
1604—1 Tropicbird
1607—2 Wedge-tail NNE
1630—2 Bonin Petrel SSE
1651—1 Wedge-tail NW
1700—1 Pterodroma
1706—1 Wedge-tail NNW
1709—1 Pterodroma
1717—1 Dark-rumped Petrel
1742—1 Tropicbird SW
1742—2 Drk-rumped Petrels SSE
1742—1 Sooty Tern NW
1745—1 Wedge-tail NNE
1752—1 Pterodroma ENE
1802—1 Pterodroma WSW
1823—1 Bird SE
1842—2 Pterodroma SE
October 4, 1963—Pacific Ocean, 4th day out Oahu heading WSW ↑

Observations began 0650

0655—1 Wedge-tail ↑

0690—1 Wedge-tail ↓

0700—3 Wedge-tail ↑

0704—20 plus/minus Shorebirds compact, fast flying flock

0706—1 Shearwater

0708—3 Pterodroma ←

0709—1 Wedge-tail ↑

0714—1 Wedge-tail ↑

0808—1 White-necked Petrel ↓

0817—1 Wedge-tail →

0829—1 Wedge-tail ↑

0830—2 Pterodroma →

0844—1 Pterodroma ←

0849—1 Pterodroma

0850—1 Red-tailed Tropicbird

0851—1 Pterodroma ↓

0852—1 Pterodroma ←

0901—1 Pterodroma ←

0913—1 Bonin Petrel →

0920—1 Pterodroma →

0925—1 Bonin Petrel
<table>
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<tr>
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<tr>
<td>0929</td>
<td>1 Red-tailed Tropicbird 200'</td>
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<td>0931</td>
<td>2 Pterodroma</td>
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<td>0934</td>
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<td>1009</td>
<td>1 Bonin Petrel</td>
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<td>1 Pterodroma</td>
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<td>1033</td>
<td>4 Bonin Petrel</td>
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<td>1045</td>
<td>Flock—actively feeding flying fish under flock</td>
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<td>2 Sooty tern</td>
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<td>2 Wedge-tail</td>
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<td>1 White-necked Petrel</td>
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<td>15 plus/minus Bonin Petrel</td>
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<td>4 plus Pterodroma—large 1 bird all dark neck</td>
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<tr>
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<td>1 Red-tailed Tropicbird feeding with flock dove once from ca. 50'</td>
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<td>1 all dark Shearwater</td>
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<td>1111</td>
<td>1 Pterodroma</td>
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<td>1 Pterodroma</td>
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<td>1 Bonin Petrel</td>
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<td>2 Bonin Petrel</td>
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<td>1 Dark-rumped Petrel</td>
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<td>1 Bonin Petrel</td>
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<td>1315</td>
<td>Flock: 4 Sooty Tern</td>
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<td></td>
<td>1 Fairy Tern</td>
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<td></td>
<td>1 Pterodroma</td>
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</tbody>
</table>
Gould, P. J.
At Sea—1963

4 Oct
1330--2 Birds
1405--1 Wedge-tail
1424--1 Bonin Petrel
1526--1 Red-tailed Tropicbird 150'
1528--2 Wedge-tail
1616--1 Bulwer's Petrel
1635--1 White-necked Petrel
1725--5 White-necked Petrel

1730--Flock--actively feeding--large school of tuna jumping--flying fish present--squid regurgitated from collected birds and flying fish found in stomachs.

25 plus/minus Sooty Tern 2 collected
125 plus/minus Wedge-tail 2 collected
2 Bonin Petrel
5 Frigatebirds
7 plus Red-footed Booby 6 collected
25 plus Booby sp.

all about 20 miles from Johnston Island

One Wedge-tail head an aluminum F and W band #565-12118 about 1840--underway again

1904--1 Wedge-tail

1911--Flock--not actively feeding

15 plus Sooty Tern
20 plus Wedge-tail
2 Frigatebirds
Gould, P. J.
At St--1963

4 Oct
1925--1 Wedge-tail
1928--2 Wedge-tail
1929--2 Wedge-tail
1931--1 Wedge-tail
1932--1 Wedge-tail
1932--1 Wedge-tail
observations ended 2010

October 5, 1963-- Pacific Ocean, 5th day out Oahu, 1st day out Johnston
observation began 0550
0650--1 Wedge-tail heading →
0808--1 Red-tailed Tropicbird collected
0918--1 Bonin Petr 1 SW
0950--1 Bird SE
1041--1 Pterodroma SE
1141--3 New Zealand Shearwater
   1 Wedge-tail
1203--2 Wedge-tail
1213--1 " "
1347--1 Pterodroma
1353--2 Fairy Tern →
   1 Shearwater
1357--1 Red-tailed Tropicbird 100'
1548--1 Shorebird heard calling but never seen
1555--1 White Tern heading SE
1614--1 Bulver's Petrel? N
1655--1 Red-tailed Tropicbird S on water 1 mile, landed again
Gould, P. J.
1963--At Sea

5 Oct
1707--2 Wedge-tails NNW
1707--1 Wedge-tail NW
1719--1 Shearwater S
1926--1 Shearwater N
Observation ended ca. 1930

October 6, 1963--Pacific Ocean, Grid Area

Observation began 0602
1014--1 Bonin Petrel
1025--2 Ruddy Turnstones collected
1100--1 Christmas Island Shearwater
1129--1 Dark-rumped Petrel?
1141--2 Sooty Shearwater
1145--1 Dark-rumped Petrel
1338--1 Wedge-tail on water WNW
1450--1 Dark Petrel SE
1515--1 Bulwer's Petrel
1525--Flock: Tuna jumping, also Flying Fish

36 Sooty Tern
1 White-necked Petrel
1 Pterodroma
1 Wedge-tail
1636--1 Sooty Shearwater?
1651--1 Pterodroma
1705--1 Bonin Petrel
1740--1 Shearwater
1755--1 Sooty Shearwater
6 Oct
1743—1 Pterodroma
1755—1 Sooty Shearwater
1800—1 Sooty Shearwater
1821—1 Sooty Shearwater
1823—1 Dark-rumped Petrel
1855—Flock: 4 Sooty Terns
1 plus Sooty Shearwater
6 pl 6 plus Wedge-tail
9 plus Shearwater-Petrel
1906—1 Sooty Shearwater
observation ended 1940

October 7, 1963—Pacific Ocean, Grid Area
observation began 0615
0658—1 Red-tailed Tropicbird 150
0718—1 Christmas Island Shearwater
0818—1 Pterodroma
0833—1 large Shearwater
0911—1 Pterodroma
0914—2 White Tern
1030—1 Red-tailed Tropicbird
1110—1 Wedge-tail
1135—1 Wedge-tail
1452—1 White-decked Petrel NNW
1512—1 Bonin Petrel
1520—1 Wedge-tail SW
At Sea

Oct. 7—1 Wedge-tail

1617—1 Sooty Shearwater
1617—1 Wedge-tail 1625—1 Christmas Island Shearwater
1630—1 Wedge-tail
1640—1 Booby ? 250-400
1705—1 All dark Shearwater
1734—1 Bird E
1800—White-necked Petrel SE
1824—1 Shearwater-Petrel N
1827—1 Wedge-tail S
1833—Flock: 2 Wedge-tail
2 White-necked Petrel
1 Shearwater like large Wedge-tail with dark wing ( )

1846—2 Bonin Petrel
1853—1 Bonin Petrel
1907—1 Red-tailed Tropicbird
1923—1 Wedge-tail SSE

observations ended 1930

1950—2 Plovers? seen by Currier, Au and Oyama

October 8, 1963—Pacific Ocean, Grid Area

observations began 0635

0805—1 Dark or White-necked Petrel SSE
0836—1 White-necked Petrel NW
0925—1 Pterodroma S
0942—1 Bonin Petrel SE
1027—1 Bird S
8 Oct
1031--2 Bonin Petrel N
1051--1 Pterodroma S
1100--1 Pterodroma S
1145--1 Pterodroma S
1145--2 Bird
1437--3 Terns SE wave top 20'
1510--1 Wedge-tail NE
1639--1 White-necked Petrel N
1720--1 Wedge-tail SW
1807--1 Bird S
1809--4 large Pterodroma SE
1830--2 Birds SE
observation ended 1935

October 9, 1963--Pacific Ocean, Grid Area
observations began 0610
0724--1 Wedge-tail E
2 White-necked Petrels N
0803--1 Ruddy Turnstone
0825--1 Ruddy Turnstone collected
1 Golden Plover collected
0928--2 Pterodroma NNW
1000--1 White-necked Petrel NW
1006--1 White-necked Petrel NW
1007--1 Bonin Petrel NW
1010--1 Shearwater Petrel SE
1045--indicated actively feeding
15 pterodromas Wedge-tail
Gould, P. J.
1963---At Sea

9 Oct 1010---1 Shearwater-Petrel, SE

1045---Flock not actively feeding

  15 plus/minus Wedge-tail

  2 Dark-rumped Petrel

  2 Bonin Petrel

  1 Kermodic Petrel

  1 White-necked Petrel?

  5 plus/minus Pterodroma

  8 Sooty Tern

stayed with flock till about 1105

1130---1 Bonin Petrel

1251---1 White-necked Petrel W

1300---1 Shearwater? NW

1305---1 Bird SW

1308---1 Bonin Petrel NW

1320---2 Pterodroma

1325---1 Pterodroma SSE

1345---1 White-necked Petrel NE

1432---1 Bonin Petrel SE

1505---1 Wedge-tail SE

1508---1 Wedge-tail SE

1555---1 Bird S

1604---2 Sooty Shearwater S

1605---1 Wedge-tail NE

1608---1 Dark-rumped Petrel S

1608---1 Wedge-tail NE

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Gould, F. J.
At Sea—1963

9 Oct 1612--1 Dark-rumped Petrel NE
     1 Wedge-tail NE
1612--1 Bonin Petrel S
1653--1 White-necked Petrel NE
1808--2 Pterodroma NNW
1815--1 Pterodroma SSE
1845--1 Bird NNW
1847--1 Bird ESE
observation ended 1928

October 10, 1963—Pacific Ocean, Grid Area
observation began 0630
0735--2 Wedge-tail NW
0737--1 Harcourt Storm Petrel
0758--2 Wedge-tail W
0751--1 Bonin Petrel
0948--1 Wedge-tail NE
0953--1 Bonin Petrel N
1054--1 Wedge-tail SE
1129--1 Tropicbird SW
1157--1 White-necked Petrel N
1208--1 White-necked Petrel NW
1220--1 Golden Plover 0-100'
1240--1 Bonin Petrel NW
1258--1 Bonin Petrel NNW
1310--2 White-necked Petrels
10 Oct 1320--Flock actively feeding
   50 plus/minus Sooty Tern
   25 plus/minus Wedge-tail
   30 plus/minus Pterodroma?
   1 White Necked Petrel
   1 Dark-rumped Petrel
   1 Kermodic Petrel
   3 plus Bonin Petrel

1329--1 Bonin Petrel
1350--1 Bonin Petrel S
1450--1 Bonin Petrel SE
1505--1 Red-tailed Tropicbird NE 100' sitting on water
1559--1 dark bird S
1613--1 Shearwater S
1628--1 Red-tailed Tropicbird 100'
1732--1 Wedge-tail E
1745--2 Pterodroma S
1752--1 Pterodroma E
1926--1 Wedge-tail E
observation ended 1943
Watch reported birds at 2100 and 2230.

October 11, 1963--Pacific Ocean, Grid Area
observations began 0640
0732--1 Wedge-tail SW
0744--1 Wedge-tail SE
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<tr>
<td>0749-2</td>
<td>Shearwater-Petrel E</td>
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<tr>
<td>0800-1</td>
<td>White-necked Petrel S</td>
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<td>0802-1</td>
<td>White-necked Petrel NE</td>
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<td>0825-7</td>
<td>plus/minus 1 Birds SW</td>
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<td>Wedge-tail NE</td>
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<td>0855-39</td>
<td>plus/minus Dark Shearwaters N</td>
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<td>0902-2</td>
<td>Wedge-tail W</td>
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<td>Bonin Petrel E</td>
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<td>0905-35</td>
<td>plus all dark Shearwaters SE</td>
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<td>0917-18</td>
<td>All dark Shearwaters S</td>
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<td>Pterodroma SW</td>
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<td>Bonin Petrel SW</td>
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<td>0930-25</td>
<td>plus/minus Shearwaters SW</td>
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<td>All dark Shearwater S</td>
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<td>0946-21</td>
<td>large Shorebirds</td>
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<td>Christmas Island Shearwater SE</td>
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<td>1014-1</td>
<td>Sooty Shearwater SE</td>
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<td>Bonin Petrel NE</td>
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<td>1017-1</td>
<td>Pterodroma SE</td>
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Gould, P. J.

1963—At Sea

11 Oct 1808—1 Frigatebird

1830—1 Bonin Petrel S

1832—2 Sooty Tern 1 ad 1 Imm E both collected

observation ended 1930

All of the "all dark" Shearwaters flocks seen today were apparently migrating.

They were mostly moving straight south and progressing in a high up—

low down formation, that is neither feeding nor hunting type. One group

was definitely Sooty Shearwaters, but others were most likely Christmas

Island Shearwaters.

October 12, 1963—Pacific Ocean

observation began 0645

0717—1 Wedge-tail NE

0750—1 Shorebird W 250'

0759—1 Wedge-tail S

0820—1 Golden Plover E

    1 Ruddy Turnstone E

0831—1 Wedge-tail N

0841—1 Wedge-tail W

0842—1 Wedge-tail W

0843—1 Pterodroma N

0845—1 Wedge-tail E

0852—1 Plover? ENE 30'

0853—1 Ruddy Turnstone ENE 30'

0900—11 Shearwaters S

0900—1 Frigatebird E

0907—1 Wedge-tail N

1 Shearwater N

1 Shearwater N
Gould, E. J.
At Sea--1963

12 Oct 0922--5 dark Shearwaters SE
       0950--2 dark Shearwaters SSE
       0956--1 Golden Plover ENE 5'
1000--1 Shearwater-Petrel
1007--2 Golden Plover ENE
1035--1 Wedge-tail WSW
1041--3 dark Shearwater SSE
1048--2 Shearwater SSE
1053--2 Wedge-tail NW
1057--1 Bird SSE
1059--1 Bonin Petrel WSW
1105--7 dark Shearwater S
1109--1 Bonin Petrel WSW
1110--1 Wedge-tail ENE
1132--2 Common Noddy ENE
1143--1 Bonin Petrel SSW
1220--3 dark Tern SE
1226--7 Golden Plover NE
1230--1 Frigatebird W
1236--4 Dark Tern E
1318--1 Wedge-tail SE
1413--3 Sooty Shearwater S
1829--1 Booby SW

at 1000 we were ca. 8 miles from Johnston Island.

1440--Flock: actively feeding
       10 Frigatebird
12 Oct

3 White Terns

1 Red-footed Booby collected

4 plus Booby sp.

10 plus Wed e-tail

1450—Golden Plover? 5

1510—5 Golden Plover

1517—1 Shearwater NW

1522—1 Shearwater SSW

1553—5 Golden Plover E

1601—1 Red-footed Booby W

1622—1 Red-footed Booby S 30'

1635—1 Frigate bird NN E 150' plus

1649—1 Frigate bird NE 200' plus

1706—1 Shearwater SW

1809—1 Pterodroma SE

1821—1 Shearwater SE

1825—1 Dark Tern? NE

1834—1 Manx Shearwater? SE

1835—1 Pterodroma SE

1850—1 Pterodroma S

1852—1 Sooty Shearwater S

observation ended 1910

October 13, 1963—Pacific Ocean, between Oahu and Johnston Island

observation began 0618

0736—1 Bird SSE

0745—1 Pterodroma NNW
Gould, P. J.
1965—At Sea

13 Oct
0804—1 Pterodroma SSW
0809—1 Bird S
0815—1 Pterodroma S
0906—2 dark Shearwater S
0915—1 Pterodroma S
0948—1 Shearwater SE
0953—1 White-necked Petrel SSE
0958—2 Golden Plover N
1006—2 Golden Plover SSE
1009—2 Golden Plover N
1045—1 Shearwater ENE
1059—1 Shearwater SSE
1059—1 Bonin Petrel NNW
1220—1 Tern ESE
1235—1 Small Petrel(Pterodroma?) SSE
1240—1 Bonin Petrel ENE
1318—1 Bonin Petrel ENE
1340—1 Golden Plover ENE
1348—1 Bonin Petrel NNE
1352—2 Bonin Petrel SSE
1352—2 Bonin Petrel NNE
1400—1 Bonin Petrel NNE
1406—1 Pterodroma SSE
1413—1 Pterodroma SSE
1415—1 Golden Plover ENE collected
1430—1 Golden Plover ESW

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Gould, P. J.
1963—At Sea

13 Oct 1459—2 Pterodroma SSE
1527—1 Pterodroma SSE
1532—1 Bonin Petrel SSE
1537—1 Pterodroma SSE
1546—1 Wedge-tail WSW
1551—1 Pterodroma S
1557—1 Bonin Petrel NW
1611—1 Pterodroma S
1619—1 Pterodroma ? SSE
1620—1 Bonin Petrel SSE
1621—1 Pterodroma SSE
1622—1 Pterodroma SSE
1623—1 Pterodroma SSE
1627—1 Pterodroma ENE
1631—1 Pterodroma SSE
1640—5 Sooty Shearwater S
1643—2 Pterodroma SSE
1646—1 Pterodroma SSE
1647—1 Dark-rumped Petrel SSE
1651—1 Pterodroma ENE
1659—1 Pterodroma ENE
1659—1 Pterodroma SSE
1 Sooty Shearwater SSE
1702—1 Bonin Petrel NNW
1714—1 Bird NNW
Gould, P. J.
At Sea—1963

13 Oct 1715—1 Pterodroma SSE
1718—1 Pterodroma SSE
1724—1 Bonin Petrel SSE
1735—1 Pterodroma
1735—1 Sooty Shearwater SSE
1740—1 Bonin Petrel

1 New Zealand Shearwater?
1744—1 Bonin Petrel NNW
19 1 Pterodroma
1745—1 Pterodroma NNW
1755—3 Pterodroma
2 Bonin Petrel
1802—1 Bonin Petrel NNW
1802—1 Bonin Petrel SSE
1802—1 White-necked Petrel
1805—1 Red-tailed Tropicbird ENE
1805—1 Pterodroma SSE
1813—1 Bonin Petrel WSW
1815—1 Sooty Shearwater SSE
1820—1 Dark-rumped Petrel ENE
1829—1 Bonin Petrel SSE
1830—1 Golden Plover NE
1842—1 Golden Plover
1845—1 Bonin Petrel
observation ended 1910
October 14, 1963—Pacific Ocean, between Oahu and Johnston Island

observation began 0625.

0816—1 Sooty Shearwater S
0852—1 White-necked Petrel NW
0852—1 Pterodroma N
0918—1 Common Noddy Tern SSE
0928—1 Pterodroma N
1037—1 Black-footed Albatross WSW seen by E. Currier, 1 yr. on Midway
1037—1 Red-tailed Tropicbird SE
1121—2 Sooty Shearwater SSE
1228—1 Shearwater-Petrel ENE
1237—2 Wedge-tail SE
1242—1 Sooty Shearwater SE
1258—1 Wedge-tail NW
1308—2 Bonin Petrel NW
1340—1 Bulwer's Petrel? SE
1352—1 Dark Shearwater S
1406—1 Dark Shearwater S
1409—1 Golden Plover
1409—1 Dark Shearwater S
1444—1 Bulwer's Petrel? S
1531—1 Wedge-tail E
1530—1 Pterodroma SW
1550—1 Harcourt's Storm Petrel NW
1551—1 Shearwater SSE
1600—1 Bonin Petrel SSW
Gould, P. J.
1967—At Sea

14 Oct 1620—1 Bonin Petrel SSW
1647—1 Pterodroma SE
1 Sooty Shearwater SE
1710—2 Golden Plover NNE
1715—1 Golden Plover SSE
1725—1 Dark Shearwater S
1730—3 Golden Plover ENE
1737—1 Bonin Petrel ESE
observation ended 1840

October 15, 1967—Pacific Ocean, 1 day out Oahu
observation began 0629
0655—1 Golden Plover ENE
0747—1 Pterodroma NNE
0756—1 Bonin Petrel SSE
0806—1 Manx Shearwater N
0945—1 Pterodroma NW
0949—3 White-tailed Tropicbird ENE
0958—2 Wedge-tail ENE 1 dark phase
1002—1 Pterodroma N
1019—1 Bonin Petrel S
1022—1 White-tailed Tropicbird ENE
1028—1 Bonin Petrel N
1039—1 Plover heard
1050—1 Masked booby ad SSE dove from ca. 50'
1127—2 Bonin Petrel SE
1145—1 Golden Plover ENE
Gould, P. J.
At Sea—1963

15 Oct
1151--1 Wedge-tail ENE
1215--1 Pterodroma SSW
1220--1 Red-tailed Tropicbird
1227--1 Golden Plover ENE
1235--1 Wedge-tail E
1243--1 Red-tailed Tropicbird
1246--2 Gray-backed Tern? ENE 30°
1314--1 Pterodroma S
1325--1 Pterodroma WSW
1325--1 Masked Booby "d. WSW
1345--2 Pterodroma S
1351--1 Pterodroma SW
1355--1 Bonin Petrel N
1412--1 Bonin Petrel SE
1420--1 Pterodroma SE
1450--1 large Pterodroma SE
1456--1 Pterodroma SE
1500--1 Golden Plover
1511--1 Pterodroma S
15130--1 Wedge-tail ENE
1514--1 Pterodroma SSE
1524--1 Bonin Petrel SSE
1 New Zealand Shearwater SSE
1530--1 Manx Shearwater NNW
1531--1 Pterodroma SW
1534--1 Pterodroma SW
Gould, E. J.
1963—At Sea

15 Oct
1543—1 Pterodroma SW
1544—1 Golden Plover
1548—2 Shearwaters N
1548—1 Shearwater S
1548—2 Pterodroma SSE
1548—2 Shearwater
1550—1 Pterodroma NE
1553—2 Shearwaters S
1602—1 Wedge-tail NNW
1604—1 Wedge-tail NNW
1605—1 Wedge-tail NNW
1614—1 Bonin Petrel SSE
1615—1 Wedge-tail ENE
1620—2 Wedge-tail ENE
1622—1 Wedge-tail ENE
1623—1 Manx Shearwater NNW
1625—1 Bonin Petrel WSW
1626—1 Manx Shearwater NNW
1627—2 Manx Shearwater NNW
1629—2 Pterodroma NNW
1630—1 Pterodroma S
1632—1 Pterodroma SSE
1635—1 Pterodroma SSE
1639—1 Pterodroma SSE
1642—1 Manx Shearwater SSE
1646—1 Wedge-tail NNW
15 Oct 1646--1 Bonin Petrel NNW
1653--2 Wedge-tail NNW loose flock
1654--1 Manx Shearwater SSE
1655--1 Pterodroma NNW
1657--1 Bonin Petrel W
1658--1 Wedge-tail NNW
1702--3 Shearwater-Petrel SSE
1703--1 Bonin Petrel SSE
1707--1 Shearwater SSE
1710--1 Wedge-tail SSE
1712--1 Manx Shearwater SW
1713--1 Wedge-tail WSW
1715-1723--Flock actively feeding school of flying fish
30+ Wedge-tail
3 Sooty Tern
1 Common Noddy Tern
1729--2 Pterodroma SSE
1729--2 Manx Shearwater NNW
1738--1 Shearwater NNW
1740--1 Wedge-tail S
1742--1 Golden Plover
1743--1 Wedge-tail WSW
1754--1 Golden Plover
1757--1 Golden Plover (same as above?) SSE
1757--2 Wedge-tail
1 Common Noddy Tern
Gould, P. J.
1963—At Sea

15 October 1801—1 Bonin Petrel NNE
1808—1 Shearwater SSE
1812—1 Shearwater NNW
1815—1 Bonin Petrel SSE
1822—1 Pterodroma NNW
1823—1 Shearwater SSE
1826—1 Tropicbird ENE

Observation ended 1835.
November 1, 1963—Pearl Harbor, Oahu, Hawaiian Isl.

Began observations at 1050 at or near entrance to Pearl Harbor.

1108—2 Frigate birds 1 & 1 juv. 300 yds.
1111—1 Frigatebird 9 30'
1146—1 Wedge-tail
1147—1 Wedge-tail
1147—1 Noddy Tern?
1153—1 Wedge-tail
1154—1 Wedge-tail?
1158—1 Pomerine Jaeger feeding
1200—2 Wedge-tail
1210—1 Jaeger 9 100'
1242—1 Wedge-tail
1245—1 Pomerine Jaeger 50' feeding
1246—1 Wedge-tail
1302—2 Pomerine Jaeger Dk. ph. 50-100'
1310—2 Pomerine Jaeger
1316—2 Pomerine Jaeger
1324—1 Wedge-tail
1326—1 Shearwater
1331—1 Pomerine Jaeger Lt. ph. 50' feeding
1341—3 Pomerine Jaeger 50'
1351—1 Shearwater
1 Nov
1358--1 Shearwater
1405--1 Bonin Petrel
1412--1 White Tern 50'
1423--1 Wedge-tail
1429--1 Bird by ( ) man
1436--1 Wedge-tail

1440--Flock--feeding--small school of small whales or dolphins or large fish
5 plus Wedge-tail
5 plus/minus Shearwaters

1445--1 Bonin Petrel feeding
1545--1 Brown Booby NE 100'
1555--1 Shearwater-Petrel NE 5'
1602--1 Wedge-tail NNE
1607--1 Wedge-tail NNE
1607--2 Golden Plover NNE 35'
1614--1 Wedge-tail NNE
1614--1 Wedge-tail NNE 35'
1625--1 Bonin Petrel WSW
1625--1 Bonin Petrel WSW
1630--3 Bonin Petrel WSW
1635--3 Shearwaters WSW Sooty?
1639--1 Shearwater WSW
1645--1 Shearwater SSW
1 Shearwater-Petrel SSW
1658--1 Sooty Shearwater SSW
1700--2 Sooty Shearwater SSW
1 Nov

1704—1 Petrel W
1707—1 Shearwater SW
1710—4 Shearwater SW
1712—1 Shearwater SW
1718—2 Dark Shearwaters SW
1724—1 Booby NW 150'
1726—1 Brown Booby SW 150'
1726—1 Bonin Petrel SW
1744—4 Sooty Shearwater SW
1746—1 Sooty Shearwater SW
1746—1 Sooty Shearwater SW
1747—4 Sooty Shearwater SW
1750—2 Shearwater SW
1751—1 Sooty Shearwater? SW
1755—Flock--migrating in 15 groups
300 plus Sooty Shearwater SW
1805—1 Tern NW
1814—1 Shearwater SW
1817—1 Shearwater SSW
1823—2 Shearwater SSW

observation ended 1830

November 2, 1963—Pacific Ocean, 2nd day out Oahu
0613—1 Red-footed Booby—roosting on mast collected
0631—1 Sooty Shearwater?
Gould, P. J.
1963—At Sea

2 Nov

0654—1 Pterodroma S
0712—1 White-tailed Tropicbird SSW
0722—1 Shearwater S
0728—1 Shearwater S
0729—1 Bonin Petrel SSW
0734—2 Pterodroma N
0733—2 Pterodroma N
0735—1 Pterodroma
0739—1 Bonin Petrel SE
0741—2 Wedge-tail N
0743—1 Wedge-tail SW
1 Bonin Petrel SW
0746—1 Bonin Petrel N
0748—1 Shearwater N
0751—2 Pterodroma NW
0759—1 Shearwater SSW
0801—2 Wedge-tail SSW
0802—1 Golden Plover SSW collected
0808—1 Pterodroma N
0808—1 Wedge-tail SW
0812—1 Shearwater—Petrel NE
0816—1 Shearwater SE
0818—1 Shearwater SE
0822—1 Wedge-tail NE
0832—1 Wedge-tail NW
0838—2 Wedge-tail SE
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2 Nov 0945—1 Bonin Petrel NNW
0945—1 Sooty Shearwater S
0947—1 Red-tailed Tropicbird E
0948—1 Terns ENE 200°
0950—1 Bonin Petrel NNW
1001—1 Dark-rumped Petrel NNW
1002—1 Bonin Petrel NNW
1006—1 Pterodroma NNW
1006—1 Harcourt’s Storm Petrel NNW
1008—1 Bonin Petrel NNW
1013—125 plus Sooty Shearwater? S
1014—1 Bonin Petrel NE
1015—1 Bonin Petrel NNW
1017—1 Bonin Petrel NNW
1017—1 Bonin Petrel WSW
1017—1 Pterodroma NNW
1026—1 Bonin Petrel NNW
1027—1 Bonin Petrel NNW
1028—1 Tropicbird
1030—1 Bonin Petrel NNW
1031—80 plus Sooty Shearwater? S
1037—1 Bonin Petrel "N"
1050—1 Bonin Petrel NW
1100—40 plus Sooty Shearwater? S
1105—1 Wedge-tail NNW
1105—1 Wedge-tail NNW
2 Nov 1108—4 Sooty Shearwater ? S
1108—2 Wedge-tail NNW
1111—17 Sooty Shearwater S
1112—12 Sooty Shearwater S
1113—100? plus Sooty Shearwater S
1135—1 Bonin Petrel WNW
1139—2 Bonin Petrel WNW
1140—1 Bonin Petrel NNW
1148—150 plus Sooty Shearwater? S
1148—1 Bonin Petrel NNW
1154—1 Wedge-tail NNW
1154—2 Pterodroma NW
1204—70 plus Sooty Shearwater? S
1209—1 Dark Shearwater SSW
1215—1 Tern SSW
1225—1 Harcourt's Storm Petrel NNW
1235—7 Sooty Shearwater SW
1248—1 Bonin Petrel NW
1248—1 Bonin Petrel NW
1249—1 Bonin Petrel NW
1250—350 plus Sooty Shearwater SSW
1254—1 Bonin Petrel SSW
1305—12 Dark Shearwater SSW
1347—1 Pterodroma NNW
1405—1 Dark Tern NW
2 Bonin Petrel
2 Nov

1405--150 plus Shearwaters SSW

1415--1 Booby SSW

1421--1 Pterodroma NNW

1 Petrel sp.? NNW

1426--1 Bonin Petrel NW

1428--1 Pterodroma NW

1438--1 Wedge-tail SW

1447--1 Bonin Petrel NNW

1447--1 Shearwater-Petrel SSW

1448--1 Bonin Petrel WSW

1500--1 Bonin Petrel WSW

1510--2 Sooty Shearwater S

1511--1 Bonin Petrel

1525--1 Bonin Petrel E

1528--3 Shearwater S

1532--1 Bonin Petrel N

1543--1 Bonin Petrel N

1543--1 White-necked Petrel E

1550--250 plus/minus Sooty Shearwater S

1559--1 Bonin Petrel

1604--Flock--not act. feeding

1 Dark-rumped Petrel

1 Bonin Petrel

2 Shearwater

2 Shearwater-Petrel

1612--4 Sooty Shearwater SE
2 Nov 1619—1 Frigatebird 200' Imm

1657—1 Bonin Petrel N

1700—50 plus/minus Sooty Shearwater S

1703—Flock feeding

30 plus/minus Shearwater not Sooties?

1705—4 Shearwater WSW

1710—1 Sooty Shearwater S

1715—1 Bonin Petrel N

1724—1 Wedge-tail NW

1732—1 "hite-necked Petrel NW

1739—50 plus Sooty Shearwaters S

1340—1 Storm Petrel

1742—3 Bonin Petrel E

1746—1 Red-footed Booby N

1748—6 Sooty Shearwaters S

1749—1 Sooty Shearwater S

1750—1 Bonin Petrel SE

1756—1 Bonin Petrel N

1800—1 Sooty Shearwater S

  time change back 1 hour so above is 1700

1700—1 Bonin Petrel N

1703—1 Bonin Petrel

1704—1 Harcourt's Storm Petrel

observation ended 1800
November 2, 1963—Pacific Ocean, 3rd day out Oahu

Observation began 0530

0525—1 Tern (heard through port hole)

0604—4 Sooty Shearwater SSW

0615—1 Small Shearwater E

0617—1 Sooty Shearwater SSW

0632—1 Pink-footed Shearwater? NW

0730—1 Bonin Petrel NE

0748—1 Bonin Petrel N

0755—2 Wedge-tail ENE

0755—1 White-necked Petrel ENE

0802—1 Pterodroma S

0809—1 Bonin Petrel E

0811—1 Bonin Petrel SW

0813—1 Bonin Petrel SW

0814—1 Bonin Petrel SW

0815—1 Pterodroma NE

0817—1 Bonin Petrel SW

0817—1 Wedge-tail NE

0818—1 Bonin Petrel NE

0818—1 Pterodroma NE

0820—1 Bonin Petrel SW

0822—1 Bonin Petrel NE

0825—7 Bonin Petrel NE

0825—25 plus Sooty Shearwater S

0829—3 Bonin Petrel
Gould, P. J.
1962—At Sea

3 Nov

0829—1 Bonin Petrel N
0833—1 Pterodroma S
0835—1 Pterodroma WS,
0838—1 White-necked Petrel
0938—1 Wedge-tail NE
0845—1 Harcourt's Petrel
0845—1 Pterodroma NE
0905—1 Brown Noddy SE 25°
0905—1 Bonin Petrel NE
0916—1 Brown Noddy E
0938—1 Bonin Petrel NE
0940—1 Bonin Petrel W
0946—1 Shearwater-Petrel NE
0948—1 Bonin Petrel NW
0951—3 Bonin Petrel
0956—1 Bonin Petrel SW
0956—1 Bonin Petrel NE
0959—1 Pterodroma NE
1000—1 Pterodroma NE
1002—1 Pterodroma NE
1003—1 Wedge-tail NE
1012—1 Bonin Petrel NE
1019—1 Pterodroma NE
1021—1 Pterodroma NE
1026—1 Bonin Petrel NE
1029—1 Red-tailed Tropicbird SW shot at 1034, collected
3 Nov 1036--1 Sooty Shearwater S
1111--1 Wedge-tail S
1117--1 Pterodroma SW
1117--1 Small Dark bird SE
1128--5 Bonin Petrel SW
1136--1 Wedge-tail SW
1136--4 Bonin Petrel  not feeding
1 White-necked Petrel
1139--1 Bonin Petrel SW
1145--1 Bonin Petrel SW
1200--1 Shearwater-Petrel SW Bulwer's size
1201--1 Pterodroma SW
1221--1 Red-tailed Tropicbird NE on water 5-10 feet
1223--1 Pterodroma NE
1227--1 Pterodroma N
1228--1 Pterodroma N
1244--1 Bonin Petrel SW
1244--3 Bonin Petrel NE
1312--1 Pterodroma SW
1314--1 Sooty Shearwater? SW
1349--1 Bonin Petrel NE
1400--1 Bonin Petrel NE
1400--1 Bonin Petrel S
1411--2 Bonin Petrel W
1425--5 Bonin Petrel
1437--1 Bonin Petrel S
Gould, E. J.
1963—At Sea

3 Nov 1444—7 Bonin Petrel 1 collected

1454—1 Red-tailed Tropicbird

1510 back on course

1527—2 Bonin Petrel

1535—1 White-necked Petrel E

1538—1 Bird

1547—2 Bonin Petrel S

1606—1 Bonin Petrel SE

1611—1 Bonin Petrel N

16120—2 Pterodroma NE

1625—2 Bonin Petrel SE

1626—1 Bird

1635—Flock feeding

8 Sooty Tern

2 White-necked Petrel

3 Bonin Petrel

1 Dark-rumped Petrel

1 Wedge-tail

1 Red-tailed Tropicbird—on water at edge of flock

back on course 1705

1725—1 Bonin Petrel NE

observation ended 1820

November 4, 1963—Pacific Ocean, 1 day out Johnston Island, 4 days out Oahu

observation began 0540

0553—1 White-necked Petrel N on water? 07
4 Nov

0620—1 Wedge-tail SE on Water ?

0630—1 Bonin Petrel E

0640—1 Pterodroma NW

0640—1 Pterodroma W

0712—1 White-necked Petrel NW

1725—1 White-tailed Tropicbird collected

0732—1 Pterodroma E

0740—1 Storm Petrel N

0754—1 Pterodroma N

0801—1 Pterodroma N

0823—1 Pterodroma SW

0829—1 Bonin Petrel NW

0829—1 Bonin Petrel NW

0841—1 Bonin Petrel WNW on water

0901—1 Bonin Petrel WNW

0903—1 Bonin Petrel SW on Water

0927—1 Bonin Petrel SW

1031—1 Pterodroma SE

1038—1 Petrel NE

1130—1 Bonin Petrel on water

1214—1 Golden Plover collected

1218—1 common Noddy N 10' 

1220—resume course

1300—Plankton samples

1305—1 Black-footed Albatross SSE 20'
Gould, E. J.
1963—At Sea

4 Nov
1306—1 Bird
1330—resume course
1407—1 Bonin Petrel E
1410—1 Gadwall Duck SE seen again at 1423
1425—1 Black-footed Albatross NW
1440—1 Dark bird NW
1528—1 Frigatebird feeding
3 plus Shearwater-Petrel
1624—Flock—actively feeding many flying fish
   25 plus Sooty Tern
30 plus Bonin Petrel 6 collected
3 Frigatebird
1 Manx Shearwater
2 Boobies
1 Laysan Albatross
1 all gray Shearwater
1 Tropicbird
1640—1 Golden Plover (shot but not recovered) not with flock
1700—1 Pterodroma S not with flock
1704—3 Golden Plover not with flock
1725—resume course
1732—1 Bonin Petrel SE
observation ended 1940
November 5, 1963—1 day out Johnston Island, Pacific Ocean and 1st grid leg
observation began 0500
0617—1 Frigatebird NE 200°
0638—1 Shearwater-Petrel W
0652—1 Pterodroma NW
0705—1 Albatross E

0705—1 Bonin Petrel SE
0721—1 Bonin Petrel SE
0742—1 White-necked Petrel SSW
0754—1 Bonin Petrel W
0837—1 Pterodroma
0838—1 Bonin Petrel SE
1007—1 Albatross same as at 0705—S
1007—1 Pterodroma NW
1022—1 Pterodroma S
1206—1 Tropicbird SW watch
1230—change course (1st grid point)
1410—Flock

200 plus birds ca. 2 miles off port
1430—1 Pterodroma W
Gould, P. J.

5 Nov
1436—1 Red-footed Booby collected
1452—1 Brown Booby
1531—1 Bonin Petrel WNW
1550—resumed course after picking up bird
1600—1 Manx Shearwater E
1607—1 Dark-rumped Petrel N
1610— Flock: actively feeding no flying fish
   72 Sooty Tern
   3 plus White-necked Petrel
   1 Dark-rumped Petrel
   1 Kermodic Petrel
   1 Manx Shearwater (same bird as at 1600 by whitish patch in wing)
   3 plus Bonin Petrel
   1 Gray Shearwater
   20 plus Pterodroma
1645—1 Shearwater-Petrel
1716—1 Petrel? SW
1726—1 White-necked Petrel SW
1739—1 White-necked Petrel SE
1745—1 White-necked Petrel one on water joined by second
   1 Pterodroma
1751—1 Dark-rumped Petrel SE
1758—returning to Johnston Island

November 6, 1963--Pacific Ocean, 1 day out Johnston and Johnston Isl.
observation began 0513
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<td>0527</td>
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<td>Complete transfer of sick seaman at Johnston Island</td>
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<td>1 Booby NE</td>
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<td>1127</td>
<td>1 Red-footed Booby WNE 10°</td>
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<td>1 Albatross S 10° same as yesterday</td>
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<td>1238</td>
<td>1 Manx Shearwater SE</td>
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</tbody>
</table>
Gould, P. J.
154
6 Nov 1242--1 Shearwater-Petrel SE
1410--1 Booby # 10-100'
1413--1 Bonin Petrel E
1415--1 Bonin Petrel SE
1434--1 Masked Booby SW 50'
1553--1 White-necked Petrel WSW
1500--1 Pterodroma ENE
1506--Flock
   2 Masked Booby 1 collected
   1 Frigatebird
   1 White-necked Petrel
   10 Bonin Petrel
   3 Pterodroma
   1 Common Noddy Tern
1615--Golden Plover
1630--1 Pterodroma ESE
1635--1 Pterodroma ENE
1656--1 White-necked Petrel? ESE
1716--1 Pterodroma SW
1731--1 large Pterodroma SW
1741--1 Pterodroma SW
1749--1 Pterodroma NW
1804--1 Shearwater-Petrel NW
1815--1 Tropicbird SE 100'
2059--2 Terns NNE
2131--1 Tern NNE
2310--1 bird? thin squeaky chirp 6 or 7 times
November 7, 1963—Pacific Ocean, Grid Area. Observation began 0000

0010—1 bird Tern?
0015—1 bird SSW
0028—1 Shearwater-Petrel SSW
0032—1 Shearwater-Petrel SSW
0040—1#
0042—1#
0046—1#
0051—1 Bird Tern?
01 2—1 Shearwater-Petrel SSW
0105—1 Shearwater-Petrel
0108—1 Pterodroma SSW
0234—1 bird Tern?
0210—1 Tern
0234—1 Tern?
0210—1 Tern
0234—1 Shearwater-Petrel
0325—1 Tern
0405—course change to NE
0405—1 Tern 75°
0606—1 Tropicbird NE 100°
0608—1 Pterodroma SW
0610—1 Pterodroma SW
0615—1 White-necked Petrel SE
0633—1 Shearwater-Petrel NW
0640—1 Red-tailed Tropicbird SE 150°
0651—1 Pterodroma SSW
7 Nov

0654—1 Pterodroma W

0658—1 Shearwater-Petrel W

0725—1 Booby W

0729—1 Pterodroma W

0748—1 White-necked Petrel SW

0756—3 SootyShearwater S

0800—Flock actively feeding flying fiaa abundant

5 plus Sooty Tern

10 plus White-necked Petrel

5 plus Bonin Petrel

2 Kormodic Petrel dark phase

1 Wedge-tail dark phase

resume course 0813

0836—1 Red-tailed Tropicbird on water heading NE

0836—1 Red-tailed Tropicbird flying near above

0836—1 Bonin Petrel W

0840—1 Tern SW probably Imm. Sooty

0845—1 Pterodroma W

0847—1 Bonin Petrel W

0910—1 bird NE

1007—1 Shearwater-Petrel SW

1018—1 bird SW

1120—1 Pterodroma SW

1308—1 Frigatebird W

changed course at 1400 to NW

1406—1 Pterodroma W
7 Nov
1433—1 Red-tailed Tropicbird NW 80° collected
resume course 1457
1519—1 Shearwater-Petrel N Phoenix Petrel? whit belly, brown back, dark under wings
1547—1 Large Pterodroma
1556—1 SootyShearwater SW
1617—1 Dark-rumped Petrel? SW
1622—1 Bird seen by watch
1709—1 White-tailed Tropicbird NNE 1 Red-tailed Tropicbird NNE together 150°
1734—1 Pterodroma W
1734—5 Terns 75°
1819—1 Shearwater-Petrel
1821—1 Shearwater-Petrel NW
change course at 1900 to SW
2351—1 Tropicbird calling overhead—observation ended 2400

November 8, 1963—Pacific Ocean, Grid Area—observation began 000
0:11—2 Terns calling overhead
0643—1 Small Gull? W 60°
stayed for plankton 0630
0705—1 Pterodroma W then E
0709—1 Pterodroma W
0715—1 Pterodroma N
0922—1 Pterodroma N
0722—1 White-necked Petrel S
Gould, P. J.
1963—At Sea

8 Nov

0724—1 Bird S 5-20'

0751—1 White-necked Petrel? NW

0759—1 Duck Hakas ene bird as 0724?

0817—1 Red-tailed Tropicbird on water SW

0837—1 Pterodroma S fast straight line course ( )

0841—1 Pterodroma SW

0850—1 Red-tailed Tropicbird 150'

0853—Flock possibly feeding flying fish

  5 Sooty Tern 1 I mm.

  2 plus Wedge-tail Dk. phase

  5 plus Bonin Petrel

  3 plus White-necked Petrel

  5 plus Pterodroma

  1 Pink-footed Shearwater?

resume course 0912

0933—1 Pterodroma N

0944—1 Bonin Petrel NW

1012—1 Pterodroma NW

1021—2 Bird by watch ( )

1155—1 Bird W by watch

1318—1 Manx Shearwater? NW on water

1440—1 Red-tailed Tropicbird S on watch

1444—3 Bonin Petrel NNE

1452—1 Tropicbird W (port watch)

1505—1 White-necked Petrel? NE

1505—1 White-tailed Tropicbird SE

1506—40 Sooty Tern flock built up from 20-40 then scattered no feeding
8 Nov 1 Shearwater
1517--1 Dark-rumped Petrel S
1517--1 Brown Shearwater S (prob. Wedge-tail)
1528--1 Pterodroma SE
1530--1 Pterodroma
1546--1 Bonin Petrel NW
1547--1 Dark-rumped Petrel NE

course at 1600 to NW
1703--1 Red-tailed Tropicbird NE
1717--1 Shearwater-Petrel E
1725--1 Bonn Petrel S heading W
1727--1 White-necked Petrel NE
1727--1 Pterodroma NE
1905--1 Tern
1909--1 Tropicbird same bird?
1914--1 Tropicbird NW 40'

observation ended 2400

November 2, 1967--Pacific Ocean, Grid Area

observations began 0000
stop for plankton samples 0645
0652--1 Pterodroma S
0702--1 White-necked Petrel S
0721--1 Bonin Petrel N
0721--1 Pterodroma S

watch reported flock of ca. 6 bird, 4 all white, (Pterodroma?) and 1 large
brown (Booby?).
<table>
<thead>
<tr>
<th>Time</th>
<th>Species</th>
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<tbody>
<tr>
<td>0722</td>
<td>Pterodroma SE</td>
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<td>0722</td>
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<td>Pterodroma SE</td>
</tr>
<tr>
<td>0734</td>
<td>Bonin Petrel SE</td>
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<tr>
<td>0734</td>
<td>Red-tailed Tropicbird 200'</td>
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<td>resume course 0735</td>
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<td>Bonin Petrel NW</td>
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<td>0846</td>
<td>Golden Plover NE</td>
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<td>0854</td>
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<tr>
<td>1110--1</td>
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<td>Plover? S 75-100'</td>
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<td>1318--1</td>
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<td>1354--2</td>
<td>Golden Plover W same</td>
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<tr>
<td>1401--2</td>
<td>Golden Plover same</td>
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<td>1409--33</td>
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<td>Bonin Petrel W</td>
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<td>Pterodroma</td>
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<tr>
<td>1428--1</td>
<td>Bonin Petrel W</td>
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<td>1429--1</td>
<td>Red-tailed Tropicbird E 100'</td>
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<td>1436--1</td>
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<td>White-necked Petrel?</td>
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<td>White-necked Petrel NW</td>
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<td>1458--</td>
<td>1 Bonin Petrel circled back</td>
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9 Nov

1458—1 Tropicbird
1505—1 "white-necked Petrel? NW
1505—50 plus Sooty Shearwater S
1512—1 Golden Plover 50'
1520—20 plus Sooty Shearwater? S
1526—2 Red-tailed Tropicbird E
1534—1 Bonin Petrel S
1537—1 Dark-rumped Petrel SE
1540—2 Sooty Shearwater S one in water
1550—1 Dark-rumped Petrel 1
1551—1 Golden Plover SW
1610—4 Sooty Shearwater S
1615—2 Bonin Petrel S
1622—1 Pterodroma S
1624—1 Pterodroma SE
1640—1 Booby? NE by watch
1645—1 Pterodroma SE
1654—1 Pterodroma SE
1656—1 White-necked Petrel? SE
1703—1 large Pterodroma SE
1709—1 Pterodroma SE
1713—30 plus/minus 5 Sooty Shearwater S
1718—1 Sooty Shearwater? S
1718—1 Pterodroma S
1723—1 Wedge-tail NW light phase
1728—35 plus/minus Birds ca. 1-2 miles on starboard horizon
Gould, P. J.
1963--At Sea

9 Nov
1735--25 plus/minus Sooty Shearwater S
1740--1 White-necked Petrel S
1754--1 Bird by watch
1805--1 Bird by watch
observation ended 1807

November 10, 1963--Pacific Ocean, Grid Area
observation began 0200
0243--1 Tern NW
0457--1 Tropicbird
0535--3 plus Terns
0545--1 Tropicbird
0630--1 Bird SE
0635--1 Sooty Shearwater SE
0637--1 Sooty Shearwater SE
0710--1 White-necked Petrel S
0725--3 Golden Plover
0733--18 Sooty Shearwater S
0740--1 Sooty Shearwater S
0756--1 Golden Plover 1 landed on helio deck
0800--2 Golden Plover
0818--1 Pterodroma N
0820--1 Pterodroma W
0832--1 Pterodroma W
0834--5 Red-tailed Tropicbird NE 200'
0842--2 Pterodroma W
10 Nov

0845--4 Red-tailed Tropicbird (same as 0834?)

0850--1 Shearwater W brown above white below ventral

0900--1 Pterodroma W

0900--1 Frigatebird 200'

0902--1 Pterodroma NE

0908--1 Red-tailed Tropicbird 150'

0915--2 Flover

0932--1 Bonin Petrel NE

1012--1 Golden Flover 40'

1032--1 Pterodroma N

1035--20 plus/minus Sooty Shearwater E?

1038--20 SootyShearwater? SE

1039--1 Pterodroma SE

1051--1 Wedge-tail light phase

1 Sooty Tern

1 Bonin Petrel NE

1 Pterodroma

1124--2 Sooty Shearwater? S

1127--9 SootyShearwater? S

1144--1 Golden Flover

1148--20 plus SootyShearwater? S

1149--2 Sooty Shearwater? S

1155--25 plus Sooty Shearwater? SE

1156--1 Bonin Petrel? SE

1157--2 Sooty Shearwater? S

1158--1 Wedge-tail S
10 Nov
1242--1 Storm Petrel SE
1250--1 Sooty Shearwater? S
1258--20 Sooty Shearwater? S
1313--35 plus/minus Sooty Shearwater? S
1320--20 plus/minus Sooty Shearwaters S
1315--Flock--first seen on horizon at 1235 and chased them at ca. 11½ knots; not actively feeding, no flying fish; probably remnant of feeding flock
9 Sooty Tern
10 plus Wedge-tail light phase
1 Dark-rumped Petrel
1 plus Bonin Petrel
10 plus Pterodroma
1 Shearwater same as at 0850 fluttering wing beat
1 Pterodroma (Phoenix Petrel?) dark wing lining
1334--2 Bonin Petrel NW
1334--2 Bonin Petrel SE
1335--1 Bonin Petrel SE
1339--20 plus/minus Sooty Shearwater? S
1345--2 Pterodroma S
1347--1 Pterodroma? S
1351--1 Bonin Petrel S
1352--1 Bonin Petrel NW
10 Nov

1353--1 Pterodroma S

1356--25 plus/minus Sooty Shearwater? S

1356--1 White-necked Petrel SW

1401--125 plus/minus Sooty Shearwater? S

1406--1 Bonin Petrel S

1416--1 Red-tailed Tropicbird S

1416--1 Golden Plover

1421--3 Red-tailed Tropicbird

1437--1 Wedge-tail SE

1445--3 Pterodroma? SE

1448--1 Pterodroma? SE

1448--1 Pterodroma? SE

1454--1 Red-tailed Tropicbird W

1456--1 Pterodroma NE

1502--1 Bonin Petrel N

1505--1 large Pterodroma N

1505--1 Red-tailed Tropicbird same as above?

1505--10 Sooty Shearwaters S

1507--1 large Pterodroma S

1507--1 Bonin Petrel NW

1510--3 Red-tailed Tropicbirds

1518--1 Bonin Petrel N

1521--1 Bonin Petrel N

1523--1 Skua like bird twice as large as Red-tailed Tropicbird which was chasing it and being chased by it all brown except belly and white spot near tip of wing and white at base of ventral wing.
10 Nov
1532--1 Bonin Petrel S on water
1539--20 plus/minus Sooty Shearwater S
1547--1 bird seen by watch
1552--1 Shearwater NW
1600--1 Golden Plover
1605--Flock
   14 Wedge-tail (5 plus dark phase)
   6 Bonin Petrel
   1 White-necked Petrel?
1620--1 Bonin Petrel SW
1622--1 Pterodroma NE
1624--3 Bonin Petrel NW
1625--1 Bonin Petrel SW
1635--5 plus Sooty Shearwater? S
1640--Flock loose association possibly breaking up of larger flock
   3 plus/minus Pterodroma
   2 White-necked Petrel
   4 Bonin Petrel
   1 Dark-rumped Petrel
1645--2 Golden Plover
1647--6 Sooty Shearwater? S
1656--1 Bonin Petrel SE
1702--1 Dark Rumped Petrel E
1705--1 Bonin Petrel S
1707--1 Bonin Petrel SSE
10 Nov

1718—1 White-necked Petrel ENE

1719—1 Golden Plover landed on ( ) deck

1720—1 Shearwater-Petrel NW

1724—1 Golden Plover

1734—1 Bonin Petrel SE

1736—2 Golden Plover SE

1740—2 Golden Plover not same as above

1806—1 Shearwater SE

1815—1 Golden Plover flew off of helio deck

1940—1 Golden Plover heard and around ship

observation ceased for rain squall at 1950

observation resumed at

2130—1 Tropicbird

2152—1 Golden Plover

2230—1 Tropicbird ran into bird bath structure on ship and recovered

just before hitting water

2245—1 Tropicbird

2311—1 Golden Plover

observation ended 2400

November 11, 1963—Pacific Ocean, Grid Area

observation began 0000

0002—1 Tropicbird

0041—1 Golden Plover

0120—0153 rain squall, no observation

0332—1 bird
11 Nov  0409—course change to 317°

0636—1 Red-tailed Tropicbird SW

0636—1 Golden Plover apparently spent night on ship

0642—2 Sooty Shearwaters S

0643—2 Sooty Shearwaters S

0650—8 Sooty Shearwaters S

0651—15 Sooty Shearwaters S

0654—4 Sooty Shearwaters S

0655—12 Sooty Shearwaters S

0655—13 Sooty Shearwaters S

0656—19 Sooty Shearwaters S

0657—8 Sooty Shearwaters S

0658—10 Sooty Shearwaters S

0659—7 Sooty Shearwaters S

0659—2 Pterodroma SE

0659—18 Sooty Shearwater S

0700—3 Sooty Shearwater S

0700—Mr. Folly reported flock of ca. 10 birds that looked to him like

Golden Plovers

0701—8 Sooty Shearwaters S

0702—10 Sooty Shearwaters S

0704—4 Sooty Shearwaters E

0708—1 Red-tailed Tropicbird E

0708—1 Kermodic Petrel N

0708—24 Sooty Shearwater S

0712—3 Sooty Shearwater S
resume course at 0749

0806—1 *pite-necked Petrel SW
0828—1 Sooty Shearwater S
0829—1 SootyShearwater S
0837—15 plus/minus SootyShearwater? S
0843—1 Wedge-tail SE light phase
0900—10 SootyShearwater S
0900—1 SootyShearwater S
0907—2 Bonin Petrel on water split up as ship approached
2 Pterodroma
0920—1 Red-tailed Tropicbird NE
0934—1 Pterodroma
0934—1 Blue-faced Booby S
0937—1 Pterodroma NW
1001—2 Sooty Shearwater S
1001—1 Wedge-tail SE
1009—1 Golden Plover
1022—2 SootyShearwater S
1022—1 Wedge-tail W
1023—1 Golden Plover

change course to 047 at 1105

1110—1 Sooty Shearwater S
1121—1 Harcourt's Storm Petrel E
1155—1 Red-tailed Tropicbird NW
1244—14 Sooty Shearwaters SE
1255—1 Masked Booby NE
Gould, P. J.
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11 Nov
1308--1 Red-tailed Tropicbird
1325--2 Bonin Petrel
1329--3 Sooty Shearwater S
1333--12 Sooty Shearwater SE
1335--1 Red-tailed Tropicbird
1342--7 Sooty Shearwater S
1356--1 Dark-rumped Petrel E
1707--1 Bonin Petrel SE
1410--1 Pterodroma S
1412--10 Sooty Shearwater? ESE
1418--5 Sooty Shearwater? S
1425--2 Bonin Petrel
1436--7 Sooty Shearwater? ESE
1438--1 Sooty Shearwater? S
1441--1 Pterodroma SE
1446--1 Bonin Petrel S
1448--1 Bonin Petrel SE
1453--1 Bonin Petrel ENE
1454--1 Bonin Petrel SE
1456--1 Bonin Petrel SE
1502--1 Shearwater S
1528--1 Sooty Shearwater S
1530--1 Pterodroma S
1531--1 Pterodroma S
1532--1 Bonin Petrel NW
1532--1 Bonin Petrel SE
11 Nov

1541--1 *Pterodroma* S

1551--1 Blue-faced *Booby* NE sat on water

1600--1 *White-tailed Tropicbird* NE collected

resume course at 1630

1641--1 *Bird* NE on water, seen by watch

1700--1 *Pterodroma* S

1745--1 *Booby* ?

1751--1 *Pterodroma* SE

1756--1 *Bonin Petrel* SE

1807--1 *Sooty Shearwater* S

observation ended 1810

**November 12, 1963--**Pacific Ocean, Grid Area

observation began 0605

0632--2 *Sooty Shearwaters* S

stayed for Flankton sampled 0645

0720--1 *Golden Plover*

0735--1 *Pterodroma* W

0741--1 *Pterodroma* W

resume course at 0742

0750--1 *Bird*

0809--1 *Pterodroma* W

0812--1 *Golden Plover*

0838--1 *Dark-rumped Petrel* collected

0844--1 *Pterodroma* SW

0912--1 large *Pterodroma* S
12 Nov
0913—1 Red-tailed Tropicbird 75'
resu e course 0920 after picking up Petrel
0927—1 Golden Plover E
0945—12 Sooty Shearwater S
0955—1 Pterodroma W
0958—1 Shearwater-Petrel W
1022—22 Sooty Shearwater? S
1028—20 Sooty Shearwater? S
1050—1 Masked Booby collected
1102—6 Sooty Shearwater S
1105—1 Sooty Shearwater? S
1125—1 Golden Plover
1125—1 Bonin Petrel SE
1156—1 Pterodroma W
1218—1 Common Noddy Tern E 10'
1225—Flock flying in small circle, but not actively feeding, no flying fish
5 Bonin Petrel
3 Pterodroma
1 Phoenix Petrel? Pterodroma with white belly dark head and perhaps
throat, dark wing linings and dark brown back
at 1236 4 Bonin Petrels flying E alongside were probably from previous
flock
1237—1 Pterodroma W
1246—1 Golden Plover W
1252—1 Pterodroma NW
1255—1 Dark-rumped Petrel W
12 Nov
1256--1 Dark-rumped Petrel NW
1314--1 Bonin Petrel N
1319--1 Pterodroma
1321--1 Pterodroma
1736--1 Bonin Petrel E
1355--1 Bonin Petrel
  2 Pterodroma E
1405--1 Fairy Tern NW
1413--1 Dark-rumped Petrel NW
1418--Flock
  2 Red-footed Booby I'm collected
  1 Bonin Petrel
  3 Pterodroma
resume course 1438
1447--1 Bonin Petrel
1450--1 Pterodroma SW
1450--1 Pterodroma SW
1451--1 Pterodroma
1456--1 White-necked Petrel NW
1535--1 Pterodroma SW
1554--1 Dark-rumped Petrel NW
1600--1 Pterodroma SW
1601--1 Pterodroma SW
1610--1 Red-footed Booby E
1611--1 White-necked Petrel S
1623--1 Red-tailed Tropicbird SSW
1624--1 Sooty Shearwater SSE
1625--1 Pterodroma SW
Gould, P. J.

12 Nov 1852—1 Bird S
1858—1 Pterodroma SSE
1732—1 Pterodroma NW
1742—1 Pterodroma S
observation ended 1830

November 12, 1963—Pacific Ocean, 1 day out of Johnston Island
observation began 0545
0710—1 Shearwater NW
0721—1 Bonin Petrel SE
0726—1 Pterodroma NW
0734—1 Wedge-tail N light phase
0737—1 Pterodroma
resume course 0739 (stopped at 0650)
0740—1 Masked Booby E collected
0749—1 Pterodroma E
0833—1 Pterodroma E
0837—1 Pterodroma S
0845—1 Wedge-tail? E
0918—1 Bonin Petrel NW
0925—1 Wedge-tail N light phase
0955—1 Wedge-tail N
0956—1 Pterodroma N
1004—1 SootyShearwater SSE
1017—1 Wedge-tail E light phase
1030—1 Pterodroma SW
13 Nov

1040—1 Pterodroma SW

1045—1 White-necked Petrel? NNE

1048—1 Dark-rumped Petrel N on water

1049—1 Dark-rumped Petrel N on water

1051—1 White-necked Petrel N on water

1056—2 Dark-rumped Petrels on water

2 White-necked Petrel

1112—Flock

2 Wedge-tail

2 Pterodroma

1 Kermode Petrel

1121—1 Sooty Shearwater S

1125—2 Wedge-tail E light phase

1130—1 Dark-rumped Petrel

1144—1 Bonin Petrel ?

1156—1 Phoenix Petrel? ENE

1 White-necked Petrel ENE

1226—1 White-necked Petrel SE

1226—1 Pterodroma ? NW

1235—1 Bonin Petrel NW

1236—1 Bonin Petrel S

1250—1 Bonin Petrel W

1 White-necked Petrel

1256—1 Pterodroma SW

1251—1 Wedge-tail SE dark phase

1303—1 Golden Plover ENE

1344—1 Pterodroma S

1421—1 Dark-rumped Petrel N on water
Gould, F. J.
1963—At Sea

13 Nov
1404—1 White-necked Petrel N
1404—1 Bonin Petrel N
1411—1 Golden Plover
1417—1 Pterodroma S
1419—1 Bird
1424—1 Dark-rumped Petrel NW
1428—1 White-necked Petrel S
1431—1 Bonin Petrel
1434—10 plus Pterodroma 1 mile to starboard
1435—1 White-necked Petrel

4 Pterodroma
1435—1 White-necked Petrel
1 Bonin Petrel
1 Dark-rumped Petrel
1436—1 Bonin Petrel S
1439—1 Pterodroma NE
1440—1 Pterodroma S
1440—1 Bonin Petrel S
1448—2 Pterodroma S
1448—1 School of Black fish? at least 2 spout
1455—1 White-necked Petrel NW
1455—1 Pterodroma SSE
1458—1 Bonin Petrel NNW
1459—1 Bonin Petrel NNW
1512—1 Pterodroma S

all appeared to be traveling toward flock seen at 1034
Gould, E. J.
At Sea--1963

13 Nov 1516--1 Dark-rumped Petrel NW
1517--1 White-necked Petrel? S
1524--1 Red-footed Booby ad. N
1529--3 Pterodroma
  1 Bonin Petrel
1530--2 Tropicbirds
  1 Red-tailed Tropicbird ENE
1535--1 Pterodroma E
1536--1 Dark-rumped Petrel NE
1538--1 Pterodroma
1539--1 Pterodroma S
1540--1 White-necked Petrel
  1 Dark-rumped Petrel
1540--1 Bonin Petrel N
1549--1 Pterodroma E
1549--1 Pterodroma E
1600--1 Pterodroma
1604--5 Pterodroma
1605--Flock actively feeding flying fish present
  1 Frigatebird IMM.
  5 plus Dark-rumped Petrel
  2 plus White-necked Petrel
  10 plus Pterodroma
  1 Phoenix Petrel (Warren King--good view)
resume course at 1628
1638--1 Bonin Petrel SE
1638--1 White-necked Petrel SW
Gould, F. J.
1963—At Sea

13 Nov
1645—1 Wedge-tail ENE light phase
1700—1 Wedge-tail N light phase
1705—1 Wedge-tail SE light phase
1734—1 Pterodroma NE
1738—1 Wedge-tail E

observations concluded 1800

November 14, 1963—Pacific Ocean, between Johnston and Oahu

observation began 0555
0728—1 Pterodroma ENE
0802—1 Red-tailed Tropicbird on water
0803—1 Pterodroma NE
0810—4 Pterodroma W
  1 Wedge-tail lt. phase
0811—1 Pterodroma SW
0851—1 Bonin Petrel NW
0857—1 Pterodroma NW
0904—1 Bonin Petrel NW
0931—1 Pterodroma W
0932—1 Bonin Petrel NW
0945—1 Bonin Petrel NW
1014—1 Pterodroma NW
1021—1 Common Noddy Tern NE
1035—1 Bonin Petrel S
1110—1 Dark-rumped Petrel NW
1140—1 Frigatebird ad &' ENE 150-300'
14 Nov 1228—1 White-tailed Tropicbird E 100'
1734—1 Manx Shearwater
1400—1 Pterodroma W
1407—1 Shearwater-Petrel S
1410—1 Pterodroma S
1812—1 Pterodroma S
1414—1 Pterodroma
1415—1 Bonin Petrel NW
1440—1 Bonin Petrel N
1448—1 Harcourt's Storm Petrel S
1615—1 Bonin Petrel SE
1530—1 Bonin Petrel S
1531—1 Pterodroma NW
1545—1 Red-footed Booby Imm. ENE
1546—1 Pterodroma NW
1554—1 Pterodroma S
1558—1 Bonin Petrel W
1617—1 Bonin Petrel W
1637—1 Bonin Petrel SW
1638—1 Pterodroma S
1638—1 Pterodroma S
1645—1 Bonin Petrel N
1650—2 Bonin Petrel W

observation ended 1740
Cranía, E. J.
At Sea—1963

November 15, 1963—Pacific Ocean, 1 day out Oahu

Observation began 0645

0703—1 Sooty Shearwater SE

0714—1 Red-footed Booby Imm FNE 15'

0720—1 Wedge-tail NW

0733—1 Manx Shearwater? N

0808—1 Pterodroma NNE

0901—1 Frigate bird FNE 100'

0951—1 Wedge-tail S light phase

1030—2 Albatrosses SW one all dark, the other white belly and dark underwings

1042—1 Pterodroma W

1116—1 Bonin Petrel NW

1117—1 Wedge-tail S

1118—1 Sooty Tern S

1144—3 Sooty Tern NE

1207—1 Bonin Petrel SSE

1208—1 Red-footed Booby Ad. NNE

1335—1 Wedge-tail FNE

change course to 090 (W)

1438—1 Red-tailed Tropicbird on water

1512—1 Masked Booby on water

1515—1 Bonin Petrel SE

1520—1 Pterodroma

1530—Flock actively feeding

16 Sooty Tern
November 16, 1963—Parts of Oahu Island, Pacific Ocean

We did not keep a regular watch today as we were supposed to be in port by 0930. We were delayed, however, because of other ships leaving the harbor and ships with higher priority than ours entering.

There are many birds around. These included lots of Pterodroma, and Wedge-tails. There were at least 8 Pomarine Jaegers around the ship at one time and at least 3 Black-footed Albatross.
January 3, 1964—Pacific Ocean, 1st day out Oahu, Hawaiian Islands

We were at the entrance at 1020 to Pearl Harbor. The personnel included Pat Gould, Bob Sundell, Bob Fleet, Ken Amerman and Jim Ludwig, from the Smithsonian. Stanley Oyama was aboard doing oceanographic studies for Dr. Doty of the University of Hawaii.

1023—1 Brown Booby Imm feeding
1027—2 Puddy Turnstones
1039—1 Booby (diving) E
1042—1 Black-footed Albatross following ship
1050—2 Black-footed Albatross following ship
1052—1 Jaeger E 30'
1052—2 Black-footed Albatross following another ship
1054—3 Frigatebirds SW 150' ??
1100—2 Black-footed Albatross following ship (same as before)

4 Porpoises (1100)
1105—4 Black-footed Albatross following ship
1107—1 Jaeger ove and sat in water
1110—7 Black-footed Albatross following ship
1112—9 Black-footed Albatross following ship
1112—2 Jaegers following ship
1117—14 Black-footed Albatross (9 on water in group)
1123—1 Frigatebird Imm. 150'
1158—1 Jaeger--this is a third bird
1202—3 Jaegers
1202—3 Black-footed Albatross following ship
1210—1 Brown Booby SW ad.
1214—6 Black-footed Albatross following ship
  5 Jaegers
1215—16 Black-footed Albatross
1230—12 Black-footed Albatross
  2 Jaegers
1235—17 Black-footed Albatross (9 on water in one flock)
1238—1 Brown Booby NW 50'
1245—1 Black-footed Albatross 0442 collected
1345—7 Black-footed Albatross
  6 Pomarine Jaegers
1347—1 Ruddy Turnstone 0443 collected
1400—9 Pomarine Jaegers (come to garbage dumped over fantail)
1405—12 Pomarine Jaegers
1420—8 Pomarine Jaegers
  14 Black-footed Albatross
1442—6 Black-footed Albatross
  7 Pomarine Jaegers
1505—5 Pomarine Jaegers
  8 Black-footed Albatross
1515—12 Black-footed Albatross
  7 Pomarine Jaegers
1533—1 Pomarine Jaeger #0444 collected
1544—2 Tropicbirds 200'
1600—1 Black-footed Albatross
  1 Pomarine Jaeger
1615—2 Black-footed Albatross
1630—5 Black-footed Albatross
3 Jan

2 Pomerine Jaegers

1635—caught 1 Black-footed Albatross alive and banded it, then released it at 1700

1645—4 Black-footed Albatross

1700—1 Noddy Tern sitting on floating log

1700—7 Black-footed Albatross

1715—4 Black-footed Albatross

2 Pomerine Jaegers

1730—2 Pomerine Jaegers

7 Black-footed Albatross

1745—15 Black-footed Albatross

4 Pomerine Jaegers

rain squall at 1800—over in 2 min.

observations ended 1810

January 4, 1964—Pacific Ocean, 2nd day out Oahu, Hawaiian Isl.

observation began 0707 (sunrise at 0706)

0622—2 Sooty Tern flew over calling

0710—2 Black-footed Albatross

0732—1 Wedge-tail N

0732—1 Bonin Petrel N

0734—1 Sooty Tern N 5–10'

0755—2 Black-footed Albatross still following ship

0800—2 Pterodroma P (Dresner on watch)

0935—1 Black-footed Albatross collected while other Albatrosses are flying around
4 Jan

1010--1 Hawaiian Noddy Tern

1122--1 White-tailed Tropicbird E 200'

1229--1 Red-footed Booby ENE 30'

1252--1 White-tailed Tropicbird E 70'

1257--1 Shearwater SSE 20'

1355--1 Bonin Petrel SSE

1426--1 Harcourt's Storm Petrel SSE

1445--1 Harcourt's Storm Petrel NW

1502--2 Storm Petrel S

1528--4 Sooty Tern ENE

1537--1 Fairy Tern ENE

1550--1

1555--1 Storm Petrel? SE (Blue-gray Noddy Tern--PJG)

white patch on forehead like that of Hawaiian Noddy, under parts
light cream or off whitish, upper parts a little darker like
pale gray or brown. Flew like Harcourt's storm Petrel

1721--6 Sooty Tern E 70-40' between rain squalls

heavy rains from 1723--1800

observation ended 1835

sunset 1835

January 5, 1964--Pacific Ocean, 3rd day out Oahu, Hawaiian Isl.
observation began 0651

We changed course last night to search for the plane that has
been missing since Jan. 1.

0707--1 Albatross
5 Jan

0748—1 Black-footed Albatross following ship

0814—2 Wedge-tail light phase circling in smoke of flare

0845—1 Wedge-tail light phase SSE

0936—1 Wedge-tail light phase

3 Harcourt's Storm Petrel

0945—1 Black-footed Albatross still following ship

0930—2 Black-footed Albatross seen by the captain

0951—1 Wedge-tail intermediate phase

1011—1 Harcourt's Storm Petrel SSE

1100—1 Frigatebird NNW

1103—1 Pterodroma W

1104—1 Frigatebird NW

1105—1 Frigatebird S

1115—2 Frigatebird Same as above

1140—1 Bird

1256—1 Frigatebird

1403—1 Frigatebird

1425—Flock not feeding and somewhat dispersed

1 Frigatebird

2 Wedgetail

1 Harcourt's Storm Petrel

7 Sooty Tern

1440—2 Wedge-tail SSW by Dresner off fantail

1440—2 Wedge-tail SSW by Dresner off fantail

1440—1 Wedge-tail SSW by Dresner off fantail

1500—2 Harcourt's Storm Petrel ESE 0-5'
5 Jan

1523--1 Wedge-tail
1651--1 Black-footed Albatross still following ship
1833--1 Frigatebird

watch second at 1850

Two birds (probably a tern and a tropicbird from description of voices) were flying around ship last night.

January 6, 1964—Pacific Ocean, 4th day out Oahu, Hawaiian Islands

observation began 0708

0708--1 Black-footed Albatross following ship
0742--1 Wedgetail flying with albatross
0752--1 Masked Booby SE 10-20' ad.
0842--2 Black-footed Albatross following ship
0930--2 Black-footed Albatross following ship

same

1056--1 Red-footed Booby E 20-50' Juv.
1133--1 Booby SE same as above?

1225--Flock--actively feeding squid in wakes no flying fish

9 Sooty Tern
3 Wedgetails
1 Frigatebird

1236--Flock feeding on squid

1 Sooty Tern
2 Wedge-tails
1 Fairy Tern

1249--1 Wedge-tail MSW

1357--1 Shearwater? S
6 Jan
1412--1 Wedge-tail ENE
1413--1 Tropicbird S seen by Dut. crew
1425--1 Red-tailed Tropicbird 70' sat in water (not above)
1516--1 Wedge-tail ENE
1543--1 Harcourt's Storm Petrel NNE
1610--2 Frigatebirds 200'
1700--2 Black-footed Albatross following ship 1 collected
1732--1 Red-footed Booby juv. collected
1800--change time zone, set clocks back 1 hour
1716--2 Red-footed Booby 1 juv. and 1 ad.
1723--1 Harcourt's Storm Petrel SSW
1727--3 Red-footed Booby '2 same as at 1716--1 sub adult added
1727--1 Red-footed Booby sub adult 3 at 1727 still around, collected
observation secured 1750
A booby was trying for over 5 min. to land on ship just as it was
getting dark, ca. 1810.

January 7, 1984--Pacific Ocean, 5th day out Oahu, Hawaiian Islands
observation began 0540
0638--1 Tropicbird ENE 200'
0745--Flock--actively feeding very far out
    3 Pterodroma
    2 Shearwater-Petrel
0811--1 Wedge-tail SW
0858--1 White-tailed Tropicbird SW 100'
0903--1 Red-tailed Tropicbird W 250'
Gould, P. J.
1964--At Sea

7 Jan
0934--1 Red-tailed Tropicbird NW 200'
0938--1 Blue-faced Booby ad. feeding
1002--1 Red-footed Booby Imm. collected
1057--1 Wedge-tail SW lt. ph.
1106--1 Red-tailed Tropicbird on water collected
1228--1 Red-tailed Tropicbird W 10 to 20' ad.
1318--1 White-tailed Tropicbird NE 200'
1402--1 Red-footed Booby Imm. collected
1428--1 Storm Petrel NE
1516--1 Red-tailed Tropicbird S on water
1555--1 Masked Booby SE
1728--1 Black fish or whale NN W
1735--1 Frigatebird
1737--1 Frigatebird
1745--1 Blue-faced Booby ad.
observation secured 1800

today we had a lot of flying fish

January 8, 1964--Pacific Ocean, 6th day out Oahu, Grid Area
observation began 0540
0543--1 Sooty Tern heard calling
0652--1 Blue-faced Booby ad. feeding on flying fish
0715-0730 many flying fish and tuna or ( )
1230--2 Red-footed Booby SSE
1316--1 "Brown"? Booby NW 20'
1511--1 Red-tailed Tropicbird W 40'
8 Jan

1634—Whales 2 N possibly black fish
1656—1 Red-tailed Tropicbird sub ad. 250'
1715—Whales 2 part of same herd as of 1634

1817—1 Red-footed Booby
observation secured 1825

*January 2, 1964—Pacific Ocean, 7th day out Oahu, Grid Area

observation began 0540
0545—1 Sooty Tern NE calling
0558—1 Red-footed Booby NE ad 10'
0715—2 Masked Booby E one wet on water
0731—1 Red-footed Booby E Im 40'
0737—2 Red-footed Booby E 10-20' in water
0744—1 Bird
0752—whale?
1101—1 Red-footed Booby E 1-3' imm.
1115—2? Birds count as 1
1203—1 Harcourt's Storm Petrel SE by watch
1210—1 Red-footed Booby N E 20' collected
1400—1 Bird
1406—1 Shearwater-Petrel ESE
(watch reported Tropicbird off fantail at 1230)
1412—1 Red-footed Booby NE 20' collected
1430—1 Black-footed Albatross circled at dye marker
1556—1 Red-tailed Tropicbird collected
1603—1 Red-footed Booby Imm.
Gould, E. J.
1964—At Sea

9 Jan

1640—1 Blackfish

1655—1 Booby SW ad.

1712—2 Red-footed Booby SW lad 1 im.

1720—1 Pterodroma* by Jay Dresner

observation secured 1830

January 10, 1964—Pacific Ocean 8th day out Oahu, Grid Area

observation began 0600

0802—3 Pterodroma feeding

0820—1 Storm Petrel seen from bridge

0828—1 Red-footed Booby E 50 Imm.

0847—1 Red-tailed Tropicbird 300-400' ad.

1122—1 Red-tailed Tropicbird SW 70'

1220—1 Red-footed Booby 10' on water ad.

1252—1 Red-footed Booby 30' W Imm.

1330—1 Red-tailed Tropicbird 150' ad.

1340—1 Masked Booby 1-40' ad

ca. same time, 100 yds. apart

1340—1 Red-footed Booby Imm.

1419—1 Pterodroma SW

1524—1 Red-tailed Tropicbird 100' ad.

1558—1 Booby off stern by Dresner

1630—1 Frigatebird ad of 200' collected

1831—1 Shearwater-Petrel NW 10'

observation secured 1832
January 11, 1964 - 9th day out Oahu, Grid Area

Observation began 0605

0825 - 4 Red-tailed Tropicbirds 0-400' 4 collected

0825 -- Whales 2

0925 -- 1 White-necked Petrel? SE

0952 -- 1 Red-tailed Tropicbird NE 200-300' ad.

1012 -- 1 Red-tailed Tropicbird NE 60-800' with above bird

1325 -- 1 Shearwater-Petrel SW

1519 -- 2 Red-footed Booby NW 5-20' Imm at edge of rain squall

1540 -- 1 Dark-rumped Petrel flock not actively feeding

2 Red-footed Booby Imm.

1 Bonin Petrel

2 Pterodroma

1552 -- 1 Red-footed Booby subadult joined above 2 Imm.

1610 -- 2 White-necked Petrel feeding flocks -- flying fish jumping under birds

1 Pterodroma

4 Red-footed Booby 3 of these same at at 1640

1 Frigatebird ad ?

1724 -- 1 Masked Booby collected

Observation secured 1820

1831 -- 1 Masked Booby ad, flew around ship
Gould, P. J.
1964--At Sea

January 12, 1964--Pacific Ocean 10th day out Oahu, Grid area

observation began 0610

at 0210 Charles Noteboom reported 2 red-tailed Tropicbirds flying around ship.

0817--1 Pterodroma NE
0902--1 Pterodroma NW
1030--1 Pterodroma NW (Dresner)

1 Bonin Petrel NW
1045--1 Pterodroma NW

1128--1 Bird large
1245--1 Storm Petrel (Mr. Smiley)

1315--1 White-necked Petrel appeared just after large
rain squallposed winds to 30
knots
1318--1 Storm Petrel

1444--1 Red-footed Booby adult 40-50'
1615--1 Red-footed Booby sub-adult 5-20'
1624--1 Pterodroma NW

1625--1 Red-footed Booby Im. collected
1736--1 Red-footed Booby NW 30' Im.

1746--1 Red-tailed Tropicbird Ad.
1750--3 Red-footed Booby 5-20' 2 Imm. 1 sub-ad.
1800--1 Red-footed Booby joined above 3
1802--1 White-necked Petrel
1815--1 Storm Petrel
1836--3 Booby (same as 1750?)
1842--1 Booby attempting to land on ship, one of above?

observation secured 1845
Gould, Fl J.
1964—At Sea

January 13, 1964—Pacific Ocean 11th day out Oahu, Grid Area
observations began 0550

0708—1 White-necked Petrel (1 min. after sunrise)
0750—2 Red-footed Booby 1 Im.
0750—1 Red-tailed Tropicbird TSE 100'
0921—1 Booby
1308—1 Masked Booby 35' ad.
   1 Frigatebird 75' ad of
1442—1 Bird NW (all white?)
1455—1 Harcourt's Storm Petrel NW
1536—1 Masked Booby ad 5-60' (collected on water at 1617)
1545—2 Harcourt's Storm Petrel
1730—1 Pterodroma NW
observation secured 1830

January 14, 1964—Pacific Ocean, 12th day out Oahu, Grid Area
observation began 0545

0738—1 Wedge-tail W same bird?
0745—1 Wedge-tail W
0845—1 White-necked Petrel
0904—1 White-necked Petrel W
0945—1 Red-footed Booby 25' adult
1315—1 Tropicbird E 60'
1512—1 Storm Petrel N 10' running ahead of rain squalls
1811—1 Red-footed Booby N 5-25' Imm,
observation secured 1915
January 15, 1964—Pacific Ocean, 17th day out of Oahu, Johnston Island at 0230

observation began 0605
0658--1 Sooty Tern S 50-150'
0724--1 Pterodroma S
0730--1 Booby N wt--10'
0803--1 Pterodroma by watch
1100--1 Pterodroma S flying very fast
1235--3 Red-footed Booby N 5-30' 1 ad 2 Im.
1521--1 Wedge-tail ? flying over Japanese fish nets in operation
1550--1 White-necked Petrel NW
1651--1 Pterodroma
1610--1 Wedge-tail
1618--2 Shearwater-Petrel N
1630--1 Wedge-tail E

observation ended 1800

January 16, 1964—Pacific Ocean, 14th day out Oahu, 1 day past Johnston

observation began 0610
0618--1 Red-footed Booby N 10-30' Im. stayed around till 0855
0730--1 Black-footed Albatross following ship
0832--1 Wedge-tail N
0832--1 Laysan Albatross following ship
0850--1 Masked Booby 30' adult
0902--1 Frigatebird N ad ?
0919--1 White-necked Petrel E
0952--2 Red-footed Booby E 5-30'
1964--At Sea

16 Jan

1008--2 Black-footed Albatross following ship

1327--2 Black-footed Albatross following ship

1344--1 Pterodroma white rump patch

1512--1 Pterodroma N

1605--3 Black-footed Albatross now following ship

1705--1 Red-footed Booby E sub adult catching flying fish

observation ended 1800

17 January, 1964--Pacific Ocean, 15th day out Oahu, 2nd day past Johnston

observation began 0730

0854--1 Red-tailed Tropicbird SE 150'

0935--1 Black-footed Albatross following ship

1037--1 Fairy Tern NW 50'

1114--1 Fairy Tern NW

1116--1 Frigatebird 200' ad 9

1210--2 Black-footed Albatross following ship

heavy rain squall 1320

1327--1 Fairy Tern NE 40'

1329--Flock--actively feeding in rain squall, no flying fish

50 plus Sooty Tern

8 Fairy Tern

1 Masked Booby

1337--3 Black-footed Albatross following ship

1400--Flock feeding in and out of rain squall no flying fish

20 plus Sooty Tern

1 Fairy Tern

2 Wedge-tail Imm.

rain squall ended 1410
January 17, 1964—At Sea

Rain squall 1436-1442
1516—4 Black-footed Albatross following ship
1526—1 Kermode Petrel SE (Gould and Sundell)
1655—6 Black-footed Albatross now following ship
1810—1 Red-tailed (White-tailed?) Tropicbird? ESE 50'

January 18, 1964—Pacific Ocean 16th day out Oahu, less than 100 mi sw Oahu
observation began 0710

0710—3 Black-footed Albatross following ship
0733—4 Black-footed Albatross following ship
0800—Flock—actively feeding, no flying fish

85 plus/minus Sooty Tern
   1 Fairy Tern
   1 Frigatebird

0835—3 Sooty Tern S
0835—26 plus/minus Sooty Tern actively feeding
0841—1 Sooty Tern S
0942—Porpoises (8)
1007—2 Sooty Tern N
1020—1 Ruddy Turnstone E
1033—15 plus/minus Sooty Tern
1554—1 Pterodroma SE
1559—1 Pomarine Jaeger W 40° dark phase
1630—25 plus/minus Sooty Terns actively feeding
1825—1 Frigatebird W NE 400°

observation secured 1830
February 2, 1984—Pacific Ocean, 1st day out Oahu

Observation began 0942

0942—100 plus/minus Shorebirds flying across harbor channel

0957—7 Shorebirds on sand spit near entrance to harbor

1000—1 Brown Booby sitting on buoy #3

1001—1 Frigatebird flying towards Oahu

1012—1 Brown Booby SW 10-20'

1047—1 Pomarine Jaeger NW 60' dark phase

1110—1 Black-footed Albatross 20' following ship

1120—2 Booby ? NW

1115—2 Black-footed Albatross now following ship

1123—1 Brown Booby NW 10'

1125—1 Pomarine Jaeger NE 50'

1127—1 Pomarine Jaeger SE 50'

1130—3 Black-footed Albatross following ship

1134—1 Pomarine Jaeger SE 10-15'

1146—1 Pomarine Jaeger SE

1204—1 Pomarine Jaeger SE

1206—4 Black-footed Albatross

1237—2 Pomarine Jaeger NW

1239—3 Black-footed Albatross following ship

1244—2 Pomarine Jaeger

1257—6 Black-footed Albatross following ship

1306—3 Tern NE following school of fish

1309—6 Sooty Tern NE feeding on small fish
1964--At Sea

3 Feb

1317--1 Pomerine Jaeger SW

1317--8 Black-footed Albatross following ship

1400-1500--3 Black-footed Albatross

1500-1600--3 plus/minus Pomerine Jaeger

1600--Banded 1 black-footed Albatross (#757-60836)

1608--1 Gray-backed Tern SW 15'

1611--2 Dark-rumped Petrel NE

1618--2 Sooty Tern N 20'

1630--1 "Sooty?" Storm Petrel SW 20'

1653--2 Sooty Tern NW 60'

1653--4 Black-footed Albatross following ship

1657--1 Frigatebird SW 300'

1703--1 Sooty Tern NW 70'

1728--3 Sooty Tern NE 60'

1754--2 Pomerine Jaeger on water light phase

1800--5 Black-footed Albatross following ship

1811--7 Sooty Tern 5-40' not feeding

1820--1 Red-footed Booby 40'

1827--1 Red-footed Booby 30' different from above

1839--2 Frigatebird 500'

observation ended 1845

February 4, 1964--Pacific Ocean, 2nd day out Oahu

observation began 0505

0505--1 Ped-footed Booby roosted on ship

0627--1 Fairy Tern NE

0630--1 Shearwater-Petrel S
Gould, F. J.
1964—At Sea

0641—1 Sooty Tern SE 5-10'
0725—1 Sooty Tern NNE 5-15'
0750—1 Sooty Tern? SE 5-15'
0759—1 Red-footed Booby NW 5-20' adult
0817—1 "Sooty?" Tern S 10-20'
0819—1 Fairy Tern NW 25'
0822—12 "Sooty?" Tern SE 5-25'
0825—1 Sooty Tern W 5-10'
0825—1 Sooty Tern S 10-20'
0825—2 Sooty Tern NW 20-50'
0836—2 Sooty Tern SE 10-20'
0854—1 Sooty Tern S 20-30'
0904—1 Fairy Tern NE 40-50'
0907—1 Sooty Tern SW
0907—1 Fairy Tern SW
0915—1 Sooty Tern SE 30'
0917—11 Sooty Tern SE not feeding 10-30'
0922—2 Sooty Tern
  1 Fairy Tern
  1010—1 Fairy Tern S 30'
0915—2 Sooty Tern NW 20'
1048—1 Storrf Petrel
1052—9 Sooty Tern "E 8" feeding
1100—63 plus/minus Sooty Tern ENE flying towards rain squall
1106—2 Fairy Tern ENE 10-30'
1107—1 Sooty Tern ENE 10-30'
1108—1 Sooty Tern ENE 10-30'
4 Feb

1235--11 Sooty Terns feeding (no flying fish)

1452--3 Sooty Tern SE 10-100' feeding

1503--1 Black-footed Albatross collected

1515--7 Sooty Tern NE 10-100'

1516--1 Sooty Tern NE

1537--1 Harcourt's Storm Petrel SW 0-10'

1544--1 Sooty Tern NE 60-100'

1708--1 Sooty Tern NE 30'

1750--Secured observations

February 5, 1964--Pacific Ocean, 3rd day out Oahu

0615--began observation

0615--1 Red-footed Booby roosting on ship since 0315

0655--1 Laysan Albatross SW 0-40'

0910--2 Harcourt's Storm Petrel S 1-5'

0959--1 Harcourt's Storm Petrel SW on water

1021--1 Red-footed Booby S 50-75'

1221--1 Frigatebird ENE 100' adrift fishing

1223--2 "Sooty?" Tern 200'

1320--1 Frigatebird

1321--1 "Masked?" Booby 0-50' feeding

1726--1 Red-footed Booby NNW 10' Im.

1358--2 Red-footed Booby ENE 30'

1415--1 Frigatebird? 150'

1430--roosting Red-footed Booby left ship under duress

1510--1 Storm Petrel NE

1626--1 Common Noddy SW 25'
Gould, L. J.
1964—At Sea

5 Feb
1640—1 Red-footed Booby S 25-50'
1658—1 Brown Booby SW 20-50'
1815—1 Red-footed Booby
1811—observation secured

February 6, 1964—Pacific Ocean, 4th day out Oahu SW
0630—began observation
0915—1 Red-footed Booby 10-20' Im.
1025—2 Masked Booby 5-20' 1 collected
1029—40 plus/minus 5 Terns
1036—Shark 25-70' long
1046—1 Masked Booby N (same as at 1025?)
1223—1 Red-tailed Tropicbird 200'
1328—1 Red-footed Booby NW 10-40' Imm.
1426—2 Red-footed Booby 10'
1550—Flock: 100 plus/minus Sooty Tern feeding
   50 plus/minus Red-footed Booby ca. 10 Imm. 40 ad.
   1 Masked Booby adult
1812—Secured observation

February 7, 1964—Pacific Ocean, 5th day SW Oahu
0606—began observation
0643—1 Dark-rumped Petrel S
0652—1 Pterodroma N (same as above?)
0708—1 Red-footed Booby S 40' feeding
   7 Sooty Tern S 100' feeding
   1 Red-tailed Tropicbird 300' not feeding
0821—2 Red-tailed Tropicbird SE 200'
February 8, 1964--Pacific Ocean, Grid Area SW Johnston

0640--began observation

1324--1 Red-tailed Tropicbird 100'

1514--1 Harcourt's Storm Petrel N

1840--observation secured

February 9, 1964--Pacific Ocean, Grid Area SW Johnston

0630--observation began
9 Feb
0710—1 Red-footed Booby NW 5-30' Imm.
1158—1 Red-footed Booby NE 50' Imm.
1316—1 Shearwater-Petrel 10-20'
1#52—1 Pterodroma SW
1613—1 Storm Petrel E
1620—1 Shearwater Petrel observation secured 1830

February 10, 1964—Pacific Ocean, Grid area SW Johnston Is.
0645—began observations
0716—1 Red-footed Booby NW 20-50'
0845—1 Red-footed Booby W ad.
1245—1 Red-footed Booby 40' Imm. collected
1410—1 Red-footed Booby Imm.
1444—1 Red-tailed Tropicbird ad. 150-200yds.
1630—1 Red-footed Booby 20-30' Imm.
1715—1 Masked Booby
1734—1 Red-tailed Tropicbird 100'
1737—1 Masked Booby (same as 1715?)
1835—secured observations

11 February, 1964—Pacific Ocean, Grid area SW Johnston Is.
0605—observation began
0702—1 Masked Booby NW 5-30' ad.
0721—1 White-necked Petrel
0732—1 Masked Booby (same as 0702?)
0744—1 Masked Booby Imm. 10-50'
0754—1 Red-footed Booby 10-60' flying with Masked
Gould, P. J.
1964—At Sea

11 Feb
0805—1 Booby
0806—1 White-necked Petrel
0816—1 Pterodroma SP
0915—1 Sooty Storm Petrel E no white rump, no wing bars
0946—2 Pterodroma brown back, dark breast band Herald's Petrel?
1035—1 Pterodroma brown above
1206—1 White-necked Petrel E
1249—1 Red-footed Booby SE 25'
1250—1 Pterodroma SW
1315—1 Red-footed Booby 30'
1320—1 Harcourt's Storm Petrel SW
1840—secured observations

February 12, 1964—Pacific Ocean, Johnston—Sand Island
0620—began observation
0726—1 Phoenix Petrel NNW PJG.
0826—1 Wedge-tailed Shearwater SSW
0829—1 Sooty Tern ENE Brown Winged Tern?
0941—1 Red-footed Booby ENE I m.
0945—1 Frigatebird WSW 0–100'

1 Booby 0–10' same as 0941?
0949—1 Wedge-tailed Shearwater ESE
0959—4 Sooty Tern (E or SE?) 0–30'
1141—12 Sooty Tern toward Johnston Isl.
1145—1630 within 2 miles of Johnston Island
1621—2 Brown Booby
1632—2 Sooty Tern towards Johnston
12 Feb

1634—6 Sooty Tern towards Johnston
1636—1 Black-footed Albatross
1645—2 Sooty Tern
1700—1 Red-footed Booby d.
1720—3 Sooty Tern towards Johnston
1723—1 Sooty Tern towards Johnston
1725—1 Red-footed Booby
1725—1 Red-footed Booby
1726—11 plus Sooty Tern towards Johnston
1731—4 Sooty Tern towards Johnston
1732—1 Sooty Tern towards Johnston
1735—7 Sooty Tern towards Johnston
1737—39 plus Sooty Tern towards Johnston
1739—3 Sooty Tern towards Johnston
1740—4 Sooty Tern towards Johnston
1741—31 Sooty Tern S towards Johnston
1742—2 Red-footed Booby 1 collected
1742—1 Black-footed Albatross still following ship collected
1746—12 Sooty Tern towards Johnston
1747—2 Sooty Tern towards Johnston
1750—6 plus Sooty Tern towards Johnston
2 Red-footed Booby towards Johnston
1755—50 plus Sooty Tern towards Johnston
25 plus Sooty Tern towards Johnston
24 plus
1810—1 Frigatebird
12 Feb 1915--100 plus Sooty Tern towards Johnston

2 Red-footed Booby towards Johnston

1820--25 Sooty Tern

1825--secured observations

Sooty Terns heard in large numbers steadily through 2045 hours.

Again at 2305, about 10 birds

Upon leaving the dock at Johnston Island we noted a mixed flock of
Sooty Tern and Frigatebirds directly over Sand Island. We kept this flock
in sight and noted the time when we could no longer see the birds or recognize
them. These times were compared with the ship charts and established
accurate mileage from each check point to the flock of birds.

<table>
<thead>
<tr>
<th>Time</th>
<th>Mileage to Flock</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>1607</td>
<td>7/8 mi.</td>
<td>Frigates recognizable to species</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Terns not recognizable to species</td>
</tr>
<tr>
<td>1608</td>
<td>1 1/2 mi.</td>
<td>Single Frigates can be seen, single terns can not be seen.</td>
</tr>
<tr>
<td>1610</td>
<td>1 3/8 mi.</td>
<td>Flock looks 1/2 actual size</td>
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<tr>
<td>1611</td>
<td>1 1/2 mi. ca</td>
<td>cannot see Terns</td>
</tr>
<tr>
<td>1612.5</td>
<td>1 7/8 mi.</td>
<td>Frigates barely visible</td>
</tr>
<tr>
<td>1614</td>
<td>2 mi.</td>
<td>Frigates not visible</td>
</tr>
</tbody>
</table>

Terns can be recognized to species at about 1/2 mi.

February 12, 1964--Pacific Ocean, Grid Area SW Johnston Island

0555--began watch

birds present around bridge at 0330 and 0400 this morning

0703--1 Laysan Albatross ESE

0824--2 Red-footed Booby NE 1 Imm and 1 Sub adult

0924--1 Masked Booby NE 30' ad.
Gould, E. J.  
1964—At Sea

17 Feb
0925—1 White-tailed Tropicbird [SE] 60’
0925—1 Pterodroma NE
0932—1 Pterodroma / Sooty Tern SW low
1337—1 Harcourt’s Storm Petrel NNW
1136—1 Red-footed Booby SW 20’ collected
1651—1 Herald’s Petrel NE low
1845—observation concluded

February 14, 1964—Pacific Ocean, Grid Area SW Johnston Island

0640—began observations
1147—1 Harcourt’s Storm Petrel W
1416—1 Red-footed Booby SW 10’ Imm.
1455—1 Black-footed Albatross SE
1648—1 Laysan Albatross SW 20’
1653—1 Frigatebird NE 500’
1747—1 Red-footed Booby SE 50’
1840—secured observation

February 15, 1964—Pacific Ocean, Grid Area SW Johnston Island

0635—began observation
0745—1 Black-footed Albatross
0750—1 Red-footed Booby Imm.
0815—1 Black-footed Albatross same as at 0745?
0816—1 Red-footed Booby Imm.
0919—1 Pterodroma S
0948—1 Black-footed Albatross still following
1127—1 Red-tailed Tropicbird SSW 100’
Gould, F. J.
1964--At Sea

15 Feb
1346--1 Red-footed Booby W 30' Sub ad.
1348--1 Masked Booby W ad. collected
1520--2 Red-footed Booby NE 10-60' 1 sub ad. 1 Imm.
1552--1 Bonin Petrel SE
1618--1 Black-footed Albatross different from 0745
1740--1a Sooty Tern S low
1745--1 Laysan Albatross
1828--secured observations

February 16, 1964--Pacific Ocean
0621--begun observations
0635--1 Red-footed Booby NE 50' Imm.
0731--1 White-tailed Tropicbird 75-200' feeding on flying fish
0749--2 Red-tailed Tropicbirds 0-200' feeding on flying fish
1012--1 Red-tailed Tropicbird ENE 5-100'
1056-1103 heavy rain
1243--1 Frigatebird E 100-700'
1257--1 Frigatebird SW 150 yds.
1257--1 Sooty Tern NW 150 yds joined up
1258--1 Frigatebird SW 100 yds.
1319--1 Frigatebird NE 200 yds Imm.
1440--2 Fairy Tern 5-10' feeding (no flying fish)
1550--1 Frigatebird 5-40' feeding
1552--Sea Turtle
1700--34 Sooty Terns NW 75-100 yds.

1 Booby NW low
Gould, E. J.
1964—At Sea

16 Feb
1700—1 Pterodroma SW
1701—1 Fairy Tern SW 30'
1808—1 Red-footed Booby NE 10-50' Imm.
1814—1 Masked Booby on water
1814—1 Red-footed Booby 5-20' (with 1808 bird)
1815—secured observations

February 17, 1964—Pacific Ocean, between Johnston and Oahu

0612—began observations
1027—1 Red-tailed Tropicbird NE 50-75'
1034—4 Sooty Tern SE
1428—2 Terns S 5-20'
1511—1 Harcourt's Storm Petrel NE
1520—1 Red-footed Booby NW low
1540—ca. 10 "Yellow-tail Tuna"? about 3' long with bright yellow tails
1545—1 Red-footed Booby (same as 1520)?
1552—2 Terns SE
1555—22 Sooty Terns NW 25-100'
1556—1 Red-footed Booby NE low (same as 1530?)
1557—14 Sooty Terns joined 1555 birds
1558—1 Masked Booby on water (had band # ) collected
1609—1 Masked Booby NE
1609—3 Sooty Tern S
1613—2 Sooty Terns SE
1617—1 Harcourt's Storm Petrel SW
1726—1 Red-footed Booby NE low ad.
**February 12, 1964--Pacific Ocean, 2 days out Oahu**

- **0620**--began observations
- **0654**--1 Sooty Tern ESE 50'
- **0725**--1 White-tailed Tropicbird NE 150'
- **0730**--1 Sooty Tern SE 2-5'
- **1731**--1 Sooty Tern SE 2-5'
- **0736**--1 Sooty Tern SW 14-20'
- **0737**--3 Sooty Tern
- **0739**--1 Sooty Tern SW 20' collected
- **0755**--2 Sooty Tern SW 10-20'
- **0758**--3 Sooty Tern SSW 10-20'
- **0800**--8 Sooty Tern S
- **0810**--1 Sooty Tern SE 10'
- **0815**--5 Sooty Tern SSW 10'
- **0829**--80 plus or minus 15 Sooty Terns (O) low feeding
- **0830**--1 Sooty Tern SE 15'
- **0837**--1 Red-footed Booby NW low
- **0848**--1 Sooty Tern SW 15'
- **0848**--1 Sooty Tern SE 15'
- **0900**--6 Sooty Tern SE 15-30'
- **0900**--1 Sooty Tern SW 15-30'
- **0905**--2 Sooty Tern SE 15-30'
- **0907**--6 Sooty Tern SW
- **0907**--3 Sooty Terns SW
- **0920**--2 Sooty Terns NE low
- **0920**--3 Sooty Terns NE low
Coul, E. J.
1964-- At Sea

18 Feb
0921--1 Sooty Tern SE 30'
0935--1 Sooty Tern SE 15'
0935--1 Fairy Tern SW 20'
0939--2 Sooty Tern S 30'
1002--2 Sooty Tern SE 30-40'
1013--1 Sooty Tern SE 30-40'
1110--School of Tuna? ca. 20 heading SW
1122--1 Sooty Tern ESE 20-30'
1128--2 Sooty Tern NW 30-40'
1135--1 Sooty Tern NNW 5-10'
1142--3 Sooty Tern

1142-1200 Flock feeding on 2' long fish no flying fish seen
50 plus or minus Sooty Terns

1 Red-footed Booby

1226--1 Sooty Tern 150' soaring

1235--1 Red-footed Booby SW low ad.
1244--1 Sooty Tern NW 10-15'
1253--2 Sooty Tern SE
1316--1 Fairy Tern SE
1355--1 Sooty Tern W
1432--1 Sooty Tern SE
1434--3 Sooty Tern SE
1436--1 Tropicbird SE
1437--1 Sooty Tern SW
1450--1 Sooty Tern NW 5-10'
1454--1 Sooty Tern SW 20-30'
Gould, E. J. 1964--At Sea

18 Feb
1532--1 Huddy Turnstone NNW
1624--5 Sooty Tern NW 10-20'
1629--1 Sooty Tern NW 30'
1710--100 plus or minus Sooty Tern feeding no flying fish
1716--1 Fairy Tern in ( ) of above flock
1811--2 Sooty Tern W 10-20'
1832--1 Red-footed Booby Imm. collected
1838--secured observations

February 19, 1964--Pacific Ocean near Oahu, Hawaiian Islands
only Jim Hidwig on observations
0645--began observation
0703--1 Pomarine Jaeger SW both in view at same time
0705--1 Pomarine Jaeger NW
0708--1 Pomarine Jaeger W new bird
0709--1 Pomarine Jaeger W new bird
0712--1 Pomarine Jaeger NNE
0729--1 Pomarine Jaeger light phase
0738--1 Pomarine Jaeger light phase
0747--2 Pomarine Jaeger light phase
0746--1 Pomarine Jaeger light phase
0800--1 Pomarine Jaeger
0803--2 Pomarine Jaeger light, 1 dark phase
0812--1 Pomarine Jaeger
0815--secured observation

certainty of at least total of 5 plus birds
March 2, 1964—Pearl Harbor, Oahu, Hawaiian Islands

Observation began 1104

1104—1 Golden Plover flew across bow
1109—1 Brown Booby on buoy
1109—10 plus or minus 2 Golden Plover on beach and sand bar
1119—1 Red-footed Booby N E low
1223—1 Pomarine Jaeger
1236—4 Pomarine Jaeger light ph.
1245—2 Pomarine Jaeger light ph.
1257—2 Pomarine Jaeger light ph.
1305—1 Red-footed Booby NE
1309—4 Sooty Tern NE 0-10'
1313—4 Pomarine Jaeger
1316—5 Pomarine Jaeger
1318—1 Sooty Tern 0-60'
1325—1 Pomarine Jaeger Imm.
1330—2 Sooty Tern 0-50'
1332—2 Pomarine Jaeger
1333—1 Sooty Tern N
1334—1 Pomarine Jaeger
1338—3 Pomarine Jaeger
1343—1 Pomarine Jaeger
1348—2 Sooty Tern N 0-25'
1352—3 Pomarine Jaeger
1355—2 Sooty Tern NE
1405—1 Black-footed Albatross SE following ship

Gould, P. J.
1964—At Sea

March 2, 1964--Pearl Harbor, Oahu Hawaiian Islands

observation began 1103

1104—1 Golden Plover flew across bow
1109—1 Brown Booby on buoy
1109—10 plus or minus 2 Golden Plover on beach and sand bar
1119—1 Red-footed Booby N E low
1223—1 Pomarine Jaeger
1236—4 Pomarine Jaeger light ph.
1245—2 Pomarine Jaeger light ph.
1257—2 Pomarine Jaeger light ph.
1305—1 Red-footed Booby NE
1309—4 Sooty Tern NE 0-10'
1313—4 Pomarine Jaeger
1316—5 Pomarine Jaeger
1318—1 Sooty Tern 0-60'
1325—1 Pomarine Jaeger Imm.
1330—2 Sooty Tern 0-50'
1332—2 Pomarine Jaeger
1333—1 Sooty Tern N
1334—1 Pomarine Jaeger
1338—3 Pomarine Jaeger
1343—1 Pomarine Jaeger
1348—2 Sooty Tern N 0-25'
1352—3 Pomarine Jaeger
1355—2 Sooty Tern NE
1405—1 Black-footed Albatross SE following ship
2 March 1415--7 Pomarine Jaeger

1420--21 Pomarine Jaeger attracted to garbage

1430--1 Sooty Tern NW 20'

1430--1 Frigatebird NE 50-60'

1434--4 Sooty Tern NW low

1551--1 Storm Petrel? NW low

1615--1 Black-footed Albatross still following

1620--20 Pomarine Jaegers still following

1804--1 Black-footed Albatross still following

1818--Flock--actively feeding

40 plus or minus 5 Sooty Terns

10 plus or minus Pomarine Jaegers chasing Terns

1 Fairy Tern

1842--"unset--10 Jaegers and 1 Albatross

1853--secured observation

March 2, 1964--Pacific Ocean, 2nd day out Oahu

0630--commence observations

0631--1 Sooty Tern SW 10'

0640--1 Fairy Tern NE 0-20'

0646--1 Fairy Tern NE 10-15'

0651--1 Tern

0701--4 Sooty Tern W 0-30'

0704--2 Sooty Terns NE low

0704--1 Sooty Tern NW 15-20'

0710--1 Sooty Tern NE 15-20'
**Gould, E. J.**
1964—At Sea

3 Mar

0710--1 Sooty Tern SV 10-30'
0712--1 Sooty Tern W 10-30'
0712--2 Sooty Tern NE
0724--3 Sooty Tern S low
0731--5 Sooty Tern SSW 5-10'
0742--1 Sooty Tern SSE
0756--1 Sooty Tern SSE
0757--1 Sooty Tern SSE 0-30'
0810--80 plus or minus Sooty Tern feeding 0-30'
0815--1 Sooty Terns NE 0-30'
0823--3 Sooty Terns NE 5'
0825--55 plus or minus Sooty Tern NE feeding

1 Hawaiian Noddy Tern NE feeding

0830--1 Sooty Tern NE 75'
0835--3 Sooty Tern NE 0-10'
0853--1 Bonin Island Petrel NW 0-30'
0912--13 Sooty Tern E 100'
0913--4 Hawaiian Noddy Tern 0-10' feeding
0914--2 Sooty Tern NW 5'
0915--1 Sooty Tern NW 5'
0915--1 Sooty Tern NW 5'
0954--1 Frigatebird 2 150' ad ♀
1004--1 Sooty Tern NE 50'
1042--1 Black-footed Albatross follows ship
1051--Flock breaking up (after feeding?)

15 Sooty Tern
1 Masked Booby
Gould, P. J.
1964—At Sea

2 Mar

2 Hawaiian Noddy Tern

1110—1 Red-tailed Tropicbird NNW 50-75'

1112—1 Sooty Tern

1203—32 plus Sooty Tern feeding

1 Hawaiian Noddy Tern

1210—1 Red-footed Booby 5-30' sub adult

1225—1 Sooty Tern NW 50'

1235—1 Frigatebird NE 350' ad &

1420—lock not feeding

5 Sooty Tern

3 Hawaiian Noddy ENE 10-50'

2 plus or minus Terns

1559—2 Terns

1734—1 Sooty Tern SW 30-80'

1800—secured observation at sunset

March 4, 1964—Pacific Ocean, 3 rd day out Oahu

0558—commence observations

0620—2 birds low over water

0645—2 Shearwaters SSE 5-15'

0653—1 Sooty Tern NNE 50'

0710—1 Sooty Tern SE 10-20'

0718—13 Sooty Tern S 5-30' calling and feeding

2 Fairy Tern S 0-30' feeding

1 Brown Booby S 15-30' feeding

0811—4 Terns SE
March 4, 1964—At Sea

09 5--1 Bird SE reported by sailor

0945--1 Storm Petrel NW

1001--1 Red-tailed Tropicbird 60-70' heading W

1007--1 Sooty Tern 5-50' intermittent feeding

1 Great Frigatebird 200 yds. over flock

1010--40 plus or minus 5 Sooty Tern feeding

1 Great Frigatebird chasing low over water

1017--1 Sooty Tern

1025--1 Red-footed Booby SE sub adult on water

1026--3 Sooty Tern SE

1031--2 Sooty Tern NE 5-10'

1243--8 Common Noddy Tern WNW 50-100'

1328--1 Red-tailed Tropicbird NW Imm. collected

1752--1 Masked Booby N ad.

1820--secured observations

1845--1 Red-tailed Tropicbird 200'

March 5, 1964—Pacific Ocean ca. 9 mi. E Johnston Island at 1055

0610--began observations

0610--1 Black-footed Albatross following ship collected

0640--2 Sooty Tern N low

0640--2 Red-footed Booby W low 1 ad., 1 Imm. 1 collected

0644--1 Red-footed Booby 30-40'

0644--4 Sooty Tern N 10'

0700--3 Sooty Tern S 30'

0705--2 Sooty Tern 5-10'
Gould, E. J.
1964—At Sea

5 Mar

0706—1 Red-footed Booby Imm

0706—1 Red-footed "Booby"

0707—1 Sooty Tern W 5-10'

0712—2 Sooty Tern NW 10-20'

0715—1 Sooty Tern N 5-10'

0729—1 Bird N

1 Sooty Tern N

0740—1 Sooty Tern SE 50-75'

0744—3 Sooty Tern S 50-75'

0745—1 Sooty Tern S 5-20'

0747—5 Sooty Tern N 5-20'

0749—2 Sooty Tern N 5-50'

0752—6 Sooty Tern N 5-50'

0757—6 Sooty Tern N 5-50'

0800—2 Sooty Tern N 5-50'

0858—7 Sooty Tern N very low

0859—3 Sooty Tern N very low

0900—2 Sooty Tern N very low

0900—5 Sooty Tern N very low

0903—2 Sooty Tern NW 10-20'

0904—1 Sooty Tern S

0906—1 Sooty Tern S 5-10'

0907—3 Sooty Tern ENE 10-50'

0908—1 Sooty Tern S 5-10'

0910—2 Sooty Tern F

0911—2 Sooty Tern NW

1 Brown Booby

low
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Species</th>
<th>Direction</th>
<th>Distance</th>
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<td>0916</td>
<td>Sooty Tern</td>
<td>NE</td>
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<td>0917</td>
<td>Sooty Tern</td>
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<td>0918</td>
<td>Sooty Tern</td>
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<td>1007</td>
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<td>1008</td>
<td>Sooty Tern</td>
<td>NW 5-50'</td>
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</table>
Gould, E. J.
1964—At Sea

5 Mar

1008—2 Sooty Tern SW low
1008—3 Sooty Tern NW low
1008—1 Sooty Tern S low
1009—1 Sooty Tern SW low
1012—2 Sooty Tern N low
1014—3 Sooty Tern W low
1015—2 Sooty Tern S low
1020—2 Sooty Tern E low
1023—1 Sooty Tern N low
1026—1 Sooty Tern NW low
1028—2 Sooty Tern S low
1030—1 Sooty Tern NE low
1030—3 Sooty Tern SW low
1034—2 Sooty Tern NW 50°
1035—1 Sooty Tern E 75°
1040—15 Sooty Tern E 50°
1041—2 Sooty Tern SW 50°
1045—1 Sooty Tern SE 5-20°
1047—2 Sooty Tern SE low
1048—2 Sooty Tern NW low
1049—3 Sooty Tern E
1053—1 Sooty Tern SE
1055—1 Sooty Tern NW

1100-1109—Flock feeding, scattered

50 plus Sooty Tern

6 Frigatebirds
1964—

Sefc

1 Booby ?

1 Tropicbird

1110—1117—6 plus Red-footed Booby

1 Masked Booby

10 plus Sooty Tern one red tagged

1 Brown Booby ad one red tagged

1125—8 Sooty Terns S 5-50'

1126—3 Sooty Tern 20'

1130—8 Sooty Tern

1131—2 Sooty Tern SE

1137—2 Sooty Tern S 30'

1137—1 Sooty Tern SE low

1138—2 Sooty Tern NW 50'

1139—1 Sooty Tern NW 50'

1140—5 Sooty Tern low

1141—1 Sooty Tern NW low

1142—3 Sooty Tern 100'

1143—1 Frigatebird 200'

1144—1 Booby?

1145—1 Sooty Tern with tag

1153—1 Sooty Tern NE 50'

1159—2 Sooty Tern

1200—1 Sooty Tern

1200—5 Sooty Tern NW

1201—1 Sooty Tern NW

1204—1 Sooty Tern NW

1211—2 Sooty Tern SE 100'
5 Mar
1212--2 Sooty Tern NE
1214--1 Sooty Tern SW 10'
1216--4 Sooty Tern SSW 5-15'
1219--4 Sooty Terns NE 50'
1227--3 Sooty Terns SW low
1230--10 Sooty Tern NE low
1231--3 Sooty Tern
1231--1 Noddy NE low
1233--1 Sooty Tern NE
1236--1 Booby Se
1238--1 Red-tailed Tropicbird-NNW 80'
1240--3 Sooty Tern SE
1243--2 Sooty Tern N 50'
1245--1 Red-footed Booby Iwm 50'
1247--2 Sooty Tern N
1248--2 Sooty Tern ENE 50'
1252--2 Sooty Tern N 20'
1258-- Whale
1300--1 Sooty Tern N 50'
1303--1 Sooty Tern N 20'
1305--1 Sooty Tern N 5'
1307--20 Sooty Tern NE feeding
   1 Red-footed Booby NE
   2 5' whales under flock
1310--1 Sooty Tern SE low
1315--3 Sooty Tern SW low
1316--1 Sooty Tern NE 20'
5 Mar
1318--3 Sooty Tern S
1322--2 Sooty Tern NW 50'
1325--7 Sooty Tern
1344--4 Sooty Tern NE 50'
1346--4 Sooty Tern N 50'
1348--2 Sooty Terns NE 20'
1353--1 Sooty Tern NE 20'
1356--2 Sooty Tern NY 20'
1358--4 Sooty Tern N E 50-75'
1159--1 Red-footed Booby
1400--3 Sooty Terns one with tag (red)
1401--4 Sooty Terns
1402--2 Sooty Terns N 20'
1415--3 Sooty Terns SW 10-45'
1416--1 Sooty Tern 10-25'
2 Masked Booby
1420--8 Sooty Tern NW
1421--7 Sooty Terns NW
1424--4 Sooty Terns NNW
1427--4 Sooty Terns NNW
1427--7 Sooty Terns NW
1428--1 Sooty Tern NW
1430--3 Sooty Terns NW
1431--3 Sooty Tern NW
1431--2 Sooty Tern NW
1432--4 Sooty Tern NW
1432--1 Red-footed Booby NW
<table>
<thead>
<tr>
<th>Date</th>
<th>Observations</th>
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<tbody>
<tr>
<td>5 Mar</td>
<td>1433--3 Sooty Terns NW</td>
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<td>1434--7 Sooty Terns NW</td>
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<tr>
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<td>2 Red-footed Booby</td>
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<tr>
<td></td>
<td>1436--2 Sooty Tern SE</td>
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<td>1437--2 Sooty Tern SE</td>
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<td>1443--1 Fairy Tern NW</td>
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<td>1433--1 Red-footed Booby</td>
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<td>1444--9 Sooty Tern NW</td>
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<td>1445--2 Sooty Tern NW</td>
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<td>1446--1 Booby? N</td>
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<td>1448--2 Sooty Tern NW</td>
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<td>1452--5 Sooty Tern SE</td>
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<td>1455--2 Sooty Tern NW</td>
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<td>1458--2 Sooty Tern S</td>
</tr>
<tr>
<td></td>
<td>1501--1 Sooty Tern NW</td>
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<tr>
<td></td>
<td>1507--1 Red-footed Booby Imm. N</td>
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<td>1508--1 Sooty Tern NW 35'</td>
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<td>1510-1523</td>
<td>65 plus or minus 2 Sooty Tern feeding</td>
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<tr>
<td></td>
<td>2 Red-footed Booby 1 ad, 1 subad. 1 collected</td>
</tr>
<tr>
<td></td>
<td>1 Wedge-tailed Shearwater</td>
</tr>
<tr>
<td>1527--2</td>
<td>Sooty Tern NW</td>
</tr>
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<td>1530--2</td>
<td>Sooty Tern NW</td>
</tr>
<tr>
<td>1531--1</td>
<td>Sooty Tern NW</td>
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</tbody>
</table>
Mar, 1964--At Sea

5 Mar

1554--1 Sooty Tern NW
1555--4 Sooty Tern NW
1559--Whale ca 70' long
1608--1 Harcourt's Storm Petrel SE
1610--1 Sooty Tern W 50'
1619--3 Sooty Tern NNW 50-75'
1620--1 Sooty Tern N low
1631--1 Booby
1653--1 Sooty Tern NW 30'
1708--1 Bird N 60-50'
1712--2 Sooty Tern N
1715--1 Frigatebird? NW
1722--2 Sooty Tern E
1725--1 Masked Booby SE
1 Booby SE
1732--1 Sooty Tern W 60'
1745--1 Red-footed Booby SSW 10' Imm.
1759--1 Red-footed Booby SSE 30'
1800--secured observations

March 6, 1964--Pacific Ocean, Grid Area SW Johnston-Sand Atoll

0628--began observation
0700--Stopped for plankton samples
0709--1 Wedge-tailed Shearwater S 0-20'
0812--resume course 2 dolphin (fish) near ship
1126--1 Wedge-tailed Shearwater SE
1145--5 Sooty Tern N 0-40'
March 6, 1964—At Sea

1421—1 Masked Booby subad. collected
1435—1 Masked Booby Imm collected
1527—1 Shearwater? N
1610—1 Black-footed Albatross
1735—1 Red-tailed Tropicbird NE 15-75°
1748—1 Harcourt's Storm Petrel N
1830—secured watch at sunset

March 7, 1964—Pacific Ocean Grid Area SW of Johnston-Sand Atoll

0632—begin observation
0640—sunrise
0705—stop for plankton samples
0845—1 Gull on water collected
1015—1 Bird N E
1509—5 Sooty Tern heading NE 5-75°
1509—1 Wedge-tailed Shearwater N E
1554—1 Wedge-tailed Shearwater SW
1605—1 Pterodroma (brown) NW
1620—1 Masked Booby NE 5-75°
1639—1 Wedge-tailed Shearwater NW
1835—secured watch at sunset

March 8, 1964—Pacific Ocean, Grid Area SW of Johnston Atoll

0630—began watch just before sunrise
0703—stop for plankton samples
0808—1 Harcourt's Storm Petrel NW
0815—1 Masked Booby 0-70° collected
9 Mar

0851--1 Bulwer's Petrel

 1 Hercourt's Storm Petrel

1054--1 Sooty Tern N 10-60'

1055--1 Black-footed Albatross 5-50' collected

1103--1 Sooty Tern NE 10-20'

1415--1 Black-footed Albatross (wounded)

1430--2 Birds

1535--1 Masked Booby SE 30' collectee

1536--1 Great Frigatebird NW 150'

1732--2 Red-tailed Tropicbirds N on water

1830--secured observations

2150--Sooty Terns (flock) over fan tail

2214--Sooty Terns ca. 10 plus or minus individual birds

2245--Sooty Terns " " " " heard between

these times

March 9, 1964--Pacific Ocean, Oria Area SW Johnston -Sand Atoll

0330--birds calling around ship

0637--began observations

0641--sunrise

0710--Morning plankton stop

0744--1 Red-footed Booby E 20' collected

0750--1 Masked Booby E 5-20' 2nd yr. Imm.

0820--completed plankton stop search for booby

0850--resume course

0850--1 Sooty Storm Petrel E

0903--1 Pterodroma "large"

0927--1 Black-footed Albatross (1000; 1020; 1105; 1116; 1210)
0953—1 Black-footed Albatross different from above
1030—1 Red-footed Booby 1 m. 10-50'
1236—1 White-necked Petrel SSE
1221—2 Terns NE 0-30'
1420—11 S oty Terns S 10-200' not feeding
1458—1 Wedge-tailed Shearwater N E
1510—2 Red-tailed Tropicbirds E 150'
1523—1 Red-tailed Tropicbird N 150'
1613—1 Red-tailed Tropicbird E 100'
1711—1 Frigatebird NE 500'
1812—1 Red-tailed Tropicbird N 100' collected
1839--secured observations at sunset.

March 10, 1964--Pacific Ocean, Grid Area SW Johnston-Send Atoll
0630--began observation ca. 10 min. before sunrise
0649--1 Bird reported by bridge
0850—1 Marco rt's Storm Petrel W
0853—1 Black-footed Albatross dk. phase, follows ship
0939—1 Bulwer's Petrel on water
1328--2 Bulwer's Petrel NE
1344--1 Harcourt's Storm Petrel
1652--1 Bird
1835--secured observations

March 11, 1964-Pacific Ocean, Johnston-Send Atoll and Nearby
0627--began observations just before sunrise
0710--1 Red-footed Booby S 10-20' subad.
11 Mar

<table>
<thead>
<tr>
<th>Time</th>
<th>Species and Notes</th>
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<tbody>
<tr>
<td>0719</td>
<td>1 <em>Black-footed Albatross light phase</em></td>
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<tr>
<td>0721</td>
<td>1 Red-footed Booby NW 5-20° ad.</td>
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<tr>
<td>0724</td>
<td>1 <em>Wedge-tailed Shearwater</em> light phase</td>
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<td>0725</td>
<td>1 Masked Booby ad</td>
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<td>0736</td>
<td>1 Sooty Tern SW</td>
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<td>0739</td>
<td>1 Masked Booby W (same as 0725?)</td>
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<td>0741</td>
<td>1 Red-footed Booby S ad.</td>
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<tr>
<td>0741</td>
<td>1 Masked Booby</td>
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<td>0745</td>
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<td>1 Red-footed Booby</td>
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<td>0755</td>
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<td>0751</td>
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<td>0800</td>
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<td>0801</td>
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<td>0801</td>
<td>6 Masked Booby S low</td>
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<td>0802</td>
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<td>0806</td>
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<td>0807</td>
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<td>2 Sooty Tern SE low</td>
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<td>0810</td>
<td>3 Sooty Terns ENE low</td>
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<td>2 Sooty Terns SE low</td>
</tr>
<tr>
<td>0812</td>
<td>1 Sooty Tern S low</td>
</tr>
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</table>
11 Mar

0814--3 Sooty Terns S low
0815--1 Red-footed Booby S 50-75' ad.
0817--4 Sooty Tern E low
0819--2 Sooty Tern E low
0821--1 Sooty Tern E low
0822--2 Sooty Tern E low
0824--1 Sooty Tern E low
0825--1 Sooty Tern E low
0826--3 Sooty Tern SE low
0826--8 Sooty Tern SE low
0828--1 Sooty Tern S low
0829--3 Sooty Terns S low
0830--6 Sooty Terns SE low
0832--3 Sooty Terns S low
0832--4 Red-footed Booby S low 1st yr.
0832--1 Sooty Tern SE low
0833--2 Sooty Tern S low
0834--2 Red-footed Booby SE low 1st yr.
0835--2 Sooty Terns S low
0836--1 Sooty Tern SW low
0837--1 Sooty Tern NW low
0838--1 Sooty Tern low
0839--1 Sooty Tern low
0840--1 Black-footed Albatross still following
0840--1 Frigatebird

Sooty Terns now too numerous to handle accurately (near Johnston
Following are notes on birds that can be checked for distance from ship
0900--mass of birds visible over Sand Island--no species identification
0907--can recognize frigatebirds over Sand Island
0912--can tell Frigates from Terns--no species identification
1545--leave dock at Johnston
1547--Birds identifiable to species
1550--Sootys and Frigates
1553--wouldn't notice birds over Sand without binoculars, but with
    binoculars, can still recognize sootys
1556--can't recognize species
1559--probable limit of visibility
1600--1 Common Noddy Tern low
1600--2 Sooty Tern low
1601--4 Sooty Tern low
1601--1 Sooty Tern low
1602--2 Sooty Tern low
1602--4 Sooty Tern low
1603--5 Sooty Tern low
1604--1 Sooty Tern low
1605--4 Sooty Tern low
1606--3 Sooty Tern low
1606--9 Sooty Tern low
1607--2 Sooty Tern low
1607--1 Sooty Tern low
1607--2 Sooty Terns
11 Mar 1608--6 Sooty Tern low
1609--1 Sooty Tern low
1610--4 Sooty Tern low
1611--3 Sooty Tern low
1612--1 Sooty Tern low
1612a--1 Sooty Tern
1612--1 Black-footed Albatross dark phase
1613--4 Sooty Tern
1614--1 Sooty Tern
1615--1 Brown Booby E
1616--1 Sooty Tern
1617--1 Sooty Tern
1619--1 Sooty Tern S low
1619--1 Sooty Tern N low
1621--2 Sooty Tern SE low
1626--2 Sooty Tern S low
1630--1 Sooty Tern NE low
1630--1 Sooty Tern SW low
1631--3 Sooty Tern SE low
1632--1 Masked Booby E low
1635--1 Sooty Tern S low
1636--1 Bulwer's Petrel? S low
1641--2 Sooty Tern NE low
1645--2 Sooty Tern N low
1651--7 Sooty Tern N low
1652--3 Sooty Tern SE low
1652--2 Sooty Tern SW low
15 Mar 1656--12 Sooty Tern feeding
1700--2 Sooty Tern NE low
1702--40 plus minus Sooty Tern NE 50'
1702--10 plus or minus Sooty Terns SW low
1705--2 Sooty Terns NE low
1707--1 Black-footed Albatross dark phase
1713--50 plus or minus Sooty Terns feeding
1715--3 Sooty Terns NW 25'
1723--2 Sooty Terns NW low
1728--3 Sooty Terns NE low
1730--2 Sooty Terns NE low
1731--1 Sooty Tern NE low
1734--2 Sooty Terns low
1735--11 Sooty Terns NE low
1737--3 Sooty Terns NE low
1738--3 Red-footed Booby NE low
1745--3 Sooty Terns SE low
1748--1 Red-footed Booby NE low
1749--19 Sooty Terns W-NW 10-50'
1757--2 Sooty Tern N low
1759--2 Sooty Tern NW 50'
1804--1 Sooty Tern NE 40'
1809--1 Sooty Tern NE 20'
1812--2 Sooty Tern NE low
1816--3 Sooty Terns NE 30'
1821--1 Black-footed Albatross
March 11, 1964—At Sea

1822—-24 Sooty Terns feeding
1830—sunset
1832—-2 Red-footed Booby NE 40°

Sooty Terns present all evening around ship to at least 0300 in the morning.

March 12, 1964—Pacific Ocean, Grid Area SW Johnston Atoll

0630—begin observations
0630—first release of terns taken from Johnston I.
0640—second release of terns taken from Johnston I.
0650—-2 Sooty Tern SE low
0710—plankton stop
0720—-1 Sooty Tern N low
0953—-1 Red-tailed Tropicbird NE 50°
1200—third release of terns from Johnston I.
1233—-1 Bird NE 0-25°
1258—-5 Sooty Tern NW 5-50°
1437—-5 Sooty Tern S 10-70°
1452—-2 Red-tailed Tropicbirds SW 60-80°
1706—-1 Tropicbird?
1840—ceased observations at sunset
released fourth group of terns.

March 13, 1964—Pacific Ocean, Grid Area SW Johnston -Sand Atoll

0620—began observations
0645—Released sixth group of terns
0705—-1 Red-footed Booby (I m.)
Coulson, E. J.
1964—At Sea

13 Mar
0710--Stopped for plankton studies
0800--1 Masked Booby W 5-60'
0807--1 Wedge-tailed Shearwater N E
1020--1 Frigatebird SW 100'
1046--6 Terns S 20-30'
1047--1 Sooty Tern SW 50'
1200--Seventh group of Terns released
1644--2 Sooty Tern E 25'
1835--ceased observations at sunset

March 14, 1964--Pacific Ocean, near Sand-Johnston Atoll

0633--began observation
0635--4 Sooty Tern E low
1
1
2
9
0645--27
0646--13
0647--4
0650--12
1 collected
0653--5
0656--24
0659--5
1 red tag
0700--5
0703--10
0705--7
14 Mar
0706--18 Sooty Tern low
0712--34 " " SE 50°
0713--14 " " " Line O T a l
0719--9 " " NNE " "
0719--3 " " NE "
0720--4 " " 20-50°
0720--2 " " SE "
0723--9- " " E low
0724--5 " " "
0725--4 " " NNE "
0725--3 " " SE "
0729--3 " " E "
0730--2 " " "
0732--6 " " N "
0735--1 " " " 3 R e d T a g
0736--10 " " "
0746--3 " " E " 2 R e d T a g
0751--9 " " N "
0756--2 " " "
0815--1 " " "
0822--1 " " S S E 50° 1 R e d T a g
0827--2
0951--1 Black-f o t e d A l b a t r o s s  l i g h t ph.
1000--2 SootyTern NNE 10-30°
1016--2 SootyTern NNE 10-30°
1020--1 " S low
14 Mar

1020—1 Sooty Tern S low
1031—1 Sooty Tern S 30'
1035—1 Sooty Tern N low
1057—1 "hite-tailed Tropicbird W 80'
1055—1 Sooty Tern W low
1135—3 Red-footed Booby on water 3 collected
1137—3 Sooty Tern N 20-30'
1201—2 Sooty Tern NNW 5'
1227—2 Sooty Tern SW 3-400'
1225—2 Tern W 3-400'
1237—170 plus or minus 20 Sooty Terns feeding
   7 Red-footed Booby feeding
   1 Frigatebird ad ?
1258—1 Red-footed Booby E low
1309—1 Sooty Tern W low collected
1315—3 Sooty Tern 5 50'
1315—1 Red-footed Booby on water
1356—3 Sooty Tern 5 5'
1726—1 Red-footed Booby 5-30'
1726—1 Red-tailed Tropicbird 7 500'
1825—secured observation at sunset.

15 March 1964—Pacific Ocean 1 day NE Johnston-Sand Atoll

0610—begin observation
0710—1 Red-tailed Tropicbird NE 500'
0840—8 Sooty Tern NE low
0840—1 Shearwater-Petrel NE low
15 Mar 0932--1 Frigatebird W 150' ad c
0940--2 Sooty Tern SW 20-50'
0941--1 Frigatebird SW 200' ad ?
1036--2 Terns NW low
1038--1 Frigatebird NW 500'
1110--Flock feeding
   100 plus or minus 20 Sooty Terns 2 collected
   1 Frigatebird
   1 Booby
1325--1 Sooty Tern
1344--1 Pulver's Petrel 0-10'
1414--1 Frigatebird 300' ad ?
1415--2 Frigatebird 400' ad ?
1442--1 Pterodroma W 0-25' så all brown ad ? 600'
1715--Storm Petrel (1)
1820--ceased observation after sunset
April 2, 1964—Pearl Harbor (entrance at 0940), Oahu

0856—1 Pomarine Jaeger N Dk. ph.
0859—1 Pomarine Jaeger N Lt. ph/
0914—1 Pomarine Jaeger W Dk. ph.
0918—1 Red-footed Booby W low sub ad.
0933—4 Pomarine Jaeger 0-20'
094—3 Pomarine Jaeger 0-20'
0940—1 Sooty Shearwater SE 0-20'
0942—6 Sooty Shearwater
0948—22 Sooty Shearwater NW
0958—4 Sooty Shearwater NW
1000—2 Sooty Shearwater NW
1004—1 Sooty Shearwater NW
1007—5 Sooty Shearwater NW
1008—2 Sooty Shearwater NW
1009—1 Sooty Shearwater NW
1015—1 Sooty Shearwater NW
1016—3 Sooty Shearwater NW
1017—1 Pomarine Jaeger N
1017—1 Sooty (?) Shearwater NW
1018—2 Sooty Shearwater NW
1021—2 Sooty Shearwater NW
1022—1 Sooty Shearwater NW
1022—3 Sonderling Phalarope on water
1023—1 Sooty Shearwater NW
1025—1 Pomarine Jaeger on water
2 Apr

1028--1 Sooty Shearwater
1043--2 Pomarine Jaeger NW
1044--2 Sooty (?) Shearwater NW
1041--1 Sooty Shearwater NW
1051--3 Sooty Shearwater NW
1054--1 Sooty Shearwater NW
1055--1 Pomarine Jaeger
1055--1 Black-footed Albatross follows ship collected
1100--1 Pomarine Jaeger collected
1105--1 Black-footed Albatross on water by David
1110--1 Pomarine Jaeger collected
1115--1 Pomarine Jaeger collected
1116--2 Sooty Shearwater NW
1121--1 Pomarine Jaeger 30' collected
1136--1 Sooty Tern 20-30'
1137--1 Wedge-tailed Shearwater N
1139--3 Sooty (?) Shearwater NW
1140--1 Sooty (?) Shearwater NW

1150--Flock--feeding

100 plus or minus Common Noddy Tern
15 plus or minus Red-footed Booby all but 1 ad.
20 plus or minus Wedge-tailed Shearwaters 2 collected
1 Manx Shearwater
4 plus Pomarine Jaeger
1150--5 Sooty Shearwater
1200--1 Sooty Shearwater NW
Gould, F. J.
1964—At Sea

1206--1 Sooty Shearwater NW
1235--1 Wedge-tailed Shearwater NW
1243--26 Sooty Shearwater NW
1246--1 Sooty Tern NW 50'
1303--1 Wedge-tailed Shearwater NW
1314--3 Sooty Shearwater NW
1314--1 Sooty (?) Tern
1315--2 Sooty Shearwater NW
1316--1 Sooty (?) Shearwater
1318--1 Shearwater
1321--1 Shearwater NW
   2 Sooty Shearwater NW
1335--1 Sooty Shearwater NW
1341--5 Sooty Shearwater NW
1341--1 Wedge-tailed Shearwater WNW
   1 Wedge-tailed (?) Shearwater WNW
1343--7 Sooty Shearwater NW
1346--1 Tern
1346--1 Common Noddy Tern E 20'
1350--2 Tern W 30'
1351--1 Sooty Shearwater NW
1353--1 Sooty Shearwater NW
1354--1 Common Noddy Tern NE
1359--1 Wedge-tailed Shearwater N
1400--1 Sooty Tern SE
1404--1 Sooty Shearwater NW (on water)
2 Apr

1415—1 Sooty Shearwater NW
1420—1 Shearwater ?
1430—43 plus or minus Sooty Shearwater NW feeding ?
1440—2 Sooty (?) Shearwater NW
1447—1 Wedge-tailed Shearwater NW
1505—2 Sooty Shearwater NW
1509—5 Sooty Shearwater NW
1509—1 Jaeger? NW 40'
1510—2 Sooty Shearwater NW
1512—3 Sooty Shearwater NW
1516—2 Gray-backed Tern NE 0-35'
1522—10 Terns 40'
1524—47 Sooty Shearwater NE avoiding ship
1527—1 Sooty Shearwater SW avoiding ship
1527—1 Bulwer's Petrel NE
1532—3 Sooty Shearwater NE
1533—2 Sooty Shearwater NE
1534—2 Sooty Shearwater NE
1535—1 Sooty Shearwater NE
1535—2 Sooty Shearwater NE
1536—14 Terns feeding
1537—10 Sooty Shearwater NW
1543—1 Sooty Shearwater NW
1544—1 Sooty Shearwater NW
1545—5 Sooty Shearwater NW
1545—2 Terns low
Gould, F. J.
1964—At Sea

2 Apr

1546—2 Sooty Shearwater NW
1547—1 Sooty Shearwater NW
1547—1 Sooty Shearwater NW
1550—1 Sooty Shearwater NW
1554—2 Sooty Shearwater NW
1558—1 Wedge-tailed Shearwater SW

1 Harcourt's Storm Petrel SW feeding

1604—2 Sooty Shearwater NW
1607—1 Sooty Shearwater NW
1612—2 Sooty Tern

1616—2 Sooty Shearwater NW
1620—3 Sooty Shearwater NW
1621—2 Sooty Shearwater NW
1623—8 Sooty Shearwater NW
1624—12 plus or minus 3 Sooty Tern

1629—1 Sooty Shearwater NW
1633—7 Sooty Shearwater NW
1635—1 Blue-faced Booby E 30' ad.
1637—13 Sooty Shearwater NW
1638—3 Sooty Shearwater NW
1639—7 Sooty Shearwater NW
1642—3 Sooty Shearwater NW
1643—2 Sooty Shearwater NW
1644—2 Sooty Shearwater SW
1646—1 Sooty Shearwater NW
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<td>Sooty (? Shearwater)</td>
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
April 3, 1964—Pacific Ocean, 2nd day out Oahu

0610—begin observation (sunrise 0637)
0646—1 Sooty Shearwater NW
0651—1 Sooty Shearwater N
0656—2 Sooty Shearwaters NW
0658—1 Sooty Tern SE 10-20'
0709—2 Sooty Tern S 10-30'
0711—1 Sooty Tern SE
0718—2 Sooty Shearwater N W
0720—1 Sooty Shearwater W
0729—1 Sooty Tern SE
0738—Flock—feeding

65 plus or minus 5 Sooty Terns 1 collected
4 Wedge-tailed Shearwater
8 plus or minus 1 Fairy Tern
6 Sooty Shearwater feeding?

0750—Flock—feeding

30 plus or minus 4 Terns
4 plus or minus 1 Shearwaters
6 plus Black fish at 0750

Resume course and speed at 0902
0910—1 Sooty Tern N
0912—1 Shearwater NW
0927—2 Pterodroma SW small brown-backed nest bird?
0931—1 Great Frigatebird high Imm or ?
3 Apr

0940—Flock—actively feeding no flying fish

16 Sooty Terns 3 immatures
5 Fairy Terns
1 Harcourt's Storm Petrel

0948—1 Bulwer's Petrel S
0952—2 Sooty (?) Shearwater NW
0959—1 Sooty (?) Shearwater NW
1005—1 Sooty Tern S low
1009—1 Frigatebird 500'
1011—1 Sanderling or Phalarope NW low
1013—1 Sooty Tern SW low
1028—1 Wedge-tailed Shearwater
1044—1 Wedge-tailed Shearwater
1046—3 Sooty Tern SE low
1050—1 Sooty Tern SE low
1051—1 Sooty Tern SE low
1117—1 Sooty Tern S low
1123—1 Wedge-tailed Shearwater
1126—1 Shearwater
1135—1 Sooty Tern SE low
1138—1 Harcourt's Storm Petrel
1148—1 Sooty Shearwater NW
1220—1 Sooty Shearwater NW
1231—1 Sooty Tern NW low
1233—1 Sooty Tern SE low
1236—1 Wedge-tailed Shearwater? S
1238—1 Sooty (?) Shearwater S
Gould, E. J.
1964—At Sea

3 Apr
1301—2 Bulwer's Petrel SE
1309—1 Wedge-tailed Shearwater NE
1315—1 Wedge-tailed Shearwater (?) SW
1315—1 Bulwer's Petrel
1326—Flock—feeding

80 plus or minus 10 Sooty Tern
5 plus or minus 2 Wedge-tailed Shearwaters

1332—2 Great Frigatebird SE 100'
1333—1 Sooty Shearwater NNW
1339—1 Sooty Tern SE 20'
1341—1 Sooty Shearwater NW
1342—1 Wedge-tailed Shearwater SE
1342—1 Sooty Tern SE
1349—3 Terns high
1349—3 Sooty Terns NE 60'
1421—3 Sooty Shearwater NW
1425—1 Sooty Tern NE low
1430—1 Great Frigatebird 100' Imm.
1432—1 Sooty Tern S low
1432—1 Sooty Tern S low
1441—2 Shearwater NE
1449—2 Sooty Tern SE low
1456—1 Sooty Tern NE 25'
1459—1 Wedge-tailed Shearwater NW
1459—1 Wedge-tailed Shearwater NW
1506—5 Wedge-tailed Shearwater E
3 Apr
1511--1 Sooty Tern SE 25'
1522--1 Sooty Tern NE low
1524--2 Shearwater SE
1537--1 Bird
1546--2 Shearwater NW
1547--2 Shearwater NW
1556--1 Red-tailed Tropicbird 200'
1558--2 Sooty Tern W 60'
1602--1 Wedge-tailed Shearwater S
1611--1 Sooty Shearwater NW
1612--1 Sooty Shearwater NW
1618--2 Sooty Tern W 50'
1622--1 Red-tailed Tropicbird SE in water
1626--1 Sooty Shearwater W
1625--1 Sooty Shearwater N
1641--1 Wedge-tailed Shearwater SW
1643--3 Sooty Tern
1643--1 Red-footed (?) Booby
1645--1 Sooty Shearwater NW
1658--1 Sooty Shearwater
1700--reset ship time to 1600
1610--1 Harcourt's storm Petrel SW
1630--1 Harcourt's Storm Petrel E
1630--1 Sooty Tern E low
1647--1 Sooty Shearwater NW
1655--1 Sooty Shearwater NW
Gould, P. J.
1964--At Sea

3 Apr
1702--1 Frigatebird ? 100-300'
1707--2 Shearwaters
1736--1 Red-footed Booby NE 60'
1745--1 Sooty (?) Shearwater NE
1750--2 Sooty Shearwater NE
1751--2 Shearwaters NE
1755--1 Sooty (?) Shearwaters NE
1800--6 Sooty Tern NE 5-100'
1815--secured observation

April 4, 1964--Pacific Ocean, 3 rd day out Oahu
0600--1 Black-footed Albatross collected
0600--1 Laysan Albatross
0615--2 Harcourt's Storm Petrel
0627--2 Sooty Tern SW
0637--2 Terns SW low
0637--1 Sooty Shearwater NW
0642--1 Sooty Shearwater NW
0648--1 Sooty Shearwater NW
0653--2 Sooty Tern S 25'
0655--2 Sooty Tern NE low
0710--2 Sooty Tern SW low
0713--1 Red-tailed Tropicbird 250'
0713--1 Black-footed Albatross collected at 0915
0729--1 Bonin Island Petrel NW
0732--1 Sooty Shearwater NW
0800--1 Christmas Island Shearwater 50' PJC definite, very close
0821--1 Sooty Tern SE 10'
April 4
0825—2 Léyaen Albatross
0835—3 Sooty Shearwater NW
0838—2 Sooty Shearwater NW
0844—1 Red-footed Booby Imm. 20-50'
0850—2 Sooty Shearwater NW
0855—3 Sooty Shearwater NW
0858—2 Harcourt's Storm Petrel SW
0900—150 plus or minus 50 Terns feeding
1 Frigatebird
0910—4 Sooty Tern SE 10'
0935—1 Black-footed Albatross SW
0947—1 Sooty Shearwater NW
0955—1 Sooty Shearwater NW
0955—1 Sooty Tern NW 50'
0956—2 Sooty Shearwater NW
0957—1 Sooty Shearwater NW
1009—1 Sooty Shearwater NW
1020—1 Great Frigatebird 500'
1020—2 Sooty Shearwater NW
1028—2 Sooty Tern NW low
1035—1 Sooty Shearwater N
1040—7 Sooty Terns N low
1041—3 Sooty Terns NW
1047—1 Bird
1053—1 Sooty Shearwater NW
1054—1
1058—1
Gould, L. J.
1964--At Sea

4 Apr
1059--1 Sooty Shearwaters NW
1100--1 Sooty Shearwater NW
1104--1 Shearwater NW
1109--1 Sooty Shearwater NW
1115--1 Sanderling or Phalarope N
1116--1 Sooty Shearwater N
1117--1 Sanderling or Phalarope NW
1118--3 Sooty Shearwater NW
1119--1 Sooty Shearwater NW
1121--1 Sooty Shearwater NW
1124--1 Sooty Shearwater NW
1127--1 Shearwater NW
1130--2 Sooty Shearwater NW
1131--2 Sooty Shearwater NW
1133--1 Sooty Tern NE 50'
1140--1 Shearwater-Albatross NW
1150--1 Sooty Shearwater NW
1151--1 Shearwater' NW
1154--3 Sooty (?) Shearwater NW
1200--1 Sooty (?) Shearwater NW
1206--4 Sooty (?) Terns S 0-30'
1214--1 Sooty Shearwater N
1215--1 Wedge-tailed Shearwater
1219--1 Sooty Shearwater NW
1224--1 Tern
1225--1 Sooty Shearwater NW
4 Apr
1221—1 Sooty Shearwater NW
1236—1 Black-footed Albatross dk. ph.
1244—1 Sooty Shearwater NW
1310—1 Shearwater-Petrel NW
1315—1 Sooty Shearwater NW
1321—1 Sooty Shearwater NW
1322—1 Sooty Shearwater NW
1328—1 Petrel W
1331—1 Sooty (? Shearwater NW
1340—1 Sooty Shearwater NW
1350—1 Shearwater-Petrel NW white rump patch
1414—1 Sooty Shearwater N
1415—1 Sooty Shearwater N
1448—2 Sooty Shearwater NW
1458—2 Sooty Tern E 50'
1500—1 Shearwater SSW
1512—1 Sooty Shearwater NW
1517—1 Sooty Shearwater NW
1519—1 Sooty (?) Shearwater NW
1521—1 Sooty Shearwater
1526—1 Sooty Shearwater NW
1527—2 Sooty Shearwater (?)
1528—4 Terns S 50'
1530—1 Sooty Tern N 10'
1532—2 Sooty Tern NNW 20-50'
1535--3 Sooty Terns SE 75'
1536--3 Sooty Terns S 40'
1536--2 Sooty Shearwaters NW
1548--2 Bulwer's Petrel
1550--1 Blue-faced Booby 50' diving
1556--1 Pterodroma SW
1611--4 Terns SE
1613--1 Sooty Shearwater NW
1623--1 Sooty Shearwater NW
1635--1 Sooty Shearwater NW
1639--1 Shearwater NW
1640--1 Sooty Shearwater
1640--1 Sooty Tern
1651--1 Shearwater
1700--1 Wedge-tailed Shearwaters W
1700--1 Sooty Shearwater NW
1706--1 Shearwater NW
1709--1 Sooty Shearwater NW
1709--1 Shearwater NW
1714--1 Shearwater NW
1716--1 White-tailed Tropicbird 2' collected
1731--1 Shearwater NW
1748--1 Sooty (?) Shearwater NW
1748--1
1748--1
1748--2
1749--1

widely scattered out; all in view at same time (plus next two)
April 5, 1964--Pacific Ocean, 4th day out Oahu.

0552—begin observations (sunrise ca. 611)

0600—1 Black-footed Albatross (lt. ph.) collected at 0730--

0607—1 Black-footed Albatross (dk. ph.)

0608—1 Wedge-tailed Shearwater SE

0614—4 Sooty Shearwater NW

0620—1 Fairy Tern NE 50'

0622—1 Laysan Albatross NW

0626—1 Harcourt's Storm Petrel W

0629—3 Sooty Tern SE 50'

0630—6 Sooty Tern SE 50'

0630—1 Sooty Shearwater NW

0632—2 Sooty Shearwater NW
Gould, F. J.
1964—At Sea

5 Apr
0637—3 Sooty (?) Shearwater NW
0640—1 Shearwater N
0651—1 Sooty Tern NE 50'
0654—1 Wedge-tailed Shearwater NW
0656—1 Harcourt's Storm Petrel
0657—2 Sooty Shearwater NW
0659—1 Laysan Albatross (same as at 0607?)
0754—1 Sooty Shearwater NW
0759—1 Sooty (?) Shearwater NW
0803—1 Sooty (?) Shearwater NW
0805—1 Sooty Shearwater NW
0812—3 Sooty Tern NW low
0918—1 Bird
0922—1 Black-footed Albatross
0923—1 Sooty Tern NW low
0941—1 Shearwater (?) NW
0943—1 Sooty Shearwater NW
0947—1 Sanderling or Phalarope NW
0949—4 Sooty Tern NW low
0912—1 Sooty Shearwater NW
0913—1 Sooty Shearwater NW
0915—1 Sooty Shearwater NW
0916—1 Black-footed Albatross collected
0925—1 Black-footed Albatross
0922—1 Bulwer's Petrel
0937—1 Storm Petrel SE
0950—1 Sooty Shearwater NW
5 Apr

1011—1 Sooty Shearwater NW
1045—1 Red-footed Booby NW ad.
1100—1 Sooty Shearwater NW
1105—2 Birds
1107—1 Harcourt's Storm Petrel SW
1111—2 Sooty (?) Tern NW low
1115—1 Sooty Storm Petrel W
1120—1 Sooty Tern F 30'
1150—1 Black-footed Albatross (lt. ph.) collected at 1212
1159—1 Harcourt's Storm Petrel F
1202—1 Blue-faced Booby F 20' sub ad.
1214—1 Harcourt's Storm Petrel
ship stopped at 1220
1231—1 Black-footed Albatross (dk. ph.) collected at 1310
1241—1 Sooty (?) Shearwater NW
1345—1 Sooty Shearwater
1400—1 White-tailed Tropicbird F 100'
1415—1 Black-footed Albatross collected at 1447
1426—1 Harcourt's Storm Petrel NE feeding
1445—1 Sooty Shearwater low
1448—1 White-tailed Tropicbird 250'
1457—2 Sooty Shearwater
1510—2 Sooty Tern high

resume course and speed at 1530
1534—1 Black-footed Albatross (dk. ph.)
Gould, E. J.
1964—At Sea

5 Apr
1612—1 Shearwater NW
1622—1 Black-footed Albatross (dark ph.)
1632—1 Sooty Shearwater NW

porpoise? at 1648—2 large ones
1650—1 Sooty Shearwater NW
1703—9 Sooty (?) Shearwaters NW all individuals
1728—1 Harcourt's Storm Petrel SE
1733—3 Bulwer's or Storm Petrels SW
1735—1 Sooty Shearwaters NW
1748—1 Sooty Shearwater NW
1756—1 Sooty Shearwater NW

1800—1 Red-footed Booby almost ad.
1802—1 Harcourt's Storm Petrel NW feeding
1805—1 Sooty Shearwater NW
1809—1
1809—2
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1809—1
1810—1
1814—2
1814—1
1817—1
5 Apr

1822--1 Wedge-tailed Shearwater SE
1822--2 Wedge-tailed Shearwater NE

1832--ceased observations at sundown and storm.

April 6, 1964--Pacific Ocean

0600--begin observations (sunrise ca. 0609)
0619--3 Sooty Shearwater SE
0620--2 Sooty Shearwater NW
0621--2 " " "
0621--1 " " "
0622--2 " " "
0623--1 " (?) " N
0624--1 " " NW
0625--1 Sanderling or Phalarope
0626--1 Sooty (?) Shearwater NW
0635--1 Sooty Shearwater NW
0639--1 Sooty Shearwater NW
0640--1 Pulver's Petrel
0650--2 Sooty Shearwater NW
0653--2 Sooty Shearwater NW
0656--2 Sooty Tern NW low
0658--1 Red-tailed Tropicbird NE 70' collected
0709--2 Sooty Shearwater NE
0717--5 Sooty Tern NW
0720--2 Sooty Tern NW
0731--1 Shearwater
0740--3 Sooty Tern SSE 70-50'
6 Apr
0743—1 Sooty Tern SSE collected
0749—12 " " SW
0800—6 " " NW 30'
0800—1 " " NW
0800—1 " " NW 30' collected
0803—1 " " NW 30'
0808—75 plus or minus 20 Sooty Terns feeding
0820—1 Sooty Shearwater NW
0830—2 Sooty Shearwater NW
0848—1 Sooty Shearwater W
0850—Flock—feeding no flying fish
10 plus Sooty 'tern
2 plus Gray-backed Tern
1 all dark Shearwater
0908—1 Sooty Shearwater N
0910—1 Sooty (?) Shearwater N
0922—4 Sooty Tern NW low
0924—2 Sooty Tern SE 5-25'
0925—1 Sooty Shearwater NW
0926—7 Sooty Tern SE low
0927—3 Sooty Tern E 50'
0928—4 Sooty Tern SW 10-20'
0930—8 Sooty Tern E 10-50'
0932—2 Sooty Tern NE low
0932—2 Sooty Tern NE low
0941—1 Shearwater
0944—2 Sooty Shearwaters W
1964--At Sea

6 Apr

0947--1 Shearwater-Petrel Ptero--silverwing linings, white rump

0952--3 Sooty Shearwater W

0957--1 Sooty Shearwater W

0957--1 Sooty Shearwater N

1001--1 Tern N

1002--1 Sooty Shearwater N

1005--1 Sooty Shearwater W

1008--2 Sooty Tern NW 30-40'

1011--5 Sooty Tern SE low

1017--Flock--50 plus or minus 10 Terns (some definitely Sootys) 5 plus or minus 3 Shearwaters

1028--2 Sooty Shearwaters W

1035--1 Sooty (?) Shearwater N

1040--2 Sooty Tern NE 30'

1041--1 Sooty Shearwater NW

1046--1 Soot Shearwater NW

1052--2 Sooty Shearwater N

1054--1 Sooty Shearwater W

1056--1 Shearwater NW

1100--1 Sooty Shearwater N

1101--2 Sooty Tern SE 20-30'

1110--3 Soot Shearwater NW

1114--1 Sooty Shearwater NW

1115--1 Sooty Shearwater NW

1116--3 Sooty Shearwater N

1120--3 1 Sooty Shearwater N
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6 Apr

1234--1 Shearwater NW
1235--1 Sooty Shearwater NW
1242--2 Wedge-tailed Shearwater W dark phase
1243--8 Sooty Shearwater SW
1247--2 Shearwater NW
1253--1 Shearwater NW
1258--1 Shearwater NW
1300--1 Shearwater NW
1301--1 Sooty Shearwater NW
1305--2 Bird NW
1307--1 Sooty Shearwater NW
1709--1 Bonin Island Petrel SE
1312--1 Sooty Shearwater W
1313--2 Sooty Shearwater NW
1336--1 Sh arwater NW
1340--1 Wedge-tailed Shearwater NW light phase
1356--2 Shearwaters NW
1402--1 Sooty Shearwater NW
1402--1 Shearwater NW
1407--3 Sooty Shearwater NW
1415--Flock--feeding
    30 plus or minus 10 Sooty Tern
    1 Frigatebird
    2 plus or minus Shearwaters
1416--1 Sooty Shearwater NW
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Could, P. J.
1964—At Sea

6 Apr
1822—1 Sooty Shearwater NW
1823—1 Sooty Shearwater NW
1835—observation ended at sundown.

April 7, 1964—Pacific Ocean, Grid Area
0610—begin observations
0611—1 Shearwater NW
0619—2 Shearwater NW
0619—1 Sooty Shearwater NW
0625—1 Sooty Shearwater NW
0625—1 Sooty Shearwater NW
0631—1 Sooty (?) Shearwater NW
0631—1 Shearwater
0638—1 Shearwater NW
0641—2 Sooty Shearwaters NW
0642—2
0644—2
0644—1
0645—1
0646—2
0650—1
0651—1
0654—1
0704—1
0710—5
0712—1
0721—2
7 Apr 0722--1 Sooty Shearwater NW
0724--1 Sooty Shearwater NW
0726--1 Shearwater NW
0732--2 Sooty Shearwater NW
0736--1 Blue-faced Booby SW Imm.
0737--1 Lt. Ph. Fulmar?
0738--1 Red-tailed Tropicbird NE
0740--1 Bonin Island Petrel NW dark belly
0741--3 all white or lt. Shearwaters or Petrels NW
0746--1 Sooty Shearwater NW
0751--1 Shearwater
0752--1 Sooty (?) Shearwater NW
0755--2 Sooty (?) Shearwaters NW
0755--1 Sooty (?) Shearwater NW
0803--2 Sooty Tern SE 50'
0815--1 Albatross
0816--2 Sooty (?) Shearwater NW
0818--2 Sooty Shearwater NW
0845--1 Sooty (?) Shearwater SW
0850--1 Bird
0859--1 Shearwater
0930--1 Bulwer's Petrel
0931--2 Sooty Terns NE
1005--2 Sooty Terns NE low
1011--1 Sooty Shearwater NW moving faster than ship (10k), est 30 k
7 Apr

1031—3 Shearwaters
1049—1 Sooty Shearwater NW
1058—2 Sooty Tern NE 50'
1101—1 Bonin Island Petrel NW
1111—3 Sooty Tern 50'
1113—2 Sooty (?) Shearwater NW
1122—1 Bonin Island Petrel NW black belly
1126—1 Sooty Shearwater NW
1140—1 Sooty (?) Shearwater
1145—1 Sooty Shearwater NW
1146—1 Sooty Shearwater NW
1148—1 Sooty (?) Shearwater NW
1209—1 Sooty Storm Petrel W
1213—2 Sooty Shearwaters SE
1222—1 Shearwater
1224—1 Sooty Storm Petrel NW
1228—9 Sooty Terns SW
1235—2 Shearwater SW
1247—1 Shearwater SW
1243—1 Shearwater-Petrel NE
1245—1 Bird
1300—1 Wedge-tailed Shearwater SW
1303—1 Red-tailed Troopibird NE 50'
1322—2 Sooty Shearwater SE
1330—2 Shearwater NW
1345—1 Shearwater NW
Gould, P. J.
1964—At Sea

7 Apr
1347—1 Sooty Shearwater SE
1348—3 Sooty Shearwater SE
1351—3 Sooty Tern NW
1353—2 Sooty Shearwater
1400—1 Wedge-tailed Shearwater NW
1401—2 Sooty Shearwaters NW
1407—1 Sooty Shearwater NW
1430—2 Sooty Shearwaters NW
1435—4 Sooty Shearwaters NW
1450—1 Sooty (?) Shearwater NW
1500—Flock—feeding
Sooty (?) Terns 50 plus or minus 10
Shearwaters ? 2
1504—2 Sooty (?) Shearwater NW
1505—2 Sooty Shearwater NW
1509—1 Sooty Shearwater NW
1520—4 Sooty (?) Shearwater NW
1521—1 Common Noddy Tern NW low
1528—1 Sooty (?) Shearwater NW
1546—1 Sooty Shearwater NW
1606—1 Harcourt's Storm Petrel NW
1609—1 Sooty Shearwater NW
1620—1 Sooty (?) Shearwater NW
1626—1 Sooty Shearwater (?) NW
1637—1 Shearwater NW
1642—2 Sooty Shearwater NW
1645—1 Shearwater NW
1653—1 Shearwater NW
Gould, F. J.
1964--At Sea

7 Apr
1702--1 Shearwater NW
1709--1 Shearwater NW
1710--1 Sooty Shearwater NW
1721--1 Shearwater NW
1728--1 Sooty Shearwater NW
1730--1 Wedge-tailed Shearwater NW
1731--1 Wedge-tailed Shearwater NW
1745--1 Shearwater
1755--1 Shearwater NW
1800--1 Sooty Shearwater NW
1801--1 Shearwater NW
1825--1 Shearwater NW
1840--closed observation ca. sunset.

April 8, 1964--Pacific Ocean, Grid Area
0612--begin observations (sunrise ca. 0618)
0617--2 Sooty Shearwater NW
0618--1 Shearwater NW
0620--1 Sooty Tern E 10'
0623--1 Sooty Shearwater NW
0623--1 Bird NW
0628--1 Sooty Shearwater NW
0634--1 Shearwater NW
0636--2 Sooty Shearwater NW
0640--1 Shearwater NW
0641--1 Shearwater NW
0644--1 Sooty Shearwaters NW
0647--1 Shearwater NW
8 Apr

0859--2 Shearwater NW
0701--1 Sooty Shearwater NW
0704--1 Sooty Shearwater NW
0706--2 Sooty Shearwater NW
0707--1 Sooty Shearwater NW
0709--1 Shearwater NW
0710--1 Sooty Shearwater NW
0712--1 Sooty Shearwater NW
0714--1 Sooty Shearwater NW
0715--1 Sooty Shearwater NW
0716--1 Shearwater NW
0720--1 Shearwater NW
0722--2 Sooty Shearwater NW
0728--2 Sooty Shearwater NW
0734--1 Storm Petrel NW
0820--2 Sooty (?) Shearwaters NW
0823--40 plus or minus 10 Terns feeding, flyingfish under flock
0823--1 Sooty (?) Shearwater NW
0829--1 Sooty (?) Shearwater NW
0830--5 Sooty (?) Shearwater NW
0831--1 Sooty (?) Shearwaters NW
0833--2 Sooty (?) Shearwaters NW
0834--1 Sooty (?) Shearwaters NW
0837--1 Shearwater NW
8 Apr.

0648—1 Shearwater NW
0649—1 Shearwater NW
0650—1 Shearwater NW
0906—1 Sooty Shearwater NW
0907—1 Shearwater NW
0910—1 Sooty Shearwater NW
0912—2 Sooty Shearwaters NW
0915—2 Sooty Shearwaters NW
0930—1 Shearwaters NW
0930—1 Shearwater NW
0931—2 Shearwater NW
0931—1 Sooty Shearwater NW
0937—1 Sooty Shearwater NW
0938—1 Sooty Shearwater NW
0941—1 Shearwater NW
0948—1 Sooty Shearwater NW
1013—2 Sooty Shearwater NW
1025—1 Sooty Shearwaters NW
1100—1 Sooty Shearwater NW
1142—1 Sooty (?) Shearwater NW
1200—1 Sooty Shearwater NW
1220—1 Sooty Shearwater NW
1223—1 Bulwer's Petrel NW
1240—1 Sooty Shearwater W
1245—1 Sooty Shearwater W
1246—1 Sooty Shearwater NW
Gould, P. J.
1964—At Sea

8 Apr
1247—2 Sooty Shearwater NW
1248—1 Shearwater NW
1252—1 Shearwater NW
1326—2 Sooty Shearwater NW
1349—1 Sooty Shearwater NW
1350—1 Sooty (?) Shearwater NW
1403—1 Bonin Island Petrel NE 1t. belly
1416—1 Shearwater NW
1421—1 Shearwater NW
1423—1 Sooty (?) Shearwater NW
1424—1 Sooty (?) Shearwater NW
1431—1 Shearwater NW
1439—1 Sooty (?) Shearwater NW
1442—1 Sooty (?) Shearwater NW
1447—1 Shearwater NW
1455—1 Sooty Tern NW 10-20'
1515—1 Sooty Tern NW 10'
1542—2 Shearwater NW
1546—1 Sooty (?) Shearwater NW
1548—3 Sooty Shearwater NW
1550—1 Tern N 20'
1600—1 Bird
1602—2 Sooty Tern W 50'
1617—1 Red-tailed Tropicbird E 100'
1623—1 Sooty Tern E 50'
Gould, E. J.
1964--At Sea

8 Apr
1644--3 Shearwaters N
1646--3 Shearwaters N
1658--1 Small Petrel N Pter. ?
1659--2 Sooty (?) Shearwaters NW
1700--4 Sooty Tern W 50'
1700--1 Shearbird N 20'
1756--1 White-tailed Tropicbird 100' collected
1757--1 Shearwater NW
1800--1 Black-footed Albatross collected 1925
1813--5 Sooty Shearwaters NW
1814--1 Sooty Shearwater (?) NW
1819--1 Sooty Shearwater NW
1830--secured observation

April 9, 1964--Pacific Ocean, Grid Area
0550--begin observation (sunrise ca. 0645)
0724--1 Blue-faced Booby S 40' Subad.
0749--1 Sooty Shearwater NW
0844--1 Sooty (?) Shearwater NW
0915--2 Shearwater-Petrel NW
0918--1 Harcourt's Storm Petrel NW
0930--3 Sooty Tern 5-40' 1 had red tag "new" 206 plus or minus 2 mi from Johnston
0951--1 Sooty Shearwater NW
0957--2 Pterodroma SE
1011--2 Shearwater SE
1030--1 Sooty Tern NE 50'
Gould, F. J.
1964—At Sea

9 Apr
1040--1 Sooty Tern NW low
1044--2 Sooty Tern NW low
1057--1 Sooty Shearwater NW
1113--1 Sooty Shearwater NW
1142--2 Shearwaters NW
1146--5 Shearwaters NW
1157--1 Shearwater NW
1158--1 Sooty Shearwater NW
1214--8 Sooty Tern NE low
1228--1 Sooty Shearwater NW
1254--1 Sooty Tern NE low
1431--1 Bonin Island Petrel feeding
1426--1 Sooty Shearwater NW
1502--1 Shearwater NW
1526— Shearwater NW
1550—1 Sooty Shearwater NW
1553—1 Shearwater NW
1646—1 Wedge-tailed Shearwater SW
1830--3 Sooty Tern NE to 30'
1845--cease observation about sunset

April 10, 1964
0611—begin observation (sunrise ca. 0620)
0631—1 Bonin Island Petrel NW
0635—1 Blue-faced Booby NE Imm.
0639—1 Shearwater NW
0642—1 Red-footed Booby Imm
10 Apr

0726—1 Blue-faced Booby NE to 40' Imm.
0735—3 Sooty Tern NE 30'
0802—1 Sooty Tern NE
0858—1 Wedge-tailed Shearwater NW
0903—1 Sooty Shearwater NW
0907—2 Sooty Tern SE 100'
0940—1 Sooty Shearwater NW
0956—1 Harcourt's Storm Petrel NW
1016—1 Red-tailed Tropicbird on water 100'
1026—1 Sooty Tern NW 5-75'
1030—1 Sooty (?) Shearwater NW
1050—1 Wedge-tailed Shearwater SW lt. ph.
1107—1 Bonin Island Petrel NW dark belly
1156—1 Bonin Island Petrel NW dark belly
1200—1 Sooty (?) Shearwater NW
1246—1 Fairy Tern NE low
1400—8 Sooty Terns NE to 50'
1422—1 Sooty Shearwater NW
1500—1 Pterodroma NW
1650—1 Sooty (?) Shearwater NNW
1731—1 Sooty Shearwater WNW
175—1 Sooty (?) Shearwater N
1805—1 Shearwater NW
1834—3 Terns WNW low
1845—cease observation ca. sunset.
April 11, 1964—Pacific Ocean, Grid Area

0700—begin observations

0745—9 Sooty Terns N 0-200' feeding

0825—16 plus or minus 2 Sooty Terns W 0-30' feeding

0848—1 Sooty Tern 10'

0925—1 Sooty Tern N W 10-20'

0937—1 Bonin Island Petrel N on water

0947—1 Sooty Shearwater W on water

1037—2 Sooty Terns 50'

1056—2 Sooty Terns NE 5-10'

1220—1 Pterodroma NW brown back, complete breast band

1224—1 Bonin Island Petrel NW on water

1230—1 Bird NW

1410—1 Sooty (?) Shearwaters NW

1423—3 Sooty Tern SW

1425—1 Harcourt's Storm Petrel S

1431—4 Sooty Tern NE on with low red-orange tag

1441—1 Sooty Shearwater NW

1444—1 Sooty Tern NE

1447—1 Sooty Tern W

1503—1 Sooty Storm Petrel NW

1509—2 Sooty Shearwater NW

1522—1 Bonin Island Petrel NW

1522—1 Harcourt's Storm Petrel

1525—1 Harcourt's Storm Petrel N
April 11, 1964—At Sea

11 Apr 1615—1 White-tailed Tropicbird SE 150' ad.

1751—Flock-feeding heading NW

19 Sooty Tern (1 red tail)

1 Fairy Tern

1 Harcourt's Storm Petrel

1752—1 Sooty Shearwater NW

1850—secured observations ca. sunset.

April 12, 1964—Pacific Ocean, Grid Area

0620—begin observation (sunrise ca. 0630)

0645—1 Sooty Shearwater NW

0649—1 Bulwer's Petrel

0729—1 Sooty Shearwater NW

0736—1 Sooty (?) Shearwater

0740—1 Sooty (?) Shearwater NW

0756—1 Sooty Shearwater (?) NW

0931—1 Petrel SE

0945—1 Shearwater NW

0946—1 Shearwater

0950—2 Sooty Tern NE 40'

1014—1 Bulwer's Petrel NE

1218—1 Bulwer's Petrel S

1229—1 Sooty Shearwater NW

1242—1 Bonin Island Petrel E

1325—Flock—feeding

140 plus or minus 10 Sooty (?) Terns

1 Booby

1341—1 Sooty Shearwater NW
Gould, P. J.
1964—At Sea

12 Apr

1150—Flock—feeding 33 plus or minus Sooty Terns

1 Fairy Tern

1515—1 Shearwater

1630—1 Bulwer's Petrel

1634—2 Sooty Shearwater

1716—1 Petrel

1746—1 Shearwater

observation ended at sunset

April 13, 1964—Pacific Ocean, Grid Area

Tropicbird flew around ship last night at ca. 2330 hours.

0615—begin observation

0658—2 Sooty Terns 1 collected

0720—1 Harcourt's Storm Petrel

0915—2 Sooty Tern SE 50°

0918—1 Sooty Tern SE low

0921—1 Sooty Shearwater N

0950—Flock—feeding no flying fish

43 Sooty Tern

4 plus or minus Wedge-tailed Shearwaters

0956—1 Wedge-tailed Shearwaters toward flock

0959—5 Terns SE 100°

1008—2 Sooty Terns SE

1050—2 Sooty Terns W

1107—2 Sooty Shearwater N

1305—1 Sooty Tern N low

1320—1 Sooty Shearwater N
April 14, 1964—Pacific Ocean, Grid Area

0610—sunrise

0630—1 Sooty Tern NE low, orange tag

0643—1 Sooty Tern NW low

0646—1 Great Frigatebird ad 9 NW 20 yds.

0650—1 Sooty Tern NW

0651—1 Wedge-tailed Shearwater NW (dk. ph.)

0745—1 Sooty Tern NE low

0802—2 Sooty (?) Shearwater NW

0850—1 Sooty Tern NW 20-40'

0905—1 Sooty Tern SW 20-40'

1041—2 Sooty Tern NW 0-100'

1053—30 plus or minus 10 Sooty (?) Terns feeding 5-300'

1119—1 Harcourt's Storm Petrel NW

1250—1 Blue-faced Booby SE 40' collected

1305—1 Sooty Tern 60'

1325—55 plus or minus 5 Sooty Terns feeding (4 orange tags) 1 collected

1425—1 Bonin Island Petrel W
Gould, P. J.
1964—At Sea

14 Apr 1435—2 Sooty Tern ENE 40°
1616—1 Booby NW low
1637—1 Frigatebird
  1 Booby same as at 1616?
1655—2 Sooty Tern SW 80°
1727—2 Sooty Tern SW
1739—1 Sooty Tern NW low
1820—sunset

**April 15, 1964—Pacific Ocean, between Johnston and Oahu**

0535—begin observations (sunrise ca. 0550)
0612—1 Bulwer's Petrel NW
0638—1 Tern SSW 30°
0649—1 Bulwer's Petrel NW
0712—1 Bulwer's Petrel NW
0745—2 Sooty Tern ENE 5-40°
0751—3 Sooty Tern ENE 5-40°
0809—2 Bulwer's Petrel NW
0837—1 Bulwer's Petrel NW
0842—1 Bulwer's Petrel NW
0843—2 Sooty Tern W 100°
0950—1 Black-footed Albatross
0954—1 Sooty Tern E
0956—2 Sooty Tern NE
1006—2 Birds
1015—1 Petrel NE
1017—1 Wedge-tailed Shearwater N on water
Gould, F. J.
1964--At Sea

15 Apr
1019--1 Sooty Shearwater NW on water
1025--1 Sooty (?) Shearwater NW
1030--1 Blue-faced Booby on a float collected
1101--2 Bulwer's Petrel NW
1133--1 Bulwer's Petrel
1138--1 Bulwer's Petrel NW
1140--1 Bulwer's Petrel WE
1145--1 Bulwer's Petrel WE
1200--1 Harcourt's Storm Petrel NW
1201--1 Bulwer's Petrel WE
1202--1 Bulwer's Petrel NW on water picking fiercely at floating brown jellyfish-like object collected
1205--1 Shearwater W
1215--2 Wedge-tailed (?) Shearwaters NW
1220--1 Laysan Albatross SW
1224--1 Shearwater-Petrel NW
1225--1 Christmas Island (?) Shearwater NW
1226--1 Bulwer's Petrel NW
1232--1 Bulwer's Petrel NW
1238--1 Bulwer's (?) Petrel NW
1240--1 Bulwer's (?) Petrel NW
1249--1 Wedge-tailed (?) Shearwater NW
1249--1 Black-footed Albatross collected
1335--1 Harcourt's Storm Petrel feeding
1342--1 Bulwer's Petrel NW
1348--2 Sooty Shear NW 5-15'
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Species</th>
<th>Location</th>
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<tbody>
<tr>
<td>15 Apr</td>
<td>1449</td>
<td>Bonin Island Petrel NW</td>
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<td>1454</td>
<td>Harcourt's Storm Petrel NW</td>
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<td>1456</td>
<td>Harcourt's Storm Petrel NW</td>
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<td>1500</td>
<td>Laysan Albatross NW</td>
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<td>1520</td>
<td>Harcourt's Storm Petrel SW</td>
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<td>1522</td>
<td>Bulwer's Petrel NW</td>
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<td>Harcourt's Storm Petrel</td>
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<td>Harcourt's Storm Petrel</td>
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<td></td>
<td>1525*</td>
<td>Sooty Tern SW</td>
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<td>1526*</td>
<td>Sooty Tern NE</td>
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<td>Bulwer's Petrel NW</td>
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<td>Bulwer's Petrel NE</td>
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<td>1552*</td>
<td>Harcourt's Storm Petrel SW</td>
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<td>1544*</td>
<td>Shearwater-Petrel NW</td>
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<td>1548*</td>
<td>Wedge-tailed Shearwater N</td>
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<td>1552*</td>
<td>Sooty Terns SW</td>
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<td>1557*</td>
<td>Bulwer's Petrel N</td>
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<td>1607*</td>
<td>Harcourt's Storm Petrel NW</td>
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<td>1612*</td>
<td>Laysan Albatross 1 collected</td>
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<td>1625*</td>
<td>Wedge-tailed Shearwater WNW</td>
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<td>1635*</td>
<td>Sooty Tern EE 30'</td>
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<td>1637*</td>
<td>Bulwer's (?) Petrel NW</td>
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<td>1656*</td>
<td>Great Frigatebird N 150 yds.</td>
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<td>1703*</td>
<td>Black-footed Albatross (dark phase)</td>
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</table>
April 15, 1964—Pacific Ocean, between Oahu and Johnston Islands

0630—Begin observations at ca. sunrise
0630—1 Black-footed Albatross (lt. ph.)
0635—1 Bulwer's Petrel WSW
0643—1 Sooty (?) Shearwater NW
0652—1 Wedge-tailed Shearwater NW
0705—1 Sooty (?) Shearwater NW
0710—3 Sooty Terns NW 30-50'
0715—1 Wedge-tail SE
0728—1 Sooty (?) Shearwater NW
0733—1 Pomarine Jaeger NW 50-60'
0735—1 Bulwer's Petrel NE
0743—1 Sooty Tern SW low
0752—4 Sooty Tern SE low
0757—1 Bulwer's Petrel N
0812—1 Bulwer's Petrel SE
0817—1 Sooty Tern S low
0817—1 Sooty Tern S low
Gould, P. J.
1964—At Sea

16 Apr

0819—1 Harcourt's Storm Petrel NE

0825—Flock—loose and feeding

- 3 Sooty Tern
- 2 Fairy Tern
- 1 Wedge-tailed Shearwater
- 1 Bonin Island Petrel

0845—1 Sooty Tern NE 40' collected

0853—1 Fed-footed Booby NE Imm.

0905—1 Bulwer's Petrel NW

0906—1 Tern SE low

0911—1 Sooty (?) Shearwater SE

0911—1 Sooty (?) Shearwater SE

0911—1 Bulwer's Petrel SE

0911—1 Bulwer's Petrel SE

0911—1 Wedge-tailed Shearwater W

0930—1 Sooty Tern S low

0930—1 Sooty (?) Shearwater W

0930—1 Sooty (?) Shearwater NE

0930—1 Wedge-tailed Shearwater W

0935—1 Bulwer's Petrel NE

0943—1 Bulwer's Petrel NE

0948—1 Sooty Tern S 9-15'

0950—1 Bulwer's Petrel NW

0953—1 Sooty Tern SW low

0959—1 Sooty Shearwater NW

1002—1 Wedge-tailed Shearwater NW
16 Apr 1010—1 Bulwer's Petrel collected
1010—2 Sooty Tern NW 30'
1025—2 Sooty Tern NE 30'
1042—2 Bulwer's Petrel N
1056—1 Sooty Tern SE low
1059—2 Sooty Shearwater NW
1108—1 Sooty Shearwater NW
1109—1 Wedge-tailed Shearwater NW
1110—1 Sooty Tern SE low
1116—1 Bulwer's Petrel NE
1122—3 Sooty Shearwater NW
1127—1 Sooty Tern 3'
1128—1 Sooty (?) Shearwater NW
1132—1 Bulwer's Petrel N
1134—2 Pterodroma black belly and ventral base of wings
1150—Flock—feeding no flying fish

87 Sooty Terns 1 collected
6 Fairy Terns

1150—2 Sooty Shearwater
1200—1 Bulwer's Petrel
1212—1 Bulwer's Petrel NW
1220—1 Bulwer's Petrel NW
1221—1 Wedge-tailed Shearwater SW
1226—1 Bulwer's Petrel SE
1233—1 Sooty Shearwater NW
1245—Flock feeding, small squid regurgitated by some after collected

200 plus or minus Sooty Terns 77 collected
16 Apr

1 Gray-backed Tern
4 Wedge-tailed Shearwaters
1 Christmas Island Shearwater
1 Red-footed Booby (Imm.)

1304—1 Bulwer's Petrel
1311—1 Sooty Shearwaters NW
1339—1 Bulwer's Petrel NW
1345—1 Sooty Tern NW
1345—1 Harcourt's Storm Petrel NW
1352—1 Sooty Shearwater NW
1415—1 Bulwer's Petrel NE
1418—1 Bulwer's Petrel NE

1430—Flock-feeding
to 45 plus or minus 5 Sooty Tern
1438 4 Wedge-tails

2 Bulwer's Petrel
1439—1 Sooty Tern NW low
1440—1 Sooty Tern NW low
1440—1 Sooty Tern NW low
1445—1 Bulwer's Petrel NW low
1453—1 Sooty Tern NW low
1455—1 Sooty Shearwater NW
1458—1 Sooty Tern NW low
1459—1 Bulwer's Petrel NW
1500—1 Great Frigatebird NW 50-50' W
16 Apr 1508--Flock--feeding

140 plus or minus 20 Sooty Tern
2 Wedge-tailed Shearwaters
1 Red-footed Booby (ad.)

1518--1 Bonin Island Petrel NW
1530--1 Sooty (?) Shearwater NW
1542--1 Blue-faced Booby NW 15-20'
1542--1 Harcourt's Storm Petrel NE
1542--1 Wedge-tailed Shearwater NW
1542--1 Sooty Tern NW low
1546--1 Sooty Shearwater NW
1553--1 Bulwer's Petrel SE
1600--1 Harcourt's Storm Petrel collected
1620--1 Bulwer's Petrel E

School of 50-75 Porpoises at 1630

1644--1 Harcourt's Storm Petrel E
1645--1 Bulwer's Petrel E
1650--1 Bulwer's Petrel
1710--1 Bulwer's Petrel SE
1710--3 plus or minus 2 Terns
1718--1 Bulwer's Petrel
1725--1 Bulwer's Petrel
1725--1 Harcourt's Storm Petrel collected
1733--1 Sooty Tern N low
1737--1 Bulwer's Petrel NW had something white in bill
1754--3 Sooty Tern NW low
1802--1 Pterodroma NW
At Sea

16 Apr

1802—1 Bulwer's Petrel SE
1811—3 Sooty Tern N W low
1828—1 Wedge-tailed Shearwater NW
1835—1 Sooty Tern
1845—1 Bulwer's (?) Petrel SE
1859—1 Blue-faced Booby

Black-footed Albatross still following
1900—secured observation at ca. sunset.

April 17, 1964—Just off Oahu, Pearl Harbor, in morning.

Saw large flock of feeding Wedge-tailed Shearwaters and some Sooty Terns. Flock ca. 50-75 Shearwaters.

After leaving flock saw three Wedge-tailed Shearwaters flying towards flock in that fast rigid gliding straight line movement that makes them look as if they know where they are going and are in a hurry to get there.
May 4, 1964--Pearl Harbor (leaving ca. 1045), Oahu, Hawaii

1045--begin observations

1045--2 Golden Plover on gravel bar

1046--1 Black-necked Stilt in shallows along shore

1111--3 Sooty Tern SE 20'

1114--2 Great Frigatebird N 60' of and 9 ad.

1123--3 Sooty Tern SE 10'

1124--3 Sooty Tern SE 10'

1125--2 Sooty Tern SE 10'

1131--4 Sooty Tern E 10'

3 Common Noddy Tern E 10'

1131--1 Tropicbird w.t.

1132--3 Sooty Tern E 10'

1140--2 Sooty Tern E 10'

1144--1 Shearwater NW

1 Bird SE Tern like

1150--1 Wedge-tailed Shearwater

1201--1 Red-footed Booby low Imm.

1205--2 Red-footed Booby on water ad.

1207--1 Sooty Tern SE low

1207--1 Sooty Tern E low

1215--1 Sooty Tern SE low

1220--1 Sooty Tern SE 10'

1228--1 Bulwer's Petrel N low

1232--1 Bulwer's Petrel S low

1236--2 Red-footed Booby E low

1237--1 Wedge-tailed Shearwater SE low
4 May
1238--2 Sooty Tern E low
1239--1 Wedge-tailed Shearwater SE low
1249--1 Great Frigatebird E 100'
1256--1 Bulwer's Petrel SE low
1309--1 Wedge-tailed Shearwater E low
1315--1 Black-footed Albatross (light phase)
1316--1 Bulwer's Petrel E low
1319--1 Black-footed Albatross (dark phase)
1320--1 Black-footed Albatross (intermediate)
1329--1 Wedge-tailed Shearwater SE 5-40'
1330--4 Sooty Terns NW 5-40'
1345--1 Bulwer's Petrel SE low
1357--1 Wedge-tailed Shearwater NE low
1416--1 Bird S low
1425--1 Wedge-tailed Shearwater SE low
1430--2 Wedge-tailed Shearwater SE low 1 dark phase
1437--1 Wedge-tailed Shearwater SE low dark phase
1440--1 Sooty Tern E 5'
1447--1 Wedge-tailed Shearwater SE 5-10'
1448--1 Wedge-tailed Shearwater SE 5'
1506--1 Wedge-tailed Shearwater ESE low
1510--1 Sooty Tern NE 30'
1510--1 Wedge-tailed Shearwater E 5'
1528--1 Wedge-tailed Shearwater SE low
1534--1 Wedge-tailed Shearwater SE 5'
1624--Flock--actively feeding over 1 mile distant
125 plus or minus 25 Terns--some were Sootys
50 plus or minus Shearwaters--some were Wedge-tailed
4 May

1644—1 Black-footed Albatross (light ph.)

1704—1 Tern SW 10-20' lot of gliding
1704—1 Tern SW 10-20' lot of gliding

1728—1 Wedge-tailed Shearwater NE 10-20'

1730—1 Wedge-tailed Shearwater NW 10'

1744—1 Wedge-tailed Shearwater SE 10-20'

1747—1 Bulwer's Petrel SE 10'

1750—1 Sooty Tern E 5'

1802—1 Wedge-tailed Shearwater SE low

1808—2 White-tailed Tropicbird NE diving in front of large fish school

1 1 Wedge-tailed Shearwater

1824—1 Sooty Tern NE 40'

1833—2 Tropicbird NE 200'

School of porpoise SE

1847—1 Shearwater NE low

1849—3 Sooty Tern SW 40'

1856—1 Wedge-tailed Shearwater SE low

1902—1 Tropicbird SW 100'

1908—ceased observation at sunset

May 5, 1964—Pacific Ocean 2nd day out Oahu

0600—begin observation

0610—1 Newell's Shearwater W

0622—2 Sooty Tern NE 20'

0650—1 Sooty Tern N 30'

0652—3 Sooty Tern

3 Wedge-tailed Shearwaters actively feeding

1 Newell's Shearwater
May 5

0702--1 Sooty Tern NW low
0704--1 Wedge-tailed Shearwater NW low
0715--2 Wedge-tailed Shearwater

2 Sooty Tern NE may have been feeding?
1 Red-footed Booby

0719--12 Sooty Tern

1 Wedge-tailed Shearwater NE 50-60' low this and above may be part of the same flock breaking up
1 Newell's Shearwater

0725--1 Bulwer's Petrel SE low
0732--2 Sooty Tern NW low

1 Bird NW 30-60' Tropicbird or Fairy Tern?
0734--1 Wedge-tailed Shearwater NW low
0736--3 Sooty Tern NW
0737--1 Newell's Shearwater SE
0738--1 Sooty Tern NW 40'
0744--2 Sooty Tern E 50'
0746--1 Sooty Tern SE 10'
0748--4 Sooty Tern NW 40'
0806--4 Terns
0806--1 Sooty Shearwater NW low
0808--1 Sooty Tern SE 20'
0812--1 Sooty Tern W 30'
0827--4 Sooty Tern S 5'
0835--Flock actively feeding

30 plus or minus 2 Sooty Tern (1 Immature bird)

2 Gray-backed Terns
5 May

3 plus or minus 1 Wedge-tailed Shearwater

0836--1 Wedge-tailed Shearwater

0850--0900--Flock feeding, no flying fish

35 Sooty Terns

3 Wedge-tailed Shearwaters

1 Christmas Island Shearwater?

0910--9 Sooty Tern 20-40'

1 Bonin Island Petrel? low

0927--2 Bulwer's Petrel low

0940--2 Bulwer's Petrel low

0948--1 Wedge-tailed Shearwater SE to 15'

1004--1 Sooty Tern SE low

1008--1 Wedge-tailed Shearwater NW low

1009--4 Sooty Tern N E 20'

1048--50-- plus 5 Sooty Terns Feeding

1108--1 Great Frigatebird 150'

1138--2 Sooty Tern NW 70'

1145--1 Shearwater-Petrel NE low

1158--1 Wedge-tailed Shearwater NNE low

1159--2 Sooty Tern SE low

1203--1 White-tailed Tropicbird SE on water

1212--5 Wedge-tailed Shearwaters SE all on water

1213--12 Sooty Tern SE

1222--23 Sooty Tern

2 Wedge-tailed Shearwater

1254--1 Bulwer's Petrel SE low

1259--1 Blue-faced Booby NW 10-30' sub ad.
Gould, E. J.
1964—At Sea

5 May

1309—5 Sooty Tern NW 10-40'
1331—1 Sooty Shearwater NW to 70'
14:5—1 Arctic Skua NW on water ca. 200 yds. Gould and Amerman, definite
1410—1 Masked Booby NE 1’0’ sub ad.
1416—1 Sooty Tern Sw
1417—30 plus or minus 5 Sooty Tern NE 5-30’ not feeding, about 2 immatures
1425—1 Bulwer's Petrel or Storm Petrel W low
1431—2 Red-tailed Tropicbird SW 100'
1450—Flock— not feeding heading NE
   13 Sooty Tern
   2 Fairy Tern
   1 Wedge-tailed Shearwater
1454—1 Bulwer's Petrel NE low
1512—2 Red-tailed Tropicbird 100'
1530—1 Red-tailed Tropicbird
1531—1 Red-tailed Tropicbird same as 1512?
1532—25 plus or minus 5 Terns
1605—1 Booby ?
1611—1 White-tailed Tropicbird NE 150'
1628—2 Sooty Tern ESE 50'
1640—Flock— feeding at edge of squall, no flying fish
   20 plus or minus 5 Sooty Tern 50'
   7 Great Frigatebird 700'
1657—3 Harcourt's Storm Petrel on water
1732—2 Sooty Tern 5-20'
1758—1 Bulwer's Petrel N low
5 May
1810—2 Sooty Tern NE 30'
1900—observation secured at sunset.

May 8, 1964—Pacific Ocean, 3rd day out Oahu
060—begin observations (sunrise ca. 0628)
0630—2 Sooty Tern NE low
0640—1 Red-tailed Tropicbird SE 120' calling
0646—1 Sooty Tern NE 10' calling
0649—1 Bulwer's Petrel NW low
0653—1 Red-tailed Tropicbird SE 30'
0727—14 Sooty Tern NE low 5-75' calling
0734—6 Birds NW to 30'
0745—1 Sooty (?) Shearwater NW
0745—1 Harcourt's Storm Petrel SE low
0813—Flock—feeding no flying fish
25 plus or minus 5 Sooty Tern
   1 Fairy Tern
   2 Shearwater
0831—2 Sooty Tern NW low lot of gliding
0943—15 Sooty Tern NE to 40'
1215—1 Shearwater-Petrel NW
1252—4-5 Sooty Tern NE low
1318—1 Harcourt's Storm Petrel W low
1344—1 White-tailed Tropicbird 70'
1349—2 Terns ESE 5-30'
1352—1 Bulwer's Petrel SE
1415—1 Blue-faced Booby NE 50'
6 May 1964—At Sea

1417—4 Sooty Tern FSE 75'
1525—1 Bulwer's Petrel S low
1546—1 Harcourt's Storm Petrel low
3 Storm Petrel
1647—1 Sooty (?) Shearwater NW
1658—2 Sooty Terns N 30'
1731—3 Sooty Terns WSW 50'
1750—2 Shearwater?
1757—2 Sooty Tern NE 20'
1758—2 Sooty Tern NE 20'
1800—2 Sooty (?) Terns NE 60'

observation ended 1930.

May 7, 1964—Pacific Ocean 4th day out Oahu

0610—begin observation sunrise ca 0630
0720—3 Sooty Tern NW 5-20' gliding
0727—1 Bulwer's Petrel SE low
0728—4 Sooty Tern SW 50'
0732—1 Wedge-tailed Shearwater SE low
0738—1 Wedge-tailed (?) Shearwater NW low
0746—1 Sooty Tern ESE low
0751—2 " NE
0754—7 " NE 30'
0759—6 " low 40'
0745—3 " S 4
0805—1 Shearwater? S low
0807—2 Sooty Tern SE low
**Coulb, L. Z.**  
1964—At Sea

### 7 May

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7 May

0859--1 Sooty Tern SE low
0859--1 Wedge-tailed Shearwater NW low
0900--1 Sooty Tern SE low
0901--1 Sooty Tern SE low
0902--3
0903--1
0915--12 " "
0921--2 " "
0924--1 " SW "
0924--3 " "
0935--3 " "
0935--3
0948--1 Tern low
0949--1 Fairy Tern NE 30'
0949--2 Sooty Tern NW low
0954--2 Wedge-tailed Shearwater SE low
0955--1 Wedge-tailed Shearwater SE low
0957--2 Sooty Tern SE low
0957--1 Wedge-tailed Shearwaters SE low
0958--1 Sooty Tern SE low
0959--1 Sooty Tern SE low
1002--Flock feeding no flying fish under flock
175 plus or minus 25 Sooty Terns, 5 with red tags
(to 1 Frigatebird
1015)
40 plus or minus 10 Wedge-tailed Shearwater 1 with red tag
1 Red-footed Booby
1018--1 Sulwer's Petrel
Gould, E. J.
1964--At Sea

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1020--1 Bulver's Petrel

1022--5 Sooty Tern NE 30′

1024--4

1025--3

1026--3

1026--1

1027--2

1028--20

1030--1

1031--1 Wedge-tailed Shearwater N low

1023--6 Sooty Tern W low

1026--1 Sooty Tern NE 40′

1046--12 plus or minus Sooty Terns E 5-10′

1051--1 Sooty Tern N 25′

1102--1 Wedge-tailed Shearwater E low

1107--1 Sooty Tern NNE

1104--3 Wedge-tailed Shearwater NNE low

1107--4 Sooty Tern NE 5-20′

1109--6 Sooty Tern SW 70′

1110--2 SSE 50′

1111--2 SW 100′

1112--9 W low

1113--21 soaring in circles

1114--3 SW 25′
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<td>1133--14</td>
<td>SSW 30-50'</td>
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<td>10-70'</td>
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<td>1148--8</td>
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<td>1217-1</td>
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<td>1 Frigatebird SE 50'</td>
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<td>20 plus or minus 5 Sooty Terns</td>
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<td>1 S low</td>
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<td>5 SE low</td>
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7 May

1345--1 Wedge-tailed Shearwater E low
1347--1 Sooty Tern E low
1355--1 Sooty Tern E low
1356--1 Sooty Tern N 40°
1758--50 plus or minus 5 Sooty Terns feeding
1407--10 Sooty Terns S

1 Harcourt's Storm Petrel S

1410--5 Sooty Tern E
1412--4 " " S
1419--1 " " NE
1424--2 " " NE
1424--1 " " SW
1425--1 " " NE
1428--1 " " SE
1432--1 " " E
1433--2 " " NE
1436--2 " "

1439--3 Red-footed Booby NE 50° sub ad.

1 Great Frigatebird 100°

1440--1 Sooty Tern SW 70°
1440--2 " " E low
1443--1 " " N low
1444--1 " " N 40°
1447--1 " " NNE 25°
1449--1 " " NNE 40°
1450--2 " " E low
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1455—2 Sooty Terns N low

1500—2 Red-footed Booby SE chasing flying fish low sub ad.

1501—1 Sooty Tern N low

1503—2 # # N low

1508—6 # # E low

1509—2 # # S 30'

1512—1 Wedge-tailed Shearwater E low

1515—1 Sooty Tern N 70'

1516—2 # # 50'

1517—1 # NE 50'

1518—1 # # E low

1520—2 # # N low

1520—2 # # N low

1525—1 # W 40'

1527—2 Wedge-tailed Shearwater S

1529—1 Sooty Tern N low

1529—2 # # S low

1530—1 # SE 35'

1532—1 # # NE 20'

1533—3 # # SE 70'

1537—2 # # S low

1538—3 # # W 40'

1538—2 # # WNW low

1549—2 # # SE 35'

1550—2 # # SW low

1555—2 # # N low
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<td>1712-2</td>
<td>N &quot;</td>
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</tbody>
</table>
7 May

1719--2 Sooty Terns N low
1721--2 " " NE
1724--1 " " ENE
1724--1 " " ENE
1724--1 " " NE
1735--2 " " N
1736--1 " " NE
1740--1 " " E
1750--1 " " E
1754--1 Sooty Shearwater S to 25'
1800--1 Wedge-tailed Shearwater S to 20'
1802--1 Wedge-tailed Shearwater S
2 Pterodroma (?) S
1805--2 Sooty Terns S
1810--2 Great Frigatebird NE 100'
1810--3 Sooty (?) Tern
1812--2 Sooty Tern NE 20'
1814--1 " " E low
1816--1 " " N low
1816--1 " " E low
1817--1 " " NE low
1820--1 " " NE 100'
1823--1 " " NE 0-100'
1824--1 Wedge-tailed Shearwater S
1825--1 Sooty Tern NE low
1850--1 Sooty (?) Shearwater NW to 30'

secured watch 1905 in rain squall
May 8, 1964--Pacific Ocean, Grid area at least most of day

0630--begin observation

0631--1 Sooty Tern 100'

0648--1 Sooty Tern NE 60'

0654--1 Fairy Tern SE 40'

0700--1 Blue-faced Booby 35' sub ad.

0701--2 Sooty Tern NE 40'

stop for plankton detail ca. 0715

0755--2 Terns N

0756--1 Red-tailed Tropicbird 60'

0800--4 Sooty Tern SE low

0840--1 Sooty Tern N low

0847--2 Sooty Terns N low

0859--1 Red-tailed Tropicbird 50-100'

0900--2 Red-tailed Tropicbird N 150'

0925--1 Pterodroma S low

back on course ca 0930

0945--1 Shearwater

1012--1 Sooty Shearwater NW 5-30'

1014--1 Sooty Tern N 20'

11'30--1 Sooty Tern SW to 20'

1218--14 Sooty Tern SE to 40' 1 orange tag

1219--8 Sooty Tern NNE low

1219--1 Wedge-tailed Shearwater SSW low

1246--1 Shearwater-Petrel SW low

1326--1 White-tailed Tropicbird W 70'

1329--1 Bird SSE low all white
8 May

1348—28 plus or minus 2 Terns NW to 100'.

1445—Flock feeding no flying fish
to 55 plus or minus 2 Sooty Tern

1456 6 Wedge-tails

1 Bulwer's Petrel?

1745—1 Red-tailed Tropicbird 100'

1754—3 Sooty Tern S 10'

1820—1 Shearwater-Petrel SW

1828—1 Sooty Tern NW 15'

2030—1 or 2 Sooty Tern NE

2037—1 or 2 Sooty Tern ?

2230—1 Sooty Tern NE ?

2335—5 Sooty Tern SW?

2347—2 Sooty Tern

May 9, 1964—Pacific Ocean, Grid Area

0020—Sooty Tern

0025—Shorebird? heard "pee-up"

0030—Sooty Tern 2 NE?

0050—Sooty Tern 3–4 NE?

0051—Sooty Tern 1

0130—Sooty Tern 3–5 NE?

0145—Sooty Tern several birds calling every few minutes

0215—Sooty Tern nearly every five minutes

0220—Sooty Tern string of birds passing continuously for last 5 minutes
going NE on both sides of ship ca. 20–30 birds

0245—Sooty Tern birds still continuously passing by, maybe 150–200 birds

in last half hour
9 May
0300—Sooty Tern
0310—Sooty Tern
0325—Sooty Tern
0400—Sooty Tern
0430—none
0440—2 plus Terns
0445—2 Tropicbirds calling
0610—2 Tropicbirds calling NSE
0622—2 plus Sooty Terns heard calling
0641—1 Red-tailed Tropicbird 180°
plankton stop at 0715
underway at 0800
0845—1 Sooty (?) Shearwater NE 30°
1227—1 Bonin Island Petrel SW
1259—2 Sooty (?) Tern NE low
1305—2 Birds SW low
1317—1 Bulwer's Petrel NW low
Blackfish-type whale at 1337
1338—1 Red-tailed Tropicbird on water
1342—3 Sooty Terns W low
1417—3 Sooty Terns NE low
1443—1 Bulwer's Petrel SW low
1447—1 Sooty (?) Shearwater SW low
1543—2 Sooty Terns NNW low
1552—1 Sooty Tern SW 50°
Gould, P. J.
1964--At Sea

9 May
1643--1 Pterodroma NW
1658--1 Pterodroma NW
1812--1 Bonin Island Petrel NW
1843--1 Sooty (?) Shearwater SW
secured watch at 1840 (sunset)

No birds reported at any time during the evening watch--probably because we were heading into the wind and the birds couldn't be heard.

May 10--1964--Pacific Ocean, Grid Area

no birds seen on night watch
0643--1 Wedge-tailed Shearwater NE

sunrise ca. 0655

Plankton stop 0702

0712--1 Harcourt's Storm Petrel NW
0715--1 Wedge-tailed Shearwater NE
0724--2 Wedge-tailed Shearwater NW

resume course and speed 0800
0817--1 Wedge-tailed Shearwater SW
0833--1 Sooty Tern NW 5-30'
0834--1 Sooty Tern NW 5-20'
0935--1 Pterodroma NW 5-25'
1052--1 Sooty Tern W to 15'

change course 1103
1119--1 Sooty Tern NE to 50'
1121--4 " " SW 35' calling
1126--4 " " N to 10'
10 May

1147—2 Sooty Tern SE 50'

1208—1 Sooty Tern NW low

1214—1 Wedge-tailed Shearwater NE

1215—1 Bulwer's Petrel SE

1230—1 Wedge-tailed Shearwater N

1315—1 White-tailed Tropicbird S to 75'

1322—21 Sooty (?) Tern SE to 50'

change course to SW 1415

1428—300 plus or minus 25 Sooty Tern 4 collected

25 plus or minus Gray backed Terns

35 plus or minus 4 Wedge-tailed Shearwaters

all light phase

3 Frigatebirds

1 Red-tailed Tropicbird—not feeding ( ) over flock

underway at 1615

1622—1 Sooty (?) Shearwater NE

1706—1 Sooty (?) Shearwater NE

1721—5 Sooty Tern NE to 20'

1745—2 Sooty Terns S 5'

1747—2 Sooty Tern S 10'

1759—1 Shearwater-Petrel NE

1852—2 Sooty Tern N 50'

1859—12 Sooty Tern NE to 30'

1900—Flock feeding big fish jumping

45 plus or minus 5 Sooty (?) Terns

10 plus or minus 3 Wedge-tailed Shearwaters
**Gould, P. J.**
1964—At Sea

10 May 1964—100 plus or minus 20 Sooty (?) Terns NE 50'

apparent sunset ca. 1940

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>2025--2 plus Sooty Terns</td>
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<tr>
<td>2034--1 plus Sooty Terns</td>
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<tr>
<td>2113--</td>
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<tr>
<td>2118--</td>
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<tr>
<td>2125--1 plus Sooty Terns</td>
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<tr>
<td>2145--3 plus Sooty Terns</td>
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<tr>
<td>2205--5 plus Sooty Terns</td>
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<tr>
<td>2232--1 Tropicbird not seen</td>
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<tr>
<td>2345--2 plus Sooty Terns</td>
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<tr>
<td>2355--Sooty Terns calls come with increasing frequency</td>
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**May 11, 1964—Pacific Ocean, Grid Area**

<table>
<thead>
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<tbody>
<tr>
<td>0010--2 plus Sooty Terns</td>
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<tr>
<td>0044--2 Sooty Terns</td>
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<tr>
<td>0048--17 Sooty Terns</td>
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<tr>
<td>0050--1 NE Sooty Terns</td>
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<tr>
<td>0147--1 NE Sooty Terns</td>
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<tr>
<td>0215--2 F or NE Sooty Terns</td>
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<tr>
<td>0235--1 Sooty Terns</td>
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<td>0240--1 Sooty Terns</td>
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<tr>
<td>0406--1 SW Sooty Terns</td>
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<tr>
<td>0415--1 Sooty Tern or Tropicbird</td>
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<tr>
<td>0442--1 Sooty Tern</td>
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sunrise ca. 0700
Gould, P. J.

11 May

0751—1 Pterodroma NW
0757—2 Sooty Tern N low
0757—2 Red-tailed Tropicbird 500`
0800—1 Sooty Tern N to 50`
0808—1 Sooty Shearwater NW
0849—1 Bulwer's Petrel SE
0849—1 Pterodroma NW
0900—2 Sooty Terns N 30`
0914—2 Pterodroma NW
0919—1 Sooty Tern SE
0919—1 Pterodroma NW
0935—1 Pterodroma NW
0935—1 Pterodroma NW

1 Petrel-Shearwater NW

1030—2 Sooty Tern S 10`
1045—1 Wedge-tailed Shearwater NW
1105—5 Bonin Island Petrel on water?

1 Wedge-tailed Shearwater

1123—2 Sooty Terns SSE 30`
1129—1 Bonin Island Petrel N
1136—1 Wedge-tailed Shearwater SSE on water
1139—1 Wedge-tailed Shearwater N

1 Sooty Tern 10-15`

1145—1151—Flock may have been feeding

150 plus or minus 15 Sooty Tern
4 plus Fairy Tern
5 plus Wedge-tailed Shearwaters
Gould, P. J.
1964--At Sea

11 May
1457--1 Shearwater/Petrel NW
1510--1 Bonin Island Petrel NW
1528--1 Red-tailed Tropicbird 5-100' hovering
1602--1 Bonin Island Petrel (?) NW
1605--5 Sooty Tern SE 50'
1613--1 Sooty Tern SE 50'
1713--2 Sooty Tern NW to 30'
1745--1 Bonin Island Petrel N
1754--1 Pterodroma NW
1815--Flock--feeding no fish
50 plus or minus Sooty Tern
1 Frigatebird
sunset ca. 1950 nightwatch kept
2240--3 plus Sooty Terns about ship.

May 12, 1964--Pacific Ocean, Grid Area
0400--1 plus Sooty Tern
0117--2 plus
0233--3
0125--3
0128--17
0140--2 plus
0213--5
0235--1
0240--2
0415--3
0425--4

heard and occasionally seen off and on throughout evening and morning
Gould, P. J.
1964 -- At Sea

12 May

0447 -- 2 Sooty Tern
0610 -- 2 Sooty Tern
0627 -- 2 Birds
0638 -- 1 Sooty Tern 40'
sunrise ca. 0657

0715 -- Flock feeding no fish
55 plus or minus 1 Sooty Tern
3 Wedge-tailed Shearwaters

0835 -- 1 Wedge-tailed Shearwater SSW
0920 -- 1 Wedge-tailed Shearwater SW
0934 -- 1 Wedge-tailed Shearwater SW
1011 -- 1 Red-tailed Tropicbird NE 50'
1031 -- 1 Red-tailed Tropicbird W 100'
1124 -- 1 Wedge-tailed Shearwater (?) SE
1512 -- 3 Sooty Tern SE
1515 -- 1 Harcourt's Storm Petrel NW
1548 -- 2 Sooty Tern S
1550 -- 1 Sooty Tern ESE

1625 -- Flock feeding no fish Terns to SE
75 plus or minus 10 Sooty Tern
5 plus or minus 1 Wedge-tailed Shearwater
1 Frigatebird ad 9 50-150'

1653 -- 4 Sooty Tern S 35'

1652 -- 1 Red-tailed Tropicbird W 100'

1700 -- Flock not feeding

125-- plus or minus 10 Sooty Terns
6 plus or minus Wedge-tailed Shearwaters
12 May

1725-- 7 Sooty Tern NE 2-15'

1755-- 150 plus or minus 20 Sooty Tern S 2-20' not feeding

1802-- 3 Sooty Terns W 20'

1805-- 40 plus or minus 5 Sooty Terns feeding 0-100'

1 Fairy Tern

1 Gray-backed Tern

1846-- 6 Sooty Tern E 5-15'

1857-- 4 Sooty Tern E 30-40'

1859-- 2 Sooty Tern SE 5-15'

1923-- 2 Sooty Tern NE 40'

1924-- 2 Sooty Tern NE 5-10'

1935-- 1 Sooty Terns NE 40'

sunset ca. 1940

2043-- 2 Sooty Tern

2050-- 1

2125-- 1

2145-- 1

2151-- 1

2205-- 1

2206-- 1

2211-- 1

2215-- 5 plus

2230-- 2

2235-- 1

2242-- 1

2245-- 1

2335-- 10 plus
May 13, 1964—Pacific Ocean, Grid Area

0000-0015—6 plus Sooty Tern
0335—5 plus Sooty Tern
0341—2 plus Sooty Tern
0355—4 plus Sooty Tern
0405—1 Sooty Tern

Sunrise ca. 0658
0836—1 Shearwater-Petrel NW
0923—1 Wedge-tailed Shearwater NW
0930—1 Bonin Island Petrel NE
1030—1 Sooty Tern E 20'
1153—1 Sooty (?) Tern SE low

1100—Flock feeding flying fish under flock to 55 plus or minus 5 Sooty Tern
1106—3 plus or minus 1 Wedge-tailed Shearwater
1 Frigatebird

1120—3 Sooty Tern N to 10'
1220—3 Sooty Tern low
1358—2 Sooty Tern N to 10'
1705—17 Sooty Tern E 5-50' not feeding
1714—1 Blue-faced Booby NW 5-15' almost ad.
1818—1 Pterodroma NW

May 14, 1964—Pacific Ocean, Grid Area

0222—2 plus Sooty Tern NW-W
0415—2 plus Sooty Tern
0642—1 Sooty Tern NW 5-50'
Gould, E. J.
1964—At Sea

14 May

sunrise ca. 0645

0650—2 Sooty Tern SE 75'
0650—1 Sooty Tern NE
0718—2 Sooty Tern NW low 30'
0720—1 Sooty Tern E 75'
0828—1 Bonin Island (?) Petrel NW
0903—2 Pterodroma 0903
0935—Flock—feeding flying fish present

100 plus or minus 10 Sooty Tern
10 plus or minus 3 Wedge-tailed Shearwaters
2 Great Frigatebird 1 ?

1152—1 Wedge-tailed Shearwater N
1232—2 Sooty Tern SE low
1240—1 Bulwer's Petrel NE
1301—3 Sooty Tern N to 50'

1336—1 Wedge-tailed Shearwater NE on water
1349—1 Pomerine Jaeger N low and fast
1437—3 Sooty (?) Shearwaters NE
1441—1 Wedge-tailed Shearwater N
1450—1 Pterodroma N
1508—1 Harcourt's Storm Petrel NNE
1523—1 Sooty (?) Shearwater N
1613—1 Sooty (?) Shearwater N

1834—40 plus or minus 2 Sooty Tern low to 150'
1836—1 Harcourt's Storm Petrel W

sunset ca. 1955
Gould, P. J.
1964—At Sea

14 May
2038—2 Sooty Tern 50'
2121—1 Sooty Tern 50'
2206—2 Sooty Tern
2302—2 Sooty Tern E 30'
2400—1 Sooty Tern E 30'

May 15, 1964—Pacific Ocean, Johnston Island ca 0930 to 1130

0003—2 Sooty Tern E 30'
0021—1 Bird (Booby?) N
0035—2 plus Sooty Tern E 45-50'
0130—1 Sooty Tern
0210—5 Sooty Tern
0230—2 plus Sooty Tern E
0320—4 plus Sooty Tern
0335—2 plus Sooty Tern
0432—2 Sooty Tern SW
0447—1 Sooty Tern
0608—2 Sooty Tern S 100'
0639—1 Sooty (?) Tern W 90'
0643—1 Wedge-tail E
0644—1 Shorebird (?) heard, no seen
0645—2 Wedge-tailed Shearwaters SE
0645—3 Sooty Tern SE low
0646—Flock—no feeding
90 plus or minus 6 Sooty Tern 7 collected
2 Wedge-tailed Shearwater

sunrise ca 0650
15 May

0730—5 Sooty Turnstone W low
0747—1 Sooty Shearwater N
0755—14 Sooty Tern SE low
0800—13 Sooty Tern E 40', 1 collected
0802—21 Soot Tern SE 40-100'
0812—1 Wedge-tailed Shearwater S
0819—3 Wedge-tailed Shearwater N
0830—3 Sooty Tern
0840—2 Great Frigatebird
0845—1 Sooty Tern W low
0850—21 Sooty Tern W 5-50'
0850—15 plus or minus Terns 5-50'
0855—1 Wedge-tailed Shearwater S
0857—Flock—not feeding includes 21 Terns at 0850

65 plus or minus 5 Sooty Terns
12 plus or minus 2 Wedge-tailed Shearwaters 2 red tagged birds
1 Sooty Shearwater

0902—1 Red-tailed Tropicbird 350'
0915—3 Sooty Tern W low
0915—1 NW low
0918—1 NW low
0918—2 NW low
0918—1 SW 11-60'
0930—4 NSW low
0935—4 NNESE 100'-45'
0940—1 N 60'
15 May

0940--1 Wedge-tailed Shearwater NE

0941--2 Wedge-tailed Shearwater SE

0947--6 Sooty Tern SE low

0950--10 "" low

0950--6 "" 40'

0952--1 "" 10'

0952--1 "" 35'

0952--1 "" 10'

0958--6 "" low

1007--1 Frigatebird SW 200 plus '

1008--3 Sooty Tern SE 40'

1009--2 "" SE low

1010--4 Sooty Tern SSE 35'

1012--8 "" SE 100'

1025--2 Wedge-tailed Shearwater

1026--1 Christmas Island (?) Shearwater

1026--1 Sooty Tern SSE 40'

1028--1 Red-footed Booby N low Imw.

1029--2 Sooty Tern E low

1036--15 Sooty Tern E high

1042--9 Sooty Tern E

1 Wedge-tailed Shearwater

1045--11 Sooty Terns NE

2 Ruddy turnstone NE

1055--25 Sooty Terns E and NE steady streams for last 10 min.
15 May

1 Common Noddy Tern E

1105--6 Sooty Tern s E
1110--1 Wedge-tailed Shearwater NE
1112--1 Sooty Tern S 5'
1115--6 Sooty Tern S 5'

1 Common Noddy Tern S 5'

1118--1 Wedge-tailed Shearwater NE
1118--2 Sooty Terns SW
1118--5 Sooty Tern NE

1122--2 Sooty Tern N low

1128--1 Common Noddy Tern E low
1131--4 Sooty Tern NE low
1134--8 Sooty Tern NE low
1136--3 Sooty Tern NE low

1136--1 Common Noddy Tern SW low

1136--1 Wedge-tailed Shearwater N E

1140--1 Pterodroma N

1144--1 Wedge-tailed Shearwater NW

1147--11 Sooty Terns

1147--2 Sooty Terns S

1147--1 Common Noddy Tern NE low

1151--2 Sooty Tern SW 90'

1151--3 Sooty Tern NE low

1158--Flock--not now feeding

17 Common Noddy Tern 1 red tagged
50 plus or minus Sooty Terns

1 Fairy Tern
15 May

Many birds seen during this time probably part of above flock at 1205.

A Sooty Tern was seen with a faded yellow tag.

1220—2 Sooty Tern E to 40'
1229—1 Sooty Tern E to 40'
1238—2 Sooty Tern SE to 50'
1241—7 Sooty Tern WNW to 20'
1249—1 Harcourt's Storm Petrel NE
1251—1 Sooty Tern SE
1255—5 Sooty Tern SE
1302—12 Sooty Tern E
1306—Sooty Tern (3) NE

1315—Flock feeding no fish to 25
1320 175—plus or minus Sooty Terns
25 plus or minus 5 Common Noddy Terns
3 Red-footed Boobies 1nm.
2 Wedge-tailed Shearwater
1 Great Frigatebird ?

1330—1 Red-footed Booby E low part of above flock?
1338—1 Red-footed Booby NE low
1350—1 Blue-faced Booby SW low ad.
1353—2 Red-footed Booby S low subad.
1401—4 Sooty Tern E to 30'
1410—1 Wedge-tailed Shearwater WNW to 20'
1415—1 Sooty Tern S 40'
1423—4 Sooty Tern SE 40'

Orange tag
Could, E. J.
1964—At Sea

15 May

1426—8 Sooty Tern & low
1430—6 " NW low
1436—1 " F 40'
1440—1 " SW low
1442—1 Wedge-tailed Shearwater N
1443—12 Sooty Tern low to 50'
1448—1 " SE 50'
1452—1 " N low
1510—6 " N low
1510—4 " NE low
1516—3 " SE low
1521—1 " SE low
1521—1 " SE low
1521—1 Wedge-tailed Shearwater NW
1524—4 Sooty Tern SE low
1527—5 Sooty Tern SE low
1528—1 Sooty (?) Shearwater NW
1532—2 Sooty Tern SE low
1545—3 Sooty Tern N 50'
1550—5 Sooty Tern SE low
1600—1 Sooty Tern high
1600—3 Sooty Tern NW 70'
1601—1 Bonin Island Petrel NW low
1603—1 Sooty Tern NNW 60' orange tag
1603—6 " 150'
1606—3 " SW 40'
1964—At Sea

15 May

1612—3 Sooty Terns S 70'
1620—1 Sooty Tern S  low
1620—1 Sooty Shearwater NW
1623—1 Wedge-tailed Shearwater NW
1626—1 Sooty Tern SE 35'

1634—1  S low
1636—1 SE 70' 1 orange tag
1636—1 SE  low
1641—1 NE  low
1645—1 S 50'
1652—1 W 40'
1654—2 NE 20'
1657—1 SE 20'
1705—1 NE  low
1720—1 SW  low
1735—1 SW  low
1758—4 low-30' SW
1758—4 N  low
1809—8 NE  low

1837—2 Wedge-tailed Shearwater NW  low
1838—2 Wedge-tailed Shearwaters NW  low
1845—5 Sooty Tern SW 40'
1846—14 NE  low
1850—6 NE  low
1934—8 NE

1934—1 Wedge-tailed Shearwater SE

1945—observations secured ca. sunset.
May 16, 1964—Pacific Ocean, between Johnston and Oahu

0630—begin observation (sunrise ca. 0637)

0707—1 Harcourt's Storm Petrel N

0747—1 Shearwater/Petrel NW

0817—1 "ull (white tail, dark mantle) 100-50'

0822—1 Shearwater NW

0845—2 Sooty Tern NW 20'

0900—1 Sooty Tern SW 20'

0902—1 Shearwater NW

0935—1 Tropicbird NE low

0957—1 Pterodroma NW

1027—1 Frigatebird ad 2 100'

1028—1 Pterodroma NW

1029—1 Frigatebird S 100 joined last Frigate

1119—2 Sooty Shearwater NW

1119—2 Sooty (? Tern NW 40-50'

1125—1 Sooty Shearwater NW

1127—1 Sooty Shearwater NW

1220—1 Wedge-tailed Shearwater NW

1221—1 Wedge-tailed Shearwater NW

1410—1 Red-tailed Tropicbird NW low

1448—1 Pterodroma S

1448—1 Wedge-tailed Shearwater S

1520—1 Bulwer's Petrel NE

1520—1 Bonin Island Petrel NW ?

1528—1 Sooty Shearwater NW
16 May
1541—1 Wedge-tailed Shearwater
1547—3 Wedge-tailed Shearwater NW
1550—2 Sooty Shearwater NW
1606—1 Bonin Island Petrel NW
1830—secured watch in heavy overcast dark weather although not yet sunset

May 17, 1964—Pacific Ocean, between Oahu and Johnston Island

0625—begin observation sky completely cloudy cold.
0645—1 Wedge-tailed Shearwater NW
0655—2 Wedge-tailed Shearwater NW
0707—2 Wedge-tailed Shearwater NW
0707—1 Bulwer's Petrel S
0715—Flock—feeding in light rain squall
15 plus or minus Terns
5 plus or minus Shearwater/Petrels
0723—2 Wedge-tailed Shearwaters NW
0724—2 Shearwaters NW
0730—Flock—feeding large fish jumping
100 plus or minus 10 Sooty Tern at least 4 Terns NW
5 plus or minus 1 Wedge-tailed Shearwaters
1 Fairy Tern
1 Frigatebird chasing other birds
0854—2 Sooty (?) Tern SW40°
0855—1 Sooty Shearwater N
0901—1 Red-tailed Tropicbird NE 35°
0903—1 Sooty Tern NE
0907—1 Sooty Shearwater NW
17 May 0912--2 Sooty Tern N 30'
0915--1 Sulwer's (?) Petrel S
0935--2 Sooty Tern
0937--2 Frigatebirds 200'
0939--1 Sooty Tern NW 20'
0940--1 Sooty Tern N 20'
1003--2 Wed-tailed Tropicbirds NNE to 40'
1004--1 Wed-tailed Tropicbird joined above 2
1006--1 Shearwater NW
1013--1 Sooty Shearwater NW
1017--1 Tern NE
1024--1 Wedge-tailed Shearwater N
1026--1 Wedge-tailed Shearwater N
1029--1 Sooty Shearwater NW
1030--1 Sooty Tern NE to 50'
1033--1 Sooty Shearwater NW
1037--1 Shearwater/Petrel NE
1037--1 Shearwater/Petrel NW
1042--1 Wedge-tailed Shearwater
1058--2 Sooty Shearwater NW
1105--1 Sooty Shearwater NW
1115--Flock not feeding
125 plus or minus 10 Sooty Tern at least 4 Immatures
  3 Fairy Terns
  4 plus or minus Wedge-tailed Shearwaters
  1 Newell's Shearwater
1020--2 Sulwer's Petrel NE
17 May

1126—2 Sooty Tern S
1128 -3 Sooty Tern S
1128—1 Newell's Shearwater S
1141--1 Sooty Shearwater NW
1143--2 Sooty Tern NW 50'
1146--3 Wedge-tailed Shearwater NW
1148--1 Sooty Shearwater NW
1150--1 Wedge-tailed Shearwater N
1154--1 Wedge-tailed Shearwater NE
1154--2 Sooty Tern N 20'
1202--1 Sooty Shearwater NW
1206—1 Wedge-tailed Shearwater NW
1208--1 Bulwer's Petrel SSW
1211--1 Bulwer's Petrel SW
1213--1 Bulwer's Petrel NW
1219--1 Wedge-tailed Shearwater NE
1220--3 Great Frigatebirds
1220--1 Sooty Shearwater NW
1223--1 Tern
1232--1 Bulwer's Petrel NE
1236--1 Sooty Tern SE low
1236--1 Tern S low
1243--2 Sooty Shearwater NW
1302--2 Great Frigatebird 200'
1405--1 Wedge-tailed Shearwater SE
1407--1 Sooty Shearwater NW
17 May

1411--2 Sooty Shearwater NW
1424--1 Sooty Shearwater NW
1424--1 Wedge-tailed Shearwater NW
1426--2 Sooty Shearwater NW
1430--1 Great Frigatebird 50-75'
1438--1 Sooty Shearwater NW
1454--2 Sooty Tern S low
1505--2 Sooty Tern S 50'
1507--1 Sooty Tern
1508--1 Sooty (?) Shearwater NW
1510--1 Sooty Tern SE 50'
1526--24 Sooty Tern

1 Wedge-tailed Shearwater

1544--1 Shearwater/Petrel NW
1550--1 Sooty (?) Shearwater NW
1558--1 Sooty (?) Shearwater NW

a few porpoises going SE at 1600
1621--1 Wedge-tailed Shearwater N
1625--3 Sooty Tern S 15-30'
1630--1 Sooty Shearwater NW
1638--1 Sooty (?) Shearwater NW
1649--2 Sooty Tern WSW 40'
1651--1 Red-tailed Tropicbird N on water
1703--1 Bulwer's Petrel ENE
1721--1 Wedge-tailed Shearwater SE
1722--2 Frigatebird 200'
Gould, F. J.
1964-- At Sea

17 May

1733--1 Bulwer's Petrel NNE

1739--3 Wedge-tailed Shearwaters ESE

1740--1 Bulwer's Petrel NE

1747--1 Bulwer's Petrel NW

1751--2 Red-footed Booby 1 ad 1 Imm. NE low landed on water

1805--1 Bonin Island Petrel NW

1805--1 Newell's Shearwater NE

1807--1 Bulwer's Petrel ESE

1824--1 Booby (?) NE Imm.

1834--1 Sooty Tern S 40'

1850--1 Red-footed Booby NE low sub ad.

1907--1 Bulwer's Petrel ENE

1906--1 Bonin Island Petrel NW

1915--1 Wedge-tailed Shearwater SW

1920--secured observation ca. sunset.

May 18, 1964--Pacific Ocean, off Oahu

0600--begin watch a few minutes before sunrise

0613--1 Wedge-tailed Shearwater SW

0630--1 Sooty Shearwater N

0645--2 Harcourt's Storm Petrel N

0651--1 Wedge-tailed Shearwater NW

0700--1 Harcourt's Storm Petrel N

0702--1 Wedge-tailed Shearwater SE

0702--1 Wedge-tailed Shearwater SE

0702--1 Wedge-tailed Shearwater SE

0702--1 Newell's Shearwater SE

0704--1 Shearwater NNW
Gould, P. J.
1964—At Sea

18 May

0704—2 Birds SW

0705—1 Newell’s Shearwater SE

0706—1 Wedge-tailed Shearwater N W

0711—1 Wedge-tailed Shearwater

0715—1 Wedge-tailed Shearwater S

0724—2 Sooty Tern S 50'

0724—1 Skua (Vin Hoeman) WSW 20'

0742—3 Wedge-tailed (?) Shearwater NW

0744—1 Bulwer’s Or Storm Petrel SSE

0746—7 Sooty Tern low to 100'

5 Wedge-tailed Shearwater

1 Newell’s Shearwater

0755—1 Newell’s Shearwater N

0756—1 Newell’s Shearwater N

0759—1 Shearwater ENE

0804—1 Shearwater-Petrel

0806—1 Newell’s Shearwater N

0806—1 Sooty Shearwater NNW

0812—1 Sooty Shearwater NNW

0815—1 Newell’s Shearwater N

0816—1 Newell’s Shearwater N

0816—2 Sooty Shearwater N

0822—4 Newell’s Shearwater N

0822—1 Sooty Shearwater

0824—1 Bulwer’s Petrel N

0827—1 Harcourt’s Storm Petrel feeding
18 May

0827--1 Sooty Shearwater N
0828--1 Shearwater - Petrel
0835--1 Bulwer's Petrel N E
0845--Flock--feeding no flying fish big fish jumping

  20 plus or minus Sooty Terns
  2 Common Noddy Terns
  15 plus or minus Wedge-tailed Shearwater
  2 Newell's Shearwater
  1 Bulwer's Petrel

0857--1 Bulwer's Petrel N W
0905--1 Bulwer's Petrel NW
0907--1 Bulwer's Petrel NW
0914--Flock--not feeding

  3 Sooty Tern
  2 Wedge-tailed Shearwater
  1 Newell's Shearwater

0926--1 Shearwater-Petrel NW
0929--2 Newell's Shearwater S
0931--1 Newell's Shearwater SE
0934--Flock--feeding

  25 plus or minus 5 Sooty Tern
  8 plus or minus 1 Wedge-tailed Shearwater
  2 Fairy Tern
  5 plus or minus 1 Common Noddy Tern
  1 Newell's Shearwater

0945--1 Bulwer's ? Petrel NW
18 May

0952--1 Bulwer's Petrel NW
0954--1 Sooty Tern NW low
0959--2 Sooty Shearwater NW
1003--1 Newell's Shearwater SE
1004--1 Newell's Shearwater SE
1008--1 Shearwater-Petrel
1012--1 Newell's Shearwater NW
1020--1 Sooty Tern NW low
1021--1 Bird SE low
1024--1 Newell's Shearwater NW
1024--1 Sooty Shearwater NW
1029--1 Wedge-tailed Shearwater NW
1032--2 Newell's Shearwater S
1037--1 Shearwater NW
1039--1 Bulwer's Petrel SE
1039--1 Newell's Shearwater SE
1044--12 Sooty Tern

not feeding

3 Wedge-tailed Shearwaters

1055--1 Sooty (?) Shearwater NW
1057--1 Harcourt's Storm Petrel NW

Spotted Oahu at 1102-- (glimpsed once at 0855)

1108--1 Sooty (?) Shearwater NW
1111--1 Wedge-tailed Shearwater W
1120--1 Red-footed Booby P 10' ad.
1130--1 Bulwer's Petrel on water
1141--1 Newell's Shearwater SE
1202--1 Harcourt's Storm Petrel NW
18 May

1209-- 1 Wedge-tailed Shearwater W

1213-- 2 Newell's Shearwater NW

1218-- 1 Wedge-tailed Shearwater E

1219-- 1 Culver's Petrel NE

1220-- 1 Wedge-tailed Shearwater W

1230-- 1 Culver's Petrel

1232-- secured May Starbrite
At Sea
1 July, Pacific Ocean, 1st day out Oahu
ca.0830 entrance to harbor

0842 1 Wedge-tailed Shearwater SSE
0842 1 Wedge-tailed Shearwater SSE
0845 Flock--feeding
   4 Terns (probably Sooties)
   1 Red-footed Booby ad. separated from terns
0856 1 Tern NW low
0900 1 Sooty Tern E low
0910 1 Sooty Tern ESE low
0914 1 bird NW
0925 1 Wedge-tailed Shearwater
0926 5 Common Noddy Tern E low
0937 2 Noddy Tern E low
0959 2 Sooty Tern ESE low
0940 2 Sooty Tern E low
0942 1 Wedge-tailed Shearwater SE
0947 2 Wedge-tailed Shearwater E 1 landed on water--feeding
0947 2 Sooty Tern E 50'
0948 2 Noddy Tern SW low
0950 4 Sooty Tern SE 40'
0952 1 Wedge-tailed Shearwater NNW
0955 1 Wedge-tailed Shearwater SE dark phase
0955 1 Sooty Tern NW 50'
1010 3 Sooty Tern W 50'
1020 1 Bulwer's Petrel NNW
1027 2 Tern ENE 50'
Gould, P. J.
1964--At Sea

1 July, Pacific Ocean, 1st day out Oahu

1028 1 Wedge-tailed Shearwater NNW
1028 1 Wedge-tailed Shearwater NNW
1029 1 Noddy Tern SSE 20'
1040 1 Wedge-tailed Shearwater ESE
1050 2 White-tailed Tropicbird ESE to 40'
1102 1 Wedge-tailed Shearwater NNW
1103 3 Sooty Tern NNE low
1130 1 Bulwer's Petrel NNW
1131 2 Sooty Terns ENE low
1132 1 Sooty Tern ENE low
1133 1 Shearwater/Petrel ESE
1134 1 Sooty Tern NNW
1200 1 Bulwer's Petrel S
1201 1 Bulwer's Petrel N
1207 1 Wedge-tailed Shearwater NNW
1209 2 Wedge-tailed Shearwater NNE
1240 1 Shearwater/Petrel N
1245 Flock some diving (feeding) headed N
  2 Wedge-tailed Shearwater
  43 Noddy Terns to 55'
1247 2 Wedge-tailed Shearwater SSE
1250 Flock
  2 Red-footed Boobies (1 ad and 1 subad.)
  150 + 50 Terns (Noddies?) 100'
  1 Sooty Tern low
1300 1 Bulwer's Petrel NW
1 July, Pacific Ocean, 1st day out Oahu

1310 1 Bulwer's Petrel N

1315 Flock--actively feeding no flying fish or other fish
      to
1320 5 Wedge-tailed Shearwater

      50 + 5 Sooty Tern

      5 + 2 Common Noddy Tern

1325 1 Wedge-tailed Shearwater N

1326 1 Wedge-tailed Shearwater SE

1335 1 Wedge-tailed Shearwater SE

1415 1 Wedge-tailed Shearwater NNW

1423 1 White-tailed Tropicbirds on water headed ENE

1437 1 Wedge-tailed Shearwater ENE

1445 1 Pink-footed? Shearwater NNW flies like typical shearwater but looks like
      Wedge-tail

1446 1 Wedge-tailed Shearwater NNW

1452 1 Wedge-tailed Shearwater NNE

1500 1 Bulwer's Petrel NNW

1505 1 Bulwer's Petrel SSE

1508 1 Newell's Shearwater N

      1 Sooty Tern

1513 1 Wedge-tailed Shearwater N

1533 1 Newell's Shearwater ESE

1534 1 Wedge-tailed Shearwater ESE

1544 1 White-tailed Tropicbird on water headed ESE

1550 Flock--feeding

      5 Red-footed Booby (possibly 1 Imm.)

1-2 Wedge-tailed Shearwater
1 July, Pacific Ocean, 1st day out Oahu

1552 1 White-tailed Tropicbird on water headed ESE to 70' dove once
1608 1 White-tailed Tropicbird ESE
1620 1 Bulwer's Petrel SSE
1623 1 Wedge-tailed Shearwater ESE
1631 1 Bulwer's Petrel ESE
1633 2 Wedge-tailed Shearwater NNW
1639 1 Newell's Shearwater NNE
1640 1 Newell's Shearwater NNE
1643 1 Shearwater/Petrel NW
1644 1 Wedge-tailed Shearwater SSE
1645 1 Red-tailed Tropicbird ENE 75'
1646 2 Wedge-tailed Shearwater NNE
1647 1 Wedge-tailed Shearwater NNE
1648 1 Wedge-tailed Shearwater NNW
1648 1 Red-tailed Tropicbird ENE 75'
1650 1 Wedge-tailed Shearwater N
1650 1 Wedge-tailed Shearwater N
1654 1 Wedge-tailed Shearwater NNW
1655 1 Newell's Shearwater NNE
1659 1 Wedge-tailed Shearwater NNE
1700 1 Red-footed Booby ENE
1707 13 + Wedge-tailed Shearwater to

1712 6 Newell's Shearwater

1 Tropicbird

1717 1 Wedge-tailed Shearwater NNE}

loose flock—not feeding flying NNE
as if above deep school of fish

1720 2 Wedge-tailed Shearwater NNE

straight, high
and arching
flapping type flight
Gould, P. J.
1864—at Sea

1 July, Pacific Ocean, 1st day out Oahu

1723 1 Newell's Shearwater ESE
1724 1 Wedge-tailed Shearwater N
1731 1 Bulwer's Petrel SSE
1732 1 Bulwer's Petrel NE
1733 2 Wedge-tailed Shearwater NNE
1734 1 Newell's Shearwater NNE
1735 1 Shearwater/Petrel NNE
1736 1 Wedge-tailed Shearwaters NNE
1736 1 Wedge-tailed Shearwater NW
1738 1 Wedge-tailed Shearwater NW
1742 2 Sooty Tern WSW Low
1752 1 Bulwer's Petrel SSE
1754 2 Wedge-tailed Shearwater NNE
1754 2 Wedge-tailed Shearwater NNE
1756 1 Bulwer's Petrel ENE
1759 1 Wedge-tailed (?) Shearwater ENE
1810 1 Wedge-tailed Shearwater NNE
1814 1 Wedge-tailed Shearwater NNE
1817 1 Wedge-tailed Shearwater SSE
1822 1 Shearwater/Petrel NNE
1825 Flock—not feeding headed ENE
55 + 5 Sooty Tern low
10+ Wedge-tailed Shearwater
2 Greater Frigatebirds to 50' 1 Imm. or ?
1835 1 Great Frigatebird ENE 75' ?
1 July, Pacific Ocean, 1st day out Oahu

1835 1 Red-footed Booby S.A. flew around ship, then sat on water
1837 1 Wedge-tailed Shearwater NNW
1843 1 Red-footed Booby Sub. A. low
1845 1 Wedge-tailed Shearwater NNE
1849 1 Newell's Shearwater N
1850 1 Wedge-tailed Shearwater ENE
1852 1 Wedge-tailed Shearwater NNW
1915 1 White-tailed Tropicbird ESE 50-100'

Sunset at 1923

1930 1 Wedge-tailed Shearwater NNW
1930 1 Red-footed Booby ad.
1935 1 Wedge-tailed Shearwater SSE
1939 1 Wedge-tailed Shearwater ENE
1942 1 Wedge-tailed Shearwater NNW
1947 1 Wedge-tailed Shearwater NNE

2 July, Pacific Ocean, 2nd day out Oahu

0514 1 Wedge-tailed Shearwater SSE
0520 Sunrise
0520 1 Wedge-tailed Shearwater NNW
0522 1 Wedge-tailed Shearwater SSE
0523 1 Wedge-tailed Shearwater SSE
0530 1 Wedge-tailed Shearwater SSE
0530 1 Red-tailed Tropicbird ENE low
0535 1 Bulwer's Petrel ESE
0539 1 Wedge-tailed Shearwater NNW
2 July, Pacific Ocean, 2nd day out Oahu

0539  1 Shearwater/Petrel  NNW
0545  1 Wedge-tailed Shearwater  NNW
0545  1 Red-tailed Tropicbird  SSE  50'
0547  1 Shearwater/Petrel  NNE
0547  1 Bonin Island Petrel  SSE
0547  1 Bulwer's Petrel  SSE
0550  1 Gray-backed Tern  SSE  low
0559  1 Great Frigatebird  NNE  ad ?
0605  1 Bonin Island Petrel  SSE
0605  1 Great Frigatebird
    1 White-tailed Tropicbird  75' Frigate chasing Tropicbird
0606  1 Gray-backed Tern  SSE  low
0607  1 Bonin Island Petrel  NNW
0615  1 Bonin Island Petrel  SSE
0615  1 Bonin Island Petrel  WSW
0615  1 Shearwater/Petrel  SSE
0622  1 Red-tailed Tropicbird  on water
0628  1 Shearwater/Petrel  NNW
0636  1 Pterodroma  NNW
0639  1 Pterodroma  NNW
0643  1 Bonin Island Petrel  SSE
0645  1 Wedge-tailed Shearwater  SSE
0646  1 Pterodroma  SSE
0646  1 Dark-rumped (?) Petrel
0651  1 Pterodroma  SSE
0651  1 Pterodroma  SSE
2 July, Pacific Ocean, 2nd day out Oahu

0654 1 Wedge-tailed Shearwater SSE
0700 1 Newell's Shearwater to 30'
0709 1 Shearwater/Petrel NNW
0709 1 Shearwater/Petrel NNW
0725 1 Pterodroma SSE
0733 1 Shearwater/Petrel
0752 1 Bulwer's Petrel NNW
0753 1 Wedge-tailed Shearwater ESE
0800 1 Wedge-tailed Shearwater NE
0801 1 Bulwer's Petrel SSE
0807 1 Wedge-tailed Shearwater ESE
0808 1 Newell's Shearwater SSE
0817 1 Wedge-tailed Shearwater SSE
0817 1 Wedge-tailed Shearwater SSE
0837 2 Wedge-tailed Shearwater WSW
0840 3 Terns NNW to 75'
0843 1 Wedge-tailed Shearwater WSW
0848 1 Wedge-tailed Shearwater SSE
0852 Flock headed ENE
  4 Red-tailed Tropicbird 75'
  1 White-tailed Tropicbird 75'
0853 1 Wedge-tailed Shearwater NNW
0900 1 Shearwater/Petrel NNW
2 July, Pacific Ocean, 2nd day out Oahu

0901 2 Great Frigatebird ENE 0-100'

0910 Flock--actively feeding--no flying fish

to

0940 4 Great Frigatebirds 0-500'

150 + 20 Wedge-tailed Shearwater 1 dark phase, 2 collected

2 Sooty Tern

0942 1 Bulwer's Petrel SSE

0951 1 Bulwer's Petrel SSE

0955 1 Red-tailed Tropicbird ENE 75'

1013 1 Sooty Tern NE 50'

1025 1 Wedge-tailed Shearwater NNW

1037 1 Wedge-tailed Shearwater NNW

1041 1 Newell's Shearwater NNW

1144 1 Wedge-tailed Shearwater SSE

1144 3 birds ESE

1145 1 Red-tailed Tropicbird

1210 1 Bulwer's Petrel

1212 1 Sooty Tern ENE 50'

1317 1 Wedge-tailed Shearwater ENE on water

1334 1 Bonin Island Petrel NNW

1345 1 Red-tailed Tropicbird 50' collected

1405 1 Bulwer's Petrel NNW

1420 1 Bonin Island Petrel SSE

1435 1 Wedge-tailed Shearwater SSE

1447 1 Wedge-tailed Shearwater

1 Bulwer's Petrel

1455 Flock--actively feeding no flying fish large tuna?
2 July, Pacific Ocean, 2nd day out Oahu

4 Sooty Tern 1 immature
15 + 3 Wedge-tailed Shearwater
10 ± 2 Bonin Island Petrel
1511 1 Shearwater/Petrel WSW
1540 Flock—feeding—no flying fish
55 ± 5 Sooty Tern 1 Immature
5 + Bonin Island Petrels
10 ± 3 Wedge-tailed Shearwater
1556 1 Sooty Tern NW 100’ calling
1556 1 Wedge-tailed Shearwater N
1605 1 White-tailed Tropicbird 75’
1609 1 Wedge-tailed Shearwater ENE
1615 1 Wedge-tailed Shearwater SSW
1615 2 Great Frigatebirds 1♂ and 1 ♀ chasing each other
1 Wedge-tailed Shearwater
1635 1 Bulwer’s Petrel SSE
1655 2 Red-tailed Tropicbirds E low
1736 1 Red-tailed Tropicbird ESE on water to 50’
1745 1 Brown Booby ad ♀ on water stayed around for over 1/2 hour
1813 1 Bulwer’s etrel ENE
1830 1 Wedge-tailed Shearwater NNW

Sunset at 1835

1845 1 Great Frigatebird ♀ NNW 300’
1846 1 Wedge-tailed Shearwater WSW

3 July, Pacific Ocean, 3rd day out Oahu
3 July, Pacific Ocean, 3rd day out Oahu

0555 1 Wedge-tailed Shearwater WNW
      1 Sooty Tern WNW low
0540 1 Sooty Tern ENE
0544 1 wedge-tailed Shearwater NW
0553 1 Wedge-tailed Shearwater SSE
0559 1 Sooty Tern NNE 100'
0607 1 Wedge-tailed Shearwater
0623 1 Bonin Island (?) Petrel WNW
0631 1 Newell's Shearwater N
0708 1 Newell's (?) Shearwater SSE
0800 1 White-tailed Tropicbird NE
0810 Flock headed NE not feeding
     8 Terns
     2 Shearwater/Petrel
0820 Flock feeding no flying fish
     10 ± Pterodroma
0849 1 Shearwater/Petrel SSE
     1 Bonin Island Petrel SE
     1 Pterodroma S
1027 1 Red-tailed Tropicbird NW 100'
1058 1 Bonin Island Petrel NW
1123 1 Red-tailed Tropicbird SE 0-35'
1340 1 Newell's Shearwater NW
     Small Bat Ray (6-10') on surface (black dorsal surface)
1350 1 Bonin Island Petrel SE
Gould, P. J.
1964--At Sea

3 July, Pacific Ocean, 3rd day out Oahu

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<th>Distance</th>
<th>Notes</th>
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<td>ENE</td>
<td>60'</td>
<td>Immature</td>
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<td>1356</td>
<td>3 Sooty Tern</td>
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<td>1 Christmas Island Shearwater</td>
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<td>1515</td>
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<td>100'</td>
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<td>1 Bonin Island Petrel</td>
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<td>2 Sooty Tern</td>
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Sunset ca. 1850

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<td>1855</td>
<td>1 Wedge-tailed Shearwater</td>
<td>NNE</td>
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<td>1858</td>
<td>7+ Wedge-tailed Shearwater</td>
<td>(not feeding?)</td>
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<td>1900</td>
<td>1 Sooty Tern</td>
<td>WNW</td>
<td>75'</td>
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<td>1910</td>
<td>1 Booby</td>
<td>NNW</td>
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<td>1914</td>
<td>1 Wedge-tailed Shearwater</td>
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4 July, Pacific Ocean, 4th day out Oahu, Johnston Island in sight by 0605

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<td>sunrise at ca. 0550</td>
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<td>0551</td>
<td>11 Sooty Tern</td>
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<td>0557</td>
<td>1 Wedge-tailed Shearwater</td>
<td>NE</td>
<td>low</td>
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4 July, Pacific Ocean, 4th day out Oahu,

0600 Flock not seen to feed
   26+ Sooty Terns original 14 joined by two groups of 6
   1 Wedge-tailed Shearwater

0609 1 Sooty Tern SW '75'
0620 1 Sooty Tern SE low
0622 2 Sooty Tern SE low
0624 3 Sooty Tern SE low
0624 1 Wedge-tailed Shearwater N
0625 1 Wedge-tailed Shearwater ENE
0629 1 Wedge-tailed Shearwater SSE had orange streamer
0629 4 Sooty Tern SE low
0632 1

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1 Immature
4 July, Pacific Ocean, 4th day out Oahu, Johnston Is. at 0605

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*change course to SSE*

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Gould, P. J.
1954--at Sea

4 July, 4th day out Oahu, Johnston Island ca. 0605

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<td>125 ± 5 Terns feeding</td>
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<td>1055</td>
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<td>1111</td>
<td>4 Sooty Tern</td>
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whale? at 1115 ca. 20'
4 July, 4th day out Oahu, Johnston Island ca. 0605

1118 1 Sooty Tern NNW 50'
1136 6 " " " low
1145 1 " " SSE "
1146 5 " " " 20'
1209 1 Bonin Island Petrel NW
1225 1 Sooty Tern S 5-40'
1300 3 Sooty Tern N 100'
1301 1 Sooty Tern SE 100'
1301 2 Sooty Tern NE 100"
1302 1 Wedge-tailed Shearwater NW low
1302 2 Sooty Tern
1309 7 Sooty Tern original 5 joined by 2 SE 0-60'
1310 1 Wedge-tailed Shearwater SE
1315 1 Bonin Island Petrel
1318 1 Sooty Tern NNW low
1318 1 " " " 50'
1417 1 " " W "
1419 1 " " SSE 30'
1452 1 " " NNW 75'
1500 1 Red-tailed Tropicbird E low
1545 3 Sooty Tern NE 35'
1644 1 Bonin Island Petrel WSW
1727 1 Dark-rumped Petrel SW
1755 1 Sooty Tern NNW low
1800 1 Sooty Tern NW low
1801 1 White-throated Petrel N
4 July, 4th day out Oahu, Johnston Is. at 0605

1826  1 Pterodroma NNW

sunset at 1844

1856  1 Bonin Island Petrel NNW

1859  1 Bonin Island Petrel SSE

2055  1 Bird SSE (white)

change course to SW at 2230

2304  1 Red-tailed Tropicbird

5 July, 5th day out Oahu, Pacific Ocean, Grid Area

0050  1 Bird NE 75'

moonrise 0225

0547  1 Wedge-tailed Shearwater

sunrise ca. 0601

0607  1 Wedge-tailed Shearwater

0614–0715  Plankton samples

0624  1 Wedgetailed Shearwater

0722  1 White-necked Petrel

0724  1 White-necked Petrel to 30'

0737  1 Wedge-tailed Shearwater W dark phase

0745  1 Wedge-tailed Shearwater NW

0841  1 Wedge-tailed Shearwater SW

1110  1 Red-tailed Tropicbird 150' ad.

1200  1 White-necked Petrel N

1230  1 Red-tailed Tropicbird NE 100' collected

1307  1 White-necked Petrel NE

1307  1 Wedgetailed Shearwater NE
5 July, Pacific Ocean, Grid Area

1309 1 Wedge-tailed Shearwater SW collected
1323 1 Red-tailed Tropicbird NNW low
1503 1 Red-tailed Tropicbird NE low
1542 1 Wedge-tailed Shearwater NNW
1545 1 Wedge-tailed Shearwater NW
1604 1 Red-tailed Tropicbird NW 300'
1728 1 Bonin Island Petrel NE
1745 1 Audubon's (?) Shearwater SE
1746 1 Bonin Island (?) Petrel NW
1801 1 Bonin Island Petrel NE

sunset ca. 1900

2010 1 Red-tailed Tropicbird SE 100'
2023 1 Bird NW 50'
2055 1 Bird
2105 2 Tropicbird SE 100'
2115 1 Tropicbird S 100'
2135 1 Tropicbird 100'
2230 1 Tropicbird E 20'
2250 1 Tropicbird NE 100'
2309 1 Shearwater/Petrel
2225 1 Tropicbird NE 100'
2341 1 Bird SE low

6 July, Pacific Ocean, south of Grid Area to ca. 10° N

0040 1 Newell's Shearwater 30'
0045 2+ Gray-backed Terns (?) calling 50' PJG
Gould, P. J.
1964--At Sea

6 July, Pacific Ocean, South of Grid Area to ca. 100° N

0116 1 Red-tailed Tropicbird on water
0122 1 Tropicbird
0323 1 Shearwater/Petrel NW
0415 1 Bird 75'
0437 1 Tropicbird NE 75'
0545 1 Bird WW 50'
0517 1 Bird low
0520 1 Bird NE 40'
0520 1 Tern calling 50'
0615 1 Wedge-tailed Shearwater SE

sunrise 0615

0626 1 Shearwater/Petrel S
0651 1 Wedge-tailed Shearwater N
0652 1 Wedge-tailed Shearwater N
0702 1 Dark-rumped (?) Petrel N
0713 1 Pterodroma NW
0714 1 White-necked Petrel NW
0716 1 Pterodroma NW
0728 1 Pterodroma SW
0729 1 Pterodroma SW
0805 1 Bonin Island Petrel S
0806 1 Bonin Island Petrel S
0810 1 Pterodroma N
0820 1 Red-tailed Tropicbird NE 400'
0824 1 White-necked Petrel SE
Gould, P. J.

1964—At Sea

6 July, Pacific Ocean, south of grid to ca. 10°N

0857 1 Pterodroma NW
0859 1 Bird NE
0913 1 Christmas Island Shearwater
0913 1 Bonin Island Petrel
0919 1 Bonin Island Petrel S
0925 1 Wedge-tailed Shearwater SE
0942 1 Bonin Island Petrel N
0949 1 Bonin Island Petrel NW
0957 1 Bonin Island Petrel S on water
1006 1 Dark-rumped Petrel E
1010 1 Shearwater/Petrel SE
1025 1 Bonin Island Petrel SE
1033 1 Bonin Island Petrel N
1037 Flock first feeding, then rafting
    25+ Wedge-tailed Shearwaters (only 1 light phase) 1 collected
1055 1 Sooty Tern Immature
1106 1 Bonin Island Petrel NNW
1130 1 Bonin Island Petrel ENE
1140 1 Bonin Island Petrel NNW
1143 1 Bonin Island Petrel NNW
1145 1 Bonin Island Petrel S
1153 1 Bonin Island Petrel NE
1203 1 Bonin Island Petrel SSE
1220 3 Wedge-tailed Shearwater NE (all dark phase)
1225 1 White-necked Petrel NW
6 July, Pacific Ocean, south of grid to ca. 16° N

1226 1 Shearwater-Petrel NW

1230 1 Bonin Island Petrel SE

change course to NW ca. 1230

1232 1 Bonin Island Petrel NW

1233 1 Bonin Island Petrel S

1240 3 Bonin Island Petrel NW

1243 1 Pale-footed (?) Shearwater NW PUG

1246 4 Wedge-tailed Shearwater (1 light phase)

1304 1 White-necked Petrel

1 Pterodroma (white rump)

1305 1 Bonin Is. Petrel

1347 1 Bonin Is. Petrel ESE

1410 1 Bonin Is. Petrel SE

1415 1 Petrel NW

1420 3 Wedge-tailed Shearwater (dark phase)

1 Wedge-tailed (?) Shearwater (light phase)

1422 1 Wedge-tailed Shearwater SE (dark phase)

1422 1 Bonin Is. Petrel

1424 1 Wedge-tailed Shearwater

1425 2 Bonin Is. Petrel

1426 1 New Zealand (?) Shearwater

1439 1 Bonin Is. Petrel

1 Wedge-tailed Shearwater (dark phase)

1432 1 Shearwater same as 1426?

1435 1 Bonin Is. Petrel NW

1438 1 Wedge-tailed Shearwater NW (dark phase)
Gould, P. J.
1954—At Sea

6 July, Pacific Ocean, south of grid to ca. 16° N

1438 2 Wedge-tailed Shearwater (dark phase)
1440 1 Pterodroma NW
1445 1 Pterodroma SE
1450 1 White-necked Petrel SE
1452 1 Bonin Is. Petrel SE on water a minute
1452 2 Bonin Is. Petrel NW
1457 1 Bonin Is. Petrel NW

1515 8 Wedge-tailed Shearwater on water (all dark phase)
1517 2 Wedge-tailed Shearwater NW (all dark phase)
1519 Flock actively feeding no flying fish

1550 50 + 5 Wedge-tailed Shearwater (5 + 1 light phase) 1 collected

5 + 1 Bonin Is. Petrel
2 White-necked Petrel
2 Christmas Is. Shearwater
70 + 5 Sooty Tern
1 Fairy Tern
1614 1 White-necked Petrel
1619 1 Bonin Islnad Petrel W
1625 3 Bonin Is. Petrel NW
1627 1 Bonin Is. Petrel SE
1627 1 Bonin Is. Petrel SE
1628 1 Bonin Is. Petrel SE
1628 1 Pterodroma SE
1630 1 Bonin Is. Petrel
1632 1 Bonin Is. Petrel
1 DarkCrumpled Petrel
Gould, P. J.
1964—At Sea

6 July, Pacific Ocean, south of grid to ca. 10° N

1643 1 Red-tailed Tropicbird ad.
1647 Flock headed SE flying slow and spread out not feeding

22 Wedge-tailed Shearwater (1 light phase)

1650 1 Bonin Is. Petrel S
1655 1 Bonin Is. Petrel NW collected

1725 9 Wedge-tailed Shearwater on water (all dark phase)
1725 1 Newell’s Shearwater SE
1722 12 Wedge-tailed Shearwater on water (all dark phase)

1736 1 Pterodroma NW
1737 1 Wedge-tailed Shearwater (dark Phase)

change course to 1750

1753 1 White-necked Petrel
1855 1 Pterodroma WSW
1947 1 Bird NE low
2205 1 Shearwater/Petrel E
2253 1 Bird S 100’
2356 1 Bird S 100’

7 July, Pacific Ocean, south of Grid Area

0125 1 Shearwater/Petrel 50’
0130 1 Shearwater/Petrel 50’
0150 1 Shearwater/Petrel
0400 1 Red-tailed Tropicbird 75’
0412 1 Shearwater/Petrel SW
0615 sunrise
0615 1 Wedge-tailed Shearwater N
At Sea

7 July, Pacific Ocean, south of Grid Area

0620-0703 Plankton stop

0711 1 Pterodroma SSW

0730 1 Pterodroma SSW

0733 1 White-necked Petrel NW

0742 1 Wedge-tailed Shearwater SW

0743 1 Pterodroma NW

0800 1 Bonin Is. Petrel S

0804 1 Bonin Is. Petrel S

0805 1 Bonin Is. Petrel S

0809 1 Bonin Is. Petrel N

0809 1 Bonin Is. Petrel S

0814 1 Bonin Is. Petrel S

0826 1 Wedge-tailed (?) Shearwater NW

0858 1 White-necked Petrel SE

0923 1 Bonin Island Petrel SW

0935 1 Pterodroma SE

0950 1 Bonin Is. Petrel NW

0955 1 Bonin Is. Petrel SE

1050 1 Pterodroma NW

1051 1 Pterodroma S

11 1 Pterodroma S

1104 1 Shearwater/Petrel NW

1115 1 Pterodroma

1125 1 Pterodroma SE

1136 1 Shearwater/Petrel N
7 July, Pacific Ocean, south of Grid Area

1136 1 Bonin Is. Petrel SE
1233 1 Bonin Is. Petrel
1247 3 Fairy Tern NNE 30'
1255 1 Bonin Is. Petrel on water
1448 1 White-necked Petrel NW
1500 1 Shearwater/Petrel NW
1519 1 White-necked Petrel SE
1632 1 White-necked Petrel NW

sunset ca. 1855

Kept seeing Newell's Shearwater all night, may have been same bird each time:
1940; 1950; 2020; 2030; 2120; 2200; 2215; 2243; 2335; 2347; 2400.

8 July Pacific Ocean, Grid Area

Still seeing the Newell's Shearwater (same bird?) at 0015; 0025; 0035; 0100; 0130; 0307; 0420; 0520.

Heavy rain from 0415 to 0500; light from 0500 to 0900

0510 1 Shearwater/Petrel SE
0611 1 Storm Petrel
0630 1 Shearwater/Petrel NW
0815 1 Shearwater/Petrel NW
0825 1 Bonin Island Petrel NW
0908 1 Red-tailed Tropicbird on water
1022 1 Bonin Is. Petrel S
1042 1 Bonin Is. Petrel SW
1138 1 Bonin Island Petrel NW
1213 1 Bonin Is. Petrel NW
1235 1 Bonin Is. Petrel NW
Gould, P. J.
1964--At Sea

8 July, Pacific Ocean, Grid Area

1318  2 Sooty Tern  5-40'
1335  1 Pterodroma  WNW
1528  1 White-necked Petrel  SW
1542  1 Sooty Tern  NE 50'
1614  1 Bonin Is. Petrel  SSW
1615  1 Bonin Is. Petrel  N
1637  1 Bonin Is. Petrel
1720  1 Pterodroma  SW
1722  1 Wedge-tailed Shearwater  SW  dark phase
1720  1 Bonin Is. Petrel  NW
1737  1 Bonin Is. Petrel  NW
sunset 1850
1900  3 Wedge-tailed Shearwater
1912  1 Shearwater/Petrel
1920  2 Terns  NE 75'

9 July, Pacific Ocean, Grid Area

0001  1 Bird  25'
0050  2 Bird  NW 50'
0155  1 Bird  75'
0210  2 Sooty Tern  75' calling
0233  1 Bird  30'
0253  1 Bird  NW 55'
0330  1 Bird  calling
change course at 0505
0559  4 Sooty Tern  NW
Gould, F. J.
1964--At Sea

9 July, Pacific Ocean, Grid Area

0605  3 Sooty Tern NE
0608  1 Newell's Shearwater
0608  1 Bonin Is. Petrel
0618  1 Bonin Is. Petrel
0732  1 Tern S low 50'
0735  1 Tern N
0746  1 Sooty Tern NW 60'
0747  1 Bonin Is. Petrel NW to 30'
0819  1 Sooty Tern W 40'
0819  1 Dark-rumped Petrel NW
0827  1 Pterodroma SSE
0828  1 Bonin Island Petrel NW
0830  1 Pterodroma SE
0840  1 Newell's Shearwater SSE
0912  1 Bonin Is. Petrel NW
0928  1 Pterodroma SE
0931  1 Christmas Is. Shearwater SE
1040  1 White-tailed Tropicbird NE 50' collected

1205  Flock feeding

      50 ± 10 Terns
      15 ± 5 Shearwater/Petrel
      2 Fairy Tern
      1 Pterodroma

1215  1 Bulwer's Petrel
1235  1 Red-tailed Tropicbird feeding
1238  1 Sooty Tern S
At Sea

9 July, Pacific Ocean, Grid Area

1240 1 Bonin Is. Petrel

1245 6 Wedge-tailed Shearwater on water all dark phase

1250 Flock scattered break up of feeding flock?

1 Fairy Tern

3 Bonin Is. Petrel

5 White-necked Petrel

5 + 1 Wedge-tailed Shearwater 1 light phase

1 Bulwer's Petrel

1315 1 Wedge-tailed Shearwater SE

1319 1 White-necked Petrel N

1332 1 Bonin Is. Petrel NE

1410 1 White-necked Petrel S

1413 1 Bonin Is. Petrel SE

1430 1 Bonin Is. Petrel

1444 1 Shearwater/Petrel NW

1450 1 Bonin Island Petrel N

1455 1 Bonin Is. Petrel NNE

1458 1 Bonin Is. Petrel SE

1500 1 White-necked Petrel

1503 1 Bonin Is. Petrel NW

1504 1 Bonin Is. Petrel SW

1509 1 Tropicbird N

1510 1 Bonin Is. Petrel

1535 1 Wedge-tailed Shearwater WNW dark phase

1557 1 Wedge-tailed Shearwater SSE dark phase
Gould, P. J.
1924—At Sea

9 July, Pacific Ocean, Grid Area
1558 1 White-necked Petrel S
1605 1 Wedge-tailed Shearwater SSE
1606 1 White-necked Petrel SE
1711 1 Bonin Is. Petrel SE
1616 1 Wedge-tailed Shearwater SE on water
1619 1 Bonin Is. Petrel SE on water
1630 2 Bonin Is. Petrel SE
1630 1 White-necked Petrel
1645 1 Sooty Tern NE 50' Imm. collected
1647 1 Bonin Is. Petrel
1740 1 Bonin Is. Petrel
1741 1 Pterodroma SW
1744 1 Wedge-tailed Shearwater SE
1750 1 Shearwater/Petrel SE
1810 1 Bonin Is. Petrel SE
1817 1 White-necked Petrel NE
1840 1 White-tailed Tropicbird E 50'

10 July, Pacific Ocean, Grid Area
0129 2 Tropicbird 100 yds. call note a single "kek"
0330 1 Tropicbird SW 50'
0335 1 Bird
0358 1 Shearwater/Petrel
0535 sunrise
0636-0720 plankton stop
0603 1 Bonin Is. Petrel SE
10 July, Pacific Ocean, Grid Area

0656 1 Bonin Is. Petrel  N
0701 1 Bonin Is. Petrel  SE
0742 1 Pterodroma  NW
0832 1 White-necked Petrel  SE
0837 1 Pterodroma  nE
0847 1 Pterodroma  SE

   whale at 0905  N
0947 1 Bonin Is. Petrel  SE
1042 1 Pterodroma  NW
1102 1 Red-tailed Tropicbird  NE 75'
1153 1 White-necked Petrel  NW
1154 1 White-necked Petrel  NW
1437 1 Bonin Is. Petrel  NW
1650 1 Newell's Shearwater  N
1740 1 Dark-rumped (?) Petrel  NNW
1814 1 Pterodroma  NW

   sunset ca. 1900
2037 1 Tropicbird  100'
2127 1 Tropicbird  N 50'
2210 1 Bird  25' NW
2250 1 Bird  low NW

11 July, Pacific Ocean, Grid Area

0048 1 Bird  NE low
0513 1 Shearwater/Petrel  NE  Bonin or Newell's

   sunrise ca. 0603
Gould, P. J.
1904--At Sea

31 July, Pacific Ocean, Grid Area

0620 1 Dark-rumped Petrel N
0630 2 Sooty Tern NW to 50'

Plankton sample 0623-0702

0636 1 Pterodroma NNW low
0645 1 Pterodroma WSW low
0647 1 Sooty Tern NE 100'
0712 1 Sooty Tern N 100'
0714 1 Pterodroma NW
0728 1 Pterodroma NW
0752 1 Pterodroma NW

0834 3 Booby (?) N on water low

0911 1 Bonin Is. Petrel N
0913 1 Pterodroma NW
0925 1 Shearwater/Petrel S
0938 1 Pterodroma NW
1005 1 White-necked Petrel SW
1120 1 Red-tailed Tropicbird NW 200'
1300 21 Sooty Tern S 25-50'
1301 1 White-necked Petrel NW
1321 1 Sooty Tern NE low
1324--3 Sooty Tern NE Imm. low to 50'
1326 1 Wedge-tailed Shearwater NW dark phase
1327 1 White-necked Petrel NW
1334 2 Wedge-tailed Shearwater NE dark phase
1340 14 Sooty Tern SW 25-50'
1340 1 Fairy Tern NE low
11 July, Pacific Ocean, Grid Area

1345 Flock feeding and calling to
1353 60+ Sooty Tern (with Immatures) 1 orange tag
   1 Bonin Is. Petrel
   1 White-necked Petrel
   1 Fairy Tern
1403 1 White-necked Petrel E
1405 1 Sooty Tern SW 10'
1420 Flock feeding large fish below
   60 + 5 Sooty Tern many immatures, 1 imm. with red tag; 1 ad. with red tag
   2 White-necked Petrel
   1 Christmas Is. Shearwater
   1 Kermodec Petrel light phase PJG and KA
1440 1 White-necked (?) Petrel
1458 1 terodroma
1503 7 Sooty Tern SW 50'
1510 2 Sooty Tern NE 50'
1523 1 Sooty (?) Shearwater SE
1526 3 Sooty Tern NE low
1540 1 Bird (Herring gull?) PJG on water
1605 Flock feeding
   30 ± 5 Sooty Tern
   9 Wedge-tailed Shearwater on water 2 light and 7 dark phase
1611 1 Bonin Is. Petrel NE
1620 1 Wedge-tailed Shearwater SE
1625 2 Wedge-tailed Shearwater NW
1647 2 Pterodroma
Gould, P. J.
1964--At S-a

11 July, Pacific Ocean, Grid Area

1708 Flock very far away

  20 + 5 Terns
  8 + 2 Shearwater/Petrel

1800 Flock

  1 White-necked Petrel
  2 Wedge-tailed Shearwater
  1 Bonin Is. Petrel not feeding
  1 Pterodroma

  26 Sooty Terns

1836 1 Wedge-tailed Shearwater SW

1837 2 Sooty Tern NE low

1842 Flock not feeding

  20 + 2 Sooty Terns
  6 + 2 Wedge-tailed Shearwater 1 dark phase
  1 Bonin Is. Petrel

1858 1 Sooty Tern SW low

  sunset ca. 1900

2029 1 Bird

2038 1 Red-tailed Tropicbird on water

2046 1 Bird

2050 1 Tropicbird

2050 1 Bird'

2053 1 Tropicbird

2057 1 Sooty Tern

2105 1 Sooty Tern 50'

2123 1 Sooty Tern SW 75'

2135 1 Tropicbird (?)
Gould, P. J.
1964--At Sea

11 July, Pacific Ocean, Grid Area

2140 1 Sooty Tern SSW 100'
2158 1 Red-tailed Tropicbird ESE on water
2159 1 Sooty Tern calling 55'
2345 1 Bird NE

12 July, Pacific Ocean, Grid Area

0052 1 Bird
0057 1 Bonin Is. Petrel flew onto ship collected
0112 1 Bird
0128 5 Pterodroma small flock probably on water
0132 3 Pterodroma same as above?
0137 1 Pterodroma same as above?
0139 1 Pterodroma
0210 1 Tropicbird
0232 1 Bird
0238 1 Bird
0301 1 Red-tailed Tropicbird collected
0411 1 Pterodroma
0425 1 Bonin Is. Petrel
0505 1 Tropicbird
sunrise ca. 0610 Plankton samples 0620-0715
0720 1 Bonin Is. Petrel NW
0725 2 Bonin Is. Petrel feeding on flying fish
1 Wedge-tailed Shearwater (dark phase)
0757 1 Pterodroma ESE
12 July, Pacific Ocean, Grid Area

0818 1 Red-tailed Tropicbird 75" joined up
0818 1 Red-tailed Tropicbird
0829 1 White-necked Petrel SE
0830 1 White-necked Petrel S
0835 1 Pterodroma S
0842 4 White-necked Petrel S on water
0852 1 Pterodroma NW
0909 1 Pterodroma SW
0913 1 White-necked Petrel E
1100 1 Red-tailed Tropicbird to 300'
1113 1 Bonin Is. Petrel on water
1120 1 Bonin Is. Petrel on water collected
1133 1 White-necked Petrel
1136 1 White-necked Petrel
1137 2 Pterodroma
1140 1 White-necked Petrel

1159 3 Sooty Tern N 2 ad., 1 Imm.
1207 1 Bonin Is. Petrel W
1215 1 Bonin Is. Petrel SE
1228 1 White-necked Petrel S
1231 3 White-necked Petrel
1232 1 Pterodroma
1238 1 Red-tailed Tropicbird S 75'
1235 1 White-necked Petrel
Gould, P. J.

12 July, Pacific Ocean, Grid Area

1320 1 Bonin Is. Petrel NE
1348 1 Bonin Is. Petrel
1332 1 White-necked Petrel
1400 1 White-necked Petrel
1450 1 Wedge-tailed Shearwater on water
1607 1 Sooty Tern NE 250 + feet
1626 1 Shearwater/Petrel S
1725 1 White-necked Petrel NE
1734 10+ Terns and Shearwater/Petrels
1735 1 Bonin Is. Petrel
1800 1 Brown Booby NnW
1852 1 Pterodroma NW
sunset ca. 1905

2005 1 Bird
2018 1 Sooty Tern calling
2055 1 Bird
2137 1 Bird

13 July, Pacific Ocean, Grid Area

0030 1 Pterodroma probably on water
0220 1 Bird
0430 1 Bird
sunrise ca. 0610 Plankton stop 0620-0705
0707 2 Pterodroma N
0715 1 Wedge-tailed Shearwater NNE
0719 1 White-necked Petrel S
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<td>1 Wedge-tailed (?) Shearwater</td>
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<td>1858</td>
<td>1 Sooty Tern</td>
<td>NE 50'</td>
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**14 July, Pacific Ocean, between Johnston and Leewards**
14 July, Pacific Ocean, between Johnston and Leewards

Ship stopped dead in water from 0030 till 1115 due to loss of compressor.

begin observation 0540

0637 1 White-tailed Tropicbird SE 100'
0650 1 Wedge-tailed Shearwater S
0745 1 Shearwater/Petrel N
0825 1 Red-tailed Tropicbird 50'
0930 1 Wedge-tailed Shearwater
0931 1 Wedge-tailed Shearwater joined up
1008 1 Sooty Tern ESE 50'
1020 1 Wedge-tailed Shearwater
1133 1 Red-tailed Tropicbird on water
1137 1 Wedge-tailed Shearwater NE
1526 1 Wedge-tailed Shearwater NW
1340 1 Sooty Tern 50'
1512 2 Wedge-tailed Shearwater SE
1553 1 Bonin Is. Petrel SSW
1713 1 Sooty Tern SSE 60'
1736 2 Shearwater/Petrel SW
1739 1 Pterodroma NE
1755 1 Sooty Tern NE 75' collected
1833 1 Sooty Tern NE 75'

sunset ca 1900

15 July, Pacific Ocean, between Johnston and Leewards

birds reported all night, observation begun 0535
15 July, Pacific Ocean, between Johnston and Leewards

0550  2 Wedge-tailed Shearwater
0605  1 Wedge-tailed Shearwater NE
0621  1 Bonin Is. Petrel SW
0626  1 Wedge-tailed Shearwater NNE
0735  Flock feeding
to
1800  30+ Wedge-tailed Shearwater
   50+ Sooty Tern
   1 Pterodroma
   1 Red-tailed Tropicbird (not seen to feed)
0835  Flock not seen to feed
   15+ Sooty Terns
   5+ Wedge-tailed Shearwater
0850  1 Sooty Tern NW 100'
0920  1 White-tailed Tropicbird collected
   fly together
   1 Red-tailed Tropicbird
0940  1 Pterodroma NW
0945  1 Bonin Is. Petrel
0950  1 Wedge-tailed Shearwater S
0957  1 Pterodroma W
1013  1 Red-tailed Tropicbird 50-75'
1014  1 Sooty Tern 50-40'
1015  1 Wedge-tailed Shearwater
1047  1 Pterodroma S
1059  8 Sooty Tern 1 immature 1 collected
1104  1 Red-tailed Tropicbird 100'
1112  4 Sooty Tern
1224  3 Bonin Is. Petrel NE
15 July, Pacific Ocean, between Johnston and Leewards

1228 2 Sooty Tern NE

1311 1 Wedge-tailed Shearwater NW

1320 1 Wedge-tailed Shearwater SE

1338 1 Sooty Tern SW low

1347 1 Bonin Is. Petrel ESE

1410 2 Wedge-tailed Shearwater NE

1422 1 Sooty Tern E 100'

1431 1 Sooty Tern 100'

1433 1 Wedge-tailed Shearwater S

1441 1 Wedge-tailed Shearwater

1441 7 Sooty Tern SE to 30'

1454 1 Wedge-tailed Shearwater N

1455 1 Wedge-tailed Shearwater N

1455 1 Bonin Is. Petrel

1525 1 Wedge-tailed Shearwater N

1531 1 " " " "

1532 1 " " " NE

1532 1 " " " "

1540 1 Pterodroma

1543 1 Wedge-tailed Shearwater

1613 1 Bonin Is. Petrel ESE

1625 1 Bonin Is. Petrel NE

1626 2 Wedge-tailed Shearwater on water

1644 1 " " " NNE

1700 1 " " " SE

1715 1 " " " N
15 July, Pacific Ocean, between Johnston and Leewards

1720 1 Shearwater/Petrel N
1730 2 Pterodroma SE
1732 1 Sooty Tern NNE low
1733 5 Sooty Tern S low
1735 1 Wedge-tailed Shearwater NNE
1735 1 Wedge-tailed Shearwater NNE
1735 1 Pterodroma NW
1745 1 Pterodroma S
1747 1 Wedge-tailed Shearwater NE
1755 1 Wedge-tailed Shearwater NW
1802 1 Wedge-tailed Shearwater NE
1806 1 Pterodroma N
1820 1 Pterodroma? N
1837 1 Wedge-tailed Shearwater NE
1847 1 Pterodroma N

sunset ca. 1855
1900 1 Sooty Tern E 75'

16 July, Pacific Ocean, closest to French Frigate Shoals

watch begun at sunrise

0540 1 Bonin Is. Petrel N
0623 1 Sooty Tern SE low
0629 1 Wedge-tailed Shearwater SW
0630 3 Wedge-tailed Shearwater SW all converging
06 31 1 Wedge-tailed Shearwater NW
0631 2 Wedge-tailed Shearwater E
<table>
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<th>Time</th>
<th>Species</th>
<th>Location</th>
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<td>0637</td>
<td>1 Buler's Petrel</td>
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<td>0643</td>
<td>1 Sooty Tern</td>
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<td>0713</td>
<td>3 Sooty Tern</td>
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<td>0718</td>
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<td>0824</td>
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<td>0835</td>
<td>1 Sooty Tern</td>
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<tr>
<td>0835</td>
<td>1 Sooty Tern</td>
<td>SE low</td>
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16 July, Pacific Ocean, nearest French Frigate Shoals

0904  1 Sooty Tern  NNE 0-30'
0936  1 Wedge-tailed Shearwater  NNE
1004  1 Wedge-tailed Shearwater  SE
1116  1 Sooty Tern  NE 50'
1126  1 Bonin Is. Petrel  N
1229  2 Sooty Tern  NE
1255  6 Sooty Tern  NW 50'
1308  1 Bonin Is. Petrel  NNW
1318  3 Sooty Tern  50-100'
1350  1 Wedge-tailed Shearwater  NNE
1355  1 Sooty Tern  N low
1400  Flock spread out and not feeding
       2 Sooty Tern
       3 Wedge-tailed Shearwater
1408  1 Fairy Tern  SW 50'
1409  2 Wedge-tailed Shearwater  NE
1412  1 Bonin Is. Petrel  SE
1424  1 Sooty Tern  NE 50'
1428  1 Wedge-tailed Shearwater  NNW
1501  1 Wedge-tailed Shearwater  SE
1504  1 Tern
1506  1 Wedge-tailed Shearwater  NNE
1513  2 Sooty Tern  SW 55'
1527  2 Sooty Tern  ESE low
1530  1 Bulwer's Petrel  SE
1531  1 Bonin Is. Petrel  SE
16 July, Pacific Ocean, nearest to French Frigate Shoals

1535  2 Wedge-tailed Shearwater NW
1537  1 Wedge-tailed Shearwater SE
1542  1 Wedge-tailed Shearwater SE
1547  1 Wedge-tailed Shearwater SE
1558  1 Shearwater/Petrel NW
1603  1 Bonin Is. Petrel SE
1610  1 Sooty Tern 50' collected
1646  1 Bonin Is. Petrel SW
1647  1 Sooty Tern SW 100'
1654  2 Sooty Tern SW low
1715  Flock scattered and not feeding
      5 Sooty Tern  2 collected
      5 Wedge-tailed Shearwaters
      1 Red-tailed Tropicbird
1750  2 Wedge-tailed Shearwater
1814  1 Bonin Is. Petrel NW
1817  1 Bonin Is. Petrel NW
1823  1 Wedge-tailed Shearwater SSW
1827  1 "   "   "    SEE
1835  1 "   "   "   "
1840  1 Sooty Tern WNW
1841  1 Sooty Tern NE
1843  1 Wedge-tailed Shearwater ENE
1848  1 "   "   "    SEE
      sunset ca. 1855
1915  2 Sooty Tern NW 50'
17 July, Pacific Ocean, 60-70 miles south of Leeward Chain between French Frigate Shoals and Oahu

Observation begin 0515

0518 1 Wedge-tailed Shearwater E
0530 1 " " " "
0538 1 " " " SE
0543 1 " " " 
0549 1 " " " E
0549 1 " " " 
0555 Flock not feeding appeared to move south

100 ± 25 Terns

60 ± 10 Wedge-tailed Shearwater

0610-0615 6 Sooty Terns N 30-40' dispersing from flock 3, 2, 1

0639 1 Sooty Tern 50'
0644 1 Wedge-tailed Shearwater NE
0645 1 Sooty Tern NE 30'
0645 1 Sooty Tern NE 50'
0647 1 Sooty Tern W 40'
0705 1 Sooty Tern E 40'
0730 5 Wedge-tailed Shearwater NW
0730 1 Sooty Tern NW 30'
0734 1 Sooty Tern NW 30'
0745 1 Sooty Tern E 20'
0750 1 Bulwer's Petrel W
0754 1 Sooty Tern Slow
0808 1 Sooty Tern W low
0823 1 Shearwater/Petrel WW
0823 1 Sooty Tern E 50'
0825 1 Sooty Tern W 50'
**Gould, F. J.**

17 July, Pacific Ocean, 60-70 miles south of Leeward Chain between French Frigate Shoals and Oahu

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<thead>
<tr>
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<th>Heading</th>
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<td>1 Sooty Tern E</td>
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<td>0845</td>
<td>8 Bird</td>
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17 July, Pacific Ocean, 60-70 miles south Leeward Chain between French Frigate Shoals and Oahu

1008  6 Sooty Tern  N low 25'
1010  8 Sooty Tern  SE low 25'
1013  8 Sooty Tern  ESE low 30'
1014  1 Bonin Is. Petrel
1025  4 Sooty Terns  NE low 30'
1028  1 Sooty Tern  E low
1029  2 Sooty Tern  E low
1040  Flock feeding no flying fish
   250 ± 25 Sooty Terns  1 collected
   150 ± 25 Wedge-tailed Shearwater  2 collected  many on water
   2 Common Noddy Terns
18 Great Frigatebirds
1130  1 Red-tailed Tropicbird
1137  3 Sooty Tern  NW
1149  1 Bulwer's Petrel  N
1157  3 Sooty Tern  SE
1159  1 Red-tailed Tropicbird  low 50'
1200  3 Sooty Tern  E low 50'
1208  1 Sooty Tern  E low
1217  1 Bulwer's Petrel  NW
1218  1 Wedge-tailed Shearwater  E
1247  1 "   "   "   E
1255  1 Sooty Tern  E'
1256  2 Wedge-tailed Shearwater  NE
1325  5 Sooty Tern  E 30'
17 July, Pacific Ocean, 60-70 miles south Leeward Chain between French Frigate Shoals and Oahu

1328 1 Red-tailed Tropicbird E 50'
1330 1 Tern (Gray-backed?) NE low
1420 2 Sooty Tern NNE 50'
1423 1 Bonin Is. etrel W
1440 1 Bulwer's (?) Petrel SE
1442 1 Red-tailed Tropicbird N
1444 3 Sooty Terns NE 50-100'
1447 1 Tern N low
1505 1 Sooty Tern N 60-70'
1510 Flock feeding no flying fish
50
1550 900 + 10 Sooty Tern

75 + 10 Wedge-tailed Shearwaters 3 collected
2 Christmas Is. Shearwater

1 Red-footed Booby sub qd.
5 Great Frigatebird 1 collected

birds feeding in and out of light rain squall

1605 1 Bulwer's Petrel
1615 1 Wedge-tailed Shearwater NW
1627 1 Wedge-tailed Shearwater N
1628 1 Wedge-tailed Shearwater N
1635 1 Sooty Tern N low
1715 1 Bonin Island Petrel N
1727 1 Wedge-tailed Shearwater N
1720 1 Sooty Tern N low
1732 1 Bulwer's Petrel
1740 11 Wedge-tailed Shearwater NE
Gould, P. J.
1904—At Sea

17 July, Pacific Ocean 60-70 miles south Leeward chain between Oahu and French Frigate Shoals

1744 1 Bonin Is. Petrel N

secured watch at sunset ca. 1855

18 July, Pacific Ocean, closest to Kaula island near Nihoa, Leeward Chain

0614 2 Newell's Shearwater E

0618 1 Wedge-tailed Shearwater

sunrise 0620

0622 1 Wedge-tailed Shearwater W

0625 1 Tern E low

Cetaceae (porpoise or small whale) 0627

0635 1 Wedge-tailed Shearwater S

0637 1 Great Frigatebird S 125'

0645 1 Brown Booby W 40'

0645 3 Terns S 200'

0646 1 Newell's Shearwater W

0649 1 Wedge-tailed Shearwater N

0705 1 Shearwater/Petrel N

0709 5 Sooty Tern S 50'

0710 1 Wedge-tailed Shearwater S

0710 1 Sooty Tern SW 100'

0714 1 Wedge-tailed Shearwater S

0721 1 Shearwater/Petrel S

0734 1 Wedge-tailed Shearwater S

0739 1 Fairy Tern E 60'

0743 1 Bonin Is. Petrel W
Gould, P. J.
1964—At Sea

18 July, Pacific Ocean, nearest Kaula Island, Leeward Chain

0743 1 Wedge-tailed Shearwater W
0745 1 Sooty Tern W 50'
0746 1 Shearwater/Petrel E
0750 1 Shearwater/Petrel E

whale at 0750

0752 1 Wedge-tailed Shearwater SE
0757 1 Bulwer's Petrel W
0800 3 Sooty Tern E 40'
2 Fairy Tern
0801 1 Wedge-tailed Shearwater W
0802 2 Wedge-tailed Shearwater E
0808 1 White-tailed Tropicbird E 50' joined up
0810 1 White-tailed Tropicbird E 50'
0813 3 Wedge-tailed Shearwater E
0818 1 Newell's Shearwater E
0813 1 Wedge-tailed Shearwater E joined previous three
0836 4 Sooty Tern 60'
0839 1 Bulwer's Petrel W
0845 2 wedge-tailed Shearwater E
0850 3 Sooty Terns ESE low 10'
0851 2 Sooty Terns W 20-30'
0851 1 Bonin Is. Petrel SE
0855 1 Christmas Is. Shearwater E
0857 1 Tropicbird so high it was just a speck
0905 Flock feeding breaking up into small groups
18 July, Pacific Ocean, nearest Kaula Island, Leeward Chain

50 + 10 Sooty Terns

6+ Wedge-tailed Shearwater 1 dark phase (lt. br.)

2 Masked Booby ad.

1 Fairy Tern

1 Gray-backed (?) Tern

1 Great Frigatebird

0911 1 Red-tailed Tropicbird 45'

0915 Flock part of last flock

30+ Sooty Terns

10 + Wedge-tailed Shearwater

1 Red-footed Booby ad.

2 Christmas Is. Shearwater

2 Red-tailed Tropicbird

1 Fairy Tern

0940 1 Red-tailed Tropicbird on water

0940 1 Christmas Island Shearwater

0950 1 Wedge-tailed Shearwater E

0950 1 Bulwer's Petrel SE

0951 1 Wedge-tailed Shearwater

0954 2 Wedge-tailed Shearwater E

0955 1 Fairy Tern 40'

0956 3 Sooty Tern SE 50' calling

1000 1 Wedge-tailed Shearwater NE collected

1001 Flock headed E

25+ Wedge-tailed Shearwater

1 Christmas Is. Shearwater
**Gould, P. J.**

1964—At Sea

18 July, Pacific Ocean, nearest Kaula Island, Leeward Chain

<table>
<thead>
<tr>
<th>1 Great Frigatebird</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Sooty Tern</td>
</tr>
<tr>
<td>1 Red-tailed Tropicbird</td>
</tr>
</tbody>
</table>

| 1010 | 1 Bulwer's Petrel NE |
| 1015 | 19 Sooty Tern NE 25-75' |
| 1016 | 7 Sooty Tern NE low |
| 1016 | 1 Wedge-tailed Shearwater NE |
| 1017 | 1 Wedge-tailed Shearwater NW |
| 1017 | 1 Bulwer's Petrel SW |
| 1018 | 1 Gray-backed Tern SW low |
| 1022 | 4 Sooty Tern N low |
| 1023 | 2 Sooty Tern N 50' |
| 1025 | 5 Sooty Tern NE 50' |
| 1025 | 2 Red-tailed Tropicbird 100' |
| 1027 | 2 Wedge-tailed Shearwater W |
| 1028 | 1 Shearwater/Petrel W |
| 1030 | 1 Bulwer's Petrel SW |
| 1031 | 1 Bulwer's Petrel SW |
| 1032 | 1 Bulwer's Petrel SW |
| 1037 | 1 Red-tailed Tropicbird E |
| 1037 | 1 Wedge-tailed Shearwater SE |
| 1043 | 1 " " " NW |
| 1045 | 1 " " " |
| 1047 | 1 Bulwer's Petrel NE |
| 1048 | 6 Sooty Terns NE low |
| 1048 | 1 Bonin Island Petrel SW |
18 July, Pacific Ocean, nearest Kaula Island, Leeward Chain

1048 1 Wedge-tailed Shearwater SW
1050 1 Bulwer's Petrel NE
1053 1 Shearwater/Petrel NW
1054 1 Bulwer's Petrel NE
1059 1 Bulwer's Petrel NE
1101 1 Bulwer's Petrel NE
1105 2 Sooty Tern SE 100'
1105 2 Sooty Tern SE 100'
1108 1 Wedge-tailed Shearwater SE
1110 1 Fairy Tern E low
1112 2 Sooty Tern NE 50'
1113 1 Bulwer's Petrel NE
1116 2 Bulwer's Petrel NE
1122 1 Red-tailed Tropicbird NE 50'
1123 Flock
   16 Sooty Tern 50-100'
   1 Fairy Tern
1027 1 Bulwer's Petrel S
1046 1 Fairy Tern NE low
1041 1 Bulwer's Petrel N
1144 10 Sooty Tern NE 50;
1146 1 Wedge-tailed Shearwater
1147 1 Red-tailed Tropicbird NE 100'
1152 1 Bulwer's Petrel NW
1155 1 Wedge-tailed Shearwater NW
1156 1 " " " NE
Gould, P. J.
1964--At Sea

18 July, Pacific Ocean, nearest Kaula Is., Leeward Chain

1157  1 Bulwer's Petrel  NE
1159  1 Bulwer's Petrel  NE
1200  1 Bulwer's Petrel  S
1200  3 Sooty Tern  NE 40'
1202  1 Sooty Tern  N  low
1202  1 Bulwer's Petrel  E
1203  2 Wedge-tailed Shearwater  E
1207  1 Bulwer's Petrel  E
1208  1 Bulwer's (?) Petrel  E
1207  1 Bulwer's Petrel  (?)  E
1212  3 Bulwer's Petrel  on water (above three?)
1217  1 Fairy Tern  E 60'
1219  1 Bulwer's Petrel  S
1219  1 Bulwer's Petrel  S
1221  1 Bulwer's Petrel (?)  E
1221  2 Sooty Tern  W 25-35'
1226  3 Wedge-tailed Shearwater  SW
1239  1 Bulwer's (?) Petrel  NE
1242  1 Wedge-tailed Shearwater  SE
1245  1 Wedge-tailed Shearwater  S
1252  1 Bulwer's Petrel  N
    whales (2) at 1255
1255  1 Christmas Island Shearwater  W
1259  1 Wedge-tailed Shearwater  N
1301  1 Bulwer's Petrel  E
18 July, Pacific Ocean, nearest Kaula Is., Leeward Chain

1310 1 Masked Booby SW low
1110 1 Wedge-tailed Shearwater N
1310 4 Sooty Tern SE low
1317 1 Bulwer's Petrel S
1321 1 Sooty Tern E to 30'
1326 1 Wedge-tailed Shearwater E
1327 3 Sooty Tern E low
1330 1 Wedge-tailed Shearwater dark phase
1333 1 Bulwer's Petrel S
1333 1 Fairy Tern N 50'
1335 1 Fairy Tern N 50'
1342 1 Bulwer's Petrel N
1343 1 Bulwer's Petrel N
1344 1 Fairy Tern E headed N low
1346 1 Bulwer's Petrel S
1348 1 Bonin Is. Petrel S
1350 1 Bulwer's Petrel S
1402 1 Bulwer's Petrel S
1402 1 Fairy Tern N 20'
1406 1 Bulwer's Petrel E
1409 2 Sooty Tern SE 50'
1409 1 Fairy Tern W 40'
1412 1 Fairy Tern N
1413 1 Wedge-tailed Shearwater N
1415 2 Wedge-tailed Shearwater N
Gould, P./J.
1964--At Sea

18 July, Pacific Ocean, nearest Kaula Is. Beeward Chain

1418 1 Fairy Tern N low
1419 1 Fairy Tern N low
1421 1 Wedge-tailed Shearwater W
1422 1 Bulwer's Petrel N
1436 1 Wedge-tailed Shearwater N
1436 1 Bulwer's Petrel N
1438 1 Wedge-tailed Shearwater N
1447 1 Bulwer's Petrel S
1447 1 Red-tailed Tropicbird 50'
1508 1 Gray-backed Tern ENE low
1512 4 Sooty Tern SW to 20'
1515 1 Newell's Shearwater E
1516 1 Bulwer's Petrel E
1517 2 Bulwer's Petrel E
1521 1 Bulwer's Petrel W
1521 1 Newell's Shearwater E
1525 1 Bulwer's Petrel E
1525 1 " " N
1525 1 " " E
1537 1 " " S
1554 1 " "
1605 Flock feeding
50 + Terns
2 Frigatebirds
¼ Red-footed Booby ad.
3 Boobies ad.
16 July, Pacific Ocean, nearest Kaula Is., Leeward Chain

1614 1 Wedge-tailed Shearwater E
1628 1 Wedge-tailed Shearwater E
1636 1 Tern E low
1640 1 Bulwer's Petrel N
1642 1 Wedge-tailed Shearwater E
1647 Flock feeding
   2 Fairy Tern
25 + 5 Wedge-tailed Shearwater some on water
   1 Newell's Shearwater
22+ Sooty Tern
   1 Christmas Island Shearwater
1659 1 Red-footed Booby E low subad.
1700 1 Wedge-tailed Shearwater E
1710 3 " " " "
1714 1 " " " "
1717 1 " " " "
1720 1 Bulwer's Petrel S
1722 2 Wedge-tailed Shearwater E
1724 1 Wedge-tailed Shearwater E
1729 2 Sooty Tern N
1730 1 Sooty Tern N
1730 1 Wedge-tailed Shearwater E
1730 1 Wedge-tailed Shearwater E
1736 1 Wedge-tailed Shearwater E
Gould, P. J.
1964--At sea

18 July, Pacific Ocean, nearest Kaula Is., Leeward Chain
1736 1 Sooty Tern E 50'
1744 2 Wedge-tailed Shearwater E

1744 1 Tern E low
1744 1 Wedge-tailed Shearwater E
1746 1 Masked Booby E low
1748 3 Sooty Tern E 50'
1748 2 Wedge-tailed Shearwater E
1749 1 Red-footed (?) Booby Im. E low
1750 1 Wedge-tailed Shearwater E
1755 1 Wedge-tailed Shearwater E
1755 2 Sooty Tern NE low
Kaula in sight at ca. 1800
1804 1 Wedge-tailed Shearwater S
1808 1 Red-tailed Tropicbird "d. S on water
1812 1 Sooty Tern NE low
1820 1 Wedge-tailed Shearwater NNE
1822 1 Red-footed Booby Im. NE low
1824 1 Gray-backed (?) Tern NE low
1825 1 Wedge-tailed Shearwater E
1825 1 Wedge-tailed Shearwater E
1825 1 Wedge-tailed Shearwater E
1830 3 Red-footed Boobies NNE low
1831 1 Wedge-tailed Shearwater E
1835 1 Bulwer's Petrel SE
1838 2 Terns NE low
1840 1 Sooty Tern E 30'
1841 5 Red-footed Booby NE low
1848 2 Sooty Tern low
Gould, P. J.
1904—At Sea

18 July, Pacific Ocean, nearest Kaula Is., Leeward Chain

1849 1 Sooty Tern  SSW 40'
1852 1 Wedge-tailed Shearwater  SSE
1853 1 Bulwer's Petrel  E
1854 1 Sooty Tern  NE low
1854 1 Sooty Tern  NE low
1855 3 Sooty Tern  NE low
1855 1 Gray-backed Tern  NE low
1859 2 Terns  NE low
1859 1 Tern  NE low
1859 1 Tern  NE low
1900 1 Red-footed Booby  ad.  NE low
1901 1 Wedge-tailed Shearwater  NW low
1905 Flock feeding, flying fish present
   85 + 10 Wedge-tailed Shearwater
   5 Fairy Tern
   100 + 10 Sooty Tern
   22 Red-footed Booby  3 or 4 imm.
   5 + 1 Common Noddy Tern

many birds on water
1920 10 of above Boobies heading for Kaula
watch secured at sunset ca. 1926

19 July Pacific Ocean, nearest Oahu
begin watch 0603
sunrise ca. 0605
0607 1 Wedge-tailed Shearwater  S
0609 Lachnorhynchus (?)
19 July, Pacific Ocean, nearest Oahu

<table>
<thead>
<tr>
<th>Time</th>
<th>Observations</th>
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<tbody>
<tr>
<td>0609</td>
<td>1 Harcourt's (?) Storm Petrel N 50'</td>
</tr>
<tr>
<td>0621</td>
<td>1 Wedge-tailed Shearwater</td>
</tr>
<tr>
<td>0622</td>
<td>1 Shearwater/Petrel SE</td>
</tr>
<tr>
<td>0624</td>
<td>1 Wedge-tailed Shearwater SSE</td>
</tr>
<tr>
<td>0624</td>
<td>1 &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>0632</td>
<td>1 &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>0633</td>
<td>1 &quot; &quot; &quot; N</td>
</tr>
<tr>
<td>0636</td>
<td>6+ Shearwater/petrel</td>
</tr>
<tr>
<td>0638</td>
<td>1 White-tailed Tropicbird N 50'</td>
</tr>
<tr>
<td>0639</td>
<td>2 Wedge-tailed Shearwater SE</td>
</tr>
<tr>
<td>0643</td>
<td>1 Shearwater/Petrel SE</td>
</tr>
<tr>
<td>0656</td>
<td>1 Wedge-tailed Shearwater</td>
</tr>
<tr>
<td>0657</td>
<td>1 Red-tailed Tropicbird NW 60-75'</td>
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<tr>
<td>0658</td>
<td>1 Wedge-tailed Shearwater E</td>
</tr>
<tr>
<td>0710</td>
<td>1 Wedge-tailed Shearwater</td>
</tr>
<tr>
<td></td>
<td>Oahu can be seen at 0710</td>
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<tr>
<td>0716</td>
<td>1 Shearwater/Petrel SE</td>
</tr>
<tr>
<td>0729</td>
<td>1 Wedge-tailed Shearwater E</td>
</tr>
<tr>
<td>0828</td>
<td>1 &quot; &quot; &quot;</td>
</tr>
<tr>
<td>0831</td>
<td>2 &quot; &quot; &quot;</td>
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<tr>
<td>0835</td>
<td>1 Bulwer's Petrel W</td>
</tr>
<tr>
<td>0841</td>
<td>1 Wedge-tailed Shearwater W</td>
</tr>
<tr>
<td>0843</td>
<td>1 &quot; &quot; &quot; &quot;</td>
</tr>
<tr>
<td>0846</td>
<td>2 &quot; &quot; &quot; &quot;</td>
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19 July, Pacific Ocean, nearest Oahu

<table>
<thead>
<tr>
<th>Time</th>
<th>Species</th>
<th>Direction</th>
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<tbody>
<tr>
<td>0848</td>
<td>1 Wedge-tailed Shearwater</td>
<td>W</td>
</tr>
<tr>
<td>0849</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>0852</td>
<td>1 &quot;</td>
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<tr>
<td>0858</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>0858</td>
<td>1 W</td>
<td>&quot;</td>
</tr>
<tr>
<td>0859</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>0906</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>0908</td>
<td>1 Christmas Is. Shearwater</td>
<td>N</td>
</tr>
<tr>
<td>0909</td>
<td>1 Christmas Is. Shearwater</td>
<td>SE</td>
</tr>
<tr>
<td>0917</td>
<td>1 White-tailed Tropicbird</td>
<td>E 100'</td>
</tr>
<tr>
<td>0930</td>
<td>1 Wedge-tailed Shearwater</td>
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</tr>
<tr>
<td>0930</td>
<td>2 Sooty Tern</td>
<td>50'</td>
</tr>
<tr>
<td>0934</td>
<td>3 Wedge-tailed Shearwater</td>
<td>W</td>
</tr>
<tr>
<td>0936</td>
<td>1 Newell's Shearwater</td>
<td>N</td>
</tr>
<tr>
<td>0942</td>
<td>1 Wedge-tailed Shearwater</td>
<td>SW</td>
</tr>
<tr>
<td>0952</td>
<td>1 Wedge-tailed Shearwater</td>
<td>SW</td>
</tr>
<tr>
<td>0952</td>
<td>1 Sooty Tern</td>
<td>N</td>
</tr>
<tr>
<td>0954</td>
<td>1 Wedge-tailed Shearwater</td>
<td>S</td>
</tr>
<tr>
<td>0958</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>1001</td>
<td>1 &quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>1012</td>
<td>1 W</td>
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</tr>
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<td>1 &quot;</td>
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<tr>
<td>1029</td>
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<tr>
<td></td>
<td>observation ended 1030</td>
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</table>
January 16—Pacific Ocean, 14th day out Oahu, ca. 1 day NE Johnston Island

One bird followed the ship for a short time. It did not associate with the Black-footed Albatross that were around.

February 5—Pacific Ocean, 3rd day out Oahu, Hawaiian Is.

One seen at 0655 came to within 500 yds. of ship but apparently took no notice of the ship.

February 13—Pacific Ocean, Grid Area SW Johnston Is.

One bird at 0703 did not stay around very long.

February 14—One bird at 1648 did not stay around very long.

February 15—One bird at 1745 did not stay around very long.
January 3—Pacific Ocean, 1st day out Oahu, Hawaiian Is.

These birds were constantly following the ship all day. The highest number counted was 17+ at 1235. These birds cannot be considered as being in a flock since their individual movements were independent of each other. There were, however, two instances when flocks of albatross were noted (1117 hours and 1235 hours). Each of these was a group of 9 birds sitting in a group on the water.

Every time garbage was thrown overboard these birds would all close in on it and sit down near it to feed. One bird was seen to sit down next to a paper box and others were attracted by bits of white paper thrown over the side. For the most part these birds remained behind the ship.

One bird had an almost completely white belly and throat, but the throat was suffused with grayish. It was lighter colored on the back (more silvery) than the other birds and may have been a bit larger. Possibly a hybrid??

Several birds showed extensive white areas around the base of the tail.

Collected 1 adult.

At 1635 we caught 1 ad. Black-foot and banded it (number 757-60701), ca, 50 mi. SSW Oahu. Bird was released at 1700 hours.

January 4—Pacific Ocean, 2nd day out Oahu, Hawaiian Is.

A total of 3 birds followed the ship today. One we collected and the other two stayed around all day.

Primarily these birds stayed behind the ship crossing and recrossing our wake. Occasionally they would fly around the ship, but would always return to a position behind the ship.

January 5—Pacific Ocean, 3rd day out Oahu, Hawaiian Is.

Two birds have been around the ship today, but apparently only one bird was following us. The 2nd appeared once and then left.

January 6—Pacific Ocean, 4th day out Oahu, Hawaiian Is.

Two individuals today followed the ship until one was collected at 1700, then
we did not see the other again.

January 7--Pacific Ocean, 5th day out Oahu, Hawaiian Is.

None seen today.

January 8--Pacific Ocean, 6th day out Oahu, Grid Area

None seen today.

January 9--Pacific Ocean, 7th day out Oahu, Grid Area

One bird seen at 1430 hours. This bird flew around the ship once and investigated a dye marker in the water and then disappeared. It was observed to have a "comfort movement", while flying low over the water.

January 10--Pacific Ocean, 8th day out Oahu, Grid Area

None seen today.

January 11--Pacific Ocean, 9th day out Oahu, Grid Area

None seen today.

January 12--Pacific Ocean, 10th day out Oahu, Grid Area

None seen today.

January 16--Pacific Ocean, 14th day out Oahu, 1 day NE Johnston

3 birds followed ship today. 1st appeared at 0730, second at 1008, and the third at 1605.

January 17--Pacific Ocean, 15th day out Oahu, 2 days NE Johnston

6 birds for the day.

<table>
<thead>
<tr>
<th>Time</th>
<th>Number of birds following ship</th>
</tr>
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<tbody>
<tr>
<td>0935</td>
<td>1</td>
</tr>
<tr>
<td>1210</td>
<td>2</td>
</tr>
<tr>
<td>1337</td>
<td>3</td>
</tr>
<tr>
<td>1516</td>
<td>4</td>
</tr>
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<td>1655</td>
<td>6</td>
</tr>
<tr>
<td>1730</td>
<td>1</td>
</tr>
<tr>
<td>1800</td>
<td>3</td>
</tr>
<tr>
<td>1814</td>
<td>4</td>
</tr>
</tbody>
</table>
January 18--Pacific Ocean 16th day out Oahu, ca. 100 mi. SW Oahu

4 birds around in morning. Various numbers from 3 throughout the rest of the day.

February 3--Pacific Ocean, 1st day out Oahu, Hawaiian Is.

Maximum of 8 individuals following the ship at 1317 hours. At times when two birds fly near each other one will follow the other for a short period. Usually, however, the birds appear to be acting as individuals. When several sit down in the water others will often fly over to join or circle around them.

One bird was caught, unharmed, on a fishing line. Banded (number 757-60836) and released.

They were heard calling, 2 times. Once a bird on the water called to (at?) another that flew by. The second time was when birds were fighting over garbage. Often the birds will land in the water to either the starboard or port for rest rather than food.

Today there was very little wind and the birds were doing an unusual amount of flapping.

February 4--Pacific Ocean, 2nd day out Oahu, Hawaiian Is.

1 bird observed 1503. Collected 1 at 1600. Ad. ♀ with 1 corpus leutra (0464).

February 12--Pacific Ocean, near Johnston-Sand Island

1 bird seen and collected within sight of Johnston Island.

February 14--Pacific Ocean, Grid Area SW Johnston Island

One bird seen at 1455 heading SE followed ship for short period.

February 15--Pacific Ocean, Grid Area SW Johnston Island

2 birds. One at 0745-0948, and another at 1618.

The one at 0948 opened bill as if to yawn then proceeded to the water. It extended its legs forward and elevated its wings and settled on a wave crest. (occurred in ca. 10 sec.) Upon landing it kept its wings up for 15-20 sec. and inserted its bill downward in water as if to drink, several times. Then closed wings and floated, did not appear to feed.
March 2--Pacific Ocean, 1st day out Oahu

One albatross followed ship from 1405 until after sunset (1842).

March 3--Pacific Ocean, 2nd day out Oahu

One bird seen for only a few minutes behind the ship at 1042.
1/2 day out in S and W direction from Pearl Harbor—August 1

1427. Circled about front of ship and moved with ship. Rapid flapping, then glide close to water.

1442-1448—Flying in direction of ship on starboard side. A lot more soaring and less flapping than one before, going higher over water. Flys horizontal, low over water, then rises in air banking with belly towards ship then back down into wave trough in "S" shaped motion.

August 2--1 1/2 days out of Pearl Harbor, S and W

We have seen a lot of these today in groups of anywhere from 1-30. Most often seen in 2's and 3's. Saw one flock where there were 13 or so sitting on water and they waited until the boat was only 25-50 yds. from them before they flew. Saw another large flock and noticed a few plunge into the water after gliding close to surface. They stayed in water a few (1-2) minutes dabbling with head often entirely under water before flying again.

These shearwaters hold a much more horizontal position over the water than other shearwaters I have seen. I have yet to see one really shear the water with a wing. Most of the banking (one wing up, the other down) is done higher above the water and when they go low they stay horizontal.

We have seen 2 or 3 birds following each other on numerous occasions. They stay together for several minutes, but almost always break up after this and circle independently.

We have seen Manx Shearwater and New Zealand Shearwater associating closely with flocks of Wedge-tails, while other birds such as Sooty and Fairy Terns loosely associated with Wedge-tails.

August 3--2 1/2 days out Pearl Harbor (S and W) ca. 500 nautical miles by evening (8:00 p.m.)
It appears that there is a general tendency for these birds to go around in
group of 2. Some lone birds are spotted and some groups of 3 but when more than 1 is
seen they often stick together most of the time.

In flight the wing pattern is distinctive.

August 4--2322-2350 hours--full moon warm and light wind.

Shining cargo light on water, we saw as many as 8 Wedge-tails in light beam
at one time. May have been as many as 10-20 birds. They were flying back and
forth very low and in tight circles. We often thought we saw them take off of the
water as the light beam hit them. Saw several with small (ca. 3") silvery fish
crosswise in their bills. Many were noticed swallowing while in flight. This was ac-
complished by a slight upward flip of the head with a concurrent slight opening
of the bill. The fish went down while head was at highest up and movement. Many
Sooty Terns were wheeling overhead at this time.

We have seen 3 or 4 dark phase wedge-tails during the last 2 days.

August 5--ca. 5 mi. South Johnston Island, 4 1/2 to 5 days out Pearl Harbor

High winds and choppy sea today. Birds very scarce. The wedge-tails that I
have seen today are moving so fast it's hard to keep up with them. This appears
to be due to the high winds. The speed of the birds flight evidently depends on
the strength of the wind.

1447. 1 Wedge-tailed Shearwater.

1525. Very large flock flying very low over water, dashing back and forth, over
school of 500 + flying fish, birds never appearing above the horizon ca. 45+
Wedge-tails, 30 ± 5 Sooty Terns, 25 ± 5 Shearwaters or petrels incident 1 fired.

1630. 2 Wedge-tailed Shearwaters.
The ship was moving at a fairly constant speed of 8.5 knots between these observations.

//Theory//

A shearwater flying ca. 5' above the water can probably detect another bird the same height above the water at about 5 miles range. Shearwaters wander about the ocean singly or in groups of 2-4 in a normal and stable hunting flight pattern. When they come upon a food source their behavior changes--faster flying, more up and down soaring, etc. This attracts other birds to the food source. Other birds should be attracted from as far away as they can see the feeding bird--(at least 5 miles by the above figuring and since they get higher than 5' on occasion this observation distance should be greater.

The above data shows that no birds were seen 38 minutes before the flock was reached or ca. 60 minutes after the flock had passed (since this flock was near ship for ca. 5 min.).

At 8.5 knots this means that there were no birds on either side of the flock (in two directions at least) for 8.5 miles on one side and ca. 5.4 miles on the other.

So this might indicate effective dispersal capacity for the birds and if the birds used it to perfection there should be 1 bird per area= \( \pi r^2 = \text{a circle} \) with a 5 mile radius. (Roughly this would mean that the birds could effectively utilize the area with 1 bird every 5 miles. "If birds were at maximum deployment then only 5 birds could probably utilize each food source."

September 6--2nd day out Oahu, Hawaiian Is., Pacific Ocean

Watching these and other shearwaters and Petrels today it appears that a majority are following along the path of the wavetroughs.

They appear to change troughs frequently to preserve a straight course (always
heading same direction.

We have seen other birds which have a dorsal appearance of Wedge-tails with the dark primaries but beneath they are much whiter with much more extensive white under the wings and much more white around the head. One seemed to have a light colored bill and I called it a Pink-footed Shearwater.

It should be checked to see if any species of Wedge-tail gets this pattern below (an exceptionally light light-phase)

1553. Sighted flock of birds which included 10+ Wedge-tails, 5+ Bonin Petrels, 125 ± 5 Terns and 1 Frigate-bird. No fish school was noticeable and none of the birds were seen to go to the water. The wedge-tails would be gliding rapidly along one direction then make a "U" turn and make another pass over the area they had just gone over. These passes would be over fairly large stretches of water. Every once in a while the whole group (which was flying mostly as a unit with only a few straglers) would begin milling about in a tight series of circles. They would be closer to the water during this maneuver and use their wings more often. Apparently at these points they had sighted the fish school near the surface, but still too deep to attack.

September 7--Pacific Ocean, 2 days out Oahu, Hawaiian I.

1520. Flock consisting of 40+ Wedge-tails, 3+ Pink-footed Shearwaters, 1 Bonin Island Petrel and 25 Sooty Terns. These birds were feeding on flying fish.

1530. Large flock consisting of 1 Bulwer's Petrel, 50 + 10 Wedge-tails, 200 ± 25 Sooty Terns, 3 White Terns, 2 Tropicbirds, 1 Dark-rumped Petrel.

All of these birds were darting back and forth (except Tropicbirds) over a huge school of flying fish. These flying fish kept breaking surface in all directions. We observed this flock for over 1/2 hour.

All the birds were chasing and catching flying fish, of 3 Wedge-tails
collected, all had stomachs filled with flying fish (none had wings on them). The wedge-tails would fly low and fast over the fish and either hit a fish in mid air or (more commonly) they would splash into the water and chase the fish by hopping and jumping along with fore and bill thrusts until the fish was captured. Once a fish was caught the bird would immediately rise and swallow the fish in mid air. No precision diving from high in the air was noted.

Groups of Shearwaters would occasionally be noticed forming on the water. These birds did not feed but went through preening movements and some wing stretching. There were always birds in the air. In general these sitting birds would be joined by other birds periodically, and a few would leave the sitting group from time to time. No single birds were ever noted sitting on the water.

Much more flapping was required while the birds were actively catching fish than when hunting.

September 8--Pacific Ocean, 4 days out Oahu, Hawaiian Is.

Following is a series of observations made by Roger Clapp while on watch:

0544 10 Wedge-tails group of individual birds flying in from the NNW and then returning in the same direction. Flying up from waves in soaring circles.

("Possibly these are members of a just dispersing flock.")

0553 1 Wedge-tail headed S
0555 1 Wedge-tail headed NNW
0601 7+ Wedge-tails headed NNW
0604 10 + Wedge-tails headed NNW, then SSE
0615 2 Wedge-tails headed NNW. "Bird shit from 15'."

Also performed comfort movements while on the wing; bringing one foot up and ruffling and smoothing on flank feathers--also (apparently) yawned.

0616 3 Wedge-tails headed WSW
0632 2 Wedge-tails headed NNW
0636 1 Wedge-tailed Shearwater headed N  "Defecated 5-10'."  "This plus above possibly indicating well fed birds on break-up of feeding flock."

0643 1 Wedge-tail headed SE
0647 1 Wedge-tail headed SSW to S
0702 1 Wedge-tail headed NE
end of Roger Clapp's notes

0604 Small hunting flock of 10+ Wedge-tails

1417 Small flock 5+ Shearwaters and 30+ Sooty Terns

1735 Large flock consisting of 200 + 10 Wedge-tails, 20 Terns, 7 Frigate-birds, 1 adult Red-footed Booby, 9 Imm. Boobies.

Huge school of flying fish plus what appears to be larger fish in the water. At one spot a dead fish (white belly up) was seen floating just beneath the surface in a cloud of blood. There were sharks at this place.

The wedge-tails were flying (gliding) back and forth in large circles over a considerable area. No single birds were seen more than 200 yards from the flock. In other words all the birds were incorporated into the one flock and no birds were feeding as lone individuals. On two occasions at least sitting flocks were observed. There were always on the outside of the feeding flock and no flying fish were seen around them. In other words the resting birds sat just outside the feeding area. One of these resting flocks has over 65 birds at one point. Birds would occasionally leave this flock and join the feeding birds and conversely some feeding birds would leave the feeding flock and join the resting flock.

While on the water the birds would do preening movements and frequently hold up their wings for several seconds at a time. Upon taking off the birds would first raise their wings and shake them than with one or two hops into the wind they would rise up and join the feeding flock.

One wedge-tail was seen with a bright red tag extending from the leg under the tail (PJG).
After about an hour the flock had become widely dispersed and by this time the birds were soaring (no wing flapping) over much larger areas than when actively feeding.

We have noticed that these Shearwaters while hunting often rise 10-15 or 20 feet above the water surface while banking for a turn. While these birds were feeding they did not do this, but usually remained fairly close to the water. After the fish school had quit jumping and the flock was spreading out, some shearwaters could be seen going up as high as 30 or 40 feet while banking. This is probably so they can get a good look around to see where the fish school had gone by seeing where other birds were displaying actual feeding behavior as opposed to hunting behavior.

Earlier in the day we had observed a Wedge-tail to glide up over 100' in the air then after a few seconds set its wing and glide down to the water surface.

**September 12--**Pacific Ocean, Grid Area

1000. Flock of ca. 50+ Wedge-tails, 2 Dark-rumped Petrel, and 10+ Sooty Terns. Flock milling, not feeding. Many birds sit on water.

**Specimen measurements:**

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<th>Sex</th>
<th>Weight</th>
<th>Wing</th>
<th>Tail</th>
<th>Cul.</th>
<th>Tar.</th>
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<tr>
<td>0362</td>
<td>♀</td>
<td>416</td>
<td>275</td>
<td>137</td>
<td>broke</td>
<td>49.1</td>
<td>57.7</td>
</tr>
</tbody>
</table>

Watching flying bird it sat down alone in water. It was shortly joined by second, third, fourth fifth through tenth birds in rapid succession. Once saw a lone bird sitting in the water that was not joined by other birds. It still sat for several minutes before flying over to join flock sitting in water. Out of 50+ Shearwaters only one was dark-phased.
Two birds had been shot and were floating about 60 yards apart. One was a lightphase Wedge-tail floating belly up and the other was a Dark-rumped Petrel floating in a normal back updownposition. On at least 3 occasions other light phased Wedge-tails joined the Wedge-tail floating belly up and found a small group around it. Not once did they attempt to form a flock around the Petrel which was in a more normal position.

January 4, 1964 -- Pacific Ocean, 2nd day out Oahu, Hawaiian Is.

One individual was seen at 0732 today.

January 5 -- Pacific Ocean, 3rd day out Oahu, Hawaiian Is.

A total of 14 birds were seen today. Two were in a flock of Tern, Frigatebird and Storm Petrel. Of them the two shearwaters were in close association only with the Harcourt's Storm Petrel for a short time.

All the Wedge-tails we have seen are apparently first year birds. The upper wing coverts are all white tipped and give a different light and dark pattern to the wing.

January 6 -- Pacific Ocean, 4th day out Oahu, Hawaiian Is.

9 individuals seen today. As before there all appeared to be first year birds. One was seen flying with a black-footed Albatross. 5 were in two feeding groups feeding on squid.

January 7 -- Pacific Ocean 5th day out Oahu Hawaiian Is.

2 light phase birds seen today, both appeared to be juvenile with whitish tips to dorsal wing coverts.

January 8 -- Pacific Ocean, 6th day out Oahu, Grid Area

None seen today.
January 2, Pacific Ocean, 7th day out Oahu, Grid Area

None seen today.

January 10, Pacific Ocean, 8th day out Oahu, Grid Area

None seen today.

January 11, Pacific Ocean, 9th day out Oahu, Grid Area

None seen today.

January 14, Pacific Ocean, 12th day out Oahu, Grid Area

One bird seen this morning.

January 15, Pacific Ocean, 13th day out Oahu, Johnston Is. at 0230

2 birds seen today, both appeared to be juvenile birds with peculiarly marked dorsal wing surface.

January 16, Pacific Ocean, 14th day out Oahu, ca. 2 days NE Johnston I.

1 bird seen today.

January 17, Pacific Ocean, 15th day out Oahu, ca. 2 days NE Johnston I.

2 immatures in with feeding flock of Sooty Terns and Fairy Terns.

February 12, Pacific Ocean, near Johnston-Sand Island

Two individuals seen at 0826 and 0949, the first heading SSW, the Second, ESE.
August 3--Ca. 2 days out from Pearl Harbor, S and W

While watching a flock of 40 + 5 Sooty Terns I saw what I was 80 per cent sure was this species. 2 birds for the most part staying together. A large school of flying fish broke the surface. At one point a flying fish arose directly in the path of one of the Shearwaters. The shearwater neared slightly, caught up with the flying fish and it looked as if the bird grasped the fish with its bill. At the start of contact both fish and bird dropped into the water and the bird stayed in the water for several minutes. This happened quite a distance off ship, but I was watching through the 25+ Spotting scope as I'm sure the bird at least caught the fish and probably ate it.

(or Christmas Island Shearwater?)--Pacific Ocean Grid Area--Number 6

Large flock sighted at 1613, ca. 20+ in flock milling about over the water. Sooty Terns were overhead and 5+ Wedge-tails and at least 1 Bonin Island Petrel were in the flock. This is the first grouping of this species we have seen--all others have been singles or doubles.
August 5--ca. 100 mi. SW Johnston Island, Pacific Ocean

These birds have become more and more common the farther we get from Hawaii. The gray back is quite visible. They are very rapid flyers, moving much faster than any Shearwater I have seen. Although they generally do more flapping than do Shearwaters, they occasionally do a lot of gliding. Even when gliding they are much faster than shearwaters. Their wing beats are also much more rapid. In flight the ventral surface of the wing has a dark hashmark extending diagonally into the middle center of the wing. This species is easily told at a distance from the Wedge-tailed Shearwater by the extremely bright white underparts, more rapid flight and smaller size.

Another good mark appears to be a dark patch extending from the nape down the side of the neck like a 3/4 collar.

January 4--Pacific Ocean 2nd day out Oahu, Hawaiian I.

Two individuals were seen today.

January 11--Pacific Ocean 9th day out Oahu, Grid Area

One bird today in flock with boobies, and other Pterodroma of 1540.

January 12--Pacific Ocean, 10th day out Oahu, Grid Area

1 bird today at 1030 flying NW. 6 Pterodroma were seen but not identified today. Some were probably this species.

February 15--Pacific Ocean, Grid Area SW Johnston Island

One bird flying SE at 1552.

March 2--Pacific Ocean, 2nd day out Oahu

1 bird at 0853 flew back and forth in front of ship several times then headed NNW.
January 11--Pacific Ocean, 9th day out Oahu, Grid Area

1 bird flying with an Immature Red-footed Booby. These birds stayed together for about 5 minutes. Definitely following each other.

February 3--Pacific Ocean, 1st day out Oahu, Hawaiian Is.

2 birds seen together at 1611 hours. One flew over to where 2 Albatross were sitting in the water and flew in alone to them several times.

February 7--Pacific Ocean, 5th day out Oahu, 1 day past Johnston

1 bird seen at 0643.
January 11--Pacific Ocean, 9th day out Oahu, Grid Area

2 birds seen today in feeding flock containing Red-footed Boobies.
Bob Sundell saw one of these birds actually chasing a flying fish.

January 12--Pacific Ocean, 19th day out Oahu, Grid Area

2 birds seen today, both as singles. One was seen just after a storm had passed and the wind was over 25 knots.

January 13--Pacific Ocean, 11th day out Oahu, Grid Area

1 bird seen today.

January 14--Pacific Ocean, 12th day out Oahu, Grid Area

2 birds seen today fighting a losing battle into 26 knot winds.

January 15--Pacific Ocean, 13th day out Oahu, Johnston Island at 0230

1 bird seen today.

January 16--Pacific Ocean, 14th day out Oahu, ca. 1 day NE Johnston I.

1 bird seen today.

February 7--Pacific Ocean, 1 day SE Johnston Island

1 bird observed flying SE at 1346.

February 11--Pacific Ocean, Grid Area SW Johnston Island

3 single birds seen today at 0721, 0806 and 1206 hours.
January 17--Pacific Ocean, 15th day out, ca. 2 days NE Johnston

One bird well seen by Gould and Sundell. It had a white belly, but dark underwings with conspicuous white patches at the ventral wing tips. Dark brown above and typical Pterodroma flight pattern and body conformation.

February 7--Pacific Ocean, 1 day SE Johnston Island

Two individuals (both white-bellied) were seen in late afternoon.
February 12--Pacific Ocean, near Johnston-Sand Island

One bird seen by Pat Gould at 0726 definitely had dark underwings--brown back and dark chest. Size, shape, and flight pattern typical Pterodroma.
February 15--Pacific Ocean, Grid Area SW Johnston Island

One bird well seen by Gould and Hoeman. Had dark brown dorsal surface, dark brown chest band with contrasting white throat. Under wings with wide brown margins and silver to white medium stripe.
February 11--Pacific Ocean, Grid Area SW Johnston Island

One bird seen at 0915 by Jim Ludwig definitely did not have a white rump. It was all black. He did not see any light bars on the wings. The bird came within 50 yds of the ship in good light. It flew like a Harcourt's Storm Petrel and was about the same size, perhaps a trifle larger.
January 4--Pacific Ocean, 2nd day out Oahu, Hawaiian Islands

2 birds were seen today, 1st at 1426, and second at 1445. The first was flying SSE, the second, NNW.

January 5--Pacific Ocean, 3rd day out Oahu, Hawaiian Islands

A total of 7 birds were seen today. 3 were sitting in the water with a wedge-tailed Shearwater and flew up as ship approached. 1 was flying with 2 Wedge-tails in a scattered non-feeding mixed flock.

2 others were watched for several minutes and both stayed together until they were out of sight.

January 6--Pacific Ocean, 4th day out Oahu, Hawaiian Islands

2 individuals were seen ( ). Both were alone and both were seen after 1500 hours.

January 9--Pacific Ocean, 7th day out Oahu, Grid Area

1 bird seen today at 1208 by the man on watch.

January 10--Pacific Ocean, 8th day out Oahu, Grid Area

One unidentified storm petrel seen by watch.

January 13--Pacific Ocean, 11th day out Oahu, Grid Area

3 individuals seen today. One bird observed to sit on the water.

February 4--Pacific Ocean, 2nd day out Oahu, Hawaiian Islands.

1 individual seen at 1537 flying SW. One unidentified storm petrel at 1048 appeared to be trailing its feet in the water.

February 5--Pacific Ocean, 3rd day out Oahu

3 birds seen at 0910 and 0959. 2 birds definitely flying together. Other bird was sitting on water when first observed. On the water these birds ride very high.

February 8--Pacific Ocean, Grid Area SW Johnston Island.

One bird seen at 1519 flying north.
February 11--Pacific Ocean, Grid Area SW Johnston Island

One bird seen at 1320 flying SW.

Pacific Ocean, Grid Area SW Johnston Island

February 13

1 bird at 1057 flying NNW.

February 14

1 bird at 1147 flying W.
August 3—ca. 2 mi. out Pearl Harbor (S and W)

We have been seeing both species off and on all the time we have been at sea. The Red-tailed Tropicbird seems to be the most abundant.

The White-tailed has a call that sounds like a high-pitched but throaty "kik".

The Red-tailed has a harsher and somewhat lower call somewhat like "keck" which is often given along with another shorter and lower note making a double call. I have not heard the White-tails giving a double call.

Saw 2 adult Red-tails accompanied by a first year bird (lighter bill color, much blackish on wings, no long deck feathers). Evidently a family group since they stayed together.

In the water the tropicbirds ride high with head held erect, almoststarched over back, and tail held up so as no part touched the water.

At 1207 saw a white-tail sitting in water on starboard side close to ship. As we approached it got up and flew away in direction of boat and landed again we caught up with it at 1218 on port side.

August 8—Number 0341

Collected two red-tailed Tropicbirds. Ovary = 15 X 8 mm. longest ova 1 1/2 X 1 1/2 mm.

Number 1. Juv. ♀ almost through the first pre-basic molt (Post. Juv.)

Soft part color:

1. base of bill yellow, rest orange red with black marks through nostrils.

2. Tarsus and lower 1/4 foot light blue, outer 3/4 foot including toenails black.

Molt:

<table>
<thead>
<tr>
<th>1. Primaries:</th>
<th>Left</th>
<th>Right</th>
</tr>
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<tbody>
<tr>
<td>Number 1</td>
<td>new</td>
<td>new</td>
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</table>
Tropicbirds

Number 2  
Left new  Right new

Number 3  
new new

Number 4  
1/3 base in sheath  remnant of sheath at base

rest old  old

2. Secondaries:

Numbers 1-12  
new new

rest old  old

3. Body: light general molt

4. Tail: all new or almost complete, 2 not yet out of sheaths.

Deck Pair = 1/5 to 1/4 grown

Number 0342

Number 2 Juv. ♂ just beginning first pre-basic (Post Juv.) molt. Testes=21 X 10 mm.

Soft Part Color:

1. upper mandible=black back to nostril light blue around base

2. lower mandible=black at sides and tips, yellow bottom, light blue at base

3. Tarsus and lower 1/4 foot light blue, outer 3/4 foot and nails=black

Molt:

1. Primaries

Number 1  
Left completely in sheath  Right new

Number 2  
new  3/4 in sheath

Number 3  
1/2 out of sheath  3/4 in sheath

2. Secondaries

Number 1-? new, rest old

3. Body  very light general body molt, just begun

4. Tail  all old except 1 of deck pair which is 1/2 out of sheath (red tinged)  
other deck feathers old
September 6--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

0757: Two birds flew over ship in company with each other and both were collected.

Number 0354 (Field number)

Imm. ♂ [7 mm.]

wt.=333 gms.; wing=150 mm; tail=332 mm.; cul.=44.7 mm.; tarsus=21.5 mm.; midtoe=34.4 mm.;
bill light greenish yellow with black hash mark from nostril to base; legs whitish with pale blue-gray areas. Outer 4/5 front black. Iris very dark, mouth lining whitish. Light fat.

Molt:

tail: right deck=1/3 in shaft.

rest new except neck, right part in sheath

wing: 8th primary 1/2 length

8th primary covert in sheath

5th primary covert 1/2 grown, trace of sheath

6th secondary and covert in sheath

body: very light general body molt

Number 0355 (field number)

Imm. ♂ [7.5 mm.]

wt.=339 gms.; wing=252 mm.; tail=316 mm.; cul.=46.4 mm.; tarsus=20.1 mm.; midtoe=37.7 mm.;
Bill very pale bluish yellow with black hash mark from nostril to base. Legs whitish with pale bluish gray areas, outer 4/5 foot black, iris very dark, mouth lining whitish. Light fat.

Molt:

tail: deck pair=1 old and 1 in sheath

two outer look newest, next 3 pair notched

wings: 8-11 old, rest new

body: light molt on breast and flanks
January 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

2 individuals were seen today, both were apparently full adults with very long tails. Neither bird appeared to be very curious about the ship as neither circled around it. This is unusual as almost all others we have seen since August have circled the ship many times.

January 7--Pacific Ocean, 5th day out Oahu, Hawaiian I.

3 individuals seen today. Apparently these birds were adults, and none of them was curious enough to come in close to the ship.

February 13--Pacific Ocean, Grid Area SW Johnston I.

One bird at 0925 flying SE at 60'.

February 16--Pacific Ocean

One bird at 0731.
January 6--Pacific Ocean, 4th day out Oahu, Hawaiian I.

One bird seen at 1435 flying 70' above the water it flew in front of the ship and was seen again at 1447 sitting on the water.

January 7--Pacific Ocean, 5th day out Oahu, Hawaiian I.

5 individuals seen today, 1 collected. A bird seen early this morning which was probably of this species, would every once in a while appear to falter in the air, side slip a little as if making a false start at diving into the water.

January 8--Pacific Ocean, 6th day out Oahu, Grid Area

2 individuals today. 1 was a sub-adult about 250' up and the other was only 40' up. Both circled the ship.

January 9--Pacific Ocean, 7th day out Oahu, Grid Area

1 adult bird (?) collected today.

January 10--Pacific Ocean, 8th day out Oahu, Grid Area

4 birds seen today, mostly adults.

January 11--Pacific Ocean, 9th day out Oahu, Grid Area

6 birds seen today.

4 birds seen today at 0825 (all collected)! Two adults were first seen making a series of false dives each time ending up lower to the water until they were only 20-30' above the water. At one point these two adults, while high in the air, make upward glides and hovered at the top of each glide. These two remained together. When one was shot (♂ with enlarged testes) the other hovered over it for over 15 minutes. This bird was an ad. ♀ (ovary minute). The other two birds were Imm. ♀♀.

January 12--Pacific Ocean, 10th day out Oahu, Grid Area

A total of 3 birds seen today. Two were observed by Charles Noteboom at 0210 this morning, flying around the ship’s lights.

January 13, 1964--Pacific Ocean, 11th day out Oahu, Grid Area
1 bird seen today.

January 17--Pacific Ocean, 15th day out Oahu, ca. 2 days NE Johnston

1 bird at 0854.

February 6--Pacific Ocean, 4th day out Oahu

One bird circles ship at 1223.

February 7--Pacific Ocean, 1 day SE Johnston Island

6 birds observed today.

One bird observed feeding at 0844. Made at least 6-10 dives, 2 from at least 100 yds. up adn the bird half closed its wings steering with wings and tail.

Did not break fall completely submerged in water with great splash, but did not remain in water for longer than 2 seconds.

A series of shorter dives were also made. One bird after starting its dive altered its direction to more of an incline and speeded down evidently having fish in sight at all times.

It was noted to check itself in mid-dive several times but this appeared to be due to movement of prey rather than trying to reduce speed on part of bird.

February 8--Pacific Ocean, Grid Area SW Johnston Is.

2 birds seen today. One was seen feeding in front of rain squall as the squall caught up it sat on the water and was not seen to get up as squall surrounded it.

February 10--Pacific Ocean, Grid Area SW Johnston Is.

2 individuals observed today.

February 15--Pacific Ocean, Grid Area SW Johnston Island

One bird at 1127 running in front of rain squall.

February 16--Pacific Ocean

3 birds. 2 at 0749 feeding on flying fish and one at 1012.

March 3--Pacific Ocean, 2nd day out Oahu

One bird at 1110, 50-75'; dove briefly to water level once.
January 6—Pacific Ocean, 4th day out Oahu, Hawaiian I.

One adult was seen at 0752 flying SE.

January 7—Pacific Ocean, 5th day out Oahu, Hawaiian I.

3 individuals seen today. One bird at 0938 was fishing by diving into the water from heights of ca. 10-20 feet by making shallow passes over the waves. It would plunge bill first into a school of flying fish.

The Bird at 1555 flew around the ship, but never too close, and on 2 occasions it settled into the water near a box that had been dumped overboard earlier.

January 8—Pacific Ocean, 6th day out Oahu, Grid Area

1 bird at 0652 milling and feeding on flying fish, calling as diving.

January 9—Pacific Ocean, 7th day out Oahu, Grid Area

Two birds at 0715 flying together. One sat on the water for 20 seconds.

January 10—Pacific Ocean, 8th day out Oahu, Grid Area

1 Bird (ad) seen today, at one point it came within 100 yds of an Imm. Red-footed Booby—no interaction.

January 11—Pacific Ocean, 9th day out Oahu, Grid Area

2 birds seen late in day both adults. One bird collected was sitting on water and flew up to inspect the ship. 2nd bird flew around ship after sunset as if trying to land.

January 12—Pacific Ocean, 11th day out Oahu, Grid Area

2 birds seen today, 1 collected.

January 13—Pacific Ocean, 14th day out Oahu, ca. 1 day NE Johnston I.

1 adult followed ship for a short while.

January 16—Pacific Ocean, 15th day out Oahu, ca. 2 days NE Johnston

1 bird in with feeding flock of Sooty and Fairy Terns.

February 6—Pacific Ocean, 4th day out Oahu

4 birds seen today, 1 in flock of Sooty Tern and Red-footed Boobies.
2 birds together at 1025 at one point sat together on the water.

February 10--Pacific Ocean, Grid Area SW Johnston Island.

1 sub-adult bird seen at 1715 and 1737 hours.

February 11--Pacific Ocean, Grid Area SW Johnston Island

1 sub-adult (collected) and 1 imm. seen today. The imm. was observed to dive, spiralling almost straight down from ca. 40' without breaking speed, then remained on water for some time. The first bird was observed to fly together with an Immature Red-footed Booby for some time. The Red-foot usually if not always followed the masked.

February 13

1 adult at 0924 flying NE at 30'

February 15

1 adult collected at 1348.

February 16--Pacific Ocean

One adult sitting on a piece of drift wood at 1814.

March 3--Pacific Ocean

One bird at 1051 in with dispersing flock of terns.
January 3—Pacific Ocean, 1st day out Oahu, Hawaiian Is.

3 individuals were recorded toady. One was seen feeding near entrance to Pearl Harbor.

January 8—Pacific Ocean, 6th day out Oahu, Grid Area

One possible Imm. seen today but identification not positive.

February 3—Pacific Ocean, 1st day out Oahu, Hawaiian I.

3 individuals observed. One sitting on a buoy at entrance to Pearl Harbor.

February 5—Pacific Ocean, 3rd day out Oahu

1 at 1658, circled ship once, appeared to be food searching other than actually heading some place.

February 12—Pacific Ocean, near Johnston-Sand Island

2 birds flying together at 1621. Quite close to Johnston Island.

March 2—Pacific Ocean, 1st day out Oahu

One bird sitting on a buoy at entrance to Pearl Harbor.
January 4—Pacific Ocean, 2nd day out Oahu, Hawaiian I.

One individual was seen today at 1229 flying ca. 30’ over the water and heading ENE.

This was almost an adult bird but still had some brownish throughout tail.

January 6—Pacific Ocean, 4th day out Oahu, Hawaiian I.

6 birds seen today. One adult, a subadult and 3 juveniles. 1 juv. and 1 subadult were collected.

From 1727 until 1737 there were 3 birds flying around together. They were always very close together. 1 adult, 1 subadult and 1 juvenile. The adult and the juvenile were seen at 1716 and were probably joined by the subadult shortly after we first lost sight of them. These three birds were flying around at the same time a subadult booby was collected but they were quite far away from this bird.

About 1810 just before it was too dark to see, a booby that was probably of this species spent 5 minutes trying to land on the ship. It made repeated runs of 2 high masts on the ship.

January 7—Pacific Ocean, 5th day out Oahu, Hawaiian I.

2 Imm. collected. One of them (1402) had a flying fish in its bill when it was picked up and had probably tried to regurgitate it.

January 8—Pacific Ocean, 6th day out Oahu, Grid Area

3 birds seen today, 2 at 1230 and one at 1817.

The one at 1817 circled over the ship several times as if trying to land and roost on the rear mast.

January 9—Pacific Ocean, 7th day out Oahu, Grid Area

10 birds seen today. 3 collected.

January 10—Pacific Ocean, 8th day out Oahu, Grid Area

4 birds seen today, 3 Imm. and 1 adult.
January 11--Pacific Ocean, 9th day out Oahu, Grid Area

6 birds seen today. 4 were in ( ) flocks with Pterodroma.

January 12--Pacific Ocean, 10th day out Oahu, Grid Area

8 birds seen today. This continues to be the most abundant bird in the area. Just before sunset there was a group of 1 nearly ad. and 3 Imm sitting in the water; once they flew up, but soon settled down again. They will probably spend the night together on the water.

January 13--Pacific Ocean, 11th day out Oahu, Grid Area

2 birds seen today.

January 14--Pacific Ocean, 12th day out Oahu, Grid Area

2 birds (1 ad and 1 Imm) seen today.

January 15--Pacific Ocean, 13th day out Oahu, Johnston Island at 0230

3 birds seen today, all together 1 ad. and 2 Imm. flying together.

January 16--Pacific Ocean, 14th day out Oahu, ca. 1 day NE Johnston I.

4 birds observed today. One bird was observed in the evening catching flying fish that were scared up by the ship.

February 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

2 birds observed just before sunset, both subadults flying around ship trying to land. One actually landed after sunset.

1 bird caught shortly after (ca. 1930) dark was roosting on railing of ship. Caught and banded and released. Head tucked under back feathers.

February 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

One bird (possibly same one banded last night,), left roosting place on rail at 0505 a.m. in response to presence of observer.

One adult seen at 0559.

February 5--Pacific Ocean, 3rd day out Oahu
One subadult bird roosting on radar tower first observed at 0315 hours and finally flushed at 1430 hours.

About 7 birds seen throughout the day.

**February 6**--Pacific Ocean, 4th day out Oahu

A total of 53 birds seen today. One group of 50+ were in with a feeding flock of Sooty Terns. Most of these ca 42+ were adults. Feeding was done by more of a chasing type of flight how over the water. No high diving was noted.

**February 7**--Pacific Ocean, 1 day SE Johnston Island

12 birds observed today (9 sightings). 4 adults and 6 immatures. One adult feeding with Sooty Terns by shallow dives interspersed with chasing over the surface.

One Immature bird flew around ship after sunset apparently trying to find a roosting spot.

**February 9**--Pacific Ocean, Grid Area SW Johnston Island

2 Immature birds observed today.

**February 10**--Pacific Ocean, Grid Area SW Johnston Island

6 individuals seen today, 1 collected at least 2 adults and 3 immature birds

**February 11**--Pacific Ocean, Grid Area SW Johnston Island

3 individuals seen today, 1 was imm. the others? One followed a sub-adult Masked Booby for some time.

**February 12**--Pacific Ocean, near Johnston-Sand Island

9 birds seen outside the strict environs of Sand-Johnston Islands. 1 first year bird collected. Most were flying towards Johnston Island and 6 were in with groups of Sooty Terns heading in the same direction.

**February 13**--Pacific Ocean, Grid Area SW Johnston Island

3 individuals. 2 at 0824 and one at 1136.
February 14

2 individuals; at 1415 and 1 at 1747.

February 15

5 individuals; one tried to land on ship after sunset

February 16--Pacific Ocean

3 individuals at 0635, 1808 and 1814.

March 2--Pearl Harbor, Oahu, Hawaiian Islands

2 individuals seen near entrance to Pearl Harbor. One at 1119 was an adult.

The second, a juvenile, was watched chasing flying fish. When a fish would break the surface, the Booby would dive down and then chase it. Later this Booby was seen chasing Jaegers.

March 3--Pacific Ocean, 2nd day out Oahu

One subadult flew around the ship at 1210.
January 2--Pacific Ocean, 1st day out Oahu, Hawaiian I.

3 birds observed. 1 at 1223 and 2 at 1054.

January 5--Pacific Ocean, 3rd day out Oahu, Hawaiian, I.

7 birds seen today.

All birds were singles, but at 1115 two birds came together and were chasing each other about in the air. Apparently one bird finally dropped (regurgitated) some food and the most aggressive bird caught this before it hit the water. I wonder how after these birds pirate their own species for food.

One individual was over a loose flock of non-feeding birds containing shearwaters and terns.

January 6--Pacific Ocean, 4th day out Oahu, Hawaiian I.

3 individuals were seen, 2 were together. The third bird was associated with a feeding flock of shearwaters and terns.

January 7--Pacific Ocean, 5th day out Oahu, Hawaiian I.

2 individuals seen, both were high in the air and about 2 miles distant.

January 10--Pacific Ocean, 8th day out Oahu, Grid Area

1 ad ♂ collected today with enlarges testes and sperm in the vas deferens. Red gular patch not expanded when seen, but greatly enlarges and deflated.

January 11--Pacific Ocean, 9th day out Oahu, Grid Area

1 ad ♀ over small feeding flock.

January 13--Pacific Ocean, 11th day out Oahu, Grid Area

1 ad ♂ seen today.

January 16--Pacific Ocean, 14th day out Oahu, ca. 1 days NE Johnston I.

1 ad ♀ seen today.

January 17--Pacific Ocean, 15th day out Oahu, ca. 2 days NE Johnston

1 ad ♀ seen today.

January 18--Pacific Ocean, 16th day out Oahu, ca. 100 miles SW Oahu

2 birds seen today one in with flock of Sooty Terns. This bird was not feeding
although the Terns were.

February 3--Pacific Ocean, 1st day out Oahu, Hawaiian Islands

3 birds seen, 2 after sunset--all very high in the air.

February 5--Pacific Ocean, 3rd day out Oahu

2 individuals observed 1 ad & fishing by making acrobatic dives from 30-40 feet, apparently probing bill in water but it never hit the water with anything but the bill. 2nd bird would circle high in the air, then go down and then up again.

February 12--Pacific Ocean, near Johnston-Sand Island

2 single birds seen out over the ocean away from the Island as compared with perhaps several hundred over the island proper and the lagoon.

We can see and identify this species up to 1 1/2 miles and can see them up to 2 miles from the ship. This is maximum and can only be done if you know that they are there and exactly where even then single birds could probably not be seen. 1 3/4 miles is probably maximum range for this species.

February 14--Pacific Ocean, Grid Area SW Johnston Island

1 bird at 1653 ca. 500' in air flying NE.

February 16--Pacific Ocean

5 birds seen today.

One & at 1550 was feeding, picked up something (squid?) off of the water. It hovered over a large object in water which may have been a black fish.

March 2--Pacific Ocean, 1st day out Oahu

One bird at 1430 (ca. 50-60' high).

March 3--Pacific Ocean, 2nd day out Oahu

Two adult & one at 0954 and one at 1235.
March 2--Pearl Harbor, Oahu Hawaiian Islands

Approximately 10 birds were seen sitting on the beach and sand flats at the entrance to Pearl Harbor.
January 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

3 birds were seen, 2 together and 1 alone.

January 18--Pacific Ocean, 16th day out Oahu, ca. 100 miles SW Oahu

1 bird seen today.
August 12--Pacific Ocean, Grid Area off Johnston Island

1253. One Sooty Sighted flying at about 75 feed. It kept trying to fly into the wind, but was constantly pushed back after about 30 seconds. It tried about 4 times then gave up and flew headed SW before the wind. The wind was blowing at 15 knots at this time.

1333. One Sooty being blown SW before the wind which is still at 15 knots. This bird tried about 3-4 times to turn back into the wind, but like the last bird could only stay for about 30 seconds each time.

1429. Flock of 10 Sooty Terns drifting generally to NW, wind has died down. 1' 25' up.

1440. Flock of 20 Sooties 1' 5' up headed E into wind.

1443. 1 S headed N joined flock moving to E.

1451. Flock of 14 W headed W 5-10' up. The wind is now at 10 knots.

Evidently these birds prefer the E direction (which is generally toward Johnston Island) but can only make it when the wind is below 15 knots. 10 knots appears to slow them down and keep them low but they can still fly into it.

January 4, 1964--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

A total of 13 birds were seen today. They were in groups of 2,1,4, and 6.

The group of six was seen between rain squalls and were heading into the wind apparently having trouble making very good time.

January 5--Pacific Ocean, 3rd day out Oahu, Hawaiian I.

A total of 7 birds were seen. All were in 1 group that was part of a loose flock containing wedge-tails, 1 Frigatebirds and 1 Harcourt's Storm Petrel. They were not feeding.

January 6--Pacific Ocean, 4th day out Oahu, Hawaiian I.

10 individuals were seen.
9 were with a feeding flock containing 3 Wedge-tails, and 1 Frigatebirds and one was with a feeding flock of 2 Wedge-tails and 1 Fairy Tern. They were feeding on squid that were breaking the surface.

January 8--Pacific Ocean, 6th day out Oahu, Grid Area

1 bird heard before it got light in the morning.

January 9--Pacific Ocean, 7th day out Oahu, Grid Area

1 seen at 0545 this morning.

January 15--Pacific Ocean, 13th day out Oahu, Johnston I. at 0230

1 bird at 0653 flying south 50-100'.

January 17--Pacific Ocean, 15th day out Oahu, ca. 2 days NE Johnston

Two feeding flocks observed today, 1st flock at 1329 had 50+ Sooties, 8 Fairy Terns and 1 Masked Booby. This flock was feeding in the middle of a heavy rain squall. No flying fish were observed.

The second flock at 1400 had 20 Sooties, 1 Fairy Tern, and 2 Wedge-tails. This flock was feeding at edge of a rain squall (same one as above) but was sometimes out of it and sometimes inside it. As above no flying fish were observed.

Watching two birds flying together in light rain both were flying low over the water. They began a series of movements as follows:

Abruptly they would pull slightly up in the air and hesitate for a few seconds. While hesitating they would fluff out their feathers and shake their whole body at the same time. This was done 3 times by one bird and 2 times by the other. Since it was raining lightly and this act was repeated it would seem as if appeared to the observer that they were bathing rather than shaking off excess water.

January 18--Pacific Ocean, 16th day out, ca. 100 miles SW Oahu

157 birds seen today.

3 feeding flocks, 1 of 85+ birds and one of 26+ birds and one of 25+ birds

One non-feeding group of 15+ birds.
February 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

21 total individuals in groups of 7, 6, 3, 2, 2, and 1. The flock of 6 were feeding on small fish (not flying fish). The small groups were all flying to the N, NW, or NE, probably towards Oahu.

February 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

111 total individuals in groups of 63, 11, 11, 9, 22, and 12 singles. Two birds were seen in association with 1 Fairy Tern. In general most appeared to be heading NE.

February 6--Pacific Ocean, 4th day out Oahu.

2 flocks, 1 of 40+ and 1 of 100+ birds. The flock of 100+ had about 50+ Red-footed Boobies in with them and 1 Masked Booby. These were actively feeding. As ship approached this flock it essentially split into two groups of 40-50 birds each. Upon pressing these flocks the Sooties finally all rose into air and then departed from area. Many of the birds became scattered into smaller groups.

February 7--Pacific Ocean, 1 day SE Johnston Island

One flock of 7 feeding at 0708 with 1 Red-footed Booby.

February 12--Pacific Ocean, near Johnston-Sand Island

A total of 363 seen between sunrise and sunset. Thousands were seen over Sand Island proper. From 1600 hours on through 2400 hours these birds were constantly about the ship, most heading in towards Johnston Island. A vast majority of these birds seen flying toward Johnston Island (ca. 340+) were flying very low over the water (ca. 5-10 ft.). They were at times accompanied (3 times) by Red-footed Boobies.

At 2305 hours there were ca. 10 birds flying about the ship in a heavy rain squall. The rain appeared to have no effect on them although the lights we used appeared to scare them away. Several appeared to be confused by the lights. No feeding activity, was noticed.
We found on checking that at 1/2 miles we can identify these birds to species and can see them as "terns" up to 1 mils, and if there is a flock they can be seen up to 1 1/2 miles away.

February 15--Pacific Ocean, Grid Area SW Johnston Island

One flock of 12 flying south low over the water.

February 16--Pacific Ocean

4 birds (1 and 3) seen today.

March 2--Pacific Ocean, 1st day out Oahu

ca. 57 birds throughout the day. One flock of 40+ was feeding. Many of these feeding birds were being chased by Pomaarine Jaegers.

March 3--Pacific Ocean, 2nd day out Oahu

241 birds. Flocks of 85+; 55+; 13; 15; 32+; and 5.

Several flocks had Hawaiian Noddy Terns mixed in with them. Most of these birds were seen before 1200. The predominant direction of flight seemed to be NE towards Oahu.
February 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

1 bird flying SW at 1609.
January 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

One bird seen at 1010 flew around the ship once and then left. Flight pattern is quite different from that of Common Noddy Tern, being much lighter with faster and more rapid wing beats. It resembles a strong Storm Petrel flight.

March 3--Pacific Ocean, 2nd day out Oahu

9 birds altogether. Most seemed to be associated fairly closely with Sooty Terns. Several actually in the same flock feeding.
February 5--Pacific Ocean, 34d day out Oahu

1 bird seen flying fairly steadily towards Johnston Island (SW).
January 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

One individual was seen at 1537 flying ENE. It did not stay around for more than one minute.

January 6--Pacific Ocean, 4th day out Oahu, Hawaiian I.

One bird was seen feeding on squid with 2 Wedge-tails and 1 Sooty Tern at 1236.

January 17--Pacific Ocean, 15th day out, ca. 2 days NE Johnston

12 birds seen today. Most were in feeding flocks with Sooty Terns and 2 Wedge-tailed Shearwaters.

This species remained closer to the water for longer stretches of time than did the sooties. They never went up in the air as high nor as often as the sooties. They also follow a straighter path than the sooties. Not making as many circles and cutbacks.

January 18--Pacific Ocean, 16th day, ca. 100 mi. SW Oahu

1 bird in with feeding flock of Sooty Tern.

February 4--Pacific Ocean, 2nd day out Oahu, Hawaiian I.

8 individuals seen today. Most were following near Sooty Terns. One actually was in company with 2 Sooty Terns. One was observed feeding. All were flying fairly low (ca. less than 30').

February 16--Pacific Ocean

3 birds today, 2 at 1440 feeding and one at 1701. No flying fish observed under 2 feeding birds.

March 2--Pacific Ocean, 1st day out Oahu

One bird in with feeding flock of Sooty Terns.

March 3--Pacific Ocean, 2nd day out Oahu

2 individuals, one at 0640 and one at 0645.
January 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

These birds have been following behind the ship all day. The highest count being 12 at 1405 hours.

Each bird appears to have a different plumage pattern. Quite a few were adults, but many were sub-adults. Both dark phase and light phase (extremes of both) were present in about equal numbers (light phase may have been slightly more predominant). These birds were attracted to the garbage thrown overboard, but were occasionally seen in front of the ship. They were attracted to bits of white paper thrown over the side of the ship.

None were observed to attract the Albatross or each other.

Many were noticed to sit in the water.

Collected 1 Imm. ?.

January 18--Pacific Ocean, 16th day out, ca. 100 mi. SW Oahu.

One dark phase bird seen today, circled ship a few times, then departed.

February 3--Pacific Ocean, 1st day out Oahu, Hawaiian I.

At least 4 birds around. 4 (2 light phase and 2 dark phase) observed at 1254.

These birds have been following the ship all day as have the Albatross. They often fly off and sit quietly in the water for extended periods of time.

One was observed to scratch its head while in flight. No parasite behavior noted.

Dark phase birds have been more noticeable.

March 2--Pacific Ocean, 1st day out Oahu.

The largest number seen at any one time was 21. This was when the birds gathered at garbage that had been dumped overboard. Most of these birds were adult light phased individuals. A few were adult dark phase and one juvenile bird was seen.

At 1818 a feeding flock of Sooty Terns was found. There were at least 10 Jaegers mixed in this flock chasing the terns.