

18 Feb
Miles 61

5.8 hrs

| | | |
|-------|----|-------|
| LWRSP | 2 | .03 |
| WRSP | 8 | .13 |
| STRT | 1 | .02 |
| RTTB | 1 | .02 |
| <hr/> | | <hr/> |
| | 12 | .19 |

| |
|-------|
| 1625 |
| 1200 |
| <hr/> |
| 425 |

| |
|-------|
| 1130 |
| 1007 |
| <hr/> |
| 123 |

| |
|-------|
| 16 |
| <hr/> |
| 45 |

19 Feb 68

hrs 7.1

Miles 75

20

LWRSP

2

.03

WRSP

10

.13

SP

4

.05

RTTB

1

.01

R. Phel

2

.03

19

.25

627

756

19 [623]



20 Feb 68

7.1 hr
80 mi

| | | |
|------------|-------|-------|
| Momy Shear | 1 | .01 |
| LWRSP | 4 | .05 |
| WRSP | 6 | .08 |
| SPot | 3 | .04 |
| BFB | 1 | .01 |
| Phul sp | 1 | .01 |
| Bird sp | 2 | .02 |
| | <hr/> | <hr/> |
| | 18 | .22 |

89

80

72

36

31

39

285

0.7 hr
2.7
3.7

7.1 hr.

2
31
42

21 Feb
76 min
6.7 hr

LWRSP 10 .13

~~Wilson's sp.~~

WRSP

15

.19

ST Pet

5

.06

Booby sp?

1

.01

R Phul

2

.03

| | |
|----|-----|
| 33 | .43 |
|----|-----|

27 Feb. 68

New Zealand Shear 2 .03

Wedge tail 2 .03 (14-15)

Hernadoc 1 .01

JFP 8 .11 75 mi

P. externa 2 .03

Small pt. 1 .01 7.3 hr 268

Shear/Pet 16 .21 74

LWRSP 5 .07

WRSP 20 .27

St. Pet 9 .12

RTTB 2 .03

Blue-footed 1 .01

~~Blue-footed~~

Red-footed 1 .01

Sooty Tern 26 .35

96 1.28

15
2
3
3
3
7.8 mi

1630

1715

315

23 Feb 68

| | | |
|------------|------------------|------------|
| WTS | - 2 | 117, 1 det |
| PIP/tahiti | 6 | .03 |
| JFP | - 7 | .08 |
| WNP | - 1 | .11 |
| P. externa | 4 | .01 |
| Shear/Pet | - 11 | .06 |
| LWRSP | - 5 | .15 |
| WRSP | - 9 | .07 |
| STPet | - 8 | .13 |
| BTTB | - 4 5 | .11 |
| Sooty tern | - 3 | .07 |
| Tern sp. | - 2 | .04 |
| | <u>64</u> | <u>.90</u> |

6.4 hr

71 mi

| | |
|------------|----|
| 10 | 12 |
| 26 | |
| <u>113</u> | |

385

| | |
|-----|---|
| 49 | 3 |
| 21 | |
| 113 | |

24 Feb 68

| | | | |
|-----------------|-------|------|---------|
| WTS | 4 | 2.17 | 2.17 |
| PIP/Tahiti | 1 | .07 | 50 mi |
| JFP | 4 | .02 | |
| P. externa | 3 | .07 | |
| | | .05 | 5.6 hr. |
| Shear/Pat | 2 | .03 | |
| Harcorts SP | 6 | .07 | |
| WRSP | | | |
| st Pat | 1 | | |
| Sooty tern | 40 | .71 | |
| | <hr/> | | |
| | 61 | 1.09 | |

25 Feb 68

Miles. 83

Hrs. 2.0

| | | |
|-------------|-------|-------|
| JFP | 1 | .01 |
| Harcorts SP | 7 | .08 |
| LWRSP | 5 | .06 |
| WRSP | 2 | .02 |
| SHPA | 1 | |
| | <hr/> | <hr/> |
| | 16 | .19 |

86

| | |
|-------|----|
| 09 | 9 |
| 33 | 34 |
| 38 | 40 |
| <hr/> | |
| 80 | |

Whale 1

Turtle 1

26 February 68

Miles 71
hrs. 6.3

0.9 10
3.3 437
2.1 24
6.3 71

| | | |
|---------------|-------|---------|
| WTS | 1 | dis .01 |
| Shear/Pet | 1 | |
| Harcourt's SP | 1 | |
| WRSP | 2 | .03 |
| Sooty Tern | 1 | |
| R Phul | 1 | |
| | <hr/> | <hr/> |
| | 7 | .10 |

27 February 68

Miles 70

| | | | | | |
|---------------|-----------|------------|---|-----|-----|
| Sm Pterodroma | 1 | .01 | # | Hrs | 6.2 |
| L WISP | 3 | .04 | | | |
| Harcorts SP | 6 | .08 | | | |
| WISP | 2 | .03 | | | |
| BTTB | 1 | SAd coll. | | | |
| | | .01 | | | |
| | <u>13</u> | <u>.18</u> | | | |

Whales 2

Porpoise 8 ± 2

| | |
|-----|-----|
| .9 | 10 |
| 2.8 | 32 |
| 2.5 | 28 |
| 5.2 | 40 |
| | 18 |
| | 158 |

28 February 68

Miles 81
Hrs. 7.7

| | | |
|---------------|-------|-------|
| Collared Pet. | 2 | .02 |
| Shear/Pet. | 2 | .02 |
| Harcorts SP | 1 | .01 |
| Sooty Tern | 143 | 1.76 |
| Fairy Tern | 4 | .05 |
| R. Phul | 4 | .05 |
| Phul. SP. | 2 | .02 |
| | <hr/> | <hr/> |
| | 158 | 1.95 |

81
2
73
69
4

30

77

29 Feb 68

Miles 67

Hrs 6.3

Harcotts SP 1 .01

St. Pet 1 .01

Fairy tern 1 .01

3 .04

1 March 68

Miles 79

Hrs 7.3

| | | |
|-----------------|-------|-------|
| Harcourt's SP | 9 | .11 |
| LWRSP | 1 | .01 |
| WRSP | 2 | .025 |
| st Pet | 3 | .04 |
| BTTB | 2 | .025 |
| Frigatebird SP. | 1 | .01 |
| Sooty Tern | 2 | .025 |
| | <hr/> | <hr/> |
| | 20 | .25 |

0.9

3.0

3.4

7.3

2 March 68

Miles 85

Hrs 7.2

| | | | |
|--------------|-----------|------------|----|
| Collared Pet | 1 | .01 | 24 |
| P. externa | 1 | .01 | 52 |
| Shear SP. | 1 | .01 | 13 |
| Harcots SP | 1 | .01 | |
| WRSP | 2 | .02 | |
| BTTB | 4 | .05 | |
| Tropi. SP. | 1 | .01 | |
| BFB aced | 1 | .01 | |
| Frigate SP. | 1 | .01 | |
| Sooty Tern | 14 | .19 | |
| | <u>29</u> | <u>.34</u> | |

3 March 68

| | | |
|-------------------|-----------|------------|
| WTS | 4 | .05 |
| Sm Pt. | 3 | .04 |
| Shear/Pet | 3 | .04 |
| WRSP | 1 | .01 |
| WTTB | 2 | .025 |
| RTTB | 5 | .06 |
| Frigatebird | 2 | .025 |
| Pom Jaeger | 3 | .04 |
| Jaeger | | |
| | <u>23</u> | <u>.29</u> |

All RIS # Hrs 8.0
Miles 86

4 March 68

| | | |
|--------------|-------|-------|
| Collared Pet | 1 | .01 |
| Murphy Pet | 2 | .02 |
| PIP/Tabati | 1 | .01 |
| ST Pet | 1 | .01 |
| BTTB | 4 | .05 |
| WTTB | 1 | .01 |
| | <hr/> | <hr/> |
| | 10 | .11 |

Miles 84

hrs 7.4

5 March 68

Miles 86

Hrs 9.0

B/lin M

| | | | |
|---------------|----------|------------|-----|
| PJP | 1 | 14.01 | |
| Tropi-bird | 2 | .02 | 7.9 |
| B Faced B. | 2 | .02 | 2.5 |
| Phalarope SP. | 2 | .02 | 4 |
| | <u>7</u> | <u>.08</u> | |

6 March 68

Miles 89

Hrs 9.6

103
30
47
06

96

| | | | |
|---------|-------|------|---|
| RTTB | 1 | .011 | |
| B. Phul | 2 | .022 | 7 |
| | <hr/> | | |
| | 3 | .033 | 6 |

6
47

7 March 68

Miles 57

BTTB 6 .10

Hrs 5.7

6

8 March 68

| | | |
|-------------|----------|------|
| WRSP | 1 | .013 |
| WTS | 2 d45 | .031 |
| PIP/Telneti | 1 | |
| RTTB | 3 | .047 |
| B Faced B | 1 | |
| Sooty Tern | 40 | .63 |
| B. Phoebe | 1 | |
| Jays SP | 1 | |
| | <hr/> 50 | .79 |

Miles 63
Hrs. 5.9

63
3.2
5.9



9 March 68

Miles 72

Hrs 6.2

| | | |
|------------|---|------|
| Shear/pet | 2 | .027 |
| WRSP | 1 | .013 |
| BTTB | 1 | |
| Pom Jaeger | 1 | |
| Jaeger sp? | 2 | |
| Sooty tern | 1 | |
| Fairy tern | 1 | |
| <hr/> | | |
| | 9 | .125 |

10 March 68

Miles 74
Hrs 7.5

| | | |
|------------|-------|------|
| St Pet | 1 | .013 |
| B Phal | 3 | .040 |
| SKUA | 1 | |
| Jugr SP | 1 | |
| Sooty Tern | 25 | .337 |
| Fairy Tern | 2 | .027 |
| | <hr/> | |
| | 33 | .446 |

11 March 68

Miles 77

| | | | |
|--------------|----------|--------|--------------------------|
| WTS | 1 | dk 013 | # Hrs 7.1 7.1 |
| Collared Pet | 1 | | |
| DK-R. Pet | 1 | | |
| WRSP | 1 | | |
| ST Pet | 1 | | |
| Sooty Tern | 4 | .051 | |
| Fairy Tern | 3 | .039 | |
| | <hr/> 12 | 0155 | |

12 March 68

Miles 107

Hrs 11.0

| | | | |
|--------------|-------|----|------|
| WTS | 1 | dk | .009 |
| Collared Pet | 1 | | |
| JFP | 1 | | |
| Shear/Pet | 2 | | .018 |
| LWRSP | 1 | | |
| WRSP | 1 | | |
| Jueyrsp | 2 | | |
| | <hr/> | | |
| | 9 | | .084 |

12.4 d
11.0

13 March 68 # Miles 99

Hrs 10.6

| | | |
|--------------|-------|------|
| WTS | 2 dks | .02 |
| Collared Pet | 3 | .03 |
| JFP | 2 | |
| Shear/Pet | 1 | |
| LWRSP | 2 | |
| WRSP | 6 | .06 |
| STPet | 2 | |
| Sooty Tern | 24 | .24 |
| Fairy Tern | 4 | .04 |
| B Phal | 1 | .01 |
| | <hr/> | |
| | 47 | .474 |

31

6

46

98

100

14 Maudr 68

Miles 71

Hrs 11.3

| | | |
|---------------|----------|-------------|
| JFP | 1 | 014 |
| LWRSP | 2 | .028 |
| Harcourt's sp | 2 | 591 |
| WRSP | 42 | |
| St. Pet. | 7 | .098 |
| B. Phul | 7 | |
| Phul sp. | 3 | .042 |
| Sooty Tern, | 14 | 197 |
| | <hr/> 78 | <hr/> 1.098 |

65

24
30

53

15 March 68

Miles 99

Hrs 10.2

| | | |
|---------------|----|------|
| Sooty Shear | 1 | .01 |
| JFP | 2 | .02 |
| Sm PT. | 2 | .02 |
| Shear/Pet | 5 | .05 |
| LWRSP | 12 | .12 |
| Harcourt's SP | 15 | .15 |
| GP SP | | .07 |
| WRSP | 46 | 4.64 |
| ST Pet | 27 | .27 |
| R. Phoebe | 7 | |
| Phoebe SP | 2 | |
| Sooty tern | 88 | 8.88 |
| B-faced Booby | 1 | |

199 2.01

16 March 68

Miles 109

Hrs 11.2

| | | |
|------------|-------|-------|
| Shear/Pet | 1 | .009 |
| WTS | 1 da | |
| JFP | 1 | |
| Kermadec | 1 | |
| LWRSP | 12 | .11 |
| Galapagos | 1 | |
| Harcorts | 2 | .018 |
| Blacks | 1 | |
| WRSP | 69 | .633 |
| St. Pet | 11 | .109 |
| Sooty tern | 13 | .119 |
| | <hr/> | <hr/> |
| | 113 | 1.036 |

17 March 68

Miles 118

Hrs 11.7

| | | |
|---------------------|----|------|
| Harcorts... | 3 | .025 |
| GPSP... | 8 | .067 |
| LWRSP: | 1 | .054 |
| WRSP | 15 | 127 |
| STPt | 7 | .059 |
| R Phul | 31 | .262 |
| RP, TB | 1 | |
| B-faced B | 4 | .033 |
| BFB | 1 | |
| Booby SP | 1 | |
| Booby/Gull | 1 | |
| Swallow-tailed Gull | 24 | .203 |
| Frigate SP | 1 | |
| Pom. Tanager | 1 | |
| Bird sp | 1 | |

100 .847

520
 1180
 720
 205
 335
 55

19 March 68

Miles 121

Hrs 10.2

| | | |
|----------|-----------|-------------|
| JFP | 1 | .0082 |
| GPSP | 31 | .250 |
| WRSP | 13 | .107 |
| STPA | 2 | .016 |
| R Phul | 7 | .058 |
| RBTB | 1 | |
| S-T Gull | 5 | .041 |
| | <u>60</u> | <u>.645</u> |

20 March 68

Miles 112
Hrs 10.6

| | | |
|--------------|-----|-------|
| Collared Pet | 1 | .009 |
| Murphy's Pet | 1 | |
| Black Pet | 1 | |
| Shear/Pet | 5 | .045 |
| Harems SP | 1 | |
| WR SP | 9 | .090 |
| ST Pet | 6 | .053 |
| R Plul | 4 | .035 |
| Sooty Tern | 181 | 1.616 |
| Frigate SP | 6 | |
| Bird sp. | 1 | |

216 1.92

12
3 130
72
20

21 March 68

Miles 73

Hrs 6.4

| | | |
|------------------|-----|-------|
| Sooty Shear | 1 | .014 |
| JFP | 2 | .027 |
| Collared Pet | 2 | |
| Shear/Pet | 10 | .136 |
| W-Thst Pet | 2 | |
| LWRSP | -1 | |
| WRSP | 2 | |
| WfSP | 1 | |
| St Pet | 2 | |
| GPSP | 1 | |
| R. Phel | 1 | |
| Parasitic Jaeger | 1 | |
| Sooty Tern | 201 | 2.753 |
| Fairy Tern | 2 | |

229 3.137

73

54

19

22 March 68

Miles 87

Hrs 8.3

| | | |
|-------------|-------|------|
| JFP | 1 | .011 |
| Colored Pet | 5 | .057 |
| LWRSP | 2 | .023 |
| WRSP | 20 | .229 |
| St Pet | 2 | |
| R-Plub | 2 | |
| Jug sp | 1 | |
| Sooty Tern | 42 | .483 |
| | <hr/> | |
| | 75 | .862 |

1.7
2.5
4.2

23 March 68

Miles 83

Hrs 7.7

| | | |
|------------|-------|-------|
| Black Pet | 1 | .012 |
| LWRSP | 8 | .096 |
| WRSP | 11 | .132 |
| SF Pet | 2 | .024 |
| R Phul | 2 | |
| RITB | 1 | |
| Sooty Tern | 6 | .072 |
| Fairy Tern | 1 | |
| | <hr/> | <hr/> |
| | 32 | .385 |

[Signature]

24 March 68

Miles 79

Hus 8.1

| | | |
|----------|-------|-------|
| LWRSP | 13 | .164 |
| OPSP | 2 | .025 |
| WRSP | 13 | .164 |
| stPet | 3 | .038 |
| Bird SP. | 1 | .013 |
| | <hr/> | <hr/> |
| | 32 | .405 |

25 March 68

Miles 113

| | | | | | |
|------------|----|------|-------------|--------|------|
| W.TS | 2 | .017 | (2) + phone | # Hrs. | 10.9 |
| Black Pet | 1 | .009 | | | |
| LWRSP | 13 | .115 | | | |
| YDSP | 2 | | | | |
| WRSP | 48 | .424 | | | |
| st Pet | 9 | .079 | | | |
| N Phal | 1 | | | | |
| RBTB | 1 | | | | |
| Jug SP | 1 | | | | |
| Fairy Tern | 1 | | | | |

79 699

26 March 68

Sooty Shearwater. 3

Miles 61

Audubons Shear. 5

Hrs. 5.6

GPSP

S+Pit

WPSP

Grassquit SP.

Booby SP

B Faced B

BBTB

S+Gulls 19

} Too numerous to
count + keep track of

1
24
2

28 March 68

Males 122
Hvs 11.0

| | | |
|-----------------|----|------|
| Audubons Shear. | 1 | .008 |
| Shear/Pet | 2 | .016 |
| Harcourts SP | 1 | |
| GPSP | 1 | |
| WRSP | 21 | .172 |
| ST Pet | 10 | .082 |
| Phal sp. | 2 | |
| S-T Gull | 1 | |
| May Frigate | 1 | |
| Tweebird? | 1 | |

41 .336

3 April 68

Miles 67

Hrs. 7.0

| | | |
|---------------|----------|------|
| Sooty Shear | 1 | .015 |
| GPSD | 13 | .194 |
| LWBSP | 5 | .075 |
| Harcourt's SP | 2 | .029 |
| WBSP | 2 | |
| St Pet | 3 | .045 |
| B Phul | 1 | |
| | <hr/> 27 | .402 |

4 April 68

Miles 80

Hrs. 7.6

| | | |
|------------------|-------|-------|
| PPP/Tahiti | 4 | .05 |
| Collared Pet | 1 | .012 |
| Sooty Shearwater | 2 | .025 |
| Shear/Pet | 1 | |
| Harcourt's SP | 3 | .037 |
| LWRSP | 10 | .125 |
| GPS | 9 | .112 |
| WRSP | 18 | .225 |
| St Pet | 8 | .100 |
| B Phal | 1 | |
| Frigate SP | 1 | |
| Sooty Tern | 5 | .063 |
| | <hr/> | <hr/> |
| | 63 | .787 |

Turtles 13

5 April 68

Miles 80

Hrs 8.0

| | | |
|-------------|-------|-------|
| WTS | 17 | .212 |
| CFS | 1 | .012 |
| DRP | 1 | |
| Shear/Pet | 4 | .050 |
| LWRSP | 6 | .075 |
| GPSP | 4 | .050 |
| WRSP | 2 | .025 |
| st Pet | 2 | |
| R Phal | 9 | .112 |
| R TT B | 1 | |
| R RB | 3 | .037 |
| B Faced B | 2 | |
| Frigate-Sp. | 9 | .112 |
| Sooty Tern | 39 | .487 |
| | <hr/> | <hr/> |
| | 100 | 1.250 |

6 April 68

| | | | |
|----------------|-------|-------|-------------|
| WTS | 8 | .096 | # Miles. 83 |
| N-2 Shear? | 4 | .048 | # Hrs. 83 |
| Davis Rynd/Pet | 5 | .060 | |
| Shear/Pet | 5 | | |
| GPSP | 5 | | |
| WBSP | 11 | .132 | |
| ST/Pet | 2 | .024 | |
| R Phul | 8 | .096 | |
| 10 Phul | 2 | .024 | |
| RFB | 1 | .012 | |
| Pom Jays | 3 | .036 | |
| Jays SP? | 2 | | |
| | <hr/> | <hr/> | |
| | 56 | .765 | |

7 April 68

Miles 83

Hrs 7.8

| | | |
|------------|-----------|-------|
| GPSP | 1 | .012 |
| WTS | 4 | .048 |
| Shear/Pet | 3 | .036 |
| Black Pet | 1 | |
| WRSP | 6 | .072 |
| ST Pet | 2 | .024 |
| RBTB | 3 | |
| B Faced B | 97 | 1.168 |
| RFB | 61 | .735 |
| Bowls sp | 2 | |
| Pom Jaeger | 3 | |
| Jaeger sp | 3 | |
| Sweet | 1 | |
| (Chimney) | | |
| | <hr/> 188 | 2.270 |

(Franklin's gull seen on station!)

8 APRIL 68

Miles 81

Hus. 7.9

| | | |
|------------|-----|-------|
| R. Phoebe | = 1 | .012 |
| Pom Jaeger | 3 | .137 |
| Jaeger sp. | 6 | .074 |
| R FB | 8 | .099 |
| B Faced B | 15 | .185 |
| B B | 26 | .321 |
| Booby sp. | 304 | 3.753 |
| Bird sp | 2 | .025 |
| <hr/> | | |
| | 365 | 4.493 |

PRELIMINARY REPORT

EASTERN AREA CRUISE NO. 35
EASTROPAC - R/V THOMAS WASHINGTON

February 15 - April 15, 1968

Prepared

by

T. J. Lewis

The following report summarizes the bird and marine mammal observations conducted aboard the R/V THOMAS WASHINGTON during EASTROPAC cruise No. 75 from 15 February to 15 April, 1968. During this period 367.4 hours of diurnal observation were conducted over a distance of 3660 nautical miles with 2984 birds observed.

Cooperation from the crew and scientific party personnel was excellent and much appreciated, especially when launching and retrieving the skiff. Special thanks go to Captain Noel Ferris and Dr. Warren Wooster who were most generous with their time and assistance.

ITINERARY

| | | |
|-------------------|------|---------------------------|
| 15 February, 1968 | 1400 | Depart San Diego |
| 18 March | 0600 | Arrive Isla San Cristobal |
| 18 March | 0900 | Depart Isla San Cristobal |
| 18 March | 1300 | Arrive Isla Baltra |
| 18 March | 1900 | Depart Isla Baltra |
| 27 March | 2300 | Arrive Isla Baltra |
| 28 March | 0600 | Depart Isla Baltra |
| 9 April | 0900 | Arrive Acapulco, Mexico |
| 9 April | 1900 | Depart Acapulco, Mexico |
| 15 April | 1530 | Arrive San Diego |

The cruise departed San Diego and proceeded directly to 20°N119°W; then due south to 20°S, east to 112°W, and north to 7°48'S. At that point we departed the cruise plan, because of an ill crewman, and proceeded directly to the Galapagos Islands for an air evacuation. We returned to 10°S 98°W, on the leg originally planned for the R/V JORDAN, and continued north. Just before reaching the equator one of the scientific party swallowed a piece of glass which cut his esophagus, and we again departed for the Galapagos Islands for an air evacuation. Again the ship returned westward to 98°W and the equator, where scheduled current measurements were conducted for one week. Upon completing this work, the ship turned north along 98°W and then sailed to Acapulco for refueling before returning home along the Mexican coast.

Diurnal observations were conducted from the bridge during nearly all of the underway time. The WASHINGTON'S skiff was used for collecting, primarily during the current meter studies at the equator, but also at other places on the trip. Observations were conducted during a portion of the return trip along the Mexican coast, but these data have little meaning outside of species present and general abundance.

The following division of the data into areas is based upon numbers and types of birds present, and, to a lesser extent, oceanographic factors.

AREA A California Current

16 February 1968

Characterized by the presence of albatross, gulls, and alcid.

AREA B

17-21 February 1968

This area is one of low bird density with a very high (85 percent) proportion of storm petrels.

AREA C The North Equatorial Current System 22-24 February, 5 April 1968

This area comprises the North Equatorial Current and its counter-current. Bird densities are higher than in areas to the north and south. About equal numbers of shearwaters, petrels, storm petrels, and terns occupy this area. This was the only area with significant numbers of large petrels.

AREA D South Equatorial Current 25-27 February, 24-25, 28 March, 3-4 April 1968

This area is much like area B with very low bird densities and a high (84 percent) proportion of storm petrels.

AREA E Zone between South Equatorial Current and Central Pacific Water Mass 28 February, 14-16 March, 20-23 March 1968

This is an area of water-mix, with patches of water having varying salinities and temperatures. It has very high bird densities and the largest concentration of Sooty Terns recorded for the trip.

AREA F Central Pacific Water Mass 29 February to 13 March 1968

This area has a very low bird density. Sooty Terns were the most abundant species, but almost equal numbers of shearwater/petrels, storm petrels and tropicbirds were present.

AREA G Galapagos Islands Area 17, 19, 26 March 1968

The Galapagos Islands' birds, chiefly the Galapagos Storm Petrel and the Swallow-tailed Gull, predominate in this area.

AREA H Coastal 6-8 April 1968

Boobies (84 percent) are predominant in this southern coastal area.

SPECIES ACCOUNTS

Only those species for which there is additional information are included. For the others see the Tables by area.

WEDGE-TAILED SHEARWATER One dark phase collected

All Wedge-tailed Shearwaters seen south of the equator (except two near the Galapagos) were dark phase birds, indicating that these are birds breeding in southern islands, probably the Marquesas. Birds seen north of the equator were almost evenly divided between dark and light phase, with a few more light phase than dark. Most of these birds were observed in the high bird density areas of the equatorial currents.

AUDUBON SHEARWATER

Two birds collected at the Galapagos

This may be the most abundant bird in the immediate vicinity of the Galapagos Islands. Thousands were seen along with many other birds in a hydrographic front at the northwest end of Isabela. Huge "balls" of bait were present here and the shearwaters were walking on the water, quite like the storm petrels do, and then just walking under water and not coming up for as long as 20 or 30 seconds. This behavior was very common at this hydrographic front. Only one Audubon Shearwater was observed at any distance from the Galapagos Islands.

SOOTY SHEARWATER

The three birds observed just west of the Galapagos Islands may be the first records of this species within the island waters. Sooty Shearwaters were seen in large numbers all along the southern half of Baja California, Mexico.

PHOENIX/TAHITI PETREL

These large petrels were present in the northern part of the area and also in the southern part, but are absent from a wide area in the center. These two petrels are extremely difficult to distinguish in the field, and only very close observation could enable one to differentiate between them. None of either species was positively identified.

JUAN FERNANDEZ PETREL

WHITE-NECKED PETREL

P. externa

There was a small number of these birds in the North Equatorial Current system, not nearly the number which was in these waters in August and September 1967. One White-necked Petrel was positively identified on 23 February (see drawing on at-sea daily log). All the rest were Juan Fernandez or only identifiable to the species level.

STORM PETRELS

This confusing group has stirred much discussion during the past and I shall add my bit to the confusion. The characteristics I used in determining species are as follows: First: Galapagos Storm Petrels follow the ship and are readily identified by their large white blaze; second: the dividing line on the rump was used to identify white-rumped Leachs at close range; third: Harcourt Storm Petrel was identified by its all-white rump (i.e., no dividing line), and squared off tail. However, I feel rather doubtful about some of the birds which I recorded as Harcourt Storm Petrel as I have recently seen some of Dick Crossin's specimens from the JORDAN cruise. They were in molt and the usual Leach characteristics were not very evident.

During five days of collecting at 98°W on the equator I collected 22 Galapagos Storm Petrels and only seven Leach Storm Petrels.

RED-TAILED TROPICBIRD

Two collected

Nearly all were observed in the western portions of this cruise, with the largest numbers south of 10°S.

WHITE-TAILED TROPICBIRD

Only three were observed in the extreme southwest portion of the trip.

RED-BILLED TROPICBIRD

Observed only in the vicinity of the Galapagos Islands and off the coast of Mexico.

RED PHALAROPE

These birds were present in very low numbers throughout the trip. Several small flocks (not over 300 total) were observed around the Galapagos Islands.

SWALLOW-TAILED GULL

Two collected

Two of these Galapagos-breeding birds were collected over a Wesson oil slick about 350 miles west of the islands. This may be the westernmost record for this bird. as Murphy's Oceanic Birds of South America gives records only to 250 kilometers southwest of the Galapagos.

DATA COLLECTING ACTIVITIES

Standard EASTROPAC environmental data concerning weather, productivity, plankton, micronekton, temperature and salinity with depth, and chemical nutrients was collected. In addition, air samples for CO2 determinations were taken, and current studies were carried out on the equator.

Scientific personnel aboard the R/V THOMAS WASHINGTON

| | | |
|------------------------|---|-------|
| Wooster, Warren S. Dr. | Scientist In Charge | SIO |
| Brennan, Robert E | Marine Technician | SIO |
| Forsbergh, Eric D. | Associate Scientist | IATTC |
| De Alverez, Saul | Student Institute of Marine Sciences Ensenada, Mexico | |
| Graham, Jerry B. | Electronics Tech. | SIO |
| Irani, Rustam H | Marine Technician | SIO |
| Jones, James H | Research Assistant | SIO |
| Lenz, Walter | Student, DAAD (German Academic Exchange Service , Institute feir Meereskunde, Kiel.) | |
| Lewis, T. James | Biologist | SI |
| Lynn, Ronald J. | Oceanographer | BCF |
| Mauck, William W. | Marine Technician | SIO |
| Nishimato Robert N. | Biologist | BCF |
| Wohlfert, Wayne | Technician | BCF |
| Wong, Chi Shing | Student | SIO |

Specimens and Sera Collected

| <u>Species</u> | <u>Specimens</u> | <u>Sera</u> |
|--------------------------------|------------------|-------------|
| Wedge-tailed Shearwater | 1 | 1 |
| Audubon Shearwater | 2 | |
| Harcourt Storm Petrel | 2 | 1 |
| Galapagos Storm Petrel | 25 | |
| Leach Storm Petrel | 8 | |
| Graceful (Elliot) Storm Petrel | 6 | |
| Red-tailed Tropicbird | 2 | 1 |
| Common Noddy Tern | 1 | |
| Swallow-tailed Gull | 2 | |
| Blue-faced Booby | 1 | |
| Red-footed Booby | 2 | |
| Frigatebird sp | 1 | |
| Chimney (?) Swift | 1 | |
| Cassin Auklet | 1 | 1 |
| Xantus Murrelet | 1 | 1 |
| Totals | <u>56</u> | <u>5</u> |

Area A

16 February 1968

| | |
|-----------------------------------|------|
| Black-footed Albatross | 2 |
| Laysan Albatross | 2 |
| New Zealand Shearwater | 1 |
| Manx(common) Shearwater | 6 |
| Shearwater sp. | 23 |
| Shearwater/petrel | 1 |
| Leach (white-rumped) Storm Petrel | 2 |
| Socorro Petrel | 4 |
| White-rumped storm petrel | 6 |
| Storm petrel sp. | 39 |
| Red Phalarope | 2 |
| Jaeger sp. | 2 |
| Glaucous-winged Gull | 1 |
| Western Gull | 5 |
| Gull sp. | 1 |
| Gull/jaeger | 1 |
| Xantus Murrelet | 8 |
| Cassin Auklet | 2 |
| Total | 108 |
| Hours | 10.3 |
| Miles | 112 |

Area B

| | Feb. | | | | | Total | %Total |
|-----------------------------------|------|-----|-----|-----|-----|-------|--------|
| | 17 | 18 | 19 | 20 | 21 | | |
| Manx (common) Shearwater | | | | 1 | | 1 | .7 |
| Cook Petrel | 3 | | | | | 3 | 2.0 |
| Small pterodroma | 3 | | | | | 3 | 2.0 |
| Leach (white-rumped) Storm Petrel | 45 | 2 | 2 | 4 | 10 | 63 | 42.9 |
| White-rumped storm petrel | 6 | 8 | 10 | 6 | 15 | 45 | 30.6 |
| Storm petrel sp. | 4 | 1 | 4 | 3 | 5 | 17 | 11.6 |
| Red-tailed Tropicbird | 2 | 1 | 1 | | | 4 | 2.7 |
| Blue-faced Booby | | | | 1 | | 1 | .7 |
| Booby sp. | | | | | 1 | 1 | .7 |
| Red Phalarope | 1 | | 2 | | 2 | 5 | 3.4 |
| Bird sp. | 1 | | | 2 | | 3 | 2.0 |
| Total | 65 | 12 | 19 | 17 | 33 | 146 | |
| Hours | 9.9 | 5.8 | 7.1 | 7.1 | 6.7 | 36.6 | |
| Miles | 112 | 61 | 75 | 80 | 76 | 404 | |

Area C

| | 22Feb. | 23 | 24 | 5Apr | Total | %Total |
|----------------------|--------|-----|-----|------|-------|--------|
| Wedge-tailed Shear, | 2 | 2 | 4 | 17 | 25 | 7.79 |
| New Zealand Shear, | 2 | | | | 2 | .62 |
| Christmas Island | | | | 1 | 1 | .31 |
| Phoenix I/Tahiti | | 6 | 1 | | 7 | 2.18 |
| Kermadec Petrel | 1 | | | | 1 | .31 |
| Dark-rumped Pet. | | | | 1 | 1 | .31 |
| Juan Fernandez | 8 | 8 | 4 | | 20 | 6.24 |
| White-necked | | 1 | | | 1 | .31 |
| <u>P. externa</u> | 2 | 4 | 3 | | 9 | 2.81 |
| Collared Petrel | | | | | | |
| Small pterodroma | 1 | | | | 1 | .31 |
| Shear/petrel | 16 | 11 | 2 | 4 | 33 | 10.28 |
| Harcourt St. Petrel | | | 6 | | 6 | 1.86 |
| Leach(White-rump) | 5 | 5 | | 6 | 16 | 4.98 |
| Galapagos St. Pet. | | | | 4 | 4 | 1.24 |
| White-rumped st.pet. | 20 | 9 | | 2 | 31 | 9.65 |
| Storm petrel sp. | 9 | 8 | 1 | 2 | 20 | 6.24 |
| White-tailed Tropic. | | | | | | |
| Red-tailed Tropic. | 2 | 5 | | 1 | 8 | 2.49 |
| Blue-footed Booby | 1 | | | | 1 | .31 |
| Blue-faced Booby | | | | 2 | 2 | .62 |
| Red-footed Booby | 1 | | | 3 | 4 | 1.24 |
| Frigatebird sp. | | | | 9 | 9 | 2.81 |
| Red Phalarope | | | | 9 | 9 | 2.81 |
| Sooty Tern | 26 | 3 | 40 | 39 | 108 | 33.64 |
| Tern sp. | | 2 | | | 2 | .62 |
| | | | | | | |
| TOTAL | 96 | 64 | 61 | 100 | 321 | |
| Hrs | 7.3 | 6.4 | 5.6 | 8.0 | 20.1 | |
| Miles | 75 | 71 | 56 | 80 | 282 | |

Area D

| | Feb. 25 | 26 | 27 | Mar. 24 | 25 | 28 | Apr. 3 | 4 | TOTAL | % TOTAL |
|----------------------------------|------------|-----|-----|------------|------|------|-----------|-----|-------|---------|
| Wedge-tailed Shearwater | | 1 | | | 2 | | | | 3 | 1.08 |
| Sooty Shearwater | | | | | | | 1 | 2 | 3 | 1.08 |
| Audubon Shearwater | | | | | | 1 | | | 1 | 0.36 |
| Phoenix I/Tahiti | | | | | | | | 4 | 4 | 1.48 |
| Juan Fernandez | 1 | | | | | | | | 1 | .36 |
| Collared Petrel | | | | | | | | 1 | 1 | .36 |
| Small pterodroma Shear/petrel | | | 1 | | | | | | 1 | .36 |
| Harcourt Storm Petrel | | 1 | | | | 2 | | 1 | 4 | 1.48 |
| Leach (white-rump) Storm Pet. | 7 | | 6 | | | 1 | 2 | 3 | 11 | 3.96 |
| Galapagos Storm Petrel | 5 | 1 | 3 | 13 | 13 | | 5 | 10 | 58 | 20.87 |
| White-rumped storm petrel | | | | 2 | 2 | 1 | 13 | 9 | 27 | 9.70 |
| Black Storm Petrel | 2 | 2 | 2 | 13 | 48 | 21 | 2 | 18 | 108 | 38.81 |
| Storm petrel | | | | | 1 | | | | 1 | .36 |
| Red-tailed Tropicbird | 1 | | | 3 | 9 | 10 | 3 | 8 | 34 | 12.40 |
| Red-billed Tropicbird | | | 1 | | | | | | 1 | .36 |
| Frigatebird sp. | | | | | 1 | | | | 1 | .36 |
| Northern Phalarope | | | | | | 1 | | | 1 | .36 |
| Red Phalarope | | 1 | | | | | 1 | 1 | 3 | 1.08 |
| Phalarope sp. | | | | | | 2 | | | 2 | .72 |
| Swallow-tailed Gull | | | | | | 1 | | | 1 | .36 |
| Jaeger sp. | | | | | 1 | | | | 1 | .36 |
| Sooty Tern | | 1 | | | | | | 5 | 6 | 2.16 |
| Fairy Tern | | | | | 1 | | | | 1 | .36 |
| Tweet Bird | | | | | | 1 | | | 1 | .36 |
| Bird sp. | | | | 1 | | | | | 1 | .36 |
| TOTAL | 16 | 7 | 13 | 32 | 79 | 41 | 27 | 63 | 278 | |
| Hours | 8.0 | 6.3 | 6.2 | 8.1 | 10.9 | 11.0 | 7.0 | 7.6 | 65.1 | |
| Miles | 83 | 71 | 70 | 79 | 113 | 122 | 67 | 80 | 685 | |

Area E

| | Feb. | | Mar. | | 16 | 20 | 21 | 22 | 23 | Total | % Total |
|--------------------------------|------|------|------|------|------|-----|-----|-----|----|-------|---------|
| | 28 | 14 | 15 | 16 | | | | | | | |
| Wedge-tailed Shearwater | | | | 1 | | | | | | 1 | .09 |
| Sooty Shearwater | | | 1 | | | | 1 | | | 2 | .16 |
| Kermadec Petrel | | | | 1 | | | | | | 1 | .09 |
| Juan Fernandez | | 1 | 2 | 1 | | | 2 | 1 | | 7 | .64 |
| Collared Petrel | 2 | | | | | 1 | 2 | 5 | | 10 | .91 |
| Murphys Petrel | | | | | | 1 | | | | 1 | .09 |
| Small pterodroma | | | 2 | | | | | | | 2 | .16 |
| Shear/petrel | 2 | | 5 | 1 | 5 | 10 | | | | 23 | 2.09 |
| White-throated Storm Petrel | | | | | | | 2 | | | 2 | .16 |
| Galapagos Storm Petrel | | | 5 | 1 | | | | | | 6 | .54 |
| Harcourt Storm Petrel | 1 | 2 | 1 | 2 | 1 | 1 | | | | 8 | .73 |
| Leach (white-rump) | | 2 | 12 | 12 | | 1 | 2 | 8 | | 37 | 3.38 |
| Black Storm Petrel | | | | 1 | 1 | | | 1 | | 3 | .27 |
| White-faced Storm Petrel | | | | | | 1 | | | | 1 | .09 |
| White-rumped storm petrel | | 42 | 46 | 69 | 9 | 2 | 20 | 11 | | 199 | 18.10 |
| Storm petrel sp. | | 7 | 27 | 11 | 6 | 2 | 2 | 2 | | 57 | 5.19 |
| Red-tailed Tropicbird | | | | | | | | 1 | | 1 | .09 |
| Blue-faced Booby | | | 1 | | | | | | | 1 | .09 |
| Frigatebird sp. | | | | | 6 | | | | | 6 | .54 |
| Red Phalarope | 4 | 7 | 7 | | 4 | .1 | 2 | 2 | | 27 | 2.45 |
| Phalarope sp. | 2 | 3 | 2 | | | | | | | 7 | .64 |
| Parasitic Jaeger | | | | | | 1 | | | | 1 | .09 |
| Jaeger sp. | | | | | | | | 1 | | 1 | .09 |
| Sooty Tern | 143 | 14 | 88 | 13 | 181 | 201 | 42 | 6 | | 68 | 62.59 |
| Fairy Tern | 4 | | | | | 2 | | 1 | | 7 | .64 |
| Bird sp. | | | | | 1 | | | | | 1 | .09 |
| TOTAL | 158 | 78 | 199 | 113 | 216 | 229 | 75 | 32 | | 1100 | |
| Hours | 7.7 | 11.3 | 10.2 | 11.2 | 10.6 | 6.4 | 8.3 | 7.7 | | 73.4 | |
| Miles | 81 | 71 | 99 | 109 | 112 | 73 | 87 | 83 | | 715 | |

AREA F

| | Feb. 29 | Mar. 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | Total | % Total |
|-------------------------|------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-------|---------|
| Wedge-tailed Shear. | | | | 4 | | | | | 2 | | | 1 | 1 | 2 | 10 | 3.83 |
| Phoenix/Tahiti Pet. | | | | | 1 | 1 | | | 1 | | | | | | 3 | 1.14 |
| Dark-rumped Petrel | | | | | | | | | | | | 1 | | | 1 | .38 |
| Juan Fernandez | | | | | | | | | | | | | 1 | 2 | 3 | 1.14 |
| <u>P. externa</u> | | | 1 | | | | | | | | | | | | 1 | .38 |
| Collared Petrel | | | 1 | | 1 | | | | | | | 1 | 1 | 3 | 7 | 2.69 |
| Murphy Petrel | | | | | 2 | | | | | | | | | | 2 | .77 |
| Small pterodroma | | | | 3 | | | | | | | | | | | 3 | 1.14 |
| Shear/petrel | | | 1 | 3 | | | | | | 2 | | | 2 | 1 | 9 | 3.45 |
| Harcourt Storm Petrel | 1 | 9 | 1 | | | | | | | | | | | | 11 | 4.23 |
| Ldach (white-rumped) | | 1 | | 1 | | | | | | | | | 1 | 2 | 5 | 1.92 |
| White-rumped storm pet. | | 2 | 2 | | | | | | 1 | 1 | | 1 | 1 | 6 | 14 | 5.36 |
| Storm petrel sp. | 1 | 3 | | | 1 | | | | | | 1 | 1 | | 2 | 9 | 3.44 |
| White-tailed Tropic. | | | | 2 | 1 | | | | | | | | | | 3 | 1.14 |
| Red-tailed Tropic. | | 2 | 4 | 5 | 4 | | 1 | 6 | 3 | 1 | | | | | 26 | 9.96 |
| Tropicbird sp. | | | 1 | | | 2 | | | | | | | | | 3 | 1.14 |
| Blue-faced Booby | | | 1 | | | 2 | | | 1 | | | | | | 4 | 1.53 |
| Frigatebird Sp. | | 1 | 1 | 2 | | | | | | | | | | | 4 | 1.53 |
| Red Phalarope | | | | | | | 2 | | 1 | | 3 | | | 1 | 7 | 2.69 |
| Phalarope sp. | | | | | | 2 | | | | | | | | | 2 | .77 |
| Skua | | | | | | | | | | | 1 | | | | 1 | .38 |
| Pomarine Jaeger | | | | 3 | | | | | 1 | 1 | | | | | 5 | 1.92 |
| Jaeger sp. | | | | | | | | | | 2 | 1 | | 2 | | 5 | 1.92 |
| Sooty Tern | 1 | 2 | 16 | | | | | | 40 | 1 | 25 | 4 | | 24 | 113 | 43.30 |
| Fairy Tern | | | | | | | | | 1 | 2 | 3 | | | 4 | 10 | 3.83 |
| TOTAL | 3 | 20 | 29 | 23 | 10 | 7 | 3 | 6 | 50 | 9 | 33 | 12 | 9 | 47 | 261 | |
| Hrs | 6.3 | 7.3 | 7.2 | 8.0 | 7.4 | 9.0 | 9.6 | 5.7 | 5.9 | 6.2 | 7.5 | 7.1 | 11.0 | 10.6 | 108.8 | |
| Miles | 67 | 79 | 85 | 86 | 84 | 86 | 89 | 57 | 63 | 72 | 74 | 77 | 107 | 99 | 1125 | |

Area G

| | Mar. 17 | 19 | 26* | Total | %Total |
|---------------------------------|------------|-----------|-----|------------|--------|
| Sooty Shearwater | | | 3 | | |
| Audubon Shearwater | | | 5 | | |
| Juan Fernandez Petrel | | 1 | | 1 | .63 |
| Galapagos Storm Petrel | 8 | 31 | | 39 | 24.38 |
| Harcourt Storm Petrel | 3 | | | 3 | 1.88 |
| Leach (white-rump) Storm Petrel | 1 | | | 1 | .63 |
| White-rumped storm petrel sp. | 15 | 13 | | 28 | 17.50 |
| Storm petrel sp. | 7 | 2 | | 9 | 5.63 |
| Red-billed Tropicbird | 1 | 1 | 2 | 2 | 1.25 |
| Blue-faced Booby | 4 | | 24 | 4 | 2.50 |
| Red-footed Booby | 1 | | | 1 | .62 |
| Booby sp. | 1 | | 1 | 1 | .62 |
| Booby/gull | 1 | | | 1 | .62 |
| Frigatebird sp. | 1 | | | 1 | .62 |
| Red Phalarope | 31 | 7 | | 38 | 23.75 |
| Pomarine Jaeger | 1 | | | 1 | .62 |
| Swallow-tailed Gull | 24 | 5 | 19 | 29 | 18.13 |
| Bird sp. | 1 | | | 1 | .62 |
| Total | 100 | 60 | | 160 | |
| Hours | 11.7 | 10.2 | 5.6 | 21.9 | |
| Miles | 118 | 121 | 61 | 239 | |

*Not included in totals as storm petrels were too numerous to count.

AREA H

| | Apr. | | | TOTAL | %TOTAL |
|---------------------------|-----------|------------|------------|------------|--------|
| | 6 | 7 | 8 | | |
| Wedge-tailed Shearwater | 8 | 4 | | 12 | 1.97 |
| New Zealand Shearwater | 4 | | | 4 | .66 |
| Dark-rumped Petrel | 5 | | | 5 | .82 |
| Shearwater/petrel | 5 | 3 | | 8 | 1.31 |
| Galapagos Storm Petrel | 5 | 1 | | 6 | .99 |
| Black Storm Petrel | | 1 | | 1 | .16 |
| White-rumped storm petrel | 11 | 6 | | 17 | 2.79 |
| Storm petrel sp. | 2 | 2 | | 4 | .66 |
| Red-billed Tropicbird | | 3 | | 3 | .49 |
| Blue-faced Booby | | 97 | 15 | 112 | 18.39 |
| Brown Booby | | | 26 | 26 | 4.27 |
| Red-footed Booby | 1 | 61 | 8 | 70 | 11.49 |
| Booby sp. | | 2 | 304 | 306 | 50.25 |
| Red Phalarope | 8 | | 1 | 9 | 1.48 |
| Northern Phalarope | 2 | | | 2 | .33 |
| Pomarine Jaeger | 3 | 3 | 3 | 9 | 1.48 |
| Jaeger sp. | 2 | 3 | 6 | 11 | 1.81 |
| Franklin Gull | | 1 | | 1 | .16 |
| Chimney Swift | | 1 | | 1 | .16 |
| Bird sp. | | | 2 | 2 | .33 |
| TOTAL | 56 | 188 | 365 | 609 | |
| Hrs | 8.3 | 7.8 | 7.9 | 24.0 | |
| Miles | 83 | 83 | 81 | 247 | |

| Date | Position (noon) | | Hrs. | #miles | #birds | B/lin.mi. |
|---------|-----------------|----------|-------|--------|--------|-----------|
| 16 Feb. | 29°00'N | 117°26'W | 10.3 | 112 | 108 | 0.96 |
| 17 | 24°28'N | 117°46'W | 9.9 | 112 | 65 | .58 |
| 18 | 21°34'N | 118°08'W | 5.8 | 61 | 12 | .19 |
| 19 | 19°16'N | 118°52'W | 7.1 | 75 | 19 | .25 |
| 20 | 16°29'N | 118°59'W | 7.1 | 80 | 18 | .22 |
| 21 | 13°43'N | 119°00'W | 6.7 | 76 | 33 | .43 |
| 22 | 11°01'N | 118°53'W | 7.3 | 75 | 96 | 1.28 |
| 23 | 8°09'N | 118°53'W | 6.4 | 71 | 64 | .90 |
| 24 | 5°32'N | 118°36'W | 5.6 | 55 | 61 | 1.09 |
| 25 | 2°49'N | 118°56'W | 8.0 | 83 | 16 | .19 |
| 26 | 0°01'S | 118°54'W | 6.3 | 71 | 7 | .10 |
| 27 | 2°31'S | 118°50'W | 6.2 | 70 | 13 | .18 |
| 28 | 5°10'S | 119°07'W | 7.7 | 81 | 158 | 1.95 |
| 29 | 8°04'S | 118°55'W | 6.3 | 67 | 3 | .04 |
| 1 Mar. | 10°48'S | 118°56'W | 7.3 | 79 | 20 | .25 |
| 2 | 13°07'S | 119°02'W | 7.2 | 85 | 29 | .34 |
| 3 | 16°02'S | 118°59'W | 8.0 | 86 | 23 | .29 |
| 4 | 18°31'S | 118°56'W | 7.4 | 84 | 10 | .11 |
| 5 | 20°00'S | 117°26'W | 9.0 | 86 | 7 | .08 |
| 6 | 19°58'S | 114°06'W | 9.6 | 89 | 3 | .03 |
| 7 | 19°21'S | 111°55'W | 5.7 | 57 | 6 | .10 |
| 8 | 17°34'S | 111°54'W | 5.9 | 63 | 50 | .79 |
| 9 | 14°00'S | 111°59'W | 6.2 | 72 | 9 | .125 |
| 10 | 11°17'S | 111°55'W | 7.5 | 74 | 33 | .45 |
| 11 | 8°29'S | 111°56'W | 7.1 | 77 | 12 | .155 |
| 12 | 6°39'S | 109°12'W | 11.0 | 107 | 9 | .08 |
| 13 | 5°22'S | 105°57'W | 10.6 | 99 | 47 | .47 |
| 14 | 4°33'S | 103°11'W | 11.3 | 71 | 78 | 1.09 |
| 15 | 3°35'S | 100°05'W | 10.2 | 99 | 199 | 2.01 |
| 16 | 2°30'S | 96°12'W | 11.2 | 109 | 113 | 1.04 |
| 17 | 1°35'S | 92°12'W | 11.7 | 118 | 100 | .85 |
| 19 | 3°07'S | 92°21'W | 10.2 | 121 | 60 | .49 |
| 20 | 6°40'S | 95°08'W | 10.6 | 112 | 216 | 1.92 |
| 21 | 9°54'S | 97°56'W | 6.4 | 73 | 229 | 3.14 |
| 22 | 7°36'S | 97°56'W | 8.3 | 87 | 75 | .86 |
| 23 | 4°41'S | 98°04'W | 7.7 | 83 | 32 | .38 |
| 24 | 1°57'S | 98°00'W | 8.1 | 79 | 32 | .40 |
| 25 | 0°34'S | 95°41'W | 10.9 | 113 | 79 | .70 |
| *26 | 0°15'N | 91°41'W | 5.6 | 61 | | |
| 28 | 0°05'N | 94°47'W | 11.0 | 122 | 41 | .34 |
| 3 April | 0°44'N | 97°52'W | 7.0 | 67 | 27 | .40 |
| 4 | 3°33'N | 98°02'W | 7.6 | 80 | 63 | .79 |
| 5 | 6°22'N | 98°01'W | 8.0 | 80 | 100 | 1.25 |
| 6 | 9°24'N | 97°59'W | 8.3 | 83 | 56 | .76 |
| 7 | 12°18'N | 98°28'W | 7.8 | 83 | 188 | 2.25 |
| 8 | 14°55'N | 98°56'W | 7.9 | 81 | 365 | 4.49 |
| TOTAL | | | 367.4 | 3808 | 2984 | |

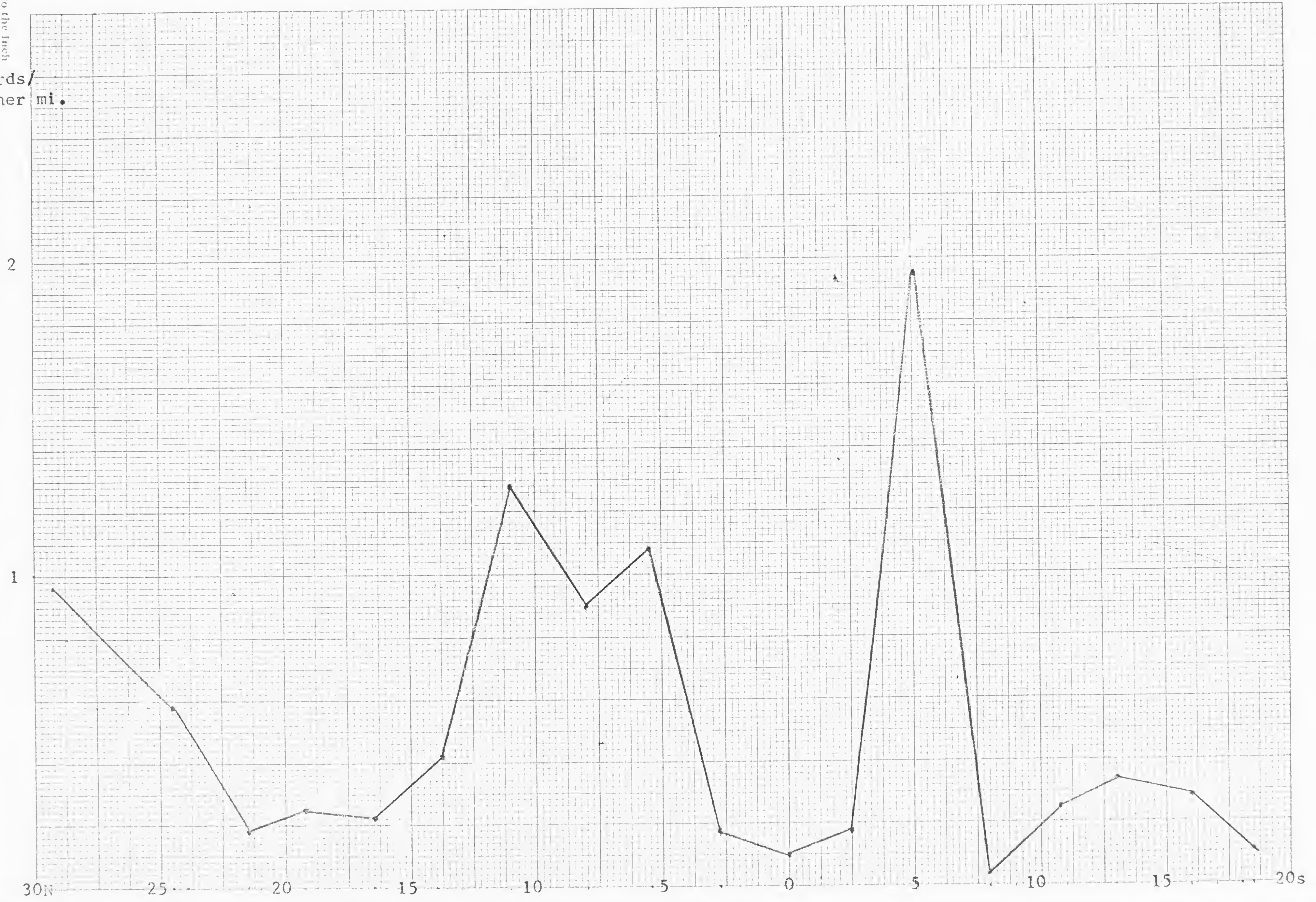
*Not included in total

| Species Group | A | B | C | D | E | F | G | H | TOTAL | %TOTAL |
|---------------|-----|-----|-----|-----|------|-----|-----|-----|-------|--------|
| Shear/petrel | 31 | 7 | 101 | 18 | 47 | 39 | 1 | 29 | 273 | 9.15 |
| Storm Petrel | 51 | 125 | 77 | 261 | 291 | 39 | 80 | 28 | 952 | 31.90 |
| Tropicbird | | 4 | 8 | 3 | | 32 | 2 | 3 | 52 | 1.74 |
| Booby | | 2 | 7 | | 1 | 4 | 7 | 514 | 535 | 17.93 |
| Frigatebird | | | 9 | 2 | 6 | 4 | 1 | | 22 | .75 |
| Phalarope | 2 | 6 | 9 | 8 | 32 | 9 | 38 | 11 | 115 | 3.85 |
| Jaeger | 2 | | | 1 | 2 | 11 | 1 | 20 | 37 | 1.24 |
| Gull | 8 | | | 1 | | | 29 | 1 | 39 | 1.30 |
| Tern | | | 110 | 14 | 688 | 123 | | | 935 | 31.34 |
| Alcid | 10 | | | | | | | | 10 | .34 |
| Misc. | 4 | 3 | | 2 | 1 | | 1 | 3 | 14 | .46 |
| Total | 108 | 147 | 321 | 310 | 1068 | 261 | 160 | 609 | 2984 | 100.00 |

Bird Densities with latitude along 119 W
Feb. 16 - March 4 1968

20 Squares to the Inch

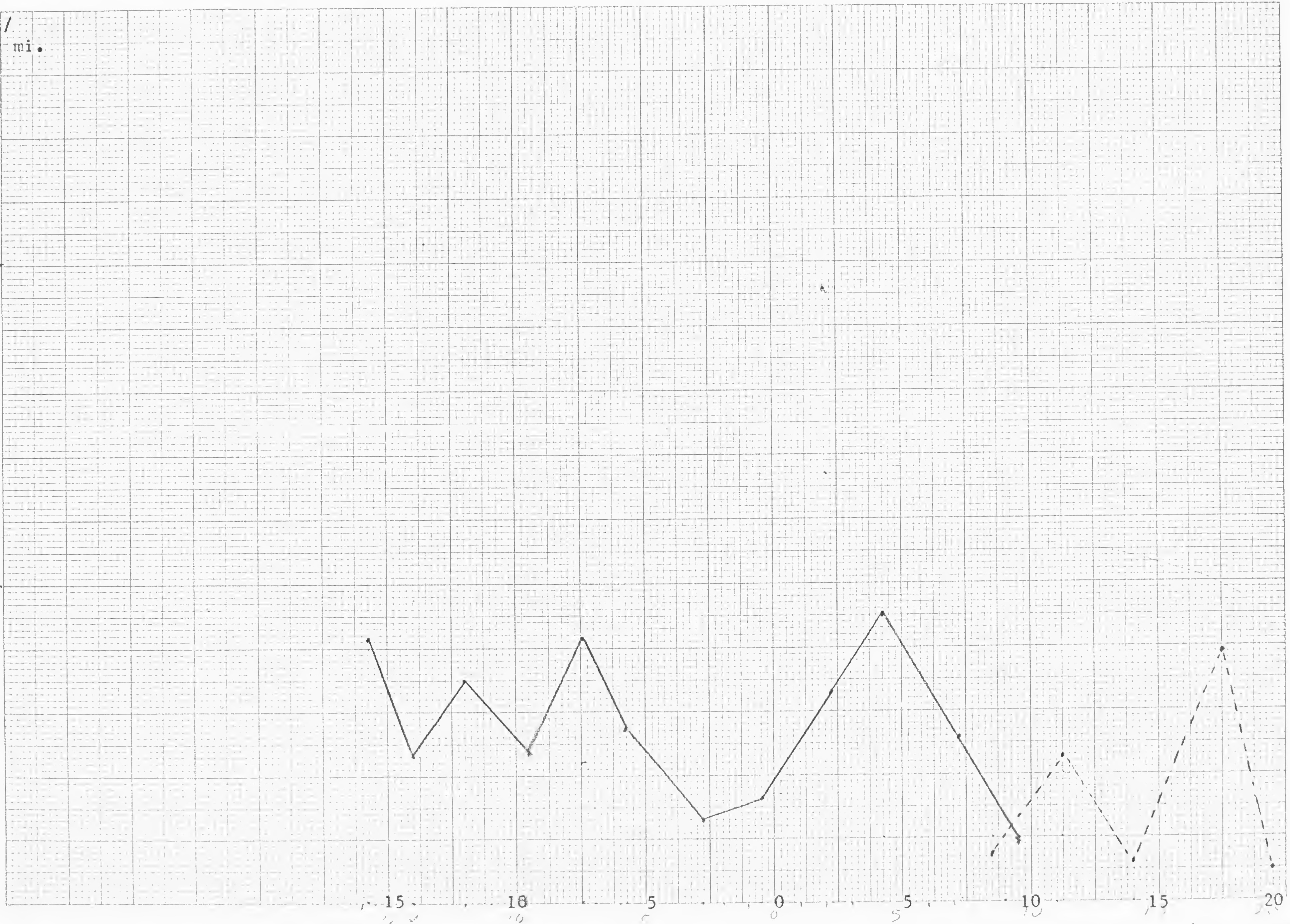
Birds/
liner mi.



Bird Densities with latitude along 112 W
From EASTROPAC 75 & 76
R/V JORDAN March 17 to 28 ———

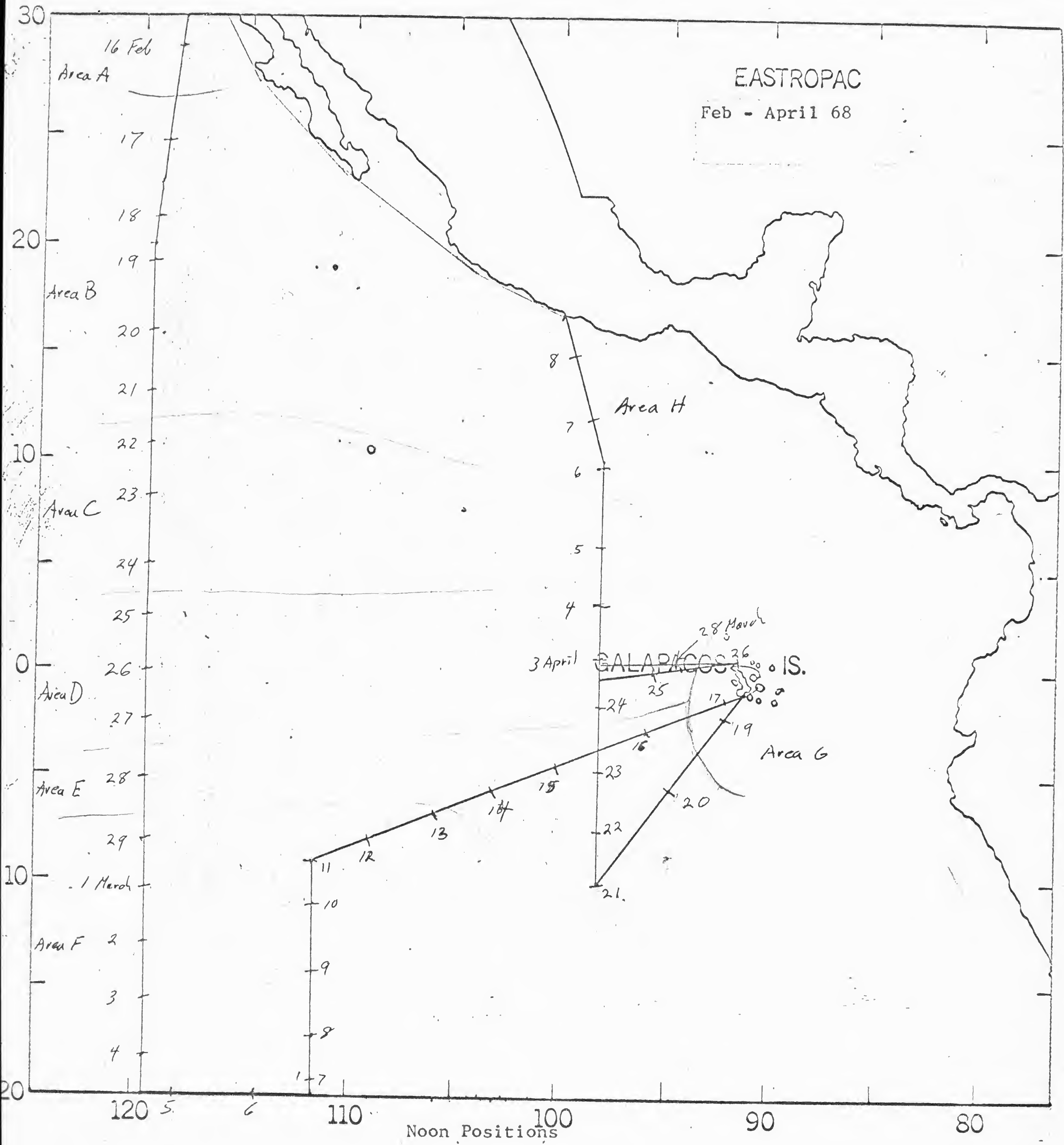
R/V WASHINGTON March 7 to 11 - - - -

Birds/
liner mi.



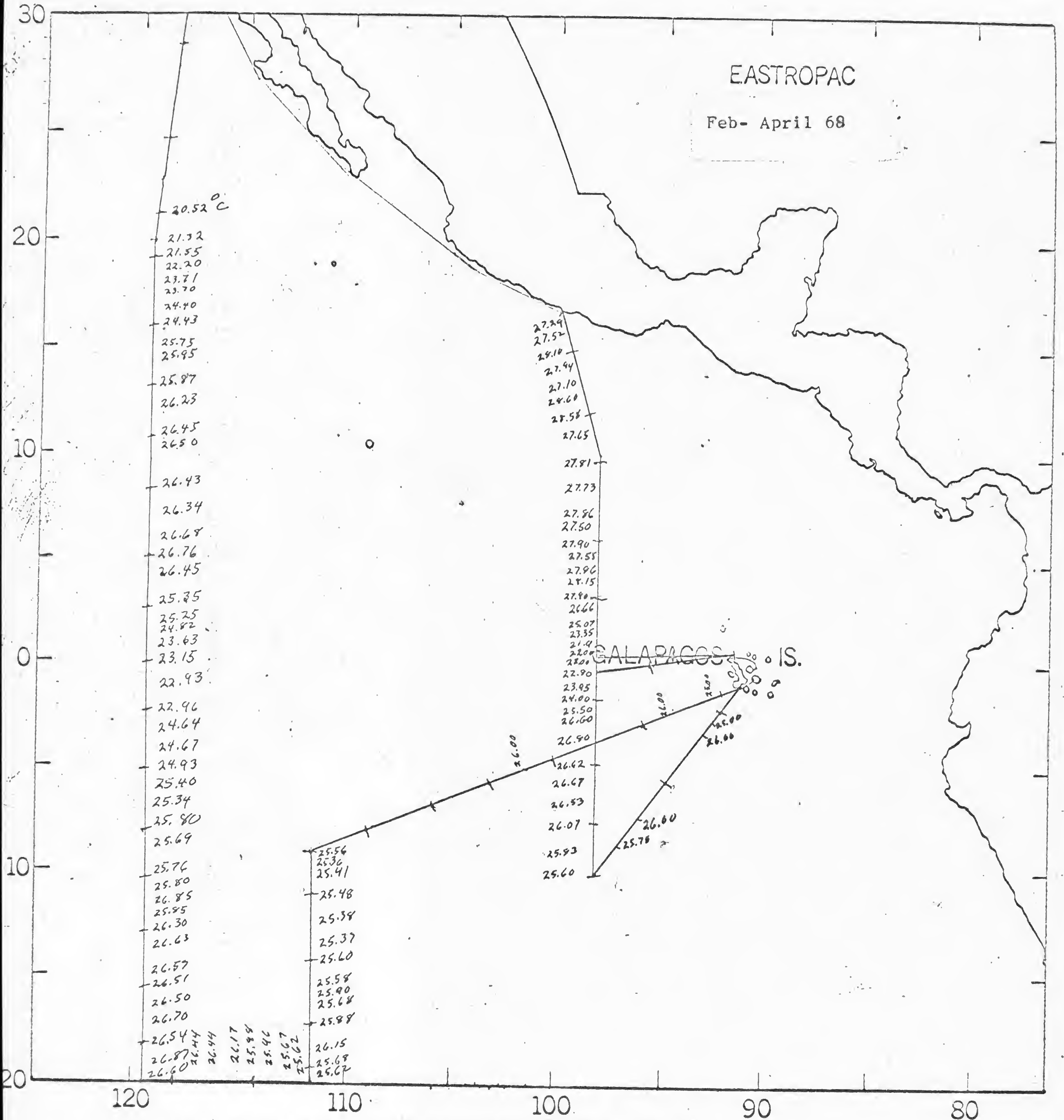
EASTROPAC

Feb - April 68



EASTROPAC

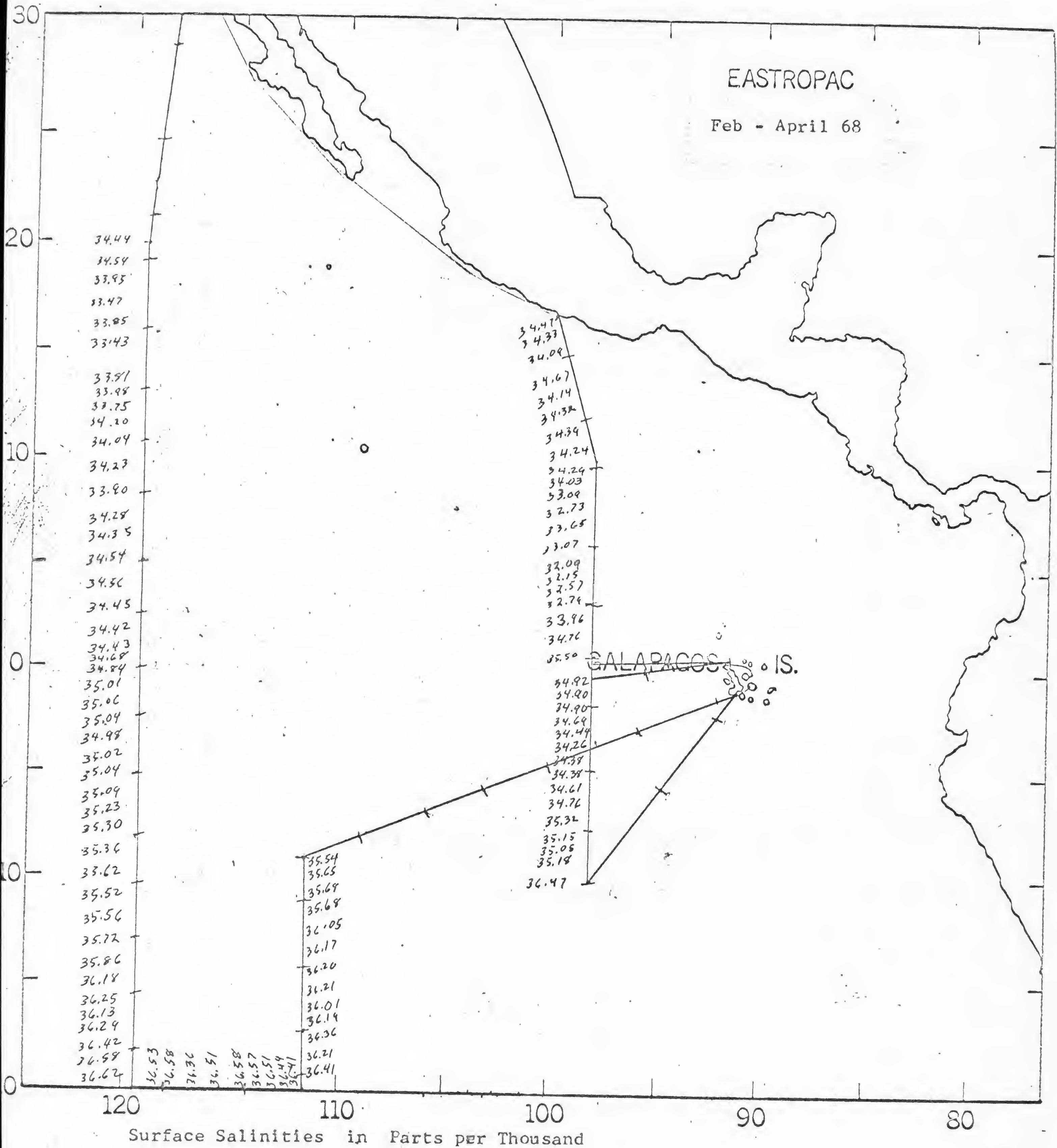
Feb- April 68



Surface Temperatures. in °C recorded on Eastropac 75

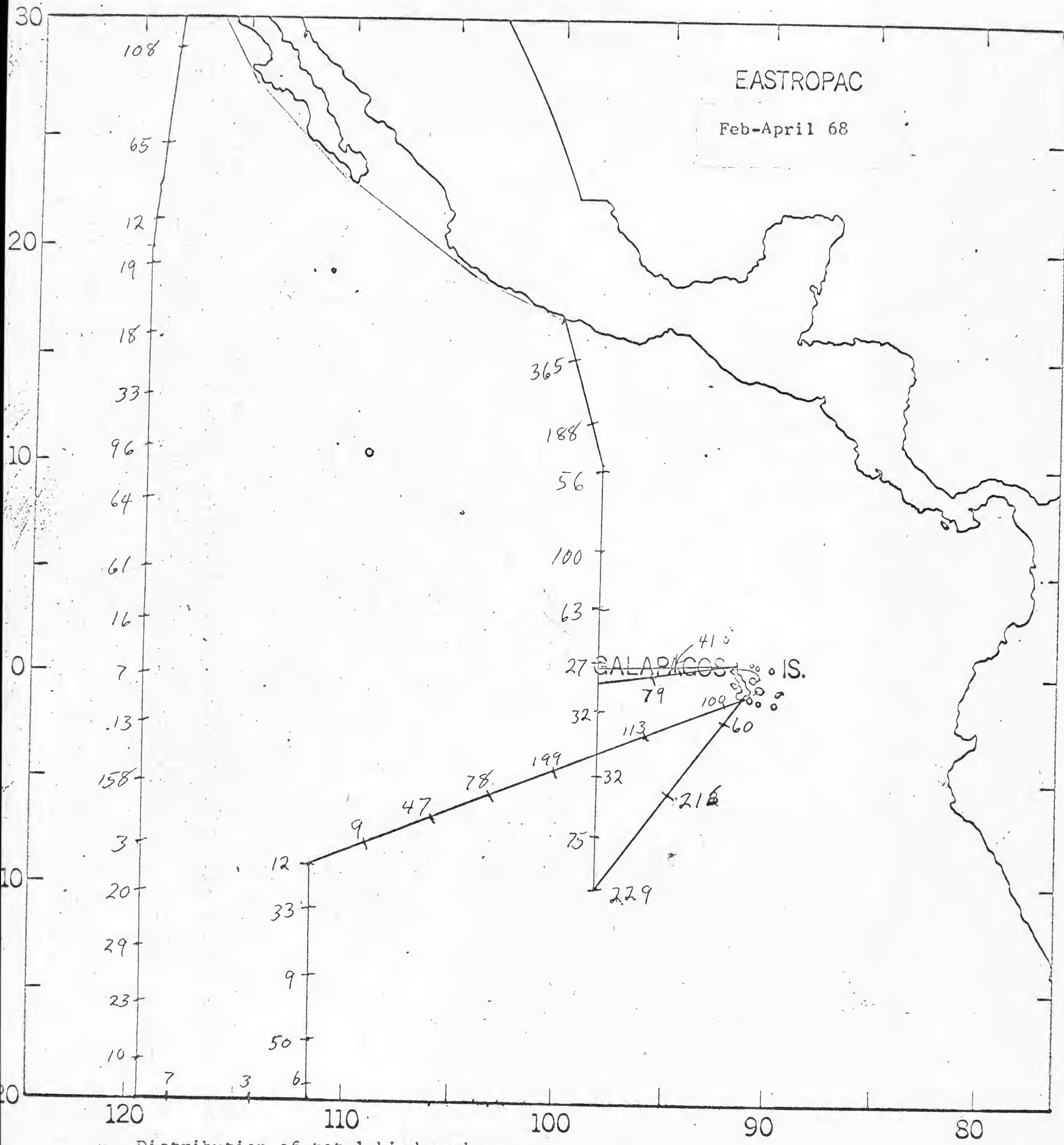
EASTROPAC

Feb - April 68



EASTROPAC

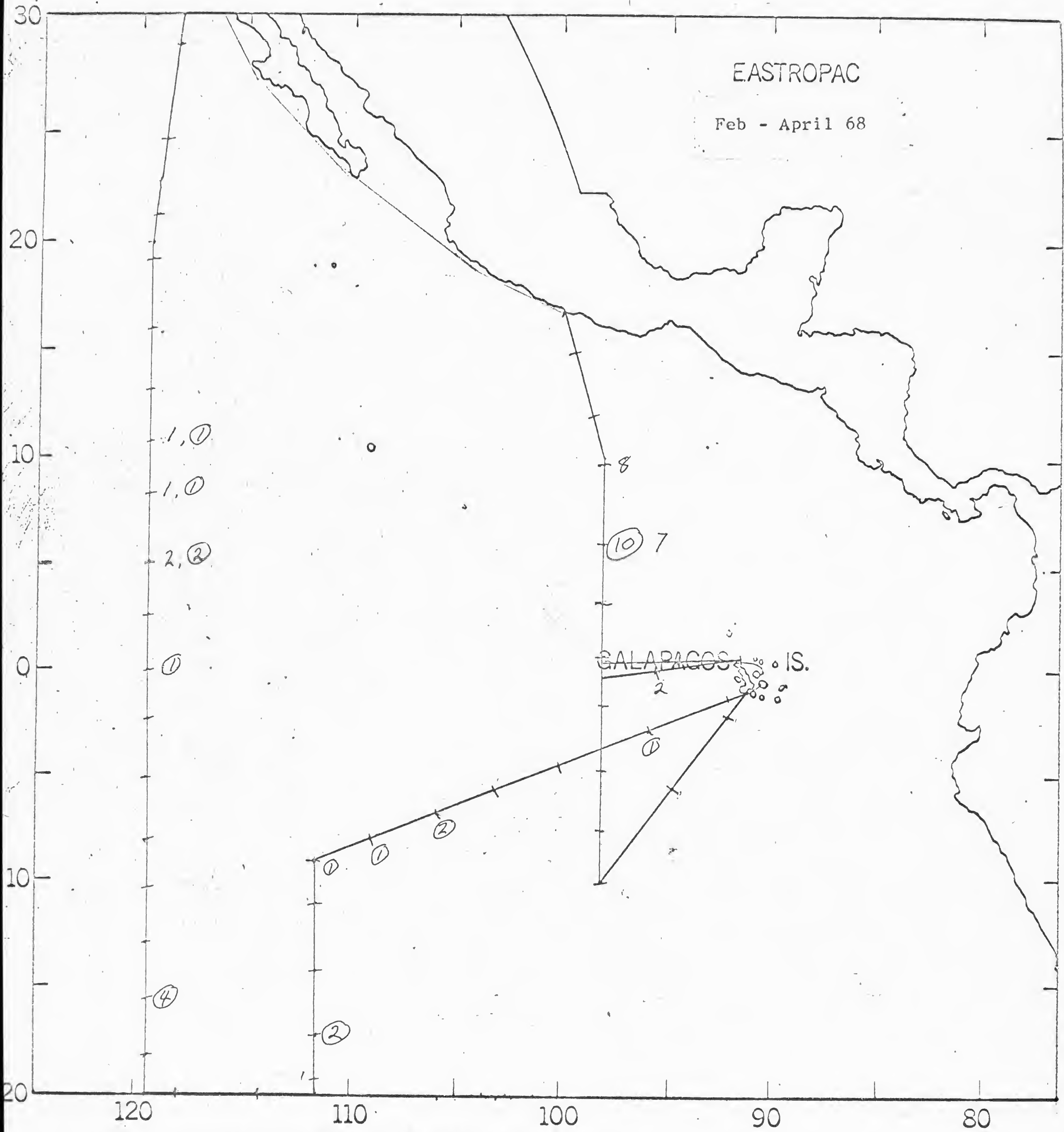
Feb-April 68



Distribution of total bird numbers

EASTROPAC

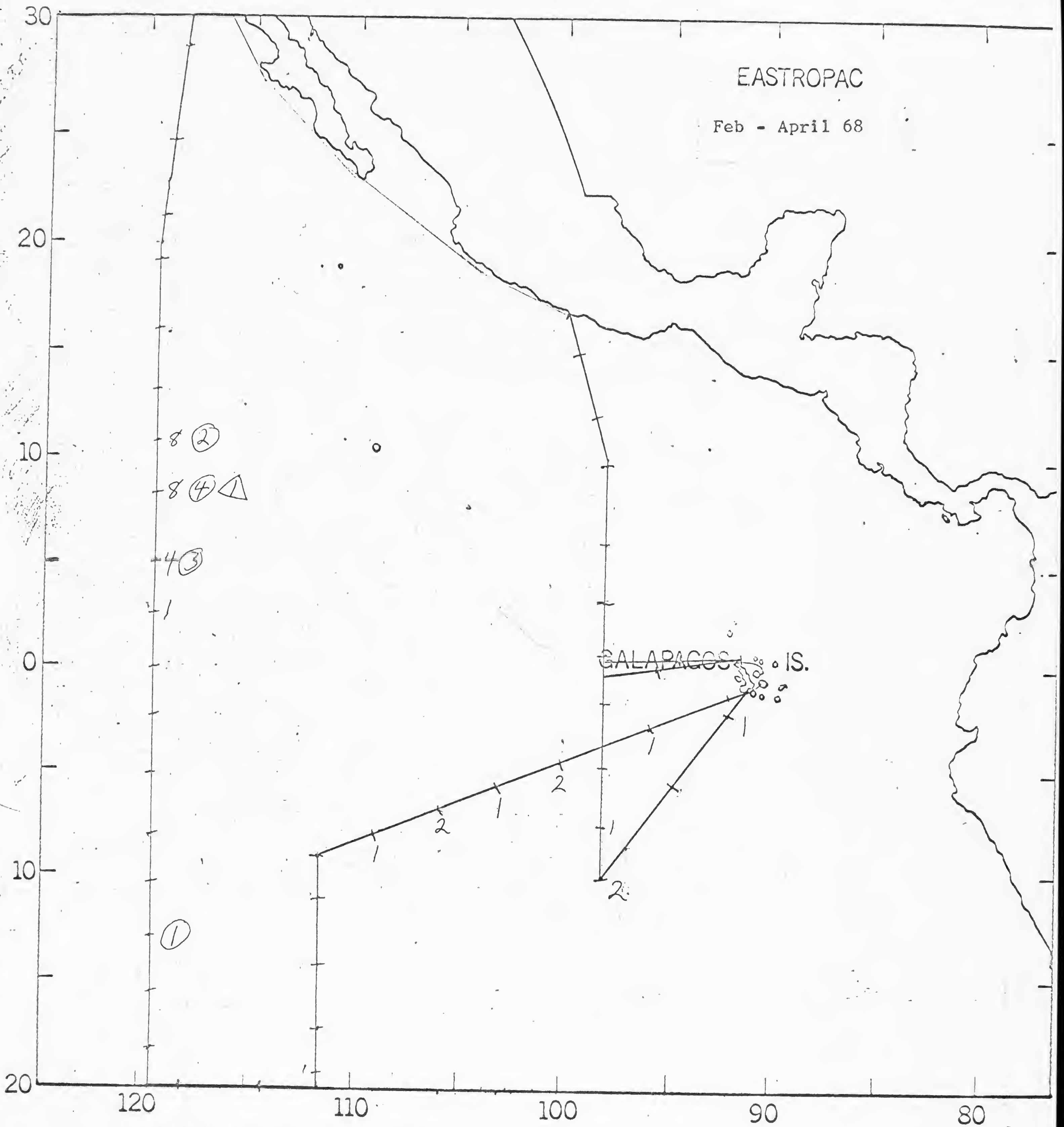
Feb - April 68



Distribution of Wedge-tailed Shearwater
Dark phase ②
light phase 2

EASTROPAC

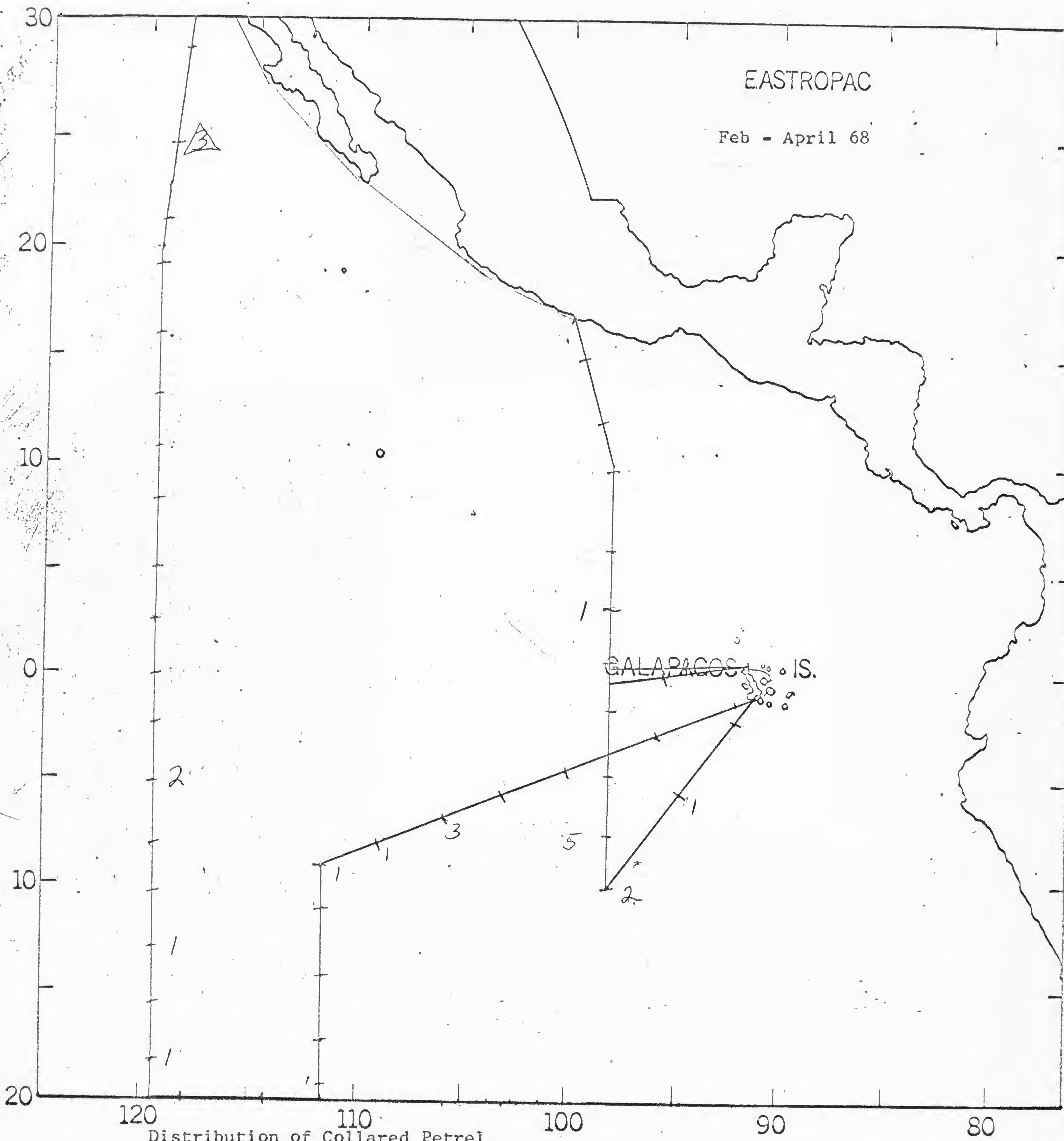
Feb - April 68




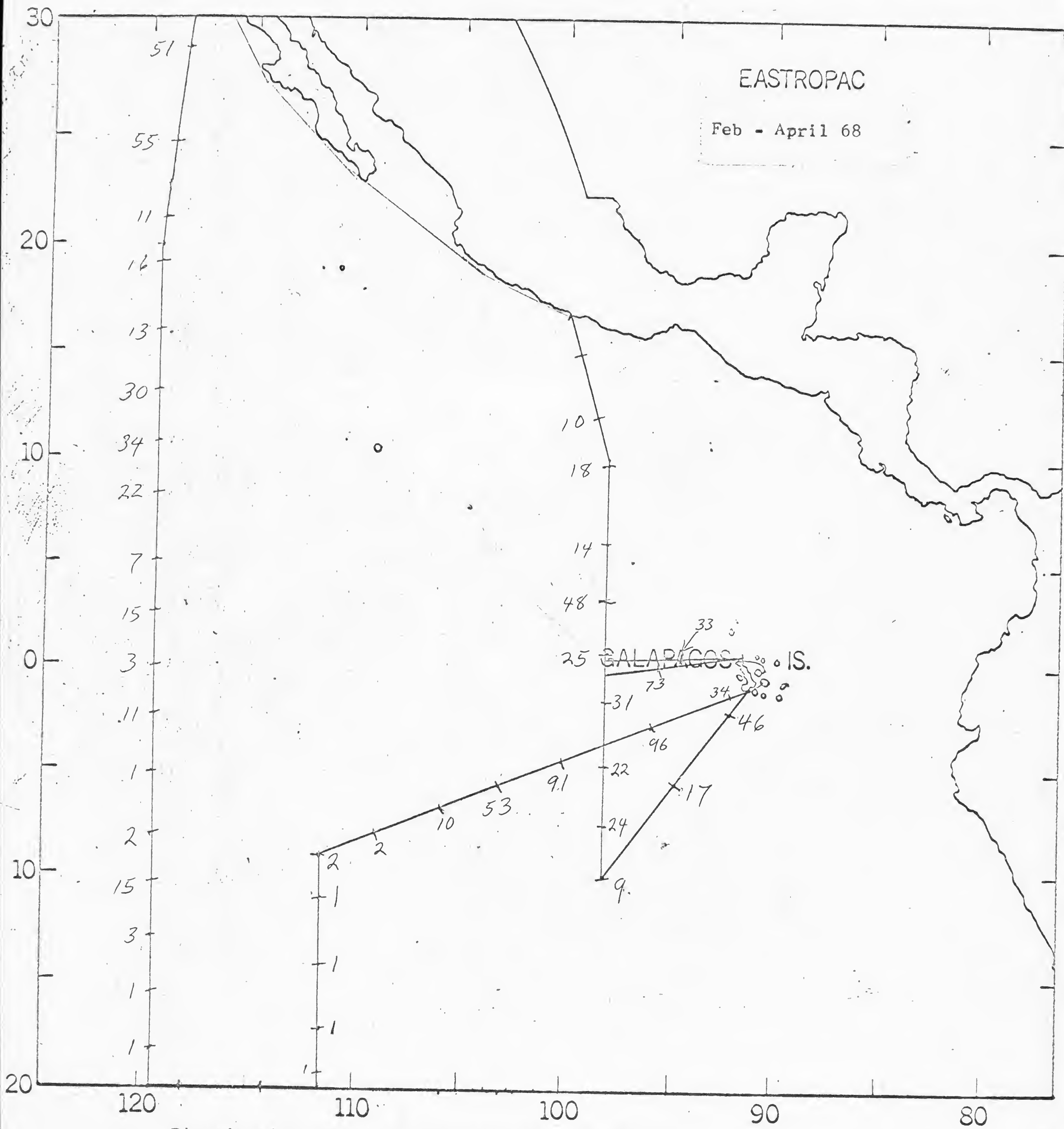
Distribution of *p. externa* ②
Juan Fernandez ②
White-necked ②

EASTROPAC

Feb - April 68



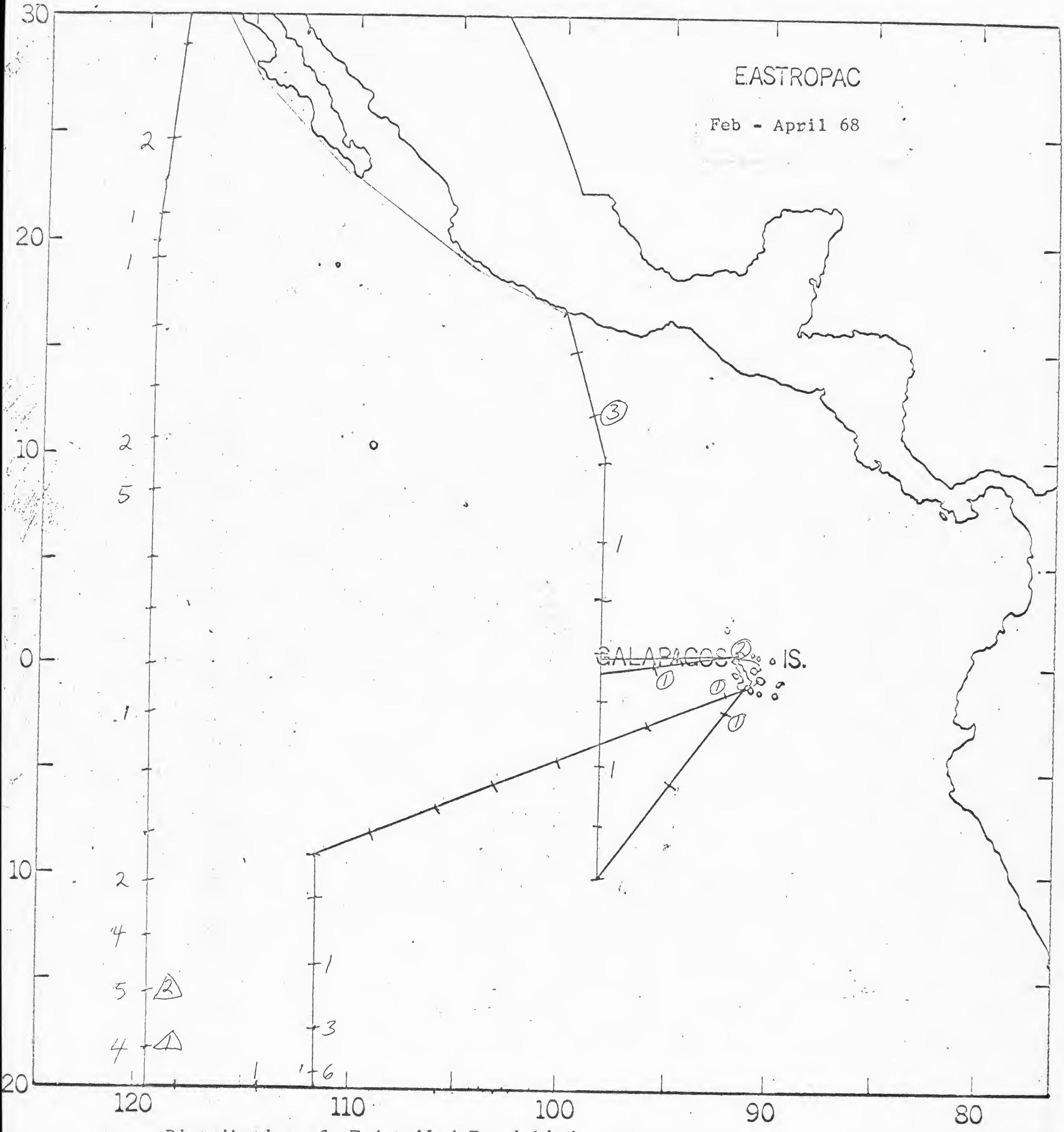
Distribution of Collared Petrel
Cools " 



Distribution of total numbers of Storm Petrels

EASTROPAC

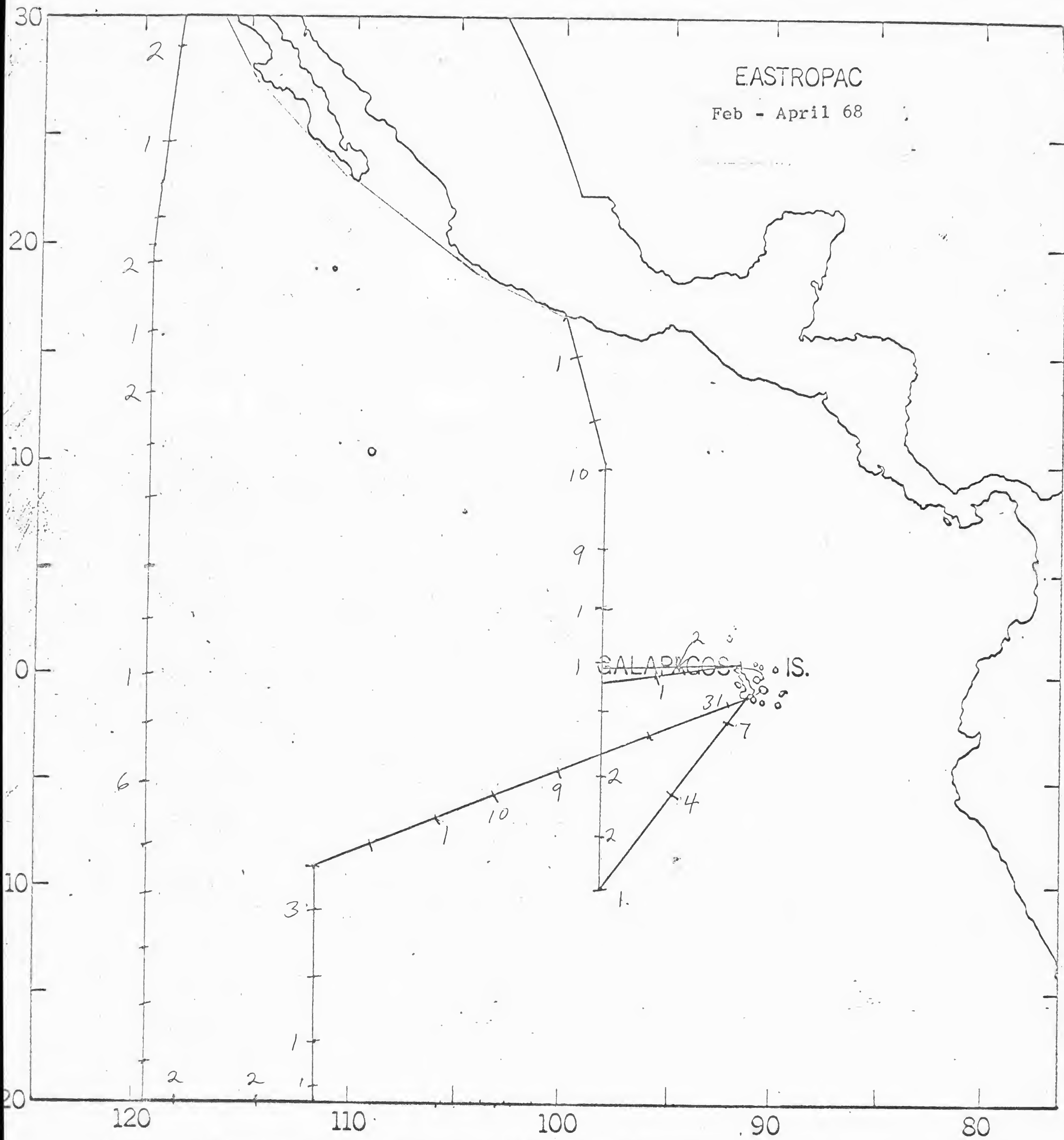
Feb - April 68



Distribution of Red-tailed Tropicbird
Red-billed Tropicbird ○
White-tailed Tropicbird △

EASTROPAC

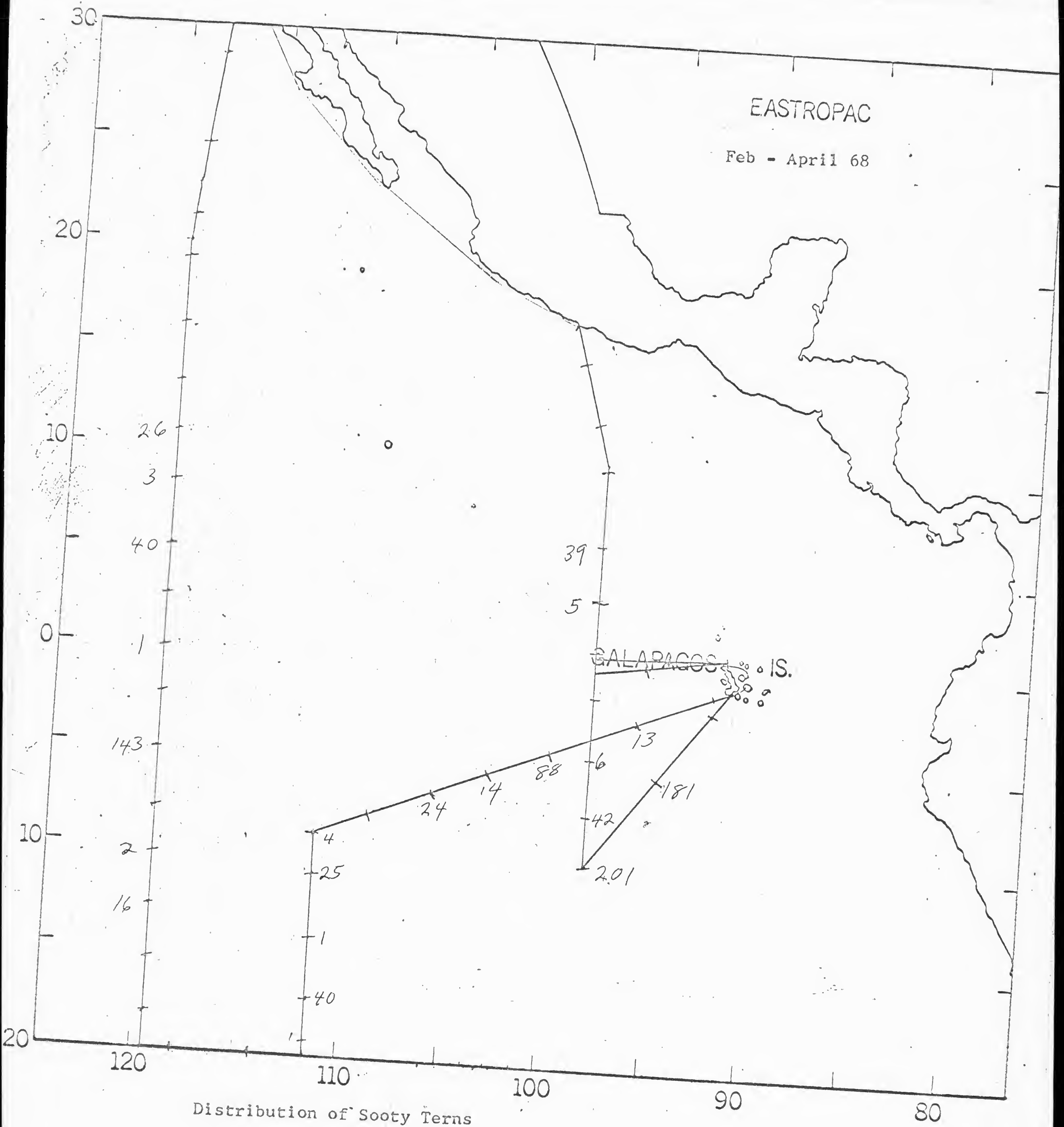
Feb - April 68



Distribution of Phalaropes (all lumped together)

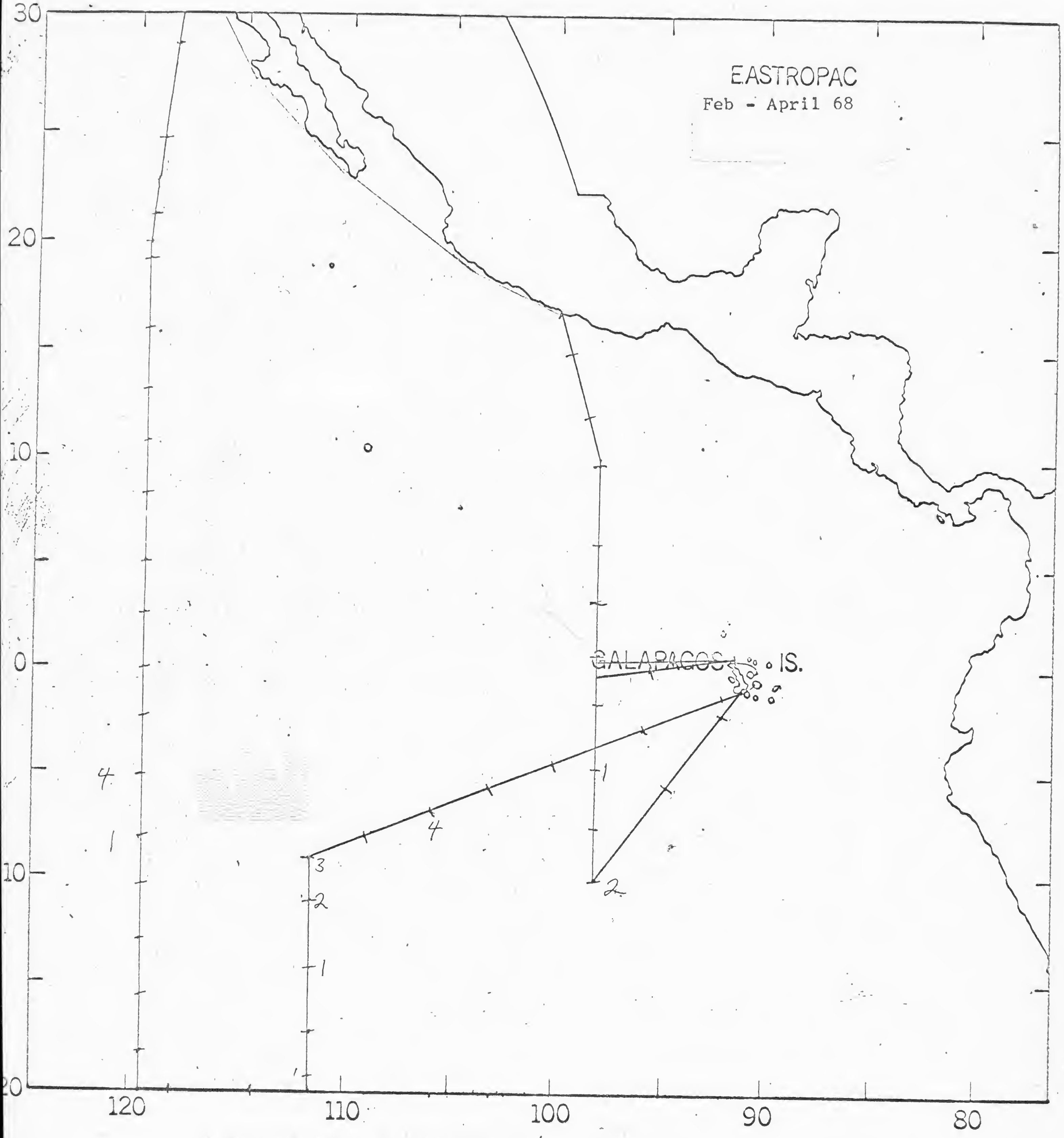
EASTROPAC

Feb - April 68

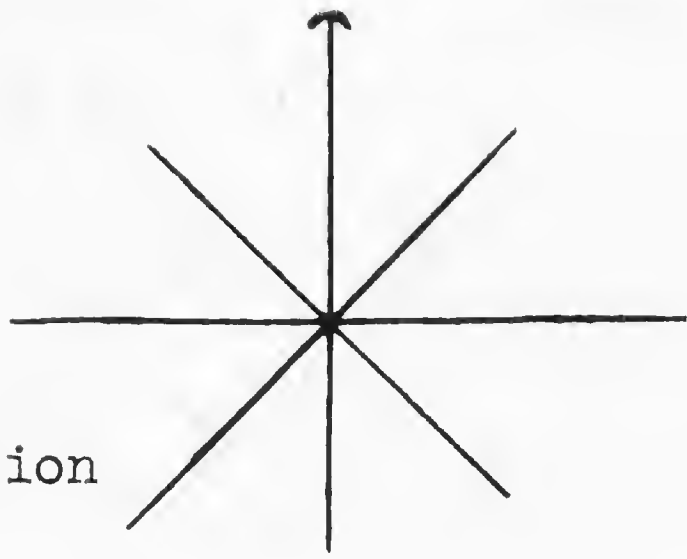


Distribution of Sooty Terns

EASTROPAC
Feb - April 68



Distribution of Fairy Terns



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

TJH
weather flat calm

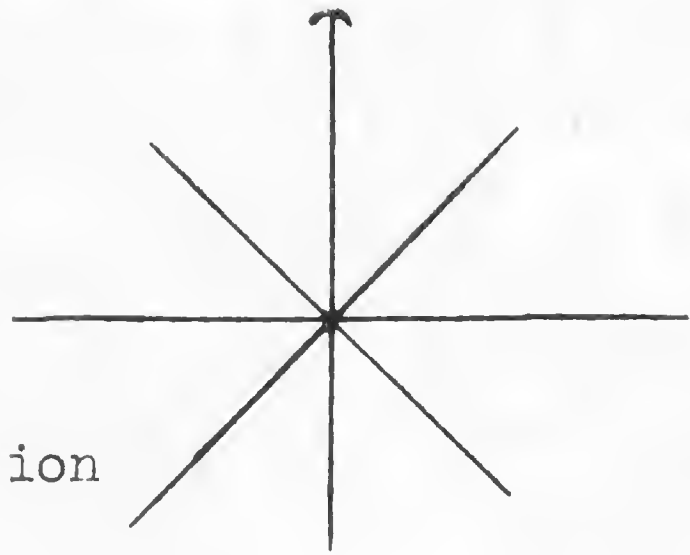
Date 16 February 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|----------------------------|---------|--------|----------|---|
| 0629 | | | | | Sunrise begin observations |
| 55 | Shearwater sp | 1✓ | E | | |
| 57 | G-W Gull | 1✓ | ☉ | | |
| 59 | Shear sp | 1✓ | NE | | Following ship Imm ← |
| 702 | St. Pet | 1✓ | ☉W | | |
| 07 | St. Pet Manx | 2✓ | E | | |
| 15 | W. Gull | ① | ☉ | | Following ^{Ad} G-W G shot but not retrieved |
| 16 | | | | | Breakfast |
| 26 | | | | | |
| 33 | R. Phel | 2✓ | N | | winter plumage |
| 34 | St. Pet Manx | 4✓ | E | | Following 1 Ad 1 2nd year bird |
| 34 | W. Gull | ② | | | |
| 48 | Shearwater | 3✓ | E | | |
| 50 | " | 1✓ | E | | |
| 0807 | " | 2✓ | E | | |
| 19 | BFA | ① | ☉ | | Following DIS Rump |
| 28 | Shearwater | 1✓ | S | | |
| 32 | LA | ② | ☉ | | Following Federal Gullage Nat's sea gull |
| 41 | W. Gull | ② | ☉ | | |
| 54 | Shearwater | 4 | E | | Following Ad |
| 0909 | W. Gull | ③ | ☉ | | 2 Ad 1 1st ^{winter} bird ca 50 mi E of Guadalupe Is. |
| 17 | BFA | ② | ☉ | | Bath DK Rump |
| 53 | WRSP | 1✓ | ☉ | | |
| 030 | Gulls - Western | ④ | ☉ | | Following 3 Ad 1 imm. |
| 32 | | | | | Seal - 1 porpoising |
| 45 | Jacquer sp Gull sp | 2✓ ① | ☉ ☉ | | Feeding over bait fish Immatures |
| 1127 | Antarctic Murrelet | 2✓ | ☉ | | on H ₂ O |
| 23 | " | 2✓ | ☉ | | on H ₂ O |
| 27 | " | 2✓ | E | | |
| 28 | " | 2✓ | ☉ | | on H ₂ O |
| 37 | St. Pet | 2✓ | ☉ | | |
| 40 | | | | | Lunch close |
| 1210 | | | | | open |
| 30 | | | | | Seal - cal? Nat Fur Seal |
| 33 | St. Pet | 1✓ | ☉ | | |
| 1318 | WRSP | 3✓ | ☉ | | |
| | St Pet | 1✓ | ☉ | | |
| 19 | St Pet | 15±5✓ | ☉ | | on H ₂ O |
| 22 | N-2 Shear | 1✓ | ☉ | | on H ₂ O - Molting Im Primaries |
| 26 | Socorro Pet | 1✓ | ☉ | | |
| 29 | St. Pet | 1✓ | ☉ | | |
| 30 | " " | 1✓ | ☉W | | |
| 1400 | " " | 1✓ | E | | No Gulls have been following |
| 01 | W. Gull | ① | ☉ | | Following Ad has been since lunch |

1741



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

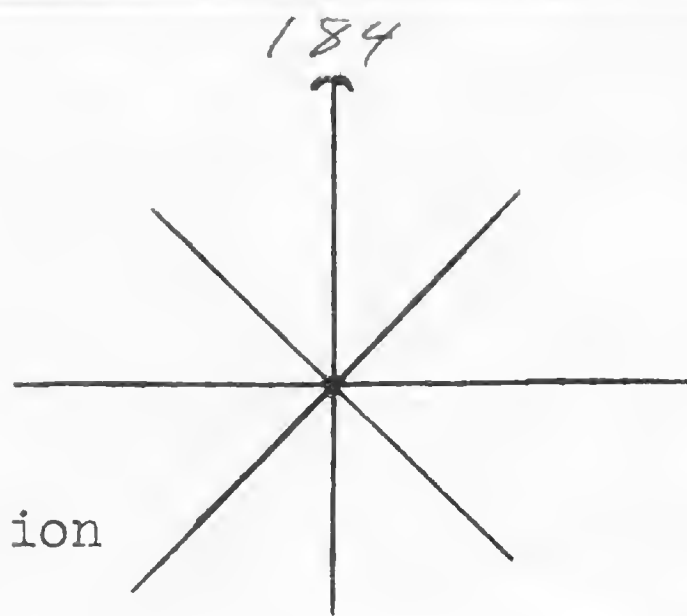
Date 16 Feb 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|--------------------------------|----|------|----------|--|
| 1420 | St. Pet | 1v | E | | |
| 40 | " " | 2v | ce | | |
| 42 | " " | 1v | ce | | |
| 51 | Shear/Pet | 1v | ce | | |
| 56 | St. Pet | 1v | ce | | out 20 |
| 1501 | " " | 1v | ce | | lots of trash - wood etc. in the o |
| 03 | " " | 1v | S | | |
| 07 | " " | 2v | ee | | |
| 16 | LWBSP | 2v | ee | | |
| 27 | WBSP | 1v | ce | | |
| 27 | St Pet | 1v | ce | | |
| 30 | St. Pet | 1v | ce | | |
| 34 | WBSP | 1v | ce | | |
| 46 | Gull/Jacq | 1v | E | | |
| 51 | Socorro Pet | 1v | ce | | |
| 53 | " " | 1v | ce | | |
| 55 | St. Pet | 1v | ce | | |
| 1602 | " " | 1v | S | | |
| 1703 | WBSP Socorro SP? | 1v | ce | | |
| 10 | Sm Alcid | 2 | SW | | All dark ^{probably} Cassin's Pet. 2 |
| 15 | St. Pet | 3v | ce | | one whale |
| 15 | | | | | whale sperm ca 30ft. 67° N, 170° W |
| 16 | | | | | close |

Sunset 1741



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

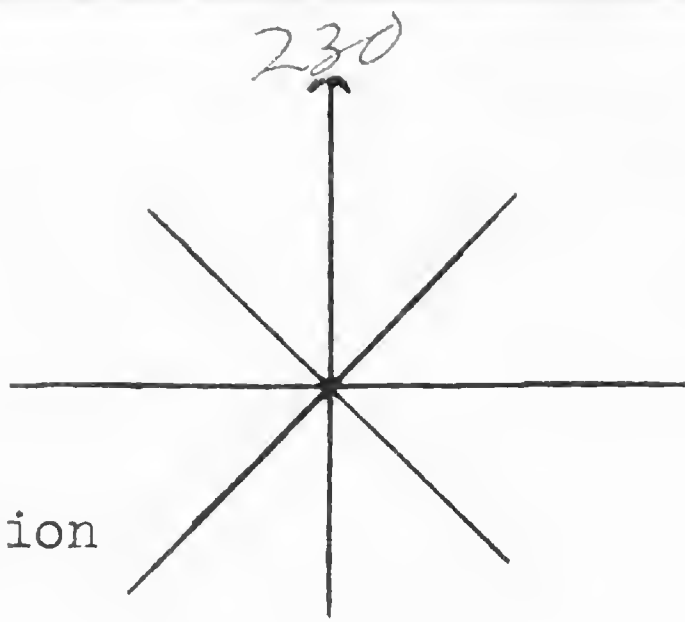
TJL
weather clear lt. breeze
long swell excellent
observation conditions

Date 17 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|-----------------------------|--------|------|----------|---|
| 0626 | | | | | Sunrise begin observations |
| 710 | | | | | Delphinid(?) 50 ± 20 Not spinning, ca 2 mi away |
| 24 | R Phel | 1 ✓ | N | | Wings Plume animals falling on side, - Inadisperse groups when first observed. Then began to bunch up as they |
| 56 | Bird SP. | 1 ✓ | ce | | Moved away, dorsal present. Looks like they are "walking on feet" |
| 0816 | WRSP | 1 ✓ | S | | sea water Temp 66° |
| 0910 | BTTB | 1 ✓ | ce | | off 20 Ad |
| 21 | LWRSP | 2 ✓ | ce | | observed very closely |
| 28 | " | 2 ✓ | ce | | |
| 1006 | " | 1 ✓ | ce | | |
| 45 | " | 2 ✓ | ce | | |
| 54 | COOKS? Pet | 2 ✓ | ce | | equiform head to Back good look |
| 1108 | COOKS " | 1 ✓ | ce | | " " " " |
| 27 | LWRSP | 1 ✓ | ce | | |
| 30 | | | | | close for lunch |
| 1200 | | | | | open |
| 02 | LWRSP | 1 ✓ | ce | | |
| 05 | small Pterodroma | 1 ✓ | ce | | |
| 25 | LWRSP | 2 ✓ | ce | | |
| FF 29 | " | 20 ± 5 | ce | | |
| 32 | " | 2 ✓ | ce | | |
| 35 | Sm Pter | 1 ✓ | ce | | |
| 35 | WRSP | 2 ✓ | ce | | |
| 37 | WRSP | 3 ✓ | ce | | |
| 1320 | ST Pet | 2 ✓ | ce | | |
| 39 | Sm Pt. | 1 ✓ | S | | |
| 41 | BTTB | 1 ✓ | ce | | on 120 |
| | ST Pet | 1 ✓ | ce | | |
| 1405 | LWRSP | 2 ✓ | ce | | |
| 57 | " | 8 ✓ | ce | | |
| 1536 | " | 2 ✓ | ce | | close |
| 1620 | | | | | underway 1705 |
| 1720 | | | | | open |
| 47 | ST Pet | 1 ✓ | ce | | |
| 48 | | | | | Sunset close observations |



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

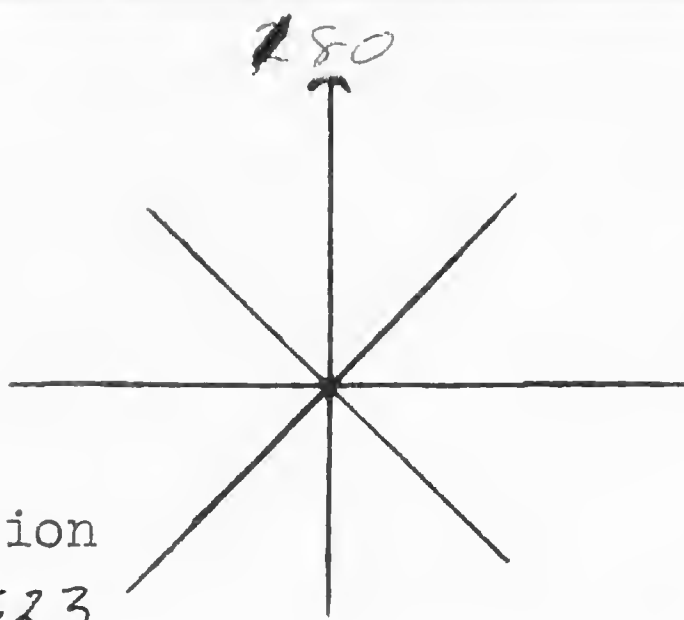
TJL
Weather wind 11/15kts.
Light seas -
Good observing conditions

Date 18 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|---------|---|------|----------|---|
| 10 07 | | | | | Depart station begin observation |
| 11 10 | WRSP | 3 | ☉ | | on H ₂ O |
| 11 30 | | | | | close for lunch |
| 12 00 | | | | | begin |
| 12 46 | WRSP | 2 | ☉ | | |
| 12 52 | St. Pet | 1 | ☉ | | |
| 13 02 | WRSP | 1 | ☉ | | |
| 13 33 | RTTB | 1 | ☉ | | on H ₂ O Ad 1410 cct to 239 |
| 15 27 | LWRSP | 2 | ☉ | | Played around Bow for 3min - slightly forked tail |
| 15 44 | WRSP | 2 | ☉ | | dividing line observed |
| 16 25 | | | | | on station close observations |



Ship
Direction
SR 0623

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

TJE

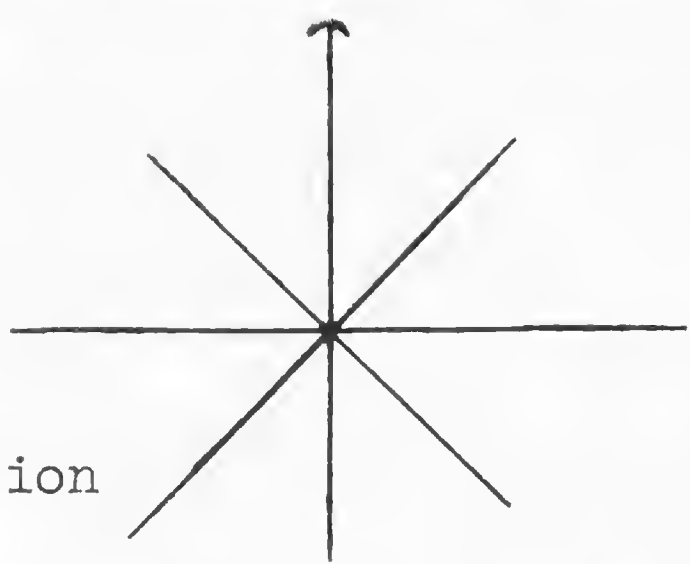
Date 19 Feb 68
Pg.# _____

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|--------|---|----|--|---|
| 0632 | | | | | Depart station. Begin observations |
| 700 | | | | | Breakfast |
| 720 | | | | | |
| 50 | WRSP | 1 | SE | | |
| 58 | RTTB | 1 | ☉ | | Ad |
| 806 | WRSP | 1 | SE | | |
| 06 | " | 1 | ☉ | | |
| 0900 | St Pet | 1 | W | | |
| 00 | " " | 1 | ☉ | | |
| 19 | WRSP | 1 | S | | |
| 26 | LWRSP | 1 | ☉ | | close - dividing line seen |
| 40 | WRSP | 1 | SE | | |
| 1000 | WRSP | 1 | SE | | |
| 10 | " | 1 | SE | | |
| 30 | | | SE | | |
| 1255 | | | | | close observations depart station |
| 57 | WRSP | 1 | ☉ | | |
| 1314 | " | 1 | E | | |
| 28 | RPhul | 2 | ☉ | | on H ₂ O together Non Breeding Plumage |
| 48 | WRSP | 1 | SE | | |
| 1444 | St Pet | 1 | SE | | |
| 1510 | LWRSP | 1 | SE | | Dividing line seen |
| 1628 | St Pet | 1 | ☉ | | |
| 1630 | | | | | on station close |

19
Seen station
1258



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

T.J.T.
 weather 1/2 low squalls
 scattered white caps
 General observational conditions
 Good

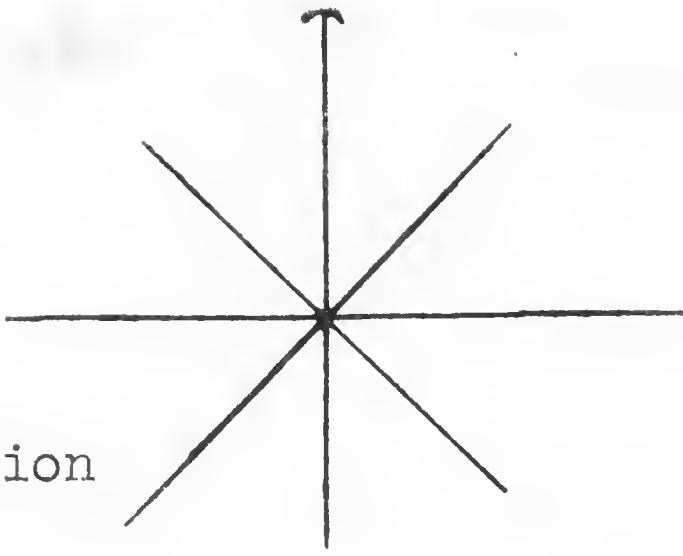
Date 20 Feb 68
 Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------------|----------------|----|--|---------------------------------|
| 0621 | | | | | Sunrise begin observations |
| 40 | St. Pet | 1 ^v | ce | | |
| 700 | | | | | } Breakfast. |
| 745 | | | | | |
| 815 | WRSP | 3 ^v | ce | | |
| 22 | Manx Shear | 1 ^v | ce | | |
| 45 | WRSP | 1 ^v | W | | |
| 47 | LWRSP | 1 ^v | ce | | dividing line in tail observed. |
| 908 | LWRSP | 1 ^v | ce | | Feeding until flushed by ship |
| 36 | WRSP | 1 ^v | ce | | Followed ship momentarily |
| 43 | St Pet | 1 ^v | E | | |
| 1030 | | | | | on station close ob. |
| 1246 | | | | | begin obser. underway |
| 48 | Phal SP | 1 ^v | ce | | on H-d |
| 1415 | Bird sp. | 1 ^v | ce | | |
| 1508 | WRSP | 1 ^v | ce | | |
| 1529 | Bird SP | 1 ^v | SE | | |
| 28 | BFB | 1 ^v | ce | | Ad |
| 44 | LWRSP | 1 ^v | ce | | dividing line observed |
| 49 | St. Pet | 1 ^v | ce | | |
| 1600 | LWRSP | 1 ^v | ce | | dividing line observed |
| 30 | | | | | on station close |

OBSERVERS:



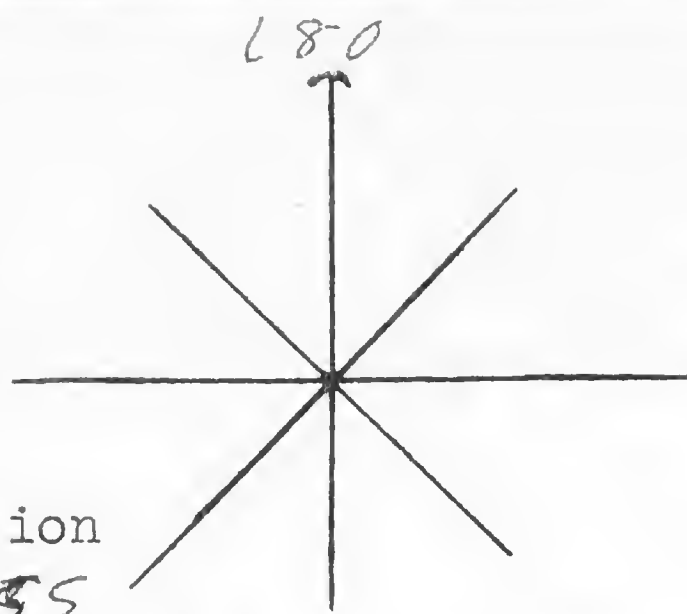
Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN *Nocturnal*
or

Date *20 Feb 68*
Pg.# *1*

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------------------|----------------|----------|-----------|----------|--------------|
| 20 30 | | | | | <i>Baz</i> |
| 21 00 | <i>St. Pet</i> | <i>1</i> | <i>ce</i> | | |
| 21 25 | <i>"</i> | | | | |
| 21 30 | | | | | <i>cb 20</i> |



Ship
Direction
1404 ~~SS~~

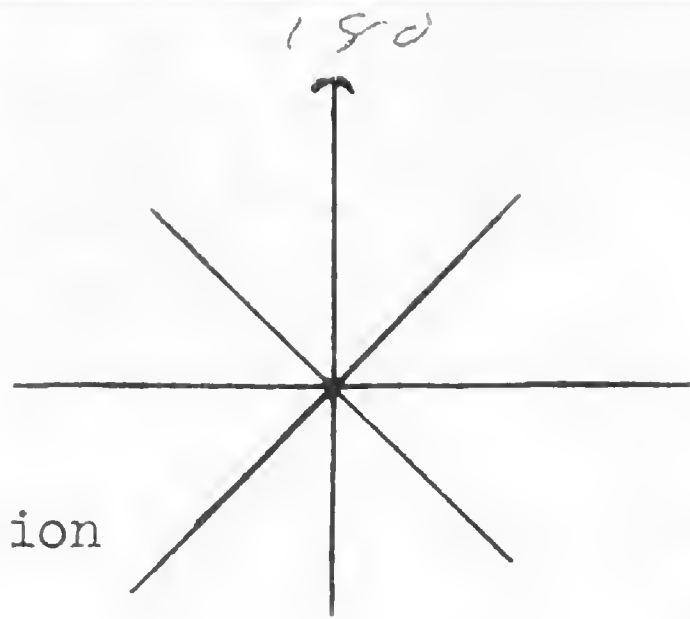
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 21 Feb 68
Pg.# 1

SPECIMEN
OR

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|----------------------------|---|------------------|----------|---|
| 0618 | | | | | Sunrise begins ab. |
| 0700 | LWRSP | 1 | ce | | dividing line seen - slightly forked tail |
| 0701 | | | | | Breakfast. |
| 21 | | | | | |
| 36 | WRSP | 1 | ce | | |
| 48 | Wilson's PSP | 1 | ce | | |
| 0809 | WRSP | 1 | ce | | No dividing line - Tail 1/2 white + Squared Not Forked - did not see feet - <u>WRSP - R 3</u> |
| 20 | " | 1 | ce | | Possibility Not heads seem d. from yesterday's + Early Morning birds. More white on Rump |
| 31 | St. Pet | 1 | W | | |
| 0904 | WRSP | 1 | W | | |
| 20 | St Pet | 1 | W | | |
| 47 | WRSP | 1 | S | | |
| 56 | LWRSP | 1 | ce | | |
| 1006 | WRSP | 1 | ce | | Forked tail + Dividing line - very close |
| 1038 | | | | | Rump looked as immaculate white as several of above birds. |
| 1335 | | | | | on station close ab. |
| 37 | WRSP | 1 | ce | | Depart station begin ab. |
| 1402 | LWRSP | 1 | ce | | |
| 26 | WRSP | 1 | SE | | dividing line observed + Forked tail. |
| 32 | LWRSP | 1 | SE | | |
| 41 | WRSP | 1 | W | | |
| 55 | WRSP | 1 | ce | | |
| 57 | St Pet | 2 | S | | |
| 1505 | WRSP | 1 | ce | | |
| 16 | LWRSP | 1 | ce | | |
| 23 | LWRSP | 1 | ce | | dividing line well seen |
| 27 | St Pet | 1 | ce | | very good look as above |
| 34 | LWRSP | 1 | ce | | |
| 38 | " | 1 | ce | | |
| 40 | R Phal | 2 | ce | | calling + Flashed from H ₂ O |
| 41 | St. Pet | 1 | ce | | |
| 46 | WRSP | 2 | ce SE | | |
| 48 | " | 1 | SE | | |
| 1610 | St Pet LWRSP | 2 | ce | | |
| 1630 | | | | | close |
| 1720 | Booby? | 1 | | | Observed by crew |



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

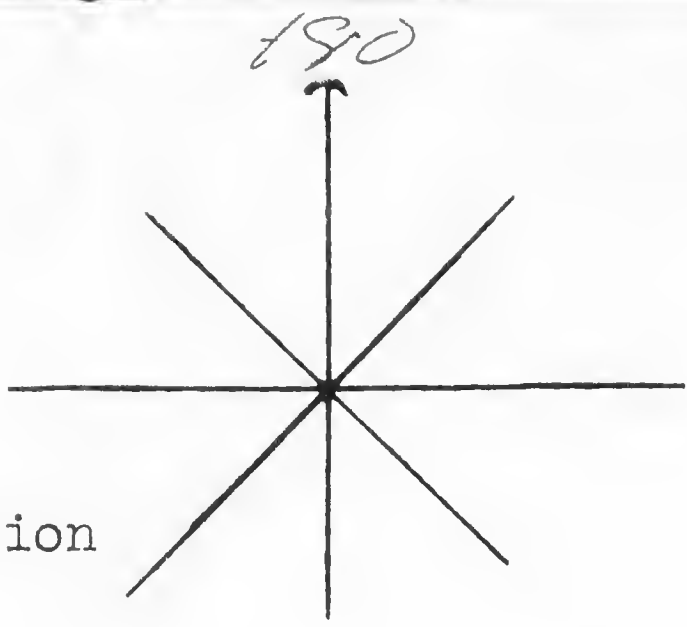
OBSERVERS:

Date 22 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|---------------------------|---|------|----------|--|
| 0616 | | | | | Sunrise begins |
| 54 | WRSP | 1 | ce | | |
| 56 | WRSP | 1 | NE | | |
| 0700 | | | | | Breakfast close |
| 0715 | | | | | open |
| 30 | RTTB | 2 | ce | | our ship Ad |
| 40 | WRSP | 2 | SE | | |
| 53 | LWRSP | 1 | ce | | Feeding on H ₂ O |
| 0805 | WRSP N-2 Shear | 1 | ce | | |
| | Kermadec | 1 | ce | | dis |
| | WRSP | 3 | ce | | |
| 25 | WRSP | 1 | ce | | |
| 30 | LWRSP | 1 | ce | | |
| 36 | WTS | 1 | ce | | It |
| 38 | WRSP | 1 | ce | | |
| 50 | LWRSP | 2 | SE | | forward tail + divider line seen |
| 54 | WRSP | 1 | SE | | |
| 0904 | st Pet | 1 | SE | | |
| 06 | Sooty Tern | 1 | S | | Imm |
| 09 | WRSP | 1 | E | | |
| 28 | st Pet | 1 | ce | | |
| 30 | B Footed B | 1 | ce | | Followed ship momentarily |
| 40 | WRSP | 1 | SE | | |
| 1008 | RFB | 1 | ce | | Following DIS phase S Ad |
| 1030 | | | | | On station closed |
| 1315 | | | | | Begin obs. under way at 1252 |
| 1400 | st Pet | 1 | SE | | |
| 11 | WRSP | 1 | SE | | |
| 26 | Shear/Pet | 1 | SE | | |
| 28 | WRSP | 1 | S | | |
| 32 | LWRSP | 1 | SE | | |
| FF 50 | Sooty Tern | 5 | ce | | Ad 3 all together over tuna |
| | JFP | 4 | ce | | |
| | Sm Ptero | 1 | ce | | |
| 52 | WRSP | 1 | SE | | |
| 1506 | JFP | 1 | NW | | |
| 10 | N-2 Shear | 1 | ce | | Very Heavy Molt could hardly fly - 3 or 4 primaries missing in both wings. |
| 11 | st Pet | 1 | SE | | |
| 15 | st Pet | 1 | ce | | |
| 20 | JFP | 1 | ce | | |
| 21 | WRSP | 1 | ce | | |
| 33 | JFP | 1 | ce | | |
| 40 | WRSP | 1 | E | | |



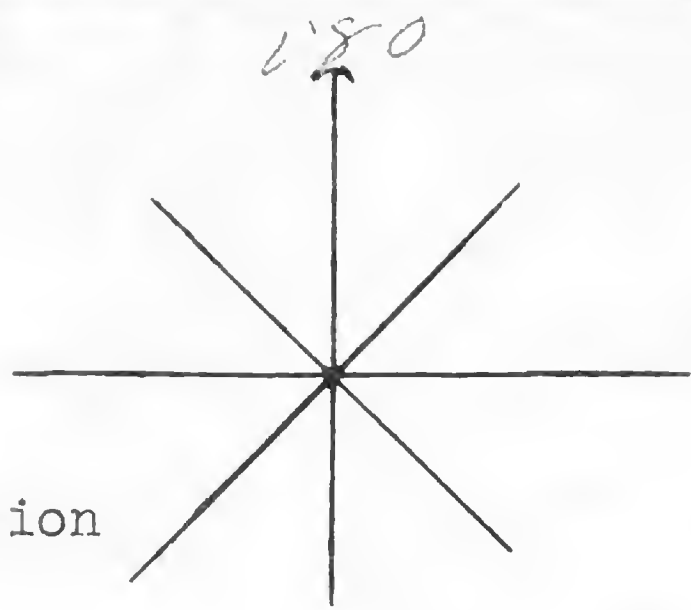
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 22 Feb 68
Pg.# 2

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|------------|--------|------|----------|------------------|
| 1553 | st Pet | 20 | SE | | |
| 57 | WRSP | 10 | SE | | |
| 1610 | " | 10 | W | | |
| 11 | WTS | 10 | N | | |
| 15 | JFA | 10 | NW | | DK |
| 16 | WRSP | 10 | SE | | |
| 23 | st Pet | 2 | W | | |
| FF 29 | Sooty Tern | 20 ± 5 | W | | |
| | P. externa | 20 | E | | |
| | Shear/pet | 15 ± 3 | E | | |
| 30 | | | | | close on station |
| 1800 | | | | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

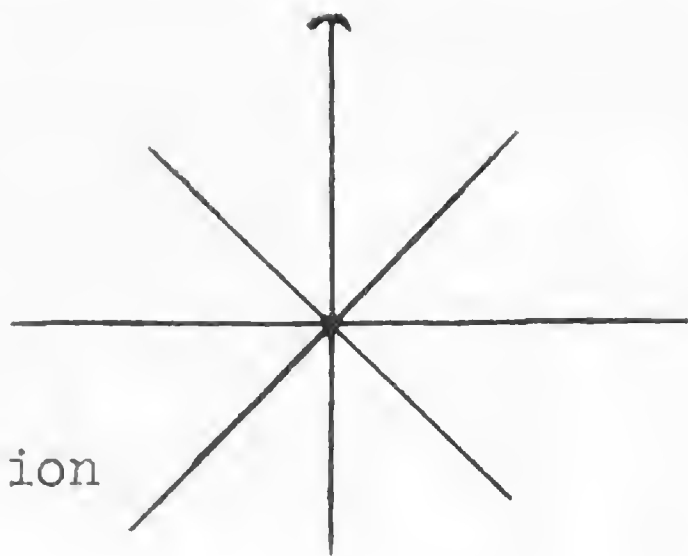
Calum sea
Scattered Squalids

Date 23 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|---------------------------|----------------|------|----------|--|
| 0613 | | | | | Sunrise begin ab. |
| 15 | BTTB | 1 ^v | ☉ | | circled ship's STD |
| 25 | Shear/Pet | 1 ^v | ☉ | | our Natural Slicis |
| 33 | st Pet | 1 ^v | ☉ | | |
| 40 | BTTB | 1 ^v | ☉ | | std |
| 53 | JFP | 1 ^v | ☉ | | |
| 54 | P. externa | 3 ^v | ☉ | | |
| 56 | WRSP | 1 ^v | ☉ | | |
| 0700 | | | | | Breakfast close |
| 0730 | | | | | open |
| 31 | Shear/Pet | 1 ^v | ☉ | | |
| 36 | JFP | 1 ^v | ☉ | | Following ship - Heavy Molt |
| 40 | BTTB | 1 ^v | ☉ | | " " STD |
| 48 | Tern sp | 2 ^v | E | | |
| 53 | JFP | 2 ^v | ☉ | | Heavy Molt |
| 0800 | BTTB | 1 ^v | ☉ | | |
| 0803 | WRSP | 1 ^v | SE | | Following ship |
| 15 | JFP | 1 ^v | ☉ | | |
| 25 | " | 1 ^v | ☉ | | |
| 29 | Shear/Pet | 4 ^v | E | | |
| 30 | Sooty Tern | 1 ^v | E | | Ad |
| 31 | st Pet | 1 ^v | E | | |
| 34 | WRSP | 1 ^v | SE | | |
| 41 | st Pet WRSP | 1 ^v | ☉ | | fed on H ₂ O |
| 46 | st Pet | 3 ^v | E | | |
| 50 | Shear/Pet | 3 ^v | ☉ | | |
| 51 | st Pet | 1 ^v | E | | |
| 53 | LWRSP | 1 ^v | ☉ | | |
| 56 | PIP/Tahiti | 1 ^v | ☉ | | |
| 0903 | BTTB | 1 ^v | ☉ | | Ad Following |
| 15 | LWRSP | 1 ^v | ☉ | | Sitting on H ₂ O on Slicis |
| 20 | JFP | 1 ^v | ☉ | | |
| 32 | WRSP | 1 ^v | ☉ | | our Natural Slicis |
| 36 | P. externa | 1 ^v | E | | |
| 45 | | | | | close to get skiff ready |
| 1314 | | | | | observed on station 1 BTTB, 1 WRSP, 1 JFP |
| 33 | LWRSP | 3 ^v | ☉ | | underway open sitting on H ₂ O together |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Flat Calm
Low swells

Date 23 Feb 68
Pg.# 2

SPECIMEN
or

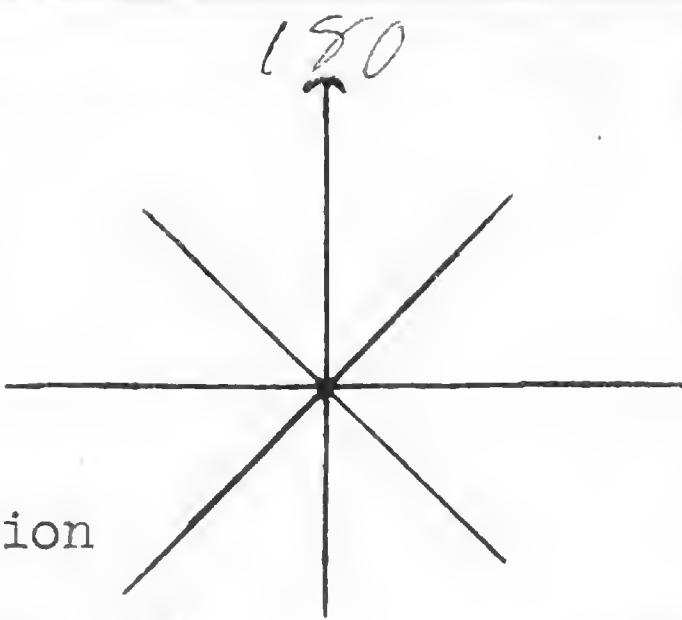
TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|----------------------------|----------------|----|--|--|
| 1406 | Glauc/Pet | 2 ^v | CE | | |
| 13 | PIP/Tahiti | 1 ^v | SE | | |
| 15 | WNP | 1 ^v | CE | | Very distinct white color around neck - black & white |
| 22 | WRSP | 1 ^v | CE | | |
| 25 | WTS | 1 ^v | SE | | No Mol. observed as on other P. externa. |
| 30 | WRSP | 1 ^v | E | | 1 ^t |
| 31 | JFD | 1 ^v | CE | | |
| 50 | WTS | 1 ^v | E | | No white on Neck at all |
| 51 | st. Pet | 1 ^v | E | | DK |
| 1510 | PIP/Tahiti | 2 ^v | E | | |
| 20 | st. Pet WRSP | 1 ^v | E | | |
| 1607 | st. Pet | 1 ^v | CE | | |
| 07 | Sooty Tern | 2 ^v | CE | | Ad Feeding over 6-10 in fish |
| 11 | PIP/Tahiti | 1 ^v | E | | |
| 24 | " | 1 ^v | E | | |
| 25 | st. Pet WRSP | 1 ^v | CE | | |
| 30 | | | | | close on station |



SS 1808 on station

2230 Heavy Rain caught 1719 WTS
several Sooty Terns overhead at least one
Immature with 5-6 Adults.



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:
Weather Baining -
overcast - Flat Calm
0730 wind out of SW now

Date 24 February
Pg.# 1

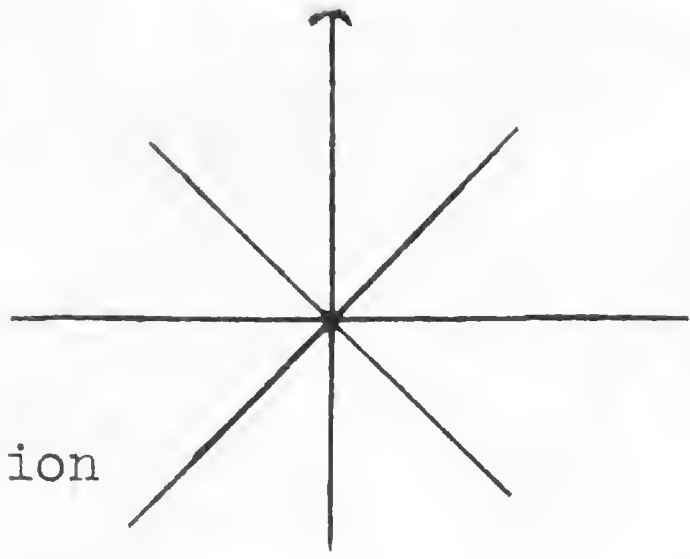
SR 0609

SPECIMEN
or
DIR. BAND NO. REMARKS

| | TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|--------------|------|---------------|---------|------|----------|---|
| In | 0614 | | | | | under way began observations |
| Rain | 29 | JFP | 10 | E | | in Rain |
| | 30 | WTS | 10 | E | | phase |
| | 44 | Shear/Pet | 10 | SE | | |
| | 0705 | | | | | Close breakfast |
| | 730 | | | | | open |
| | 55 | St. Pet | 10 | E | | |
| | 0805 | WTS | 10 | E | | dis |
| | 28 | P. externa | 10 | CE | | |
| | 48 | " | 10 | CE | | |
| | 0915 | Harcourt's SP | 2 | CE | | Quarter tail 1/2 black, 1/2 white No divider, large stampet = to or larger than Leach's |
| | 27 | P. externa | 10 | CE | | |
| | 39 | JFP | 10 | CE | | |
| | 42 | Harcourt's SP | 1 | CE | | out of Rain |
| Fin Rain | 1013 | Shear/Pet | 10 | E | | |
| Rain stopped | 18 | JFP | 20 | E | | |
| | 19 | PIP/Tahiti | 10 | E | | |
| | 21 | Harcourt's SP | 1 | CE | | |
| | 30 | | | | | close on station |
| | 1450 | | | | | open |
| | 1523 | WTS | 10 | CE | | Lt. |
| SF? | 35 | Harcourt's SP | 10 | CE | | |
| | 32 | Sooty Tern | 80 | CE | | 7 Ad 1 Imm |
| | 42 | Harcourt's SP | 10 | E | | |
| FF | 53 | Sooty Tern | 25 ± 50 | CE | | over tuna |
| SF? | 1605 | " " | 70 | CE | | 6 Ad 1 Imm also |
| | 24 | WTS | 10 | NE | | |
| | 30 | | | | | close on stations |

Between 0500 + sunrise 15-20 sooty terns around ship in Rain, all had 2 or 3 immatures with adults.

Not feeding on Procellariids or Frigatebirds searching by ground



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E


OBSERVERS:

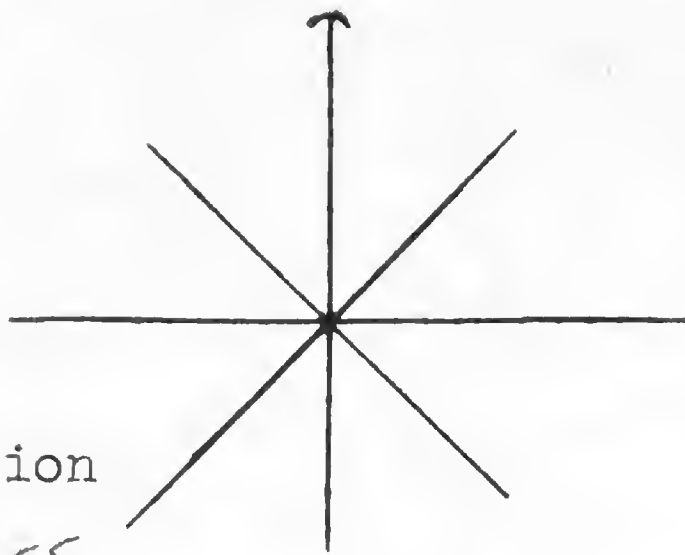
Date 25 Feb 68
Pg.# 1

SIR 0608

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|------------|-----|------|----------|--|
| 0608 | | | | | SIR began observations |
| 14 | ST. Pet | 1 ✓ | SE | | |
| 57 | WRSP | 1 ✓ | E | | |
| 0700 | | | | | Breakfast |
| 15 | | | | | |
| 20 | LWRSP | 3 ✓ | ce | | |
| 38 | LWRSP | 1 ✓ | ce | | |
| 0902 | " | 1 ✓ | ce | | |
| 09 | Harcnts SP | 1 ✓ | ce | | |
| 50 | " " | 2 ✓ | ce | | Feeding. Rounded tail,  |
| | WRSP | 1 ✓ | ce | | } Together. |
| 1010 | Harcnts SP | 1 ✓ | ce | | |
| 25 | " " | 3 ✓ | ce | | Photographed #18 |
| 30 | | | | | |
| 1245 | | | | | 1 " Together on H ₂ O #19-20-21 |
| 1320 | | | | | on station - Turtle seen on station - accurate measurement ± 3 ft. |
| 1608 | JFP | 1 ✓ | ce | | Whale - small i.e. 25 ft. Noticeable prominent dorsal, falcate, white on flanks all the way to flukes, seemed quite agile for a Balainoptera. Turned 90° directly in front of ship. Surface water Temp 25.2° |
| 1630 | | | | | close on station |



Ship
Direction

1811 55

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

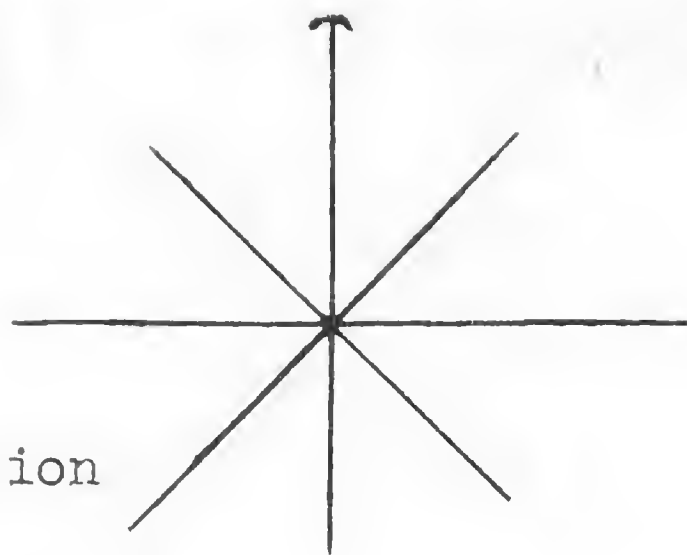
Date 26 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|---------------|---|----|--|-----------------------------|
| 0607 | | | | | Sun Rise begins ob. |
| 50 | Shear/Pet | 1 | ce | | |
| 56 | WRSP | 1 | ce | | |
| 0700 | | | | | Breakfast |
| 0715 | | | | | 5 |
| 0858 | WRSP | 1 | ce | | |
| 0915 | WTS | 1 | ce | | DIK |
| 20 | Sooty Tern | 1 | w | | Age? |
| 37 | B. Phal | 1 | ce | | off H ₂ O called |
| 1030 | | | | | on station close |
| 1605 | | | | | complete station begin ob. |
| 42 | Harcourt's SP | 1 | E | | Rounded tail Kudu to Kudu |
| 1811 | | | | | Sunset. Close |

Approx 2000's 2000's



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

TJL
Weather: Calm, lots of
long slicks, Runway NW-SE

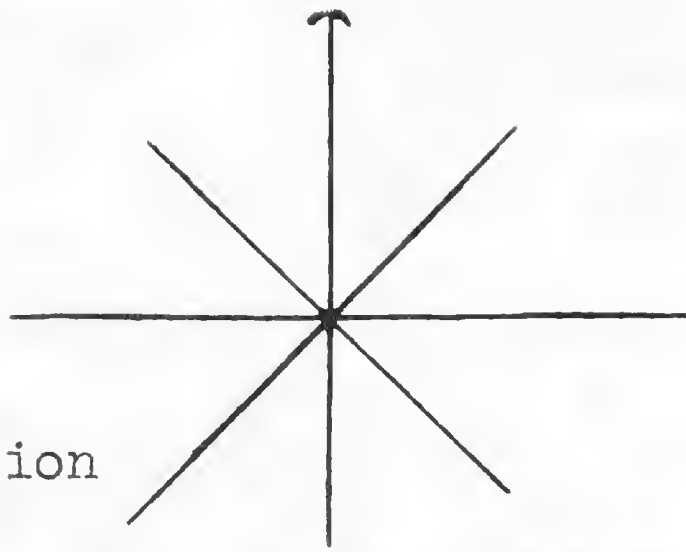
Date 27 Feb 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

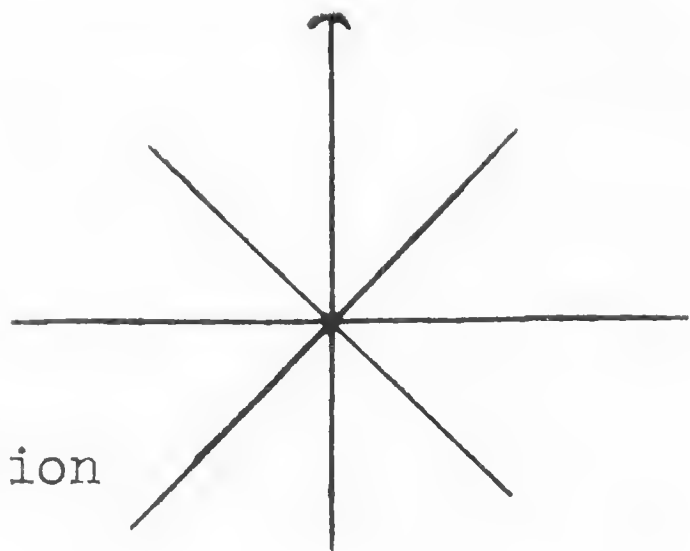
| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|---------------|---|------|----------|---|
| 0605 | | | | | Sannice Many long Natural slicks |
| 28 | Harcourt's | 1 | ce | | |
| 45 | WRSP | 1 | SE | | Feeding over slicks |
| 0700 | | | | | |
| 0700 | | | | | Breaks fast. |
| 20 | | | | | |
| 30 | | | | | Porpoise 8±2 distant 23.5°c |
| 44 | WRSP | 1 | ce | | Whales 2 blew in distant |
| 0940 | Harcourt's SP | 1 | S | | |
| 55 | " | 2 | ce | | |
| 1000 | | | | | Photographed #26 |
| 1030 | incubation | | | | |
| 1202 | incubation | | | | |
| 1400 | | | | | Close to attend to proceedings of King Neptune's Royal Court. |
| 17 | LWRSP | 1 | ce | | open - collected 1 BTTB SA on station (1150) |
| 1500 | " | 1 | ce | | Dividing line observed |
| 30 | " | 1 | ce | | " " " |
| | Harcourt's | 2 | ce | | together in front of ship |
| 40 | Sm Pt. | 1 | ce | | Pat? Pat? |
| | | | | | I think it was collected, very discolored edges of wings - too distant to distinguish head but appeared to contrast with back upper side of wings were brownish as just prior to molt |
| 1430 | | | | | on station |

OBSERVERS:

Ship
Direction
 SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

 Date 28 Feb 68
 Pg. # 1

| TIME | SPECIES | # | DIR. | SPECIMEN or BAND NO. | REMARKS |
|---------|----------------------|----------------|------|----------------------------|---|
| 0611 | | | | | under way |
| 55 | | | | | |
| 0700 | | | | | 2 or 3 whales - on horizon |
| 30 | | | | | low high blows, long periods between blows |
| 44 | | | | | 3 Breach/blast. |
| 0811 | Sooty Tern | 2 \checkmark | SE | | whales 3 or 4 short stubby blows in very quick succession |
| 11 | R Phal SP | 1 \checkmark | N | | 25.1°C |
| 12 | Shear/Pet | 1 \checkmark | S | | |
| 0912 | Harcourt's SP | 1 \checkmark | ☉ | | |
| FF 30 | Sooty Tern | 30 \pm 5 | ☉ | | No diving line - large size 1/2 white, 1/2 D/B Tail. |
| | Fairy Tern | 2 \checkmark | ☉ | | Feeding |
| 1027 | Collared Pet | 1 \checkmark | S | | dark brown light back, heavy band on under wing |
| 30 | | | | | close on station |
| 1238 | | | | | |
| 1320 | Fairy Tern | 1 \checkmark | ☉ | | Feeding |
| FF 43 | Sooty Tern | 35 \pm 5 | ☉ | | together |
| | Shear/Pet | 1 \checkmark | ☉ | | only 1 observed possibly 6 more that were not seen. |
| 1401 | Collared Pet | 1 \checkmark | SE | | |
| 32 | Fairy Tern | 1 \checkmark | ☉ | | Feeding |
| 33 | Phalarope SP | 1 \checkmark | W | | |
| FF 1510 | Sooty Tern | 55 \pm 5 | ☉ | | No Immatures Identified, only Adults observed. |
| TF 24 | " " | 6 \checkmark | S | | up high traveling 1 Im, 5 Ad |
| SF 42 | " " | 15 \pm 3 | ☉ | | |
| 1614 | R Phal | 3 \checkmark | ☉ | | off H ₂ & winter Plunge |
| 20 | " | 1 \checkmark | ☉ | | " " " |
| 130 | | | | | on station close |



Ship
Direction

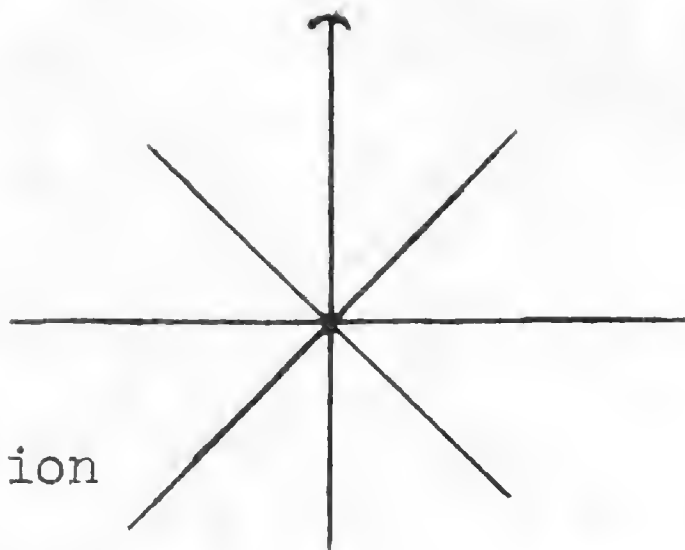
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 29 Feb 68
Pg.# 1

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------------------|-------------|---|------|----------|------------------|
| 0614 | | | | | under way |
| 0645 | St Pet | 1 | lee | | |
| 0700 | | | | | Breakfast |
| 0720 | | | | | |
| 0848 | Fairy Tern | 1 | lee | | |
| 59 | Harcorts SP | 1 | lee | | |
| 1030 | | | | | close on station |
| 14 14 | | | | | under way |
| 1630 | | | | | on station. |
| SS 1814 | | | | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

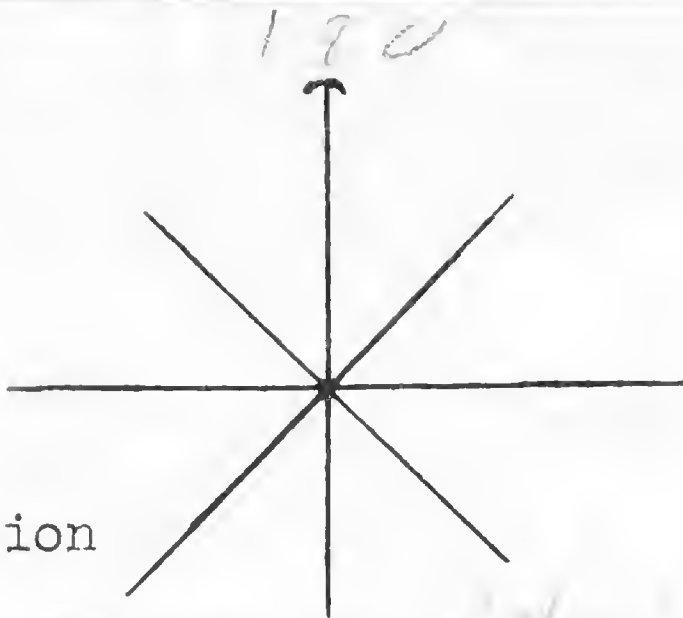
Date 1 March 68
Pg.# 1

SR0601

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|--------------|-----|----|--|--|
| 0608 | | | | | under way begin observation |
| 20 | WRSP | 1 V | ce | | over National Shells. |
| 0700 | | | | | Breakfast. |
| 0730 | | | | | |
| 824 | Harcorts SP | 2 V | W | | Feeding - distant |
| 48 | st Pet | 1 V | W | | |
| 0900 | Harcorts SP | 2 V | ce | | |
| 39 | Frigate bird | 1 V | ce | | |
| | Sooty Tern | 2 V | ce | | |
| 1000 | Harcorts SP | 1 V | ce | | landed on H ₂ O to left - |
| 02 | st Pet | 1 V | ce | | |
| 25 | Harcorts SP | 1 V | ce | | |
| 30 | | | | | close on station |
| 1140 | BTTB | 1 V | ce | | |
| 1238 | | | | | over ship on station |
| 1318 | Harcorts SP | 1 V | ce | | Feeding - sat on H ₂ O then up then on H ₂ O again, squared tail 1/2 white, 1/2 dark |
| 27 | WRSP | 1 V | E | | |
| 30 | LWRSP | 1 V | E | | |
| 1405 | st Pet | 1 V | ce | | formed Tail |
| 52 | Harcorts SP | 2 V | ce | | square tail 1/2 white, 1/2 to black, No line in white |
| 1600 | | | | | |
| 1740 | BTTB | 1 V | ce | | close on station |
| 1818 | | | | | over ship on station |
| | | | | | Sunset on station |



Ship
Direction

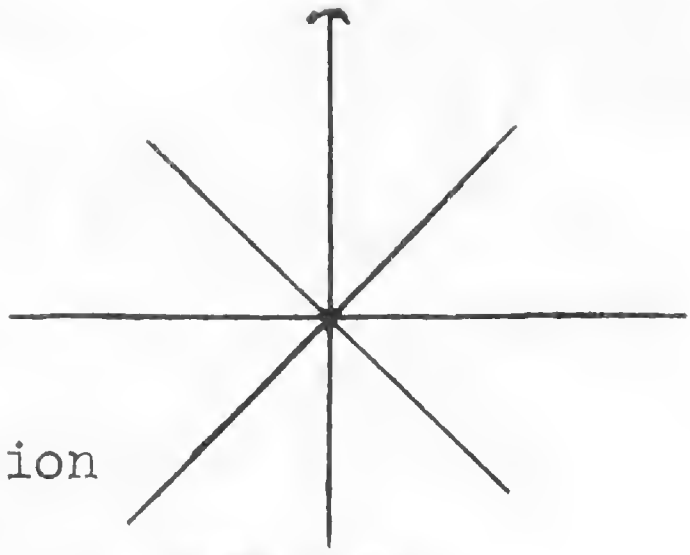
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 2 March 68
Pg.# 1

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|------------------------------|--------|------|----------|---|
| 0640 | BTTB | 2 | ☉ | | 1004. JS observed on station last Nite 1130-1200 |
| 0702 | | | | | 1 WTTB?, Sooty tern 3, (2 Ad, 1 Im) 2 R. Phul. |
| 23 | Collared Pet | 1 ✓ | E | | under way |
| 42 | Frigate SP | 1 ✓ | SE | | Heavy Molt. dit heart, gray back, dis heavy border |
| 45 | B Facial Body | 1 ✓ | ☉ | | on under wings. |
| 53 | Sooty Tern | 1 ✓ | S | | ♀ or Imm |
| 0857 | WRSP | 1 ✓ | ☉ | | 5 Ad |
| 0912 | SP Haucoits SP | 1 ✓ | ☉ | | dist |
| 21 | BTTB | 1 ✓ | ☉ | | Flushed from H ₂ O Ad, plumage - will Nat soon |
| 1003 | Shear SP | 1 ✓ | W | | shape + size like Sooty shear - did not see under wings - flew like sooty also. ^{slightly} _{Stel 3} |
| 15 | WRSP | 1 ✓ | E | | Bel 3 |
| 18 | P. externa | 1 ✓ | S | | dist |
| 26 | Tropic SP. | 1 ✓ | ☉ | | on station. Close 1100 school of tern on station |
| 30 | | | | | depart station in 1 hour approx obs. |
| 1250 | | | | | Rem Stipar 1430 |
| FF 1450 | Sooty tern | 15 ± 3 | ☉ | | Ad shot but Not Retrieved |
| 1557 | BTTB | 1 ✓ | ☉ | | close on station |
| 1630 | | | | | |
| 1919 | | | | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

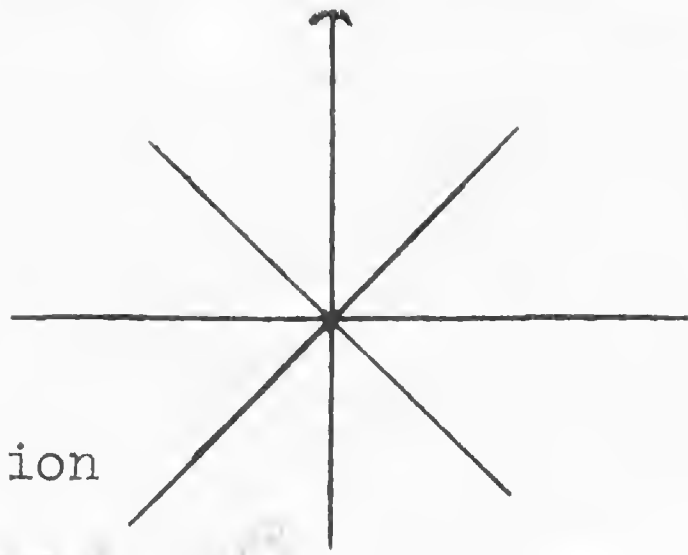
Date 3 March 68
Pg.# 1

0557 ~~5518771021~~

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|-----------------------------------|-----|----------------|--|---|
| 0607 | | | | | under way begin obs. |
| 58 | RTTB | 1 ✓ | ☉ | | SAd |
| 700 | | | | | |
| 15 | | | | | Breakfast |
| 40 | RTTB | 2 ✓ | ☉ | | |
| 54 | Lg Shear/Pet | 1 ✓ | ☉ | | ISA 1? |
| 0800 | Frigatebird | 1 ✓ | ☉ | | All dk, seen only momentarily |
| | Small Shear/Pet | 1 ✓ | ☉ | | For ID |
| 20 | WTTB | 1 ✓ | ☉ | | |
| 38 | Sm Pterodroma | 3 ✓ | ☉ | | off H ₂ O Ad - bright yellow bill - long tail feathers |
| 55 | WTS | 2 ✓ | S | | distant |
| 0925 | WTS | 1 ✓ | ☉ S | | DK |
| 30 | | | S | | " |
| 1000 | Shear/Pet | 1 ✓ | ☉ | | slowed to 8 kts |
| 07 | WTTB | 1 ✓ | ☉ | | |
| 30 | | | ☉ | | off H ₂ O Ad ↓ |
| 1242 | | | | | on station |
| 36 | | | | | under way |
| 45 | WRSP | 1 ✓ | ☉ | | Porpoise 5/8 Just breaking H ₂ O dorsal & what back was seen was gray, dorsal rather broad & slightly recurved - Seas poor for observing |
| 1442 | WTS | 1 ✓ | ☉ | | sea water Temp. 26.6°C animals did not exceed 8ft. |
| 1521 | Pom Juvs | 1 ✓ | ☉ | | dk |
| 22 | RTTB | 1 ✓ | ☉ S | | |
| 25 | Pom Juvs | 1 ✓ | ☉ | | Ad |
| 30 | Pom Juvs | 1 ✓ | S | | |
| 1630 | | | S | | All three together Intermediate Phase Ad |
| 1740 | RTTB | 1 ✓ | ☉ | | on station |
| | Frigatebird | 1 ✓ | ☉ | | |



Ship
Direction

0556 IR

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

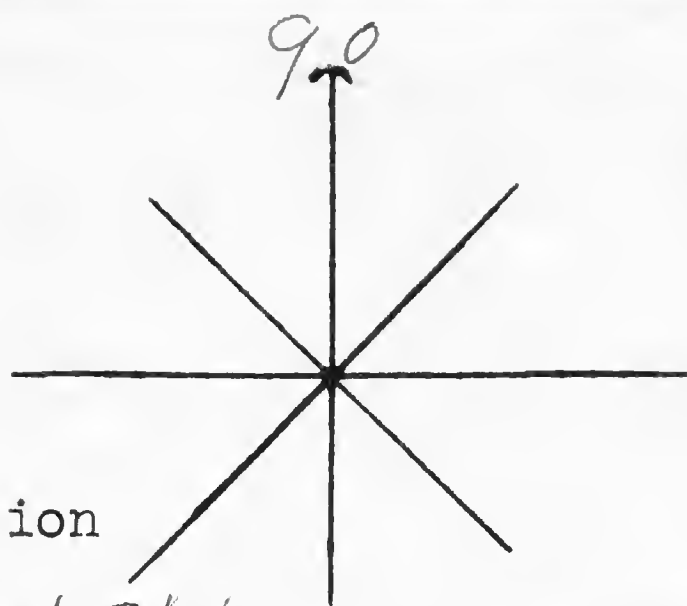
OBSERVERS:

Date 4 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|-----------------------|---|---------------|--|--|
| 0630 | | | | | open obs. |
| 49 | BTTB | 2 | ca | | Ad, Imm |
| 52 | PIP/tahiti | 1 | N | | |
| | Murphy Pet | 1 | N | | Dark with silver wing linings, predim size some or slightly smaller than PIP/tahiti, All uniform above |
| 0700 | | | | | Breakfast |
| 0720 | | | | | |
| 28 | BTTB | 1 | ca | | Ad |
| 0852 | Murphy Pet | 1 | NE | | Some as above. |
| 0921 | Collared Pet | 1 | ca | | |
| 40 | WTTB | 1 | ca | | Ad on station |
| 1030 | | | | | under way |
| 1245 | | | | | |
| 1343 | st. Pet | 1 | ca | | |
| 1614 | BTTB | 1 | ca | | Ad shot but not recovered. J. Jones on station |
| 1630 | | | | | |



Ship
Direction

Speed 9 kts

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

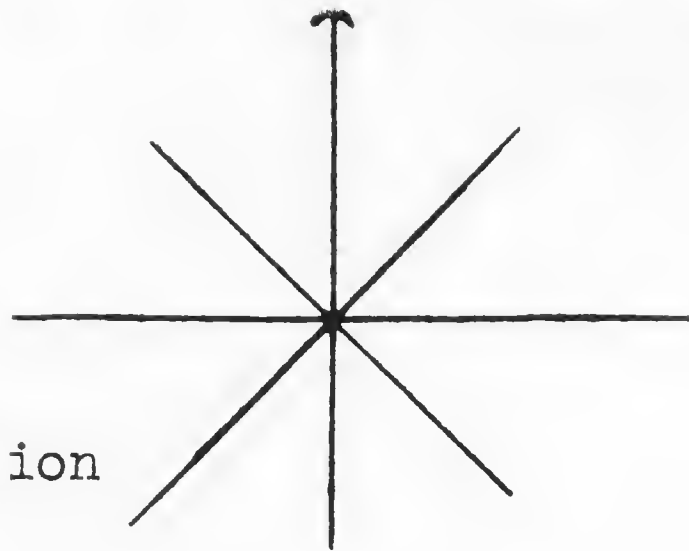
OBSERVERS:

Date 5 March, 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------------|---|----|--|---|
| 0551 | | | | | Sunrise begin obs |
| 0630 | Tropicbird | 1 | CE | | 20 20 117 07 25-40 obs |
| 0700 | | | | | Breakfast |
| 0812 | Tropicbird | 1 | CE | | |
| 1030 | | | | | on station |
| 1137 | | | | | Depart |
| 1214 | Phal sp | 1 | N | | |
| 1321 | " " | 1 | IV | | |
| 1422 | PIP | 1 | CE | | |
| 1630 | | | | | Towered beside ship - small bill |
| 1755 | B Faced B | 2 | 1 | | on station 1 Imm 1 Juv Both Imm (observed on station) |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

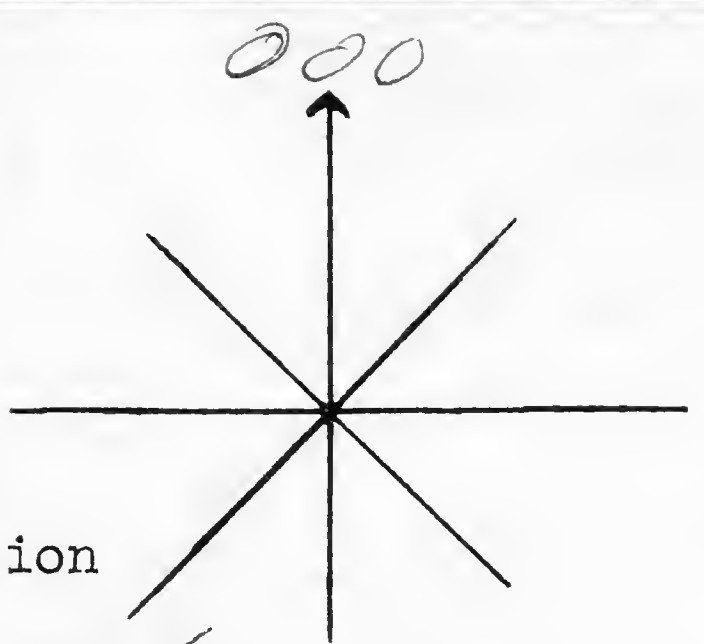
OBSERVERS:

Date 6 March 67
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|---------|---|---|--|------------------|
| 0540 | | | | | 513 begin obs |
| 0700 | | | | | |
| 0730 | | | | | Breakfast |
| 1000 | BTTB | 1 | | | |
| 30 | | | | | SAD |
| 1138 | | | | | Close station |
| 50 | | | | | Port station |
| 1228 | B. Phal | 1 | | | open obs. |
| 1320 | " | 1 | N | | |
| 1630 | | 1 | N | | |
| 1723 | | | | | on station close |
| 1757 | | | | | open underway |
| | | | | | Sunset. |



OBSERVERS:

Ship
 Direction

SR 0528

SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

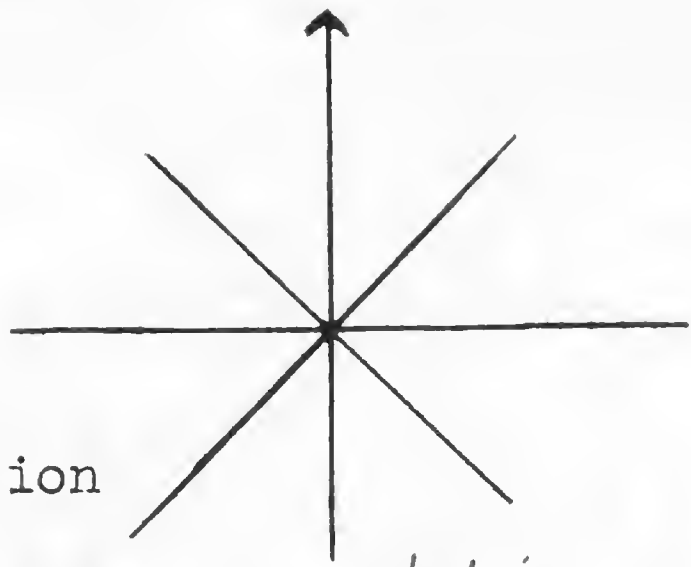
Date 7 March
 Pg.# 1

SPECIMEN
 or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------|---|---|--|---------------------------------|
| 0721 | | | | | underway begin obs. |
| 48 | BTTB | 1 | ☉ | | SAD 195/3 - 111 55 |
| 1030 | | | | | overhead |
| 1125 | BTTB | 1 | ☉ | | close |
| 1240 | | | | | 7-0 overhead - observed by crew |
| 1400 | | | | | u/w - Puffins etc. |
| 1518 | BTTB | 1 | ☉ | | begin obs. |
| 1540 | " | 1 | ☉ | | PINK Ad overhead |
| 1630 | BTTB | 2 | ☉ | | distat |
| | | | | | Ad Pinks overhead |
| | | | | | on station, close |

OBSERVERS:

Ship
Direction
 SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

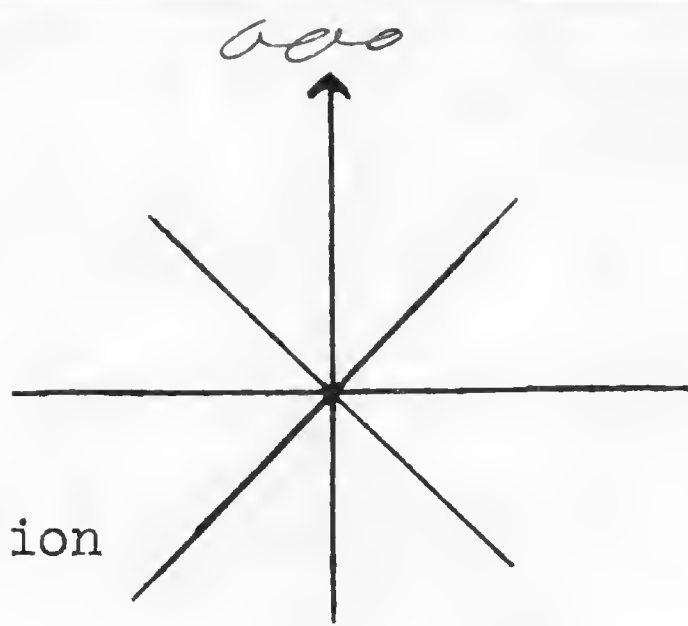
 Date 8 March 68
 Pg.# 1

SR 0529 on station

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|---------|-------------|--------|----|--|---|
| 0549 | BTTB | 1 | ce | | Ad on station |
| 0557 | Jaysen SP. | 1 | E | | " " |
| 0604 | | | | | |
| 16 | BTTB | 1 | ce | | under way |
| 21 | WTS | 1 | S | | SAD |
| 40 | PFP/Tolanti | 1 | SF | | DK |
| 0700 | | | | | |
| 20 | | | | | Breakfast close |
| FF 0915 | Sooty tern | 40 ± 4 | | | open - Feeding 1 Tern observed, Lots of Adul. T. |
| 0930 | | | | | |
| 1000 | Bfaced B | 1 | | | close on station (A Deep one) |
| 1342 | | | | | Tern under way open |
| 1416 | WIBSP | 1 | ce | | |
| 1524 | B Phul | 1 | N | | stopped & Fed several times then |
| 1528 | BTTB | 1 | ce | | continued North |
| 1608 | WTS | 1 | ce | | over ship Tern |
| 1630 | | | | | DK close on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

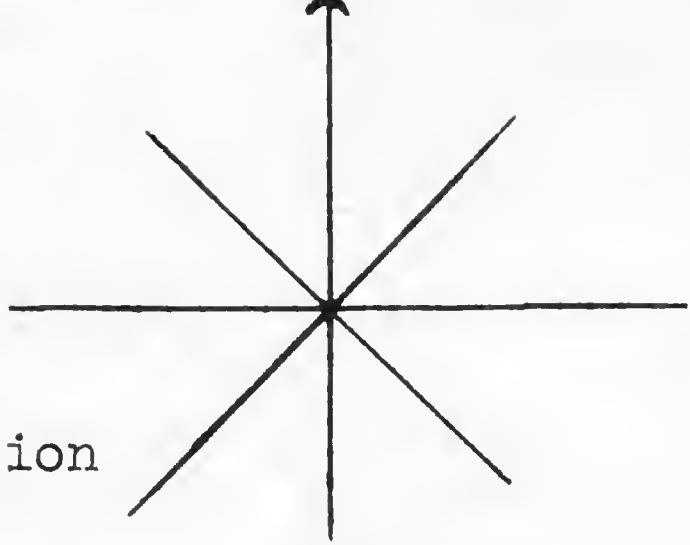
Date 9 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|------------|---|------|----------|-----------------------------------|
| 0630 | | | | | under way begin obs. |
| 0700 | | | | | Breakfast. |
| 0730 | | | | | |
| 0810 | BTTB | 1 | ☉ | | over ship Ad Plunge - Bill Nutsen |
| 12 | Shear/Pet | 2 | ☉ | | |
| SF 0925 | Fairy Tern | 1 | ☉ | | |
| | Sooty Tern | 1 | ☉ | | Ad |
| | Pom Jaeger | 3 | ☉ | | 1 Ad 2? |
| 1030 | | | | | on station |
| 1245 | | | | | under way |
| 1525 | WRSP | 1 | ☉ | | |
| 1530 | | | | | on station |

400



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

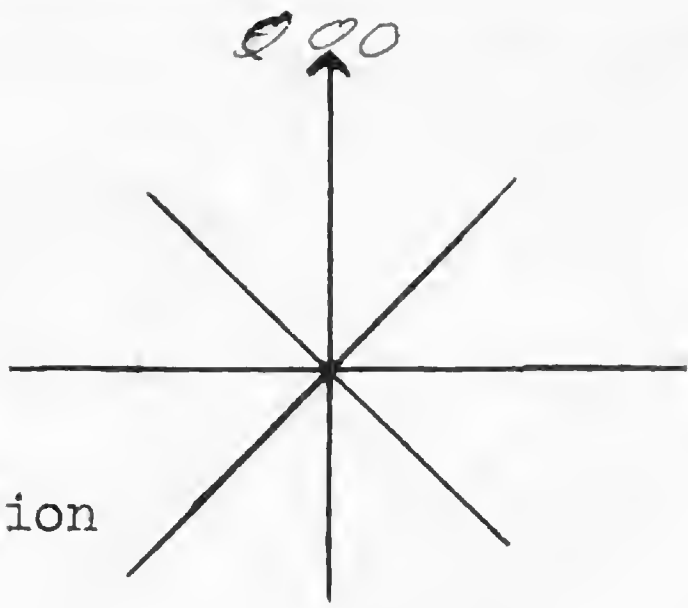
OBSERVERS:

Date 10 March
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|---------|------------|-------|----|--|---|
| 0600 | | | | | underway begin obs. |
| 0700 | | | | | |
| 0720 | | | | | Breakfast. |
| SF 0925 | Sooty Tern | 25 #5 | CE | | only adults observed! together toward above flocks |
| | Fairy Tern | 2 | CE | | |
| 35 | Jaeger SP | 1 | NE | | |
| | Skua | 1 | NE | | |
| 1030 | | | | | on station |
| 1242 | | | | | |
| 1332 | st. Pet. | 1 | CE | | underway |
| 1515 | B Phul | 2 | N | | 1105 1155 |
| 22 | " | 1 | N | | |
| 1600 | | | | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

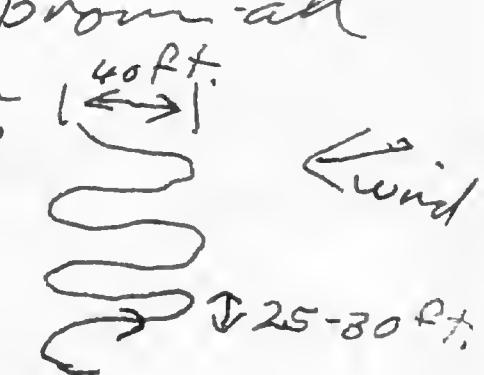
OBSERVERS:

Date 11 March 68
Pg.# 1

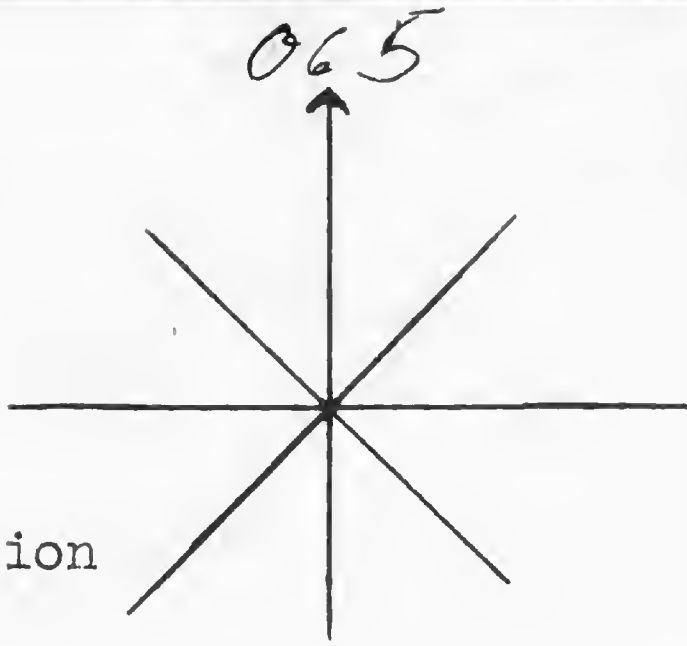
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|---------|--------------------------------------|---|-----|--|--|
| 0610 | | | | | begin obs underway |
| 0700 | | | | | |
| 0730 | ST. Pet | 1 | ce | | Breakfast |
| 0815 | WTS | 1 | | | Behind ship observed by Ron-Theradiomann |
| PF 0954 | Sooty Tern | 4 | slw | | obs |
| | Fairy Tern | 3 | ce | | All Ad } Feeding |
| 1008 | Shear Pet Collared Pet | 1 | ce | | |
| 1030 | | | | | white underneath dark head, black sideburns, gray back heavy black border on underwings. |
| 1244 | | | | | close - on station |
| 1345 | Barns Bumped Pet. | 1 | ce | | open Report Station |
| 1448 | WRSP | 1 | ce | | good looks, very peculiar flight looked like Brand New Plumage - No Brown - all Black, bill rather long, size - smaller than JFP, had under wing pattern like BFP |
| 1600 | | | | | close deep station |



from side
ca 30 ft. ↓
very rapid
return down
wind
between the
two arrows
several rapid wing
beats then tilted
up on side and
went down wind.



OBSERVERS:

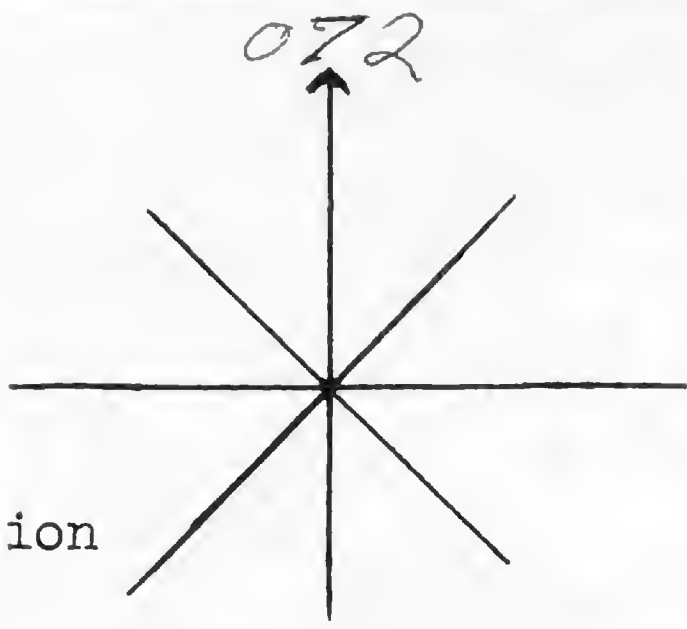
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

SPECIMEN or
Note - proceeding towards
Canal Zone for Bermuda with
Sea Plane for Siskin cools.

Date 12 March 68
Pg.# 1

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|--------------|---|----|--|--|
| 0525 | | | | | sunrise begin observations. |
| 55 | Jacger SP | 1 | ce | | following ship - disorientation |
| 0700 | | | | | Breakfast |
| 30 | | | | | |
| 53 | LWRSP | 1 | ce | | Forked tail, dividing line observed. |
| 0812 | Cullered Pet | 1 | ce | | heavy Molt. |
| 22 | Sm Shear/Pet | 1 | E | | |
| 1015 | WTS | 1 | ce | | dk. off H ₂ O |
| 52 | WRSP | 1 | ce | | Possibly tethys circled ship - last seen going around stern of ship. |
| 1110 | | | | | |
| 1130 | | | | | Lunch |
| 49 | Shear/Pet | 1 | S | | |
| 1513 | JFP | 1 | SE | | |
| 1700 | Jacger SP | 1 | ce | | landed on H ₂ O |
| 1710 | | | | | |
| 1730 | | | | | close sunset |



Ship
Direction

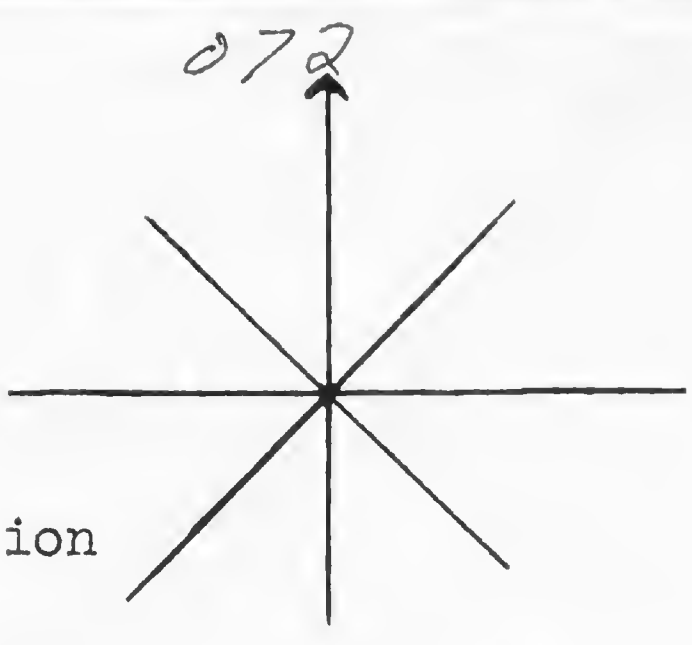
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 13 March 68
Pg.# 1

SPECIMEN
or *change to # 7 this zone*

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|---------------------|----------------|------|----------|---------------------------------|
| 0625 | | | | | begin obs. |
| 0700 | | | | | 3 Breakfast |
| 30 | | | | | |
| 0753 | st. Pet | 1 ^v | E | | |
| 0810 | WBSP | 1 ^v | ce | | |
| 25 | " | 1 ^v | ce | | |
| 0917 | st. Pet | 1 ^v | ce | | |
| 45 | WBSP | 1 ^v | E | | |
| 57 | " | 1 ^v | ce | | |
| SF 1010 | Sooty tern | 3 ^v | ce | | |
| | WTS | 2 ^v | ce | | Im sun. No Age determined. |
| 1034 | Fairy Tern | 2 ^v | ce | | Feeding |
| 1100 | WBSP | 1 ^v | ce | | |
| 15 | | | | | lunch |
| 1140 | | | | | |
| 1229 | JFP | 1 ^v | N | | |
| 1411 | Fairy tern | 1 ^v | ce | | Im - brown in wings |
| | Sooty tern | 1 ^v | ce | | Im |
| 28 | st. Pet. | 3 ^v | ce | | |
| 43 | R. Phul | 1 ^v | ce | | Porting around in front of ship |
| 48 | shear/Pet | 1 ^v | ce | | winter Plunge. |
| 49 | WBSP | 1 ^v | ce | | distant |
| 1500 | JFP | 1 ^v | ce | | |
| 09 | LWBSP | 2 ^v | ce | | chased flying fish, |
| 1550 | | | | | |
| SF 1625 | Sooty tern | 20±5 | e | | c to 1 mfe ca 6 hts |
| | Fairy tern | 1 ^v | ce | | 3 Distant — up high |
| 1650 | | | | | under way 2 M/E |
| 1700 | | | | | 3 Pinnev |
| 1720 | | | | | |
| 1812 | | | | | Sunset close |



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

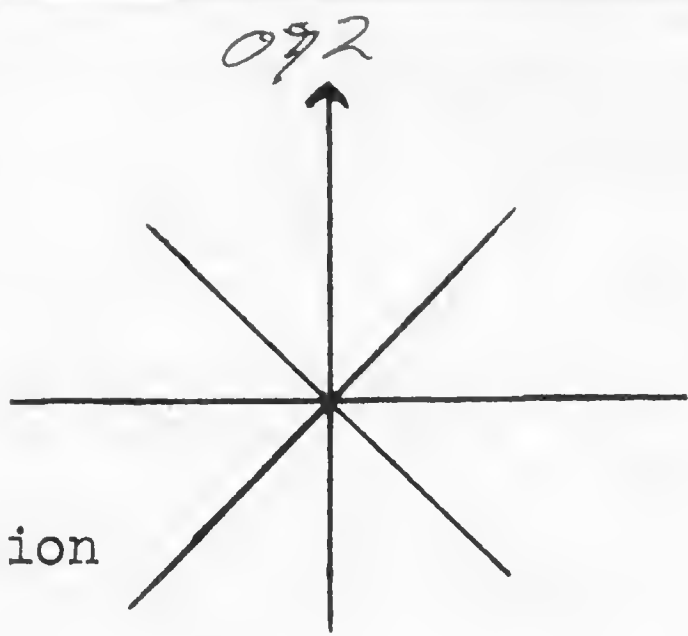
OBSERVERS:
Heavy Rain -

Date 14 March 68
Pg.# 1

SPECIMEN or + 7 Time Zone

TIME SPECIES # DIR. BAND NO. REMARKS at 6 kts on leeward

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|--------------|------------|-----|------|----------|---|
| 0601 | | | | | Sunrise |
| 42 | JFP | 1 ✓ | e | | Fun Rain |
| 0700 | | | | | } Breakfast |
| 15 | | | | | |
| 30 | WRSP | 1 ✓ | ⊙ | | In Rain |
| 36 | " | 1 ✓ | a | | |
| 0801 | LWRSP | 1 ✓ | ⊙ | | off H ₂ O |
| 903 | Sooty Tern | 3 ✓ | ⊙ | | } all 5 together 2 SAD - 3 Imm over 18" slip Jack Tuna Many at Tuna riding bow |
| 09 | " " | 2 ✓ | | | |
| 50 | WRSP | 1 ✓ | ⊙ | | |
| 1040 | WRSP | 4 ✓ | ⊙ | | All together |
| 1055 | " | 1 ✓ | e | | |
| 1100 | | | | | Rain stopped |
| 30 | | | | | 3 Lunch |
| 1206 | WRSP | 2 ✓ | SE | | } Traveling |
| 36 | WRSP | 1 ✓ | SE | | |
| 1258 | B. Phal | 3 ✓ | IV | | } Non Breeding Plunge |
| 1412 | WRSP | 1 ✓ | ⊙ | | |
| 23 | " | 7 ✓ | ⊙ | | } on H ₂ O Resting flock |
| 32 | " | 4 ✓ | ⊙ | | |
| TF-3 SF-5 33 | Sooty tern | 7 ✓ | ⊙ | | up high 2 Imm rest? |
| 39 | WRSP | 2 ✓ | ⊙ | | } on H ₂ O |
| 52 | " | 3 ✓ | e | | |
| 1500 | B. Phal | 2 ✓ | ⊙ | | } Together on H ₂ O |
| | WRSP | 2 ✓ | ⊙ | | |
| 38 | B Phal | 1 ✓ | ⊙ | | on H ₂ O |
| 39 | " | 1 ✓ | ⊙ | | " " called } winter Plunge |
| 41 | WRSP | 2 ✓ | N | | |
| 58 | " | 1 ✓ | ⊙ | | |
| 1603 | " | 2 ✓ | ⊙ | | |
| 10 | " | 3 ✓ | NE | | |
| 24 | " | 2 ✓ | ⊙ | | Feeding together |
| 43 | " | 2 ✓ | ⊙ | | |
| 58 | St. Pet | 2 ✓ | ⊙ | | |
| 59 | LWRSP | 1 ✓ | ⊙ | | dividing line seen |
| 712 | Harcourt's | 2 ✓ | NE | | No dividing line, or forked tail. |



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

C. L. ...

Date 14 March 68
Pg.# 2

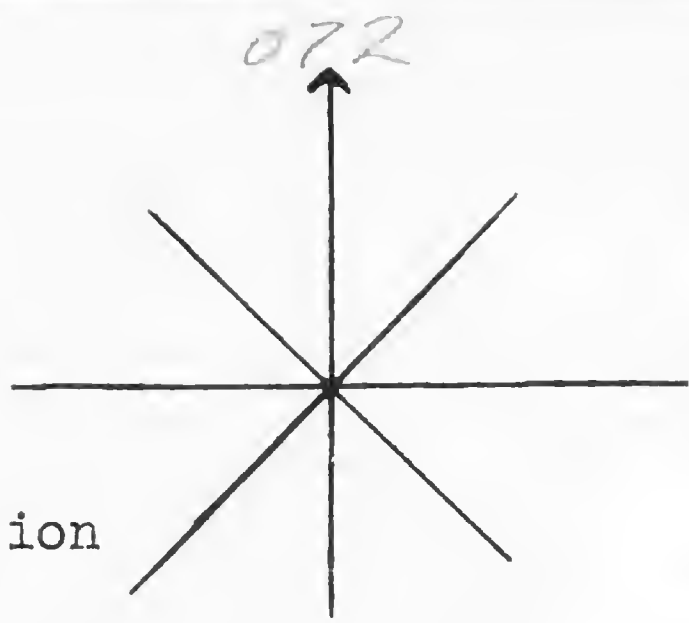
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|---------|----|----|--|---------------------|
| 1737 | 5+ Pet | 5✓ | ce | | on H ₂ O |
| 41 | Phal SP | 3✓ | N | | |

1803

Sunset.



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

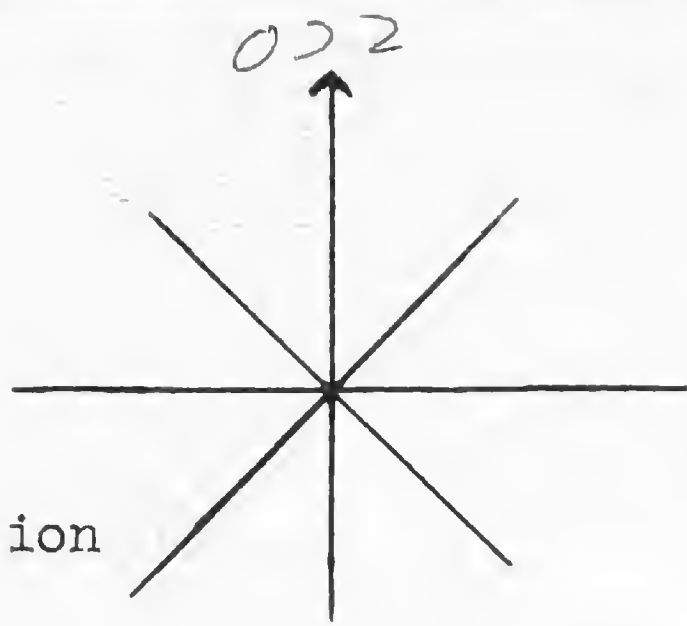
OBSERVERS:

Flint Calum

Date 15 March 68
Pg.# 1

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|--------------|----------------|---------------|----------|---|
| 0545 | | | | | Surveillance |
| 50 | Sooty Shear | 1 ✓ | NE | | Pre 3 |
| 51 | BURST | 1 ✓ | NE | | |
| 0607 | " | 1 ✓ | NE | | 1 definitely a Hancock's SP. |
| 45 | ST Pet | 1 9 | | | |
| 50 | | | | | Stopped for Air drop of Medical Supplies |
| 0724 | | | | | under way |
| 750 | | | | | begin obs |
| 0800 | ST Pet | 1 ✓ | CE | | |
| 814 | WRSP | 1 ✓ | CE | | |
| 25 | WRSP | 3 ✓ | CE | | |
| 38 | JFP | 1 ✓ | CE | | |
| 50 | Shear/Pet | 1 ✓ | N | | disturb |
| 52 | " | 1 ✓ | N | | " |
| 53 | WRSP | 2 ✓ | CE | | |
| 0903 | " | 2 ✓ | CE | | |
| 05 | LWRSP | 1 ✓ | CE | | forked tail dividing line observed. |
| 14 | WRSP | 4 ✓ | CE | | are following ship - probably <u>tethys</u> |
| 16 | WRSP | 6 ✓ | CE | | on H ₂ O together flushed |
| 35 | " | 5 ✓ | CE | | " |
| FF 38 | WRSP | 3 ✓ | | | Mixed Ages 3 over juveniles |
| | Sooty tern | 75 ± 10 | | | |
| | JFP | 1 ✓ | | | |
| | Sm Pet. | 1 ✓ | | | |
| 45 | BPhal | 2 ✓ | CE | | on H ₂ O Non Breeding Plunge |
| 47 | LWRSP | 1 ✓ | CE | | |
| 48 | WRSP | 2 ✓ | CE | | |
| 55 | Shear/Pet | 1 ✓ | N | | |
| 57 | Sooty tern | 2 | CE | | No Age |
| 1001 | ST Pet | 2 ✓ | CE | | on H ₂ O |
| FF 04 | Sooty tern | 4 ✓ | CE | | 1 Ad 3 Imm |
| | ST Pet. | 1 ✓ | CE | | |
| 25 | Shear/Pet | 1 ✓ | N | | |
| 37 | LWRSP | 1 ✓ | N | | good look |
| 53 | Galapagos SP | 2 ✓ | CE | | following ship |
| 59 | LWRSP | 1 ✓ | CE | | |
| 1115 | | | | | gleaned |
| 30 | | | | | |
| 1210 | WRSP | 2 ✓ | CE | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Flat Calm

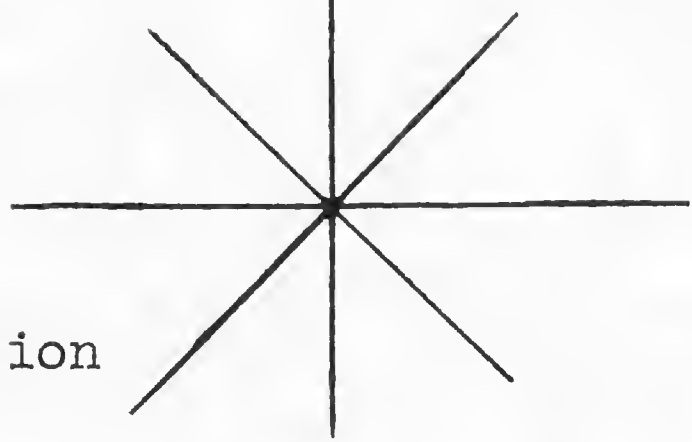
Date 15 Mar 68
Pg.# 2

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|------------|----------------|------|----------|--|
| 1247 | 6 SP | 2 [✓] | NE | | |
| 8F 55 | Sooty Tern | 9 [✓] | ce | | Mixed Age at Least 2 Imm flocks rather dispersed |
| 57 | WRSP | 1 [✓] | ce | | |
| 1303 | WRSP | 4 [✓] | ce | | |
| 25 | LWRSP | 1 [✓] | ce | | |
| 33 | WRSP | 1 [✓] | e | | together on H ₂ O on Natural slicks |
| | R Phal | 1 [✓] | e | | |
| 57 | LWRSP | 2 [✓] | ce | | |
| 1425 | Shear/Pet | 1 [✓] | NW | | |
| 27 | Phal SP | 2 [✓] | ce | | on H ₂ O |
| 34 | St. Pet | 8 [✓] | a | | " |
| 37 | WRSP | 8 [✓] | ce | | " flushed 1 small 1 large (1 LWRSP position) |
| 41 | Sm. Pt. | 1 [✓] | NW | | |
| 54 | st Pet | 5 [✓] | ce | | on H ₂ O |
| 1501 | B faced B | 1 [✓] | ce | | Ad off H ₂ O |
| 06 | R Phal | 2 [✓] | ce | | on H ₂ O |
| | st. Pet | 2 [✓] | ce | | on H ₂ O |
| 40 | R Phal | 2 [✓] | ce | | For light Rain } together |
| 1600 | LWRSP | 2 [✓] | N | | " " " " " } |
| 20 | GPSP | 4 [✓] | ce | | off H ₂ O |
| 38 | WRSP | 1 [✓] | e | | following ship |
| | | 1 [✓] | ce | | Primer |
| 1700 | | | | | |
| 25 | | | | | |
| 46 | | | | | sunset |

072

OBSERVERS:

Ship
Direction
 SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

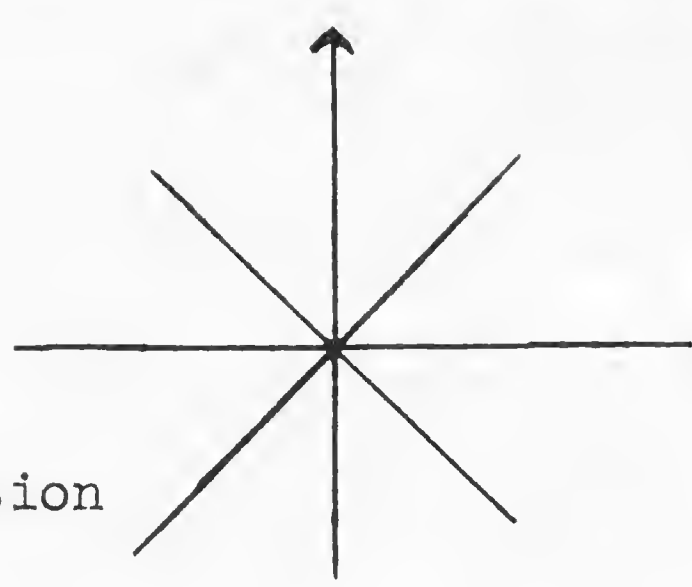
 Date 16 March 68
 Pg.# 1

 SPECIMEN
 or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------------|-----------------|--------------|---------------|----------|---|
| 0536 | | | | | Sunrise |
| 44 | St. Pet | 2 ✓ | ce | | |
| 605 | Shear/Pet | 1 ✓ | ce | | |
| 0700 | | | | | Breakfast |
| 15 | | | | | |
| 28 | WRSP | 1 ✓ | ce | | |
| 35 | | | | | |
| 0801 | LWRSP | 5 ✓ | ce | | 200 ± 50 Porpoise rather chunky bodied. all did not spin, probably 6-8 ft. That's a guess, very few animals cleared the water completely, were going directly away from ship. + Tursiops Rel 3 25.4°C |
| 04 | Sooty tern | 3 ✓ | ce | | Together on H ₂ O flushed, raised tail & divided line observed. |
| 17 | " " | 2 ✓ | ce | | 2 Ad 1 Imm |
| 36 | " " | | | | Imm |
| 37 | LWRSP | 1 ✓ | ce | | Porpoise 30-40 distant - did not spin all broke surface together 25.2°C |
| 0940 | WRSP | 5 ✓ | ce | | |
| 1011 | JFP | 1 ✓ | ce | | |
| 15 | LWRSP | 2 ✓ | ce | | sitting on H ₂ O - Heavy Molt. |
| 36 | WRSP | 2 ✓ | ce | | |
| 40 | Sooty Tern | 2 ✓ | ce | | on H ₂ O |
| 53 | WRSP | 1 | ce | | Ad |
| 1100 | | | | | |
| 30 | | | | | Lunch |
| 53 | WRSP | 1 ✓ | ce | | |
| 1208 | Colaptes SP | 1 ✓ | ce | | |
| 1338 | Harcourt's | 1 ✓ | ce | | |
| | LWRSP | 1 ✓ | ce | | Together |
| | WRSP | 3 ✓ | ce | | |
| 1408 | Black SP | 1 ✓ | NE | | beside ship. |
| 31 | Sooty Tern | 4 ✓ | SE | | |
| 34 | LWRSP | 2 ✓ | E | | |
| 1550 | Kermadec | 1 ✓ | ce | | off H ₂ O, very slow easy flight all white underneath, except wings which seemed to be flecked with white - Molt. |
| 1555 | | | | | Porpoise - 30 ± 5 small, did not spin Delphinus sp. Rel 3 25.1°C |

OBSERVERS:



Ship
Direction

SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

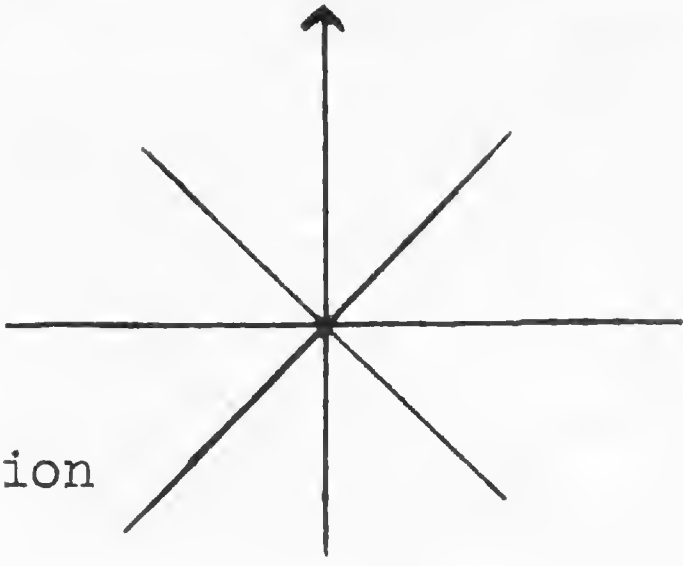
Date 16 March 68
 Pg.# 2

SPECIMEN
 or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------------|----|----|--|-----------------------------------|
| 1640 | Sooty Tern | 20 | ca | | Ad |
| 44 | WTS | 10 | ca | | |
| 45 | WRSP | 17 | ca | | dk |
| 50 | " | 10 | ca | | SW |
| 55 | " | 12 | e | | Feeding on H ₂ O |
| 1710 | Harcourt's | 10 | ca | | on H ₂ O |
| 12 | | | | | |
| 13 | WRSP | 8 | ca | | Delphinus? |
| 13 | LWRSP | 10 | ca | | |
| 20 | St Pet | 9 | ca | | on H ₂ O |
| 22 | WRSP | 6 | ca | | on H ₂ O |
| 28 | " | 4 | ca | | Not a flock scattered individuals |
| 1731 | | | | | Sunset |

I think all of these are Leach's
 There were three long areas of rough water separated by slicks + The slicks were at the edges of these They went E + west roughly/into a long diagonal across these areas.
 -30 ± 5
 25.0°C



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

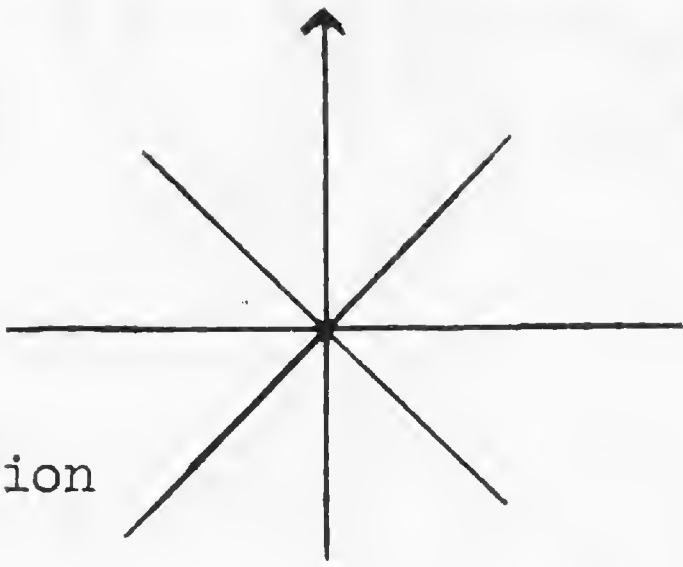
OBSERVERS:

Date 17 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|--------------------|--------|------|--|--|
| 0519 | | | | | |
| 0535 | | | | | Sunrise begin obs. |
| 54 | WRSP | 1V | ⊙ | | |
| 0600 | Swallowtailed Gull | 1V | ⊙ | | |
| 0655 | | | | | Followed ship momentarily. Seen by crew |
| 0705 | | | | | Porpoise. 40 ± 10 Photographed. Did not spin |
| 0720 | | | | | Relphius or Stenella will wait for photos. |
| 0815 | | | | | about 10 Taken near end of Roll ^{Sea Water Temp} 23.3 °C |
| 0815 | St. Pet. | 1V | ⊙ | | Breakfast. |
| 0911 | LWRSP | 1V | ⊙ | | |
| 48 | Booby SP | 1V | ⊙ | | |
| 51 | St Pet | 1V | ⊙ | | dist-nt |
| 1019 | " " | 1V | ⊙ | | |
| 1046 | | | | | Porpoise - Delphinus - Photographed → 23.5 °C |
| 1105 | RFB | 1V | ⊙ | | 45-50 sea water ^{on top} one Animals to about 10 ft. - others smaller. |
| 1110 | | | | | Ad off - S.S. websterii |
| 1150 | | | | | Lunch |
| 1156 | Swallowtailed Gull | 1V | ⊙ | | |
| 1203 | Frigatebird | 1V | ⊙ | | |
| 12 | R Phal | 2V | ⊙ | | Imm |
| 18 | | | | | Gray Plunge |
| 20 | WRSP | 1V | ⊙ | | |
| 22 | R Phal | 1V | ⊙ | | Porpoise 200 ± 50 Not spinning |
| 25 | Booby Gull | 1V | ⊙ | | off H ₂ O some falling on side, large heavy bird. |
| 31 | wRSP | 1V | ⊙ | | 21.9 °C |
| 35 | GSP | 1V | ⊙ | | under Porpoise |
| 40 | ST Gull | 3V | ⊙ | | |
| 54 | R Phal | 1V | ⊙ | | on H ₂ O |
| 57 | " " | 5V | ⊙ | | " " |
| 57 | WRSP | 4V | ⊙ | | " " - on slicks |
| 1315 | | | | | over slicks |
| 30 | ST Gull | 4V | ⊙ | | Porpoise 20+ dist-nt 21.5 °C |
| 33 | R Phal | 10 ± 2 | ⊙ | | on H ₂ O |
| 40 | | | | | " |
| 44 | GSP | 3V | ⊙ | | Porpoise 40 ± 5 Not spinning 21.2 °C |
| 50 | | | | | Porpoise 150 ± 25 " " all jump together |
| 1400 | R-BTB | 1V | ⊙ | | Ad off H ₂ O 21.2 °C |
| 01 | B. faced B | 1V | ⊙ NE | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

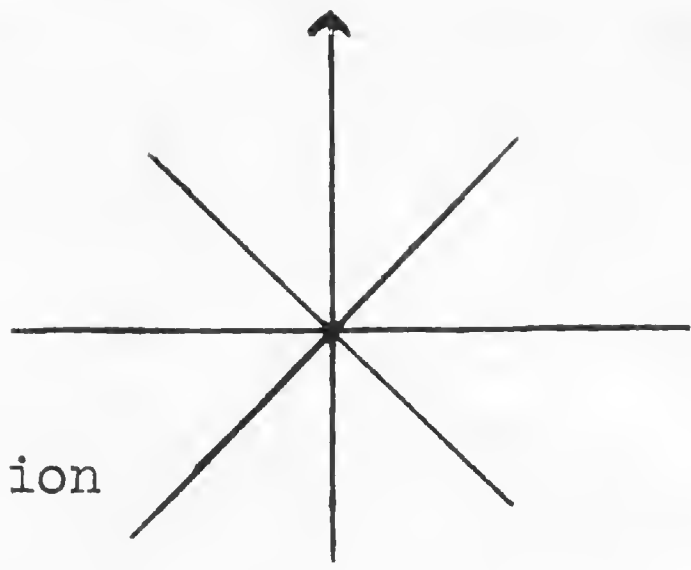
Date 17 March 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------------------------|----|----|--|--|
| 1721 | Harcorts SP | 1✓ | ce | | |
| 26 | GP SP | 1✓ | ce | | |
| 29 | " | 1✓ | SW | | |
| 31 | R. Phal | 2✓ | ce | | on H ₂ O |
| 32 | St. Pet | 1✓ | ce | | |
| 42 | R. Phal | 2✓ | ce | | |
| 45 | Harcorts SP | 1✓ | ce | | on H ₂ O |
| 45 | WRSP | 1✓ | ce | | |
| 55 | B. Facial B | 1✓ | ce | | exact ship Ad |
| 1520 | R. Phal | 4✓ | NW | | |
| 24 | | | | | Porpoise 20 ± 3 just breakin H ₂ O |
| 28 | R. Phal | 2✓ | ce | | Small to Trine 21.0 |
| 29 | WRSP | 1✓ | ce | | on H ₂ O |
| 50 | GPSP | 2✓ | ce | | |
| 1609 | ST Gulls | 2✓ | ce | | |
| 12 | Harcorts SP | 1✓ | NE | | on H ₂ O |
| 27 | | | | | |
| 34 | B. Facial B | 1✓ | NE | | Porpoise 10 ± 3 1 large 1 small rest not observed out of H ₂ O 19.7°C |
| 35 | Bird SP | 1✓ | NE | | Toward Island. |
| 37 | St. Pet | 3✓ | NE | | " " |
| 46 | ST Gulls | 2✓ | NE | | " " |
| 49 | " | 1✓ | ce | | on H ₂ O |
| 52 | BFB | 1✓ | NE | | Toward Is. Mole? |
| 58 | Pom Jaeger | 1✓ | SW | | Ad Int. |
| 1709 | WRSP | 6✓ | NE | | Toward Is. |
| 12 | ST Gulls | 3✓ | ce | | off H ₂ O |
| 14 | " | 7✓ | NE | | Toward Is. |
| 16 | | | | | Sunset 18.4 miles St. Isabella |

OBSERVERS:



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 18 March 68
Pg.# 1

SPECIMEN
or

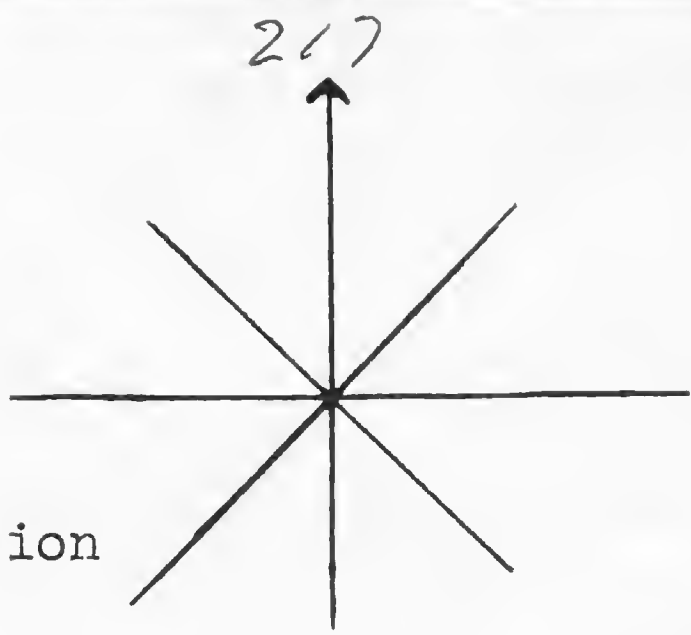
TIME SPECIES # DIR. BAND NO. REMARKS

0430

0830

In ar off Wreck Bay, San Cristobal, Is. -
When approaching several large flocks sub.
Audubon's Shearwaters were flushed - 3-400 birds.
A few storm petrels were around - No great
Numbers. B-faced Boobies, B-footed B. Frigates
& possibly Greater - 1 - Brown Pelican? seen on
Beach. - An Arctocephalus was swimming and
ship when in bay of wrecks. - finches - and other
land birds were seen from ship.

provided initial Pelican - (Bay) notes
all Pelican-related ? = 1 - 100
Sta. No. 000



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

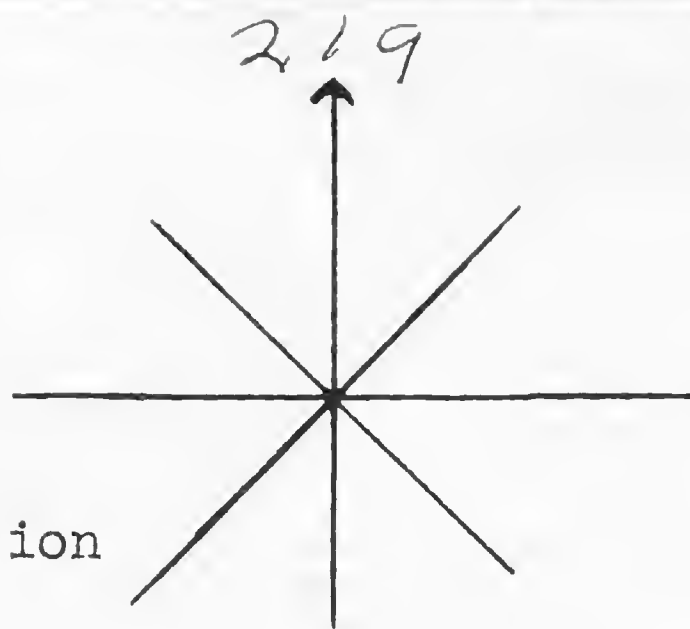
OBSERVERS:

Date 19 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|---------|----|------|----------|---|
| 0510 | | | | | Sunrise |
| 0515 | | | | | Porpoise ca 20ft. brownish, |
| 0519 | WRSP | 1 | ce | | probably Cuvier's beaked whale. |
| 0525 | " | 1 | ce | | 26.8°C |
| 38 | ST Pet | 2 | ce | | |
| 0600 | ST Gull | 3 | ce | | |
| 07 | JFP | 1 | S | | |
| 09 | B Phil | 2 | F | | |
| 25 | WRSP | 1 | ce | | |
| 0700 | B Phil | 1 | ce | | |
| 0704 | ST Gull | 1 | ce | | |
| 0705 | | | | | Practiced |
| 0800 | | | | | |
| 0800 | | | | | Im Fog - very limited visibility |
| 03 | WRSP | 1 | ce | | |
| 44 | " | 1 | ce | | |
| 0940 | | | | | |
| 0942 | | | | | Porpoise - Tursiops - Im fog 150±50 |
| 48 | | | | | Some report fog 23.5°C |
| 55 | WRSP | 1 | ce | | Cuvier's Beaked Whale - 1 good launch |
| 59 | " | 2 | ce | | 23.7°C ca. |
| 1010 | GPSP | 5 | ce | | on H ₂ O |
| 11 | | | | | |
| 40 | | | | | Porpoise - Tursiops 100±20 24.2°C |
| 55 | GPSP | 6 | ce | | " - 15±3 Photographed Nat Tursiops |
| 1100 | " | 20 | ce | | small Gt tender. |
| 1105 | | | | | Following ship |
| 1150 | | | | | 3 Land |
| 1151 | B Phil | 2 | NW | | |
| 37 | " | 1 | ce | | off H ₂ O |
| 1250 | | | | | |
| 1355 | ST Gull | 1 | ce | | GPSP 10 still airdrop |
| 1423 | B Phil | 1 | ce | | on H ₂ O |
| 1532 | B BTB | 1 | ce | | Ad |
| 1645 | | | | | |
| 1700 | | | | | Porpoise - photographed first pictures on Btu Ball #3 27.5°C 30±5 Close |



Ship
Direction

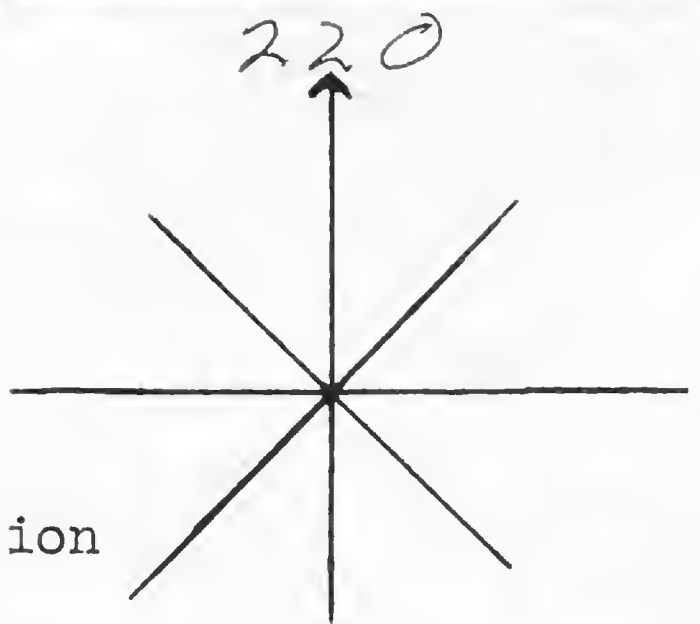
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 20 March 68
Pg.# 1

SPECIMEN
or speed 12 kts

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|---------------|---------|------|----------|---|
| 0522 | | | | | Sunrise |
| 0610 | Frigate SP | 1 ✓ | ⊙ | | ♀ |
| 0638 | B Phal | 2 ✓ | NW | | |
| 0700 | | | | | |
| 0720 | | | | | Breakfast |
| 30 | Frigate SP | 2 ✓ | ⊙ | | |
| 46 | WR SP | 1 ✓ | ⊙ | | 1 Im 1 ♀ circling up high - Natter ship. |
| 54 | " | 2 ✓ | ⊙ | | |
| 0917 | B Phal | 1 ✓ | ⊙ | | edge of squall |
| 49 | " | 1 ✓ | ⊙ | | on H ₂ O |
| 1055 | Harcourt's SP | 1 ✓ | N | | |
| 1100 | | | | | |
| 40 | | | | | Lunch |
| 1258 | WR SP | 2 ✓ | ⊙ | | |
| 1316 | Frigate SP | 2 ✓ | ⊙ | | circling distant |
| 1445 | St. Pet | 1 ✓ | ⊙ | | |
| 54 | Collared Pet | 1 ✓ | ⊙ | | |
| 58 | Sooty Tern | 3 ✓ | ⊙ | | |
| SF 1500 | " " | 25 ± 25 | ⊙ | | Now headed toward below clouds |
| | Frigate SP | 1 ✓ | ⊙ | | chasing |
| 34 | WR SP | 1 ✓ | ⊙ | | |
| 48 | Bird SP | 1 ✓ | ⊙ | | |
| 58 | WR SP | 1 ✓ | ⊙ | | on horizon |
| FF 1600 | Sooty tern | 50 ± 10 | ⊙ | | |
| | Shear/Pet | 5 ± 10 | ⊙ | | some Ad's - flock disappeared into a squall |
| 23 | Black Pet | 1 ✓ | ⊙ | | |
| 25 | st Pet | 5 ✓ | ⊙ | | |
| 28 | Sooty tern | 3 ✓ | ⊙ | | on H ₂ O |
| 28 | Murphy's Pet | 1 ✓ | ⊙ | | All Ad |
| 35 | WR SP | 1 ✓ | ⊙ | | high ardking med size all Ad's. |
| SF 50 | Sooty Tern | 50 ± 10 | ⊙ | | headed toward above. |
| 58 | WR SP | 1 ✓ | ⊙ | | 1 Im Brn |
| 1700 | | | | | Mostly Ad's. |
| | | | | | Pinner |



Ship
Direction

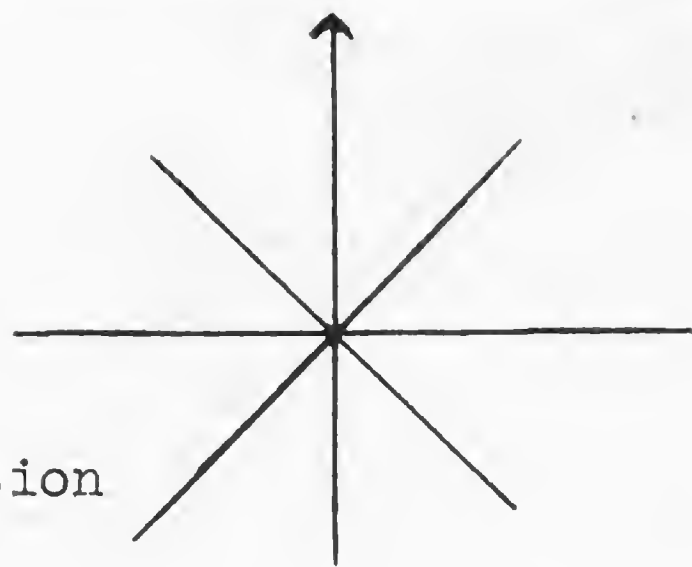
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 21 March 68
Pg.# 1

| TIME | SPECIES | # | DIR. | SPECIMEN or BAND NO. | REMARKS |
|-------|------------------|-------|------|----------------------|--|
| 0535 | | | | | Sunrise |
| 0650 | St. Pet | 1✓ | ce | | |
| 0700 | Collared Pet | 1✓ | SE | | |
| 0701 | B Phal | 1✓ | ce | | |
| 16 | | | | | Breakfast. |
| 32 | WTSP | 1✓ | ce | | |
| 42 | Collared Pet | 1✓ | SW | | black wing and neck, - all dark brown, white ring. |
| 56 | W-Th SP | 1✓ | SW | | |
| 0826 | JFP | 1✓ | ce | | |
| FF 45 | Sooty Tern | 50±20 | ce | | on the 0-flushed Heavy Molt. |
| | Shear/Pet | 10+ | ce | | flocks all straggled out Mostly Ad. |
| 0923 | Wf SP | 1✓ | ce | | |
| 28 | W B SP | 1✓ | E | | gray back - black line through eye |
| FF 45 | Sooty Tern | 50±10 | ce | | Mixed Age - Mostly Ad |
| 59 | 11 | 1✓ | ce | | Imm |
| 1002 | WBSP | 1✓ | ce | | Following ships |
| 28 | St. Pet | 1✓ | ce | | |
| 47 | JFP | 1✓ | ce | | |
| 48 | LWBSP | 1✓ | ce | | |
| 53 | Parasitic Jaeger | 1✓ | S | | close Ad, short pted. tail feathers observed. |
| 1100 | Fairy Tern | 2✓ | NE | | |
| 05 | | | | | Lunch |
| 30 | | | | | |
| 41 | Sooty Shear | 1✓ | NE | | |
| 48 | BPSP | 1✓ | ce | | |
| 1200 | | | | | Fine & Buoy drills close |
| 16 | | | | | on station |
| 1709 | | | | | under way cc to 000 |
| 1740 | | | | | Sunset. |

OBSERVERS:

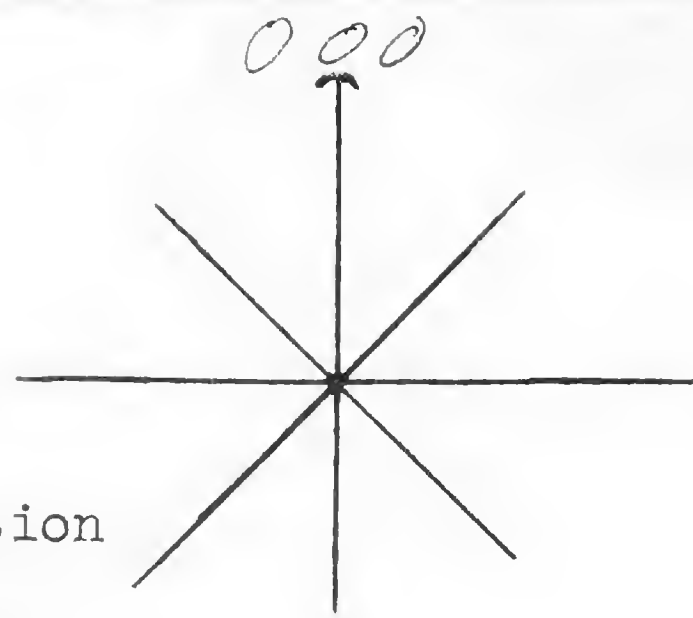
Ship
Direction
 SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

 Date 22 March 68
 Pg.# 1

 SPECIMEN
 or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|--------------|--------------------|--------------|----------|--|
| 0545 | | | | | under way depart station |
| 0616 | Collared Pet | 1 ^v | ☉ | | off H ₂ O |
| 0700 | | | | | |
| 15 | | | | | 3 Breakfast. |
| 38 | Collared Pet | 1 ^v | NE | | |
| 41 | St. Pet | 1 ^v | ☉ | | |
| 0809 | Collared Pet | 1 ^v | N | | |
| 30 | " | 1 ^v | NE | | |
| 36 | St. Pet | 1 ^v | ☉ | | |
| 41 | B Phal | 1 ^v | ☉ | | off H ₂ O flushed to North |
| 56 | WRSP | 1 ^v | N | | |
| 0915 | JFP | 1 ^v | ☉ | | off H ₂ O Heavy Molt in Primaries |
| 15 | WRSP | 1 ^v | ☉ | | |
| TF 23 | Sooty Tern | 13 ^v | ☉ | | |
| 26 | WRSP | 1 ^v | NE | | No Age determined. |
| 34 | WRSP | 5 ^v | ☉ | | |
| 44 | Sooty Tern | 3 ^v | ☉ | | Feeding on H ₂ O |
| 47 | " | 1 ^v | ☉ | | Ad just within view. |
| 1011 | Jaeys SP | 1 ^v | N | | Age? joined above. |
| 25 | WRSP | 1 ^v | W | | |
| 30 | | | | | |
| 1247 | | | | | on station. |
| FF 1333 | Sooty Tern | 25 ^v 42 | ☉ | | Depart station Feeding Mixed Ages |
| 55 | WRSP | 1 ^v | ☉ | | |
| 1410 | WRSP | 2 ^v | ☉ | | |
| 23 | LWRSP | 2 ^v | ☉ | | |
| 23 | Collared Pet | 1 ^v | ☉ | | |
| 34 | WRSP | 4 ^v | ☉ | | |
| 1517 | B Phal | 1 ^v | N | | |
| | WRSP | 1 ^v | N | | following Phalarope. |
| 25 | " | 3 ^v | ☉ | | off H ₂ O |
| 1630 | | | | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

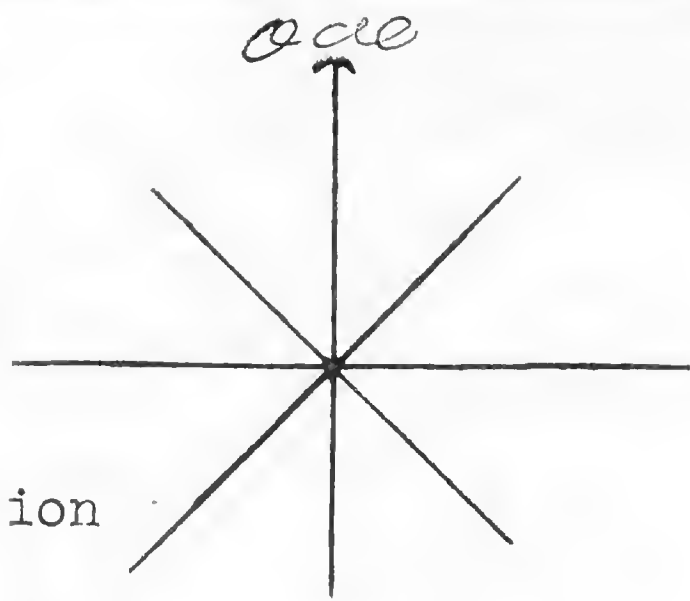
TJL
Light winds, 12/15Ts.
Larks squalls all around
In Rain most of Day

Date 23 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|------------|----|------|----------|---|
| 604 | | | | | Underway |
| 0700 | | | | | Breakfast |
| 15 | | | | | |
| 56 | Fairy Tern | 1✓ | a | | edge of Squall |
| 803 | Sooty Tern | 1✓ | a | | Imm. " " " |
| 10 | WRSP | 2✓ | ce | | |
| FF 0924 | Sooty Tern | 5✓ | ce | | Feeding Ad small bait fish jumping in Rain |
| 25 | St. Pet | 1✓ | ce | | In Rain ✓ |
| 45 | WRSP | 4✓ | ce | | |
| 1005 | " | 1✓ | ce | | |
| 30 | | | | | |
| 1245 | | | | | Lunch + station |
| 1311 | BTTB | 1✓ | ce | | ownship SAd In Rain |
| 25 | WRSP | 1✓ | ce | | |
| 1400 | | | | | |
| 16 | LWRSP | 6✓ | ce | | + Whale - Balaenoptera - ca 30 ft 26.8°C dorsal-like fin back, color black - No other color seen, Blow ca. 5-6 ft |
| 29 | | | | | Off H ₂ O |
| 44 | | | | | station |
| 1520 | | | | | |
| 21 | | | | | Whale - Balaenoptera - ca 30-40 ft. 27.0°C Possibly humpback - |
| 38 | Black Pet | 1✓ | ce | | Whale - sperm? - small, distant, only head core out. did not dive. |
| 47 | St. Pet | 1✓ | ce | | Following ship |
| 51 | R Phoe | 2✓ | ce | | |
| | LWRSP | 2✓ | ce | | off H ₂ O - on small slicks |
| 1624 | WRSP | 3✓ | ce | | |
| 30 | | | | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

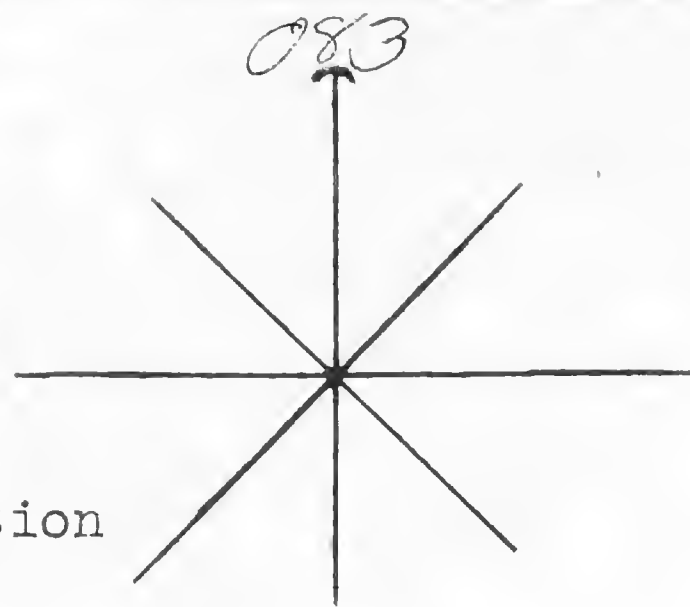
Afternoon flat calm with
many large Natural slicks

Date 24 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|----------|-----|-----|--|---|
| 0515 | | | | | Whale - 30ft* passed under ship Balaeoptera specimen - Blow ca 15 ft - was about 100 ft from ship when blew - had a prominent recurved dorsal - color Black No other color seen. 24.37°C |
| 0555 | | | | | under way begin obs. |
| 0646 | WRSP | 2 ✓ | 000 | | |
| 0705 | | | | | |
| 15 | | | | | Breakfast. |
| 0736 | LWRSP | 1 ✓ | 000 | | Ported tail & Division line |
| 0830 | | | | | |
| 40 | | | | | station |
| 0935 | WRSP | 2 ✓ | 000 | | |
| 1000 | LWRSP | 4 ✓ | 000 | | off H ₂ O - together. |
| 30 | | | | | |
| 1230 | | | | | on station depart station |
| 52 | WRSP | 2 ✓ | 000 | | |
| 1315 | | | | | |
| 50 | LWRSP | 5 ✓ | 000 | | Porpoise 15 ± 3 ca 6ft. - 2 sizes - one smaller 23.75°C, <u>Stenella</u> sp.? They did spin a couple of times Photographed. (Plus X from 12-22 Feeding Together) |
| 1400 | " | 3 ✓ | E | | |
| 22 | | | | | |
| 24 | WRSP | 1 ✓ | 000 | | Porpoise 15 ± 5 distant 24.3°C |
| 30 | | | | | |
| 41 | | | | | |
| 45 | GPSP | 1 ✓ | 000 | | station |
| 47 | WRSP | 3 ✓ | 000 | | |
| 1510 | GPSP | 1 ✓ | E | | |
| 24 | WRSP | 2 ✓ | 000 | | |
| 27 | Bird sp | 1 ✓ | 000 | | |
| 29 | St. Pet. | 3 ✓ | 000 | | |
| 1628 | WRSP | 1 ✓ | 000 | | on station |
| 1630 | | | | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

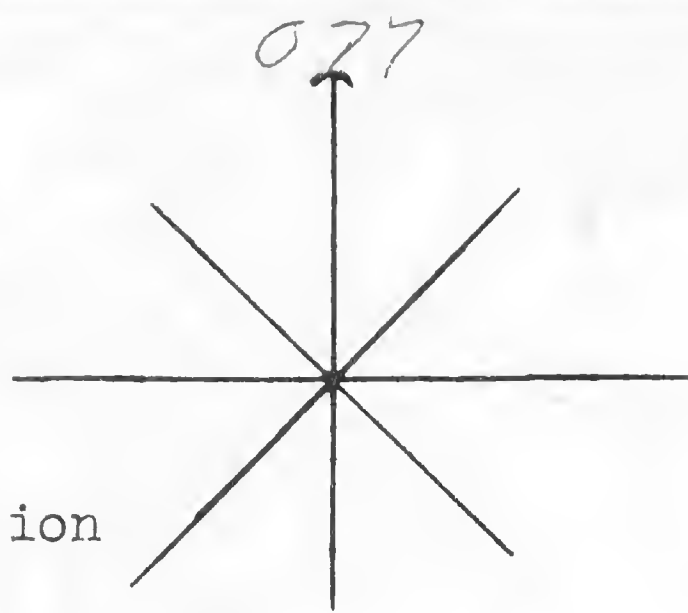
III
Flat Calm - headed toward
Catalina - Aquino - To
evacuate 2 crew members

Date 25 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|------------|------|---|--|---|
| 0530 | | | | | Sunrise |
| 0634 | WRSP | 1✓ | ☉ | | |
| 700 | | | | | } Breakfast. |
| 720 | | | | | |
| 832 | WRSP | 1✓ | ☉ | | |
| 817 | | | | | } 3 sperm whales 2 about 15-20 ft 1-45 ft did not dive very close 22.7°C |
| 829 | WRSP | 2✓ | ☉ | | |
| 856 | " | 1✓ | ☉ | | |
| 911 | LWRSP | 1✓ | ☉ | | |
| 925 | WTS | 1✓ | ☉ | | |
| 931 | WRSP | 4✓ | ☉ | | } 1st Phase |
| 938 | St Pet | 2✓ | ☉ | | } on H ₂ O |
| 951 | WRSP | 1✓ | ☉ | | |
| 1104 | St Pet | 2✓ | ☉ | | |
| 1125 | | | | | } Lunch. |
| 1140 | RBTB | 1✓ | ☉ | | |
| 1158 | WRSP | 2✓ | ☉ | | } over head, ad |
| 1206 | LWRSP | 1✓ | ☉ | | |
| 1218 | WRSP | 1✓ | ☉ | | |
| 1223 | " | 1✓ | N | | |
| 1240 | Fairy Tern | 1✓ | ☉ | | |
| 1241 | WRSP | 2✓ | ☉ | | |
| 1243 | N Phaul | 1✓ | ☉ | | } called, good look |
| 1244 | WRSP | 38±2 | ☉ | | } on H ₂ O |
| 1302 | LWRSP | 10✓ | ☉ | | } on H ₂ O |
| 1305 | GPSP | 1✓ | ☉ | | |
| 1341 | St. Pet | 1✓ | E | | |
| 1351 | LWRSP | 1✓ | ☉ | | |
| 1357 | St. Pet | 4✓ | ☉ | | |
| 1359 | GPSP | 1✓ | ☉ | | |
| 1438 | Jaeger SP | 1✓ | N | | |
| 1505 | Black Pet | 1✓ | ☉ | | |
| 1612 | WRSP | 1✓ | ☉ | | |
| 1614 | WTS | 1✓ | ☉ | | } Lt. |
| 1654 | WRSP | 1✓ | ☉ | | |
| 1700 | | | | | } close |
| 1724 | | | | | } Sunset. |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

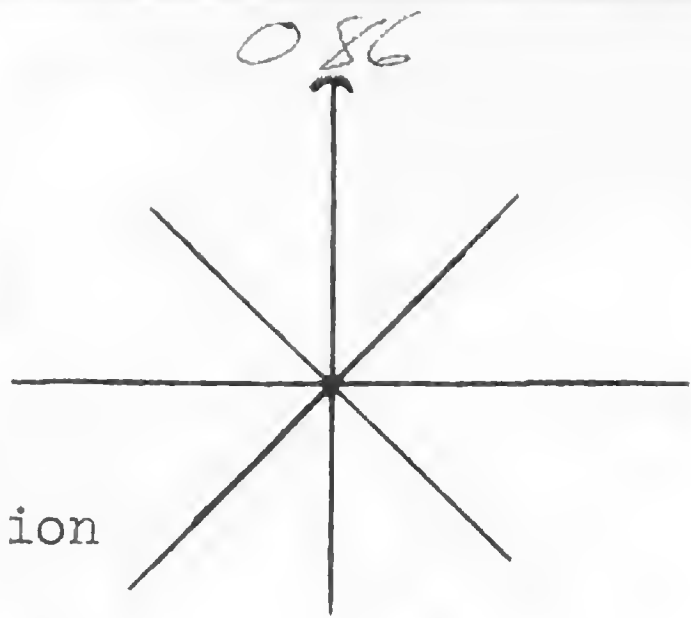
OBSERVERS:

Date 26 March 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|-----------------|----|------|----------|---|
| 0518 | - | | | | Sunrise |
| 21 | | | | | Seal - 21.0 C |
| 21 | WRBSP | 1 | ce | | |
| 24 | st. Pet | 3 | ce | | over seal |
| 25 | | | | | |
| 26 | BFB | 1V | E | | Porpoise 40+ 21.0 C dist. 1st. |
| 37 | Sooty Shear | 1V | NW | | Ad |
| 38 | st. Pet | 5 | W | | Rel 3 |
| 53 | Sooty Shear | 1V | N | | Not a flock |
| 55 | GPS P | 2 | W | | good look |
| 0600 | | | | | |
| 15 | ST Gulls | 2V | ce | | disc continued recording st. Pet - Many - both over seal to GPSR & WRBSP? around ship - can't tell which are traveling with ship & which are new |
| 47 | Booby SP | 1V | ce | | overhead |
| 52 | Audubon's Shear | 1V | ce | | |
| 58 | | | | | |
| 59 | B-faced-B | 2V | ce | | off H ₂ O |
| 0704 | ST Gull | 1V | ce | | Porpoise 20±5 - distant - rather small - long snout |
| 0705 | | | | | 20.3 C |
| 25 | | | | | on H ₂ O |
| 58 | Audubon's Sh | 1V | W | | Breakfast |
| 59 | B-faced B | 1V | W | | |
| 0804 | | | | | Ad |
| 06 | S-T Gulls | 2V | | | Seals 2 |
| 15 | S-T Gull | 1V | | | |
| 20 | | | | | Seal |
| 25 | | | | | 50±10 |
| 25 | Sooty Shear | 1V | ce | | Porpoise - Tursiops & Stenella 18.5 C |
| 30 | | | | | Photos 28-29 Bull #3 |
| 48 | B-faced B | 1V | ce | | Over porpoise |
| 0910 | | | | | Sperm whale 1 ca 35 ft. |
| 20 | | | | | Ad |
| 30 | | | | | Turtle - with Goose nests bar nicks |
| 36 | | | | | all over dorsal + visible |
| 48 | B-faced B | 1V | ce | | Seal 14.0 C |
| 1002 | " | 1V | ce | | " |
| 05 | ST Gulls | 8V | ce | | Sitting on Log |
| | | | | | on H ₂ O |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 26 March 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

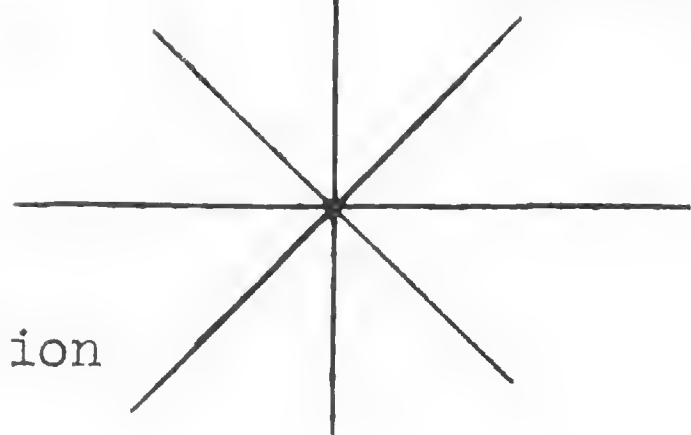
| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|-----------------|----|------|----------|--|
| 1007 | | | | | Seals 3, 22.7 |
| 12 | B-faced B | 2✓ | ce | | Ad |
| 13 | | | | | Seals 2, |
| 14 | Audubons Sh | 1✓ | ce | | Seals 5 |
| 20 | | | | | Seals 5 |
| 22 | BBTB | 1✓ | ce | | overhead Ad |
| 25 | BBTB | 2✓ | ce | | on H ₂ O Ad |
| 28 | B-faced B | 1✓ | ce | | Ad |
| 33 | | | | | Seal |
| 40 | B-faced B | 4✓ | ce | | on H ₂ O Ad |
| 53 | Audubons Sh | 1✓ | ce | | |
| 56 | ST Gulls | 5✓ | ce | | on H ₂ O |
| 57 | Seal | | | | Seal 1 |
| 1100 | Audubons Sh | 1✓ | E | | Toward Islands / Pinnacled Islands 15 mi |
| 20 | | | | | |
| 24 | B-F Budy | 7✓ | ce | | Launch |
| 21 | BBTB | 1✓ | ce | | 4 Ad 3 Imm |
| 25 | | | | | on H ₂ O Imm |
| | | | | | Hydrographic front, water temp change 65°C from 16.5 to 23°. Front was observed on radar. Birds: ST Pet, Audubons Sh, B. Phul, Flightless Cormorant, Pale-footed Shear |
| 1527 | | 3 | | | Pinnacled Pet. on E. side of Isabela |
| 1630 | | 3 | | | headed S toward Canal De Isabela |

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OBSERVERS:

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Ship
Direction



Date 28 Mar. 68
Pg.# 1

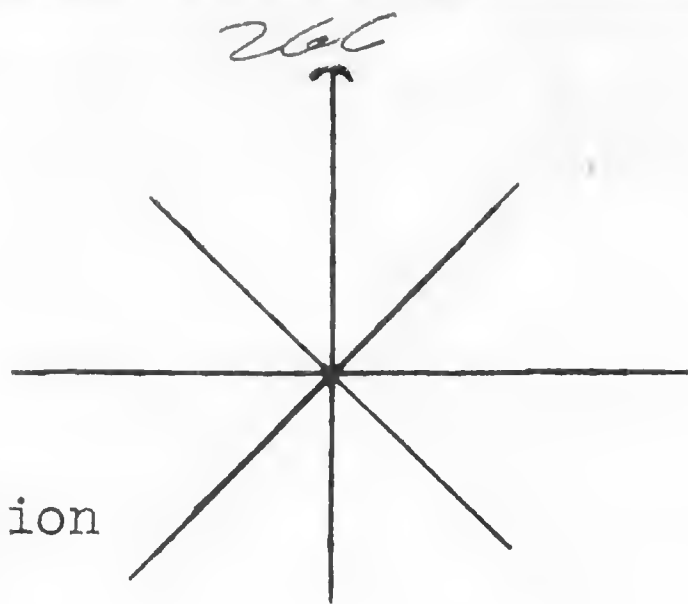
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|-----------------|-----|------|----------|--|
| 0520 | | | | | Sunrise |
| 0550 | ST Pet | 1 ✓ | | | |
| 0617 | WRSP | 1 ✓ | | | disappearing into fog |
| 0630 | Twist bird | 1 ✓ | ce | | |
| | | 1 ✓ | ce | | circled ship once |
| 0700 | | | | | |
| 13 | | | | | 3 Breakfast |
| 0800 | WRSP | 2 ✓ | ce | | |
| 05 | ST Pet | 1 ✓ | ce | | |
| 06 | | | | | Thin Heavy Fog Fog lifting - 50±10' |
| 10 | GPSP | 1 ✓ | | | Porpoise Two types, one small ca 6 ft, the other |
| 54 | ST Pet | 7 ✓ | ce | | 21.5°C, slightly larger (only about 10 in number, |
| 0911 | " " | 1 ✓ | ce | | Not a flock |
| 15 | Phal SP | 1 ✓ | ce | | |
| 19 | ST Pet | 1 ✓ | W | | |
| 28 | WRSP | 1 ✓ | E | | |
| 57 | Harcourt's SP | 1 ✓ | ce | | |
| 1028 | Shear/Pet | 1 ✓ | | | |
| 42 | Mag Frigate | 1 ✓ | E | | Med size - brown backs, white bellie - Some white on underwings - flat like ^{at Phoe} WTS A rather fast flight & wing beat could not see head & under part of Breast & Neck Adopt |
| 55 | | | | | |
| 1102 | WRSP | 3 ✓ | ce | | Porpoise, ca 30 ± 10 small animals - 21.8°C |
| 1105 | | | | | |
| 30 | | | | | |
| 30 | | | | | close for lunch |
| 40 | WRSP | 2 ✓ | ce | | Pilot whales 8 ± 1 No white ^{white} dorsal one very large animal. 22.5°C |
| 49 | | | | | |
| 57 | Audubon's Shear | 1 ✓ | ce | | Porpoise - distant 35 ± 10 23°C |
| 1250 | | | | | |
| 1403 | WRSP | 3 ✓ | ce | | Porpoise 30 ± 5 spinning small ca 6 ft. 20°C |
| 18 | | | | | Porpoise 30 ± 5 distant |
| 44 | WRSP | 4 ✓ | ce | | |
| 56 | Phal SP | 1 ✓ | N | | on 120 |
| 1614 | | | | | 50 ± 10 Stenella ceruleoalata or Pelphium - No line observed on flank - Gray color, No white indorsal Photos #5-708 Roll #4 21.3°C |

SI-MNH-958-e

Rev. 5-66



Ship
Direction

SMITHSONIAN INSTITUTION
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AT SEA DAILY LOG - E

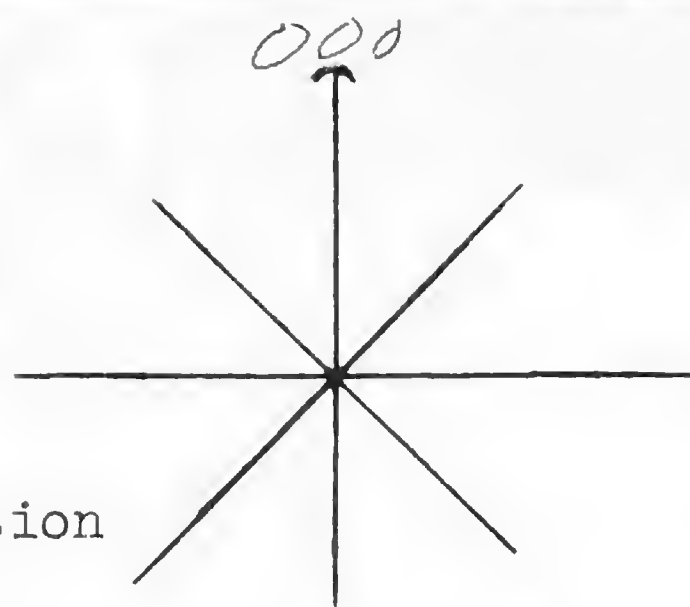
OBSERVERS:

Date 28 March 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|-----------|----|------|----------|--|
| 1627 | WRSP | 24 | ☉ | | 55 at 31 Murphy? all dk Med size. flew with rather stiff wings in very easy arcs. Porpoise 10 ± 2 going South 21.2° C |
| 1726 | " | 9 | ☉ | | |
| 1735 | shear/pet | 1 | ☉ | | |
| 1736 | | | | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

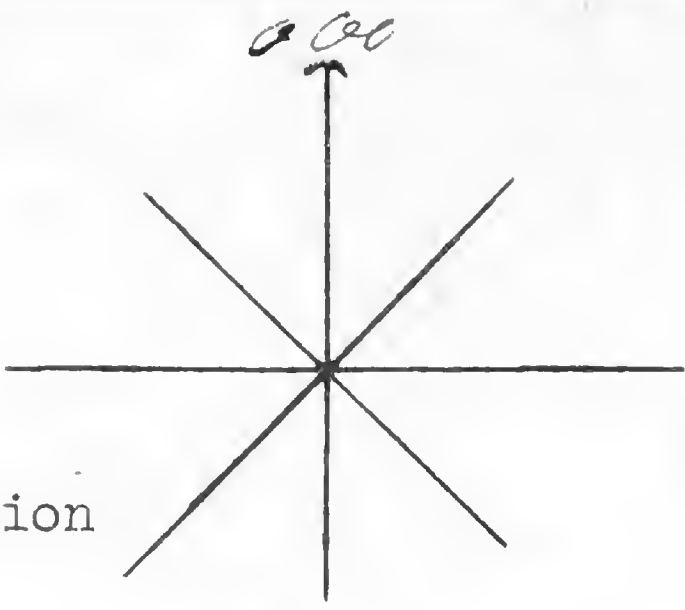
OBSERVERS:

Date 3 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|---------------|----|------|----------|------------------------------------|
| 0601 | | | | | U/W from station |
| 0630 | | | | | Begin obs |
| 45 | WRSP | 1✓ | ce | | |
| 0700 | | | | | |
| 15 | | | | | Breakfast |
| 31 | WRSP | 1✓ | ce | | |
| 35 | GPSP | 3✓ | ce | | Following ship |
| 0825 | | | | | |
| 45 | | | | | on station |
| 0950 | GPSP | 5✓ | ce | | Following ship |
| 1010 | LWRSP | 1✓ | ce | | |
| 1030 | | | | | on station close obs |
| 1240 | | | | | |
| 1315 | | | | | Begin obs |
| 1352 | GPSP | 2✓ | ce | | Following ship |
| 1357 | Sooty Shear | 1✓ | N | | white underwings |
| 1408 | GPSP | 3✓ | ce | | |
| 1418 | LWRSP | 1✓ | ce | | Following ship |
| 1430 | | | | | |
| 1442 | | | | | Station |
| 1515 | LWRSP | 3✓ | ce | | |
| 1522 | Harcourt's SP | 1✓ | ce | | on H ₂ O |
| 57 | R. Phul | 1✓ | N | | No dividing line, tail not notched |
| 57 | St Pet | 3✓ | ce | | |
| 57 | Harcourt's SP | 1✓ | ce | | |
| 1630 | | | | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

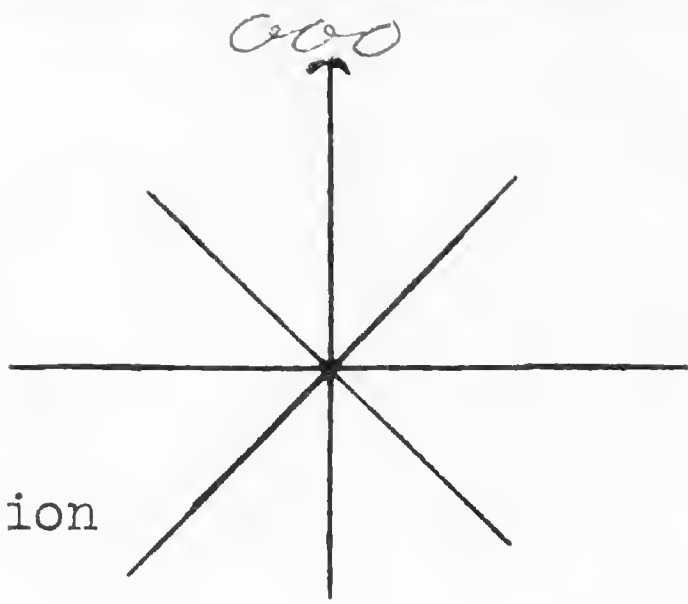
OBSERVERS:

Date 4 Apr 1968
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS 10/15

| | | | | | | |
|------|----------------|-----|----|--|--|--|
| 0600 | | | | | | Begin obs |
| 25 | GPSP | 1 ✓ | ca | | | |
| 50 | | | | | | 2 sperm whales ca 40 ft. 26.7°C |
| 0700 | | | | | | |
| 20 | | | | | | 3 Breakfast |
| 22 | WRSP | 2 ✓ | ca | | | |
| 45 | GPSP | 2 ✓ | ca | | | |
| 0806 | B. Phoe | 1 ✓ | ca | | | off H ₂ O called |
| 30 | | | | | | |
| 41 | | | | | | on station |
| 55 | Sooty tern | 3 ✓ | E | | | ca. |
| 0900 | PIP/Tahiti | 2 ✓ | ca | | | |
| 12 | st Pet | 4 ✓ | ca | | | |
| 25 | Harcourt's SP. | 1 ✓ | | | | |
| 37 | st Pet | 4 ✓ | ca | | | |
| 38 | PIP/Tahiti | 1 ✓ | ca | | | |
| 50 | Frigate SP | 1 ✓ | E | | | |
| 1008 | PIP/Tahiti | 1 ✓ | NW | | | Imm |
| 15 | GPSP | 5 ✓ | ca | | | |
| 1025 | | | | | | on station |
| 1241 | | | | | | |
| 50 | | | | | | 3 Drills |
| 55 | | | | | | Turtle |
| 1300 | LWRSP | 1 ✓ | ca | | | |
| | WRSP | 7 ✓ | ca | | | on H ₂ O |
| 10 | | | | | | |
| 12 | | | | | | Turtle |
| 18 | | | | | | Porpoise 15 ± 5 only dorsal out of H ₂ O were not disturbed by ships passing. Several small GAT? |
| 22 | Sooty tern | 2 ✓ | E | | | Turtle very pointed dorsal 27.3°C |
| 23 | | | | | | |
| 26 | LWRSP | 3 ✓ | ca | | | Ad Turtles (2) |
| 27 | | | | | | on H ₂ O |
| 30 | WRSP | 7 ✓ | ca | | | Turtles (2) |
| 30 | | | | | | on H ₂ O |
| 32 | Gallard Pet | 1 ✓ | E | | | Turtle |
| 40 | | | | | | Turtle |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

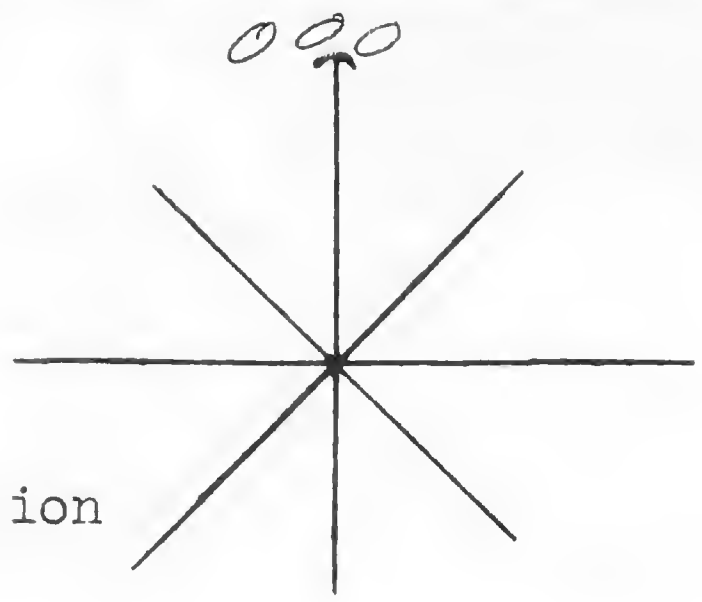
Flint Allen

Date 4 April 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| | | | | | |
|------|---------------|-----|----|--|--|
| 1415 | | | | | Turtles (2) ✓ |
| 20 | | | | | |
| 21 | GPSP | 1 ✓ | ce | | whale 1 - photos last on Roll - did not see profile of |
| 25 | Sooty Shear | 1 ✓ | N | | 27.5 °C ca 20 ft Dorsal - about maybe 1 ft high |
| 40 | Shear/Pet | 1 ✓ | ce | | could be either small Baleen whale or large Porpoise |
| 41 | | | | | dorsal located midway on back. |
| 1503 | WIRSP? | 2 ✓ | N | | Turtle ✓ |
| 06 | | | | | |
| 11 | Sooty Shear | 1 ✓ | N | | Turtle ✓ |
| 20 | | | | | |
| 28 | LWRSP | 1 ✓ | ce | | 4 Sperm whale, 28.2 °C Photos on end of |
| 39 | LWRSP | 5 ✓ | ce | | blowing quite close, together - very close |
| 55 | Harcourt's SP | 2 ✓ | ce | | blowing about every 15-20 seconds. Fr. Rain |
| 57 | | | | | on H ₂ O |
| | | | | | on station |



Ship
Direction

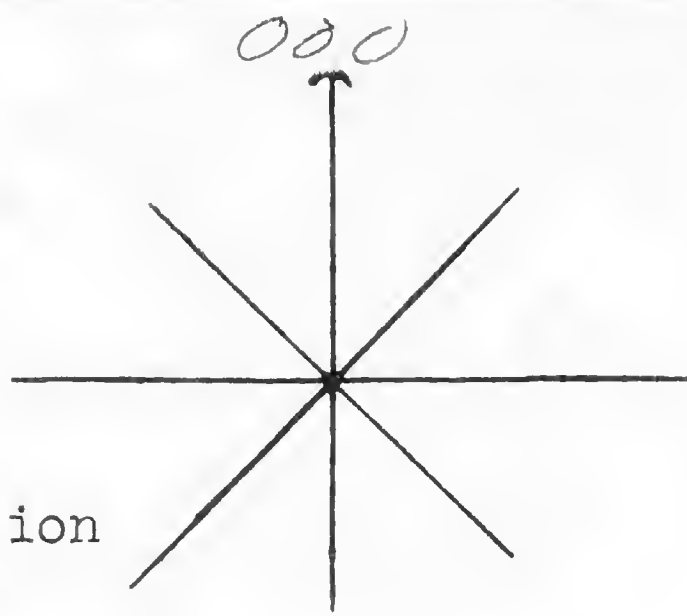
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 5 April 68
Pg.# 1

SPECIMEN
or
DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|-------|-------------|------|------|----------|---|
| 0615 | | | | | Begin obs |
| 30 | Shear/Pet | 1✓ | ∞ | | |
| 0700 | WTS | 1✓ | ∞ | | |
| 0701 | | | | | DK |
| 16 | | | | | Breakfast |
| 42 | Sooty tern | 1✓ | W | | Ad |
| 51 | GPSP | 1✓ | ∞ | | |
| 0904 | St. Pet | 1✓ | ∞ | | |
| 20 | WTS | 1✓ | W | | DK |
| 27 | B. Phal | 1✓ | ∞ | | |
| 35 | Frigates SP | 4✓ | ∞ | | on H ₂ O |
| 38 | WTS | 1✓ | ∞ | | 2F 2? |
| 45 | LWRSP | 1✓ | ∞ | | DK |
| 45 | WTS | 2✓ | ∞ | | DK |
| 0921 | GPSP | 1✓ | ∞ | | |
| 40 | Frigates SP | 1✓ | ∞ | | |
| 55 | B. Phal | 2✓ | ∞ | | |
| | LWRSP | 3✓ | ∞ | | off H ₂ O |
| 1005 | B. Phal | 1✓ | E | | |
| 17 | " | 3✓ | ∞ | | |
| 24 | Sooty tern | 1✓ | ∞ | | on H ₂ O |
| 1030 | | | | | Fun |
| 1230 | | | | | on station |
| 44 | Frigates SP | 2✓ | ∞ | | |
| 1314 | RFB | 1✓ | ∞ | | up high |
| 35 | RTTB | 1✓ | ∞ | | ♂ S.S. websterii - following ship for phone |
| 36 | WTS | 1✓ | ∞ | | SAd |
| 37 | CTS | 1✓ | ∞ | | light |
| 48 | B. Phal | 1✓ | ∞ | | good look, |
| 52 | GPSP | 1✓ | ∞ | | |
| 1426 | WRSP | 1✓ | ∞ | | |
| PF 40 | Sooty tern | 25±5 | ∞ | | Mixed Ages |
| | WTS | 5✓ | ∞ | | 3 light 2 DK } Feeding on S/SIP Jaws Tuned |
| | RFB | 1✓ | ∞ | | dk Phase |
| 1504 | GPSP | 1✓ | ∞ | | |
| 14 | LWRSP | 2✓ | ∞ | | |
| | B. Phal | 2✓ | ∞ | | on H ₂ O } over water and stick. |



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

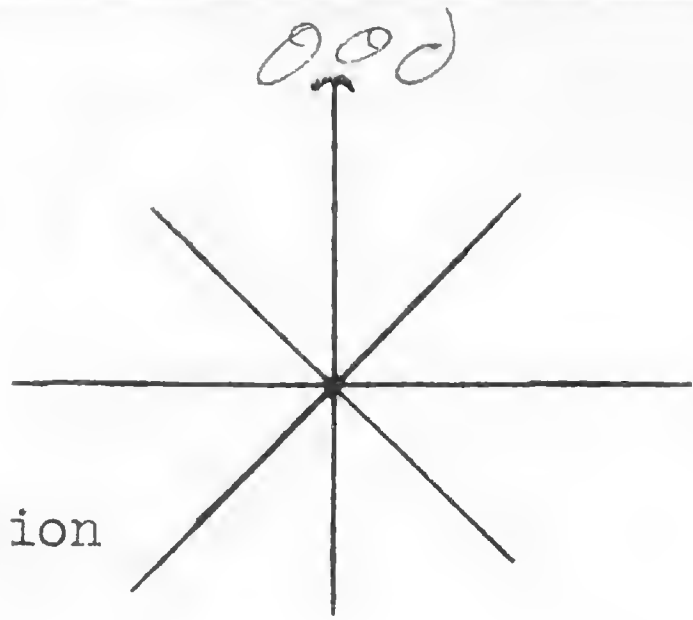
OBSERVERS:

Light Trala Wanda

Date 5 April 68
Pg. # 2

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|-----------------|------|------|----------|---------------------------|
| FF 1540 | Sooty Tern | 12 ✓ | ☉ | | } Feeding 2 ad 1 light |
| | Frigate SP | 2 ✓ | ☉ | | |
| | WTS | 3 ✓ | ☉ | | |
| | Small Shear/Pet | 2 ✓ | ☉ | | |
| | RFB | 1 ✓ | ☉ | | |
| 44 | WTS | 1 ✓ | ☉ | | Ad dk |
| 48 | Shear/Pet | 1 ✓ | SW | | toward flock, DK |
| 52 | B-Faced B | 1 ✓ | NW | | |
| 1605 | " | 1 ✓ | N | | Ad |
| 69 | ST Pet | 1 ✓ | N | | Ad |
| 14 | WTS | 1 ✓ | ☉ | | own stick, |
| 19 | " | 1 ✓ | NW | | light. |
| 22 | DR Petrel | 1 ✓ | W | | " |
| 25 | WBSP | 1 ✓ | NW | | |
| 30 | | | ☉ | | on station |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

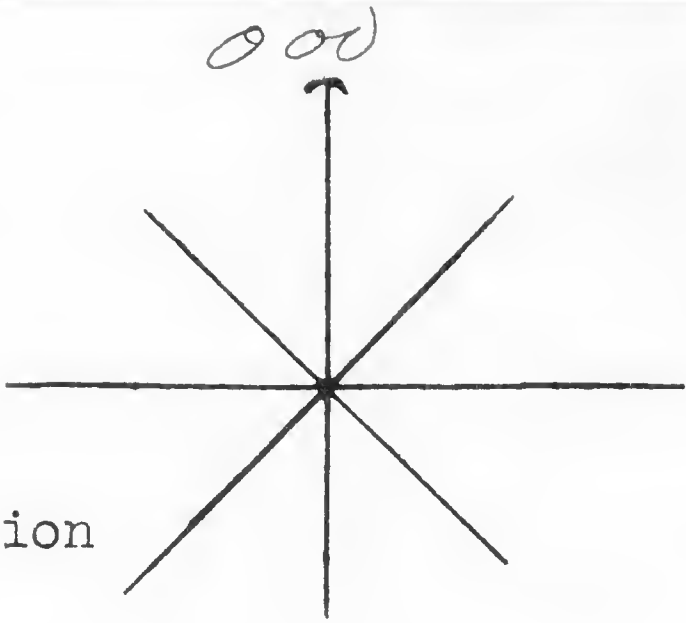
Light Tanager
The winds increasing due
To Gale in Tehuantepec

Date 6 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS ^{10/1/73}

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|------------|-----|---------------|----------|--|
| 0551 | | | | | depart station |
| 620 | WTS | 1 ✓ | SW | | light |
| 22 | DRP | 1 ✓ | SW | | |
| 32 | " | 1 ✓ | W | | |
| 700 | WTS | 1 ✓ | W | | light |
| 01 | | | | | |
| 21 | | | | | light |
| 27 | Pom Jaeger | 1 ✓ | S | | Breakfast |
| 33 | WTS | 1 ✓ | SW | | Ad. Fat. |
| 43 | R Phul | 2 ✓ | SW | | light |
| 46 | St. Pet | 1 ✓ | W | | on H ₂ O |
| 47 | Shear/Pet | 1 ✓ | W | | |
| 48 | Jaeger SP | 1 ✓ | W | | disturb |
| 58 | St Pet GSP | 5 ✓ | NW | | |
| 58 | Shear/Pet | 1 ✓ | W | | |
| 0800 | WTS | 1 ✓ | W | | disturb |
| 06 | Jaeger SP | 1 ✓ | NW | | light |
| 27 | WTS | 1 ✓ | SW | | Dark |
| 42 | Shear/Pet | 1 ✓ | W | | light |
| 48 | DRP | 1 ✓ | W | | |
| 51 | St Pet | 1 ✓ | W | | |
| 0902 | WTS | 1 ✓ | SW | | light |
| 11 | DRP | 1 ✓ | W | | |
| 21 | DRP | 1 ✓ | W | | |
| 25 | WTS | 1 ✓ | W | | |
| 31 | Shear/Pet | 1 ✓ | W | | light |
| 40 | | | | | |
| 1025 | | | | | Reduce speed to 7.5 kts - one engine - changing oil. |
| 1231 | | | | | Enstation underway 10 kts? - wind slowing us up |
| 51 | WRSP | 2 ✓ | N | | |
| 1317 | N Phul | 2 ✓ | W | | off H ₂ O |
| 18 | Shear/Pet | 1 ✓ | NW | | |
| 46 | Pom Jaeger | 1 ✓ | SE | | In Phase |
| | RFB | 1 ✓ | W | | PK - S. Websterii |
| 50 | N-2 Shear? | 4 ✓ | W | | |
| | Pom Jaeger | 1 ✓ | W | | |
| 58 | WRSP | 1 ✓ | W | | In Phase |



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

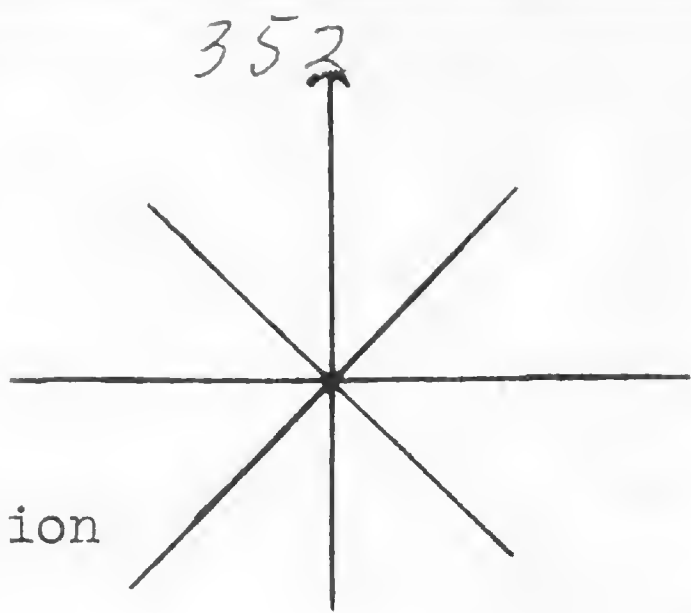
18-20 kt wind

Date 6 April 68

Pg.# 2

SPECIMEN
or

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|---------|---|------|----------|---|
| 1412 | WRSP | 8 | ☉ | | off H ₂ O |
| 15 | WTS | 1 | NW | | |
| TF 1500 | RPhal | 5 | NW | | light |
| | " | 1 | NW | | |
| 1630 | | | | | on station RFB (underwater Radar) collected |



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

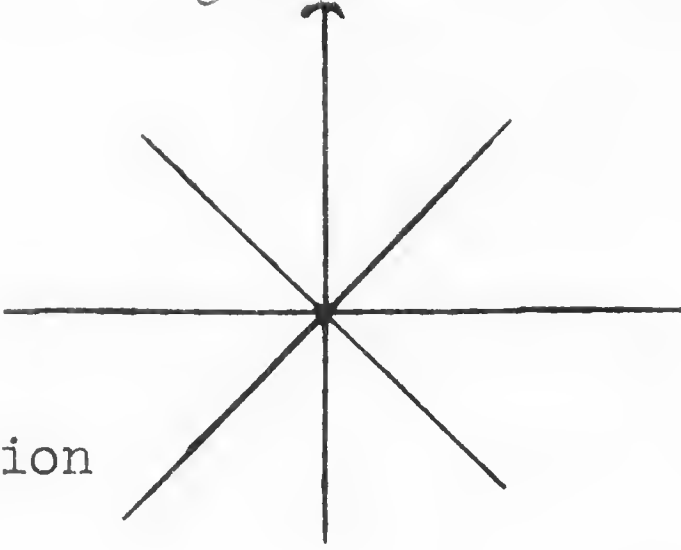
Date 7 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS 10/1/75

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|-----------|---------|------|----------|---|
| C 0549 | RFB | 1✓ | ce | | underway |
| 55 | Jays SP | 2✓ | SW | | Booby of Rodner Mast asleep - collected |
| 56 | shear/Pet | 1✓ | ce | | |
| 0600 | WTS | 2✓ | S | | light |
| 10 | B Faced B | 2✓ | ce | | circles ship Ad |
| 11 | Booby SP | 1✓ | ce | | |
| 16 | RFB | 2✓ | ce | | circles ship - one roosted, Imm |
| 25 | RFB | 1✓ | ce | | " " - Roosted on Mast. |
| 0700 | | | | | Breakfast |
| 20 | | | | | |
| 23 | WTS | 1✓ | NW | | light |
| 30 | St. Pet | 1✓ | ce | | |
| 37 | RFB | 2✓ | ce | | Imm circles ship |
| 39 | " | 1✓ | ce | | St Ad " " |
| 49 | B-faced B | 1✓ | ce | | St Ad circ. ship |
| 53 | Jays SP | 1✓ | E | | |
| 0854 | RBTB | 1✓ | ce | | |
| 1036 | | | | | |
| 1300 | | | | | on station |
| 33 | GPSP | 1✓ | ce | | Franklin's Gull seen on station |
| 40 | B Faced B | 1✓ | ce | | Green Tuna of 1201 |
| 47 | B Faced B | 1✓ | ce | | on H2O St Ad |
| 47 | Shear/Pet | 2✓ | ce | | on H2O B Ad, 3 Imm 5 St Ad |
| 50 | WRSP | 5✓ | ce | | dist. dist. |
| 1420 | RBTB | 1✓ | ce | | off H2O |
| 50 | Booby SP | 1✓ | IV | | off H2O Ad dk |
| FF 1505 | RFB | 50 ± 10 | | | Imm? dist. dist. |
| | B Faced B | 75 ± 12 | | | } all our + Ad + P. sp. 28.4°C |
| | Pomarine | 3✓ | | | |
| | WTS | 1✓ | | | } <u>Stenella longirostris</u> ca 500 |
| | Black Pet | 1✓ | | | |
| 25 | WRSP | 1✓ | ce | | |
| 46 | RFB | 1✓ | S | | Imm |
| 46 | B Faced B | 1✓ | S | | Ad |
| 48 | " | 1✓ | S | | Ad |
| 48 | St Pet | 1✓ | ce | | |
| 53 | RFB | 2✓ | E | | Imm |

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Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

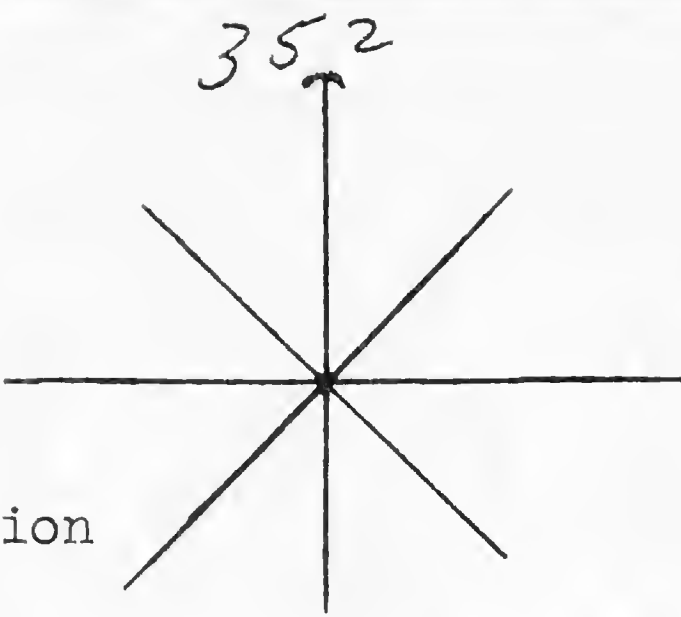
Flat Calm

Date 7 April 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|---------|-----|------|----------|--------------------------------|
| 1610 | BBTB | 1 ✓ | W | | on H ₂ O |
| 15 | SWIFT? | 1 ✓ | W | | around ship chimney? collected |
| 24 | RFB | 1 ✓ | N | | |
| 25 | | | | | on station |



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

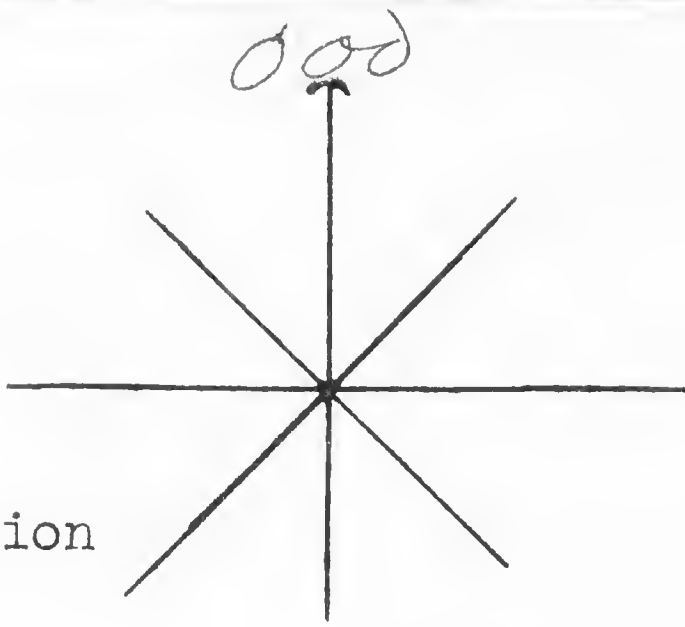
OBSERVERS:

Date 8 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|------------|----------------------|------|----------|--|
| 0556 | | | | | under way |
| 605 | Bird sp | 1✓ | ☉ | | |
| 39 | Pom Jaeger | 1✓ | N | | Now following ship. |
| 40 | BFB | 1✓ | ☉ | | Following ship's Imm |
| 48 | B Faced B | 1✓ | ☉ | | Following Ad (|
| 54 | Pom Jaeger | 1✓ | ☉ | | Following Ad |
| 56 | B Faced B | 1✓ | ☉ | | Ad Now 2 Following |
| 0700 | | | | | Breakfast |
| 15 | | | | | |
| 35 | Jaeger sp | 1✓ | NW | | |
| 53 | Bird sp | 1✓ | ☉ | | distinct |
| 0800 | BB | 1✓ | ☉ | | following SAd |
| 00 | B Faced B | 1✓ | ☉ | | Imm " |
| 04 | Jaeger sp | 1✓ | ☉ | | Ad " |
| 05 | Pom Jaeger | 1✓ | ☉ | | Ad " |
| 0934 | BFB | 1✓ | ☉ | | Age? |
| 1000 | | | | | |
| 1233 | | | | | Constation ca to 000 |
| 55 | B Faced B | 1✓ | ☉ | | |
| 56 | BB | 5✓ | N | | on H, CST of - Not about 1/2 way complete to Ad Plumage |
| TF 1312 | B Faced B | 4✓ | NE | | distinct |
| | BB | 4✓ | NE | | 3 Ad 1 Imm |
| | RFB | 2✓ | NE | | Age? |
| | | | | | Imm - came to ship |
| 20 | BB | 1✓ | N | | Ad " |
| 24 | BFB | 1✓ | ☉ | | Imm circled ship |
| 34 | | | | | |
| 47 | BB | 3✓ | N | | Turtle ca 5-6 inches |
| 57 | BB | 1✓ | | | 2 Imm 1 Ad |
| 1410 | Booby sp | 3 | ☉ | | Ad " sitting on sheet of Plywood |
| FF 20 | Booby sp | 300 ^{at 20} | ☉ | | over popoia 27.5 Mixed Ages + species. Mainly BB but could not identify. RFB + Imm BFB |
| 55 | B Faced B | 2✓ | ☉ | | could not determine that Boobies were present. attracted to ship SAd together |
| | BB | 1✓ | ☉ | | " " Imm together |
| 58 | BB | 2✓ | ☉ | | |
| 1500 | B Faced B | 2✓ | ☉ | | Ad on H=0 |
| 02 | Booby sp | 1✓ | N | | |
| 07 | Jaeger sp | 1✓ | NE | | |



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

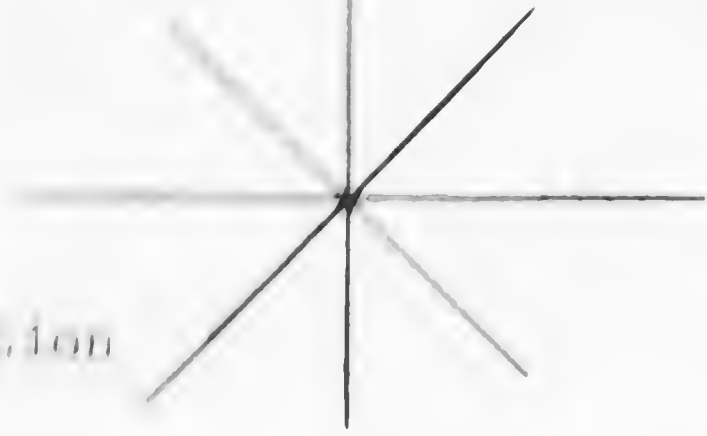
Date 8 April 68
Pg.# 2

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|-----------|----|------|----------|-------------------------|
| 1510 | BFB | 2✓ | | | Ad } All on log, ? } |
| | Brown B | 2✓ | | | |
| 12 | RFB | 2✓ | N | | Attracted to ship |
| 15 | BB | 1✓ | ☉ | | |
| 16 | Jaezn sp | 2✓ | NE | | S. Her on log |
| 17 | BB | 2✓ | N | | |
| 25 | BB | 1✓ | N | | |
| 27 | R Phal | 1✓ | ☉ | | on H ₂ O |
| 30 | Jaezn | 1✓ | ☉ | | on H ₂ O |
| 42 | BB | 1✓ | E | | |
| 53 | B Faced B | 1✓ | ☉ | | Attracted to ship S Ad |
| 1608 | RFB | 2✓ | ☉ | | Following |
| 30 | | | | | on station |

Ship
Direction



SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

Date 20 April 63
Port 21

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

0600 _____ *Begm obs 11 mi. W of Pt. de la Puna*

20 Birds - large

2

N

25 Phal sp

1

N

27 BB

1

W

30 "

1

W

Ad

Prod - 2

35 Galapagos

1

W

"

Phal - 11

Chasing Sooty Tern

Bl - 36, 1

40 "

1

W

Sub 6 - 3

45 "

1

W

Jan 2

50 "

1

W

Tan 100

55 "

1

W

Sub 6 - 2

60 "

1

W

May 7 night

65 "

1

W

Large numbers

Sub 6 - 5/6

70 "

1

W

75 "

1

W

80 "

1

W

85 "

1

W

90 "

1

W

95 "

1

W

100 "

1

W

105 "

1

W

110 "

1

W

115 "

1

W

120 "

1

W

125 "

1

W

130 "

1

W

135 "

1

W

140 "

1

W

145 "

1

W

150 "

1

W

155 "

1

W

160 "

1

W

165 "

1

W

170 "

1

W

175 "

1

W

180 "

1

W

185 "

1

W

190 "

1

W

195 "

1

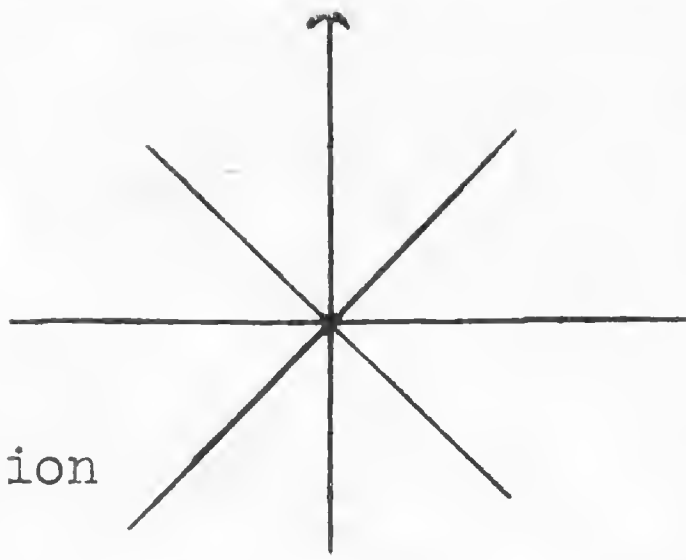
W

200 "

1

W

OBSERVERS:

Ship
Direction
 SMITHSONIAN INSTITUTION
 DIVISION OF BIRDS
 AT SEA DAILY LOG - E

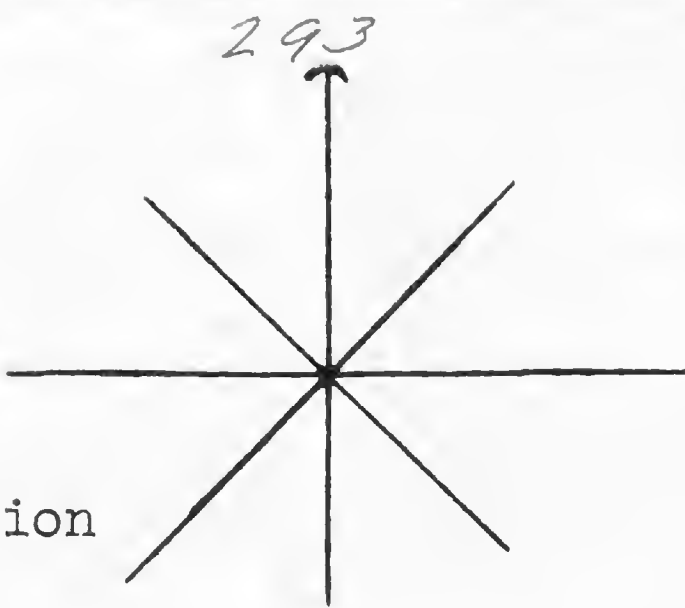
 Date 10 April 68
 Pg.# 2

 SPECIMEN
 or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|------------|--------|------|----------|------------------------|
| 0814 | BB | 17 | W | | |
| 15 | " | 7 | W | | |
| 14 | " | 5 | W | | BB-81 |
| 20 | " | 7 | W | | BfaceB-1 |
| 38 | " | 1 | W | | Ad |
| 58 | " | 4 | NW | | Ad |
| 58 | R. Phul | 1 | NW | | Ad P-97 |
| 0904 | Shorebirds | 200±20 | NW | | large tight flock |
| 07 | Phul sp | 100±20 | NW | | |
| 08 | " " | 40±10 | ce | | |
| 08 | Tern sp | 2 | E | | 66Hz0 |
| 10 | BB | 2 | ce | | sitting on log |
| 12 | Shorebirds | 50±20 | E | | |
| 13 | BB | 3 | W | | Ad |
| 14 | Phul sp | 9 | ce | | on the 0 |
| | BB | 5 | NW | | Ad |
| 16 | Tern sp | 1 | ce | | Possibly Parasitic |
| 16 | Shorebirds | 25±5 | ce | | disturbed by Jaeger |
| 19 | Phul sp | 75±10 | ce | | off the 0 |
| 20 | St. Pet | 1 | ce | | |
| 22 | BB | 1 | SW | | Ad |
| 23 | N Phul | 40±10 | ce | | on the 0 |
| 29 | St. Pet | 1 | ce | | |
| 29 | Bird sp. | 1 | ce | | |
| 31 | R. Phul | 1 | ce | | on the 0 |
| 32 | " | 22 | ce | | " " |
| 33 | " | 20±3 | ce | | " " |
| 34 | " | 36 | ce | | " " Plushed to NW |
| 34 | " | 10 | ce | | |
| 36 | LT Jaeger | 1 | NW | | |
| 37 | BB | 5 | N | | |
| 38 | " | 4 | NW | | 1 Im 1 SA 2 Ad |
| 40 | Pom Jaeger | 1 | NW | | Ad light phase |
| 42 | BB | 2 | NW | | Im |
| 47 | BB | 10 | NW | | Mixed phase |
| 48 | St. Pet | 1 | ce | | |
| 48 | R. Phul | 7 | ce | | on the 0 |
| 50 | Phul sp | 1 | W | | |
| 52 | BB | 3 | W | | Ad |
| 53 | " " | 3 | ce | | 1 Ad 2 Im |
| 57 | B Face B | 1 | ce | | Ad |
| | BB | 2 | ce | | Im Ad 3 sitting on log |
| 1000 | St. Pet | 1 | ce | | |
| 02 | | | | | Turtle |

 BB-81
 BfaceB-1
 Ad P-97
 Shore-275
 Phul 225
 Tern-2
 Im 1
 PT-1
 LTJ-1
 N Phul-40
 Stam-4
 Bird-1
 729



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 10 April 68
Pg.# 3

SPECIMEN
or

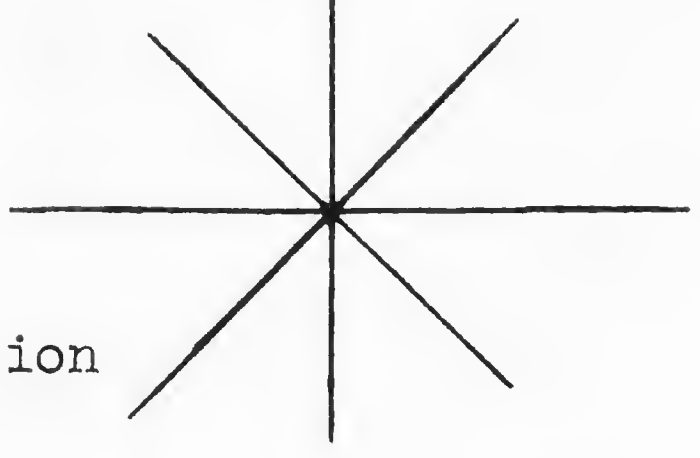
TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|------------|-------|------|----------|--|
| 1010 | Jay's SP | 1 | E | | |
| 14 | BB | 7 | NW | | 3 Ad 2 SA 2 Im |
| 17 | BB | 4 | NW | | Ad? |
| 25 | Phal SP | 25±10 | } | | in one large loose flock about 1 mi. by 1/2 mi |
| | Subm Gull | 6 | | | |
| | Monk Shear | 10±2 | | | |
| | BB | 30±3 | | | |
| | Term SP | 20±10 | | | |
| 35 | Pom Jaeger | 1 | ca | | Follow ship light |
| 37 | ST Pet | 1 | ca | | " " |
| 39 | BB | 2 | NW | | |
| 43 | " " | 3 | E | | |
| 1100 | " " | 1 | ca | | on H ₂ O Ad |
| 01 | Monk Shear | 2 | ca | | " " |
| 05 | Pom Jaeger | 2 | ca | | Follow ship |
| | Black SP | 3 | ca | | " " |
| 07 | BB | 1 | E | | |
| 08 | Term SP | 2 | N | | |
| 08 | Monk Shear | 1 | NE | | |
| 12 | BB | 5 | N | | |
| 15 | Phal SP | 50±10 | ca | | on H ₂ O |
| 17 | " " | 50±20 | | | |
| 20 | | | | | |
| 35 | | | | | band |
| 37 | Phal SP | 25±20 | ca | | |
| 47 | ST Pet | 1 | ca | | |
| 48 | Black Pet | 1 | ca | | |
| 48 | Monk Shear | 1 | ca | | |
| 49 | Phal SP | 3 | N | | |
| 49 | BB | 1 | ca | | Im |
| 50 | Phal | 5 | NE | | |
| 52 | BB | 2 | ca | | |
| 53 | B Phal | 3 | ca | | called off H ₂ O |
| 55 | Phal | 2 | E | | |
| 56 | " | 14 | ca | | on H ₂ O |
| 56 | BB | 1 | N | | Im |
| 56 | BB | 8 | N | | Ad |
| 1200 | " | 1 | NE | | " |
| 1500 | | | | | close |

Jae - 1
BB - 66
Phal - 274
Sub - 6
Monk - 14
Term - 72
STam - 2
PT - 3
BOSP - 4
APK - 3

445

293



Ship Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 10 April 68
Pg.# 4

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|---------|-------------|------|------|----------|--|
| TF 1504 | BB Tern SP | 3 | W | | Together Moving W |
| | Mary Shear | 10±2 | W | | |
| 07 | Pan. Jaeger | 4 | ca | | Following ship: 1 obs, 1 Funn, 2 light |
| 08 | Mary Shear | 24 | W | | |
| | L-T Jaeger | 1 | W | | Following shearwaters |
| 10 | B Petrel | 5 | ca | | Following ship |
| 49 | M. Shear | 1 | ca | | |
| 1621 | B Phal | 7 | ca | | |
| 24 | BB | 3 | ca | | on the 0 |
| 50 | Terns SP | 3 | E | | |
| 1705 | | | | | |
| 35 | | | | | 2c base |

BB-6

Tern-13

Mary-26

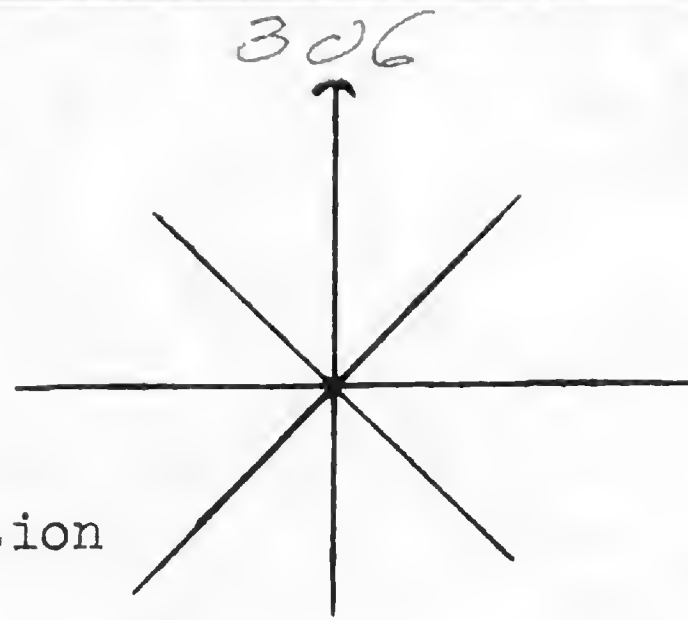
Pan Jac-4

L-T J-1

BLSP-5

RPh-7

62



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 11 April 68
Pg.# 1

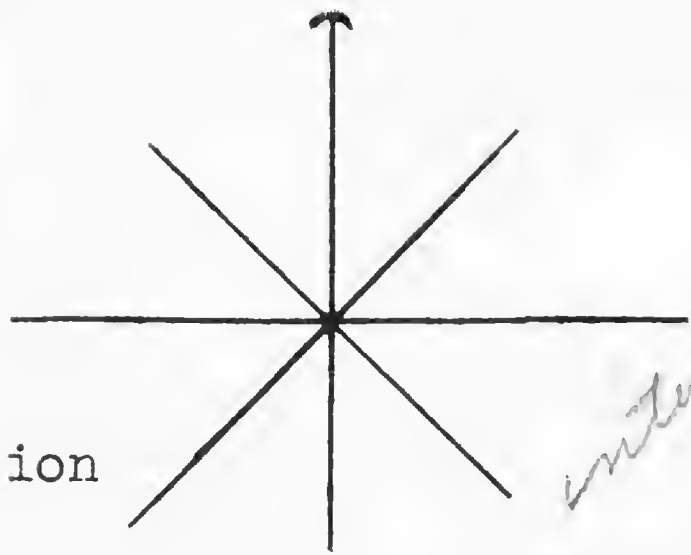
SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

| TIME | SPECIES | # | DIR. | BAND NO. | REMARKS |
|------|----------------|--------|------|----------|---|
| 0546 | | | | | Survivor in ab |
| 628 | Frigate, Mag | 2 | S | | ad + Imm |
| 43 | BB | 2 | S | | |
| 0700 | | | | | |
| 30 | | | | | Breakfast |
| 31 | Heermanns gull | 1 | ce | | |
| 32 | BB | 6 | W | | |
| 32 | NPhal | 3 | ce | | on H ₂ O |
| 33 | B Pet. | 4 | e | | following ship |
| 33 | BB | 3 | W | | |
| 34 | BB | 34 | W | | |
| 35 | ST Pet | 15 | ce | | scattered everywhere |
| 38 | BB | 13 | W | | |
| 40 | " | 9 | W | | |
| 41 | Phal sp | 15 ± 3 | ce | | on H ₂ O |
| 48 | BB | 3 | W | | |
| 52 | ST Pet | 2 | NW | | |
| 54 | BB | 4 | W | | |
| 57 | Black Tern | 1 | ce | | on fish ball - close good closer - Nutcracker |
| 58 | ST Pet | 5 | ce | | |
| 58 | BB | 7 | W | | |
| 0900 | BB | 3 | NW | | |
| 10 | B Pet | 7 | ce | | following |
| 11 | BB | 2 | W | | |
| 13 | BB | 9 | W | | |
| 28 | Sooty Tern? | 2 | E | | |
| 38 | " " | 13 | ce | | |
| 40 | B Pet | 12 ± 2 | ce | | following ship |
| 58 | BB | 1 | ce | | Imm |
| 1015 | | | | | |
| 35 | L-T Jaeger | 1 | N | | Tursiops ca 5m6 core to bow + left in a hurry No Photo's 22.7°C |
| 48 | Phal sp | 15 ± 3 | e | | on H ₂ O |
| 50 | | | | | ca. 30 ± 3 B Pet following ship |

LTJ - 1
Mag Frig - 2
BB - 96
Heem - 1
Bl Tern - 1
ST 15 (116)
Phala - 30
Bl SP - 23
NPhal - 3 (58)
STern 22

194



Ship
Direction

interpolated

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 12 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

1300
+
1500

22°30'N - 110°00'W

Many Feedsy Flocks of Many Shearwaters, Puffins, Sooty Terns - total numbers ca 5,000 birds
Also present are a few Frigates, and Jaegers
Location ca. 30mi S cape San Lucas.
Some phalaropes in area also

1715

22°33'N 110°20'

Porpoise 750 ± 200 Tursiops?
20.3°C
13 April 68

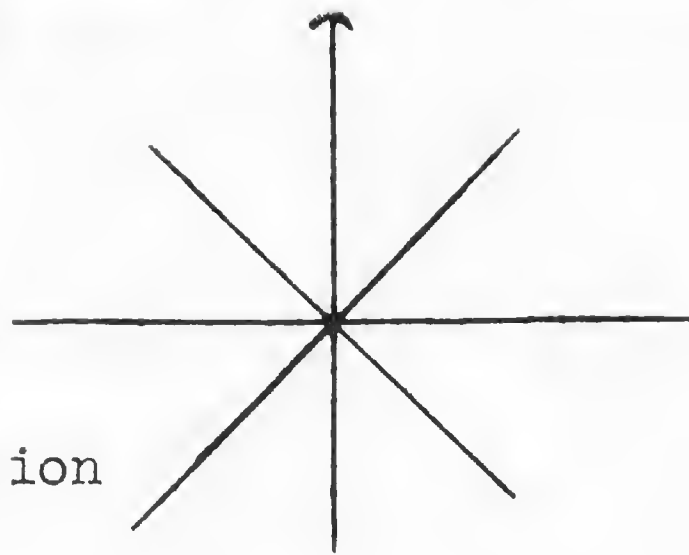
0520
0540

B.G. 24°30'N 112°

ca 50 of 300 Delphinus visible bow -
Passed through large school off Santa Margarita Is.
one animal was white all the way back to blowhole
only 2 or 3 had small white spots at base
of dorsal - all the rest had dark dorsal.
18.5°C

1406

Blue whale - good looks - large rounded
back very small dorsal, ca 60 ft. ± 15
water temp. 19.1°C
25°37'N ~ 113°04'W approx 72 mi South of
Pta. Abreojos - appeared to be going South.



Ship
Direction

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA DAILY LOG - E

OBSERVERS:

Date 14 April 68
Pg.# 1

SPECIMEN
or

TIME SPECIES # DIR. BAND NO. REMARKS

0550-0600

Blue ~~whales~~ whales. 5 or 6 humpbacks
60 ft ± 15 ft Dark in color, very small fin set
far back on body, body very wide with high
rounded back.

0650

Lags. off Thurloe head
5 or 6

16.1°C

27°28'N - 114°49'W

5 mi off Montserrat

Tremulous concentration of
Sooty Shear, B & W Phal. Gulls, Xantus Murlets
Cassins Audubons. Gulls, Storm Shear.
Sooty shearwater dove when ship approached.

Date 16 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0629 Position: Lat. 30 01, Long. 117 24

Sunset: Time 1741 Position: Lat. 27 58, Long. 117 32

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 122

Miles travelled from sunset to 2400 hours = _____

1741
629
1112

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0546 | * | 30° 09 | 117 22 |
| 2. | 1203 | LAN | 29° 00 | 117 26 |
| 3. | 1400 | SUN | 28 39 | 117 28 |
| 4. | 1800 | R Fix | 27° 55 | 117 33 |
| 5. | | | | |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. ^{Swell}Wave Dir. ^{Swell}Wave Hgt. SS 11575

| | | | | | | | |
|------|-------|--------|---------|---------|---------|--------|---|
| 0100 | | | | Lt Airs | Lt Airs | | |
| 0200 | | | | | | 270 | 1 |
| 0300 | | | | | | | |
| 0400 | | | | | | 270 | 3 |
| 0500 | | | | | | | |
| 0600 | 30 05 | 117 22 | | | | Calmer | — |
| 0700 | 29 55 | 23 | | | | | |
| 0800 | 29 45 | 117 24 | 294 | 06 | 270 | 2 | |
| 0900 | 29 35 | 24 | | | | | |
| 1000 | 29 24 | 117 25 | 294 | 06 | 270 | 2 | |
| 1100 | 29 12 | 25 | | | | | |
| 1200 | 29 00 | 117 26 | 005 | 04 | 220 | 1 | |
| 1300 | 28 50 | 27 | | | | | |
| 1400 | 28 39 | 117 28 | Lt Airs | Lt Airs | 290 | 1 | |
| 1500 | 28 27 | 29 | | | | | |
| 1600 | 28 16 | 117 30 | | | 290 | 2 | |
| 1700 | 28 06 | 31 | | | | | |
| 1800 | 27 55 | 117 33 | | | 290 | 11 | |
| 1900 | | | | | | | |
| 2000 | | | 264 | 05 | 290 | 4 | |
| 2100 | | | | | | | |
| 2200 | | | 336 | 06 | 290 | 3 | |
| 2300 | | | | | | | |
| 2400 | | | 330 | 06 | 290 | 2 | |

Date 17 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

87
83
170

Sunrise: Time 0626 Position: Lat. 25° 32', Long. 117° 41'

Sunset: Time 1748 Position: Lat. 23° 33', Long. 117° 52'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 120

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|-----------|------------|
| 1. | 0544 | * | 25° 40' N | 117° 40' W |
| 2. | 0902 | Sun + VEN | 25 04 | 117 43 |
| 3. | 1200 | L AN + VEN | 24 28 | 117 46 |
| 4. | 1400 | " " | 24 05 | 117 48 |
| 5. | 1810 | * | 23 28 | 117 53 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Swell Wave Dir. | Swell Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------------|-----------------|
| 0100 | | | | | | |
| 0200 | | | 330 | 05 | 310 | 4 |
| 0300 | | | | | | |
| 0400 | | | 350 | 08 | 310 | 6 |
| 0500 | | | | | | |
| 0600 | 25 38 | 117 40 | LT | Airs | 310 | 4 |
| 0700 | 27 | 41 | | | | |
| 0800 | 25 15 | 117 42 | 350 | 10 | 310 | 4 |
| 0900 | 25 04 | 117 43 | | | | |
| 1000 | 24 53 | 117 44 | 022 | 10 | 240 | 4 |
| 1100 | 41 | 45 | | | | |
| 1200 | 24 28 | 117 46 | 020 | 12 | 280 | 4 |
| 1300 | 17 | 47 | | | | |
| 1400 | 24 05 | 117 48 | 020 | 12 | 280 | 4 |
| 1500 | 54 | 48 | | | | |
| 1600 | 23 42 | 117 49 | 020 | 12 | 280 | 4 |
| 1700 | 39 | 50 | | | | |
| 1800 | 23 30 | 117 52 | 020 | 13 | 280 | 4 |
| 1900 | | | | | | |
| 2000 | | | 022 | 10 | 280 | 4 |
| 2100 | | | | | | |
| 2200 | | | 022 | 13 | 280 | 4 |
| 2300 | | | | | | |
| 2400 | | | 020 | 13 | 280 | 4 |

55
11.2

Date 18 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0620 Position: Lat. 21°46', Long. 117°58'

Sunset: Time 1756 Position: Lat. 21°04', Long. 118°52'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 66

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0543 | * | 21°46' | 117°58' |
| 2. | 1100 | VEF | 21 42' | 118 04' |
| 3. | 1207 | LAM | 21 33 | 118 10 |
| 4. | 1400 | Sun + VEF | 21 18 | 118 28 |
| 5. | 1825 | * | 21 04 | 118 52 |

Hourly Positions: 470 CCG 239

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. <i>Swell</i> | Wave Hgt. <i>Swell</i> |
|------|----------|-----------|-----------|----------|------------------------|------------------------|
| 0100 | | | | | | |
| 0200 | | | 015 | 13 | 280 | 4 |
| 0300 | | | | | | |
| 0400 | | | 030 | 15 | 290 | 5 |
| 0500 | | | | | | |
| 0600 | | | 020 | 17 | 280 | 6 |
| 0700 | | | | | | |
| 0800 | | | 030 | 15 | 280 | 6 |
| 0900 | | | | | | |
| 1000 | 21 48 | 117 58 | 060 | 11 | 280 | 6 |
| 1100 | 21 42 | 118 04 | | | | |
| 1200 | 21 34 | 118 09 | 045 | 15 | 020 | 5 |
| 1300 | 21 25 | 118 18 | | | | |
| 1400 | 21 18 | 118 28 | 045 | 15 | 020 | 5 |
| 1500 | 21 12 | 118 38 | | | | |
| 1600 | 21 05 | 118 47 | 055 | 14 | 020 | 5 |
| 1700 | 21 04 | 118 52 | | | | |
| 1800 | | | 055 | 13 | 040 | 6 |
| 1900 | | | | | | |
| 2000 | | | 030 | 13 | 040 | 6 |
| 2100 | | | | | | |
| 2200 | | | 035 | 10 | 040 | 6 |
| 2300 | | | | | | |
| 2400 | | | 045 | 09 | 040 | 5 |

Date 19 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0623 Position: Lat. 19° 34', Long. 118° 30'

Sunset: Time 1758 Position: Lat. 18° 30', Long. 119° 02'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 79.4

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0717 | * | 19° 34' | 118° 30' |
| 2. | 0836 | sun-NEE | 19 29 | 118 57 |
| 3. | 0905 | sun-SEA | 19 12 | 118 52 |
| 4. | 1400 | * | 18 37 | 119 33 |
| 5. | 1830 | * | 18 30 | 119 02 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
| 0100 | | | | | | |
| 0200 | | | 015 | 10 | 050 | 5 |
| 0300 | | | | | | |
| 0400 | | | 015 | 17 | 050 | 5 |
| 0500 | | | | | | |
| 0600 | | | 017 | 12 | 050 | 6 |
| 0700 | 19 51 | 118 57 | | | | |
| 0800 | 41 | 57 | 020 | 11 | 050 | 6 |
| 0900 | 37 | 57 | | | | |
| 1000 | 19 30 | 57 | 020 | 11 | 050 | 6 |
| 1100 | | | | | | |
| 1200 | 19 16 | 118 55 | 047 | 10 | 050 | 5 |
| 1300 | 19 18 | 118 52 | | | | |
| 1400 | 18 58 | 53 | 025 | 12 | 050 | 4 |
| 1500 | 18 47 | 56 | | | | |
| 1600 | 18 30 | 119 00 | 030 | 11 | 050 | 4 |
| 1700 | 18 37 | 119 02 | | | | |
| 1800 | | | 040 | 10 | 050 | 3 |
| 1900 | | | | | | |
| 2000 | | | 020 | 10 | 050 | 3 |
| 2100 | | | | | | |
| 2200 | | | 012 | 09 | 050 | 3 |
| 2300 | | | | | | |
| 2400 | | | 055 | 06 | 050 | 4 |

Date 20 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0621 Position: Lat. 17° 14' N, Long. 119° 00' W

Sunset: Time 1800 Position: Lat. 15° 45' N, Long. 118° 56' W

15

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|----------------|-------------|------------|
| 1. | 0543 | * | 17° 14' N | 119° 00' W |
| 2. | 0919 | Sun, Moon, VEN | 16° 42.5' N | 119 00 W |
| 3. | 1210 | LAIN | 16° 29' N | 118 59 W |
| 4. | 1400 | Sun VEN | 16 13 | 118 56 |
| 5. | 1723 | * | 15 45 | 118 56 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|-----------|-----------|-----------|----------|-----------|-----------|
| 0100 | | | | | | |
| 0200 | | | 050 | 06 | 050 | 3 |
| 0300 | | | | | | |
| 0400 | | | 010 | 09 | 050 | 3 |
| 0500 | | | | | | |
| 0600 | 17° 14' N | 119 00 | 010 | 08 | 050 | 4 |
| 0700 | 17 07 N | 119 00 | | | | |
| 0800 | 16 56 N | 119 00 | 015 | 12 | 320 | 4 |
| 0900 | 16 46 N | 119 00 | | | | |
| 1000 | 16 34 N | 118 59 | 015 | 12 | 320 | 4 |
| 1100 | 16 29 | 118 59 | | | | |
| 1200 | 16 29 | 118 59 | 045 | 16 | 040 | 5 |
| 1300 | 16 24 | 118 57 | | | | |
| 1400 | 16 13 | 56 | 045 | 15 | 040 | 4 |
| 1500 | 16 02 | 57 | | | | |
| 1600 | 15° 50' | 118 57 | 020 | 12 | 040 | 4 |
| 1700 | 15 45 | 118 56 | | | | |
| 1800 | | | 050 | 10 | 060 | 4 |
| 1900 | | | | | | |
| 2000 | 15 33 | 118 57 | 030 | 10 | 300 | 4 |
| 2100 | 15 22 | 118 58 | | | | |
| 2200 | 15 11 | 118 59 | 020 | 10 | 300 | 4 |
| 2300 | | | | | | |
| 2400 | | | 060 | 06 | 300 | 2 |

Date 21 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0617 Position: Lat. 14 29, Long. 119 03

Sunset: Time 1804 Position: Lat. 13 09, Long. 117 55

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0530 | * | 14 29 | 119 03 |
| 2. | 0807 | | 14 07 | 119 00 |
| 3. | 1210 | LAN | 13 43 | 119 00 |
| 4. | 1500 | | 13 27 | 119 00 |
| 5. | 1827 | * | 13 07 | 118 55 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. ^{Small}Wave Dir. ^{Small}Wave Hgt.

| | | | | | | |
|------|---------|--------|-----|----|-----|---|
| 0100 | | | | | | |
| 0200 | | | 020 | 10 | 360 | 4 |
| 0300 | | | | | | |
| 0400 | | | 020 | 10 | 360 | 4 |
| 0500 | | | | | | |
| 0600 | 14 29 | 119 03 | 020 | 12 | 010 | 4 |
| 0700 | 20 | 119 02 | | | | |
| 0800 | 14 07 | 119 01 | 020 | 12 | 320 | 4 |
| 0900 | 13 57 | 119 00 | | | | |
| 1000 | 13 46 | 119 00 | 040 | 15 | 320 | 4 |
| 1100 | | | | | | |
| 1200 | 13 43 | 119 00 | 045 | 10 | 010 | 4 |
| 1300 | | | | | | |
| 1400 | 13 32.5 | 118 51 | 045 | 15 | 040 | 4 |
| 1500 | 26 | 118 58 | | | | |
| 1600 | 16 | 58 | 025 | 10 | 040 | 4 |
| 1700 | 13 09 | 118 55 | | | | |
| 1800 | 13 09 | 118 55 | 035 | 09 | 045 | 4 |
| 1900 | | | | | | |
| 2000 | | | 018 | 11 | 340 | 4 |
| 2100 | | | | | | |
| 2200 | | | 030 | 11 | 340 | 4 |
| 2300 | | | | | | |
| 2400 | | | 050 | 15 | 340 | 4 |

Date 22 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0616 Position: Lat. 11°44', Long. 118°55'

Sunset: Time 1806 Position: Lat. 10°21', Long. 118°58'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 83 mi

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0539 | + | 11°4' | 118°55' |
| 2. | 0948 | + | 11°07' | 57 |
| 3. | 1209 | FAV | 10°51' | 55 |
| 4. | 1430 | | 10°45' | 56 |
| 5. | 1838 | + | 10°16' | 118°57' |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. ~~Wave~~ Swell Dir. ~~Wave~~ Swell Hgt.

| | | | | | | |
|------|-------|--------|-----|----|-----|---|
| 0100 | | | | | | |
| 0200 | | | 030 | 11 | 040 | 4 |
| 0300 | | | | | | |
| 0400 | | | 030 | 13 | 040 | 4 |
| 0500 | | | | | | |
| 0600 | 11 45 | 117 55 | 040 | 09 | 040 | 4 |
| 0700 | 36 | 56 | | | | |
| 0800 | 25 | 56 | 030 | 12 | 040 | 4 |
| 0900 | 14 | 56 | | | | |
| 1000 | 05 | 57 | 060 | 15 | 040 | 4 |
| 1100 | | | | | | |
| 1200 | 11 37 | 55 | 060 | 13 | 040 | 3 |
| 1300 | 10 36 | 55 | | | | |
| 1400 | 45 | 56 | 010 | 15 | 065 | 4 |
| 1500 | 34 | 56 | | | | |
| 1600 | 24 | 57 | 060 | 15 | 055 | 4 |
| 1700 | 21 | 58 | | | | |
| 1800 | | | 040 | 08 | 060 | 4 |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 23 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.V. Lewis

Sunrise: Time 0613 Position: Lat. 8° 55', Long. 118° 56'

Sunset: Time 1808 Position: Lat. 7° 30', Long. 117° 54'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 75

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0540 | * | 7° 56' | 118° 36' |
| 2. | 0508 | Visual | 8° 36' | 56 |
| 3. | 1210 | LAW | 8° 29' | 52 |
| 4. | 1500 | DR | 7° 47' | 55 |
| 5. | 1630 | DR | 7° 30' | 54 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Swall Wave Dir. | Swall Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------------|-----------------|
| 0100 | | | | | | |
| 0200 | | | 120 | 8 | 110 | 4 |
| 0300 | | | | | | |
| 0400 | | | 120 | 8 | 110 | 4 |
| 0500 | | | | | | |
| 0600 | 8° 56' | 118° 56' | 120 | 8 | 110 | 4 |
| 0700 | 47 | | | | | |
| 0800 | 8° 36' | 56 | 120 | 8 | 110 | 4 |
| 0900 | 25 | 57 | | | | |
| 1000 | 14 | 56 | 120 | 8 | 110 | 4 |
| 1100 | | | | | | |
| 1200 | 8° 54' | 53 | 120 | 8 | 110 | 4 |
| 1300 | 07 | 53 | | | | |
| 1400 | 00 | 54 | 120 | 8 | 110 | 4 |
| 1500 | 7° 47' | 55 | | | | |
| 1600 | 36 | 55 | 120 | 8 | 110 | 4 |
| 1700 | 30 | 54 | | | | |
| 1800 | | | 120 | 8 | 110 | 4 |
| 1900 | | | | | | |
| 2000 | | | 120 | 8 | 110 | 4 |
| 2100 | | | | | | |
| 2200 | | | 120 | 8 | 110 | 4 |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 24 February 68 Ship T. Washington () Cruise No. _____
 Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0609 Position: Lat. 6° 16', Long. 174° 43'
 Sunset: Time 1909 Position: Lat. 00° 51', Long. 40

Miles travelled from 0000 hours to sunrise = _____
 Miles travelled from sunrise to sunset = 77
 Miles travelled from sunset to 2400 hours = _____

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

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. *Wind* Dir. *Wave* Hgt.

| | | | | | | |
|------|-------|----|-----|----|-----|---|
| 0100 | | | | | | |
| 0200 | | | 10 | 13 | 150 | 4 |
| 0300 | | | | | | |
| 0400 | | | 20 | 27 | 150 | 4 |
| 0500 | | | | | | |
| 0600 | 06 16 | 42 | 25 | 15 | 160 | 3 |
| 0700 | 6 08 | 41 | | | | |
| 0800 | 05 55 | 41 | 165 | 10 | 140 | 3 |
| 0900 | 44 | 40 | | | | |
| 1000 | 34 | 37 | 230 | 7 | 140 | 3 |
| 1100 | 22 | 35 | | | | |
| 1200 | 12 | 35 | 320 | 03 | 130 | 2 |
| 1300 | | | | | | |
| 1400 | 12 | 36 | 70 | 10 | 130 | 4 |
| 1500 | 12 | 37 | | | | |
| 1600 | 03 | 39 | 180 | 28 | 170 | 6 |
| 1700 | 04 57 | 40 | | | | |
| 1800 | | | 180 | 29 | 170 | 4 |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 25 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0607 Position: Lat. 3° 39' N, Long. 118° 27'

Sunset: Time 1812 Position: Lat. 2° 08' N, Long. 118° 58'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 86

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0553 | * | 3 34 N | 118 52 |
| 2. | 0830 | VIN | 2 22 N | 53 |
| 3. | 1208 | LAM | 2 09 N | 118 26 |
| 4. | 1945 | sun | 2 26 N | 118 57 |
| 5. | 1827 | * | 2 05 N | 119 00 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
| 0100 | | | | | | |
| 0200 | | | 130 | 13 | 170 | 04 |
| 0300 | | | | | | |
| 0400 | | | 140 | 08 | 170 | 4 |
| 0500 | | | | | | |
| 0600 | 3 38 N | 118 52 | 140 | 09 | 170 | 4 |
| 0700 | 2 25 N | 53 | | | | |
| 0800 | 2 15 N | 54 | 140 | 08 | 170 | 4 |
| 0900 | 2 08 N | 53 | | | | |
| 1000 | 2 57 N | 54 | 130 | 07 | 170 | 4 |
| 1100 | 52 | 56 | | | | |
| 1200 | 49 | 56 | 180 | 07 | 170 | 4 |
| 1300 | 44 | 56 | | | | |
| 1400 | | | 100 | 08 | 170 | 3 |
| 1500 | | | | | | |
| 1600 | | | 160 | 06 | 170 | 4 |
| 1700 | | | | | | |
| 1800 | | | 160 | 07 | 170 | 3 |
| 1900 | | | | | | |
| 2000 | | | 135 | 05 | 170 | 3 |
| 2100 | | | | | | |
| 2200 | | | 142 | 06 | 170 | 3 |
| 2300 | | | | | | |
| 2400 | | | 140 | 07 | 170 | 3 |

Date 26 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder J.J. Lewis

Sunrise: Time 0607 Position: Lat. 0° 44' N, Long. 117° 51'

Sunset: Time 1811 Position: Lat. 0° 20' S, Long. 117° 52'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 74 mi

Miles travelled from sunset to 2400 hours = _____

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

- 1.
- 2.
- 3.
- 4.
- 5.

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
|------|----------|-----------|-----------|----------|-----------|-----------|

| | | | | | | |
|------|----------|------------|-----|----|-----|---|
| 0100 | | | | | | |
| 0200 | | | 140 | 8 | 170 | 3 |
| 0300 | | | | | | |
| 0400 | | | 140 | 05 | 170 | 3 |
| 0500 | | | | | | |
| 0600 | 0° 44' N | 117° 58' W | 135 | 06 | 170 | 3 |
| 0700 | 35' N | 57' W | | | | |
| 0800 | 25' N | 57 | 140 | 05 | 170 | 3 |
| 0900 | 17' N | 56 | | | | |
| 1000 | 06' N | 56 | 140 | 05 | 170 | 3 |
| 1100 | | | | | | |
| 1200 | 0° 15' S | 117° 34' | 140 | 09 | 130 | 3 |
| 1300 | | | | | | |
| 1400 | | | 140 | 07 | 130 | 3 |
| 1500 | | | | | | |
| 1600 | 0° 28' S | 117° 50' W | 140 | 05 | 130 | 3 |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | 140 | 05 | 130 | 3 |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

1647

Date 27 February 68 Ship T. Washington () Cruise No. _____
 Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0605 Position: Lat. 01°44'S, Long. 118°53'
 Sunset: Time 1814 Position: Lat. 3°15'S, Long. 118°58'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 92

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|---------------|----------------|
| 1. | <u>0528</u> | <u>*</u> | <u>1°44'S</u> | <u>118°53'</u> |
| 2. | | | | |
| 3. | <u>1202</u> | <u>LAN</u> | <u>2°21'S</u> | <u>118°50'</u> |
| 4. | | | | |
| 5. | <u>1838</u> | <u>*</u> | <u>3°21'S</u> | <u>57</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|----------------|----------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>01°44'S</u> | <u>118°53'</u> | | | | |
| 0700 | <u>55</u> | <u>52</u> | | | | |
| 0800 | <u>2 075</u> | <u>51</u> | | | | |
| 0900 | <u>16</u> | <u>50</u> | | | | |
| 1000 | <u>27</u> | <u>50</u> | | | | |
| 1100 | <u>31</u> | <u>50</u> | | | | |
| 1200 | <u>31</u> | <u>50</u> | | | | |
| 1300 | <u>36</u> | <u>52</u> | | | | |
| 1400 | <u>41</u> | <u>55</u> | | | | |
| 1500 | <u>54</u> | <u>55</u> | | | | |
| 1600 | <u>3 08</u> | <u>57</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 28 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 603 Position: Lat. 4°26'S, Long. 119°12'

Sunset: Time 1715 Position: Lat. 05°52'S, Long. 119°01'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 87

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|---------------|-----------------|
| 1. | <u>2532</u> | <u>*</u> | <u>4°26'S</u> | <u>119°12'W</u> |
| 2. | | | | |
| 3. | <u>1209</u> | <u>LAN</u> | <u>5°10'S</u> | <u>119°07'W</u> |
| 4. | | | | |
| 5. | <u>1843</u> | <u>*</u> | <u>5°57'S</u> | <u>119°00'</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------------|----------------|------------|-----------|------------|----------|
| 0100 | | | | | | |
| 0200 | | | <u>140</u> | <u>12</u> | <u>150</u> | <u>4</u> |
| 0300 | | | | | | |
| 0400 | | | <u>140</u> | <u>12</u> | <u>150</u> | <u>5</u> |
| 0500 | | | | | | |
| 0600 | <u>4°26'S</u> | <u>119°12'</u> | <u>140</u> | <u>11</u> | <u>150</u> | <u>5</u> |
| 0700 | <u>35</u> | <u>10</u> | | | | |
| 0800 | <u>46</u> | <u>10</u> | <u>145</u> | <u>08</u> | <u>150</u> | <u>5</u> |
| 0900 | <u>55</u> | <u>10</u> | | | | |
| 1000 | <u>5°09'S</u> | <u>10</u> | <u>120</u> | <u>12</u> | <u>150</u> | <u>6</u> |
| 1100 | | | | | | |
| 1200 | <u>5°10'S</u> | <u>07</u> | <u>135</u> | <u>13</u> | <u>150</u> | <u>5</u> |
| 1300 | <u>16'S</u> | <u>07</u> | | | | |
| 1400 | <u>27</u> | <u>06</u> | <u>130</u> | <u>15</u> | <u>130</u> | <u>5</u> |
| 1500 | <u>36</u> | <u>05</u> | | | | |
| 1600 | <u>47</u> | <u>02</u> | <u>140</u> | <u>13</u> | <u>130</u> | <u>6</u> |
| 1700 | <u>57</u> | <u>00</u> | | | | |
| 1800 | | | <u>140</u> | <u>12</u> | <u>130</u> | <u>4</u> |
| 1900 | | | | | | |
| 2000 | | | <u>130</u> | <u>10</u> | <u>130</u> | <u>4</u> |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 29 February 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.V. Lewis

Sunrise: Time 0601 Position: Lat. 7° 18' S, Long. 119° 00' W

Sunset: Time 1916 Position: Lat. 8° 31' S, Long. 118° 52' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 73 *include 21 miles from 0000 to sunrise*

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE | |
|----|-------------|-------------|----------|------------|----|
| 1. | 0549 | * | 7° 18' S | 119° 00' | |
| 2. | | | | | |
| 3. | 1200 | LAV | 8° 04' S | 118° 55' W | 71 |
| 4. | | | | | 67 |
| 5. | 1841 | * | 8° 31' S | 118° 51' | 63 |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
| 0100 | | | | | | |
| 0200 | | | 130 | 12 | 130 | 4 |
| 0300 | | | | | | |
| 0400 | | | 150 | 11 | 130 | 4 |
| 0500 | | | | | | |
| 0600 | | | 150 | 6 | 140 | 5 |
| 0700 | | | | | | |
| 0800 | | | 148 | 8 | 160 | 5 |
| 0900 | | | | | | |
| 1000 | | | 115 | 7 | 140 | 5 |
| 1100 | | | 120 | | | |
| 1200 | | | 120 | 11 | 140 | 5 |
| 1300 | | | | | | |
| 1400 | | | 160 | 09 | 140 | 8 |
| 1500 | | | | | | |
| 1600 | | | 140 | 06 | 140 | 8 |
| 1700 | | | | | | |
| 1800 | | | 140 | 06 | 140 | 6 |
| 1900 | | | | | | |
| 2000 | | | 142 | 05 | 140 | 6 |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 1 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0601 Position: Lat. 10° 07.3, Long. 118° 58

Sunset: Time 1817 Position: Lat. 11° 26.3, Long. 56

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 85

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 05 26 | * | 10° 07.3 | 118° 58 |
| 2. | | | | |
| 3. | 12 08 | LAND | 10° 49 | 118° 56 |
| 4. | 15 00 | | 11° 25 | 118 55 |
| 5. | | | | |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|----------|--------|-----|----|-----|---|
| 0100 | | | | | | |
| 0200 | | | 210 | | 170 | 3 |
| 0300 | | | | | | |
| 0400 | | | 210 | | 170 | 4 |
| 0500 | | | | | | |
| 0600 | 10° 07.3 | 118 58 | 210 | | 170 | 4 |
| 0700 | 12 | 58 | | | | |
| 0800 | 22 | 58 | 210 | 07 | 170 | 4 |
| 0900 | 33 | 58 | | | | |
| 1000 | 43 | 57 | 210 | 07 | 170 | 3 |
| 1100 | 49 | 56 | | | | |
| 1200 | 48 | 56 | 030 | 05 | 170 | 3 |
| 1300 | 53 | 56 | | | | |
| 1400 | 11° 04.5 | 56 | 030 | 06 | 160 | 4 |
| 1500 | 15 | 55 | | | | |
| 1600 | 26 | 56 | 345 | 05 | 160 | 4 |
| 1700 | | | | | | |
| 1800 | | | 210 | 05 | 160 | 3 |
| 1900 | | | | | | |
| 2000 | | | 015 | 08 | 160 | 2 |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 2 March 68 Ship T. Washington () Cruise No.

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0601 Position: Lat. 12 34 S, Long. 119 02

Sunset: Time 1819 Position: Lat. 13 58 S, Long. 118 57

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 75

Miles travelled from sunset to 2400 hours =

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|-----------|-----------|
| 1. | 0523 | * | 12° 34' S | 119° 02' |
| 2. | | | | |
| 3. | 1807 | LORAN | 12° 07' S | 119° 02' |
| 4. | | | | |
| 5. | 1627 | Magnetic | 13° 53' S | 118° 54' |
| | 1856 | * | 13° 58' S | 118° 58' |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------|--------|-----|----|--|--|
| 0100 | | | | | | |
| 0200 | | | 015 | 07 | | |
| 0300 | | | | | | |
| 0400 | | | 003 | 07 | | |
| 0500 | | | | | | |
| 0600 | | | 010 | 07 | | |
| 0700 | 12 34 | 119 02 | | | | |
| 0800 | 12 43 | 119 01 | 343 | 10 | | |
| 0900 | 12 54 S | 119 01 | | | | |
| 1000 | 13 04 S | 119 02 | 010 | 07 | | |
| 1100 | 07 | | | | | |
| 1200 | 07 | | 360 | 12 | | |
| 1300 | 13 11 | 01 | | | | |
| 1400 | 13 22 | 00 | 350 | 10 | | |
| 1500 | 13 33 | 118 58 | | | | |
| 1600 | 13 38 | 118 58 | 350 | 09 | | |
| 1700 | | | | | | |
| 1800 | | | 350 | 08 | | |
| 1900 | | | | | | |
| 2000 | | | 243 | 08 | | |
| 2100 | | | | | | |
| 2200 | | | 020 | 09 | | |
| 2300 | | | | | | |
| 2400 | | | 045 | 07 | | |

Date 3 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T. J. Lewis

Sunrise: Time 0557 Position: Lat. 15 17 S, Long. 112 00

Sunset: Time 1821 Position: Lat. 16 47, Long. 119 02

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 92

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0557 | * | 15 17 S | 112 00 |
| 2. | | | | |
| 3. | 1702 | LANE | 16 32 S | 117 55 |
| 4. | 1830 | * | 16 47 S | 119 00 |
| 5. | 1839 | * | 16 50 S | 119 02 |

04
33
31
70

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------|--------|-----|----|--|--|
| 0100 | | | | | | |
| 0200 | | | 085 | 08 | | |
| 0300 | | | | | | |
| 0400 | | | 080 | 08 | | |
| 0500 | | | | | | |
| 0600 | 17 | 80 | 040 | 09 | | |
| 0700 | 15 27 | 119 00 | | | | |
| 0800 | 38 | | 085 | 09 | | |
| 0900 | 44 | | | | | |
| 1000 | 57 | 118 54 | 080 | 11 | | |
| 1100 | | 118 50 | | | | |
| 1200 | 15 02 | 118 50 | 075 | 14 | | |
| 1300 | 07 | 05 | | | | |
| 1400 | 12 | 05 | 065 | 12 | | |
| 1500 | 24 | 05 | | | | |
| 1600 | 41 | 05 | 090 | 13 | | |
| 1700 | 45 | 03 | | | | |
| 1800 | | | 090 | 13 | | |
| 1900 | | | | | | |
| 2000 | | | 085 | 09 | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 4 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder TJ Lewis

Sunrise: Time 0530 Position: Lat. 17° 46', Long. 118° 56'

Sunset: Time 1720 Position: Lat. 19° 18', Long. 112° 32'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 92

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------------|-----------------|
| 1. | <u>0510</u> | * | <u>17° 46'</u> | <u>118° 56'</u> |
| 2. | | | | |
| 3. | <u>1207</u> | <u>LAV</u> | <u>18° 31'</u> | <u>118° 36'</u> |
| 4. | | | | |
| 5. | <u>1839</u> | * | <u>19° 20'</u> | <u>112° 50'</u> |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|--------------|---------------|-----------|----------|-----------|-----------|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>17 46</u> | <u>118 56</u> | | | | |
| 0700 | <u>35</u> | <u>56</u> | | | | |
| 0800 | <u>19 08</u> | <u>56</u> | | | | |
| 0900 | <u>18</u> | <u>56</u> | | | | |
| 1000 | <u>28</u> | <u>56</u> | | | | |
| 1100 | | | | | | |
| 1200 | <u>31</u> | <u>56</u> | | | | |
| 1300 | <u>29</u> | <u>56</u> | | | | |
| 1400 | <u>30</u> | <u>56</u> | | | | |
| 1500 | <u>39</u> | <u>57</u> | | | | |
| 1600 | <u>19 11</u> | <u>57</u> | | | | |
| 1700 | <u>17</u> | <u>58</u> | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 5 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder TJ Lewis

Sunrise: Time 0551 Position: Lat. 20° 01', Long. 118° 14' W

Sunset: Time 1710 Position: Lat. 20° 02', Long. 116° 34' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 94 mi

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------------|-----------------|
| 1. | <u>0520</u> | <u>*</u> | <u>20° 01'</u> | <u>118 14 W</u> |
| 2. | <u>1200</u> | <u>LAN</u> | <u>20° 00'</u> | <u>117 26 W</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | <u>1733</u> | <u>*</u> | <u>20° 02'</u> | <u>116 34 W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|----------------|---------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | | | | | | |
| 0900 | | | | | | |
| 1000 | | | | | | |
| 1100 | | | | | | |
| 1200 | <u>20° 00'</u> | <u>117 26</u> | | | | |
| 1300 | <u>00</u> | <u>17 15</u> | | | | |
| 1400 | | <u>17 05</u> | | | | |
| 1500 | | <u>16 55</u> | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 6 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0540 Position: Lat. 20° 05', Long. 114° 58' W

Sunset: Time 1757 Position: Lat. 20° 015', Long. 115° 12' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 96

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|------------------|-------------------|
| 1. | <u>0800</u> | <u>+</u> | <u>20° 00' S</u> | <u>115° 00' W</u> |
| 2. | | | | |
| 3. | <u>1800</u> | <u>LAM</u> | <u>19° 21' S</u> | <u>114° 00' W</u> |
| 4. | | | | |
| 5. | | | <u>20° 32' S</u> | <u>115° 12' W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--|--|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | | | | | | |
| 0900 | | | | | | |
| 1000 | | | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 7 March 68 Ship T. Washington () Cruise No.

Organization POBSP (EASTROPAC) Recorder TJ Lewis

Sunrise: Time 0528 Position: Lat. 20° 30', Long. 111 57

Sunset: Time 1748 Position: Lat. 19° 30', Long. 111 59

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 75 mi

Miles travelled from sunset to 2400 hours =

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|------------|
| 1. | 0505 | * 12m | 20° 00' | 111 57 W |
| 2. | | | | |
| 3. | 7:00 | | 19° 30' | 111 57 W |
| 4. | | | | |
| 5. | 1872 | * | 19° 30' | 112° 00' W |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | | | | | | |
| 0900 | | | | | | |
| 1000 | | | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | 19 00 S | 111 57 | | | | |
| 1600 | 18 52 S | 58 | | | | |
| 1700 | 18 43 S | 112 00 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 8 March 68 Ship T. Washington () Cruise No.

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0529 Position: Lat. 17° 25', Long. 111° 54'

Sunset: Time 1747 Position: Lat. 16° 05', Long. 111° 54'

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 66 mi

Miles travelled from sunset to 2400 hours =

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------------|-----------------|
| 1. | <u>0902</u> | <u>*</u> | <u>17° 12'</u> | <u>111° 54'</u> |
| 2. | | | | |
| 3. | <u>1139</u> | <u>*</u> | <u>16° 32'</u> | <u>111° 54'</u> |
| 4. | | | | |
| 5. | <u>1815</u> | <u>*</u> | <u>16° 05'</u> | <u>111° 54'</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|---------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>17 12</u> | <u>111 51</u> | | | | |
| 0700 | <u>17 02</u> | <u>52</u> | | | | |
| 0800 | <u>16 51</u> | <u>52</u> | | | | |
| 0900 | <u>41</u> | <u>53</u> | | | | |
| 1000 | | | | | | |
| 1100 | | | | | | |
| 1200 | <u>34</u> | <u>54</u> | | | | |
| 1300 | | | | | | |
| 1400 | <u>32</u> | <u>56</u> | | | | |
| 1500 | <u>17</u> | <u>56</u> | | | | |
| 1600 | <u>09</u> | <u>57</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 9 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0530 Position: Lat. 14 43.5, Long. 112-03W

Sunset: Time 1747 Position: Lat. 13 26, Long. 111-59W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 77

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0452 | * | 14° 43.5 | 112-03W |
| 2. | | | | |
| 3. | 1138 | 28W | 14° 00 | 111-59 |
| 4. | | | | |
| 5. | 1809 | * | 13° 26.5 | 111-59W |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | 14 27 | 112-01 | | | | |
| 0900 | 14 16 | 112-01 | | | | |
| 1000 | 14 05 | 112-00 | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 10 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0531 Position: Lat. 11° 58' S, Long. 111° 55' W

Sunset: Time 1744 Position: Lat. 10° 39' S, Long. 111° 56' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 78

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|------------------|-------------------|
| 1. | <u>0459</u> | <u>*</u> | <u>11° 58' S</u> | <u>111° 55' W</u> |
| 2. | | | | |
| 3. | <u>1138</u> | <u>LAW</u> | <u>11° 17' S</u> | <u>111° 55' W</u> |
| 4. | | | | |
| 5. | <u>1810</u> | <u>*</u> | <u>10° 39' S</u> | <u>111° 56' W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|---------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | | | | | | |
| 0900 | <u>11 27</u> | <u>111 55</u> | | | | |
| 1000 | <u>11 19</u> | <u>111 55</u> | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | <u>10 50</u> | <u>55</u> | | | | |
| 1600 | <u>10 39</u> | <u>56</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 11 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T. J. Lewis

Sunrise: Time 0532 Position: Lat. 9°14'S, Long. 111°57'

Sunset: Time 1713 Position: Lat. 7°50'S, Long. 111°58'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 84 mi 272 km

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0452 | * | 9°14'S | 111°57' |
| 2. | | | | |
| 3. | 1137 | LAN | 8°24'S | 111°56' |
| 4. | | | | |
| 5. | 1808 | * | 7°48'S | 111°57' |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------|---------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | 09°05'S | 111°57' | | | | |
| 0800 | 8°55'S | 111°57' | | | | |
| 0900 | 41 | 58 | | | | |
| 1000 | 31 | 59 | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 12 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0525 Position: Lat. 07°02'S, Long. 110°11'W

Sunset: Time 1739 Position: Lat. 06°19'S, Long. 108°43'W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 119

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|---------------|-----------------|
| 1. | <u>0449</u> | * | <u>7°06'S</u> | <u>110°45'W</u> |
| 2. | | | | |
| 3. | <u>1204</u> | LAN | <u>6°29'S</u> | <u>109°03'W</u> |
| 4. | | | | |
| 5. | <u>1756</u> | * | <u>6°13'S</u> | <u>109°22'W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------------|-----------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>07°00'</u> | <u>110°07'W</u> | | | | |
| 0700 | <u>0556</u> | <u>108°58'</u> | | | | |
| 0800 | <u>51</u> | <u>49</u> | | | | |
| 0900 | <u>46</u> | <u>39</u> | | | | |
| 1000 | <u>33</u> | <u>31</u> | | | | |
| 1100 | <u>41</u> | <u>23</u> | | | | |
| 1200 | <u>39</u> | <u>12</u> | | | | |
| 1300 | <u>36</u> | <u>04</u> | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 13 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (CENTROPAC) Recorder T.J. Lewis

Sunrise: Time 0613 Position: Lat. 5°25', Long. 102°42'

Sunset: Time 1812 Position: Lat. 5°08', Long. 105°22'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 108

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0540 | * | 5 20 | 102 30 |
| 2. | | | | |
| 3. | 1213 | LAN | 5 21 | 105 36 |
| 4. | | | | |
| 5. | 1830 | * | 5 05 | 105 20 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | 5 25 | 102 34 | | | | |
| 0900 | 50 | 24 | | | | |
| 1000 | 37 | 15 | | | | |
| 1100 | 24 | 06 | | | | |
| 1200 | 23 | 105 37 | | | | |
| 1300 | 20 | 47 | | | | |
| 1400 | 17 | 37 | | | | |
| 1500 | 14 | 29 | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 13 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (CENTROPAC) Recorder T.J. Lewis

Sunrise: Time 0613 Position: Lat. 5° 27.5', Long. 102° 42'

Sunset: Time 1812 Position: Lat. 5° 04.8', Long. 105° 22'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 108

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0540 | * | 5 20.0 | 102 36.0 |
| 2. | | | | |
| 3. | 1213 | LAN | 5 21.5 | 105 36.0 |
| 4. | | | | |
| 5. | 1830 | * | 5 05.0 | 105 22.0 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------|----------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | 5 27.5 | 102 42.0 | | | | |
| 0900 | 5 27 | 102 42 | | | | |
| 1000 | 5 27 | 102 42 | | | | |
| 1100 | 5 24 | 102 42 | | | | |
| 1200 | 5 22 | 105 32.0 | | | | |
| 1300 | 5 20 | 105 47 | | | | |
| 1400 | 5 17 | 105 37 | | | | |
| 1500 | 5 14 | 105 29 | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 15 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP(EASTROPAC) Recorder T. J. Lewis

Sunrise: Time 0545 Position: Lat. 08° 51'S, Long. 101-40

Sunset: Time 1747 Position: Lat. 08° 19'S, Long. 99-44

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 109

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0402 | * | 08° 52'S | 101 17 |
| 2. | 0531 | * | 08° 52'S | 101 03 |
| 3. | 1149 | LAN | 08° 35'S | 100-02 |
| 4. | | | | |
| 5. | 1818 | * | 08 16 S | 99 0 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | 03-54 | 101-07 | | | | |
| 0600 | 30 | 100-57 | | | | |
| 0700 | 48 | 50 | | | | |
| 0800 | 47 | 44 | | | | |
| 0900 | 44 | 34 | | | | |
| 1000 | 40 | 24 | | | | |
| 1100 | 37 | 14 | | | | |
| 1200 | 35 | 05 | | | | |
| 1300 | 31 | 99 59 | | | | |
| 1400 | 27 | 43 | | | | |
| 1500 | 25 | 33 | | | | |
| 1600 | 22 | 24 | | | | |
| 1700 | 19 | 17 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 16 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0536 Position: Lat. 2°45'S, Long. 97-15W

Sunset: Time 1731 Position: Lat. 2°19'S, Long. 95-20W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 117

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0459 | + | 2°47'S | 97-17W |
| 2. | | | | |
| 3. | 1133 | LARK | 2°32'S | 96-16W |
| 4. | | | | |
| 5. | 1754 | + | 2°13'S | 95-16W |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | 2°47'S | 97-17W | | | | |
| 0600 | 45 | 09 | | | | |
| 0700 | 43 | 06 | | | | |
| 0800 | 40 | 96 50 | | | | |
| 0900 | 37 | 41 | | | | |
| 1000 | 34 | 31 | | | | |
| 1100 | 32 | 22 | | | | |
| 1200 | 30 | 12 | | | | |
| 1300 | 26 | 02 | | | | |
| 1400 | 23 | 95-50 | | | | |
| 1500 | 20 | 41 | | | | |
| 1600 | 17 | 32 | | | | |
| 1700 | 15 | 22 | | | | |
| 1800 | 12 | 95-15 | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 17 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time 0515 Position: Lat. 01-45, Long. 90-24

Sunset: Time 1716 Position: Lat. 01-22, Long. 91-30

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 127

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0450 | * | 01-45 S | 93 28 W |
| 2. | | | | |
| 3. | 1127 | 2000 | 01-34 S | 92-27 |
| 4. | | | | |
| 5. | 1700 | Radio | 01-22 | 91-22 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------|-------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | 01-45 S | 93 28 | | | | |
| 0600 | 43 | 16 | | | | |
| 0700 | 42 | 06 | | | | |
| 0800 | 41 | 48 56 | | | | |
| 0900 | 39 | 46 | | | | |
| 1000 | 37 | 35 | | | | |
| 1100 | 37 | 26 | | | | |
| 1200 | 35 | 12 | | | | |
| 1300 | 33 | 02 | | | | |
| 1400 | 30 | 01-53 | | | | |
| 1500 | 28 | 41 | | | | |
| 1600 | 24 | 31 | | | | |
| 1700 | 22 | 22 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 18 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder T.J. Lewis

Sunrise: Time at sunrise Bay San Cristobal Is. Position: Lat. _____, Long. _____

Sunset: Time at Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = _____

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

- 1.
- 2.
- 3.
- 4.
- 5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--|--|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | | | | | | |
| 0800 | | | | | | |
| 0900 | | | | | | |
| 1000 | | | | | | |
| 1100 | | | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 19 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastropae) Recorder T.J. Lewis

Sunrise: Time 0510 Position: Lat. 02° 02.5', Long. 91° 32.0' W

Sunset: Time 1719 Position: Lat. _____, Long. 93° 00' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 145

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|-----------------|----------------|
| 1. | <u>0623</u> | <u>LAN</u> | <u>2° 14.5'</u> | <u>91° 41'</u> |
| 2. | | | | |
| 3. | <u>1200</u> | <u>LAN</u> | <u>3° 27.5'</u> | <u>92° 21'</u> |
| 4. | | | | |
| 5. | <u>1745</u> | <u>*</u> | <u>0° 01.5'</u> | <u>93° 05'</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | <u>2-01.5</u> | <u>91-31</u> | | | | |
| 0600 | <u>10</u> | <u>36</u> | | | | |
| 0700 | <u>19</u> | <u>45</u> | | | | |
| 0800 | <u>28</u> | <u>53</u> | | | | |
| 0900 | <u>38</u> | <u>92-00</u> | | | | |
| 1000 | <u>48</u> | <u>62</u> | | | | |
| 1100 | <u>58</u> | <u>14</u> | | | | |
| 1200 | <u>3-07</u> | <u>21</u> | | | | |
| 1300 | <u>16</u> | <u>38</u> | | | | |
| 1400 | <u>24</u> | <u>30</u> | | | | |
| 1500 | <u>34</u> | <u>44</u> | | | | |
| 1600 | <u>42</u> | <u>50</u> | | | | |
| 1700 | <u>51</u> | <u>57</u> | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 20 March 68 Ship T. Washington () Cruise No. 0302

Organization POBSP (Eastpac) Recorder T.J. Lewis

Sunrise: Time 0522 Position: Lat. 05-45, Long. 94-25

Sunset: Time 1734 Position: Lat. 07-25, Long. 95-47

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 130

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0007 | * | 5-40 S | 94-20 W |
| 2. | | | | |
| 3. | 1128 | LAN | 6-35 S | 95-48 |
| 4. | | | | |
| 5. | 1755 | * | 7-28 S | 95-50 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------|-------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | 05-51 S | 94-29 | | | | |
| 0700 | 50 | 35 | | | | |
| 0800 | 16 36 | 41 | | | | |
| 0900 | 14 | 48 | | | | |
| 1000 | 22 | 55 | | | | |
| 1100 | 30 | 45-02 | | | | |
| 1200 | 40 | 08 | | | | |
| 1300 | 48 | 14 | | | | |
| 1400 | 57 | 22 | | | | |
| 1500 | 07-06 | 28 | | | | |
| 1600 | 14 | 36 | | | | |
| 1700 | 21 | 44 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 21 March 68 Ship T. Washington () Cruise No.

Organization POBSP (Pac tropic) Recorder T.J. Lewis

Sunrise: Time 0535 Position: Lat. 8-58S, Long. 97-14W

Sunset: Time 1740 Position: Lat. 9-52S, Long. 97-54W

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 73

Miles travelled from sunset to 2400 hours =

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|--------------|--------------|
| 1. | <u>0457</u> | <u>*</u> | <u>8-54S</u> | <u>97-11</u> |
| 2. | <u>1138</u> | <u>LAV</u> | <u>9-54S</u> | <u>97-56</u> |
| 3. | | | | |
| 4. | | | | |
| 5. | <u>1700</u> | <u>*</u> | <u>9-50S</u> | <u>98-00</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | <u>9-03S</u> | <u>97-18</u> | | | | |
| 0600 | <u>10</u> | <u>24</u> | | | | |
| 0700 | <u>19</u> | <u>30</u> | | | | |
| 0800 | <u>30</u> | <u>37</u> | | | | |
| 0900 | <u>40</u> | <u>43</u> | | | | |
| 1000 | <u>49</u> | <u>52</u> | | | | |
| 1100 | <u>57</u> | <u>58</u> | | | | |
| 1200 | | | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 22 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (EASTROPAC) Recorder J. Lewis

Sunrise: Time 530 Position: Lat. 8° 24.5, Long. 97° 57.10

Sunset: Time 1741 Position: Lat. 6° 56.5, Long. 97° 58.20

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 90

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------------|------------------|
| 1. | <u>0502</u> | * | <u>8° 24.5</u> | <u>97° 57.10</u> |
| 2. | | | | |
| 3. | <u>1139</u> | <u>LAV</u> | <u>7° 36.5</u> | <u>97° 55.4</u> |
| 4. | | | | |
| 5. | <u>1758</u> | * | <u>6° 56.5</u> | <u>97° 58.20</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>8-21</u> | <u>97-58</u> | | | | |
| 0700 | <u>10</u> | <u>57</u> | | | | |
| 0800 | <u>7-58</u> | <u>58</u> | | | | |
| 0900 | <u>49</u> | <u>57</u> | | | | |
| 1000 | <u>40</u> | <u>56</u> | | | | |
| 1100 | <u>36</u> | <u>56</u> | | | | |
| 1200 | | | | | | |
| 1300 | <u>28</u> | <u>56</u> | | | | |
| 1400 | <u>12</u> | <u>56</u> | | | | |
| 1500 | <u>08</u> | <u>56</u> | | | | |
| 1600 | <u>6-57</u> | <u>56</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 23 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eustropac) Recorder TJ Lewis

Sunrise: Time 0536 Position: Lat. 5° 28' S, Long. 98° 01' W

Sunset: Time 1742 Position: Lat. 4° 03' S, Long. 98° 09' W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 86

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|-----------------|------------------|
| 1. | <u>0510</u> | <u>*</u> | <u>5° 28' S</u> | <u>98° 01' W</u> |
| 2. | | | | |
| 3. | <u>1200</u> | <u>PR</u> | | |
| 4. | | | | |
| 5. | <u>1800</u> | <u>*</u> | <u>4° 03' S</u> | <u>98° 09' W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | | | | | | |
| 0700 | <u>5° 18</u> | <u>97-59</u> | | | | |
| 0800 | <u>08</u> | <u>98-00</u> | | | | |
| 0900 | <u>4° 57</u> | <u>98-01</u> | | | | |
| 1000 | <u>47</u> | <u>03</u> | | | | |
| 1100 | <u>41</u> | <u>04</u> | | | | |
| 1200 | <u>41</u> | <u>04</u> | | | | |
| 1300 | <u>39</u> | <u>04</u> | | | | |
| 1400 | <u>27</u> | <u>05</u> | | | | |
| 1500 | <u>20</u> | <u>06</u> | | | | |
| 1600 | <u>09</u> | <u>07</u> | | | | |
| 1700 | <u>03</u> | <u>08</u> | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 24 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastropac) Recorder T.J. Lewis

Sunrise: Time 0535 Position: Lat. 2°40'S, Long. 98°09'

Sunset: Time 1741 Position: Lat. 1°19'S, Long. 98°00'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 80

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0500 | L | 2°40'S | 98°09' |
| 2. | | | | |
| 3. | 1138 | L | 1°58'S | 98°00' |
| 4. | | | | |
| 5. | 1753 | * | 1°19'S | 98°00' |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | 2°38'S | 98°09' | | | | |
| 0700 | 28 | 03 | | | | |
| 0800 | 17 | 02 | | | | |
| 0900 | 10 | 02 | | | | |
| 1000 | 03 | 01 | | | | |
| 1100 | | | | | | |
| 1200 | 1°57'S | 00 | | | | |
| 1300 | 1°50'S | 00 | | | | |
| 1400 | 39 | 00 | | | | |
| 1500 | 31 | 00 | | | | |
| 1600 | 23 | 00 | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 25 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastpac) Recorder T.J. Lewis

Sunrise: Time 530 Position: Lat. 0°39S, Long. 176-46W

Sunset: Time 1729 Position: Lat. 0°21S, Long. 179-44W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 125

Miles travelled from sunset to 2400 hours = _____

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

| | | | | |
|----|-------------|------------------|---------------|---------------|
| 1. | <u>0000</u> | <u>DR</u> | <u>0°39</u> | <u>176-41</u> |
| 2. | | | | |
| 3. | <u>1200</u> | <u>Sun 71000</u> | <u>0°34.2</u> | <u>175-41</u> |
| 4. | | | | |
| 5. | <u>1501</u> | <u>Sun 71000</u> | <u>0-28.9</u> | <u>175-48</u> |

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
|------|----------|-----------|-----------|----------|-----------|-----------|

| | | | | | | |
|------|-------------|---------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>0-39</u> | <u>176-41</u> | | | | |
| 0700 | <u>37</u> | <u>30</u> | | | | |
| 0800 | <u>37</u> | <u>20</u> | | | | |
| 0900 | <u>37</u> | <u>12</u> | | | | |
| 1000 | <u>36</u> | <u>03</u> | | | | |
| 1100 | <u>35</u> | <u>05-52</u> | | | | |
| 1200 | <u>34</u> | <u>41</u> | | | | |
| 1300 | <u>32</u> | <u>28</u> | | | | |
| 1400 | <u>29</u> | <u>18</u> | | | | |
| 1500 | <u>26</u> | <u>08</u> | | | | |
| 1600 | <u>24</u> | <u>04-52</u> | | | | |
| 1700 | <u>22</u> | <u>49</u> | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 26 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastpac) Recorder TJ Lewis

Sunrise: Time 0514 Position: Lat. 0° 05' N, Long. 92° 53' W

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 68 mi (0-10-135)

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

- 1.
- 2.
- 3.
- 4.
- 5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-----------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | <u>0° 05' N</u> | <u>92-55</u> | | | | |
| 0600 | <u>07</u> | <u>43</u> | | | | |
| 0700 | <u>10</u> | <u>24</u> | | | | |
| 0800 | <u>12</u> | <u>24</u> | | | | |
| 0900 | <u>14</u> | <u>13</u> | | | | |
| 1000 | <u>17</u> | <u>03</u> | | | | |
| 1100 | <u>16</u> | <u>91-57</u> | | | | |
| 1200 | <u>15</u> | <u>41</u> | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 28 March 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Castroville) Recorder TJ Lewis

Sunrise: Time 0520 Position: Lat. 0°07'N, Long. 93-32W

Sunset: Time 1731 Position: Lat. 0°03'N, Long. 95-42

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 129

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

- 1.
- 2.
3. 1124 LAN 0°05'N 94-41
- 4.
5. 1752 * 0°03' 95-44

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | <u>0°07'N</u> | <u>93-29</u> | | | | |
| 0600 | <u>07</u> | <u>29</u> | | | | |
| 0700 | <u>07</u> | <u>50</u> | | | | |
| 0800 | <u>06</u> | <u>94 02</u> | | | | |
| 0900 | <u>06</u> | <u>13</u> | | | | |
| 1000 | <u>5</u> | <u>25</u> | | | | |
| 1100 | <u>5</u> | <u>36</u> | | | | |
| 1200 | <u>5</u> | <u>47</u> | | | | |
| 1300 | <u>4</u> | <u>58</u> | | | | |
| 1400 | <u>4</u> | <u>95-09</u> | | | | |
| 1500 | <u>4</u> | <u>17</u> | | | | |
| 1600 | <u>3</u> | <u>27</u> | | | | |
| 1700 | <u>3</u> | <u>37</u> | | | | |
| 1800 | <u>3</u> | <u>46</u> | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 3 April 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastropac) Recorder T. J. Lewis

Sunrise: Time 0532 Position: Lat. 2° 10' N, Long. 97° 55' W

Sunset: Time 1736 Position: Lat. 1° 19' N, Long. 97° 50'

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 69

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

- 1.
- 2.
3. 1134 LAN 97-52
- 4.
- 5.

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|---------------|----------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>2-10 N</u> | <u>97-55 W</u> | | | | |
| 0700 | <u>18</u> | <u>54</u> | | | | |
| 0800 | <u>27</u> | <u>54</u> | | | | |
| 0900 | <u>34</u> | <u>53</u> | | | | |
| 1000 | <u>42</u> | <u>52</u> | | | | |
| 1100 | | | | | | |
| 1200 | <u>- 44</u> | <u>97-52</u> | | | | |
| 1300 | <u>50</u> | <u>52</u> | | | | |
| 1400 | <u>59</u> | <u>54</u> | | | | |
| 1500 | <u>01-05</u> | <u>55</u> | | | | |
| 1600 | <u>14</u> | <u>56</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 4 April 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eustropac) Recorder T. J. Lewis

Sunrise: Time 0531 Position: Lat. 2° 43' N, Long. 98-05 W

Sunset: Time 1740 Position: Lat. 04-12' N, Long. 97-59

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 95

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|-----------------|-----------------|
| 1. | <u>0509</u> | <u>*</u> | <u>2° 43' N</u> | <u>98° 05 W</u> |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |
| 5. | <u>1802</u> | <u>*</u> | <u>4° 14' N</u> | <u>98-00 W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>2-45</u> | <u>98-05</u> | | | | |
| 0700 | <u>56</u> | <u>05</u> | | | | |
| 0800 | <u>3-09</u> | <u>54</u> | | | | |
| 0900 | <u>17</u> | <u>03</u> | | | | |
| 1000 | <u>28</u> | <u>03</u> | | | | |
| 1100 | | | | | | |
| 1200 | <u>3-23</u> | <u>98-02</u> | | | | |
| 1300 | <u>36</u> | <u>01</u> | | | | |
| 1400 | <u>47</u> | <u>01</u> | | | | |
| 1500 | <u>57</u> | <u>00</u> | | | | |
| 1600 | <u>9-08</u> | <u>00</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 5 April 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastpac) Recorder T.J. Lewis

Sunrise: Time 0530 Position: Lat. 5°40'N, Long. 98°05'W

Sunset: Time 1741 Position: Lat. 7°03'N, Long. 98°03'W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 83

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|---------------|----------------|
| 1. | <u>0505</u> | <u>*</u> | <u>5°40'N</u> | <u>98°05'W</u> |
| 2. | | | | |
| 3. | <u>1135</u> | <u>LAN</u> | <u>6°22'N</u> | <u>98°01'W</u> |
| 4. | | | | |
| 5. | <u>1808</u> | <u>*</u> | <u>7°07'N</u> | <u>98°03'W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>5-41N</u> | <u>98-05</u> | | | | |
| 0700 | <u>51</u> | <u>04</u> | | | | |
| 0800 | <u>6-02</u> | <u>03</u> | | | | |
| 0900 | <u>10</u> | <u>02</u> | | | | |
| 1000 | <u>18</u> | <u>01</u> | | | | |
| 1100 | | | | | | |
| 1200 | <u>22</u> | <u>01</u> | | | | |
| 1300 | <u>31</u> | <u>02</u> | | | | |
| 1400 | <u>41</u> | <u>02</u> | | | | |
| 1500 | <u>48</u> | <u>02</u> | | | | |
| 1600 | <u>58</u> | <u>02</u> | | | | |
| 1700 | <u>7-03</u> | <u>03</u> | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 6 April 68 Ship T. Washington () Cruise No. _____

Organization BOBSP (EAST PAC) Recorder T.J. Lewis

Sunrise: Time 0528 Position: Lat. 8° 38' N, Long. 97-52

Sunset: Time 1742 Position: Lat. 10° 03' N, Long. 98-00 W

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 86

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|------------------|----------------|
| 1. | <u>0507</u> | * | <u>8° 38' N</u> | <u>98-12 W</u> |
| 2. | | | | |
| 3. | <u>1133</u> | <u>LAN</u> | <u>9° 24' N</u> | <u>97-59 W</u> |
| 4. | | | | |
| 5. | <u>1905</u> | * | <u>10° 16' N</u> | <u>98-00 W</u> |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|--------------|--------------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <u>8-41</u> | <u>98-11</u> | | | | |
| 0700 | <u>50</u> | <u>07</u> | | | | |
| 0800 | <u>9-00</u> | <u>06</u> | | | | |
| 0900 | <u>10</u> | <u>03</u> | | | | |
| 1000 | <u>20</u> | <u>98-00</u> | | | | |
| 1100 | | | | | | |
| 1200 | <u>9-24</u> | <u>47-59</u> | | | | |
| 1300 | <u>30</u> | <u>59</u> | | | | |
| 1400 | <u>39</u> | <u>59</u> | | | | |
| 1500 | <u>51</u> | <u>00</u> | | | | |
| 1600 | <u>10-00</u> | <u>98-00</u> | | | | |
| 1700 | | | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 7 April 68 Ship T. Washington () Cruise No.

Organization POBSP (Eastpac) Recorder T. Lewis

Sunrise: Time 0526 Position: Lat. 11-31N, Long. 178-18

Sunset: Time 1746 Position: Lat. 12-50N, Long. 178-33

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset = 86

Miles travelled from sunset to 2400 hours =

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0547 | * | 11-31 | 178-18 |
| 2. | | | | |
| 3. | 1135 | L.A.S. | 12-10 | 178-28 |
| 4. | | | | |
| 5. | 1810 | * | 12-50 | 178-33 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------|--------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | 11-34 | 178-18 | | | | |
| 0700 | 43 | 20 | | | | |
| 0800 | 54 | 22 | | | | |
| 0900 | 12 04 | 25 | | | | |
| 1000 | 15 | 27 | | | | |
| 1100 | 16 | 28 | | | | |
| 1200 | 17 | 28 | | | | |
| 1300 | 18 | 28 | | | | |
| 1400 | 31 | 30 | | | | |
| 1500 | 41 | 31 | | | | |
| 1600 | 52 | 33 | | | | |
| 1700 | 50 | 33 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 8 April 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastpac) Recorder TJ Lewis

Sunrise: Time 0526 Position: Lat. 14-17^N, Long. 98-47

Sunset: Time 1749 Position: Lat. 15-39, Long. 98-58

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = 89

Miles travelled from sunset to 2400 hours = _____

| | TIME OF FIX | TYPE OF FIX | LATITUDE | LONGITUDE |
|----|-------------|-------------|----------|-----------|
| 1. | 0502 | * | 14°17' | 98-47 |
| 2. | | | | |
| 3. | 1137 | CAN | 14-55 | 98-50 |
| 4. | | | | |
| 5. | 1810 | * | 15°39' | 98-58 |

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-------|-------|--|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | 14-18 | 98-48 | | | | |
| 0700 | 29 | 52 | | | | |
| 0800 | 39 | 53 | | | | |
| 0900 | 48 | 55 | | | | |
| 1000 | 55 | 56 | | | | |
| 1100 | 57 | 56 | | | | |
| 1200 | 57 | 56 | | | | |
| 1300 | 15-00 | 56 | | | | |
| 1400 | 10 | 56 | | | | |
| 1500 | 21 | 56 | | | | |
| 1600 | 32 | 56 | | | | |
| 1700 | 39 | 58 | | | | |
| 1800 | | | | | | |
| 1900 | | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

Date 10 April 68 Ship T. Washington () Cruise No. _____

Organization POBSP (Eastropac) Recorder T. Lewis

Sunrise: Time _____ Position: Lat. _____, Long. _____

Sunset: Time _____ Position: Lat. _____, Long. _____

Miles travelled from 0000 hours to sunrise = _____

Miles travelled from sunrise to sunset = _____

Miles travelled from sunset to 2400 hours = _____

TIME OF FIX TYPE OF FIX LATITUDE LONGITUDE

- 1.
2. *Hourly* *interpolated Turner-B Amstrong*
3. *Time Fix*
4. *↑*
5. *not given*

Hourly Positions:

Time Latitude Longitude Wind Dir. Wind Sp. Wave Dir. Wave Hgt.

| | | | | | | |
|------|-----------------|------------------|--|----------------|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | <i>17° 30 N</i> | <i>101° 30 W</i> | | <i>8 knots</i> | | |
| 0700 | <i>31</i> | <i>38</i> | | | | |
| 0800 | <i>32</i> | <i>46</i> | | | | |
| 0900 | <i>33</i> | <i>54</i> | | | | |
| 1000 | <i>34</i> | <i>102 02</i> | | | | |
| 1100 | <i>36</i> | <i>10</i> | | | | |
| 1200 | <i>40</i> | <i>19</i> | | | | |
| 1300 | <i>45</i> | <i>29</i> | | | | |
| 1400 | <i>49</i> | <i>39</i> | | | | |
| 1500 | <i>54</i> | <i>48</i> | | | | |
| 1600 | <i>58</i> | <i>58</i> | | | | |
| 1700 | <i>18° 03</i> | <i>3 08</i> | | | | |
| 1800 | <i>07</i> | <i>17</i> | | | | |
| 1900 | <i>11</i> | <i>27</i> | | | | |
| 2000 | <i>16</i> | <i>37</i> | | | | |
| 2100 | <i>20</i> | <i>47</i> | | | | |
| 2200 | <i>25</i> | <i>57</i> | | | | |
| 2300 | <i>18° 30</i> | <i>104 06</i> | | | | |
| 2400 | | | | | | |

Date 21 April 68 Ship T. Washington () Cruise No.

Organization POBSP (EASTROPAC) Recorder T. J. Lewis

Sunrise: Time Position: Lat. , Long.

Sunset: Time Position: Lat. , Long.

Miles travelled from 0000 hours to sunrise =

Miles travelled from sunrise to sunset =

Miles travelled from sunset to 2400 hours =

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

- 1.
- 2.
- 3.
- 4.
- 5.

Hourly Positions:

| Time | Latitude | Longitude | Wind Dir. | Wind Sp. | Wave Dir. | Wave Hgt. |
|------|----------|-----------|-----------|----------|-----------|-----------|
|------|----------|-----------|-----------|----------|-----------|-----------|

| | | | | | | |
|------|-------|--------|----|--|--|--|
| 0100 | | | | | | |
| 0200 | | | | | | |
| 0300 | | | | | | |
| 0400 | | | | | | |
| 0500 | | | | | | |
| 0600 | 14 08 | 104 58 | | | | |
| 0700 | 13 | 5 07 | | | | |
| 0800 | 20 | 17 | | | | |
| 0900 | 26 | 27 | | | | |
| 1000 | 32 | 37 | | | | |
| 1100 | 38 | 45 | | | | |
| 1200 | 44 | 53 | | | | |
| 1300 | | | | | | |
| 1400 | | | | | | |
| 1500 | | | | | | |
| 1600 | | | 48 | | | |
| 1700 | 28 | | | | | |
| 1800 | | 106 41 | | | | |
| 1900 | 27 | | | | | |
| 2000 | | | | | | |
| 2100 | | | | | | |
| 2200 | | | | | | |
| 2300 | | | | | | |
| 2400 | | | | | | |

11 do
 0529
 5 11

1716
 1210
 506

30

25

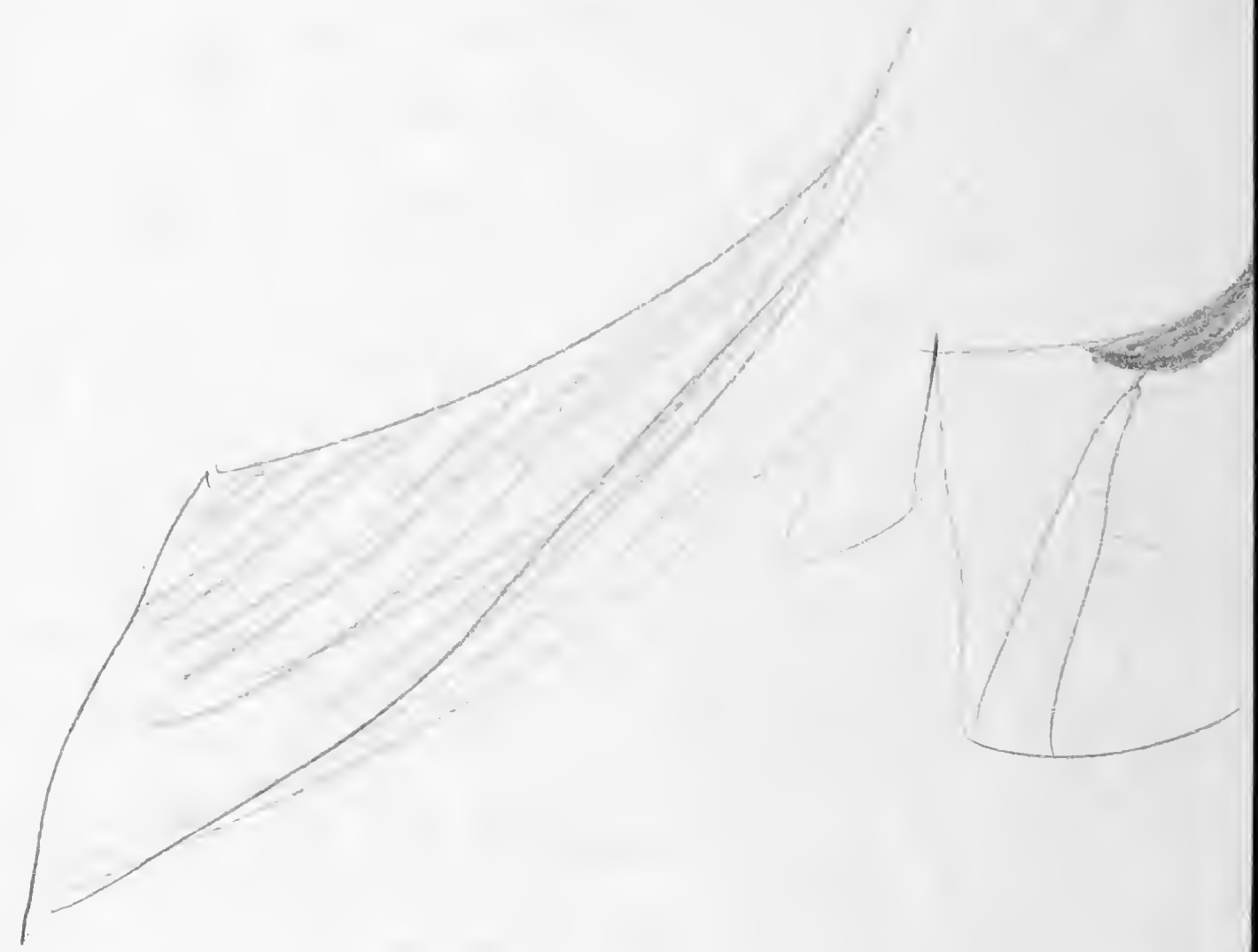
100 2.01

16 February

112

/ 100 mi

| | | | |
|--|------------|------------|-------|
| BFA | 2 | .02 | |
| LA | 2 | .02 | |
| Manx - Common | | | |
| 2 Shear | 6 | .05 | |
| N-2 Shear | 1 | .01 | |
| Shear sp | 23 | .20 | |
| Shear sp | 1 | .01 | |
| LW BSP | 2 | .02 | |
| Socorro | | | |
| Socorro Pat. | 4 | .03 | |
| WBSP | 6 | .05 | |
| St. Pet | 39 | .35 | |
| B. Phul | 2 | .02 | |
| Tukey sp | 2 | .02 | |
| G-W Gull | 1 | .01 | |
| W Gull | 5 | .04 | |
| Gull sp? | 1 | .01 | |
| Gull/Tukey | 1 | .01 | |
| Xantus Murrelet | 8 | .07 | |
| Cassin's Murrelet ^{Birdshot} ? | 2 | .02 | |
| | <u>108</u> | <u>.96</u> | Total |



Ships followed 10 .09
 Non ships 98 .87

~~17 Feb~~
~~626~~
~~1122~~

120
 8
 112

1705
 20

1130
 626

17 Feb 68
 15
 30
 45

8 mi

504
 1749
 20
 28

1620
 1200
 420
 28

hrs 9.9 # Miles 112

| | | |
|--------------|-----------|------------|
| Cooler's Pet | 3 | .03 |
| Small Pt. | 3 | .03 |
| LWRSP | 45 | .40 |
| WRSP | 6 | .05 |
| St Pet | 4 | .04 |
| BTTB | 2 | .02 |
| Birdsp. | 1 | .01 |
| R. Phel. | 1 | .01 |
| | <u>65</u> | <u>.58</u> |

112
 5
 107
 9.4
 59
 44
 48
 05
 58
 49

| | | | |
|--|------------------------------------|-------------------|--|
| SHIP'S NAME S/S <i>Thomas Washington</i> M/V | MONTH AND YEAR <i>Feb 19 68</i> | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU |
| CALL SIGN | FROM: | DATE LAST CHECKED | SHIP'S WEATHER OBSERVATIONS |
| COUNTRY OF REGISTRY | TO: | CORRECTION | |

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29 905 in.", etc.)

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 0.1-9.9) | PRESENT WEATHER (Coded 0.1-9.9) | PAST WEATHER (0.1-9) | SEA LEVEL PRESSURE (Millibars and tenths, 99, or 10, in Col. 15 and first 99, or 10, in Col. 14) | AIR-TEMP. DATA °C | | WET BULB (Degrees and tenths, in Col. 16) | DRY BULB (Degrees in Col. 16 tenths in Col. 17 & 33) | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUD | TYPE OF MIDDLE CLOUD | TYPE OF HIGH CLOUD | COURSE OF SHIP (Coded 0.1-9) | SPEED OF SHIP (Coded 0.1-9) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0.1-9) | AMOUNT OF CHANGE (Mb and tenths) | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. INDICATOR | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | |
|------|---|---|---------------------------------|----------------------|------------------------|----------------|-------|----------------------------|------------------------------------|----------------------|---|-------------------|------|---|--|---|------------------------|----------------------|--------------------|------------------------------|-----------------------------|----------------------|--------------------------------------|-------------------------------------|-----------|-------------------------------------|-------------------------------|-------------------------------|---|--|--|----|--|-------------------------------|-------------------------------|----------------|-------------------------------|---|---|
| | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |
| 99 | 180 | | 20 | 06 | 4 | 4 | 02 | 12 | 99 | 01 | 1 | 10 | 12.1 | 21 | 1 | 189 | 6 | 1 | 4 | 0 | 4 | 3 | 7 | 15 | 0 | // | 19 | 1 | 25.9 | 1 | 3 | 00 | 02 | 21 | 2 | 04 | | | |
| 99 | 180 | | 20 | 06 | 4 | 4 | 02 | 12 | 99 | 01 | 1 | 10 | 11.0 | 21 | 1 | 200 | 4 | 1 | 2 | 0 | 4 | 3 | 1 | 07 | 0 | // | 20 | 1 | 25.7 | 1 | 3 | 11 | 02 | 05 | 2 | 01 | | | |
| 99 | 180 | | 20 | 12 | 4 | 9 | 05 | 06 | 98 | 03 | 9 | 10 | 15.0 | 21 | 1 | 194 | 8 | 4 | 0 | 4 | 3 | 6 | 33 | 0 | // | 19 | 1 | 25.2 | 1 | 3 | 00 | 02 | 15 | 2 | 02 | | | | |
| 99 | 180 | | 20 | 18 | 4 | 7 | 00 | 15 | 99 | 01 | 1 | 10 | 17.3 | 23 | 9 | 211 | 1 | 7 | 3 | 0 | 4 | 3 | 1 | 12 | 0 | // | 20 | 1 | 25.0 | 1 | 3 | 00 | 01 | 33 | 2 | 02 | | | |
| 99 | 159 | | 21 | 00 | 4 | 7 | 04 | 15 | 99 | 03 | 0 | 10 | 15.0 | 21 | 8 | 272 | 7 | 1 | 3 | 0 | 4 | 3 | 1 | 15 | 0 | // | 22 | 1 | 25.6 | 2 | 3 | 00 | 02 | 04 | 2 | 04 | | | |
| 99 | 180 | | 21 | 06 | 4 | 6 | 03 | 10 | 99 | 01 | 1 | 10 | 15.2 | 21 | 7 | 217 | 6 | 1 | 3 | 0 | 4 | 3 | 1 | 04 | 0 | // | 21 | 1 | 25.9 | 2 | 3 | 00 | 02 | 30 | 2 | 02 | | | |
| 99 | 180 | | 21 | 12 | 4 | 5 | 02 | 10 | 98 | 02 | 1 | 10 | 14.8 | 21 | 3 | 208 | 6 | 2 | 5 | 0 | 4 | 3 | 6 | 02 | 0 | // | 22 | 1 | 26.7 | 3 | 3 | 00 | 02 | 25 | 2 | 03 | | | |
| 99 | 137 | | 21 | 18 | 4 | 5 | 05 | 12 | 99 | 01 | 1 | 10 | 15.9 | 22 | 2 | 217 | 7 | 2 | 2 | 0 | 4 | 3 | 1 | 03 | 0 | // | 21 | 1 | 26.2 | 2 | 3 | 00 | 02 | 35 | 2 | 03 | | | |
| 99 | 175 | | 22 | 00 | 4 | 6 | 04 | 15 | 99 | 01 | 2 | 10 | 12.5 | 23 | 9 | 200 | 6 | 1 | 3 | 0 | 4 | 3 | 1 | 05 | 0 | // | 18 | 1 | 25.2 | 1 | 3 | 00 | 04 | 04 | 2 | 04 | | | |
| 99 | 180 | | 22 | 06 | 4 | 4 | 00 | 11 | 98 | 01 | 1 | 10 | 14.2 | 24 | 4 | 211 | 5 | 1 | 3 | 0 | 4 | 3 | 1 | 17 | 0 | // | 19 | 1 | 25.4 | 4 | 3 | 00 | 04 | 34 | 2 | 04 | | | |
| 99 | 116 | | 22 | 12 | 4 | 5 | 03 | 11 | 98 | 01 | 1 | 10 | 12.5 | 24 | 4 | 211 | 5 | 2 | 3 | 0 | 4 | 3 | 7 | 05 | 0 | // | 20 | 1 | 27.8 | 4 | 3 | 00 | 03 | 09 | 2 | 03 | | | |
| 99 | 110 | | 22 | 18 | 4 | 7 | 03 | 12 | 99 | 02 | 1 | 10 | 14.6 | 20 | 6 | 217 | 9 | 2 | 2 | 0 | 4 | 3 | 1 | 14 | 0 | // | 19 | 1 | 25.9 | 6 | 3 | 00 | 03 | 24 | 2 | 03 | | | |
| 99 | 180 | | 23 | 00 | 4 | 7 | 06 | 15 | 99 | 02 | 2 | 10 | 12.0 | 25 | 6 | 272 | 1 | 0 | 3 | 0 | 4 | 3 | 2 | 20 | 0 | // | 21 | 1 | 27.8 | 6 | 3 | 00 | 03 | 06 | 2 | 04 | | | |
| 99 | 180 | | 23 | 06 | 4 | 5 | 04 | 11 | 98 | 01 | 2 | 10 | 13.2 | 25 | 1 | 233 | 6 | 7 | 2 | 0 | 4 | 3 | 1 | 10 | 0 | // | 20 | 1 | 25.7 | 6 | 3 | 00 | 03 | 06 | 2 | 04 | | | |
| 99 | 180 | | 23 | 12 | 4 | 3 | 12 | 08 | 98 | 02 | 5 | 10 | 11.3 | 24 | 4 | 239 | 3 | 2 | 3 | 0 | 4 | 3 | 5 | 04 | 0 | // | 24 | 1 | 27.2 | 4 | 3 | 00 | 01 | 16 | 2 | 03 | | | |
| 99 | 180 | | 23 | 18 | 4 | 8 | 05 | 09 | 99 | 01 | 1 | 10 | 13.2 | 25 | 3 | 241 | 8 | 2 | 2 | 7 | 4 | 3 | 1 | 11 | 0 | // | 25 | 1 | 26.4 | 3 | 3 | 00 | 01 | 09 | 2 | 03 | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |

| | | | |
|---|----------------------|-------------------|--|
| SHIP'S NAME <input type="checkbox"/> S/S <input type="checkbox"/> M/V | MONTH AND YEAR 19 | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU SHIP'S WEATHER OBSERVATIONS |
| CALL SIGN | FROM: | DATE LAST CHECKED | |
| COUNTRY OF REGISTRY | TO: | CORRECTION | |

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.)

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 00-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths, Last 3 figures in Col. 15 and first "9" or "10" in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS MET BUIB (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGHEST CLOUDS | COURSE OF SHIP (Coded) | SPEED OF SHIP (Coded) | 3-HOUR PRESS. CHANGE | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. INDICATOR | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | | | | | | | | | | | | | | |
|------|---|---|-----------------------------|-------------------------|------------------------|--|--------------------|--------------------------|----------------------------------|-----------------------|--|-------------------|-------|---|-------------------------|-----------------------|------------------------|------------------------|-----------------------|----------------------|-------------------------------------|-------------------------|----------------|---|-------------------------------|--|----|--|-------------------------------|----|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|--|--|
| | | | | | | DIRECTION (True) tens of degrees (00 = calm) | SPEED (True knots) | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | OBSE-VERS INITIALS | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | |
| 99 | | | | | | | | | 00 | | | | | | | | | | | | | | | | | | | 0 | // | 1 | ✓ | | 3 | | | | | | | | | | |
| 99 | 316 | 1 | 117.3 | 16 | 06 | 4 | 8 | 02 | 06 | 99 | 02 | 10 | 17.3 | 15 | 6 | 150 | 7 | 0 | 0 | | | | 4 | 3 | 1 | 07 | 0 | // | 15 | 1 | 12.2 | 6 | 3 | 00 | 01 | 27 | 6 | 00 | | | | | |
| 99 | 307 | 7 | 117.3 | 16 | 12 | 4 | 7 | 01 | 02 | 98 | 03 | 2 | 10 | 15.9 | 15 | 6 | 150 | 7 | 0 | 0 | | | 9 | 4 | 3 | 1 | 07 | 0 | // | 15 | 1 | 17.2 | 6 | 3 | 06 | 01 | 22 | 0 | 02 | | | | |
| 99 | 293 | 1 | 117.5 | 16 | 18 | 4 | 6 | 01 | 02 | 99 | 02 | 2 | 10 | 15.2 | 15 | 3 | 147 | 8 | 3 | 0 | | | 4 | 3 | 1 | 07 | 0 | // | 15 | 1 | 17.2 | 3 | 3 | 00 | 01 | 27 | 0 | 02 | | | | | |
| 99 | 283 | 1 | 117.5 | 17 | 00 | 4 | 3 | 00 | 00 | 99 | 01 | 1 | 10 | 15.9 | 17 | 2 | 146 | 2 | 0 | 0 | | | 4 | 3 | 7 | 07 | 0 | // | 15 | 1 | 15.4 | 2 | 3 | 00 | 01 | 29 | 4 | 02 | | | | | |
| 99 | 271 | 1 | 117.6 | 19 | 06 | 4 | 8 | 06 | 05 | 98 | 02 | 1 | 10 | 16.0 | 15 | 6 | 161 | 8 | 8 | 3 | 0 | | 4 | 3 | 1 | 11 | 0 | // | 15 | 1 | 18.4 | 2 | 3 | 00 | 01 | 27 | 4 | 02 | | | | | |
| 99 | 260 | 7 | 117.7 | 17 | 12 | 4 | 1 | 05 | 08 | 98 | 01 | 0 | 10 | 15.6 | 17 | 2 | 167 | 5 | 0 | 0 | 2 | | 4 | 3 | 4 | 00 | 0 | // | 16 | 1 | 18.9 | 6 | 3 | 00 | 01 | 31 | 4 | 03 | | | | | |
| 99 | 249 | 1 | 117.7 | 17 | 18 | 4 | 3 | 05 | 10 | 99 | 01 | 0 | 10 | 20.7 | 25 | 6 | 117 | 3 | 0 | 0 | 2 | | 4 | 3 | 1 | 17 | 0 | // | 17 | 1 | 18.1 | 6 | 3 | 00 | 01 | 31 | 4 | 03 | | | | | |
| 99 | 237 | 7 | 117.7 | 18 | 00 | 4 | 3 | 02 | 12 | 99 | 01 | 0 | 10 | 20.0 | 17 | 3 | 172 | 0 | 0 | 0 | | | 4 | 3 | 7 | 07 | 0 | // | 16 | 1 | 19.4 | 3 | 3 | 00 | 02 | 27 | 4 | 05 | | | | | |
| 99 | 228 | 7 | 117.7 | 16 | 06 | 4 | 0 | 02 | 10 | 99 | 02 | 0 | 10 | 21.0 | 15 | 3 | 178 | 0 | 0 | 0 | | | 4 | 3 | 1 | 07 | 0 | // | 17 | 1 | 20.0 | 3 | 3 | 00 | 02 | 28 | 4 | 05 | | | | | |
| 99 | 217 | 7 | 1800 | 18 | 12 | 4 | 6 | 01 | 13 | 98 | 03 | 0 | 10 | 20.0 | 15 | 9 | 183 | 5 | 1 | 4 | 0 | | 6 | 4 | 3 | 7 | 07 | 0 | // | 18 | 1 | 21.1 | 9 | 3 | 00 | 02 | 28 | 4 | 04 | | | | |
| 99 | 218 | 7 | 1170 | 16 | 18 | 4 | 1 | 03 | 15 | 99 | 02 | 0 | 10 | 20.2 | 15 | 0 | 183 | 1 | 1 | 2 | 0 | | 4 | 3 | 1 | 13 | 0 | // | 17 | 1 | 20.2 | 0 | 3 | 00 | 02 | 27 | 4 | 04 | | | | | |
| 99 | 211 | 7 | 1189 | 17 | 00 | 4 | 7 | 05 | 15 | 19 | 02 | 2 | 10 | 19.0 | 24 | 3 | 179 | 1 | 1 | 4 | 0 | | 4 | 5 | 3 | 7 | 06 | 0 | // | 23 | 1 | 22.2 | 7 | 3 | 00 | 02 | 27 | 4 | 05 | | | | |
| 99 | 205 | 7 | 1190 | 19 | 06 | 4 | 4 | 03 | 13 | 98 | 03 | 2 | 10 | 20.7 | 20 | 0 | 189 | 4 | 1 | 2 | 0 | | 4 | 3 | 1 | 07 | 0 | // | 16 | 1 | 20.1 | 0 | 3 | 00 | 02 | 04 | 4 | 05 | | | | | |
| 99 | 200 | 7 | 1190 | 19 | 12 | 4 | 8 | 05 | 10 | 98 | 03 | 1 | 10 | 20.0 | 20 | 0 | 184 | 1 | 2 | 4 | 0 | | 4 | 0 | 6 | 03 | 0 | // | 19 | 1 | 22.2 | 0 | 3 | 03 | 02 | 05 | 2 | 00 | | | | | |
| 99 | 193 | 7 | 1190 | 17 | 18 | 4 | 8 | 05 | 11 | 19 | 02 | 1 | 10 | 20.3 | 20 | 6 | 180 | 4 | 1 | 6 | 0 | | 4 | 3 | 1 | 07 | 0 | // | 20 | 1 | 21.6 | 6 | 3 | 03 | 02 | 05 | 2 | 06 | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | |

| | | |
|--|--------------------------------|-------------------|
| SHIP'S NAME <input type="checkbox"/> S/S <input checked="" type="checkbox"/> M/V <i>Knob</i> | MONTH AND YEAR 19 <i>71</i> | BAROMETER NUMBER |
| CALL SIGN <i>NLBU</i> | FROM: | DATE LAST CHECKED |
| COUNTRY OF REGISTRY <i>US</i> | TO: | CORRECTION |

ESSA FORM 72-1
(1-68)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU

SHIP'S
WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| IND. | QUADRANT OF GLOBE (Degrees and tenths) 3 figures) | LONGITUDE (Degrees and tenths) 4 figures) | DAY OF MONTH (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 00-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (10-9) | SEA LEVEL PRESSURE (Millibars and tenths, "9" or "10" in Col. 15 and first Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGH CLOUDS | COURSE OF SHIP (Coded 0-9) | SPEED OF SHIP (Coded 0-9) | 3-HOUR PRESS. CHANGE (Coded 0-9) | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE (Coded) | INDICATOR | SEA TEMPERATURE (Degrees and tenths) 3 figures) | TENTHS OF AIR TEMP. CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | OBSERVERS INITIALS | | | | | | | | | | | | | | | |
|------|---|---|---|-------------------------|---------------------------|----------------|-------|-----------------------------|----------------------------------|------------------------|--|-------------------|-----|---|-------------------------|-----------------------|-----------------------|---------------------|-------------------------------|------------------------------|-------------------------------------|-------------------------------------|---------------------------------|----------------|---|--|--|-------------------------------|--|--------------------|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|-----|-----|-----|-----|
| | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | | |
| 99 | 030 | 5 | 1190 | 22 | 00 | 4 | 7 | 13 | 10 | 98 | 02 | 2 | 10 | 119 | 25 | 6 | 250 | 8 | 2 | 1 | 0 | | | | 7 | 13 | 0 | // | 25 | 1 | 26.7 | 6 | 3 | 00 | | | | | | | | VHC | | | |
| 99 | | | | | 06 | | | | | | | 7 | 10 | 120 | 23 | 3 | 244 | 4 | 3 | 0 | | | | | | | 0 | // | 24 | 1 | 26.5 | 1 | 3 | | | | | | | | | VHC | | | |
| 99 | | | | | 12 | | | | | | | 10 | 130 | 120 | 0 | 244 | | | 0 | 1 | | | | | | 20 | 0 | // | 19 | 1 | 26.7 | 0 | 3 | 12 | | | | | | | | | VHC | | |
| 99 | | | | | 18 | | | | | 99 | | | | 120 | 27 | 2 | 261 | | | 0 | | | | | | | 10 | 0 | // | 20 | 1 | 26.0 | 2 | 3 | | | | | | | | | | VHC | |
| 99 | | | | | 00 | | | | 15 | 99 | 01 | 1 | 10 | 127 | 25 | 6 | 239 | | | 0 | | | | | | | 10 | 0 | // | 23 | 1 | 26.1 | 3 | 3 | | | | | | | | | | VHC | |
| 99 | | | 1190 | | 06 | | | | 12 | 98 | 02 | 0 | 10 | 120 | 25 | 0 | 233 | | | 0 | | | | | | | 10 | 0 | // | 23 | 1 | 26.0 | | 3 | | | | | | | | | | VHC | |
| 99 | | | | | 12 | | | | 12 | 98 | 02 | 0 | 10 | 135 | 27 | 9 | 222 | | | 0 | | | | | | | 10 | 0 | // | 21 | 1 | 26.0 | 1 | 3 | | | | | | | | | | VHC | |
| 99 | | | 1190 | | 18 | | | | 08 | 99 | 02 | 1 | 10 | 120 | 21 | 1 | 233 | | | 0 | | | | | | | 10 | 0 | // | 21 | 1 | 26.0 | 1 | 3 | | | | | | | | | | | VHC |
| 99 | | | 1190 | | 00 | 4 | 3 | | 10 | 99 | 02 | 1 | 10 | 120 | 24 | 4 | 278 | 3 | 1 | 0 | | | | | | 10 | 0 | // | 22 | 1 | 27.2 | 1 | 3 | 01 | 02 | | | | | | | | | VHC | |
| 99 | | | | | 06 | 1 | 2 | 18 | 05 | 98 | 02 | 0 | 10 | 139 | 24 | 4 | 211 | 2 | 1 | 0 | | | | | | 10 | 0 | // | 17 | 1 | 26.0 | 1 | 3 | | | | | | | | | | | VHC | |
| 99 | | | | | 12 | 1 | 2 | 05 | 98 | 02 | 0 | 10 | 140 | 24 | 4 | 211 | 1 | 0 | 0 | | | | | | 10 | 0 | // | 17 | 1 | 26.1 | 1 | 3 | | | | | | | | | | | | VHC | |
| 99 | | | | | 18 | 2 | 2 | 10 | 99 | 03 | 1 | 10 | 158 | 25 | 3 | 239 | | | 0 | 0 | | | | | | 10 | 0 | // | 21 | 1 | 26.9 | 3 | 3 | 1 | 10 | | | | | | | | | VHC | |
| 99 | | | | | 00 | 1 | 1 | 18 | 05 | 99 | 03 | 1 | 10 | 125 | 25 | 9 | 244 | 7 | 0 | 0 | | | | | 10 | 0 | // | 22 | 1 | 26.8 | 1 | 3 | | | | | | | | | | | | VHC | |
| 99 | | | | | 06 | 2 | 2 | 18 | 05 | 98 | | 10 | 120 | 25 | 9 | 233 | | | 0 | | | | | | | 10 | 0 | // | 23 | 1 | 26.0 | 1 | 3 | | | | | | | | | | | | VHC |
| 99 | | | | | 12 | 3 | 2 | 18 | 05 | 98 | | 10 | 113 | 25 | 0 | 239 | 3 | 4 | 0 | | | | | | 10 | 0 | // | 23 | 1 | 26.2 | 1 | 3 | | | | | | | | | | | | | VHC |
| 99 | | | | | 18 | 1 | 1 | 18 | 05 | 99 | | 10 | 120 | 25 | 1 | 278 | | | 0 | 2 | | | | | 10 | 0 | // | 21 | 1 | 26.0 | 1 | 3 | | | | | | | | | | | | | VHC |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | | |

| | | | | |
|---|--------------------------------|-------------------|--|--|
| SHIP'S NAME <input type="checkbox"/> S/S <input type="checkbox"/> M/V <i>T. Long...</i> | MONTH AND YEAR 19 <i>79</i> | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU | GENERAL INSTRUCTIONS (See observing handbook for more details) |
| CALL SIGN <i>K-111</i> | FROM: | DATE LAST CHECKED | SHIP'S WEATHER OBSERVATIONS | 1. Fill in all blanks on upper left-hand side of this form. |
| COUNTRY OF REGISTRY | TO: | CORRECTION | | 2. Check appropriate box in column 32. 3. Before entering, convert: a. all temperatures to °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, |
| | | | | followed by letters or abbreviations for the first entry on each form, ("77 5°F", "29 905 in.", etc.) |
| | | | | 4. Begin a new sheet each month, voyage, ocean and quadrant. |
| | | | | 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. |

| IND. | QUADRANT OF GLOBE LATITUDE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths, 99 or "10" in Col. 13 and first Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGHEST CLOUDS | COURSE OF SHIP (Coded) | SPEED OF SHIP (Coded) | 3-HOUR PRESS. CHANGE | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | SEA TEMPERATURE °C (Degrees and tenths, 3 figures) | WAVES (Make as many groups as patterns observed) | | TENTHS OF AIR TEMP. INDICATOR | CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 1sE3EsRs, ICE C2KD, re. Wind Shifts, beginning and ending of precip., freak waves, etc.) | OBSERVERS INITIALS | | | | | | | | | | | | | | | | | | | |
|------|---|---|------------------------------------|------------------------|------------------|---|--------------------------|----------------------------------|-----------------------|--|---|----------------------------------|---|-------------------------|-----------------------|------------------------|------------------------|-----------------------|----------------------|-----------|-------------------------------------|-------------------------|--|--|-------|----------------------------------|---|---|-------------------------------|----|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|--|--|--|--|--|--|--|
| | | | | | TOTAL CLOUD AMT. | DIRECTION (True, tens of degrees (00 = calm)) | | | | | DRY BULB (Degrees in Col. 16, tenths in Col. 17 & 33) | WET BULB (Degrees and tenths) | | | | | | | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | (CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | | | | | |
| 99 | | | | | 00 | | | | | | | | | 153 | 21 | 9 | 223 | | | | | | 3 | | | 0 | // | | 1 | | | 9 | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 06 | | | | | | | | | 166 | 24 | 0 | 239 | | | | | | | | | 0 | // | | 1 | | | 0 | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 12 | | | | | | | | | 150 | 24 | 4 | 239 | | | | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 18 | | | 8 | 06 | | | | | 176 | 26 | 7 | 256 | | | 0 | 0 | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 00 | | | | 06 | | | | | 155 | 21 | 1 | 239 | 3 | 3 | 3 | 0 | | 4 | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 06 | | | | | | | | | 166 | 26 | 1 | 244 | 3 | 1 | 0 | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 12 | | | | 13 | | | | | 155 | 27 | 4 | 239 | | | | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | 185 | | | | 18 | | | | 11 | 12 | 99 | | | 180 | 25 | 8 | 261 | | | 1 | 2 | 0 | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 00 | | | | 11 | | | | | 163 | 21 | 1 | 244 | 4 | 3 | 3 | 0 | | 4 | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 06 | | | | 10 | 11 | | | | 180 | 26 | 7 | 256 | 3 | 3 | 3 | 0 | | 4 | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 12 | | | | 12 | 9 | 02 | | | 160 | 24 | 4 | 239 | | | | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 18 | | | | 11 | 18 | 99 | | | 186 | 26 | 1 | 244 | 7 | 1 | 3 | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | | |
| 99 | | | | | 00 | | | | 15 | | | | | 160 | 27 | 8 | 244 | 3 | 1 | | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | |
| 99 | | | | | 06 | | | | 13 | | | | | 173 | 25 | 6 | 239 | 5 | 1 | 2 | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | | |
| 99 | | | | | 12 | | | | 11 | 15 | | | | 160 | 25 | 0 | 233 | 3 | 1 | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | | |
| 99 | | | | | 18 | | | | 09 | 20 | | | | 176 | 25 | 6 | 228 | | | | | | | | 0 | // | | 1 | | | | 3 | | | | | | | | | | | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | (CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | | | | | |

| SHIP'S NAME S S M V | | MONTH AND YEAR 19 79 | | BAROMETER NUMBER | | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU | | GENERAL INSTRUCTIONS (See observing handbook for more details) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|-----------------------------|----------------------|------------------------|--|---|---|----------------------------------|--------------------|--|--|-----------|----------------------------------|-------------------------|----------------------|----------------------|--------------------|------------------------|-----------------------|----------------------|------------------------------------|-------------------------------------|----------------|-------------------------------------|-------------------------|-----------|---|-------------------------------|----------------|--|----------------|---|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|
| CALL SIGN | | FROM: | | DATE LAST CHECKED | | CORRECTION | | 1. Fill in all blanks on upper left-hand side of this form. 2. Check appropriate box in column 32. 3. But a. all temperatures in °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.) 4. Begin a new sheet each month, voyage, ocean and quadrant. 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COUNTRY OF REGISTRY | | VOYAGE | | CORRECTION | | SHIP'S WEATHER OBSERVATIONS CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths, Last 3 figures in Col. 15 and first "9" or "10" in Col. 14) | AIR-TEMP. DATA °C | | WET BULB (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF LOWEST CLOUD | TYPE OF MIDDLE CLOUD | TYPE OF HIGH CLOUD | COURSE OF SHIP (Coded) | SPEED OF SHIP (Coded) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0-9) | AMOUNT OF CHANGE (Mb and tenths) | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. | | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 EsEsRs, ICE C2KDire, Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | |
| | | | | | | TOTAL CLOUD AMT. (Coded) | DIRECTION (Degrees (True) tenths of degrees (00 = 000)) | | | | | DRY BULB (Degrees in Col. 17 & 33) tenths in Col. 17 & 33) | INDICATOR | | | | | | | | | | | | | | | | PERIOD (Coded) | HEIGHT (Coded) | PERIOD (Average seconds 2 figures) | HEIGHT (Coded) | | | | PERIOD (Coded) | HEIGHT (Coded) | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |
| 99 | 200 | 5 | 1124 | 07 | 00 | 4 | 6 | 13 | 12 | 99 | 02 | 1 | 10 | 160 | 26 | 7 | 233 | 6 | 3 | 3 | 0 | 0 | 2 | 2 | 7 | 10 | 0 | // | 23 | 1 | 278 | 7 | 3 | 10 | 03 | 12 | 2 | 08 | - | - |
| 99 | 200 | 5 | 1126 | 07 | 06 | 4 | 5 | 09 | 13 | 99 | 25 | 1 | 10 | 173 | 25 | 1 | 228 | 5 | 3 | 3 | 0 | 0 | 2 | 2 | 1 | 10 | 0 | // | 21 | 1 | 253 | 0 | 3 | 10 | 03 | 12 | 2 | 08 | - | - |
| 99 | 200 | 5 | 1129 | 07 | 12 | 4 | 1 | 12 | 12 | 99 | 25 | 7 | 10 | 160 | 24 | 1 | 227 | 4 | 3 | 3 | 0 | 0 | 2 | 0 | 7 | 10 | 0 | // | 22 | 1 | 267 | 4 | 3 | 10 | 03 | 12 | 2 | 07 | - | - |
| 99 | 195 | 5 | 1117 | 07 | 18 | 4 | 8 | 11 | 09 | 99 | 15 | 1 | 10 | 186 | 25 | 6 | 227 | 8 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 22 | 1 | 253 | 6 | 3 | 10 | 03 | 12 | 2 | 07 | - | - |
| 99 | 177 | 5 | 1100 | 06 | 00 | 4 | 6 | 11 | 08 | 99 | 01 | 2 | 10 | 165 | 28 | 4 | 246 | 7 | 3 | 3 | 0 | 0 | 8 | 3 | 7 | 10 | 0 | // | 23 | 1 | 277 | 9 | 3 | 10 | 03 | 12 | 2 | 04 | - | - |
| 99 | 180 | 5 | 1100 | 06 | 06 | 4 | 1 | 10 | 11 | 99 | 02 | 2 | 10 | 166 | 25 | 0 | 228 | 6 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 21 | 1 | 253 | 2 | 3 | 10 | 03 | 12 | 2 | 04 | - | - |
| 99 | 173 | 5 | 1100 | 08 | 12 | 4 | 6 | 10 | 15 | 98 | 02 | 1 | 10 | 143 | 25 | 0 | 233 | 6 | 3 | 3 | 0 | 0 | 8 | 3 | 7 | 11 | 0 | // | 23 | 1 | 277 | 1 | 3 | 10 | 03 | 12 | 2 | 04 | - | - |
| 99 | 166 | 5 | 1100 | 08 | 18 | 4 | 0 | 16 | 16 | 99 | 02 | 1 | 10 | 171 | 25 | 1 | 244 | 8 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 22 | 1 | 255 | 1 | 3 | 10 | 03 | 12 | 2 | 04 | - | - |
| 99 | 177 | 5 | 1119 | 07 | 00 | 4 | 1 | 11 | 11 | 99 | 01 | 2 | 10 | 169 | 28 | 3 | 256 | 3 | 3 | 3 | 0 | 0 | 8 | 3 | 7 | 10 | 0 | // | 25 | 1 | 272 | 3 | 3 | 10 | 03 | 12 | 2 | 10 | - | - |
| 99 | 177 | 5 | 1119 | 07 | 06 | 4 | 1 | 11 | 11 | 99 | 05 | 2 | 10 | 170 | 25 | 4 | 228 | 6 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 21 | 1 | 253 | 6 | 3 | 10 | 03 | 12 | 2 | 08 | - | - |
| 99 | 177 | 5 | 1120 | 09 | 12 | 4 | 6 | 12 | 15 | 98 | 03 | 1 | 10 | 155 | 24 | 4 | 233 | 6 | 3 | 3 | 0 | 0 | 8 | 3 | 7 | 11 | 0 | // | 23 | 1 | 267 | 4 | 3 | 10 | 03 | 12 | 2 | 04 | - | - |
| 99 | 141 | 5 | 1100 | 01 | 18 | 4 | 8 | 17 | 12 | 91 | 01 | 1 | 10 | 183 | 25 | 0 | 228 | 8 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 14 | 0 | // | 21 | 1 | 253 | 1 | 3 | 10 | 03 | 12 | 2 | 08 | - | - |
| 99 | 240 | 5 | 1100 | 10 | 00 | 4 | 3 | 12 | 15 | 99 | 01 | 1 | 10 | 145 | 27 | 4 | 241 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 20 | 0 | // | 25 | 1 | 278 | 7 | 3 | 10 | 04 | 09 | 2 | 08 | - | - | |
| 99 | 128 | 5 | 1119 | 10 | 06 | 4 | 7 | 15 | 12 | 98 | 03 | 1 | 10 | 140 | 25 | 6 | 220 | 7 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 25 | 1 | 253 | 1 | 3 | 10 | 02 | 09 | 2 | 04 | - | - |
| 99 | 123 | 5 | 1120 | 10 | 12 | 4 | 7 | 13 | 15 | 98 | 02 | 1 | 10 | 110 | 27 | 0 | 233 | 4 | 3 | 3 | 0 | 0 | 8 | 3 | 7 | 10 | 0 | // | 23 | 1 | 278 | 0 | 3 | 10 | 03 | 12 | 2 | 05 | - | - |
| 99 | 112 | 5 | 1100 | 10 | 18 | 4 | 1 | 15 | 15 | 99 | 02 | 1 | 10 | 166 | 25 | 1 | 222 | 7 | 3 | 3 | 0 | 0 | 8 | 3 | 1 | 10 | 0 | // | 21 | 1 | 253 | 0 | 3 | 10 | 03 | 12 | 2 | 05 | - | - |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |

| | | |
|--|--------------------------------------|--------------------------------------|
| SHIP NAME <i>U.S. V.T. Washington</i> | MONTH AND YEAR <i>March 19 68</i> | BAROMETER NUMBER <i>535</i> |
| CALL SIGN | VOYAGE FROM: <i>100</i> | DATE LAST CHECKED <i>11/31/68</i> |
| COUNTRY OF REGISTRY | TO: <i>100</i> | CORRECTION <i>0</i> |

ESSA FORM 72-1 (1-68)
U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU
SHIP'S WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| IND. | QUADRANT OF GLOBE (Degrees and tenths) 3 figures) | LONGITUDE (Degrees and tenths) 4 figures) | DAY OF MONTH (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths; 90-99 in Col. 15 and first 10 in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGH CLOUDS | COURSE OF SHIP (Coded 0-9) | SPEED OF SHIP (Coded 0-9) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0-9) | INDICATOR (Ab and tenths) | AIR-SEA TEMP. D. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE (Degrees and tenths) 3 figures) | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | | | | | | | | | | |
|------|---|---|-----------------------------|----------------------|------------------------|------------------|---------------------------------|--------------------------|----------------------------------|--------------------|--|----------------------------------|----------------------------------|---|-------------------------|-----------------------|---------------------|----------------------------|---------------------------|----------------------|------------------------------------|------------------------------|--|-------------------------|-----------|---|--|-------------------------------|---|------------------------|--|----------------|----------------|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|-----|----|
| | | | | | | TOTAL CLOUD AMT. | DIRECTION (Degrees (00 = calm)) | | | | | DRY BULB (Degrees in Col. 16) | WET BULB (Degrees and tenths) | | | | | | | | | | | | | | WIND WAVES | SWELL | | | HEIGHT (Coded) | PERIOD (Coded) | HEIGHT (Coded) | PERIOD (Coded) | OBSERVERS INITIALS | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | Nh | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |
| 99 | | 5 | 11 | 11 | 00 | 7 | 15 | 12 | 11 | 22 | 10 | 10 | 125 | 27 | 4 | 244 | | | | | | | 8 | 31 | 10 | 0 | 11 | 23 | 1 | 27.8 | 7 | 3 | 10 | 03 | 10 | 2 | 04 | | | |
| 99 | | | | 11 | 06 | 4 | 12 | 11 | 11 | 05 | 10 | 100 | 27 | 1 | 23 | 6 | 3 | 3 | | | | | 9 | 31 | 10 | 0 | 11 | 22 | 1 | 25.3 | 6 | 3 | | 03 | 10 | 2 | 04 | | | |
| 99 | | | | 11 | 12 | 4 | 12 | 12 | 11 | 05 | 10 | 100 | 27 | 1 | 23 | 6 | 3 | 3 | | | | | 8 | 37 | 10 | 0 | 11 | 22 | 1 | 26.7 | 7 | 3 | | | | 10 | 2 | 06 | | |
| 99 | 086 | | | 11 | 18 | 4 | 11 | | | | 10 | 100 | 25 | 6 | 23 | 6 | 2 | 3 | | | | | 8 | 31 | 10 | 0 | 11 | 21 | 1 | 25.3 | 7 | 3 | | | | 10 | 2 | 06 | | |
| 99 | 112 | | | 11 | 00 | 4 | 12 | 18 | 29 | 22 | 10 | 100 | 27 | 1 | 23 | 3 | 3 | 3 | | | | | 0 | 07 | | 0 | 11 | 22 | 1 | 27.8 | 10 | 3 | | | | 10 | 2 | 06 | | |
| 99 | | | | 11 | 06 | 4 | 12 | | | | 10 | 100 | 27 | 6 | 23 | 6 | 3 | 3 | | | | | 1 | 31 | | 0 | 11 | 21 | 1 | 27.8 | 6 | 3 | | | | 10 | 2 | 06 | | |
| 99 | | | | 12 | 12 | 4 | 7 | 12 | 11 | 12 | 10 | 100 | 27 | 4 | 22 | 7 | 3 | 3 | | | | | 1 | 07 | | 0 | 11 | 21 | 1 | 27.8 | 7 | 3 | 10 | 03 | 10 | 2 | 06 | | | |
| 99 | | | | 12 | 18 | 4 | 8 | 12 | 11 | 05 | 10 | 100 | 27 | 6 | 23 | 8 | 2 | 3 | | | | | 1 | 31 | 20 | 0 | 11 | 22 | 1 | 25.6 | 7 | 3 | | | | 10 | 2 | 06 | | |
| 99 | 064 | | | 13 | 00 | 4 | 12 | 11 | 19 | 02 | 10 | 100 | 27 | 2 | 29 | 7 | 3 | 3 | | | | | 1 | 37 | 10 | 0 | 11 | 22 | 1 | 28.3 | 2 | 3 | 10 | 03 | 10 | 2 | 08 | | | |
| 99 | | | | 13 | 06 | 4 | 8 | 11 | 12 | 11 | 05 | 10 | 125 | 25 | 6 | 233 | 8 | 3 | 2 | | | | | 1 | 21 | 17 | 0 | 11 | 22 | 1 | 25.3 | 6 | 3 | 10 | 03 | 10 | 2 | 06 | | |
| 99 | | | | 13 | 12 | 4 | 6 | 13 | 14 | 99 | 03 | 10 | 155 | 25 | 6 | 239 | 5 | 7 | 3 | | | | | 1 | 22 | 20 | 0 | 11 | 23 | 1 | 26.7 | 6 | 3 | 06 | 03 | 10 | 2 | 06 | | |
| 99 | | | | 13 | 18 | 4 | 14 | 12 | 11 | 05 | 10 | 139 | 27 | 2 | 20 | 9 | 1 | 3 | | | | | 1 | 10 | | 0 | 11 | 24 | 1 | 25.8 | 2 | 3 | | 03 | 10 | 2 | 06 | | | |
| 99 | 515 | | | 14 | 00 | 4 | 6 | 13 | 12 | 99 | 02 | 10 | 105 | 27 | 8 | 239 | 0 | 1 | 2 | 0 | 00 | | 1 | 22 | 05 | 0 | 11 | 22 | 1 | 28.3 | 8 | 3 | 05 | 02 | 11 | 0 | 04 | | 150 | |
| 99 | 049 | | | 14 | 06 | 4 | 6 | 15 | 15 | 98 | 05 | 10 | 101 | 27 | 1 | 239 | 7 | 3 | 0 | | | | 1 | 12 | 14 | 0 | 11 | 22 | 1 | 26.0 | 1 | 3 | 05 | 02 | 10 | 2 | 01 | | | |
| 99 | 054 | | | 14 | 12 | 4 | 8 | 15 | 14 | 98 | 02 | 10 | 105 | 27 | 6 | 239 | 7 | 3 | 0 | | | | 1 | 27 | 0.4 | 0 | 11 | 24 | 1 | 28.3 | 6 | 3 | 05 | 02 | 15 | 5 | 06 | | 70 | |
| 99 | 045 | | | 14 | 18 | 4 | 9 | 27 | 14 | 97 | 58 | 2 | 10 | 142 | 25 | 3 | 29 | 7 | 0 | 0 | | | 0 | 12 | 10 | 0 | 11 | 24 | 1 | 25.4 | 3 | 3 | 05 | 02 | 10 | 5 | 04 | | 11 | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | Nh | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |

SHIP'S NAME: U.S. Washington MONTH AND YEAR: Feb 19 68 BAROMETER NUMBER: _____
 CALL SIGN: K6WU FROM: San Diego DATE LAST CHECKED: Feb 19 68
 COUNTRY OF REGISTRY: US TO: _____ CORRECTION: _____

ESSA FORM 72-1 (1-68)
 U.S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 WEATHER BUREAU

SHIP'S WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
 (See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | LATITUDE (Degrees and tenths, 3 figures) | TIME OF MONTH GMT (2 figures) | DAY OF MONTH GMT (2 figures) | WIND INDICATOR (Coded) (2 figures) | WIND | | VISIBILITY (Coded) (90-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths, last 3 figures in Col. 15 and first "9" or "10" in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUD | TYPE OF LOWEST CLOUD | TYPE OF MIDDLE CLOUD | COURSE OF HIGH CLOUD | SPEED OF SHIP (Coded) (0-9) | 3-HOUR PRESS. CHANGE (Coded 0-9) | CHARACTER OF CHANGE (0-9) | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 (Coded) | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. | | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{re} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSER- VERS INITIALS | | | | | | | | | |
|------|---|---|---|----------------------------------|---------------------------------|---------------------------------------|---------------------------------|--------------------|-------------------------------|----------------------------------|-----------------------|--|-------------------|---------------------------------|---|------------------------|----------------------|----------------------|----------------------|--------------------------------|-------------------------------------|------------------------------|-------------------------------------|------------------------------------|-----------|--|---------------------|--------------------------------|---|----------------|--|------------------------------------|----------------------------|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|--|
| | | | | | | | DIRECTION (True) (00 = calm) | SPEED (True knots) | | | | | INDICATOR | PERIOD (seconds) (2 figures) | | | | | | | | | | | | | HEIGHT (Coded) | DIRECTION (tens of degrees) | PERIOD (Coded) | HEIGHT (Coded) | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | |
| 99 | 087 | 7 | 189 | 21 | 00 | 4 | 8 | 51 | 06 | 92 | 02 | 2 | 10 | 102 | 2 | 2 | 2 | 8 | 0 | 6 | 0 | 0 | 4 | 3 | 7 | 0 | 0 | 11 | 25 | 1 | 27 | 8 | 3 | 00 | 02 | | | | | | | |
| 99 | 171 | 7 | 189 | 21 | 06 | 4 | 9 | 25 | 10 | 89 | 60 | 2 | 10 | 107 | 25 | 6 | 2 | 4 | 7 | 2 | 0 | 0 | 4 | 3 | 1 | 4 | 0 | 11 | 24 | 1 | 27 | 0 | 6 | 3 | | 2 | 04 | 4 | 04 | | | |
| 99 | 63 | 7 | 189 | 24 | 12 | 4 | 9 | 00 | 00 | 11 | 00 | | 10 | 100 | 22 | 1 | 2 | 4 | 9 | 7 | 2 | 0 | 0 | 4 | 3 | 7 | 20 | 0 | 11 | 19 | 1 | 27 | 2 | 8 | 3 | 11 | 00 | 15 | 4 | 04 | | |
| 99 | 56 | 7 | 189 | 24 | 18 | 4 | 9 | 19 | 10 | 12 | 50 | | 10 | 120 | 22 | 1 | 2 | 4 | 9 | 7 | 2 | 0 | 0 | 4 | 3 | 1 | 06 | 0 | 11 | 00 | 1 | 26 | 6 | 9 | 3 | 00 | 02 | 19 | 4 | 04 | | |
| 99 | 45 | 7 | 110 | 25 | 00 | 4 | 9 | 17 | 10 | 11 | 63 | | 10 | 109 | 25 | 6 | 2 | 2 | 9 | 9 | 2 | 0 | 0 | 4 | 3 | 7 | 20 | 0 | 11 | 23 | 1 | | 6 | 3 | | 02 | 17 | 4 | 04 | | | |
| 99 | 42 | 7 | 187 | 25 | 06 | 4 | 6 | 18 | 07 | 12 | 00 | | 10 | 108 | 25 | 0 | 2 | 3 | 6 | 2 | 2 | 0 | 0 | 4 | 3 | 1 | 06 | 0 | 11 | 22 | 1 | 2 | 0 | 3 | | 02 | 17 | 4 | 04 | | | |
| 99 | 105 | 7 | 181 | 25 | 12 | 4 | 8 | 15 | 00 | 12 | 02 | | 10 | 101 | 24 | 4 | 2 | 2 | 8 | 2 | 2 | 0 | 0 | 4 | 3 | 2 | 06 | 0 | 11 | 23 | 1 | 2 | 7 | 4 | 3 | 00 | 02 | 11 | 4 | 04 | | |
| 99 | 30 | 7 | 188 | 18 | 11 | 4 | 7 | 12 | 00 | 11 | 05 | | 10 | 100 | 25 | 6 | 0 | 3 | 8 | 2 | 2 | 0 | 0 | 4 | 3 | 1 | 14 | 0 | 11 | 22 | 1 | 2 | 0 | 3 | 00 | 02 | 17 | 4 | 04 | | | |
| 99 | 24 | 7 | 188 | 00 | 00 | 4 | 5 | 10 | 05 | 19 | 02 | | 10 | 116 | 25 | 6 | 0 | 3 | 5 | 2 | 2 | 0 | 0 | 4 | 3 | 1 | 04 | 0 | 11 | 22 | 1 | 27 | 6 | 3 | 06 | 02 | 17 | 4 | 04 | | | |
| 99 | 015 | 7 | 110 | 26 | 06 | 4 | 3 | 14 | 05 | 98 | 05 | | 10 | 114 | 25 | 9 | 0 | 2 | 3 | 2 | 2 | 0 | 0 | 4 | 3 | 1 | 11 | 0 | 11 | 21 | 1 | 2 | 1 | 3 | | 02 | 17 | 4 | 04 | | | |
| 99 | 1 | 7 | 110 | 26 | 12 | 4 | 4 | 14 | 04 | 95 | 51 | | 10 | 108 | 23 | 3 | 1 | 2 | 8 | 4 | 2 | 2 | 0 | 0 | 4 | 3 | 6 | 03 | 0 | 11 | 23 | 1 | 2 | 7 | 3 | 00 | 02 | 17 | 4 | 03 | | |
| 99 | 11 | 7 | 189 | 26 | 18 | 4 | 4 | 14 | 05 | 11 | 05 | | 10 | 105 | 25 | 1 | 2 | 4 | 2 | 2 | 0 | 0 | 0 | 4 | 3 | 1 | 13 | 0 | 11 | 23 | 1 | | 3 | | 02 | 14 | 4 | 03 | | | | |
| 99 | 000 | 5 | 185 | 26 | 00 | 4 | 5 | 17 | 00 | 1 | 61 | | 10 | 112 | 26 | 7 | 0 | 5 | 1 | 4 | 0 | 0 | 0 | 4 | 3 | 6 | 12 | 0 | 11 | 7 | 1 | 2 | 1 | 3 | 00 | 02 | 14 | 4 | 03 | | | |
| 99 | 008 | 5 | 189 | 27 | 06 | 4 | 2 | 15 | 05 | 1 | 00 | | 10 | 100 | 23 | 0 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 4 | 3 | 1 | 13 | 0 | 11 | 23 | 1 | 2 | 3 | 3 | | 02 | 14 | 4 | 03 | | | |
| 99 | 017 | 5 | 110 | 27 | 12 | 4 | 7 | 10 | 00 | 16 | 02 | | 10 | 120 | 22 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 3 | 7 | 20 | 0 | 11 | 23 | 1 | | 8 | 3 | 12 | 01 | 13 | 2 | 03 | | |
| 99 | 025 | 5 | 188 | 1 | 18 | 4 | 7 | 11 | 06 | 99 | 02 | | 10 | 139 | 26 | 1 | 0 | 6 | 1 | 2 | 3 | 0 | 0 | 0 | 4 | 3 | 1 | 14 | 0 | 11 | 25 | 1 | | 1 | 3 | 12 | 01 | 15 | 2 | 03 | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | |

| | | | |
|---------------------------|-------------------------|-------------------|--|
| SHIP'S NAME S S M V | MONTH AND YEAR 19 22 | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU |
| CALL SIGN | VOYAGE FROM: TO: | DATE LAST CHECKED | SHIP'S WEATHER OBSERVATIONS |
| COUNTRY OF REGISTRY | | CORRECTION | |

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.)

| IND. | QUADRANT OF GLOBE (Degrees and tenths 3 figures) | LATITUDE (Degrees and tenths 4 figures) | LONGITUDE (Degrees and tenths 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 00-99) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths, "9" or "10" in in Col. 15 and first "9" or "10" in in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUD | TYPE OF LOWEST CLOUD | TYPE OF MIDDLE CLOUD | TYPE OF HIGH CLOUD | COURSE OF SHIP (Coded) | SPEED OF SHIP (Coded) | 3-HOUR PRESS. CHANGE | WAVES (Make as many groups as patterns observed) | CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | | | | | | | | | | | | | | |
|------|--|---|--|---------------------------------|----------------------|------------------------|-------------------------------|--|--------------------------|----------------------------------|--------------------|---|--|----------------------------------|---|------------------------|----------------------|----------------------|--------------------|------------------------|-----------------------|----------------------|--|---|------------------------|--------------------|------------|-------------------------------|--|------|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|---|--|--|--|
| | | | | | | | TOTAL CLOUD AMT. (Degrees) | DIRECTION (Tenths of degrees (00=colln)) | | | | | DRY BULB (Degrees in Col. 16 & 33) tenths in Col. 17 & 33) | WET BULB (Degrees and tenths) | | | | | | | | | | | | | WIND WAVES | SWELL | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | Nh | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | |
| 99 | 04.4 | 5 | 102.4 | 15 | 00 | 4 | 4 | 08 | 2 | 99 | 01 | 1 | 10 | 105 | 26 | 7 | 23 | 3 | 4 | 3 | 5 | 0 | 1 | 2 | 1 | 0.2 | 0 | // | 22 | 1 | 28.7 | 7 | 3 | 0 | 00 | 12 | 2 | 03 | | | | | | |
| 99 | 043 | 5 | ... | 15 | 06 | 4 | 5 | 08 | 2 | 99 | 02 | 2 | 10 | 105 | 26 | 6 | 23 | 9 | 1 | | | 0 | 1 | 1 | 1 | 0 | // | 22 | 1 | 27.0 | 6 | 3 | 00 | 00 | 12 | 2 | 03 | | | | | | | |
| 99 | ... | 5 | 1010 | 15 | 12 | 4 | 3 | 06 | 10 | 99 | 02 | 2 | 10 | 112 | 25 | 6 | 23 | 9 | 1 | 2 | 3 | 0 | 1 | 2 | 1 | 0.2 | 0 | // | 23 | 1 | 28.7 | 6 | 3 | 00 | 00 | 12 | 2 | 03 | | | | | | |
| 99 | 036 | 5 | 1012 | 15 | 18 | 4 | 1 | 23 | 06 | 11 | 05 | 2 | 10 | 102 | 28 | 3 | 24 | 9 | 1 | 2 | 3 | 0 | 1 | 2 | 1 | 0.1 | 0 | // | 22 | 1 | 28.7 | 3 | 3 | 00 | 00 | 12 | 2 | 03 | | | | | | |
| 99 | ... | 5 | 0992 | 16 | 00 | 4 | 5 | 19 | 10 | 99 | 02 | 2 | 10 | 098 | 28 | 9 | 26 | 4 | 1 | 3 | 3 | 0 | 1 | 2 | 3 | 0.2 | 0 | // | 29 | 1 | 30.0 | 9 | 3 | 00 | 00 | 17 | 0 | 07 | | | | | | |
| 99 | 001 | 5 | ... | 16 | 06 | 4 | 4 | 19 | 07 | 99 | 02 | 2 | 10 | 127 | 26 | 1 | 23 | 4 | 3 | 3 | 0 | 0 | 1 | 2 | 1 | 0.2 | 0 | // | 22 | 1 | 26.3 | 1 | 3 | 00 | 00 | 14 | 0 | 04 | | | | | | |
| 99 | 007 | 5 | 0973 | 16 | 12 | 4 | 5 | 17 | 12 | 77 | 32 | 2 | 10 | 105 | 26 | 6 | 23 | 9 | 1 | 2 | 3 | 0 | 0 | 1 | 2 | 2 | 0.2 | 0 | // | 25 | 1 | 28.3 | 6 | 3 | 00 | 00 | 12 | 1 | 05 | | | | | |
| 99 | 026 | 5 | ... | 16 | 18 | 4 | 3 | 11 | ... | 99 | 02 | 1 | 10 | ... | 27 | ... | 26 | 3 | 1 | | | 0 | 1 | 1 | 1 | 0.06 | 0 | // | 24 | 1 | 25.5 | ... | 3 | | | 14 | 1 | 06 | | | | | | |
| 99 | 021 | 5 | 0953 | 17 | 00 | 4 | 4 | 17 | 09 | 99 | 02 | 0 | 10 | 011 | 28 | 9 | 25 | 6 | 4 | 1 | 3 | 0 | 0 | 1 | 2 | 1 | 1.5 | 0 | // | 27 | 1 | 26.7 | 7 | 3 | 00 | 00 | 17 | 0 | 05 | | ✓ | | | |
| 99 | 021 | 5 | 114 | 17 | 06 | 4 | ... | ... | ... | ... | ... | ... | 10 | 105 | ... | 6 | ... | 4 | 8 | 3 | | 0 | 1 | 2 | 1 | 0 | // | 22 | 1 | 25.3 | ... | 3 | 00 | 00 | 17 | 0 | 04 | | | | | | | |
| 99 | 012 | 5 | 0715 | 11 | 12 | 4 | 5 | 16 | ... | 99 | 02 | 0 | 10 | 098 | ... | 3 | ... | 0 | 11 | 3 | | 0 | 1 | 2 | 1 | 0.2 | 0 | // | 24 | 1 | 24.4 | 3 | 3 | 00 | 00 | 16 | 0 | 05 | | | | | | |
| 99 | 015 | 5 | 0924 | 17 | 18 | 4 | 4 | ... | 12 | 99 | 02 | 0 | 10 | 111 | ... | 2 | 22 | 4 | 1 | | | 0 | 1 | 4 | ... | 0 | // | 22 | 1 | 22.5 | 3 | 3 | 00 | 00 | 15 | 0 | 03 | | | | | | | |
| 99 | 013 | 5 | 0714 | 18 | 00 | 4 | 3 | 15 | 08 | 99 | 02 | 0 | 10 | 08.8 | 23 | 9 | 22 | 3 | 1 | 3 | 0 | 0 | 1 | 2 | 0 | 0.0 | 0 | // | 24 | 1 | 23.3 | 9 | 3 | 00 | 00 | 15 | 0 | 03 | | ✓ | | | | |
| 99 | 11 | 5 | 111 | 18 | 06 | 4 | 0 | ... | 07 | 99 | ... | 5 | 10 | 125 | 27 | 8 | ... | ... | ... | ... | | 0 | 1 | 2 | 1 | ... | 0 | // | ... | 1 | ... | 7 | 7 | 8 | 3 | 00 | 00 | 15 | 0 | 02 | | | | |
| 99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | Nh | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | |

| | | | |
|---|--|-------------------|--|
| SHIP'S NAME S'S M/V <i>Washington</i> | MONTH AND YEAR 19 <i>61</i> | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU |
| CALL SIGN <i>R6WU</i> | VOYAGE FROM: <i>...</i> TO: <i>...</i> | DATE LAST CHECKED | |
| COUNTRY OF REGISTRY <i>US</i> | | CORRECTION | |

SHIP'S WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert
 - all temperatures to "C".
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LATITUDE (Degrees and tenths, 4 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | TOTAL CLOUD AMT. (Coded) | VISIBILITY (Coded) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) | SEA LEVEL PRESSURE (Millibars and tenths; Last 3 figures in Col. 15 and first 3 figures in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGH CLOUDS | COURSE OF SHIP (Coded 0-9) | SPEED OF SHIP (Coded 0-9) | 3-HOUR PRESS. CHANGE | SPEED OF SHIP (Coded 0-9) | CHARACTER OF CHANGE | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths; 3 figures) | TENTHS OF AIR TEMP. | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 1s E _s E _s R _s , ICE C ₂ K D _i r _e , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | | | |
|------|---|--|---|---------------------------------|----------------------|------------------------|--|-------------------------|-----------------------------|--------------------|----------------------------------|--------------------|--|-------------------|-------|---|-------------------------|-----------------------|-----------------------|---------------------|----------------------------|---------------------------|----------------------|---------------------------|---------------------|-----------|-------------------------------------|-------------------------------|-------------------------------|---|--|--|------|--|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|----|---|----|
| | | | | | | | DIRECTION (True) (tenths of degrees) (00-99) | SPEED (Tenths of knots) | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | |
| 99 | L _a L _a L _a | Qc | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | |
| 99 | | | | | | 00 | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | 3 | | | | | | | | | | |
| 99 | 010 | | 0100 | 19 | 06 | 11 | 8 | 10 | 06 | 75 | 03 | 0 | 10 | 137 | 23 | 3 | 28 | 6 | 0 | 0 | | | | | 0 | 6 | 2 | 1 | 0 | // | 22 | 1 | 27.7 | 3 | 00 | 00 | 07 | 0 | 03 | | | | |
| 99 | 020 | | 0915 | 19 | 12 | 4 | 8 | 07 | 03 | 77 | 02 | 2 | 10 | 112 | 21 | 7 | 217 | 3 | 6 | 2 | 0 | | | | 0 | 6 | 2 | 3 | 0.1 | 0 | // | 22 | 1 | 21.7 | 7 | 3 | 00 | 00 | 07 | 0 | 03 | | |
| 99 | 028 | 5 | 0922 | 19 | 18 | 4 | 1 | 06 | 05 | 1 | 07 | 1 | 10 | 137 | 21 | 7 | 217 | 4 | 1 | 2 | 0 | | | | 0 | 6 | 3 | 3 | 0.2 | 0 | // | 18 | 1 | 24.6 | 2 | 3 | 00 | 00 | 15 | 0 | 04 | | |
| 99 | 028 | | 0927 | 20 | 00 | 4 | 5 | 05 | 07 | 98 | 02 | 1 | 10 | 098 | 25 | 7 | 244 | 5 | 2 | 2 | 0 | | | | 0 | 6 | 3 | 3 | 0.2 | 0 | // | 26 | 1 | 28.3 | 7 | 3 | 00 | 00 | 05 | 0 | 04 | | |
| 99 | 048 | | 0950 | 20 | 06 | 4 | 1 | 07 | 10 | 98 | 02 | 0 | 10 | 122 | 20 | 7 | 239 | 1 | 1 | 0 | 0 | | | | 0 | 6 | 3 | 1 | 0.1 | 0 | // | 22 | 1 | 27.7 | 7 | 3 | 00 | 00 | 17 | 0 | 05 | | |
| 99 | 051 | | 0945 | 20 | 12 | 4 | 9 | 07 | 08 | 98 | 03 | 2 | 10 | 098 | 24 | 7 | 239 | 7 | 2 | 2 | 0 | | | | 0 | 6 | 3 | 3 | 0.2 | 0 | // | 26 | 1 | 28.3 | 7 | 3 | 00 | 00 | 07 | 0 | 04 | | |
| 99 | 110 | 5 | 0951 | 21 | 18 | 4 | 4 | 10 | 13 | 11 | 12 | 1 | 10 | 117 | 26 | 7 | 244 | 4 | 1 | 2 | 0 | | | | 0 | 6 | 3 | 3 | 0.6 | 0 | // | 23 | 1 | 26.5 | 7 | 3 | 00 | 00 | 15 | 0 | 04 | | |
| 99 | 074 | 5 | 0951 | 21 | 00 | 4 | 6 | 09 | 10 | 98 | 02 | 1 | 10 | 091 | 26 | 7 | 239 | 6 | 3 | 2 | 0 | | | | 0 | 6 | 3 | 4 | 0.2 | 0 | // | 26 | 1 | 27.8 | 7 | 3 | 00 | 00 | 07 | 0 | 03 | | |
| 99 | | 5 | 0954 | 21 | 06 | 4 | 1 | 11 | 16 | 75 | 03 | 0 | 10 | 114 | 21 | 6 | 239 | 1 | 7 | 2 | 0 | | | | 0 | 6 | 3 | 1 | 0.1 | 0 | // | 22 | 1 | 27.4 | 6 | 3 | 00 | 00 | 09 | 0 | 08 | | |
| 99 | 070 | 5 | 0971 | 21 | 12 | 4 | 8 | 10 | 13 | 98 | 02 | 2 | 10 | 098 | 25 | 6 | 233 | 7 | 7 | 2 | 0 | | | | 0 | 6 | 3 | 6 | 0.5 | 0 | // | 25 | 1 | 28.3 | 6 | 3 | 00 | 00 | 10 | 0 | 05 | | Re |
| 99 | 098 | 5 | 0971 | 21 | 18 | 4 | 7 | 11 | 13 | 99 | 11 | 2 | 10 | 100 | 24 | 1 | 233 | 1 | 2 | 4 | 0 | | | | 0 | 6 | 1 | 0.6 | 0 | // | 22 | 1 | 25.6 | 1 | 3 | 00 | 00 | 10 | 0 | 06 | | | |
| 99 | 110 | 5 | 0978 | 22 | 00 | 4 | 1 | 15 | 16 | 77 | 01 | 1 | 10 | 115 | 21 | 4 | 250 | 1 | 1 | 2 | 0 | | | | 0 | 8 | 1 | 0.0 | 0 | // | 23 | 1 | 27.2 | 4 | 3 | 05 | 01 | 10 | 0 | 05 | | ✓ | |
| 99 | 091 | 5 | 0980 | 22 | 06 | 4 | 4 | 14 | 10 | 100 | 01 | 1 | 10 | 125 | 25 | 0 | 233 | 4 | 1 | 2 | 0 | | | | 0 | 6 | 1 | 0.6 | 0 | // | 22 | 1 | 26.5 | 0 | 3 | 00 | 01 | 15 | 0 | 05 | | | |
| 99 | 085 | 5 | 0980 | 22 | 12 | 4 | 5 | 15 | 10 | 98 | 02 | 0 | 10 | 105 | 24 | 4 | 228 | 5 | 1 | 2 | 0 | | | | 0 | 8 | 2 | 3 | 0.1 | 0 | // | 24 | 1 | 27.8 | 4 | 3 | 05 | 01 | 15 | 0 | 05 | | |
| 99 | 05 | 5 | 0980 | 22 | 18 | 4 | 8 | 16 | 10 | 11 | 02 | 1 | 10 | 122 | 27 | 2 | 244 | 8 | 2 | 2 | 0 | | | | 0 | 6 | 3 | 1 | 0.0 | 0 | // | 23 | 1 | 26.0 | 2 | 3 | 00 | 01 | 15 | 0 | 04 | | |
| 99 | L _a L _a L _a | Qc | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | |

| SHIP'S NAME <input type="checkbox"/> S S <input type="checkbox"/> M V | | | MONTH AND YEAR 19 <u>67</u> | | BAROMETER NUMBER | | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU | | SHIP'S WEATHER OBSERVATIONS | | | | | | | | | | | | GENERAL INSTRUCTIONS (See observing handbook for more details) | | | | | | | | | | | | CHECK IF SENT BY RADIO | | | | | | | |
|---|--|---|---|----------------------|------------------------|-------------------------------|--|----------------------|--------------------------------|------------------------------------|----------------------|---|---------------------------------------|----------------------------------|-------------------------|-----------------------|-----------------------|---------------------|--|-------------------------------|---|------------------------------------|----------------|---|-------------------------|-----------|---|-------------------------------|---|--|--|---|--|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----|----|
| CALL SIGN | | | VOYAGE | | FROM: | | DATE LAST CHECKED | | 3-HOUR PRESS. CHANGE | | | | | | | | | | | | 1. Fill in all blanks on upper left-hand side of this form. 2. Check appropriate box in column 32. 3. Before entering, convert: a. all temperatures to °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, | | | | | | | | | | | | followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.) | | | | | | | |
| COUNTRY OF REGISTRY | | | TO: | | CORRECTION | | AIR-TEMP. DATA °C | | | | | | | | | | | | 4. Begin a new sheet each month, voyage, ocean and quadrant. 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. | | | | | | | | | | | | OBSERVERS INITIALS | | | | | | | | | |
| IND. | QUADRANT OF GLOBE (Degrees and tenths 3 figures) | LONGITUDE (Degrees and tenths 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | TOTAL CLOUD AMT. (Degrees) | DIRECTION (True) (tens of degrees 00 = calm) | SPEED (True) (knots) | VISIBILITY (Coded) (0 - 99) | PRESENT WEATHER (Coded 00 - 99) | PAST WEATHER (0 - 9) | SEA LEVEL PRESSURE (Millibars and tenths, last 3 figures in Col. 15 and first "10" in Col. 14) | DRY BULB (Degrees in Col. 17 & 33) | WET BULB (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGH CLOUDS | COURSE OF SHIP (Coded) (0 - 9) | SPEED OF SHIP (Coded) (0 - 9) | CHARACTER OF CHANGE (M and tenths) | AMOUNT OF CHANGE (M and tenths) | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) (0 - 9) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths 3 figures) | TENTHS OF AIR TEMP. | WAVES (Make as many groups as patterns observed) | WIND WAVES | SWELL | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |
| L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | |
| 99 | 06.9 | 5 | 097.9 | 23 | 00 | 4 | 7 | 16 | 09 | 99 | 52 | 2 | 10 | 091 | 35 | 6 | 278 | 2 | 3 | 0 | 0 | 0 | 0 | 3 | 5.1 | 0 | // | 25 | 1 | 27.2 | 4 | 3 | 00 | 00 | 15 | 0 | 06 | | | |
| 99 | 06.2 | 5 | 0980 | 23 | 06 | 4 | 2 | 11 | 12 | 98 | 57 | 1 | 10 | 117 | 25 | 6 | 232 | 2 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | // | 23 | 1 | | 6 | 3 | | | | | 15 | 0 | 05 | | |
| 99 | 06.5 | 5 | 0980 | 23 | 12 | 4 | 4 | 16 | 12 | 98 | 05 | 1 | 10 | 078 | 26 | 1 | 244 | 4 | | | | 7 | 2 | 3 | 0.1 | 0 | // | 24 | 1 | 22.7 | 1 | 3 | 00 | 10 | 16 | 0 | 25 | | | |
| 99 | 04.7 | 5 | 0990 | 23 | 18 | 4 | 9 | 16 | 11 | 98 | 59 | 1 | 10 | 137 | 25 | 1 | 250 | 9 | 7 | | | 2 | 1 | 0 | 0 | // | 25 | 1 | 27.2 | 1 | 3 | | | | 11 | 0 | 06 | | | |
| 99 | 01 | 5 | 0980 | 24 | 00 | 4 | 10 | 05 | 05 | 98 | 02 | 2 | 10 | 075 | 26 | 1 | 277 | 7 | 2 | 0 | 0 | 0 | 0 | 3 | 0.1 | 0 | // | 23 | 1 | 28.3 | 1 | 3 | 00 | 00 | 05 | 0 | 25 | | | |
| 99 | 033 | 5 | 981 | 24 | 06 | 4 | 4 | 10 | 16 | 98 | 02 | 2 | 10 | 125 | 5 | 6 | 239 | 4 | 2 | 0 | 0 | 8 | 2 | 1 | 0 | 0 | // | 22 | 1 | 26.1 | 1 | 3 | 00 | 00 | 15 | 0 | 05 | | | |
| 99 | 02.8 | 5 | 181 | 24 | 12 | 4 | 4 | 07 | 06 | 98 | 02 | 2 | 10 | 078 | 23 | 9 | 228 | 4 | 4 | 3 | 0 | 0 | 0 | 3 | 0.1 | 0 | // | 22 | 1 | 27.2 | 9 | 3 | 00 | 00 | 07 | 0 | 25 | | | |
| 99 | 018 | 5 | 181 | 24 | 18 | 4 | 8 | 08 | | 99 | 02 | 2 | 10 | 11.9 | 23 | 9 | 228 | 8 | 1 | 2 | 0 | 8 | 2 | 1 | 0 | 0 | // | 22 | 1 | 27.4 | 1 | 3 | | | | 14 | 0 | 04 | | |
| 99 | 01.2 | 5 | 098.0 | 25 | 00 | 4 | 9 | 18 | 06 | 98 | 02 | 4 | 10 | 07.1 | 28 | 3 | 239 | 9 | 1 | 0 | 1 | 0 | 0 | 6 | 3.9 | 0 | // | 22 | 1 | 26.1 | 3 | 3 | 00 | 00 | 18 | 0 | 03 | | | |
| 99 | 01 | 5 | 098.0 | 25 | 06 | 4 | 0 | 16 | 06 | 98 | 05 | 4 | 10 | 11.2 | 22 | 8 | 222 | 0 | 1 | 0 | 1 | 0 | 8 | 2 | 1 | 0 | // | 22 | 1 | 22.8 | 8 | 3 | | | | 15 | 0 | 03 | | |
| 99 | 00 | 5 | 098.0 | 25 | 12 | 4 | 0 | 00 | 0 | 16 | 05 | 1 | 10 | 07.5 | 22 | 2 | 217 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0.1 | 0 | // | 21 | 1 | 25.0 | 2 | 3 | 00 | 00 | 00 | 0 | 14 | | | |
| 99 | 00.5 | 5 | 754 | 25 | 18 | 4 | 9 | 00 | 00 | 77 | 05 | 4 | 10 | 07.1 | 22 | 2 | 217 | 9 | 6 | 0 | 0 | 2 | 2 | 3 | 0.1 | 0 | // | 20 | 1 | 22.4 | 2 | 3 | | | | 14 | 0 | 25 | | |
| 99 | 00.1 | 5 | 097.6 | 26 | 00 | 4 | 7 | 18 | 03 | 97 | 05 | 4 | 10 | 07.1 | 23 | 9 | 228 | 7 | 6 | 0 | 0 | 2 | 2 | 3 | 0.1 | 0 | // | 23 | 1 | 25.0 | 9 | 3 | 00 | 00 | 18 | 0 | 03 | | | |
| 99 | 00.2 | 5 | 936 | 26 | 06 | 4 | 0 | 24 | 01 | 17 | 05 | 4 | 10 | 07.3 | 22 | 2 | 217 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 0.1 | 0 | // | 21 | 1 | 22.5 | 4 | 3 | | | | 35 | 0 | 03 | | |
| 99 | 01.1 | 7 | 092.1 | 26 | 12 | 4 | 0 | 21 | 05 | 97 | 04 | 10 | 07.8 | 22 | 8 | 222 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 3 | 0.1 | 0 | // | 22 | 1 | 24.4 | 8 | 3 | 00 | 00 | 21 | 0 | 05 | | | |
| 99 | 01 | 7 | 1919 | 26 | 18 | 4 | 8 | 00 | 02 | 97 | 05 | 4 | 10 | 10.8 | 25 | 6 | 23.38 | | 0 | 0 | 9 | 2 | 2 | 1 | 0 | 0 | // | 22 | 1 | 24.6 | 6 | 3 | 00 | 00 | 35 | 0 | 04 | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |

| | | | | | | | | | | | | | |
|--|--------------------------------------|-------------------|--|---|--|--|--|--|--|--|--|--|--|
| SHIP'S NAME <input type="checkbox"/> S/S <input checked="" type="checkbox"/> M/V <i>Washington</i> | MONTH AND YEAR <i>March 19 67</i> | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SERVICES ADMINISTRATION WEATHER BUREAU SHIP'S WEATHER OBSERVATIONS | GENERAL INSTRUCTIONS (See observing handbook for more details) | | | | | | | | | |
| CALL SIGN <i>K6WU</i> | VOYAGE FROM: <i>San Diego</i> | DATE LAST CHECKED | | 1. Fill in all blanks on upper left-hand side of this form. 2. Check appropriate box in column 32. 3. Before entering, convert: a. all temperatures to °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.) 4. Begin a new sheet each month, voyage, ocean and quadrant. 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. | | | | | | | | | |
| COUNTRY OF REGISTRY <i>US</i> | TO: <i>San Diego</i> | CORRECTION | | | | | | | | | | | |

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LATITUDE (Degrees and tenths, 4 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PAST WEATHER (Coded 00-99) | PRESENT WEATHER (Coded 00-99) | SEA LEVEL PRESSURE (Millibars and tenths; Last 3 figures in Col. 15 and first 99 in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS (Degrees in Col. 17 & 33) | TYPE OF LOWEST CLOUD | TYPE OF MIDDLE CLOUD | TYPE OF HIGH CLOUD | COURSE OF HIGH CLOUD | SPEED OF HIGH CLOUD (Coded 0-9) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0-9) | AMOUNT OF CHANGE (Nb and tenths) | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths; 3 figures) | WAVES (Make as many groups as patterns observed) | | CHECK ONE <input type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | TENTHS OF AIR TEMP. (Coded) | WIND WAVES | | SWELL | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD ₁ re, Wind Shifts, beginning and ending of precip., freak waves, etc.) | OBSERVERS INITIALS | | | | | | | |
|------|---|--|---|---------------------------------|----------------------|------------------------|-------------------------------|--|--------------------------|-------------------------------|----------------------------------|---|---------------------------------------|----------------------------------|---|--|----------------------|----------------------|--------------------|----------------------|------------------------------------|----------------------|------------------------------------|-------------------------------------|-----------|-------------------------------------|-------------------------|-------------------------------|---|--|--|---|--------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------|--|--------------------|----|---|---|---|---|---|---|
| | | | | | | | TOTAL CLOUD AMT. (Degrees) | DIRECTION (True) tenths of degrees (00 = calm) | | | | | DRY BULB (Degrees in Col. 17 & 33) | WET BULB (Degrees and tenths) | | | | | | | | | | | | | | | | PERIOD (seconds 2 figures) | HEIGHT (Coded) | | | PERIOD (Coded) | HEIGHT (Coded) | PERIOD (Coded) | HEIGHT (Coded) | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | | | |
| 99 | 30.0 | 7 | 091.0 | 27 | 00 | 44 | 11 | 05 | 11 | 00 | 10 | 10 | 10 | 10.1 | 25.6 | 22.8 | 4 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| 99 | 30.0 | 7 | 091.0 | 27 | 06 | 40 | 16 | 07 | 17 | 05 | 0 | 10 | 10 | 11.2 | 20.6 | 18.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 99 | 30.5 | 7 | 093.1 | 28 | 12 | 49 | 11 | 04 | 13 | 45 | 4 | 10 | 10 | 10.2 | 21.7 | 21.7 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 99 | 30.1 | 7 | 014.0 | 28 | 18 | 48 | 00 | 00 | 17 | 10 | 0 | 10 | 10 | 12.5 | 22.8 | 22.8 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| 99 | 30.0 | 7 | 097.8 | 29 | 00 | 40 | 10 | 00 | 17 | 11 | 0 | 10 | 10 | 11.2 | 20.9 | 18.8 | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 99 | 000 | 7 | 097.8 | 29 | 06 | 40 | 11 | 04 | 17 | 11 | 0 | 10 | 10 | 11.2 | 20.6 | 18.6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 99 | 000 | 7 | 097.8 | 29 | 12 | 49 | 00 | 04 | 15 | 28 | 1 | 10 | 10 | 11.5 | 20.6 | 19.6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 99 | 000 | 7 | 097.8 | 29 | 18 | 40 | 10 | 04 | 17 | 10 | 0 | 10 | 10 | 11.2 | 23.2 | 22.2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.8 | 30 | 06 | 41 | 10 | 00 | 17 | 10 | 0 | 10 | 10 | 11.2 | 21.7 | 21.7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.8 | 30 | 12 | 40 | 10 | 00 | 17 | 10 | 0 | 10 | 10 | 11.2 | 22.2 | 21.7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.8 | 31 | 00 | 40 | 11 | 05 | 17 | 02 | 2 | 10 | 10 | 11.2 | 24.4 | 22.8 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.8 | 31 | 06 | 41 | 11 | 05 | 15 | 02 | 2 | 10 | 10 | 10.5 | 22.7 | 21.7 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.5 | 31 | 12 | 49 | 00 | 00 | 15 | 02 | 4 | 10 | 10 | 11.5 | 22.7 | 21.1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 99 | 000 | 7 | 097.5 | 31 | 18 | 49 | 00 | 00 | 15 | 07 | 4 | 10 | 10 | 11.2 | 22.2 | 22.2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| SHIP'S NAME S/S <u>Washington</u> M/V <u>KGWU</u> | | MONTH AND YEAR <u>April</u> 19 <u>51</u> | | BAROMETER NUMBER | | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU | | GENERAL INSTRUCTIONS (See observing handbook for more details) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|----------------------|------------------------|--|-------|---|----------------------------------|--|--|-------------------|------|---|------------------------|-----------------------|-----------------------|----------------------|---------------------------|----------------------|------------------------------------|----------------|-------------------------------------|-------------------------|-----------|--|---------------------|--|-------------------------------|---|--|--------------------|------|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|----|----|--|--|
| CALL SIGN <u>KGWU</u> | | FROM: <u>San Pedro</u> | | DATE LAST CHECKED | | 1. Fill in all blanks on upper left-hand side of this form. 2. Check appropriate box in column 32. 3. Before entering, convert: a. all temperatures to °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.) 4. Begin a new sheet each month, voyage, ocean and quadrant. 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COUNTRY OF REGISTRY | | VOYAGE TO: <u>San Pedro</u> | | CORRECTION | | SHIP'S WEATHER OBSERVATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 0.1-9.9) | PRESENT WEATHER (Coded 00-99) | PAST WEATHER (0-9) in Col. 15 and first 3 figs in Col. 14 | SEA LEVEL PRESSURE (Millibars and tenths, 99 or 10 ⁰ in Col. 13 and first 3 figs in Col. 14) | AIR-TEMP. DATA °C | | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUD | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | COURSE OF HIGH CLOUD | SPEED OF SHIP (Coded 0-9) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0-9) | INDICATOR | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 | INDICATOR | SEA TEMPERATURE (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s E _s R _s , ICE C ₂ KD;re, Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | | | | | | | | |
| | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | | | |
| | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | |
| 99 | | | 7 175 | 01 | 00 | 4 | 1 | 11 | 24 | 11 | 22 | 1 | 10 | 278 | 26 | 7 | 044 | 6 | 4 | 3 | | | | | 6 | 10 | 0 | 11 | 26 | 1 | 22.3 | 7 | 3 | | | 12 | 9 | 22 | | | | | | |
| 99 | 000 | 7 | 0975 | | 06 | 4 | 2 | 00 | | 24 | 11 | 1 | 10 | 117 | | 2 | 112 | 2 | 3 | 1 | | | | 1 | 1 | | 0 | 11 | 21 | 1 | 21.8 | | 3 | | | 13 | 9 | 02 | | | | | | |
| 99 | 000 | 7 | 0980 | | 12 | 4 | 1 | 10 | 23 | 16 | 07 | 4 | 10 | 10.5 | 21 | 1 | 111 | 1 | 1 | 1 | | | | 0 | 2 | 20 | 0 | 11 | 21 | 1 | 21.7 | 1 | 3 | 10 | 20 | | | 14 | 9 | 13 | | | | |
| 99 | 000 | 7 | 0980 | | 18 | 4 | 9 | 00 | 00 | 25 | 22 | 4 | 10 | 11.9 | 21 | 2 | 117 | 1 | 1 | 1 | | | | 0 | 0 | 00 | 0 | 11 | 21 | 1 | 21.7 | 2 | 3 | 00 | 00 | | | 14 | 1 | 20 | | | | |
| 99 | 000 | 7 | 1000 | 02 | 00 | 4 | 7 | 12 | 24 | 29 | 21 | 1 | 10 | 22.8 | 26 | 7 | 039 | 7 | 4 | 3 | 1 | | | 6 | 2 | 6 | 10 | 0 | 11 | 24 | 1 | 22.4 | 7 | 3 | 00 | 00 | | | 14 | 3 | 00 | | | |
| 99 | 000 | 7 | 1000 | 02 | 06 | 4 | | | | 11 | 1 | 10 | 11.2 | 22 | 2 | 217 | 9 | 1 | 1 | 1 | | | | 0 | 1 | 0 | 0 | 11 | 20 | 1 | 21.8 | 2 | 3 | 00 | 00 | | | 14 | 8 | 03 | | | | |
| 99 | 000 | 7 | 1000 | 02 | 12 | 4 | 8 | 13 | 01 | 29 | 07 | 2 | 10 | 10.5 | 22 | 2 | 217 | 8 | 5 | 3 | 1 | | | 0 | 0 | 0 | 0 | 11 | 21 | 1 | 21.7 | 2 | 3 | 25 | 21 | | | 14 | 8 | 02 | | | | |
| 99 | 000 | 7 | 1000 | 02 | 18 | 4 | 1 | 15 | 30 | 13 | 05 | 2 | 10 | 12.5 | 25 | 0 | 233 | 6 | 2 | 9 | 1 | | | 0 | 1 | 0 | 0 | 11 | | 1 | 22.2 | 2 | 3 | 00 | 00 | | | 14 | 0 | 02 | | | | |
| 99 | 007 | 7 | 1000 | 02 | 00 | 4 | 7 | 06 | 01 | 18 | 01 | 2 | 10 | 18.8 | 23 | 3 | 217 | 7 | 3 | 1 | | | | 1 | 3 | 2 | 6 | 10 | 0 | 11 | 23 | 1 | 22.9 | 3 | 3 | 10 | 20 | | | 17 | 0 | 02 | | |
| 99 | 003 | 7 | 1000 | 02 | 06 | 4 | 9 | 00 | 00 | 25 | 12 | | 10 | 11.2 | | 2 | 219 | 1 | 1 | 1 | | | | 2 | 1 | 0 | 0 | 11 | 20 | 1 | 22.6 | 2 | 3 | 00 | 00 | | | 14 | 2 | 02 | | | | |
| 99 | 026 | 7 | 1000 | 02 | 12 | 4 | 1 | 14 | 06 | 28 | 02 | 2 | 10 | 11.2 | 21 | 7 | 118 | 5 | 3 | 1 | | | | 0 | 0 | 0 | 11 | 21 | 1 | 23.9 | 7 | 3 | 35 | 25 | | | 15 | 8 | 02 | | | | | |
| 99 | 000 | 7 | 1000 | 02 | 18 | 4 | 1 | 16 | 04 | 28 | 00 | 2 | 10 | 12.5 | 23 | 9 | 228 | 9 | 5 | 0 | 1 | | | 2 | 2 | 4 | 0 | 11 | 21 | 1 | 22.7 | 1 | 3 | 00 | 00 | | | 15 | 0 | 02 | | | | |
| 99 | 013 | 7 | 1000 | 02 | 00 | 4 | 8 | 16 | 00 | 18 | 02 | 2 | 10 | 08.5 | 24 | 4 | 228 | 8 | 5 | 3 | 1 | | | 8 | 2 | 6 | 13 | 0 | 11 | 24 | 1 | 24.1 | 4 | 3 | 05 | 23 | | | 16 | 0 | 02 | | | |
| 99 | 20 | 7 | 0980 | 04 | 06 | 4 | 4 | 13 | 07 | 18 | 02 | 2 | 10 | 11.2 | | 2 | 214 | 4 | 2 | 1 | | | | 8 | 2 | 1 | 07 | 0 | 11 | 23 | 1 | 22.4 | 1 | 3 | 00 | 00 | | | 14 | 0 | 03 | | | |
| 99 | 024 | 7 | 1000 | 04 | 12 | 4 | 8 | 17 | 07 | 18 | 03 | 1 | 10 | 01.8 | 25 | 6 | 248 | 8 | 3 | 1 | | | | 12 | 7 | 28 | 0 | 11 | 25 | 1 | 26.7 | 6 | 3 | 00 | 00 | | | 14 | 0 | 02 | | | | |
| 99 | 045 | 7 | 0981 | 04 | 18 | 4 | 6 | | | 11 | 00 | 1 | 10 | 10.5 | 24 | 4 | 216 | 1 | 2 | 1 | | | | 1 | 1 | 0 | 11 | 26 | 1 | 27.2 | 3 | | | | | 14 | 0 | 00 | | | | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | | | |

| | | |
|---|--------------------------------------|-------------------|
| SHIP'S NAME U.S.S. <i>Washington</i> | MONTH AND YEAR April 19 <i>68</i> | BAROMETER NUMBER |
| CALL SIGN | VOYAGE FROM: <i>Port</i> | DATE LAST CHECKED |
| COUNTRY OF REGISTRY | TO: <i>Port</i> | CORRECTION |

ESSA FORM 72-1 (1-68)
U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
WEATHER BUREAU

SHIP'S WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
(See observing handbook for more details)

- Fill in-all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | AIR-TEMP. DATA °C | | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | WAVES (Make as many groups as patterns observed) | | 38 | 39 | 40 | 41 | | | |
|------|--|--|---|---------------------------------------|---------------------------------------|---|---|-------------------------|-----------------------------------|---------------------------------|------------------------------------|---|---|----------------------------------|---|-------------------------|-----------------------|-----------------------|----------------------|----------------------------------|--|-------------------------------------|------------------------------------|----------------|---|--|---------------------------------------|-------------------------------|--------------------------------|----------------|--|--|------------------------|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|
| | | | | | | | | | | | | | | 15 | 16 | | | | | | | | | | | | | | | | | 33 | 34 | | | | | 35 | 36 | 37 |
| IMO. | QUADRANT OF GLOBE (Degrees and tenths 3 figures) | LONGITUDE (Degrees and tenths 4 figures) | DAY OF MONTH GMT (2 figures) | TIME INDICATOR (Coded) (2 figures) | WIND INDICATOR (Coded) (2 figures) | TOTAL CLOUD AMT. (Degrees and tenths of 10 = 0.1) | DIRECTION (True) (Degrees and tenths of 10 = 0.1) | SPEED (True) (knots) | VISIBILITY (Coded) (0.1 - 9.9) | PAST WEATHER (Coded 00 - 99) | PRESENT WEATHER (Coded 00 - 99) | SEA LEVEL PRESSURE (Millibars and tenths; 1.0 = 10 in in Col. 15 and first 3 figures in Col. 14) | DRY BULB (Degrees in Col. 16 & 33 tenths in Col. 17 & 33) | WET BULB (Degrees and tenths) | AMOUNT OF LOWEST CLOUDS (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | COURSE OF HIGH CLOUD | SPEED OF SHIP (Coded) (0 - 9) | 3-HOUR PRESS. CHANGE (Coded) (0 - 9) | AIR-SEA TEMP. DIFFERENCE (Coded) | DEW POINT FROM TABLE 30 (Coded) | INDICATOR | SEA TEMPERATURE °C (Degrees and tenths 3 figures) | TENTHS OF AIR TEMP. (Average seconds 2 figures) | PERIOD (Average seconds 2 figures) | HEIGHT (Coded) | DIRECTION (Tens of degrees) | PERIOD (Coded) | HEIGHT (Coded) | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |
| 99 | 042 | 7 | 0980 | 05 | 00 | 47 | 11 | 03 | 79 | 11 | 210 | 108 | 25 | 3 | 244 | 7 | 13 | 1 | 1 | 1 | 1 | 1 | 827 | 15 | 0 | 11 | 27 | 1 | 205 | 3 | 3 | 00 | 00 | 12 | 803 | | | | | |
| 99 | 051 | 7 | 0980 | 05 | 06 | 44 | 12 | 05 | 99 | 11 | 10 | 112 | 27 | 2 | 261 | 4 | 13 | 1 | 1 | 1 | 1 | 1 | 821 | 07 | 0 | 11 | 26 | 1 | 297 | 2 | 3 | 00 | 00 | 12 | 804 | | | | | |
| 99 | 057 | 7 | 0980 | 05 | 12 | 46 | 08 | 17 | 11 | 02 | 210 | 108 | 26 | 7 | 261 | 4 | 13 | 1 | 1 | 1 | 1 | 1 | 825 | 02 | 0 | 11 | 26 | 1 | 224 | 7 | 3 | 05 | 05 | 12 | 903 | | | | | |
| 99 | | | | | 18 | | | | | | | | | | | | | | | | | | | | | 0 | 11 | | | | | | | | | | | | | |
| 99 | | 7 | 0980 | | 00 | 47 | 10 | 09 | 99 | 03 | 10 | 088 | 30 | 0 | 156 | 7 | 16 | 1 | 1 | 1 | 1 | 1 | 826 | 10 | 0 | 11 | 27 | 1 | 300 | 0 | 3 | 05 | 05 | 05 | 804 | | | | | |
| 99 | 079 | 7 | 0980 | 06 | 06 | 46 | 09 | 10 | 11 | 02 | 210 | 112 | 26 | 7 | 256 | 6 | 13 | 1 | 1 | 1 | 1 | 1 | 821 | 07 | 0 | 11 | 24 | 1 | 278 | 7 | 3 | 05 | 05 | 05 | 804 | | | | | |
| 99 | 086 | | 0982 | | 12 | 41 | 07 | 10 | 99 | 11 | 10 | 105 | 27 | 2 | 244 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 001 | 02 | 0 | 11 | 26 | 1 | 275 | 2 | 3 | 05 | 05 | | | | | | | |
| 99 | 094 | 7 | 980 | | 18 | 47 | 07 | 15 | 11 | 03 | 10 | 117 | 28 | 4 | 261 | 8 | 13 | 1 | 1 | 1 | 1 | 1 | 820 | 06 | 0 | 11 | 25 | 1 | 270 | 9 | 3 | 05 | 05 | 05 | 804 | | | | | |
| 99 | | 7 | | | 17 | 43 | 04 | 19 | 79 | 01 | 10 | 088 | 27 | 4 | 263 | 2 | 22 | 1 | 1 | 1 | 1 | 1 | 827 | 18 | 0 | 11 | 28 | 1 | 300 | 4 | 3 | 05 | 03 | | | | | | | |
| 99 | 108 | 7 | 0982 | 07 | 06 | 44 | 06 | 16 | 98 | 05 | 10 | 112 | 27 | 2 | 256 | 4 | 13 | 1 | 1 | 1 | 1 | 1 | 821 | 07 | 0 | 11 | 24 | 1 | 292 | 2 | 3 | 05 | 03 | 03 | 706 | | | | | |
| 99 | 115 | 7 | 0984 | 07 | 12 | 41 | 10 | 00 | 98 | 01 | 10 | 112 | 27 | 2 | 244 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 822 | 07 | 0 | 11 | 26 | 1 | 294 | 7 | 3 | 00 | 00 | | | | | | | |
| 99 | 121 | 7 | 0984 | 07 | 18 | 46 | 02 | 05 | 19 | 02 | 10 | 125 | 27 | 8 | 250 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 820 | 00 | 0 | 11 | 24 | 1 | 268 | 8 | 3 | 00 | 00 | 04 | 204 | | | | | |
| 99 | 124 | 7 | 1185 | | 00 | 47 | 20 | 00 | 77 | 01 | 10 | 078 | 30 | 0 | 100 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 821 | 06 | 0 | 11 | 23 | 1 | 317 | 0 | 3 | 00 | 00 | | | | | | | |
| 99 | 127 | 7 | 0987 | 08 | 06 | 40 | 30 | 04 | 98 | 05 | 10 | 112 | 27 | 2 | 244 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 821 | 04 | 0 | 11 | 23 | 1 | 272 | 2 | 3 | 00 | 00 | 04 | 204 | | | | | |
| 99 | 143 | 7 | 0988 | 08 | 12 | 41 | 32 | 12 | 77 | 01 | 10 | 102 | 26 | 7 | 251 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 822 | 10 | 0 | 11 | 22 | 1 | 281 | 7 | 3 | 05 | 01 | | | | | | | |
| 99 | 147 | 7 | 0988 | 08 | 18 | 42 | 00 | 00 | 91 | 05 | 10 | 114 | 30 | 6 | 261 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 821 | 14 | 0 | 11 | 21 | 1 | 283 | 6 | 3 | 05 | 01 | | | | | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | l | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - |

SHIP'S NAME
 S/S
 M/V *Twashington*

MONTH AND YEAR
April 19 68

BAROMETER NUMBER

CALL SIGN
K6WCE

VOYAGE
 FROM: *So Pac*
 TO: *San D.*

COUNTRY OF REGISTRY
US

DATE LAST CHECKED

CORRECTION

ESSA FORM 72-1
 (1-68)

U.S. DEPARTMENT OF COMMERCE
 ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
 WEATHER BUREAU

SHIP'S
 WEATHER OBSERVATIONS

GENERAL INSTRUCTIONS
 (See observing handbook for more details)

- Fill in all blanks on upper left-hand side of this form.
- Check appropriate box in column 32.
- Before entering, convert:
 - all temperatures to °C.
 - all pressures to millibars.
 - if conversion tables not available, enter values as observed,
- Begin a new sheet each month, voyage, ocean and quadrant.
- Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data.

| IND. | QUADRANT OF GLOBE (Degrees and tenths, 3 figures) | LONGITUDE (Degrees and tenths, 4 figures) | DAY OF MONTH GMT (2 figures) | TIME GMT (2 figures) | MIN INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PAST WEATHER (Coded 00-99) | SEA LEVEL PRESSURE (Millibars and tenths, "9" or "10" in Col. 15 and first Col. 14) | AIR-TEMP. DATA °C | | WET BULB (Degrees and tenths) | HEIGHT OF LOWEST CLOUDS (Degrees and tenths) | TYPE OF LOWEST CLOUDS | TYPE OF MIDDLE CLOUDS | TYPE OF HIGH CLOUDS | SPEED OF SHIP (Coded 0-9) | 3-HOUR PRESS. CHANGE | CHARACTER OF CHANGE (Coded 0-9) | INDICATOR (mb and tenths) | AMOUNT OF CHANGE (mb and tenths) | SEA TEMPERATURE (Degrees and tenths, 3 figures) | TENTHS OF AIR TEMP. INDICATOR | WAVES (Make as many groups as patterns observed) | | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSER- VERS INITIALS | | | | | | | | | | | | |
|------|---|---|---------------------------------|----------------------|-----------------------|------------------|---|--------------------------|-------------------------------|--|--|------------|----------------------------------|---|-----------------------|-----------------------|---------------------|---------------------------|----------------------------|------------------------------------|------------------------------|-------------------------------------|---|----------------------------------|---|----|---|------------------------------------|-------------------------------|----|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|
| | | | | | | TOTAL CLOUD AMT. | DIRECTION (True) tens of degrees (00 = calm) | | | | DRY BULB (Degrees in Col. 17 & 33) tenths in Col. 17 & 33) | WIND WAVES | | | | | | | | | | | | | SWELL | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | |
| 99 | 155 | 1 | 111 | 09 | 00 | 4 | 000 | 03 | 99 | 02 | 010 | 085 | 31 | 7 | 256 | 0 | 9 | 0 | 0 | 0 | 7 | 12 | 0 | // | 23 | 1 | 21.3 | 7 | 3 | 05 | 03 | 32 | 2 | 22 | | | | | | | |
| 99 | | | | | 06 | | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | | | | | |
| 99 | | | | | 12 | | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | | | | | |
| 99 | 176 | 7 | 1021 | 10 | 18 | 43 | 30 | 12 | 99 | 03 | 010 | 013 | 31 | 7 | 233 | 0 | 8 | 0 | 1 | 6 | 2 | 12 | 0 | // | 10 | 1 | 20.5 | 7 | 3 | 05 | 03 | 29 | 2 | | | | | | | | |
| 99 | | | | | 00 | | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | | | | | |
| 99 | 185 | 7 | 1041 | 11 | 06 | 49 | 32 | 16 | 98 | 05 | 10 | 125 | 23 | 3 | 222 | 1 | 2 | 0 | 1 | 2 | 1 | 1 | 0 | // | 21 | 1 | 24.4 | 3 | 3 | 05 | 03 | 27 | 2 | 04 | | | | | | | |
| 99 | | | | | 12 | | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | | | | | |
| 99 | 177 | 7 | 1054 | 11 | 18 | 49 | 30 | 15 | 14 | 02 | 10 | 152 | 23 | 3 | 222 | 1 | 2 | 0 | 1 | 2 | 1 | 13 | 0 | // | 21 | 1 | 22.7 | 3 | 3 | 05 | 03 | 27 | 2 | 04 | | | | | | | |
| 99 | | | | | 00 | | | | | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | | | | | |
| 99 | 180 | 7 | 1074 | 12 | 06 | 49 | 35 | 13 | 98 | 02 | 10 | 152 | 24 | 4 | 222 | 1 | 0 | 5 | 0 | 6 | 2 | 1 | 06 | 0 | // | 21 | 1 | 23.0 | 4 | 3 | 05 | 03 | 31 | 2 | 04 | | | | | | |
| 99 | 173 | 1 | 1082 | 12 | 12 | 41 | 31 | 12 | 98 | 02 | 10 | 145 | 20 | 0 | 178 | 1 | 0 | 3 | 0 | 7 | 2 | 7 | 08 | 0 | // | 17 | 1 | 22.2 | 0 | 3 | 05 | 02 | 31 | 2 | 04 | | | | | | |
| 99 | 177 | 7 | 1091 | 12 | 18 | 45 | 32 | 08 | 79 | 02 | 10 | 190 | 21 | 1 | 172 | 5 | 0 | 3 | 9 | 0 | 7 | 2 | 4 | 00 | 0 | // | 15 | 1 | 20.3 | 1 | 3 | 05 | 02 | 37 | 2 | 04 | | | | | |
| 99 | 173 | 1 | 1012 | 13 | 00 | 42 | 03 | 04 | 97 | 01 | 010 | 160 | 31 | 3 | 339 | 4 | 1 | 3 | 0 | 0 | 7 | 4 | 10 | 0 | // | 32 | 1 | 21.6 | 3 | 3 | 05 | 01 | 03 | 4 | 02 | | | | | | |
| 99 | 237 | 7 | 1106 | 13 | 06 | 42 | 31 | 06 | 98 | 02 | 010 | 180 | 20 | 0 | 172 | 2 | 1 | 3 | 0 | 0 | 7 | 2 | 1 | 71 | 0 | // | 15 | 1 | 21.7 | 0 | 3 | 05 | 01 | 30 | 4 | 02 | | | | | |
| 99 | 241 | 7 | 1115 | 13 | 12 | 47 | 31 | 05 | 98 | 02 | 10 | 170 | 23 | 3 | 156 | 1 | 0 | 7 | 0 | 7 | 2 | 7 | 08 | 0 | // | 14 | 1 | 20.0 | 3 | 3 | 05 | 01 | 30 | 4 | 02 | | | | | | |
| 99 | 173 | 1 | 1124 | 13 | 18 | 49 | 11 | 05 | 98 | 05 | 10 | 170 | 24 | 4 | 156 | 1 | 0 | 7 | 0 | 7 | 2 | 1 | 06 | 0 | // | 14 | 1 | 20.7 | 8 | 3 | 05 | 01 | 30 | 4 | 02 | | | | | | |
| 99 | LaLaLa | Qc | LoLoLoLo | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | CM | CH | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | |

| | | | | | | | | | | | | | | | |
|--|--------------------------------------|-------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| SHIP'S NAME <input type="checkbox"/> S/S <input type="checkbox"/> M/V <i>Washington</i> | MONTH AND YEAR <i>April 19 68</i> | BAROMETER NUMBER | ESSA FORM 72-1 (1-68) U.S. DEPARTMENT OF COMMERCE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION WEATHER BUREAU | GENERAL INSTRUCTIONS (See observing handbook for more details) | | | | | | | | | | | |
| CALL SIGN <i>KGWU</i> | VOYAGE FROM: <i>Acapulco</i> | DATE LAST CHECKED | SHIP'S WEATHER OBSERVATIONS | 1. Fill in all blanks on upper left-hand side of this form. 2. Check appropriate box in column 32. 3. Before entering, convert: a. all temperatures to °C. b. all pressures to millibars. c. if conversion tables not available, enter values as observed, followed by letters or abbreviations for the first entry on each form, ("77.5°F", "29.905 in.", etc.) 4. Begin a new sheet each month, voyage, ocean and quadrant. 5. Transmit data in 5-figure groups from unshaded columns and remarks. See observing handbook, section 1-04 for handling missing data. | | | | | | | | | | | |
| COUNTRY OF REGISTRY <i>US</i> | TO: <i>San Diego</i> | CORRECTION | | | | | | | | | | | | | |

| IND. | QUADRANT OF GLOBE (Degrees and tenths) 3 figures) | LONGITUDE (Degrees and tenths) 4 figures) | DAY OF MONTH (2 figures) | TIME GMT (2 figures) | WIND INDICATOR (Coded) | WIND | | VISIBILITY (Coded 90-99) | PRESENT WEATHER (Coded 00-99) | SEA LEVEL PRESSURE (Millibars and tenths; Last 3 figures in Col. 15 and first in Col. 14) | AIR-TEMP. DATA °C | | 3-HOUR PRESS. CHANGE | AMOUNT OF CHANGE (mb and tenths) | INDICATOR | DEW POINT FROM TABLE 30 INDICATOR | SEA TEMPERATURE °C (Degrees and tenths) 3 figures) | TEETHS OF AIR TEMP. | | WAVES (Make as many groups as patterns observed) | | CHECK ONE <input checked="" type="checkbox"/> BUCKET <input type="checkbox"/> INTAKE | ADDITIONAL MESSAGE GROUPS AND REMARKS (More swell groups, 2 I _s E _s E _s R _s , ICE C ₂ KD _{ire} , Wind Shifts, beginning and ending of precip., freak waves, etc.) | CHECK IF SENT BY RADIO | OBSERVERS INITIALS | | | | | | | | | | | | | | | | | |
|------|---|---|---|-------------------------|---------------------------|--|------------------------|-----------------------------|----------------------------------|--|---|----------------------------------|----------------------------|-------------------------------------|-----------|--------------------------------------|--|---------------------|-------|---|----------------|--|--|------------------------------------|-----------------------|------|------|-------------------------------|-------------------------------|------|--|----------------|----|-------------------------------|-------------------------------|-------------------------------|----------------|-------------------------------|----|----|--|--|
| | | | | | | DIRECTION (Degrees (00 = calm)) 10 = 10° | SPEED (Tiree knots) | | | | DRY BULB (Degrees in Col. 16, tenths in Col. 17 & 33) | WET BULB (Degrees and tenths) | | | | | | WIND WAVES | SWELL | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | pp | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | |
| 99 | | | 1131 | 14 | 00 | 4 | 1 | 04 | 77 | 02 | 2 | 10 | 170 | 200 | 183 | 7 | 00 | 2 | 7 | 7 | 7 | 07 | 0 | // | 17 | 1 | 20.6 | 0 | 3 | 07 | 01 | 27 | 2 | 02 | | | | | | | | |
| 99 | | | | 14 | 06 | 4 | 1 | 76 | 10 | 98 | 02 | 10 | 180 | 18 | 167 | 6 | 00 | 7 | | 1 | 11 | 0 | // | 15 | 1 | 18.7 | 0 | 3 | | | 29 | 2 | 02 | | | | | | | | | |
| 99 | 212 | | | 14 | 12 | 4 | 1 | | 98 | 02 | 0 | 10 | 175 | 1 | 150 | 1 | 0 | 02 | | | 1 | 0 | // | 14 | 1 | 17.1 | 1 | 3 | 06 | 01 | 29 | 2 | 02 | | | | | | | | | |
| 99 | | | | 14 | 18 | 4 | 5 | 30 | 05 | 11 | 12 | 10 | 207 | 16 | 140 | 8 | 00 | 2 | 3 | 1 | 07 | 0 | // | 14 | 1 | 16.7 | 7 | 3 | 16 | 01 | 31 | 0 | 02 | | | | | | | | | |
| 99 | 271 | 1135 | | 15 | 00 | 4 | 5 | 10 | 71 | 03 | 0 | 10 | 180 | 21 | 157 | 0 | 0 | 00 | 0 | 0 | 0 | 0 | // | 19 | 1 | 18.7 | 1 | 3 | 26 | 02 | 37 | 7 | | | | | | | | | | |
| 99 | 275 | 7130 | | 15 | 06 | 4 | 6 | 33 | 11 | 98 | 02 | 1 | 10 | 173 | 10 | 148 | 3 | 5 | 00 | 7 | 7 | 07 | 0 | // | 13 | 1 | 16.7 | 6 | 3 | 06 | 07 | 33 | 0 | 07 | | | | | | | | |
| 99 | 271 | 1135 | | 15 | 12 | 4 | 7 | 32 | 16 | 98 | 02 | 2 | 10 | 160 | 15 | 139 | 8 | | | | | 1 | 0 | // | 14 | 1 | 16.7 | 6 | 3 | 05 | 04 | 30 | 2 | 06 | | | | | | | | |
| 99 | 275 | 1169 | | 15 | 18 | 4 | 7 | 27 | 08 | 98 | 02 | 2 | 10 | 186 | 16 | 144 | 1 | 3 | 00 | 1 | 0 | 7 | 2 | 1 | 03 | 0 | // | 13 | 1 | 16.7 | 1 | 3 | 05 | 04 | 30 | 2 | 02 | | | | | |
| 99 | | | | | 00 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 06 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 12 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 18 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 00 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 06 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 12 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | | | | | 18 | | | | | | | | | | | | | | | | | | 0 | // | | 1 | | | | | | | 3 | | | | | | | | | |
| 99 | L _a L _a L _a | Q _c | L _o L _o L _o L _o | YY | GG | i _w | N | dd | ff | VV | ww | W | - | PPP | TT | - | - | N _h | CL | h | C _M | C _H | D _s | v _s | a | PP | 0 | T _s T _s | T _d T _d | 1 | T _w T _w T _w | t _T | 3 | P _w P _w | H _w H _w | d _w d _w | P _w | H _w H _w | - | - | | |

Birds Collected

| | | |
|--------------------------|------------------|-----------|
| Audubon's Shearwater | 11 | 2 |
| W-Tailed Shearwater | 1 | 1 |
| Green-winged Teal | 11 11 | 9.6 = 2.5 |
| Lesser Green-winged Teal | 11 11 | 8 |
| Horseshoe Bittern | 11 | 2 |
| Green-winged Teal | 6 | 6 |
| Red-tailed Tropicbird | 11 | 2 |
| Common Noddy Tern | 1 | 1 |
| Lesser Frigatebird | 11 | 2 |
| Blue-faced Booby | 1 | 1 |
| Red-footed Booby | 2 | 2 |
| Frigatebird | 1 | 1 |
| Shearwater | 1 | 1 |
| Cassian's Duck | 1 | 1 |
| Sooty Tern | 1 | 1 |



Birds