

Official, No. 34.

MO. 34

CONTRIBUTIONS
TO OUR
KNOWLEDGE OF THE METEOROLOGY
OF THE
ARCTIC REGIONS.

Published by the Authority of the Meteorological Council.



PART V.

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[Continued on page 3 of cover.]

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PREFACE TO PART V.

THE material for the four previous parts of the "*Contributions to our Knowledge of the Meteorology of the Arctic Regions*" has been furnished mainly by the records of the several Franklin Search Expeditions which wintered in the Arctic Regions in localities eastward of the meridian of 120° W. This fifth part relates to the region of Behring Strait, and to Expeditions which were sent out to search in that direction for Sir John Franklin's Expedition.

The following is a list of the Expeditions, the records of which have been employed on the present occasion :—

Locality.	Ship.	Captain.	Years.	No. of Months.	Observations.
Port Providence - -	H.M.S. "Plover" -	T. E. L. Moore	1848-9	9	Hourly.
Chamisso Island - -	" " -	"	1849-50	12	"
Port Clarence - -	" " -	"	1850-1	11	"
" " - -	" " -	"	1851-2	11	"
" " - -	H.M.S. "Rattlesnake" -	H. Trollope, C.B.	1853-4	11	Tri-hourly. .
Point Barrow - -	H.M.S. "Plover" -	R. Maguire -	1852-4	23	Four-hourly.

With the exception of the hourly observations of temperature at Point Barrow, the Meteorological observations made at these stations have not before been fully discussed.

The publication of these results exhausts the amount of information as to the winter of the arctic regions obtainable from the records of the Franklin Search, and covers the period from 1848 to 1858. The discussion, as in the case of the previous parts, has been entirely conducted by Mr. Richard Strachan.

R. H. SCOTT,
Secretary to the Council.

August 1888.

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No. XXXI.

Results of Meteorological Observations made at Port Providence.

H.M.S. "PLOVER," Commander T. E. L. Moore, R.N., passed the winter 1848-9 in Emma Harbour, in latitude $64^{\circ} 26' 10''$ N., longitude 173° W. Emma Harbour is on the east side of Port Providence at its southern part, and is a basin about 4 miles long, and $1\frac{1}{2}$ mile broad. "Lofty rugged mountains, majestic and snow-bewrapped, surrounded the ice-bound harbour, now clad in a smooth almost unbroken mantle of dazzling white."*

During this wintering hourly meteorological observations were regularly and carefully recorded in the log-book, which is now deposited in the Public Record Office, and numbered 4658.

The barometrical observations have been corrected for approximate instrumental error, and reduced to temperature 32° . As the numbers on the thermometers used have not been recorded, the temperature observations have had to be taken without any correction whatever. The direction of the wind has been corrected for two points easterly variation of the compass.

Table I. gives the hourly means of the atmospheric pressure for each month, and for the period November to June inclusive. The diurnal range, if reliable, is abnormal. The results of all the observations exhibit a minimum at 9 a.m., a maximum at 11 a.m., a minimum at 6 p.m., and a maximum at midnight; the amplitude being $\cdot 016$ inch. The monthly mean pressure was greatest in April, least in November.

Table II. contains the hourly mean temperature of the air for each month. The coldest month was December, which had a mean temperature of only $3^{\circ} \cdot 8$. The temperature went down again in March to a mean of 6° .

Table III. gives the extremes of atmospheric pressure, from which it appears that it exceeded 31 inches in April, and reached $28 \cdot 5$ in December, giving an extreme range of $2 \cdot 5$ inches. The wind was N.E., and moderate with the high extremes; and from various directions, though stronger, with the low. Mist, snow, and squalls

* "The Tents of the Tuski," by W. H. Hooper, p. 71.

occurred with the low extremes, and the weather was generally fine with the high. In winter, temperature was lower with the high extremes than with the low.

Table IV. gives the extremes of the temperature of the air. The highest temperature, $56^{\circ}5$, was recorded in June, the lowest, -24° , in March, giving for the absolute range $80^{\circ}5$. The monthly range appears to be much greater in winter than in summer. In winter the barometer was lower with the highest than with the lowest temperatures. The wind was N.N.E., light or calm, and the weather clear, with the minima temperatures; stronger and S.Wly., overcast and misty, with the maxima.

Table V. contains the hourly sums of the wind components for each month.

Table VI. contains the hourly sums of the wind components for the entire period of 256 days, and their resultants. These show a maximum in the wind force about 3 a.m., and a minimum about 1 p.m., with secondary fluctuations, and, as regards direction, little variation in azimuth.

Table VII. gives the monthly resultants of the winds deduced from the means of the components as given in Table V.

Table VIII. shows the number of times calm was noted for each hour in each month, and for the period. Altogether there were 41 days of calm out of 256. March had nearly 9 days of calm, November less than 2. Calms were most frequent at 1 a.m., least at 3 p.m.

Table IX. summarises the winds of each month according to their azimuths and mean force. The results confirm the resultants given in Table VII., for the predominant winds were from N.N.E. in October, November, and December, W.S.W. and N.E. in January, N.E. and S.W. in February, S.W. and N.N.E. in March, N.N.E. and S.W. in April, N.N.E. and S.S.W. in May, N.E. and S.S.W. in June.

Table X. summarises the hourly notations of the weather in each month. The clearest month was April, the most overcast January, which also had the most mist. December was the most squally month. Out of 256 days snow fell during 58 and rain during 11, which indicates 98 days of precipitation for the entire year. There was very little fog, and that mostly in June. Wind, force 8 and upwards, was noted 27 times in October (14 days), 39 in November, 37 in December, 8 in January, 33 in February, 48 in March, 44 in April, 34 in May, 3 in June.

Table XI. shows hourly for each month, and for the whole period, the mean amount of cloud, on the scale of 0 to 10. April is here shown to be the clearest month, (omitting October, for which the data are incomplete). January and June were about equally overcast.

Table XII. contains the results of observations on the temperature of the surface sea-water.

October 18th to 31st. The barometer was very low. The mean temperature of the air was $3^{\circ}7$ below that of the sea. The winds were all from between N.N.W. and E.,

and fresh. On the 23rd, 10 a.m. to 6 p.m., a gale blew from N.N.E., force 9 to 11. Snow fell on 6 days.

November. The barometer continued very low. The mean temperature of the air fell to $10^{\circ}6$ below that of the sea. The winds were nearly all from between N.N.W. and E.N.E., and moderate. On the 16th, 3 to 5 p.m., the N. wind reached the force of 10. Snow fell on 10 days.

December. The barometer stood a little higher, but still low. The winds were registered to all points of the compass except S.E., though they mostly favoured N.N.W. to N.E., S.S.W., and W.S.W. They were fresh to moderate. On the 8th, 9 a.m. to noon, the wind was W., force 10, and 9th, midnight to 2 a.m., N.W. 10. Snow fell on 13 days.

January. The barometer was much higher than it had previously been. The temperature of the air was remarkably mild, and rain fell nearly the whole of one day. Snow fell on 11 days. Hail was noted at 7 entries or hours. The amount of cloud was large. The distribution of the winds was entirely different to what it had been in the previous months. They were from all points, but chiefly from S.S.E. to W., and from N. to N.E.; generally moderate.

February. The barometer maintained its high reading, and the temperature of the air remained comparatively mild for the locality. Rain again fell for about 12 hours. Snow fell on 10 days. The winds were variable, but chiefly from N.N.E. and N.E., and from S. to S.W. On the 12th, noon to 4 p.m., the wind was S. b. E. 10, and on the 13th, 7 to 8 p.m., S. 10.

March. The barometer stood rather lower than it had done during the previous two months, and the air became much colder. Snow fell on 12 days. The winds were chiefly from S.S.W. to W.S.W., and from N.N.W. to E.N.E.

April. The barometer stood highest in this month. The mean temperature of the air was $7^{\circ}8$ lower than that of the sea. Snow fell on 10 days. The winds were chiefly from N.N.E. and N.E., and W.S.W. to S.S.W.

May. The barometer stood lower than in April. The mean temperature of the air was now $0^{\circ}3$ higher than that of the sea. Rain fell on 3 days, snow on 11. The winds were chiefly from N. to E.N.E., and from S.S.W. and S.W. On the 3rd, 6 to 8 p.m., the wind was N.E. 10.

June. The barometer fell still lower. The mean temperature of the air rose $4^{\circ}2$ above that of the sea. Rain fell on 10 days, snow on 5. The sky was much clouded. Winds were registered to all points of the compass, but came chiefly from N.N.E. to E.N.E., and from S.S.E. to S.W.

TABLE I.

MEAN ATMOSPHERIC PRESSURE, at PORT PROVIDENCE, H.M.S. "PLOVER,"
1848 October 18th to 1849 June 30th.

Hours.	1848.			1849.						Nov. to June.
	Oct.*	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	
1 a.m.	inches. 29.502	inches. 29.572	inches. 29.725	inches. 29.848	inches. 29.909	inches. 29.731	inches. 30.125	inches. 29.895	inches. 29.732	inches. 29.817
2 "	.497	.567	.722	.846	.907	.735	.121	.896	.733	.816
3 "	.497	.564	.717	.842	.904	.735	.121	.897	.730	.814
4 "	.490	.564	.711	.837	.904	.736	.118	.896	.729	.812
5 "	.492	.564	.704	.835	.897	.735	.119	.894	.731	.810
6 "	.494	.566	.698	.830	.895	.740	.120	.893	.731	.809
7 "	.496	.567	.694	.832	.896	.742	.125	.894	.734	.810
8 "	.493	.565	.687	.825	.896	.743	.128	.894	.736	.809
9 "	.490	.566	.685	.826	.883	.741	.124	.890	.737	.806
10 "	.485	.570	.694	.840	.888	.749	.126	.893	.742	.813
11 "	.487	.571	.700	.843	.889	.754	.130	.889	.743	.815
Noon	.481	.569	.698	.844	.886	.750	.133	.891	.742	.814
1 p.m.	.480	.564	.696	.841	.883	.739	.132	.886	.742	.810
2 "	.481	.564	.691	.840	.883	.737	.129	.884	.742	.809
3 "	.484	.564	.688	.838	.886	.737	.130	.880	.744	.808
4 "	.488	.570	.687	.843	.888	.738	.130	.880	.742	.810
5 "	.491	.566	.687	.842	.888	.732	.131	.877	.736	.807
6 "	.487	.568	.689	.845	.890	.737	.118	.870	.739	.807
7 "	.503	.571	.687	.845	.898	.733	.117	.867	.740	.807
8 "	.516	.574	.692	.845	.903	.732	.120	.863	.742	.809
9 "	.521	.580	.692	.845	.904	.735	.130	.864	.742	.811
10 "	.521	.585	.691	.851	.906	.738	.145	.868	.740	.815
11 "	.526	.587	.695	.851	.910	.736	.156	.869	.741	.818
Midnight	.532	.587	.691	.850	.911	.738	.155	.876	.742	.819
Means	29.497	29.570	29.697	29.841	29.896	29.738	30.128	29.884	29.738	29.811
1 a.m. after Midnight	29.523	29.584	29.694	29.843	29.913	29.738	30.153	29.873	29.741	29.817

* For 14 days: 18th to 31st.

TABLE II.

MEAN TEMPERATURE OF THE AIR, at PORT PROVIDENCE, 1848 October 18th to 1849
June 30th, H.M.S. "PLOVER."

Hours.	1848.			1849.					
	Oct.*	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.
1 a.m.	24.2	18.0	2.9	19.7	15.0	3.7	17.5	26.1	36.0
2 "	24.3	18.0	2.7	19.9	14.7	3.6	16.8	26.0	35.8
3 "	24.2	18.1	2.9	20.1	14.2	3.2	16.8	26.1	35.9
4 "	24.2	17.9	2.7	20.3	13.8	3.0	16.5	25.8	36.3
5 "	24.4	17.8	3.5	20.3	14.4	2.8	16.9	27.1	37.0
6 "	24.5	17.6	3.8	20.5	14.4	2.6	17.7	28.0	37.2
7 "	24.7	17.9	4.0	20.1	14.7	2.8	19.3	29.1	37.5
8 "	24.9	17.8	3.9	20.4	15.1	4.1	21.0	30.6	38.2
9 "	24.8	18.1	3.9	19.9	15.3	7.1	22.7	31.3	39.5
10 "	25.2	18.4	4.4	19.9	16.4	9.0	24.2	32.8	39.7
11 "	25.7	18.6	4.3	20.2	18.0	10.3	26.2	33.0	40.1
Noon	26.0	19.3	4.8	21.0	19.8	11.6	26.7	33.7	40.6
1 p.m.	25.9	19.2	5.2	21.3	19.5	10.9	27.8	33.5	40.3
2 "	25.8	18.8	4.9	20.8	19.2	10.2	28.1	33.2	40.2
3 "	25.3	18.3	4.5	20.6	18.5	10.0	27.2	32.9	40.3
4 "	24.9	17.8	4.1	20.4	17.6	9.3	26.0	32.2	39.7
5 "	24.8	17.7	3.9	20.4	16.8	7.2	24.3	31.6	39.8
6 "	24.0	17.9	3.4	20.1	16.3	5.9	23.0	30.7	39.3
7 "	23.8	17.7	3.5	20.6	15.8	5.7	21.8	30.0	38.3
8 "	23.5	17.6	3.6	21.0	15.9	5.0	20.7	29.3	37.8
9 "	23.9	17.5	3.8	21.3	15.4	4.8	19.7	28.9	37.2
10 "	23.6	17.2	3.7	21.0	15.4	4.6	18.9	28.2	37.1
11 "	23.6	17.2	3.7	20.9	15.2	4.0	18.5	27.8	36.5
Midnight	23.8	17.3	3.2	20.9	15.3	3.6	18.0	27.1	36.3
Means	24.6	18.0	3.8	20.5	16.1	6.0	21.5	29.8	38.2
1 a.m. after Midnight	23.8	17.3	2.9	20.2	15.4	3.2	17.7	26.7	36.2

* For 14 days: 18th to 31st.

TABLE III.

EXTREMES OF ATMOSPHERIC PRESSURE, with accompanying TEMPERATURE OF THE AIR, WIND, and WEATHER, at PORT PROVIDENCE, H.M.S. "PLOVER."

Month.	Date.	Highest.	Temp.	Wind.	Weather.	Date.	Lowest.	Temp.	Wind.	Weather.	Range.
	d. h.	inches.	°			d. h.	inches.	°			inches.
November 1848	30 10	30.10	2.3	N.N.E. 1	b	11 7	28.72	29.3	N.N.W. 8	o m q	1.38
December "	2 12	30.72	-6.5	N.N.E. 4	b c q	30 19	28.49	29.5	W. 7	m s q	2.23
January 1849	15 15	30.79	4.5	N.E.b.N. 6	o m q	28 1	28.75	31.5	N. 2	m s	2.08
February "	17 2	30.80	28.3	S.W. 5	b c m	12 1	28.84	31.0	S.b.E. 10	o m q	1.96
March "	7 10	30.39	-14.0	N.N.E. 3	o c v	3 4	28.86	20.0	N.N.W. 9	o m s	1.53
April "	11 11	31.03	9.5	N.E. 4	b c v	4 6	29.18	28.0	S.W. 5	o m	1.85
May "	13 21	30.42	33.5	N.E. 3	b c v	8 8	28.85	33.0	E.N.E. 2	o c	1.57
June "	14 9	30.13	39.5	Calm	o c	24 1	29.21	36.5	S.W. 2	m r q	0.92
Period -	April	31.03	-	-	-	Dec.	28.49	-	-	-	2.54

TABLE IV.

EXTREMES OF AIR TEMPERATURE, with accompanying PRESSURE, WIND, and WEATHER, at PORT PROVIDENCE, H.M.S. "PLOVER."

Month.	Date.	Max.	Bar.	Wind.	Weather.	Date.	Min.	Bar.	Wind.	Weather.	Range.
	d. h.	°	inches.			d. h.	°	inches.			°
November 1848	6 8	33.0	29.84	Calm	o m s	30 7	-2.5	30.07	N.N.E. 1	b c	35.5
December "	30 1	31.0	29.19	S.b.W. 7	o m q	15 18	-22.0	30.36	N.N.E. 1	b c	53.0
January 1849	19 6	35.0	29.76	S.W.b.S. 3	o m r	2 10	-17.0	30.15	W.S.W. 1	b c m	52.0
February "	22 5	33.0	30.08	S.W. 3	o c m	7 10	-21.5	30.18	N.E.b.N. 2	b c v	54.5
March "	30 0	35.3	29.05	S.W.b.S. 2	o m s	10 12	-24.0	30.12	Calm	b c v	59.3
April "	23 0	46.0	20.95	Calm	b c v	2 18	-14.7	30.10	Calm	b c v	60.7
May "	25 1	44.5	30.21	S.S.W. 1	b c	18 12	5.0	30.00	Calm	b c v	39.5
June "	16 1	56.5	29.83	Calm	b c	18 13	30.0	29.76	Calm	o f	26.5
Period -	June	56.5	-	-	-	March	-24.0	-	-	-	80.5

TABLE V.

SUMS OF WIND COMPONENTS, at PORT PROVIDENCE, 1848-9.

Hours.	October 1848 (14 days).				November 1848.				December 1848.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	48.9	—	24.5	1.1	96.7	3.0	47.7	3.7	97.1	5.3	33.1	12.7
2 "	54.0	—	25.6	1.4	96.7	1.5	42.1	8.1	97.3	6.3	31.5	12.7
3 "	56.7	—	23.6	1.4	103.4	1.5	39.4	8.1	95.7	9.1	30.2	12.2
4 "	56.5	—	23.6	1.4	108.6	6.1	42.6	5.0	93.3	11.5	32.2	11.6
5 "	57.9	—	24.1	1.4	108.6	6.1	42.3	5.0	89.5	19.0	27.7	16.0
6 "	55.8	—	24.2	3.7	87.7	1.5	41.2	3.7	90.6	15.1	23.2	24.5
7 "	53.3	—	26.5	3.1	93.9	1.5	42.8	3.7	92.7	14.2	23.2	19.9
8 "	53.4	—	25.7	3.5	90.9	1.5	42.1	4.6	94.1	10.2	22.4	10.8
9 "	51.5	—	27.2	2.3	93.9	3.7	37.1	—	83.1	8.5	28.3	19.9
10 "	48.5	—	24.6	2.3	94.9	3.7	38.0	—	77.4	8.5	27.2	19.9
11 "	52.1	—	25.3	2.3	95.5	3.7	37.0	—	75.8	8.5	30.0	19.9
Noon	47.8	—	22.8	2.3	94.9	4.9	35.7	—	88.6	8.5	27.2	11.4
1 p.m.	44.6	—	27.0	1.1	88.0	5.8	34.4	0.4	78.1	9.7	28.1	15.2
2 "	46.3	—	23.9	1.1	87.0	6.7	34.4	0.8	81.2	12.0	28.6	11.0
3 "	48.8	—	24.4	3.8	85.8	9.6	39.9	0.8	80.8	12.8	22.1	12.3
4 "	47.0	—	28.2	3.8	85.5	6.4	41.1	0.8	80.2	5.7	22.8	18.8
5 "	46.6	—	25.0	4.2	85.1	1.8	40.4	0.8	80.8	5.2	24.5	18.7
6 "	45.5	—	24.9	4.2	82.4	5.3	41.0	0.8	89.2	4.5	31.3	12.5
7 "	47.1	—	24.9	2.3	81.6	5.3	39.0	0.8	88.0	4.1	24.2	10.9
8 "	49.2	—	22.2	2.3	76.0	5.3	37.3	1.9	88.8	4.1	25.6	11.1
9 "	49.3	—	23.4	1.9	85.7	4.9	39.2	2.5	92.2	4.1	31.9	12.5
10 "	50.4	—	23.5	1.9	82.8	4.9	36.7	1.4	91.2	5.0	31.9	12.9
11 "	52.0	—	24.2	1.9	84.7	4.9	36.8	1.4	91.5	5.0	32.3	13.3
Midnight	50.1	—	23.8	1.9	91.6	4.9	45.6	1.4	91.1	6.1	32.9	13.9
Means	50.6	—	24.7	2.4	90.9	4.4	39.7	2.3	87.8	8.5	28.0	14.8

TABLE V.—*continued.*SUMS OF WIND COMPONENTS, at PORT PROVIDENCE, 1848-9—*continued.*

Hours.	January 1849.				February 1849.				March 1849.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	37.1	29.5	24.2	39.7	40.9	46.6	30.4	21.1	47.6	19.1	15.3	19.1
2 "	39.5	34.0	25.4	43.2	43.8	46.5	31.2	22.9	51.7	23.4	18.5	22.4
3 "	40.6	34.4	22.8	43.0	45.7	43.7	35.3	27.6	53.6	22.7	21.6	20.0
4 "	40.4	39.1	23.3	45.1	42.2	44.6	28.5	26.0	44.7	22.1	21.7	17.6
5 "	37.1	36.4	29.5	36.4	43.3	41.1	40.2	18.0	49.2	25.2	20.4	25.1
6 "	40.2	30.1	23.0	34.0	42.4	38.9	37.8	18.0	40.3	21.9	25.1	26.4
7 "	35.5	34.0	18.1	32.9	40.1	37.7	38.2	17.4	48.3	23.2	15.4	28.8
8 "	38.1	31.5	10.7	34.8	34.8	34.2	40.5	19.1	44.8	21.5	13.9	30.7
9 "	31.0	39.9	19.4	34.7	33.2	38.5	26.4	19.7	37.3	21.2	18.0	23.7
10 "	32.9	34.6	21.8	33.8	31.1	43.7	22.6	19.3	42.1	21.9	19.4	21.0
11 "	31.8	32.0	28.2	32.4	31.0	49.5	20.4	16.7	45.3	21.4	22.0	21.0
Noon	34.9	30.1	17.1	34.3	30.8	48.8	16.0	19.5	41.8	20.0	23.2	19.7
1 p.m.	36.7	34.7	17.7	28.5	26.9	42.8	18.8	17.2	45.8	20.1	22.5	24.7
2 "	30.6	29.9	21.1	29.2	25.4	40.2	23.4	16.1	45.8	18.9	23.3	25.9
3 "	32.9	20.6	19.8	34.9	29.0	37.9	24.4	15.8	43.6	17.9	23.3	26.8
4 "	30.4	20.5	19.3	34.5	30.3	38.2	26.4	16.7	51.0	15.1	22.1	30.8
5 "	25.9	22.1	17.5	37.2	30.7	38.2	26.0	15.3	45.9	17.2	25.4	31.7
6 "	36.3	31.4	27.7	36.2	32.8	45.0	25.2	16.8	48.7	19.0	30.4	28.1
7 "	32.7	31.5	25.7	37.4	32.3	47.4	29.6	16.7	49.3	15.1	25.9	18.5
8 "	27.8	30.5	22.0	39.1	32.3	49.0	27.9	17.8	51.0	15.7	20.3	18.1
9 "	31.1	32.4	15.4	31.9	31.4	47.4	28.5	19.7	44.4	19.4	14.5	24.7
10 "	25.3	35.4	19.8	35.5	38.5	43.8	31.1	19.3	46.7	17.0	14.3	25.8
11 "	19.1	35.1	20.0	38.1	40.1	49.2	32.3	23.1	50.7	19.6	16.8	30.7
Midnight	30.2	36.6	23.6	40.1	42.6	52.5	36.6	23.6	59.2	17.4	17.2	28.6
Means	33.3	31.9	21.5	36.0	35.5	43.6	29.1	19.3	47.0	19.8	20.4	24.6

TABLE V.—*concluded.*SUMS OF WIND COMPONENTS at PORT PROVIDENCE, 1848-49—*concluded.*

Hours.	April 1849.				May 1849.				June 1849.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	47.8	22.0	24.3	31.7	39.6	20.1	39.1	14.1	38.3	8.4	36.7	3.7
2 "	49.9	23.4	29.1	28.8	46.8	16.9	42.8	14.1	40.3	4.7	36.3	1.4
3 "	45.7	20.4	31.0	29.5	48.1	15.5	33.6	14.2	43.4	8.5	29.8	5.3
4 "	45.9	22.2	32.6	24.4	48.3	16.0	33.9	13.1	48.5	1.1	31.3	4.6
5 "	47.0	18.4	36.8	20.8	42.4	18.0	29.9	12.1	42.3	3.8	29.7	3.3
6 "	46.6	19.0	30.5	14.7	44.2	15.1	34.5	8.9	40.7	2.7	29.8	3.5
7 "	36.1	15.5	17.7	16.9	41.3	14.2	30.8	9.9	37.5	4.7	29.4	2.6
8 "	34.4	15.1	22.4	14.0	36.7	14.7	28.5	11.1	31.6	10.2	29.3	2.0
9 "	33.3	15.6	20.1	15.6	29.8	17.6	32.5	11.0	28.0	13.4	30.4	4.1
10 "	32.5	12.1	19.6	14.3	37.5	17.9	29.4	12.1	26.1	22.8	32.1	4.5
11 "	33.9	15.6	22.0	17.1	44.3	17.8	30.1	14.9	27.4	15.3	27.7	6.1
Noon	31.0	13.5	20.7	16.7	45.9	21.2	37.7	15.7	28.6	15.5	25.7	3.7
1 p.m.	25.9	13.8	18.1	16.4	32.6	20.5	46.0	12.7	22.9	21.5	24.1	8.8
2 "	23.6	20.1	18.3	20.8	38.2	18.9	46.9	11.6	26.6	20.1	23.7	10.0
3 "	24.2	18.6	16.3	21.8	39.5	19.6	41.8	12.2	22.6	23.9	28.6	8.2
4 "	28.8	15.8	22.1	16.4	39.4	21.5	41.2	12.8	29.3	16.6	22.1	9.3
5 "	33.5	18.0	20.8	23.5	46.1	21.1	33.2	12.7	30.0	11.4	19.7	6.7
6 "	30.6	21.6	22.6	19.7	37.5	20.3	37.0	11.3	28.5	11.7	16.1	8.7
7 "	33.4	16.2	25.7	19.6	33.4	22.6	31.9	13.2	29.0	11.1	21.6	8.2
8 "	34.8	15.2	28.6	18.0	31.7	29.5	31.5	17.1	29.7	12.9	23.1	8.2
9 "	29.8	26.8	25.5	28.3	29.4	25.2	31.0	13.8	35.8	9.5	23.9	4.5
10 "	45.1	26.7	20.9	33.4	31.5	33.1	31.9	19.0	43.4	6.9	30.1	2.6
11 "	45.0	26.0	30.5	30.9	39.5	25.1	31.1	17.3	45.6	7.4	36.5	6.7
Midnight	49.4	26.0	28.1	33.0	40.2	27.5	29.1	15.5	46.0	9.5	35.3	5.5
Means	37.0	19.1	24.3	21.9	39.3	20.4	34.8	13.4	34.3	11.4	28.0	5.5

TABLE VI.

SUMS OF WIND COMPONENTS, with RESULTANT WINDS,
at PORT PROVIDENCE, H.M.S. "PLOVER,"
1848 October 18th to 1849 June 30th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
1 a.m.	494.0	154.0	275.3	146.9	N. 20 E.	365
2 "	520.0	156.7	282.5	155.0	N. 19 E.	390
3 "	532.9	155.8	267.3	161.3	N. 16 E.	390
4 "	528.4	162.7	269.7	148.8	N. 18 E.	386
5 "	517.3	168.0	280.6	138.1	N. 22 E.	380
6 "	488.5	144.3	269.3	137.4	N. 21 E.	370
7 "	478.7	145.0	242.1	135.2	N. 22 E.	360
8 "	458.8	138.9	235.7	130.6	N. 18 E.	340
9 "	421.1	158.4	239.4	131.0	N. 22 E.	285
10 "	423.0	165.2	234.7	127.2	N. 23 E.	280
11 "	437.1	163.8	242.7	130.4	N. 22 E.	300
Noon	444.3	162.5	226.1	123.3	N. 20 E.	300
1 p.m.	401.5	168.9	236.7	125.0	N. 26 E.	260
2 "	404.7	166.8	243.6	126.5	N. 26 E.	265
3 "	407.2	160.9	240.6	136.6	N. 23 E.	268
4 "	421.9	139.8	245.3	143.9	N. 20 E.	300
5 "	424.6	135.0	232.5	150.8	N. 16 E.	320
6 "	431.5	158.8	256.2	138.3	N. 23 E.	300
7 "	426.8	153.3	248.5	127.6	N. 24 E.	300
8 "	421.3	162.2	238.5	133.6	N. 22 E.	280
9 "	429.1	169.7	233.3	139.8	N. 20 E.	280
10 "	454.9	172.8	240.2	151.8	N. 17 E.	295
11 "	468.2	172.3	260.5	163.4	N. 18 E.	315
Midnight	500.4	180.5	272.2	163.5	N. 19 E.	335
Means	455.7	159.0	250.6	140.2	N. 21 E.	218

* These figures must be divided by 256 to obtain the mean force at the given hour.

TABLE VII.

MONTHLY RESULTANTS of the
WINDS, at PORT PROVIDENCE,
H.M.S. "PLOVER," 1848
October 18th to 1849 June
30th.

Months.	Resultants.	
	Direction.	Force.*
October 1848	N. 24 E.	3.95
November "	N. 23 E.	3.13
December "	N. 10 E.	2.60
January 1849	N. 84 W.	0.47
February "	S. 50 E.	0.45
March "	N. 9 W.	0.89
April "	N. 8 E.	0.61
May "	N. 49 E.	0.93
June "	N. 45 E.	1.07

* In grades of Beaufort's scale.

TABLE VIII.

CALMS observed at PORT PROVIDENCE, H.M.S. "PLOVER," 1848 October 18th to
1849 June 30th.

Hours.	1848.			1849.						
	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	Period.
1 a.m.	1	1	4	7		9	9	10	10	56
2 "	1	1	3			9	8	8	10	50
3 "	1	2	3	6		9	8	8	8	51
4 "	1	1	3	4	6	11	5	8	9	48
5 "	—	2	3	4	6	10	6	8	6	45
6 "	—	4	4	2	4	12	7	9	7	49
7 "	—	3	4	5	3	7	9	8	8	47
8 "	—	3	4	4	2	8	8	8	6	43
9 "	—	1	4	—	2	9	9	7	6	38
10 "	—	1	4	1	2	8	11	7	4	38
11 "	—	1	4	3	2	7	6	5	6	34
Noon	1	1	3	3	2	8	7	5	7	37
1 p.m.	1	1	2	3	3	5	11	4	3	33
2 "	1	1	1	4	2	6	6	4	4	29
3 "	—	1	1	3	2	6	5	2	4	24
4 "	—	2	2	4	3	4	5	2	3	25
5 "	—	2	2	5	2	8	4	4	8	35
6 "	—	3	2	2	3	8	5	3	10	36
7 "	—	4	3	2	4	10	7	3	7	40
8 "	—	4	3	3	5	11	9	4	5	44
9 "	—	1	3	5	4	11	8	7	11	50
10 "	—	2	2	3	2	13	8	8	9	47
11 "	—	1	2	2	4	12	8	8	7	44
Midnight	—	3	2	3	4	13	7	8	7	47
Means	0.3	1.9	2.8	3.5	3.5	8.9	7.3	6.2	6.9	41.3

TABLE IX.
SUMMARY OF THE WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (by Scale 0 to 12), at PORT PROVIDENCE, H.M.S. "Plover," 1848-9.

Months.	Total Observations.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.
October 1848.	336	30	5.4	141	4.4	123	3.7	6	4.8	2	1.7	—	—	—	—	—	—
November	720	138	4.3	336	3.6	135	4.3	13	2.4	—	—	5	4.0	8	5.0	8	2.9
December	744	142	5.0	274	3.5	81	3.7	14	4.8	4	6.0	3	2.0	—	—	3	2.0
January 1849.	744	53	3.8	78	2.5	108	3.8	5	5.6	4	4.5	2	3.0	14	5.0	39	2.9
February	672	15	3.9	102	3.0	163	5.3	8	5.4	2	6.0	—	—	4	4.7	19	5.0
March	744	75	4.6	103	4.1	80	4.2	20	4.8	—	—	—	—	—	—	2	1.5
April	720	19	4.4	128	3.4	104	3.5	30	3.9	17	2.8	—	—	1	1.0	6	5.3
May	744	35	2.1	149	2.9	116	3.6	94	4.0	4	5.0	—	—	1	1.0	12	1.5
June	720	8	3.6	128	2.9	140	3.2	48	3.4	2	3.0	8	3.6	3	2.7	21	2.8

(continued.)

Months.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.
	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
October 1848.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27	5.4	—	—	7
November	4	4.2	10	2.5	4	2.0	4	4.0	2	5.0	1	1.0	—	—	6	6.3	—	—	46
December	10	5.3	39	3.2	4	1.0	26	2.3	15	5.7	8	4.0	6	8.7	44	5.5	3	1.0	68
January 1849.	17	3.8	54	3.4	80	3.5	123	3.5	37	3.3	13	2.2	8	4.0	20	4.2	6	1.5	83
February	75	5.7	45	4.3	114	3.0	21	2.5	2	4.0	—	—	4	3.0	6	2.4	9	2.7	83
March	2	3.0	30	3.8	120	3.6	45	2.4	11	3.7	9	2.9	—	—	33	3.5	—	—	214
April	10	1.9	42	2.5	94	3.6	52	3.5	6	3.5	6	1.8	1	3.0	27	3.7	1	3.0	176
May	7	1.3	90	3.4	69	3.3	8	2.5	—	—	1	2.0	1	2.0	8	4.5	1	4.0	148
June	35	1.7	73	1.5	33	1.5	15	1.5	4	1.2	10	1.0	3	1.3	19	2.8	5	1.2	165

TABLE X.
SUMMARY OF WEATHER NOTATIONS made at PORT PROVIDENCE, H.M.S. "Plover," 1848 October 18th to 1849 June 30th.

Hours.	18th to 31st October 1848.								November 1848.								December 1848.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	1	8	5	2	—	—	2	6	6	12	12	14	—	—	7	17	10	3	18	19	—	—	9	15
2 "	2	8	4	2	—	—	3	6	6	8	16	15	—	—	7	16	9	4	18	19	—	—	9	16
3 "	3	7	4	4	—	—	5	7	7	7	16	17	—	—	9	17	9	3	19	21	—	—	9	18
4 "	3	6	5	2	—	—	4	7	7	6	17	15	—	—	10*	18	9	3	19	20	—	—	9	18
5 "	2	7	5	2	—	—	3	7	7	5	18	17	—	—	10*	17	9	2	20	19	—	—	11	19
6 "	2	8	4	2	—	—	2	8	4	11	15	17	—	—	7	15	9	5	17	19	—	—	13	18
7 "	1	8	5	2	—	—	3	8	3	10	17	17	—	—	8	15	9	3	19	19	—	—	12	18
8 "	0	10	4	1	—	—	4	6	3	10	17	16	—	—	10	15	9	3	19	20	—	—	11	17
9 "	0	7	7	1	—	—	4	4	6	8	16	14	—	—	8	12	9	2	20	18	—	—	6	16
10 "	0	10	4	2	—	—	5	3	6	8	16	14	—	—	8	11	9	3	19	18	—	—	9	15
11 "	0	10	4	1	—	—	6	4	7	9	14	14	—	—	7	11	9	3	19	18	—	—	10	16
Noon	0	9	5	1	—	—	6	4	5	12	13	12	—	—	7	12	9	4	18	18	—	—	11	14
1 p.m.	0	8	6	2	—	—	4	6	4	14	12	12	—	—	7	12	9	4	18	20	—	—	8	15
2 "	0	10	4	2	—	—	3	6	4	13	13	12	—	—	6	11	9	4	18	20	—	—	8	16
3 "	0	10	4	1	—	—	3	6	5	10	15	12	—	—	6	9	8	5	18	20	—	—	8	15
4 "	0	8	6	—	—	—	2	5	4	11	15	12	—	—	7	10	8	4	19	19	—	—	9	15
5 "	0	7	7	—	—	—	3	5	4	10	16	12	—	—	7	10	8	3	20	19	—	—	9	14
6 "	0	10	4	1	—	—	3	5	9	9	12	15	—	—	7	11	9	4	18	19	—	—	8	18
7 "	2	9	3	2	—	—	3	6	9	9	12	15	—	—	8	11	10	3	18	19	—	—	8	17
8 "	5	6	3	3	—	—	3	7	9	8	13	15	—	—	9	13	8	5	18	19	—	—	7	14
9 "	5	6	3	2	—	—	2	8	9	7	14	16	1	—	7	16	8	4	19	21	—	—	8	16
10 "	4	6	4	2	—	—	2	8	10	9	11	15	1	—	8	16	10	2	19	22	—	—	7	17
11 "	3	6	5	2	—	—	2	8	10	7	13	15	1	—	8	16	9	3	19	21	—	—	8	17
Mdn.	4	6	4	2	—	—	3	8	9	9	12	12	1	—	7	15	9	3	19	22	—	—	7	18
Means	1.6	7.9	4.5	1.7	—	—	3.3	6.2	6.4	9.2	14.4	14.4	0.2	—	7.8	13.6	9.0	3.4	18.6	19.5	—	—	8.7	16.2

* Hail once.

TABLE X.—*continued.*

SUMMARY OF WEATHER NOTATIONS made at PORT PROVIDENCE, H.M.S. "PLOVER," 1848
October 18th to 1849 June 30th—*continued.*

Hours.	January 1849.								February 1849.								March 1849.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	5	1	25	26	1	1	6	13	9	2	17	16	—	—	7	8	6	8	17	19	1	—	6	11
2 "	5	1	25	26	1	1	9	13	8	3	17	16	—	1	6	7	5	7	19	18	1	—	6	12
3 "	5	2	24	24	2	1	11*	15	7	4	17	16	—	1	6*	7	7	8	16	20	1	—	6	10
4 "	6	—	25	24	2	1	10†	14	7	4	17	16	—	1	6*	7	4	11	16	18	1	—	7	10
5 "	4	—	27	23	3	1	10*	12	9	5	14	13	—	1	6	7	5	7	19	14	—	—	4	4
6 "	5	—	26	27	2	1	6*	7	9	3	16	13	—	1	6	7	7	8	16	14	—	—	8	3
7 "	5	—	26	27	2	1	5	7	8	3	17	12	—	—	8	5	10	7	14	13	—	—	7	3
8 "	5	1	25	27	2	1	5	8	9	2	17	11	—	1	7	2	11	6	14	12	—	—	6	3
9 "	4	6	21	27	—	1	6*	9	5	7	16	16	—	1	10	9	9	4	18	13	—	—	12	3
10 "	3	7	21	26	—	1	8*	8	4	7	17	16	—	1	10	9	8	5	18	14	—	—	12	3
11 "	3	8	20	26	—	1	6	9	3	9	16	16	—	—	10	9	8	5	18	14	—	—	8	3
Noon	4	7	20	23	—	1	7	8	5	7	16	16	—	—	9	9	7	6	18	14	—	—	8	3
1 p.m.	4	7	20	24	—	1	8	9	3	6	19	19	—	—	8	9	7	5	19	16	—	—	9	3
2 "	4	8	19	24	—	1	7	9	3	6	19	18	—	—	7	9	7	6	18	15	—	—	10	3
3 "	4	8	19	23	—	1	6	8	3	7	18	17	—	—	7	9	7	6	18	15	—	—	8	4
4 "	6	6	19	23	—	1	7	9	3	7	18	18	—	—	8	9	7	8	16	17	—	—	8	4
5 "	6	6	19	24	—	1	7	8	5	5	18	18	—	—	6	8	5	10	16	14	—	—	11	4
6 "	4	4	23	25	—	1	8*	9	6	4	18	18	—	—	6	8	3	10	18	18	—	—	12	5
7 "	4	5	22	24	—	1	8	10	5	4	19	17	—	—	6	10	4	8	19	15	—	—	8	5
8 "	3	3	25	26	—	1	8*	10	6	3	19	18	—	—	7	10	5	7	19	16	—	—	10	5
9 "	5	2	24	27	—	—	6*	9	6	5	17	21	—	1	6	10	7	3	21	17	—	—	12	5
10 "	6	1	24	27	—	—	6*	10	6	5	17	21	—	1	7	10	6	5	20	15	—	—	11	8
11 "	5	—	26	29	—	1	5*	11	7	4	17	21	—	1	7	10	5	7	19	15	—	—	8	10
Mdn.	3	1	27	28	—	2	6	11	7	4	17	20	—	1	6	11	5	7	19	15	—	—	7	10
Means	4.5	3.5	23.0	25.4	0.6	1.0	7.1	9.8	6.0	4.8	17.2	16.8	—	0.5	7.2	8.3	6.5	6.8	17.7	15.5	0.2	—	8.5	5.6

* Hail once.

† Hail twice.

TABLE X.—*concluded.*

SUMMARY OF WEATHER NOTATIONS made at PORT PROVIDENCE, H.M.S. "PLOVER,"
1848 October 18th to 1849 June 30th—*concluded.*

Hours.	April 1849.								May 1849.								June 1849.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	5	8	17	8	—	—	3	11	4	8	19	9	—	1	8	7	—	4	26	12	6	9	5	6
2 "	5	10	15	9	—	—	2	11	6	7	18	9	—	2	8	7	1	4	25	12	6	8	3	8
3 "	5	10	15	11	—	—	3	9	5	10	16	10	—	1	9	7	3	3	24	11	4	8	3	8
4 "	6	7	17	13	—	—	3	9	6	8	17	11	—	2	11	7	2	3	25	12	5	9	3	7
5 "	6	9	15	11	1	—	4	6	7	8	16	9	—	1	8	3	2	6	22	13	6	7	3	7
6 "	8	7	15	10	1	—	4	6	8	7	16	9	—	1	7	2	2	6	22	13	6	8	3	5
7 "	6	8	16	11	1	—	6	3	7	9	15	9	—	1	7	2	2	8	20	13	6	9	3	5
8 "	8	6	16	12	1	—	9	3	9	5	17	10	—	2	7	2	2	8	20	12	6	8	3	7
9 "	7	6	17	11	1	—	9	2	10	5	16	10	—	2	7	3	3	6	21	10	6	9	2	8
10 "	7	7	16	10	1	—	10	2	11	3	17	10	—	2	6	4	3	7	20	9	6	7	2	6
11 "	9	8	13	9	—	—	6	1	12	5	14	10	—	2	7	4	3	6	21	7	5	6	4	7
Noon	9	8	13	9	—	—	6	1	11	7	13	9	—	2	5	4	3	5	22	7	5	4	4	7
1 p.m.	10	9	11	7	—	—	5	—	9	9	13	5	—	2	4	3	5	3	22	9	3	10	2	8
2 "	8	13	9	7	—	—	6	—	9	7	15	5	—	2	4	4	4	8	18	9	3	10	1	8
3 "	9	9	12	7	—	—	7	—	9	7	15	5	—	3	4	5	4	6	20	9	3	10	4	6
4 "	11	8	11	7	—	—	6	—	6	7	18	9	—	3	5	5	4	4	22	9	3	9	3	6
5 "	8	11	11	7	—	—	6	—	6	6	19	8	—	2	6	3	4	3	23	11	2	8	3	4
6 "	7	10	13	8	—	—	8	3	4	9	18	11	—	1	8	2	4	4	22	13	2	5	4	4
7 "	6	9	15	8	—	—	8	5	5	5	21	14	—	—	7	2	6	3	21	10	4	6	3	4
8 "	6	7	17	8	—	—	7	5	5	4	22	14	—	—	8	4	6	3	21	9	5	7	2	5
9 "	6	8	16	8	—	—	7	7	3	5	23	13	1	1	9	3	3	4	23	11	5	10	1	7
10 "	8	8	14	8	—	—	4	9	3	5	23	12	1	—	8	6	2	3	25	11	5	10	1	7
11 "	10	6	14	8	—	—	4	8	2	8	21	12	1	—	7	6	2	2	26	11	5	10	3	8
Mdn.	8	6	16	8	—	—	4	10	2	9	20	11	1	—	8	7	2	3	25	10	5	10	3	8
Means	7.4	8.3	14.3	9.0	0.2	—	5.7	4.6	6.6	6.8	17.6	9.8	0.2	1.4	7.0	4.2	3.0	4.7	22.3	10.5	4.7	8.2	2.8	6.5

TABLE XI.
MEAN AMOUNT of CLOUD, at PORT PROVIDENCE,
H.M.S. "PLOVER," 1848 October 18th
to 1849 June 30th.

Hours.	1848.			1849.						
	Oct.*	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	Period.
1 a.m.	6.4	6.8	7.0	8.3	7.2	7.1	6.9	7.5	9.2	7.4
2 "	6.0	6.9	6.9	8.2	7.2	7.3	6.9	7.1	8.9	7.3
3 "	5.5	7.1	7.0	8.1	7.2	7.1	7.0	7.1	8.4	7.2
4 "	5.9	7.2	7.1	8.3	7.3	7.2	7.0	7.1	8.6	7.3
5 "	6.1	7.1	7.1	8.9	6.9	7.4	6.9	6.8	8.5	7.3
6 "	6.2	6.9	6.9	8.5	7.0	6.8	6.7	6.8	8.4	7.1
7 "	6.8	7.3	7.0	8.5	7.1	6.4	6.6	6.8	8.0	7.2
8 "	6.6	7.4	7.1	8.4	7.2	6.3	6.7	6.7	8.1	7.2
9 "	7.1	7.0	7.3	8.1	7.4	7.1	7.0	6.5	8.1	7.3
10 "	6.6	6.8	7.2	8.0	7.6	7.1	7.0	6.5	8.0	7.2
11 "	6.6	6.8	7.2	7.9	7.4	7.1	6.2	6.0	8.0	7.0
Noon -	7.0	6.9	6.9	8.0	7.5	7.0	6.1	5.9	8.0	7.0
1 p.m.	7.1	6.9	6.9	8.0	8.0	7.2	5.8	6.1	7.6	7.1
2 "	6.8	6.9	7.1	7.8	8.1	7.1	6.0	6.2	7.7	7.1
3 "	6.9	7.1	7.0	7.6	8.0	7.0	6.0	6.4	7.7	7.1
4 "	7.3	7.1	7.0	7.6	8.0	6.7	5.9	7.3	7.7	7.2
5 "	7.4	7.2	7.2	7.6	7.6	7.1	6.0	7.1	8.1	7.3
6 "	6.6	6.3	6.8	8.3	7.5	7.7	6.2	7.3	8.0	7.2
7 "	5.3	6.3	6.9	8.1	7.7	7.5	6.7	7.6	7.9	7.1
8 "	4.9	6.3	6.9	8.5	7.7	7.6	7.0	7.9	7.7	7.2
9 "	4.9	6.3	7.0	8.1	7.5	7.5	7.1	8.3	8.4	7.2
10 "	5.1	6.1	7.0	8.1	7.4	7.4	6.6	8.1	8.6	7.2
11 "	5.6	6.1	7.0	8.4	7.3	7.6	6.3	8.0	9.0	7.3
Mdnt. -	5.4	6.2	7.1	8.7	7.3	7.5	6.8	8.0	8.8	7.3
Means	6.3	6.8	7.0	8.2	7.5	7.2	6.6	7.0	8.2	7.2

* For 18th to 31st, 14 days.

TABLE XII.
MEAN TEMPERATURE of the SEA
WATER, at PORT PROVIDENCE,
1848-9, H.M.S. "PLOVER."

Hours.	1848.			1849.		
	Oct.*	Nov.	April.†	May.	June.	
1 a.m.	27.9	27.9	—	—	—	
2 "	27.9	27.9	29.3	29.8	33.5	
3 "	27.8	28.3	—	—	—	
4 "	27.6	28.3	29.3	29.8	33.5	
5 "	28.1	28.2	—	—	—	
6 "	28.1	28.4	29.4	29.8	33.5	
7 "	28.1	28.5	—	—	—	
8 "	27.9	28.8	29.5	29.8	33.7	
9 "	28.2	28.8	—	—	—	
10 "	29.1	28.7	29.7	29.9	34.2	
11 "	29.3	28.7	—	—	—	
Noon -	29.0	28.7	29.8	30.0	34.8	
1 p.m.	29.1	28.6	—	—	—	
2 "	29.0	28.6	29.7	30.1	34.6	
3 "	28.8	28.8	—	—	—	
4 "	28.7	28.7	29.8	30.1	34.4	
5 "	28.6	28.7	—	—	—	
6 "	28.6	28.6	29.6	30.1	34.3	
7 "	28.4	28.5	—	—	—	
8 "	28.3	28.6	29.4	30.0	34.1	
9 "	28.0	28.5	—	—	—	
10 "	27.8	28.4	29.4	29.9	33.8	
11 "	27.4	28.3	—	—	—	
Mdnt. -	27.3	28.1	29.4	29.9	33.6	
Means	28.3	28.5	29.5	29.9	34.0	

* For 14 days, 18th to 31st.

† For 25 days, 6th to 30th.

Jan. 9th, noon, temp. of sea 28°.

Feb. 3rd and 19th, temp. of sea 28°·1 (from 2 obs.).

REMARKS from the Log of H.M.S. "PLOVER."

1848.—OCTOBER.

- 17th, 11 p.m. - Anchored in Plover Bay.
 18th, 3 a.m. - A whale seen.
 18th, 7.45 p.m. - Rays of aurora, centre N.W. b. N., meeting in the zenith.
 19th, 4 a.m. - Bay lightly frozen over.
 19th, 9.30 p.m. - Rays of aurora to the westward.
 20th, 1.20 a.m. - Rays of aurora from N.W. b. N. to E. b. N., brilliant rays from N. and N.E.
 20th, 9 p.m. - Faint aurora from N.E. to N.
 22nd, 10 p.m. - Rays of aurora.
 23rd, 11 p.m. - Faint rays of aurora in N.E.
 25th, 10 p.m. - Occasional strong illumination, apparently aurora.
 28th, Noon - Lat. 64° 26' 10".
 28th, 8 p.m. - Aurora faintly visible to the northward.
 29th, 12.20 a.m. - Rays of aurora from N. to E. $\frac{3}{4}$ S., through the zenith to W. $\frac{3}{4}$ N.
 29th, 1 p.m. - A number of seals on the ice.
 29th, 7 p.m. - Rays of aurora to northward converging towards the zenith.
 29th, 10 p.m. - Rays of aurora extending from N. b. E. to E.N.E. and to about 15° of altitude.
 30th, 2 a.m. - Rays of aurora very brilliant from N.N.W. $\frac{1}{2}$ W. spreading to N.N.E., brightest rays from N. to N. b. W.
 30th, 3.30 a.m. - Aurora forming an arch from N.W. b. N. to N.E. b. E. about 20° of altitude, spreading to the zenith.
 30th, 9 p.m. - Aurora faintly visible.
 30th, Midnight - Rays of aurora from N. $\frac{1}{2}$ E. to N.E.
 31st, 1 a.m. - Rays of aurora from N.N.E. to N.E. b. E., converging towards the zenith.

1848.—NOVEMBER.

- 1st - Bay frozen nearly all over.
 2nd - Harbour almost entirely frozen over.
 3rd - Ice in harbour breaking up.
 4th, 5 a.m. - Ice drifting down the harbour.
 5th, 2 a.m. - Strong current setting down the harbour, which appeared clear of ice.
 5th, 4 a.m. - Rays of aurora.
 6th - Harbour clear of ice.
 8th - Several seals seen. Harbour freezing over.
 9th - Thin ice drifting down the harbour.
 10th - Ice only on the N. and E. shores of harbour.
 12th, 2 a.m. - Occasional heavy snow-drift from the hills.
 13th - A great many seals on the ice to the eastward.
 14th - A great number of seals about the ship.
 16th, 4 a.m. - Aurora visible from N.E. to N.N.W. Ice remaining fast on N. and E. shores.
 16th, 9.30 p.m. - Aurora faintly visible to N.E.
 16th, 10.30 p.m. - Aurora increasing in brilliancy, and extending from N. b. W. to N.E., and to about 20° of altitude; rays shooting towards the zenith.
 17th, 1.20 a.m. - Rays of the aurora (pink coloured) from N.W. b. N. through the zenith to N.E. b. E.
 17th, 10 p.m. - Aurora about E.N.E.
 18th - Water extremely thick, wind preventing the ice from forming.
 19th, 5 a.m. - Harbour frozen over.
 19th, 6 a.m. - Aurora to E.N.E.

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C

- 19th, 8 p.m. - Rays of aurora from E.N.E. to N.N.E., darting towards the zenith.
 20th, 3 a.m. - Aurora visible between the clouds.
 24th, 11 p.m. - Faint rays of aurora to N.E.
 26th, 7.20 p.m. - Bright aurora extending nearly over the face of the heavens, with the exception of a dark bank of clouds to the S.S.W. Coruscations flitting rapidly, their chief direction appearing to pass in waves from N.N.W. to S.S.W. over a point of convergence about 17° S. of the zenith.
 26th, 10 p.m. - Pink (coloured) rays of aurora bearing N.W. b. W.
 26th, 10.30 p.m. - Rays of aurora forming two arches at N.E. b. N. about 15° and 40° of altitude. Dark banks of clouds to the S.S.W.
 27th, 1 a.m. - Rays of aurora very brilliant from W.S.W., dark bank to the S.S.W.
 27th, 9 p.m. - An arch of aurora, spanning from N. b. E. to N.E., altitude of centre about 7° ; a dark cloud underneath.
 27th, 11 p.m. - Aurora fainter but more extended: a few bright rays N.E. b. E., coruscating towards the zenith.
 27th, Midnight - Aurora very faint.
 28th, 1 a.m. - Aurora very faint from E.N.E. to N. b. W. and to about 15° of altitude, intermingled with clouds.
 28th, 5 a.m. - Aurora very faint E.N.E.
 28th, 2 p.m. - A succession of most tremendous squalls, causing a heavy snowdrift of very great velocity.
 28th, 3 p.m. - Tremendous sudden squalls.
 29th, 4 a.m. - Northern sky faintly illuminated by aurora.
 29th, 9 p.m. - Aurora very faintly forming a small arch from E.N.E. to N.N.E. and to about 12° of altitude.
 30th, Midnight - A very faint illumination from aurora to E.N.E.

1848.—DECEMBER.

- 1st, 1 a.m. - Very faint aurora to E.N.E.
 22nd, 1 p.m. - A peculiar reddish tint in the mist over the mountains.
 28th, Midnight - A bright reddish aurora on northern horizon in the form of a low arch, shooting out at intervals indistinct rays towards the zenith.

1849.—JANUARY.

- 2nd, 9 p.m. - Aurora forming an arch of about 15° of altitude, centre of arch N.E. b. E.
 2nd, 10 p.m. - A brilliant arch of clouds to W.S.W.
 5th, 2 a.m. - Wind constantly shifting.
 7th, 2 p.m. - Objects on the horizon much enlarged by mirage.
 7th, sunset - The sky from N. to E.N.E. very beautifully illumined with the prismatic colours, of which the visible base was a deep purple and the upper ray merging from blood red into the lightest shade of pink.
 14th, 11 a.m. - Very heavy snowdrift in the squalls.
 15th, 2 a.m. - Aurora round the visible horizon, only to N. b. W. and N.W. b. N., converging to the zenith; very broad rays to W.N.W. appearing inside of the hills and below their summits.
 18th, 3 a.m. - A very heavy fall of hail.
 18th, 5 a.m. - Snow falling half melted.
 22nd, 11 p.m. - Faint gleam of aurora to N.N.W.
 31st, 9 p.m. - A remarkable misty halo round the moon, circle of 45° diameter.

1849.—FEBRUARY.

- 2nd, 8.30 p.m. - Clouds passing the moon from W.S.W., lower air calm.
 3rd, 1 p.m. - Lower portion of the Port covered with a thin coating of ice.
 3rd, Midnight - A remarkable misty halo round the moon, circle of about 40° diameter.
 5th, 2 a.m. - A misty halo round the moon, circle of about 4° diameter.
 18th, 10.30 p.m. - Aurora from E.S.E. to W.N.W. through the zenith, rays darting from the zenith to the N. horizon.
 18th, 11.30 p.m. - Rays of aurora to E.S.E. and N.N.E., light green; to W.N.W., light pink.

1849.—MARCH.

- 20th, 2 a.m. - Aurora from N. b. W. to E. b. N.
 20th, 3 a.m. - Aurora from N.N.W. to E. b. N.
 30th, 10 p.m. - Clouds passing the moon from W.; wind S.W. b. S.

1849.—APRIL.

- 12th, 9.45 a.m. - Solar halo about 45° diameter.
 23rd - Thickness of ice 5 feet at a spot $\frac{3}{4}$ mile from the ship; depth of water, $6\frac{1}{2}$ fathoms; temperature of water, 28° ; of air in sunshine, 73° .
 24th - Ice all fast in the outer harbour as far as the spit, outside of which water extended across the harbour, about $\frac{3}{4}$ mile in width, beyond which again was smashed ice as far as could be seen. From the appearance of the clouds on the horizon the water in the offing was judged to be clear.
 26th, Noon - Solar halo about 30° diameter.
 28th - Six geese passed to E.N.E.
 30th, 9.30 a.m. - Solar halo, inner edge $21^{\circ} 30'$ in semi-diameter, outer edge $25^{\circ} 50'$ in semi-diameter, upon which on each side was a parhelion at the same altitude, about 4° less than that of the sun.
 30th, 10 a.m. - The halo became oval in shape, the large semi-diameter $22^{\circ} 40'$, the lesser $21^{\circ} 20'$.

1849.—MAY.

- 5th - Ice broken up $3\frac{1}{2}$ miles in the lower harbour.
 9th - Ice in Emma Harbour breaking up fast, water within $1\frac{1}{4}$ mile of the ship.
 25th - Commenced cutting out ship.

1849.—JUNE.

- 17th - Working out of Emma Harbour.
 19th - Fast to a floe in Providence Harbour.
 21st, 8 p.m. - Several bergs and drift ice.
 22nd - A walrus and several seals. Pieces of berg ice.
 23rd - Walruses, seals, numerous flocks of wild fowl, looms, auks, gulls, &c.
 24th, 1 a.m. - Numerous pieces of drift ice around passing in a very strong E.S.E. current.
 24th, 9.30 p.m. - Harbour crowded with drift ice, rapidly driving in; a strong S.S.E. swell.
 26th, 8 p.m. - Ice opening a little to seaward, but still very thick about the entrance.
 30th, 6 a.m. - Made sail from Port Providence.
 30th, 9.40 p.m. - Anchored in Chaycheen Harbour.

No. XXXII.

Results of Meteorological Observations at Chamisso Island.

H.M.S. "Plover," Commander T. E. L. Moore, wintered in 1849-50 at Chamisso Island, latitude $66^{\circ} 13' N.$, longitude $161^{\circ} 46' W.$ This is a small island $1\frac{1}{4}$ mile long, at the head of Kotzebue Sound, with Escholtz Basin to the eastward, and Choris Peninsular to the northward. It rises to a height of 231 feet. "The land about this part of the Sound is generally characterised by rounded hills from about 600 feet to a thousand above the sea, with small lakes and rivers; its surface is rent into deep furrows, which, until a very late period in the summer, are filled with water, and being covered with a thick swampy moss, and in some places with long grass or bushes, it is extremely tedious to traverse it on foot. Early in the summer myriads of mosquitos infest this swampy shore, and almost preclude the possibility of continuing any pursuit, but in August they begin to die off, and soon afterwards entirely disappear."*

Hourly meteorological observations were regularly and carefully recorded in the log book, which is numbered 4,660, and deposited in the Public Record Office.

The barometrical observations have been corrected for approximate instrumental error, and reduced to temperature 32° . As the numbers on the thermometers used have not been recorded the temperature observations have had to be taken without any correction whatever. The direction of the wind has been corrected for three points easterly variation of the compass.

Table I. shows the mean hourly atmospheric pressure for each month and for the entire period. The final results show a maximum at midnight, a minimum at 8 a.m., a maximum at 11 a.m., and a minimum at 7 p.m. The amplitude of the mean diurnal range is only $\cdot 016$. The barometer stands higher in the winter than in the summer.

Table II. shows the mean hourly temperature of the air for each month and for the entire period. The mean temperature for the period is 18° , which may be taken as that for the year. The coldest month was February, $-15^{\circ} \cdot 6$; the warmest, July, $49^{\circ} \cdot 7$. The mean diurnal range of temperature was largest in May, $14^{\circ} \cdot 9$, though in April it was $14^{\circ} \cdot 4$, and least in December, $1^{\circ} \cdot 9$.

* Beechey's Narrative of a Voyage to the Pacific.

Table III. gives the monthly extremes of atmospheric pressure with the temperature, wind, and weather at the same times. The highest was $30 \cdot 87$ in December, the lowest $28 \cdot 59$ in February, so that the absolute range was $2 \cdot 28$ inches. The monthly range of pressure was greatest in December, least in July. The high extremes of pressure were accompanied by clearer weather than the low.

Table IV. gives the monthly extremes of the temperature of the air, with the pressure, wind, and weather at the same times. The absolute maximum temperature, 64° , occurred in July, the absolute minimum, $-43^{\circ} \cdot 5$, in February, so that the absolute range was $107^{\circ} \cdot 5$. The weather was clearer with the minimum than with the maximum extremes. The greatest monthly range of temperature occurred in April, the least in August.

Table V. contains the hourly sums of the wind components for each month.

Table VI. contains the hourly sums of the wind components for the entire period, and their resultants in direction and force. These show greatest strength of wind at midnight, least about noon. In seven hours the wind veers from S.W. at 8 a.m. to N.W. b. W. at 3 p.m., and in 17 hours it backs again.

Table VII. exhibits the resultants of the winds in direction and force for each month, computed from the means of the columns in Table V. The resultant force is low for October because there were frequent N.W. winds, for December because the frequent winds were from E. and W., for March because they were W. b. S. and E., for April because they were W. b. S. and E.N.E., as is shown in Table IX.

Table VIII. contains the sums of the calms noted at each hour for each month, and for the period. In the aggregate, calms were most frequent at 10 p.m., and least at 4 p.m. May had most calms, August least.

Table IX. shows the number of times winds have been observed under sixteen points of the compass, and their mean force in each month. The azimuth most favoured with wind in August was N.W. b. W., September E. b. N., October N.N.W. and S.E., November E. b. N., December E. and W., January W. and E.N.E., February W. b. S. and E. b. N., March W. b. S. and E., April W. b. S. and E.N.E., May W. b. S., June W., July W.N.W. The tendency of the winds to blow from opposite directions causes their monthly resultants in several instances to appear exceedingly feeble.

Winds of force 8 and higher grades were recorded in August 5 times, September 13, October 29, November 9, December 11, January 46, February 60, March 38, April 59, May 3, June 21, July 0.

Table X. contains the hourly sums of the weather notations for each month. Altogether there were 25 days of rain, and 38 of snow out of 337, but the number of days on which snow fell were 63, and rain 38, so that precipitation occurred on 101 days. Mist was very frequent in February, March, and April. The sky was clearest in January and May, most overcast in August.

Table XI. contains the hourly mean amount of cloud (scale 0 to 10) for each month, and for the year. The yearly curve shows a maximum about 5 a.m., and a minimum at noon. From March to September the days are less cloudy than the nights, but from October to February this is not apparent. August had the most clouded sky, May and January the clearest.

Table XII. contains the hourly means of the sea temperature observations for each month.

MEAN TEMPERATURE of the AIR on the ICE compared with that on board the SHIP for May 4th to 31st.

Hour.	1 a.m.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Noon.	
Ship	-	28°·3	27°·5	26°·9	26°·7	28°·9	29°·5	29°·9	31°·3	33°·6	36°·2	38°·0	39°·5
Floe	-	22°·8	22°·3	22°·2	22°·6	25°·1	26°·5	28°·8	30°·4	31°·6	32°·9	34°·2	35°·4
Colder Floe.	on	5°·5	5°·2	4°·7	4°·1	3°·8	3°·0	1°·1	0°·9	2°·0	3°·3	3°·8	4°·1
Hour.	1 p.m.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Midt.	
Ship	-	40°·4	40°·6	40°·9	40°·3	39°·2	38°·0	37°·1	35°·7	34°·0	32°·1	30°·7	29°·7
Floe	-	36°·6	37°·6	37°·8	37°·9	37°·7	36°·7	35°·5	33°·4	30°·0	26°·9	25°·1	24°·3
Colder Floe.	on	3°·8	3°·0	3°·1	2°·4	1°·5	1°·3	1°·6	2°·3	4°·0	5°·2	5°·6	5°·4

The temperature of the air was observed on board the "Plover," but from May 4th to 31st inclusive it was also observed on the ice. The mean results of the two sets of observations given in the above table show a wide and varied difference, the air on the ice being colder than that on the deck, as much as 5°·6 at 11 p.m., but only 0°·9 at 8 a.m., increasing again to 4°·1 at noon, thence decreasing to 1°·3 at 6 p.m. These results indicate that the diurnal range of temperature is not sufficiently well shown, and that the observations would have been better if they had been taken throughout on the floe or on shore.

August 15th to 31st.—The mean temperature of the sea exceeded that of the air by 1°·6. The barometer averaged 29°·70 inches. Winds were observed from all directions, but they were much more frequent and stronger from westward than eastward. Snow fell on two days, rain on 10. The sky was generally overcast.

September. The mean temperature of the sea was 0°·7 below that of the air. The barometer averaged 29°·63 inches. Winds were observed from all directions, but

chiefly from the eastward, and these were superior in force. Hail fell on two days, rain on seven. The sky was cloudy.

October. The mean temperature of the sea exceeded by 6° that of the air. The barometer averaged 29°·65. The winds came from all directions. Snow fell on eight days, rain on two. The sky was generally cloudy, but less so by night than by day.

November. The mean temperature of the sea-water exceeded by 27° that of the air, which was only 1°. The barometer averaged 29°·50. Winds were observed from all directions, but chiefly from E. and E.N.E., but were not so strong as in the former months. Snow fell on eight days, rain on one. The sky was generally overcast, but there was less cloud, but more mist, by night than by day.

December. The mean temperature of the sea-water exceeded that of the air by 22°·6. The barometer averaged 30°·10. Winds were recorded from every direction, but chiefly from E. and W. Snow fell on eight days, rain on two. There was a good deal of mist, and a good deal of clear sky.

January. The mean temperature of the sea-water exceeded by 40° that of the air. The barometer averaged 30°·11. Winds were recorded from all directions, but chiefly from W. and E., moderate to fresh. Snow fell on four days, rain on one. The sky was generally clear, and the range of temperature great.

February. The mean temperature of the air was 43°·6 below that of the sea-water. The barometer averaged 29°·59. Winds were recorded from all directions, but chiefly from westward, fresh. There was a great deal of mist, but the sky was frequently clear, and the range of temperature great. Snow fell on ten days.

March. The mean temperature of the air was 34° below that of the sea-water. The barometer averaged 30°·17. Winds were recorded from all directions, but chiefly from westward, and were moderate. Snow fell on eight days, rain on one. Mist was frequent, and the general state of the sky clearer by day than by night.

April. The mean temperature of the air was 13°·5 below that of the sea-water. The barometer averaged 29°·81. Winds were recorded from all directions, but chiefly from eastward and westward, fresh. Snow fell on seven days, rain on three. The nights were generally misty and the days clear. The range of temperature was very great.

May. The mean temperature of the air exceeded that of the sea by 3°·8. The barometer averaged 29°·91. Winds were recorded from all directions, but chiefly from westward, light to moderate. Snow fell on three days, rain on one. The sky was generally clear.

June. The mean temperature of the air exceeded that of the sea by 4°·3. The barometer averaged 29°·79. Winds were recorded for all directions, but chiefly from

westward, light to moderate. Snow fell on three days, rain on four. The sky was mostly clear.

July 1st to 17th. The mean temperature of the air exceeded that of the sea by 5°. The barometer averaged 29·76. Winds were recorded from all directions. Rain fell on six days. The sky was generally cloudy.

H.M.S. "Herald" having been at or near Chamisso Island during the whole of September 1849, it has been thought advisable to append to this paper the results for this month of the meteorological observations made on board that ship.

The "Herald's" barometer showed less diurnal range, the temperature of the air was lower by a degree during the night, the temperature of the sea was 2°·6 higher than the "Plover's;" but as regards wind and weather there is fair agreement, considering that these are eye observations.

TABLE I.
MEAN ATMOSPHERIC PRESSURE at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to 1850 July 17th.

Hours.	1849.					1850.							Year.
	Aug.*	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.†	
1 a.m. -	inches. 29·705	inches. 29·639	inches. 29·671	inches. 29·507	inches. 30·113	inches. 30·120	inches. 29·611	inches. 30·170	inches. 29·824	inches. 29·914	inches. 29·791	inches. 29·747	inches. 29·818
2 " -	·707	·637	·668	·505	·111	·120	·607	·168	·825	·917	·790	·748	·817
3 " -	·708	·633	·663	·504	·111	·118	·602	·165	·826	·918	·787	·752	·816
4 " -	·707	·630	·658	·504	·113	·115	·596	·164	·825	·920	·786	·754	·814
5 " -	·709	·633	·656	·501	·113	·114	·594	·165	·822	·922	·787	·756	·814
6 " -	·710	·635	·651	·500	·109	·112	·594	·164	·819	·920	·788	·760	·813
7 " -	·715	·636	·650	·496	·104	·104	·587	·162	·815	·918	·792	·763	·812
8 " -	·714	·637	·647	·495	·095	·098	·583	·158	·815	·916	·790	·763	·809
9 " -	·720	·638	·644	·490	·095	·094	·583	·159	·819	·926	·789	·762	·810
10 " -	·718	·638	·646	·495	·094	·098	·589	·164	·819	·925	·791	·764	·812
11 " -	·720	·638	·646	·497	·095	·101	·582	·167	·824	·926	·791	·766	·813
Noon -	·714	·636	·644	·497	·094	·106	·582	·169	·823	·925	·791	·766	·812
1 p.m. -	·707	·639	·648	·497	·096	·102	·582	·171	·819	·920	·787	·764	·811
2 " -	·705	·633	·650	·496	·098	·106	·580	·171	·816	·917	·786	·761	·810
3 " -	·704	·631	·647	·496	·096	·112	·576	·167	·811	·914	·785	·758	808
4 " -	·699	·625	·648	·494	·093	·115	·575	·165	·808	·911	·784	·755	·806
5 " -	·693	·620	·637	·493	·100	·121	·577	·166	·804	·908	·786	·752	·805
6 " -	·688	·617	·635	·494	·097	·121	·576	·167	·802	·908	·784	·751	·803
7 " -	·686	·618	·638	·490	·092	·125	·572	·169	·800	·902	·782	·745	·802
8 " -	·686	·619	·641	·495	·093	·127	·575	·173	·807	·903	·782	·746	·804
9 " -	·685	·623	·652	·504	·098	·131	·574	·177	·812	·903	·780	·744	·807
10 " -	·690	·625	·653	·509	·105	·132	·573	·182	·810	·904	·785	·749	·810
11 " -	·688	·627	·659	·516	·111	·135	·580	·184	·809	·904	·788	·758	·812
Midnight -	·688	·628	·664	·520	·117	·134	·580	·186	·813	·906	·792	·759	·816
Means -	29·703	29·631	29·651	29·500	30·102	30·115	29·585	30·169	29·815	29·914	29·787	29·756	29·811
1 a.m. after Midnight.	29·694	29·634	29·655	29·521	30·118	30·133	29·585	30·191	29·815	29·910	29·793	29·766	29·818

* For 17 days, 15th to 31st.

† 1st to 17th.

TABLE II.
MEAN TEMPERATURE OF THE AIR at CHAMISSO ISLAND, H.M.S. "PLOVER,"
1849 August 15th to 1850 July 17th.

Hours.	1849.					1850.							Year
	Aug.*	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.†	
1 a.m. -	44°2	41°4	24°2	0°6	4°8	-11°8	-17°8	-9°1	8°4	27°0	33°5	45°8	15°9
2 " -	43°8	41°2	23°9	0°4	4°5	12°2	18°0	9°1	8°1	26°4	33°4	45°6	15°7
3 " -	43°5	41°0	23°9	0°2	4°5	11°9	18°0	9°6	7°6	25°8	33°5	45°6	15°5
4 " -	43°4	40°9	24°1	0°2	4°7	11°8	17°6	10°1	7°3	25°7	33°9	46°0	15°6
5 " -	43°4	40°7	24°1	0°1	5°0	11°7	17°2	10°3	7°9	27°8	34°9	46°6	15°9
6 " -	43°7	40°7	24°3	0°2	5°1	11°5	16°9	10°0	9°6	28°5	35°6	46°9	16°4
7 " -	44°0	40°8	25°0	0°4	5°3	11°6	16°4	9°3	11°2	29°2	35°9	47°7	16°9
8 " -	44°5	41°1	25°5	0°9	5°4	11°3	15°8	7°9	13°9	30°8	37°0	48°7	17°7
9 " -	44°7	41°2	25°6	1°2	5°6	11°1	14°8	5°6	16°2	33°0	38°9	50°3	18°8
10 " -	45°4	42°1	25°9	1°6	6°0	10°6	13°1	3°3	18°2	35°5	40°9	50°4	19°9
11 " -	46°3	42°6	26°0	2°0	6°2	10°4	12°9	1°2	19°7	37°4	42°2	50°8	20°7
Noon -	46°8	43°5	25°9	2°3	6°2	10°3	11°9	-0°3	20°9	39°1	43°0	51°6	21°4
1 p.m. -	46°5	44°1	26°2	2°2	6°4	10°5	11°3	+0°1	20°8	39°7	43°2	52°8	21°7
2 " -	46°1	44°2	26°3	2°0	6°3	11°0	11°9	0°6	21°1	40°1	43°8	53°4	21°8
3 " -	46°1	44°4	26°1	1°6	5°4	11°9	13°4	+0°3	21°5	40°6	43°8	53°4	21°5
4 " -	46°8	44°7	25°8	1°2	5°1	12°3	15°0	-0°6	21°7	40°1	43°6	53°9	21°2
5 " -	46°7	44°1	25°5	1°3	5°3	12°6	15°5	2°5	20°4	39°0	43°3	53°0	20°7
6 " -	45°9	43°8	25°2	1°3	5°5	12°7	15°5	5°0	18°6	37°6	43°0	52°6	20°0
7 " -	45°8	43°3	24°8	0°8	5°8	12°8	16°1	7°4	16°1	36°6	42°1	51°5	19°2
8 " -	45°4	43°0	24°3	0°7	5°5	13°2	16°6	8°8	13°3	35°0	40°6	51°1	18°4
9 " -	45°1	42°6	24°1	0°3	5°2	13°2	16°6	9°5	12°0	33°0	39°1	50°5	17°5
10 " -	44°7	42°2	24°0	0°4	4°9	13°0	17°0	9°5	11°5	31°2	37°2	48°9	17°1
11 " -	44°6	41°9	23°9	0°6	5°0	13°0	17°2	9°0	10°8	29°7	35°5	47°8	16°7
Midnight -	44°4	41°7	23°6	0°8	4°9	13°0	17°4	8°8	10°5	28°8	34°7	47°1	16°5
Means -	45°1	42°4	24°9	1°0	5°4	-11°9	-15°6	-6°1	14°5	33°2	38°9	49°7	18°5
1 a.m. after } Midnight. }	43°9	41°3	23°2	0°8	5°4	-13°2	-17°5	-9°9	9°4	27°6	33°9	46°8	16°0

* For 17 days, 15th to 31st. † 1st to 17th.

TABLE III.
EXTREMES of ATMOSPHERIC PRESSURE, with accompanying TEMPERATURE, WIND, and
WEATHER, at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to 1850
July 17th.

Month.	Date.	Highest.	Temp.	Wind.	Weather.	Date.	Lowest.	Temp.	Wind.	Weather.	Range.
	d. h.	inches.				d. h.	inches.				inch.
August 1849 -	29 2	30°24	+54	N.W.b.W. 7	b c	20 6	29°39	+56	S.b.W. 1	b c v	0°85
September " -	7 2	34	47	W.b.S. 1	c b	19 15	°09	39	N.W.b.N. 4	r	1°25
October " -	16 6	22	+23°5	N.b.E. 3	b c	8 23	28°85	35°3	E.b.N. 3	r q	1°37
November " -	24 22	22	-13	W.b.S. 1	b c q	0 13	29°02	4°5	E.b.N. 6	o q	1°20
December " -	10 10	87	+7	E.b.N. 1	c b	2 0	28°85	30°3	S.b.W. 4	o m	2°02
January 1850 -	4 5	73	+6	Calm	b c	21 18	29°40	9	S.W.b.S. 1	o m	1°33
February " -	24 3	29	-9	Calm	b v	22 19	28°59	+13	E.b.N. 4	o m q	1°70
March " -	11 13	80	-21	W.b.S. 4	b c m	0 13	29°25	-3	Calm	o m s	1°55
April " -	15 0	41	+23°5	Calm	b c v	21 11	°09	+29	S.b.E. 5	m s q	1°32
May " -	20 23	31	44	Calm	b c v	30 0	°52	50	N.b.W. 1	b c v	0°79
June " -	20 15	20	34	S.b.E. 5	o m	9 15	°27	43	N.E.b.N. 1	b v	0°93
July " -	10 1	°04	+55	N.E.b.N. 2	b c	6 5	°37	+50°5	Calm	m r	0°67
Year -	Dec.	30°87	-	-	-	Feb.	28°59	-	-	-	2°28

TABLE IV.
EXTREMES of AIR TEMPERATURE, with accompanying PRESSURE, WIND, and WEATHER,
at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to 1850 July 17th.

Month.	Date.	Max.	Bar.	Wind.	Weather.	Date.	Min.	Bar.	Wind.	Weather.	Range.
	d. h.		inches.			d. h.		inches.			°
August 1849 -	24 2	+57°5	29°53	N.E.b.N. 1	b c v	28 22	+35	30°20	W.b.S. 1	p s q	21°5
September " -	10 4	58	30°07	Calm	b	21 20	+33	29°44	S.E.b.E. 7	e q	25
October " -	6 0	42	29°56	E.b.S. 4	b c	24 3	0	°92	S.b.E. 3	b c	42
November " -	27 6	26	°26	E.b.N. 4	o p q	13 8	-16	°80	Calm	b c	42
December " -	30 17	33	°67	S.E.b.E. 6	o q	25 12	26°5	30°50	N.E.b.N. 1	b v	59°5
January 1850 -	0 21	35	°43	S.E.b.E. 6	o q	27 9	36	°47	Calm	b v	71
February " -	25 21	27	°12	S.b.E. 2	o m s	11 20	43°5	29°95	W.b.S. 1	b c	70°5
March " -	8 14	29	°83	W.b.S. 2	o m s	2 17	37	°71	W.b.S. 6	b c	66
April " -	18 1	48	°91	Calm	o m r	2 16	-41	30°09	Calm	b c m	89
May " -	27 0	54	°90	Calm	b v	0 15	+3	29°68	Calm	b c	51
June " -	24 7	62	30°07	Calm	b v	1 12	22	°76	N.W.b.W. 6	b c q	40
July " -	12 1	64	29°71	S.b.W. 3	r q	0 14	+34	°60	Calm	b c v	30
Year	July	+64	-	-	-	Feb.	-43°5	-	-	-	107°5

TABLE V.

SUMS of WIND COMPONENTS, CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th
to 1850 July 17th.

Hours.	August 15th to 31st, 1849.				September 1849.				October 1849.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	22.4	22.4	4.0	38.1	35.8	15.3	49.7	13.4	32.0	37.2	38.5	18.5
2 "	26.3	19.3	3.1	44.7	33.6	17.4	55.9	14.8	30.4	40.6	39.3	18.6
3 "	24.7	15.9	2.9	46.2	36.4	27.5	63.5	15.7	35.6	38.9	42.0	21.6
4 "	24.9	15.2	2.9	43.2	36.2	32.6	59.4	11.3	38.5	42.3	39.4	24.1
5 "	21.4	14.6	1.8	42.5	33.6	39.7	63.5	15.1	31.4	37.8	41.9	22.3
6 "	19.7	14.6	1.8	43.1	36.7	35.7	64.7	17.3	33.4	38.9	43.4	24.1
7 "	15.8	16.8	2.4	38.5	36.8	34.7	59.4	17.5	31.8	39.7	40.2	22.9
8 "	15.6	16.7	5.2	38.6	35.9	37.5	63.5	18.8	28.5	38.6	39.1	33.4
9 "	16.3	16.8	6.3	36.6	36.0	35.1	58.0	18.9	39.7	37.0	38.5	24.5
10 "	16.2	15.9	6.8	28.4	34.1	33.4	57.6	20.9	41.6	35.1	37.2	27.2
11 "	15.6	16.0	5.8	33.7	31.0	29.6	55.2	23.1	40.0	35.0	35.9	25.9
Noon	17.9	12.8	6.2	33.7	30.4	30.3	53.1	22.2	38.6	32.8	32.8	24.2
1 p.m.	24.0	12.2	4.7	36.2	36.2	18.1	42.2	17.2	31.2	29.6	31.7	22.8
2 "	24.3	12.3	4.1	33.6	36.6	17.1	42.3	15.5	30.6	28.7	29.0	27.5
3 "	24.8	12.4	8.8	34.9	38.6	16.7	44.9	14.5	30.9	30.6	27.9	31.9
4 "	23.9	15.6	5.0	37.3	35.6	19.3	44.4	19.2	32.5	33.8	27.8	39.5
5 "	25.1	11.7	5.3	33.8	35.4	19.2	48.7	17.6	33.5	33.5	25.2	33.6
6 "	23.8	12.3	3.5	33.1	34.4	17.9	47.2	19.1	34.5	34.1	26.9	33.1
7 "	23.7	13.7	2.7	40.4	31.9	16.4	45.8	21.6	31.0	35.0	27.0	32.8
8 "	22.8	16.0	4.9	33.1	31.7	15.0	45.3	22.5	33.4	36.7	22.2	29.1
9 "	17.6	18.8	5.4	31.9	27.2	14.4	39.5	18.6	30.9	36.3	36.0	27.4
10 "	14.5	22.7	8.7	31.3	25.5	14.9	40.4	11.7	27.4	39.3	40.5	27.6
11 "	17.1	21.9	7.9	36.4	27.0	21.3	35.1	14.4	27.6	41.7	40.4	24.8
Midnight	17.5	23.3	8.8	35.2	31.1	17.7	39.9	15.0	27.6	41.7	37.6	24.3
Means	20.7	16.2	5.0	36.9	33.7	24.0	50.8	17.3	33.0	36.5	35.0	26.7

TABLE V.—continued.

SUMS of WIND COMPONENTS, CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th
to 1850 July 17th—continued.

Hours.	November 1849.				December 1849.				January 1850.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	28.3	10.7	52.8	36.0	12.9	22.2	39.5	39.5	19.0	17.4	38.5	56.9
2 "	25.6	10.1	52.6	32.2	12.0	22.6	38.9	43.0	19.8	18.6	36.1	55.0
3 "	26.3	11.0	53.8	33.5	17.0	20.6	41.5	41.9	21.2	23.9	36.1	55.0
4 "	25.1	10.3	49.8	29.3	18.0	17.3	43.3	37.5	17.9	23.2	34.9	54.4
5 "	23.7	13.0	53.4	30.2	16.6	17.5	43.4	29.9	18.2	15.1	30.7	54.4
6 "	24.0	12.9	57.7	29.1	14.9	21.5	38.6	24.4	17.6	23.4	34.8	53.7
7 "	20.3	11.2	48.2	26.6	15.9	19.7	30.1	20.6	19.8	21.7	32.6	52.0
8 "	18.5	13.6	46.0	22.1	15.9	20.0	30.2	19.8	20.2	22.6	28.1	47.3
9 "	24.6	11.6	44.1	26.9	14.5	26.7	27.7	22.2	21.7	21.9	30.5	49.9
10 "	22.4	8.9	43.3	28.9	15.8	24.6	33.8	21.2	20.3	22.4	28.9	46.1
11 "	26.0	10.4	42.7	29.0	13.4	19.0	30.6	23.2	19.4	21.3	30.1	45.0
Noon	30.5	10.5	45.2	27.6	16.7	22.7	28.4	23.3	22.2	22.9	30.7	44.6
1 p.m.	27.5	6.4	43.5	13.8	18.9	19.1	31.0	22.5	18.7	15.1	26.8	38.3
2 "	27.9	7.1	43.0	14.1	20.2	18.4	29.5	22.1	19.1	14.9	26.0	37.5
3 "	28.5	9.3	44.6	14.3	17.9	16.3	40.4	25.5	20.2	13.7	30.9	44.5
4 "	29.2	9.1	41.5	14.4	16.5	15.7	40.2	25.5	20.9	11.7	28.4	51.0
5 "	25.8	13.3	45.0	16.0	12.9	25.8	33.0	23.7	21.9	13.4	31.8	48.1
6 "	24.8	12.2	41.5	15.6	12.2	23.6	32.0	27.4	22.0	13.4	34.3	48.1
7 "	27.8	6.4	37.6	21.5	9.9	23.3	33.7	32.3	19.0	12.2	41.8	51.5
8 "	28.2	7.9	40.3	24.0	13.4	24.9	33.9	31.9	19.7	12.1	42.6	53.5
9 "	19.8	11.5	37.7	27.6	9.1	25.8	31.1	41.3	23.6	8.9	39.5	56.4
10 "	19.6	12.6	39.0	28.2	8.4	24.7	22.7	49.3	24.8	6.4	43.6	56.4
11 "	23.9	14.1	38.0	32.9	7.0	24.2	35.8	34.9	27.4	8.7	53.1	57.9
Midnight	24.6	15.7	39.9	33.5	6.4	28.0	37.9	36.9	26.0	9.3	49.1	62.7
Means	25.1	10.8	45.0	25.3	14.0	21.8	34.5	30.0	20.9	16.4	35.0	50.9

TABLE V.—*continued.*

SUMS of WIND COMPONENTS, CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to 1850 July 17th—*continued.*

Hours.	February 1850.				March 1850.				April 1850.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	10.0	21.9	39.1	77.6	6.6	18.0	29.7	75.7	16.9	37.8	52.5	44.0
2 "	10.9	21.8	40.1	75.9	7.1	21.6	32.7	70.9	17.2	30.7	50.9	46.9
3 "	10.5	21.3	37.6	77.9	7.5	21.2	33.7	65.1	15.7	36.1	47.1	46.3
4 "	11.5	18.5	36.6	69.1	4.8	20.9	31.8	55.3	16.2	36.1	45.3	47.9
5 "	13.6	15.3	34.5	59.3	6.4	21.1	33.6	56.0	19.3	24.4	38.0	50.3
6 "	13.0	14.1	33.5	58.3	5.2	23.1	30.6	56.8	21.5	24.1	38.4	46.9
7 "	11.8	13.6	28.8	49.4	5.4	25.0	29.8	55.8	19.8	29.2	39.5	41.7
8 "	8.5	14.7	23.7	47.1	5.4	25.7	29.7	55.7	16.3	26.5	37.1	37.8
9 "	10.2	18.8	24.3	53.8	3.8	23.6	28.6	46.3	19.6	19.7	48.8	39.5
10 "	9.5	18.9	24.6	55.0	3.7	25.4	28.7	45.2	19.4	17.0	48.9	42.5
11 "	7.4	19.4	22.4	51.8	2.9	29.3	31.0	47.8	18.5	10.2	44.8	41.6
Noon	9.6	18.6	20.1	54.5	4.3	25.8	32.4	48.8	17.8	10.0	51.8	42.3
1 p.m.	8.6	17.0	20.6	57.2	3.5	24.5	32.3	47.8	14.3	12.4	46.1	35.3
2 "	9.4	17.9	21.4	60.5	3.1	24.7	32.0	45.9	14.7	18.0	49.1	35.3
3 "	8.3	19.7	23.4	67.2	7.2	23.9	32.8	42.9	17.7	15.4	45.2	33.0
4 "	8.9	18.9	23.7	70.3	7.7	23.0	31.6	44.3	19.7	14.9	46.2	31.6
5 "	9.4	16.2	23.6	67.1	7.9	21.3	30.2	46.3	16.2	15.1	44.3	32.3
6 "	9.6	17.2	28.5	69.8	7.7	22.2	34.6	59.9	12.8	17.3	37.5	32.3
7 "	9.0	15.6	31.8	73.3	2.7	25.0	27.5	63.8	13.1	16.7	36.2	33.2
8 "	4.8	17.4	28.6	74.3	2.0	23.4	24.3	60.9	15.1	17.2	38.3	32.5
9 "	10.5	14.8	32.3	76.8	2.7	20.5	26.4	62.7	21.6	20.2	41.1	36.8
10 "	7.6	15.4	30.4	71.6	4.5	17.0	26.4	72.1	28.6	24.9	43.9	37.7
11 "	8.4	17.7	31.3	81.6	4.6	17.2	28.4	73.1	27.7	24.9	42.1	46.2
Midnight	9.0	18.3	34.2	84.6	5.3	16.4	27.4	76.8	25.1	27.7	44.0	43.3
Means	9.6	17.6	29.0	66.0	5.1	22.5	30.3	57.3	18.5	21.9	44.0	39.9

TABLE V.—*concluded.*

SUMS of WIND COMPONENTS, CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to 1850 July 17th—*concluded.*

Hours.	May 1850.				June 1850.				July 1st to 17th 1850.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	11.4	15.7	5.9	38.2	19.3	28.2	10.6	47.4	5.9	10.1	11.5	16.0
2 "	12.7	23.8	10.5	45.6	20.6	30.3	9.2	63.2	3.8	10.2	10.6	13.7
3 "	10.4	16.1	11.9	37.5	20.6	31.1	8.7	56.8	2.2	10.2	8.5	11.5
4 "	12.5	14.1	14.2	35.8	14.1	33.0	7.5	55.2	2.8	13.5	4.9	11.5
5 "	12.0	17.3	9.0	38.6	12.0	30.2	5.9	47.8	6.2	10.4	8.6	8.9
6 "	9.0	17.0	7.7	38.3	11.4	29.8	4.0	48.9	5.8	12.8	9.1	8.4
7 "	10.6	15.3	8.0	38.2	14.8	28.9	3.7	44.2	6.0	14.9	9.3	8.6
8 "	13.2	11.8	14.3	32.9	13.6	24.3	5.1	44.6	4.9	11.9	9.6	7.4
9 "	12.1	15.9	18.3	37.8	16.7	27.0	4.3	46.1	5.8	8.6	8.6	9.1
10 "	14.9	15.4	14.0	32.9	21.4	23.3	3.5	42.3	8.6	6.8	9.6	10.6
11 "	13.2	12.9	11.1	35.6	20.5	26.5	5.5	35.6	8.2	7.2	7.2	10.2
Noon	14.8	10.7	9.0	37.2	23.6	26.0	5.2	33.2	10.1	11.1	7.2	9.9
1 p.m.	14.1	17.2	8.0	29.3	19.8	23.0	5.5	41.8	12.4	13.4	8.8	11.3
2 "	14.2	13.0	8.0	28.8	22.3	23.0	6.8	40.7	13.5	14.7	9.8	13.4
3 "	19.2	9.7	6.6	29.6	26.1	21.6	6.4	44.1	13.3	13.2	10.0	13.2
4 "	18.0	10.0	6.3	28.2	25.9	19.2	6.6	45.5	11.7	11.3	11.8	8.9
5 "	21.1	6.0	6.4	29.5	18.8	17.8	3.9	43.8	8.6	10.1	8.0	10.0
6 "	20.1	4.3	4.6	33.2	19.3	16.1	4.6	39.5	10.6	10.2	13.9	10.6
7 "	17.1	4.8	2.5	30.8	21.5	18.4	7.8	38.3	12.5	10.1	14.4	9.5
8 "	16.2	5.3	1.9	30.3	17.6	22.3	8.4	41.7	9.8	11.1	8.2	11.4
9 "	14.1	5.8	2.7	34.7	13.3	24.4	6.3	38.9	9.4	10.2	8.7	14.6
10 "	16.1	6.8	6.3	33.6	17.1	20.9	4.6	40.4	6.8	11.4	5.2	14.0
11 "	15.7	13.2	6.3	38.5	22.0	23.8	6.8	48.9	6.5	11.5	5.2	15.7
Midnight	9.8	14.8	4.0	40.0	18.4	32.9	9.4	46.4	8.3	12.9	5.2	18.1
Means	14.3	12.4	8.2	34.8	18.8	25.1	6.3	44.8	8.1	11.2	8.9	11.5

TABLE VI.

SUMS of WIND COMPONENTS, with RESULTANT WINDS
at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849
August 15th to 1850 July 17th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
1 a.m.	220.5	256.9	372.3	501.3	S. 74° W.	134
2 "	220.0	267.0	379.9	524.5	S. 72° W.	152
3 "	228.1	273.8	387.3	509.0	S. 69° W.	130
4 "	222.5	277.0	370.0	474.6	S. 62° W.	118
5 "	214.4	256.4	364.3	455.3	S. 65° W.	100
6 "	212.2	267.9	364.3	449.3	S. 57° W.	102
7 "	208.8	270.7	332.0	416.0	S. 54° W.	104
8 "	196.5	263.9	331.6	405.5	S. 47° W.	100
9 "	221.0	262.7	338.0	411.6	S. 60° W.	85
10 "	227.9	247.1	336.9	401.2	S. 73° W.	67
11 "	216.1	236.7	322.3	402.5	S. 76° W.	83
Noon	236.5	234.2	322.1	401.5	N. 88° W.	79.5
1 p.m.	229.2	208.0	301.2	373.5	N. 74° W.	75.5
2 "	235.9	209.8	301.0	374.9	N. 71° W.	78
3 "	252.7	202.5	321.9	395.6	N. 56° W.	89
4 "	250.5	202.5	313.5	415.7	N. 65° W.	113
5 "	236.6	203.4	305.4	401.8	N. 71° W.	102
6 "	231.8	200.8	309.1	421.7	N. 75° W.	116.5
7 "	219.2	197.6	308.8	449.0	N. 81° W.	142
8 "	214.7	209.3	298.9	445.2	N. 88° W.	144.5
9 "	199.8	211.6	306.7	467.7	S. 86° W.	161.5
10 "	200.9	217.0	311.7	473.9	S. 84° W.	163
11 "	214.9	240.2	330.4	505.3	S. 82° W.	177
Midnight	209.1	258.7	337.4	516.8	S. 75° W.	185.5
Means	221.7	236.5	332.0	441.4	S. 82° W.	110

* These figures must be divided by 337, to obtain the mean force at the given hour.

TABLE VIII.

CALMS recorded at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849 August 15th to
1850 July 17th.

Hours.	August (17 days).	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July (17 days).	Period.
1 a.m.	—	5	4	2	6	8	4	6	6	16	7	4	68
2 "	—	2	5	1	6	7	5	4	7	10	4	5	56
3 "	—	2	4	2	7	6	5	7	8	14	5	8	68
4 "	—	2	3	4	7	6	4	9	6	14	6	6	67
5 "	—	2	3	3	8	5	5	6	6	15	5	6	64
6 "	—	1	1	4	8	3	7	5	7	15	5	7	63
7 "	—	1	1	4	6	4	5	4	6	15	8	4	58
8 "	—	1	1	4	6	5	4	5	6	10	8	4	54
9 "	—	—	1	2	5	4	4	10	6	11	6	5	54
10 "	—	—	1	3	3	4	4	8	8	6	5	4	46
11 "	—	2	—	1	4	4	4	8	9	6	5	5	48
Noon	—	2	—	2	5	3	3	6	9	6	6	3	45
1 p.m.	—	3	—	3	7	6	6	6	6	8	8	1	54
2 "	1	2	—	3	8	4	5	7	4	8	7	1	50
3 "	—	4	—	4	7	4	5	6	4	6	4	1	45
4 "	1	3	—	4	8	4	3	6	5	5	2	2	43
5 "	—	3	2	3	6	6	4	7	6	5	6	4	52
6 "	—	3	2	5	5	6	3	6	8	7	6	2	53
7 "	—	5	1	7	7	4	6	7	10	9	6	1	63
8 "	—	5	1	8	6	6	6	8	8	11	3	2	64
9 "	—	7	2	8	7	7	6	7	7	12	8	2	73
10 "	—	4	2	6	8	6	9	6	7	15	7	4	74
11 "	—	4	3	5	9	6	6	6	8	12	7	5	71
Midnight	—	5	3	3	7	7	4	7	6	12	5	4	63
Totals	2	68	40	91	156	125	117	157	163	248	139	90	1396

TABLE IX.

SUMMARY of WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (Scale 0-12), at CHAMISSO ISLAND, H.M.S. " PLOVER," 1849 August 15th to 1850 July 17th.

Month.	No. of Observations.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.
August 1849.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
August	408	11	2'1	7	1'4	11	1'5	9	2'4	5	2'4	12	2'7	10	2'6	13	3'
September	720	36	3'9	35	2'5	18	2'4	102	4'2	114	4'3	29	4'1	26	4'2	46	4'1
October	744	69	2'7	29	2'5	13	3'0	38	4'7	45	5'0	60	3'1	70	2'8	57	3'4
November	720	28	1'3	26	1'8	55	2'6	127	3'6	114	3'7	18	2'9	15	3'1	16	2'6
December	744	17	2'8	12	1'9	25	2'4	62	2'6	80	3'1	58	3'5	41	3'6	43	3'7
January 1850.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
January	744	18	1'3	12	1'4	34	4'1	86	4'2	66	3'7	11	4'5	16	5'0	21	3'8
February	672	13	1'5	2	1'5	15	4'5	62	4'4	60	4'5	17	4'5	10	3'5	10	3'7
March	744	4	1'5	2	4'5	5	2'8	55	2'5	89	3'2	48	4'1	28	4'0	18	4'1
April	720	14	3'2	11	4'6	37	3'6	80	4'4	65	4'8	39	4'7	28	3'9	33	3'8
May	744	31	1'3	16	2'3	26	2'7	19	2'7	13	2'2	7	1'9	17	2'2	21	2'0
June	720	27	1'5	20	1'6	21	1'5	3	1'0	3	1'7	3	1'7	12	2'9	47	4'3
July	408	10	1'3	18	1'8	18	1'7	28	1'9	25	2'0	14	1'9	21	3'0	11	2'7

(continued)

Months.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		No. of Calms.
	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
August 1849.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
August	24	3'2	33	4'1	25	4'6	23	3'0	35	3'0	90	4'3	58	4'0	39	3'3	1	3'0	2
September	36	3'9	19	3'5	21	2'9	22	2'4	15	2'1	19	2'7	42	3'3	72	4'1	-	-	68
October	66	4'0	27	3'9	20	3'7	32	4'4	26	4'5	3	5'3	53	3'9	94	2'2	2	1'0	40
November	19	2'3	14	2'4	22	2'5	46	3'1	33	3'9	35	5'0	29	4'5	32	2'7	-	-	91
December	27	3'3	7	2'4	10	2'2	54	3'3	78	3'8	37	4'4	15	3'4	22	2'9	-	-	156
January 1850.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
January	22	2'5	27	1'8	26	2'5	62	4'1	108	4'7	68	5'1	18	4'9	16	1'2	8	1'0	125
February	6	3'5	2	1'0	14	2'5	155	4'7	157	5'0	14	5'0	3	1'3	15	1'5	-	-	117
March	6	3'0	6	3'3	14	3'1	141	4'4	151	4'5	4	5'2	7	4'1	9	1'8	-	-	157
April	22	3'7	3	1'7	10	5'1	74	4'8	91	4'9	19	4'2	15	3'3	16	3'2	-	-	163
May	21	1'5	25	1'6	24	2'8	79	3'5	74	3'6	42	3'2	43	2'9	38	1'5	-	-	248
June	50	4'0	21	2'7	28	2'2	70	2'8	92	3'5	80	3'9	67	3'5	36	1'9	1	1'0	139
July	27	3'1	30	2'8	8	1'8	13	1'8	19	2'2	40	2'9	28	2'6	8	1'4	-	-	90

TABLE X.

SUMMARY of WEATHER NOTATIONS at CHAMISSO ISLAND, H.M.S. " PLOVER," 1849 August 15th to 1850 July 17th.

Hours.	August 1849.								September 1849.								October 1849.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	-	4	13	6	-	7	-	6	5	11	14	1	-	6	-	12	11	7	13	1	-	2	3	12
2 "	-	5	12	6	-	7	-	7	4	10	16	1	-	6	-	14	7	11	13	1	-	2	3	11
3 "	-	4	13	6	-	8	-	7	4	9	17	1	-	5	-	15	6	11	14	-	-	2	4	12
4 "	1	2	14	6	-	10	1	5	4	11	15	1	-	5	-	15	6	12	13	-	-	2	4	12
5 "	1	6	10	6	-	9	1	6	3	11	16	-	-	4	-	12	4	12	15	1	-	2	4	15
6 "	1	4	12	6	-	8	1	7	3	11	16	-	-	5	1*	12	4	13	14	1	-	2	6	14
7 "	1	5	11	6	-	9	1	7	2	13	15	-	-	3	1*	12	3	12	16	1	-	2	6	14
8 "	2	4	11	5	-	9	1	7	2	13	15	-	-	3	1*	11	2	13	16	1	-	1	5	14
9 "	2	4	11	5	-	6	2	6	3	13	14	1	-	3	2*	9	2	13	16	2	-	1	8	17
10 "	2	5	10	5	-	6	2	6	3	15	12	1	-	5	2*	8	3	13	15	2	-	2	7	18
11 "	2	4	11	5	-	6	1	6	5	14	11	-	-	5	2*	7	5	12	14	1	-	1	7	16
Noon	1	5	11	4	-	9	1	6	5	17	8	-	-	5	2*	7	6	13	12	3	-	1	7	14
1 p.m.	1	7	9	5	-	8	-	5	2	20	8	-	-	3	-	4	2	17	12	1	-	-	4	11
2 "	1	7	9	3	-	10	1	5	3	18	9	-	-	4	-	4	2	21	8	1	-	1	4	10
3 "	1	6	10	4	-	10	1	6	3	17	10	1	-	4	-	5	2	18	11	1	-	1	5	10
4 "	1	4	12	4	-	9	-	7	3	15	12	1	-	2	-	5	2	15	14	1	-	2	5	11
5 "	1	4	12	5	-	8	-	6	3	16	11	-	-	5	-	-	2	16	13	1	-	2	8	8
6 "	1	4	12	5	-	9	1*	6	3	14	13	1	-	5	1*	5	3	14	14	1	-	2	7	8
7 "	-	5	12	5	-	8	-	6	2	14	14	1	-	5	1*	4	3	14	14	-	-	1	7	8
8 "	-	5	12	5	-	7	-	6	2	12	16	1	-	5	-	3	5	10	16	-	-	1	6	8
9 "	-	4	13	5	-	5	-	7	2	15	13	1	-	5	-	3	9	6	16	-	-	1	6	12
10 "	-	5	12	5	-	5	-	7	3	13	14	-	-	7	-	3	10	7	14	-	-	1	5	13
11 "	-	4	13	5	-	7	-	7	2	16	12	-	-	6	-	5	10	6	15	-	-	2	4	17
Mdn.	-	4	13	5	-	5	-	7	3	16	11	-	-	7	-	7	10	7	14	-	-	1	3	17
Means	0.8	4.6	11.6	5.1	-	7.7	0.6	6.3	3.1	13.9	13.0	0.5	-	4.7	0.5	7.8	5.0	12.2	13.8	0.8	-	4.5	5.3	12.6

* Hail.

† Hail once.

TABLE X.—*continued.*

SUMMARY OF WEATHER NOTATIONS at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849
August 15th to 1850 July 17th—*continued.*

Hours.	November 1849.								December 1849.								January 1850.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	9	9	12	5	—	—	3*	11	12	6	13	14	—	—	3	6	17	7	7	8	—	1	1	15
2 "	10	5	15	5	—	—	3*	11	8	10	13	14	—	—	1	6	18	7	6	9	—	1	1	15
3 "	12	4	14	4	—	—	3*	9	10	9	12	14	—	—	3	6	19	3	9	9	—	1	1	14
4 "	10	6	14	4	—	—	3*	8	8	11	12	14	—	1	4	8	19	3	9	12	—	1	1	14
5 "	9	6	15	4	—	—	3*	8	9	7	15	14	—	—	4	7	17	5	9	8	—	—	3	14
6 "	9	6	15	5	—	—	5*	12	9	7	15	14	—	—	4	8	18	3	10	9	—	—	2	14
7 "	6	10	14	5	—	—	4*	8	8	9	14	14	—	—	3	6	20	1	10	10	—	—	2	11
8 "	5	12	13	4	—	—	5*	9	9	7	15	16	—	—	2	6	16	5	10	8	—	1	2	11
9 "	7	7	16	5	—	—	8	9	10	3	18	13	—	—	5	5	13	8	10	8	—	—	4	10
10 "	8	4	18	5	—	—	6	7	9	7	15	12	—	—	5	6	14	6	11	6	—	—	4	9
11 "	7	7	16	4	—	—	8	6	8	11	12	11	—	—	5	6	15	8	8	5	—	—	3	11
Noon	9	5	16	4	—	—	8	5	8	11	12	10	—	1	5	6	17	5	9	5	—	—	1	11
1 p.m.	6	8	16	2	—	—	5	2	8	9	14	9	—	2	5	1	15	7	9	5	—	—	1	6
2 "	6	5	19	2	—	—	6	2	8	6	17	7	1	2	6	1	16	7	8	6	—	—	1	5
3 "	6	4	20	2	—	—	4	4	7	6	18	8	1	2	8	3	14	7	10	5	—	—	1	9
4 "	5	5	20	2	—	—	3	5	8	7	16	10	1	1	6	2	14	7	10	5	—	—	1	9
5 "	5	6	19	4	—	1	4	7	11	5	15	10	1	1	5	2	17	9	5	7	—	—	2	10
6 "	6	6	18	3	—	1	4	8	12	6	13	12	—	1	8	2	16	12	3	7	—	—	2	12
7 "	8	6	16	5	—	—	6	6	11	8	12	11	—	1	5	4	19	8	4	8	—	—	1	13
8 "	8	4	18	5	—	—	6*	7	12	6	13	10	—	—	4*	5	18	7	6	9	—	—	1	16
9 "	9	4	17	7	—	—	6	7	9	11	11	9	—	—	4*	4	17	7	7	12	—	—	1	17
10 "	8	5	17	8	—	—	6	7	12	9	10	11	—	1	5*	4	17	8	6	11	—	—	1	17
11 "	10	3	17	8	—	—	4	8	12	8	11	11	—	1	4	5	19	6	6	12	—	—	1	17
Mdn.	9	6	15	8	—	—	4	9	13	6	12	11	—	1	5	4	19	5	7	11	—	—	1	17
Means	7.8	6.0	16.2	4.6	—	0.1	4.9	7.3	9.6	7.7	13.7	11.6	0.2	0.6	4.5	4.7	16.8	6.3	7.9	8.1	—	0.2	1.6	12.4

* Hail once.

TABLE X.—*continued.*

SUMMARY OF WEATHER NOTATIONS at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849
August 15th to 1850 July 17th—*continued.*

Hours.	February 1850.								March 1850.								April 1850.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	8	9	11	18	—	—	5	15	7	10	14	22	—	—	5	7	7	9	14	23	—	2	2	12
2 "	9	8	11	18	—	—	5	15	9	9	13	23	—	1	5	8	6	10	14	23	—	2	2	12
3 "	9	9	10	17	—	—	4	15	8	9	14	23	—	1	5	10	7	10	13	19	—	1	3	12
4 "	8	8	12	17	—	—	5	15	9	9	13	23	—	—	6	11	10	7	13	20	—	1	4	12
5 "	7	9	12	16	—	—	6	14	9	7	15	22	—	—	8	11	7	10	13	19	—	1	5	12
6 "	10	6	12	17	—	—	5	14	7	10	14	20	—	—	7	11	8	11	11	18	—	1	5	11
7 "	10	7	11	15	—	—	5	11	8	10	13	20	—	—	6	12	8	10	12	21	—	1	4	10
8 "	10	7	11	15	—	—	6	9	8	11	12	19	—	—	5	11	10	10	10	18	—	1	4	9
9 "	9	8	11	13	—	—	7	11	11	9	11	13	—	—	5	6	10	13	7	13	—	1	5	9
10 "	10	6	12	12	—	—	9	10	14	7	10	13	—	—	5	7	8	15	7	13	—	1	4	8
11 "	11	7	10	13	—	—	7	11	16	5	10	13	—	—	7	8	9	11	10	12	—	—	4	8
Noon	13	3	12	12	—	—	8	10	14	8	9	13	—	—	7	8	10	10	10	11	—	—	5	9
1 p.m.	10	6	12	12	—	—	7	9	13	9	9	13	—	—	8	5	7	14	9	8	—	2	6	9
2 "	10	6	12	12	—	—	7	8	14	8	9	13	—	—	8	6	9	13	8	8	—	1	6	9
3 "	10	5	13	11	—	—	6	8	15	7	9	10	—	—	7	7	11	11	8	8	—	1	7	9
4 "	9	5	14	12	—	—	7	9	13	9	9	11	—	—	8	7	13	7	10	7	—	2	5	8
5 "	8	5	15	16	—	—	8	11	12	10	9	13	—	—	7	8	12	9	9	10	—	3	4	6
6 "	7	5	16	16	—	—	8	11	9	13	9	14	—	—	7	10	12	9	9	10	—	2	5	5
7 "	7	11	10	20	—	—	5	12	5	15	11	17	—	—	6	9	11	10	9	13	—	3	2	6
8 "	7	11	10	20	—	—	6	12	6	16	9	20	—	—	6	7	7	11	12	15	—	3	3	7
9 "	9	8	11	17	—	—	10	10	6	14	11	23	—	—	5	8	5	13	12	19	—	1	2	12
10 "	8	8	12	17	—	—	10	11	8	12	11	24	—	—	6	9	6	12	12	21	—	1	2	12
11 "	10	4	14	18	—	—	10	13	8	10	13	26	—	—	6	8	7	9	14	22	—	1	4	14
Mdn.	9	5	14	19	—	—	8	14	7	10	14	26	—	—	6	9	7	10	13	23	—	1	4	13
Means	9.1	6.9	12.0	15.5	—	—	6.8	11.6	9.8	9.9	11.3	18.1	—	0.1	6.3	8.5	8.6	10.6	10.8	15.5	—	1.4	4.0	9.8

TABLE X.—concluded.

SUMMARY of WEATHER NOTATIONS at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849
August 15th to 1850 July 17th—concluded.

Hours.	May 1850.								June 1850.								July 1850.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	10	10	11	8	2	—	1	12	10	8	12	6	3	1	3	15	3	6	8	3	—	4	—	4
2 "	9	11	11	9	2	—	2	13	9	11	10	5	4	2	3	14	3	5	9	5	—	5	—	3
3 "	11	11	9	9	3	—	2	10	6	11	13	8	4	3	3	12	5	3	9	5	—	3	—	4
4 "	13	9	9	8	3	—	2	9	9	8	13	9	4	2	2	13	4	5	8	4	—	5	—	1
5 "	16	6	9	13	1	—	3	7	8	6	16	3	7	3	2	10	3	4	10	6	—	5	—	2
6 "	16	7	8	14	1	—	2	6	8	9	13	7	4	2	3	11	3	4	10	5	—	5	—	2
7 "	18	4	9	14	1	1	2	6	11	5	14	7	2	2	2	10	3	5	9	4	—	4	—	2
8 "	18	3	10	12	2	—	2	6	11	6	13	5	3	1	1	9	3	8	6	5	—	2	—	2
9 "	15	6	10	5	3	—	1	8	12	8	10	4	3	2	2	10	4	6	7	4	—	1	—	2
10 "	17	8	6	7	2	—	3	4	12	8	10	4	2	1	2	10	5	5	7	4	—	2	—	2
11 "	19	7	5	8	1	—	3	4	12	9	9	2	2	1	1	9	5	6	6	3	—	2	—	2
Noon	20	5	6	7	1	—	3	4	12	11	7	2	2	2	1	9	5	6	6	4	—	4	—	2
1 p.m.	17	8	6	4	—	—	3	4	14	9	7	4	1	2	—	9	4	6	7	2	—	4	—	3
2 "	16	9	6	4	—	—	2	4	16	7	7	4	1	3	—	10	4	7	6	2	—	5	—	3
3 "	18	8	5	5	—	—	1	5	18	6	6	3	1	3	—	8	5	5	7	2	—	3	—	2
4 "	19	9	3	5	—	—	2	5	17	6	7	4	1	3	—	8	6	3	8	2	—	3	—	2
5 "	18	8	5	7	—	—	1	2	14	10	6	4	1	2	—	9	3	7	7	4	—	4	—	4
6 "	19	8	4	5	—	—	1	3	16	5	9	4	1	2	—	8	3	6	8	3	1	3	—	4
7 "	21	7	3	5	1	—	2	4	15	5	10	4	1	4	—	10	3	6	8	2	1	1	—	4
8 "	18	9	4	5	1	—	3	3	16	8	6	4	1	3	1	8	3	4	10	3	1	3	—	5
9 "	15	10	6	5	1	—	2	3	14	9	7	1	3	3	1	9	3	5	9	5	1	6	—	3
10 "	14	10	7	6	1	—	1	6	13	11	6	2	2	3	1	10	5	3	9	4	1	6	—	3
11 "	12	11	8	8	2	—	—	9	12	8	10	2	2	3	1	14	4	5	8	3	1	4	—	4
Mdn.	11	12	8	7	3	—	—	9	11	7	12	4	2	1	2	14	5	3	9	2	1	3	—	4
Means	15.8	8.2	7.0	7.5	1.3	—	1.8	6.1	12.3	8.0	9.7	4.3	2.4	2.3	1.3	10.4	3.9	5.1	8.0	3.6	0.3	3.6	—	2.9

TABLE XI.

MEAN AMOUNT of CLOUD at CHAMISSO ISLAND, H.M.S. "PLOVER," 1849
August 15th to 1850 July 17th.

Hours.				1849.					1850.							Year.
				Aug.*	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.†	
1 a.m.	-	-	-	8.5	6.8	5.8	6.4	5.6	4.3	6.0	6.5	6.7	5.4	6.0	7.1	6.3
2 "	-	-	-	8.5	7.1	6.3	6.5	6.0	4.1	6.0	6.4	6.9	5.5	6.0	7.1	6.4
3 "	-	-	-	8.4	7.4	6.4	6.1	5.6	4.3	5.9	6.3	6.5	5.3	6.4	6.7	6.3
4 "	-	-	-	8.4	7.2	6.2	6.2	5.8	4.5	6.3	6.2	6.3	5.0	6.2	6.8	6.3
5 "	-	-	-	8.1	7.2	6.8	6.4	6.1	4.5	6.4	6.5	6.5	4.8	6.7	7.1	6.4
6 "	-	-	-	8.2	7.2	6.8	6.5	6.2	4.5	6.2	6.6	6.0	4.6	6.4	7.1	6.4
7 "	-	-	-	8.1	7.0	7.1	6.6	6.4	4.4	6.1	6.4	6.2	4.4	5.9	6.9	6.3
8 "	-	-	-	7.9	7.0	7.1	6.7	6.1	4.6	6.1	6.1	5.8	4.3	5.8	6.4	6.2
9 "	-	-	-	8.1	7.0	7.4	7.1	6.4	5.1	6.0	5.6	5.5	4.6	5.4	6.1	6.2
10 "	-	-	-	7.7	6.7	7.0	6.8	6.2	4.9	5.8	5.3	5.6	3.8	5.4	6.0	6.0
11 "	-	-	-	7.7	6.3	6.9	6.6	6.1	4.7	5.5	5.2	5.6	3.5	5.1	5.7	5.7
Noon	-	-	-	7.7	6.1	6.4	6.4	6.1	4.6	5.5	5.1	5.7	3.4	4.9	5.6	5.6
1 p.m.	-	-	-	7.9	6.3	6.6	6.9	6.5	4.6	6.1	5.3	5.7	3.7	4.5	5.9	5.8
2 "	-	-	-	7.9	6.4	6.4	7.3	6.8	4.6	6.0	5.0	5.5	3.8	4.1	5.8	5.8
3 "	-	-	-	8.0	6.4	6.9	7.4	7.0	4.9	6.1	4.9	5.4	3.7	3.9	5.7	5.9
4 "	-	-	-	8.1	6.5	7.1	7.5	6.5	4.9	6.5	5.1	5.3	3.4	4.2	5.9	5.9
5 "	-	-	-	8.3	6.4	7.0	7.5	6.1	4.2	6.7	5.4	5.4	3.5	4.5	6.6	6.0
6 "	-	-	-	8.3	6.8	7.0	7.2	5.8	3.9	6.9	5.5	5.3	3.4	4.6	6.8	6.0
7 "	-	-	-	8.4	7.1	6.9	6.9	5.6	3.7	6.1	6.2	5.7	3.2	5.1	6.7	6.0
8 "	-	-	-	8.3	7.3	6.7	6.9	5.6	3.8	6.1	6.0	5.9	3.4	4.9	7.0	6.0
9 "	-	-	-	8.5	7.0	6.2	6.4	5.6	4.4	6.0	6.2	6.6	4.2	4.9	6.8	6.1
10 "	-	-	-	8.5	7.0	5.9	6.8	5.0	4.2	6.3	5.9	6.4	4.7	4.9	6.3	6.0
11 "	-	-	-	8.6	6.9	6.1	6.4	5.2	4.1	6.4	6.3	6.7	5.3	5.4	6.8	6.2
Midnight	-	-	-	8.6	6.6	6.1	6.4	5.2	4.2	6.5	6.3	6.5	5.2	5.9	6.8	6.2
Means	-	-	-	8.2	6.9	6.6	6.7	6.0	4.4	6.1	5.8	6.0	4.3	5.3	6.5	6.1

* For 17 days, 15th to 31st.

† 1st to 17th.

TABLE XII.

MEAN TEMPERATURE of the SEA WATER at CHAMISSO ISLAND, 1849 August 15th
to 1850 July 17th.

Hours.	1849.					1850.						
	Aug.*	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.†
1 a.m.	46°4	41°2	30°9	°	°	°	°	°	°	28°9	33°9	43°3
2 "	46°2	41°1	30°8							28°9	33°9	43°0
3 "	46°1	41°0	30°8							28°9	33°9	43°1
4 "	46°0	41°1	30°7							28°9	33°9	43°1
5 "	46°0	41°0	30°6							29°0	33°7	43°4
6 "	46°0	40°9	30°6							29°0	33°7	43°4
7 "	46°1	41°1	30°7	The observations are nearly always 28°, and the mean is 28° for every hour.	The observations are nearly always 28°, and the mean is 28° for every hour.	The observations are nearly always 28°, and the mean is 28° for every hour.	The observations are always 28° at every hour.	The observations are always 28°.	The observations are nearly always 28°.	29°2	33°7	43°5
8 "	46°3	41°2	30°7							29°3	34°0	43°6
9 "	46°7	41°3	30°9							29°4	34°1	43°9
10 "	46°9	41°6	30°9							29°5	34°4	44°7
11 "	47°0	41°6	30°9							29°6	34°7	44°6
Noon	47°1	41°9	31°0							29°7	35°1	45°0
1 p.m.	47°3	42°4	31°1							29°9	35°5	45°7
2 "	47°4	42°5	31°2							29°9	35°7	46°0
3 "	47°5	42°5	31°1							29°8	35°8	46°7
4 "	47°4	42°3	31°0							29°8	35°9	47°3
5 "	47°2	42°2	31°2							29°7	35°7	46°6
6 "	47°1	42°3	31°1							29°7	35°6	45°9
7 "	47°0	42°2	30°9							29°6	35°2	45°8
8 "	46°9	42°1	30°9							29°5	35°0	45°3
9 "	46°8	41°8	30°9							29°5	34°9	45°2
10 "	46°6	41°6	31°0							29°4	34°6	44°4
11 "	46°4	41°5	31°0							29°2	34°3	44°3
Midnight	46°4	41°3	31°0							29°1	34°1	43°9
Means	46°7	41°7	30°9	28°0	28°0	28°0	28°0	28°0	28°0	29°4	34°6	44°7

* For 17 days, 15th to 31st.

† 1st to 17th.

REMARKS from the Log of H.M.S. "Plover."

1849.—AUGUST.

- 15th, 3 p.m. - Anchored in Kotzebue Sound at Chamisso Island.
24th - - - Flock of birds passing to the southward.
25th, 5 to 7 p.m. Shifted to under Choris Peninsula.

1849.—SEPTEMBER.

- 1st, 10.15 p.m. Slight gleam of aurora from E. b. N. to N. b. E.
9th, 2 a.m. - A low arch of aurora from N. to E. b. N.
9th, 10 p.m. - Aurora from N.E. b. N. to N. b. W.
9th, 11 p.m. - Arch of aurora from E. b. N. to N. b. W. from the horizon.
10th, 8.45 p.m. - Aurora from E. b. N. to N.N.E.
13th, 9 p.m. - Aurora from E. b. N. to N. b. W.
13th, 10 p.m. - Aurora very brilliant.
17th, 10.30 p.m. Slight appearance of aurora to eastward.
18th, 8.45 p.m. - Aurora from N.E. b. N. to N.W. b. W.
18th, 10 p.m. - Aurora very brilliant to N.E. b. N. and N.W. b. W., and extending to S.E. b. E.
23rd, 12.10 a.m. A dark bank to N.E. b. N.; the aurora rising from behind the bank from N. b. W. to N.E. b. E., rays spreading towards the zenith.
23rd, 11 p.m. - Aurora from N. b. W. to E. b. N.
24th, 12.15 a.m. An arch of aurora extending from N. to E. b. N.
24th, 2 a.m. - Aurora more brilliant and extensive, covering nearly the entire face of the heavens.
24th, 9.30 p.m. - Slight appearance of aurora, N.E. b. N. and S.E. b. E.
24th, 11.35 p.m. Aurora very brilliant.

1849.—OCTOBER.

- 3rd, 1 a.m. - Aurora forming a very faint arch from N. b. W. to E. b. S.
12th, 11.30 p.m. Aurora showing from E. b. N. to W. b. S., elevation about 10°.
13th, 1 a.m. - An arch of aurora, extending from E. b. S. to W. b. N., and passing through the zenith.
13th, 7.30 p.m. - Aurora extending in an arch from E.S.E. to N. b. W., elevation about 15°.
13th, 9 p.m. - Aurora extending in a low arch from N.W. b. N. to E. b. N.
16th, 10 p.m. - Slight appearance of aurora in E. b. N.
17th, 1 a.m. - Slight aurora extending from N.E. b. E. to N. b. W.
17th, 10 a.m. - Ice forming rapidly in the bay.
17th, 7.45 p.m. - Slight appearance of aurora from N. b. W. to N.E.
17th, 9 p.m. - Aurora very bright from N.W. b. W. to E. b. S., faintly coruscating towards the zenith, but principally very bright arches across the zenith.
18th, 1 a.m. - Faint rays of aurora from W. b. N. to E. b. N.
18th, 2.30 a.m. - Ice grinding together very much.
18th, 3.30 a.m. - A large clear space of water on starboard side.
18th, 9 a.m. - The ice in many parts capable of bearing a man's weight.
18th, 6.35 p.m. - Slight appearance of aurora from N. b. W. to N.E.

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- 21st, 12.30 a.m. - Aurora forming a bright arch from E.N.E. to N.W. b. W.
 21st, 3 a.m. - Aurora forming an arch from E. b. N. to N.W. b. W.
 21st - Ice forming all over the bay, but breaking up in the squalls.
 21st, 10 p.m. - Aurora forming a brilliant arch from E. to N.W. b. W.
 21st, Midnight - Aurora nearly covering the face of the heavens.
 23rd - Ice strong enough to bear a man, close to the ship.
 23rd, 6.40 p.m. - Aurora extending in an arch from N. b. E. to N.E. b. E., elevation about 15°.
 23rd, 10 p.m. - Rays of aurora to N.E. b. N. and N.W. b. W., coruscating to the zenith.
 25th, 2 a.m. - Aurora from E. b. S. to N.W. b. N., forming an arch through the zenith.
 25th, 8.30 p.m. - Aurora forming a brilliant arch from E. to N.W. b. N.
 25th, Midnight - Aurora very faint from N.N.W. to E. b. N.
 26th, 1 a.m. - Aurora bright from S.E. b. E. to N.W. b. W., in the shape of an arch.
 28th, 1 a.m. - Aurora showing faintly from E. b. N. to N. b. E., elevation 20°.
 29th, 9 p.m. - Aurora in a perpendicular column, bearing E. by S. to 10° of altitude, and spreading into two arches; the centre of upper arch 33° of altitude and passing through the pointers of the Great Bear, terminating at N.W. b. W.; the centre of the lower arch 23° of altitude, and terminating at N.W. b. N.
 29th, 10 p.m. - Aurora scarcely visible.
 29th, Midnight - Aurora very faint from E. b. N. to N.W. b. W.

1849.—NOVEMBER.

- 1st, 1 p.m. - Faint halo round the sun, 44° in diameter.
 2nd, Midnight - Faint appearance of aurora.
 3rd, 1 a.m. - Aurora very bright for a short time from E. b. S. to W. b. S., coruscating to the zenith, altitude 75°, passing through Castor and Pollux and Pleiades; colours changing rapidly, yellow and green predominating.
 4th, 9 p.m. - Two arches of aurora from N.W. b. N. to N.E. b. E.; upper arch 15° of altitude, lower arch 10°.
 9th - A pack of seven wolves seen crossing the bay.
 10th, 3 a.m. - Faint appearance of aurora to N. b. W.
 10th - A wolf or fox seen under the bows.
 11th, 4 a.m. - Aurora extending over the whole face of the heavens.
 12th, 2 a.m. - Aurora from E. through the zenith to N.N.W., spreading over one half of the heavens, not very bright.
 12th, 3 a.m. - Aurora scarcely visible covering the same surface.
 12th, 4 a.m. - Aurora forming two bright arches, the upper one from N.W. b. W. to E. b. S., altitude 20°, width 2°, the lower one 12° of altitude, width 3°, from N.W. to E. b. N.
 12th, 7 p.m. - A bright arch of aurora from N.W. b. W. to E., altitude of centre 10°.
 12th, 8 p.m. - Aurora forming two arches, the upper one from N.W. b. W. to E. b. N., 12° of altitude, the lower from N.W. to E. b. N., altitude 5°.
 12th, 9 p.m. - Faint appearance of aurora.
 12th, 10 p.m. - Aurora very bright, forming an arch from S.E. b. E. to N.W. b. W. and coruscating towards the zenith.
 13th, 1 a.m. - Rays of aurora from W. b. S. to E.S.E., coruscating to the zenith; an arch of 8° altitude from E. b. S. to W. b. S.

- 13th, 4.30 a.m. - Aurora from S.E. b. E. to N.E. b. E.
 13th, 11.30 p.m. - Faint appearance of aurora from E. b. N. to W. b. N., altitude of arch 5°.
 14th, 1 a.m. - An arch of aurora from N.E. b. E. to N.W. b. N., altitude 15°, faint emanations shooting towards the zenith.
 14th, 9 p.m. - Aurora from N.W. b. W. to E. b. N., rays coruscating towards the zenith, altitude of arch 15°.
 14th, 11 p.m. - Aurora forming a bright arch from E. b. N. to N.W., altitude of centre of arch 12°.
 14th, Midnight - Aurora scarcely visible.
 16th, 2.30 a.m. - Aurora forming an arch extending from E. b. N. to N.W. b. W., altitude of centre about 10°.
 16th, 10 p.m. - Irregular arch of aurora from E. b. N. to N. b. W., altitude 15°.
 16th, 11 p.m. - Aurora becoming less distinct.
 17th, Midnight - Faint appearance of aurora from N.E. b. N. to N.W. b. N., altitude 15°.
 19th, 11 p.m. - Aurora forming an arch from E. b. S. to N.W. b. W., altitude 40°; also an oval from E. to N.W., altitude of the points 15°, altitude of upper curve 25°, altitude of lower curve 5°; rays of varying brilliancy.
 20th - A herd of deer seen on the hills of Choris Peninsula.
 21st - A large herd of deer seen.
 21st, 9 p.m. - Aurora in an arch from E. b. N. to W. b. S., 30° altitude, rays coruscating towards the zenith.
 21st, 10 p.m. - Aurora appearing fainter.
 21st, 11 p.m. - Aurora from E. b. N. to W. b. S., passing through the zenith.
 23rd, 1 a.m. - Faint irregular arch of aurora from E. b. N. to N.W. b. W., passing through Great Bear, altitude 60°, rays coruscating to the zenith as far as W. b. S.

1849.—DECEMBER.

- 14th, Midnight - Patches of aurora from E. b. N. to N.W. b. W., 4° of altitude.
 15th, 2 a.m. - An arch of aurora 20° of altitude, extending from E. b. N. to N. b. W.
 15th, Midnight - A few patches of aurora from N.E. b. N. to N. b. W., 20° altitude.
 18th, 1 a.m. - A few patches of aurora from N.E. b. N. to N. b. E., 15° altitude.
 20th, 5 a.m. - Irregular patches of aurora over the whole face of the heavens, and continually varying in appearance.
 21st, 8 p.m. - Aurora in patches from N.W. b. W. to N.E. b. E., altitude 12°.
 21st, 9 p.m. - A faint arch of aurora from E. b. S. to N. b. E., 40° altitude, also from N.W. b. W. to N. b. W., 6° altitude.
 21st, Midnight - Aurora coruscating towards the zenith.
 22nd, 1 a.m. - Patches of aurora over the face of the heavens, coruscating towards the zenith.
 23rd, 1 a.m. - An arch of aurora extending from E. to N. b. W., altitude 50°.
 23rd, 2 a.m. - Several patches of aurora frequently varying their position and form, between E. b. N. and W. b. N.; coruscations occasionally reaching the zenith.
 23rd, 11 p.m. - Aurora from E. b. N. to N.W. b. W., 30° altitude.
 26th, 7 a.m. - Faint appearance of aurora to E. b. S.
 26th - Newly formed ice 14 inches thick since 24th.
 28th - Found thickness of ice to be 9 feet 2 inches.

1850.—JANUARY.

- 2nd - - A large herd of deer seen on Choris Peninsula.
 4th - - A herd of deer seen on the ice.
 4th, 9 p.m. - An arch of aurora from N.E. b. E. to N.W. b. W., 12° of altitude.
 5th, 9 p.m. - Faint arch of aurora from E. b. N. to N. b. E., 6° of altitude, **coruscating faintly in the N.**
 5th, Midnight - Small patches of aurora from N.E. b. E. to N.E. b. N.
 9th, 7 a.m. - An arch of aurora from E. b. N. to W. b. N., 20° of altitude.
 10th, 1 a.m. - A brilliant arch of aurora from E. b. N. to W. b. N., 30° of altitude.
 10th, 11 p.m. - Faint appearance of aurora from N.E. b. E. to N. b. W.
 12th, 10 p.m. - Two arches of aurora, one from N.W. b. W. to E. b. N., 35° altitude; the other from N.W. b. W. to E. b. S., 50° altitude.
 12th, Midnight - Patches of aurora all over the face of the heavens.
 13th, 8 p.m. - Faint appearance of aurora to N. b. W.
 13th, 11 p.m. - Patches of aurora from N.W. b. W. to E. b. N., coruscating to the zenith.
 13th, Midnight - Brilliant arch from E. b. S. to W. b. S., 85° altitude.
 14th, Midnight - Aurora forming an arch from N.W. b. W. to E. b. N., 10° altitude, rays coruscating towards the zenith.
 15th, 1 a.m. - An arch of aurora from E. b. N. to N.W. b. W., rays coruscating towards the zenith.
 16th, 1 a.m. - Aurora forming an arch from N.W. b. W. to E. b. N., 20° altitude, rays coruscating towards the zenith.
 16th, 6 p.m. - A remarkable column of light emerged from the moon's upper and lower limbs, perpendicular to the horizon, extending 4° either way.
 17th, 8 p.m. - A misty halo round the moon 1½ in diameter.
 17th, 9 p.m. - A dark arch of clouds from N.W. b. W. to E. b. N., 10° altitude.
 17th, Midnight - An arch of aurora from E. b. N. to N.W. b. W., 20° altitude.
 18th, 9.30 p.m. - Brilliant streams of aurora over the face of the heavens, E. b. S. and W. b. N., and constantly varying in appearance.
 19th, 1 a.m. - Aurora very brilliant all over the face of the heavens.
 19th, 2 a.m. - A brilliant arch of aurora from N. b. W. to N.W. b. W., 15° altitude.
 19th, 4 a.m. - Aurora in patches all over the face of the heavens, brilliant rays from N.W. b. W. coruscating towards the zenith.
 19th, 7 p.m. - Aurora forming an arch from N.W. to E. b. S., 15° of altitude, rays from E. b. S. and N.W., coruscating towards the zenith.
 19th, 8 p.m. - Aurora forming an arch from N.W. b. W. to E. b. N., 10° altitude, rays coruscating towards the zenith.
 21st, 8 a.m. - Very heavy drift of snow in the squalls.
 21st - - Found the ice aground 8 feet 2 inches in thickness, the water forcing itself upwards to within 2 feet 5 inches of the surface of the ice.
 24th, 2 a.m. - Aurora forming an arch from E. b. N. to N.W. b. W., 40° altitude, very brilliant.
 24th, 6 a.m. - Aurora in patches and coruscating towards the zenith.
 25th, Midnight - A broad belt of aurora from E. b. S. to W. b. N. passing through the zenith; **irregular patches to the N.**
 26th, 1 a.m. - A brilliant arch of aurora from N.W. b. W. to E. b. S., 40° altitude.
 28th, 11 p.m. - An arch of aurora from N.W. b. W. to E. b. S., 40° altitude.
 30th, 1 a.m. - Aurora in irregular patches to N.E. b. N.
 31st, 5 a.m. - Two arches of aurora from N.W. b. W. to E. b. S., 45° and 55° altitude.
 31st, 7 a.m. - An arch of aurora from N.W. b. W. to E. b. N., 40° altitude.

1850.—FEBRUARY.

- 4th - - Very heavy snow-drift.
 5th, 8 p.m. - An arch of aurora from E. b. N. to N.W. b. N., 15° altitude.
 5th, 11 p.m. - A very brilliant arch of aurora from N.W. b. W. to E. b. S., 30° altitude, and several irregular patches to N.E. b. N. between the arch and the horizon.
 6th, 2 a.m. - Aurora forming an arch from N.E. b. E. to N.W. b. W., 50° altitude.
 6th, 8.30 a.m. - Temperature of air -41°.
 7th, 2 a.m. - Aurora in irregular patches all over the face of the heavens, rays coruscating towards the zenith.
 8th, 2 a.m. - Aurora in irregular patches all over the face of the heavens.
 8th, 10 p.m. - An arch of aurora from E. b. N. to N.W. b. W., 15° altitude, rays faintly coruscating towards the zenith.
 11th, 5 p.m. - Quicksilver freezing, temperature -37°·5.
 11th, 7 p.m. - Found a cup of quicksilver placed with the thermometers frozen, temperature of air -40°·5, making a correction of +2°.
 11th, Midnight - Spirits froze, temperature -41°.
 12th, 2 a.m. - Several patches of aurora to N.E. b. N.
 12th, 5 a.m. - A brilliant arch of aurora from E. b. N. to N.W. b. W., 40° altitude.
 12th - - Saw a fox.
 13th - - Saw a fox.
 14th - - Saw a fox.
 17th - - Heavy snow drift.
 19th, 3 a.m. - An arch of aurora from N.W. b. W. to E. b. S., 40° altitude, rays coruscating towards the zenith.
 20th, 7 p.m. - A misty halo round the moon, 44° in diameter.
 20th - - A fox seen.
 22nd - - Very heavy snow drift.
 23rd - - Heavy snow drift.
 24th - - Heavy snow drift.
 26th - - Heavy snow drift.

1850.—MARCH.

- 10th, 11 p.m. - Aurora in irregular streams all over the face of the heavens.
 18th - - A flock of birds seen migrating from the southward.

1850.—APRIL.

- 1st, 1 a.m. - Patches of aurora to N.E. b. N.
 1st, 2 a.m. - Patches of aurora all over the face of the heavens.
 3rd, 11 p.m. - A brilliant arch of aurora from N. b. W. to N.E. b. E.
 4th, 1 a.m. - An arch of aurora from N.W. b. W. to E. b. N., 5° of altitude.
 4th, 2 a.m. - An arch of aurora from N.W. b. W. to E. b. N., 20° of altitude.
 5th, 11 p.m. - Sudden squalls.
 7th, 2 a.m. - Irregular patches of aurora to W. b. S.
 8th, Midnight - Heavy squalls.
 29th - - Very heavy snow-drift.

1850.—MAY.

- 6th - Measured the depth of the ice from its surface; found it to be 4 feet 9 inches at 26 yards from the stern of the ship.
- 9th - A goose seen flying round the ship.
- 9th - Measured the depth of the ice from its surface; 9 feet 6 inches; water 10 feet 3 inches.
- 10th - Several geese and gulls about the ship.
- 19th - Several gulls about the ship.
- 19th - Observed water and pack ice from Choris Peninsula, bearing W. b. N., 10 miles.
- 20th - The observations of the temperature of the water are omitted in consequence of the thermometer having been broken by accident.
- 21st - Employed cutting the ice. Floe gave way.
- 30th - Found the thickness of the ice at the distance of 40 yards from the ship to be 4 feet 9 inches.
- 31st - Discontinued the observations of temperature on the ice.

1850.—JUNE.

- 8th - Found the thickness of the ice at the distance of 30 yards ahead of the ship to be 3 feet 8 inches.
- 13th, 6.30 p.m. - A passing shower of rain.
- 17th, 4 p.m. - Very heavy squalls.
- 18th, 4 p.m. - Tide setting ice down.
- 19th, Noon - Ship swung to the ebb.
- 23rd - Ice in motion this day with the tides.
- 23rd - From this date to the end of the month floes and drift ice were in motion.
- 28th - The Sound, as reported by the look-out man, covered with packed and drift ice, excepting a few openings of water. The Buckland River open water, excepting floes of ice.

1850.—JULY.

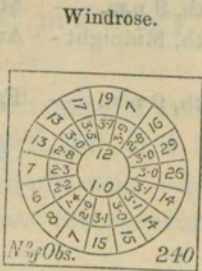
- 1st - Two walruses close by the ship.
- 3rd - Floes in motion with the tides.
- 3rd - A large school of white whales.
- 4th - A school of white whales.
- 4th, 11 p.m. - Got under weigh.
- 5th, 11 a.m. - At single anchor.
- 6th - Several white whales and walruses.
- 9th - Many white whales and several seals.
- 14th - Shifted to anchorage off Chamisso Island.
- 15th, 10 p.m. - Working out of the Sound.
- 16th, 4 a.m. - A considerable quantity of drift ice.
- 16th, 3 p.m. - Anchored off Chamisso Island.
- 17th, Midnight - Under weigh.

APPENDIX to No. XXXII.

IN KOTZEBUE SOUND, off CHAMISSO ISLAND, H.M.S. "HERALD," SEPTEMBER 1849.

Hours.	Barometer at 32°.	Temperature.			Wind Component: Sums.				Wind Notations.							
		Air.	Wet-bulb.	Sea.	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	inches. 29·616	40° 1	38° 9	43° 9	38·6	18·3	42·7	15·6	8	14	8	—	—	2	—	8
6 "	·610	39° 9	38° 5	43·8	32·7	25·8	40° 0	15·9	9	15	6	4	—	3	—	5
9 "	·606	41° 7	40° 0	44·4	27·3	27·3	41·2	17° 0	7	15	8	5	—	4	—	5
Noon	·607	43° 4	41° 5	44·7	29·3	19·7	34° 0	21·6	9	15	6	4	—	2	1	6
3 p.m.	·608	44° 4	42° 1	44·6	31·9	14·2	28·7	19·1	9	15	6	4	—	—	1	5
6 "	·607	43° 6	41° 3	44·5	35·4	13·6	30° 3	14·6	9	14	7	5	—	2	1	4
9 "	·607	41° 8	40° 1	44·3	31·4	20·8	37° 9	12° 3	7	13	10	5	—	2	1	3
Midnight	·608	41° 0	39° 5	44·2	36·5	23·6	38° 0	12° 6	10	11	9	3	—	4	—	5
Means	29·609	42° 0	40° 2	44·3	32·9	20·4	36·6	16·1	8·5	14·0	7·5	3·8	—	2·4	0·5	5·1

Hours.	Cloud Notations.							
	C'less.	Cir.	Cir.-c.	Cir.-s.	Cum.	Cum.-s.	Str.	Nim.
3 a.m.	2	4	2	2	11	6	3	—
6 "	—	5	4	4	7	9	1	—
9 "	—	6	5	4	8	5	2	—
Noon	—	6	4	6	5	9	—	—
3 p.m.	—	6	4	2	8	9	1	—
6 "	—	7	5	1	10	5	1	1
9 "	—	3	1	3	10	6	6	1
Midnight	1	6	1	3	10	4	3	2
Means	0·4	5·4	3·3	3·1	8·6	6·6	2·1	0·5



EXTREMES OF PRESSURE AND TEMPERATURE, WITH ACCOMPANYING WINDS AND WEATHER.

	Date.	Barometer.	Temp.	Wind.	Weather.
Maximum pressure	d. h. 7 18	inches. 30·30	° 45	S. 1	b c m
Minimum "	19 6	29·04	41	W. 3	b c
Maximum temperature	3 6	29·82	63	S.E. 1	b c
Minimum "	30 12	29·57	33	N. by W. 7	c q m
Range in month	—	1·26	30	—	—

Wind force 8 and upwards was noted 0 times. 1st at Noon, lat. 66° 39', long. 162° 57'; 2nd to 13th, off Chamisso; 14th to 28th, off Choris Peninsula; 29th, Noon, lat. 66° 31', long. 162° 55'; 30th, lat. 66° 48', long. 164° 16', current, N. 66° W. 18'.

1849.—SEPTEMBER.

- 1st, 1 a.m. - Slight appearance of aurora in N.W.
 1st, 10 p.m. - Faint indications of aurora in the N.W. quarter, coruscations diagonal.
 9th, 10 p.m. to Midnt. Aurora very bright E. to N., about 80° in altitude.
 10th, 3 a.m. - Aurora very bright E. to N.N.W. about 60° in altitude in its highest part, arching with regularity to its extremes.
 10th, 9 p.m. - Aurora in Ed. moving to N., altitude 21°, extremes from E. to N. b. W. (mag.), shooting in brilliant coruscations to the zenith, rising in the E. and moving to the N.
 10th, Midnight - Aurora very faint in the same quarter.
 12th, 11 p.m. - Aurora very brilliant N.N.E. to W.S.W., extending in vertical bands and large masses of light from γ Ursa Majoris to the Pleiades, altitude 45° to 50°.
 13th, 3 a.m. - Aurora faint in the same quarter.
 14th, 1 a.m. - Aurora.
 17th, 10 p.m. - Faint indications of aurora.
 18th, 9 p.m. - Aurora very brilliant.
 18th, Midnight - Aurora bright, coruscations all over the heavens, their edges tinged with prismatic colours.
 19th, 3 a.m. - Aurora bright in the zenith.
 20th, 9 p.m. - Faint indications of aurora.
 24th, 1 a.m. - Aurora coruscating in different parts of the heavens.
 At 1.20 it was bright in different parts from E. to E.S.E., nearly in a complete circle, 25° in altitude, 12° in diameter, subsiding with faint coruscations, and then disappearing.
 24th, 9 p.m. - Aurora bright from E.N.E. to W.N.W., circles shooting meteors very bright to the N.
 24th, Midnight - Aurora bright from E.N.E. to N.N.W., not coruscating, but moving in two horizontal beams from E. to W.
 28th, 9 p.m. - Faint coruscations of aurora in the W.

No. XXXIII.

Results of Meteorological Observations made at Port Clarence.

H.M.S. "Plover," Commander T. E. L. Moore, R.N., passed the winter of 1850-51 in Port Clarence, and hourly meteorological observations were made there with the same instruments, and upon the same plan as in the former winter at Port Providence. These observations have been reduced in a similar manner to the former series. Captain Beechey, in his "*Narrative of the Voyage of the Blossom*," describes the northern and eastern shores of Port Clarence as sloping from the mountains to the sea, being occasionally terminated by cliffs; and the southern side as a low diluvial formation.

Grantley Harbour is in latitude 65° 5' N., longitude 165° 30' W.

Table I. contains the hourly values of mean atmospheric pressure for each month and the entire period. The general curve of mean pressure shows a maximum at 1.30 a.m., a minimum at 9 a.m., a secondary maximum about noon, and a secondary minimum at 6 p.m. The amplitude of the first oscillation is .017, that of the second .009. Taking the mean pressure of July as 29.75, and that of August as 29.70, the mean for the year is 29.775 inches. The monthly mean pressure was greatest in January and April, and least in October.

Table II. contains the hourly values of mean temperature for each month and the entire period. The diurnal range of temperature was greatest in April, 14°, and least in December, 1°2. The mean temperature of the coldest month, January, was -10°3, that of the warmest month, August, may be taken as 51°3. The mean temperature of the year was 21°3.

Table III. shows the extremes of atmospheric pressure in each month, with the temperature, wind, and weather at the same time. Atmospheric pressure was greatest, 30.68, in December; and least, 28.47 inches, also in December; so that the absolute range of the barometer was 2.21 inches. The monthly range is greater in winter than in summer. The winds were stronger with the low than with the high barometric extremes.

Table IV. shows the extremes of the temperature of the air in each month, with the barometric pressure, wind, and weather at the same time. The absolute maximum temperature was 64°, in July, the absolute minimum, -34°, in March; so that the absolute range of the thermometer was 98°. The monthly range of temperature was greater in winter than in summer.

Table V. contains the hourly sums of the wind components for each month.

Table VI. contains the hourly sums of the wind components for the entire period, with their resultants. As an average result of all the observations, it appears that the

wind, which is nearly N.E. at 10 a.m., backs to N.N.E. at 7 p.m., and afterwards veers to N.E. again. As regards force, a maximum is shown at 5 a.m., and a minimum at 1 p.m., with a secondary maximum at 4 p.m., and a secondary minimum at 7 p.m. The force of the wind is greater by night than by day.

Table VII. gives the monthly resultants of the winds computed from the mean hourly components of the winds as given in Table V. These resultants are from the north-east quarter in all months except June and July, and their maximum force is in December, the minimum in June. The change in June is evidently produced by the action of the sun in heating the land in summer, the supply of air coming from the coldest direction, the sea.

Table VIII. is a summary of the number of calms recorded for each hour of each month and the entire period. Calms were more frequent by night than by day. The maximum of frequency may be assigned to midnight, and the minimum to noon. This result forms a surprising contrast with the curve of wind force.

Calms were most frequent in May, least in December, and in this respect agree with the strength of the summer and winter resultant winds.

Table IX. summarises the winds of each month under sixteen directions, and gives their mean force. The most frequent winds agree with the resultants shown in Table VII.

Table X. contains the hourly summaries of the weather notations in each month. Clear sky was most frequently recorded in September, January, and April; overcast sky in June. Mist was very prevalent from November to June inclusive. Out of 313 days comprising the period, mist prevailed on 205. The hourly notations of rain make up 16.5 days, of snow 45.5 days, or precipitation occurred during 62 days, but "rainy days" number 89, of which snow fell on 67. The winds were most squally in September and April.

Table XI. shows the hourly mean amount of cloud for each month and the entire period. Cloudiness is greatest generally about midnight, and least about noon. The sky was most clouded in June, least so in September and January.

Table XII. contains the results of the observations on the temperature of the surface sea-water.

In order to supply data for the complete year, two appendices are added to this paper.

Appendix A. contains results of observations in July.

Appendix B. contains results of observations in August.

TABLE I.
MEAN ATMOSPHERIC PRESSURE in PORT CLARENCE, H.M.S. "PLOVER," 1850
September 1st to 1851 July 10th.

Hours.	1850.				1851.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m.	inches. 29.892	inches. 29.574	inches. 2.654	inches. 29.623	inches. 30.079	inches. 29.668	inches. 29.726	inches. 30.058	inches. 29.889	inches. 29.789	inches. 29.812	inches. 29.797
2 "	.896	.574	.654	.625	.077	.663	.725	.057	.893	.789	.810	.797
3 "	.894	.573	.653	.627	.074	.659	.721	.061	.890	.788	.806	.795
4 "	.894	.572	.653	.626	.068	.655	.721	.062	.890	.785	.802	.793
5 "	.890	.574	.655	.629	.064	.647	.717	.062	.894	.785	.803	.793
6 "	.889	.573	.654	.630	.058	.638	.712	.059	.892	.785	.802	.790
7 "	.887	.570	.654	.628	.053	.636	.703	.054	.889	.786	.798	.789
8 "	.888	.564	.648	.624	.046	.631	.697	.043	.885	.788	.795	.783
9 "	.887	.561	.642	.623	.045	.633	.693	.036	.883	.789	.791	.780
10 "	.889	.560	.645	.624	.045	.634	.693	.044	.887	.789	.792	.782
11 "	.893	.558	.644	.628	.047	.643	.698	.045	.884	.790	.796	.784
Noon	.893	.562	.643	.626	.047	.648	.698	.044	.886	.790	.793	.785
1 p.m.	.884	.557	.645	.624	.046	.645	.691	.041	.884	.790	.795	.782
2 "	.883	.551	.645	.623	.043	.643	.694	.041	.884	.790	.791	.781
3 "	.881	.551	.649	.623	.042	.643	.691	.039	.885	.789	.786	.780
4 "	.880	.549	.649	.623	.046	.648	.688	.037	.884	.788	.781	.779
5 "	.877	.543	.649	.621	.046	.653	.687	.036	.882	.789	.778	.778
6 "	.872	.538	.655	.622	.048	.652	.686	.031	.877	.790	.776	.776
7 "	.877	.542	.659	.623	.048	.653	.690	.029	.878	.789	.770	.778
8 "	.878	.541	.665	.626	.049	.663	.698	.032	.879	.784	.769	.780
9 "	.885	.545	.670	.626	.052	.669	.705	.041	.880	.785	.770	.784
10 "	.890	.549	.675	.631	.054	.666	.710	.053	.883	.789	.772	.788
11 "	.893	.554	.683	.636	.055	.669	.714	.061	.889	.792	.776	.793
Midnight	.896	.558	.687	.642	.053	.669	.715	.066	.891	.794	.774	.795
Means	29.887	29.558	29.655	29.626	30.054	29.651	29.703	30.047	29.886	29.789	29.789	29.786
1 a.m. after Midnight	29.894	29.559	29.680	23.636	30.057	29.675	29.714	30.069	29.892	29.791	29.780	29.795

* For 10 days, 1st to 10th. Adopted mean for July 29.750.
" " Aug. 29.700.
Year 29.775.

TABLE II.

MEAN TEMPERATURE of the AIR, in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Hours.	1850.				1851.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m.	34.6	20.8	-3.6	4.0	-10.8	7.4	-0.1	12.0	29.3	36.6	45.9	16.0
2 "	34.7	20.8	3.5	3.9	10.7	7.4	+0.1	11.4	29.0	36.4	45.6	15.9
3 "	34.5	20.9	3.7	3.8	10.7	7.5	0.1	11.1	29.1	36.5	45.6	15.9
4 "	34.5	20.7	3.8	4.0	10.8	7.8	+0.1	11.0	29.5	36.8	46.4	16.0
5 "	34.5	20.8	3.6	3.7	10.7	8.0	-0.1	11.6	30.4	37.5	47.5	16.3
6 "	35.2	20.8	3.7	3.5	10.4	7.8	0.2	13.6	31.5	38.4	48.6	16.8
7 "	36.8	21.0	3.4	3.5	10.4	7.7	-0.2	15.9	33.2	39.7	49.0	17.5
8 "	38.7	21.4	3.4	3.4	10.5	8.0	+1.1	17.8	34.9	40.8	50.3	18.4
9 "	40.0	22.2	3.0	3.4	10.1	8.8	2.2	19.4	36.0	41.6	51.8	19.3
10 "	41.4	23.0	2.5	3.4	10.0	9.9	3.9	20.2	36.7	42.2	52.8	20.1
11 "	42.1	23.6	2.0	3.3	9.9	10.7	5.2	21.3	37.1	43.2	52.9	20.7
Noon	42.9	24.8	1.5	3.0	9.6	11.6	6.3	23.3	37.9	43.1	52.6	21.3
1 p.m.	43.2	24.6	1.7	3.2	8.9	12.4	7.2	24.4	39.0	42.8	52.3	21.7
2 "	43.3	24.6	1.9	3.2	8.7	13.3	8.2	24.7	38.5	42.8	52.9	21.9
3 "	43.7	24.0	2.6	3.1	9.3	12.9	8.2	24.9	37.8	42.6	53.2	21.7
4 "	43.4	23.4	3.0	3.5	10.0	12.3	7.4	25.0	37.2	42.0	53.0	21.3
5 "	41.7	22.5	3.3	3.4	10.0	10.8	5.3	24.1	36.1	41.9	53.0	20.5
6 "	39.9	21.9	3.4	3.9	10.1	9.8	3.5	22.6	34.9	41.6	52.8	19.8
7 "	38.1	21.6	3.2	4.2	10.5	9.3	2.1	19.6	33.6	41.1	53.0	19.0
8 "	36.7	21.6	3.1	4.1	10.5	9.2	1.4	16.7	32.7	40.6	52.2	18.3
9 "	35.9	21.7	3.1	4.0	10.7	8.9	0.6	14.5	31.9	39.9	50.7	17.7
10 "	35.3	21.4	3.1	4.0	10.9	9.1	+0.2	13.5	31.1	38.7	49.2	17.1
11 "	34.7	21.1	3.2	3.9	11.3	8.7	-0.1	12.9	30.4	37.8	48.0	16.6
Midnight	34.2	20.6	3.7	3.9	11.3	8.8	-0.2	12.4	30.0	36.7	47.2	16.2
Means	38.3	22.1	-3.0	3.6	-10.3	9.5	+2.6	17.7	33.7	40.1	50.3	18.6
1 a.m. after Midnight	33.8	20.3	-3.5	3.9	-11.0	8.7	0.0	12.0	30.0	36.5	46.6	16.1

*For 10 days, 1st to 10th. Adopted mean for July 49.6.
" " Aug. 51.3.
" " Year 21.3.

TABLE III.

EXTREMES of ATMOSPHERIC PRESSURE, with accompanying TEMPERATURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Month.	Date.	Highest.	Temp.	Wind.	Weather.	Date.	Lowest.	Temp.	Wind.	Weather.	Range.
September 1850	d. h. inches.					d. h. inches.					inch.
September 1850	6 11	30.31	+37	E.N.E. 3	c b q	23 1	29.47	+33	N.N.E. 7	o m s	0.84
October	16 12	29.95	+26	Calm	o s	10 9	14	23.5	N.E.b.N. 5	c b m	0.81
November	29 2	30.21	-14	E.N.E. 3	b c	17 2	01	0	N.N.W. 9	o m q	1.20
December	30 16	68	17	E.N.E. 2	b c	18 22	28.47	+20	N.N.E. 3	c	2.21
January 1851	21 15	58	-22	N.E. 1	b c m	3 22	29.33	-7	N.b.E. 7	m b q	1.25
February	14 13	17	+6	N.N.E. 5	m b q	27 10	28	+20	E.N.E. 7	o m	0.89
March	21 0	47	5	E. 3	b c m	28 21	22	24	E.N.E. 1	b c m	1.25
April	5 10	53	30	N.E.b.N. 3	o m	1 7	28.99	32	S.S.E. 4	o m q	1.54
May	19 20	47	35	Calm	c b m	3 5	29.47	29	N. 8	m b q	1.00
June	12 1	22	37	W.S.W. 3	b c m	4 8	20	38	N.N.W. 4	c m b	1.02
July 1st-10th	1 13	15	+41	Calm	o f	9 14	52	+56	E.N.E. 3	m r	0.63
Period	Dec.	30.68	—	—	—	Dec.	28.47	—	—	—	2.21

TABLE IV.

EXTREMES of AIR TEMPERATURE, with accompanying PRESSURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Month.	Date.	Max.	Bar.	Wind.	Weather.	Date.	Min.	Bar.	Wind.	Weather.	Range.
September 1850	d. h.		inches.			d. h.		inches.			
September 1850	14 3	+60	30.11	Calm	b c v	29 17	+17	29.78	Calm	b c v	43
October	5 2	40	29.27	S.E. 4	c b v	30 23	+2	43	N.N.E. 3	b c	38
November	29 22	18	30.03	N.E. 3	o m s	28 7	-21	30.18	E.N.E. 2	b c v	39
December	17 6	28	29.04	N.E.b.E. 4	c b q	28 1	23	12	E.N.E. 2	b c	51
January 1851	15 2	21	30.03	S.S.E. 4	c b m	10 20	32	05	Calm	b c	53
February	26 2	32	29.54	Calm	o m	0 23	20	29.68	E.N.E. 2	b c m	52
March	2 2	30	42	S.S.W. 2	m s q	14 16	34	30.00	Calm	b c	64
April	26 4	53	30.40	E. 1	b c m	15 15	-22	29.85	N.N.E. 3	b m q	75
May	12 1	54	08	Calm	b c v	0 16	+18	91	N. 6	m b q	36
June	24 0	59	29.79	N.E.b.E. 1	b c m	11 16	29	30.15	Calm	f	30
July 1st-10th	6 22	64	62	N.N.W. 1	b c	0 14	+38	06	S.S.W. 4	o f	26
Period	July	+64	—	—	—	March	-34	—	—	—	98

TABLE V.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Hours.	September 1850.				October 1850.				November 1850.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	40.1	8.4	26.0	5.6	43.7	8.0	25.4	7.5	104.5	—	28.5	23.6
2 "	43.8	8.0	28.8	5.1	44.7	9.0	27.3	8.4	109.3	—	28.5	24.7
3 "	39.9	8.0	27.4	4.7	45.5	9.6	29.2	8.8	110.2	—	31.5	20.3
4 "	46.3	9.0	31.9	7.3	45.2	11.9	32.7	8.7	113.3	—	29.6	23.1
5 "	48.7	9.0	33.9	7.3	44.2	10.4	34.7	8.6	109.2	0.4	21.3	25.6
6 "	50.7	10.0	34.2	8.5	42.5	10.8	38.7	9.1	107.9	3.4	29.1	27.4
7 "	48.8	10.2	35.5	8.7	35.8	9.7	28.4	13.7	94.0	5.5	30.9	19.6
8 "	53.0	13.0	33.1	11.8	32.9	8.4	29.8	9.2	82.3	4.3	25.1	15.5
9 "	52.5	13.6	32.9	13.6	32.4	8.9	28.5	5.8	77.5	4.0	24.6	14.4
10 "	57.9	14.7	35.9	15.3	35.8	11.1	30.2	4.6	75.8	2.4	24.4	13.1
11 "	59.2	13.0	35.2	11.7	35.5	13.0	31.7	7.8	76.7	1.9	21.0	15.8
Noon	59.9	12.8	35.1	9.6	33.4	13.7	31.4	8.7	74.4	2.6	22.8	17.8
1 p.m.	64.5	10.4	31.0	7.7	36.4	10.6	32.8	10.7	67.6	1.2	21.5	19.4
2 "	63.5	12.4	30.0	9.0	42.5	6.0	34.1	11.4	66.0	1.2	18.8	15.6
3 "	65.3	12.0	28.3	10.9	46.5	8.5	35.2	13.7	71.4	1.2	19.5	17.0
4 "	65.0	11.2	26.3	11.4	44.4	6.0	34.3	12.2	77.3	1.8	14.6	18.0
5 "	65.3	11.6	26.9	13.1	43.5	4.4	33.2	13.1	71.1	1.8	9.2	20.3
6 "	61.1	9.4	24.8	16.4	41.6	6.0	29.4	8.5	74.6	1.6	9.9	25.6
7 "	59.7	9.4	23.1	17.2	39.3	6.6	28.2	7.5	73.8	4.6	12.2	30.3
8 "	49.0	8.7	20.3	11.5	43.6	7.4	26.4	9.6	73.6	1.9	17.1	22.3
9 "	44.9	8.7	19.2	10.1	41.7	6.7	30.8	7.8	86.3	1.1	17.5	24.4
10 "	44.1	8.7	20.2	10.5	46.1	7.7	24.8	8.2	90.9	1.5	16.6	24.3
11 "	43.7	8.3	21.0	8.7	47.3	6.3	23.8	10.2	92.9	1.1	18.3	25.5
Midnight	42.5	9.3	21.6	5.9	46.4	8.2	26.3	11.1	89.0	0.8	21.2	21.4
Means	52.9	10.4	28.4	10.1	41.3	8.7	30.3	9.4	86.2	1.8	21.4	21.0

TABLE V.—continued.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th—continued.

Hours.	December 1850.				January 1851.				February 1851.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	94.8	9.3	73.9	2.7	67.1	6.6	43.9	9.3	37.8	17.0	63.7	4.6
2 "	95.1	7.4	74.3	1.9	63.4	7.6	38.4	9.5	35.0	16.7	63.7	6.1
3 "	92.4	8.3	74.5	2.3	66.0	5.7	40.3	8.3	37.1	17.6	69.9	6.5
4 "	86.1	8.3	67.4	2.3	55.3	6.8	46.1	5.0	33.2	12.6	70.3	4.6
5 "	89.2	7.3	70.7	3.3	49.9	7.4	46.2	5.0	35.8	12.6	73.6	4.6
6 "	85.4	5.4	70.1	3.3	53.3	7.4	44.2	5.0	37.7	15.4	70.2	4.6
7 "	78.6	7.8	63.3	3.6	49.5	6.5	40.8	4.6	29.2	9.4	60.6	1.5
8 "	75.5	9.6	61.6	1.7	56.2	7.4	39.3	5.7	27.4	8.7	59.6	1.5
9 "	68.6	2.2	63.8	1.7	55.1	7.4	38.9	5.4	24.8	12.5	48.5	3.3
10 "	64.2	—	61.0	—	44.9	11.9	39.7	6.5	25.5	15.3	54.3	3.1
11 "	67.2	—	63.2	—	48.1	9.4	47.3	6.3	25.1	21.7	52.1	4.3
Noon	69.9	—	63.1	—	51.7	10.3	41.0	6.5	23.9	21.3	48.3	3.5
1 p.m.	67.7	1.3	61.3	—	49.9	10.0	31.9	10.9	22.9	22.6	47.0	5.6
2 "	75.8	1.7	68.8	—	47.8	10.4	33.5	9.1	23.3	22.1	46.0	4.2
3 "	74.9	0.7	66.2	—	50.5	10.0	34.1	8.4	25.8	22.1	47.3	5.3
4 "	71.1	0.7	67.4	—	54.5	9.8	40.0	2.3	29.0	23.1	49.6	4.2
5 "	70.7	—	67.1	—	51.1	10.4	35.5	9.2	28.0	24.1	44.8	4.2
6 "	72.9	2.1	67.3	—	51.4	10.4	31.0	10.4	31.9	28.7	51.9	3.8
7 "	73.7	2.1	72.2	—	46.5	11.2	29.2	10.4	26.3	25.0	47.3	5.7
8 "	74.4	1.4	69.0	—	50.7	9.1	31.8	10.3	23.9	21.0	49.2	6.9
9 "	79.9	1.8	73.4	0.8	55.1	8.7	35.8	9.2	33.4	20.4	59.8	7.7
10 "	84.3	2.8	75.3	1.1	52.9	8.4	36.2	7.3	33.4	22.1	61.7	7.3
11 "	83.3	5.6	71.2	1.1	57.8	6.3	45.1	7.7	37.3	18.3	66.5	6.7
Midnight	88.9	5.6	73.5	1.1	69.5	6.3	50.2	9.2	37.3	16.6	66.3	5.9
Means	78.5	3.8	68.3	1.1	54.1	8.6	39.2	7.6	30.2	18.6	57.2	4.8

TABLE V.—*continued.*SUMS OF WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th—*continued.*

Hours.	March 1851.				April 1851.				May 1851.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	53.4	21.4	60.3	3.8	46.4	38.6	45.3	9.5	42.0	17.8	14.4	8.1
2 "	52.2	21.4	57.3	4.2	41.5	36.9	49.4	7.0	39.6	17.9	13.2	10.6
3 "	55.7	21.3	61.3	4.6	34.3	36.2	44.0	10.8	43.0	14.5	20.7	3.4
4 "	61.2	20.4	61.8	5.0	41.3	30.3	46.7	8.4	39.1	15.8	21.1	2.7
5 "	59.5	24.5	65.6	4.6	41.0	27.6	51.0	8.4	42.6	16.0	27.1	3.1
6 "	52.5	18.6	58.6	3.8	43.8	30.9	53.4	8.4	37.7	15.6	24.8	2.2
7 "	50.2	22.6	55.0	3.8	43.7	26.8	55.3	7.7	36.8	20.4	21.8	8.4
8 "	47.6	13.7	45.6	5.0	47.1	25.0	54.0	7.4	41.3	21.1	21.8	8.8
9 "	44.9	13.5	46.6	5.4	49.8	23.2	54.3	6.5	39.8	22.6	24.3	9.1
10 "	47.0	13.1	56.2	5.2	44.3	27.4	55.0	6.5	42.5	24.5	22.5	12.9
11 "	54.5	14.6	56.7	5.4	47.2	28.3	57.3	7.8	42.1	28.1	24.1	10.6
Noon	51.1	14.4	55.6	5.0	40.0	24.2	53.1	7.8	43.8	28.5	19.6	14.5
1 p.m.	47.3	20.7	55.4	3.4	37.9	26.7	42.1	8.4	44.3	24.7	17.0	13.6
2 "	45.7	23.2	53.2	7.5	40.5	25.7	47.4	7.1	45.0	26.4	21.1	16.0
3 "	41.8	25.6	46.3	10.1	38.0	32.8	51.7	8.5	50.5	15.8	20.5	14.4
4 "	38.5	28.4	45.1	11.1	40.1	31.5	51.3	7.7	51.3	18.0	20.5	14.5
5 "	36.4	24.7	48.2	10.1	41.3	34.1	53.3	6.9	50.6	18.1	20.5	15.7
6 "	41.5	22.9	47.2	14.5	35.2	32.7	56.0	1.3	49.3	18.8	19.6	18.3
7 "	44.0	21.8	44.1	15.5	41.3	29.8	49.1	0.7	48.6	19.4	18.2	22.5
8 "	45.3	20.9	42.8	10.7	51.7	25.7	52.0	1.9	45.4	15.5	16.5	16.5
9 "	44.2	24.3	38.6	11.5	40.4	29.6	40.9	9.5	46.5	19.8	22.2	12.4
10 "	48.5	22.4	39.4	13.4	45.9	32.3	45.0	10.4	45.0	16.7	16.7	9.9
11 "	47.1	23.6	42.4	8.8	43.8	39.2	49.5	12.4	43.8	17.6	11.2	3.0
Midnight	51.5	25.6	54.8	8.8	49.9	37.7	53.4	10.3	41.8	17.9	14.6	3.4
Means	48.4	21.0	51.6	7.5	42.8	30.6	50.4	7.6	43.8	19.6	19.8	10.6

TABLE V.—*concluded.*

SUMS OF WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Hours.	June 1851.				July (1st to 10th) 1851.				N.	S.	E.	W.
	N.	S.	E.	W.	N.	S.	E.	W.				
1 a.m.	23.4	34.5	15.3	19.1	15.5	3.9	9.4	3.5				
2 "	21.9	34.0	15.7	18.9	13.7	3.9	9.0	3.1				
3 "	17.2	31.0	13.0	16.8	11.5	3.7	9.3	1.5				
4 "	14.9	31.2	9.8	20.1	9.5	4.6	13.0	1.9				
5 "	14.1	30.2	9.4	21.9	9.3	4.6	10.4	1.9				
6 "	17.9	27.5	10.4	18.4	9.8	4.6	7.8	1.9				
7 "	18.5	23.3	10.8	17.2	8.0	3.1	7.0	7.4				
8 "	18.7	22.6	11.6	17.8	7.4	3.9	7.6	7.4				
9 "	17.4	25.3	13.3	18.6	8.1	3.4	7.8	9.0				
10 "	16.0	26.5	10.6	19.3	10.1	4.2	5.1	12.0				
11 "	18.3	30.6	9.0	22.2	10.1	5.4	5.1	14.7				
Noon	21.3	26.9	6.8	29.3	8.9	4.6	6.9	16.6				
1 p.m.	19.3	21.8	4.9	37.7	11.5	7.8	3.6	19.5				
2 "	20.2	23.7	4.3	41.3	12.2	5.0	3.6	18.4				
3 "	18.3	26.3	5.7	45.9	12.3	3.1	3.6	18.9				
4 "	19.5	27.6	5.9	47.2	10.4	1.5	3.8	13.9				
5 "	23.9	25.4	7.0	43.6	12.3	1.5	5.9	11.7				
6 "	26.4	23.8	6.7	41.6	11.9	1.6	6.0	11.3				
7 "	26.1	23.3	7.0	41.5	15.5	1.1	5.5	10.4				
8 "	28.1	26.9	7.2	40.0	19.3	1.1	6.2	8.6				
9 "	23.0	23.7	6.1	32.9	19.0	0.4	6.6	5.3				
10 "	25.8	26.1	7.0	27.0	17.9	0.4	7.4	8.5				
11 "	26.0	26.4	8.4	23.5	14.0	0.8	9.2	5.8				
Midnight	21.5	29.0	11.8	22.2	13.6	0.8	9.2	4.9				
Means	20.7	27.0	9.1	28.5	12.2	3.1	7.0	9.1				

TABLE VI.
SUMS of WIND COMPONENTS, with RESULTANT WINDS,
in PORT CLARENCE, H.M.S. "PLOVER," 1850
September 1st to 1851 July 10th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
1 a.m. -	568.7	164.5	406.1	97.3	N. 37° E.	510
2 " -	560.2	162.8	405.6	99.5	N. 38 E.	500
3 " -	552.8	155.9	421.1	88.0	N. 40 E.	520
4 " -	545.4	150.9	430.4	89.1	N. 41 E.	520
5 " -	543.5	150.0	443.9	94.3	N. 42 E.	530
6 " -	539.2	149.6	441.5	92.6	N. 42 E.	520
7 " -	493.1	145.3	409.4	96.2	N. 42 E.	470
8 " -	489.4	137.7	389.1	91.8	N. 40 E.	460
9 " -	470.9	136.6	383.5	92.8	N. 41 E.	440
10 " -	464.0	151.1	394.9	98.5	N. 43 E.	430
11 " -	484.0	166.0	402.7	106.6	N. 43 E.	435
Noon -	478.3	159.3	383.7	119.3	N. 40 E.	410
1 p.m. -	469.3	157.8	348.5	136.9	N. 34 E.	380
2 " -	482.5	157.8	360.8	139.6	N. 34 E.	390
3 " -	495.3	158.1	358.4	153.1	N. 33 E.	405
4 " -	501.1	159.6	358.8	142.5	N. 32 E.	405
5 " -	494.2	156.1	351.6	147.9	N. 31 E.	395
6 " -	497.8	158.0	349.8	151.7	N. 30 E.	395
7 " -	494.8	154.3	336.1	161.7	N. 27 E.	380
8 " -	505.0	139.6	338.5	138.3	N. 29 E.	415
9 " -	514.4	145.2	350.9	131.6	N. 31 E.	430
10 " -	534.8	149.1	350.3	127.9	N. 30 E.	445
11 " -	537.0	153.5	366.6	113.4	N. 33 E.	460
Midnight -	551.9	157.8	402.9	104.2	N. 37 E.	495
Means -	511.1	153.2	382.6	117.3	N. 36 E.	450

* These figures must be divided by 313 to obtain the mean force at the given hour.

TABLE VII.
MONTHLY RESULTANTS of the WINDS
in PORT CLARENCE, H.M.S.
"PLOVER," 1850 September
1st to 1851 July 10th.

Month.	Resultants.	
	Direction.	Force.†
September 1850 -	N. 23 E.	1.54
October " -	N. 33 E.	1.25
November " -	N.	2.81
December " -	N. 42 E.	3.24
January 1851 -	N. 35 E.	1.79
February " -	N. 77 E.	1.91
March " -	N. 58 E.	1.68
April " -	N. 74 E.	1.48
May " -	N. 22 E.	0.81
June " -	S. 71 W.	0.65
July 1st to 10th. -	N. 13 W.	0.94

† In grades of Beaufort's scale.

TABLE VIII.
CALMS OBSERVED in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851
July 10th.

Hours.	1850.				1851.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m. -	10	7	4	3	1	1	4	2	10	6	1	49
2 " -	7	7	3	3	1	2	3	2	10	7	2	47
3 " -	9	7	5	3	4	2	1	4	11	7	3	56
4 " -	4	5	3	—	5	3	1	4	10	10	2	47
5 " -	4	5	3	—	5	4	2	2	9	9	2	45
6 " -	3	5	3	—	5	2	2	1	9	10	3	43
7 " -	3	5	1	—	5	3	2	—	7	9	2	37
8 " -	2	2	2	—	4	1	3	2	5	9	3	33
9 " -	3	4	2	—	2	1	1	—	5	5	1	24
10 " -	2	4	1	1	2	1	—	—	3	2	—	16
11 " -	2	3	1	1	1	1	1	—	4	3	—	17
Noon -	2	3	—	1	2	4	—	1	2	3	—	18
1 p.m. -	3	5	2	2	2	2	1	3	4	3	—	27
2 " -	1	5	2	1	—	2	—	1	3	3	—	18
3 " -	1	2	3	2	1	2	—	1	5	4	—	21
4 " -	3	2	4	1	—	2	—	2	4	3	—	21
5 " -	2	3	3	2	—	3	1	2	4	3	—	23
6 " -	3	6	3	2	2	2	1	2	4	2	—	27
7 " -	3	7	2	1	4	3	1	2	2	3	—	28
8 " -	5	8	3	1	4	4	2	3	6	3	—	39
9 " -	8	8	3	1	2	—	3	6	5	3	1	40
10 " -	8	8	4	2	3	3	5	5	10	3	—	51
11 " -	8	8	3	2	3	3	7	4	12	6	1	57
Midnight -	7	7	4	1	2	3	4	4	8	5	1	46
Means -	4.3	5.2	2.7	1.2	2.5	2.2	1.9	2.2	6.3	5.0	0.9	830

* For 10 days, 1st to 10th.

TABLE IX.

SUMMARY of WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (Scale 0 to 12),
in PORT CLARENCE, H.M.S. "Plover," 1850 September 1st to 1851 July 10th.

Month.	No. of Observa- tions.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O. F.		O. F.		O. F.		O. F.		O. F.		O. F.		O. F.		O. F.	
September - 1850.	720	20	2.9	248	3.6	64	3.2	61	2.0	21	2.0	17	1.9	—	—	4	4.5
October - - -	744	40	2.6	188	3.3	71	3.0	73	2.0	38	2.1	54	2.2	9	2.9	8	3.2
November - - -	720	77	4.4	162	4.5	11	2.3	90	1.7	8	1.0	25	2.6	—	—	4	1.0
December - - -	744	17	6.6	269	4.7	81	4.6	284	3.1	21	2.2	2	1.5	7	3.1	10	2.4
January - 1851.	744	29	5.1	152	3.9	62	2.6	258	1.8	32	2.4	38	2.4	—	—	8	3.6
February - - -	672	4	3.0	36	2.8	88	4.1	313	3.0	37	2.4	24	3.5	19	3.3	3	3.7
March - - - -	744	6	4.1	150	4.1	46	3.7	229	2.8	51	2.0	29	3.7	14	5.1	3	3.0
April - - - -	720	48	4.6	146	3.7	49	4.1	100	3.5	100	3.1	24	3.6	37	4.2	22	3.4
May - - - - -	744	87	4.4	90	4.8	20	2.8	34	1.9	36	2.1	48	1.2	13	2.2	43	2.5
June - - - - -	720	30	2.6	16	1.8	9	1.4	24	2.5	12	1.4	20	1.1	1	2.0	66	4.0
July - - - - -	240	17	2.8	49	3.4	5	1.8	38	2.5	1	2.0	4	2.2	—	—	—	—

(continued.)

Month.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.
	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
September - 1850.	12	5.9	22	4.0	21	2.2	31	3.0	8	1.5	5	1.0	1	3.0	80	2.5	2	1.0	103
October - - -	5	2.4	14	3.2	16	3.4	17	4.9	3	1.3	20	2.0	10	1.9	52	1.6	—	—	126
November - - -	—	—	3	2.0	—	—	8	2.7	2	4.0	14	3.1	36	3.0	216	4.4	—	—	64
December - - -	—	—	17	2.9	—	—	6	1.5	—	—	—	—	—	—	—	—	—	—	30
January - 1851.	3	3.0	28	5.2	—	—	—	—	—	—	1	1.0	2	2.0	69	4.8	2	1.5	60
February - - -	27	4.3	57	4.6	—	—	—	—	4	1.7	3	1.7	2	1.5	1	3.0	—	—	54
March - - - -	35	4.9	73	3.2	1	1.0	9	3.2	—	—	—	—	—	—	39	4.1	4	2.7	45
April - - - -	42	4.9	63	4.8	9	3.2	7	3.7	—	—	3	1.7	—	—	10	2.4	7	4.3	53
May - - - - -	38	2.7	54	3.0	22	1.8	48	1.5	4	1.7	5	1.6	6	7.5	44	4.1	—	—	152
June - - - - -	28	4.2	27	3.3	67	2.0	119	2.2	29	2.4	47	2.0	13	3.5	87	3.6	4	2.5	121
July - - - - -	—	—	6	4.5	1	3.0	38	3.1	25	2.5	6	1.8	10	1.5	15	2.3	3	1.3	22

TABLE X.
WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "Plover," 1850 September 1st to
1851 July 10th.

Hours.	September 1850.								October 1850.								November 1850.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	12	11	7	5	1	1	—	8	3	9	19	14	—	—	13	3	1	14	15	27	—	—	7	11
2 "	10	13	7	5	1	1	—	8	3	9	19	14	—	—	13	3	1	13	16	27	—	—	8	12
3 "	12	11	7	5	1	1	—	8	5	6	20	14	—	—	12	3	1	15	14	28	—	—	9	13
4 "	13	9	8	6	1	1	—	9	5	7	19	13	—	—	12	3	1	13	16	27	—	—	9	14
5 "	12	10	8	8	1	1	1	9	4	8	19	11	—	—	14	3	1	14	15	27	—	—	7	14
6 "	11	11	8	7	1	3	2	10	2	9	20	8	—	—	13	3	2	10	18	28	—	—	7	15
7 "	13	10	7	5	1	3	2	10	3	9	19	8	—	—	13	3	2	10	18	27	—	—	8	13
8 "	11	12	7	3	2	3	4	10	3	10	18	6	—	—	14	3	4	7	19	27	—	—	8	12
9 "	8	13	9	3	2	2	5	10	2	14	15	6	—	—	13	2	3	6	21	26	—	—	7	10
10 "	8	13	9	3	2	2	5	11	3	16	12	7	—	—	11	2	3	9	18	26	—	—	9	9
11 "	6	15	9	4	1	2	5	11	6	16	9	7	—	—	9	2	3	10	17	25	—	—	9	8
Noon	6	17	7	3	1	1	5	10	3	16	12	8	—	—	9	2	3	10	17	23	—	—	7	7
1 p.m.	9	13	8	6	—	1	4	9	2	13	16	6	—	—	12	1	2	11	17	21	—	—	11	6
2 "	9	15	6	6	—	—	4	9	2	15	14	8	—	—	11	3	2	13	15	22	—	—	12	6
3 "	11	11	8	6	—	—	4	9	4	13	14	10	—	—	12	3	2	10	18	22	—	—	12	6
4 "	11	11	8	5	—	—	4	11	2	15	14	10	—	—	11	3	1	10	19	24	—	—	12	7
5 "	9	12	9	4	—	—	4	10	2	13	16	10	—	—	11	3	1	13	16	24	—	—	11	7
6 "	7	14	9	3	—	—	4	13	2	14	15	9	—	—	11	3	2	12	16	25	—	—	9	10
7 "	7	14	9	3	—	2	4	13	4	13	14	11	—	—	12	4	2	11	17	27	—	—	10	10
8 "	10	10	10	3	—	2	3	11	2	11	18	8	—	—	11	5	1	14	15	28	—	—	9	9
9 "	10	12	8	3	1	1	3	10	1	11	19	9	—	—	11	5	1	14	15	28	—	—	11	10
10 "	9	14	7	3	1	1	3	10	—	13	18	8	—	—	12	4	1	13	16	28	—	—	12	10
11 "	9	15	6	4	1	1	2	11	1	11	19	11	—	—	13	4	1	14	15	27	—	—	11	10
Mdn.	9	14	7	4	1	1	2	10	2	11	18	10	—	—	12	4	2	12	16	27	—	—	10	10
Means	9.7	12.5	7.8	4.3	0.8	1.2	2.9	10.0	2.7	11.8	16.5	9.4	—	—	11.9	3.1	1.8	11.6	16.6	25.9	—	—	9.4	9.6

TABLE X.—continued.

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th—continued.

Hours.	December 1850.								January 1851.								February 1851.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	1	13	17	25	—	—	6	16	7	18	6	27	—	—	3	9	—	13	15	28	—	—	4	14
2 "	1	14	16	25	—	—	6	16	8	16	7	27	—	—	3	9	—	12	16	28	—	—	5	14
3 "	1	12	18	24	—	—	6	16	9	15	7	27	—	—	3	8	1	12	15	28	—	—	5	14
4 "	2	14	15	24	—	—	6	16	6	19	6	26	—	—	3	8	1	12	15	28	—	—	5	13
5 "	1	15	15	24	—	—	6	16	7	15	9	26	—	—	3	8	2	9	17	28	—	—	5	13
6 "	1	12	18	23	—	—	6	15	7	13	11	25	—	—	4	8	3	10	15	27	—	—	6	13
7 "	1	11	19	23	—	—	6	15	7	14	10	24	—	—	4	7	3	11	14	26	—	—	5	8
8 "	1	11	19	22	—	—	6	14	7	15	9	20	—	—	3	6	3	11	14	25	—	—	3	6
9 "	1	14	16	22	—	—	5	14	9	13	9	19	—	—	3	4	4	10	14	25	—	—	2	3
10 "	4	11	16	20	—	—	6	12	10	12	9	17	—	—	3	4	4	13	11	24	—	—	2	3
11 "	5	11	15	19	—	—	5	10	12	10	9	17	—	—	3	4	4	13	11	24	—	—	2	2
Noon	4	13	14	17	—	—	5	7	14	8	9	18	—	—	3	6	4	12	12	23	—	—	1	3
1 p.m.	2	15	14	18	—	—	5	13	10	12	9	15	—	—	4	6	5	10	13	24	—	—	1	5
2 "	2	15	14	18	—	—	5	13	9	13	9	15	—	—	4	6	6	11	11	24	—	—	1	6
3 "	2	14	15	18	—	—	5	13	9	12	10	15	—	—	4	7	6	9	13	24	—	—	1	7
4 "	2	16	13	17	—	—	5	13	10	11	10	20	—	—	3	8	3	11	14	24	—	—	1	8
5 "	2	16	13	17	—	—	5	14	8	13	10	21	—	—	3	8	2	11	15	24	—	—	1	9
6 "	1	15	15	19	—	—	7	16	8	13	10	22	—	—	3	10	1	10	17	25	—	—	1	11
7 "	—	15	16	21	—	—	7	16	7	15	9	22	—	—	3	10	—	14	14	25	—	—	3	11
8 "	—	15	16	21	—	—	7	14	8	16	7	23	—	—	3	10	—	14	14	27	—	—	3	10
9 "	—	14	17	20	—	—	7	15	8	17	6	24	—	—	3	9	—	14	14	27	—	—	2	11
10 "	—	16	15	20	—	—	9	14	8	17	6	24	—	—	3	8	—	15	13	27	—	—	4	12
11 "	1	17	13	20	—	—	9	14	8	17	6	24	—	—	3	9	—	14	14	27	—	—	4	12
Mdn.	2	15	14	20	—	—	7	14	6	19	6	24	—	—	3	9	—	13	15	27	—	—	4	12
Means	1.5	13.9	15.6	20.7	—	—	6.1	14.0	8.4	14.3	8.3	21.9	—	—	3.2	7.5	2.2	11.8	14.0	25.8	—	—	3.0	9.2

TABLE X.—continued.

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th—continued.

Hours.	March 1851.								April 1851.								May 1851.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	1	13	17	28	—	—	3	15	3	16	11	26	1	—	2	17	2	11	18	22	3	6	—	8
2 "	1	12	18	28	—	—	3	15	3	16	11	26	1	—	2	16	3	9	19	22	3	5	—	8
3 "	2	13	16	28	—	—	3	15	4	16	10	26	—	—	2	16	3	8	20	22	3	5	1	8
4 "	2	12	17	28	—	—	2	15	6	15	9	25	—	—	1	14	2	11	18	22	2	5	3	8
5 "	2	11	18	28	—	—	2	14	9	11	10	23	—	—	2	15	2	11	18	25	—	4	4	7
6 "	2	12	17	27	—	—	3	13	10	9	11	23	—	1	2	15	2	11	18	23	—	4	4	6
7 "	3	12	16	27	—	—	3	12	11	9	10	20	—	1	1	14	2	10	19	23	—	6	4	7
8 "	4	14	13	25	—	—	3	10	11	9	10	19	—	2	2	14	3	12	16	23	—	5	4	7
9 "	5	12	14	25	—	—	3	10	11	8	11	18	—	—	3	13	3	11	17	24	—	6	5	6
10 "	5	13	13	25	—	—	4	10	11	9	10	18	—	1	3	12	3	11	17	23	—	5	5	5
11 "	5	13	13	23	—	—	2	10	11	10	9	18	—	—	2	14	4	10	17	23	—	4	4	5
Noon	5	16	10	22	—	—	2	9	11	11	8	20	—	—	3	12	4	11	16	22	—	3	4	6
1 p.m.	4	19	8	22	—	—	5	11	10	10	10	22	—	—	1	14	4	11	16	18	—	5	—	9
2 "	4	17	10	22	—	—	5	11	10	10	10	22	—	—	2	14	5	10	16	17	—	6	—	8
3 "	4	16	11	21	—	—	3	10	9	12	9	22	—	—	—	14	5	11	15	17	—	5	2	8
4 "	3	18	10	20	—	—	3	10	9	13	8	23	—	—	1	14	5	10	16	17	—	7	2	8
5 "	4	17	10	20	—	—	5	10	8	13	9	23	—	—	3	13	5	9	17	17	—	7	2	8
6 "	2	17	12	22	—	—	5	9	8	12	10	23	—	—	2	13	5	9	17	16	—	8	3	8
7 "	1	14	16	23	—	—	4	9	6	15	9	23	—	—	2	14	4	11	16	18	—	6	2	8
8 "	1	16	14	23	—	—	3	9	4	15	11	24	—	—	2	14	2	12	17	18	—	6	2	8
9 "	1	16	14	26	—	—	3	11	2	16	12	23	1	2	1	16	1	12	18	20	1	6	2	8
10 "	1	16	14	27	—	—	4	12	2	15	13	24	1	2	1	16	1	12	18	21	2	7	2	8
11 "	1	15	15	27	—	—	4	12	3	14	13	25	1	2	1	16	1	11	19	21	2	8	1	9
Mdn.	1	14	16	26	—	—	2	14	3	17	10	25	1	1	1	17	2	9	20	22	2	8	—	7
Means	2.7	14.5	13.8	24.8	—	—	3.3	11.5	7.3	12.5	10.2	22.5	0.2	0.5	1.7	14.5	3.0	10.6	17.4	20.7	0.8	5.7	2.3	7.4

TABLE X.—concluded.

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th—concluded.

Hours.	June 1851.								July 1851.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	1	7	22	23	5	9	1	5	1	3	6	4	3	2	—	—
2 "	1	7	22	22	6	9	1	5	1	3	6	4	3	2	—	—
3 "	2	7	21	21	6	9	1	5	1	4	5	6	1	3	—	—
4 "	2	7	21	22	5	9	1	5	1	4	5	6	1	2	—	—
5 "	2	8	20	21	5	9	2	5	2	2	6	6	1	2	—	—
6 "	2	10	18	22	4	11	2	5	2	3	5	6	1	2	—	—
7 "	2	10	18	22	4	10	2	5	3	2	5	6	1	3	—	—
8 "	2	7	21	23	3	12	3	5	3	3	4	7	—	3	—	—
9 "	2	7	21	25	2	11	2	6	3	2	5	7	—	2	—	—
10 "	2	7	21	25	2	9	1	6	3	2	5	7	—	2	—	—
11 "	2	7	21	25	2	9	1	7	2	3	5	7	—	1	—	—
Noon	2	8	20	24	3	7	1	5	2	3	5	7	—	1	—	—
1 p.m.	4	8	18	25	2	6	3	3	1	3	6	5	1	1	—	1
2 "	4	8	18	26	1	6	3	3	1	4	5	5	1	1	—	1
3 "	4	7	19	27	—	4	3	4	1	5	4	5	1	2	—	1
4 "	4	5	21	27	—	4	3	4	1	5	4	5	1	2	—	1
5 "	4	5	21	27	—	5	2	4	1	4	5	4	2	2	—	1
6 "	3	6	21	26	—	6	2	4	1	4	5	4	2	2	—	1
7 "	4	6	20	25	—	5	1	4	1	5	4	4	2	1	—	—
8 "	4	6	20	23	1	4	1	4	1	5	4	5	2	2	—	1
9 "	3	8	19	24	1	4	1	5	1	5	4	5	2	1	—	1
10 "	2	8	20	24	2	6	1	6	1	5	4	6	2	1	—	1
11 "	2	7	21	23	3	7	1	6	1	6	3	6	2	—	—	1
Midnight	2	6	22	23	3	6	1	7	1	6	3	6	2	—	—	1
Means	2.6	7.2	20.2	24.0	2.5	7.4	1.7	4.9	1.5	3.8	4.7	5.5	1.3	1.7	—	0.5

TABLE XI.

MEAN AMOUNT of CLOUD in PORT CLARENCE, H.M.S. "PLOVER," 1850 September 1st to 1851 July 10th.

Hours.	1850.				1851.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m.	5.1	7.8	7.2	7.5	5.2	7.5	7.6	6.4	8.0	8.4	7.3	7.1
2 "	5.3	7.9	7.3	7.5	5.3	7.6	7.6	6.3	7.9	8.4	7.3	7.1
3 "	5.1	7.8	7.3	7.6	5.3	7.6	7.6	6.2	8.1	8.3	7.1	7.1
4 "	5.2	7.6	7.3	7.4	5.3	7.6	7.6	6.0	7.8	8.3	7.0	7.0
5 "	5.2	7.6	7.4	7.5	5.6	7.7	7.8	5.9	7.7	8.3	6.9	7.1
6 "	5.4	7.7	7.8	7.5	5.8	7.4	7.5	5.9	7.5	8.1	6.8	7.0
7 "	5.2	7.6	7.7	7.5	5.7	7.2	7.5	5.8	7.5	8.0	6.6	6.9
8 "	5.4	7.5	7.8	7.4	5.7	7.0	7.0	5.8	7.5	8.2	6.7	6.9
9 "	5.7	7.4	8.0	7.1	5.6	6.6	6.9	5.7	7.5	8.1	6.8	6.9
10 "	5.8	6.7	7.8	7.0	5.6	6.4	6.8	5.5	7.3	8.0	6.8	6.7
11 "	5.7	6.2	7.4	6.8	5.4	6.4	6.6	5.5	7.2	8.0	6.6	6.5
Noon	5.6	6.6	7.3	6.6	5.3	6.5	6.4	5.4	7.1	7.9	6.5	6.5
1 p.m.	5.2	7.2	7.5	6.8	5.4	6.6	6.5	5.5	7.4	7.5	6.8	6.6
2 "	5.3	6.9	7.5	6.9	5.5	6.4	6.6	5.5	7.2	7.5	6.7	6.5
3 "	5.3	6.6	7.5	7.0	5.6	6.8	6.7	5.5	7.3	7.5	6.8	6.6
4 "	5.3	7.2	7.8	7.1	5.6	7.0	6.5	5.4	7.4	7.6	6.5	6.7
5 "	5.8	7.5	7.6	7.1	5.7	7.2	6.6	5.6	7.4	7.5	6.6	6.8
6 "	6.0	7.4	7.3	7.3	5.7	7.5	6.8	5.7	7.3	7.6	6.5	6.8
7 "	6.0	7.2	7.3	7.5	5.6	7.4	7.2	5.9	7.2	7.5	6.6	6.9
8 "	5.8	7.7	7.2	7.3	5.4	7.4	7.1	6.1	7.6	7.4	6.8	6.9
9 "	5.6	7.7	7.2	7.4	5.2	7.4	7.0	6.6	7.7	7.5	6.9	6.9
10 "	5.4	7.8	7.3	7.5	5.2	7.2	7.0	6.8	7.8	7.8	7.0	7.0
11 "	5.3	7.8	7.1	7.5	5.2	7.3	7.1	6.6	7.9	8.1	7.0	7.0
Midnight	5.2	7.7	7.3	7.3	5.3	7.5	7.2	6.4	8.0	8.2	7.0	7.0
Means	5.5	7.4	7.5	7.3	5.5	7.1	7.0	5.9	7.6	7.9	6.8	6.9

* For 10 days, 1st to 10th.

TABLE XII.

MEAN TEMPERATURE of the SEA WATER in PORT CLARENCE, H.M.S. "PLOVER," 1850
September 1st to 1851 July 10th.

Hours.	1850.		1851.				
	Sept.	Oct.	April.	May.	June.	July.*	
1 a.m.	38.5	29.8	—	—	—	—	
2 "	38.3	29.7	—	—	—	—	
3 "	38.1	29.7	—	—	—	—	
4 "	38.1	29.6	29.2	31.1	35.9	48.0	
5 "	37.9	29.6	—	—	—	—	
6 "	37.9	29.7	—	—	—	—	
7 "	38.2	29.7	—	—	—	—	
8 "	38.4	29.7	29.2	31.1	36.2	48.5	
9 "	38.9	29.8	—	—	—	—	
10 "	39.1	29.8	—	—	—	—	
11 "	39.5	29.9	—	—	—	—	
Noon	39.7	29.9	29.2	31.1	36.6	49.4	
1 p.m.	40.6	30.0	—	—	—	—	
2 "	40.8	30.0	—	—	—	—	
3 "	40.6	30.0	—	—	—	—	
4 "	40.4	29.9	29.3	31.2	36.7	49.7	
5 "	40.1	29.8	—	—	—	—	
6 "	39.8	29.8	—	—	—	—	
7 "	39.5	29.8	—	—	—	—	
8 "	39.1	29.7	29.3	31.1	36.8	49.4	
9 "	38.8	29.8	—	—	—	—	
10 "	38.7	29.8	—	—	—	—	
11 "	38.6	29.8	—	—	—	—	
Midnight	38.2	29.7	29.3	31.2	36.3	48.6	
Means	39.1	29.8	29.2	31.1	36.4	48.9	

* For 10 days, 1st to 10th.

REMARKS from the LOG of H.M.S. "PLOVER."

1850.—AUGUST.

29th, 8 p.m. - In Grantley Harbour, Port Clarence.

1850.—SEPTEMBER.

- 3rd, 10 p.m. - Irregular rays of aurora from W. b. N. to S.E.
- 5th, 1 a.m. - Aurora from E.S.E. to W.N.W. in irregular patches, constantly varying; rays coruscating towards the zenith.
- 6th, 3 a.m. - An arch of aurora from N. to E. b. N., altitude 20°.
- 6th, Midnight - Irregular rays of aurora.
- 8th, 1 a.m. - An arch of aurora from E.N.E. to N.N.W., altitude 25°.
- 13th, 1 a.m. - Aurora from N.N.W. to E.
- 14th, 11 p.m. - Aurora N.N.W. to S.S.E.

1850.—OCTOBER.

- 1st, 10 p.m. - Aurora very brilliant, an arch from N.N.W. to E.N.E., 18° altitude.
- 2nd, 10 p.m. - Aurora very brilliant, forming an arch from E.S.E. to W.N.W.
- 4th - Received from Captain Collinson, of H.M.S. "Enterprise," thermometers, self-registering, Nos. 447 and 448, and thermometers, spirit, Nos. 406 and 419.
- 8th - Buried a self-registering thermometer.
- 9th, Noon - Self-registering thermometer, highest 38°, lowest 24°.
- 10th, Noon - Earth 34°, 21°.
- 11th, Noon - Earth 26°, 24°.
- 12th, Noon - Earth 26°, 21°.
- 12th, 6 p.m. - Thin sludge ice round the ship.
- 13th, Noon - Earth 26°, 18°.
- 14th, 6 a.m. - Thin sludge ice all over the harbour.
- 14th, Noon - Earth 29°, 24°.
- 15th, Noon - Earth 29°·5, 27°.
- 16th, 6 a.m. - Sludge ice all over the harbour (apparently).
- 16th, Noon - Earth 32°, 20°·5.
- 17th, 6 a.m. - Sludge ice apparently all over the harbour.
- 17th, Noon - Earth 29°, 26°·5.
- 18th, 6 a.m. - Sludge ice all over the harbour.
- 18th, Noon - Earth 34°, 24°.
- 19th, 6 a.m. - Ice all over the harbour.
- 19th, Noon - Earth 29°, 22°·5.

- 20th, Noon - Earth $30^{\circ}5$, $22^{\circ}5$.
- 21st, Noon - Earth 36° (query 26°), 18° .
- 22nd, Noon - Earth $24^{\circ}5$, $14^{\circ}5$.
- 23rd, Noon - Earth 24° , 18° .
- 24th, Noon - Earth 24° , 12° .
- 25th, Noon - Earth $31^{\circ}5$, $15^{\circ}5$.

1850.—NOVEMBER.

- 14th, 2 a.m. - Heavy snow-drift.
- 14th, 3 a.m. - An arch of aurora from W.N.W. to E.N.E.
- 25th, 8 p.m. - Aurora faint to northward, altitude 10° .
- 26th, 1 a.m. - Aurora from W.N.W. to E.N.E.

1850.—DECEMBER.

- 8th, 1 a.m. - Aurora very brilliant.
- 9th, 3 a.m. - Faint arch of aurora to N.N.W.
- 11th, 2.30 a.m. - Aurora from W.N.W. to N.E.
- 16th, 5 p.m. - A ray of aurora to N.N.W., showing red.
- 18th, 2 p.m. - Heavy snow-drift.
- 27th, 1 a.m. - Aurora from W.N.W. to E.N.E.

1851.—JANUARY.

- 1st, 2.30 a.m. - Aurora extending from E.S.E. to W.N.W.
- 16th, 2.30 a.m. - Aurora from W.N.W. to E.N.E.
- 18th, 3 a.m. - Faint arch of aurora from N.N.W. to E.N.E.
- 19th, 5.30 p.m. - An arch of aurora from N.N.W. to E., coruscating towards the zenith.
- 19th, 11 p.m. - Squally at intervals. Aurora extending over the whole of the atmosphere.
- 20th, 8 p.m. - Heavy squalls at intervals.
- 21st, 7 p.m. - Faint arch of aurora from N.N.W. to N.E.
- 28th, 11 p.m. - Aurora very brilliant to W.N.W.

1851.—FEBRUARY.

- 1st, 6 a.m. - Aurora extending from W.N.W. to N.N.E.
- 9th, 11 p.m. - Aurora very brilliant, forming an arch from W.N.W. to E.N.E., coruscating towards the zenith.
- 11th, 2 a.m. - A faint arch of aurora visible to E.N.E.
- 11th, 4 a.m. - Heavy squalls at intervals.
- 18th, 7 p.m. - Aurora extending from N.N.W. to S.S.E.
- 22nd - Large herd of deer seen on southern shore.
- 25th, 3 p.m. - Temperature of water at 17 feet $30^{\circ}5$. Water flowing over the ice inshore.
- 25th, Midnight - Faint ray of aurora from E.N.E. to N.N.W.
- 27th, 11 p.m. - An arch of aurora from N.N.W. to E.N.E.

1851.—MARCH.

- 1st, 1 a.m. - Brilliant appearance of aurora, extending in two distinct arches from N.N.W. to E.N.E.
- 2nd, 11 p.m. - Aurora very brilliant extending from E.S.E. to W.N.W.
- 7th, 10 p.m. - An arch of aurora from N.N.W. to E.N.E.
- 11th, 6 p.m. - Heavy squalls at intervals.
- 11th, 10 p.m. - Very squally.
- 12th, 7 a.m. - Wind shifting round the compass and blowing with frequent and heavy squalls in every direction.
- 24th, 10 p.m. - A faint arch of aurora from N.N.W. to E.N.E.
- 27th, 11 p.m. - Brilliant arch of aurora from N.N.W. to E.N.E.

1851.—APRIL.

- 8th, 11 p.m. - An arch of aurora from N.N.W. to N.E.
- 10th, 1 a.m. - Arch of aurora from N.N.W. to E.N.E.
- 12th, 1 a.m. - Heavy and frequent squalls of short duration rapidly veering round the compass, but prevailing northerly.
- 15th, 10 p.m. - Heavy squalls occasionally.
- 15th, 11 p.m. - Extraordinary heavy squalls. Wind veering rapidly round the compass.
- 22nd, Midnight - Arch of aurora from N.N.W. to E.N.E.

1851.—MAY.

- 4th, 3 a.m. - Continued heavy squalls from N.N.E.
- 5th - Found the ice, at 50 yards from the ship, 7 feet in thickness.
- 6th - Two geese seen.
- 10th - At 300 yards from the ship found the ice 3 feet 10 inches in thickness.
- 12th - Several gulls flying round the ship.
- 16th - Removed the thermometer from off the ice inboard.
- 22nd, 5.30 p.m. - Ship floated.

1851.—JUNE.

- 2nd - Caught four fawns.
- 3rd - Seven deer on the ice.
- 11th - A great number of seals on the ice around the ship.
- 12th - Dug up self-registering thermometer, minimum $31^{\circ}5$, maximum $34^{\circ}5$.
- 17th - Caught eighteen fawns.

1851.—JULY.

- 8th, 5.40 p.m. - In Port Clarence.
- 11th, 8 a.m. - Sailed from Port Clarence.

No. XXXIII., APPENDIX A.

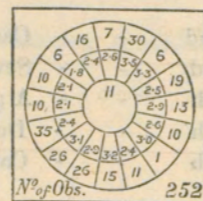
RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE in JULY, mean date 18th, various years.

Hours.	Baro- meter corrected.	Tension of Vapour.	Temperature.		Wind Components: Sums.				Weather Notations.								Amount of Cloud.
			Air.	Sea.	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.	
4 a.m.	inches. 29.753	inch. .325	47.5	47.2	34.8	40.1	40.4	19.5	10	16	16	7	2	6	—	1	8.6
8 „	.751	.340	49.3	48.7	29.8	42.3	38.7	26.2	10	14	18	9	1	7	—	3	6.6
Noon	.750	.361	51.9	50.3	40.9	45.3	27.2	50.0	11	15	16	10	—	9	—	2	5.4
4 p.m.	.748	.346	50.9	50.2	28.2	46.1	16.7	56.6	13	16	13	10	1	5	—	—	4.6
8 „	.745	.350	50.2	50.2	29.4	35.8	19.1	41.5	9	13	20	8	2	6	—	—	7.6
Midnight	.740	.331	48.1	48.4	36.0	33.4	27.2	32.8	9	15	18	9	2	7	—	1	8.4
Means	29.748	.342	49.6	49.2	33.2	40.5	28.2	37.8	10.4	14.8	16.8	8.8	1.3	6.7	—	1.2	6.9
Days	26	5	31	15	42				42								5

EXTREMES OF PRESSURE AND TEMPERATURE, WITH ACCOMPANYING WINDS AND WEATHER.

—	Date.	Bar.	Temp.	Wind.	Weather.
Maximum pressure	d. h. 25 4	inches. 30.22	53.6	W. b. S. 2	f
Minimum „	15 12	29.22	—	S.S.E. 1	o m r
Maximum temperature	7 0	29.66	63	W.S.W. 1	b
Minimum „	28 12	—	39	N.N.E. 5	b c
Range in month	—	1.00	24	—	—

Wind-rose.



Specific gravity at 4 a.m., 1.0160 (2 observations); at 8 a.m., 1.0190 (1); at noon, 1.0131 (3); at 4 p.m., 1.0133 (5); at 8 p.m., 1.0150 (3); at midnight, 1.0514 (4).

Temperature of water at bottom, 45° (4 days), specific gravity, 1.0193 (3 observations).

No. XXXIII., APPENDIX B.

RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE, August 1851, 30 days, mean date 19th, H.M.S. "DÆDALUS" and "PLOVER."

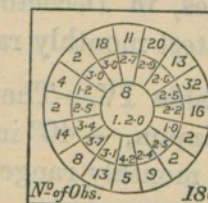
Hours.	Baro- meter corrected.	Temperature.		Wind Components: Sums.				Weather Notations.							
		Air.	Sea.*	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
4 a.m.	inches. 29.679	48.7	49.8	23.4	21.1	32.7	8.2	1	16	13	7	—	9	—	6
8 „	.719	50.5	50.3	23.1	18.4	25.2	11.9	4	16	10	8	1	4	—	4
Noon	.715	53.7	50.8	25.8	23.0	26.7	24.2	6	16	8	6	—	4	—	2
4 p.m.	.697	54.0	50.8	38.0	24.4	21.2	27.2	6	17	7	7	—	5	—	4
8 „	.690	51.5	50.3	42.2	18.3	27.8	23.7	5	19	6	7	—	3	—	9
Midnight	.684	49.4	50.0	40.5	19.1	36.5	19.8	2	15	13	9	—	8	—	7
Means	29.697	51.3	50.3	32.2	20.7	28.3	19.2	4.0	16.5	9.5	7.3	0.2	5.5	—	5.3

* Means for 6 days.

EXTREMES OF PRESSURE AND TEMPERATURE, WITH ACCOMPANYING WINDS AND WEATHER.

—	Date.	Bar.	Temp.	Wind.	Weather.
Maximum pressure	d. h. 23 8	inches. 30.10	50	N.N.E. 2	c
Minimum „	29 16	29.30	45	S. b. E. 3	d q
Maximum temperature	15 4	29.85	67	N.N.E. 1	b
Minimum „	31 12	30.10	42	W.S.W. 4	d
Range in month	—	0.80	25	—	—

Wind-rose.



No. XXXIV.

Results of Meteorological Observations made in Port Clarence.

H.M.S. "Plover," Commander T. E. L. Moore, R.N., passed the winter of 1851-2 in Port Clarence, where she had passed the previous winter, and the meteorological register was continued upon the same plan as before.

The meteorological results here given form a sequel to those contained in the memoir No. XXXIII., and the tables are numbered similarly.

Table I.—The general curve of mean atmospheric pressure shows a maximum at midnight, and a minimum at 8.30 a.m., a secondary maximum about noon, and a secondary minimum at 6 p.m. The amplitude of the first oscillation is .010, that of the second .008. Taking the mean pressure of July as 29.67, and that of August as 29.66, the mean for the year is 29.757 inches. The monthly mean pressure was greatest in March, and least in May.

Table II.—The diurnal range of temperature was greatest in April, $15^{\circ} \cdot 7$, and least in December, about 2° . The mean temperature of the coldest month, January, was -12° ; that of the warmest month, July, may be taken as $50^{\circ} \cdot 8$. The mean temperature of the year was 20° .

Table III.—Atmospheric pressure was greatest, 30.78, in March, and least, 28.94 inches, in December, so that the absolute range of the barometer was 1.84. The greatest monthly range was in February, the least in July.

Table IV.—The absolute maximum temperature was 72° in June, the absolute minimum, -40° in January, so that the absolute range of the thermometer was 112° . The monthly range of temperature was greater in winter than in summer.

Table VI.—As an average result of all the observations, it appears that the wind, which is nearly N.E. at 8.30 a.m., backs to N.E. b. N. at 6.30 p.m., and afterwards veers to N.E. again. As regards force, a maximum is shown at 5 a.m., and a minimum about noon, with a secondary maximum at 10 p.m., and a secondary minimum at midnight. The force of the wind is greater by night than by day.

Table VII.—The wind resultants are from the north-east quarter in all months except June and July, and their maximum force is in February, the minimum in June and September.

Table VIII.—Calms were more frequent by night than by day. The maximum of frequency occurred at 3 a.m., the minimum at 2 p.m. Calms were most frequent in June, least in September.

Table IX.—The most frequent winds agree with the resultants shown in Table VII.

Table X.—Clear sky was most frequently recorded in December, overcast sky in October. Mist was very prevalent from September to April inclusive. Out of 315 days comprising the period, mist prevailed on 210. The hourly notations of rain make up 23.4 days, of snow 38.3, or precipitation occurred during 61.7 days; but there were 88 rainy days, of which snow fell on 58. The winds were most squally in February.

Table XI.—Cloudiness was greatest generally about midnight, and least about noon. The most clouded sky was in May, the least in December.

In order to supply data for completing the year, two appendices are added to this paper.

Appendix A. contains results of observations in July.

Appendix B. contains results of observations in August.

TABLE I.
MEAN ATMOSPHERIC PRESSURE in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st
to 1852 July 11th.

Hours.	1851.				1852.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m.	inches. 29·699	inches. 29·699	inches. 29·747	inches. 29·981	inches. 29·781	inches. 29·752	inches. 30·028	inches. 29·754	inches. 29·658	inches. 29·728	inches. 29·799	inches. 29·784
2 "	·698	·697	·748	·979	·779	·747	·027	·755	·656	·725	·799	·783
3 "	·699	·694	·750	·980	·777	·749	·023	·756	·656	·725	·797	·782
4 "	·699	·692	·755	·979	·775	·745	·022	·755	·656	·724	·799	·782
5 "	·697	·691	·755	·980	·775	·746	·023	·752	·656	·723	·801	·782
6 "	·698	·689	·755	·973	·773	·746	·025	·749	·654	·721	·801	·780
7 "	·706	·683	·754	·970	·769	·747	·021	·741	·654	·721	·802	·779
8 "	·709	·678	·751	·966	·762	·740	·011	·732	·647	·720	·811	·775
9 "	·719	·676	·750	·962	·761	·744	·008	·724	·647	·720	·814	·775
10 "	·722	·679	·757	·963	·768	·750	·013	·724	·645	·720	·815	·778
11 "	·718	·681	·758	·963	·773	·754	·017	·729	·645	·721	·819	·780
Noon	·713	·683	·759	·963	·772	·757	·018	·731	·643	·721	·822	·780
1 p.m.	·716	·683	·753	·960	·766	·755	·011	·727	·644	·715	·823	·778
2 "	·709	·680	·752	·956	·762	·755	·007	·730	·642	·716	·823	·776
3 "	·706	·677	·753	·953	·758	·754	·005	·729	·641	·715	·820	·774
4 "	·695	·675	·754	·952	·758	·755	·003	·731	·642	·713	·820	·773
5 "	·688	·677	·758	·956	·760	·755	·004	·732	·640	·710	·822	·773
6 "	·685	·679	·758	·955	·758	·756	·003	·734	·637	·710	·821	·772
7 "	·686	·681	·761	·956	·756	·772	·003	·736	·635	·707	·822	·774
8 "	·684	·682	·764	·956	·757	·766	·005	·739	·639	·708	·821	·775
9 "	·685	·686	·765	·961	·756	·767	·007	·748	·643	·709	·822	·777
10 "	·687	·690	·770	·963	·755	·771	·012	·752	·646	·713	·826	·780
11 "	·691	·695	·773	·967	·757	·776	·010	·757	·647	·715	·830	·783
Midnight	·690	·696	·775	·969	·758	·778	·011	·758	·649	·719	·832	·785
Means	29·700	29·685	29·757	29·965	29·765	29·756	30·013	29·742	29·647	29·717	29·815	29·778
1 a.m. after Midnight.	29·688	29·693	29·775	29·971	29·756	29·780	30·014	29·762	29·649	29·726	29·841	29·787

* For 11 days 1st to 11th. Adopted mean for July 29·674.
" " August 29·659.
" " Year 29·757.

TABLE II.
MEAN TEMPERATURE of the AIR in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st
to 1852 July 11th.

Hours.	1851.				1852.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m.	40°·7	22°·2	5°·9	1°·5	-12°·5	-9°·4	4°·4	3°·2	27°·5	35°·7	46°·8	15°·1
2 "	40°·4	22°·2	5°·8	1°·2	12°·5	9°·3	4°·0	3°·0	27°·4	35°·6	46°·5	14°·9
3 "	40°·5	22°·0	5°·7	1°·4	12°·7	9°·3	3°·9	3°·0	27°·4	35°·8	46°·7	14°·9
4 "	40°·5	22°·0	5°·9	1°·6	12°·8	9°·5	3°·6	2°·8	27°·8	36°·1	47°·1	15°·0
5 "	40°·6	21°·6	5°·7	1°·5	12°·6	9°·0	3°·4	3°·1	28°·5	36°·9	48°·4	15°·3
6 "	40°·8	21°·4	5°·7	1°·7	12°·7	9°·1	3°·5	4°·9	29°·5	38°·5	49°·5	15°·8
7 "	41°·2	21°·6	5°·9	1°·8	12°·6	8°·8	3°·8	7°·6	31°·1	40°·0	50°·5	16°·6
8 "	42°·2	22°·2	6°·5	1°·8	12°·1	8°·9	4°·8	10°·8	32°·8	41°·2	51°·6	17°·5
9 "	43°·5	23°·3	6°·9	1°·7	11°·6	9°·3	7°·1	14°·1	33°·8	42°·3	52°·9	18°·6
10 "	44°·2	25°·0	7°·9	1°·6	11°·5	7°·9	9°·3	17°·2	35°·1	43°·9	55°·1	20°·0
11 "	45°·1	26°·2	8°·7	1°·8	10°·9	6°·8	10°·2	18°·3	35°·9	45°·7	55°·1	20°·8
Noon	45°·8	26°·5	9°·3	2°·2	10°·3	5°·9	11°·7	18°·5	36°·6	46°·4	55°·0	21°·4
1 p.m.	46°·4	26°·9	9°·1	1°·8	10°·4	5°·3	12°·6	17°·8	36°·3	47°·3	55°·5	21°·6
2 "	46°·5	26°·9	8°·9	1°·8	11°·0	5°·3	13°·2	17°·8	36°·8	47°·2	55°·8	21°·7
3 "	46°·4	26°·7	8°·3	1°·5	11°·6	5°·6	12°·7	17°·9	36°·6	47°·1	54°·7	21°·3
4 "	46°·0	25°·9	7°·6	0°·9	12°·1	6°·0	11°·4	17°·0	36°·2	46°·8	53°·4	20°·6
5 "	45°·3	24°·1	7°·2	0°·6	12°·5	7°·1	9°·1	15°·2	35°·2	45°·5	52°·5	19°·6
6 "	44°·3	23°·5	6°·7	0°·7	12°·6	8°·2	7°·0	12°·8	33°·9	44°·6	50°·9	18°·5
7 "	43°·4	22°·7	6°·7	0°·4	12°·6	8°·4	6°·0	9°·6	32°·9	42°·8	50°·2	17°·6
8 "	42°·3	22°·5	6°·9	0°·2	12°·4	8°·1	5°·0	7°·4	31°·6	41°·6	50°·4	17°·0
9 "	41°·6	22°·3	6°·6	0°·1	12°·1	8°·1	4°·4	5°·7	30°·0	40°·2	49°·0	16°·3
10 "	41°·0	22°·2	6°·4	-0°·1	12°·0	8°·1	4°·1	4°·6	28°·7	38°·8	47°·8	15°·8
11 "	40°·8	21°·9	6°·2	0°·1	12°·2	8°·3	4°·4	4°·0	28°·4	37°·7	46°·9	15°·4
Midnight	40°·4	21°·8	6°·0	0°·4	12°·4	8°·6	4°·5	3°·5	28°·0	36°·5	46°·4	15°·1
Means	42°·9	23°·5	6°·9	1°·2	-12°·0	-7°·9	6°·8	10°·0	32°·0	41°·4	50°·8	17°·8
1 a.m. after Midnight.	40°·3	21°·7	6°·1	0°·1	-12°·0	-8°·5	4°·3	3°·1	28°·0	36°·3	46°·6	15°·1

* For 11 days, 1st to 11th. Adopted mean for July 50°·8.
" " Aug. 44°·3.
" " Year 20°·0.

TABLE III.

EXTREMES of ATMOSPHERIC PRESSURE, with accompanying TEMPERATURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Month.	Date.	Highest.	Temp.	Wind.	Weather.	Date.	Lowest.	Temp.	Wind.	Weather.	Range.
	d. h.	inches.	°			d. h.	inches.	°			inches.
September 1851 -	2 10	30.41	+41	N.N.W. 1	c m	16 19	28.94	+50	E.S.E. 6	o d q	1.47
October " -	20 18	.52	+11	N.E. 1	b c	25 21	.94	20	Calm	c m	1.58
November " -	27 14	.55	-17	N.E. 4	b c q	16 7	29.15	18	N.N.E. 3	m b q	1.40
December " -	5 12	.49	14	E. 1	b c v	15 2	28.94	+21	E. 1	o m s	1.55
January 1852 -	13 1	.11	12	E.N.E. 3	b m q	30 20	29.04	-8	N.W. 1	o m	1.07
February " -	23 2	.71	3	E.N.E. 2	b c v	6 16	28.95	5	N.N.E. 9	o m q	1.76
March " -	16 10	.78	-10	N.N.E. 5	b m q	20 5	29.25	-11	N. 5	b m q	1.53
April " -	21 16	.15	+11	E.N.E. 5	b m q	7 21	.35	+10	N.N.W. 2	m s	0.80
May " -	28 9	.32	29	W. 3	o f m	13 3	.23	40	E.N.E. 6	m q	1.09
June " -	5 18	29.93	39	N.W. 1	b c	14 0	.25	33	N.N.E. 1	r s	0.68
July 1st-11th, -	9 3	30.03	+47	W.N.W. 2	b c	5 22	.56	+66	N.N.E. 1	c b	0.47
Period -	March	30.78	—	—	—	—	28.94	—	—	—	1.84

TABLE IV.

EXTREMES of AIR TEMPERATURE, with accompanying PRESSURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Month.	Date.	Max.	Bar.	Wind.	Weather.	Date.	Min.	Bar.	Wind.	Weather.	Range.
	d. h.	°	inches.			d. h.	°	inches.			°
September 1851 -	4 23	+54	29.53	N.N.E. 4	b c	30 12	+29	29.78	N.N.W. 1	b c m	25
October " -	4 2	44	.25	E. 3	b c m	22 8	+8	30.11	E.N.E. 1	b c	36
November " -	14 7	30	.37	N.E. 6	m b q	27 19	-18	.51	N.E. 2	b c	48
December " -	20 10	36	.84	E.S.E. 6	m q	10 8	23	.30	E.N.E. 3	b c m	59
January 1852 -	19 1	23	.77	Calm	c b m	3 17	40	.01	E.N.E. 1	b c	63
February " -	29 12	18	30.10	E.S.E. 4	m b q	17 22	26	29.79	N. 5	m b q	44
March " -	28 0	36	29.68	W. 1	c b m	24 17	20	30.21	Calm	b c m	56
April " -	26 4	48	.52	Calm	b v	11 12	-21	29.85	Calm	b c	69
May " -	9 2	49	.44	E.N.E. 1	b c v	3 17	+7	.59	E.N.E. 1	c b m	42
June " -	23 2	72	.67	E. 1	b c	1 17	23	.66	N.W. 6	b c q	49
July 1st-11th, -	5 23	68	.58	N.N.E. 1	c b	2 15	+39	.89	S.W. 1	c b m	29
Period -	June	+72	—	—	—	Jan.	-40	—	—	—	112

TABLE V.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Hours.	September 1851.				October 1851.				November 1851.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	28.7	23.0	39.7	24.7	51.2	—	34.9	16.2	52.9	1.2	41.2	1.8
2 "	29.4	20.6	37.7	23.2	56.4	—	37.9	17.5	52.4	1.0	38.8	2.8
3 "	29.1	19.9	35.1	20.2	57.4	—	30.9	14.7	44.4	1.5	41.9	1.7
4 "	26.5	20.4	37.3	27.5	62.0	—	35.0	12.7	44.4	3.1	42.5	0.8
5 "	25.9	23.3	36.5	27.4	62.4	—	34.0	13.6	47.9	2.1	43.5	—
6 "	27.3	23.4	38.8	23.3	53.1	4.3	24.6	9.9	50.2	0.7	48.0	—
7 "	22.0	30.0	36.7	18.8	48.9	4.2	14.1	10.1	50.2	—	44.5	—
8 "	20.7	32.2	34.5	17.2	49.0	1.5	21.4	12.5	42.7	—	37.8	—
9 "	21.9	36.3	36.1	16.8	47.3	4.3	24.1	6.0	44.7	—	40.3	—
10 "	23.7	35.5	39.1	18.4	52.6	4.9	30.5	7.0	42.0	0.8	39.1	—
11 "	19.0	34.1	38.9	20.4	51.4	5.3	28.6	9.0	41.8	0.8	38.5	0.9
Noon	19.1	33.5	39.2	20.1	54.9	3.7	26.7	13.2	46.1	0.8	42.9	0.9
1 p.m.	24.3	35.5	38.6	19.0	46.1	4.6	30.9	13.4	39.5	1.8	40.5	1.3
2 "	22.6	35.9	37.6	17.1	45.6	4.6	30.5	14.3	43.4	1.6	43.4	1.1
3 "	22.4	32.7	35.4	20.8	50.7	1.8	28.0	11.5	50.7	0.8	51.2	1.1
4 "	22.0	30.6	38.7	20.9	51.8	0.9	27.1	12.7	49.7	—	52.0	2.3
5 "	25.3	29.9	42.1	17.5	50.0	—	24.6	11.9	48.6	—	49.3	2.3
6 "	29.5	30.8	35.3	18.0	49.0	—	27.2	14.4	46.3	—	48.1	2.3
7 "	27.8	31.7	34.5	16.0	47.0	—	25.8	14.0	45.3	—	44.3	2.3
8 "	28.6	33.3	37.7	13.7	49.8	—	28.7	15.1	50.6	—	46.8	1.9
9 "	27.5	31.0	36.5	10.9	48.9	0.4	32.3	10.3	49.0	1.5	48.0	—
10 "	31.3	27.5	34.0	8.8	48.4	0.4	35.0	6.8	52.4	1.1	48.2	—
11 "	27.1	28.4	36.7	11.0	50.6	—	34.5	9.5	51.6	2.7	45.6	2.7
Midnight	24.9	28.8	38.3	10.3	50.1	—	34.7	11.0	47.3	3.3	42.0	3.6
Means	25.2	29.5	37.3	18.4	51.4	1.7	29.3	12.0	47.3	1.0	44.1	1.2

TABLE V.—*continued.*

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th—*continued.*

Hours.	December 1851.				January 1852.				February 1852.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	29.9	28.0	45.7	8.5	63.4	1.1	47.1	1.1	82.6	2.3	53.7	1.5
2 "	27.7	27.4	46.1	7.7	63.8	1.1	48.0	1.1	82.5	2.3	52.3	1.9
3 "	24.4	24.6	48.7	1.8	56.4	1.1	46.1	1.1	77.7	3.1	56.7	1.5
4 "	25.9	24.1	45.2	2.7	55.6	2.3	50.6	0.8	89.3	2.7	62.8	1.1
5 "	34.3	18.4	41.7	2.3	54.2	2.3	45.3	0.8	87.8	2.7	66.6	1.5
6 "	30.8	19.0	40.4	2.2	47.4	2.3	44.2	—	82.0	2.3	60.6	1.5
7 "	29.9	17.4	37.5	1.1	45.3	1.1	43.7	—	84.4	1.8	51.6	2.5
8 "	29.6	17.7	35.2	1.1	49.8	1.1	48.8	—	83.9	1.1	53.5	1.5
9 "	29.0	14.0	37.3	0.4	57.2	—	50.9	0.4	90.0	0.4	50.0	0.8
10 "	27.6	14.4	36.4	—	49.5	—	50.8	0.4	81.7	0.4	43.6	0.4
11 "	26.6	15.6	33.9	—	49.4	1.2	48.7	2.0	82.3	0.4	43.9	—
Noon	23.8	14.3	29.7	—	46.4	—	37.5	2.2	73.5	0.4	47.8	—
1 p.m.	27.4	11.4	34.9	0.8	48.9	0.2	34.2	2.5	74.4	1.5	52.6	1.5
2 "	29.7	11.4	36.3	1.5	51.7	1.5	34.2	2.7	81.9	1.5	52.9	2.3
3 "	31.5	10.8	31.9	1.5	47.9	2.6	38.6	3.1	84.9	1.1	46.2	2.3
4 "	31.1	11.7	35.8	1.5	50.5	2.9	41.1	4.4	81.4	1.5	50.6	2.3
5 "	27.4	15.8	30.3	1.1	53.7	2.5	36.6	3.6	82.1	1.5	50.9	—
6 "	27.8	12.6	34.8	1.9	55.6	0.4	34.9	1.9	78.0	1.5	52.4	—
7 "	29.1	13.6	40.8	1.9	62.9	0.4	37.1	1.5	76.7	1.5	48.4	0.8
8 "	23.2	13.6	41.7	0.8	61.6	0.2	36.8	1.9	83.0	3.1	48.4	0.8
9 "	27.0	14.7	45.7	1.1	52.4	1.7	52.8	—	79.4	5.1	51.3	0.8
10 "	26.3	19.1	42.8	3.2	48.1	1.5	48.2	—	80.7	5.2	51.4	1.1
11 "	25.3	24.5	39.4	6.7	50.0	4.2	46.5	—	79.1	3.1	49.7	1.5
Midnight	32.2	20.8	36.3	5.2	52.9	5.0	50.0	2.3	80.3	2.3	46.8	1.5
Means	28.2	17.3	38.7	2.3	53.1	1.5	43.9	1.4	81.6	2.0	51.9	1.2

TABLE V.—*continued.*

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th—*continued.*

Hours.	March 1852.				April 1852.				May 1852.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	58.8	23.1	42.3	15.4	60.7	1.2	27.9	6.0	29.9	20.1	31.6	15.6
2 "	66.1	19.0	38.0	12.4	60.1	0.8	28.5	3.1	33.7	22.0	33.9	15.6
3 "	62.4	22.7	34.2	19.6	58.9	1.1	25.8	3.1	33.6	28.9	37.2	11.9
4 "	58.5	21.9	40.3	21.9	59.7	1.1	32.7	3.4	34.5	23.1	40.1	10.0
5 "	48.8	18.7	37.2	25.2	63.7	2.5	33.6	5.9	32.2	20.6	44.5	9.9
6 "	50.0	17.0	32.3	21.2	60.0	2.9	33.1	5.9	38.4	18.5	46.7	11.4
7 "	49.6	18.6	33.2	19.6	54.7	3.2	31.8	4.8	36.8	19.9	50.2	9.9
8 "	45.8	20.0	34.7	19.3	56.5	3.2	31.6	6.3	33.5	22.2	49.3	12.0
9 "	44.0	20.3	36.8	23.7	56.5	1.1	29.2	5.0	33.6	29.7	48.2	13.4
10 "	41.7	14.4	37.9	24.7	63.4	0.7	33.6	5.2	36.8	28.9	42.8	13.3
11 "	38.1	16.9	35.5	26.1	68.6	1.5	32.3	4.5	36.6	25.5	35.3	9.3
Noon	47.0	18.8	33.8	25.8	69.6	1.5	29.0	6.5	38.8	27.0	39.5	9.6
1 p.m.	31.2	21.5	39.9	11.5	65.1	3.5	33.6	5.2	40.5	16.7	45.1	16.0
2 "	34.3	21.1	39.9	10.8	68.6	4.3	34.5	4.1	41.6	18.1	47.7	15.1
3 "	38.4	27.8	40.5	12.2	67.3	2.9	32.2	5.5	44.7	20.6	51.6	13.4
4 "	40.1	26.0	38.7	10.6	68.3	6.1	28.7	6.8	42.6	24.4	44.3	15.8
5 "	38.7	22.5	38.9	15.7	63.0	6.8	28.3	6.8	42.3	26.2	47.0	17.9
6 "	44.3	19.4	40.1	12.9	66.9	6.8	28.8	10.9	44.8	22.6	44.4	17.6
7 "	50.1	20.5	38.6	13.2	68.6	5.8	29.4	8.4	44.3	24.3	45.3	15.8
8 "	52.7	20.0	42.0	15.8	77.7	6.0	30.5	9.3	39.6	24.8	39.7	16.0
9 "	51.5	16.3	41.3	15.0	75.8	3.4	29.6	7.4	40.7	23.1	41.0	14.2
10 "	58.7	17.8	40.7	15.8	73.3	2.6	25.5	9.8	41.6	22.9	42.2	12.5
11 "	65.2	18.7	43.5	19.0	73.0	5.4	24.9	9.8	41.1	25.2	44.6	12.5
Midnight	61.7	21.7	45.0	20.9	66.2	3.0	24.8	9.2	40.6	22.7	38.5	11.5
Means	49.1	20.2	38.6	17.8	65.3	3.2	30.0	6.4	38.4	23.2	42.9	13.3

TABLE V.—concluded.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th—concluded.

Hours.	June 1852.				July 1st to 11th, 1852.							
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
1 a.m.	26.9	9.3	16.1	9.7	8.4	4.3	4.6	10.8				
2 "	27.1	7.8	18.8	10.2	8.0	4.3	3.7	15.8				
3 "	29.3	16.0	16.1	15.0	8.4	4.4	4.6	8.9				
4 "	29.5	9.8	15.0	17.8	10.2	4.4	5.7	8.9				
5 "	29.4	11.1	16.3	20.1	10.2	4.8	5.9	6.0				
6 "	27.4	11.2	13.5	17.5	8.6	4.8	4.8	6.0				
7 "	25.7	11.6	11.2	19.3	8.6	5.3	4.8	7.0				
8 "	24.8	15.6	12.3	22.6	5.8	6.8	3.6	7.8				
9 "	28.0	12.9	10.3	24.3	3.5	7.7	1.8	8.2				
10 "	26.2	13.0	6.7	30.0	3.6	6.1	2.9	11.9				
11 "	30.1	18.6	5.4	31.7	4.3	5.9	1.1	17.0				
Noon	31.2	18.8	5.3	34.8	3.9	4.2	1.1	18.0				
1 p.m.	32.6	19.2	6.4	27.6	8.7	2.7	1.1	17.3				
2 "	32.6	20.9	6.4	26.6	8.7	2.7	1.1	17.3				
3 "	34.5	21.5	7.7	28.3	8.6	2.7	1.1	18.8				
4 "	38.9	20.3	5.2	27.6	9.3	2.7	1.1	19.5				
5 "	43.1	20.3	4.9	24.8	7.8	1.9	1.1	17.9				
6 "	39.9	21.2	7.7	22.9	7.7	3.3	1.1	18.1				
7 "	38.5	16.1	13.4	25.8	7.7	3.3	1.1	18.1				
8 "	36.5	17.5	11.7	19.5	7.3	4.3	1.1	16.2				
9 "	41.7	18.8	14.2	19.8	6.2	6.4	1.1	16.5				
10 "	39.0	15.0	14.1	15.0	6.7	6.4	3.3	13.8				
11 "	37.6	19.6	15.1	15.0	8.5	5.3	4.0	13.8				
Midnight	33.6	19.4	14.4	11.8	10.4	5.3	4.7	12.8				
Means	32.7	16.1	11.2	21.6	7.5	4.6	2.8	13.4				

TABLE VI.

SUMS of WIND COMPONENTS, with RESULTANT WINDS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
1 a.m.	493.4	113.6	384.8	111.3	N. 36° E.	470
2 "	507.2	105.7	383.7	106.3	N. 34° E.	490
3 "	481.0	123.3	377.3	99.5	N. 38° E.	450
4 "	496.1	112.9	407.2	107.6	N. 38° E.	490
5 "	496.8	106.5	405.1	112.7	N. 37° E.	490
6 "	475.2	106.4	387.0	98.9	N. 38° E.	470
7 "	456.1	113.1	359.3	93.1	N. 38° E.	430
8 "	441.1	121.4	362.7	100.3	N. 39° E.	415
9 "	455.7	126.7	365.0	99.0	N. 39° E.	425
10 "	448.8	119.1	363.4	111.3	N. 37° E.	415
11 "	448.1	125.8	342.1	120.9	N. 35° E.	390
Noon	454.3	123.0	332.5	131.1	N. 31° E.	390
1 p.m.	438.7	118.6	357.8	116.1	N. 37° E.	400
2 "	460.7	123.6	374.5	112.9	N. 38° E.	425
3 "	481.6	125.3	364.4	118.5	N. 35° E.	430
4 "	485.7	127.1	363.3	124.4	N. 34° E.	430
5 "	482.0	127.4	354.0	119.5	N. 34° E.	430
6 "	489.8	118.6	354.8	120.9	N. 32° E.	440
7 "	498.0	117.2	358.7	117.8	N. 32° E.	450
8 "	510.6	122.8	365.1	111.0	N. 33° E.	465
9 "	500.1	122.4	392.8	96.0	N. 38° E.	480
10 "	506.5	119.5	385.4	86.8	N. 38° E.	490
11 "	509.1	137.1	384.5	101.5	N. 37° E.	470
Midnight	500.2	132.3	375.5	100.1	N. 37° E.	460
Means	479.9	120.3	370.7	109.0	N. 36° E.	445

* These figure must be divided by 315, to obtain the mean force at the given hour.

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TABLE VII.
MONTHLY RESULTANTS of the WINDS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Months.	Resultants.	
	Direction.	Force.†
September 1851 -	S. 77° E.	0.65
October " -	N. 19° E.	1.71
November " -	N. 43° E.	2.16
December " -	N. 73° E.	1.23
January 1852 -	N. 40° E.	2.16
February " -	N. 33° E.	3.28
March " -	N. 35° E.	1.17
April " -	N. 21° E.	2.20
May " -	N. 63° E.	1.07
June " -	N. 32° W.	0.65
July 1st-11th " -	N. 74° W.	1.00

† In grades of Beaufort's scale.

TABLE VIII.
CALMS observed in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st
to 1852 July 11th.

Hours.	1851.				1852.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 am.	2	3	4	1	4	4	3	6	4	10	2	43
2 "	2	3	4	1	3	5	5	6	5	11	3	48
3 "	4	3	3	4	7	4	4	7	5	7	2	50
4 "	4	3	5	4	4	4	1	4	4	6	—	39
5 "	4	5	3	4	3	1	3	2	3	6	3	37
6 "	2	6	4	4	5	2	4	2	4	9	3	45
7 "	3	6	5	3	4	2	5	3	4	9	3	47
8 "	3	3	6	3	1	1	4	2	4	5	2	34
9 "	5	3	1	3	—	—	3	3	2	6	3	29
10 "	4	1	2	4	1	—	2	3	3	4	2	26
11 "	4	—	2	5	1	2	1	5	3	3	1	27
Noon	4	—	1	6	5	2	1	5	2	3	1	30
1 p.m.	1	1	3	4	4	3	2	3	—	2	—	23
2 "	2	2	1	4	3	1	—	3	1	2	—	19
3 "	2	2	1	4	2	1	1	4	1	2	—	20
4 "	2	1	2	6	3	1	1	4	1	3	—	24
5 "	—	2	4	5	2	1	2	4	1	3	—	24
6 "	—	3	5	5	—	3	2	2	1	4	—	25
7 "	—	4	5	5	2	3	2	2	1	5	—	29
8 "	1	3	4	4	4	3	4	1	3	6	1	34
9 "	—	3	5	4	2	3	4	5	4	3	1	34
10 "	3	3	4	5	3	4	4	6	4	7	1	44
11 "	2	5	4	4	4	4	3	5	3	7	1	42
Midnight	1	5	3	1	4	6	2	7	3	8	1	41
Means	2.3	2.9	3.4	3.9	3.0	2.5	2.6	3.9	2.7	5.5	1.2	814

* For 11 days, 1st to 11th.

TABLE IX.
SUMMARY OF THE WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (Scale 0 to 12),
in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Months.	No. of Observa- tions.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.
September 1851.	720	13	2.8	65	3.7	66	3.2	79	2.3	79	2.5	50	2.1	32	3.7	51	5.0
October	744	99	2.6	137	2.9	57	2.7	114	2.6	39	2.6	18	2.8	1	2.0	10	2.2
November	720	51	3.2	169	3.2	140	3.0	146	2.3	79	2.5	26	2.2	3	1.3	—	—
December	744	39	4.2	88	2.6	69	2.4	223	1.7	72	2.3	58	2.4	15	4.7	20	5.0
January 1852.	744	69	3.5	202	3.6	74	2.6	183	2.2	93	2.1	26	2.9	—	—	—	—
February	696	58	5.2	272	5.1	75	3.8	113	2.6	44	3.3	45	2.5	2	3.5	—	—
March	744	103	4.6	63	3.9	33	3.0	63	3.3	105	3.2	56	3.4	14	4.3	12	3.8
April	720	111	5.4	188	3.9	12	3.0	99	2.2	60	2.5	36	1.9	2	1.5	1	1.0
May	744	46	4.2	97	3.7	50	3.5	140	2.9	25	2.8	58	3.2	24	4.8	47	3.9
June	720	85	4.6	63	2.8	5	2.4	54	1.8	26	1.5	19	1.6	9	1.6	39	1.9
July	264	—	—	44	2.4	17	1.8	4	1.2	—	—	—	—	—	—	—	—

(continued.)

Months.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.
	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
September 1851.	14	2.2	53	3.3	41	3.0	41	4.1	19	2.3	7	2.3	17	3.1	29	2.9	9	1.7	55
October	—	—	2	3.0	—	—	3	2.0	3	2.0	38	2.1	51	2.8	102	2.5	—	—	70
November	—	—	—	—	—	—	—	—	—	—	6	1.5	1	2.0	18	2.9	—	—	81
December	31	5.4	8	3.3	9	2.3	5	2.8	—	—	2	1.0	—	—	12	3.1	—	—	93
January 1852.	—	—	2	1.5	2	3.0	—	—	—	—	1	2.0	—	—	19	3.5	2	3.0	71
February	—	—	—	—	—	—	1	1.0	—	—	—	—	—	—	25	3.0	1	4.0	60
March	16	6.0	27	3.5	59	3.0	20	2.5	24	3.0	17	1.1	4	1.7	63	5.2	—	—	63
April	1	2.0	4	2.7	16	1.5	20	2.1	1	1.5	5	2.0	3	4.0	67	2.7	—	—	94
May	19	4.3	32	2.8	28	2.6	30	1.9	25	2.8	35	2.3	2	2.5	20	4.8	—	—	66
June	3	2.3	43	3.1	40	3.5	57	3.2	13	1.9	69	1.3	25	1.8	39	3.3	—	—	131
July	—	—	15	1.9	23	2.5	41	2.6	26	2.4	41	2.1	12	1.8	11	1.0	—	—	30

TABLE X.
WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to
1852 July 11th.

Hours.	September 1851.								October 1851.								November 1851.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	1	9	20	19	1	12	—	8	1	12	18	22	—	—	11	11	7	11	12	21	—	—	3	7
2 "	2	6	22	19	1	11	—	8	1	11	19	22	—	—	12	11	7	12	11	21	—	—	3	7
3 "	2	6	22	21	1	9	—	7	1	10	20	22	—	—	11	10	7	14	9	21	—	—	4	7
4 "	2	6	22	21	1	8	—	7	1	12	18	21	—	—	11	10	8	11	11	21	—	—	5	6
5 "	2	9	19	21	1	9	—	8	2	11	18	20	—	—	12	9	7	12	11	21	—	—	5	6
6 "	2	10	18	19	1	9	—	9	1	12	18	20	—	—	11	8	9	7	14	20	—	—	5	7
7 "	2	10	18	17	1	10	—	8	2	10	19	19	—	—	11	8	7	9	14	20	—	—	5	5
8 "	2	11	17	14	1	11	—	9	2	12	17	17	—	—	11	9	8	7	15	19	—	—	6	4
9 "	2	12	16	16	1	9	—	8	4	9	18	18	—	—	13	9	8	7	15	19	—	—	6	6
10 "	2	12	16	17	1	9	—	7	3	8	20	18	—	—	13	7	9	7	14	19	—	—	7	6
11 "	1	13	16	17	—	9	—	8	2	9	20	18	—	—	12	7	9	5	16	20	—	—	8	6
Noon	1	14	15	16	—	10	—	8	2	13	16	18	—	—	10	6	10	4	16	19	—	—	8	4
1 p.m.	1	11	18	20	—	12	—	8	1	12	18	23	—	—	10	3	6	10	14	16	—	—	7	6
2 "	1	10	19	18	—	14	—	7	1	11	19	23	—	—	11	3	6	10	14	17	—	—	6	6
3 "	1	10	19	18	—	13	—	7	2	11	18	23	—	—	8	3	6	11	13	17	—	—	4	7
4 "	2	7	21	19	—	13	—	7	1	9	21	22	—	—	9	3	6	10	14	17	—	—	4	6
5 "	3	5	22	18	1	13	—	6	1	7	23	23	—	—	9	3	10	6	14	16	—	—	4	7
6 "	2	9	19	20	—	11	—	5	1	8	22	23	—	—	9	5	10	7	13	17	—	—	3	8
7 "	2	10	18	19	—	13	—	6	1	11	19	23	—	—	9	5	12	6	12	19	—	—	3	8
8 "	2	10	18	18	—	14	—	7	1	10	20	23	—	—	10	6	10	8	12	20	—	—	4	8
9 "	2	10	18	18	—	16	—	7	2	10	19	22	—	—	10	7	9	10	11	21	—	—	4	7
10 "	2	11	17	17	—	16	—	7	2	11	18	20	—	—	10	9	9	11	10	20	—	—	5	9
11 "	2	11	17	16	—	16	—	8	1	11	19	20	—	—	10	9	9	11	10	21	—	—	5	10
Mdn.	2	9	19	18	—	15	—	7	2	9	20	19	—	—	10	9	9	9	12	21	—	—	5	9
Means	1.8	9.6	18.6	18.2	0.5	11.7	—	7.4	1.6	10.4	19.0	20.8	—	—	10.5	7.1	8.2	9.0	12.8	19.3	—	—	5.0	6.8

TABLE X.—continued.
WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to
1852 July 11th—continued.

Hours.	December 1851.								January 1852.								February 1852.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	10	14	7	23	—	—	2	11	5	17	9	26	—	—	2	15	3	14	12	25	—	—	2	16
2 "	11	13	7	23	—	—	2	11	5	16	10	26	—	—	2	15	3	13	13	25	—	—	2	16
3 "	10	14	7	23	—	—	2	10	4	17	10	26	—	—	3	13	3	13	13	25	—	—	1	16
4 "	10	13	8	23	—	—	1	10	6	16	9	26	—	—	3	13	3	14	12	26	—	—	1	17
5 "	11	11	9	24	—	—	1	9	6	16	9	27	—	—	3	14	3	12	14	26	—	—	1	16
6 "	11	9	11	24	—	—	1	11	6	16	9	26	—	—	3	13	3	11	15	26	—	—	1	16
7 "	12	8	11	24	—	—	2	9	3	18	10	26	—	—	3	13	5	8	16	24	—	—	1	15
8 "	12	9	10	21	—	—	2	8	3	17	11	25	—	—	1	10	6	7	16	23	—	—	1	13
9 "	10	11	10	21	—	—	3	6	3	17	11	25	—	—	1	10	6	7	16	23	—	—	2	15
10 "	11	10	10	19	—	—	3	5	4	15	12	25	—	—	2	11	7	5	17	23	—	—	3	11
11 "	10	12	9	18	—	—	4	4	3	16	12	25	—	—	2	12	6	8	15	23	—	—	3	11
Noon	10	12	9	17	—	—	4	3	3	16	12	25	—	—	2	12	6	10	13	23	—	—	4	11
1 p.m.	9	13	9	19	—	—	1	5	2	19	10	25	—	—	5	11	4	10	15	25	—	—	2	14
2 "	10	11	10	19	—	—	1	5	1	19	11	24	—	—	5	12	5	11	13	25	—	—	2	15
3 "	9	9	13	19	—	—	—	4	1	20	10	24	—	—	4	12	5	10	14	25	—	—	3	14
4 "	9	12	10	20	—	—	—	4	1	19	11	24	—	—	4	13	5	10	14	25	—	—	3	14
5 "	9	13	9	20	—	—	1	5	1	20	10	24	—	—	4	11	5	8	16	25	—	—	3	14
6 "	10	12	9	21	—	—	2	4	2	18	11	24	—	—	3	9	5	11	13	25	—	—	2	14
7 "	10	12	9	22	—	—	—	6	1	21	9	25	—	—	3	10	5	14	10	25	—	—	2	15
8 "	10	12	9	24	—	—	—	7	1	23	7	25	—	—	3	12	5	15	9	25	—	—	2	16
9 "	10	12	9	24	—	—	—	8	2	21	8	25	—	—	3	14	4	17	8	26	—	—	2	16
10 "	10	13	8	24	—	—	—	8	3	20	8	25	—	—	3	14	4	16	9	26	—	—	4	16
11 "	10	14	7	24	—	—	—	8	4	19	8	25	—	—	3	15	4	15	10	26	—	—	4	15
Mdn.	10	13	8	25	—	—	—	8	5	19	7	24	—	—	3	14	4	14	11	26	—	—	4	15
Means	10.2	11.7	9.1	21.7	—	—	1.3	7.0	3.1	18.2	9.7	25.0	—	—	2.9	12.4	4.6	11.3	13.1	24.8	—	—	2.3	14.6

TABLE X.—*continued.*

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "Plover," 1851 September 1st to 1852 July 11th—*continued.*

Hours.	March 1852.								April 1852.								May 1852.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	6	7	18	28	—	—	3	15	4	12	14	26	1	—	8	11	—	6	25	17	—	1	4	8
2 "	6	8	17	28	—	—	3	15	3	12	15	26	1	—	7	11	—	8	23	17	—	1	4	8
3 "	6	6	19	27	—	—	4	15	3	13	14	26	1	—	6	11	1	10	20	17	—	1	3	8
4 "	6	6	19	28	—	—	5	14	4	12	14	27	—	—	6	12	1	9	21	15	—	2	5	8
5 "	6	8	17	29	—	—	5	14	4	12	14	27	—	—	6	11	1	12	18	16	—	2	7	8
6 "	6	6	19	26	—	—	5	11	4	13	13	28	—	—	4	10	1	14	16	16	—	2	7	9
7 "	6	4	21	27	—	—	4	9	5	12	13	25	—	—	6	10	1	14	16	17	—	3	7	7
8 "	6	5	20	28	—	—	4	8	5	12	13	25	—	—	6	10	1	12	18	17	—	3	7	6
9 "	6	6	19	27	—	—	4	8	6	13	11	25	—	—	6	11	—	12	19	15	—	3	5	6
10 "	5	8	18	27	—	—	4	8	5	14	11	25	—	—	7	11	—	13	18	17	—	3	3	6
11 "	5	8	18	26	—	—	4	7	6	13	11	26	—	—	7	11	—	16	15	16	—	2	3	6
Noon	5	9	17	25	—	—	4	7	6	13	11	25	—	—	7	10	—	18	13	15	—	2	3	4
1 p.m.	8	9	14	26	—	—	5	7	6	12	12	26	—	—	7	7	—	16	15	12	—	2	3	4
2 "	6	11	14	26	—	—	5	7	6	10	14	26	—	—	7	7	—	16	15	13	—	2	3	5
3 "	5	11	15	26	—	—	5	9	5	11	14	26	—	—	6	8	—	17	14	13	—	2	4	6
4 "	6	11	14	26	—	—	4	8	5	11	14	26	—	—	7	6	—	17	14	13	—	1	4	7
5 "	6	9	16	26	—	—	4	9	7	10	13	26	—	—	7	6	—	14	17	13	—	2	4	7
6 "	6	8	17	27	—	—	4	10	7	10	13	26	—	—	7	6	—	14	17	14	—	3	5	6
7 "	4	10	17	27	—	—	4	12	7	9	14	26	—	—	7	6	—	16	15	11	1	3	3	6
8 "	5	8	18	27	—	—	5	12	6	9	15	27	—	—	7	6	—	15	16	11	1	3	4*	7
9 "	7	5	19	27	—	—	6	14	5	8	17	26	1	—	6	7	1	11	19	12	1	3	3	7
10 "	6	8	17	27	—	—	5	16	6	9	15	26	1	—	7	7	1	10	20	12	—	2	4	6
11 "	6	7	18	27	—	—	5	17	6	10	14	26	1	—	7	8	—	11	20	15	—	3	4	6
Mdn.	5	5	21	28	—	—	5	16	5	11	14	26	1	—	8	8	—	11	20	16	—	2	5	6
Means	5.8	7.6	17.6	26.9	—	—	4.4	11.2	5.2	11.3	13.5	26.0	0.3	—	6.6	8.8	0.3	13.0	17.7	14.6	0.1	2.2	4.3	6.5

* 1 Hail.

TABLE X.—*concluded.*

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "Plover," 1851 September 1st to 1852 July 11th—*concluded.*

Hours.	June 1852.								July (1st to 11th) 1852.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
1 a.m.	—	3	9	18	11	2	10	1	4	1	3	7	4	—	—	2
2 "	—	3	11	16	11	2	10	1	4	1	4	6	4	—	—	2
3 "	—	4	11	15	10	2	9	1	4	1	5	5	4	—	—	2
4 "	—	4	11	15	9	2	9	—	3	1	5	5	3	2	—	2
5 "	—	5	9	16	10	1	8	—	2	1	3	7	3	1	—	2
6 "	—	5	7	18	13	1	10	—	2	1	3	7	3	1	—	2
7 "	—	5	7	18	13	1	10	—	3	1	3	7	3	1	—	2
8 "	—	5	7	18	13	1	9	—	3	1	1	9	3	1	—	1
9 "	—	7	7	16	13	1	10	—	3	1	2	8	3	—	—	1
10 "	—	6	10	14	13	—	10	—	3	1	4	6	1	—	—	1
11 "	—	6	9	15	13	—	10	—	4	1	4	6	1	—	—	1
Noon	—	6	9	15	13	—	8	1	4	1	4	6	1	—	—	1
1 p.m.	—	6	10	14	8	—	10	1	4	—	7	4	2	—	—	1
2 "	—	7	9	14	8	—	10	1	4	—	7	4	2	—	—	1
3 "	—	7	8	15	8	—	10	1	4	—	7	4	2	—	—	1
4 "	—	6	9	15	9	—	9	1	4	—	7	4	1	—	—	1
5 "	—	6	9	15	10	—	8	1	5	—	5	6	1	—	—	1
6 "	—	6	9	15	8	—	9	1	5	—	5	6	2	—	—	1
7 "	—	5	7	18	9	—	9	2	6	—	5	6	2	—	—	1
8 "	—	3	9	18	10	1	8	2	5	—	6	5	2	—	—	1
9 "	—	5	6	19	11	1	6	3	7	—	7	4	2	—	—	1
10 "	—	5	8	17	9	2	9	2	7	—	7	4	3	—	—	1
11 "	—	5	8	17	9	2	9	2	7	—	7	4	3	—	—	1
Midn.	—	3	10	17	10	1	8	2	8	—	4	7	3	—	—	1
Means	—	5.1	8.7	16.2	10.5	0.8	9.1	1.0	4.4	0.5	4.8	5.7	2.4	0.3	0.4	1.3

TABLE XI.

MEAN AMOUNT of CLOUD in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Hours.	1851.				1852.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
1 a.m. -	7.9	7.7	6.3	5.0	5.7	6.7	7.4	6.9	8.5	7.6	7.5	7.0
2 " -	7.9	7.8	6.1	5.0	5.8	6.7	7.3	7.0	8.5	7.4	7.3	7.0
3 " -	7.9	7.9	6.0	5.4	5.8	6.7	7.4	6.9	8.0	7.0	6.9	6.9
4 " -	7.8	7.8	6.0	5.3	5.7	6.6	7.5	6.8	8.0	7.0	6.8	6.8
5 " -	7.5	7.6	6.1	5.4	5.8	6.9	7.4	7.0	7.9	7.1	7.5	6.9
6 " -	7.3	7.7	6.3	5.5	5.7	6.9	7.5	6.7	7.8	7.3	7.5	6.9
7 " -	7.3	7.5	6.4	5.5	6.0	7.0	7.6	6.7	7.9	7.3	7.5	7.0
8 " -	7.3	7.3	6.4	5.4	6.2	6.9	7.5	6.5	7.9	7.2	7.7	6.9
9 " -	7.4	7.3	6.4	5.5	6.4	6.7	7.4	6.3	7.9	7.0	7.5	6.9
10 " -	7.4	7.3	6.2	5.5	6.4	6.7	7.2	6.4	7.6	6.7	6.8	6.7
11 " -	7.3	7.5	6.2	5.5	6.5	6.7	7.2	6.4	7.5	6.8	6.5	6.7
Noon -	7.2	7.2	6.2	5.4	6.5	6.6	7.1	6.4	7.2	6.7	6.5	6.6
1 p.m. -	7.5	7.7	6.5	5.8	6.1	6.8	6.6	6.3	7.3	6.7	6.1	6.7
2 " -	7.6	7.7	6.4	5.8	6.2	6.8	6.6	6.4	7.2	6.7	6.2	6.7
3 " -	7.6	7.4	6.3	5.9	6.2	6.9	6.6	6.4	7.1	6.8	6.2	6.7
4 " -	7.6	7.7	6.3	5.6	6.3	7.1	6.5	6.5	7.3	6.8	6.2	6.7
5 " -	7.5	7.9	6.2	5.4	6.2	7.1	6.7	6.4	7.6	6.9	6.9	6.8
6 " -	7.5	7.8	6.1	5.3	6.0	6.6	7.1	6.4	7.7	7.0	7.0	6.8
7 " -	7.6	7.4	5.8	5.2	5.9	6.2	7.5	6.8	7.4	7.2	6.6	6.7
8 " -	7.7	7.6	6.0	5.1	5.7	6.0	7.3	6.9	7.6	7.3	6.5	6.7
9 " -	7.7	7.4	6.0	5.2	5.6	5.9	7.2	7.2	7.7	7.2	6.6	6.7
10 " -	7.7	7.5	5.9	5.0	5.6	6.1	7.0	6.8	7.9	7.2	6.6	6.7
11 " -	7.5	7.6	6.0	4.9	5.6	6.1	7.2	6.7	8.1	7.2	6.6	6.7
Midnight -	7.5	7.6	6.2	5.0	5.4	6.3	7.6	6.8	8.2	7.2	7.3	6.8
Means -	7.6	7.6	6.2	5.4	6.0	6.6	7.2	6.6	7.7	7.1	6.9	6.8

* For 11 days, 1st to 11th.

TABLE XII.

MEAN TEMPERATURE of the SEA WATER in PORT CLARENCE, H.M.S. "PLOVER," 1851 September 1st to 1852 July 11th.

Hours.	1851.		1852.			
	Sept.	Oct.*	April.	May.	June.	July.†
2 a.m. -	—	—	28.2	30.5	34.9	46.3
4 " -	44.2	33.8	28.2	30.5	34.9	46.3
6 " -	—	—	28.2	30.4	34.9	46.5
8 " -	44.5	33.3	28.2	30.5	35.0	46.6
10 " -	—	—	28.2	30.6	35.2	47.1
Noon -	45.3	33.6	28.3	30.6	35.5	47.2
2 p.m. -	—	—	28.3	30.7	35.4	47.6
4 " -	45.6	34.0	28.3	30.6	35.5	47.7
6 " -	—	—	28.3	30.6	35.5	47.7
8 " -	44.7	33.4	28.2	30.6	35.5	47.4
10 " -	—	—	28.2	30.6	35.5	47.6
Midnight -	44.1	33.0	28.2	30.6	35.4	47.6
Means -	44.7	33.5	28.2	30.6	35.3	47.1

* For 12 days, 1st to 12th.

† For 11 days, 1st to 11th.

REMARKS from the Log of H.M.S. "PLOVER."

1851—AUGUST.

28th, 9 a.m. - Anchored in Port Clarence.

1851.—SEPTEMBER.

9th - Worked into Grantley Harbour.
 21st - Some deer seen on the hills.
 24th, 6 a.m. - Wind changed suddenly from N.E. to S.E. b. S. with heavy squalls.
 25th, 11 p.m. - Brilliant arch of aurora from W.N.W. to E.N.E.
 27th, 10 p.m. - Very brilliant aurora.
 29th, 10 p.m. - Aurora brilliant and coruscating.

1851.—OCTOBER.

3rd, 10.25 p.m. - Aurora visible.
 4th, 2 a.m. - A brilliant arch of aurora, extending from N.N.W. to E.S.E., and coruscating towards the zenith.
 9th - Young ice forming round the ship.
 11th, 10 p.m. - An arch of aurora bright, from N.N.W. to E.N.E.
 11th - Harbour freezing over.

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- 13th, 11 p.m. - Brilliant arch of aurora extending from W.N.W. to E.N.E., coruscating towards the zenith.
 14th, 3 p.m. - Buried self-registering thermometer on shore.
 19th - - Ice forming.
 20th, 8 p.m. - Brilliant arch of aurora from N.N.W. to E.N.E.
 22nd, 11 p.m. - Aurora from E.N.E. to N.N.W.
 23rd, 11 p.m. - Brilliant patches of aurora.

1851.—NOVEMBER.

- 4th - - Port Clarence frozen over.
 13th - - Eight deer on the ice.
 22nd, 11.30 p.m. - A brilliant arch of aurora visible, extending from N.N.E. to W.N.W., coruscating towards the zenith.
 27th, 9 p.m. - Aurora from N.E. to N.N.W.

1851.—DECEMBER.

- 6th, 6 a.m. - Arch of aurora from W.N.W. to N.E.
 7th, 1 a.m. - Aurora from E.N.E. to W.N.W.
 7th, 10 p.m. - Arch of aurora from W.N.W. to E.
 11th - - Herd of deer seen on the ice.
 20th, 11 p.m. - Wind veering from E.N.E. to S.E., with heavy squalls.
 22nd, 7.30 a.m. - Aurora from W.N.W. to E.N.E.
 23rd, 5 a.m. - Brilliant arch of aurora from E.N.E. to N.N.W.
 28th, 2 a.m. - Aurora from E.N.E. to N.N.W., coruscating towards the zenith.
 28th - - Several herds of deer on the hills.
 29th, 1 a.m. - Aurora extending from N.E. to W.N.W.
 29th, 10 p.m. - Aurora from E.N.E. to N.N.W., coruscating towards the zenith.

1852.—JANUARY.

- 3rd, 3 p.m. - Quicksilver freezing.
 9th, 5 a.m. - An arch of aurora from N.E. to N.N.W.
 11th, 11 p.m. - Hard squalls, veering rapidly round the compass, but prevailing northerly.
 19th, 9 p.m. - Aurora from N.N.W. to E.N.E.
 20th, 11 p.m. - Aurora from N. to W.N.W.
 23rd, 2 a.m. - Rays of aurora from N.E. to W.
 24th, 2.30 a.m. - Brilliant arch of aurora from E.N.E. to N.N.W., coruscating towards the zenith.
 24th, 5 p.m. - Strong gale from northward force 7 to 8, with heavy snow-drift; it in an instant fell light, wind veering round the compass.
 25th, 2 a.m. - Arch of aurora from N.E. to N.N.W.
 30th, 5 a.m. - Arch of aurora from N.E. to N.N.W.

1852.—FEBRUARY.

- 6th, 1 p.m. - Heavy snow-drift.
 11th, 2 a.m. - Drift.
 14th, 3 a.m. - Arch of aurora from N.E. to N.N.W.
 17th, 3 a.m. - Hard squalls with heavy snow-drift.
 19th, 2 a.m. - Heavy drift.
 19th, 9 to 10 p.m. - Aurora very brilliant, covering the face of the heavens, rapidly changing colours, and coruscating in all directions.

- 23rd, 10 p.m. - Arch of aurora from N.N.W. to E.N.E.
 26th, 2 a.m. - Arch of aurora from E.S.E. to N.N.W.
 27th, 5 a.m. - Arch of aurora from N.E. to N.N.W.
 27th, 10 p.m. - Brilliant arch of aurora from E.N.E. to N.N.W.
 28th, 10 p.m. - Arch of aurora from E.N.E. to N.N.W.

1852.—MARCH.

- 12th, 2 a.m. - Heavy squalls, with drift.
 13th, 3 a.m. - Arch of aurora from E.N.E. to N.N.W.
 14th, 3 a.m. - Squally with drift.
 15th, Midnight - Arch of aurora from E.N.E. to N.N.W.
 17th, 12.30 a.m. - Arch of aurora from E.N.E. to N.N.W.
 17th, 8 p.m. - Aurora from N.N.W. to N.N.E.
 19th, 2 a.m. - Heavy squalls, with drift.
 23rd, 10 p.m. - Heavy squalls, with drift.
 27th, 8 p.m. - Heavy squalls, with drift.

1852.—APRIL.

- 4th, 11.30 p.m. - Arch of aurora from E.S.E. to W.N.W.
 18th - - Killed a deer.
 20th, 11 p.m. - An arch of aurora from E.S.E. to W.N.W., changing colours rapidly.
 25th - - Saw two swans.
 29th - - Shot a deer.

1852.—MAY.

- 4th - - Open water on the south side of entrance to harbour.
 5th - - Commenced sawing the ice.
 6th - - A flock of wild fowl.
 9th - - Ship free. Wild geese overhead.
 11th - - Killed a deer.
 12th - - Self-registering thermometer taken up, showed maximum 30°, minimum 10°·5.
 19th - - Killed a deer.
 24th - - Killed four deer.

1852.—JUNE.

- 11th - - Ice leaving the south shore and packing on the north.
 12th - - Several seals on the ice.
 14th - - Ice in motion.
 15th - - Clear water in Port Clarence seen from mast-head, with the exception of a small floe under Point Riley.
 16th - - Loose ice.
 26th - - Killed a deer.

1852.—JULY.

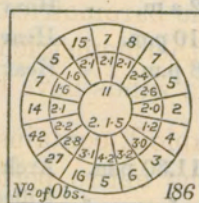
- 1st - - Working out of Grantley Harbour.
 2nd - - In Port Clarence.
 12th - - Sailed from Port Clarence.

No. XXXIV., APPENDIX A.

RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE, H.M.S.
"AMPHITRITE," July 1852.

Hours.	Baro- meter corrected.	Tempera- ture.		Wind Components : Sums.				Weather Notations.							
		Air.	Sea.	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
4 a.m.	—	—	—	15.7	28.3	14.3	20.6	5	16	10	6	—	2	—	2
6 "	29.667	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8 "	—	—	—	18.9	30.8	9.5	30.7	4	13	14	10	—	6	—	2
Noon	.663	—	—	11.4	32.9	8.2	50.0	6	12	13	5	—	5	—	2
4 p.m.	—	—	—	14.2	36.5	2.9	48.1	7	13	11	5	—	6	—	1
6 "	.667	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8 "	—	—	—	11.5	28.6	2.7	39.6	6	13	12	6	1	3	—	1
Midt.	.698	—	—	16.5	25.7	13.4	27.2	5	14	12	5	—	—	—	5
Means	29.674	—	—	14.7	30.5	8.5	36.0	5.5	13.5	12.0	6.2	0.2	3.7	—	2.2

Wind rose.

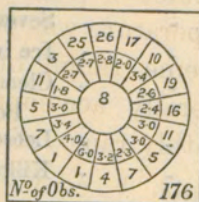


No. XXXIV., APPENDIX B.

RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE, H.M.S. "PLOVER,"
"RATTLESNAKE," and "AMPHITRITE," August 1852 and 1853, mean date 23rd, 35 days.

Hours.	Baro- meter cor- rected.	Temperature.		Wind Components : Sums.				Weather Notations.							
		Air.*	Sea.*	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	inches. 29.653	43.7	48.0	41.4	18.7	36.6	16.0	7	19	9	7	2	5	—	4
Noon	.655	46.2	48.8	35.8	14.1	34.5	24.6	7	21	7	8	—	3	—	2
6 p.m.	.659	44.7	48.7	44.5	13.2	34.1	23.7	7	20	8	7	—	3	—	5
Midt.	.668	42.7	47.7	44.5	17.9	33.2	11.9	6	18	11	8	1	3	—	8
Means	29.659	44.3	48.3	41.6	16.0	34.6	19.0	6.8	19.5	8.7	7.5	0.7	3.5	—	4.7

Wind rose.



* Means for 8 days.

No. XXXV.

Results of Meteorological Observations made in Port Clarence.

H.M.S. "RATTLESNAKE," Captain Henry Trollope, C.B., passed the winter 1853-4 in Port Clarence, during which time meteorological observations were recorded every three hours in the log. The Public Record Office kindly lent the documents Nos. 1,463, 1,464, and 1,625 necessary for the purposes of the present discussion.

The barometrical observations have been corrected and reduced to 32° at sea level. The thermometrical observations have been used as recorded. The observed directions of the winds have been corrected for two points easterly variation of the compass.

Table I. contains the results for the mean atmospheric pressure of each month and for the entire period. The mean diurnal range of the barometer shows a maximum about 1 a.m., and a minimum about 3 p.m. Taking the mean pressure in July 29.97 and August 29.75, the mean pressure for the year will be 29.844 inches.

Table II. contains the results for the mean temperature of the air for each month and for the entire period. The mean temperature of the warmest month, July, may be taken as 49°·6, that of the coldest, February, was — 19°·7, so that the mean range for the year was about 69°. Taking 47° for the mean temperature of August, the mean temperature of the year was 19°.

Table III. gives the extremes of atmospheric pressure in each month, with the temperature, wind, and weather at the same time. The barometer was highest, 30.86, in March, and lowest, 28.61, in the same month, giving the large range of 2.25 inches. The winds were stronger, and the weather not so fair with the low as with the high extremes of pressure.

Table IV. give the extremes of the temperature of the air in each month, with the barometric pressure, wind, and weather at the same time. The absolute maximum temperature was 65° in July, and the absolute minimum — 40° in March, so that the extreme range of the thermometer was 105°. The maxima temperatures were generally accompanied with lower atmospheric pressure than the minima. The monthly range of temperature is about twice as great in winter as in summer.

Table V. contains the components for the winds of each month.

Table VI. contains the components for the winds of the entire period of 320 days, with their resultants. These indicate a tendency of the wind to veer from about N.E. at 8 p.m. to N.E. b. E. $\frac{1}{2}$ E. about 11 a.m., backing during the short interval, 11 a.m. to 8 p.m. As regards force, a minimum occurs about 3 p.m., a maximum about 3 a.m.

Table VII. shows the monthly resultants of the winds computed from the mean values in Table V. They are all from the north-east quarter, except January, which is from the south-east, and feeble, June from north-west, very weak, and July from south-west, also slight.

Table VIII. summarises the winds of each month under sixteen points, and gives their mean force. The most frequent winds are in accordance with the resultant winds.

Table IX. summarises the weather notations of each month. The most clear weather was experienced in November, February, and April; the most overcast in October and January. The most squally weather was experienced in December. Rain fell on 17 days, snow on 46, or precipitation occurred on 63 days out of 320. If duration is the basis of computation, rain fell during 11.3 and snow during 28.2 days.

Table X. gives the results of the observations made on the temperature of the sea-water at the surface.

With a view of furnishing complete results for the entire year ending August 1854, there are appended to these tables the results of observations made on board H.M.S. "Trincomalee" in July, and of those made on board the "Rattlesnake," "Plover," and "Trincomalee" in August.

NOTES ON ICE.

1853.

Oct. 12th	-	-	In winter quarters, N.E. bight of Port Clarence.
Oct. 15th	-	-	Harbour full of sludge ice.
Oct. 24th	-	-	At 10 p.m. the wind fell suddenly, and immediately sludge ice formed round the ship.
Oct. 26th	-	-	Ship surrounded by young ice.
Oct. 30th	-	-	Ice forming in compact masses, though not sufficient to bear with safety.
Nov. 4th	-	-	No ice seen from the ship.
Nov. 5th	-	-	Drifting ice.
Nov. 10th	-	-	The ice is stationary, about 2½ or 3 inches thick.
Nov. 26th	-	-	Thickness of ice, 50 yards on starboard beam, 14½ inches.
Dec. 10th	-	-	Ice, 30 yards on starboard quarter, 19 inches in thickness, head E.N.E.

1854.

Jan. 4th	-	-	The ice cracked ahead and astern, and the ship shifted 2 or 3 inches bodily to port.
Jan. 27th	-	-	Sea open within 1½ mile of shore at Cape Prince of Wales.
May 4th	-	-	Open water, extending about 1 mile to the W. from the extremes of spits, and covered with pin-tail ducks and gulls.
May 9th	-	-	Thickness of ice in the fire-hole about 3 feet 4 inches.
May 29th	-	-	Large pieces of ice breaking away from the shore, so that there was difficulty in landing on the narrow part of Grantley N. spit.
May 31st	-	-	First communication with the shore by water.
June 19th	-	-	Ice apparently has now completely left Port Clarence, except in some few places where it is still attached to the beach on both N. and S. shores.

NOTES ON AURORA.

1853.

Sept. 11th, 11 p.m.	-	Aurora extending from E.N.E. to N.W.; highly illumined coruscations playing upwards to a height of 45°.
Oct. 9th, 11.30 p.m.	-	Aurora in full display, a wavy zone 10° in breadth, from E.S.E. to W.N.W. through the zenith, of a primrose colour highly illumined, and a perfect arc of a great circle from N.W. to E., altitude 17°; continuing the same till midnight, then blending into one.
Oct. 23rd, 2 a.m.	-	Very bright aurora.
Oct. 24th, 8.25 p.m.	-	Faint aurora to E.N.E., with rays pointing to the zenith.
Oct. 24th, 9 p.m.	-	It became a little brighter, and from N.W. b. W. to E.N.E. there was an illumined curve, some rays at E.N.E. extremity still pointing towards the zenith.
Nov. 9th, 1 a.m.	-	A most beautiful superlatively dazzling aurora in festoons over the whole heavens, highly illumined with prismatic colours to the northward.
Nov. 9th, 3.30 a.m.	-	Could hear, though indistinctly, sounds like continuous and repeated very distant abrupt claps of thunder, as would be naturally caused by electricity.
Nov. 9th, 4 a.m.	-	Faint aurora in the northern horizon.
Nov. 9th, 7 p.m.	-	Aurora particularly bright in the N.W. horizon, extending to the zenith, met with corresponding but not squally (?) streaks from the S.S.E. horizon. Aurora extending to E.N.E., and illuminating the high land to the northward with its bright and constantly varying light.
Nov. 9th, 8.20 p.m.	-	Aurora a little brighter, extending from about E. b. N. to N.W. b. N., describing an arc at an altitude of about 20°. The rays shooting downwards to the horizon and brightly illumining the land to the N., being also reflected on the ice.
Nov. 9th, 8.40 p.m.	-	The aurora changed its form by describing three distinct arcs, the highest being the brightest; the coruscations not so vivid as before.
Nov. 9th, 9 p.m.	-	Aurora disappeared.
Nov. 9th, 9.40 p.m.	-	Aurora reappeared, but without effulgence, though occasionally varying in brightness, as auroræ usually do.
Nov. 9th, 11.20 p.m.	-	Only two arcs, but of greater altitude (30°).
Nov. 9th, Midnight	-	Aurora still distinctly seen in the N.N.W., shadow on the ice bright, but the aurora itself one of common occurrence.
Nov. 10th, 6 a.m.	-	Aurora indescribably beautiful, lasting until dawn.
Nov. 11th, Midnight	-	Faint aurora N.N.E. and W.N.W.
Nov. 21st, 3 a.m.	-	Faint aurora N.E. to N.
Nov. 27th, 1 and 2 a.m.	-	Faint aurora to N.N.E.
Nov. 27th, Midnight	-	Faint aurora to N.N.W.
Nov. 28th, 2 a.m.	-	Faint aurora from N.N.E. to W.N.W.
Nov. 29th, 3 a.m.	-	Faint aurora in N.N.W.
Nov. 29th, 11 p.m.	-	Faint aurora N.E. to N.W., about 15° altitude.
Nov. 30th, 2 a.m.	-	Faint aurora to N.N.E.
Dec. 1st, 8 p.m.	-	Moderately brilliant aurora from E.N.E. to N.N.W., about 15° altitude.
Dec. 2nd, 1 a.m.	-	Aurora forming like a rainbow, coruscating in the N.N.W., altitude about 12°.
Dec. 3rd, 2 a.m.	-	Aurora to N.N.E.
Dec. 4th, 5.30 a.m.	-	Very faint aurora.
Dec. 4th, 7 p.m.	-	Faint appearance of aurora.
Dec. 4th, 11 p.m.	-	Faint aurora in N.N.W.
Dec. 5th, 10 p.m.	-	Very faint appearance of aurora.
Dec. 12th, 10.30 p.m.	-	Faint aurora in N.N.W.
Dec. 21st, 1 to 1.30 a.m.	-	Faint aurora.

1854.

- Jan. 3rd, 2 a.m. - Faint aurora in N.N.W.
 Jan. 7th, Midnight - Aurora.
 Jan. 8th, 3 a.m. - Aurora in the form of a rainbow from W.N.W. to N.N.E.
 Jan. 19th, 2 a.m. - Faint aurora.
 Jan. 20th, 10 p.m. - Faint aurora extending from N.N.E. to E.N.E.
 Jan. 23rd, Midnight - Faint aurora extending from N.N.E. to E.N.E.
 Jan. 29th, 11.30 p.m. - Faint aurora.
 Jan. 31st, 3 a.m. - Aurora from E.N.E. to N.N.W.
 Feb. 14th, 2 a.m. - Faint aurora.
 Feb. 14th, 10 p.m. - Aurora from E.N.E. to N.N.W., resembling in shape a rainbow.
 Feb. 16th, 11 p.m. - Faint aurora to N.N.E.
 Feb. 17th, 10.30 p.m. - Faint aurora, about 3° of altitude.
 Feb. 19th, 11 p.m. - Faint aurora, extending from N.N.E. to E.N.E.
 Feb. 23rd, 11 p.m. - Faint aurora from E.N.E. to N.W.
 March 3rd, 2 a.m. - Faint aurora to N.N.E.
 March 3rd, 5.30 a.m. - Aurora, small but brilliant, about 10° or 15° from zenith.
 March 7th, 3 a.m. - Faint aurora.
 March 9th, 3 a.m. - Very faint aurora to N.N.E.
 March 15th, 10 p.m. - Beautiful aurora extending from within 10° of the horizon in W.S.W., across the zenith to within 7° or 8° of the E. horizon in three waving arches about 1° in breadth.
 March 16th, 9 p.m. - Bright arch of aurora from E.N.E. to W.S.W., altitude of centre about 10° or 12°.
 March 18th, 10.30 p.m. - Faint aurora extending from W.N.W. to E.N.E.
 March 21st, 1.30 a.m. - Faint aurora extending from N.N.W. to E.N.E. in the shape of a rainbow.
 March 30th, 10.30 p.m. - Brilliant aurora from W.N.W. to E. b. S., varying in altitude.
 March 30th, Midnight - Faint aurora still visible.
 April 3rd, 3 a.m. - Faint aurora to N.N.E.
 April 8th, Midnight - Faint aurora to N.N.E.
 April 23rd, 10 p.m. - Faint but good aurora forming two complete arches extending from N.N.W. to E., with altitudes of about 25° and 40°.
 April 26th, 10 p.m. - Faint aurora.
 April 27th, 11 p.m. - Faint aurora.

Additional Notes:—

On September 13th flocks of geese were seen flying to the southward. During January five deer were shot. Large herds of deer were seen about the south spit in February, and one was shot. During March two deer were shot, and on 25th a herd of about 20 were seen crossing from Cape Riley to Sinnaramute. On March 19th two walrus were seen. During April two deer were shot. On April 26th, three birds like cranes were seen. During May two deer, five ducks, five snipes, one crane, one plover, one ptarmigan, and one swan were shot. Early in May ducks and gulls were seen in the open water; on the 10th an owl was seen about the ship; on and after the 12th seals were seen.

TABLE I.

MEAN ATMOSPHERIC PRESSURE in PORT CLARENCE, H.M.S. "RATTLESNAKE,"
 1853 September 1st to 1854 July 17th.

Hours.	1853.				1854.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
3 a.m.	inches. 29.679	inches. 29.708	inches. 30.333	inches. 29.538	inches. 30.214	inches. 29.955	inches. 29.952	inches. 29.718	inches. 29.579	inches. 29.786	inches. 29.856	inches. 29.847
6 "	.686	.712	.330	.534	.209	.943	.938	.709	.578	.791	.854	.844
9 "	.679	.724	.319	.524	.208	.928	.938	.703	.575	.785	.856	.840
Noon	.684	.733	.318	.517	.199	.922	.950	.705	.571	.790	.862	.841
3 p.m.	.685	.725	.310	.499	.198	.909	.961	.700	.567	.784	.856	.836
6 "	.680	.718	.311	.513	.209	.907	.976	.694	.565	.781	.877	.839
9 "	.683	.729	.314	.524	.217	.913	.982	.701	.577	.782	.862	.844
Midnight	.682	.729	.317	.540	.222	.924	.978	.704	.576	.791	.866	.848
Means	29.682	29.722	30.319	29.524	30.210	29.925	29.959	29.704	29.573	29.786	29.861	29.842

* For 17 days, 1st to 17th.

TABLE II.

MEAN TEMPERATURE of the AIR in PORT CLARENCE, H.M.S. "RATTLESNAKE,"
 1853 September 1st to 1854 July 17th.

Hours.	1853.				1854.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*	
3 a.m.	—	—	10.4	-1.7	1.1	-21.3	-10.9	5.7	29.5	35.6	41.7	—
6 "	42.4	21.8	10.2	1.6	0.7	21.5	11.0	6.2	31.1	36.8	42.6	14.3
9 "	—	—	10.7	0.8	2.8	20.8	9.1	10.6	33.6	38.9	44.6	—
Noon	45.1	24.7	12.2	0.5	4.3	18.5	5.9	15.8	35.9	40.4	45.5	17.2
3 p.m.	—	—	11.9	0.1	2.9	17.5	3.7	17.1	35.0	40.3	45.2	—
6 "	44.2	22.9	10.6	0.5	1.3	18.8	6.5	14.3	34.1	39.5	44.5	16.9
9 "	—	—	11.0	0.3	0.8	19.0	9.3	9.0	32.6	38.1	44.3	—
Midnight	42.7	22.0	10.0	0.9	0.3	20.1	10.7	6.9	30.8	36.3	43.8	14.6
Means	43.6	22.9	10.9	-0.8	1.3	-19.7	-8.4	10.7	32.8	38.2	44.0	15.7

* For 17 days, 1st to 17th.

TABLE III.

EXTREMES of ATMOSPHERIC PRESSURE, with accompanying TEMPERATURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Month.	Date.		Highest.	Temp.	Wind.	Weather.	Date.		Lowest.	Temp.	Wind.	Weather.	Range.
	d.	h.	inches.	°			d.	h.	inches.	°			inches.
September 1853 -	29	3	30.24	+25	N.N.E. 4	o c	12	3	29.09	+50	N.N.W. 2	p q	1.15
October " -	21	12	.44	29	E. 2	b c v	9	3	28.93	32.5	Calm	b c	1.51
November " -	27	12	.61	6	Calm	b c v	20	12	29.91	+27	S.W.b.S.5	c s	0.70
December " -	31	3	.17	+5	E.N.E. 2	c	27	18	28.85	-7	E.N.E. 5	s q	1.32
January 1854 -	4	9	.56	-5	E.N.E. 1	b c	12	0	29.58	+26	S.S.E. 8	o s q	0.98
February " -	11	12	.37	38	E. 2	b c	25	6	.27	-8	E. 1	c	1.10
March " -	30	3	.86	-2	E. 2	b c	12	18	28.61	+7	N.E. 4	o c q	2.25
April " -	0	15	.37	+1	E. 1	b c	18	9	29.31	15	N.N.E. 5	s q	1.06
May " -	18	12	29.99	29	Calm	c f	30	3	.14	34	S.S.E. 2	c p	0.85
June " -	3	12	30.26	28	S.W. 3	c	22	21	.26	57	E.S.E. 4	b c q	1.00
July 1st-17th " -	13	18	.13	52	E.N.E. 2	b c	0	21	.37	34	W. 3	c p	0.76
Period -	March		30.86	—	—	—	March		28.61	—	—	—	2.25

TABLE IV.

EXTREMES of AIR TEMPERATURE, with accompanying PRESSURE, WIND, and WEATHER, in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Month.	Date.		Max.	Bar.	Wind.	Weather.	Date.		Min.	Bar.	Wind.	Weather.	Range.
	d.	h.	°	inches.			d.	h.	°	inches.			°
September 1853 -	9	6	+57	29.41	E.N.E. 1	c	29	12	+22	30.20	N.N.E. 4	o	35
October " -	7	0	35.5	.08	E.N.E. 1	b c	29	18	+3.5	.04	E.S.E. 4	c	32
November " -	4	0	31.5	30.01	S.b.W. 3	o s q	15	15	-10	.41	E.N.E. 4	b c	41.5
December " -	19	21	29	29.17	E. 4	o	11	18	27	29.68	E.N.E. 1	b c	56
January 1854 -	2	0	30	30.09	E.S.E. 4	c q	25	9	35	30.20	E.N.E. 3	b c	65
February " -	27	6	8	29.56	S.E. 4	o	11	15	39.5	.30	E. 2	b c	47.5
March " -	5	0	27	.06	Calm	b c	17	15	40	.18	E. 1	b c	67
April " -	27	3	39	.95	Calm	b c	6	18	-14	29.97	E.N.E. 2	b c	53
May " -	13	3	46	.45	N.N.W. 2	b c v	0	15	+18	.83	E.N.E. 3	c	28
June " -	22	0	58	.67	W.S.W. 2	b c v	3	12	28	30.26	S.W. 3	c	30
July 1st-17th " -	14	3	65	30.05	Calm	c	0	14	+32	29.50	N.W. 3	o g	33
Period -	July		+65	—	—	—	March		-40	—	—	—	105

TABLE V.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Hours.	September 1853.				October 1853.				November 1853.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
3 a.m.	57.8	12.3	22.9	12.5	57.7	—	29.8	7.2	27.6	14.2	52.7	7.3
6 "	57.8	8.6	27.0	9.9	58.5	1.5	27.5	5.0	26.7	8.3	54.2	4.9
9 "	49.4	15.4	21.8	10.5	52.7	1.5	36.0	3.5	20.8	11.6	36.2	4.4
Noon	45.7	19.2	21.5	10.8	57.4	2.3	36.2	5.2	19.8	10.7	41.4	2.8
3 p.m.	48.5	15.9	20.9	10.5	56.8	1.3	32.6	3.5	15.7	22.3	42.3	4.5
6 "	55.1	18.1	17.1	12.5	55.2	2.4	28.3	2.2	12.8	18.5	36.8	3.1
9 "	49.7	15.3	19.9	13.2	59.7	3.9	30.9	3.8	17.1	19.0	37.2	2.7
Midnight	58.4	10.4	22.4	9.8	58.4	3.9	39.9	5.4	14.9	17.4	41.9	4.3
Means	52.8	14.4	21.7	11.2	57.1	2.1	32.7	4.5	19.4	15.3	42.8	4.2

Hours.	December 1853.				January 1854.				February 1854.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
3 a.m.	51.5	8.3	73.2	5.9	28.3	40.2	29.6	13.6	35.5	0.9	56.3	0.4
6 "	52.4	6.8	66.7	8.9	20.0	34.6	30.6	13.7	33.0	1.3	49.1	0.4
9 "	43.9	1.5	54.0	3.8	15.1	41.0	27.4	7.5	31.7	—	53.7	—
Noon	44.2	1.1	52.9	3.5	16.1	37.4	35.2	6.7	31.5	0.4	51.8	0.8
3 p.m.	40.2	10.3	49.7	4.9	22.4	34.5	29.2	12.2	37.1	—	58.1	—
6 "	50.4	6.7	55.8	4.4	20.4	33.5	33.7	8.5	37.4	2.8	57.6	—
9 "	42.4	6.3	62.7	3.0	21.7	40.4	28.9	12.0	35.6	—	54.6	1.1
Midnight	40.9	9.5	55.4	5.3	29.9	38.0	33.7	10.8	32.4	—	56.1	—
Means	45.7	6.3	58.8	5.0	21.7	37.4	31.0	10.6	34.3	0.7	54.7	0.3

TABLE V.—continued.

SUMS of WIND COMPONENTS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Hours.	March 1854.				April 1854.				May 1854.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
3 a.m.	29.2	0.9	58.5	1.9	41.6	0.9	53.4	2.5	28.2	1.3	41.4	3.1
6 "	21.5	0.4	51.6	1.9	34.6	—	53.6	0.4	31.3	0.9	41.8	2.3
9 "	23.2	5.4	47.8	4.6	29.0	—	48.9	0.8	27.8	4.1	42.4	2.3
Noon	22.9	6.0	48.8	6.2	33.6	0.4	50.4	1.1	26.7	4.4	47.4	2.7
3 p.m.	21.7	6.0	40.5	4.7	30.3	0.9	44.0	1.0	27.9	9.7	42.4	6.4
6 "	21.5	3.0	45.2	4.5	32.7	0.6	37.6	1.9	33.8	1.6	39.7	8.4
9 "	26.1	2.7	50.9	4.5	31.0	0.7	33.8	1.1	31.8	5.4	34.0	6.8
Midnight	20.2	3.6	50.9	1.5	37.0	1.4	44.9	1.3	33.1	2.0	33.8	5.7
Means	23.3	3.5	49.3	3.7	33.7	0.6	45.8	1.3	30.1	3.7	40.4	4.7

Hours.	June 1854.				July 1st to 17th, 1854.			
	N.	S.	E.	W.	N.	S.	E.	W.
3 a.m.	31.4	13.7	13.2	12.7	7.0	14.2	4.7	7.7
6 "	20.8	16.4	15.4	9.8	7.2	10.1	7.9	6.3
9 "	18.8	14.6	7.6	13.7	2.4	16.2	2.8	11.8
Noon	19.4	18.4	13.9	25.8	4.2	21.2	3.3	18.4
3 p.m.	25.0	14.8	8.3	32.1	7.1	16.2	—	14.6
6 "	28.4	16.9	17.8	26.8	8.7	12.7	1.7	17.0
9 "	33.8	18.2	1.9	22.1	6.4	11.3	4.2	13.3
Midnight	35.1	11.9	7.7	17.9	3.8	13.1	6.3	7.2
Means	26.6	15.6	10.7	20.1	5.8	14.4	3.9	12.0

TABLE VII.

MONTHLY RESULTANTS of the WINDS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Months.	Resultants.	
	Direction.	Force.†
September 1853 -	N. 15° E.	1.33
October " -	N. 27 E.	2.00
November " -	N. 84 E.	1.30
December " -	N. 54 E.	2.16
January 1854 -	S. 52 E.	0.84
February " -	N. 58 E.	2.29
March " -	N. 66 E.	1.61
April " -	N. 53 E.	1.86
May " -	N. 53 E.	1.44
June " -	N. 40 W.	0.48
July 1st-17th " -	S. 43 W.	0.70

† In grades of Beaufort's scale.

TABLE VI.

SUMS of WIND COMPONENTS, with RESULTANT WINDS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
3 a.m.	395.8	106.9	435.7	74.8	N. 51° E.	465
6 "	363.8	88.9	425.4	63.5	N. 53 E.	455
9 "	314.8	111.3	378.6	62.9	N. 57 E.	375
Noon	321.5	121.5	402.8	84.0	N. 58 E.	372
3 p.m.	332.7	131.9	368.0	94.4	N. 54 E.	340
6 "	356.4	116.8	371.3	89.3	N. 50 E.	370
9 "	355.3	123.2	359.0	83.6	N. 50 E.	360
Midnight	364.1	111.2	393.0	69.2	N. 52 E.	410
Means	350.5	114.0	391.7	77.7	N. 53 E.	393

* These figures must be divided by 320, the number of days, to obtain the mean force at the given hour.

TABLE VIII.

SUMMARY OF THE WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (SCALE 0 to 12), at PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Months.	Total Observations.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.
September 1853.	- - - 240	42	3'3	72	3'2	16	2'0	25	1'7	10	1'4	3	1'7	—	—	5	2'0
October - - - 248	58	3'1	46	2'7	31	2'9	49	2'1	18	2'1	7	2'6	2	1'0	1	1'0	
November - - - 240	3	3'7	6	3'5	13	2'8	107	1'8	43	2'3	5	1'8	—	—	9	4'4	
December - - - 248	13	3'2	26	3'7	39	3'7	73	2'6	47	2'5	7	3'0	5	2'8	3	4'0	
January 1854.	- - - 248	4	4'0	17	1'7	4	2'5	74	1'8	25	1'6	4	4'0	1	6'0	26	4'9
February - - - 224	6	4'2	13	3'7	62	3'3	68	2'1	63	2'2	2	1'0	1	4'0	—	—	
March - - - 248	—	—	8	3'1	33	3'0	69	1'9	94	2'0	5	1'0	—	—	5	2'2	
April - - - 240	3	2'7	25	2'9	71	2'5	81	1'9	34	2'1	1	1'0	—	—	1	1'0	
May - - - 248	6	4'0	23	2'7	26	3'4	79	2'4	27	1'9	5	1'4	—	—	6	2'0	
June - - - 240	24	2'7	15	2'1	6	3'2	12	2'0	7	1'1	9	12'8	3	1'0	6	2'7	
July 1st to 17h - - - 136	5	2'4	4	2'0	2	1'5	6	1'5	4	1'0	1	2'0	1	5'0	6	3'5	
(continued)																	

(continued.)

Months.	S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.		
	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.			
September 1853.	-	-	7	2'6	18	3'0	11	4'0	7	1'9	3	2'3	2	1'0	5	1'6	9	3'0	1	1'0	4
October	-	-	1	4'0	1	4'0	—	—	—	—	—	—	2	1'0	7	2'6	16	3'1	—	—	9
November	-	-	9	4'2	14	2'7	2	4'5	2	1'5	—	—	1	2'0	—	—	6	4'3	—	—	18
December	-	-	2	4'5	2	5'5	1	3'0	—	—	1	1'0	—	—	8	2'5	18	2'7	—	—	3
January 1854.	-	-	18	4'7	19	3'8	5	3'8	6	2'3	—	—	—	—	—	—	31	2'5	—	—	14
February	-	-	—	—	2	1'0	—	—	—	—	—	—	—	—	—	—	2	2'5	—	—	5
March	-	-	—	—	5	2'4	1	2'0	1	2'0	—	—	—	—	2	3'0	11	4'3	—	—	14
April	-	-	1	1'0	1	1'0	1	1'0	2	1'0	1	1'0	—	—	1	3'0	7	1'4	1	1'0	9
May	-	-	3	2'0	4	1'0	2	1'0	10	1'2	2	2'0	5	1'4	4	1'0	11	2'3	—	—	35
June	-	-	7	2'9	18	2'6	16	1'7	29	1'5	13	1'5	15	1'6	4	2'7	30	2'9	1	1'0	25
July	-	-	7	3'4	15	2'7	12	2'2	15	2'1	8	1'6	8	1'2	3	2'3	10	1'4	1	1'0	28

TABLE IX.

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

Hours.	September 1853.								October 1853.								November 1853.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	7	13	10	1	—	2	1	5	8	8	15	—	—	—	5	4	11	13	6	—	—	—	2	8
6 "	7	13	10	1	—	4	1	4	8	10	13	—	—	—	3	4	13	12	5	—	—	1	3	9
9 "	7	13	10	2	—	5	1	3	7	11	13	—	—	—	4	6	13	12	5	—	—	—	3	4
Noon	8	13	9	3	—	5	1	2	6	14	11	—	—	—	6	7	9	10	11	—	—	—	6	3
3 p.m.	7	15	8	2	—	2	—	3	6	14	11	—	—	—	5	4	8	14	8	—	—	—	5	1
6 "	5	13	12	2	—	2	—	3	6	13	12	—	—	—	8	5	9	18	3	—	—	—	1	4
9 "	4	14	12	2	—	4	—	5	7	14	10	1	—	—	7	7	8	19	3	—	—	1	2	8
Mdn.	7	12	11	1	—	5	—	8	9	11	11	—	—	—	6	10	9	18	3	1	—	—	1	7
Means	6'5	13'2	10'3	1'7	—	3'6	0'5	4'1	7'1	11'9	12'0	0'1	—	—	5'5	5'9	10'0	14'5	5'5	0'1	—	0'3	2'3	5'5
Hours.	December 1853.								January 1854.								February 1854.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	3	21	6	—	—	—	4	15	6	13	12	—	—	—	4	7	11	13	4	—	—	—	2	11
6 "	3	22	6	—	—	—	4	17	7	13	11	—	—	—	3	6	10	13	5	—	—	—	2	9
9 "	5	19	7	—	—	—	4	13	6	13	12	—	—	—	5	2	11	12	5	1	—	—	1	7
Noon	5	18	8	1	—	—	5	12	5	12	14	2	—	—	6	7	11	13	4	2	—	—	1	9
3 p.m.	4	16	11	—	—	—	4	12	5	15	11	—	—	—	5	4	10	13	5	2	—	—	1	8
6 "	4	18	9	—	—	—	5	13	7	13	11	1	—	—	4	9	9	13	6	—	—	—	—	7
9 "	5	17	9	—	—	—	7	18	6	14	11	2	—	—	4	8	9	15	4	—	—	—	—	9
Mdn.	3	18	10	1	—	—	9	20	8	11	12	1	—	—	6	12	11	12	5	—	—	—	1	9
Means	4'1	18'6	8'3	0'2	—	—	5'3	15'0	6'3	13'0	11'7	0'7	—	—	4'6	6'9	10'2	13'0	4'8	0'6	—	—	1'0	8'6

TABLE IX.—continued.

WEATHER NOTATIONS in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th—continued.

Hours.	March 1854.								April 1854.								May 1854.*							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	10	13	8	1	—	—	2	8	8	16	6	—	—	—	3	14	4	16	11	1	2	4	6	10
6 "	10	14	7	—	—	—	2	5	9	18	3	—	—	—	2	12	7	15	9	2	—	5	3	7
9 "	9	15	7	—	—	—	2	8	10	18	2	—	—	—	1	11	10	17	4	2	—	1	2	10
Noon	9	10	12	1	—	—	3	3	11	16	3	3	—	—	1	3	7	15	9	1	1	4	2	5
3 p.m.	8	10	13	—	—	—	3	3	11	14	5	2	—	—	2	4	8	13	10	—	1	4	3	8
6 "	8	15	8	—	—	—	2	4	9	16	5	—	—	—	2	6	6	17	8	—	—	4	1	6
9 "	9	14	8	—	—	—	2	8	10	15	5	1	—	—	2	4	4	20	7	1	2	2	2	10
Mdn.	9	14	8	1	—	—	2	10	9	15	6	—	—	—	3	13	5	14	12	1	2	5	4	9
Means	9.0	13.1	8.9	0.4	—	—	2.2	6.1	9.6	16.0	4.4	0.8	—	—	2.0	8.4	6.4	15.9	8.7	1.0	1.0	3.6	2.9	8.1

Hours.	June 1854.								July (1st to 17th) 1854.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	8	12	10	2	2	4	1	8	5	9	3	—	—	—	—	1
6 "	10	16	4	1	—	1	2	4	5	11	1	—	—	—	—	2
9 "	10	16	4	1	—	4	—	3	5	10	2	—	—	2	—	1
Noon	10	16	4	1	1	1	2	4	5	11	1	—	—	2	—	2
3 p.m.	10	13	7	1	2	3	1	6	5	10	2	—	—	2	—	2
6 "	9	14	7	—	—	1	1	6	5	10	2	—	—	2	—	2
9 "	9	13	8	1	1	2	2	6	3	10	4	—	—	2	—	1
Mdn.	9	11	10	3	1	3	2	7	6	9	2	—	—	1	—	—
Means	9.4	13.9	6.7	1.2	0.9	2.4	1.4	5.5	4.9	10.0	2.1	—	—	1.4	—	1.4

* May 8th, 4.30 p.m., first rain fell; a very slight shower.

TABLE X.

MEAN TEMPERATURE of the SEA WATER in PORT CLARENCE, H.M.S. "RATTLESNAKE," 1853 September 1st to 1854 July 17th.

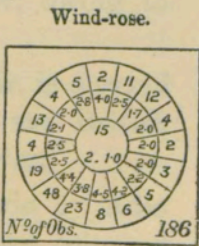
Hours.	1853.				1854.						
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.*
3 a.m.	—	—	28.4	Observed on 19 days, and always 28°.	—	—	—	—	—	38.0	46.5
6 "	45.9	31.3	28.4		—	—	—	—	—	38.8	46.9
9 "	—	—	28.4		—	—	—	—	—	38.9	47.8
Noon	46.8	31.1	28.4		28.3	28.1	28.4	28.9	31.5	39.4	47.7
3 p.m.	—	—	28.5		—	—	—	—	—	39.1	47.7
6 "	46.8	32.1	28.7		—	—	—	—	—	39.0	48.1
9 "	—	—	28.6		—	—	—	—	—	38.9	47.5
Midnight	46.2	31.2	28.5		—	—	—	—	30.7	38.6	47.1
Means	46.4	31.4	28.5	28.0	28.3	28.1	28.4	28.9	31.1	38.8	47.4

* For 17 days, 1st to 17th.

No. XXXV. APPENDIX A.

RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE, H.M.S. "TRINCOMALEE," July 1854.

Hours.	Baro- meter corrected.	Temperature.		Wind Components: Sums.				Weather Notations.							
		Air.	Sea.	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
4 a.m.	inches. 29.947	Not recorded.	Not recorded.	13.3	47.4	16.9	34.9	6	14	11	6	4	3	1	7
8 "	.964			10.6	56.4	11.9	34.1	7	12	12	5	1	5	1	9
Noon	.970			14.2	59.7	11.0	54.1	8	12	11	5	—	3	1	9
4 p.m.	.978			18.8	56.8	4.3	52.5	8	12	11	4	—	5	—	14
8 "	.977			13.1	46.1	8.7	47.5	6	13	12	7	—	3	—	12
Midnight	.974			12.0	49.3	6.8	46.3	5	14	12	9	—	2	—	13
Means	29.968	—	—	13.7	52.6	9.9	44.9	6.7	12.8	11.5	6.0	0.8	3.5	0.5	10.7



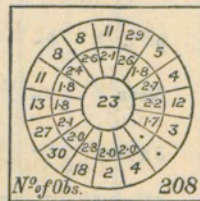
No. XXXV. APPENDIX B.

RESULTS of METEOROLOGICAL OBSERVATIONS made in PORT CLARENCE, H.M.S. "RATTLE-SNAKE," "PLOVER," "TRINCOMALEE," August 1854, mean date 12th (52 days).

Hours.	Baro- meter corrected.	Temperature.		Wind Components: Sums.				Weather Notations.							
		Air.*	Sea.*	N.	S.	E.	W.	b.	c.	o.	m.	f.	r.	s.	q.
3 a.m.	—	44°·8	48°·2	—	—	—	—	—	—	—	—	—	—	—	—
6 "	29°·757	45°·1	49°·8	38°·7	33°·6	31°·2	27°·6	9	30	13	18	2	9	—	3
9 "	—	46°·0	50°·6	—	—	—	—	—	—	—	—	—	—	—	—
Noon	·755	47°·8	51°·5	32°·3	28°·7	15°·1	47°·3	12	31	9	19	2	7	—	4
3 p.m.	—	49°·2	52°·2	—	—	—	—	—	—	—	—	—	—	—	—
6 "	·744	47°·8	52°·2	37°·7	29°·4	15°·5	58°·7	14	31	7	12	1	6	—	6
9 "	—	46°·6	51°·2	—	—	—	—	—	—	—	—	—	—	—	—
Midnight	·752	46°·5	50°·6	37°·5	31°·9	19°·7	46°·1	8	31	13	17	3	7	—	7
Means	29°·752	46°·7	50°·8	36°·5	30°·9	20°·4	44°·9	10°·7	30°·8	10°·5	16°·5	2°·0	7°·2	—	5°·0

* The temperatures of air and sea depend on observations made on board the "Rattlesnake" from 11th to 23rd (13 days).

Wind-rose.



No. XXXVI.

Results of Meteorological Observations made at Point Barrow.

H.M.S. "Plover," Commander Rochfort Maguire, R.N., wintered in 1852-3 and 1853-4 at Point Barrow, in latitude 71° 21' N., longitude 156° 17' W.

The "Plover" reached Point Barrow September 3rd, 1852, and departed August 7th, 1853. She again arrived there on September 7th, 1853, and left July 20th, 1854.

"The position of the ship at Point Barrow was at the extremity of a narrow point or spit of gravel, which at no part rose more than 6 feet above the ordinary sea-level, and about 5 miles distant from the mainland of the American continent. The coast trended on one side to the S.W., and on the other to the E.S.E., and was uniformly low and flat in the latter direction for 150 miles, whilst to the S.W. there was no elevation near the coast approaching 100 feet for a like distance. The mainland to the south had not been explored for more than 20 or 30 miles, to which extent it was perfectly flat, and the natives described it as quite level for several days' journey farther, beyond which it became hilly, and far south, mountainous. The climate, therefore, may be described as maritime or almost insular, and was not subject to such extremes of temperature as the land. This was ascertained by the register kept by Captain Maguire on a journey to the hunting-grounds during the coldest part of the year, the temperatures recorded by him being generally lower than those taken at the ship during his absence. In the summer the shooting parties recorded higher temperatures on the land than were observed at the ship.

"The long polar night, or observed absence of the sun, was 69 days, from November to January; and the continued presence of the luminary in the summer, owing to refraction, embraced a period of 74 days."

This information, and likewise that relating to the temperature of the air, is derived from a report on the "Results of Thermometrical Observations" made to the British Association in 1857 by John Simpson, R.N., who was Surgeon to the "Plover."

The thermometers used throughout the period of observation were made by Adie of Edinburgh, in 1848. Six of them, alike in appearance and size, had spirit coloured pale red, for the thermometrical fluid, and were mounted on glass scales. They were on several occasions exposed together to different degrees of cold, and were very uniform in their indications down to the lowest temperature registered. From these

experiments, says Dr. Simpson, "I incline to the belief that an error of 3 or 4 degrees will be found to exist in these instruments at the freezing point of mercury."

Thermometer Adie No. 11 was in constant use; and, according to a table of comparisons of thermometers, given by Dr. Simpson, at the melting point of ice it read $32^{\circ} \cdot 3$, and at the melting point of mercury -34° . Accordingly the following corrections have been applied to the results deduced by him:—

At	-	-	-	32°	22°	12°	2°	-8°	-18°	-28°	-38°	-48°
Correction	-	-	-	$-.3$	$-.8$	-1.3	-1.8	-2.3	-2.8	-3.3	-3.8	-4.3

"The spirit thermometer for use was placed in a tin cylinder $2\frac{1}{2}$ inches in diameter, with a longitudinal opening, through which it could be easily read; this cylinder was kept in another of the same material which was painted white, 7 inches in diameter, having a conical projecting roof, and a flat bottom, with numerous small openings in both, and a door opening like a common tin lantern: this again, with its door facing the north, was fixed to a stout stake, placed in the ice at a distance of 90 feet to the eastward of the ship. The arrangement so made was to protect the instrument from the wind and snow-drift, and from the influence of the sun, while admitting the easy access of air. To have placed it farther from the ship would have been to put it in the way of natives, who might steal or break it; and as the ship's hull was banked round with snow, and the prevailing winds came in from the N.E., it was thought the effect of her presence on the thermometer at that distance would be little or none."

All data other than Dr. Simpson's have been obtained from the ship's log, which was borrowed from the Public Record Office.

The "Plover" was supplied with a marine barometer, Dennis, No. 31, which had a wooden frame. The barometrical observations have been corrected for temperature and for instrumental error.

The winds have been corrected for four points easterly variation when the true direction was not recorded.

Table I. contains the results of the barometrical observations. The series was only four-hourly, nevertheless the results indicate a maximum about midnight, and a minimum about 6 p.m. Atmospheric pressure was greater in winter than in summer.

Table II. shows the mean temperature of every hour for each month and for each period, with the monthly means. "The coldest and hottest times of the day were usually a little after 2 a.m. and a little before 2 p.m., but the time at which the mean temperature of the month occurred was rather before 7 a.m. and p.m."

The greatest range between the day and night temperatures took place in April.

The diurnal range during the winter months was very small. The solar rays, which had hardly produced any effect in shaded places during February, manifested rapidly increasing power during March, April, and May. The diurnal range of each summer month in succession, becomes smaller in consequence of the summer warmth being attended by more cloudy weather and a lessened fall of temperature during the nights. September exhibits a small diurnal range. "The almost continued foggy state of the weather then prevents the sun effecting much rise in the day, and the great extent of sea, river, and lake surface, still unfrozen during the earlier part of the month, prevents any great fall of temperature during the night."

"The mean of December 1852 is 4° higher than that of November; this was owing to a southerly gale which almost produced a thaw for three days at the winter solstice, and had the effect of driving the ice completely off the coast, leaving nothing visible from the beach to the farthest range of vision, east, north, and west, but the open ocean and a water sky. This was succeeded by intense cold in January, when the sea speedily froze over again." February 1854 was the coldest month, the mean temperature having been $-30^{\circ} \cdot 9$, and the following August the warmest, the adopted mean temperature being $39^{\circ} \cdot 8$. The annual mean temperature was $5^{\circ} \cdot 2$.

Table III. exhibits the extremes of atmospheric pressure in each month, with the wind and weather at the same time. The greatest pressure, $30 \cdot 97$, and the least, $29 \cdot 07$, both occurred in March 1854, thus the absolute range of the barometer was $1 \cdot 9$ inch.

Table IV. gives the extremes of temperature in each month. The greatest monthly range of temperature, $76^{\circ} \cdot 7$, occurred in April 1853. The absolute highest temperature throughout the two years was 52° , and the absolute lowest -49° , so that the extreme range of temperature was 101° .

Table V. contains the sums of the wind components for each month.

Table VI. gives the sums of the wind components for the two periods, and also their resultants. For the first period the mean resultant is N. 73° E., force $0 \cdot 9$; for the second period, N. 80° E., force $0 \cdot 9$. In each period the wind indicated a slight variation in azimuth towards the east from noon to midnight, and in each the force is less at noon than at midnight. The agreement between the results for these two years seems remarkable.

Table VII. contains the monthly resultants of the winds deduced from the data in Table V. During the months February to October these resultants are from the eastward, when from the westward they are generally feeble, as in December 1852, January 1853, November 1853, January and February 1854.

Table VIII. summarises the winds in each month under 16 directions, and shows their mean force. The prevalent wind was from the eastward in all months except January, in which it was westerly. December 1852, July 1853, February 1854, and March 1854 had also prevalent Westerly or North-westerly winds, which average force 3 of Beaufort's scale.

Table IX. summarises the weather notations. During the first period of 341 days, 50 were clear, 74 overcast, 214 misty, 11 foggy; rain fell on 10, snow on 36, and 15 were squally. During the second period of 324 days, 54 were clear, 79 overcast, 225 misty, 7 foggy; rain fell on 5, snow on 47, and 53 were squally. The most clear weather was experienced in February and March 1854, the most overcast in September 1853. Mist was very common all the year round, and there were occasional fogs in summer. The second year was much more squally than the first.

"The fall of snow was not great, and did not exceed one foot in depth, but the air throughout was loaded a good deal with clouds and vapours, and during the summer the dew-point was high. The climate may, therefore, be considered humid, as might be anticipated from its maritime situation."—*Parliamentary Papers*, 1854, p. 163.

Table X. shows the results of experiments on solar radiation. A mercurial thermometer was blackened and enclosed in a glass case for exposure to the sun's rays. From observations taken with this instrument, the mean hourly values for June, for 22 days in July, and for 21 days both before and after the 21st June, have been computed. This table, though so limited, may be of some interest in regard to the growth of vegetation during the short summer of the Arctic Regions; it is due to Dr. Simpson.

In both years in which the "Plover" wintered at Port Barrow, "the ice round the "Point was broken up, and swept to the northward by South-westerly gales. At "times no ice could be seen from the masthead. In 1853 this disruption occurred in "December, and caused the water to rise 3½ feet above the highest spring-tide. The "temperature at the same time rose to +30°. In January 1854, the same thing "occurred, the thermometer on this occasion rising to +27°. During both winters a "water-sky to the north-west was generally observed from the ship, unless after a "long continuance of North-westerly winds or calm weather. There is but little rise "and fall of the tide, 0·7 inch being the average. With fine weather or easterly "winds, the tides were very regular, but a South-west gale upset them altogether."

"In 1852-53 open water was seen on 27 days between October and April, and in 1853-54, on seven days only, whilst the indication of open water occurred during the same period in 1852-53 on 57 days, and in 1853-4 on 62 days. December, January, and February appear to be the months during which the ice is more frequently in motion."—Sir Richard Collinson, "Arctic Paper," p. 126, in *Proceedings of the Royal Geographical Society for 1875*.

"The natives state that the whales make their appearance off Point Hope in April and May, when the ice there breaks up into fields, and that most of them have disappeared by the time the ships arrive. About the same time these animals also appear off Point Barrow, and are pursued by the natives in their oomiaks until June, when few are seen, and in July none, in this neighbourhood, and the people believe they retire northward, to return this way in August and September. The masters of sailing vessels have informed me that whales are less abundant in the open water in July and August than in September."—*Parliamentary Papers*, 1854, p. 179.

TABLE I.
MEAN ATMOSPHERIC PRESSURE at POINT BARROW, 1852 September 1st to 1853 August 10th.

Hours.	1852.				1853.								Period, Sept. to July.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug. (1st to 7th).	
6 a.m. -	inches. 29·961	inches. 29·921	inches. 29·930	inches. 30·108	inches. 29·996	inches. 30·108	inches. 29·975	inches. 29·905	inches. 30·063	inches. 29·814	inches. 29·666	inches. 29·824	inches. 29·950
Noon -	·965	·909	·907	·100	·972	·086	·960	·898	·056	·812	·675	·827	·940
6 p.m. -	·959	·901	·907	·111	·975	·107	·955	·889	·020	·809	·670	·839	·937
Midnight -	·963	·931	·928	·126	·988	·114	·973	·909	·028	·822	·672	·840	·950
Means -	29·962	29·915	29·918	30·111	29·983	30·104	29·966	29·900	30·042	29·814	29·671	29·832	29·944

TABLE I.
MEAN ATMOSPHERIC PRESSURE at POINT BARROW, 1853 September 1st to 1854 July 21st.

Hour.	1853.				1854.								Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July (1st to 21st).		
6 a.m. - - -	inches. 29·844	inches. 29·952	inches. 30·306	inches. 29·857	inches. 30·099	inches. 30·000	inches. 29·991	inches. 29·900	inches. 29·838	inches. 29·883	inches. 29·816	inches. 29·953	
Noon - - -	·856	·950	·300	·842	·070	29·997	·983	·895	·844	·887	·832	·951	
6 p.m. - - -	·850	·950	·300	·840	·069	·993	·979	·882	·844	·883	·826	·947	
Midnight - -	·867	·989	·313	·860	·084	30·012	30·007	·907	·858	·878	·833	·967	
Means - - -	29·854	29·960	30·305	29·850	30·080	30·001	29·990	29·896	29·846	29·883	29·827	29·954	

TABLE II.

MEAN TEMPERATURE of the AIR at POINT BARROW.

Hours.	1852.				1853.								Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	1st to 10th Aug.	
1 a.m.	+28.0	+2.9	-11.5	-8.3	-26.7	-20.9	-17.9	-2.5	+12.7	+27.8	+32.5	+36.1	+4.4
2 "	27.9	3.1	11.1	8.4	26.6	21.3	18.3	2.9	12.6	27.7	32.7	36.2	4.3
3 "	27.9	2.8	10.9	8.7	26.3	21.5	18.7	2.9	12.8	27.9	32.7	36.1	4.3
4 "	27.9	2.5	10.7	8.6	26.4	21.5	18.8	2.8	13.3	28.1	33.0	35.9	4.3
5 "	28.2	2.6	10.9	8.0	26.4	21.3	19.0	2.5	14.4	29.4	33.4	36.2	4.7
6 "	28.4	2.9	11.2	7.7	26.4	20.9	18.3	1.1	16.8	30.2	33.9	36.6	5.3
7 "	28.4	3.0	11.4	7.8	26.4	20.5	17.3	+0.3	18.3	31.3	34.4	37.3	5.8
8 "	28.4	3.3	11.6	7.8	26.5	20.1	16.0	2.6	19.4	32.1	35.3	37.8	6.4
9 "	28.4	3.9	11.2	7.8	26.9	19.5	14.0	4.5	21.0	33.0	35.7	38.8	7.2
10 "	28.7	4.6	11.2	7.5	27.0	19.2	12.2	6.3	22.0	34.0	36.4	38.9	7.8
11 "	28.8	5.2	11.0	7.5	26.7	18.9	11.0	8.2	22.8	35.1	36.7	39.7	8.4
Noon	29.0	5.8	11.4	7.6	26.6	18.8	10.1	8.6	23.5	35.2	36.7	40.9	8.8
1 p.m.	28.8	5.5	11.2	7.3	26.8	18.5	9.6	8.9	23.5	35.8	37.2	40.8	8.9
2 "	28.7	5.1	11.5	7.3	27.0	18.7	9.0	8.9	23.4	36.0	37.5	41.1	8.9
3 "	28.7	4.7	11.2	7.1	27.2	18.7	9.5	8.4	23.4	35.1	37.5	41.3	8.8
4 "	28.9	4.3	12.2	6.9	27.3	19.0	10.7	8.1	22.3	34.6	37.2	41.1	8.4
5 "	28.6	4.4	12.3	7.0	27.3	20.0	12.3	8.0	21.6	33.7	36.6	40.2	7.9
6 "	28.4	4.3	12.2	7.4	27.0	20.5	14.0	6.6	20.8	32.9	36.3	40.4	7.4
7 "	28.3	3.9	12.3	7.3	27.3	20.7	15.4	4.2	19.3	32.0	35.8	39.1	6.6
8 "	28.2	3.6	12.0	7.0	27.4	20.6	16.3	2.5	18.1	31.0	35.2	38.4	6.1
9 "	28.1	2.5	11.9	7.3	27.2	20.4	16.7	1.1	16.5	30.3	34.6	37.9	5.6
10 "	28.0	2.4	12.4	7.1	27.2	20.3	17.2	0.6	14.9	29.4	34.0	37.4	5.2
11 "	28.0	2.3	12.3	7.4	27.1	20.7	17.6	-0.3	13.7	28.7	33.6	37.0	4.8
Midt.	27.8	2.2	12.3	8.0	27.3	20.7	17.9	-0.7	13.3	28.3	33.2	36.7	4.6
Means	+28.4	+3.7	-11.6	-7.6	-26.9	-20.1	-14.9	+3.0	+18.3	+31.6	+35.1	+38.4	+6.5

Adopted temperature for August, 37.0
 " " year, 6.3

TABLE II.—continued.

MEAN TEMPERATURE of the AIR at POINT BARROW.

Hours.	1853.				1854.							Period.
	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July, 1st to 20th.	
1 a.m.	+22.7	-3.3	-10.1	-23.8	-17.2	-32.1	-23.8	-5.6	+15.3	+30.1	+33.8	-1.3
2 "	22.5	3.2	9.5	24.2	17.1	32.0	23.8	5.7	15.4	30.1	33.6	-1.3
3 "	22.3	3.4	9.4	24.1	16.9	31.7	23.5	5.7	15.6	30.2	33.9	-1.1
4 "	22.0	3.4	9.5	23.8	16.4	31.4	23.1	5.7	16.4	30.5	34.3	-0.9
5 "	21.5	3.4	9.4	23.5	16.2	31.0	23.4	4.6	17.3	31.2	34.9	-0.6
6 "	21.6	3.3	9.4	23.8	16.1	30.8	23.1	2.5	18.4	31.6	36.9	0.0
7 "	22.1	3.2	9.6	23.8	15.6	31.0	22.0	-0.4	19.9	32.0	37.9	+0.6
8 "	22.2	3.0	10.0	23.6	15.3	31.2	19.8	+1.7	21.0	33.2	38.7	1.3
9 "	22.6	2.3	10.0	23.6	15.3	31.1	18.2	3.2	21.8	33.6	39.1	1.8
10 "	22.9	2.0	10.0	23.7	15.4	30.6	16.5	5.0	22.8	33.7	40.0	2.4
11 "	23.0	1.6	10.2	23.5	15.6	30.1	15.0	6.1	23.6	34.0	40.0	2.8
Noon	23.1	1.4	10.5	23.8	15.7	29.8	14.5	7.2	23.6	34.3	39.7	2.9
1 p.m.	23.1	1.2	10.0	24.3	15.4	29.8	14.1	7.5	24.2	34.3	39.6	3.1
2 "	23.1	1.4	10.0	24.3	15.8	29.8	13.8	7.2	23.7	34.8	39.5	3.0
3 "	23.1	2.2	10.1	24.2	15.9	30.2	14.8	6.6	23.5	34.5	39.0	2.7
4 "	23.0	2.8	10.3	24.3	16.0	30.5	15.4	6.4	23.4	34.4	38.5	2.4
5 "	22.7	3.3	10.5	24.3	16.4	30.8	16.7	5.1	22.9	33.9	38.5	1.9
6 "	22.2	3.4	10.8	24.2	16.5	31.0	18.3	3.1	22.3	32.9	38.3	1.3
7 "	21.9	3.5	10.7	24.1	16.9	31.1	20.4	+0.8	21.0	32.0	38.1	0.6
8 "	21.8	3.5	10.5	24.1	16.7	31.3	21.3	-1.0	19.9	31.8	37.0	+0.2
9 "	21.9	3.5	10.3	24.1	17.0	31.5	22.0	2.5	18.7	31.1	35.8	-0.3
10 "	21.9	3.3	10.3	24.1	16.9	31.3	22.7	3.6	17.7	30.6	35.0	-0.6
11 "	22.0	3.4	10.3	23.9	16.9	31.3	22.9	4.3	17.4	30.4	34.3	-0.8
Midnight	21.8	3.7	10.2	23.8	16.8	31.1	23.5	-4.9	16.6	29.9	34.4	-1.0
Means	+22.4	-2.9	-10.1	-24.0	-16.3	-30.9	-19.7	+0.6	+20.1	+32.3	+37.1	+0.8

Adopted temperature for July 37.8.
 " " August 39.8.
 " " year 4.1.

TABLE III.

EXTREMES of ATMOSPHERIC PRESSURE, with accompanying WIND and WEATHER, at POINT BARROW, H.M.S. "PLOVER."

Month.	Date.	Highest.	Wind.	Weather.	Date.	Lowest.	Wind.	Weather.	Range.
	d. h.	inches.			d. h.	inches.			inch.
September 1852 -	20 18	30.36	Calm	b c m s	3 12	29.29	S.S.W. 8	o g d	1.07
October " -	7 12	.32	N. 3	b c	22 6	.36	N. 4	b c m	0.96
November " -	9 0	.71	N. 2	b c m	23 6	.18	N. 4	b c m	1.53
December " -	8 12	.80	E.N.E. 1	b v	5 6	.39	S.S.W. 4	c m	1.41
January 1853 -	13 0	.37	S. 1	o c m	3 18	.41	W. 2	b c m	0.96
February " -	14 0	.80	N. 1	b e v	9 0	.30	N. 2	o c m	1.50
March " -	5 0	.62	N. 2	b c m	18 12	.22	W. 2	b c m	1.40
April " -	28 12	.32	N.N.E. 2	b c m	17 18	.46	N.N.W. 4	b c m	0.86
May " -	5 12	.64	E. 2	b e v	13 0	.50	S.S.W. 1	o c v	1.14
June " -	9 18	.10	N.E. 3	b e v	20 12	.56	W.S.W. 4	o c v	0.54
July " -	— 18	29.99	E.N.E. 2	b e v	16 12	.19	S.W. 1	b c f	0.80
September " -	6 12	30.17	N.W. 3	c m s	— 18	.18	S. 2	o m d	0.99
October " -	21 12	.68	E.S.E. 3	b m	9 0	.44	N.E.b.E. 6	m q s	1.24
November " -	28 18	.72	N.E. 2	b m	9 0	.87	N.W. 3	o m	0.85
December " -	31 12	.43	Calm	b c m	6 18	.17	E.N.E. 4	b c m	1.26
January 1854 -	19 6	.58	S.E. 6	b c m	26 0	.39	W. 8	o m q	1.19
February " -	19 12	.58	W.N.W. 2	b v	25 18	.49	Calm	o m	1.29
March " -	24 18	.97	E.S.E. 2	b e v	13 6	.07	E. b. N. 6	b c m	1.90
April " -	30 12	.40	E.N.E. 3	b e v	18 0	.44	V'ble 1	o s	0.96
May " -	1 12	.50	E. b. N. 7	b c m q	15 0	.41	S.W.b.S. 2	b c m	1.09
June " -	3 0	.21	S.S.W. 1	b e v	30 0	.53	E. 3	o m s	0.68
Period -	March	30.97	—	—	March	29.07	—	—	1.90

TABLE IV.

EXTREMES of TEMPERATURE at POINT BARROW.

Year.	1852-3.		1853-4.	
Month.	Max.	Min.	Max.	Min.
September -	42.0	10.7	41.0	-5.0
October -	26.5	-24.0	12.8	-25.0
November -	24.4	-40.8	21.2	-29.2
December -	27.5	-40.8	5.5	-43.9
January -	14.9	-47.0	26.4	-40.8
February -	1.3	-39.7	-5.0	-49.1
March -	23.3	-40.8	22.2	-46.0
April -	32.8	-43.9	25.4	-19.7
May -	44.0	-8.2	42.0	-5.0
June -	45.0	16.0	47.0	23.3
July -	52.0	25.4	51.0	27.5
August -	49.0	30.7	48.0	28.5
Year -	52.0	-47.0	51.0	-49.1
	July 31st.	Jan. 19th.	July 20th.	Feb. 9th.

TABLE V.

SUMS of WIND COMPONENTS at POINT BARROW.

Hours.	1852 September.				1852 October.				1852 November.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m. -	42.1	17.7	55.2	24.6	26.3	6.5	66.2	—	19.8	21.1	50.3	6.3
Noon -	38.9	15.7	58.1	21.6	18.8	6.5	62.8	1.8	16.4	13.1	41.5	5.4
6 p.m. -	38.8	13.6	50.6	30.5	27.1	4.6	62.2	2.1	17.3	20.3	40.4	4.5
Midnight -	39.1	18.2	44.4	28.7	25.4	5.6	68.0	—	18.3	21.4	44.6	4.3
Means -	39.7	16.3	52.1	26.3	24.4	5.8	64.8	1.0	18.0	19.0	44.2	5.1
Hours.	1852 December.				1853 January.				1853 February.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m. -	16.9	33.8	21.8	45.5	21.6	4.8	7.8	30.6	25.2	0.7	67.0	1.7
Noon -	20.8	26.3	20.0	57.7	18.1	8.2	7.9	30.1	20.7	3.4	64.7	5.7
6 p.m. -	14.5	28.6	22.3	52.4	14.9	10.2	10.2	30.8	22.9	6.1	70.8	5.6
Midnight -	20.0	24.5	26.8	44.8	12.1	9.3	11.3	25.6	22.8	3.6	67.5	4.5
Means -	18.0	28.3	22.7	50.1	16.7	8.1	9.3	29.3	22.9	3.5	67.5	4.4
Hours.	1853 March.				1853 April.				1853 May.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m. -	13.8	14.7	35.0	29.8	9.0	11.5	50.3	7.1	18.8	1.1	50.2	6.3
Noon -	13.9	16.9	40.1	26.4	15.4	10.7	48.7	11.2	21.2	4.1	54.8	1.1
6 p.m. -	17.4	10.5	43.4	29.4	13.5	6.2	51.4	15.9	21.4	2.2	57.6	2.3
Midnight -	15.3	13.5	34.4	27.6	12.6	5.2	39.0	7.5	17.4	1.4	61.5	3.3
Means -	15.1	13.9	38.2	28.3	12.6	8.4	47.4	10.4	19.7	2.2	56.0	3.2
Hours.	1853 June.				1853 July.				1853 August 1-7.			
	N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m. -	13.2	8.9	55.6	11.9	16.7	10.3	33.0	29.5	4.1	1.1	5.5	1.4
Noon -	9.2	7.5	57.4	10.5	19.8	9.0	31.0	34.8	4.5	3.5	10.6	1.8
6 p.m. -	9.6	13.3	56.4	9.5	16.9	7.9	27.0	23.1	3.9	2.3	8.7	1.8
Midnight -	9.7	10.2	59.4	10.8	16.0	15.8	34.9	23.6	7.8	1.9	8.9	1.5
Means -	10.4	10.0	57.2	10.7	17.4	10.8	31.5	27.8	5.1	2.2	8.4	1.6

TABLE V.—continued.
SUMS of WIND COMPONENTS at POINT BARROW.

Hours.		1853 September.				1853 October.				1853 November.			
		N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m.	-	34.8	7.0	62.0	13.9	38.1	5.9	47.4	3.2	24.2	23.6	27.2	28.4
Noon	-	42.4	3.5	50.3	18.1	32.7	5.4	42.4	4.3	23.1	21.9	24.3	28.2
6 p.m.	-	39.1	9.2	64.5	12.9	34.5	5.7	53.6	1.4	27.6	26.8	25.4	28.0
Midnight	-	40.4	7.6	72.2	18.3	38.6	8.0	57.1	3.5	24.6	26.8	26.2	28.8
Means	-	39.2	6.8	62.2	15.8	36.0	6.3	50.1	3.1	24.9	24.8	25.8	28.4
Hours.		1853 December.				1854 January.				1854 February.			
		N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m.	-	18.3	7.5	71.3	1.6	29.1	30.8	21.8	55.2	13.3	5.6	15.5	36.8
Noon	-	17.3	7.9	68.2	1.6	18.4	27.7	13.6	55.2	15.7	13.8	20.3	32.8
6 p.m.	-	17.3	7.9	68.2	1.6	18.2	39.9	18.4	44.1	14.5	10.1	21.5	34.0
Midnight	-	12.9	9.0	63.7	1.7	20.1	37.1	22.6	61.3	14.1	11.6	21.0	27.8
Means	-	16.5	8.1	67.9	1.6	21.5	33.9	19.1	54.0	14.4	10.3	19.6	32.8
Hours.		1854 March.				1854 April.				1854 May.			
		N.	S.	E.	W.	N.	S.	E.	W.	N.	S.	E.	W.
6 a.m.	-	21.3	20.1	35.1	27.6	17.5	17.3	38.7	15.1	13.8	14.4	86.5	—
Noon	-	19.1	20.9	37.8	28.3	13.1	23.6	45.2	7.6	14.7	19.2	85.3	1.5
6 p.m.	-	25.3	22.1	41.2	25.9	14.8	22.9	52.5	7.3	18.2	21.3	86.1	1.4
Midnight	-	28.1	23.4	36.4	24.5	15.4	23.7	47.6	16.3	14.3	17.2	73.4	1.4
Means	-	23.5	21.6	37.6	26.6	15.2	21.9	46.0	11.6	15.2	18.0	82.8	1.1
Hours.		1854 June.				1854 July 1-21.							
		N.	S.	E.	W.	N.	S.	E.	W.				
6 a.m.	-	23.5	19.3	69.9	9.9	4.3	12.7	23.9	17.8				
Noon	-	12.3	13.2	70.2	9.7	4.5	6.8	22.0	25.1				
6 p.m.	-	17.0	17.2	64.7	13.3	6.1	5.8	19.4	21.4				
Midnight	-	24.5	20.4	67.7	4.7	7.4	12.7	25.7	23.8				
Means	-	19.3	17.5	68.1	9.4	5.6	9.5	22.8	22.0				

TABLE VI.
SUMS of WIND COMPONENTS, with RESULTANT WINDS, at POINT BARROW.
(A.) For the Period 1852 September to 1853 August 7th.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.*
6 a.m.	-	227.5	132.2	497.9	194.7	N. 73 E. 318
Noon	-	217.7	124.9	497.6	208.1	N. 72 E. 304
6 p.m.	-	218.2	125.8	501.0	207.9	N. 73 E. 306
Midnight	-	216.5	130.6	500.7	182.2	N. 75 E. 330
Means	-	220.0	128.5	499.3	198.2	N. 73 E. 314

(B.) For the Period 1853 September to 1854 July 21st.

Hours.	Components.				Resultants.	
	N.	S.	E.	W.	Direction.	Force.†
6 a.m.	-	238.2	164.2	499.3	209.5	N. 76 E. 299
Noon	-	213.3	163.9	479.6	212.4	N. 79 E. 272
6 p.m.	-	232.6	188.9	515.5	191.3	N. 82 E. 330
Midnight	-	240.4	197.5	513.6	212.1	N. 82 E. 305
Means	-	231.1	178.6	502.0	206.3	N. 80 E. 300

* These figures must be divided by 341, the number of days, to get the mean force by Beaufort's scale.
† These figures must be divided by 324, the number of days, to get the mean force by Beaufort's scale.

TABLE VII.

MONTHLY RESULTANTS of the WIND at POINT BARROW, 1852 September to 1854 July 21st.

Months.				Resultants.	
				Direction.	Force.*
September	1852	-	-	N. 48 E.	1·17
October	"	-	-	N. 74 E.	2·16
November	"	-	-	S. 88 E.	1·30
December	"	-	-	S. 69 W.	0·94
January	1853	-	-	N. 67 W.	0·70
February	"	-	-	N. 73 E.	2·36
March	"	-	-	N. 83 E.	0·32
April	"	-	-	N. 83 E.	1·23
May	"	-	-	N. 72 E.	1·81
June	"	-	-	E.	1·55
July	"	-	-	N. 29 E.	0·25
Aug. (1st-7th)	"	-	-	N. 67 E.	1·06
September	"	-	-	N. 55 E.	1·89
October	"	-	-	N. 58 E.	1·81
November	"	-	-	W.	0·09
December	"	-	-	N. 83 E.	2·16
January	1854	-	-	S. 71 W.	1·20
February	"	-	-	N. 72 W.	0·50
March	"	-	-	N. 80 E.	0·36
April	"	-	-	S. 79 E.	1·17
May	"	-	-	S. 88 E.	2·64
June	"	-	-	N. 88 E.	1·62
July (1st-21st)	"	-	-	S. 1 E.	0·19

* In grades of Beaufort's scale.

TABLE VIII.

SUMMARY of WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (Scale 0 to 12), at POINT BARROW.

Months.				Total Observa- tions.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.			
					O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.		
September	-	1852.	-	120	3	3'0	7	3'3	11	3'7	15	4'5	15	4'8	2	3'5	10	3'8	3	2'0		
October	-	-	-	124	5	1'0	3	1'0	25	3'2	20	3'9	40	2'6	5	4'4	7	1'6	1	2'0		
November	-	-	-	120	7	2'4	10	1'9	14	2'1	6	1'8	31	3'4	8	2'6	6	3'5	3	4'3		
December	-	-	-	124	4	2'8	3	2'3	5	1'8	4	2'2	11	2'5	8	2'8	8	4'1	4	2'2		
January	-	1853.	-	124	11	1'5	7	2'4	12	2'2	2	2'0	7	1'1	—	—	1	1'0	—	—		
February	-	-	-	112	1	1'0	1	4'0	23	3'1	27	3'4	35	3'3	5	3'0	2	1'5	—	—		
March	-	-	-	124	9	2'1	4	2'0	4	2'0	11	2'8	27	2'3	11	4'1	4	3'2	—	—		
April	-	-	-	120	—	—	3	2'3	17	2'5	6	3'8	38	3'0	9	2'0	6	2'3	3	1'0		
May	-	-	-	124	4	1'2	14	1'6	11	3'2	16	3'6	54	2'4	3	2'3	3	2'3	—	—		
June	-	-	-	120	3	1'0	2	3'0	16	2'1	6	3'0	44	3'0	8	1'9	8	1'4	3	1'0		
July	-	-	-	124	4	1'8	3	1'7	17	2'3	6	2'3	14	3'3	11	2'0	12	2'0	—	—		
August	-	-	-	28	1	2'0	2	1'5	8	1'6	—	—	2	2'0	6	3'7	—	—	—	—		
(continued.)																						
Months.				S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.
				O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
September	-	1852.	-	7	2'9	—	—	5	2'4	2	2'0	5	3'2	3	7'7	19	3'8	6	2'0	1	1'0	6
October	-	-	-	4	1'0	—	—	2	1'0	—	—	—	—	—	2	1'5	1	1'0	—	—	9	
November	-	-	-	12	2'3	5	1'8	4	2'0	1	1'0	1	1'0	—	—	—	5	2'6	—	—	7	
December	-	-	-	1	2'0	3	3'7	14	5'0	8	2'8	22	2'8	10	4'4	8	3'1	5	3'2	—	—	6
January	-	1853.	-	6	2'0	1	1'0	6	1'8	19	1'6	30	2'0	3	3'0	11	1'5	1	1'0	—	—	7
February	-	-	-	3	1'3	—	—	4	1'0	1	3'0	4	1'8	1	5'0	—	—	—	—	—	5	
March	-	-	-	2	1'5	2	4'0	7	2'3	7	2'9	19	2'6	10	3'0	1	3'0	3	1'7	—	—	3
April	-	-	-	2	1'5	1	1'0	4	1'8	10	2'1	4	2'2	4	2'0	—	—	1	2'0	—	—	12
May	-	-	-	—	—	1	1'0	—	—	1	1'0	1	2'0	3	1'3	5	1'6	1	1'0	—	—	7
June	-	-	-	3	2'7	1	3'0	4	3'2	3	3'3	6	2'8	3	2'0	1	1'0	—	—	—	—	9
July	-	-	-	1	3'0	2	2'5	5	2'2	2	2'0	22	2'8	10	2'4	7	2'7	1	2'0	—	—	7
August	-	-	-	—	—	—	—	—	—	—	—	1	1'0	1	2'0	2	1'5	3	1'3	—	—	2

TABLE VIII.—continued.

SUMMARY of WINDS, referred to SIXTEEN POINTS, with MEAN FORCE (Scale 0 to 12), at POINT BARROW.

Months.	Total Observations.	N.		N.N.E.		N.E.		E.N.E.		E.		E.S.E.		S.E.		S.S.E.	
		O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.
September 1853.	120	13	1'9	4	2'0	20	3'3	23	4'2	24	3'8	8	3'5	1	2'0	1	3'0
October	124	8	2'1	16	2'1	19	3'0	43	2'9	6	1'8	3	3'0	5	2'6	2	1'5
November	120	2	2'0	—	—	6	2'3	8	2'4	5	2'0	4	3'2	23	2'9	12	2'1
December	124	1	2'0	4	1'5	12	1'9	24	2'7	40	3'4	11	3'3	8	4'5	1	2'0
January 1854.	124	3	2'0	2	1'5	1	2'0	2	1'5	—	—	2	4'5	21	3'6	5	3'4
February	112	4	1'2	—	—	6	2'0	4	3'8	8	4'4	6	2'8	3	3'0	—	—
March	124	3	1'3	3	3'7	6	4'0	4	3'5	9	3'1	13	4'4	18	2'3	5	2'2
April	120	9	1'7	2	2'0	4	1'5	17	2'3	13	3'2	15	3'2	19	3'9	1	6'0
May	124	3	2'0	4	1'8	2	2'0	27	4'2	33	3'5	24	2'9	17	2'6	1	2'0
June	120	8	2'6	4	1'5	10	2'9	16	3'4	25	4'8	18	4'1	9	2'6	2	2'5
July	84	1	2'0	—	—	2	3'5	4	1'8	21	2'8	3	2'7	9	2'0	1	1'0
August	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

(continued.)

Months.			S.		S.S.W.		S.W.		W.S.W.		W.		W.N.W.		N.W.		N.N.W.		Variable.		Calms.
			O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	O.	F.	
1853.																					
September	-	-	1	2'0	1	1'0	2	2'0	4	2'2	6	3'5	2	3'5	5	3'4	5	6'0	—	—	—
October	-	-	3	2'0	3	1'7	2	1'5	1	2'0	—	—	1	2'0	2	1'5	2	2'5	1	1'0	7
November	-	-	6	2'0	2	1'0	6	2'2	2	4'0	5	3'0	5	5'4	16	3'9	12	2'3	—	—	6
December	-	-	—	—	2	1'0	2	1'0	—	—	—	—	—	—	3	1'3	3	1'5	1	1'0	12
1854.																					
January	-	-	6	1'5	6	4'8	9	3'1	7	2'9	14	4'7	9	4'1	25	2'7	3	3'7	1	2'0	8
February	-	-	2	1'0	2	1'5	11	1'6	13	1'9	14	3'3	7	2'9	16	2'3	3	2'0	—	—	13
March	-	-	2	1'0	2	1'0	9	2'4	3	4'0	8	2'8	11	1'7	18	2'9	6	2'7	—	—	4
April	-	-	3	2'0	1	1'0	2	1'5	2	2'5	4	3'0	6	2'8	5	1'8	4	2'2	5	1'0	8
May	-	-	2	1'5	1	2'0	2	1'0	—	—	—	—	—	—	2	1'0	1	1'0	—	—	5
June	-	-	3	2'3	3	1'7	4	2'8	3	2'3	3	2'3	1	2'0	1	2'0	3	2'3	—	—	7
July	-	-	4	2'0	1	1'0	3	1'7	7	3'6	12	3'3	6	3'2	3	1'7	2	1'0	—	—	5
August	-	-																			

TABLE IX.

WEATHER NOTATIONS at PORT BARROW.

Hours.	September 1852.								October 1852.								November 1852.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	3	14	13	18	2	2	3	4	6	20	5	15	—	—	2	4	4	22	4	22	—	—	—	3
Noon	3	18	9	17	3	1	3	2	8	18	5	13	—	—	2	3	3	21	6	24	—	—	2	1
6 p.m.	1	18	11	26	1	2	7	2	4	22	5	18	—	—	3	3	2	24	4	25	—	—	1	1
Midt.	—	18	12	23	1	2	3	4	6	22	3	14	—	—	2	3	4	20	6	20	—	—	1	1
Means	1'8	17'0	11'2	21'0	1'8	1'8	4'0	3'0	6'0	20'5	4'5	15'0	—	—	2'2	3'2	3'2	21'8	5'0	22'7	—	—	1'0	1'5
Hours.	December 1852.								January 1853.								February 1853.							
6 a.m.	5	17	9	20	—	—	2	4	8	17	6	15	—	—	1	1	3	24	1	22	—	—	1	—
Noon	6	19	6	19	—	—	1	1	7	20	4	18	—	—	1	—	5	20	3	16	—	—	—	—
6 p.m.	6	19	6	20	—	—	2	5	19	7	22	—	—	1	—	3	23	2	22	—	—	—	—	—
Midt.	5	18	8	22	—	—	2	4	9	16	6	17	—	—	3	—	6	19	3	15	—	—	—	—
Means	5'5	18'3	7'2	20'2	—	—	1'2	2'8	7'3	18'0	5'7	18'0	—	—	1'5	0'2	4'2	21'5	2'3	18'7	—	—	0'2	—
Hours.	March 1853.								April 1853.								May 1853.							
6 a.m.	2	26	3	28	—	—	3	—	2	18	10	25	1	—	3	—	3	19	9	23	2	—	6	—
Noon	3	24	4	26	—	—	4	—	2	20	8	26	—	—	4	—	7	20	4	17	—	—	2	—
6 p.m.	2	21	8	26	—	—	4	3	1	24	5	28	—	—	3	—	2	19	10	26	—	—	5	—
Midt.	2	23	6	27	—	—	3	4	1	20	9	23	4	—	2	—	3	11	17	22	1	—	8	—
Means	2'3	23'5	5'2	26'7	—	—	3'5	1'7	1'5	20'5	8'0	25'5	1'2	—	3'0	—	3'8	17'2	10'0	22'0	0'7	—	5'2	—
Hours.	June 1853.								July 1853.								August 1-7, 1853.							
6 a.m.	6	16	8	11	4	2	—	3	5	22	4	15	2	6	—	—	2	5	—	1	2	—	—	—
Noon	7	19	4	14	1	1	—	1	6	17	8	9	5	4	1	—	3	4	—	1	—	—	—	—
6 p.m.	6	19	5	11	3	2	—	1	8	16	7	8	3	5	—	1	2	5	—	2	—	—	—	—
Midt.	5	14	11	12	2	—	1	1	5	18	8	12	4	5	1	1	1	4	2	1	3	—	—	—
Means	6'0	17'0	7'0	12'0	2'2	1'2	0'2	1'5	6'0	18'2	6'8	11'0	3'5	5'0	0'5	0'5	2'0	4'5	0'5	1'2	1'2	—	—	—

TABLE IX.—*continued.*
WEATHER NOTATIONS at POINT BARROW.

Hours.	September 1853.								October 1853.								November 1853.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	1	12	17	26	1	2	3	7	2	20	9	25	1	—	4	6	2	18	10	28	—	—	4	2
Noon	2	17	11	24	2	2	5	4	5	18	8	18	1	—	4	4	8	18	4	16	—	—	2	3
6 p.m.	1	11	18	27	1	1	7	9	3	20	8	22	—	—	1	4	6	21	3	19	—	—	4	2
Midn.	1	9	20	27	1	2	4	9	3	22	6	25	—	—	2	4	4	20	6	21	—	—	3	4
Means	1.3	12.2	16.5	26.0	1.2	1.7	4.7	7.2	3.2	20.0	7.8	22.5	0.5	—	2.7	4.5	5.0	19.2	5.8	21.0	—	—	3.2	2.8
Hours.	December 1853.								January 1854.								February 1854.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	7	23	1	19	—	—	1	5	3	18	10	25	—	—	4	10	9	14	5	17	—	—	2	3
Noon	8	21	2	16	—	—	1	5	5	21	5	19	—	—	1	4	11	15	2	8	—	—	—	2
6 p.m.	7	22	2	17	—	—	2	6	4	20	7	24	—	—	4	4	9	17	2	16	—	—	1	2
Mdn.	6	23	2	21	—	—	2	7	3	16	12	27	—	—	4	7	11	13	4	15	—	—	2	2
Means	7.0	22.2	1.8	18.2	—	—	1.5	5.7	3.8	18.7	8.5	23.7	—	—	3.2	6.2	10.0	14.7	3.3	14.0	—	—	1.2	2.2
Hours.	March 1854.								April 1854.								May 1854.							
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	9	19	3	19	—	—	2	5	7	18	5	21	—	—	2	5	1	18	12	27	1	—	2	6
Noon	10	17	4	16	—	—	4	5	3	19	8	24	—	—	6	2	2	21	8	25	2	—	2	5
6 p.m.	12	17	2	14	—	—	3	3	3	21	6	25	—	—	5	7	2	15	14	25	2	—	5	5
Mdn.	9	19	3	20	—	—	2	5	5	20	5	23	—	—	1	6	3	18	10	24	1	—	4	4
Means	10.0	18.0	3.0	17.2	—	—	2.7	4.5	4.5	19.5	6.0	23.2	—	—	3.5	5.0	2.0	18.0	11.0	25.2	1.5	—	3.2	5.0
Hours.	June 1854.								July 1-21, 1854.															
	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.	b.	c.	o.	m.	f.	r.	s.	q.
6 a.m.	4	13	13	19	2	—	8	9	2	14	5	16	4	3	—	2								
Noon	4	19	7	23	1	—	6	8	4	11	6	10	2	2	—	2								
6 p.m.	3	18	9	22	1	—	6	8	3	15	3	14	1	2	—	1								
Mdn.	4	12	14	22	1	—	8	9	3	12	6	10	3	2	1	1								
Means	3.8	15.5	10.7	21.5	1.2	—	7.0	8.5	3.0	13.0	5.0	12.5	2.5	2.2	0.2	1.5								

TABLE X.
MEAN TEMPERATURE of a BLACK BULB THERMOMETER at POINT BARROW.

Hour.	1853.		
	June 1st to 30th.	July 1st to 22nd.	42 days of June and July.
1 a.m.	34.5	35.7	35.0
2 "	36.3	36.9	36.8
3 "	38.7	39.1	39.6
4 "	43.4	42.5	44.2
5 "	48.7	43.3	48.1
6 "	53.9	46.6	53.3
7 "	59.3	52.6	58.6
8 "	63.0	54.9	61.9
9 "	66.0	58.4	64.7
10 "	67.7	62.3	65.2
11 "	72.0	65.0	70.3
Noon	71.9	65.0	70.3
1 p.m.	72.2	63.3	69.8
2 "	71.4	62.7	69.3
3 "	69.4	65.8	68.2
4 "	67.6	63.2	65.9
5 "	63.1	56.1	61.1
6 "	58.1	50.7	56.0
7 "	54.1	52.1	53.4
8 "	49.1	46.1	48.4
9 "	47.1	37.3	45.4
10 "	42.3	37.4	41.3
11 "	37.2	35.6	37.1
Midnight	36.2	34.5	35.9
Means	55.0	—	54.1

The extremes seem to be very near noon and midnight.

REMARKS from the LOG of H.M.S. "PLOVER."

1852.—SEPTEMBER.

- 1st, noon - Lat. 70° 26' N, long. 161° 35' W.
 2nd, noon - Lat. 71° 08', long. 160° 13'.
 3rd - At Point Barrow. Several flocks of eider ducks.
 4th - Current S.E., 2½ miles per hour, S.E. 2½, E. 1.
 9th, 9 p.m. - Aurora in N.E. and N.
 12th, 2 p.m. - Sailing ice coming in from westward.

- 13th, 6 p.m. - Ice closing to westward.
 14th - Current E. $\frac{1}{2}$ mile.
 15th, 8 p.m. - Aurora very brilliant.
 20th, 6 a.m. - Ice coming in from westward.
 21st, 10 p.m. - Aurora.
 22nd, 7 a.m. - Sailing ice moving to eastward. Open water to westward of Point Barrow, beyond the ice.
 24th, 1 a.m. - Ice forming about the ship.
 29th, 1.30 p.m. - Ice moving to eastward.

1852.—OCTOBER.

- 3rd, 8 p.m. - Very brilliant aurora.
 4th, 8 p.m. - Very brilliant aurora extending from N.W. to E.
 5th, 7 p.m. - Aurora extending from S. to N.
 7th, 2 a.m. - Aurora from S.W. to N.
 7th, 7 p.m. - Aurora extending from S.E. to N.
 9th, 8 p.m. - Aurora visible from S.E. to N.N.W.
 13th, 9 p.m. - Thermometer fell from 16° to 1° .
 13th, 10 p.m. - Aurora visible from S. to N.W.
 14th, 7 p.m. - Aurora extending from S.E. to N.W.
 15th, 8 p.m. - Aurora visible to W.
 17th, 7 p.m. - Aurora extending from W. to E.
 18th, 8 p.m. - Aurora extending from N.N.W. to S.E.
 19th, 8 p.m. - Brilliant aurora.
 20th, 6 p.m. - Brilliant aurora extending from E. to N.W.
 21st, 6 p.m. - Arch of aurora in the S.W. extending from S.E. to N.W.
 24th, 3 a.m. - Aurora.
 30th, 2 a.m. - Aurora extending from W.N.W. to E.

1852.—NOVEMBER.

- 5th, 7 p.m. - Aurora very brilliant, arches forming in S.W. and passing to the northward, coruscating, waving with beautiful colours.
 5th, Midnight - Aurora very brilliant.
 7th - Open water seen from the village N. distant $\frac{1}{2}$ mile.
 8th, 8 p.m. - Faint aurora in the N.E.
 8th, 11 to 11.20 - Brilliant coruscations in the zenith with beautiful colours.
 8th, Midnight - Faint aurora in N.E.
 9th, 8 p.m. - Faint aurora.
 10th, 12.30 a.m. - Arch of aurora extending N.W. to S.S.E.
 10th, 8 p.m. - Aurora forming in N.E., going S.W. and returning, coruscating in the E. in circles about 15° above the horizon and 10° in diameter.
 13th, 5 a.m. - Aurora extending W.S.W. to E., altitude 30° .
 13th, 9 p.m. - Faint aurora from S.E. to N.W., forming in four equidistant arches.
 14th, 7 p.m. - Faint aurora S.E. to N.W.
 15th, 5.30 a.m. - Aurora E. and W.
 15th, 8 p.m. - Faint aurora.
 16th, 8 p.m. - Faint aurora forming in four arches, extending S.E. and N.W.
 18th, 2 a.m. - Faint aurora N. and S.S.E.
 18th, 10 p.m. - Arch of aurora from S.E. to N.W.
 26th, 8 p.m. - Faint aurora, brilliant at intervals.
 27th, 2 a.m. - Aurora, brilliant at intervals, E.S.E. and W.N.W.
 30th, 2.30 a.m. - Aurora extending from N.N.E. to S.

1852.—DECEMBER.

- 1st, 10 p.m. - Aurora forming in patches in N.E. and an arch in S.W., S., and W.
 1st, Midnight - Brilliant aurora covering the entire heavens, and most brilliant to N.E.
 2nd, 2 a.m. - Brilliant aurora.
 2nd, 8 p.m. - Brilliant aurora N. to S., through the zenith.
 2nd, 10 p.m. - Overcast, with N. breeze; aurora above the clouds.
 4th, 2.30 a.m. - Arch of aurora S.E. and N.N.W.
 5th, 7 p.m. - Brilliant aurora.
 6th, 2 a.m. - Arch of aurora S.E. and N.W.
 6th, 8 p.m. - Aurora.
 7th, 2 a.m. - Aurora, brilliant in the S.W., faint in the N.E.
 7th, 9 p.m. - Arch of aurora in the N.E.
 8th, 5.30 p.m. - Aurora N. and S.
 8th, Midnight - A double arch of aurora in the S.W., changing colour and coruscating.
 9th, 2 a.m. - Arch of aurora in N.E., extremes S.S.E. and N.N.W.
 9th, 2.30 a.m. - Remarkable aurora in three distinct circles round horizon, altitude 6° .
 9th, 6 p.m. - Arch of aurora N.N.W. and S.S.E.
 9th, Midnight - Brilliant aurora in all parts of the heavens.
 10th, 8 p.m. - Faint arch of aurora in N.E.
 11th, 7 p.m. - Arch of aurora in N.E., S.E., and N.W.
 12th, 1 a.m. - Faint arch of aurora N.N.W. and E.S.E.
 12th, 7 p.m. - Brilliant aurora from S.E. to N.W., passing through the zenith, with slight mist.
 12th, 11 p.m. - Aurora passing from N.E. to S.W., forming in a circle to E.
 13th, 2 a.m. - Brilliant aurora.
 14th, 7 p.m. - Aurora.
 14th, 10 p.m. - Aurora in N.E.
 15th, 9 p.m. - Faint aurora in N.E., arch S.E. and N.W.
 17th, 1 a.m. - Hail-storm with very heavy drift.
 17th, 1 p.m. - Heavy snow-drift.
 17th, 3 p.m. - Observed the ice to be entirely gone from the northern shore of the spit, and in the channel as far as could be seen.
 17th, Midnight - Arch of aurora N. and S.S.E.
 18th, 9 a.m. - Daylight. No ice in sight to seaward, it having entirely left the northern shore of spit and Martin's Island.
 18th, 8 p.m. - Brilliant aurora S. and N., forming in circles to S.E.
 19th, 5 a.m. - Arch of aurora N.E. and S.W.
 19th, 10 a.m. - A few hummocks in the offing; a thick haze over the open water.
 19th, 2 p.m. - Ice packed up on the main spit of Point Barrow to the height of thirteen or fourteen feet.
 20th, Noon - From masthead observed a large basin of open water, about three miles off the land, extending from Point Barrow to the eastward, forming bays in the channels between the islands. Open water outside the ice from N.N.W. to N.E. Solid pack to W. of Point Barrow.
 21st, 2 a.m. - Faint aurora in the N.E.
 21st, 11 a.m. - No ice in sight from N. b. W. to S.E. from masthead.
 22nd, 6 p.m. - Faint aurora above the clouds, S. and W., arch S.W.
 23rd, 11 a.m. - Ice in sight from masthead, distant about four miles. Open water inside, extending from Point Barrow to eastward, freezing over.
 25th, 11 a.m. - Ice outside spit stationary.
 25th, 8 p.m. - Aurora in N.E.
 26th, 6.30 p.m. - Faint arch of aurora, extending from S.E. to N.

- 28th, 7.30 a.m. - Open water outside spit from N.W. to E.
- 28th, 5 p.m. - Faint aurora in N.E.
- 28th, 8 p.m. - Brilliant aurora, arches both N.E. and S.W.
- 29th, 2 a.m. - Current setting out of channel joining current outside setting to eastward.
- 29th, 3 a.m. - Faint aurora in N.E.
- 29th, 5 p.m. - Aurora from S.E. to N.W., arch N.E.
- 29th, 9 p.m. - Halo round moon, distant 9°.
- 30th, 9 p.m. - Aurora in N.E.
- 31st, 9 p.m. - Aurora in N.E., extending S.E. and N.W.

1853.—JANUARY.

- 1st, 4 p.m. - Faint aurora to S.E.
- 1st, 8 p.m. - A double arch of aurora N.E. and S.W.
- 2nd, 2 a.m. - Aurora in N.E.
- 2nd, 10 a.m. - From masthead observed the offing to be frozen over as far as could be seen. A few hummocks off Point Barrow. Ice to the eastward free from hummocks.
- 2nd, 3 p.m. - Brilliant aurora, extending S.E. to N.W. in a broad arch through the zenith.
- 2nd, 9 p.m. - Aurora in N.E.
- 3rd, 2 a.m. - Brilliant aurora in S.W., coruscating.
- 3rd, 8 p.m. - Faint arch of aurora in N.E.
- 4th, 8 p.m. - Faint aurora in N.E.
- 5th, 8 p.m. - Faint aurora.
- 6th, 2 a.m. - Faint aurora in N.E.
- 6th, 9 p.m. - Aurora extending from S.E. to N.W., arches both N.E. and S.W. low, the sky being very dark under the latter.
- 7th, 8 p.m. - Aurora in S.W., brilliant in S.
- 7th, 10 p.m. - Faint aurora.
- 9th, 2 a.m. - Faint aurora in N.E.
- 9th, 6 p.m. - Faint aurora in N.E.
- 9th, 11 p.m. - Brilliant aurora commencing in S.W. and passing N.E., coruscating and changing colour rapidly, forming in circles in S.E. and N.W.
- 9th, Midnight - Faint aurora all over the heavens.
- 10th, 2 a.m. - Brilliant aurora in S.W.
- 11th, 2 a.m. - Aurora in S.W. above the clouds.
- 11th, 6 a.m. - Faint aurora in the E.
- 11th, 11.30 p.m. - Aurora in N.E., extending N.W. to S.S.E.
- 12th, p.m. - Faint aurora in N.E.
- 13th, 7 p.m. - Aurora in S.W., arch extending S.E. and N.W.
- 13th, 11 p.m. - Arch passing through the zenith.
- 13th, Midnight - Aurora covering northern heavens.
- 14th, 2 a.m. - Aurora from S.S.E. to N., arch N.E.
- 14th, 10 p.m. - Brilliant aurora covering the southern heavens.
- 15th, 2 a.m. - Aurora in N.E., arch S.E. and N.W.
- 15th, 10 p.m. - Aurora extending from S.E. to N.W., arch N.E.
- 16th, 9 a.m. - Open water observed from $\frac{1}{4}$ mile E. of village extending from N.E. to W., and by native report to Cape Smyth, washing the beach. The line of ice still fast to eastward along the islands, with open water outside, distant $1\frac{1}{2}$ mile, with floating pieces of ice.
- 16th, 9 p.m. - Brilliant aurora, forming in several arches, passing through and on each side of zenith.
- 17th, 2 a.m. - Arch of aurora from N.W. to S.S.E.
- 17th, 10 p.m. - Aurora from S.E. to N.W., arch N.E., coruscating.
- 18th, 2 a.m. - Aurora S.E. to N.W., arch N.E.

- 18th, Noon - Great mirage extending from bight of spit to eastward.
- 18th, 8 p.m. - Aurora in N.E., extremes of arch N. and E.
- 19th, 2 a.m. - Brilliant aurora from E. to W., passing through the zenith, coruscating, and changing colours.
- 19th, 6 a.m. - Observed the tracks of three bears near the house.
- 19th, 10 p.m. - Slight aurora in S.
- 20th, 3 a.m. - Aurora in S.W.
- 20th, 8 p.m. - Halo round the moon, distant 22°.
- 20th, 9 p.m. - Faint aurora in S.W.; aurora beneath the halo.
- 20th, Midnight - Aurora in N.E.
- 21st, 7 p.m. - Faint aurora in E.
- 21st, 8 p.m. - Halo round the moon.
- 22nd, 2 a.m. - Faint aurora in S.W.
- 22nd, 8 p.m. - Halo round the moon.
- 24th, 1 a.m. - A remarkable halo round the moon, diameter about 6° dilating to 8°, with prismatic colours; moon's altitude 38°.
- 24th, 8 p.m. - Misty halo round the moon, distant 22°.
- 24th, Midnight - Faint halo.
- 25th, 2 a.m. - Aurora from N. to E.
- 25th, 11.15 a.m. - Observed sun for first time clear of horizon.
- 26th, 2 a.m. - Halo round the moon.
- 27th, 2 a.m. - Aurora, coruscating arch in S.W.
- 27th, 7 p.m. - Arch of aurora in N.E.
- 27th, 10 p.m. - Arch S.W.
- 28th, 2 a.m. - Patches of aurora in N.W.
- 28th, 9 p.m. - Aurora in S.W.
- 30th, 11 a.m. - Ice in a crack between East Point and Martin's Island thrown up two and three feet by pressure.
- 31st, 2 a.m. - Bright patches of aurora in the E. and zenith, above the clouds.
- 31st, 8 p.m. - Aurora extending N.W. to S.S.E., arch N.E.

1853.—FEBRUARY.

- 1st, 2 a.m. - Brilliant aurora extending from S.E. to N.W. through the zenith, coruscating.
- 1st, 8 p.m. - Brilliant aurora S.E. and N.W., arch in the zenith.
- 1st, 10 p.m. - Arch in S.W.
- 1st, Midnight - Extremes E.S.E. and N.N.W., arch N.E.
- 2nd, 9 p.m. - Aurora in N.E.
- 3rd, 2 a.m. - Aurora in N.E., arch S.E. and N.W.
- 3rd, 9 p.m. - Aurora S.E. and N.W., arch passing through the zenith above the clouds.
- 4th, 6 p.m. - Faint aurora in N.E.
- 4th, 8 p.m. - Aurora above the clouds.
- 5th, 6 p.m. - Aurora E. and N.N.W., arch N.E.
- 5th, 10 p.m. - Aurora S.E. and N.W., arch S.W.
- 6th, 10.30 p.m. - Arch of aurora in N.E., extremes E.S.E. and N.N.W.
- 7th, 1 a.m. - Aurora in N.E., extending S.E. and N.W.
- 7th, Noon - Open water seen from Point Barrow extending to the southward.
- 8th, 2 a.m. - Aurora in N.E., extending S.E. and N.N.W., coruscating.
- 8th, 11 a.m. - Open water seen from Point Barrow, none in sight from masthead.
- 8th, 10 p.m. - Aurora extending N.W. to S.S.E., arches N.E. and S.W.
- 9th, 9 p.m. - Faint aurora in N.E.

- 10th, 8 p.m. - Aurora from S.E. to N.W., arch N.E.
- 11th, 2 a.m. - Aurora from S.E. to N.W., arch N.E.
- 11th, 7 p.m. - Faint arch of aurora in N.E.
- 12th, 2 a.m. - Aurora S.E. and N.W., arch S.W.
- 12th, 11 a.m. - Ice packed upon spit S. of village higher than the huts.
- 12th, 9 p.m. - Aurora from N.N.W. to S.S.E.
- 13th, 6 p.m. - Aurora from S.E. to N.W., passing through the zenith.
- 13th, Midnight - Brilliant aurora, coruscating and changing colours.
- 14th, 2 a.m. - Aurora from S.E. to N.W. passing through the zenith.
- 14th, 7 p.m. - Aurora S.E. and N.W., passing through the zenith, coruscating, and changing colour rapidly.
- 15th, 8 p.m. - Aurora from N.W. to E.S.E.
- 16th, 2 a.m. - Aurora in the N.E. above the clouds
- 18th, 3 a.m. - Arch of aurora extending from N.W. to S.S.E.
- 19th, 2 a.m. - Aurora from S.E. to N.W., arch N.E.
- 19th, Noon - Open water in sight from the village.
- 19th, 7 p.m. - Aurora from N.W. to S.S.E. passing through the zenith.
- 20th, Noon - Open water near the village.
- 23rd, Midnight - Patches of stratus forming in arches like aurora both N.E. and S.W.
- 24th, 8 p.m. - Faint aurora from S.E. to N.W.
- 25th, 4 p.m. - Remarkable circles round the sun, distant about 20° and 40°.
- 26th, 2 a.m. - Aurora extending from N.W. to S. Eight deer seen.
- 27th, 4 a.m. - Aurora from W.N.W. to S.E., arch S.W.
- 27th, 9 p.m. - Aurora extending from E. to N.N.W.
- 28th, 8 p.m. - Aurora extending S.E. and N.W., arch S.W.

1853.—MARCH.

- 1st, 8 p.m. - Aurora extending from S.E. to N.W., arch S.W.
- 1st, 10 p.m. - Aurora all over the heavens, faint and steady.
- 4th, 8 p.m. - Faint arch of aurora from N.W. to S.S.E.
- 5th, 7 p.m. - Aurora extending from S.E. to N.W., arch N.E.
- 5th, 11 p.m. - Arch of aurora S.W.
- 6th, 9 p.m. - Faint arch of aurora extending S.E. and N.W., arch in the zenith.
- 7th, 3 a.m. - Aurora from S.E. to N.W., arch S.W.
- 7th - Several herds of deer.
- 8th, 8 p.m. - Aurora from S.E. to N.W., passing through the zenith.
- 9th, 3 a.m. - Aurora from E. to N., coruscating and changing colour.
- 9th, 8 p.m. - Aurora from S.E. to N.W., arch N.E.
- 10th, 7 p.m. - Aurora from S.E. to N.W., arch S.W.
- 10th, 11.10 p.m. - Double arch of aurora in S.W., coruscating.
- 11th, 2 a.m. - Aurora from E.S.E. to N.
- 11th, 8 p.m. - Aurora from N.W. to S.S.E.
- 11th, 10 p.m. - Aurora in patches all over the heavens.
- 12th, 2 a.m. - Aurora from S.E. to N.W., arch N.E.
- 12th, 8 p.m. - Faint aurora from S. to W.
- 12th, Midnight - Aurora in patches all over the heavens.
- 13th, 8 p.m. - Aurora from S.E. to N.W., arch S.W.
- 13th, 10 p.m. - Aurora from E. to W.N.W., arch N.E.
- 14th, 2 a.m. - Very brilliant aurora, coruscating and changing colour rapidly.
- 14th, 8 p.m. - Aurora from S.E. to N.W., arches S.W. and in the zenith.
- 15th, 2 a.m. - Aurora from S.E. to N.W., arch S.W.

- 16th, 3 a.m. - Double arch of aurora in the N.E.
- 17th, 8 p.m. - Patches of aurora to S.E.
- 17th, 11 p.m. - Arch of aurora in N.E.
- 19th, 2 a.m. - Faint arch of aurora in S.W., extremes S. and W.
- 19th, 8 p.m. - Faint aurora extending from S.E. to W.
- 21st, 3 a.m. - Aurora from S.E. to N.W., arch N.E.
- 23rd, 2 a.m. - Aurora in the N.
- 23rd, 11 p.m. - Faint aurora in S.E., and halo round the moon, radius 4°.
- 26th, 11 p.m. - Arch of aurora N.E., extending from E. to N.N.W.
- 27th, 10 p.m. - Aurora from S.E. to N.W., arch in the zenith.
- 28th, 2 a.m. - Aurora from S.E. to N.W., arch in the zenith.
- 28th, 9 p.m. - Aurora from S.E. to N.W., arch N.E.
- 29th, 8 p.m. - Arch of aurora from E. to N.
- 30th, 2 a.m. - Aurora from S.E. to N.W., arch S.W.
- 30th, 8 p.m. - Aurora from S.E. to N.W., arch N.E.
- 31st, 2 a.m. - Aurora from S.E. to N.W., arch S.W.
- 31st, 10 p.m. - Aurora in patches all over the heavens.

1853.—APRIL.

- 1st, 10 p.m. - A brilliant arch of aurora from S.E. to W., coruscating and changing colour.
- 2nd, 2 a.m. - Aurora E. and W., arch in the zenith.
- 2nd, 9 p.m. - Aurora from S.E. to N.W., arch N.E.
- 3rd, 3 a.m. - Aurora from S.E. to N.W., arch S.W.
- 4th, 10 p.m. - Faint patches of aurora to S.E.
- 5th, 10 p.m. - Arch of aurora S.W., extending from S. to W., coruscating.
- 6th, 10 p.m. - Faint aurora in S.W.
- 8th, 11 p.m. - Faint arch of aurora in S.W.
- 9th, 2 a.m. - Patches of aurora to S.E.
- 9th, 9 p.m. - Arch of aurora S.W., extending from S.S.E. to W.N.W.
- 10th, 1 a.m. - Arch of aurora N.E., extending from S.E. to N.
- 10th - A raven passed the ship.
- 12th, 8 p.m. - Arch of aurora from S.E. to N.W.
- 25th - A flock of snow buntings near the ship.

1853.—MAY.

- 6th - Open water seen from Point Barrow.
- 13th - Flock of birds seen flying to eastward.
- 19th - Numerous flights of ducks passing to the N.E.
- 25th - Many flights of birds going to the N.E.
- 30th - Several flights of ducks passed the ship.
- 31st - Four flocks of birds seen.

1853.—JUNE.

- 1st - Several flights of ducks passed the ship.

1853.—JULY.

- 10th - A lane of open water from N. to W.
- 17th - Ice in motion.
- 24th - Ship clear of ice.
- 29th - Ice setting out of the channel with the wind and current.

1853.—AUGUST.

- 1st - - Current E.S.E. 12.
- 2nd - - Current N. 48.
- 2nd - - Current E.S.E. 24.
- 5th - - Current S. 48. Ice opening and clearing from the land about Point Barrow.
- 5th - - Current E.S.E. 12.
- 6th - - Current N. 12.
- 6th - - Current E. 36.
- 7th - - Current N.W. 24.
- 7th - - Current E. 24.

1853.—SEPTEMBER.

- 1st - - Lat. 70° 51' N., long. 159° 40' W. Loose ice.
- 2nd - - Lat. 71° 9', long. 157° 45'.
- 2nd - - Heavy stream of ice. A floe.
- 3rd to 5th - Off Refuge Inlet, beset with ice.
- 4th - - Quantities of eider duck about the ship. Large flocks of geese seen on shore.
- 6th - - Off Cape Smyth.
- 7th - - Point Barrow.
- 14th, 9 p.m. - Brilliant arch of aurora, coruscating and passing through the zenith.
- 15th - - Ice all round the ship.
- 16th - - Several flocks of ducks.
- 16th, 9.30 p.m. - A bright arch of aurora from S. to N.
- 23rd, 9 p.m. - Patches of aurora to S.W.
- 24th, 8 p.m. - Brilliant aurora from E. to N.
- 26th, 2 a.m. - Patches of aurora to S.W.
- 27th, 8 p.m. - Faint patches of aurora to S.E.
- 27th, 10 p.m. - A brilliant arch of aurora from E.S.E. to N.N.W.
- 28th, 8.30 p.m. - Bright arch of aurora extending from S.E. b. E. to N.W. b. N.
- 29th, 8 p.m. - Arch of aurora extending from S.E. to N.W. and passing through the zenith.
- 30th, 2 a.m. - Arch of aurora from S.S.E. to N.W.

1853.—OCTOBER.

- 1st - - A large flock of ducks going to S.W.
- 2nd - - A flight of ducks passing to westward.
- 3rd, 9 p.m. - An arch of aurora extending from S.E. to N.W.
- 4th, 7 p.m. - Aurora from E. to W., passing through the zenith.
- 4th, 10 p.m. - Aurora in the S.
- 6th, 3 a.m. - Patches of aurora to N.W.
- 6th, 11 p.m. - Brilliant aurora from S.W. to N.E., passing through the zenith, coruscating, and changing colours.
- 8th, 2 a.m. - Arch of aurora from S.E. to W.N.W.
- 9th, 7 p.m. - Brilliant arch of aurora from N. to E.S.E.
- 9th, 10 p.m. - Aurora in S., extending N.W. to S.E., coruscating.
- 10th, 4 a.m. - Patches of aurora to N.W.
- 10th, 7 p.m. - Aurora forming two arches in S., extending N.W. and S.E.
- 11th, 2 a.m. - Patches of aurora in S.E.
- 11th, 7 p.m. - Arch of aurora passing through the zenith, extending N.W. and S.E.

- 11th, 10 p.m. - Aurora all over the heavens.
- 12th, 2 a.m. - Patches of aurora in S.W.
- 12th, 10 p.m. - Aurora N.W., extending in patches to the zenith.
- 13th, 2 a.m. - Arch of aurora from E.S.E. to N.W.
- 14th, 2 a.m. - Patches of aurora to S.E., extending towards the zenith.
- 15th - - A flight of ducks.
- 16th - - A flock of ducks.
- 17th - - A flight of ducks going to westward.
- 19th, 9 p.m. - Arch of aurora from S.E. to N.N.W.
- 20th, 2 a.m. - An irregular arch of aurora from N.W. to S.E., coruscating.
- 21st, 2 a.m. - Aurora in patches from N.W. to S.E.
- 21st, 9 p.m. - Halo round the moon, distant about 20°.
- 22nd, 4 a.m. - Aurora in patches to westward.
- 22nd, 11 p.m. - Aurora in patches to N.W.
- 23rd, 2 a.m. - Brilliant arch of aurora from N.W. to S.E., coruscating and passing through the zenith.
- 23rd, 6 p.m. - Aurora in patches to N.W.
- 24th, 2 a.m. - Patches of aurora in S.W.
- 24th, 6 p.m. - Aurora in patches to N.N.W. and S.E.
- 24th, 9 p.m. - Arches of aurora in N.
- 25th, 2 a.m. - Aurora in patches from N.N.W. to E.S.E.
- 25th, 8 p.m. - Aurora in N.
- 26th, 3 a.m. - Arch of aurora from S.E. to N.W.
- 27th, 10 p.m. - Aurora from N.W. to S.E.
- 28th, 10 p.m. - Aurora in patches to N.N.E.
- 29th, 3 a.m. - Aurora in patches from N.W. to S.E.
- 30th, 8 p.m. - Arch of aurora from S.E. to N.N.W., passing through the zenith, and coruscating.
- 31st, 2 a.m. - A brilliant aurora from N.W. to S.E., coruscating, and passing through the zenith.
- 31st, 7 a.m. - Aurora very bright in patches from E.S.E. to W.

1853.—NOVEMBER.

- 1st, 9 p.m. - Aurora in patches to N.W.
- 2nd, 10 p.m. - Bright arch of aurora from E. b. S. to N.N.W.
- 3rd, 2 a.m. - Aurora in patches to northward.
- 3rd, 9 p.m. - Faint arch of aurora from N. to S.E.
- 3rd, 11 p.m. - Arch of aurora in S.
- 4th, 2 a.m. - Bright aurora from S.E. to N.W., passing through the zenith.
- 4th, 5 a.m. - Aurora in patches from N.W. to E.S.E.
- 5th, 9 p.m. - Faint arch of aurora from E. to W. b. N.
- 6th, 8 p.m. - Extreme of an arch of aurora in E., the rest of the arch hidden by the clouds.
- 6th, 11 p.m. - Arch of aurora from S.E. to N.W., passing through the zenith, and coruscating.
- 7th, 2 a.m. - Aurora in patches from E.S.E. to N.W.
- 7th, 8 p.m. - Faint arch of aurora from S.E. to N.N.W.
- 7th, 11 p.m. - Aurora in patches all round the horizon.
- 8th, 2 a.m. - Aurora in patches to E.S.E.
- 8th, 4 a.m. - Aurora in arches N. and S.
- 8th, 8 p.m. - Aurora in patches from N. to S.E.
- 9th, 7 p.m. - Bright patches of aurora to S.E.
- 9th, 10 p.m. - Arch from N.W. to E.S.E.
- 10th, 2 a.m. - Arch of aurora from N.W. to S.E.
- 10th, 6 a.m. - Aurora in patches, very brilliant, covering the face of the heavens.

- 10th, 9 p.m. - Brilliant aurora.
- 11th, 3 a.m. - Brilliant aurora in N.
- 11th, 6 p.m. - Faint patch of aurora to E.N.E.
- 11th, 11 p.m. - Faint aurora in S.
- 12th, 2 a.m. - Bright patches of aurora in S.
- 12th, 4 a.m. - Patches from S.E. to N.W.
- 15th, 7 p.m. - Faint aurora from N. to S.E.
- 15th, 10 p.m. - Brilliant aurora from N.W. to S.E., coruscating.
- 16th, 2 a.m. - Bright patches of aurora to W. and N.W.
- 16th, 4 a.m. - Patches of aurora from S.E. to N.W.
- 16th, 8 p.m. - Faint arch of aurora from S.E. to N.N.W.
- 16th, 10 p.m. - Arch of aurora from N.W. to S.E.
- 18th, 8 p.m. - Faint arch of aurora from N. to E.
- 18th, 10 p.m. - Bright aurora from N.E. to S.W., passing through the zenith.
- 18th, Midnight - Bright patches of aurora to W.
- 19th, 2 a.m. - Bright patches of aurora in N.W., coruscating.
- 19th, 7 a.m. - Bright halo round the moon.
- 20th, 2 a.m. - A large halo round the moon.
- 20th, 10 p.m. - Faint arch of aurora from S.E. to N.W.
- 21st, 7 p.m. - Faint aurora from N. to S.E.
- 21st, 9 p.m. - Faint halo round the moon
- 22nd, 2 a.m. - Patches of aurora.
- 24th, 6 p.m. - Aurora in S.
- 24th, 10 p.m. - Very brilliant aurora all over the heavens, coruscating, changing colour, and forming the corona.
- 25th, 7 a.m. - Bright patches of aurora to N.W.
- 25th, 4 p.m. - Faint aurora in N.
- 25th, 10 p.m. - Patches of aurora E. to N.W.
- 27th, 2 a.m. - Bright arch of aurora from N.N.W. to S.E.
- 27th, 4 p.m. - Patches of aurora, N.E. and N.
- 28th, 2 a.m. - Brilliant arch of aurora from N.W. to S.E., coruscating.
- 28th, 5 a.m. - Patches of aurora N.W.
- 28th, 4 p.m. - Patches of aurora N. b. W.
- 28th, 9 p.m. - Bright arch of aurora S.E. to N.N.W.
- 29th, 2 a.m. - Aurora in patches all over.
- 29th, 3 a.m. - Bright arch from W.S.W. to S.E.
- 29th, 5 p.m. - Patches of aurora in N.
- 29th, 9 p.m. - Patches of aurora N.W.
- 30th, 2 a.m. - Patches of aurora N.W. and S.E.
- 30th, 6 p.m. - Bright arch of aurora from E. to N.N.W.
- 30th, 9 p.m. - Arch of aurora from S.E. to N.W., passing through the zenith.

1853.—DECEMBER.

- 1st, 2 a.m. - Patches of aurora all over the heavens, coruscating.
- 1st, 7 p.m. - Bright patches of aurora from S.E. to N.W.
- 1st, 9 p.m. - Aurora all over, above the clouds.
- 2nd, 3 a.m. - Brilliant aurora from N.W. to S.E., coruscating.
- 2nd, 8 p.m. - Faint patches of aurora N.E.
- 3rd, 7 a.m. - Bright patches of aurora S.E. and N.
- 3rd, 9 p.m. - Bright arch of aurora from E. to N.N.W.

- 4th, 7 a.m. - Low arch of aurora S.
- 4th, 7 p.m. - Aurora from N.W. to S.S.E.
- 4th, 10 p.m. - Aurora, coruscating.
- 4th, 11 p.m. - Aurora in patches.
- 5th, 2 a.m. - Bright patches of aurora N.W.
- 5th, 6 p.m. - Faint aurora N.N.W.
- 5th, 9 p.m. - Brilliant patches N.N.E., coruscating.
- 6th, 2 a.m. - Brilliant aurora from N.E. to S.W., coruscating, and changing colour.
- 6th, 9 p.m. - Faint arch of aurora from S.E. to N.N.W.
- 7th, 2 a.m. - Faint patches of aurora N.W. and S.E.
- 8th, 2 a.m. - Arch of aurora from S.E. to N.W.
- 8th, 6 a.m. - Patches of aurora S.
- 8th, 7 p.m. - Extensive halo round the moon.
- 8th, 10 p.m. - Faint aurora from E.S.E. to N. b. W.
- 9th, 3 a.m. - Aurora all over, coruscating.
- 9th, 5 p.m. - Faint arch of aurora from N. to S.E.
- 10th, 2 a.m. - Bright arch of aurora, extending from S.E. to N.W.
- 10th, 9 p.m. - Faint aurora from N. to E.
- 11th, 2 a.m. - Brilliant aurora N.E.
- 11th, 5 a.m. - Aurora from N.W. to S.E., coruscating.
- 11th, 10 p.m. - Bright patches of aurora S.E. and N.N.W.
- 12th, 2 a.m. - Faint aurora E.S.E. and N.W.
- 12th, 5 a.m. - Patches of aurora S.W.
- 12th, 10 p.m. - Brilliant aurora from S.E. to N.W., passing through the zenith, and coruscating.
- 13th, 2 a.m. - Patches of aurora W.N.W. and S.S.E.
- 13th, 4 p.m. - Faint aurora N.E.
- 13th, 9 p.m. - Extensive halo round the moon.
- 16th, 2 a.m. - Patches of aurora N.W. and E.S.E.
- 16th, 8 p.m. - Arch of aurora from N. to S.E.
- 17th, 2 a.m. - Brilliant aurora from N.E. and N.W.
- 17th, 8 p.m. - Bright arch of aurora N.W. and S.E. b. E.
- 18th, 2 a.m. - Faint aurora from N.E. to S.W., coruscating.
- 18th, 9 p.m. - Aurora in N.
- 19th, 3 a.m. - Aurora N.W.
- 19th, 5 a.m. - Extensive halo round the moon.
- 19th, 7 a.m. - Bright patches of aurora N. and in the zenith.
- 21st, 2 a.m. - Arch of aurora from N.W. to S.E.
- 21st, 4 a.m. - Aurora in patches.
- 21st, 9.30 a.m. - Aurora in patches S.W.
- 21st, 4 p.m. - Bright patches of aurora N. and E.
- 21st, 7 p.m. - Bright arch of aurora N.W. to S.E.
- 22nd, 1 a.m. - Aurora in the zenith, coruscating.
- 22nd, 2 a.m. - Extensive halo round the moon.
- 22nd, 9 p.m. - Aurora from N.W. to E.S.E.
- 23rd, 3 a.m. - Bright patches of aurora N.E. and N.W.
- 23rd, 4 p.m. - Arch of aurora from N. to E.S.E.
- 23rd, 8 p.m. - Broad arch of aurora from N. b. W. to E.N.E.
- 24th, 2 a.m. - Bright patches of aurora all over the heavens.
- 24th, 8 p.m. - Brilliant arch of aurora N.W. and S.E., passing through the zenith, and coruscating.
- 25th, 3 a.m. - Bright arch of aurora N.W. to S.E.

- 25th, 7 p.m. - Arch of aurora E. to N. b. W.
- 26th, 2 a.m. - Brilliant arch from S.E. to N.W., coruscating.
- 26th, 5 a.m. - Patches of aurora in the zenith.
- 26th, 8 p.m. - Faint aurora E. to N.
- 27th, 3 a.m. - Arch of aurora N.W. to S.E.
- 28th, 4 a.m. - Faint patches of aurora S.E.
- 28th, 8 p.m. - Aurora from S.E. to N.W., coruscating.
- 29th, 4 a.m. - Aurora from E. to W.
- 29th, 10 p.m. - Aurora in S.
- 30th, 3 a.m. - Aurora E. and N.W.
- 30th, 3 p.m. - Aurora from E. to N. b. W.
- 30th, 8 p.m. - Brilliant aurora N.E. coruscating.
- 31st, 3 a.m. - Brilliant aurora all over the heavens, coruscating.
- 31st, 4 p.m. - Aurora in patches N.W.

1854.—JANUARY.

- 1st, 2 a.m. - Bright patches of aurora all over.
- 1st, 4 p.m. - Faint arch of aurora N. to S.
- 2nd, 3 a.m. - Aurora all over the heavens.
- 2nd, 3 p.m. - Aurora S.E. and N., coruscating.
- 2nd, 8 p.m. - Aurora from S.E. to W.S.W.
- 3rd, 9 p.m. - Patches of aurora N.N.W. to E.
- 4th, 3 a.m. - Bright patches of aurora N.E.
- 5th, 9 p.m. - Aurora from N. to E.S.E.
- 5th, 4 a.m. - Aurora from W. to S.E.
- 5th, 5 a.m. - Patches in S.
- 6th, 4 a.m. - Bright aurora N.E.
- 6th, 8 p.m. - Faint patches of aurora S.E.
- 7th, 2 a.m. - Bright arch of aurora in N.
- 7th, 3 p.m. - Bright patches of aurora N. and N.E.
- 7th, 8 p.m. - Bright arches of aurora N.W. and S.E., coruscating, and changing colour.
- 8th, 4 a.m. - Brilliant aurora S.E. to N.W., coruscating.
- 8th, 5 p.m. - Bright arch of aurora S.E. and N.
- 8th, 7 p.m. - Halo round the moon.
- 8th, 10 p.m. - Faint aurora S.E. to N.N.W.
- 9th, 2 a.m. - Aurora N.W. to S.E.
- 9th, 8 p.m. - Halo round the moon.
- 11th, 8 a.m. - Patch of aurora in the zenith.
- 11th, 3 p.m. - Halo round the moon.
- 13th - - Open water outside spit and islands as far as could be seen. A raven near the ship.
- 14th, 7 p.m. - Patches of aurora N.E.
- 15th, 2 a.m. - Bright patches of aurora S.E. and N.E.
- 15th - - Open water freezing over.
- 16th, 5 a.m. - Bright arch of aurora S.E. and N.W.
- 18th, 4 p.m. - Bright aurora from N. to S.E.
- 18th, 8 p.m. - Faint aurora in N.
- 19th, 2 a.m. - Brilliant aurora S.E. and N.W., coruscating.
- 19th, 6 a.m. - Faint aurora in E.
- 19th, 9 p.m. - Faint patches of aurora in the zenith.

- 21st, 6 a.m. - Faint aurora N.N.E.
- 21st, Noon - Re-appearance of the sun.
- 21st, 10 p.m. - Bright patches of aurora S.E. and N.E.
- 22nd, 6 p.m. - Faint arch of aurora from N. to E.
- 23rd, 3 a.m. - Brilliant arch of aurora N.W. and S.E., coruscating.
- 23rd, 5 a.m. - Aurora all over the heavens.
- 23rd, 6 p.m. - Patches of aurora N. and E.
- 23rd, 9 p.m. - Bright arch of aurora N. to S.E.
- 24th, 2 a.m. - Aurora in patches covering the face of the heavens.
- 24th, 4 a.m. - Bright arch of aurora S.E. and N.W.
- 24th, 7 p.m. - Bright aurora from N. to E. b. S.
- 26th, 8 p.m. - Faint patches of aurora S.E.
- 27th, 2 a.m. - Bright patches of aurora.
- 27th, 4 a.m. - Bright arch of aurora in S.W., extremes S.E. and N.W.
- 27th, 7 p.m. - Faint aurora in N.
- 27th, 10 p.m. - Brilliant arch of aurora from N.W. to E.S.E., coruscating.
- 28th, 2 a.m. - Patches of aurora all over the heavens, coruscating.
- 28th, 8 p.m. - Aurora in N.
- 29th, 3 a.m. - Aurora in N.
- 29th, 8 p.m. - Faint arch of aurora S.E. and N.W.
- 30th, 9 p.m. - Aurora from N.N.W. to S.E., coruscating.
- 31st, 2 a.m. - Aurora all over the heavens, coruscating.
- 31st, 7 p.m. - Bright arch of aurora from N. to E.

1854.—FEBRUARY.

- 1st, 3 a.m. - Low arch of aurora in S.
- 1st, Midnight - Bright arch of aurora from N. to E.
- 2nd, 9 p.m. - Bright aurora N.E. and S.W.
- 3rd, 3 a.m. - Brilliant aurora, coruscating.
- 3rd, 7 p.m. - Faint aurora N.E.
- 4th, 3 a.m. - Brilliant arch of aurora S.E. to N.W., coruscating.
- 4th, 6.45 p.m. - Halo round the moon.
- 4th, 8 p.m. - Faint aurora in N.
- 5th, 6 a.m. - Patches of aurora near the zenith.
- 6th, 7 p.m. - Bright patches of aurora S.E. and N.
- 5th, 10 p.m. - Faint low aurora S.E.
- 6th, 5 p.m. - Halo round the moon.
- 6th, 9 p.m. - Brilliant aurora in N.
- 7th, 7 p.m. - Brilliant aurora in N.
- 8th, 2 a.m. - Brilliant aurora from N.W. to S.E., coruscating.
- 9th, 6 a.m. - Bright aurora from N.W. to S.E., passing through the zenith.
- 9th, 7 p.m. - Bright arch of aurora from N.W. to S.E., passing through the zenith.
- 9th, 10 p.m. - Bright arches of aurora in N. and S.
- 10th, 8 p.m. - Aurora from S.E. to N.W.
- 11th, 2 a.m. - Brilliant aurora all over the heavens, coruscating
- 12th, 3 a.m. - Bright patches of aurora.
- 13th, 10 p.m. - Aurora in N.W.
- 14th, 3 a.m. - Patches of aurora S.W.
- 14th, 8 p.m. - Bright aurora from S.E. to N.W.
- 15th, 3 a.m. - Brilliant aurora N.N.W., coruscating.

- 15th, 7 p.m. - Brilliant aurora N.E.
- 16th, 3 a.m. - Brilliant aurora from N.W. to S.E., coruscating.
- 17th, 9 p.m. - Bright aurora E.S.E.
- 18th, 2 a.m. - Faint aurora S.E. and N.
- 18th, 8 p.m. - Aurora S.E. and N.W.
- 19th, 2 a.m. - Arch of aurora from N.W. to E.S.E.
- 19th, 7 p.m. - Arch of aurora from N. to E.
- 20th, 3 a.m. - Aurora S.E. and N.W.
- 20th, 8 p.m. - Low arch of aurora in N.
- 20th, 10 p.m. - Faint aurora from N.N.W. to S.E.
- 21st, 3 a.m. - Low arch of aurora in S.
- 21st, 9 p.m. - Faint aurora to S.E.
- 22nd, 3 a.m. - Patches of aurora to S.W.
- 22nd, 9 p.m. - Bright arch of aurora S.E. to N.W.
- 23rd, 3 a.m. - Bright patches of aurora in N.
- 23rd, 8 p.m. - Brilliant aurora, coruscating.
- 24th, 4 a.m. - Aurora in patches S.W.
- 24th, 8 p.m. - Aurora all over the heavens, coruscating.
- 25th, 2 a.m. - Faint aurora from N.W. b. W. to E. b. N.
- 25th, 7 p.m. - Bright arches of aurora N. and S.
- 26th - Open water seen from the hummocks off Point Barrow.
- 28th, 9 p.m. - Faint arch of aurora N.W. and S.E.

1854.—MARCH.

- 1st, 2 a.m. - Faint aurora in N.
- 1st, 4 a.m. - Bright patches of aurora S.E. and N.W.
- 1st, 8 p.m. - Bright arch of aurora in N.
- 2nd, 8 p.m. - Faint aurora in the zenith.
- 3rd, 8 p.m. - Bright arch of aurora from N.W. to S.E.
- 4th, 4 a.m. - Brilliant arch of aurora N.W. to S.E., coruscating.
- 4th, 8 p.m. - Bright arch of aurora N. to E.
- 5th, 8 p.m. - Halo round the moon.
- 5th, 9 p.m. - Faint aurora in N.W.
- 6th, 9 p.m. - Patches of aurora near the zenith.
- 7th, 3 a.m. - Bright aurora all over the heavens.
- 7th, 9 p.m. - Faint aurora to eastward.
- 8th, 2 a.m. - Bright patches of aurora in the zenith.
- 8th, 8 p.m. - Bright arch of aurora from N.W. to S.E.
- 9th, 4 a.m. - Faint aurora S.E.
- 9th, 8 p.m. - Patches of aurora N. and N.E.
- 10th, 8 p.m. - Bright arch of aurora S.E. and N.W.
- 11th, 3 a.m. - Extensive halo round the moon.
- 12th, 1 a.m. - An extensive halo round the moon.
- 12th, 9 p.m. - Faint aurora N. and N.E.
- 13th, 8 p.m. - Halo round the moon.
- 13th, 9 p.m. - Brilliant aurora N. and N.E., coruscating.
- 14th, 10 p.m. - Bright patches of aurora in the zenith.
- 14th, Midnight - Halo round the moon.
- 15th, 3 a.m. - Brilliant aurora in N.
- 15th, 7 p.m. - Low arch of aurora S.E. to W.

- 15th, 10 p.m. - Aurora in N.E.
- 16th, 3 a.m. - Brilliant aurora, extending S.E. and N.W., coruscating.
- 16th, 8 p.m. - Brilliant aurora from E. to N.N.W.
- 17th, 9 p.m. - Arch of aurora from E. to N.
- 18th, 2 a.m. - Arch of aurora from N. to E.
- 18th, 4 a.m. - Patches N.W. and S.E.
- 18th, 9 p.m. - Bright arch of aurora S.E. and N.W.
- 19th, 3 a.m. - Bright patches of aurora to N.W. and S.E.
- 19th, 7 p.m. - Faint patches of aurora N.E. and S.E.
- 20th, 3 a.m. - Bright arch of aurora from S.E. to N.W.
- 20th, 8 p.m. - Arch of aurora N.E.
- 21st, 9 p.m. - Faint arch of aurora S.E. to N.N.W.
- 22nd, 8 p.m. - Faint arch of aurora S.E. to N.W.
- 23rd, 10 p.m. - Arch of aurora N. to S.E.
- 24th, 2 a.m. - Bright arch of aurora from S.E. to N.W.
- 24th, 8 p.m. - Aurora extending N.E. to S.S.E.
- 25th, 9 p.m. - Faint arch of aurora N. to S.E.
- 26th, 9 p.m. - Brilliant arch of aurora S.E. to N.W., coruscating, and passing through the zenith.
- 27th, 3 a.m. - Brilliant aurora N.E.
- 28th, 9 p.m. - Patch of aurora S.E.
- 29th, 8 p.m. - Bright aurora N.N.E. to S.S.E.
- 30th, 9 p.m. - Bright patches of aurora S.E. and S.W.
- 31st, 3 a.m. - Patches of aurora E.S.E. and in the zenith.
- 31st, 8 p.m. - Low brilliant arch of aurora, extending W. to S.E.

1854.—APRIL.

- 1st, 3 a.m. - Patches of aurora in S.E. and zenith, coruscating.
- 1st, 8 p.m. - Patch of aurora N.W. and S.E.
- 7th, 8 p.m. - Bright arch of aurora S.E. to N.W., passing through the zenith.
- 8th, 3 a.m. - Bright patches of aurora in the zenith.
- 8th, Noon - Remarkable parhelion.
- 9th, 3 a.m. - Bright patches of aurora S.E.
- 10th - A snow bunting seen.
- 10th, 9 p.m. - Bright patches of aurora in the zenith, coruscating.
- 14th, 11 p.m. - Brilliant arch of aurora from E. to N.N.W.
- 18th, 8 p.m. - Bright patches of aurora S.E. and in the zenith.

1854.—MAY.

- 13th - A whale and several flights of ducks seen.
- 15th - Numerous flocks of ducks.
- 18th - Several flights of ducks.

1854.—JULY.

- 17th - A general movement of the ice inside the hummocks to westward.
- 18th - Numerous seals basking on the ice

