VII. *Tide Observations at Otaheite, or Tahiti.*

By Captain Sir E. Belcher, *R.N. Communicated by Captain* Beaufort, *R.N., F.R.S., &c.*

Received October 31, 1842,—Read February 16, 1843.

H. M. Ship Sulphur, Spithead,
July 22, 1842.

Sir,

With reference to that part of my instructions relating to noon high water at the Island of Otaheite, or Tahiti, I now transmit to you fair copies of the tide-journal registered at the island of Motouta, in the harbour of Papiete, as well as a short comparative series made at Point Venus.

The island of Motouta, the position before named, is the property of the Queen, and therefore free from intrusion or likelihood of disturbance. It is situated well within the reefs, upon a coral flat, and any wave tumbling over the reef would expend itself before reaching the island.

It is, at the same time, within the direct influence of the deep water channel, to seaward, but entirely protected by the reef. The swell does not enter by reason of the overlapping tongue of the northern reef, which, projecting westerly, receives and throws off the sea obliquely. The gauge was placed in ten feet of water, and the batten in four.

In order to prevent any confusion, by change of observers, and thus destroying the interest which a single individual would feel if entrusted with the sole execution of this interesting duty, I selected one of my old followers, Mr. M^{c}Kinley Richardson, Mate, and placing him in entire charge of the island, furnished him with a tide-gauge of my own construction, as well as a tide-batten.

The tide-gauge was constructed as follows (Plate IV.):—A square wooden trunk of six inches aperture, *a a*, was closed at the bottom, but admitted water by small lateral holes, *b b*, six inches from the bottom. This was to prevent any sudden wave which might roll in from affecting the mean level.

Within this trunk floated a glass cylindrical jar *c*, five inches in diameter by eleven in height, and ballasted with sufficient small shot to half immerse it. It was rendered air-tight by means of the gauge-rod which screwed into an interior stuffed pad against the collar of the exterior.

The end of this rod was of brass, where it screwed into the float, but for ten feet above was of very light, tough cypress, half an inch in diameter.

At the summit of the trunk a cap was fitted, *d*, having three friction rollers, through

which the rod traversed freely. Above the trunk, secured to strong uprights, stepping into its exterior sides *e*, *e*, the graduated battens rose, having a clear space between them, and very neatly and *strongly* graduated with black divisions on a white ground.

The index had a clamp tube, through which the gauge-rod passed, *f*, when it was finally clamped at the first high water.

The index was a piece of machinery, *per se*, *f f*. It was furnished with fore, as well as back, friction rollers, on springs, amounting to eight, by which it maintained its position steadily, and kept the gauge-rod perpendicular. This machine had been well tested at Bow Island and its imperfections obviated.

This gauge was fixed upon the abrupt steep of the reef in ten feet water, and well ballasted by pigs of iron, on which it also rested. It was distant from the wall thirty yards, and easily read off by a telescope. It was registered during daylight (from 6 A.M. until 6 P.M.) *from the top*, so that the *least* number indicated high water, and *vice versâ*.

The tide-batten was lashed to the rocks (similarly ballasted) close to the wall of Motouta, in four feet water, and a thick plank enabled the observer to take the closest inspection. It was registered from the *bottom* by day as well as night, and by day at the same periods as the tide-gauge. The *greatest* number therefore indicates high water.

As it is almost impossible to determine the actual moment of high or low water, I had recourse to the method of equal altitudes, within two hours on each side; as the results of my observations on the coast of Lancashire, where the water was subject to a rise and fall of thirty-one feet, always coincided up to the latest half hour.

I have been thus minute in order to satisfy any sceptical minds bent on the maintenance of the *absolute noon period*, that the minutest attention was devoted to this duty, and the coincidence of the two observers, five miles asunder, will in some points be found to agree minutely.

It will be seen by reference to the mean tide-levels, subsequently reduced for each day (and *not contemplated* by the observers themselves), how strictly this duty was attended to, the range never exceeding *two inches* on either gauge or batten.

The position at Matavai was at the extremity of Point Venus, which was shielded in a great measure from the influence of the sea, by reefs similar to those at Papiete; but here we had merely tide-battens; the observations, however, were corroborated by repetitions within the rivulet, on a pole with crosses to mark the simultaneous levels, the more readily to deduce the moments of high and low water. These were watched for the last week by Mr. CHRISTOPHER GEORGE, second master, my general assistant in the observatory, and superintendent of the tide-journals.

These data (from the 22nd to the 27th) are comparable with those observed at Motouta.

By these documents it will be observed that there were two irregular moments of

high water during each twenty-four hours, and that their range was from 10 A.M. to $2^h\ 27^m$ P.M., or nearly $4^h\ 27^m$ by day, and $3^h\ 20^m$ by night. The influences of the sea or land breezes are not apparent. Indeed, if any such influence be admitted, it is decidedly at variance with the anticipated effect, as the night tides are *higher* with the land wind *off shore*.

With a *strong* land wind the height generally indicated the same as in calm. But the mean tide-levels before alluded to, distinctly indicate *an equable rise and fall*.

The night tides observed at Point Venus do not so exactly accord with those observed at Motouta.

I much regret that we had not an opportunity of observing the whole lunation; but I trust that sufficient has been advanced to satisfy you that no exertion was wanting in carrying through these intricate labours, and that even in their present form they may prove not altogether without interest.

I am Sir,

Your most obedient Servant,

EDWARD BELCHER, Captain.

Captain F. BEAUFORT, *R.N.*,
Hydrographer.

Abstract of Tide Observations.—Table I.

Otaheite. Island of Motouta. April 1840.

Date.	Mean time of High Water.	Mean time of Low Water.	Duration of Flood.	Duration of Ebb.	Height of Tide by Gauge.	Height of Tide by Batten.	Extreme Rise and Fall. Gauge.	Extreme Rise and Fall. Batten.	Mean Tide Level. Gauge.	Mean Tide Level. Batten.	Mean Tide Level. Diff.	Moon's Age.	Moon's Change.	Moon's Passage.	Diff. of Moon's Passage and High Water.	Weather, &c.
	h m	h m	ft. ins.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	h m	d h m	h m	h m	
☿ 8.	2 27 P.M.	8 36	.....	6 9	3 10¼	1 6¾	0 1¾	0 4¾	3 9½	1 9	2 0½	5 9	☽ Q. 8 18 22	P.M. 5 21	2 54	Wind from 9 0 A.M. to 4 0 P.M. S.W. 3 5 B.C.; 4 P.M. to 6 0 Calm. 0 B.C.; 6 to 10 0 E.S.E. 3 B.C.; 10 Mid. N.N.E. 2 B.C. At 4 P.M. the wind outside the reefs was apparently N.W.
♃ 9.	10 44 A.M. 10 00 P.M.	.....	Tide irregular.		3 10¼ 3 4	1 8½ 2 1½	0 6½	0 5	3 7¼	1 11	1 8¼	6 9	.....	6 20	3 40	Wind from 0 0 to 9 0 A.M. N.N.E. 1 3 B.C.; 9 0 Mid. S.W. 1 5 B.C.
♀ 10.	A.M. 10 45 ..... 10 12	5 38 ..... 4 36	..... 5 7 ..... 5 36	7 38 ..... 6 9	3 5 3 11½	2 2½ 1 7½	0 6½	0 7	3 8¼	1 11¼	1 9	7 9	.....	P.M. 7 15	2 57	Wind from 0 0 to 2 0 Calm 0 B.C.; 2 0 to 8 30 S.E.&E. 2 B.C.; 8 30 to 9 0 S.W. 2; 9 0 Mid. S.E. to E. 2 4 B.C.
♄ 11.	A.M. 10 43 P.M. 11 40	6 5 ..... 5 35	..... 4 38 ..... 6 8	7 53 ..... 6 5	4 1½ 3 5	1 5½ 2 4½	0 8½	0 11½	3 8½	1 9½	1 11	8 9	.....	8 7	3 33	Wind from 0 0 to 5 0 A.M. Calm 0 B.C.; 5 0 to 5 P.M. East 1 4 B.C.N.; 5 0 Mid. S.E. 2 B.C.
☉ 12.	A.M. 10 0 ..... 11 47	5 32 ..... 5 25	..... 4 28 ..... 6 12	5 52 ..... 4 35	4 0 3 3½	2 5½ 1 4	0 8½	1 1½	3 8½	1 9	1 11½	9 9	.....	8 54	2 53	Wind from 0 0 to Noon N.N.E. 1 B.C.; 1 Mid. Vble. Vble. 2 B.C.N.
☽ 13.	A.M. 11 20 ..... 0 35 P.M.	6 0 ..... 5 20	..... 5 42 ..... 5 22	6 13 ..... 5 26	3 2 4 3½	1 3 2 5½	1 1½	1 2½	3 9	1 10	1 11	10 9	.....	9 37	2 58	Wind from 0 0 A.M. to 9 0 A.M. Calm 0 B.C.; 9 0 Mid. N.E. 1 2 B.C.; R.P.M.
♂ 14.	..... 11 26 A.M. ..... 11 42 P.M.	5 44 ..... 6 20	..... 5 42 ..... 5 22	5 9 ..... 5 26	3 2 4 3½	2 5½ 1 3	1 1½	1 2½	3 9	1 10	1 11	11 9	.....	10 22	0 53	Wind from Easterly all day. 1 2 B.C.; B.C.L.
☿ 15.	..... 11 50 A.M. ..... 11 48 P.M.	6 2 ..... 7 1	..... 5 48 ..... 4 47	6 20 ..... 4 49	4 3¼ 3 1	1 3 2 7½	1 2¼	1 4½	3 8¼	1 11¼	1 9	12 9	.....	11 0	0 48	Wind Easterly all day. 2 4 B.C.; B.C.T.L.; R.Q.C.; R.O.Q.P.

TABLE I. (Continued.)

Otaheite. Island of Motouta. April 1842.

Date.	Mean time of High Water.	Mean time of Low Water.	Duration of Flood.	Duration of Ebb.	Height of Tide by Gauge.	Height of Tide by Batten.	Extreme Rise and Fall. Gauge.	Extreme Rise and Fall. Batten.	Mean Tide Level. Gauge.	Mean Tide Level. Batten.	Mean Tide Level. Diff.	Moon's Age.	Moon's Change.	Moon's Passage.	Diff. of Moon's Passage and High Water.	Weather, &c.
♃ 16.	h m ..... 11 52 A.M.	h m 7 0 ..... 6 40	ft. in. 4 52	ft. in. 7 18 ..... 5 12	ft. in. 4 3 3 0	ft. in. 2 5 1 02	ft. in. 1 3	ft. in. 1 3	ft. in. 3 7½	ft. in. 1 10	ft. in. 1 9½	h m 13 9	d h m ☉ F. M. 16 7 55	h m	h m	Wind from 0 0 to 6 0 A.M. Easterly. 1 B. C. 6 0 8 0 Calm. 0 B. C. 8 0 Mid. Easterly. 2 B. C.
♀ 17.	1 10 A.M. ..... 0 25 P.M.	..... 6 48 ..... 7 35	6 30 ..... 5 37	..... 5 38 ..... 4 50	4 2 3 3	2 7 1 3½	0 11½	1 3½	3 8½	1 10¾	1 9¾	14 9	.....	0 26	0 54	Wind from 0 0 A.M. to 9 0 A.M. Calm. 0 B. C. 9 1 30 Calm. 0 1 30 3 0 N.W. 2 3 B. C. 3 0 Mid. Calm. 3 B. C.
♄ 18.	1 20 A.M. ..... 1 10 P.M.	..... 6 38 ..... 7 0	5 45 ..... 6 32	..... 5 18 ..... 5 50	3 3 4 1½	2 5 1 4½	0 10½	1 0½	3 8¼	1 10¾	1 9¼	15 9	.....	1 12	0 8	Wind from 0 0 A.M. to 6 0 A.M. E.S.E. 1 B. C. 6 0 0 0 Calm. 1 8 0 4 0 East. 3 4 0 Mid. Calm. 0
☉ 19.	1 18 A.M. ..... 1 10 P.M.	..... 6 20 ..... 8 54	6 18 ..... 6 50	..... 5 2 ..... 7 44	4 0 3 4	2 4 1 3½	0 8	1 1½	3 8	1 11¼	1 8¾	16 9	.....	1 58	0 40	Wind from 0 0 to 8 0 P.M. Calm. 0 B. C. 8 0 Mid. Easterly. 1 2 B. C.
☽ 20.	1 35 A.M. ..... 0 45 P.M.	..... 6 55 ..... 7 17	4 41 ..... 5 50	..... 5 20 ..... 6 32	4 1½ 3 5	2 3½ 1 3½	0 8½	0 12	3 9½	1 10	1 11½	17 9	.....	2 49	.....	Wind from 0 0 to 6 0 A.M. Easterly. 2 B. C. 6 0 10 0 Calm. 0 10 0 5 30 W.S.W. 1 4 B. C. 5 30 7 0 Calm. 0 B. C. 7 0 Mid. Easterly. 1 B. C.
♂ 21.	1 37 A.M. 0 0	.....	Tide irregular, flowing and ebbing at intervals of three hours.				0 10	0 6	3 9	1 10	1 11	18 9	.....	.....	3 40	Wind from 0 0 A.M. to Noon. Easterly. 2 B. C. Noon 5 0 P.M. N.W. 2 3 B. C. 5 0 9 0 Calm. 0 B. C. 9 0 Mid. S.E. 1 3 B. C.
♀ 22.	2 30 A.M. ..... 4 20 P.M.	7 41 8 3 ..... 9 15	.... 8 13	..... 5 37 ..... 4 55	4 0 3 7½	.... 1 10 1 5½	..... 0 4½	0 5 0 4½	3 9½	1 8¼	2 1½	19 9	.....	4 32		Wind from 0 0 A.M. to 6 0 A.M. S.E. 2 B. C. 6 0 9 0 P.M. Calm. 2 B. C. 9 0 Mid. West. 3 B. C. V.

TABLE I. (Continued.)

Otaheite. Island of Motouta. April 1840.

Date.	Mean time of High Water.	Mean time of Low Water.	Duration of Flood.	Duration of Ebb.	Height of Tide by Gauge.	Height of Tide by Battten.	Extreme Rise and Fall. Gauge.	Extreme Rise and Fall. Batten.	Mean Tide Level. Gauge.	Mean Tide Level. Batten.	Mean Tide Level. Diff.	Moon's Age.	Moon's Change.	Moon's Passage.	Diff. of Moon's Passage and High Water.	Weather, &c.
	h m	h m	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	h m	d h m	h m	h m	
♃ 23.	2 30 P.M.	.....	Tide ebbing and flowing at irregular intervals.				0 1½	0 2½	3 9¾	1 8¾	2 1	20 9	.....	5 22	.....	Wind from 0 0 A.M. to 5 0 A.M. Easterly. 2 B. C.; 5 0 to 8 0 Calm. 0 B. C.; 8 0 to 4 30 P.M. W.N.W. 1 4 B. C.; 4 30 to 8 0 Calm. 0 B. C.; 8 0 Mid. S.E. 5 B. C.
	.....	7 0														
♀ 24.	.....	4 0	.....	9 0									☽ L. Q.			
	10 30 A.M.	.....	6 30	.....	3 10½	1 9½	0 1½	0 3½	3 9¾	1 10½	1 11¼	21 9	24 11 47	6 12	.....	Wind from East to South. Calm and Variable. 1 2 B. C.
	.....	2 30	.....	4 0	3 9	1 6										
	12 0	.....	7 30	.....												
♄ 25.	.....	4 15	.....	4 15												
	10 15 A.M.	.....	6 0	.....	4 0	1 11	0 4	0 5	3 10	1 8½	2 1½	22 9	.....	6 59	.....	Wind from 0 0 A.M. to 7 30 A.M. S.E. 1 3 B. C.; 7 30 to 9 0 E.N.E. 2 B. C.; 9 0 to 4 0 P.M. N.W. 1 4 B. C.; 4 0 Mid. South. 2 5 B. C.
	.....	3 30	.....	5 15	3 8	1 6										
	9 15	.....	5 45	.....												
☉ 26.	.....	4 0	.....	6 45												
	10 30 A.M.	.....	6 30	.....	4 1½	2 0½	0 6	0 8	3 10½	1 8½	2 2	23 9	.....	7 46	.....	Wind from Midnight to 10 0 A.M. S.E. 2 B. C.; 10 0 to 4 0 N. by E. 2 B. C.; 4 0 Mid. Calm and Variable.
	.....	4 15	.....	5 45	3 7½	1 4½										
	10 0 P.M.	.....	5 45	.....												
☽ 27.	.....	5 10	.....	7 10												
	11 0 A.M.	.....	4 50	.....	4 3½	2 3	0 8½	0 12	3 11¼	1 9	2 2½	24 9	.....	.....	.....	Wind from Midnight to 2 0 Calm.; 2 0 to 6 0 S.E. 1 B. C.; 6 0 to 8 0 Calm.; 8 0 to 2 0 N.E. 1 C.; 2 0 Mid. Calm.
	.....	4 0	.....	5 0	3 7	1 3										
	10 30 P.M.	.....	6 30	.....												
♂ 28.	.....	5 15	.....	6 45												
	11 00 A.M.	.....	5 45	.....	4 2	2 2	0 8	0 10½	3 9	1 8¾	2 1½	25 9	.....	.....	.....	Wind from 0 0 to 4 0 E. by N. 3 B. C.; 4 0 to 10 0 S.E. 3 B. C.; 10 0 Mid. N. by W. 2 B. C.
	.....	3 30	.....	4 30	3 6	1 3½										
	9 45 P.M.	.....	6 15	.....												
☿ 29.	.....	5 15	.....	7 30	4 1	1 5	0 5½	0 6½	3 9¼	1 9	2 2¼	26 9	.....	.....	.....	Wind from 0 0 to 4 0 N. by W. 2 B. C. V.; 4 0 to 6 0 S.E. by E. 2 1; 6 0 Mid. Calm & Var. B. C.
	11 0 A.M.	.....	5 45	.....	3 7½	1 11½										

TABLE I. (Continued.)

Otaheite. Island of Motouta. May 1840.

Date.	Mean time of High Water.	Mean time of Low Water.	Duration of Flood.	Duration of Ebb.	Height of Tide by Gauge.	Height of Tide by Batten.	Extreme Rise and Fall. Gauge.	Extreme Rise and Fall. Batten.	Mean Tide Level. Gauge.	Mean Tide Level. Batten.	Mean Tide Level. Diff.	Moon's Age.	Moon's Change.	Moon's Passage.	Diff. of Moon's Passage and High Water.	Weather, &c.
	h m	h m	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	h m	d h m	h m	h m	
May ♀ 1.	11 30 A.M.			6 50		2 2		0 11½		1 8¼		28·9	1 12 6			Wind from 0 0 to 4 0 S.E. 2 B. C.; 4 0 to 8 0 E.N.E. 4 C. C.; 8 0 to 8 0 E.N.E. 4 or 5; 8 0 Mid. S.E. 3 B. C.
		6 20				1 2½										
♄ 2.	0 49 A.M.		6 29			2 3½		1 0½		1 9¼		0·5				Wind from 0 0 to 4 0 S.E. 3 B. C.; 4 0 to 8 0 E.S.E. 2 B. C. V.; 8 0 Noon. S.W. to E. 2 3 B. C.; Noon to Midnight. E.S.E. 3 B. C.
		6 30		5 41												
	11 55		5 25			1 3										
		6 52		6 57												
☉ 3.	0 51 A.M.		6 0			2 3		1 0		1 9		1·5				Wind from Midnight to 8 0 E.S.E. 3 B. C.; 8 0 Mid. East. 3 4 6 B. C. V.
		6 49		5 58												
	0 24 P.M.		5 35			1 3										
		6 57		6 33												
☽ 4.	1 11 A.M.		6 14			2 3		0 10		1 10		2·5				Wind from Midnight to Mid., S.E. to East 2, 4, 6 B. C.
		7 37		6 26												
	1 16 P.M.		5 39			1 5										
		7 15		5 59												
♂ 5.	0 45 A.M.		5 30			2 2		0 8		1 10		3·5				Wind from Midnight to Midnight, Easterly 5 B. C.
		6 52		6 7												
	0 57 P.M.		6 5			1 6										
		8 30		7 33												
☿ 6.	2 27 A.M.		5 57			2 2		0 8		1 10		4·5				Wind from Midnight to Mid., E.N.E. to N.E. 0, 1, 2 B. C.
		7 57		5 30												
	2 43 P.M.		6 46			1 6										
		8 22		5 39												
♃ 7.	Tide irregular.															Wind from Midnight to Midnight. Easterly with Calms. 1, 2, 0 B. V.

TABLE II.

Otaheite. Point Venus. April 1840.

Date.	Mean time of High Water.	Mean time of Low Water.	Duration of Flood.	Duration of Ebb.	Height of Tide by Gauge.	Height of Tide by Batten.	Extreme Rise and Fall. Gauge.	Extreme Rise and Fall. Batten.	Mean Tide Level. Gauge.	Mean Tide Level. Batten.	Mean Tide Level. Diff.	Moon's Age.	Moon's Change.	Moon's Passage.	Diff. of Moon's Passage and High Water.	Weather, &c.
	h m	h m	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	h m	d h m	h m	h m	
☿ 22.	4 52 P.M.	9 3 9 11	7 49	5 12		4 0 3 7		0 5	3 9½			19 9		4 32		Wind E.S.E. throughout the day. 2 4 B. C.
♃ 23.	6 3 P.M.	7 41 10 33	7 30			3 11 3 8½		0 2½	3 9¾			20 9		5 22		Wind from 6 0 A.M. to 10 38 S.E. 2 B. C. 10 38 0 30 Calm. 2 0 30 1 10 N.N.W. 3 B. C. 1 10 Mid. Calm. B. C.
♀ 24.	10 12 A.M. 7 47 P.M.	6 0 2 18	4 12 5 29	4 6		3 11½ 3 8		0 3½	3 10¾			21 9	☽ L. Q. 24 11 47	6 12		Wind S.E. to E.S.E. throughout the day. 4 B. C.
♄ 25.	10 20 A.M. 9 50 P.M.	4 54	4 56	6 34		4 2 3 7		0 7	3 11½			22 9		6 59		Wind from 0 0 A.M. to 2 0 P.M. S.E. 1 B. 2 0 6 0 N.W. 3 B. C. 6 0 Mid. E.S.E. B. C.
☉ 26.	10 52 A.M.	7 20 5 4	3 32	5 12		4 2 3 7½		0 7½	3 10¾			23 9		7 46		Wind S.E. throughout the day. 2 B. C.
☽ 27.	10 51 A.M.	4 58		6 7		4 2½ 3 7½		0 7½	3 10¼			24 9		8 32		Wind from 0 0 A.M. to 10 0 E.S.E. 3 B. 10 0 11 0 Calm. 3 B. 11 0 Noon. Easterly. 2 Noon. 5 0 Northerly. 2 B. 5 0 Mid. S.E. 2 B.
♂ 28.	11 16 A.M.	4 56		5 42		4 3½ 3 6		0 9½	3 10¾			25 9				Wind from 0 0 A.M. to 4 0 S.E. 4 B. C. 4 0 10 0 S.E. by S. 2 B. C. 10 0 Mid. N. by W. 2 B. C.
☿ 29.	11 20 A.M. 9 36 P.M.	6 10 5 16	5 10 4 20	5 56		4 4 3 6		0 10	3 11			26 9				Wind from Midnight to 4 0 N. by W. 2 B. C. 4 0 8 0 S.E. 1 B.C.V. 8 0 Noon. N.E. 4 Noon. Mid. Calm.

Tide Observations.

Otaheite. Motouta Island. April 1840.

Date.	Moon's age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind. Direction.	Wind. Force.	Weather.	Remarks.
	h m	h m	ft. in.	ft. in.				
☿ April 8.	5 9	9 15 A.M.	3 10¼	.....	S.W.	3	b.c.	
		37	3 10¼	1 6¾				
		10 4	3 10	1 7½	S.W.	3–4	b.c.	
		19	3 10	1 8				
		11 05	3 10	1 8	S.W.	3–5	b.c.	
		20	3 10	1 8½				
		45	3 10	1 8½	S.W.	3–5	b.c.	
		Noon.	3 9½	1 9½				
		0 35 P.M.	3 9½	1 9	S.W.	3–5	b.c.	
		1 05	3 9¼	1 9½				
		40	3 8½	1 10	S.W.	4	b.c.m.	
		2 4	3 8½	1 11½				
		27	3 8½	1 11½	.....	.....	.....	High Water 2h 24m.
		3 00	3 8	1 11	S.W.	4	b.c.m.	
		16	3 8	1 11				
		30	3 8½	1 10		3		
		50	3 8½	1 9½	S.W.	2	b.c.m.	
		4 02	3 8½	1 9½				
		25	3 8½	1 10	Calm.	.....	.....	Breeze outside strong N.W.
		45	3 8½	1 10				
		5 5	3 8½	1 10	.....	.....	b.c.m.	
		25	3 8½	1 10				
		40	3 8½	1 10				
		50	3 9	1 9½				
		59	3 9	1 9½	E.S.E.	1	.....	Land breeze.
		6 20	.....	1 9		1		
		50	.....	1 8½				
		7 20	.....	1 8½				
		51	.....	1 8				
		8 49	.....	1 7½	E.S.E.	3	b.c.	
		9 12	.....	1 8				
		37	.....	1 8½		3	.....	Low Water 8h 36m.
		10 00	.....	1 8½				
		30	.....	1 8½				
		11 00	.....	1 8½	N.N.E.	2		
		26	.....	1 8				
		55	.....	1 9		2		
		0 25 A.M.	.....	1 9	N.N.E.			
♃ 9.	.....	1 00	.....	1 8½	.....	3	b.c.	
		20	.....	1 9				
		50	.....	1 9				
		2 26	.....	1 9	.....	.....	.....	Tide irregular.
		3 00	.....	1 9				
		35	.....	1 8½	.....	2		
		4 10	.....	1 9				
		35	.....	1 9½				
		5 00	.....	1 9½				
		32	.....	1 9½	.....	2		
		5 50	3 10	1 9½	N.N.E.	3	b.c.	
		6 11	10½	8½				
		26	10½	8½				
		44	9	10				
		52	3 10	1 9½	N.E.	2		

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♃ April 9.	.....	7 4 A.M.	3 9½	1 9¼				
		10	9½	9				
		24	10	9½	E.N.E.	2		
		42	9½	10				
		8 00	8½	10½				
		20	8	10½	.....	1		
		38	8	10½	E.N.E.	1		
		54	7	11½	Calm.			
		9 5	6½	11½				
		20	6½	11½	W.S.W.	2	b.c.	
		35	5½	2 00	S.W.	4		
		10 2	4	0½				
		20	4	1				
		30	4	1½	S.W.	4	b.c.	
		11 00	5	1½				
		15	5	0½	S.W.	4	b.c.	
		32	5	1	S.W.	5	b.c.	
		46	5½	0½	.....	.....	.....	High Water 10h 44m.
		Noon.	5½	1 11½				
		0 46 P.M.	5½	11½	S.W.	4	b.c.	
		44	5	11½				
		1 2	5	11				
		10	5	11				
		34	5½	11½				
		2 00	6	11½				
		28	6	2 0½	S.W.	3	b.c.	
		44	6	0½				
		3 5	6	1 0½	S.W.	2	b.c.	
		20	6	11½				
		40	5	2 1				
		55	4	2				
		4 4	4	0½	.....	.....	.....	Tide irregular.
		17	4	0				
		40	5	1				
		50	5	1				
		5 2	5	2	S.W.	1	b.c.	
		40	5	1½				
		6 00	3 5	2				
		22	.....	1				
		7 4	.....	0				
		30	.....	0				
		8 2	.....	1 11½				
		14	.....	11				
		40	.....	2 0				
		9 5	.....	0½	S.W.	2	b.c.	
		25	.....	0½				
		10 0	.....	0½	.....	.....	.....	High Water 10h 00m.
		29	.....	0½				
		52	.....	0½				
		11 22	.....	0				
		50	.....	0				
♀ 10.	.....	0 2 A.M.	.....	2 0				
		10	.....	1 11				
		1 20	.....	10½	Calm.	.....	b.c.	
		56	.....	11	S.E.	2		

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♀ Ap. 10.	.....	2 1 A.M.	.....	1 11½				
		30	.....	11				
		3 0	.....	10½				
		27	.....	10½				
		4 5	.....	10½	S.E.	3		
		19	.....	10½				
		35	.....	10				
		5 5	.....	9½				
		29	.....	9	.....	.....	.....	Low Water 5h 38m.
		52	.....	9	.....	2		
		6 10	.....	9½	.....	1		
		28	.....	9½	.....	1		
		44	3 5	10½	E.	2	b.c.	
		7 4	5½	11				
		10	7	11				
		30	7	11½				
		45	7	11½				
		8 5	7½	11½				
		15	7½	2 0½	S.W.	1	b.c.	
		30	7½	0½				
		39	7	0½				
		9 2	6½	0½	Calm.	.....	b.c.	
		25	6	1	N.E.	1	b.c.	
		40	6	0½				
		10 0	6	0½	.....	4		
		20	5	1				
		40	5	2½				
		11 0	5	2	.....	.....	.....	High Water 10h 45m.
		20	6	1½				
		32	6	1				
		0 6 P.M.	6½	1 11				
		32	6½	11½				
		52	7	11				
		1 0	8	10				
		15	8½	9½	N.E.	4	b.c.	
		25	9	9				
		1 40	3 9½	1 8½				
		49	10	8½				
		2 0	10	8½	N.E.	4	b.c.	
		18	10	8				
		30	10	8				
		44	10	8½				
		55	10½	8				
		3 2	10½	8½				
		25	10½	8½				
		40	10½	8½				
		59	10	8½				
		4 10	11	8				
		40	11	7½	.....	.....	.....	Low Water 4h 36m.
		54	11½	8½				
		5 8	11½	8				
		22	11	8½	E.	2	b.c.	
		40	10½	9				
		50	10½	9	Calm.			
		6 2	3 10½	9				
		25	.....	1 9				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♀ Ap. 10.	.....	6 50 P.M.	.....	1 10				
		7 20	.....	9				
		40	.....	10				
		8 2	.....	10				
		28	.....	11½	S.E.	1	b.c.	
		9 0	.....	2 1½				
		30	.....	2	Calm.			
		10 3	.....	2	.....	.....	.....	High Water 10h 3m.
		30	.....	2				
		11 1	.....	2				
		20	.....	1½	E.	1	b.c.	
		32	.....	1				
		46	.....	0½				
		0 0	.....	2 0	Calm.			
♄ 11.	.....	0 14 A.M.	.....	0½				
		34	.....	1				
		52	.....	1½				
		1 19	.....	1				
		40	.....	0½				
		2 4	.....	1 11½	.....	1		
		22	.....	9½	.....	1		
		49	.....	8¼	.....	1		
		3 14	.....	7½				
		34	.....	6½				
		48	.....	6½				
		4 2	.....	6½	Calm.			
		18	.....	6½				
		35	.....	6½	E.			
		5 00	.....	1 6				
		25	.....	6				
		6 00	.....	5½				
		10	4 0	5½	.....	.....	.....	Low Water 6h 5m.
		30	3 11½	7				
		50	11	7				
		7 2	10	8				
		14	10	8½				
		40	9	8½				
		50	8	9				
		8 2	8	10	E.	1	b.c.	
		16	8	11½				
		50	7½	2 0½	.....	4		
		9 0	6	0				
		20	6	0½				
		37	6	0½				
		50	6	0½				
		10 0	5	1				
		23	5	1				
		42	5	2				
		11 5	5	1½	.....	.....	.....	High Water 10h 43m.
		20	6½	1				
		32	6	1				
		40	5½	1½				
		Noon.	6	2 1	E.	3	b.c.	
		0 20 P.M.	6	0½				
		40	3 7	0				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☿ Ap. 11.	.....	1 0 P.M.	3 8	1 10½				
		30	10	10½				
		55	10½	9½	.....	3	b.c.v.	
		2 55	11	7				
		3 10	4 0	6½				
		4 10	1	5½				
		50	1½	5	.....	2	b.c.v.	
		5 30	1½	5				
		55	1½	5	S.E.	2	c.v.	
		6 10	0½	6½	.....	.....	.....	Low Water 5h 35m.
		40	.....	7				
		7 10	.....	8½				
		40	.....	10				
		8 15	.....	11	.....	2	b.c.	
		50	.....	2 1				
		9 25	.....	1½				
		55	.....	2				
		10 25	.....	3				
		11 0	.....	4				
		40	.....	4½				
		0 20 A.M.	.....	4	.....	2	b.c.	High Water 11h 40m.
		1 00	.....	2 2				
☉ 12.	.....	20	.....	0½				
		50	.....	1 11				
		2 30	.....	10				
		3 10	.....	8				
		40	.....	6½				
		4 20	.....	5½				
		5 10	.....	4				
		32	4 0	4	.....	.....	.....	Low Water 5h 32m.
		50	4 0	4				
		6 5	4 0	5				
		35	1	5				
		7 00	1	6				
		25	1	6				
		40	4 0	7				
		8 0	3 10	8				
		10	9½	9				
		32	9	10				
		9 0	7	2 0				
		25	6	0½				
		40	6	1				
		10 1	5½	2				
		20	5	1				
		11 0	6	1				
		Noon.	5½	0½	.....	.....	.....	High Water 10h 00m.
		0 30 P.M.	5	0½				
		15	5½	0½				
		1 40	6½	1 11½				
		2 20	7½	10½				
		50	8	10				
		3 2	9	10				
		30	4	6				
		5 0	4	5				
		25	3½	4½	.....	.....	.....	Low Water 5h 25m.
		50	3 1	6				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☉Ap. 12.	.....	6 20 P.M.	.....	1 6				
		35	.....	8				
		7 5	.....	9				
		20	.....	10				
		8 5	.....	11	N.E.	2	b.c.	
		35	.....	2 2				
		9 10	.....	2½				
		40	.....	3				
		10 15	.....	4½				
		45	.....	5				
		11 9	.....	5				
		45	.....	5½	Calm.	1	b.c.	High Water 11h 47m.
		0 40 A.M.	.....	2 5				
☽ 13.	.....	1 20	.....	3½				
		55	.....	1½				
		3 5	.....	0½				
		30	.....	1 11	Calm.	.....	b.c.	
		50	.....	10				
		5 0	.....	9				
		20	.....	8				
		40	4 2	7				
		6 0	2	5	N.E.	2	.....	Low Water 6h 0m.
		20	1	6				
		40	0	6				
		7 0	0	7				
		16	3 11	8				
		40	11	7½				
		8 1	10½	8	Calm.			
		20	9	9				
		40	8	11				
		9 0	6	2 0				
		20	5	1	N.E.	1	b.c.	
		40	4	1				
		10 1	5	1				
		34	5½	1				
		46	4	2				
		11 4	4	2				
		18	4	2½				
		Noon.	4	2	Calm.	.....	b.c.	High Water 11h 20m.
		0 26 P.M.	5	2				
		40	5	1½				
		1 0	6	1	N.E.	1	b.c.	
		20	7	1 11				
		2 0	9	8				
		16	10	8	Calm.	.....	b.c.	
		30	11	8				
		3 0	11	8				
		10	11½	7	N.E.	2	b.c.	
		30	11½	6½				
		4 0	11½	6				
		25	11	5½				
		30	4 0	5				
		46	2	4				
		5 0	3	3				
		35	3	3	.....	1	b.c.	Low Water 5h 20m.
		6 0	4	3½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind. Direction.	Wind. Force.	Weather.	Remarks.
	h m	h m	ft. in.	ft. in.				
☽ Ap. 13.	.....	35 P.M.	.....	1 4½	.....	.....	R.	
		6 59	.....	5				
		7 14	.....	5½				
		30	.....	6½	.....	.....	Strong breeze off the land.	
		45	.....	7½				
		8 5	.....	1 8½				
		30	.....	11				
		55	.....	11½				
		9 30	.....	2 0				
		10 10	.....	2				
		25	.....	3½				
		55	.....	4½				
		11 20	.....	5				
		50	.....	5				
		0 35 A.M.	.....	2 5½	E.	2	b.c.	High Water 0h 35m.
♂ 14.	.....	1 10	.....	5				
		50	.....	5				
		2 20	.....	2				
		3 0	.....	1 10				
		30	.....	8				
		4 10	.....	7				
		50	.....	6½				
		5 2	.....	4	E.	2	b.c.	
		26	.....	4				
		6 2	4 2	4	.....	.....	.....	Low Water 5h 44m.
		26	2	4				
		7 20	0	5				
		55	2	6				
		8 20	3 11	8				
		9 0	9	10				
		26	7	2 1				
		40	4	1				
		10 1	4	2	E.	2	b.c.	
		17	3	3				
		40	3	4				
		11 0	2	4				
		12	2	5				
		22	2	5	.....	.....	.....	High Water 11h 26m.
		40	2	5				
		Noon.	2	4				
		0 20 P.M.	2	3				
		40	3	3				
		1 0	3	3	.....	1	b.c.	
		20	4	2				
		30	5	1				
		50	6	0				
		2 2	7	1 11½				
		3 2	9	10				
		20	10	8½				
		40	11	7				
		4 1	11¾	6	.....	.....	b.c.	
		27	4 1	4				
		40	2	4				
		5 0	4 2	1 3½	E.	1	b.c.	
		20	3	3½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♂ Ap. 14.	.....	5 40 P.M.	4 3	1 3½				
		6 0	.....	3	.....	.....	.....	Low Water 6h 20m.
		40	.....	3				
		7 0	.....	4	E.	1	b.c.l.	
		20	.....	5				
		45	.....	6				
		8 10	.....	7½	.....	1	b.c.	
		20	.....	7½				
		40	.....	10				
		9 10	.....	11½				
		37	.....	2 1½	Calm.	.....	b.c.l.	
		10 10	.....	3½				
		11 0	.....	5				
		30	.....	5½	E.	2	b.c.	
		0 20 A.M.	.....	5½	.....	.....	.....	High Water 11h 42m.
		1 40	.....	2 4				
♀ 15.	.....	2 0	.....	3				
		18	.....	2				
		3 0	.....	2				
		30	.....	2				
		4 5	.....	1 10½				
		30	.....	8				
		5 0	.....	4	E.	2	b.c.	
		20	.....	4				
		40	.....	3				
		6 0	4 2	3				
		30	3¼	3	E.	4	b.c.	
		7 4	2	4	.....	.....	.....	Low Water 6h 2m.
		30	1	5				
		8 10	0	6				
		20	3 11	8				
		9 0	8	9				
		14	7½	10				
		38	6	10	E.	4	b.c.	
		10 1	5½	2 0				
		26	5	0				
		40	4	1				
		11 1	3	2½				
		16	2	4				
		40	1	5				
		50	1½	6				
		Noon.	1	5½	.....	4	.....	High Water 11h 50m.
		0 16 P.M.	1	3				
		38	1½	3				
		1 6	2	3				
		35	2½	2½				
		2 0	3 1	2 2	E.	.....	b.c.t.l.	
		16	6*	1	.....	.....	.....	* Gauge went down suddenly 5 inches.
		35	7	1 11½				
		3 0	8	10				
		16	9	9				
		32	10	8				
		45	11	7	E.	3	b.c.t.l.	Heavy rain; lightning over Island of Eimeo.
		4 0	4 0	6				
		16	1	5				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☿ Ap. 15.	.....	4 40 P.M.	4 1	1 4½				
		5 0	1	4½	.....	2	r.q.c.	
		10	1	5				
		26	2	4½				
		6 0	2	4½	W.N.W.	.....	l.q.c.p.	Heavy rain.
		20	.....	4½				
		40	.....	4				
		7 16	.....	1 3	.....	.....	.....	Low Water 7h 1m.
		37	.....	5				
		40	.....	7½				
		8 10	.....	10				
		50	.....	2 1				
		9 15	.....	2½				
		40	.....	3½				
		10 15	.....	4½				
		48	.....	6				
		11 35	.....	7½				
		45	.....	7½	.....	.....	.....	High Water 11h 48m.
		0 15 A.M.	.....	2 7	E.	1	b.c.l.	
♃ 16.	.....	40	.....	5½				
		1 15	.....	4				
		50	.....	2½				
		2 25	.....	1				
		3 0	.....	1 11				
		30	.....	10				
		45	.....	9½				
		4 0	.....	8½				
		55	.....	5½				
		6 0	.....	3½				
		15	4 3	3½				
		30	3	3½	Calm.			
		7 0	3	3	.....	.....	.....	Low Water 7h 0m.
		25	2	4				
		45	2½	4½				
		8 0	2	5½				
		20	1	6				
		32	0	7				
		46	3 10	9	Calm.			
		9 0	3 9	1 10½				
		20	8	2 0½				
		40	7	1				
		10 0	5	2				
		22	5	2				
		46	3	4				
		11 20	2	5				
		40	2	5				
		Noon.	2	5				
		0 30 P.M.	1½	5	Calm.	.....	.....	High Water 11h 52m.
		40	2	4				
		1 0	2	4				
		18	1	3				
		40	0	2				
		2 0	2	2½				
		30	4	0				
		3 0	7	1 11				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
4 Ap. 16.	.....	3 11 P.M.	3 8	1 10				
		32	9	9				
		4 0	10	9				
		20	9	8	Calm.	.....	b.c.	
		40	4 0	6				
		5 10	3 11½	5				
		25	4 1	4				
		39	2	4				
		46	2	4				
		6 0	3	3½				
		9	2	4	Calm.	.....	b.c.	
		20	2	3				
		40	.....	2	.....	.....	.....	Low Water 6h 40m.
		7 12	.....	4				
		35	.....	4½				
		8 0	.....	6				
		11	3 11½	6	E.	2	b.c.	Land breeze.
		20	.....	6½				
		40	.....	7	.....	1	b.c.	
		9 0	.....	7				
		20	.....	9				
		44	.....	11	E.	1	b.c.	
		10 0	3 7	11				
		20	.....	2 0½				
		40	.....	2				
		50	.....	3				
		11 0	.....	4				
		16	.....	4				
		30	.....	4				
		36	.....	5				
		49	.....	5	E.	3	b.c.	
		Midnight.	.....	6				
		0 10 A.M.	.....	2 6½				
♀ 17.	.....	30	.....	6½				
		1 0	.....	7	.....	.....	.....	High Water 1h 10m.
		20	.....	6½				
		45	.....	5½				
		55	.....	4				
		2 15	.....	3½				
		45	.....	2½				
		3 5	.....	1				
		25	.....	1 11				
		50	.....	9½				
		4 25	.....	8½				
		5 5	.....	7½				
		30	.....	5½				
		6 15	.....	4½				
		40	4 2	4½	Calm.	.....	b.c.	
		7 00	2	4½	.....	.....	.....	Low Water 6h 48m.
		18	2¼	4½				
		40	2	5				
		8 00	1	6				
		30	0½	6				
		9 00	3 11	7				
		25	10	8				
		40	8	10	W.	1	b.c.	

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♀ Ap. 17.	.....	9 47 A.M.	3 8	1 11				
		10 0	7	11½				
		16	7	11½				
		30	6	2 0½	Calm.			
		40	6	0½				
		11 0	5	1	E.	1	b.c.	
		30	3	2				
		40	3	2				
		50	3	3				
		Noon.	3	3	S.W.	1	b.c.	
		0 10 P.M.	3¼	3½				
		22	3½	4				
		40	3	3½	Calm.	.....	.....	High Water 0h 25m.
		1 0	3	4				
		20	3	3				
		35	3¼	3½	N.W.	2	b.c.	
		45	4	2½				
		50	4	2½	W. by S.	3	b.c.	
		2 0	4	2½				
		10	4	2½	W.	2	b.c.	
		40	5	0½				
		50	6	0				
		3 0	6	0½	W.N.W.	2		
		20	6½	0				
		35	7½	1 11				
		50	3 9	1 10				
		4 0	9	9				
		20	10	8				
		32	11	7				
		46	4 0	7				
		5 2	0	6½	Calm.			
		10	0	6½				
		30	1	5				
		42	1½	5				
		50	2	5½				
		6 0	2	5½				
		30	.....	4				
		40	.....	4				
		7 0	.....	4	E.	2	b.c.	
		15	.....	3½				
		31	.....	3½				
		42	.....	3½	Calm.	.....	.....	Low Water 7h 35m.
		56	.....	3½				
		8 5	4 2¼	4½				
		22	.....	4				
		9 0	.....	5½	E.S.E.	2	b.c.	
		30	.....	8				
		10 0	3 8	10½				
		25	.....	11				
		55	.....	2 0				
		11 25	.....	1½				
		55	.....	2½				
		45	.....	3				
		Midnight.	.....	3½	E.S.E.	3	b.c.	
♄ Ap. 18.	.....	0 30 A.M.	.....	2 3½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
24 Ap. 18.	.....	1 0 A.M.	.....	2 5				
		20	.....	5	.....	.....	.....	High Water 1h 20m.
		40	.....	5				
		2 5	.....	4				
		30	.....	2½				
		50	.....	1½				
		3 20	.....	0				
		40	.....	1 11				
		4 0	.....	10				
		40	.....	9				
		5 0	.....	8				
		30	.....	7				
		6 0	4 0½	6				
		20	0½	6				
		30	1	5½				
		40	1	5½	.....	.....	.....	Low Water 6h 38m.
		7 0	1	5½				
		20	1	6				
		40	4 1	1 6				
		8 0	1	6				
		7	1	6				
		45	1	6¼				
		9 5	3 11	7				
		29	10	8				
		40	9½	9				
		10 5	11	10				
		30	8	11				
		50	6	2 0				
		11 0	5	1				
		30	5	1				
		40	4½	1½				
		Noon.	3½	2½				
		0 15 P.M.	3	3				
		30	3	4				
		40	3	4				
		50	3	4				
		1 0	3	5				
		20	2½	4½	Calm.	.....	b.c.	
		30	3	4				
		2 5	2½	3½				
		25	2½	3				
		3 2	2½	3				
		30	5	2				
		45	7	0½	S.W.	3	P.R.	
		4 0	9	1 10½				
		20	10½	9				
		5 0	4 0	7½				
		20	1	6				
		6 0	1½	4½				
		20	.....	4½				
		40	.....	4½				
		7 20	.....	4½				
		50	.....	4½				
		8 20	.....	4½				
		50	.....	5				
		9 30	.....	6½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♄ Ap. 18.	.....	10 10 P.M.	.....	1 8				
		40	.....	9½				
		11 10	.....	11				
		30	.....	2 0				
		Midnight.	.....	1½				
		0 40 A.M.	.....	2 3	S.	2	b.c.	
☉ 19.	.....	1 5	.....	4				
		30	.....	4	.....	.....	.....	High Water 1h 18m.
		2 0	.....	3				
		40	.....	1½				
		3 20	.....	2 0½				
		40	.....	1 11½				
		4 0	.....	11				
		50	.....	10				
		5 0	.....	9½				
		30	.....	9				
		40	.....	8				
		6 0	.....	7				
		10	.....	6				
		20	4 0	3½	.....	.....	.....	Low Water.
		40	1	1 5½				
		7 0	1	5½	Calm.	.....	b.c.	
		10	1	5½				
		30	1	5½				
		40	1	5½				
		8 0	1½	5½				
		30	1	7	S.W.	1	b.c.	
		45	0	6½				
		9 5	1	6½	Calm.			
		20	0	7				
		30	0	7				
		45	3 11½	7				
		10 0	11	7	N.E.	2	b.c.	
		20	10½	8				
		40	10	9				
		50	9	10				
		11 0	9	11½	W.N.W.	2–4	b.c.	
		20	7	12½				
		40	6½	2 0½				
		12 0	6	1½	.....	4	b.c.	
		0 20 P.M.	5	2				
		30	5½	2½	W.	4	b.c.	
		40	5	2½				
		50	5	2½	Calm.			
		55	4½	2½				
		1 0	4	3	N.W.	3	b.c.	
		15	4	3				
		31	4	2½	.....	.....	.....	High Water 1h 10m.
		40	5	2½	W.	3	b.c.	
		50	4	2				
		2 0	4	2				
		24	4½	1½				
		40	5	1				
		3 0	5	1				
		25	6	2 0	W.	2	b.c.	

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
⊙ Ap. 19.	.....	3 30 P.M.	3 6½	1 11½				
		49	7	11				
		4 00	8	10				
		18	9	9½				
		4 43	3 10	1 9	.....	1	b.c.	
		5 0	10½	8	E.N.E.	2	b.c.	
		20	11	8				
		35	11½	7				
		52	11½	7				
		6 25	.....	6	E.	.....	b.c.	
		40	.....	5½				
		55	.....	5½	E.	1	b.	
		7 10	.....	5½				
		35	.....	5½				
		50	.....	5½				
		8 0	.....	5½				
		30	.....	5				
		55	.....	4	.....	.....	.....	Low Water 8h 54m.
		9 25	.....	6				
		10 00	.....	6				
		20	.....	6½				
		40	.....	7				
		50	.....	9				
		11 15	.....	10½				
		35	.....	11	E.	2	b.	
		Midnight.	.....	2 0				
		0 30 A.M.	.....	2 2				
☽ 20.	.....	1 0	.....	2½				
		20	.....	3				
		30	.....	3½				
		2 0	.....	2½	.....	.....	.....	High Water 1h 35m.
		30	.....	1				
		50	.....	0				
		3 50	.....	1 9½				
		4 0	.....	9	E.	2	b.c.	
		30	.....	8				
		40	.....	7				
		5 00	.....	6				
		30	.....	5½				
		6 0	.....	5½	.....	.....	.....	Strong land breeze.
		10	4 0	5½				
		20	0½	5½	Calm.			
		30	0½	5½				
		40	1	5½	.....	3	b.c	
		50	1	5¼	.....	1		
		7 0	1	5¼	.....	.....	.....	Low Water 6h 55m.
		10	1	5½				
		20	1	5½				
		30	1½	5½	Calm.			
		40	1½	6				
		50	0½	6	Calm.			
		8 15	0½	6	.....	.....	.....	Tide irregular.
		44	4 0½	1 5½				
		40	0	5½	Calm.			
		9 0	0	6	Calm.			

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☽ Ap. 20.	.....	9 20 A.M.	4 0	1 7				
		31	0	7				
		45	0	7				
		10 0	3 11	7				
		15	11	7½				
		30	11	7½	W. ½ N.	2	b.c.	
		11 0	10	9	W S.W.	3	b.c.	
		15	9	9½	.....	3	b.c.	
		30	9	9½	.....	3		
		45	8	10½	.....	4	b.c.	
		12 0	8	10½	.....	4	b.c.	
		30 P.M.	6	2 1				
		45	6	1	.....	.....	.....	High Water. (The
		1 0	6	1	.....	3	b.c.	high water not well
		30	6	0½	W.S.W.	2	b.c.	determined; batten
		2 0	6	0½	W.	3	b.c.	and gauge differ.)
		20	5½	1½				
		40	5	1				
		50	6	0½				
		3 0	6	0	.....	4	b.c.	
		10	6½	1 11½				
		20	6½	11½				
		30	6½	11				
		40	7	10½	Calm.			
		50	7	10½				
		4 0	7½	10				
		10	8	9½	Calm.			
		20	9	8				
		40	10	8				
		5 0	11	7½	W.	2	b.c.	
		10	11	7½				
		20	10½	7				
		30	10	7	W.	3	b.c.	
		40	00	6	.....	0	b.c.	
		6 0	.....	6				
		20	.....	5½				
		35	.....	5	.....	0	b.c.	
		45	.....	4½				
		55	.....	4				
		7 2	.....	3½	E.	1	b.c.	
		20	.....	3½	.....	.....	.....	Low Water 7h 17m.
		35	.....	4				
		45	.....	4				
		55	.....	4				
		8 5	.....	4½				
		15	.....	4½				
		8 40	.....	1 5½				
		9 20	.....	5½				
		40	.....	5½				
		10 20	.....	6½				
		50	.....	7½				
		11 20	.....	8				
		50	.....	9				
		Midnight.	.....	9½				
☌ Ap. 21.	.....	0 25 A.M.	.....	1 10				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♂ Ap. 21.	.....	1 0 A.M.	.....	2 0				
		30	.....	2	.....	.....	.....	High Water 1h 57m.
		2 0	.....	3				
		30	.....	2				
		3 0	.....	1				
		40	.....	1 10				
		4 5	.....	9½				
		40	.....	9				
		5 0	.....	9				
		20	.....	9				
		6 0	3 9	8½	Calm.	.....	b.c.	
		20	10	8				
		7 0	11½	7				
		30	4 0	7				
		8 0	0	7	E.	2	b.c.	
		25	3 11½	8				
		40	11½	7				
		9 0	4 0	7				
		30	0	7				
		10 0	0	8				
		11 0	0	7	S.E.	3	b.c.	
		30	3 11	8	Calm.			
		Noon.	9	9	.....	.....	.....	High Water, irregular.
		0 30 P.M.	8½	7½				
		1 0	8	7	N.W.	2	b.c.	
		30	7½	6½				
		2 0	7½	6½	Calm.			
		30	6½	5½				
		3 0	6½	5½	W.S.W.	2	b.c.	
		30	6	5				
		4 0	7	6	W.	2	b.c.	
		30	8	7				
		5 0	9	8	W.	2	b.c.	
		30	10	9				
		6 0	11	10				
		30	.....	9	.....	.....	.....	Tide irregular, ebbing and flowing at three hours intervals.
		7 0	.....	6				
		30	.....	5½	Calm.			
		8 0	.....	1 6				
		30	.....	6½				
		9 0	.....	7½	S.E.	1		
		30	.....	7				
		10 0	.....	7½	.....	2		
		30	.....	7½				
		11 0	.....	8	.....	3		
		30	.....	8				
		Midnight.	.....	8	.....	3	b.c.	
		0 30 A.M.	.....	1 8¼				
☿ 22.	.....	1 0	.....	9	S.E.	1–3	b.c.	
		30	.....	9½				
		2 0	.....	10				
		30	.....	10	.....	.....	.....	High Water 2h 30m.
		3 0	.....	10				
		30	.....	9½				
		4 0	.....	9½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☿ Ap. 22.	.....	4 30 A.M.	.....	9½				
		5 0	.....	10				
		30	.....	9				
		6 0	3 11½	9	S.E.	2	b.c.	
		30	11	7½	Calm.			
		7 0	4 0	7	.....	.....	b.	
		30	0	6				
		8 0	0	6	.....	.....	.....	Low Water 8h 3m.
		30	0	6	.....	.....	r.	
		9 0	0	6½	.....	.....	b.c.	
		30	3 11½	7	N.W.	2		
		10 0	11	7	W.	2		
		30	11	7½	.....	2		
		11 0	10½	8	.....	2	b.c.	
		30	10	8	.....	3		
		Noon.	10	8½	.....	4	b.c.	
		0 30 P.M.	10	9	.....	4	b.c.	
		1 0	9½	9				
		30	10½	8½				
		2 0	10	8½	.....	4	b.c.	
		30	9	9				
		3 0	8½	10	.....	4	b.c.	
		30	8	10				
		4 0	8	10	.....	3	b.c.v.	
		30	8	10				
		5 0	8	10	.....	.....	.....	High Water 4h 20m.
		30	8	10				
		6 0	7½	9½				
		30	.....	9½	W.			
		7 0	.....	8				
		30	.....	7				
		8 0	.....	1 6½	.....	3		
		30	.....	5½				
		9 0	.....	5	.....	.....	.....	Low Water 9h 15m.
		30	.....	5½				
		10 0	.....	6	.....	3		
		30	.....	6¼				
		11 0	.....	7½				
		30	.....	6½				
		Midnight.	.....	8	.....	3		
		0 30 A.M.	.....	1 9				
♃ 23.	.....	1 0	.....	9½				
		30	.....	9½				
		2 0	.....	9½				
		30	.....	9½	.....	.....	.....	High Water 2h 30m.
		3 0	.....	9½				
		30	.....	9½				
		4 0	.....	9½				
		30	.....	9	E.	2	b.c.	
		5 0	.....	8				
		30	.....	8	.....	0	b.c.	
		6 0	3 10½	8				
		30	10½	8				
		7 0	10½	7½	.....	.....	.....	Low Water 7h 0m.
		30	10	8				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
4 Ap. 23.	.....	8 0 A.M.	3 10	1 8				
		30	10	8½	N.W.	1	b.c.	
		9 0	10	8½				
		30	9½	8½				
		10 0	9½	9	W.	2	b.c.	
		30	10	8				
		11 0	10	8				
		30	10	8	N.W.	2	b.c.	
		Noon.	10	8				
		0 30 P.M.	10½	8				
		1 0	10	8½				
		30	9½	8½	N.W.	4	b.c.	
		2 0	9½	8½				
		30	9	9	N.W.	2	b.c.	
		3 0	9	10	.....	2	b.c.	
		30	9	9½	N.	3	b.c.	
		4 0	9	10	.....	2	b.c.	
		30	9	10½	.....	2	b.c.	
		5 0	9	9¾	Calm.			
		30	9	9½	S.E.	1	b.c.	
		6 0	9	9	.....	2	b.c.	
		30	.....	9				
		7 0	.....	9	.....	0	b.c.	
		30	.....	9				
		8 0	.....	1 9				
		30	.....	8½				
		9 0	.....	8½	S.E.	1	b.c.	
		30	.....	8½				
		10 0	.....	9				
		30	.....	9	.....	5	b.c.	
		11 0	.....	9½	.....	5	b.c.	
		30	.....	9				
		Midnight.	.....	8				
		0 30 A.M.	.....	1 7	S.E.	2	b.c.	
♀ 24.	.....	1 0	.....	7				
		30	.....	6½				
		2 0	.....	6½				
		30	.....	6				
		4 0	.....	6	S.	2	b.c.	Low Water 4h 0m.
		30	.....	6				
		5 0	.....	6				
		30	.....	6½	S.S.E.	2–4	b.c.	
		6 0	3 11	7				
		30	11	7½	S.E.	1	b.c.	
		7 0	10½	8	.....	1		
		30	10	9	.....	1		
		8 0	9½	9	E.	1	b.c.	
		30	9½	8½	Calm.	.....	b.c.	
		9 0	10	8½				
		30	9	9	N.E.	1	b.c.	
		10 0	9	9	Calm.			
		30	9	10	W.N.W.	1	b.c.	High Water 10h 30m.
		11 0	10	9½	W.S.W.	3	b.c.	
		30	10	9	.....	3	b.c.	
		Noon.	10	8¾				

Tide ebbing and flowing at irregular intervals.

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind. Direction.	Wind. Force.	Weather.	Remarks.
	h m	h m	ft. in.	ft. in.				
♀ Ap. 24.	.....	0 30 P.M.	3 10½	1 8	.....	2	b.c.	
		1 0	10½	7½	.....	.....	b.c.	
		30	10½	8	Calm.			
		2 0	10½	7½				
		30	10½	7	Variable.	.....	b.	Low Water 2h 30m.
		3 0	11	7½	Calm.			
		30	11	7½				
		4 0	10½	8	E.	1	b.c.	
		30	10	7½				
		5 0	9½	7¾	Calm.	.....	b.c.	
		30	9	9				
		6 0	.....	8½	S.E.	1	b.c.	
		30	.....	8½				
		7 0	.....	9				
		30	.....	9	S.E.			
		8 0	.....	1 9	S.	3	b.c.	
		30	.....	8½				
		9 0	.....	9	S.E.	2	b.c.	
		30	.....	9				
		10 0	.....	9	E.S.E.	3	b.	
		30	.....	9				
		11 0	.....	9	E.	1	b.c.	
		30	.....	9¼				
		Midnight.	.....	9½	Variable.	1	b.	High Water 0h 0m. Tide ebbing and flowing at intervals of two hours.
		0 30 A.M.	.....	1 9				
♄ 25.	.....	1 0	.....	9				
		30	.....	8				
		2 0	.....	7½	S.E.	1	b.c.	
		30	.....	7				
		3 0	.....	6½				
		30	.....	6	S.E.	3	b.c.	
		4 0	.....	6				
		30	.....	6	.....	.....	.....	Low Water 4h 15m.
		5 0	.....	6½	S.E.	3	b.c.	
		30	.....	6½				
		6 0	.....	7	S.E.	2	b.c.	
		30	3 11	7½				
		7 0	11	8	S.S.E.	1	b.c.	
		30	11	8	.....	1	b.c.	
		8 0	11	8	E.N.E.	2	b.c.	
		30	10	9				
		9 0	9½	10	E.	1	b.c.	
		30	9	10	Calm.			
		10 0	9	10½	W.N.W.	1–3	b.c.	
		30	8½	10½	.....	.....	.....	High Water 10h 15m.
		11 0	8	10	N.W	3	b.c.	
		30	8½	9½				
		Noon.	8½	9	N.E.	1	b.c.	
		0 30 P.M.	9	9				
		1 0	9½	8	N.N.E.	4–2	b.c.	
		30	10	8	Calm.			
		2 0	10	7	N.W.	3	b.c.	
		30	4 0	6½				
		3 0	0½	6	N.W.	4	b.c.	
		30	1	6	.....	.....	.....	Low Water 3h 30m.

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♄ Ap. 25.	.....	4 0 P.M.	4 0½	1 6	N.W.	4	b.c.	
		30	0	6½				
		5 0	0	7	S.	2		
		30	3 11½	7	.....	3		
		6 0	11½	8				
		30	.....	9½	S.	2	b.c.	
		7 0	.....	10				
		30	.....	1 10½				
		8 0	.....	11	.....	3	b.c.	
		30	.....	11				
		9 0	.....	11				
		30	.....	11	.....	3	b.c.	High Water 9h 15m.
		10 0	3 7½	11				
		30	.....	11	.....	5	b.c.	
		11 0	.....	10½				
		30	.....	10	.....	3		
		Midnight.	.....	9	S.S.E.	2	b.c.	
		0 30 A.M.	.....	1 8				
☉ 26.	.....	1 0	.....	7	S.S.E.	3	b.c.	
		30	.....	6				
		2 0	.....	5	.....	3	b.c.	
		30	.....	5				
		3 0	.....	4¾				
		30	.....	4½				
		4 0	.....	4½	S.S.E.	3–4	b.c.	Low Water 4h 0m.
		30	.....	4½				
		5 0	.....	4½				
		30	.....	5				
		6 0	.....	5	S.	2	b.c.	
		30	4 0	6				
		7 0	3 11½	7	S.E.	1	b.c.	
		30	10½	8½				
		8 0	9½	9	Calm.			
		30	9	9				
		9 0	8½	9½	Variable.			
		30	8½	10				
		10 0	8	10	N.N.E.	3	b.c.	
		30	7½	10	.....	.....	.....	High Water 10h 30m.
		11 0	7½	10	N.N.E.	4	b.c.	
		30	7¾	10				
		Noon.	8¾	10				
		0 30 P.M.	10	9½				
		1 0	11	8				
		30	11½	6½	N.	4	b.	
		2 0	11½	6¼				
		30	11¾	6	.....	5	b.	
		3 0	4 0¼	5				
		30	1½	4	.....	5	b.	
		4 0	.....	1 4	N.	2	b.c.	Low Water 4h 15m.
		30	.....	4				
		5 0	.....	4	Variable.			
		30	.....	4	S.	1	b.	
		6 0	.....	4				
		30	.....	4½				
		7 0	.....	5½				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind. Direction.	Wind. Force.	Weather.	Remarks.
	h m	h m	ft. in.	ft. in.				
☉ Ap. 26.	.....	7 30 P.M.	.....	1 8	Calm.	0	b.c.	
		8 0	.....	1 9	Variable.			
		30	.....	10	S.S.E.	3	b.c.	
		9 0	.....	1 11	.....	5	b.	
		30	.....	1 11½				
		10 0	3 6	2 0	.....	3–5	b.	High Water 10h 0m.
		30	.....	1 11½				
		11 0	.....	1 11				
		30	.....	1 10½				
		Midnight.	.....	1 10	S.E.	4	b.	
☽ 27.	.....	0 30 A.M.	.....	1 9				
		1 0	.....	1 8				
		30	.....	1 7	E.	2	b.	
		2 0	.....	1 7				
		30	.....	1 6				
		3 0	.....	1 5	E.N.E.	3	b.c.	
		30	.....	1 4	.....	3		
		4 0	.....	1 3½				
		30	.....	1 3½				
		5 0	.....	1 3				
		30	.....	1 3				
		6 0	4 2	1 3½				
		30	4 1	1 4½	S.E.	3	b.	Low Water 5h 10m.
		7 0	4 1	1 4½				
		30	3 11½	1 6				
		8 0	3 10	1 7½	Variable.	2	b.c.	
		30	3 9	1 8½	Calm.	0	b.	
		9 0	3 8½	1 9				
		30	3 8	1 9½				
		10 0	3 7½	1 10	N.	1	b.c.	
		30	3 7	1 10½				
		11 0	3 7	1 11	.....	2	.....	High Water 11h 0m.
		30	3 8	1 10				
		Noon.	3 9½	1 9	N.N.W.	3	b.c.v.	
		0 30	3 10	1 8				
		1 0	3 10½	1 7	N.W. by N.	4	b.c.	
		30	3 11	1 6				
		2 0	4 0	1 5				
		30	4 1	1 4	Calm.	0	b.c.	
		3 0	4 2	1 3½	W.S.W.	1		
		30	4 2½	1 2½				
		4 0	4 3¼	1 2	.....	.....	.....	Low Water 4h 0m.
		30	4 3½	1 2¼	Calm.	0	b.c.	
		5 0	4 3½	1 3				
		30	4 3	1 3	S.W.	2		
		6 0	4 2	1 4				
		0	4 2	1 4	S.W.	2	b.c.	
		30	.....	1 4				
		7 0	.....	1 4				
		30	.....	1 5				
		8 0	.....	1 6½				
		30	.....	1 8	S.E.	2–4	b.	
		9 0	.....	1 11				
		30	.....	2 0½				
		10 0	.....	2 2	.....	.....	.....	High Water 10h 30m.

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☽ Ap. 27.	.....	10 30 P.M.	.....	2 2	Variable.	1	b.	
		11 0	.....	2 2				
		30	.....	2 $1\frac{1}{2}$	S.	3	b.	
		Midnight.	.....	2 1				
	.....	0 30 A.M.	.....	2 1				
♂ 28.		1 0	.....	2 0				
		30	.....	1 10				
		2 0	.....	1 8				
		30	.....	1 6				
		3 0	.....	1 5	S.	3	b.c.	
		30	.....	1 4				
		4 0	.....	1 3				
		30	.....	1 3	S.E.	4		
		5 0	.....	1 $2\frac{1}{2}$	.....	4	.....	Low Water 5^h 15^m.
		30	4 2	1 $2\frac{1}{2}$	.....	3		
		6 0	4 $1\frac{1}{2}$	1 3				
		30	4 $1\frac{1}{2}$	1 $3\frac{1}{2}$				
		7 0	4 0	1 5	E.	2	b.c.	
		30	3 $11\frac{1}{2}$	1 $5\frac{1}{2}$				
		8 0	3 10	1 $7\frac{1}{2}$				
		30	3 $9\frac{1}{2}$	1 $8\frac{1}{2}$				
		9 0	3 $8\frac{1}{2}$	1 $9\frac{1}{2}$	W.	3	b.c.	
		30	3 8	1 10				
		10 0	3 7	1 11	N.	1	b.c.	
		30	3 6	2 0	.....	.....	.....	High Water 11^h 00^m.
		11 0	3 $6\frac{1}{2}$	2 $0\frac{1}{2}$	N.N.E.	3		
		30	3 7	2 0				
		Noon.	3 8	1 11	N.N.W.	5	b.c.	
		0 30 P.M.	3 $9\frac{1}{2}$	1 8				
		1 0	3 10	1 7	N.N.E.	2–4	b.c.	
		30	3 10	1 7				
		2 0	4 0	1 6				
		30	4 $0\frac{1}{2}$	1 $5\frac{1}{2}$	N.W.	4	b.c.	
		3 0	4 1	1 5	.....	.....	.....	Low Water 3^h 30^m.
		30	4 $0\frac{1}{2}$	1 5				
		4 0	4 0	1 5	N.W.	4	b.c.	
		30	4 0	1 $5\frac{1}{2}$				
		5 0	3 $11\frac{1}{2}$	1 6	S.	2–3	b.c.	
		30	3 $11\frac{1}{2}$	1 6				
		6 0	3 11	1 7	S.	2	b.c.	
		0	3 11	1 7				
		30	.....	1 7				
		7 0	.....	1 8				
		30	.....	1 $8\frac{1}{2}$				
		8 0	.....	1 9	S.	2	b.c.	
		30	.....	1 $9\frac{1}{2}$				
		9 0	.....	1 11				
		30	.....	1 11	.....	3	b.c.	
		10 0	3 $7\frac{1}{2}$	1 11				
		30	.....	1 11				
		11 0	.....	1 $10\frac{1}{2}$	.....	5	b.c.	
		30	.....	1 10				
		Midnight.	.....	1 9	.....	3	b.c.	
☿ 29.	.....	0 30 A.M.	.....	1 9	S.S.E.	2	b.c.	

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
☿ Ap. 29.	.....	1 0 A.M.	.....	1 8				
		30	.....	1 7				
		2 0	.....	1 6	S.S.E.	3	b.	
		30	.....	1 6				
		3 0	.....	1 $5\frac{3}{4}$				
		30	.....	1 $5\frac{1}{2}$				
		4 0	.....	1 $5\frac{1}{2}$	S.S.E.	3–4	b.	
		30	.....	1 5				
		5 0	.....	1 5				
		30	.....	1 5				
		6 0	4 1	1 5	S.	2	b.c.	
		30	4 0	1 6	S.E.	1	b.c.	
		7 0	3 $11\frac{1}{2}$	1 7				
		30	3 $10\frac{1}{2}$	1 8				
		8 0	3 $9\frac{1}{2}$	1 9	Calm.			
		30	3 9	1 10				
		9 0	3 $8\frac{1}{2}$	1 $10\frac{1}{2}$	N. by E.	2	b.c.	
		30	3 8	1 11				
		10 0	3 8	1 11				
		30	3 $7\frac{1}{2}$	1 11				
		11 0	3 $7\frac{1}{2}$	1 $11\frac{1}{4}$	N.N.E.	4	b.c.	
		30	3 8	1 11				
		Noon.	3 $8\frac{3}{4}$	1 $10\frac{1}{2}$				
☿ May 1.	.....	8 20 A.M.	.....	1 8	Calm.	0	b.	
		8 37	.....	1 9				
		8 55	.....	1 10				
		9 25	.....	1 11	N.W.	2	b.c.	
		10 00	.....	2 0				
		35	.....	2 1	.....	3		
		11 20	.....	2 2	W.N.W.	4		
		40	.....	2 2	.....	5		
		0 25 P.M.	.....	2 1				
		1 10	.....	2 0	W.	.....	.....	High Water $11^h\ 30^m$.
		30	.....	1 11				
		50	.....	1 10	W.	5	b.c.	
		2 15	.....	1 9				
		45	.....	1 8				
		3 30	.....	1 7				
		50	.....	1 6	W.N.W.	3		
		4 10	.....	1 5	N.W.	2		
		15	.....	.....	N.	2		
		55	.....	1 4	N.N.E.	2	b.	
		5 20	.....	1 $3\frac{1}{2}$	E.N.E.	.....	b.c.	
		50	.....	1 3	E.S.E.	1	c.	
		6 25	.....	1 $2\frac{1}{2}$	S.E.	2		
		45	.....	1 $2\frac{1}{2}$	.....	.....	.....	Low Water $6^h\ 20^m$.
		7 0	.....	1 3				
		27	.....	1 4	S.E. by S.	3–5	b.c.	
		50	.....	1 5				
		8 15	.....	1 6	.....	.....	b.	
		40	.....	1 7				
		9 0	.....	1 8				
		25	.....	1 9				
		45	.....	1 10				
		10 15	.....	1 11	.....	2	b.	

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♀ May 1.		10 35 P.M.		2 0				
		11 0		2 1				
		30		2 2				
		50		2 3		1–2	b.	
		0 15 A.M.		2 3½				
☾ May 2.		1 0		2 3½	S.E.	1	b.	
		20		2 3½				High Water 0h 49m.
		35		2 3				
		50		2 2				
		2 05		2 1				
		20		2 0				
		45		1 11				
		3 15		1 10				
		35		1 9	S.E.	2	b.	
		50		1 8				
		4 20	2 3½	1 7				
		40	2 3½	1 6				
		5 5	3	1 5	S.E.	2–3	b.	
		30	2 2	1 4				
		6 5	2 1	1 3				
		40	2 0	1 3				Low Water 6h 30m.
		7 40	1 11	1 4				
		8 0	1 10	1 5		2		
		20	1 9	1 6		1		
		40	1 8	1 7	Calm.			
		9 5	1 7	1 8				
		25	1 6	1 9	W.	1	b.	
		45	1 5	1 10				
		10 3	1 4	1 11		2		
		32	1 3	2 0		4		
		55		2 1		3	b.	
		11 10		2 2				
		30		2 3				
		Noon.		2 4	N.	4	b.	
		12 25 P.M.		2 3				High Water 11h 55m.
		40		2 2				
		1 0		2 1				
		2 0		2 0	N.N.E.	5	b.c.	
		20		1 11				
		40		1 10				
		3 30		1 9				
		4 0		1 8	N.E.	5		
		20		1 7				
		40		1 5	S.W.	4	o.c.g.	
		5 20		1 4	E.	3	b.c.	
		6 25		1 3½				
		7 0		1 3	N.E.	1		Low Water 6h 52m.
		30		1 3				
		8 0		1 4	S.E.	1		
		30		1 5				
		9 0		1 6		5	b.	
		20		1 7				
		32		1 8				
		45		1 9				
		10 39		1 11				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m	ft. in.	ft. in.				
♄ May 2.	.....	11 6 P.M.	.....	2 0	E.	1	b.c.	
		34	.....	2 1	E.N.E.	1	b.c.	
		0 2 A.M.	.....	2 2				
☉ 3.	.....	30	.....	2 3				
		1 10	.....	2 3	.....	.....	.....	High Water 0h 51m.
		40	.....	2 2				
		2 10	.....	2 1				
		35	.....	2 0				
		35	.....	2 0				
		3 5	.....	1 11				
		30	.....	1 10	S.E.	2	b.	
		4 0	.....	1 9				
		25	.....	1 8				
		5 0	.....	1 7				
		20	.....	1 6	.....	1	b.	
		50	.....	1 5				
		6 30	.....	1 4	.....	.....	.....	Low Water 6h 49m.
		7 10	.....	1 4				
		50	.....	1 5	Calm.	0	b.	
		8 15	.....	1 6				
		35	.....	1 7	.....	0		
		9 10	.....	1 8				
		40	.....	1 9	W.	1	b.c.	
		10 5	.....	1 10	W.S.W.	4		
		25	.....	1 11				
		45	.....	2 0				
		11 7	.....	2 1				
		30	.....	2 2				
		Noon.	.....	2 2½	.....	.....	.....	High Water 0h 24m.
		1 0 P.M.	.....	2 2				
		2 0	.....	2 1	S.	5	o.c.g.	
		25	.....	2 0				
		55	.....	1 11				
		3 20	.....	1 10	.....	2		
		50	.....	1 9	.....	5	o.c.	
		4 5	.....	1 8				
		25	.....	1 7				
		5 9	.....	1 6				
		40	.....	1 5				
		6 0	.....	1 4	.....	.....	.....	Low Water 6h 57m.
		40	.....	1 3	S.	3	c.	
		7 10	.....	1 3				
		50	.....	1 4	.....	2	c.	
		8 30	.....	1 5				
		9 10	.....	1 6	.....	2	b.	
		35	.....	1 7				
		10 5	.....	1 8	.....	1	b.	
		25	.....	1 9	.....	3		
		50	.....	1 10				
		11 15	.....	1 11	.....	0		
		35	.....	2 0				
		Midnight.	.....	2 1	.....	2	b.	
☽ 4.	.....	0 25 A.M.	.....	2 2				
		55	.....	2 3				

TABLE. (Continued.)

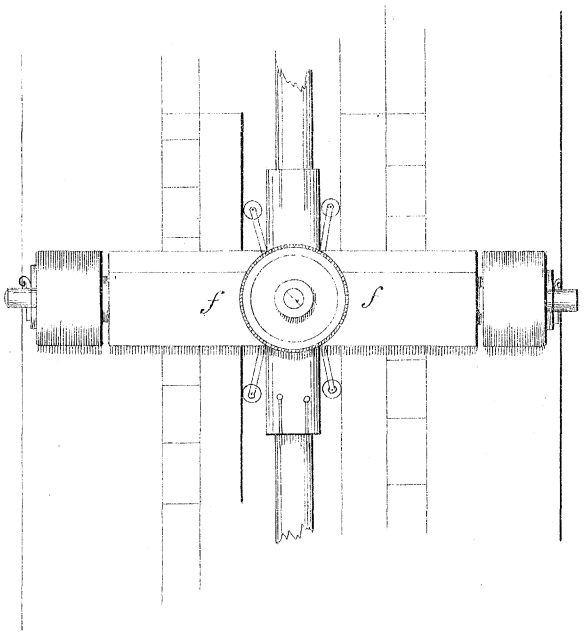
Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m		ft. in.				
☽ May 4.	.....	1 30 A.M.	.....	2 3	Calm.	0	b.c.	
		55	.....	2 2	.....	.....	.....	High Water 1h 11m.
		2 20	.....	2 1				
		35	.....	2 0				
		50	.....	1 11	S.S.E.	1	b.	
		3 25	.....	1 10	.....	2–3	b.	
		50	.....	1 9				
		4 15	.....	1 8				
		40	.....	1 7				
		5 10	.....	1 6	S.	5	b.	
		6 0	.....	1 6	.....	3	b.	
		35	.....	1 5				
		7 15	.....	1 5	Calm.	.....	b.	
		8 0	.....	1 4½	Calm.			
		45	.....	1 5				
		9 10	.....	1 6	W.	1	b.	
		50	.....	1 7	.....	.....	.....	Low Water 7h 37m.
		10 10	.....	1 8	W.S.W.	4	b.c.	
		25	.....	1 9	.....	5		
		38	.....	1 10				
		49	.....	1 11				
		11 00	.....	2 00				
		50	.....	2 1				
		0 25 P.M.	.....	2 2				
		1 20	.....	2 2	.....	.....	.....	High Water 1h 16m.
		2 40	.....	2 2	N.	6	b.c.	
		3 25	.....	2 0				
		4 0	.....	1 11				
		15	.....	1 10				
		30	.....	1 9				
		45	.....	1 8				
		5 5	.....	1 7	Calm.			
		40	.....	1 6	S.S.W.	1	b.c.	
		6 10	.....	1 5	.....	.....	.....	Low Water 7h 15m.
		40	.....	1 5	S.E.	1	b.	
		7 20	.....	1 5				
		8 0	.....	1 5				
		9 40	.....	1 6				
		10 10	.....	1 7	.....	3	b.	
		30	.....	1 8				
		40	.....	1 9				
		50	.....	1 10				
		11 5	.....	1 11				
		20	.....	2 0				
		55	.....	2 1				
♂ 5.	.....	0 40 A.M.	.....	2 2				
		1 45	.....	2 1	S.S.E.	1	b.	
		2 30	.....	2 0	S.E.	3		
		3 20	.....	1 11	.....	.....	.....	High Water 0h 45m.
		55	.....	1 10				
		4 25	.....	1 9	Calm.	0	b.	
		50	.....	1 8				
		5 30	.....	1 7				
		6 20	.....	1 6	S.E.	1	b.	
		50	.....	1 6				

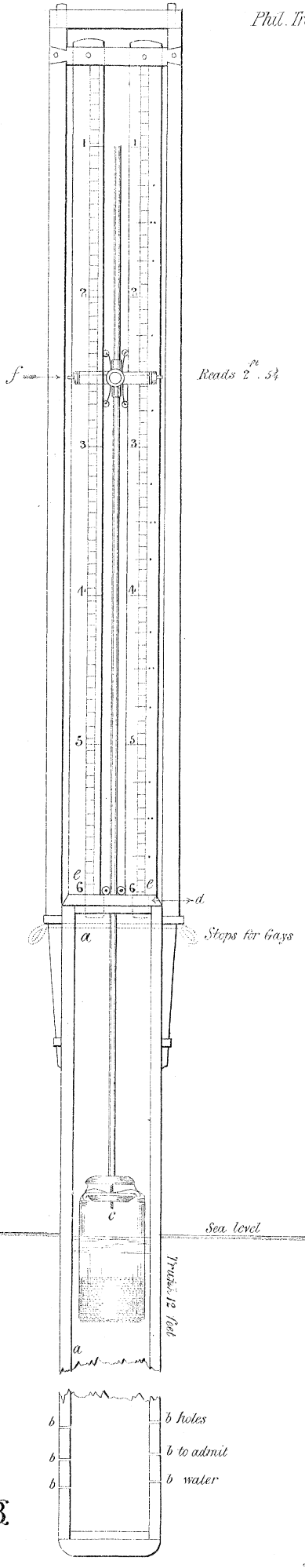
TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m		ft. in.				
♂ May 5.	.....	7 25 P.M.	.....	1 6				
		55	.....	1 7	Calm.	0	b.	Low Water 6h 32m.
		8 15	.....	1 7				
		40	.....	1 7	W.	1	b.	
		9 50	.....	1 8				
		10 40	.....	1 9				
		11 20	.....	1 10	E.	4	b.c.	
		40	.....	1 11	Variable.			
		Noon	.....	2 0	W.	4	b.c.	
		0 5 P.M.	.....	2 2	W.S.W.	4–5	b.c.	
		40	.....	2 2	.....	.....	.....	High Water 0h 57m.
		1 5	.....	2 2				
		30	.....	2 2				
		2 35	.....	2 1				
		3 10	.....	2 0	Variable.	3	b.c.	
		30	.....	1 11				
		4 10	.....	1 10				
		5 10	.....	1 9	N.	3	b.c.	
		6 5	.....	1 8	E.N.E.	5	b.	
		40	.....	1 7				
		7 0	.....	1 7				
		25	.....	1 6½	E.	3	b.	
		8 00	.....	1 6				
		30	.....	1 6	Calm.	0	b.	Low Water 8h 30m.
		9 0	.....	1 6				
		35	.....	1 6				
		10 10	.....	1 7				
		50	.....	1 8				
		11 30	.....	1 9				
☿ 6.	.....	0 10 A.M.	.....	1 10	E.	2	b.	
		50	.....	1 11				
		1 35	.....	1 11	.....	.....	.....	High Water 2h 27m.
		2 5	.....	2 0	Calm.	0	b.	
		40	.....	2 0	E.	3	b.	
		3 30	.....	1 11				
		4 10	.....	1 10				
		50	.....	1 9	S.E.	3	b.	
		5 30	.....	1 8				
		6 10	.....	1 7				
		55	.....	1 6				
		7 25	.....	1 7	.....	.....	.....	Low Water 7h 57m.
		8 20	.....	1 7				
		9 10	.....	1 7	W.	3	b.c.	
		50	.....	1 7				
		10 30	.....	1 8	.....	5		
		11 0	.....	1 9				
		30	.....	1 10				
		0 40 P.M.	.....	1 11	W.	5	b.c.	
		1 40	.....	2 0½				
		2 40	.....	2 0½	N.	4	b.c.	
		50	.....	2 0	.....	.....	.....	High Water 2h 43m.
		3 20	.....	2 0				
		40	.....	2 0				
		4 40	.....	1 11	Calm.	0	b.c.	
		5 10	.....	1 10				

TABLE. (Continued.)

Date.	Moon's Age.	Mean Time.	Tide-gauge.	Tide-batten.	Wind.		Weather.	Remarks.
					Direction.	Force.		
	h m	h m		ft. in.				
☿ May 6.	.....	5 50 P.M.	.....	1 9				
		6 30	.....	1 8	E.	1	b.c.	
		7 30	.....	1 7				
		8 0	.....	1 6½				
		9 0	.....	1 7	.....	.....	.....	Low Water 8h 22m.
		10	.....	1 7				
		10 0	.....	1 8				
		11 0	.....	1 9				
♃ 7.	.....	3 40 A.M.	.....	1 6				
		5 40	.....	1 7	E.	1	b.	
		6 10	.....	1 8				
		50	.....	1 9	.....	.....	.....	High Water 9h 25m.
		7 15	.....	1 8				
		40	.....	1 7	S.E.	0	b.	
		8 20	.....	1 7				
		9 0	.....	1 7	.....	.....	.....	Tide irregular.
		50	.....	1 7	N.W.	2	b.c.	
		10 30	.....	1 7	W.	3		
		11 20	.....	1 7				
		0 20 P.M.	.....	1 8				
		0 50	.....	1 9	N.W.	4		
		2 55	.....	1 10				
		3 55	.....	1 10	N.E.	3	b.c.	
		5 40	.....	1 11				
		6 25	.....	1 11	.....	.....	.....	High Water 6h 25m.
		7 10	.....	1 10	.....	.....	.....	Low Water 11h 17m.
8.		3 15	.....	1 10	.....	.....	.....	High Water 3h 18m.





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