

SERIES OF TEMPERATURES TAKEN BY THE SPEEDWELL IN 1877, 1878, AND 1879—Continued.

Date.	Serial number.	Latitude.	Longitude.	Depth in fathoms.	Temperatures.												A.									
					Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	30 fathoms.	35 fathoms.	40 fathoms.	45 fathoms.	50 fathoms.		55 fathoms.	60 fathoms.	70 fathoms.	80 fathoms.	90 fathoms.	100 fathoms.	110 fathoms.	120 fathoms.	
1878.																										
Aug. 13	157	0 0	0 0	40	73	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	160	42 36	70 27	54	71.5								41½													
	161			54*	64			50	47½	44.5	44.5	44														
	163			73	70.5	65.5	58	56.5																		
	165	42 44	70 38	35	71	64½							45.5	41.5												
	170	42 33	69 59	90																						
	173			115*	68.5	65.5	60½	55½		50½			46½													
	174	42 37	69 40	140	65.5																					
	176																									
	177	42 38	69 41½	175																						
	179			7	67	59	54	47																		
	181	42 24	70 36	45	73.5	64½	60	57	52.5	53½	50.5	45	44	42.5	41.5											
	184			45	75	66.5				53.5				42½	42½											
	185	42 33	69 55	110	68.5	64½							50½													
	186			110*	73.5		61½		59				46½	44.5												
	183			85		65.5								43.5												
Sept. 2	195	42 27	70 19	29 } to } 23 }	72.5	63½	62		55			51.5	45.5													
	200			10	64.5	60	58	56.5																		
	201			8.5	63.5	61	58.5	54																		
1879.																										
Aug. 4	279	42 09	70 15	13 } to } 13.5 } 12.5 }	74	63		64	64.2																	
	280	42 09	70 16	to } 13.5 }	71			62																		
	281	42 12	70 16	14	62.3			67.5	44																	
	282	42 13	70 13	13.5	72.2	61.2		64.5	43																	
	283	42 09	70 22	31	70.7	65			41																	

TEMPERATURE OBSERVATIONS BY THE SPEEDWELL, SEPTEMBER 25 AND 29, 1879.

S. MIS. 90-64

Date.	Serial number.	Locality.	Depth in fathoms.	Temperatures.																
				Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	30 fathoms.	35 fathoms.	40 fathoms.	45 fathoms.	50 fathoms.					
1879. Sept. 25	1	Long Point WNW. ½ mile	17	0	55.3	50.75				47.6										
25	2	Wood End Light NW. ¼ mile	21		55					47										
29	3	Wood End Light NE. ¼ mile	22		59	56.5				45										
29	4	Wood End Light N. 80° E. 2 miles	24½		57.5		46.5			44.2										
29	5	Wood End Light N. 55° E. 3¼ miles	21		57.2	56.5	46.5			45										
29	6	Wood End Light N. 48° E. 5¼ miles	21		57.3	56.2	51			45.2										
29	7	Wood End Light N. 45° E. 7¼ miles	19½		58.5	57.5	53.1			46.1										
29	8	Wood End Light N. 50° E. 7¼ miles	19½		58.5	57.5	50			46										
29	9	Wood End Light N. 66° E. 6¼ miles	21		59.2	57	54.1			44.8										
29	10	Wood End Light N. 85° E. 6 miles	26	69.5	58	57	55.1			44										
29	11	Wood End Light S. 75° E. 3¼ miles	30	69.5	58.5	57	55.8			46		44								
29	12	Race Point Light S. 71° E. 8¼ miles	33	66	67.8	56.2	55.8			48		44								
29	13	Race Point Light S. 45° E. 4¼ miles	34	66	58.2	56	54.5			51.1		44.2								
29	14	Race Point Light S. 32° E. 6 miles	11	67	58	57	51.5													
29	15	Race Point Light S. 13° E. 5¼ miles	23	62.5	57.2	56	54.5			49		52.5								
29	16	Race Point Light S. 10° W. 6 miles	19	62.5	58	58	51			49										
29	17	Race Point Light S. 30° W. 6¼ miles	26	63	57	56.2	54.5			46.5										
29	18	Race Point Light S. 51° W. 8¼ miles	28	62.5	57	56.5	55					45								
29	19	Race Point Light S. 68° W. 9¼ miles	49	62.8	57.8	57.2	54.5			48		44								43.2

[1371

LISTS OF DREDGING STATIONS.

1009

TEMPERATURE OBSERVATIONS BY THE SPEEDWELL SEPTEMBER 25 AND 29, 1879—Continued.

Date.	Serial number.	Locality.	Depth in fathoms.	Temperatures.													
				Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	30 fathoms.	35 fathoms.	40 fathoms.	45 fathoms.	50 fathoms.		
1879.				0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sept. 29	20	Race Point Light S. 70° W. 9½ miles	32	62.5	57	53.2	51.5	.....	47	.....	44	.....	.....	.....	.....	.....	.....
	21	Race Point Light S. 66° W. 5½ miles	21	64	57	53.2	51	.....	45	.....	.....	.....	.....	.....	.....	.....	.....
	22	Race Point Light S. 42° W. 5½ miles	28	62.8	56.5	56.2	46.1	.....	.....	.....	46	.....	.....	.....	.....	.....	.....
	23	Race Point Light S. 18° W. 2½ miles	33	.....	57.5	57	56	.....	45	.....	.....	.....	44	.....	.....	.....	.....
	24	Race Point Light S. 82° E. 2 miles	30	61	58	58	57	.....	.....	.....	44	.....	.....	.....	.....	.....	.....
	25	Race Point Light N. 16° E. 2¼ miles	27	61	58	59	56.8	.....	.....	.....	44.9	.....	.....	.....	.....	.....	.....

A series of temperature observations was made by the Speedwell, off Provincetown, on September 25 and 29, 1879. These had separate numbers from No. 1 to No. 25, and no dredgings or natural-history observations were made. Their localities, etc., and the serial temperatures taken on those days are therefore placed at the end of the tables of serial temperatures taken in the course of dredging expeditions.

II.—Serial temperatures, U. S. Fish Commission steamer *Albatross*, Lieut. Commander Z. L. Tanner, U. S. Navy, commanding, 1883.

Serial number.	Date.	Locality.						Depth.	Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	40 fathoms.	60 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,100 fathoms.	1,200 fathoms.	1,300 fathoms.	1,400 fathoms.	1,500 fathoms.	1,600 fathoms.	Bottom.		
		Latitude N.	Longitude W.	Fathoms.																																
2008	1883. Apr. 27	35 09 40	75 04 36	92	67	72	75	75	74																									74		
....	Apr. 27	35 09 58	74 59 18	69	76	76	76	76	76																											
2009	Apr. 28	35 29 35	74 46 45	531	64	69	69	71	70																											
....	Apr. 28	35 31 00	74 45 30	724	66	62																														
2010	Apr. 28	35 30 00	74 44 45	890	65	61	61	69	79	69																										
....	Apr. 30	36 16 15	74 27 50	670	79	46	45	44	42	42																										
2016	May 5	37 31 00	74 52 36	19	48	47	45	45	45																											
....	May 5	37 29 40	74 53 00	17	49	47	46	45	45																											
2018	May 7	37 12 22	74 20 04	788	62	54	54	54	52	53																										
2019	May 7	37 13 52	74 23 32	600	56	52	51	51	51	51																										
2020	May 21	37 37 50	74 15 30	143	56	54																														
2021	May 21	37 36 00	74 15 00	179	53	51	52	53	57	54																										
2022	May 21	37 32 00	74 13 20	487	59	52	52	52	52	53																										
2023	May 21	37 48 00	74 01 30	377	62	55	55	55	54	55																										
2025	May 25	40 02 00	70 27 00	239	57	49	48	48	46	44																										
2027	May 25	39 58 25	70 37 00	198	56	52																														
2028	May 25	39 57 59	70 32 00	209	56	52																														
2029	May 25	39 42 00	70 47 00	1,168	57	53	52	52	52	51																										
2032	May 26	39 29 00	72 19 40	74	55	50	49	48	43	39																										
2033	May 26	39 32 30	72 18 35	379	62	49	49	48	46	43																										
2035	July 17	39 26 16	70 02 37	1,362	73	71	71	69	62	48	41	46																								
2036	July 18	38 52 40	69 24 40	1,735	82	76	74	72	68	65	62	61																								
2037	July 18	38 53 00	69 23 30	1,731	79	76	74	73	66	63	62	61																								
2038	July 26	38 30 30	69 08 25	2,033	77	76	77	77	71	66	62	58																								
....	July 27	37 58 30	69 01 20	2,451	78	82																														
2030	July 28	38 19 25	68 20 20	2,369	77	81	81	81	81	77	68	60	50	43	40	40	39	39	39	39																
2040	July 29	38 35 13	68 16 00	2,226	76	75	75	76	75	68	56	57																								
2042	July 30	39 33 00	68 26 45	1,555	74	71	71																													
....	July 31	40 01 50	68 50 30	608	72	72	70	68	55	65	58	44	43	45	43	40	40																			
....	Aug. 30	41 58 00	67 57 45	43	58	58	58	57	57	56	56																									
2063	Aug. 31	42 23 00	66 23 00	141	60	57	57																													
....	Aug. 31	42 23 30	66 21 15	115	57	54	53	53	53	49	53	51	44	42																						
2070	Sept. 1	41 55 30	65 47 10	113	61	57	57	55	54	53																										
....	Sept. 1	41 56 40	65 50 10	102	58	55	55	55	55	54	52	53	41																							
2072	Sept. 2	41 53 00	65 35 00	858	70	56	50																													
....	Sept. 3	41 40 30	65 35 00	855	58	58				69	54	48																								
2079	Sept. 4	41 13 00	66 19 50	75	60	67	67																													
....	Sept. 20	40 06 50	70 31 15	65	71	67	58																													
....	Sept. 20	40 01 50	70 39 20	111	70	68	68	63	69	69	61	47																								

II.—Serial temperature, U. S. Fish Commission steamer *A. Latross*, Lieut. Commander Z. L. Tanner, U. S. Navy, commanding, 1883—Continued.

Serial number.	Date.	Locality.		Depth.	Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	40 fathoms.	60 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,100 fathoms.	1,200 fathoms.	1,300 fathoms.	1,400 fathoms.	1,500 fathoms.	1,600 fathoms.	1,600 fathoms.	Bottom.		
		Latitude N.	Longitude W.																														
	1883.	° ' "	° ' "	Fathoms.																													
2090	Sept. 21	39 42 50	71 01 20	1,000	75	69	68	68	68																								39
2094	Sept. 21	39 44 30	71 04 00	1,022	70	68	68	68	68																								38
2095	Sept. 30	39 29 00	70 58 40	1,342	71½	69½	67	67	67																								37
2096	Sept. 30	39 22 20	70 52 20	1,451	70	69	67½	68	68	67	66	56½	67½	53½	47	40	40	40	40	39	39	38½	38										37
2097	Oct. 1	37 56 29	70 57 30	1,917	73	72½	68																										37
2098	Oct. 1	37 40 30	70 37 30	2,221	73	72½	72																										37
2101	Oct. 3	39 18 20	68 24 00	1,686	61	67	69	68																									35
2102	Nov. 5	38 44 09	72 38 00	1,209	61	62½	62	61½	61½																								39
2104	Nov. 5	38 48 09	72 40 30	991	60	61	62	62	62	62	62	59	55	53½	49	40½	40	40	39	39	39	39	39									41½	
.....	Nov. 6	37 34 48	73 03 15	1,542	62	62	62	62	62	62	62½	63	54	38½	51½	43½	41	39½	39	39	39	38½										60	
2108	Nov. 9	35 16 00	75 02 30	48	76	78½	77	78	78	77	75	63																				73	
.....	Nov. 9	35 16 20	75 04 00	34	75	77																										73	
.....	Nov. 9	35 14 30	75 00 30	102	74	76																										73	
.....	Nov. 11	35 41 30	74 28 45	1,066	76	76½	77	77	77	77	77	68½	60	40	45	41	40	40	39													76	
.....	Nov. 12	36 16 15	74 51 20	40	65	68																										76	

Table of serial temperatures, 1884.

Serial number.	Date.	Position.		Depth.	Temperature at—																		
		Latitude N.	Longitude W.		Temperature.		25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,100 fathoms.	1,200 fathoms.	1,300 fathoms.	Bottom.	
					Air.	Sur- face.																	
	1884.	°	'	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
					Fathoms.																		
Hyd. 46	Jan. 24	17 51	00 03	25	2,423	80	77	77	77	77	60	51											39.1
Hyd. 47	Jan. 24	17 46	30 05	10	2,482	78	77	77	74	67			45										38.8
Hyd. 57	Jan. 25	17 49	05 05	29	2,178	77	77	77	77	67	59			49									38.8
Hyd. 62	Jan. 25	17 32	40 05	52	2,017	77	77	77.5	78	66.5	58.5	49			44								
Hyd. 61	Jan. 26	16 59	00 05	19	2,543	76	77	77.5	77	65.3													
Hyd. 65	Jan. 26	16 28	00 04	42	2,192	76	77	77.8	76	65	55	47											39.8
Hyd. 71	Jan. 27	15 44	10 03	42	950	76	77	77.8	76	65	55	47											39.8
Hyd. 80	Jan. 28	13 56	35 03	02	684	75	77	77	72.5	61													39.5
Hyd. 82	Jan. 28	13 29	00 02	42	1,651	80	77				41.5												39.5
Hyd. 81	Jan. 28	13 23	00 02	34	1,680	77	78	76	68	61.3	50	45	43		40.5	40	40			39.5			39.5
Hyd. 2119	Jan. 29	11 48	50 02	17	1,140	75	77	77	75	68.5													39.3
Hyd. 116	Feb. 5	14 21	44 03	58	1,615	78	77	77	75	62													39.3
Hyd. 120	Feb. 6	16 01	00 06	55	2,492	76	77	77	77.5	64.5													39.8
Hyd. 121	Feb. 6	16 36	20 06	41	2,501	76	77	77	77	67	55	47.8											39.5
Hyd. 123	Feb. 7	15 49	00 07	36	2,616	76	77	77.3	77.3	67	55												
Hyd. 124	Feb. 7	15 02	00 07	13	2,747	80	77	77.8	78	64.5	53				40.5	39.8	39.5						
Hyd. 127	Feb. 8	13 25	04 06	25	2,844	77	77	77.8	77.8	55.5													39.5
Hyd. 128	Feb. 8	12 54	40 08	11	2,768	81	78	77.5		61.3													39.5
Hyd. 133	Feb. 9	11 33	20 06	19	553	77	75	70.5	65	58	43.5												40.8
Hyd. 134	Feb. 9	11 18	50 06	24	656	79	76	71.8	63	58													40
Hyd. 135	Feb. 9	11 05	00 06	50	239	78	76	71	64.5														49.3
Hyd. 139	Feb. 9	11 01	00 07	14	605	75	75							40.5									
Hyd. 145	Feb. 10	11 52	00 03	35	630	78	76	76	68.5	59.8	49.8												39.6
Hyd. 150	Feb. 18	11 56	00 06	56	733	77	76	76	66	63													39.6
Hyd. 151	Feb. 18	11 50	45 08	56	732	77	76	75	66														43.2
Hyd. 152	Feb. 18	11 40	25 08	57	321	76	75				50												39.3
Hyd. 2126	Feb. 19	13 17	45 01	01	1,701	78	77	76	66.5	65.5	47												39.6
Hyd. 162	Feb. 19	13 40	20 07	10	2,694	75	76	76	69	62	53	46											39.6
Hyd. 165	Feb. 23	15 55	00 07	03	2,209	76	77	76	74	67.5													40.1
Hyd. 166	Feb. 20	16 42	00 07	18	2,028	76	77																
Hyd. 170	Feb. 21	17 48	00 02	12	2,434	77	77	77.5	77	69													39.6
Hyd. 171	Feb. 21	18 01	30 02	23	1,929	81	79	77	76	67													39.6
Hyd. 172	Feb. 21	18 07	00 02	29	1,596	80	79	77.5	77	67													39.7
Hyd. 173	Feb. 22	17 36	50 02	54	2,423	78	77			77	70.5												
Hyd. 180	Feb. 22	17 45	30 05	04	2,391	79	77																
Hyd. 188	Feb. 23	17 51	40 04	36	894	75	77																

Table of serial temperatures, 1884—Continued.

Serial number.	Date.	Position.		Depth.	Temperature at—																			
		Latitude N.	Longitude W.		Air.	Sur- face.	25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,100 fathoms.	1,200 fathoms.	1,300 fathoms.	Bottom.		
																							Fathoms.	
	1884.	°	'	°	'																			
Hyd. 190	Feb. 23	17	33	70	74	45	00	935	78	77														
Hyd. 197	Feb. 24	18	45	00	74	32	40	1,347	78	77	77.5	76	72											
Hyd. 198	Feb. 24	18	40	00	74	12	00	1,537	80	79	78	77	68.5										39.7	
Hyd. 199	Feb. 24	18	56	00	73	51	00	1,974	80	79	78	77.4	68.2										39.7	
Hyd. 205	Feb. 25	19	40	00	74	42	00	1,923	77	77	78	74.6	66.7											
2127	Feb. 25	19	45	00	75	01	00	1,639	78	77	77.6	76	69	61	54.2	47.5	43.5	40	39				39.7	
Hyd. 200	Feb. 25	19	43	21	75	15	30	1,745	78	77	77	76	71										39.9	
Hyd. 215	Feb. 28	18	54	30	74	19	30	1,486	77	78	78.4	78	74.4										39.7	
Hyd. 216	Feb. 28	18	32	30	75	06	00	870	78	78	78.4	78	74.4										39.7	
Hyd. 217	Feb. 28	18	34	00	74	21	00	1,015	79	78	77.8	77.6	68.7											
Hyd. 346	Mar. 23	9	46	00	76	18	30	255	81	82													41.8	
Hyd. 353	Mar. 24	9	44	40	77	56	00	550	79	79	76													
Hyd. 354	Mar. 24	9	47	00	78	09	30	630	79	78	78.7	72.5	61.4	51.6										
Hyd. 355	Mar. 24	9	48	00	78	24	00	1,017	79	79														
Hyd. 363	Mar. 25	9	45	15	79	34	00	370	80	79													39.3	
Hyd. 371	Apr. 3	11	20	00	80	42	10	1,832	80	79													40.2	
2151	Apr. 10	15	28	39	80	26	00	633	79	78	78.8	77.8	67.9	55.3	47.8	42.7	41.4						39.7	
Hyd. 419	Apr. 14	23	48	14	84	03	55	1,356	79	79	78.6	77.9	67.9	57.1	51.4	41.6		40.9	40.1	40			38.6	
2172	Apr. 20	38	01	15	73	44	00	568	76	76	53.8	55.4	51	45.1	40.7	40							37	
2173	July 21	37	57	00	72	34	00	1,600	70	68	57	51.7	51.7	51.7	39.7	39.7	39.5						40.7	
2175	July 22	39	23	00	72	18	30	452	69	68	50.5	51.3	50.6	44.1	40.6	40.2							36.6	
Hyd. 533	July 23	39	23	00	72	18	30	922	70	69	57	52.8	50.7	44.2	40.7	40.2	40		30.6	38.7	38.7		38.6	49.3
Hyd. 544	Aug. 3	36	55	00	71	07	00	221	71	68	61.3	51.8	51.8										52.3	
Hyd. 545	Aug. 4	39	47	00	70	16	30	784	74	72	61.1	52.6	52.2	45.9	40.9			39.6	39.3				36.6	
2167	Aug. 6	39	55	30	69	43	00	84	77	74	49.8	52.8	52.3										36.6	
Hyd. 519	Aug. 20	39	34	00	71	24	30	925	75	74	66.9	54.8	51.2	43.8	40.6	30.1	40.6						38.3	
Hyd. 552	Aug. 23	39	40	05	69	23	00	1,068	75	74	64.2	53.9	52.5	44.3	40.7	39.3	40.6		39.2	39.1	38.6		36.3	
Hyd. 553	Sept. 7	37	41	00	69	15	16	2,704	79	81	82	79.8	72.7	57.3	44	45.6	40.5		39.6	39.6	39.5		36.8	
2224	Sept. 8	36	16	00	68	21	00	2,574	79	80	79.8	77.1	64.8	61.6	63.8	52.5	44.9	41	40.2				36.7	
2225	Sept. 9	36	05	30	69	51	45	2,512	77	81	78.3	71.9	67.6	64.3	64.8	60	51.1		44.7	41.4	40.2		36.8	
2227	Sept. 10	36	55	23	71	55	00	2,160	81	82	82.2	77.1	71.4	68.2	62.8	57.7	52.7		42.5	40.4	39.3		36.8	
Hyd. 554	Sept. 11	37	22	53	73	05	30	1,606	78	78	76	63.2	63.8	48	40.3	39.7	39.4						39.7	
Hyd. 556	Sept. 12	39	40	00	73	03	00	474	70	74	61.8	52.9	49.3	43.5	40.4								38.7	
Hyd. 557	Sept. 13	39	03	30	72	12	30	831	66	72		66.8	53.5	43.1	40.6			39.7	39.2					

Record of serial temperatures taken by the U. S. Fish Commission steamer Albatross during the year 1885.

[143]

Serial number.	Date.	Position.		Depth.	Character of bottom.	Temperature (degrees).																	
		Latitude N.	Longitude W.			Air.	Surface.	25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	Bottom.			
	1885.	° ' " "	° ' " "	Fath.																			
2393	Mar. 13	28 43 00	87 14 30	825	gy. M.	70	64	65.2	64.0	57.9	.....	45.7	43.0	.....	.....	.....	.....	.....	.....	.....	.....	41.0	
Hyd. 699	Apr. 1	31 54 45	79 17 00	86	gy. M. brk. Sh.	66	69	68.9	68.4	66.3	663.3	660.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	60.3
Hyd. 702	Apr. 3	36 30 00	73 14 00	2,340	bu. Oz.	68	72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36.8
Hyd. 703	Apr. 4	36 45 00	73 28 00	1,646	bu. Oz.	68	66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37.2
Hyd. 704	Apr. 4	36 57 30	73 47 00	1,436	bu. Oz.	61	53	50.8	49.9	52.2	43.0	.....	39.5	.....	38.4	38.6	.....	.....	.....	.....	.....	.....	37.5
Hyd. 705	Apr. 4	37 01 68	74 10 00	1,208	bu. Oz.	50	52	50.1	44.0	51.3	44.0	.....	39.7	.....	38.3	40.8	.....	.....	.....	.....	.....	.....	37.5
Hyd. 712	Apr. 5	37 04 30	74 32 00	98	bk. S.	43	49	50.8	48.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47.2
2542	Aug. 7	40 60 15	70 42 20	129	S. brk. Sh.	73	76	59.8	56.3	49.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39.6
Hyd. 819	Aug. 9	39 49 00	70 42 00	432	gy. M.	71	77	59.5	57.0	49.8	44.0	40.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39.6
Hyd. 854	Aug. 10	39 41 00	71 42 00	378	gn. S.	76	77	62.5	45.8	49.0	42.1	40.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37.3
2564	Aug. 11	39 22 00	71 23 30	1,396	gy. Oz.	79	78	61.6	58.1	51.3	48.8	40.3	40.0	39.4	39.0	39.2	38.8	38.5	41.3	.....	.....	.....	37.3
2565	Aug. 23	33 19 20	69 02 30	2,069	br. & gy. Oz.	72	77	76.8	53.7	53.1	54.2	49.9	40.1	39.4	32.7	39.0	38.0	38.8	38.6	.....	.....	.....	36.2
2566	Aug. 29	37 23 00	68 09 00	2,620	gy. Oz.	75	60	81.2	72.2	66.6	64.6	63.0	59.1	53.7	45.3	40.7	40.2	39.5	39.3	.....	.....	.....	36.4
2571	Sept. 1	40 09 30	67 09 00	1,556	gy. Glob. Oz.	75	72	65.7	60.2	54.8	45.7	41.8	40.0	39.7	38.8	39.8	.....	.....	.....	.....	.....	.....	37.8
2573	Sept. 2	40 34 18	66 09 00	1,742	gy. M. S.	71	71	68.3	61.0	52.8	49.4	42.0	40.2	39.7	39.1	39.4	36.6	36.8	38.1	.....	.....	.....	37.3
2575	Sept. 3	41 07 00	65 26 30	1,710	gy. Oz.	64	71	71.2	59.1	52.8	47.0	41.3	40.2	39.8	39.3	38.7	38.8	38.4	38.0	.....	.....	.....	37.1
2628	Oct. 21	32 24 00	76 35 30	328	yl. M.	70	77	79.9	77.6	59.0	48.0	45.5	40.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	38.5

* 5 fathoms.

† 10 fathoms.

‡ 15 fathoms.

§ 25 fathoms.

|| 50 fathoms.

¶ 250 fathoms.

LISTS OF DREDGING STATIONS.

Record of speed of five trawlings and soundings, July, 1888, U. S. Fish Commission steamer Albatross, Lieut. Commander Z. L. Tanner, U. S. Navy, commanding.

TRAWL—GOING DOWN.

Fathoms.	Number of station.				
	2038.	2039.	2040.	2041.	2042.
	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>
Surface to 100	4 00	5 15	7 20	3 55	4 00
100 to 200	5 00	4 05	4 10	4 30	4 00
200 to 300	5 00	3 50	3 15	4 00	3 45
300 to 400	4 00	4 00	4 25	4 30	5 30
400 to 500	4 40	5 30	9 05	4 30	3 55
500 to 600	4 00	4 45	4 15	4 48	3 30
600 to 700	4 00	3 53	4 00	4 45	3 30
700 to 800	5 20	4 02	3 30	4 47	5 00
800 to 900	4 45	4 15	4 00	4 45	4 00
900 to 1,000	4 10	4 00	3 40	4 47	4 30
1,000 to 1,100	4 05	7 35	4 20	4 47	4 00
1,100 to 1,200	4 50	6 15	3 40	5 05	4 00
1,200 to 1,300	9 20	7 25	4 15	4 20	4 10
1,300 to 1,400	6 00	5 00	4 15	4 20	4 10
1,400 to 1,500	5 50	5 00	3 40	4 20	4 00
1,500 to 1,600	4 30	4 30	4 40	4 30	4 20
1,600 to 1,700	4 30	4 30	4 35	4 40	4 10
1,700 to 1,800	6 00	4 00	7 40	4 25	4 15
1,800 to 1,900	5 15	8 00	6 20	4 20	3 50
1,900 to 2,000	4 15	11 45	5 25	4 10	3 40
2,000 to 2,100	5 05	7 45	5 10	4 10	3 45
2,100 to 2,200	5 00	7 00	5 10	4 10	.....
2,200 to 2,300	4 35	7 00	7 00	*2 00	.....
2,300 to 2,400	4 20	5 00	6 15	.....	.....
2,400 to 2,500	4 00	5 00	7 00	.....	.....
2,500 to 2,600	9 30	6 45	6 45	.....	.....
2,600 to 2,700	5 30	4 50	4 00	.....	.....
2,700 to 2,800	.....	5 00	3 30	.....	.....
2,800 to 2,900	.....	9 55	4 00	.....	.....
2,900 to 3,000	.....	5 00	3 40	.....	.....
3,000 to 3,100	.....	4 20	.....	.....	.....
3,100 to 3,200	.....	6 15	.....	.....	.....
Total time	2 17 30	3 02 15	2 28 40	1 40 32	1 26 00
Average speed per 100 fathoms	5 05	5 42	4 57	4 28	4 06
Depth in fathoms	2,033	2,369	2,226	1,608	1,555

* To 2,250 fathoms.

TRAWL—COMING UP.

100 to surface	4 30	5 15	6 00	4 40	3 25
200 to 100	4 00	3 45	3 00	4 40	3 25
300 to 200	4 00	4 00	3 31	4 40	3 25
400 to 300	5 55	5 30	3 31	4 40	3 25
500 to 400	4 00	4 00	3 31	4 40	3 25
600 to 500	4 00	3 30	3 31	4 40	3 20
700 to 600	2 40	4 00	3 31	4 40	3 20
800 to 700	4 15	3 45	3 31	5 45	3 20
900 to 800	3 30	4 00	3 31	4 30	3 20
1,000 to 900	3 00	4 00	3 31	4 25	3 45
1,100 to 1,000	3 00	3 45	3 32	4 55	5 00
1,200 to 1,100	4 00	4 30	4 35	5 10	4 00
1,300 to 1,200	3 30	4 15	4 00	6 15	5 00
1,400 to 1,300	3 30	4 55	4 00	7 00	6 45
1,500 to 1,400	4 00	4 25	4 00	7 00	6 45
1,600 to 1,500	4 15	3 55	4 00	10 00	5 45
1,700 to 1,600	9 00	3 30	3 25	6 45	0 05
1,800 to 1,700	5 00	4 00	3 40	6 48	7 48
1,900 to 1,800	4 45	4 00	4 15	6 48	7 48
2,000 to 1,900	5 00	4 00	10 05	6 48	7 47
2,100 to 2,000	4 30	4 00	5 45	6 48	.....
2,200 to 2,100	4 30	4 00	5 25	6 45	.....
2,300 to 2,200	4 30	4 00	5 50	5 45	.....
2,400 to 2,300	5 00	4 00	5 30	.....	.....
2,500 to 2,400	4 00	5 00	6 10	.....	.....
2,600 to 2,500	5 00	4 30	12 30	.....	.....
2,700 to 2,600	6 00	4 40	6 45	.....	.....
2,800 to 2,700	.....	4 25	6 45	.....	.....
2,900 to 2,800	.....	5 20	8 30	.....	.....
3,000 to 2,900	.....	5 10	7 00	.....	.....
3,100 to 3,000	.....	6 15	.....	.....	.....
3,200 to 3,100	.....	10 15	.....	.....	.....
Total time	2 00 20	2 24 15	2 32 50	2 14 10	1 40 45
Trawl on bottom	1 14 30	1 47 30	2 37 20	1 51 25	1 26 50
Average speed per 100 fathoms	4 27	4 30	5 05	5 44	4 48

Record of speed of five trawlings and soundings, July, 1883, etc.—Continued.

SOUNDING—GOING DOWN.

Fathoms.	Number of station.				
	2038.	2039.	2040.	2041.	2042.
	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>	<i>h. m. s.</i>
Surface to 100	1 02	0 57	1 30	1 20	1 00
100 to 200	0 56	0 55	1 30	1 20	0 55
200 to 300	0 57	1 00	1 30	1 20	4 00
300 to 400	1 00	0 46	1 30	1 20	6 30
400 to 500	1 02	0 58	1 30	1 20	1 25
500 to 600	1 02	1 02	1 30	1 15	1 03
600 to 700	1 07	1 00	1 30	1 25	1 17
700 to 800	1 09	1 02	1 30	1 18	1 15
800 to 900	1 08	1 00	1 30	1 22	1 25
900 to 1,000	1 16	1 07	1 30	1 17	1 20
1,000 to 1,100	1 14	1 06	1 30	1 23	1 25
1,100 to 1,200	1 17	1 04	1 30	1 21	1 25
1,200 to 1,300	1 07	1 08	1 30	1 19	1 30
1,300 to 1,400	1 17	1 10	1 30	1 20	1 25
1,400 to 1,500	1 16	1 11	1 30	1 20	* 1 00
1,500 to 1,600	1 15	1 14	1 30	to 24	.....
1,600 to 1,700	1 22	1 05	1 00	.....	.....
1,700 to 1,800	1 28	1 12	1 45	.....	.....
1,800 to 1,900	2 40	1 18	1 20	.....	.....
1,900 to 2,000	2 33	1 16	1 30	.....	.....
2,000 to 2,100	.....	1 15	1 20	.....	.....
2,100 to 2,200	.....	1 20	\$0 20	.....	.....
2,200 to 2,300	.....	|| 1 00	.....	.....	.....
Total time	27 08	24 05	31 15	19 30	26 55
Average speed per 100 fathoms	1 21	1 01	1 21	1 13	1 43
Depth in fathoms	2,033	2,369	2,226	1,608	1,555

* To 1,480 turns.
† To 1,530 turns.

‡ To 1,942 turns.
§ To 2,125 turns.

|| To 2,276 turns.

SOUNDING—COMING UP.

100 to surface	1 00	1 00	1 05	1 25	1 00
200 to 100	1 27	1 00	1 30	1 25	0 57
300 to 200	0 37	1 00	1 30	1 25	0 58
400 to 300	0 37	1 00	1 30	1 25	1 00
500 to 400	0 35	1 00	1 30	1 25	1 00
600 to 500	0 50	1 00	1 30	1 25	1 00
700 to 600	0 38	1 00	1 30	1 20	1 00
800 to 700	0 32	0 57	1 30	1 20	1 05
900 to 800	0 40	0 50	1 30	1 25	1 07
1,000 to 900	0 47	0 51	1 30	1 30	1 05
1,100 to 1,000	0 46	0 52	1 45	1 25	1 10
1,200 to 1,100	0 45	1 05	1 45	1 25	1 15
1,300 to 1,200	0 47	1 05	1 45	1 25	1 14
1,400 to 1,300	0 51	1 05	1 45	1 25	1 13
1,500 to 1,400	0 52	1 10	2 00	1 30	1 00
1,600 to 1,500	0 57	1 15	1 05	1 00	.....
1,700 to 1,600	0 55	1 10	1 40	.....	.....
1,800 to 1,700	1 00	1 27	1 30	.....	.....
1,900 to 1,800	1 20	1 30	1 30	.....	.....
2,000 to 1,900	0 40	1 33	1 30	.....	.....
2,100 to 2,000	.....	2 15	1 30	.....	.....
2,200 to 2,100	.....	2 25	0 30	.....	.....
2,300 to 2,200	.....	2 00	.....	.....	.....
Total time	12 38	28 30	32 50	21 15	16 04
Average speed per 100 fathoms	0 56	1 12	1 28	1 19	1 02

The "Total time" is not the sum of the partial times, but the whole time employed for the trawling or sounding, including preparation for it.