this reduction has not been carried out. According to Grassi, the increase of density in a water of 1.026 at one atmosphere is 0.00079 per 100 fathoms. From Mr. Buchanan's observations on the compressibility of distilled water, of sea water, and of glass, it was found that sea water was compressed approximately in the ratio 0.0009 for every hundred fathoms of depth in sea water, so that if the density of a water at the surface is 1.027, at 1000 fathoms it is 1.036, at 2000 fathoms 1.045, at 3000 fathoms 1.054, and at 4000 fathoms it is 1.063.

In Table I. the density of sea water of average concentration is given for every whole centigrade degree from 0° C. to 31° C. It will be observed that its density at 15°.56 C.

0 1·02818 1·0514 0·9511 16 1·02590 0·9989 1·0011 1 813 468 553 17 567 966 034 2 807 422 595 18 542 944 056 3 799 382 632 19 516 922 079 4 790 343 669 20 490 905 096 5 779 309 700 21 463 884 117 6 768 271 737 22 436 869 132 7 755 238 768 23 408 849 153 8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202	Tempera- ture, t° C.	Density at t° C., D _t .	$\phi(t) = \frac{D_t}{D_{1556}}.$	$\frac{1}{\frac{\phi(t)}{D_{13:55}}} = \frac{1}{D_t}.$	Tempera- ture, t° C.	Density at t° C., D ₁ .	$\frac{\phi(t)}{D_{t}} = \frac{D_{t}}{D_{1576}}.$	$\frac{1}{\phi(t)} = \frac{D_{1546}}{D_t}.$
1 813 468 553 17 567 966 034 2 807 422 595 18 542 944 056 3 799 382 632 19 516 922 079 4 790 343 669 20 490 905 096 5 779 309 700 21 463 884 117 6 768 271 737 22 436 869 132 7 755 238 768 23 408 849 153 8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 <	0	1.02818	1.0514	0.9511	16	1.02590	0.9989	1.0011
2 807 422 595 18 542 944 056 3 799 382 632 19 516 922 079 4 790 343 669 20 490 905 096 5 779 309 700 21 463 884 117 6 768 271 737 22 436 869 132 7 755 238 768 23 408 849 153 8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	1	813	468	553	17	567 [.]	966	034
3 799 382 632 19 516 922 079 4 790 343 669 20 490 905 096 5 779 309 700 21 463 884 117 6 768 271 737 22 436 869 132 7 755 238 768 23 408 849 153 8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	2	807	422	595	18	542	944	056
479034366920490905096577930970021463884117676827173722436869132775523876823408849153874120579924380834168972617383025351815188107101428602632180220211692116885272907842211267408691528259766240	3	799	382	632	19	516	922	079
577930970021463884117676827173722436869132775523876823408849153874120579924380834168972617383025351815188107101428602632180220211692116885272907842211267408691528259766240	4	790	343	669	20	490	905	096
676827173722436869132775523876823408849153874120579924380834168972617383025351815188107101428602632180220211692116885272907842211267408691528259766240	5	779	309	700	21	463	884	117
7 755 238 768 23 408 849 153 8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	6	768	271	737	22	436	869	132
8 741 205 799 24 380 834 168 9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	7	755	238	768	23	. 408	849	153
9 726 173 830 25 351 815 188 10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	8	741	205	799	24	380	834	168
10 710 142 860 26 321 802 202 11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	9	726	173	830	25	351	815	188
11 692 116 885 27 290 784 221 12 674 086 915 28 259 766 240	10	710	142	860	26	321	802	202
12 674 086 915 28 259 766 240	11	692	116	885	27	290	784	221
	12	674	086	915	28	259	766	240
13 654 061 940 29 227 749 258	13	654	061	940	29	227	749	258
14 634 037 964 30 195 726 282	14	634	037	964	30	195	726	282
15 613 013 987 31 163 705 304	15	613	013	987	31	163	705	304

TABLE I.1-Density of Standard Sea Water (D15-56 = 1.026) at different Temperatures.

¹ Abridged from the Report on Researches into the Composition of Ocean-Water, Phys. Chem. Chall. Exp., part i. p. 70, 1884.