itself, and all the materials carried into deep water, are compressed. Water is, however, only to a slight extent compressible, so the effect of pressure is not so great as is popularly supposed. Tait and Buchanan have shown conclusively that compressibility decreases slightly but sensibly with increase of pressure. V. W. Ekman has recently made a very careful investigation on the compression of sea-water, and has published *Tables for Sea-Water under Pressure*. From his tables we may easily compute the actual density with compression, when depth, salinity, and temperature are known.

Let us take, as an example, the conditions at Station 63, near the Sargasso Sea, 22nd June 1910, as shown in the following table, giving for the depths specified: (1) the temperature, (2) the salinity, (3) the density disregarding the compression (calculated by means of Knudsen's Tables), and (4) the actual density with compression (calculated from Ekman's Tables):—

Depth.		Temp. °C.	Salinity per thousand.	Density.	
Metres.	Fathoms.			Without compression S.	Actual density S_1.
0	0	22.30	36.44	1.02525	1.02525
183	100	16.71	36.27	1.02658	1.02741
366	200	15.22	36.00	1.02671	1.02835
549	300	12.35	35.54	1.02696	1.02943
732	400	8.41	35.11	1.02732	1.03067
915	500	5.97	35.16	1.02770	1.03190
1830	1000	3.54	34.94	1.02781	1.03631
3000	1640	2.90	34.92	1.02786	1.04171
4000	2187	2.35	34.88	1.02787	1.04621

It is seen that the density is practically identical, for instance, at 3000 metres and at 4000 metres when leaving compression out of account, whereas a considerable difference was actually produced by the compression. At 4000 metres the effect of the pressure of 400 atmospheres was so great that the density increased from 1.02787 to 1.04621, equal to an increase of weight of $1\frac{3}{4}$ per cent. As a matter of fact the water at 4000 metres has become only $1\frac{3}{4}$ per cent heavier by reason of the compression; a fairly delicate weighing would have been necessary to detect this increase. The case may also be stated thus: 1 litre of water at 4000 metres weighs 1046 grams; if