

Some minute creatures are crushed and broken or lose their characteristic form, even when they are treated thus tenderly, and can only be seen in full beauty as it were accidentally. On one occasion in the Pacific, when Mr Murray was out in a boat in a dead calm collecting surface creatures, he took gently up in a spoon a little globular gelatinous mass with a red centre, and transferred it to a tube. This globule gave us our first and last chance of seeing what a Pelagic Foraminifer really is when expanded and uninjured.

The Sieves.—A number of tubs were ranged on the bridge and filled with sea-water, when the dredge or trawl was nearing the surface; two at least of these were provided with sets of sieves, so arranged that the lowest sieve fits freely into the bottom of the tub, and the three succeeding sieves fit freely one within another (fig. 11). Each sieve is provided with a pair of iron handles through which the hand can pass easily, and the handles of the largest sieve are made long, so that the whole nest can be lifted without stooping or putting the arms into the water. The upper smallest sieve is usually deeper than the others; it is made of a strong open net of brass wire, the meshes $\frac{1}{2}$ inch to a side. The second sieve is a good deal finer, the meshes $\frac{1}{4}$ inch to a side; the third is finer still, and the fourth so close as to allow the passage of mud or very fine sand only. The sieves are put into the tub and the tub filled up to the middle of the top sieve with sea-water. The top sieve is then half-filled with the contents of the dredge, and the set of sieves are gently moved up and down in the water. It is of great importance not to give any rotatory motion to the sieves in this part of the process, for such is very ruinous to fragile organisms; the sieves should be gently churned up and down whether singly or together. The result is that the rougher stones and gravel and the larger organisms are washed and retained in the upper sieve; the fine mud or sand passés through all the sieves and subsides into the bottom of the tub, while the three remaining sieves contain in graduated series the objects of intermediate size. The sieves are examined carefully in succession, and the organisms removed with a small pair of bone or brass forceps.

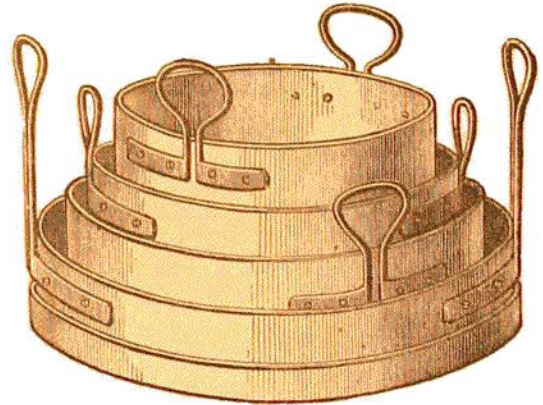


FIG. 11.—Set of Dredging Sieves.

The Work-room.—Two sets of cabins were specially built on the after part of the main-deck for the different departments of the scientific work. The chart-room, the headquarters of the naval scientific staff, was a commodious apartment on the starboard side, with ranges of shelves stocked with charts, and hydrographic, magnetic, and meteorological instruments. All the work in these departments, as well as the whole of the