

are all of the same height, 9 inches, and they pack conveniently upright in cases with wooden partitions and hinged lids, and padded at the bottom with cork. These jars are extremely convenient, and wonderfully cheap: 200 cases complete, containing 2300 jars, were supplied by E. Breffit and Co., Upper Thames Street, at a cost of 70*l.* Besides these large store-bottles, there are many thousands of smaller stoppered bottles and corked test-tubes of different sizes and forms. Larger animals are packed in cylinders of zinc, which are made on board by a tinsmith as required.

For preserving salpæ, heteropods, and other surface animals containing much water, a solution of picric acid in water has been found very useful. A saturated solution at the ordinary temperature of England (say 5° C.) answers well, but picric acid becomes rapidly more soluble as the temperature rises; and in the tropics a saturated solution is much too strong, and shrivels up delicate tissues. We have now on board a *Carinaria*, which, having lost its shell, was put into the picric-acid solution as an experiment; and after ten months it is still wonderfully perfect, retaining the form and the transparency of the thick gelatinous mantle unimpaired. *Ptero-trachea* and *Firola* have been similarly prepared with success, and a portion of a huge *Pyrosoma*, five feet long, which was brought up in the trawl thus treated, is in excellent condition. Soft and pulpy animals, steeped for a few hours in a weak solution of chromic acid before being put in alcohol, have their tissues hardened, and retain their form. This process answers well for oceanic cephalopods and holothurians, which should be put in living, and allowed to die in the acid. A very weak solution of osmic acid is of great value for killing and hardening small gelatinous animals for microscopic preparations. A drop of a solution, one-tenth to one-fortieth per cent., may be added to a watch-glass of sea-water in which the creatures are; but they must not be allowed to remain more than a few minutes in