It might be supposed that these shells and other surface animals would consume so long a time in dropping to the bottom in great depths that their soft tissues would be decomposed, and that they would have ceased to be serviceable as food by the time they reached the ocean bed. Such is, however, not the case, partly because the salt water of the sea exercises a strongly preservative effect on animal tissues, partly because the time required for sinking is in reality not very great.

In order to test the matter for myself I made the following experiment. I took a dead Salpa, of about 2 inches in length, and placed it in a glass cylinder full of water, and 3 inches in diameter. I allowed the Salpa to fall from the surface of the water in the cylinder to the bottom a number of times, and noted carefully the time which it took to traverse this distance, which was about 8 inches. I found that on an average it took 20 seconds to fall the 8 inches. This gives at the same rate, without allowance for acceleration, a distance of a fathom to be traversed in three minutes, or 2,000 fathoms in four days four hours.

I allowed the Salpa to remain in the sea water in the cylinder for a long time. It was still not greatly decomposed after having remained in the same water for a month, whilst the ship was in the tropics; the nucleus was after this interval still undestroyed. The dead animal might have thus sunk to the bottom in the greatest depths almost six times over without having become so much decomposed as to be unserviceable for food to deep-sea animals.

We obtained by our dredgings several interesting proofs of the feeding of deep-sea animals on *débris* derived from neighbouring shores. Thus, off the coast of New South Wales we dredged from 400 fathoms a large Sea-Urchin which had its stomach full of pieces of a Sea Grass (*Zostera*) derived from the coast above.

Again, we dredged between the New Hebrides and Australia from 1,400 fathoms, a piece of wood and half a dozen examples of a large palm fruit as large as an orange. In one of these fruits which had hard woody external coats, the albumen was still preserved and perfectly fresh in appearance, and white, like that of a ripe cocoanut. The hollows of the fruits were occupied by a small Lamellibranch Mollusc and a Gasteropod, and the husks and albumen were bored by a small Teredo or allied Mollusc. The fibres of the husks of the fruits had amongst them small Nematoid Worms.

We dredged up similar land vegetable *débris* on many other occasions, of which I will cite some, because they are interest-