

ing in the sea and others in fresh water. This is in itself an indication that no very wide gulf is actually fixed between fresh-water and marine organisms, and that in point of fact, given suitable conditions, representatives of the most diverse classes have been able to accommodate themselves to life in a medium of greater or less density.

But we have direct evidence on this head in certain cases. The probable existence of relict seas has already been referred to, and they presuppose the survival of ocean forms in fresher water, although the gradual modification may have taken place in past geological time.

Yet there are instances known which seem clearly to show that the process of accommodation to a different medium still proceeds, and that quite a number of forms are capable of withstanding important changes in salinity. The hydroid polype *Cordylophora lacustris* was originally discovered in brackish water; it is common in the Norfolk Broads, where there is a considerable admixture of seawater, and is known elsewhere as an estuarine form. Still, it has been able to migrate into entirely fresh water, for it has been found in the Seine near Paris, in the fresh-water tanks of the Jardin des Plantes, and has actually invaded the water-mains of the city of Hamburg.<sup>1</sup>

Another case which indicates the possibilities for an even more sensitive type, is that of *Crambessa tagi*, a large Discomedusan which commonly ascends the river Tagus until it reaches comparatively fresh water.<sup>2</sup>

A more extreme example, embracing animals from several groups, is afforded by the fauna of certain artificial ponds at Port Canning, Lower Bengal.<sup>3</sup> Situated in the neighbourhood of the Ganges delta, these ponds are sometimes in communication with the estuary, from which they have undoubtedly derived the marine forms which interest us. At other times, however, they are completely isolated, and may become even more strongly saline than the sea through continued evaporation, or during the rainy season may become nearly fresh. The most striking of the marine types referred to, which are capable of withstanding such profound changes in the nature of the water, are a sea-anemone (*Metridium*), a Hydromedusan with hydroid stage (*Irene*), a Cirripede (*Balanus*), a cheilostomatous Polyzoan (*Membranipora*), and a Polychæte worm.

Finally, there is an interesting account given by von Kennel<sup>4</sup> of the inhabitants of a lagoon on the east coast of Trinidad, which at times is flooded by the sea, and at other times becomes almost

<sup>1</sup> Semper, *The Natural Conditions of Existence as they affect Animal Life*, 5th ed., London, 1906, p. 152.

<sup>2</sup> Haeckel, *Zeitschr. f. wiss. Zool.*, Bd. xix., 1869, p. 509.

<sup>3</sup> Annandale, *Records Indian Museum*, vol. i., 1907, p. 35.

<sup>4</sup> *Arb. Zool. Inst. Würzburg*, Bd. vi., 1883, p. 276.