

fishes of Egypt, affirms that three species of mullet reached a large size and were of finer flavour after retention in fresh water than those in salt or brackish water. In Florida red fish (*Pagrus*) confined in a fresh-water lake were found 38 pounds in weight, and improved in delicacy of flavour, while numerous other marine species survived the change, but some sharks and sting-rays succumbed, owing, it was surmised, to the winter cold of 1885. The shark tribe are essentially marine, and ill-able to adapt themselves to non-marine surroundings. I know of one record only of a marine species found far from the ocean, viz., a questionable instance of a dogfish, which was stated to have followed the salmon schools for a distance of 1,500 miles from the Pacific shore. The fish was recorded to have been killed up the Bruno River, Nevada, by the wheel of a waggon crossing a ford. There are, it is true, some fresh-water sharks, like *Carcharias gangetica* in the Ganges, and the Senegal saw-fish, also Indian and South American rays (*Narcine*, *Torpedo*, &c.). Certain whales also are non-marine, such as the small *Platanista gangetica* in the Ganges, and *Inia* and *Pontoporia*, belonging to the Grampus and Porpoise family, and found in the Amazon and other South American rivers. The white beluga ascends the St. Lawrence for 150 miles, and goes up the Saguenay River for some distance.

The carps, of which our suckers and mullets are examples, are credited with much plasticity. The German carp can not only endure but survive changes of a remarkable character, living in mud and existing far from lakes or streams for a long period. Certain suckers can endure alkaline and other chemical impurities, and an extraordinarily high temperature. In that wonderful volcanic geyser area, the Yellowstone Park, Professor Jordan found suckers and chubs in water of 85° F. and 88° F. and young trout in a temperature of about 75° F.

The catfish and bull-heads are notoriously tenacious of life. Thoreau, indeed, said that *Ameiurus nebulosus* opens and shuts its mouth for half an hour after its head has been cut off; but there are only one or two questionable instances of their surviving removal from favourable surroundings. More experiments are, however, desirable. If, as Bloch stated, the delicate grayling (*Thymallus*) can flourish in brackish water, contrary to Sir