

sea for the purpose of producing their young, which are seen returning into the fresh water by myriads, extremely small in size, but possessing the power of surmounting every obstacle which occurs in the course of a river, by applying their slimy and glutinous bodies to the surface of rocks, or the gates of a lock, even when dry, and so climbing over it.* Before the year 1800 there were no eels in Lake Wener, the largest inland lake in Sweden, which discharges its waters by the celebrated cataracts of Trolhättan. But I am informed by Professor Nilsson, that since the canal was opened uniting the river Gotha with the lake by a series of nine locks, each of great height, eels have been observed in abundance in the lake. It appears, therefore, that though they were unable to ascend the falls, they have made their way by the locks, by which in a very short space a difference of level of 114 feet is overcome.

Gmelin says, that the *Anseres* (wild geese, ducks, and others) subsist, in their migrations, on the spawn of fish; and that oftentimes, when they void the spawn, two or three days afterwards, the eggs retain their vitality unimpaired.† When there are many disconnected freshwater lakes in a mountainous region, at various elevations, each remote from the other, it has often been deemed inconceivable how they could all become stocked with fish from one common source; but it has been suggested, that the minute eggs of these animals may sometimes be entangled in the feathers of waterfowl. These, when they alight to wash and plume themselves in the water, may often unconsciously contribute to propagate swarms of fish, which, in due season, will supply them with food. Some of the water-beetles, also, as the *Dyticidæ*, are amphibious, and in the evening quit their lakes and pools; and, flying in the air, transport the minute ova of fishes to distant waters. In this manner some naturalists account for the fry of fish appearing occasionally in small pools caused by heavy rains; but the showers of small fish, stated in so many accounts to have fallen from the atmosphere, require farther investigation.

Geographical Distribution and Migrations of Testacea.

The Testacea, of which so great a variety of species occurs in the sea, are a class of animals of peculiar importance to the geologist; because their remains are found in strata of all ages, and generally in a higher state of preservation than those of other organic beings. Climate has a decided influence on the geographical distribution of species in this class; but as there is much greater uniformity of temperature in the waters of the ocean, than in the atmosphere which invests the land, the diffusion of many marine mollusks is extensive.

Causes which limit the extension of many species. — Some forms attain their fullest development in warm latitudes; and are often exclusively confined to the torrid zone, as *Nautilus*, *Harpa*, *Terebellum*, *Pyramidella*, *Delphinula*, *Aspergillum*, *Tridacna*, *Cucullæa*,

* Phil. Trans. 1747, p. 395.

† Amœn. Acad., Essay 75.