

The tow-net collections during the 'Challenger' expedition gave frequent illustrations of this fact by the dead animals collected in such positions off the coast of North America, off the Cape of Good Hope, in the North Pacific, and elsewhere. Dr. O. Fischer records a remarkably large number of bacteria on the borders of such meeting currents. This destruction of life is not limited to minute pelagic organisms, but occasionally affects animals which live at the bottom of the sea. Some remarkable instances of this kind have been observed between depths of 50 and 100 fathoms off the eastern coast of the United States.

"Lieutenant-Commander Tanner, commanding the United States Fish Commission steamer 'Albatross,' reports that 'on the morning of July 20, 1884, in lat. $37^{\circ} 47'$ N., long. $74^{\circ} 15'$ W., near the 100-fathom line, we passed numerous dead octopods floating on the surface. This unusual sight attracted immediate notice and no little surprise among those who knew their habits, as it was not suspected at first that they were dead. We lowered a boat and picked up three or four specimens, which we were unable to identify, but in general appearance they resembled *Alloposus mollis* (Verrill) of unusually large size. These dead cephalopods were seen frequently on the 100-fathom line and outside of it, from the position given above to the meridian of Montauk Point, a distance of 180 miles. They were less numerous, however, as we went to the northward and eastward. Several dead squid were seen also, and two specimens were picked up with a scoop-net.'

"A still more remarkable instance of this kind is furnished in the well-known case of the destruction of the tile-fish (*Lopholatilus chamaeleonticeps*) in the same locality in the spring of 1882. In the months of March and April 1882, vessels arriving at Philadelphia, New York, and Boston reported having passed large numbers of dead or dying fish scattered over an area of many miles, and from descriptions and the occasional specimens brought in, it was evident that the great majority of these were tile-fish. Naturally, these fish were not evenly distributed over all the area in which they were seen, some observers reporting them as scattering, and others as at times so numerous that there would be as many as fifty on the space of a rod square. As one account after another came in, it became apparent that a vast destruction of fish had taken place, for vessels reported having sailed for forty, fifty, and sixty miles through floating fish; and in one case, the schooner