

southern zones of latitude, and not in the intervening tropics, been taken into consideration.

SPECIES CAPTURED  
IN DEPTHS  
GREATER THAN,  
AND LESS THAN,  
500 FATHOMS.

Let us now limit our attention to species taken in the southern zone of latitude in depths greater than 500 fathoms which may be considered as representing the deep-sea fauna. To the south of the tropic of Capricorn the Challenger procured 793 species from depths greater than 500 fathoms, all of which live on the bottom or close to it. 610 of these, or 76·9 per cent., are limited to the southern zone of latitude, 48 species, or 6 per cent., occur in all the three zones, and 52 species, or 6·5 per cent., occur in the northern and southern zones and not in the intervening tropics. Nearly similar results are obtained by limiting our examination to the species captured deeper than 1000 fathoms, 1500 fathoms, and so on. If we now turn our attention to the animals captured in the shallower zones in the southern zone of latitude, it will be found that the species captured in depths less than 500 fathoms numbered 1875, and of these 102 species, or 5·4 per cent., occur in the northern zone, and not in the intervening tropics. Speaking generally, the percentage of species occurring in all the three great zones of latitude is slightly higher in the deeper zones than in the shallower, but the percentage of species which occur in the northern and southern zones, and not in the intervening tropics, remains nearly the same in deep and in shallow water when the species given on pages 1446 to 1450 are taken into consideration. From this examination again, it does not appear that there is any sufficient evidence for the belief in a universal deep-sea fauna of great antiquity. There are many indications that the migration into the deep sea has taken place continuously since Mesozoic times, when possibly cooling set in at the poles, and is even now going on. The indications that this migration is taking place principally from polar regions are more distinct than those of migration from any other quarter, although instances might be cited of groups now living in tropical regions about the mud-line which have apparently a much wider distribution in the deep sea.

DISTRIBUTION OF  
THE GENUS  
SEROLIS.

In all the shallow-water dredgings about the islands of the Great Southern Ocean, such as Kerguelen, Heard Island, the Falklands, and Crozets, numerous species of the Isopod genus *Serolis* were procured on muddy deposits. Species of this genus, modified for deep-sea life, were likewise obtained in diminished numbers at great depths in high southern latitudes, and some large species were dredged in very deep water as far north as the equator, although the genus is not represented in the littoral region in these latitudes, and, with one doubtful exception, there do not seem to be any representatives of the genus north of the equator. This may be taken as an instance of how animals have spread from the mud-line to deeper zones and from the Antarctic area northward over the floor of the ocean, but it is altogether improbable that littoral species can, as has been suggested, pass by way of the deep sea from the littoral zone of one polar region to that of the other.