

The general results bearing on the distribution, in the different zones of depth, of the Benthos animals procured by the Challenger, as well as their distribution in the three great zones of latitude above indicated, are exhibited in Tables I. and II. on page 1430. An examination of Table II. shows that the species common to all the three zones of latitude on the whole increase in number as the depth of the zone decreases, and the same is true of the species taken only in the northern and southern zones and not within the tropics; the increase is not quite regular throughout the shallower zones, owing, apparently, to the relatively small number of species preserved from the Challenger's dredgings in the shallow waters of the northern temperate regions. The percentage, however, of the species from any one zone of depth which are common to all the three zones of latitude or to the northern and southern zones and not present within the tropical zone, is less in the shallower than in the deeper zones. In all the deeper zones the number of species from any one zone which occur in all the three zones of latitude in any depth whatever does not exceed 9 per cent. of the total number taken in that zone of depth. For instance, of the 153 species taken in depths beyond 2500 fathoms, only 14 species are found in all the three zones of latitude, viz., the tropical, northern, and southern zones; 8 are common to the northern and southern zones, but do not occur in the intervening tropical zone; 5 are common to the tropical and southern zones, and 6 common to the tropical and northern zones. Again, of the 493 species taken in the zone between 1000 and 1500 fathoms, only 34 are common to the three great zones of latitude in any depth whatever, 28 are common to the northern and southern zones, 26 common to the tropical and southern zones, and 48 common to the tropical and northern zones. It thus appears that only a relatively small percentage of Benthos animals have a very wide distribution over the floor of the ocean.

COMPARISON OF
THE DISTRIBUTION
OF SPECIES IN
DIFFERENT ZONES
OF LATITUDE AND
DIFFERENT ZONES
OF DEPTH.

If, for illustration of this subject, we limit our attention to the species captured in the southern zone of latitude, that is, to the south of the tropic of Capricorn, we find that about 3000 species were procured by the Challenger at all depths, belonging to about 1250 genera. The number of species actually described and recorded in the special Zoological Reports amounts to 2814 species, belonging to 1179 genera. 2476 of these species belonging to 949 genera were taken in this southern zone only, while 338 species belonging to 230 genera extend into one or both of the other great zones of latitude, hence 88 per cent. of the species captured are limited to the southern zone, while only 12 per cent. extend to the tropical and northern zones. An analysis of the above lists shows that 172 species, or about 6 per cent. of the species captured in the southern zone, are recorded in the reports from the northern zone, but not from the intervening tropical zone. This points to a greater similarity between the widely separated polar zones than between contiguous zones. The similarity would be still more striking had representative species of genera occurring in the northern and

DISTRIBUTION OF
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