

maintains nearly the same conditions of temperature through many degrees of latitude; and when as it passes southwards it does become gradually affected by increasing warmth, it may be supposed merely to sink a few fathoms deeper, carrying its conditions and its fauna along with it. For example, animal forms which abound in the celtic province at 25 fathoms with a mean temperature of 10° C., may be expected in greatest number in perhaps 40 or 50 fathoms, with the same temperature, in the lusitanian province. Such a zone may thus be continuous for a great distance, while the surface climate has been altering greatly, and the migrations of littoral forms have been again and again interrupted. But the deeper zone also sometimes meets with a 'natural barrier,' as at the line of junction between the warm and cold areas already mentioned; which causes a curious sifting out of those species which are intolerant of a change of temperature. Thus the fauna of the temperate northward flow of water off the west coast of Scotland is materially different from that of the cold indraught along the east coast.

If there be this overlapping between the lusitanian and celtic provinces, the same relation may be anticipated between our own and the boreal province; and it is well known that this is the case, for the great majority of the mollusca which have been dredged by McAndrew, Barlee, and especially by Gwyn Jeffreys, from depths below 50 fathoms, are identical with those found in shallower water on the Scandinavian coast. Our recent work, while it has brought out more fully the overlapping, has gone much farther towards the indication of a general law.