

RESEMBLANCE
BETWEEN THE
SHALLOW-WATER
MARINE FAUNAS
OF BRITAIN AND
TRISTANDA CUNHA.

shallow water in the extra-tropical regions of the southern hemisphere were those about the Tristan da Cunha group. With reference to these dredgings and trawlings, Professor Wyville Thomson wrote in the Station-book at the time: "From 150 to 100 fathoms the dredge brought up a large quantity of specimens of all groups. . . . Altogether a mass of material much like what is found off the coast of England. . . . From 75 fathoms nearly the same things were got as in 60 fathoms, notably a profusion of Alcyonarians. These shallow-water dredgings around Tristan da Cunha gave a great amount of material, the fauna being very much of the same character as that of somewhat shallower water in the north. The species seem in many cases to be identical, but this will require critical examination to determine."¹

ANIMALS OF HIGH
NORTHERN AND
HIGH SOUTHERN
LATITUDES.

The general similarity between the animals from the dredgings and trawlings in high southern latitudes and those from like positions in the high northern latitudes was the subject of frequent discussion among the naturalists during the whole of the southern cruise of the Challenger. The number of identical or nearly identical Mollusc shells in the Challenger collections from the deposits in 400 fathoms off the Azores, and off the south-eastern coasts of Australia, was especially remarkable. Again, the similarity, and in many cases identity, of species from high northern and high southern latitudes is frequently pointed out by the naturalists who have written the Zoological Memoirs in the Challenger Report. This may be illustrated by the following extracts, dealing with distribution and development:—

FISHES OF THE
NORTHERN AND
SOUTHERN HEMI-
SPHERES.

GÜNTHER writes: "The fauna of Chili and Juan Fernandez might be described, without much exaggeration, as a mixture of European and New Zealand forms; of the fishes mentioned here two being identical with, and four representative of, European species."² *Lycodes* "is represented in the Southern as well as Northern Hemisphere, but it would appear from the present state of our knowledge that the Antarctic species do not descend to so great a depth as the Arctic. Probably all of the latter will be found to reach beyond the vertical limit of 100 fathoms. . . . Two species only of *Gymnelis* are known: one [*Gymnelis viridis*] from the Arctic Ocean, the other [*Gymnelis picta*] from the Straits of Magellan."³ "The most striking character of the fauna [of the southern temperate zone] is the reappearance of types inhabiting the corresponding latitudes of the northern hemisphere, and not found in the intervening tropical zone. This interruption of the continuity in the geographical distribution of shore-fishes is exemplified by species as well as genera, for instance—*Chimæra monstrosa*, *Galeus canis*, *Acanthias vulgaris*, *Acanthias blainvillii*, *Rhina squatina*, *Zeus faber*, *Lophius piscatorius*, *Centriscus scolopax*, *Engraulis encrasicolus*, *Clupea sprattus*, *Conger vulgaris*. Instances of genera are still more numerous—*Cestracion*, *Spinax*, *Pristiophorus*, *Raja*; *Callanthias*, *Polyprion*, *Histioporus*, *Cantharus*, *Box*, *Girella*, *Pagellus*, *Chilodactylus*, *Sebastes*, *Aploactis*, *Agonus*, *Lepidopus*, *Cyttus*, *Psychrolutida*, *Notacanthus*; *Lycodes*, *Merluccius*, *Lotella*, *Phycis*, *Motella*; *Aulopus*; *Urocampus*, *Solenognathus*; *Myxine*. . . . The reappearance of so specialised a genus as *Lycodes* [in the Antarctic] is most remarkable."⁴

HERDMAN writes: "The discovery, so far south as Kerguelen Island, of a member of this genus [*Eugyra*], which has been hitherto found only in the northern hemisphere, is very interesting. . . . In the genus *Bollenia*, one species occurs in the extreme north, while the other two are from far south, the genus being unrepresented in intermediate latitudes. . . . In the genus *Styela*, all the species, with the exception

¹ See *ante*, p. 399.² Zool. Chall. Exp., pt. lvii. pp. 76, 81.³ Zool. Chall. Exp., pt. vi. p. 23.⁴ Study of Fishes, pp. 281, 290, London, 1880.