

have included the descriptions of those fishes in the deep-sea series, it will be useful to enumerate them here, with an indication of their geographical range. Of the nineteen species obtained at a depth of 345 fathoms, four are identical with Mediterranean species, five are representatives of Mediterranean species, eight belong to genera with a wide range at great depths, and two only must be regarded as peculiar Japanese forms.

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| 1. <i>Centrophorus squamulosus</i> , . . . | } | Eight species of <i>Centrophorus</i> from the coast of Portugal, Madeira, and the Mediterranean. |
| 2. <i>Centrophorus foliaceus</i> , . . . | | |
| 3. <i>Beryx decadactylus</i> , . . . | | Madeira and the coast of Portugal. |
| 4. <i>Polymixia japonica</i> , . . . | { | One species of this genus from Madeira and St. Helena. One species from Cuba. |
| 5. <i>Lepidopus tenuis</i> , . . . | | |
| 6. <i>Physiculus dalwigki</i> , . . . | | Madeira and St. Helena. |
| 7. <i>Haloporphyrus lepidion</i> , . . . | | Mediterranean, Madeira, and the coast of Portugal. |
| 8. <i>Macrurus japonicus</i> , . . . | { | The species of <i>Macrurus</i> and <i>Coryphænoides</i> are generally distributed over the deep sea. |
| 9. <i>Macrurus macrochir</i> , . . . | | |
| 10. <i>Macrurus parallelus</i> , . . . | | |
| 11. <i>Coryphænoides nasutus</i> , . . . | | |
| 12. <i>Coryphænoides villosus</i> , . . . | | |
| 13. <i>Bathyrhissa dorsalis</i> , . . . | | Peculiar to the sea off Japan. |
| 14. <i>Xenodermichthys nodulosus</i> , . . . | | Peculiar to the sea off Japan. |
| 15. <i>Gonostoma gracile</i> , . . . | { | One species from the Mediterranean and Madeira, the other from the deep sea, and generally distributed. |
| 16. <i>Synaphobranchus pinnatus</i> , . . . | | |
| 17. <i>Synaphobranchus affinis</i> , . . . | | Madeira, Brazil. |
| 18. <i>Nettastoma parviceps</i> , . . . | | Japan. |
| 19. <i>Myxine australis</i> , . . . | | One species from the Mediterranean. |
| | | Southern coasts of South America." |

At 6 P.M. the ship proceeded for the passage between Vries Island and Nipon, which was passed at midnight. The light at Joka Sima was not seen farther than 10 miles.

The temperature of the surface water off Ino Sima was 3° higher than in Yedo Bay, and it gradually rose to 68° between Vries Island and the mainland. Here a current was met with setting northeast at the rate of one mile per hour.

On the 13th at 5 A.M. Rock Island was passed, and the ship was steered to the westward towards Matoya to keep out of the current. At noon the barometer began to fall rapidly and a southerly gale was expected, for it was noticed whilst lying in