

INFLUENCE OF THE NATURE OF THE GROUND.

It is necessary to consider in the first instance what kind of ground or bottom is favourable to the occurrence of Hexactinellids. For this purpose the different kinds of sea-bottom may be noted, along with the number of dredgings or trawlings on each ground. Those searches must then be noted which yielded any Hexactinellida, so that their proportion to the total number for each kind of bottom may be estimated.

Then the proportionate abundance of species on each kind of bottom must be collated with the number of dredgings or trawlings. In Table IX. (p. 470) the data for this purpose are given and the general results may be summarised thus:—

| Nature of the Bottom. | Number of Dredgings or Trawlings | Number of Dredgings or Trawlings with Hexactinellids. | Percentage with Hexactinellids. | Number of Species. | Percentage of Species. |
|--|----------------------------------|---|---------------------------------|--------------------|------------------------|
| 1. Sand, | 22 | 5 | 22·7 | 5 | 22·7 |
| 2. Gravel and stones, | 3 | 2 | 66·6 | 2 | 66·6 |
| 3. Hard ground, | 17 | 4 | 23·5 | 6 | 35·3 |
| 4. Coral mud, | 16 | 2 | 12·5 | 7 | 43·8 |
| 5. Volcanic mud, | 24 | 4 | 16·6 | 14 | 58·3 |
| 6. Green mud, | 17 | 1 | 5·9 | 1 | 5·9 |
| 7. Red mud, | 11 | 1 | 9·1 | 2 | 18·2 |
| 8. Mud (including blue mud), | 53 | 12 | 22·6 | 32 | 60·4 |
| 9. Red clay, | 39 | 6 | 15·4 | 11 | 28·2 |
| 10. Globigerina ooze, | 53 | 10 | 19 | 13 | 24·5 |
| 11. Pteropod ooze, | 10 | 3 | 30 | 7 | 70 |
| 12. Radiolarian ooze, | 4 | 2 | 50 | 2 | 50 |
| 13. Diatom ooze, | 4 | 3 | 75 | 9 | 225 |

From this summary it is seen that the smallest number of localities yielding Hexactinellida occurred on those bottoms which are described as green mud and red mud. A somewhat small number were also dredged from Coral mud, volcanic mud, and red clay, and then from Globigerina ooze and mud (including blue mud), on all of which the percentage of Hexactinellid localities is over twenty-two. The same may be said of the sandy and rocky ground. The localities on Pteropod ooze were somewhat more abundant, viz., 30 per cent., and on Radiolarian ooze yet more so, viz., 50 per cent. The highest numbers refer to gravel and stones, 66·6 per cent., and to Diatom ooze, 75 per cent.

The statistics are somewhat different when the number of species found on the different bottoms is taken into consideration. Here again green mud and red mud yielded the smallest percentage of forms, viz., 5·9 per cent. and 18·2 per cent. respectively. Then