

except the sea-anemones already referred to,<sup>1</sup> which are universally distributed over the central portion of the North Sea, namely dead-men's fingers (*Alcyonium digitatum*) and the sea-pen *Virgularia mirabilis*. The former generally consists of irregularly shaped ramifying masses attached by the base to other substances, but in the area examined by the "Michael Sars" during 1904, in depths between 38 and 96 metres, temperature 10° to 6.15° C., there was an interesting variation in its relation to its foundation. An annelid (*Sabella pavonia*), commonly met with here, inhabits an upright muddy tube attached at the lower end. The whole length of this tube was covered by the dead-men's fingers, which in some instances grew out from the lower end of the tube into the usual irregularly ramifying masses. This symbiosis was no fortuitous occurrence, but was invariable throughout the whole of the central portion of the North Sea where these two forms are everywhere to be found.<sup>2</sup> On the coasts of Scotland and Jutland, on the other hand, *Alcyonium* occurred in its ordinary form. The common *Virgularia mirabilis*, found at depths of 50 to 100 metres, with a temperature of 7°-8° C., was the only sea-pen met with in the area examined, but we obtained a fairly large number of individuals.

Sponges constitute a group of attached forms abounding in individuals, though remarkably poor in species; they cannot be said to be regularly distributed, but are more or less local. On the north side of the Great Fisher Bank in particular we got enormous quantities of a ramifying whitish form (*Halichondria panicea* var. *bibula*).<sup>3</sup> The different variations of *Ficulina* (*Suberites*) *ficus* are, however, the most prevalent. The commonest of these variations, where the sponge grows round shells and gives shelter to the hermit crab *Pagurus pubescens*, are comparatively scarce in the central portion of the North Sea, and we came across them at only one or two stations, but in the more northern parts of the North Sea plateau they were plentiful. Another variety, attached to empty shells of the sea-tooth (*Antalis entalis*) which as a rule shelter the gephyrean *Phascolosoma strombi*, was abundant at

<sup>1</sup> *Urticina crassicornis*, *Metridium dianthus*, chiefly found on large shells of *Mytilus modiolus* and *Neptunca*, *Bolocera tuedie* and *Chondractinia digitata* on shells of *Neptunca* and *Sipho*; at one or two stations (depth about 100 metres, temperature slightly over 6° C.) we got *Zoanthus*.

<sup>2</sup> Several of these overgrown tubes were empty, which looks as if the worm benefited least by the symbiosis.

<sup>3</sup> Thanks to information kindly sent me by Professor Plate, Berlin, I can add *H. panicea* forma *typica* as being common on the Great Fisher Bank; this form was also abundant on the northern slope of the Dogger Bank.