

a few specialists, and are known only by Latin names, of which most zoologists even are ignorant. Nevertheless these names must be used if the reader desires to penetrate into the general laws which govern the distribution of animals in the ocean. In order to overcome this difficulty I commence this chapter with systematic lists recording the different species of fishes, and the details of their capture, accompanied by outline drawings of the most important species. By means of these lists the reader may easily obtain information as to what group in the system a certain fish belongs, and further details will be found in the literature of the subject.<sup>1</sup>

Bottom-fishes  
collected by  
the "Michael  
Sars."

During the many cruises of the "Michael Sars" probably all the species of fish which live in the Norwegian Sea and the North Sea have been captured, but only the commonest species will be treated of here. Nearly all the fish caught during the Atlantic cruise in 1910 will, however, be mentioned, or at all events as many as the present state of the work will permit.

The following list includes all the forms captured by us in the Atlantic which, according to our experience, must be considered as living mainly along the bottom.

#### I. LIST OF FISHES CAUGHT BY THE "MICHAEL SARS" ALONG THE SEA-BOTTOM IN THE NORTH ATLANTIC

This list includes 138 different species belonging to almost all the most important groups of bottom-fishes. Thirty-two species belong to the order Plagiostomi, fishes with a cartilaginous skeleton, and 106 to the order Teleostei, fishes with an ossified skeleton.

THE ELASMOBRANCHII.—Our list includes of the order Plagiostomi the two sub-orders, Selachii (sharks) and Batoidei, with the family Raiidæ (rays), besides the order Holocephali with the Chimæridæ.

Seventeen species are sharks (Selachii), including the large Atlantic *Notidanus*, the small but numerous Scylliidæ, which also go into the Norwegian Sea. Of the large group of the Spinacidæ, *Acanthias vulgaris* is caught by the nets of the fishermen in the North Sea; it follows the herring shoals, and is therefore called dog-fish by the fishermen.

The two genera *Centrophorus* and *Spinax* include deep-sea fishes living on the slope. *Centrophorus* is confined to the Atlantic only, and so is *Centroscyllium*; *Spinax niger* is caught in the Norwegian fjords also. Two teeth of extinct species of sharks, *Carcharodon* and *Oxyrhina*, were

<sup>1</sup> See, for instance, A. C. L. G. Günther, *An Introduction to the Study of Fishes*, chap. xxi., Edinburgh, 1880; Francis Day, *The Fishes of Great Britain*, Edinburgh, 1880-84; Boulenger and Bridge, *Fishes*, in the *Cambridge Natural History*, 1904. The lists are arranged according to the system proposed by Boulenger.