

in the waters examined by the "Michael Sars," viz. the North Atlantic and the Norwegian Sea.

To commence with, it will be advisable to consider the details of our fishing methods. The method of simultaneously towing many appliances at different depths cannot be supposed to give such exact results as hauls with closing nets, because the tow-nets function not only while being towed along, but are also liable to do so while being lowered and raised. To counteract the errors arising in this way we generally towed our nets all night long, or for lengthened periods sometimes extending to twelve hours. The distance thus covered in towing the nets was infinitely greater than the distance traversed by the nets in being lowered and raised, and the sources of error were presumably proportionally diminished.

In order to judge of the results obtained in this way we may examine the catches of individuals belonging to a definite species at all depths and at all stations. Of the well-known species *Argyropelecus hemigymnus* we took during our cruise a total of 286 individuals, at the various depths indicated in the following table:—

Vertical distribution of <i>Argyropelecus</i> .	Surface	.	.	.	.	0 individuals.
	At a depth of 50 metres	.	.	.	.	0 "
	" 100 "	.	.	.	.	0 "
	" 150 "	.	.	.	.	62 "
	" 300 "	.	.	.	.	155 "
	" 500 "	.	.	.	.	48 "
	" 750 "	.	.	.	.	0 "
	" 1000 "	.	.	.	.	6 "
	" 1250 "	.	.	.	.	0 "
	" 1500 "	.	.	.	.	11 "
" 2000 "	.	.	.	.	4 "	

The bulk occurred at depths between 150 and 500 metres; no individuals were caught above 150 metres, and only about 7 per cent were taken at depths lower than 500 metres. If we assume, then, that these 7 per cent were captured during the process of hauling in the appliances, and that none of them live at depths below 500 metres, we will have an idea of the accuracy of our method.

We see, further, that by far the greater number were caught at a depth of 300 metres, where we generally had out a $\frac{3}{4}$ -metre silk net, whereas at 150 metres and at 500 metres the appliance used was, as a rule, a young-fish trawl, that would have had a far greater capacity for catching these fishes. It seems, accordingly, that a preponderating majority of the individuals of this species