the different individuals of a type; and for the calculation also of the mean or avorage growth of the type. If we have a vory large mass of observations upon the age of herrings of different sizes, it may, in many cases, be possible to find the average length of the herrings of each age (for each year's age). This is done by calculating the average length of all the different groups of equal age, e.g. of all the 4-years, the 5-year-old herrings, and so on. This same material can also be used for the study of the variation in length of all the 4, 5, or 6-year-old herrings. But the investigations of later years, especially the investigations of the Norwegian zoologists, Einsr Lea and Oscar Sund, have shown that this method is not so reliable as one might anticipate, because the schools of herrings often consist of individuals which are not representative of all the individuals of the year-class to which they belong. A school of herring may ec ain only the larger individuals of the 4-year-old horrings, and an average of the longth of these individuals may not represent the avorage length of all the 4-year-old herrings of the type living in the sea. The goar used for catching the herrings may also have a selecting power. All the smaller 4-year-old herring may go through the meshes, and the 4-year old herrings remaining in the net may, therefore, be far from being representative of the whole year-class.

Experience of this kind has led to the development of another method for the study of the variation and for ascertaining the average growth of fishes. We now examine the individuals of our samples, which belong to one single year-class of old grown fish from the spawning schools, these being so old that we may suppose that all individuals of the year-class have joined the spawning school. For each of the individuals of the year-class in the sample the length at the conclusion of the different growth periods is calculated, and these figures are then used for the study of the variation and average lengths exhibited by the year-class at different ages.

We will now briefly consider some figures obtained by the application of either of these two methods. The following tables (2 to 5) give some examples of the study of a series of samples by the first method, that is by the comparison of the length which herrings of the different year-classes had reached when the sample was taken.

TABLE No. 2.-Immature herring; Halifax Harbour, Fail, 1914.

Cm.	Number of different year classes.			
	3	4	5	All year classes
28 29	1	4.0	1 2	1 1 7 28 13 8 0
d sizes	3	51	3	60
All sizes	5	90	5	

Table 2 gives the and its of a small sample of immature herrings from Halifax harbour. The sample consisted of 3, 4, and 5-year-old herrings. It will readily be seen that only the 4-year-old may have been represented in any such number that they could give us a key to the variation and average growth of the year-class. The variation is within the limits 25 to 28 centimetres of length, the average being some what over 26 centimetres.