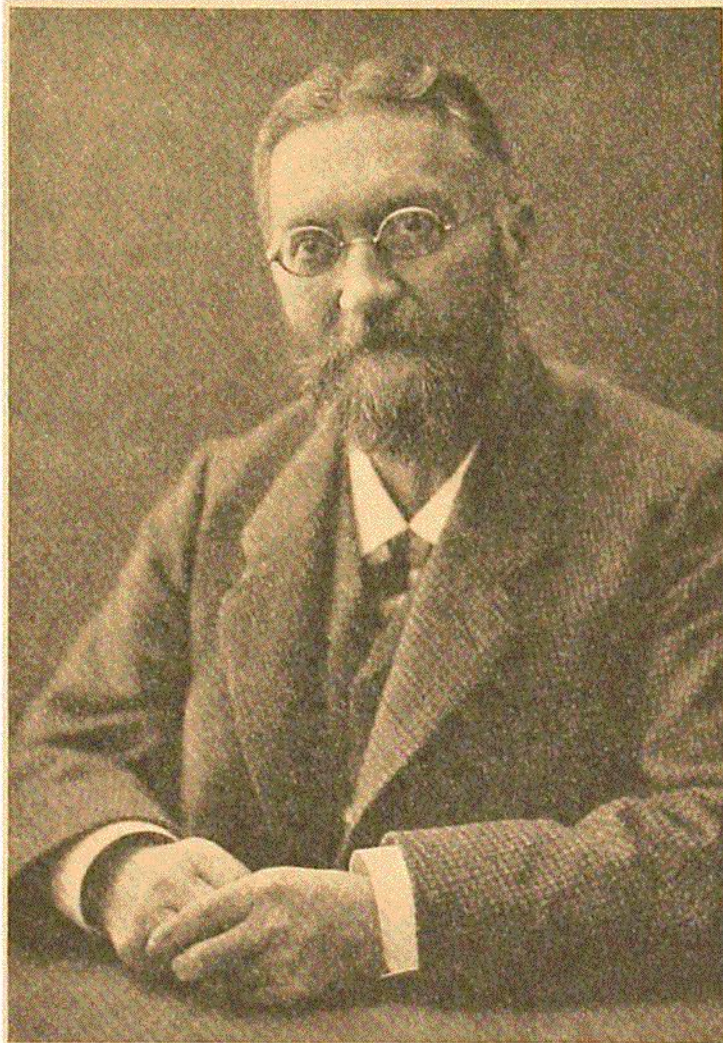


least, and as only very few individuals grow to a large size, this group must be considered as 'full-grown' blennies. In other words, it takes the blennies $2\frac{1}{2}$ to 3 years to become 'full-grown.'

This account contains the foundation of this branch of science and a programme for further investigations, which have been employed in many recent researches, and will in future be employed along with more modern methods.



H. HEINCKE.

Another important series of investigations was inaugurated by Heincke, who endeavoured to employ the methods of anthropology by recording various dimensions of the organisms in order to characterise variations in growth peculiar to a species in different areas of the sea. Heincke measured the length and height of body, length of head, etc., in a great number of herrings from various marine areas, and he found the relations between these dimensions to be so characteristic that he

supposed the herring to be subdivided into various races, each constituting a peculiar type of growth.

These two methods are, however, useful only as long as one can operate with great numbers of measurements according to the principles of the statistical method, and it proved in many cases impossible to determine the age and the type of growth of each individual by these methods. As regards the study of age alone this proved a great obstacle, especially in regard to the older animals. It was therefore very important to find a method which would give the age of each individual and define its particular type of growth.