A New Biological Station and its Aim. By C. H. Eigenmann.

One of the most promising fields for biological research is variation. Variation not only in the adult individuals, but in every step of the ontogeny. Descriptive zoölogy, as far as the higher groups are concerned, is well nigh exhausted. The general distribution of most of the vertebrates of North America is fairly well known, and it remains but to fill in details. Closely allied to variation is heredity. To these two subjects much of the energy that has hitherto been devoted to systematic zoölogy may be profitably diverted. The subject of variation or method of evolution is not a new one. I want to propose a new method of studying this subject.

During the coming summer a new biological station will be established somewhere in Indiana, whose chief aim will be the survey of a base-line for future studies in variation. A limited and well defined area, such as is to be found in one of the smaller lakes of Northern Indiana, will be selected, and the animals, chiefly non-migratory vertebrates of such a limited area, will be studied in detail for a series of years, if necessary. This survey will serve as the base-line for the study of variation of the same animals in the other localities. For economic reasons the fishes and reptiles will receive most of our attention.

An attempt will be made to determine the kind of variation, continuous or discontinuous, and the limits of variation. These limits should be examined for a series of years, or at definite longer intervals to note the annual, or biennial, or triennial, etc., variations, if any, from a given mean. The study conducted in this way ought to demonstrate the methods of evolution. A most interesting part of the work will be the variation in the early stages of ontogeny, the segmentation, etc., and the relation of such variations to variations in the mature animal.

Very little could be done towards an understanding of meteorology by isolated observations of atmospheric phenomena, yet on just this sort of observation many of our ideas of the methods of evolution are based. In a few cases large series of individuals have been examined, which had been collected at different times and at different places, but so far we know little or nothing of the limits of variation of any vertebrate within a limited territory, a single locality or anything of the annual variation. It is just this knowledge that we must have to test the current views of the methods of evolution.

At a recent meeting of the Board of Trustees of the Indiana University I was granted the use of the apparatus of the zoölogical laboratory for a summer station. The station will be a part of the Zoölogical Department of the University and will afford specialists in this department opportunities in field and survey work.

While no fixed courses will be offered, embryology and zoölogy will be taught, but only animals found native to the region will be utilized. An opportunity will be given to teachers and others over the State to study zoölogy in the field at a time when animal life is most abundant and the places of the interrelation of organisms apparent.

THE FUNCTIONS OF THE SPINAL CORD FROM A CLINICAL STUDY. BY GEO. A. TALBERT.

In this day of great scientific research I know of no subject that presents such intense interest as some of the problems that confront the neurologist. This interest is not stimulated so much by the actual knowledge possessed as it is, perhaps, by the mist that envelops the subject. We might say that just enough is known to create enthusiasm for greater research.

The difficulties that observers have encountered are manifold, and for this very fact they have been led to be cautious many times in coming to a conclusion. The very methods that seem necessary to obtain the facts may defeat the end desired. The operator is never quite certain how near he has approached the normal condition. The artificial means that are often used must necessarily be rough imitations of the natural state. Let us take an illustration:

If the cerebral lobes of a frog are removed the animal seems to perform no movements except as a result of an external stimulus. The animal remains in a quiescent stage for hours and even days at a time. But if the proper stimulations are brought about the animal seems to possess the power of performing as complicated movements as a perfectly intact frog. There is a want of spontaneity. This would show that the seat of the will must be in the removed parts. If, however, the animal is kept alive for some time after the operation, we find that there are movements which point quite strongly to the guidance of an intelligent will. Some observers have found that if the frog is kept alive long enough it will catch flies and other food that comes in its way, and it is even known to bury itself in the earth at the approach of winter.

So from this we might have some doubt about our first conclusion. We probably would be led to think the shock that necessarily follows such an operation may to a certain extent give us abnormal phenomena, and really be a defeat of the normal condition. I have several times in my own observations looked upon the results with some apprehension. This furnishes us with an example of the many difficulties which are to be encountered in laboratory investigations. We