

bryos were about forty-eight hours of incubation, there being eleven well-defined somites in one and sixteen in the other. The neural canal was partially closed, but only one brain vesicle in each case was developed. Between the two anterior ends was a mass of much distorted structures and apparently including several gill arches.

The eggs were secured from reliable parties, and I have every reason to consider them fresh and that they had been properly cared for. My assistant assures me that the temperature of the incubator was regular and that all conditions were normal.

The slide from which the drawing was made was prepared by Mr. Charles Sudranski.

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## THE LAKE LABORATORY AT SANDUSKY, OHIO.

MEL T. COOK.

The past few years has witnessed a wonderful increase in facilities for biological work. Among the most noticeable features has been the establishment of summer laboratories especially adapted for biological research until we now have six marine and a larger number of inland laboratories. Since the character of biological work is so dependent upon the locality, and since each locality presents certain problems peculiar to itself, each of these laboratories has certain advantages over its friendly rivals and the itinerant biologist has the opportunity of reaping the benefits from all. He meets his fellow-worker and studies the varied fauna and flora under the most favorable conditions.

Among the earliest of these laboratories was the Lake Laboratory at Sandusky, Ohio, which was first opened in 1895, under the direction of Professor Kellicott, of the Ohio State University. In 1898 Professor Kellicott died and the laboratory came under the direction of his successor, Prof. Herbert Osborn, the present director.

The laboratory was at first intended for investigation only, and for the first four seasons was used by only three or four workers. In 1899 there were fourteen investigators and it was then decided to offer regular courses; this was done in 1900 and each succeeding year. For the past three seasons the increase in interest has been very pronounced. In 1902 there were twenty-four students and six instructors; of the twenty-four



Upper Floor, Lake Laboratory.



Proposed Site.

students, sixteen were graduates and eight of these were engaged in investigations.

The laboratory is under the control of the Ohio State University and under the direct management of the President of the University and of the director. The equipment consists of three boats and the necessary dredges for working on the aquatic fauna and flora. The microscopes, microtomes, other apparatus and library are supplied from the Ohio State University laboratories.

Thus far the work has been conducted in the building of the Ohio



Cedar Point Beach, Looking West.

State Fish Commission, but appropriations have been made for the erection of a new building especially for this work. It is expected that this building will be ready for use in 1903. This will give more and better facilities to meet the increasing demands. Ample arrangements will be made for the general courses, both for students and for teachers in the secondary schools. Special efforts will be made to accommodate advanced students in graduate courses and to provide opportunities for independent research by investigators in the many fields of biology.

While the control of the laboratory will probably remain with the Ohio State University, other institutions will be invited to coöperate and

every effort will be made to make the laboratory of special service to the biologist of the inland states.

The location is accessible from all parts of the Central West. The climate is healthful and conducive to summer work.

The flora is one of the richest in the country. According to Mosely's "Sandusky Flora" it contains 300 more species than have been reported from any other locality of like dimensions in the State of Ohio. The flora is also more extensive than that reported from other parts of North America. Most plants native to Ohio, with the exception of those characteristic of the Ohio River counties and Sphagnum swamps, are found within the range of the Sandusky Flora. It also includes 165 species not reported in the Canadian catalogue and sixty-seven species not known in Michigan, and many species characteristic of western and southern regions.

This wonderful flora is due largely to the climate and geology, the lake protecting the south shore from the cold winds of the north and thus allowing many southern plants to extend their northern limits.

The lake, the bays, the marshes, the rivers, the deep ravines, the rocky shore line, the mud and sand beaches, the sand dunes, the various kinds of soil, the prairie, and the woods, all tend to give desirable conditions for this very rich and striking flora.

All of the above conditions, together with the varied food supply furnished by the rich flora, give an equally varied and remarkable fauna.