

ACARINA.

36. *Phytoptus abnormis*, Garman—*Tilia Americana* L.
37. *Phytoptus acericola*, Garman—*Acer saccharinum* L.
38. *Phytoptus quadripes*, Shimer—*Acer saccharinum* L.
39. *Phytoptus ulmi*, Garman—*Ulmus Americana* L.
40. *Erineum anomalum*—*Juglans nigra* L.

From the above lists it will be seen that we have representatives from every order of insects which produce galls, except Coleoptera.

Doubtless the number of gall-producing insects in Indiana will far exceed 300 species. I should be very glad if members of the Academy will send specimens to me. Specimens may be sent either fresh or dry or in formalin. Always send enough of the host plant to enable determination.

NOTES ON DEFORMED EMBRYOS.

MEL T. COOK.

It is well known that extremes of temperature will produce malformed embryos, but it is also probable that malformations may result from other causes.

Last spring the students in my class in embryology found a very large number of deformed chick embryos. The most common malformation was two or more blastoderms, but in many cases the embryos did not



develop beyond the formation of the primitive streak. The farthest developed and most remarkable deformity was in the case of two embryos so placed that anterior ends were joined and the posterior ends extending in opposite directions. Judging from the mesoblastic somites, the em-

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.

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