time to avoid flattening the egg by pressure of the coverslip. In practice this presents little difficulty.

The fixative noted above is used simply because it appears to give the best fixation in our material. Others may be substituted if desired. Contrary to early reports the Feulgen method of staining appears to be applicable to material fixed in any of the ordinary fixatives. We have used it after Fleming, Gilson's mercuric nitric solution and Bouin, as well as Carnoy.

As an aid in transferring the eggs during dehydration, staining, etc., any of the standard methods of handling small objects may be used. We use the method of packing them in Drosophila pupa skins when they are in 70 per cent. alcohol after fixation[2] and then pushing them out of these cases either singly or in groups during the final process of mounting in balsam.

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RECONSTRUCTION WORK BY THE USE OF CELLOPHANE

IN 1930–31 the writer began investigations on the development of the jugular lymph sacs in turtles. In review of the literature on the vascular system, one observes that the only available extra-vitamin methods of studying the development of vascular elements, are by plastic reconstructions and by injections. Excellent as these methods are in studying vascular anatomy, they merely show the extent of the system at any stage and many questions as to the exact way in which growth takes place can not be determined by them. For that reason a new method for studying the development of the system was being sought. It seems hardly necessary to emphasize the advantage of using all possible methods in studying systems, if not always in one's own work, certainly through understanding the value of the observations of others and the necessity of comparing and testing the limitations of different methods.

Material was being sought which was thin and transparent, so depth could be observed when used in reconstructions. Cellophane answered the purpose, it being material of transparency, which is strong, durable and .0017″ in thickness.

Camera lucida drawings were made of serial sections on separate sheets of cellophane. A projection microscope was used for the drawings, so that a relatively large field with a high magnification could be obtained. This material made it possible to check each drawing carefully and quickly with the one preceding, before they were placed in reconstruction form. It was found to be the best method to get every vascular element in the reconstruction and to establish, thereby, a graded series of stages of embryos of different ages, complete in all details, in which the vascular elements could be studied and compared in their proper relations. In some cases it seemed highly desirable to use different colored inks to represent the arteries, veins, lymphatics and nerves.

It seems to the writer that where wax reconstructions are necessary, the use of cellophane marks a decided advancement in the preliminary steps for making the plastic reconstructions. The transparency of the material, making observation of depth possible, gives one an accurate course of the parts under observation in relation to other structures.

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SPECIAL ARTICLES

SIMULTANEITY IN THE ONSET OF POLIOMYELITIS

THE observation has often been made that when multiple cases of poliomyelitis occur in a family or a similar group of children, the onset of symptoms in all the individuals affected is simultaneous or nearly so. Sometimes the first symptoms are weakness or paralysis of muscles; at other times the symptoms are indefinite and mild, with weakness or paralysis of muscles following only after several days, or not at all.

These occurrences point to a common and coincidental exposure to the virus of the group of children affected. From these children, secondary cases of the disease may arise in other children, according to circumstances varying from group to group. The secondary cases will be separated from the primary ones by an interval of one, two or even more weeks, which interval is called the "incubation period."

A corresponding simultaneity is shown in a remarkable manner by groups of monkeys (*Macacus rhesus* and *cynomolgus*) inoculated experimentally with a potent virus by simple nasal instillation. The incubation period in these animals is regular and

[2] C. W. Metz, "A Simple Method of Handling Small Objects in Making Microscopic Preparations." *Anat. Rec.*, Vol. 21, No. 4, pp. 373–374, 1921.