eggs are allowed to hatch and the newly hatched larvae can then be removed from the food with a tiny dissecting knife. By means of this technic it is possible to analyze more exactly the critical period when a certain gene operates during the larval period. It is now also possible to study the embryology of Drosophila more exactly under controlled conditions.

H.J.Muller Labelling of stock cultures. In place of the usual practice of Drosophila laboratories of pasting a label on each stock culture and writing the name of the stock anew at each transfer, I have for many years found it much quicker and less subject to error, if the designation of the stock is written once for all in ink or India ink on both sides of a cardboard tag which is affixed thru its string to a rubber band that passes around the neck of the culture vessel. This tag is transferred to the new vessel when the flies are transferred, and it is best to have a separate tag for each culture vessel.

H. J. Muller Fly morgue. In place of the usual method of having a jar of alcohol or other volatile fluid into which the flies to be discarded are dropped thru a narrow slit, it is much more convenient to have a broad dish containing a non-volatile oil. The used oil from automobiles affords a conveniently obtained medium. The opening may be protected by a wide-mesh wire grating. The flies do not have to be brushed off in any exact manner, but may be merely jarred off by knocking the porcelain plate against the screen with one motion of one hand. Renewal is seldom necessary and there are no disturbing odors. This method was used independently in Texas and in the USSR.

H.J. Muller Seeding with yeast. In place of the usual method of allowing drops of yeast to fall into the bottle from a pipette of sprinkling crumbs of yeast, it saves time and ensures more even distribution if one makes up a very thin suspension of the yeast in water, and then sprays this through a simple atomiser, such as is used for spraying fixative on charcoal drawings. In this way a great number of cultures may be seeded at once en masse.

H.J. Muller Supplying vials with paper. When numerous small vials have to be handled it is time-consuming to prepare and insert paper for each one, although the presence of paper is helpful. For this purpose it is convenient to use white confetti, which can be purchased already prepared in considerable quantities. This is sifted between the fingers into the cultures en masse, as they stand still uncovered after having been seeded with yeast.

C.A. Offermann and I.K. Schmidt Culture media for Drosophila. With the development of the Drosophila technique, not only a certain amount of sterilization of the culture medium during its preparation became necessary, but also an adaptation of it ot different requirements. Productivity and duration of the media are the two main factors to be considered for our purpose, and they are to a certain degree

in inverse relationship. By productivity we mean the quantity of flies produced in a given time. By means of overcrowding a certain food can yield a higher number of flies which are small in size, but this higher yield will be usually cancelled by a serious loss in the speed of development (in strongly overcrowded bottles in fact the cycle has proved to be as much as twice the usual length). Three functional types of media may be distinguished: 1) for the maintenance of parent flies, 2) for the maintenance of lines of stock cultures, 3) for the attainment of high productivity. 1)This type has proven to be extremely useful for the current work where we have to keep alive the flies from the moment we obtain them until the moment of their use. In this case offspring are not desired. Flies have been kept on such a medium for over a month (some over two months) at room temperature, without a transfer. The same vial or bottle can be used over again until the surface dries out, and etherized flies will not stick to its surface:- Water 90cc., agar 2gr., syrup 7gr., Nipagin .15gr. 2)Suitable media serving this purpose, such as the banana agar and the cornmeal syrup media, are already in use in all Drosophila laboratories and will not be described here. 3)The main characteristics of this type are: production of large quantity of flies, short cycle of development, and low selective level (preservation of individuals of low viability).

The addition of killed yeast in large quantities to the ordinary food formulae was introduced a few years ago by Muller (in 1928), giving surprisingly good results. These media had, however, the inconvenience of requiring a constant supply of fresh ingredients. Dry yeast was used in place of fresh yeast by Winchester and by Gershenson. The authors have recently experimented with a systematic series of modifications of the Russian food mixture with the addition of dry or fresh yeast. Fifty different modifications have been tried, approximately twenty vials being employed for each trial and counts of the offspring made. Each ingredient was tested in different concentrations. As a result the following formulae have been found the best for obtaining high productivity. (A.with dry yeast) - Water 80cc., Agar 1.5gr., Dry yeast 1.5gr., Raisins 4 gr., Syrup 5 gr., cornmeal 5gr., Nipagin .15gr. The agar is dissolved by bringing the water slowly to the boiling point, dry yeast (that has been disintegrated in a small part of water) is added and the mass is kept boiling for another ten minutes, so as to make sure that all the yeast cells are killed. Then the mashed raisins, syrup and cornmeal are added with continuous stirring, and the food will be ready for distribution. The addition to the liquid mass of "Nipagin T" Nachmittelfabrik Julius Penner A.G. Berlin Schoeneberg as found in Dr. Nachtsheim's laboratory, is important for cultures which contain few larvae or develop slowly.

The layer of food should be somewhat deeper than 1/2 inch and its surface seeded with pure live yeast (fresh or dried). Adding paper and making the suface appetizing with fruit juice did not increase the yield in our case. 200 flies per vial and 1000 per half pint bottle should be considered a good average. This means that a vial can be employed where formerly a bottle was required, and a bottle can take the place of a group of bottles. Not only the number, but the size of flies is considerably increased. When fresh yeast is easily available it

can be employed advantageously by substituting 15 grams fresh yeast for 1.5 grams of dry yeast in our formula.

The preceding formulae enable us to prepare food of each of the three types by the use of ingredients which will not spoil. A laboratory can thus provide itself with a year's supply at once, avoiding further trouble in this connection.

We desire to call special attention to the convenience offered by the new type of medium here described: the "syrup-agar" for the preservation of the P flies, for the great elasticity it introduces in current laboratory work.

E.E. Shipman Bottle for Drosophila culture. Due to the high cost of transportation of the bottles designed by Bridges and manufactured by the Owens-Illinois Pacific Coast Company at San Francisco, it was necessary to find a substitute bottle manufactured nearer home. The writer has found a Urine Specimen Bottle, No.820, manufactured by the Glasco Products Company, Chicago, Illinois quite satisfactory. The bottle is made of the same type of glass as milk bottles, has straight sloping sides, the inside top diameter is about 1/4 inch less than the inside bottom diameter, and has a milk bottle type opening so that paper caps may be used if desired. The writer handled three gross of them this summer with an average of about 35 offspring per bottle and had only four cases where the food cake shook completely loose, daily removals were made so that the danger of loose food cakes was much greater than in routine stock work.