spots.

Frequency of spots: Variable in different experiments from one spot on fractions of a percent to one spot on ten and more percent of all individuals. The frequency is increased considerably if the individuals carry an autosomal Minute (use stocks like Rochester #68, DIS-5).

Size of spots: From one seta to whole imaginal disk, very rarely larger.

Location of spots: Variable. The smaller spots, which in most experiments are the frequent ones, occur preferably on the abdominal tergites. Careful inspection under about 30x magnification is necessary for detection. (See note in DIS-5 on "foot-focusing device").

Harnly, Morris H. Wing measurements. The following method has been found satisfactory for making wing measurements: The Spencer Drawing Apparatus No. 345 MS (list price $62.00) on which a compound microscope can be mounted is used to project the wings. A 16 mm. objective and 10 X ocular are used. The size of the projected wing is determined by the distance of the microscope above the drawing board. When first setting up the apparatus it is advisable to project a wing and determine a height that will place the entire wild-type wing on the drawing paper. Ordinary 8 x 11 paper can be used for the drawings.

Having established the proper height of the microscope above the drawing board, a ruled 2 mm. slide is placed on the microscope stage and projected. This distance of 2 mm. can be marked off on a straight line on a permanent record sheet. Thereafter, whenever the apparatus is set up exactly the same magnification can be obtained by a proper adjustment of the height of the microscope above the drawing board (a slight movement of the draw tube may aid in this) using the 2 mm. slide and the record sheet as checks. The wing is removed from the fly with a McClure's angular-or-flat Iridectomy Scissors #c991 figure 2 (list price $9.00, Standard Scientific Supply Co.), mounted in 95% alcohol, projected and drawn. The length can be determined directly by projecting the 2 mm. ruled slide onto the drawings. An area equivalent to 4 sq. mm. can be obtained at the same magnification by projecting the ruled 2 mm. slide and measuring the square drawn with a Keuffel and Esser Compensating Polar Planimeter No. 4242. This will give by division the value in sq. mm. of one unit on the vernier. Measurements with the planimeter of the area of the wing drawings can then be converted into sq. mm.

Timofeeff-Ressovsky, N.W. and K.G. Zimmer. On the technique of radiation-genetic experiments. From both the genetic and physical points of view we want to lay stress on the following rules, the observation of which will be of great help for comparing and analysing the results of radiation-genetic experi-