many (20-100 depending on the markers present and the extent of the deficiency to be generated) single male matings in step 3 of the cross scheme. These males are saved and subsequently mated to their daughters (we have informally designated these males "Big Daddies" or "Dirty Old Men"). The use of single males is also required because the frequency of 3:1 disjunction occurring in this cross scheme can be as high as 10% resulting in euploid individuals which can be phenotypically indistinguishable from the deficiency class. These lines can be tested for the presence of the deficiency by their ability to uncover biochemical, recessive lethal or visible loci.

We have constructed overlapping deficiency stocks which cover the entire region from 25E to 26A (B137 to D211). We have used the following designation for these deficiencies: TDf(Y:2) followed by the designations according to Lindsley and Sandler et al. (1972) of the two translocations used to generate the deficiency, e.g. T Df(Y:2) H69 D211.

There are a number of possible explanations for the failure to produce some segmental deficiency stocks: (1) triplications of Y chromosome material may result in male sterility; (2) deficiency females may not be produced due to the absence of a bb^+ locus in the translocated Y chromosome elements (this problem can be circumvented by initially using a bb^+ C(1) RM in the series of crosses); and (3) the extent of autosomal material which can be deleted is dependent upon the regions involved or the presence of haplo- insufficient loci in the region.

Pye, Q. Cornell University, Ithaca, New York. New white-eyed Drosophila "unknown" stocks for genetics laboratory courses.

In his teaching note MacIntyre (DIS 51:158) discussed the utility of some phenotypically identical (orange eye, dark body and incomplete wing veins) but genotypically unique Drosophila "unknown" stocks for genetics laboratory courses. I have constructed a set of "unknown" stocks that are comparable to his, except that they all have white eyes. White eyes are due to three different situations, (1) the interaction of bw, bw^D, or w^{Bwx} with cn, st or v, (2) the epistatic interaction of w with ca, bw, st, bw^D or v, or (3) the allele w. Another difference between the orange and white-eyed stocks is that some of the white unknowns contain two wing vein mutations (e.g. shf^2; ve or ve ri) that interact to produce the wing phenotype.

Sved, J.A. Sydney University, Australia. A computer program which saves on cooking and washing up.

Any genetic mapping experiment that can be attempted in a one-term course is usually restricted to one in which students are given stocks already built up, and asked to carry out a limited crossing program. Such an experiment usually provides more intellectual exercise for the person setting up the program than for the student, since the student has little opportunity to plan crosses, synthesize required stocks, etc. This note describes briefly the use of computer simulation to enable quite complicated "experiments" to be carried out. Most students seem to enjoy the exercise, and hopefully learn a little genetics in the process.

The philosophy of the program is to simulate as closely as possible the problems faced in an actual mapping experiment. Most importantly, the program manipulates genotypes according to Mendelian principles, but displays only phenotypes rather than genotypes to the student. The program generates for each student a different unknown visible mutant, which may lie anywhere in the genome. A set of about 30 markers is provided, mostly recessives but with some dominants and balancers, and the student has to synthesize any stocks required to localize the unknown mutant. It takes 12-15 generations to get to the stage of constructing and carrying out a three-point testcross with markers reasonably close to the mutant. If one generation is run each day, the exercise therefore takes a minimum of 3 weeks. In practice, few students seem to be able to get through in anything like the minimum time. Each student is also provided with a recessive lethal, the mapping of which constitutes a more advanced exercise.

The simulation as described above uses as data the crosses supplied by the students, who have to be taught how to input crosses (instructions are supplied by the program). The program can also be used in a simpler way that is more suitable for larger elementary classes,

in which the data are supplied by the person in charge of the class. In this mode, the program is essentially a means of generating individual problems. Each student is given a different set of genetical data, and asked to infer the parental cross, calculate map distances, etc. The program supplies a list of the correct answers to be used for marking.

Copies of the program are available on request. However, it should be emphasized that a certain commitment may be required to get the program set up. First, the program is too long to be easily typed up from listing or sent on cards, so that it has to be sent on tape, which needs to be interpreted. Secondly, although the program is written in standard FORTRAN, it may be necessary to write a small supplementary program to enable students to submit crosses in the most efficient manner, particularly if a terminal rather than a card punch is being used. Some permanent file space is also needed. Each of these steps requires some computer experience or the assistance of a programmer.

Wright, C.P. Western Carolina University, Cullowhee, North Carolina. A method for transferring etherized flies into a container of active flies.

In working with fruit flies, it is sometimes necessary to transfer etherized flies into a container of flies which are awake and active. It is usually best to make such a transfer without etherizing or disturbing the active flies in the container. One method which is useful in this situation involves the use of a Pasteur pipette. An etherized fly can be gently brushed or sucked head-first into the small end of a Pasteur pipette. The Pasteur pipette containing the etherized fly can then be carefully inserted along the side of the stopper or cover of the container of active flies. This can be done in such a way that the active flies in the container do not escape and are not disturbed. After the end of the Pasteur pipette which contains the etherized fly has entered the chamber of the fly container, gentle air pressure can be applied with the pipette bulb or by mouth. The etherized fly will be forced out of the pipette into the fly container. The etherized fly should be deposited on a dry surface such as the side of the container and allowed to remain on the dry surface until it wakes up and becomes active.

I have found this to be a useful technique in the situation of introductory genetics labs where beginning genetics students sometimes have difficulty in handling flies. If students try to etherize all the active flies in a container in order to introduce a few etherized flies of another genotype, sometimes all the flies will be killed as a result of accidental over-etherization. This can cause problems, especially in the situation where the active flies are virgin females which might be difficult to replace if they are killed. The use of this method of transfer decreases the amount of ether to which the flies are exposed, and thus increases their chance for survival.

Dog Chemical in Man's World

A recent item in the New Scientist pointed out methyl p-hydroxybenzoate as a chemical that makes bitches attractive to dogs. The human world must appear pretty seductive to dogs as this chemical is currently used as a preservative in foods, drink and cosmetics (Merck Index 9, p. 796)! The lists of ingredients on many shampoos and handcreams show that they contain this chemical under its alternative name of methylparaben. Geneticists and other Drosophila lovers could expect strange happenings should a dog ever enter their labs, for the standard preservative added to Drosophila fly-food is Nipagin. This is yet another alias for methyl p-hydroxybenzoate.