

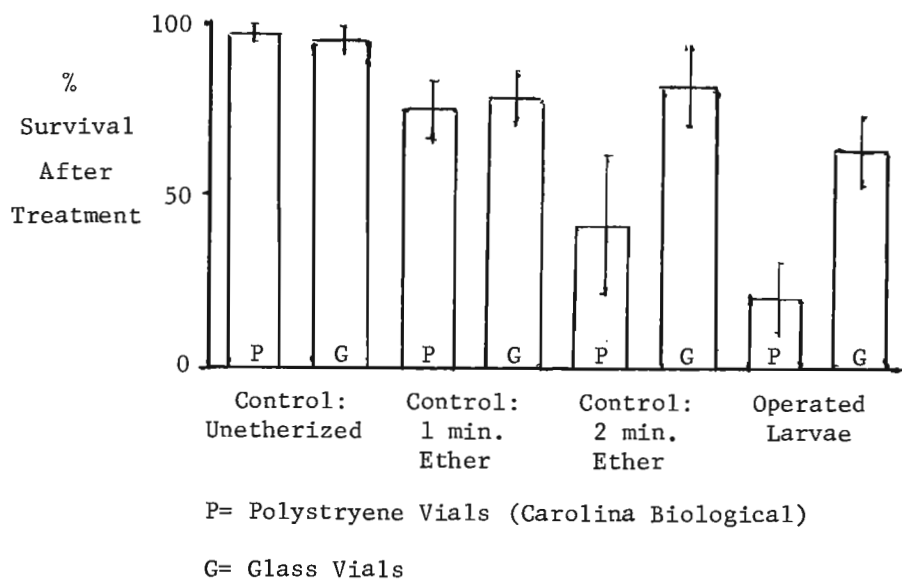
The length of the wandering stage may be quite variable in different cultures; however, this variability can be substantially reduced by keeping the number of individuals per culture constant and by incubating cultures in a high humidity atmosphere. The presence of bromophenol blue in the medium has no detectable effect on development time and it does not interfere with the assays for such enzymes as alcohol dehydrogenase, alpha glycerophosphate dehydrogenase, aldehyde oxidase or with protein assays.

References: Maroni & Stamey 1983, DIS this issue; Maroni et al. 1982, Genetics 101:431-446.

McCrady, E. University of North Carolina, Greensboro, North Carolina. Possible detrimental interaction between etherized larvae and polystyrene culture vials.

larval cuticle retaining ether molecules with the surfaces of polystyrene culture vials (Carolina Biological) in which the operated larvae were isolated. Dead larvae were frequently found stuck to the walls of such vials, while the few surviving animals appeared to have remained in the food until pupariation. To test this possibility, the control series summarized in the graph was carried out, comparing the survival of operated and control animals in glass and polystyrene vials after differing amounts of etherization.

Survival of larval hosts injected with disc parts reached an unacceptably low level in a recent series of experiments. After reducing the period of etherization to its lowest practical length, the possibility arose that the high mortality might be due to interaction of



Data on control etherizations are averages of four wild-type stocks, including the one routinely used in our experimental work. No significant differences were found in the survival of the different stocks. The results indicate strongly that if etherization of larvae exceeds one minute, the use of polystyrene vials for subsequent culture should be avoided. Experimental operations performed since change over to glass vials have routinely averaged over 60% survival, and we have adopted one minute, 25 seconds as the optimal length of etherization for larvae in a saturated chamber.

McRobert, S.P. & L. Tompkins. Temple University, Philadelphia, Pennsylvania. Stalking the wild *Drosophila*.

picnic supplies are sold, which is hung by a loop of red yarn. We bait these traps with mashed banana topped with active dry yeast. Flies are collected by being shaken into a plastic sandwich bag which has been quickly placed over the open end of the cup. The flies are

We have developed a simple and efficient procedure for collecting *Drosophila* in the field. Instead of a paper cup suspended from a branch with string (e.g., Spencer 1950), our trap is a clear plastic cup, available wherever disposable

then aspirated into a food vial. Our aspirator is made by cutting an automatic pipet top so that the smaller end is 2-3 mm (i.d.), then covering the large end with polyethylene mesh (Fisher Scientific Co.) and inserting it into a length of plastic tubing. Flies are sucked from the plastic bag into the pipet tip and subsequently blown into the food vial by mouth.

This procedure is superior to traditional techniques in a number of respects. First, the traps are virtually indestructible; they are not destroyed by rain nor consumed by animals, although they may be carried away by raccoons. We have used these traps for several months, replenishing the bait at weekly intervals while the traps still hung on branches. Use of red yarn to suspend the traps makes them readily visible in the field. Finally, the collection procedure is remarkably efficient. The transparency of the cups makes it easy to observe the presence of flies without disturbing them, and use of the plastic bag and aspirator as described above provides little or no opportunity for flies to escape. With practice, it is possible to transfer all of the flies from a trap to a food vial in less than a minute.

S.P.M. was supported by a Biomedical Research Grant awarded to Temple University.

Reference: Spencer, W.P. 1950, Biology of *Drosophila* (Demerec, ed.) pp. 535-590.

Powers, N.R., R.Wirtz & W.Jederberg.  
Letterman Army Institute of Research,  
San Francisco, California. Computer  
assisted techniques for use with the  
sex-linked recessive lethal testing  
with *Drosophila melanogaster*.

At Letterman Army Institute of Research,  
mutagenicity testing of various materials are  
being conducted using the Sex-linked Recessive  
Lethal (SLRL) essay with *Drosophila melanogaster*.  
These tests are conducted in compliance  
with Food and Drug Administration-Good Labora-  
tory Practice Regulations (1978) needing a unique  
numbering of *D. melanogaster*, their progeny

and storage of raw data. A FORTRAN V program and associated subroutines have been designed for the rapid generation of large numbers of labels for culture vials and cards for recording data for each unique numbered male. In addition, this system records new data, stores it, and allows the user to receive a selected copy of the data set. This program also summarizes the testing results so that statistical techniques can be applied. The use of the system has greatly reduced the time spent generating these materials, eliminated errors and insured continuity from the initiation to the termination of the assay.

The first program generates labels (Figure 1) for vials containing the P<sub>1</sub>-F<sub>1</sub> progeny

from these vials. To generate labels and cards the program request from the user: study number, replication (run) number, sequential unique identifying number for each fly, code for control or test compound, exposure date and brood number. The

GLP STUDY NO. 82001  
RUN: 37  
T2-898 BR: 1 5MAR82  
COMPOUND CODE: 002MPT  
NOTES:

GLP STUDY NO. 82001  
COMPOUND CODE: 002MPT  
T2-898 BR: 1 5MAR82 RUN: 37

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F2 CROSS MEDIUM BATCH #: \_\_\_\_\_  
DATE: \_\_\_\_\_ INITIALS \_\_\_\_\_

FAILURES \_\_\_\_\_ LETHALS \_\_\_\_\_ NONLETHALS \_\_\_\_\_

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F3 CROSS MEDIUM BATCH #: \_\_\_\_\_  
DATE: \_\_\_\_\_ INITIALS \_\_\_\_\_

FAILURES \_\_\_\_\_ LETHALS \_\_\_\_\_ NONLETHALS \_\_\_\_\_

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NOTES:

Figure 1. Sample of the label and card for a test-compound.