

Letters

QUESTIONABLE ADVICE

The October article "Observing the Events of Mammalian Development with Mice," by M. H. Peaslee and F. A. Einhellig (*ABT* 36[7]:412) describes a useful high-school project that hopefully will encourage students to investigate normal growth of classroom animals. It is disappointing, therefore, that the article includes some erroneous statements and questionable advice.

The authors state that "often litter size [of mice] during suckling is *regulated* [italics mine] by cannibalism." This, in context, reads as if cannibalism normally is to be expected. In fact, cannibalism is abnormal and is a response to a stress situation; it should rarely, if ever, be encountered if the animals are well cared for. Beneficial factors which contribute to successful rearing of small mammals include spacious cages with solid sides and floor (as described by the authors), a quiet, well-ventilated location, and a highly nutritious, well-balanced diet throughout pregnancy and lactation. Common causative factors of cannibalism are lack of privacy and improper handling of animals. Privacy can be ensured by providing a pregnant mouse with adequate nesting material (soft towelling and tissue for shredding, and cotton) and a nesting box (a five-sided inverted cardboard box with an arched doorway cut out is ideal). These simple additions permit expression of normal maternal behavior of building a soft nest in which to hide the pups. Handling the pups must be done with care. The mother is often resentful of human handling, and in general it is best to avoid handling the babies for at least three days after birth. (The lack of growth data for these few days is not critical to the success of the study.) Thereafter, the procedure should be to rub your hands through the bedding to pick up the smell of the mother before handling any pup. If this is not done, human odor will be transferred to the pups and the mother may kill them when they are returned.

Questionable advice is given by Peaslee and Einhellig when they suggest that high-school students add potentially lethal poisons, such as DDT, to the diets of small mammals. The stated intent is to demonstrate deleterious effects on growth and behavior distortions. To my mind, serious problems of humaneness toward the animal, safety for the student, and general ethical justification are raised by encouraging youngsters to feed "stress chemicals" to classroom animals. Of less significance, procedural difficulties (such as selecting the right dose to demonstrate retarded growth rather than death) and poor experimental design (administration of poison is not an ideal method of studying animal behavior) make such projects ill-devised and inadvisable. I

strongly recommend that such projects not be attempted. There are many projects on animal growth and behavior which do not harm the animals and which could be undertaken with greater benefit. References for such projects follow.

- ANON. 1974. Suggestions for experiments involving animals at the preuniversity level. Canadian Council on Animal Care, 151 Slater St., Ottawa, Ontario K1P 3H3.
HAINSWORTH, M.D. 1968. Experiments in animal behavior. Houghton Mifflin Co., Boston. P. 162-172.
STOKES, A. W., ed. 1968. Animal behavior in laboratory and field. W. H. Freeman and Co., San Francisco. See especially Separates number 796, 797, 804, 805 and 827.

F. Barbara Orlans
Division of Research Grants
National Institutes of Health
Bethesda, Md. 20014

M. H. Peaslee and F. A. Einhellig comment:

We appreciate Dr. Orlans' careful scrutiny of our manuscript; however, we do object to the reference to "erroneous statements" which, according to her own explanation, amount to the inference that "litter size . . . is regulated by cannibalism." It was our intention that students handle and examine closely the developing offspring, and if the result of this invasion of "privacy" of the nursing mouse is the loss of a few pups, so be it. High-school classrooms seldom have the peace, quiet, or tranquility described and we fear that the "five-sided inverted cardboard box" would very quickly be reduced to rubble by the nesting female.

The projects were suggested under the assumption that only responsible students would possess the required dedication and that a close student-teacher relationship would clearly prevail. We find it unfortunate that our critic has raised no objection to the stressful environments surrounding man—excessive intake of tannic acid (found in coffee, tea, or cocoa), imbibition of alcoholic beverages, or recycling of DDT through our food chain—the same "lethal poisons" suggested for use with project mice.

REVIVE AUDIOVISUAL COVERAGE!

I'm concerned that *ABT* might be giving up on "Auditioning Audiovisuals!" I believe the last column appeared in the May 1974 issue, and not very often before that. I consider this column a very valuable source of media reviews for biologists that should appear with much greater frequency in *ABT* (like in every issue). I suggest you publish the annotated list of films given to participants each year at the NABT convention, even without review comments. This