Letters

National Cancer Institute Monographs

The National Cancer Institute publishes monographs presenting series of papers on specific subjects of importance to cancer research and proceedings of conferences and symposia dealing with cancer and closely related research fields.

Four monographs have appeared to date: No. 1, "Estrogen-Induced Tumors of the Kidney in the Syrian Hamster" (December 1959); No. 2, "Symposium on Normal and Abnormal Differentiation and Development" (March 1960); No. 3, "Conference on Experimental Clinical Cancer Chemotherapy" (August 1960); and No. 4, "Symposia—Tumor Viruses" (September 1960).

Investigators, institutions, or sponsors of meetings should write to me for information concerning submission of material. Manuscripts offered for publication as a National Cancer Institute monograph should conform to the instructions to authors appearing on the inside back cover of the *Journal of the National Cancer Institute.*

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Progeny Yields in Drosophila

In a recent report by W. C. Levengood and M. P. Shinkle [*Science* **132**, 34 (1960)] regarding environmental factors influencing progeny yields in *Drosophila* it is stated that "atmospheric pressure effects on progeny yields . . . appear not to have been previously reported." Although comparatively little work has been done, there have been some publications applicable to the subject. For example, Stephen and Bird [*Can. Entomologist* **81**, 132 (1949)] studied some effects of different pressure levels on oviposition in the cabbage worm, *Pieris rapae.* Moreover, in reviews by Uvarov [*Trans. Entomol. Soc. London* **79**, 1 (1931)] and Wellington [*Can. J. Research* **24**, 51 (1946)] reference is made to Pictet's studies on pressure effects on emergence of *Pieris* adults. Although Levengood and Shinkle seem to have been concerned principally with numbers of progeny in their experiments, the observations by Pictet and by Stephen and Bird are directly applicable to experiments concerning progeny yields. Stephen and Bird found increased oviposition in insects exposed to relatively low pressures (900 to 930 mbar) as compared with that at higher pressures. Pictet reported that pressure changes might contribute to the success or failure of *Pieris* to emerge from the pupa. Parental oviposition and subsequent emergence from the pupal stage each may influence the final number of adult progeny. Incidentally, the results of Stephen and Bird (increased oviposition at lower pressures) do not support the data of Levengood and Shinkle (decreased number of progeny from matings during lower pressure).

Levengood and Shinkle also report results of rearings of *Drosophila* in an electrical "field." They found a lack of correlation between numbers of progeny and pressure level during mating, under the influence of the field. However, they do not give the amount of variability in the progeny data—a statistic which would aid in interpretation of these data, particularly since so much stress is placed upon this negative effect. The field presumably was developed through and around the culture medium. It would also have been helpful, therefore, if some indication of the dielectric capacity of the culture medium were given, since the dielectric capacity is inversely related to the field strength within the medium.

The authors appear not to have been too sure of the difference between an electrical *field* and an *amount* of electricity. For example, they state that the "electrostatic field strength was estimated to be 7×10^2 coul." But a coulomb expresses quantity of electricity, quite distinct from field strength per se. The latter should be expressed in terms of force (newtons) or electric intensity (newtons per coulomb) [J. A. Chalmers, *Atmospheric Electricity* (Pergamon, New York, 1957)]. As Chalmers stated, many authors refer to the electrical field of the atmosphere in terms of the potential gradient (volts per meter); the difference between the latter unit and electric intensity (E) is merely one of sign.

I am not clear on the meaning of the last two paragraphs of the report of Levengood and Shinkle. For example, in the sentence, "The electric field appears to provide a certain amount of protection and reduces the variations found outside the field"—variations in what? And in the sentence "Flies in the electric field are, in a sense, protected or shielded from external fluctuations," what external force is fluctuating? Are the authors referring in these two sentences to the natural, atmospheric electrical field? If they are, it seems to me that the field (potential gradient) within the laboratory building would not be important any-

(*Continued on page 115*)