

MOSQUITO METROLOGY AND COMMUNICATIONS

Lou Ziegler, of the Nassau County, New York Mosquito Control organization, has sent in a copy of Volume 42, No. 2 (June, 1966) of the "Proceedings of the Radio Club of America" which contains an article that may be of more than passing interest to persons engaged in studies of mosquitoes and their biology. Since this source might be unfamiliar to most AMCA members, we are calling attention to it here. This article, with the title cited above, is by William H. Offenhauser and Peter Williams.

To give an idea of the contents of the article, the "Editor's Foreward" is quoted as follows: "This paper summarizes a generation of work by a group of devoted scientists who have wedded biology and electronics to produce entirely new knowledge, available to neither kind of specialist working alone. That continued expansion of this kind of work will ultimately rid man of a perennial nuisance is more than merely predictable; it has already been shown that electronic simulation of the appropriate mosquito sounds can lure the mosquito to an apparatus of destruction, as does the cheese to a mousetrap, without also luring [insects] friendly and helpful to the interests of man."

The authors cite Herms & Gray as a source of their information on mosquitoes, and include statements of facts which are of course well known to mosquito workers (as well as some mis-statements!). Then they proceed to go into detail in the field of electronics and computers.

An idea of what is included may be gained from the following quotation from the section on Method: "If we use sound as the energy form, it is reasonable to require that the sound be (1) recorded and (2) analyzed with procedures that have been standardized. Since all mosquito sounds are low in energy level, it is also necessary to collect substantially *all* the sound radiated and to exclude substantially *all* noise, with 60 DB S/N (signal-to-noise) ratio as the target objective for all recorded signals.

"The system must be very stable electrically, very reproducible and quite free of microphonics and all extraneous noise, both airborne and transmitted through solid structures.

... "A reference signal for system calibration (by substitution) is a sine wave 1 kcs audio oscillator of high stability and pure wave form, working with a microvolter and a standardizing coupler. These are reliable and inexpensive. Design the system to bring all signals up to a standardized bus level of +10 VU as read on an ASA Standard VU Meter, whether the signal comes from live pickup or from a recording."

By this time, many if not most of us will be lost. However, mosquito workers and biologists in general are becoming increasingly aware of the necessity of enlisting the aid of the physical sciences, in their efforts to understand (and control) insects. This reviewer does not have the competence in this field to analyze or judge the value or accuracy of the findings reported, but would like to call attention to this article so that others better versed in the technicalities involved will, perhaps, become interested enough to read the article and pursue its implications.—D.L.C.