table. It is exceedingly helpful to have such differences tabulated so that ready reference may be made to them. The title of this table is probably in error since it mentions *Anopheles* where it obviously refers to *A. quadrimaculatus.*

The old and new world forms of *Anopheles maculipennis* are compared taxonomically. It is concluded that sufficient differences exist between them to consider them as distinct. The three new world subspecies are then compared as to larval and adult bionomics and disease relationship. In western America the most important vector of malaria is *A. m. freeborni.*

Owing to the variability in the *Anopheles pseudopunctipennis* group, the author feels that two subspecies and one variety should be recognized at present; namely, *A. pseudopunctipennis pseudopunctipennis* Theo., *A. pseudopunctipennis franciscanus* (McCracken), and *A. pseudopunctipennis franciscanus* var. *boydi* (Vargas). Although this fine differentiation of the species into subspecies and varieties may help to clarify the situation, it is becoming unwieldy in our binomial system of nomenclature.

Anopheles punctipennis is capable of carrying malaria but its role in this disease is considered of minor importance. It is thought that this species may be the cause of some of the malaria in the Mother Lode region of the Sierra Nevada of California. The species, however, does not readily enter houses.

This paper is a good contribution to our knowledge of mosquitoes in their relation to malaria and should prove useful to mosquito control workers as well as to taxonomists.—Helen Sollers, Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, U. S. Department of Agriculture, Washington, D. C.

TOXISCHE WIRKUNG VON NEOCID AUF LARVEN, PUPPEN UND IMAGINES VON *Anopheles* UND *Culex.* (Toxic effect of Neocid upon Larvae, pupae, and adults of *Anopheles* and *Culex.*) By A. Mandekos, 1944. Deut. Tropenmed. Ztschr. 48 (3/6): 84-88.

Neocid, "polychlorodiphenylethane 5 per cent powder 'adspers. cp. q. s.," (DDT) has been found by the Germans to be more effective against the larvae of *Anopheles superpictus* Grassi, than other known insecticides.

Mandekos' experiments with Neocid, carried out in 1943, were conducted along three lines: (1) as a dust, (2) as a water suspension, and (3) as a petroleum-water suspension.

It was found that the dust killed adults after 3½ hours but even after 15 minutes convulsive spasms were noticeable.

Scarcely more than 2 per cent of *Anopheles* and *Culex* larvae could be found alive after the application of the water suspension, in dilution of 3.5 per cent and at the rate of 0.035 g. of pure substance per square meter. This was applied in the open and in strong currents. When the suspension was sprayed in three cow stables in Saloniki all anophelines present were killed and the stables remained free of anophelines for one to five weeks.

Neocid-petroleum-water suspension is more effective than the water suspension alone when used in places with considerable current. The author recommends an increase in concentration Neocid to 4-5.5 per cent at the rate of 0.8 g. of Neocid per square meter for strong currents and for places where much organic material exsits, in which *Culex* particularly is found.

Mosquito eggs and pupae tested appear to be little if at all affected by the use of Neocid.

In the weak concentrations of Neocid used in these experiments, no toxic effect on man was observed.

Another insecticide, calcium arsenite, mixed with road dust in proportions of 3.5 per cent and tested against mosquito larvae in standing water, proved to be as satisfactory as paris green.

Note: From the facts presented, the procedures and results are difficult to interpret.—Helen Sollers, Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, U. S. Department of Agriculture, Washington, D. C.