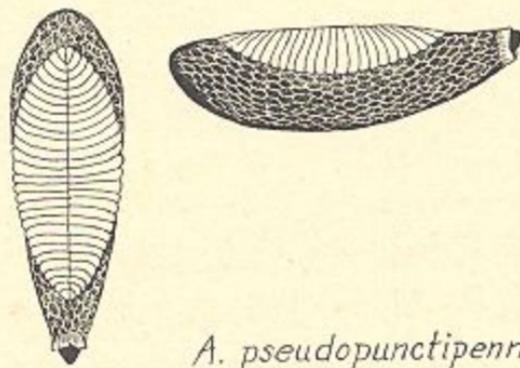


### THE EGG OF *ANOPHELES PSEUDOPUNCTIPENNIS* IN PANAMA

Investigations in Europe on the puzzling distribution of malaria and mosquitoes have resulted in the discovery of several races of *Anopheles maculipennis*. In the New World, *Anopheles pseudopunctipennis* also has a peculiar relation to malaria transmission; in some regions it is of no importance, while in others it habitually frequents houses, attacking man viciously, and is a dangerous vector. Variations in egg structure do not always signify the presence of more than one race of mosquitoes, but since the habits of *A. pseudopunctipennis* suggest that it may be divided into geographical races, it might be of interest to compare the eggs from different regions. For this reason a description of the eggs from Panama is presented.

The eggs were collected from mats of green algae growing in a creek near Pedro Miguel, Canal Zone.



*A. pseudopunctipennis*

Description of the Egg (Fig. 1)

FIG. 1. Egg of *Anopheles pseudopunctipennis*

Length: There was considerable variation in the length, the extremes being 480 microns and 575 microns. Of 217 measurements, the mean was 520 microns and the standard deviation 19 microns.

Float length: Extremes, 320 microns to 427 microns. Of 188 measurements, the mean was 376 microns and the standard deviation 23 microns.

Width: Extremes, 130 microns to 178 microns. Of 99 measurements, the mean was 158 microns, the standard deviation 11 microns.

Long, narrow eggs; the anterior end blunt, and the posterior end tapering. Dorsal surface flattened, ventral surface convex. Color black. The exochorion possesses the pattern of polygonal markings that has been described for eggs of other members of the *Anopheles* Group, and covers all of the egg except for the posterior tip, where the exochorion flares out into a broad, collar-like frill. The floats are large; they are placed on the dorsal surface, and are fused with one another along the mid-dorsal line. There is a wide range in the number of float ridges, the extremes being 22 and 38, although most of the floats have from 26 to 33 ridges. Of 307 float ridge counts, the mean was 29.6, and the standard deviation 2.7.

*A. pseudopunctipennis* eggs of Panama resemble the eggs of this species that were described from California by Herms and Freeborn (1920, Jour. Parasit., 7: 69-79) except that in the Panamanian form the floats are large and have many float ridges, while the egg described by Herms and Freeborn the floats are smaller and are "represented by a fusiform closely appressed area," and there are only "twelve sections representing the twelve original compartments of lateral floats."

The collar-like frill of the local eggs is identical with that described by Herms and Freeborn. Herms and Frost (1932, Jour. Parasit., 18: 240-244) described a different kind of *A. pseudopunctipennis* egg from California, and suggested that an inward fold of the floats might have been mistaken for the "collar-like float" (frill?) by Herms and Freeborn. In the eggs from Panama there is no possibility of confusing the frill and floats; both are distinct and separate, and except for size and number of ridges, the structures of the floats shows no variation. It would be interesting to know if the various types of California eggs can be deposited by the same mosquito, or if they represent seasonal variations such as those described for *A. walkeri* by Matheson and Hurlbut (1937, Amer. Jour. Trop. Med., 17: 237-243).—LLOYD E. ROZEBOOM, *Medical Entomologist, Gorgas Memorial Laboratory, Panama, R. de P.*