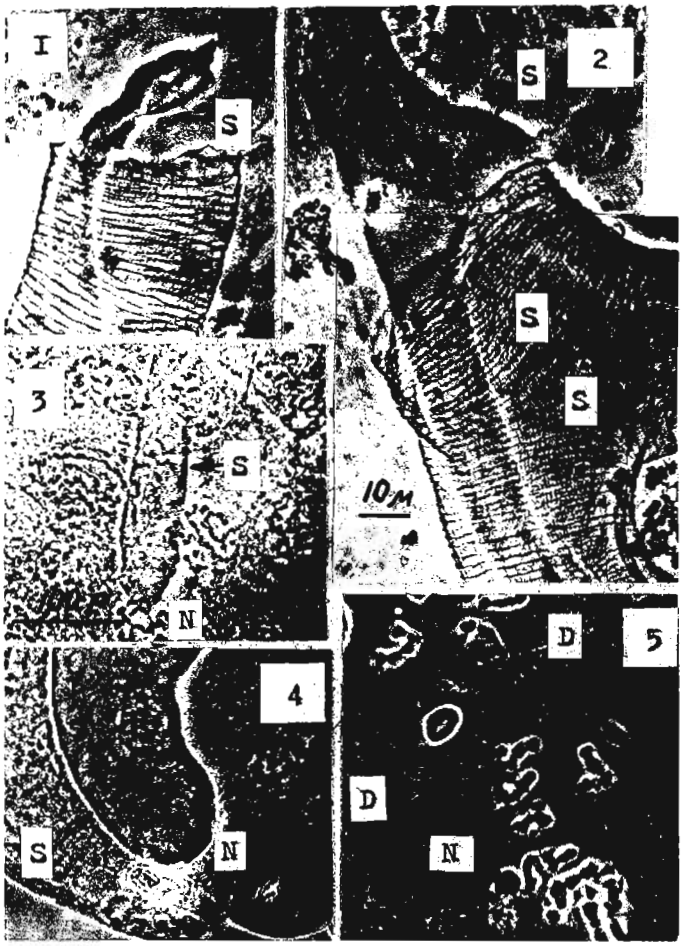
Zhimulev, I.F. Institute of Cytology and Genetics, Novosibirsk, U.S.S.R. Description of a new type of secretion in the larval salivary gland of D. melanogaster.

The mucoprotein secretion which appears in the salivary glands of Drosophila larvae shortly before puparium formation has been described in a number of papers (reviewed by Lane et al. 1972). The secretion has a rough granular appearance under phase contrast microscope (Zhimulev, Kolesnikov, in press). This paper describes new type of secretion, the so-called "silk-secretion" which differes sharply from the mucoprotein. Patches of this secretion have been found in the ducts of all the Batumi-L larvae studied (Figure 1) and in $l_{(2)}gl$ larvae. In the $l_{(3)}tl$ larvae the silk-secretion is easily seen because there is no mucoproteine secretion in the salivary gland (Zhimulev, Kolesnikov, in press). The silk-secretion has been observed both in the duct



Figures 1. End of a salivary gland duct with a patch of the silk-secretion; Batumi-L stock, 115 hours, phase contrast. 2. The same, $l_{(3)}tl$ stock, 144 hours. 3. Secretion in the distal part of the gland; $l_{(3)}tl$ stock, 168 hours. 4. The same, 264 hours. 5. Droplets of the silk-secretion in the cytoplasm of salivary gland; $l_{(3)}tl$ stock, 408 hours. S-secretion, N-nucleus, D-droplet of secretion.

(Figure 2) and in the distal part (Figures 3, 4). The mass of the secretion increases with larval age (Figure 4). Information of the silk-secretion is represented in the Table. In 264-408 hour old $l_{(3)}tl$ larvae droplets of a substance reminiscent of silk-secretion are observed in the cytoplasm (Figure 5). It may be suggested that the silk-secretion possesses a digestive function or it is a predecessor of the mucoprotein secretion.

Reference cited: Lane, N.J., J.R. Carter and M. Ashburner 1972, Wilhelm Roux' Archiv 169:216-238.

Presence of silk-secretion in salivary glands

Larvae	Hours after oviposition	Total number of glands	Glands with silk-secretion
$l_{(2)}gl$	168	10	10
$l_{(3)}tl$	120	33	26
(lethal tumorous larvae)	132	21	18
	144	30	21
	168	30	18
	264	23	9
	408	34	9
Laboratory stocks:			
Batumi-L	90-120	20	20
Oregon-R	90-120	8	6