

To Rita

October 24, 1948

Dr. Viktor Hamburger  
Department of Zoology  
Washington University  
St. Louis, Mo.

Dear Viktor:

In an effort to stop bleeding I attempted to coat the cut surface with a thin film of celloidin, thinking that this might adhere to the tissue long enough to seal up blood vessels, but not long enough to interfere with later development of the region. I simply dipped a glass rod in dilute celloidin, then very rapidly touched the rod to the cut surface before the celloidin could solidify. This must be done rapidly since celloidin sets almost the instant it is in contact with air, and moreover the celloidin tends to adhere to the needle, rather than to coat the tissue. This method was not very successful in most attempts, but worked occasionally.

A much more successful method was as follows, viz. to treat the region to be removed with celloidin before making a cut. If I repeatedly dipped the needle into dilute celloidin and then touched the tissue, I found that suddenly the capillaries in the treated area would break down, and the treated area would become quite red; but then the whole tissue region including the blood seemed to "freeze", and the block of tissue could then be cut out with little or no bleeding following the cutting. The area over which the "freezing" spreads can be controlled quite well.

This technique has been used successfully in bilateral extirpations of leg buds. I hope it will prove useful to you.

My work goes well enough, al though the writing of the invertebrate material has taken much more time than I had anticipated, and I still am not satisfied at all with what I know about it.

Evelyn has had a thyroid operation to remove an accessory thyroid from within the substance of the main thyroid, so our schedules have been confused. All went well, and we are returning to normal.

Our greetings to you and Mrs. Hamburger.

Sincerely,

Gray