March and April: Yellow perch (1); wall-eyed pike; common pike. *May and June:* European carp.

June and July: Log-perch (1); straw-colored minnow (1); common shiner (1). *October to April:* Trout and salmon.

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ACETO-CARMIN MOUNTING MEDIA

BELLING'S aceto-carmin technique,[1,2] which has been so valuable for a quick examination of meiotic divisions, has proven to be especially useful in the investigation of the giant chromosomes in the salivary glands of the Diptera. The chief disadvantage of the method lies in the fact that the preparations are temporary and the specimens can not be preserved without further treatment. Often specimens so prepared are too valuable to be discarded and a number of methods have been devised for transforming these temporary preparations into permanent slides. (McClintock,[3] Steere,[4] Buck,[5] Marshak,[6] etc.). These methods serve the purpose for which they were designed, but they lose the chief advantage of Belling's original technique, its extreme simplicity and speed.

The aceto-carmin technique can be greatly improved and the preparations made permanent by adding to the fixing solution certain inert substances which do not alter the fixation image but which serve as mounting media when the acetic acid and water evaporate. A number of such substances are available, *i.e.*, dextrose, gelatin, glycerine, gum-arabic, pectin, etc. A detailed investigation of these water-soluble mounting media is now in progress. Two mixtures, however, have already shown their usefulness.

(1) The specimen is macerated on a slide in a drop of Belling's aceto-carmin (a saturated solution of carmin in 45 per cent. acetic acid plus a trace of iron). Then several drops of the following solution are added:

Belling's aceto-carmin	80 cc
Karo Corn Syrup (Dextrose)	10 cc
Certo (Pectin)	10 cc

(The commercial products in the mixture can be purchased at any grocery store.) The preparation is then heated, as in the Belling technique. The coverglass can be pressed down until the specimen has reached the desired thinness. If an excess of the solution is squeezed out around the edges of the coverglass it need not be removed, as it forms an excellent sizing and dries as hard as balsam.

(2) The following mixture may be used alone and thus it reduces the fixing, staining and mounting to a single operation. It may be used undiluted or it may be diluted with Belling's aceto-carmin in various proportions (3:1, 1:1, 1:3, etc.), depending upon the nature of the specimen to be examined. With greater dilutions more fluid should be used to allow for the greater evaporation of water and acetic acid.

Acetic acid (glacial)	50 cc
Water	50 cc
Glycerine	1 cc
Gelatin (powdered)	10 grams
Dextrose	4 grams
$FeCl_3$	0.05 grams
Carmin	To saturation

The gelatin should be dissolved in the water and the other components added. The mixture should be boiled and filtered, just as is done with Belling's solution. As the acid and water evaporate, the medium becomes as firm as balsam and, unlike the familiar glycerine-jelly, it will not liquefy, even when heated to 80° C.

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2 *Biol. Bul.*, 50: 160, 1926.
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5 SCIENCE, 81: 75, 1935.
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