hundred eggs on a bit of cheese-cloth. In the case of *Papilio ajax,* a breeding cage was employed and a sprig of wild parsnip was placed in its best lighted corner. The result was excellent.

In order to rear larvae, the bits of leaves with attached eggs were placed on fresh food plant in tin cans covered with pieces of glass. The plant in this case was also kept in a curved-necked bottle. This type of tight container retained the moisture, which is absolutely essential for small larvae. However, they were soon transferred to large breeding cages.

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PREPARATION OF NON-TOXIC URINE FRACTIONS FOR ASSAY OF MALE HORMONE BY THE FEMALE BITTERLING TEST[1]

IN testing urines for hormones by means of the female bitterling (*Rhodeus amarus*)[2,3,4] it was found that certain urines were toxic to the fish. Sometimes the addition of as little as 45 cc of untreated urine to 4 liters of water proved fatal to the fish within 24 hours. Since this test will probably be widely used as a means of assay for male hormone, it was deemed important to attempt to remove the toxic factor or factors.

After many experiments the simple expedient of dialysis proved to be all that was necessary. It had previously been found that the ovipositor-lengthening factor was not lost in dialysis.

Two hundred cc portions of fresh urine with specific gravities ranging from 1.018 to 1.036 were placed in Cellophane bags and dialyzed against running tap water for 24 hours. The specific gravities then were 1.001 to 1.003. The urines were then boiled to destroy bacteria. Amounts equivalent to 150 cc of the original urine to four liters of water containing two bitterlings were not in the least toxic to the fish. Since employing routine dialysis we have had no deaths of the fish due to the toxicity of urines.

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[1] Aided by a grant from the Lucius N. Littauer Foundation.

[2] Kleiner, Weisman and Barowsky, *Jour. Amer. Med. Assoc.*, 104: 1318, 1935.

[3] Kleiner, Weisman and Mishkind, *Jour. Amer. Med. Assoc.*, 106: 1643, 1936.

[4] Kleiner, Weisman and Mishkind, *Proc. Soc. Exper. Biol. and Med.*, 34: 367, 1936.

AN ELECTRICALLY HEATED NEEDLE FOR PARAFFIN EMBEDDING

THE use of needles periodically heated in a gas flame for orientating small material during the process of embedding in paraffin has several disadvantages. The constant reheating involves loss of time, and there is danger of damaging fine material, such as root tips, with needles that are too hot. The device described here has been in almost daily use in this laboratory for the past four months and can be easily made at a trifling cost.

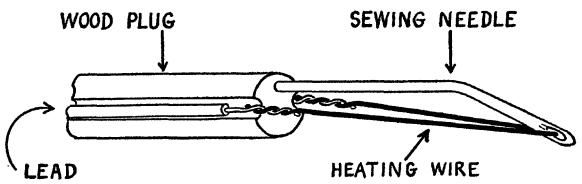

FIG. 1

The drawing shows the method of construction. It will be seen that a loop of heating wire is passed through the eye of a bent sewing needle, the needle being fixed into a small wooden plug. This plug, which has grooves cut in it to receive the leads, can either be long enough to serve as a handle or else it can be fitted into the end of a thin bamboo cane. In the former case it can be bound round with insulating tape to hold the leads; these are best made of light electric bell flex. The heating wire, 4 cm long, is of 40 S. W. G. nickel chromium, having a resistance of about 60 ohms per meter. It is best, but not absolutely necessary, to silversolder the wire to the leads. The current is supplied from the mains through a small transformer giving 3.3 volts, so that about one ampere flows through the heating wire. It is of course easy to adjust the length and gauge of the resistance wire to suit any small transformer that is available.

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