Use of an Electric Drill-operated Trephine in Preparing Turtles for Heart Beat Studies

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The turtle heart is excellent for many studies of the heart and its beat, both for teaching and research, because it has a strong beat, is relatively insensitive to manipulations, will beat for hours under average laboratory conditions, and requires only amphibian Ringer's solution as perfusate or as a washing solution.

The heart can be exposed only with some difficulty, since the tough shell must be cut or a portion removed. Formerly we cut the plastron from the carapace with a hack saw; this usually caused considerable hemorrhage, with resulting deterioration of the specimen.

We now use a trephine powered by a small electric hand drill. Our trephine cuts a hole 1⅜ inch in diameter, but any trephine cutting a hole 1¼–2 inches in diameter will serve excellently. The handle of the trephine is removed, and the shaft is turned or ground down to a diameter of ¼ inch to fit into the chuck of the drill. The center spike of the trephine is adjusted so that it protrudes ⅛ inch.

In use, the turtle is pithed and then held, back down, on a solid table. The spike of the trephine is placed a trifle cephalad to the center of the plastron. The drill is started, and run until the disc is cut from the plastron (Fig. 1). In a good preparation, the underlying muscles are not damaged in the slightest. The disc may then be pulled from the muscles, leaving a hemorrhage-free area overlying the heart which can be seen through the tissues, beating serenely. The dissection is completed by cutting through the muscles, avoiding large blood vessels. The heart may be used *in situ* or excised for perfusion experiments.

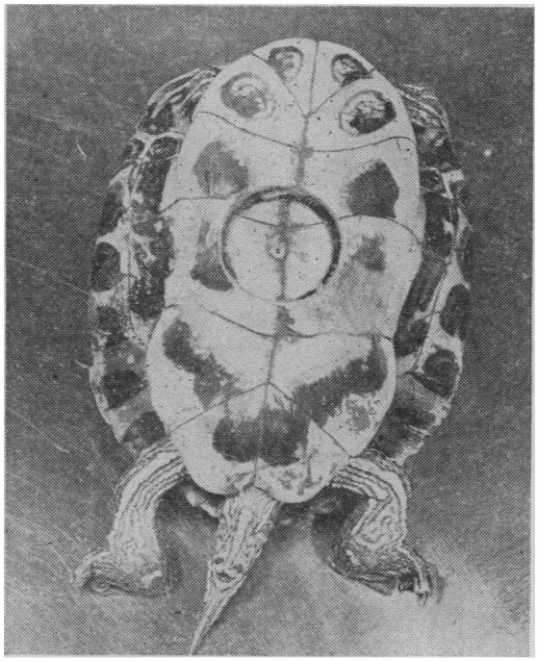

FIG. 1

This simple technic of cutting through the plastron with a trephine speeds the preparation of turtles for routine class use and prevents hemorrhage, insuring an excellent preparation.

Book Reviews

Sexual behavior in the human male. Alfred C. Kinsey, Wardell B. Pomeroy, and Clyde E. Martin. Philadelphia-London: W. B. Saunders, 1948. Pp. xv + 787. (Illustrated.) $6.50.

It is indeed a peculiarity in our human society to consider appropriate and in good taste the investigation of any structure, function, or behavior characterizing man, as a means of understanding our species, with the exception of well-directed studies on problems in sex and reproduction. However, the great advances in this field within the last 30 years have done much to provide a good foundation for further sound advances, and constructive fundamental researches on the multiple problems of sexuality are much needed.

The endorsement and support of this large research project, of which this volume is a partial report, by the Committee on Research in Problems of Sex of the National Research Council during the past 6 years; the excellent support rendered by the University of Indiana both in personnel and working facilities; the financial support and encouragement of the Rockefeller Foundation; and the preface by Dr. Alan Gregg, director of the Division of Medical Sciences of the Rockefeller Foundation, collectively assure the propriety, the merit, and the scientific soundness of the investigation. Whereas the facts revealed will shock many sensitive individuals who, like the majority, believe they know the pertinent facts of human sexual behavior because of their acquaintance with their own pattern which they consider 'normal,' the present volume will unfold an unbelievable variation among the members of the human population that must, of necessity, be comprehended before any degree of intelligence can be exercised by such counseling agencies as physicians, social workers, prison executives, institutional counseling personnel, or military authorities.

Representing some of the results from a study begun approximately 9 years ago by Prof. A. C. Kinsey, who is schooled in sampling techniques from his earlier investigations on variation among insect populations, this volume is the first in a series of 9 projected volumes in the investigation, which is scheduled for measurable completion within a period of 20