UNDER the will of the late Thomas L. Gray, the Royal Society of Arts has been appointed residuary legatee of his estate for the purpose of founding a memorial to his father, the late Thomas Gray, C.B., who was for many years Assistant Secretary to the Board of Trade (Marine Department). The objects of the trust are "The Advancement of the Science of Navigation and the Scientific and Educational Interests of the British Mercantile Marine." The council now offers the following prizes: A prize of £100 to any person who may bring to their notice a valuable improvement in the science or practice of navigation proposed or invented by himself in the years 1930 and 1931. A prize of £100 for an essay on "The stability of ships, with special reference to the particulars which should be supplied by shipbuilders, and also the value of any mechanical devices for ascertaining the M. G., with which you are acquainted." Further information may be obtained from the Secretary, Royal Society of Arts, John Street, Adelphi, London W. C. 2.

FOR the twenty-third consecutive season the University of Michigan will maintain its summer station for instruction and research in biology from June 29 to August 22, on the shores of Douglas Lake, Cheboygan County. Because of its natural surroundings, the Douglas Lake site offers unique opportunities for pursuing a variety of problems in biology. To the north of the camp is a region of evergreen coniferous forests, while to the south are hardwood forests, making the station the best situated in this respect of any in the country. Lowlands near the lake furnish a variety of plants, including orchids and insect catching types, while Cecil Bay and Big Stone Bay on Lake Michigan are not too distant for study of forests free from fire for fifty years. Bird and animal study is facilitated by the wide variety of natural conditions. A beaver colony with three dams is near by, and 150 species of birds are found in the region in summer. Invertebrate fauna, mollusks, both land and aquatic, crustacea, insects and examples of animal parasites are numerous and well suited to study.

DISCUSSION

A METHOD FOR EXPLANTING THE KIDNEY

ACCURATE determinations of the physiological activities of the kidney require that successive samples of blood be drawn from the renal vein in healthy, unnarcotized animals. A suitable technique for attaining this end has long been desired but has been difficult to evolve. Certain surgical procedures have been carried out in animals under ether anesthesia in an attempt to solve the problem.

Both rabbits and dogs have been employed as experimental animals. In preliminary trials, the left kidney was brought out through a small lumbar incision and the skin and muscle layers were lightly closed around the pedicle. Protection from trauma and drying was afforded by the use of a simple but effective dressing, and after a considerable period, epithelium grew in from the edges of the skin, eventually covering the entire organ. Following removal of the right kidney, animals so treated have remained in perfect health for more than a year. It was found, however, that an excess of granulation tissue formed about the base and prevented easy access to the vessels. This procedure was therefore abandoned, and an effective operative technique substituted.

Dogs were found to be more suitable for these tests. In these animals it was possible to bring out the kidney through a simple, muscle-splitting, lumbar, flank incision and to close the muscle layers loosely around the pedicle. The organ was then tipped posteriorly to render the renal vein as prominent as possible, and a flap of skin was brought down over the organ from the dorsal side and so sutured as to make the position of the kidney a permanent one. Then a strip of skin was cut and sutured down to the subcutaneous tissue on either side of the renal vein. leaving the vein covered by and enclosed in a gutter of skin which was semi-circular in cross-section.

The wounds healed by first intention, and within ten days the right kidney could be removed safely. With the removal of the right kidney, a carotid artery was usually explanted in a tube of skin in accordance with the method described by Cohn and Levy. This was done to facilitate arterial puncture and to obtain constant records of blood pressure.

The technique described herewith has been carried out on forty-five animals, the first of which are now six months post-operative, in excellent health, and without evidence of renal insufficiency as evidenced by alterations in blood chemistry.

By explanting kidneys in the manner outlined above, it has been possible to determine renal circulation, urea excretion and utilization of oxygen by the kidney under a variety of conditions.

C. P. RHOADS

THE HOSPITAL OF THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH, NEW YORK CITY, N. Y.

CENTRAL BODIES IN THE SPERM-FORMING DIVISIONS OF ASCARIS

THE early investigations of O. Hertwig, Brauer, Boveri and others have long been regarded as estab-