sporocyst wall assumes a reddish tint. We can not agree between ourselves whether or not the sporozoites are stained a very light blue. At any rate the structures within the sporocyst are rendered visible. We suspect that the improved optical properties are the result of reducing the glare by staining the material about the sporocysts.

The foregoing procedure may be variously modified. The technique may be adapted to oocysts in a test tube instead of under a cover-glass. Also, we have found that if the fresh, non-sporulated cysts are used instead of those in the sporulated condition, development will occur beneath the cover-glass if heat is not applied while the preparation is flooded with acetic acid.

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THE LIGATION OF EARTHWORMS TO REMOVE THE ANTERIOR OR POSTERIOR END

DURING experiments conducted on the regeneration of blood vessels in earthworms, it was desired to remove the anterior thirteen somites. To effect this removal of tissue the following method was found to be superior to the usual method of cutting with a scalpel.

This method consists of tying the worm tightly enough to cause the end to slough off. In a six- to eight-inch piece of number 00 silk thread, a single knot is tied and drawn to a quarter-inch loop through which the worm is caused to crawl. The number of somites can be counted as the worm crawls through the loop and at the desired point the knot is drawn tight enough to constrict the worm to the smallest diameter without cutting the body wall. A little practice will determine how much pressure can be applied to the silk to obtain the desired result. This knot should be tied quickly and drawn against the finger with the ends of the silk on each side of the finger to prevent the worm from twisting into the thread. A second and third knot is then tied and the surplus silk clipped off.

The anterior end remains attached to the posterior for from two to four days; if it remains attached longer than this it is probable that the first knot was not tied tightly enough and a second tying is necessary.

This method is far more successful than that of cutting for several reasons. When the silk is tied around the worm a large quantity of mucus is secreted protecting the region. When the anterior end sloughs off the surface left exposed is very small, averaging about one millimeter in diameter. Around this end at the time of separation there is already a protecting fringe of proliferated epithelium. Extrusion of the digestive tract is very rare, allowing more rapid recovery. When worms are cut with the scalpel the contractions of the body wall often force the digestive tract out, and at best leaves a large surface exposed for bacterial infection, causing high mortality.

A point of great importance, in the work on blood vessels, is the retention of all the blood in the vessels. When the worms are severed by the scalpel much blood is lost. By tying, all the blood is kept in the vessels, leaving the worm in better condition

In summing up the advantages of this method it may be said that it is far superior to cutting, allowing the animal to readjust itself more gradually to the loss of tissue. While the shock of tying the worm so tightly may be as great as the shock of cutting, certainly the post-operative effects are not so great. Regeneration starts more quickly and proceeds more rapidly. Worms severed in this manner showed signs of feeding activities in about one to one and one half months.

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SPECIAL ARTICLES

ON A RELEASE-PHENOMENON IN ELECTRICAL STIMULATION OF THE "MOTOR" CEREBRAL CORTEX

THE starting-point for this investigation was the question as to how the excitability of a motor point of the cerebral cortex and eventually the reactions obtained by its stimulation would be influenced, if changes occurred at all, when the surrounding parts of the cortex were put out of function. To avoid as far as possible shock-producing effects on the cortex, we decided to produce a functional block of the cortex round the motor point under investigation by local anesthesia with novocaine.

The general course of these experiments was as follows: general anesthesia of the animal by intraperitoneal injection of Dial (0.4–0.6 cc Dial Ciba per kg bodyweight), which leaves, as Fulton, Liddell and Rioch recently have shown, the cortex rather well excitable for electrical stimulation. After 1 to 2 hours, or even longer, when an even stage of narcosis is reached, the threshold of a point of the so-called motor cortex was determined for faradic bipolar or