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Does the optic nerve of the frog tadpole regenerate after section?**By WILLIAM H. COLE.**

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During the study of conjunctival regeneration in frog tadpoles (*Rana clamitans* and *R. catesbeiana*) it was noted that, after removal and immediate replantation of the eye, degeneration of the eye took place. The eyeball became whitish and opaque as seen through the conjunctiva, and gradually became smaller until no trace of it was visible externally. Instead of the usual convexity in the eye region, the area became depressed. It was therefore concluded that the eye was absorbed, due to the lack of regeneration of the blood vessels, muscles and nerves of the eye. Out of 37 animals on which such an operation had been performed, there was one whose eye did not degenerate. At no time did the eye become whitish or opaque, although it diminished in size about one third. For the first few weeks its position was abnormal, the eye having rotated anteriorly about 20 degrees. Gradually this displacement disappeared, and at the end of two months the eye was normal in position, although still about one third smaller. Near the end of the third month compensatory movements of the eyeball reappeared. When the body was rotated the eye always rotated in the opposite direction, as in unoperated animals. This led to the assumption that the ocular muscles must have regenerated. The fact that the eye remained normal in appearance made it seem likely that the optic nerve and blood vessels had also regenerated. During the fourth month the head was removed, fixed and sectioned for histological study. The sections were nearly transverse to the optic nerve and gave evidence that the nerve was continuous. Just posterior to the eyeball there was an irregularity in the nerve involving a slight enlargement in diameter. Since the crucial sections were not as clear as desirable, and since a longitudinal cut would have been preferable, the conclusion that the optic nerve had regenerated could be only tentative. Accordingly further operations are being made in the hope of answering the question raised.