

ther studies of all these forms are now being made.

*The Eye of the Common Mole:* JAMES ROLLIN SLONAKER.

The eye of the mole lies imbedded in the muscle beneath the skin, where it appears as an inconspicuous dark spot. It is situated well forward on the side of the snout.

The eye is degenerate and is no longer capable of functioning in distinct vision. The most noticeable changes which have occurred are:

1. The great reduction in the size of the eye.
2. The much crowded condition of the retina as a result of the decrease in size of the eye as a whole.
3. The noticeable reduction in the size, or the complete absence of the aqueous and vitreous chambers.
4. The varied modification of the shape and size of the lens. Also the peculiar cell structure of the lens.

All the structures of the normal mammalian eye are present in some form or other.

Two stages have been studied: (1) At birth, (2) the condition found in the adult. Very little difference is seen in these two stages excepting an increase in size.

The eye muscles and the optic nerve are easily traced back to the skull. At birth the nerve presents in its course from the eye to the skull a peculiar arrangement. The course is marked by numerous cells and few or no fibers. At the eye there is a rapid change from this cell condition to the fiber condition of the nerve tract. The fibers have not apparently grown much beyond the limits of the eye. In the adult the fibers can be traced to the skull.

The eye cleft may be seen in cross sections. It is very small and of practically

the same diameter in both horizontal and vertical sections through it. It meets the eye at such an angle that it is impossible for rays of light, should any enter, to pass through the eye along the axis of vision.

All the elements of the normal retina are present, but, owing to the much crowded condition, the ganglion cell layer is much increased in thickness.

The lens, which is found in a great variety of shapes and sizes, is composed of peculiar cartilage-like cells with well-defined nuclei. It is therefore incapable of functioning as a normal lens.

It is very doubtful therefore whether the eye of the mole functions in any sense. At the best it can do no more than distinguish between light and darkness.

*The Breeding Habits of Certain Fishes:* JACOB REIGHARD.

1. Experimental evidence was offered that the nests of *Amia* are built by the male fish alone. Access to an area of the natural breeding ground was barred by a fyke net, in which fish that attempted to reach the breeding ground were caught and kept living. The males were removed from the net and placed in the natural enclosure behind it; the females were confined in a crate. Twenty-three nests were built by the males and of these only five ever contained eggs. These eggs were apparently all laid by one or two females that had gained access to the enclosure. The remaining eighteen nests were never used and were finally abandoned.

2. It was pointed out that the colors of the male *Amia* are protective in the breeding season. The fins are all colored green in harmony with the surrounding vegetation. The reticulation of the sides is in close imitation of the shadows cast by the interlaced and floating parts of water plants. The tail spot is strikingly like certain refraction images cast on the bottom