



- Fig. 1 - Schematic drawing of the optic system of the goldfish.
(Table) which a dorsal peripheral ring of the contralateral retina was
- Fig. 2 - Cross section of the tectum of a normal goldfish
- Fig. 3 - Cross section of the opposite tectum of the same fish of fig. 2
Fig. 1 2 - Cross section of the same area of the opposite tectum of the same fish after regeneration of the optic nerve.
- Fig. 4 - Schematic drawing illustrating the experiments in which the ventral or the dorsal retina was removed.
- Fig. 5 - Cross section of the brain of a Cichlid at the level of the bifurcation of the optic nerve in medial and lateral tract (in the medial tract are visible many regenerated fibers while the lateral tract is empty).
- Fig. 6 a, b, c - Cross section of the optic lobe of a goldfish and 2 details:
(Table) one from the reinnervated ventral half of the lobe and the other from its dorsal half which is lacking in regenerated fibers.
- Fig. 7 a,b,c,d,e - Cross section of the whole brain of a Cichlid and 4
(Table) details.
- Fig. 8 - Schematic drawing illustrating the experiments in which the anterior or the posterior retina was removed.
- Fig. 9 a,b,c - Sagittal section of the optic lobe of a goldfish and 2 details:
(Table) one from the anterior half which has not been reinnervated and the other from its posterior half which shows abundant regenerated fibers.
- Fig. 10 - Schematic drawing illustrating the experiments in which a partial or complete peripheral ring of retina was removed.

(Initial of not stated figure of work)

Fig. 11 - Cross section of the ventral ^{half} of the optic lobe of a fish in which a dorsal peripheral ring of the contralateral retina was removed.

Fig. 2 - Cross-section of an optic lobe of a normal goldfish. r: retinal layers. X 150

Fig. 12 - Cross section of the same area of the opposite tectum in the same fish as in fig. 11 after regeneration of the optic nerve, (30 days after section); r: retinal layers. X 150 without any retinal lesion.

Fig. 1 - Schematic drawing illustrating the experimental procedure in which the dorsal retina was removed.

Fig. 3 - Schematic drawing illustrating the experimental procedure in which the ventral part of the posterior retina was removed.

nerve severed X 43. b: detail from the anterior part of the cortex showing
 some regenerated fibers only in the parallel layer, directed toward the
 Fig. 1 - Lateral view of the optic system of the goldfish showing the
 pathway and destination of the optic fibers arising in the retina.

Fig. 2 - Cross-section of an optic lobe of a normal goldfish. r: retinic
 layers. X 160

Fig. 3 - Cross-section of an optic lobe of a goldfish after regeneration
 of the optic nerve (30 days after section) r: retinic layers. X 160

Fig. 4 - Schematic drawing illustrating the experiments in which the ventral
 or the dorsal retina was removed. dorsal retina of the controlateral eye
 was removed X 52.5.

Fig. 8 - Schematic drawing illustrating the experiments in which the ante-
 rior or the posterior retina was removed.

Fig. 10 - Schematic drawing illustrating the experiments in which a partial
 or complete ring of retina was removed.

reads photos?

Plate I



Fig. 5 - Cross-section of the brain of a Cichlid at the level of the bi-
 furcation of an optic nerve into the medial and lateral tracts. In the
 medial tract (M) one can see many regenerated fibers, while the lateral
 tract (L) contains only degenerated fibers. X 52.5

Fig. 6 - a: cross-section of the optic lobe of a goldfish in which the
 ventral half of the controlateral retina has been removed and the optic
 nerve severed X 47.5 b: detail from the ventral half of the lobe, which
 has been reinnervated. X 160 c: detail from the dorsal half of the lobe
 which is lacking in regenerated fibers X 160.

Fig. 7 - a: cross-section of the whole brain of a Cichlid in which the
 ventral retina of the right eye and the dorsal retina of the left eye have
 been removed. Both optic nerve were severed. X 22. b: detail from the
 dorsal cortex of the right lobe which has been reinnervated X 130.
 c: detail from the ventral cortex of the right lobe, which is lacking in
 regenerated fibers X 130. d: detail from the dorsal cortex of the left
 lobe without regenerated fibers X 130. e: detail from the ventral
 cortex of the left lobe which has been reinnervated x 130.

Fig. 9 - a: sagittal section of the optic lobe of a goldfish in which the
 posterior retina of the controlateral eye has been removed and the opti

nerve severed X 40 - b: detail from the anterior part of the cortex showing some regenerated fibers only in the parallel layer, directed toward the posterior region of the lobe X 100 - c: detail from the posterior half of the lobe which has been fully reinnervated X 100.

(b and c should be printed in such a way as to make them corresponding to the outlined areas in a. The larger contours are the right ones).

Plate II

Fig. 11 - Cross-section of the ventral half of the optic lobe of a goldfish in which a peripheral ring of the dorsal retina of the controlateral eye has been removed X 52.5.

Fig. 12 - Cross-section of the same area of the opposite lobe in the same goldfish as in fig. 11 after regeneration of the optic ~~nerve~~ nerve without any retinal lesion X 52.5.