1950

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Author's Abstract

The forced circling produced by rotation of the eyeball in *Sphoeroides spinosus* was found to survive bilateral ablation of the forebrain, the cerebellum, and the inferior lobes of the infundibulum, or the combined ablation of any 2 of the 3, or [redacted] of all 3. It also survived bilateral extirpation of the labyrinths plus severance of all extraocular muscles. Ablation of the optic lobe of the rotated eye abolished the circling. Conversely, the circling could be evoked in animals with only one eye rotated by ablation of the optic lobe of the contralateral eye. The results point to the optic lobe as the primary integrative center. They also raise the possibility that a corollary discharge of motor patterns into the sensorium may play an important adjustor role in the visual perception of movement along with non-retinal kinesthetic and postural infulences from the periphery.