idium that these infusorians are capable of unlimited reproduction, under favorable environmental conditions, without recourse to fertilization, may now be extended to *Blepharisma;* and, furthermore, the conclusion that fertilization accelerates the division rate, as previously demonstrated in *Uroleptus*[5] and in *Spathidium,*[2] may now be extended to *Blepharisma.*

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An Experimental Study on Formation of Middle Ear in Rana.

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The otic vesicle of various species of Rana was extirpated completely and in part. In one series the ear was grafted homoplastically to the flank, and later regrafted to the orthotopic position. The animals were carried through metamorphosis, to study the effects of these operations upon the formation of the middle ear. It was sought to determine the extent which differentiation of the inner ear influences the formation of the plectrum and tympanum, and the periods at which this influence may be effective.

The operations were performed on the left ear. Equilibration was found to be abnormal, the larvae swimming in counter-clockwise spirals or in clockwise circles. The larvae at rest were found to lie upon the left side. Normal equilibration was regained in some of the older larvae, but a number of metamorphosed animals showed a sharp inclination of the head to the left.

The grafted ear vesicle differentiated more or less completely. In some cases considerable differentiation of the otoliths took place. Normal differentiation of the Anuran ear in heterotopic position has recently been described.

The metamorphosed animals had a fully developed tympanic membrane on the operated side. The *annulus tympanicus* was present. A plectrum was formed when but a small rudimentary ear was present, its medial end fused with the ear capsule, which showed no operculum. The tympanum and Eustachian tube were formed normally.

[5] Calkins, G. N., *J. Exp. Zool.,* 1919, xxix, 121.