
Edmund Beecher Wilson: *Amphioxus*, the comparative and the exemplary

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Abstract

The experiments that Edmund Beecher Wilson conducted in 1892 with the marine invertebrate *Amphioxus* (now *Branchiostoma lanceolatum*) have commonly been interpreted as a move towards experimental embryology, and the causal morphology or developmental mechanics proposed and pioneered by Wilhelm His and Wilhelm Roux. The disagreement in the literature on Wilson's 'experimental turn' has largely focused on the extent to which his entry into experimental work constituted a 'revolt from morphology' (cf. Allen, 1978). While I generally agree with Maienschein and others (e.g. Maienschein, 1981; Benson, 1981) that there was continuity between Wilson's earlier morphological and his later experimental work, I would like to take this a step further. I will detail how Wilson's work on *Amphioxus* derived from, and constituted an investigation by other means, of embryological problems that had evolved over the preceding years. In particular, I will highlight how Wilson tracked the origin of later adult and embryological characters and structures to the earliest stages of the embryo, and how he tried to make sense of the phenomenon of cleavage. *Amphioxus*, in this context, lent itself to experimentation since it showed a large degree of natural variation in cleavage patterns already. In understanding the *Amphioxus* work in this way, one can see how it actually formed a bridge between Wilson's established comparative methods and his venture into experimentation.

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