

Stimulation of these nerves has led to similar results to those furnished by stimulation of the vagus, *i. e.*, retardation of the rate, weakening of the beat and after acceleration. Hence they have been called by me *accessory vagi*. There seem to be nerves of somewhat similar function in the sea turtle.

*Peculiar Cardiac Inhibition followed by Acceleration.* Special attention is called to the following experiment which is believed to be *unique* in physiology. In a small alligator with the *whole brain destroyed* for some time, *both vagi divided* and dead throughout the greater part of their course (stimulation not producing cardiac arrest), a sharp tap over the liver and stomach with a dissecting forceps caused cardiac arrest of brief duration, then slowed irregular rhythm followed by acceleration of a very pronounced kind (from 40 to 50 beats). Here then were the usual phenomena of reflex vagus inhibition, as when the vagi and medulla are intact. *This experiment was tried three times.* It does not seem possible to explain this unparalleled result by present theories. I conclude that the impulses passed through the sympathetic system of nerves and that probably other inhibitory fibres than those of the vagus were concerned, and that accelerating fibres were also involved. It is also possible to conceive that terminations of the vagi were in some way reached by these impulses, but in any case the results are new to physiology, the only published case at all resembling it being Marshall Hall's experiment on the eel's stomach (*Todd's Cyclopaedia of Anat. and Phys.*, article "Heart.")

*Cardiac Augmentors.* As described by Gaskell, there is in the *Crocodylia*, from the ganglion of the eleventh metamere of the sympathetic chain, a strong well-defined branch passing to the heart.

Stimulation of this nerve has given rise to [1] acceleration following the law of *inverse proportion*, which seems applicable to all kinds of acceleration. [2] Decided augmentation of the force of the beat. This is more marked than the acceleration in rate, and in fact may disguise the effects of the nerve, for no actual acceleration of beat may follow.

In all cases, stimulation of a genuine cardiac augmentor