the vagi, the rest of the heart, including sinus extension, may beat as usual; and this holds equally well, as I have observed, for the Alligator and the Fish.

3. Arrest of the heart by diminution of the force of the contractions to zero, as often occurs in the Frog, does *not*, so far as my observations go, occur in any Chelonian.

4. The ventricle with the auricles may cease, the sinus and sinus extension continuing to beat. But such stop is likely to be very brief, the wave of contraction soon passing on.

5. Preliminary acceleration, which is very rare in the S. Terrapin, occurs more frequently in the sea-turtle, but never except with the stimulation of a weak current.

I have noticed brief preliminary acceleration soon followed by slowing, the strength of the current remaining the same, when the heart's powers have been much enfeebled.

Arrest of the sinus, auricles and ventricles continuing to beat, is unknown.

Diastolic relaxation during stimulation is, perhaps, in the marine turtle rather less marked than in the Terrapin; but it does occur, and equally well in the bloodless heart.

The After-Effects of Vague Stimulation.—These are very similar in all the Chelonians; in all, stimulation of the vagus may be followed by a rhythm without increase; a rhythm with slight increase or with marked increase; and the same law holds equally well in the sea-turtle as in the Terrapin that the rate of increase in the force and frequency of the beats of the heart is in inverse proportion to those prevailing at the time of stimulation; from this it follows that a weak heart, one needing help most, is the one the vagi nerves can actually improve most effectually. This has been illustrated to me over and over again when working on the marine turtles; thus, when, as the heart is getting weak, the left auricle, as is the rule, falls into a condition of great enfeeblement, while the right is comparatively strong, the stimulation of the vagus will restore the left, for a time at least, to harmony of rhythm with its fellow, and produce marked improvement in the strength of the beats.

The after acceleration in the sea-turtles, especially in C.