

the insect-eating plants, as so admirably described by Charles Darwin.

Mechanical phenomena of motion [*Bewegungserscheinungen*] in plants, especially the remarkable movements of the petioles of *Mimosa pudica*, are of the same nature as the secretion of water from protoplasm, in consequence of the stimulation already mentioned. That the vacuole formation in numerous protoplasts, also in the *Amœba* itself, arises from a similar secretion of watery solution from the protoplasm in consequence of stimulation, is highly probable. The mechanical movements of *Amœba*, etc., toward the point of stimulation is explicable only through these hypotheses.

Numerous and very different in kind are the observations on higher, especially warm-blooded animals, which have afforded the demonstration that with the prevention of the access of oxygen to the organs the stimulative capacity sinks, while, in consequence of this hindrance, the extent of the decomposition of tissue and of chemical interchange rises.

When a stream of blood containing oxygen is conducted through the living kidneys, the union of glycocholic acid and benzoic acid which takes place has been shown to be an anhydrating process. The opposite process, however—viz.: the splitting up of hippuric acid and similar compounds under addition of water in the living organs—is observed.

Presumably the last process takes place also without the presence of oxygen, and can be effected in the protoplasm incapable of stimulation.

Let these intimations suffice to indicate how in one realm of physiological chemistry—and that the largest—results unite to induce further investigation of problems becoming ever more comprehensive; and how, further, all living beings, of form and life-phenomena the most widely