however idle or blind man may be in seeking to understand the sublime plan!

As, however, it is not my purpose in this paper to offer a new designation for these strange and diversified animals, but rather to describe an important and essential peculiarity in the anatomy and physiology of the entire class, (which, by the way, might perhaps form a very scientific groundwork for their classification,) I will now proceed to the discussion of my subject.

A careful study of the structure and functions of organs, as developed in the lower animals, has long been considered by comparative physiologists, an important and instructive pursuit. We may thus see functions performed by the simplest possible structural arrangements, and may learn what are the essentials of such organs. Dr. Goadby (the once English but now American professor of comparative physiology,) remarks in his beautifully illustrated work on this subject, "that in this class (Insecta) the most important problem—the ultimate structure of glands—may be studied with great ease. In the higher animals, these organs are veiled by a parenchyma, which renders investigation difficult; but in insects we find them already analyzed—existing as simple tubuli, and offering every facility for the most minute examination of them. When the like organisms in man and the higher animals have been successfully treated and reduced to their elemental conditions, lo! they too, are simple tubes!" Now with regard to the special function of respiration, I think some important truths may be elicited, by a careful study of the very beautiful and elaborate arrangement by which it is effected in the insect race. It will scarcely be needful to observe—even in the most casual way—what an important part is played by this function in the economy of all organized beings. Most animals can exist for a considerable period without food; although this is an essential condition to the continuance of their life. But if the function of respiration be suspended, even for a very limited period, death is the speedy and inevitable result. Now the necessity for respiration in all animals—whether aquatic, terrestrial or ærial—results from the fact, that a continual decay takes place during every moment of such an animal's existence. Waste and renewal form one of the prominent peculiarities of organic life. And one of the peculiar phases of this physiological law is, that activity and waste bear a definite relation to each other. The more active any organ, or set of organs may be, the