

of the long lists of largely incongruous and incomprehensible names that he is expected to master, it is the utter absence of anything in the system of nomenclature tending to show the relations of various forms to each other, or of varieties to the parent or more abundant form. There is nothing to show at a glance the results of the experience of others and to attain any idea of the true relationship of allied forms. The student must either acquire the knowledge by slow and persevering experiment, or oftentimes forego the acquisition altogether, because time and the rarity of books will not permit him to gain it. We cannot start where others left off, but must follow their paths step by step, only hoping to gain the point they reached soon enough to be able to penetrate a little further.

Most conspicuously is this the case as regards the so-called varieties of variable species. Let a student in England, for instance, take up Mr. Edwards' Catalogue of North American Butterflies, and the first species is listed with three "dimorphic" varieties and one "sub-variety." The theory of their origin is well known, and the facts regarding their appearance at certain seasons, but this cannot be learned from the list, and must be gained from various contributions on the subject written at many times and distributed through many books—a comparatively easy task as regards *Papilio ajax*, though less easy were the researches of some species in question conducted by an obscure author and published in some rare book in a foreign language.

Under the present system *Papilio Walshii*, *Pieris pallida* and *Grapta umbrosa* are designated dimorphic varieties, although no two of them bear the same or similar relations to the species to which they belong.

It is hardly to be expected that we can arrive at an exact and universally acceptable definition of a species, or that the time will soon come when extremists for the sake of advertisement or other reasons will not persist in declaring accepted species as mere varieties or *vice versa*, or that such persons will cease to set dictum above experiment; but it does not seem impossible to adopt some system that shall indicate to a certain extent the relations of many forms, and at the same time elastic enough to be acceptable to all.

For the purposes of this article, however, I consider it necessary to submit a brief description of what I hold to constitute a species, in the hope that it will substantially agree with the conceptions of others in the main.

We may define a species as an aggregation of individual forms of life