

the external features of insects. The great bulk of what passes for comparative anatomy, physiology and embryology, is purely descriptive, and is only to be awarded a higher grade in a scale of studies than that which deals with the external properties, when it requires a better training of the hand and eye to carry it out, and greater patience of investigation. We pass at once to a higher grade of research when we deal with comparisons or processes (which, of course, involve comparisons). All good descriptive work, indeed, is also comparative; but at the best it is so only in the narrowest sense, for only intimately allied forms are compared. In descriptive work we deal with simple facts; in comparative work we deal with their collocation. "Facts," said Agassiz, one day, "Facts are stupid things, until brought in connection with some general law."

It is to this higher plane that concerns itself with general laws that I would urge the young student to bend his steps. The way is hard; but in this lies one of its charms, for labor is its own reward. It is by patient plodding that the goal is reached; every step costs and counts; the ever-broadening field of knowledge exhilarates the spirit and intensifies the ambition; there is no such thing as satiety—study of this sort never palls.

It is hardly necessary to point out that so-called systematic work never reaches this higher grade unless it is monographic; unless it deals in a broad way with the relationship and general affinities of insects. It is not my purpose to call attention here to the needs of science in this department, as they are too patent to escape observation; but if one desires a model upon which to construct such work, one need not look further than the Revision of the Rhynchophora by Drs. LeConte and Horn. Rather than linger here, we prefer to pass directly to some of the obscurer fields of study.

When we compare the number of insect embryologists in America with that of their European colleagues, the result is somewhat disheartening and discreditable; although perhaps the comparison would be not quite so disproportionate were some of our students to publish their notes. But take all that has been done upon both sides of the water, and what a meager showing it makes. Of how many families of Coleoptera alone have we the embryonic history of a single species? Of two of the four families of Butterflies, the fertile eggs of which are perfectly easy to obtain, nothing is known. In short, one may readily choose numbers of typical groups whose embryonic history would be a great acquisition to science.