

No piece of work in morphology or physiology is complete until it is seen in its ætiological or evolutionary aspects. "Evolution bears, in fact, the same relation to morphology and physiology as history to statistics."

As to the old-fashioned "Natural History" or the new-fashioned "Bionomics", that is eminently physiological; the habits of the organism, the behaviour of mates, the ménage of the family, the competition and co-operation among fellows, the struggle for existence in its widest sense—the study of these is physiological, just as classification or the working-out of genealogical trees is morphological.

As to Embryology, it has been until recently almost wholly morphological—the study of stages in the growing organism, in the developing organs, in the differentiating tissues, in the lineage of cells. To this, quite recently, there has been added some physiological analysis of the actual processes at work in the development.

Finally, as to Palæontology, this is strictly morphological—the anatomy, perhaps even the histology, of the extinct. That both palæontology and embryology have become what might be called historical or genealogical in their aims, is wholly due to the influence of the evolution doctrine. Palæontology had not this meaning to Cuvier, nor embryology to Wolff.

But to infer from this summary that the history of biology for the last hundred years and more has been a steady and orderly progress in scientific analysis would be an entire misunderstanding. Since the beginning of the Victorian era, at least, there has been contemporaneous work on all the five lines, and many a worker has been at once morphologist and physiologist, at several levels of analysis. Moreover, it must be remembered that a retrospect of progress from a vantage-ground of achievement is apt to see a definiteness in the various movements which those who shared in them were but dimly aware of. And, finally, we must recognize that while to-day's description of the externals of a new species may be called a Linnæan piece of work, and a modern anatomical paper Cuvierian, and so on,