

more striking example of this peculiar mode of growth than the seventeen years locust, so fully traced by Miss M. H. Morris.¹

While all longlived animals continue, as a matter of course, their existence through a series of years, under the varying influence of successive seasons, there are many others which are periodical in their appearance; this is the case with most insects,² but perhaps in a still more striking manner with Medusæ.³

The most interesting point in this subject is yet the change of character which takes place in the different stages of growth of one and the same animal. Neither Vertebrata, nor Mollusks, nor even Radiata exhibit in this respect any thing so remarkable in the continuous changes which an individual animal may undergo, as the Insects, and among them those with so-called complete metamorphoses, in which the young (the larva) may be an active, wormlike, voracious, even carnivorous being, which in middle life (the chrysalis) becomes a mummylike, almost motionless maggot, incapable of taking food, ending life as a winged and active insect. Some of these larvæ may be aquatic and very voracious, when the perfect insect is aerial and takes no food at all.⁴

Is there any thing in this regulation of the duration of life in animals which recalls the agency of physical forces? Does not, on the contrary, the fact, that while some animals are periodical and bound to the seasons in their appearance, and others are independent of the course of the year, show distinctly their independence of all those influences which, under a common expression, are called physical causes? Is this not further illustrated in the most startling manner by the extraordinary changes, above alluded to, which one and the same animal may undergo during different periods of its life? Does this not prove directly the immediate intervention of a power capable of controlling all these external influences, as well as regulating the course of life of every being, and establishing it upon such an immutable foundation, within its cycle of changes, that the uninterrupted action of these agents shall not interfere with the regular order of their natural existence?

There is, however, still another conclusion to be drawn from these facts: they point distinctly at a discriminating knowledge of time and space, at an appreciation of the relative value of unequal amounts of time and an unequal repartition of small, unequal periods over longer periods, which can only be the attribute of a thinking being.

¹ HARRIS'S *Insects injurious to Vegetation*, p. 184.

² HEROLD, (E.) *Teutscher Raupeu-Kalender*, Nordhausen, 1845.

³ AGASSIZ'S *Acalephs of North America*, p. 228.

⁴ BURMEISTER'S *Handb. d. Entom. etc.* — LACORDAIRE, *Introd. à l'Entomologie*, etc. — KIRBY and SPENCE, *Introd. to Entomol.*, etc., p. a., give accounts of the habits of Insects during their metamorphosis.