

difference between the different states of the insects that compose the majority of them, that there is between those whose pupes are not locomotive. The larves of the locust, for instance, are stated to emigrate, as well as the perfect insect, and live upon the same food; the only difference is in the locomotive and reproductive powers of the latter, both of which, as I have just said, must be connected with some change in their nervous system, operated gradually by a physical agent.

From what has been stated, with respect to these several classes of instincts, it appears, that as far as can be judged from circumstances, they have their beginning in consequence of the action of an intermediate physical cause upon the organization of the animal, which certainly renders it extremely probable that such is the general proximate cause of the phenomena in question. I would, however, by no means, be understood to assert this dogmatically, but merely that it appears to me the most probable hypothesis, and most consistent with the analogy of the Divine proceedings in this globe of ours, as well as with his general government of the heavenly bodies; and though I have mentioned heat, electricity, and other elements as concerned in the production of these phenomena, yet I do not assert that other physical principles may not be commissioned to have a share in it. This field is open both to the speculatist and experimenter; they may each assist the other in traversing and exploring it, and the well-known adage, *Dies diem docet*, be verified more and more by their united efforts.

Some may still feel disposed to ask,—Is it within the sphere of probability, or even possibility, that by the mere action of physical powers, however subtile, upon the brain and nerves of an animal, there should be produced such a wonderful sequence of actions and mani-