

transformations of inferior animals. They have also rendered it extremely probable that the organs of the system, instead of existing simultaneously in the germ, arise in regulated succession, and are the results not of the mere expansion of pre-existing rudiments, but of a real formation by the union of certain elements; which elements are themselves successively formed by the gradual coalescence or juxtaposition of their constituent materials. On contemplating the infinitely lengthened chain of means and ends, and of causes and effects, which, during the construction and assemblage of the numerous parts composing the animal machine, are in constant operation, adapting them to their various purposes, and combining them into one efficient and harmonious system, it is impossible not to be deeply impressed with the extent and the profoundness of the views of Providence, which far exceed the utmost boundaries of our vision, and surpass even the powers of the human imagination.\*

The clearest evidence of enlarged and provident designs may be collected from observing the order in which the nascent organs are successively brought forwards, and added to the growing fabric: such order appearing, in all cases, to be that best calculated to secure the due performance of their appointed functions, and to promote the general objects of the system. The apparatus first perfected is that which is immediately necessary for the exercise of the vital functions, and which is therefore required for the completion of all the other structures; but provision is likewise made for the esta-

\* "Si l'on applique," says Cuvier, when speaking of the anatomy of insects, "à chacune de ces espèces, par la pensée, ce qu'il seroit bien impossible qu'un homme entreprit de vérifier en effet pour toutes, une organisation à-peu-près égale en complication à celle qui a été décrite dans la chenille par Lyonet, et tout récemment dans le hanneton par M. Straus, et cependant plus ou moins différente dans chaque insecte, l'imagination commencera à concevoir quelque chose de cette richesse effrayante, et de ces millions de millions de parties, et de parties de parties, toujours corrélatives, toujours en harmonie, qui constituent le grand ouvrage de la nature." (*Histoire des Progrès des Sciences Naturelles*, iv. 145.)