

school, as inferior both to Crustaceans and Arachnidans, on account of their having only, as it were, a rudimental heart, exhibiting indeed a kind of systole and diastole, but unaccompanied by any system of vessels by which the blood might circulate in them. A learned and acute writer, and eminent zoologist, amongst our own countrymen, has with great force controverted the justice of this sentence of degradation pronounced upon Insects; an opinion which has also been embraced by many other modern writers on the subject, and considerable doubt has been shown to rest upon the main foundations upon which the illustrious and lamented Baron Cuvier, who was the father of the hypothesis, had built it.*

But the important discoveries of Dr. Carus, who first proved that a *circulation* really exists in various larves of Insects, and afterwards that it is also discoverable in several perfect ones,† have placed the matter beyond all doubt. Taking, therefore, into consideration the *nervous* system of Insects, as well as those of circulation and respiration, as ought, in all reason, to be done—for upon comparison of these three systems so intimately connected with life and sensation, surely the first place is due to that by which alone the animal is conscious of its existence and that of the world it inhabits, and is enabled to run the race appointed by its Creator; surely, if even no Carus had appeared to demonstrate the existence of a circulation in these animals, still the perfection of their nervous system, compared with that of the Molluscans, in determining their respective stations, would be a sufficient counterpoise to a heart and vascular system for circulation; and, if to this superiority, we add the number and nature of the several organs by which this system acts, and the fruits of such agency in the activity and various

* Mac Leay, Hor. Entomolog. 204, 297.

† Introd. to Comp. Anat. E. T. by Gore, ii. 392. Act. Acad. Cæs. Nat. Cur. xv. ii.