

integument covering the insect is much harder than bone, so are the muscles stronger, compared with the muscles of the vertebrata. From the time of Socrates, comparisons have been made between the strength of the horse and of the insect; to the obvious superiority of the latter.

As goodly a volume has been written on the muscles of a caterpillar as has ever been dedicated to the human myology. A very minute anatomical description has been made of the caterpillar which feeds upon the willow; and here we see that the annular construction of the hard integument determines the plan of the whole anatomy: the arrangement of the muscles, and the distribution of the nerves. Each ring has its three sets of muscles; direct, oblique, traversing and interweaving, but yet distinct and symmetrical; and all as capable of being minutely described as those of the human body have been by Albinus.* Corresponding with these muscles, the system of nerves is delicately laid down. In short, we allow ourselves to be misled in supposing that animals, either of minute size or low in the scale of arrangement, exhibit any neglect or imperfection. Even if they were more simple in structure, the admiration should be the greater: since they have all

* The work referred to is by Lyonnet, who reckons four thousand and sixty one muscles in this caterpillar.