

water, and requires universal vision, each eye is nearly hemispherical, and placed on a peduncle, by which it is projected to the distance requisite to effect this purpose. (See Pl. 45, Fig. 3, b, and b'.)

In the *Serolis* (Pl. 45, Fig. 6. b'.), the disposition of the eye, and its range of vision, are similar to those in the *Trilobite*; but the summit of the eye is less elevated; as the flat back of this animal presents little obstruction to the rays of light from surrounding objects.*

In the *Limulus* (Pl. 45, Fig. 1.), where the side eyes (b, b'.) are sessile, and do not command the space immediately before the head, two other simple eyes (b'') are fixed in front, compensating for the want of range in the compound eyes over objects in that direction.†

In the above comparison of the eyes of *Trilobites*, with those of the *Limulus*, *Serolis*, and *Branchipus*, we have placed side by side, examples of the construction of that most delicate and

* Fig. 1. b'. Fig. 3. b'. and Fig. 6. b'. are magnified representations of the eyes to which these figures are respectively adjacent. Figs. 10. and 11. are differently magnified forms of the eye of *Asaphus caudatus*, which in Fig. 9. is represented of its natural size. A few of these lenses are semi-transparent; they are still set in their original rims, or frame-work of the cornea, the whole being converted into calcareous spar.

† These eyes are placed so close together, that, having been mistaken for a single eye, they caused the name of *Monoculus Polyphemus* to be applied to this animal by Linnæus.