

others by features held in common. The abortion of the posterior lobe of the glabella, the absence of the occipital ring, the immutable number of two joints in the thorax, all show the divergence from the common type; and also there is seldom seen on an *Agnostus* the proof of that development and expansion of the pygidium which can be traced in the moulding of the surface of this shield in most other primordeal trilobites.

Nevertheless there are some indications of a closer resemblance between *Agnostus* and its allies in the earlier stages of growth than appear in the adult trilobite. Owing to the minuteness of the shield in the young of this genera, it is difficult to make out the outline and contour of the test in the early stages; but it may be said that the pygidium is proportionately broader and both the marginal fold and furrow wider than is found to be the case at a later period; in the early larval stages it thus approximates more in form and contour to other trilobites than at a later period.

By comparing different species of *Agnostus*, and by a close examination of the surface features of the tests, we arrive at a few indications of the process by which this peculiar self-contained genus has been developed.

To look at some *Agnosti* (*e. g.* *Regii**) one would hardly suspect that there are more than two lobes in the glabella, but on examining others (*Fallaces* and *Longifrontes*) it will be seen that there has been an abortion of the true posterior lobe (called "basal lobes"), so that in the *Regii* it has become a mere ridge. The so-called posterior lobe of the glabella is also itself in some species seen to be indented by two pairs of furrows; hence there are normally five lobes in the glabella.

The abortion of the true posterior lobes of the glabella (the "basal lobes") is the fixation of an early larval condition in *Agnostus*. This lobe in *Agnostus* never becomes an integral part of the glabella, but consists of two small triangular lobes (sometimes nearly obsolete) below the level of the glabella and connected behind it by a narrow thread-like ridge. The triangular form of these lobes is not embryonic, it shows a larval development up to a certain point; but its subordination to the glabella and its separation from it, is evidence of subsequent arrest of growth.

The suppression of the occipital ring reduces the cephalic somites in *Agnostus* to five, which is the complete number in many trilobites which have this ring. In most species of *Agnostus* the occipital ring is not recognizable, hence the first

*The several sections into which the genus *Agnostus* has been divided by Tullberg are described at page 404.