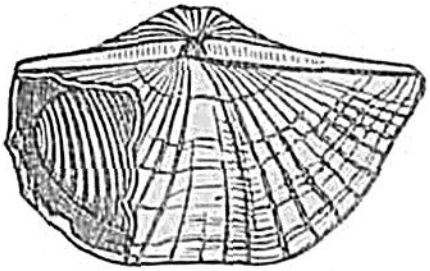
S. rotundatus, and *S. trigonalis* (fig. 522), also abound; and smooth species, such as *Spirifer glaber* (fig. 523), with its numerous varieties.

Fig. 522.



Spirifer trigonalis, Martin, sp. Mountain Limestone: Derbyshire, &c.

Fig. 523.

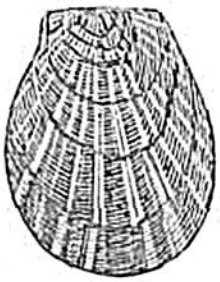
Spirifer glaber, Martin, sp. Mountain Limestone.

Among the palliobranchiate mollusks, *Terebratula hastata* deserves mention, not only for its wide range, but because it often retains the pattern of the original colored stripes which ornamented the living shell. (See fig. 524.) These colored bands are also preserved in several lamellibranchiate bivalves, as in *Aviculopecten* (fig. 525), in which dark stripes alternate with a light ground. In some also of the spiral univalves, the pattern of the original painting is distinctly retained, as in the *Pleurotomaria* (fig. 526), which displays wavy blotches, resembling the coloring in many recent Trochidæ.

Fig. 524.

Terebratula hastata, Sow., with radiating bands of color. Mountain Limestone. Derbyshire: Ireland; Russia, &c.

Fig. 525.



Aviculopecten sublobatus, Phill. Mountain Limestone. Derbyshire; Yorkshire.

Fig. 526.

Pleurotomaria carinata, Sow. (*P. flammigera*, Phill.) Mountain Limestone. Derbyshire, &c.

The mere fact that shells of such high antiquity should have preserved the patterns of their coloring, is striking and unexpected; but Prof. E. Forbes has deduced from it an important geological conclusion. He infers that the depth of the primeval seas in which the Mountain Limestone was formed, did not exceed 50 fathoms. To this opinion he is led by observing, that in the existing seas the testacea which have colors and well-defined patterns, rarely inhabit greater depths than 50 fathoms; and the greater number are found where there is most light in very shallow water, not more than two fathoms deep. There are even examples in the British seas of testacea which are always white or colorless when taken from below 100 fathoms; and yet individuals of the same species, if taken from shallower zones, are vividly striped or banded.