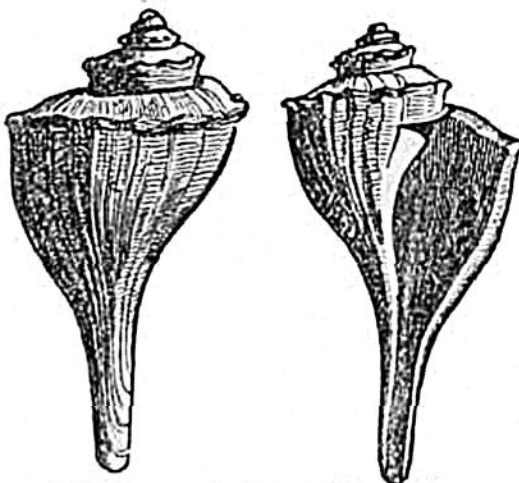


bordering the Atlantic does not exceed 100 feet, although it is sometimes several hundred feet high. Its width in the middle and southern states is very commonly from 100 to 150 miles. It consists, in the south, as in Georgia, Alabama, and South Carolina, almost exclusively of Eocene deposits; but in North Carolina, Maryland, Virginia, Delaware, more modern strata predominate, which, after examining them in 1842, I supposed to be of the age of the English crag and Faluns of Touraine.* If, chronologically speaking, they can be truly said to be the representatives of these two European formations, they may range in age from the Older Pliocene to the Miocene epoch, according to the classification of European strata adopted in this chapter.

The proportion of fossil shells agreeing with recent, out of 147 species collected by me, amounted to about 17 per cent., or one-sixth of the whole; but as the fossils so assimilated were almost always the same as species now living in the neighboring Atlantic, the number may hereafter be augmented, when the recent fauna of that ocean is better known. In different localities, also, the proportion of recent species varied considerably.

On the banks of the James River, in Virginia, about 20 miles below Richmond, in a cliff about 30 feet high, I observed yellow and white sands overlying an Eocene marl, just as the yellow sands of the crag lie on the blue London clay in Suffolk and Essex in England. In the Virginian sands, we find a profusion of an *Astarte* (*A. undulata*, Conrad), which resembles closely, and may possibly be a variety of, one of the commonest fossils of the Suffolk Crag (*A. bipartita*); the other shells also, of the genera *Natica*, *Fissurella*, *Artemis*, *Lucina*, *Chama*, *Pectunculus*, and *Pecten*, are analogous to shells both of the English crag and French faluns, although the species are almost all distinct. Out of 147 of these American fossils I could only find 13 species common to Europe, and these occur partly in the Suffolk Crag, and partly in the faluns of

Fig. 164.



Fulgur canaliculatus. Maryland.

Fig. 165.



Fusus quadricostatus, Say. Maryland.

Touraine; but it is an important characteristic of the American group, that it not only contains many peculiar extinct forms, such as *Fusus*

* Proceed. of the Geol. Soc. vol. iv. part 3, 1845, p. 547.