situated, and the Pyrenees, the space B intervenes. (See Map, fig. 292.) Here the tertiary strata cover, and for the most part conceal, the cretaceous rocks, except in some spots where they have been laid open by the denudation of the newer formations. In these places they are seen still preserving the form of a white chalky rock, which is charged in part with grains of greensand. Even as far south as Tercis, on the Adour, near Dax, cretaceous rocks retain this character where I examined them in 1828, and where M. Grateloup has found in them *Ananchytes ovata* (fig. 253), and other fossils of the English chalk, together with *Hippurites*.

CRETACEOUS ROCKS IN THE UNITED STATES.

If we pass to the American continent, we find in the State of New Jersey a series of sandy and argillaceous beds wholly unlike our Upper Cretaceous system; which we can, nevertheless, recognize as referable, paleontologically, to the same division.

That they were about the same age generally as the European chalk and greensand, was the conclusion to which Dr. Morton and Mr. Conrad came after their investigation of the fossils in 1834. The strata consist chiefly of greensand and green marl, with an overlying coralline limestone of a pale yellow color, and the fossils, on the whole, agree most nearly with those of the upper European series, from the Maestricht beds to the gault inclusive. I collected sixty shells from the New Jersey deposits in 1841, five of which were identical with European species—*Ostrea larva*, *O. vesicularis*, *Gryphæa costata*, *Pecten quinque-costatus*, *Belemnites mucronatus*. As some of these have the greatest vertical range in Europe, they might be expected more than any others to recur in distant parts of the globe. Even where the species are different, the generic forms, such as the Baculite and certain sections of Ammonites, as also the *Inoceramus* (see above, fig. 274) and other bivalves, have a decidedly cretaceous aspect. Fifteen out of the sixty shells above alluded to were regarded by Professor Forbes as good geographical representatives of well-known cretaceous fossils of Europe. The correspondence, therefore, is not small, when we reflect that the part of the United States where these strata occur is between 3000 and 4000 miles distant from the chalk of Central and Northern Europe, and that there is a difference of ten degrees in the latitude of the places compared on opposite sides of the Atlantic.*

Fish of the genera *Lamna*, *Galeus*, and *Carcharodon* are common to New Jersey and the European cretaceous rocks. So also is the genus *Mosasaurus* among reptiles. The vertebra of a Plesiosaurus, a reptile known in the English chalk, had often been cited on the authority of Dr. Harlan as occurring in the cretaceous marl, at Mullica Hill, in New Jersey. But Dr. Leidy has since shown that the bone in question is not saurian but cetaceous, and whether it can truly lay claim to the high antiquity assigned to it, is a point still open to discussion. The discovery of another mammal of the seal tribe (*Stenorhynchus vetus*, Leidy), from

* See a paper by the author, Quart. Journ. Geol. Soc. vol. i. p. 79.