C. A. White has described Cretaceous fossils, from the provinces of Sergipe, Pernambuco, Para, Bahia, and elsewhere, in vol. vii. of the *Archives of the National Museum of Rio de Janeiro* (1888). Darwin found Cretaceous fossils in Fuegia, on the summit of Mount Tarn and near Port Famine, in the Straits of Magellan; and the author, in 1838, obtained Belemnites, probably Cretaceous, on the shores of Orange Bay, near Cape Horn.[1]

Subdivisions.

In view of the very wide and various distribution of these continental Cretaceous beds, and the diversity of conditions as to water, depth, and temperature under which they have originated, it is not to be expected that there should be uniformity in the succession of rocks, either as to kinds or as to fossils, since life varies in distribution with variations in the above conditions. As a consequence, the Cretaceous formation is, even in Europe, a formation with or without chalk, with or without limestone, with or without sandstones, or chiefly made up of sandstones, and with wide variations in the fauna.

The principal British subdivisions are the following: —

I. Lower Cretaceous. — The *Neocomian* of Thurman (1832), so named from the Latin name of Neufchâtel, *Neocomium;* including (1) the Wealden, and (2) the Lower Greensand, but restricted by some to the Wealden.

II. Upper Cretaceous. — (1) The *Gault* or *Albian*, consisting of clay with some greensand (it is made *Lower* Cretaceous by most European geologists); (2) the *Cenomanian*, consisting of (*a*) the Upper Greensand, marl beds, and the Gray Chalk of Folkestone; (3) the *Turonian*, the Lower White Chalk without flints; (4) the *Senonian*, or the Upper Chalk with flints. Above comes, in Denmark, (5) the *Danian*, or the Maestricht beds.

The Wealden, including the Hastings sands below and the Weald clay above, is about 1500 feet thick in southern England, where it was deposited in the fresh waters of a delta over 20,000 miles in area. The Gault is 100 feet to 200 feet thick. The chalk without flints is a prominent formation across from Flamborough Head, on the east coast of England, to the southern coast, in Dorset.

The "greensand" is like that of America (page 68). The chalk consists chiefly of Foraminifers, or the shells of Rhizopods, but contains also remains of Sponges and other forms of life, which together appear to indicate that the beds were formed at depths of a few hundred feet — by some made 300 fathoms or more; they are similar in general character to those now accumulating over the sea-bottom. The flint nodules occur in layers in the chalk. The facts seem to show that the sea-bottom, on account of depth or for some other reason, was in a more favorable condition for growing siliceous Sponges in some places than at others. The material of a flint nodule, while

[1] For a note on the discovery, see *Am. Jour. Sc.*, xxxv., 83, 1888.