

Jurassic rocks in Central and North-Western Europe, and in Great Britain.

In Germany, Charpentier in 1778 distinguished *Pläner* limestone and *Quader* sandstone in his geological map of Saxony. Werner and his pupils placed these formations amongst the younger "Flotz" series. William Smith had recognised in England four strata between the London clay and the Portland stone:

4. White Chalk.
3. Lower or Grey Chalk.
2. Greensand.
1. Micaceous Clay (Brick earth).

In Cambridgeshire, dark plastic clays occur below the Greensand, and Michell had in 1788 designated these as *Gault* or *Galt*; W. Smith called them *Blue Marl*. Conybeare and Phillips sub-divided the series into two groups:

2. The Chalk.
1. $\left\{ \begin{array}{l} (d.) \text{ Chalk Marl.} \\ (c.) \text{ Greensand.} \\ (b.) \text{ Weald Clay.} \\ (a.) \text{ Ferruginous Sand.} \end{array} \right.$

The White Chalk was early described, and the similarity of its lithological and palæontological features established in the south-east of England, the north of France, Belgium, Denmark, Sweden, North Germany, and Poland. D'Omalius d'Halloy traced the formations of the Paris basin into Belgium, distinguished four groups of deposit in ascending order, (a) grey clay, (b) sand and sandstone (Tourtia), (c) chalk marl, (d) chalk and flint, and comprised these in one formation, which he named "Terrain crétacé." In the same year, 1822, Brongniart and Cuvier published a detailed description of the deposits of the Paris basin in the second edition of their work, *Récherches sur les ossements fossiles*. After a careful comparison of the French Cretaceous formations with the English, Belgian, and Scandinavian, Brongniart added a description of the chloritic Cretaceous deposits of the Savoy and of the Perte du Rhône, near Bellegarde, together with an enumeration of the fossils occurring in them.

Another work of that year which considerably advanced the knowledge of Cretaceous rocks was that of Gideon Mantell on