

stage consists of a lower green pyritous sandy member (Sables verts), 30 feet thick, covered by an upper argillaceous band which represents the English Gault. These deposits continue the English type round the northern and eastern margin of the Paris basin. They have been found also in deep wells around Paris. In the valley of the Meuse and in the Ardennes, this stage consists of three subdivisions: (1) a lower green sand (*Amm. mamillaris*), with phosphatic nodules; (2) a brick clay with *Amm. lautus*, *A. tuberculatus*; (3) a porous calcareous and argillaceous sandstone known as Gaize, containing a large percentage of silica soluble in alkali (*Amm. inflatus*, etc.).

The English type of strata from the Weald upward is also prolonged into France. Fresh-water sands and clays (with *Unio* and *Cyrena*), found above the Jurassic series in the Boulonnais, evidently represent the Weald, and are covered by dark green clays and sands (with *Ostrea aquila*), which are doubtless a continuation of the Folkestone beds, and by a thin blue clay which represents the Gault. Again, in the Pays de Bray, to the west of Beauvais, certain sands and clays resting on the Portlandian strata represent the Wealden series, and are followed by others which may be paralleled with the Urgonian, Albian, and Gault.¹⁵⁸

In Belgium the Cretaceous system is underlain by certain clays, sands, and other deposits belonging to a continental period of older date than the submergence of that region beneath the sea in which were deposited the uppermost Neocomian beds. These scattered continental deposits have been grouped under the name of Aachenian.¹⁵⁹ That at least some part of them belongs to older Neocomian time, and may be coeval with the Weald, may be inferred from the remarkable discovery at Bernissart, already alluded to, where, in a buried system of Cretaceous ravines, the reptilian and ichthyic life of the time has been well preserved (ante, p. 1534).

CRÉTACÉ.—The Upper Cretaceous rocks of France have been the subject of prolonged and detailed study by the geologists of that country.¹⁶⁰ The northern tracts form part

¹⁵⁸ Wealden deposits have been described as occurring even as far south as the province of Santander, Spain. A. Gonzalez de Linares, *Anal. Soc. Esp. Hist. Nat.* vii. 487, 1878.

¹⁵⁹ On the Aachenian deposits see Dumont, "Terrains Crétacés et Tertiaires" (edited by M. Murlon, 1878), vol. i. pp. 11-52.

¹⁶⁰ Notably by MM. Hebert, Toucas, Coquand and Cornuel. As already stated, considerable differences exist among French and Swiss geologists as to