

A. (*Hoplites*) *Noricus*, *Ancyloceras gigas*, *Diceras Lonsdalei*, *Exogyra sinuata*, *Gervillia anceps*, *Pinna Mulleti*.

The clays of Speeton cliffs of the Neocomian have afforded marine fossils; the Lower, the 3 zones of *Ammonites* (*Olcostephanus*) *Astierianus* (lowest), with *Toxaster complanatus*, *Olcostephanus Speetonensis*, *Hoplites Noricus*; and the Middle, *Pecten cinctus*, *Exogyra sinuata*, *Belemnites jaculum*, etc.

B. France. — The term *Neocomian*, as first used (by D'Orbigny) was restricted to beds of the age of the Wealden; his *Urgonian* (named from Orgon, Bouches-du-Rhône), as used by Lapparent corresponds to the lower part of the Lower Greensand (Atherton clay); *Aptian*, to the rest of the Lower Greensand, except the upper part (Folkestone beds); and *Albian*, to the latter with the Gault. Lapparent includes all to the top of the Gault in his "Infra-Crétacé."

The *Neocomian* is divided into (1) the *Valenginian* (so named from the Château de Valengin, near Neufchâtel), and (2) the *Hauterivian* (so named from Hauterive). The *Valenginian* contains *Toxaster Campicheii*, *Strombus Sautieri*, *Pygurus rostratus*, *Nerinea Favrei*, *N. Meriani*; and the *Hauterivian*, *Dysaster ovulum*, *Toxaster complanatus*, *Ostrea Couloni*, *O. macroptera*, *Pinna Mulleti*, *Trigonia carinata*, *Ammonites* (*Hoplites*) *radiatus*, *A. (Engonoceras) Gervillianus*, *A. (Olcostephanus) Astierianus*.

The *Urgonian* contains *Heteraster oblongus*, *Requienia ammonia*, *R. Lonsdalei*, *Radiolites Neocomiensis*. The upper part of the *Urgonian*, containing *Heteraster oblongus* and *Requienia oblonga*, is the *Rhodanian* of Renevier. In southern France, toward the Pyrenees, the *Urgonian* contains *Requienia Lonsdalei* with *Orbitulina conoidea*, *O. discoidea*, *Nerinea gigantea*, *Heteraster oblongus*.

The *Aptian* (from Apt, in Vaucluse) contains, at the Perte-du-Rhône, *Epiaster polygonus*, *Plicatula placunea*, *Ostrea aquila*, *Trigonia caudata*.

In Germany, the Lower Cretaceous to the base of the Gault is the Hils formation or Neocomian. In northwestern Germany, in Hanover, on the borders of Holland, the Hastings sand is represented by the Deistersandstein, containing some coal, remains of Reptiles including the *Iguanodon*, and many plants; and above this is the Weald clay (Wälderthon) 70'-100'. The marine beds in north Germany contain *Toxaster complanatus*, *Ammonites* (*Olcostephanus*) *Astierianus*, *Hoplites radiatus*, *Hoplites Noricus*, *Exogyra Couloni*. Next is the Gault, the lower part of which is made the equivalent of the Lower Greensand of England, or the *Aptian*, with *Ammonites Martini*, *A. Deshayesi*, *Exogyra Couloni*, and the rest the English Gault, with *Ammonites* (*Schlönbachia*) *inflatus*, *A. (Hoplites) auritus*, *A. (Hoplites) lautus*, *A. (Hoplites) interruptus*.

2. UPPER CRETACEOUS.

1. **Albian or Gault.** — In England contains *Ammonites* (*Hoplites*) *auritus*, *A. (Schlönbachia) varicosus*, *A. (Schlönbachia) cristatus*, *A. (Acanthoceras) mammillaris*, *Inoceramus sulcatus*, *Pterocera bicarinata*, *Hamites attenuatus* (Fig. 1460), *Toxoceras bituberculatum* (Fig. 1461), *Turrilites catenatus*. Includes 3 zones according to Barrois, those of (1) *Schlönbachia inflata*; (2) *Hoplites interruptus*; (3) *Acanthoceras mammillare*. In France, near Montiérender, there are the *Ammonites*: (1) *Schlönbachia inflata*; (2) *Hoplites splendens*, *Hoplites auritus*, *Acanthoceras mammillare*, *Hoplites Deluci*, *Acanthoceras Lyelli*; (3) *Turrilites catenatus*. The Gault is the *Flammenmergel* of Germany with *Schlönbachia inflata*, *Hoplites lautus*, *Hoplites auritus*, *Aucella gryphæoides*.

2. **Cenomanian.** — In England consists of (1) the Upper Greensand, (2) Chloritic or Glauconitic Marl, (3) Chalk Marl, (4) Gray Chalk. The Upper Greensand contains below, *Exogyra conica*, *Pecten quadricostatus*, *Inoceramus concentricus*, *Cardium Hillanum*, *Trigonia scabricula*, *Hamites alternatus*, and above, *Holaster nodulosus*, *Pecten asper*, *Terebratula biplicata*, *Rhynchonella compressa*. The *Chloritic Marl* contains *Terebratula*