of the true marine Neocomian series are replaced by a massive fluviatile formation corresponding to the English Wealden, and divisible into two groups: 1st, Deister sandstone (150 feet), like the Hastings Sand of England, consisting of fine light yellow or gray sandstone (forming a good building material), dark shales, and seams of coal varying from mere partings up to workable seams of three, and even more than six, feet in thickness. These strata are full of remains of terrestrial vegetation (Equisetum, Baiera, Oleandridium, Lacopteris, Sagenopteris, Anomozamites, Pterophyllum, Podozamites, and a few conifers), also shells of fresh-water genera (Cyrena, Paludina), cyprids, and remains of Lepidotus and other fishes; 2d, Weald Clay (65-100 feet) with thin layers of sandy limestone (Cyrena, Unio, Paludina, Melania, Cypris, etc.).¹⁶⁰ The Gault (Aptian and Albian) of northwestern Germany contains three groups of strata. The lowest of these consists of blue clays with Belemnites brunsvicensis, Amm. (Acanthoceras) Martini, A. (Hoplites) Deshayesi, followed by white marl with Belem. Ewaldi. The middle consists of a lower clay with the zone of Ammonites (Acanthoceras) milletianus, and an upper clay with Amm. (Hoplites) tardefurcatus. The highest contains at its base a clay with Belemnites minimus, and at its top the widely diffused and characteristic "Flammenmergel"-a pale clay with dark flame-like streaks, containing the zone of Ammonites (Schlönbachia) inflatus, Amm. (Hoplites) lautus, etc.¹⁶⁷ In the Teutoburger Wald the Gault becomes a sandstone.

The Upper Cretaceous rocks of Germany present the greatest lithological contrasts to those of France and England, yet they contain so large a proportion of the same fossils as to show that they belong to the same period, and the same area of deposit ¹⁶⁸ The Cenomanian stage consists

¹⁶⁷ Geol. Mag. vi. 1869, p. 261. A. von Strombeck, Zeitsch, Deutsch. Geol. Ges. xlii. 1890, p. 557.

¹⁶⁸ On the distribution of the Cephalopods in the Upper Cretaceous rocks of north Germany, see C. Schlüter, Zeitsch. Deutsch. Geol. Ges. xxviii. p. 457 (see Geol. Mag. 1877, p. 169), and Palæontographica, xxiv. 123-263, 1876. For the Inocerami, Zeitsch. Deutsch. Geol. Ges. xxix. p. 735.

¹⁶⁶ W. Dunker, "Ueber den norddeutsch. Wälderthon, u. s. w.," Cassel, 1844; Dunker and Von Meyer, "Monographie der norddeutsch. Wälderbildung, u. s. w.," Brunswick, 1846; Heinrich Credner, "Ueber die Gliederung der oberen Jura und der Wealdenbildung in nordwestlichen Deutschland," Prague, 1863; C. Struckmann, "Die Wealden-Bildungen der Umgegend von Hannover," 1880; A. Schenk on the Wealden Flora of North Germany, Palæontographica, xix. xxiii.