

LOWER CRETACEOUS (NEOCOMIAN¹²⁵).—Between the top of the Jurassic system and the strata known as the Gault, there occurs an important series of deposits to which, from their great development in the neighborhood of Neuchâtel in Switzerland, the name of Neocomian has been given. This series, as already remarked, is represented in England by two distinct types of strata. In the southern counties, from the Isle of Purbeck to the coast of Kent, there occurs a thick series of fresh-water sands and clays termed the Wealden series. These strata pass up into a minor marine group known as the Lower Greensand, in which some of the characteristic fossils of the Upper Neocomian rocks occur. The Wealden beds of England therefore form a fluviatile equivalent of the continental Neocomian formations, while the Lower Greensand represents the later marginal deposits of the Neocomian sea, which gradually usurped the place of the Wealden estuary. The second type, seen in the tract of country extending from Lincolnshire into Yorkshire, contains the deposits of deeper water, forming the westward extension of an important series of marine formations which stretch for a long way into central Europe.

Neocomian.¹²⁶—The marine Neocomian strata of England are well exposed on the cliffs of the Yorkshire coast at Filey, where they occur in an argillaceous deposit long known as the "Speeton Clay." This deposit is now shown to contain an interesting continuous section of marine strata from the Kimeridge Clay to the top of the Lower Cretaceous, or even into the Upper Cretaceous series. It has been carefully studied by Mr. Lamplugh and by Professors Pavlow and Nikitin, by whom it has been brought into comparison with the Neocomian rocks of Russia. The lower part of the "Speeton Clay" consists of hard dark bituminous shales with large septarian nodules and many crushed fossils. Among these remains there occur *Belemnites Oweni*, *Ammonites* sp., *Lingula ovalis*, *Discina latis-*

¹²⁵ Neocomian, from Neocomum, the old name of Neuchâtel in Switzerland.

¹²⁶ Fitton, *Trans. Geol. Soc.* 2d ser. iv. 1837, 103; *Proc. Geol. Soc.* iv. pp. 198, 208; *Q. J. Geol. Soc.* i. Consult on marine Neocomian type Young and Bird, "Survey of the Yorkshire Coast," 1828, 2d edit. pp. 58-64; J. Phillips, "Geology of Yorkshire," p. 124. J. Leckenby, *Geologist*, ii. 1859, p. 9. Judd, *Q. J. Geol. Soc.* xxiv. 1868, 218; xxvi. 326; xxvii. 207; *Geol. Mag.* vii. 220; C. J. A. Meyer, *Q. J. Geol. Soc.* xxviii. 243; xxix. 70. A. Strahan, *op. cit.* xlii. 1886, p. 486; *Mem. Geol. Surv.* sheet 84.