while the Carstone at the top immediately below the Red Chalk is placed on the horizon of the marls with B. minimus.[128] The Carstone ranges into Norfolk, and perhaps represents the entire "Lower Greensand" of central and southern England.

Wealden.—In the southern counties a very distinct assemblage of strata is met with.[129] It consists of a thick series of fluviatile deposits termed Wealden (from the Weald of Sussex and Kent, where it is best developed), surmounted by a group of marine strata ("Lower Greensand"), in which Upper Neocomian fossils occur. It would appear that the fresh-water conditions of deposit, which began in the south of England toward the close of the Jurassic period, when the Purbeck beds were laid down, continued during the whole of the long interval marked by the Lower and Middle Neocomian formations, and only in Upper Neocomian times finally merged into ordinary marine sedimentation. The Wealden series has a thickness of over 2000 feet, and in Sussex and Kent consists of the following subdivisions in descending order:

Weald Clay	1000 feet.
Hastings Sand group composed of—	
3. Tunbridge Wells Sand (with Grinstead Clay) . .	140 to 380 "
2. Wadhurst Clay	120 " 180 "
1. Ashdown Sand (with Fairlight Clays in lower part) .	400 or 500 "

In the Isle of Wight these subdivisions cannot be made out, and the total visible thickness of strata (sandstones, sands, clays, and shales) is only about half of what can be observed on the mainland further east, but the base of the series cannot be seen. Westward at Punfield, on the coast of Dorsetshire, the Wealden strata are exposed on the shore, and are there estimated to be from 1500 to 2000 feet thick. On the whole the Wealden series is thickest toward the west.

The sandy and clayey sediments composing the Wealden series precisely resemble the deposits of a modern delta. That such was really their origin is borne out by their

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[128] See A. J. Jukes-Browne, "Geology of East Lincolnshire," in Mem. Geol. Surv. sheet 84, 1887; G. W. Lamplugh, "Argiles de Speeton," Bull. Soc. Imp. Nat. Moscou, 1391.

[129] On the Wealden or fluviatile type consult, besides the works quoted on p. 1543, Mantell's "Fossils of the South Downs," 4to, 1822; Topley, "Geology of the Weald," in Mem. Geol. Surv. 8vo, 1875. Bristow and Strahan, "Geology of the Isle of Wight," 2d edit. 1889, in Mem. Geol. Surv., list of Wealden fossils, p. 258.