

plains in the centre of England, ranging thence northward along the flanks of the Carboniferous tracts to Lancaster Bay, and southward by the head of the Bristol Channel to the southeast of Devonshire. They have been arranged in the following subdivisions:

Rhætic ¹	{ Penarth beds.—Red, green, and gray marls, black shales, and "White Lias"—20 feet or less up to 150 feet.
Upper Trias or Keuper	{ Upper Keuper or New Red Marl.—Red and gray shales and marls, with beds of rock-salt and gypsum—800 to 3000 feet. Lower Keuper Sandstone.—Thinly laminated micaceous sandstones and marls (waterstones), passing downward into white, brown, or reddish sandstones, with a base of conglomerate or breccia—150 to 250 feet.
Lower Trias or Bunter (1000 to 2000 feet)	{ Upper Mottled Sandstone.—Soft bright red and variegated sandstones, without pebbles—200 to 700 feet. Pebble-beds.—Harder reddish-brown sandstones with quartzose pebbles, passing into conglomerate; with a base of calcareous beccia—60 to more than 1000 feet. Lower Mottled Sandstone.—Soft bright red and variegated sandstone, without pebbles—80 to 650 feet.

Like the Permian red rocks below, the sandstones and marls of the Triassic series are almost barren of organic remains. Extraordinary differences in the development of their several members occur, even within the limited area of England, as may be seen from the subjoined table, which shows the variations in thickness from northwest to southeast:

	Lancashire and W. Cheshire.	Staffordshire	Leicestershire and Warwickshire
	Feet	Feet	Feet
Keuper { Red marl	3000	800	700
Lower Keuper sandstone	450	200	150
Upper mottled sandstone	500	50-200	absent
Bunter { Pebble-beds	500-750	100-300	0-100
Lower mottled sandstone	200-500	0-100	absent

Somerset and Bristol Coal-fields," Mem. Geol. Survey, 1876; Ussher, Q. J. Geol. Soc. xxxii. 367; xxxiv. 459; Geol. Mag. 1875, p. 163; Proc. Somerset. Arch. Nat. Hist. Soc. xxxv. 1889; Etheridge, Q. J. Geol. Soc. xxvi. 174; A. Irving, Geol. Mag. 1874, p. 314; 1887, p. 309; Quart. Journ. Geol. Soc. 1888, p. 149; W. T. Aveline, op. cit. 1877, p. 380; J. G. Goodchild, Trans. Cumberl. Westmorel. Assoc. xvii. 1891-92.

¹ The term "Rhætic" is derived from the Rhætian Alps, where the rocks so named are well developed. "Bunter" and "Keuper" are terms borrowed from Germany; the first was taken by Werner from the variegated (German, bunt) colors of the strata, the second is a local miner's term.