

India.—The hippurite limestone of southeastern Europe is prolonged into Asia Minor, and occupies a vast area in Persia. It has been detected here and there among the Himalaya Mountains in fragmentary outliers. Southward of these marine strata, there appears to have existed in Cretaceous times a wide tract of land, corresponding on the whole with the present area of the Indian peninsula, but not improbably stretching southwestward so as to unite with Africa. On the southeastern side of this area the Cretaceous sea extended, for near Trichinopoly and Pondicherry a series of marine deposits occurs, corresponding to the European Upper Cretaceous formations, with which it has 16 per cent of fossil species in common. Among these are *Amm. (Acanthoc.) rhotomagensis*, *A. (Pachydiscus) peramplus*, and *Rhynchonella compressa*. The occurrence of *Nautilus danicus* in the higher sands of Ninnyur probably shows that the Cretaceous system of India reaches as high as the Danian stage.¹⁷⁸ Similar strata with many of the same fossils appear on the African coast in Natal. The most remarkable episode of Cretaceous times in the Indian area was undoubtedly the colossal outpouring of the Deccan basalts (p. 439). These rocks, lying in horizontal or nearly horizontal sheets, attain a vertical thickness of from 4000 to 6000 feet or more. They cover an area estimated at 200,000 square miles, though their limits have no doubt been reduced by denudation. Their oldest portions lie slightly unconformably on Cenomanian rocks, and in some places appear to be regularly interstratified with the uppermost Cretaceous strata. The occurrence of remains of fresh-water mollusks, land-plants, and insects, both in the lowest and highest parts of the volcanic series, proves that the lavas must have been subaerial. This is one of the most gigantic outpourings of volcanic matter in the world.¹⁷⁹

North America.—The Cretaceous system stretches over a vast portion of the American continent, and sometimes reaches an enormous thickness. Sparingly developed in the eastern States, from New Jersey into South Carolina, it there includes the younger or Neocomian plant-bearing strata of Virginia. It spreads out over a wide area in the

¹⁷⁸ J. Seunes, *Mem. Soc. Geol. France, Paleont. t. ii. fasc. iii. 1891, p. 22.*

¹⁷⁹ *Medlicott and Blandford, "Geology of India," see ante, pp. 439, 982.*
The Upper Cretaceous fauna of India is described in *Palæontograph. Indica, ser. xiv. 1883.*