

the well-known red earth of bone caves. In southeastern Europe it plays an important part among superficial deposits, being extensively developed over the limestone districts, especially in Istria and Dalmatia, where it is known as the ferruginous red earth or *terra rossa*.⁶¹

Other remarkable examples of similar subaerial waste have been specially noticed among crystalline schists and eruptive rocks. In Brazil, it has been remarked with astonishment that the crystalline rocks are sometimes decayed to a depth of more than 300 feet.⁶² In Massachusetts, Pennsylvania, and generally in the middle and southern Atlantic States of North America, the depth of disintegration appears gradually to increase southward from the limits where the country has been "glaciated" by ice-sheets during the Glacial Period.⁶³ In central Asia, a similar superficial decay has been observed.⁶⁴ Dr. Sterry Hunt has specially drawn

⁶¹ On the origin of "Terra Rossa," see M. Neumayr, *Verhandl. Geol. Reichsanst.* 1875, p. 50; Th. Fuchs, *op. cit.* p. 194; E. von Mojsisovics, *Jahrb. Geol. Reichsanst.* xxx. (1880), p. 210; E. Tietze, *op. cit.* xxx. (1880), p. 729; Lorenz, *Verh. Geol. Reichs.* 1881, p. 81; C. de Georgi, *Boll. Com. Geol. Ital.* vii. p. 294. It is included among the ferruginous deposits by Stoppani ("*Corso di Geologia*," iii. p. 534). Neumayr shows that it is of various ages; in the Karst it incloses Miocene mammals.

⁶² Liais, "*Geologie du Bresil*," p. 2. *Ann. des Mines*, 7me ser. viii. p. 698. T. Belt, "*Naturalist in Nicaragua*" (1874), p. 86. T. Sterry Hunt, *Amer. Journ. Sci.* 3d ser. vii. p. 60; xxvi. (1883), p. 196; *Geol. Mag.* 1883, p. 310; *American Naturalist*, ix. (1875), p. 471. This writer dwells especially on the great geological antiquity of the weathered crust. On the secular rock-weathering of the Swedish mountains see Nathorst, *Geol. Fören. Stockholm. Förhand.* 1879, iv. No. 13.

⁶³ I. C. Russell, *Bull. U. S. Geol. Survey*, No. 52 (1889), p. 12 *et seq.* There is a useful bibliography of papers on the subaerial decay of rocks appended to this essay. See also W. O. Crosby, *Proc. Nat. Hist. Soc. Boston*, xxiii. p. 219.

⁶⁴ On a smaller scale it is also to be noted in the granite and killas (phyllite) of Cornwall and Devon, which, not having suffered from the abrading action of the ice of the Glacial Period, show a deep cover of rotted rock, and afford some indication of what may have been elsewhere the condition of Britain before the period of glaciation. The sea-cliffs along the north coast of Cornwall expose instructive sections of the deep upper decomposed, and of the lower blue solid killas, with the remarkably uneven boundary along which they pass into each other.