

occurs in beds, each bed is not divided into laminae, and it is the absence of this minor stratification which makes the stone so useful for architectural purposes (Craigleith and other sandstones at Edinburgh, some of which contain 98 per cent of silica). **Glauconitic sandstone** (green-sand)—a sandstone containing kernels and dusty grains of glauconite, which imparts a general greenish hue to the rock. The glauconite has probably been deposited in association with decaying organic matter, as where it fills echinus-spines, foraminifera, shells and corals on the floor of the present ocean.¹¹⁷ **Buhrstone**—a highly siliceous, exceedingly compact, though cellular rock (with *Chara* seeds, etc.), found alternating with unaltered Tertiary strata in the Paris basin, and forming from its hardness and roughness an excellent material for the grindstones of flour-mills, may be mentioned here, though it probably has been formed by the precipitation of silica through the action of organisms. **Arkose** (*granitic sandstone*)—a rock composed of disintegrated granite, and found in geological formations of different ages, which have been derived from granitic rocks. **Crystallized sandstone**—an arenaceous rock in which a deposit of crystalline quartz has taken place upon the individual grains, each of which becomes the nucleus of a more or less perfect quartz crystal. Mr. Sorby has observed such crystallized sand in deposits of various ages from the Oolites down to the Old Red Sandstone.¹¹⁸

Graywacke—a compact aggregate of rounded or subangular grains of quartz, felspar, slate, or other minerals or rocks, cemented by a paste which is usually siliceous, but may be argillaceous, feldspathic, calcareous, or anthracitic (Fig. 21). Gray, as its name denotes, is the prevailing color: but it passes into brown, brownish-purple, and sometimes, where anthracite predominates, into black. The rock is distinguished from ordinary sandstone by its darker hue, its hardness, the variety of its component grains, and, above all, by the compact cement in which the grains are imbedded. In many varieties, so pervaded is the rock by the siliceous paste, that it possesses great toughness, and its grains seem to graduate into each other as well as into the surrounding

¹¹⁷ *Ante*, p. 141; Sollas, *Geol. Mag.* iii. 2d ser. p. 539.

¹¹⁸ *Q. J. Geol. Soc.* xxxvi. p. 63. See Daubrée, *Ann. des Mines*, 2d ser. i. p. 206. A. A. Young, *Amer. Journ. Sci.* 3d ser. xxiii. 257; xxiv. 47, and especially the work of Irving and Van Hise (quoted on p. 196), which gives some excellent figures of enlarged quartz-grains.