

combine to form the Cretaceous System ; but all of these have peculiarities by which they may, *upon a great scale*, be distinguished from the aqueous products of other periods. The arenaceous rocks are often found in the state of unindurated or even loose sand, the clays are generally soft and marly, the limestones soft and earthy. Peculiar colours also belong to these different members of the group: the sands are often green, sometimes very ochraceous, the clays of a pale greenish blue, the limestones white or red. Variations, however, occur in particular districts. The sands and limestones are usually rather coarsely grained, composed of clear worn quartz grains and pebbles, mixed with some calcareous matter, and coloured by disseminated ochraceous oxide of iron to yellow or brown tints (Woburn, Ryegate), or rendered green by interspersed large or small grains of a peculiar mineral (silicate of iron). This granular mineral is, indeed, eminently characteristic of the lower portions of the cretaceous system, being found commonly in two great groups of "green sands," in an intermediate clay, and in the superincumbent chalk. Nor is its diffusion confined to Europe: it is so abundant in the cretaceous rocks of the New World, as to be used for manure in New Jersey. Fuller's earth and good ochre lie in the lowest arenaceous sands (Woburn, Nutfield, Shotover). Layers of chert nodules occur in the sand, and sometimes beds of chert. In Kent, beds of whitish limestone, of considerable thickness, interlamine the lower green sands; harder limestone lies in them in Lincolnshire. The clay is usually of a marly or even chalky type, and of a light blue tint (golt of Cambridge), but also of a full blue colour (Folkstone) and somewhat laminar texture; generally it holds small balls and irregular masses of clay indurated by oxide of iron, or crusted over by pyrites. In the Wealden district are some red layers. Green grains are commonly found in it: analysis generally shows it to contain much calcareous matter.