

ence, occur in the mineral kingdom, and particularly in the older, fossiliferous rocks. Shells are found in the strata in the three following states:—

1st. Shells in which the constituent substance has suffered no change but that of decay. Many of the specimens in the sands of the Crag in Norfolk and Suffolk, and in the Eocene beds at Grignon, near Paris, and the Pliocene of Palermo, in Sicily, are as perfect as if collected from the sea-shore, having suffered no loss but that of colour. In some instances, even the variegated markings remain; but in general they are bleached, or have a ferruginous stain.

2dly. The form preserved, but the constituent substance mineralized. This state is very common in shells that are imbedded in hard rock, whatever may be the age of the deposit. In calcareous strata the constituent substance is generally transmuted into calcareous spar, as in most of the shells of the chalk, oolite, mountain limestone, &c. In sands abounding in silex, the shell is changed into flint, as in the exquisite specimens from the Green Sand of Blackdown, Devonshire; in deposits permeated with sulphuret of iron, the shells are often metamorphosed into pyrites, as in the clays of the Lias, Galt, &c.

3dly. In the state of *Casts* and *impressions*. Although in loose sands the shells are either empty, or filled with detritus easily removable by washing, in clay, limestone, and sandstone, the cavities are