## PLATE XXII.

Fig. 1. Fine washings of a Red Clay from Station 276 ; 2350 fathoms, South Pacific. The little, colourless, prismatic crystals are simple or grouped microliths of phillipsite, and are associated with more or less circular grains of manganese and argillaceous substance (magnified 280 diameters).

Fig. 2. Section of a spherule formed by crystals of phillipsite from Station $276 ; 2350$ fathoms, South Pacific. The spherule is entirely enveloped by the clay and penetrated by manganese. The section shows the form of the crystals towards the periphery of the spherule, more or less inclined to the longer axis. These spherules are about 0.1 mm . in diameter (magnified 60 diameters).

Fig. 3. Section of a spherule of crystals of phillipsite forming the nucleus of a manganese nodule from Station 276 ; 2350 fathoms, South Pacific. The section passes through the centre of the spherule, which is about 0.1 mm . in diameter. It seems to be formed by a more or less regular grouping of the little crystals following approximately the radii of a circle, and they increase in size as they approach the periphery. In several crystals the zones of increase are indicated by lines of inclusions, and in others these zones are shown to be grouped concentrically. The crystals of phillipsite forming the spherule are surrounded by a thin layer of manganese, beyond which is a muddy deposit, containing particles of volcanic minerals and manganese (magnified 60 diameters).

Fig. 4. Crystals of phillipsite of considerable size found free in the clay at Station $276 ; 2350$ fathoms, South Pacific. They are generally grouped in an irregular manner, or show a tendency to form twins. They are covered with manganese depositions or form the centres of little concretions of that substance (magnified 37 diameters).

