

flattened. They are insoluble in hydrochloric acid. The small quantity of material at our disposal did not permit of complete analysis, but we found them to contain silica, magnesia, and iron. The external characters show on a small scale so many of the peculiarities of the chondres of meteorites, that celebrated experts in meteoric stones pronounced them as such without being aware of the source from which they were procured. These characters may be best realised by reference to the figures on Pl. XXIII.

Fig. 11 represents the external aspect of one of these spherules from a *Globigerina* Ooze, Station 338, 1990 fathoms, South Atlantic. It was procured from the residue after treating about two quarts of the deposit with dilute acid. It is about 1 mm. in diameter, being magnified twenty-five times in the figure; it is yellowish brown, but the bronze metallic reflection is not rendered in the figure. At the upper part a shallow depression or cupule is seen. The internal structure is leaf-like, excentric, and more or less radial, and is seen to consist of the apposition of fine lamellæ. It might be said that these lamellæ take their origin from a centre situated near the left hand side of the spherule. This radial, excentric, lamellar structure is one of the characteristics of the chondres of meteorites; indeed, this structure has been considered diagnostic of chondritic forms of bronzite, for example. Microscopic examination by means of transmitted light, however, only partially confirms this relationship with the chondres of bronzite. The small size, as well as the friability, of these spherules, make it impossible to cut them into thin sections; we were, therefore, limited in our examination to splinters obtained by breaking these little bodies between two glass slides. In consequence, however, of their lamellar structure they break into extremely thin plates that are perfectly transparent except at those points where there are numerous dark, opaque inclusions, believed to be titaniferous magnetite. Under a magnifying power of 200 or 300 diameters, the details shown in figs. 10 and 13 can be observed. These thin plates are almost colourless, or at most they are slightly brownish, and present two systems of crystalline lamellæ. Both of these systems are formed by little prisms, grouped in a parallel fashion, which on crossing cut each other at angles of about 70° and 110° , as represented in fig. 10. The small prisms juxtaposed in a parallel manner, and forming what we have called a system, all extinguish at the same time; their colours of polarisation are not very pronounced.

When we published the preliminary results of our researches some years ago, it was stated that these prisms always extinguished following their longer axis; later measurements, which we consider as quite definite, have shown that this observation was not exact. Relying upon the preliminary observation, we believed that they belonged to the rhombic system, but by operating upon little detached prisms we have observed that while in the great majority of cases the extinction followed their longer axis, in others the little prisms are extinguished under a maximum angle of 40° . The lamellæ are thus crystallised in the monoclinic system.