

prolonged downward, so that the shell is deeper and somewhat turbinate. The two species usually occur together, but *P. Micheliniana* has apparently a much wider distribution than *P. Menardii*; for while the latter was limited to the region of the trade-winds and the equatorial drift current, and was found rarely, if at all, to the south of the Agulhas current, the former accompanied us southward as far as Kerguelen Land. Both forms of *Pulvinulina*, however, are more restricted than *Globigerina*; for even *P. Micheliniana* became scarce after leaving the Cape, and the wonderfully pure calcareous formation in the neighborhood of Prince Edward Island and the Crozets consists almost solely of *Globigerina bulloides*, and neither species of *Pulvinulina* occurred to the south of Kerguelen Land.

Over a very large part of the globigerina ooze area, and especially in those intertropical regions in which the formation is most characteristically developed, although the great bulk of the ooze is made up of entire shells and fragments of shells of the above-described foraminifera, there is frequently a considerable proportion (amounting in some cases to about twenty per cent.) of fine granular matter, which fills the shells and the interstices between them, and forms a kind of matrix or cement. This granular substance is, like the shells, calcareous, disappearing in weak acid to a small insoluble residue: with a low microscopic power it appears amorphous, and it is likely to be regarded, at first sight, as a paste made up of the ultimate calcareous particles of the disintegrated shells; but under a higher power it is found to consist almost entirely of "coccoliths" and "rhabdoliths." I need scarcely enter here into a detailed description of these singular bodies, which have already been carefully studied by Huxley, Sorby, Gümbel, Haeckel, Carter, Oscar Schmidt, Wallich, and others. I need only state that I believe our observations have placed it beyond a doubt that the "coccoliths" are the separated elements of a peculiar calcareous armature which