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(Comm. by H. Yabe, M.I.A., Feb. 12, 1935.)

A fine-grained, gray limestone with numerous round spots was collected by Mr. Y. Inai, now a member of our Institute of Geology and Palaeontology, Tōhoku Imperial University, from the upper part of the Ordovician Ssu-yen formation\(^1\) exposed on the road side from Tou-fang-kou to Pen-hsi-hu, Manchuria. Under the microscope, the limestone is cryptocrystalline and homogenous, except for the spherical bodies, mostly 1 mm. in diameter, consisting of large xenomorphic crystals of transparent colorless calcite and marginally fringed by far smaller usually rhombohedral crystals of dolomite of light brownish tinge. The limestone is traversed irregularly by a number of fine hair-like veinlets of dolomite, sometimes with calcite in their median part; this shows that we have here a case of secretion of calcareous matter, first dolomitic and then purer calcium carbonate, in pre-existing hollows and fissures. The original nature of the spherical bodies is a mere matter of conjecture; they are mostly simple or isolated and strongly remind us of certain monothalamous foraminifera in form and size, which, like *Orbulina*, were apparently devoid of any particular aperture, hence perhaps provided with a perforated test, and undivided interior. Beside, there are smaller forms, otherwise similar to the larger ones, and also some examples in which either subequal spherical bodies or those of different sizes are joined together.

The spherical bodies often form more or less prominent relief on weathered surface of the limestone and are attractive by being distinctly corrugated or granulated on their surface; this feature is especially well exhibited by those on artificially etched surface of the rock, which then closely simulate shells of arenaceous foraminifera such as *Psammosphera*, due to the thin, apparently arenaceous test and undivided interior. The spherical bodies can easily be set free from the matrix by dissolving the limestone in dilute acid; then their calcite core and the matrix around them disappear and a very small amount of clayey matter, some dolomite grains and a great number of thin

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spherical “tests” of whitish color are left in residue. The latter shrink in drying and assume various polygonal forms imitating tests of certain arenaceous foraminifera. Under the microscope, however, the “test” like film consists of dolomite crystals or grains instead of other mineral grains, such as quartz, etc.

There are a number of reports pertaining to the early Palaeozoic foraminifera remains, and the current view is that these early foraminifera belong to arenaceous forms; it is desirable to be more careful as to the mineralogical composition of the “arenaceous” tests.

Explanation of Figures.

Figs. 1–3. Ordovician foraminifera? (Reg. No. 21298)
1. Etched surface of the limestone with spherical bodies raised on the general surface. ×5
2. Spherical bodies isolated from the matrix, shrunk in drying. ×10
3. Thin section of the limestone in transmitted light, showing large xenomorphic crystals of calcite in the interior of the spherical bodies and minute crystals or grains of dolomite along the periphery. ×60