2. *Farrea sollasii*, n. sp. (Pl. LXXIV. figs. 1–6).

On the much macerated and half-eaten skeleton of a dead Japanese *Farrea occa* (in Dr. Döderlein's collection), I found a system of dichotomous tubes about 3 cm. high, and evidently belonging to a *Farrea*, which in external appearance so closely resembled *Farrea occa* that any special description is superfluous. It is, however, at least probable that we have here the representative of another species. The difference lies especially in the structure of the discohexasters scattered in the parenchyma. They differ markedly from those of *Farrea occa*, so that I felt compelled to erect a distinct species.

I shall not enter into any detailed description of the strongly developed dictyonal framework, with its rough internal and external conical radial bosses, nor of the uncinates of various strength usually very much narrowed at the gastral extremity, nor of the dermal and gastral framework as a whole, but refer simply to the distinct representation given in Pl. LXXIV. fig. 1. The length of the anchor-hooks in many of the gastral clavulæ (Pl. LXXIV. fig. 5) is rather remarkable. It is, however, necessary to call attention to the peculiar discohexasters which occur in all parts of the dry skeleton, in more or less abundance, beside the quite isolated oxyhexasters which occur in the form constantly represented in *Farrea occa*. The basal portion of the uniformly developed rays of these discohexasters seems rather short, and divides into three long thin rather outwardly bent terminal rays, which bear on their outer ends a small transverse terminal plate, with four to eight gently recurved marginal teeth (Pl. LXXIV. fig. 6). Besides these delicate and weakly developed discohexasters, similar smaller forms here and there occur with stronger terminal rays, bearing discs without marginal teeth, and on the whole more resembling thickened knobs (Pl. LXXIV. fig. 1, left, below).

3. *Farrea vosmaeri*, n. sp. (Pl. LXXIV. figs. 7–13).

Among numerous specimens of *Farrea occa*, Carter, which Dr. Döderlein dredged in Sagami Bay, Japan, from a depth of 100 to 200 fathoms, and preserved immediately in spirit, there are some well-preserved portions of a *Farrea*, which in microscopic appearance and in the structure of the individual siliceous elements differs from *Farrea occa*, and so markedly from *Farrea sollasii*, that the erection of a distinct species seems inevitable. The spicules are very like those of *Aulodictyon woodwardii*, Sav. Kent, but they include oxyhexasters which are not represented in the latter. The saving clause must again be noted, that it is possible that the divergent spicules have been intruded from outside. As can be inferred from Pl. LXXIV. figs. 7, 10–13, neither the general structure of the dictyonal framework nor the majority of the isolated