Nevertheless, there would seem to be a limit to the thickness of stony masses formed even under such favorable circumstances, for the analogy of tertiary volcanic regions lends no countenance to the notion that sedimentary and igneous rocks 25,000, much less 45,000 feet thick, like those of Wales, could originate while one and the same fauna should continue to people the earth. If, then, we allow that 25,000 feet of matter may be ascribed to one system, such as the Silurian, from the top of "the Ludlow" to the base of "the Llandeilo" inclusive, we may be prepared to find in the next series of subjacent rocks, the commencement of another assemblage of species, or even in part of genera, of organic remains. Such appears to be the fact, and I shall therefore conclude with the Llandeilo beds, the original base-line of Sir R. Murchison, my account of the Silurian formations in Great Britain, and proceed to say something of their foreign equivalents, before treating of rocks older than the Silurian.

It would lead me into too long a digression to attempt to follow the Upper, Middle, and Lower Silurian into Scotland, the lake country, Cornwall, and other parts of the British Isles. For an account of these rocks in Ireland, the reader is referred to Col. Portlock's Report on Tyrone, to the writings of Mr. Griffith and Prof. M'Coy, and those of the officers of the Government Survey, as well as to the sketch recently given by Sir R. I. Murchison.

When we turn to the Continent of Europe, we discover the same ancient series occupying a wide area, but in no region as yet has it been observed to attain great thickness. Thus, in Norway and Sweden, the total thickness of strata of Silurian age, is scarcely equal to 1000 feet,* although the representatives both of the Upper and Lower Silurian of England are not wanting there, and even some beds of schist have been comprehended which, as we shall hereafter see, lie below the Llandeilo group. In Russia the Silurian strata, so far as they are yet known, seem to be even of smaller vertical dimensions than in Scandinavia, and they appear to consist chiefly of Middle and Lower Silurian, or of a limestone containing Pentamerus oblongus, below which are strata with fossils corresponding to those of the Llandeilo beds of England. The lowest rock with organic remains yet discovered, is "the Ungulite, or Obolus grit" of St. Petersburg, probably coeval with the Llandeilo, and not exhibiting any of those peculiar forms which distinguish "the Lingula flags" of Wales, or the Bohemian "primordial fauna" of Barrande.

The shales and grits near St. Petersburg, above alluded to, contain green grains in their sandy layers, and are in a singularly unaltered state, taking into account their high antiquity. The prevailing brachiopods consist of the *Obolus* or Ungulite of Pander, and a *Siphonotetra* (see figs. 604, 605). As bearing on the antiquity of this formation, it is interesting to notice that both genera have recently been found in our own Dudley limestone.

* Murchison's Siluria, p. 321.