

at first somewhat abruptly, and then gradually. In the smaller specimens the section is nearly circular, but in the larger it is more or less ovate, the dorsal, or side of the concave curve, being less convex than the ventral. The siphuncle is situated in the median line, near, but not in contact with the shell, about a line in diameter at the passage, but inflated to two or three lines between the septa. The chamber of habitation is large, apparently one-third the whole bulk of the shell. There are about four septa to the inch measured on the side of a specimen five inches in length. The surface is marked with obscure engirdling striæ which make a slight bend towards the apex along the median line of the ventral aspect. There are also faint indications of longitudinal sulci. The following are the dimensions of three specimens.

1.—Length following the curve along the middle of the ventral side 5 inches; dorso-ventral diameter of the aperture 18 lines; lateral diameter 22 lines; dorso-ventral diameter at the first septum 24 lines; lateral diameter 28 lines; diameter at the twelfth septum (at which point the section is circular) 10 lines; depth of chamber of habitation 22 lines. The ventral outline is curved to a radius of about $3\frac{1}{2}$ inches. For about 9 lines from the aperture the shell enlarges very gradually, and then suddenly expands two or three lines.

2.—Length $4\frac{1}{2}$ inches on the ventral curve; dorso-ventral diameter at the aperture 17 lines; lateral diameter 21 lines; dorso-ventral diameter at the last septum 22 lines; lateral diameter 27 lines; depth of chamber of habitation 24 lines; ventral aspect curved to a radius of 4 inches. The smaller extremity, where broken off, is about 9 lines in diameter.

3.—Length $3\frac{1}{2}$ inches on the ventral curve; dorso-ventral diameter at the aperture 14 lines; lateral diameter 16 lines; dorso-ventral diameter at the last septum 19 lines; lateral diameter 22 lines; curved to a radius of about 3 inches.

In all the specimens the dorsal aspect is less convex than the ventral but in some the difference is very slight. At first sight, taking extreme forms, it might well be thought that there are several species; but there is a transition, and I do not see how they can be separated. The individuals are numerous, but mostly in fragments. Grimsby; Niagara formation. This species is dedicated to the discoverer, Johnson Pettit, Esq., of Grimsby C. W., who has done good service to science in collecting many fossils from a formation difficult to work out.

O. THALES, n. sp.—Length five or six inches, proportionately not so ventricose as *O. Pettiti*; siphuncle not in the median line, but a little to the right thereof, moniliform, the segments two lines in diameter, nearly in contact with the shell; about four septa to the inch on the side. In a specimen which, when perfect, must have been six inches in length, the