

2nd. With a columella slightly developed.

3rd. Columella large and prominent, with a smooth space all round.

4th. Columella well developed, but with a number of irregular often elongated tubercles in the surrounding smooth space.

5th. The septa reaching the columella, no smooth space.

6th. Septa covering the columella.

7th. Septa reaching the centre, with the columella either prominently, slightly or not all indicated beneath.

This last mentioned form must certainly be regarded as a true *Zaphrentis*, all other characters of the genus being present, and from it there is a regular series of forms leading in the seven or more directions above indicated. It appears to me therefore that so far from these specimens being divisible into several genera they only constitute one species.

The most persistent characters are the rounded edges of the septa near the margin of the cup, and the oval shape of the septal fossette, in the bottom of which where it reaches the side of the cup is a single septum which projects a little and partially divides the fossette.

This species somewhat resembles *Z. cornicula* (Lesueur), but differs in the edges of the septa, which are not dentated as in that species.

Formation and Locality. Devonian; Corniferous limestone. Extremely abundant at Rama's Farm near Port Colborne, Canada West.

ZAPHRENTIS SPATIOSA (Billings).

Description.—Corallum short, turbinate, moderately curved and very broadly expanding. At the margin of the cup about ninety radiating septa alternately a little unequal and with their edges broadly rounded as in *Z. prolifica*. Length measured on the side of the greater curvature, about three inches, width of cup two inches and a-half. Septal fossette unknown.

This species is closely related to *Z. prolifica*. and may perhaps be united with it when its characters become more fully known.

Formation and Locality.—Devonian; Onondaga and Corniferous limestones, Rama's Farm, near Port Colborne Canada West.

Genus CYSTIPHYLLUM (Lonsdale.)

Generic Characters.—Corallum simple, turbinate, entirely filled with vesicular celluliferous structure; radiating septa rudimentary or obsolete.