

Agelacrinites chapmani occurs in one of the lower layers of limestone, and the *Comarocystites* was found about five feet above this level. The exposures in the quarry belong to the upper part of the *Cystid* zone. It is evident that the types of *Comarocystites punctatus* were found in the *Cystid* zone, since Billings stated in his original description that the specimens occurred "generally along the water's edge, from the Rideau Falls to the Chaudiere." The remarkable specimen obtained by Sir James Grant from an excavation on St. Patrick street, near Chapel street, in Ottawa, also may have come from the *Cystid* zone, but there are no exposures at present in this area, by means of which the horizon may be established definitely. Evidently *Comarocystites* has a considerable vertical range in the Trenton of the Ottawa area, being unknown so far only from the *Dalmanella* zone, at the base of the Trenton, and from the *Hormotoma* or *Sponge* zone, at the top of the Trenton. In the intermediate zones it evidently occurs at more or less remote intervals, and is a comparatively rare fossil.

Possibly there are two species of *Comarocystites* in the Ottawa area; one of larger size, with more compressed theca, and with nearly smooth thecal plates; the other smaller, less compressed, with minutely granular thecal plates, marked by pairs of distinctly lunate short ridges. The second form is known to occur at the top of the *Tetradium* zone, immediately beneath the *Prasopora* zone, and in the *Cystid* zone. Possibly the smooth form occurs at a different horizon, but the number of well preserved specimens at hand is not sufficient to determine whether the smooth and ornamented forms in reality are distinct or not.

Comarocystites punctatus is cited by Rominger also from the Trenton, in section 17 of township 41, above the big bend in the Escanaba River, north of Little Bay de Noquette, in Michigan.

20. *Literature on Comarocystites punctatus*:—
Comarocystites punctatus Billings:

Billings, Canadian Journal, 2, 1854, p. 270, figs. 1-3.

Figure 1 in this paper corresponds to figure 2 on plate V of Decade III. Figure 2 is an apical view of the same specimen and corresponds to figure 2b in the Decade, but is not identical with the latter; there is no indication of a pair of arms at the upper end of the figure, but only of a single protuberance, and the location of the anal pyramid beneath the pair of arms in the lower part of the figure is shown. Figure 3 corresponds to figure 1 of the Decade.

Geol. Surv. Canada Rep. Progr. for 1853-56, 1857, p. 288.