

secondary ridges appear across the sutures between adjacent radials and also between the radials and the first interbrachials. The parts of the plates, not occupied by the radial carinæ or the above-mentioned ridges, are covered by a delicate granulation. The prominence of these ornamental elevations and their unusually lineal character give the impression of a polygon surrounding each radial, with its angles connected to the centre of that plate like the spokes of a wheel. Less pronounced polygons also appear around each plate of the third circlet, but higher up the cup, this impression is lost on account of the increasing irregularity of the plates and the more pronounced petaloid character of the ridges.

The beauty of the organism is further increased by the peculiar manner of origin of the first and second pinnulæ. The radial plates bifurcate on the second primibrach (primaxil, second costal) and a row of non-stellate but granulated plates lies between the two divisions of the ray. The prominent carinæ are continued up the secundibrachs (distichals) into the arms. From each of the second secundibrachs, lateral branches of the carinæ pass outwards and upwards into the notch between the arms of contiguous rays. Wachsmuth and Springer interpret these lateral extensions of the carinæ as pinnulæ: they appear however to be an integral part of the plates over which they pass and may be considered as the carinæ of tertibrachs (palmars), the continuation of which into arms has not been completed. This explanation seems reasonable in view of the fact that twenty is the normal number of arms in the *Glyptocrinidæ*. Following Wachsmuth and Springer, however, the third secundibrach (distichal) is without a plume, but from the fourth, a strong pinnule passes inwards and upwards to become confluent with its mate in the depression between the two arms of the same ray. It is this peculiar arrangement of the lower pinnulæ which induces me to believe that my specimens belong to Billings' species. Were it not for this agreement in a unique feature, the difference in ornamentation and in the general shape of the cup might be considered sufficient ground for the establishment of a new species.

*Periglyptocrinus priscus*, as emended above, is a fairly large and unmistakable species and is the most beautiful form among the many Crinoids from the Trenton Formation in Ontario.

*Horizon*—Trenton.

*Location*—Balsam Lake, Ontario.

*Collector*—Mr. Joseph Townsend.

*Specimen Number*—649 T. University of Toronto Museum.