

mesial fold; mesial fold somewhat flattened or very slightly rounded on the summit; plications rounded; surface concentrically lamellose.

The specimens are all casts, or impressions of the shells.

They bear some resemblance to *S. sulcatus* of the Niagara group, and are intermediate between that species and the *S. cycloptera* of the Lower Helderberg group.

7. TREMASTOSPIRA ACADIE. N. sp. Fig. 4.

Shell wider than long; beak of the ventral valve produced and incurved; mesial depression marked by a small fold on each side, which originates about one-third of the length below the beak and continues to the margin; sinus bounded on each side by a more strongly elevated plication, beyond which are six other plications on each side.

Surface marked by fine concentric striae.

This shell is referred to the genus *Trematospira* from external characters alone, which are unlike *Rhynchonella* proper, and the shell is not a *Spirifer*.

8. RHYNCHOSPIRA SINUATA. N. sp.

Shell ovoid, ventricose beak of the ventral valve incurved; a mesial sinus beginning a little below the beak; surface marked by about eight or nine simple scarcely subangular plications on each side the mesial sinus.

Surface marked by concentric lines of growth.

This species differs from the *R. formosa* of the Lower Helderberg rocks of New York in the plications being more slender, in the more defined sinus of the ventral valve, and the continuation of the two small folds in the sinus nearly to the beak.

9. RHYNCHONELLA SAFFORDI.

Shell varying in form from ovoid to globose. Full grown specimens usually wider than long, and sometimes becoming extremely ventricose, so that the diameter across the two valves much exceeds the length. Ventral valve depressed convex, with the beak minute, closely incurved; dorsal valve very ventricose, most prominent toward the front. Cardinal slope a little depressed, sides rounded, and the front in direct line flattened but not depressed. Surface finely plicated, plications little elevated,