

width, eight lines. Length of largest ventral valve in a straight line from beak to front, seven lines; width, ten lines. The proportional length and width appear to vary. The apical angle of the ventral valve also varies, being in some specimens much more pointed at the beak than in the one above figured. Specimens of all sizes occur from three lines in width upward."

Having obtained a large series of specimens from east of Swanton, Vermont, the following observations are added to the above description:

Shell transversely to longitudinally oval; more or less plano-convex; cardinal angles about 100° ; hinge-line a trifle less than the greatest width of the shell. Ventral valve convex; arching gently from the frontal margin to the deepest part of the valve, it curves more abruptly over to the slightly incurved, pointed beak; a mesial sinus of varying strength occurs on many shells and in others it is entirely absent; a false area without a trace of an opening extends some distance beneath the beak and out to the extremity of the hinge-line, where it narrows to a little more than an inflected cardinal margin. Dorsal valve transverse, depressed, rising to the highest point at the beak, which is elevated, but not incurved, over the hinge-line; in some examples the valve is unusually flat, with a low, round, pointed beak rising at the center of the cardinal line; in others the beak is more elevated, the body of the valve sloping up towards it. Shell structure calcareous. Surface marked by concentric striæ and undulations of growth that give the older shells a rough appearance.

The muscular impressions of the ventral valve are preserved as dark, narrow, elongate scars, two each side of the median line and two near the lateral margins; the central pair (fig. 1, pl. ix) appear to diverge from a single scar extending forward from near the beak; the next pair are broader and longer and much like the two lateral pairs. Numerous striæ, about $.5^{\text{mm}}$ apart, radiate from the vicinity of the beak forward and laterally to the margins of the shell.

The scars of the interior of the dorsal valve are better preserved than those of the ventral; a short, central, elevated line extends about half-way from the beak to the front margin, separating two large posterior and two small anterior (adductor?) scars; the posterior scars have a low ridge bounding them, outside of which numerous strong lateral sinuses radiate out a short distance; the radiating lines observed on the cast of the ventral valve also occur on casts of the dorsal valve. I am not sure but that Mr. Billings's fig. 348 (Geol. Vermont, vol. ii, p. 948) is similar to the compressed specimens of the ventral valve from Parker's quarry. Figures 1*g*, 1*h*, plate ix, are taken from two compressed ventral valves from the arenaceo-argillaceous shales at the Parker quarry. But for the fact that we have specimens showing forms between figures 1*a*, 1*b*, and 1*g*, 1*h*, the tendency would be to separate the latter as a distinct species, as the outline of the valve is lost and the surface characters are largely obliterated.