

Surface marked by fine concentric lines of growth, and on some shells fine radiating lines are seen near the beak; when the surface is entire a secondary system of ornamentation is seen as very fine concentric striae, broken by very short undulations that give almost a reticulated surface.

The Wasatch specimens show valves 2^{mm} to 9^{mm} in length. Those from near Pioche are more compressed and appear more quadrangular and broader than the Wasatch forms, except in the small shells, which are very much alike. When the dorsal valves are compressed longitudinally, the cardinal line is straightened and the concentric striae are depressed, so that the shell might readily be taken for a species of *Kutorgina*.

Figures 4*b* and 4*c*, pl. viii, are drawn from casts of the interior of the two valves as they occur in the shales of the Highland Range and at the Chisholm mine, near Pioche. Figure 4*d* shows the relative proportions of the valves to each other when flattened in the shale.

Formation and localities.—Middle Cambrian. Box Elder Cañon, above Call's Fort; Big Cottonwood Cañon, one mile below Argenta, Wasatch Mountains; East Cañon, above Ophir City, Oquirrh Mountains, Utah, in dark silicious argillites; also, in the pinkish argillaceous shale at the Chisholm mine, southwest face of the Ely Mountains, near Pioche, Nevada.

Genus ACROTRETA Kutorga.

Acrotreta Kutorga, 1848. Verhandl. der russisch. kais. min. Gesellsch., St. Petersburg, 1847, p. 275. Type *A. subconica*, same report, p. 275, pl. vii, figs. 7*a-c*.

ACROTRETA GEMMA Billings.

Plate viii, figs. 1, 1*a, b*.

Acrotreta gemma Billings, 1865. Paleozoic fossils, vol. i, p. 216, figs. 201*a-f*.

Acrotreta subconica and *A. attenuata* Meek, 1873. Sixth Ann. Rep. U. S. Geol. Surv. Terr., p. 463.

Acrotreta pyxidicula White, 1874. Geog. and Geol. Expl. and Surv. West 100th Merid., Rep. Invert. Foss., p. 9; vol. iv, pt. 1, p. 53, pl. iii, figs. 3*a-d*, 1875.

Acrotreta gemma Walcott, 1884. Monographs U. S. Geol. Survey, vol. viii, Pal. Eureka district, p. 17, pl. i, figs. 1*a, b, 1d, 1f*; pl. ix, figs. 9, 9*a*.

Original description.—"Shell very small, about 1 line in diameter; one valve nearly flat and the other acutely conical. Dorsal valve very gently convex, nearly circular; sides and front margin uniformly rounded; posterior margin very obtusely angulated at the beak, on each side of which a portion of the cardinal edge, equal to one-fourth of the whole width of the shell, is nearly straight; umbo very small; beak apparently depressed to the hinge line and not projecting beyond it; cardinal angles compressed, broadly rounded; a wide, shallow, mesial