

Genus STENO THECA Salter.

Stenotheca Salter. Name proposed 1866; published by Mr. Henry Hicks, 1872. Quart. Jour. Geol. Soc., vol. xxviii, p. 180.

Mr. Hicks does not give a description of the genus, but from the figures of the type species *S. cornucopia* there is little difficulty in identifying *S. rugosa* with it generically.

The genus may be provisionally described as follows:

Shell depressed conical; aperture oval, elliptical or narrow elongate oval; apex eccentric and curved over towards one end of the shell; surface marked by more or less strong undulations and lines of growth.

The rougher surface and the strongly-arched curvature from the beak to the side opposite to which it curves seem to distinguish *Stenotheca* from the closely related genus *Scenella*.

When reviewing the fauna of the St. John Formation, contained in the Hartt collections, I referred *Discinia Acadica* of Hartt to the genus *Palaeocma*, as the material for study was too fragmentary to change the generic reference made by Mr. Whitfield (United States Geological Survey, Bull. 10, p. 19). Subsequently I saw specimens of *Stenotheca rugosa* that showed that, in exterior appearance, *D. Acadica* was a true *Stenotheca*? (Amer. Jour. Sci., 3d ser., vol. xxix, p. 117, 1885). More recently Mr. G. F. Matthew has published a note on *S. Acadica*, describing the interior, and proposes that it be placed in a subgenus of *Stenotheca*, "characterized by its subcircular aperture and patelloid form." No name is given for the proposed subgenus (Canadian Rec. Sci., vol. ii, p. 10, 1886.)

STENO THECA RUGOSA Hall (sp.).

Plate xii, figs. 1, 1a-c.

Metoptoma? *rugosa* Hall, 1847. Pal. N. Y., vol. i, p. 306, pl. lxxxiii, figs. 6a-c.

Stenotheca rugosa Billings, 1872. Can. Nat., new ser., vol. vi, p. 479.

Stenotheca pauper Billings, 1872. Can. Nat., new ser., vol. vi, p. 479.

Original description.—"Elliptical, with the sides straight; apex elevated and slightly bent forwards; posterior extremity broader than the anterior; surface marked by strong concentric undulations, which increase in number on the posterior side.

Position and locality.—"In the subcrystalline calcareous beds, associated with the Hudson River shales, near Troy."

The usual outline of the aperture is that of an elongate oval, varying somewhat in proportion and the curvature of the sides, so as to be subcircular in some examples. The apex varies in position from a point nearly over the anterior margin to one-third the distance between the anterior and posterior margins. On a young shell, 3^{mm} in length, the apex overhangs the anterior margin. There is considerable variation in the surface markings; the strong annulations of growth seen on some