

Genus *SYNTROPHIA* Hall and Clarke*Syntrophia multicosta* sp. nov.

Plate 5, figures 8-15

**Description.** Shell outline semioval, in some specimens inclining toward subquadrate; hinge line straight, usually equal to greatest transverse diameter and in a large specimen measuring 16mm. In such a specimen the length would measure 10.5mm and the distance from hinge line to apex of pedicle valve 8mm. Cardinal angles about 90°, not rounded, sides generally rather straight and parallel for a distance reaching nearly to the ends of the transverse axis; the anterior half of the shell uniformly rounded save for a distinct flattening of the anterior margin.

Pedicle valve with wide flat cardinal area the sides forming an angle of from 95° to 110° at the beak; beak slightly convex; the slope from beak to valve margin quite straight and nearly uniform in all directions. Delthyrium triangular, two thirds as wide at the hinge line as it is high, and reaching apex.

Brachial valve nearly flat with a very shallow sinus, not showing in all specimens.

Radiating costae are numerous and nearly uniform in size from near the point of their origin to their termination on the margin; as shell growth proceeds new costae are added by implantation. Shells about 2.5mm long have some 33 costae, shells of 5mm length have about 49, while adult shells have 81 and over. In figure 13, plate 5, if the two strong costae on either side of the midcosta are traced to their termination on the margin they will be found to have 11 costae between them instead of one. The new costae do not seem to have been added in regular order, for while the new group of five to the right have their middle one the longest, the middle one of the new five on the left is the shortest and youngest. The costae are crossed by fine raised striae, about .25mm apart. In the gerontic stage the additions to the shell margin of the brachial valve tend to add very markedly to its convexity.

The interior of the brachial valve shows a strong and prominent median ridge starting from the middle of the valve and widening