

From the above we see that it is only the specimens called by Hall "large" that have a sufficient number of plications to strictly come under the species according to his description. Large specimens both from Becraft mountain and Trilobite mountain may be placed in it but the great majority are comparatively small shells with an average of nine plications on each side of the sinus. Taking the large shell as the normal, the majority, both at Becraft and Trilobite mountains, represent immature development, for the large shells have passed through this stage as seen by taking younger stages on them.

In other respects the shells are very similar, they are quite strongly incurved and gibbous at the umbo, the cardinal area is high, concave and usually equals the greatest width of the shell. The sinus of the smaller shells is not as angular as in the larger ones and in this respect approaches *S. cyclopterus*. The similarity to this latter species is more clearly shown in the young. The pedicle valve of *S. concinnus*, measuring 6mm by 8mm, has five plications and a *S. cyclopterus*, 5mm by 9mm has four, but in the latter species the plications are almost as pronounced as in the mature shell, while on the former they are exceedingly faint. The convexity of the two shells is very similar. Notwithstanding the close resemblance of these two species, they can hardly be very closely related since the characteristic plications of each persist from the youngest stages.

S. murchisoni Castelnau

Hall¹ speaks of the great similarity between *S. murchisoni* and *S. cyclopterus* and says that the former may be perhaps only a variety of the latter "which in the sandstone attains a larger size than in the shaly limestone below." The young of *S. cyclopterus* is very like that of *S. murchisoni*, many of the former having angular cardinal extremities similar to the latter. The height and concavity of the cardinal area as well as the number of plications and the surface markings are also alike. But there seems to be a slight but constant, greater incurving of the pedicle valve in the former. Of course with the mature shell there

¹Pal. N. Y. 3:430.