

between the Pourtalesiæ proper and such genera as *Paleopneustes* and *Palæotropus*, in which the actinostome is more or less labiate, and in which the structure of the actinal surface resembles more closely that of the normal Spatangoids. *Calymne* has, like the Pourtalesiæ, simple ambulacral pores, a disconnected apical system retaining something also of its cylindrical shape; two of the ovaries in the trivium, the others not developed, the bivium well separated from it by intercalated interambulacral plates. It has a simple actinostome, and large ambulacral plates; the proportion between the size of the ambulacral and interambulacral plates is similar to that in *Cystechinus*. It has, unlike the Pourtalesiæ proper, an elliptical outline and a fasciole across the anterior edge of the test. The median interambulacral area of the actinal side forms a narrow rounded keel extending from the edge of the actinostome to the ambitus, but like *Cystechinus* a nearly flat actinal surface with a low rounded keel extending almost from the actinostome to the posterior edge of the test, where it runs into a small but well-defined subanal beak, the only remnant in this genus of the anal snout of the Pourtalesiæ proper. The presence of so well-defined a lateral fasciole in this genus is interesting, as otherwise the genus is eminently an old type, but combining with its ancient characteristics such as the uniform size of the coronal plates of the test on the abactinal surface, a disconnected apical system, a simple actinostome with the remarkably simple arrangement of the plates immediately surrounding it and a short elliptical outline, the more modern features of a distinct subanal beak, a lateral fasciole, an anal system high upon the posterior extremity of the test close to the abactinal surface, and an elongated actinal plastron with a well-defined lateral fasciole.

When seen in profile this genus retains of the Pourtalesiæ the cylindrical shape and the actinal surface slightly convex from the presence of a keel; and by the position and structure of its anal system it unites the Spatangina and the Pourtalesiæ by showing the connection of *Calymne* to *Urechinus*, *Cystechinus*, *Echinocrepis*, and *Pourtalesia* proper, in addition to such features as the presence of a lateral fasciole to which I have already alluded. The general outlines of the test recall on the one side the Ananchytidæ and on the other the Dysasteridæ, and even some of the Clypeastroids, and resemble to a very striking degree those of the test of young specimens of *Cystechinus*.

**Calymne relicta* (Pls. XXXIV., XXXIX. figs. 24-26; Pl. XL. figs. 63-65; Pl. XLIII. fig. 24; Pl. XLIV. figs. 47, 48).

Calymne relicta, Wy. Thomson, 1877, Voy. Chall., Atlantic, vol. i. p. 397, figs. 102, 103.

Only fragments of this species were preserved, from which, in connection with the drawings given by Thomson in the Challenger narrative, the figures on Plate XXXIV. have been reconstructed. I copy Thomson's description of this species (Voyage of the Challenger, Atlantic, vol. i. p. 397). "The test is 30 mm. in length and 20 mm. in height, and very elegant and symmetrical in form; the outline is oval, slightly truncated posteriorly,