

Remarks.—The young forms of this species appear to me to agree so closely with the brief descriptions of *Luidia elegans*, Perrier, and *Luidia variegata*, Perrier, that after a careful study of the present series of specimens, I have felt the strongest temptation to consider that the two species just named were growth-stages of *Luidia alternata*. As I have not had an opportunity of seeing the types of either *Luidia elegans* or *Luidia variegata*, I refrain from expressing a definite opinion upon the subject. *Luidia elegans* is cited by Verrill¹ as a distinct species in the results of the "Albatross" dredgings, and this circumstance would naturally lead to the inference that the forms are perhaps better distinguished than I have supposed. At any rate the figures assigned to *Luidia elegans* in that work bear no resemblance to the species I have studied. On the other hand, *Luidia variegata* has been placed as a synonym of *Luidia alternata* by Ludwig,² in his account of the Asteroidea collected by Professor Ed. Van Beneden on the coast of Brazil.

I can confirm Ludwig's statement that pedicellariæ are not present in the young stages of *Luidia alternata*, from specimens collected by the Challenger.

3. *Luidia limbata*, n. sp. (Pl. XLIV. figs. 3 and 4; Pl. XLV. figs. 7 and 8).

Rays five. $R = 110$ mm., $r = 15$ mm. $R = 7.3 r$. Breadth of a ray near the base, at the broadest part, 18 mm.

Rays moderately long, very flat, and rather broad, tapering slowly from the base to the extremity, which is not very attenuate; frequently with a slight lateral constriction at the base. Abactinal and actinal surfaces subplane, bevelled towards the margin, which is subangular, slightly rounded.

The paxillæ of the abactinal area are large, compact, closely fitting, and square, except along the median radial line and the centre of the disk. The larger paxillæ bear on the tabulum about a dozen, or even more, low, hemispherical granules, subequal, comparatively large and well-spaced, and round the margin a series of very small, short, cilia-like spinelets, about two dozen or more in number, the series often appearing to be double. There are three to four regular longitudinal series of square paxillæ at the sides of the ray. In the intermediate area along the median radial line the paxillæ are smaller, and have a tendency (more marked in some examples than others) to become rounded or irregular in form.

The paxillæ, which represent the aborted supero-marginal plates, are remarkable for bearing on their tabulum a broad, low, valvular pedicellaria resembling the form frequently found in *Pentagonasteridæ*. These pedicellariæ are most numerous in the neighbourhood of the interbrachial arcs, and may there extend upon the adjacent one or two series of longitudinal paxillæ. Along the ray, however, they are generally confined to the outermost or "supero-marginal" series. Sometimes on the inner part of the ray there are two pedicel-

¹ *Report of Commis. Fish and Fisheries for 1883*, Washington, 1885, p. 543, pl. xiii figs. 39, 39a.

² *Mém. Cour. Acad. roy. Belgique*, 1882, t. xlv. p. 9.