

flattened by pressure. In general, however, the fossils are in better condition than those studied by Billings, and in many cases species described by him from imperfect material are represented by specimens far more perfect than were at his disposal, affording new and important information upon their morphology and relations.

Direct comparison with the types of Billings' species was found to be highly desirable in the study of this material, and upon being informed of this Mr. R. W. Brock, with a liberality for which he has my sincere thanks, promptly placed the whole of the original collection in the Museum at Ottawa at my disposal for examination, and authorized such portions of it as I desired for more detailed study to be shipped to me at Burlington. I am much indebted to Mr. Lawrence M. Lambe, Paleontologist, Geological Survey, for his careful and courteous attention to the packing and shipping of these valuable specimens.

The following list will show the character and extent of this echinoderm fauna, sufficiently for comparison with that of other localities; and along with it I will give an account of some new and notable occurrences brought to light by this study.

CRINOIDEA.

Order CAMERATA.—

RETEOCRINUS (Billings).

Several specimens belonging to this genus, described by Billings from fragmentary material, and of which he said 'none of the specimens collected are perfect, and the characters of the species, therefore have not been fully ascertained,' fully confirm the interpretation of the genus given by Wachsmuth and Springer in their 'Remarks on *Glyptocrinus* and *Reteocrinus*' (Am. Jour. Sci. xxv, p. 256), to the effect that instead of having, as Billings supposed, 'no perfectly formed plates,' and its cup consisting of 'a reticulated skeleton, composed of rudimentary plates, etc.,' the plates of the base and radial series are perfectly formed, connected with each other by distant sutures; the interbrachial areas only being occupied by a large number of small plates, without definite arrangement. In the original description by Billings the column of the type species is stated to be round. The revised description by Wachsmuth and Springer (N. A. Crinoidea Camerata, p. 178) gives the column as 'obscurely pentagonal.' This was a mistake in the text, and does not agree with our own