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ON THE NATURE OF THE SO-CALLED "COVERING PLATES" IN PROTOPALÆASTER NARRAWAYI.

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In the autumn of 1910, Mr. J. E. Narraway, of Ottawa, found a small starfish in the Black River limestone at City View, a short distance west of the Central Experimental Farm at Ottawa. On examining the specimen on his return from the field he found that the central groove in two of the rays was roofed over, for a short distance, by flat, alternating plates which met on the median line and formed a tight, tent-like covering over the groove. Furthermore, these plates were borne by two rows of small plates just inside the marginal series, and each plate was provided with a cup-like pit into which the proximal end of a covering plate fitted. The specimen had every appearance of being exposed from the actinal side, and assuming that such was the case, the plates were interpreted as being homologous with the covering pieces over the ambulacral grooves of cystids and crinoids. Mr. Narraway at once drew the writer's attention to the specimen, and I fully agreed with him as to its nature and importance. It was next shown to Professor Hudson, whose work on Ordovician echinoderms is well known. He concurred in our views of the specimen, which he studied with great care, and he finally described and figured the species in *THE OTTAWA NATURALIST* for May and July, 1912. Before the publication of his paper, photographs and descriptions had been seen by three or four paleontologists and students of recent echinoderms, and, it must be confessed, all dissented from our view as to the nature of the "covering pieces."

Recently, in searching the collection of starfish in the Museum of Comparative Zoology, Cambridge, Mass., the writer came upon what seemed to be a second specimen showing the "covering plates." (See plate VI, fig. 1). This specimen has three imperfect arms, all of which show the groove covered by alternating plates which are obtusely pointed at their distal ends, where they fit together closely. Some of the plates have been removed from portions of the arms, and it is then seen that the