

"covering plates" are supported by small plates with a pit on top, just as in *Protopalæaster narrawayi*. Outside the row of plates bearing the "covering pieces" is a row of small spine-bearing marginals, so that, though the plates are of very different size, there is a complete analogy in arm structure between this specimen and the one found by Mr. Narraway. If the specimen had shown no more than this, it would have been a valuable support to our interpretation of Mr. Narraway's specimen, but on examining it more closely, small patches of top-shaped plates were discovered. These patches are so arranged as to suggest that they once formed part of a covering over the structures now exposed on the arm. On comparing these plates with those on the abactinal side of *Urasterella pulchella*, (Billings), it was found that they were identical with them. Furthermore, the arms of the specimen are of the same shape as those of the *Urasterella*, and that species has small, spine-bearing marginals. The specimen figured is from the Walcott-Rust quarry at Trenton Falls, N.Y., and is associated with specimens of *Urasterella pulchella*. This specimen shows that, in this case at least, the covering pieces are really ambulacral ossicles, exposed by the removal of most of the abactinal skeleton. Dr. H. L. Clark, to whom I am indebted for many helpful suggestions in regard to this matter, remarks that such a condition of preservation might be expected to be very common, as the actinal side of a starfish, being buried in the mud, might easily be preserved, even though the abactinal side, not so protected, disintegrated. The chief reason that Narraway, Hudson and myself had for thinking that *Protopalæaster narrawayi* was exposed from the actinal side was that the covering pieces did not look like ambulacral plates, and that they made an apparently tight and imperforate roof over the groove. These plates, instead of being narrow and grooved at the sides for the protrusion of the tube feet, were wide, thin, and fitted closely together at the sides and ends. But the same condition obtains in the specimen here illustrated, and our argument must fall. A fact in regard to Mr. Narraway's specimen to which we did not attach enough importance is the way in which the marginal plates are truncated on the side now exposed to view. The lower faces are rounded and granulated, and one would expect the lower (actinal) faces to be rounded also. (The faces actually presented, however, are flat and smooth, as would be expected if they served as a foundation for the plates of the abactinal side.) The specimen of *Protopalæaster* also shows two plates resting on the disk for which a place can not be found in the structure of the specimen. (See figure 2 of the plate.) Professor