

It is characteristic of these deposits that one of the arms is always more developed and more richly furnished with spines and holes; and this arm is directed obliquely outwards. I do not know any species of *Cucumaria* provided with deposits like those in this abyssal form. The specimens obtained at Station 156 differ by the absence of deposits in the body-wall itself. These specimens, however, seem to be macerated and their deposits dissolved by some impurity in the alcohol. Possibly they are more nearly related to the variety *grandis*.

Cucumaria abyssorum, var. *grandis*, nov. (Pl. V. fig. 1).

Habitat.—Station 298, November 17, 1875; lat. $34^{\circ} 7' S.$, long. $73^{\circ} 56' W.$; depth, 2225 fathoms; bottom temperature, $35^{\circ} \cdot 6$; blue mud; two specimens. Station 299, December 14, 1875; lat. $33^{\circ} 31' S.$, long. $74^{\circ} 43' W.$; depth, 2160 fathoms; bottom temperature, $35^{\circ} \cdot 2$; blue mud; eight individuals. Station 295, November 5, 1875; lat. $38^{\circ} 7' S.$, long. $94^{\circ} 4' W.$; depth, 1500 fathoms; bottom temperature, $35^{\circ} \cdot 3$; Globigerina ooze; a single specimen.

Considering the more highly developed state of the internal and external organs of these animals, it may possibly be most conformable to the truth to consider them as types of the species itself, but judging, on the contrary, from the deposits, they may properly be regarded as transitional forms, uniting the species with its variety, *hyalina*. They attain a considerable size, as much as 100 mm. or more, and differ mainly in the scarcity of deposits, which in most of the specimens seem to be confined only to the pedicels and tentacles. Only in one smaller individual, about 45 mm. long, scattered deposits are present in the body-wall itself, but they do not seem to attain a very high degree of development, excepting in the caudal portion of the body, where they are well developed. A closer examination will show that some of the deposits (Pl. V. fig. 1) resemble those known in *Cucumaria abyssorum*, but that others, especially those in the caudal portion, are of the same shape as those characteristic of *Cucumaria abyssorum*, var. *hyalina*; the more common forms, however, seem to be irregular \times -shaped bodies with short ill-developed arms, and even simple rods with one end spinous and directed outwards. Even transitional forms between the rods and four-armed bodies are not rare. As a rule, it may be observed that the arms of the deposits are shorter and the deposits themselves more irregular than is the case in *Cucumaria abyssorum* and its variety *hyalina*. The deposits in the pedicels closely resemble those in the typical form itself. The rest of the individuals obtained from Station 299 are devoid of deposits in the body-wall; only in the neighbourhood of the pedicels and in the pedicels themselves have I found deposits of the same characteristic shape as those in the smaller specimen above described. It may be kept in mind that the larger individuals are devoid of deposits, while the smaller have such, a peculiarity which