

chocolate brown, the colour extending on the actinal surface up to the median longitudinal series of spines borne on the infero-marginal plates.

*Young Phase.*—In the young form of this species the rays are not so strikingly angular at the margin as in the adult. In a small example in which R measures 10 mm., the armature of the adambulacral plates appears to form only a single series. The two obliquely placed spines on the infero-marginal plates which form the conspicuous intermediate series on the actinal surface of the adult, are at this stage quite at the margin, and the spines appear large and robust in relation to the size of the starfish. The supero-marginal plates bear each a single spinelet. The spinulation of the abactinal surface already shows the character of the adult.

In a rather larger stage, when R measures 15 mm., a second spinelet is beginning to be developed on alternate adambulacral plates, but it is as yet only very small, and the inner spinelet on these plates is more inclined over the furrow than the single spinelet on the alternate plates, which causes the appearance of two alternating series of spinelets. The infero-marginal spines have not yet left their marginal position.

*Locality.*—Stations 233 and 233A. Off Kobé and Awadji Sima, Japan. Depth 8 to 50 fathoms. Mud and sand.

*Remarks.*—This species is a near ally of *Asterias amurensis*; the difference, however, in the armature of the supero-marginal plates, the character of the adambulacral armature, and the prominence of the abactinal spinelets appear to me to justify their being regarded as distinct species.

#### 8. *Asterias amurensis*, Lütken.

*Asterias amurensis*, Lütken, 1876, Videnskab. Medd. naturh. Foren. i Kjøbenhavn, p. 296.

*Locality.*—Yokohama, Japan. Depth 5 to 25 fathoms.

*Remarks.*—I have referred several specimens collected at Yokohama to Lütken's species, although they do not seem to present some of the characters mentioned in his description so strongly marked as in the types which I had the opportunity of examining in Copenhagen, and in other examples which I have seen elsewhere. They appear to me to hold an intermediate position in some respects between the typical form of *Asterias amurensis* and *Asterias versicolor*, and I am inclined to think that they may represent a locational variety. The species, however, is one which shows considerable variation, and I do not feel that the material at my disposal is sufficient to enable me to do more at present than place on record the opinions above expressed.

It is probable that some of the starfishes from Japan which have been referred to *Asterias rubens* belong either to *Asterias amurensis* or *Asterias versicolor*; and others are examples of the species described above (p. 570) under the name of *Asterias torquata*.