There is a good deal of difference in the shape and form of the blade bone, probably dependent on age. The blade bone of the smaller specimen is subtriangular, being about one 10th part wider than it is high from the front of the condyle to the upper edge; the acromion and coracoid processes are directed forwards, and only slightly bent outwards; the acromion is much broader, and rounded at the end. In the larger specimen the blade bone is much wider than high; that is to say, it is more than once and a half as wide as high; the coracoid and acromion processes are much elongated and strongly bent upwards. This difference may be sexual; for the young bone does not appear to be like a portion only of the larger one: and if there is a change of form, the whole bone changes as it grows; that is to say, the angular prominence on the front edge is lower down the front margin in the larger one.

In all these specimens the bones of the face are shorter than the distance from their edge to the crest round the nostrils; and in this respect it differs from De Blainville's figure of *Physeter breviceps*, which is said to have come from the Cape of Good Hope; but I have never had the opportunity of examining the skull, and therefore cannot vouch for the correctness of the figure.

A partial Comparison of the Conchology of Portions of the Atlantic and Pacific Coasts of North America. By Robert E. C. Stearns.

A striking feature in the conchological fauna of that part of the Pacific coast included in the Californian-and-Vancouver zoological province, when compared with the molluscan fauna of the Atlantic coast from the arctic seas to Georgia, is the preponderance in the former of those forms of molluscan life which are embraced in the order of Scutibranchiata*.

The Scutibranchiate Gasteropods, or shield-gilled crawlers, comprise a great number of mollusks, all of which are marine, and which inhabit the sea-shore, principally the littoral and laminarian zones, subsisting on marine vegetation; thus we find the beautiful group of *Calliostoma* upon the larger algæ, as well as the unique *Trochiscus* (*T. Sowerbyi*), and *Chlorostoma* crawling over the sedimentary rocks, upon which grows the green *Cladophora* or some allied vegetable form upon which it feeds, and which also is the favourite food of several species of limpets.

The order of Scutibranchiata, according to Messrs. Adams, includes:—the family of *Neritidæ* (none of which are found in the Californian and Oregonian province, though they begin to appear on the coast of Lower California); the *Trochidæ*, which is largely represented by the following genera—*Eutropia* one species, *Leptothyra* three species, *Pachypoma* and *Pomaulax* one species each, *Liotia* one (perhaps two) species, *Thalotia* and *Trochiscus* one species each, *Calliostoma*, *Chlorostoma*, *Omphalius*, *Margarita*, and *Gibbula*, each by several species; the family of *Haliotidæ*, which is represented by several species, all of large size, widely distributed and exceedingly numerous in individuals—*Fissurella*, including *Lucapina*, *Glyphis*,

* *Vide* Adams, 'Genera of Recent Mollusca,' vol. i. p. 376.

and *Clypidella*, also *Puncturella* and *Emarginula*; *Dentaliadæ* by two or more species; *Tecturidæ* by several species of *Acmæa*, also by *Scurra*, *Gadinia* by one and *Nacella* by six or more species; *Chitonidæ* by numerous species and great numbers of individuals.

It may be that some of the groups included by the Messrs. Adams in the order referred to, as our knowledge increases, will require to be separated or removed; but so far as the purposes of comparison as made herein are concerned, the result will not be materially impaired.

The total number of marine molluscan species and well-marked varieties within the Californian and Oregonian province, so far as known and determined, is not far from 630, of which about 200 are Bivalves; and of the remaining 430, 123 are included within the Scutibranchs; of this latter number about 40 belong to the Chitonidæ, and the same number to the Trochidæ.

Of the 247 marine gasteropods enumerated by the late Dr. Stimpson, in the Smithsonian-Institution Check-list, as found from the arctic seas to Georgia, 32 only, or less than one eighth, come within the order mentioned; of this comparatively small number, seven are *Chitons* and fourteen belong to the *Trochidæ*, while *Haliotis** is without a representative: the *Trochidæ* within this province are not characterized by such marked or unique characters as distinguish their relatives on the west coast.

Some revision may be required hereafter in the number of Scutibranchiate species credited to the west-coast province, as forms now catalogued as distinct may, in some instances, be united; but, on the other hand, it is not unlikely that new forms undoubtedly distinct will be detected when the coast is more thoroughly explored.—*Proceedings of the California Academy of Sciences*, October 7, 1872.

The Megalops Stage of Ocypoda. By S. I. Smith.

The *Monolepis inermis*, long ago described by Say†, and partially figured by Dana‡, is undoubtedly a stage in the development of *Ocypoda arenaria*. The large size and peculiar structure of this megalops render it one of the most interesting forms of the group of larvæ to which it belongs. It is closely allied to the *Monolepis orientalis*, Dana, from the Sooloo Sea, figured in detail on plate 31 of the Crustacea of the Wilkes's Exploring Expedition. The carapax is very convex above and narrowed toward the front. The front is deflexed and the extremity tricuspidate, the median tooth being long and narrowly triangular, while the lateral teeth are small and obtuse. The sides are high and impressed, so as to receive the three anterior pairs of ambulatory legs. The third pair of ambulatory legs are closely appressed along the upper edge of the carapax, and extend forward over the eyes, the dactyli being curved down over the eyes and along each side of the front. The posterior legs are small and weak, and

* A solitary specimen of *Haliotis*, of small size, was obtained through dredging in the Gulf-stream, four or five years ago, by Count L. F. Pourtales, of the U. S. Coast Survey, but *south* of Georgia.

† Journ. Acad. Nat. Sci. Philad. 1817, vol. i. p. 157.

‡ Crustacea of Wilkes's Expl. Exped. pl. 31. fig. 6.