

Oregonia gracilis Dana.

Oregonia gracilis Dana, United States Exploring Expedition, Crust., p. 106, pl. 3, fig. 2, 1852 (♂).

Oregonia hirta Dana, *ibid.*, p. 107, pl. 3, fig. 3, 1852 (♀).

? *Oregonia longimana* Bate, Proceedings Zoological Society London, 1864, p. 663, 1865; in J. K. Lord, Naturalist in Vancouver Island, *ibid.*, p. 267, 1866.

Virago Sound, Q.C.I., 15 to 8 fath., also Vancouver Island.

The series of specimens is sufficient to show that the two forms described by Dana are sexual and belong to one species, the *gracilis* being based on the adult male and the *hirta* on the two forms of the female. In the characters of the rostral spines and the rest of the carapax, all the larger males before me agree with the description and figures of *gracilis*, while in the same characters the females agree with *hirta*, and the smaller males are more or less intermediate between the two forms. But among the females themselves there are two forms: all the adult and fertile specimens having the abdomen very broad and nearly orbicular, while in other specimens (most of them small, but some of them as large as the smaller of those with orbicular abdomens) the abdomen is much narrower and elliptical, as shown in Dana's fig. 3 b. The smaller of these latter females are, perhaps, merely immature individuals, but the larger are apparently truly dimorphic, sterile females, such as are found in many genera of Brachyura, and as, in most similar cases, the larger of the sterile individuals show a considerable approach to the male in the form of the carapax, etc.

In the largest male before me the menes of the chelipeds very nearly or quite to the tips of the rostrum, and, in this, agrees with Bate's *O. longimana*, though the chelipeds are not twice as long as the carapax, if the rostrum is, as it is usually, included in the length. Bate makes no allusion to the size of his specimen, and describes it so imperfectly that it is not easy to determine its affinities with certainty.*

* It may be well to remark here that there had apparently been an admixture of specimens from some region or regions far south of Vancouver Island, in the collection which served as the basis of Bate's chapter on "Vancouver Island Crabs" in the work above referred to, and that this fact also adds to the difficulty of determining the species there described. Bate himself remarked upon the mingling of northern and southern forms in the collection, but he does not seem to have suspected any mistake in regard to the localities from which the specimens came. I am aware that many tropical and subtropical marine species extend far north along the Pacific American coast, but it is scarcely conceivable that such an assemblage of species as Bate's list indicates should exist in any one faunal region. The list contains not only tropical Pacific American species but also Central and South Pacific, and even tropical Atlantic species. Some of the incongruities may, however, be due to wrong identifications, as in the case of the *Chloranthes* about to be mentioned; but, making all reasonably supposable allowance for mistakes of this kind, there is still sufficient evidence of a mixture of specimens from different faunas, to throw doubt upon the authenticity of the supposed habitats of many of the new species in Mr. Lord's collection. The existence in the region of Vancouver Island of any of the following species (all of which are enumerated among the Decapoda in Bate's list) is, at least, very doubtful:—*Eriphia gonagra*, "*Panopeus*" *crenatus*, *Xantho dispar*, *Ocypode* *Orenii*, *Grapsus leiclus*, *Hemigrapsus* "*edentatus*", *Gelasimus annulipes*, *Porcellana Edwardsii*, *Empagurus perialis*,