

*Tauria*, Dana, distinct alike from *Hyperia*, with which Spence Bate united it, and from *Metoecus*, with which Boeck made it synonymous. *Daira*, Milne-Edwards, is altered by Dana, on page 1596, to *Dairilia*, on the ground that *Daira* was preoccupied. This new form of the name is incorrectly given as *Dairinia* in the British Museum Catalogue, owing probably to the misprint in Dana's own work, on page 1442. It is given correctly on pages 1519, and 1545 and 1604; Bovallius, 1885, says, "I am quite sure that Dana was wrong in introducing the animals described by him into the genus *Daira* of Milne-Edwards;" he is of opinion that *Paraphronima*, Claus, comes nearest to, if it be not identical with, the *Daira* of Milne-Edwards. *Synopia*, Dana, the single genus of his subfamily Synopinæ, must be transferred to the Gammaridea, as Claus has already pointed out. In some of the species of this genus, besides the confluent principal eyes to which the generic name refers, there are two small subsidiary groups of ocelli; hence the expression "pigmentum oculorum unicum" in the generic character is unsuitable.

For the readjustment of the other two families of the Hyperidea see Notes on Claus, 1879.

In treating of the Orchestidæ, which he takes as the type of the Amphipoda (p. 849), Dana describes in detail the head and its (theoretical) segments. He considers that the sides and top of the head correspond to the first antennary and ophthalmic annuli, one or both; that the epistome and lateral plates adjoining it represent the sternal and episternal pieces of the second antennary annulus [against which view see Spence Bate, British Assoc. Report, 1885, p. 26]; that the labrum and a lateral piece above the mandible represent the sternal and episternal pieces of the mandibular annulus; that the back piece of the lower part of the head which supports the maxillipeds is the proper episternal of the maxilliped annulus, while the first and second maxillary annuli are not represented, unless combined with the maxilliped segment at the back of the head.

Pages 1395-1413 contain an interesting essay on the classification of Crustacea. "The fundamental idea," the author says, "which we shall find at the basis of the various distinctions of structure among the species is, the *higher centralization of the superior grades, and the less concentrated central forces of the inferior.*" "This centralization is literally a *cephalization* of the forces. In the higher groups, the larger part of the whole structure is centred in the head, and contributes to head functions, that is, the functions of the senses and those of the mouth. As we descend, the head loses one part after another, and with every loss of this kind there is a step down in rank. This centralization may be looked for in the nervous cords; but the facts are less intelligibly studied there than in the members, the production and position of which measure the condition of the forces." At the close he criticises the names Podophthalmia and Edriophthalmia, on the ground that though all stalk-eyed Crustacea may belong to the Podophthalmia, there are many sessile-eyed species which cannot be grouped with the Edriophthalmia. In the classification which follows, pages 1414-1415, he renames his Subclass II., Tetradecapoda, which he thus defines:—"Annuli cephalothoracis cephalici numero *septem*. Oculi sessiles. Appendices branchiales simplicissimæ, sive thoracicæ sive abdominales. Cephalothorax multi-annulatus, carapace carens, pedibus seriatis instructus. Abdomen appendicibus seriatis instructum, raro obsolescens." The epithet *simplicissimæ* applied to the branchial appendages must be qualified in regard to some species of Amphipoda.

The work concludes with an essay on the Geographical Distribution of Crustacea, pages 1451-1592, in which many interesting conclusions are deduced from the facts at Dana's command. When he comes to speak (p. 1581) of the "origin of the geographical distribution of Crustacea," he says, for the origin of the existing distribution of species "two great causes are admitted by all, and the important question is, how far the influence of each extended. The first, is *original local creations*; the second, *migration.*" The form of his answer to this question would probably have been different had his book been