

lephs, by the unexpected views under which he presented the facts recorded by his predecessors, so much so that a new era may be dated from the publication of his little work, for the history of the Acalephs not only, but also for the invertebrate animals in general. The whole aim of Steenstrup's investigations is fully expressed in the title of his work, "On the alternation of generations."¹ He expresses himself upon that point very clearly and in very few words, in his preface: "The substance of this paper is the fundamental idea expressed by alternation of generations. It is a remarkable, and, thus far, unexplained phenomenon of nature, that an animal brings forth a brood neither similar, nor growing to be similar, to the parent, but differing from it, and producing by itself another brood, that returns to the form and relations of the mother animal, in such a manner that a mother animal does not rear the like of itself, but reappears only in its descendants of the second or third or a following generation; and this appears always, in different animals, in a definite generation, and with definite intermediate generations."

Next to Sars and Steenstrup, Sir John Dalyell has been most successful in tracing the phenomena here alluded to. This author, whom Ed. Forbes, with his quick appreciation of every kind of merit in others, justly calls the Spallanzani of Scotland, has done more for the elucidation of the early history of the Medusæ than any other writer, although, from want of method in his descriptions and owing to his disregard of the modern systematic forms of presenting such subjects, his observations are only intelligible upon very careful perusal, and not available for a connected study of the gradual growth and successive phases of their development. For instance, it has not occurred to Sir John Dalyell, that what he calls "Hydratuba" may be the offspring of several distinct genera of Medusæ, and so he con-

¹ STEENSTRUP (JOH. JAPETUS SM.), Ueber den Generationswechsel, oder die Fortpflanzung und Entwicklung durch abwechselnde Generationen, übersetzt von C. H. Lorenzen, Copenhagen, 1842, 8vo. fig. English translation by George Busk, published by the Ray Society: On the Alternation of Generations, London, 1845, 8vo. fig. Although the question of alternate generations is for the first time distinctly raised by Steenstrup, and presented by him as a phenomenon occurring not only among Radiates, but also among Mollusks and Articulates, it would be doing injustice to Sars not to remember, that, as far as the Medusæ are concerned, he had already correctly appreciated the character of the development of *Aurelia aurita*, which he does not

consider as a simple metamorphosis of a larva, but as the metamorphosis of a new generation derived from the progeny of a Medusa. He goes even so far as to consider this mode of reproduction as a case parallel to that of *Salpa*, first observed by Chamisso, and to vindicate the accuracy of the investigations of the genial poet. Thus the groundwork upon which the theory of alternate generations could be reared is already laid out by Sars, when he says (Wiegmann's Archiv, 1841, vol. 1, p. 28), "It is, therefore, not the larva, or the individual hatched from the egg, that develops into a perfect Acaleph, but the brood arising from this larva by transverse division."