

working naturalists may have them in their hands at the earliest possible date; and to avoid as far as possible the multiplication of synonyms by the description of the same species simultaneously by different observers. That this overlapping must occur to some extent is inevitable. After our own earlier investigations in H.M. ships LIGHTNING and PORCUPINE, and those of Count Pourtalès in connection with the American Coast Survey, had demonstrated the existence of a varied and remarkable fauna at extreme depths, as well as the possibility of bringing the nature and distribution of that fauna within the range of human knowledge, the study of the biological conditions of the deep sea was rapidly and energetically extended. In most cases this question has been made a national one, the extent and cost of such explorations being beyond the ordinary limit of private enterprise, and the American, the Swedish, the German, the Austrian, the Italian, and the French Governments have already made valuable additions to our knowledge. One systematic series of investigations requires special notice; for several years Professor Alexander Agassiz has undertaken successive expeditions under the auspices of the United States Coast Survey, for the purpose of observing the conditions of the Caribbean Sea and the Gulf of Mexico. Results of these cruises of the highest interest are being published in quick succession, and, for reasons which will be explained hereafter, many of the species in different invertebrate groups procured by the Challenger are described by the specialists who have undertaken the preparation of Mr Agassiz's Reports. The extent of our collections makes the rapid publication of the descriptions of the larger groups, and the discussion of the general phenomena of distribution impossible, but the inconveniences arising from delay may be reduced to a minimum by the plan which we have adopted. Each Memoir will be paged separately, and a legend will be attached to each by which it can be referred to; for example (ZOOLOG. CHALL. EXP.—PART I.—1880). Each of the Zoological series of volumes, of which this is the first, will contain one or more Memoirs, and will be published with a provisional