large a number of individuals as possible in their natural circumstances, and to collect specimens for comparison. Of many species, I compared several hundred individuals in the most careful way. I examined with the microscope and measured in the most accurate manner the details of form of all the species. As the final result of these exhaustive and almost endless examinations and measurements it appeared that "good species," in the ordinary dogmatic sense of the systematists, have no existence at all among the Calcareous Sponges; that the most different forms are connected one with another by numberless gradational transition forms; and that all the different species of Calcareous Sponges are derived from a single exceedingly simple ancestral form, the Olynthus. A drawing of the Olynthus and its earliest stages of development (observe especially the highly important Gastrula) is given in the frontispiece of the present edition. Illustrations of the various structural details which establish the derivation of all Calcareous Sponges from the Olynthus, are given in the atlas of sixty plates which accompanies my monograph of the group. In the gastrula, moreover, is now also found the common ancestral form from which all the tribes of animals (the lowest group, that of the protozoa, alone being excepted) can without difficulty be derived. It is one of the most ancient and important ancestors of the human race!

If we take for the limitation of genus and species an average standard, derived from the actual practice of systematists, and apply this to the whole of the Calcareous Sponges at present known, we can distinguish about twenty-one genera, with one hundred and eleven species (as I have done in the second volume of the Monograph). I have, however, shown that we