

fossils, so that their presence apparently in abundance in the recent chalk-mud is a clear instance of the preservation of one of the old types hitherto supposed to be extinct. The same may be said of *Pourtalesia*, which must associate itself either with *Ananchytes* or with *Dysaster*, both of which are types of groups likewise supposed to have been lost. We thus find that, while no Echinoderm hitherto discovered in the deep water is specifically identical with any chalk form, not only does the abyssal fauna with its abundance of the Cidaridæ, Echinothuridæ, and irregular urchins, and the disproportionate numbers of the genera *Astropecten*, *Astrogonium*, and *Stellaster*, and their allies among starfishes, singularly resemble the chalk in general facies; but several genera approach chalk forms more closely than they do any hitherto known in a living state—approach them so closely as almost to force upon us the conviction that their relation is one of descent, accompanied by change of conditions and consequent modification, though not to any extreme degree.

As I have already stated, the whole of the mollusca from the deep water which had been previously described as fossils were known from tertiary and post-tertiary beds; with the very doubtful exception of our common *Terebratulina caput-serpentis*, which certainly approaches very closely *Terebratula striata* from the chalk.

It is not surprising that this should be the case. It is a marked character of the European Tertiaries that with the exception of some of the older beds in the south of Europe, all of them have been deposited in shallow water; so that the tertiary beds represent