country whose range of study has been similarly wide;[1] the doctrine that in each of the two great series of Porcellanea and Vitrea "everything passes into everything else" being one in which my friends W. K. Parker, T. Rupert Jones, and H. B. Brady entirely accord with me. Not the less, however, do we all recognise the fact that particular types of form *are* transmitted with marked genetic continuity, and the necessity, for the purposes of systematic arrangement and description, of marking these types by distinctive generic and specific names.

The genus *Orbitolites*, as shall presently appear, furnishes a peculiarly illustrative example of our mode of dealing with the subject. Four very well-marked types of form present themselves, round which the entire assemblage of specimens collected over a very wide geographical area, and from a great bathymetrical range, can be arranged without difficulty. Three of them belong to the littoral zone of warmer seas, where (as on the Fiji reef) they are generally found living together; and they differ in little else than *grade of development*, the smallest and simplest (*Orbitolites marginalis*) retaining the greatest resemblance to what may with almost certainty be regarded as the common ancestral type of *Orbitolites* and *Orbiculina;* the next (*Orbitolites duplex*) being a transitional form, in which the generalised ancestral characters very early give place to the distinctive peculiarity of the Orbitoline type, while an indication is given of advance towards the complexity of the highest and most specialised form; and the third (*Orbitolites complanata*) being the one which shows all the peculiarities of the type

[1] It is quite true that our conclusions on this point are not accepted by several Continental zoologists and palæontologists of repute. Prof. Möbius, for example, who a few years since brought home a gathering of *Foraminifera* from a reef off Mauritius, has expressed his dissent from it, on the ground that he sees no reason to believe that species are less sharply defined among *Foraminifera* than they are in other groups of the Animal Kingdom, and that it is a logical error to pass at once from the *individual* to the *genus*. Now I find in Prof. Möbius's own valuable monograph (Foraminifera von Mauritius) a very characteristic illustration of our position. The form he has described as *Orbitolites complanata* is so far from being a characteristic example of that species, that not only the central (or earlier) portion of the animal figured by him (pl. IV., wrongly lettered III., fig. 5), but the whole disk of which he gives a vertical section (pl. V. fig. 2), save its three outer annuli, is formed upon the plan characteristic of my *Orbitolites duplex*, his specimen being a young example of one of the *transitional* forms above adverted to. Now if Prof. Möbius should reply that the existence of such forms only shows that our conception of Foraminiferal species should be enlarged, and that the type I have here distinguished as *Orbitolites duplex* should be merged in *Orbitolites complanata*, I have simply to reply that as the two types are well and clearly differentiated in the hundreds of specimens of each which have passed under my review, and as *Orbitolites duplex* is much more nearly allied in the "simplicity" of its structure to *Orbitolites marginalis* than it is to the "complex" *Orbitolites complanata*, the utmost confusion would be the result of such an enlargement of our conception of the latter, as would be necessary to enable it to include the former. If Prof. Möbius will attentively study Part III. of my Researches on the Foraminifera (*Phil. Trans.*, 1859), he will find that, on the logical principle he advocates, our conception of his *Peneroplis pertusus* must be enlarged to include not only all the species of the genus *Peneroplis*, but also those of the genera *Dendritina* and *Spirolina;* for my series of forms of these types, collected from a very wide geographical area, and under very diversified conditions of climate and sea-depth, shows such a *gradational* passage from one type to another, that it is impossible to break up the assemblage into even *primary* groups—much less into *secondary*—that could be limited by precise definitions. I may add that before committing myself to the publication of an opinion which was at that time opposed to the doctrine taught by all the highest authorities in Systematic Zoology, I had the advantage of submitting it to the criticism of M. Deshayes, one of the ablest Conchologists then living; who, after an attentive examination of the series which I placed before him, avowed his inability to draw a definite line of demarcation through any part of it. And yet to abolish *Peneroplis*, *Dendritina*, and *Spirolina* as "generic types" would be out of the question.