

DISCUSSIONS.

ARE CORRECTIONS TO THE ORIGINAL SPELLING OF GENERIC NAMES ADVANTAGEOUS?

A VERY important work on the nomenclature of Paleozoic corals has recently appeared in England.¹ The following constitutes a brief review of the work with a discussion of its authors' action in correcting the original orthography of many of the generic names that are treated in it.

Any thoroughgoing study of a group of fossils must have as a preliminary foundation an exhaustive study into the work of earlier students. The earlier work may be said to have three aspects: first, the recording and demonstration of observed phenomena, second, the interpretation and classification of those phenomena, and, lastly, a nomenclature devised to express the phenomena and the interpretations put upon them. The names stand in our writings and in our minds as symbols of the phenomena, together with their many and varied implications and relationships to other phenomena. The present work deals not with phenomena nor with interpretations but with nomenclature, and to that division of nomenclature that applies to systematic units: more precisely it deals with the names of genera, of all genera to which Paleozoic corals have ever been referred. Indeed, the title might better have referred to generic *names* rather than to *genera* for genera as such are given almost no consideration. That will come later in other volumes not specifically announced, but definitely implied not only by the title but by an "Introduction" that discusses matters that are not at all pertinent to the strictly nomenclatural treatment that constitutes the present volume. The curious fact is that from a practical viewpoint one begins best the study of a group with a thoroughgoing survey of the generic *names* already in the literature. One first tries to discover all the names and, still working only with words, he tries to discover what species is actually the valid genotype of each name. This, with a very complete bibliography and a thorough documentation, is essentially what Lang, Smith and Thomas have done for the Paleozoic corals in this work.

It must not be supposed because the present work deals principally with names that it is unimportant. Indeed, it is of the highest importance as the first comprehensive step toward the illumination of that dark chaos that is the literature on Paleozoic corals.

In the words of Doctor Lang's introduction—"any work dealing with Palaeozoic corals must take account of every generic name that

¹ Lang, William Dickson; Smith, Stanley; and Thomas, Dighton Henry: *Index of Palaeozoic coral genera*. British Museum (Natural History), London. 1940. Price 15 shillings.

has been used to include any Palaeozoic coral species. The interpretation of a genus is absolutely conditioned by the genotype species; and it is the duty, in many instances the laborious duty, of the investigator to decide which of several genosyntypes is to be considered the genolectotype, to elucidate the genotype, and to determine the validity, or otherwise, and the status of each genus.

"Having established, as we have supposed, a satisfactory phylogenetic classification, the systematist must next apply a nomenclature, which must not only be logical but also legal;" . . . "it is the generic names that must first be determined, and for this it is necessary to have a list of all the genera of Palaeozoic corals which have hitherto been published, together with their genotypes, whether already designated, or here first determined. Accordingly this volume contains such a list: it is the nomenclatorial foundation of all that follows."² I may add not only that it is a foundation for all that follows, but that it is a foundation which will be invaluable to all others who are working or contemplate working with Paleozoic corals. Should no other part of the great work undertaken by the authors reach publication, the present part is still a contribution of very high value and great utility.

The authors profess to have made an effort to adhere to the International Rules of Zoological Nomenclature in carrying out their work, not at all an easy task owing to the well known ambiguity that characterizes the Rules at many points. This effort is highly to be commended for we can never arrive at any uniformity of nomenclature unless some stable guiding principles are followed; and the Rules provide the only universally accepted set of such principles applicable. However, in one important point, they have chosen to disregard the clear provision of Article 19 of the Rules, which provides that "The original orthography of a name is to be preserved unless an error of transcription, a *lapsus calami*, or a typographical error is evident." They have introduced numerous emendations of names not on the ground of the purely mechanical errors covered by the provisions of the Rules, but on the ground that "the author's original orthography is not in accordance with its etymological derivation, or is at variance with the transliteration of Greek names given in the International Rules of Zoological Nomenclature."

The International Rules permit emendations in the orthography of names only in cases where purely mechanical errors are evident in the original publication of the name itself (Article 19 and Opinion 26). Several Recommendations and Appendix F tell us how generic names should be formed and how Greek letters should be transliterated into Latin, but these are not themselves Rules. They are

² The work under review, p. 8.

recommendations or counsel as to what procedure one should follow in forming names. In their very nature as recommendations they look to the future, not to the past. They should be followed by any careful worker, but they cannot be applied retroactively without nullifying the Rules themselves. The Articles of the Rules are phrased in terms of "must"; they are requirements that must be observed if names are to have validity or availability. The Recommendations are phrased in terms such as "It is well to avoid"—, "The following words may be taken"—, "The writer will do well to"—, etc.; they are suggestions, not requirements. To apply the Recommendations retroactively can be done only at the cost of nullifying some Article of the Rules and of sacrificing the basic purpose of the Rules, which is to insure uniformity of usage.

There is in Recommendation *a* under Article 8 a suggestion that the word "transcription," as employed in the Rules, may be interpreted also as "transliteration," and, in Opinion 36 of the International Commission, covering a curious case, the suggestion is reinforced. But the basic purpose and philosophy of the Rules requires that "transcription" be interpreted in its strictest sense; that is, as "copying," and not as "transliteration" (change from one alphabet to another). This latter view is reinforced by Opinion 125, one of the latest to be issued, where the name *Borus* Agassiz, 1846, an admitted emendation of an error in transliteration in *Boros* Herbst, 1797, was held not to meet the provisions of Article 19 of the Rules, although under Recommendation *a*, Article 8 and Appendix *f*, Herbst should have written *Borus*. Although Commissioner Bather argued that Agassiz was "within his rights" (whatever that may mean) in making the emendation, he immediately admits that this "right" might be disputed, and states that "there is no possible question of an error of transcription." This seems to show clearly enough that emendations of errors of transliteration do not comply with Article 19 of the Rules, and that the term "transcription" as employed in that Article does not mean "transliteration." The summary of Opinion 125, following a principle established in Opinion 120, reads "*Borus* Agassiz 1846 is an emendation of, and therefore an absolute synonym of, *Boros* Herbst, 1797; *Borus* Albers, 1850, is a dead homonym." The principle established, stated in other words, is that an emendation undertaken contrary to Article 19 of the Rules strictly interpreted as to the meaning of "transcription" is (as established in Opinion 120) a junior objective synonym of the name in its original form. The name in its emended form, however, has power to preoccupy that form as a later name for another genus.

Returning to the work under review, we find numerous emenda-

tions contrary to the provisions of Article 19 of the Rules. These emendations cannot be employed legally under the Rules, but must eventually take their places as junior objective synonyms of the names in their original forms. Since, for a time there probably will be some paleontologists who will follow the authors of the work under review and employ the names in their emended form and there certainly will be others who recognize the clear illegality of most of the emendations and who will not employ them, we have a dual set of names for Paleozoic corals. One will be employed by what may be termed "classicists" and the other by "legalists." This is just such a situation as the Rules are supposed to avoid. The purpose of the Rules is to promote uniformity of usage. Classical purity is a secondary consideration entirely subordinate to fixity and uniformity.

In view of the numerous "corrections" of generic names by my good friends, the authors, may I be forgiven if I too lapse into pedantry so far as to point out that the English word "synonym" is frequently misused by them. Thus they write of *Actinocyathus*.³ "This genus is a synonym [sic] of *Stylidophyllum*—," and many other instances of the same solecism occur throughout the work. It should be unnecessary to mention that the word "synonym" is correctly applied to indicate identity of meaning in words or names, not equivalence of nonverbal entities. One can say correctly, "*Actinocyathus* is the same genus as *Stylidophyllum* and the two names (for the same thing) are therefore synonyms," or even "*Actinocyathus* (meaning the name) is a synonym of *Stylidophyllum* (the name), but to say that a genus or a species is a synonym of another is essentially absurd, even though systematic "literature" abounds with this misuse.

It is indeed unfortunate that the authors, magnificent paleontologists all three of them, should have been so led astray by their understandable yearning for classical purity that they have not only introduced confusion into the orthography of the names of the Paleozoic corals, but they have lent the very considerable weight of the authority of their names and of the great Institution at which they work and which has published their results to what is a clear violation of the Rules of Nomenclature. It is to be hoped that their example in respect to emendations will not be followed with the inevitable confusion in nomenclature that is certain to result. In other respects their example is a model that may well inspire workers in fields other than the Paleozoic corals, in most of which work of the same sort is very badly needed indeed. J. BROOKES KNIGHT.

³ Work reviewed, p. 14.