parts by either space or hyphen, as in the Germanic languages. Perhaps it may be because of the present transitional state of the language that there seem to be no very definite rules as to when hyphens should be employed in such English compound nouns. Originally, perhaps hyphens were the general rule; but gradually usage has justified the omission of the hyphen in many cases. Then when two compound terms are compounded together, with the use of a single hyphen, the results are sometimes curious; *e.g.*, "the Great Northern-Northern Pacific railway system," a term which is clear enough to an American, but might puzzle a foreigner.

As editor of *Stain Technology,* the writer has to struggle again and again with the problem of hyphenation of compound names, trying to solve it in a way that is logical, consistent and at least fairly grammatical. Thus, although the term "spore former," as two words without a hyphen, is undoubtedly sanctioned by usage, the logic of "non-spore former" seems at least questionable; just what is a "non-spore"? This latter compound noun is quite simply improved by introducing a second hyphen; but when an author tries to describe some technic by the use of a compound term made up of all the principal ingredients used (themselves often compound nouns), the problem becomes more complicated. It is hard to justify such terms as "safranin-orange G-crystal violet technic" or "iron alum-hematoxylin phenol-Bismarck brown Y schedule." Such expressions as these are perhaps unambiguous to any one familiar with the names of dyes and the nature of staining solutions; but the layman, looking at the former, would never suspect that the "G" belongs with "orange" and "crystal" with "violet."

Does English have any rules for the hyphenation of such a compound term? The writer has been unable to find any, presumably because such compounding was originally foreign to the language. Granted that Weatherby is right in assuming that compound terms will some day be frankly recognized and written as one word, let us hope that some one will devise a system for use in doubly and triply compounded words to show which elements belong most closely together and which are related to the others more indirectly.

H. J. CONN

NEW YORK STATE AGRICULTURAL EXPERIMENT STATION, GENEVA

USE OF PARENTHESES IN ZOOLOGICAL NOMENCLATURE

IN a recent communication, Dr. Osgood[1] ably argues for dropping the parentheses about authors' names when the specific designation of an animal has been changed. One of his arguments is that parentheses are unnecessary to the specialist and both unnecessary and confusing to the layman (such as, I suppose, a visitor to a museum).

Personally, I hold no thesis in this matter and am perfectly willing to follow any convention which seems to the majority wisest; but I wish to point out that not all who use zoological names are specialists in taxonomy nor, strictly speaking, laymen. General zoologists are often temporarily befuddled by the rapidity of changes in nomenclature, however wise and necessary these changes may be in themselves.

Recently, I have had occasion to make use of an extensive taxonomic literature upon a group whose members are not well known to me. In this task, I have found the conventional use of parentheses very helpful in tracing synonymy and I suspect that other non-taxonomic zoologists may have had similar experiences.

ARTHUR N. BRAGG

UNIVERSITY OF OKLAHOMA

QUOTATIONS

DISTRIBUTION OF THE YOUNGER STARRED SCIENTISTS[1]

THE distribution of productive scientists is certainly of great significance in an age of science, and can advantageously be studied geographically. A summary of the findings is of special interest to the scientists themselves.

Cattell has published, in the appendices of "American Men of Science," 1906–1933, some data as to the places of birth, education and work of the scientists who were, between 1903 and 1932, starred, by vote of their fellow specialists, as especially distinguished in research.

[1] Extracts from an article in the issue of the *American Journal of Science* for January, 1939.

In the following discussion the scientists first starred in the sixth edition of "American Men of Science," issued in August, 1938, receive especial attention; but the 1938 distribution of all the living scientists starred in 1921–1937 is discussed. Detailed attention is given to the starred astronomers, geologists, chemists, physicists and mathematicians. Some comparisons are made, also, with the older groups of scientists, those starred in 1903 or 1910, nearly all of whom are now dead or retired.

DISTRIBUTION BY OCCUPATION, AGE, SEX

The occupational distribution of those of the nearly 500 scientists starred in 1932 or 1937 who report their employment in the 1938 edition of "American Men of

[1] SCIENCE, 89: 9–11.