will maintain it has suffered as a result. Another great language, Chinese, has totally lost all inflections, but still seems to be able to cope with the task of expressing complicated ideas precisely.

As the opinion of an authority, we may quote the words of the great Danish philologist, Otto Jespersen, close student and lover of the English language, who stated:

> Besides, in a great many cases it is really contrary to the genius of the language to use an adjective at all. . . . *Birthday* is much more English than *natal day* . . . and *eyeball* than *ocular globe*. . . . Mere position before another noun is really the most English way of turning a noun into an adjective, *e.g.*, the *London* market, a *Wessex* man . . . a *Japan* table . . . a *Gladstone* bag, *imitation* Astrakhan. . . . The unnaturalness of forming Latin adjectives is, perhaps, also shown by the vacillation often found between different endings, as in *feudatary* and *feudatory, festal* and *festive*.[1]

If we examine the usage of great writers, we can find plenty of evidence that the use of nouns as adjectives is not foreign to the English language. Words like violet, marble, iron, etc., uncompromising as they sound, are all used as adjectives, and forms such as violaceous, marbly, ferrous, etc., have either been dropped, or retained in technical parlance only. Shakespeare says: "the Carthage queen," "Rome gates," "Tiber banks," "through faire Verona streets," "For canker vice the sweetest buds doth love," and Tennyson writes, "Every tiger madness muzzled, every serpent passion kill'd."

That this usage is not confined to poets may be seen by consulting Darwin, who says in the Origin of Species " . . . jackals and species of the cat genus. . . ."

The preference of present-day scientific writers can be studied directly. When I was writing a book on immunology, I took the opportunity of sending out questionnaires to about 30 persons who are either engaged in editing journals in which immunological papers often appear, or who have in the last few years published a number of papers on this subject. Each individual was asked to choose the form he preferred out of a choice of two or three. Not all replied, but the majority did, some with the addition of pencilled notes of encouragement. The pertinent data are shown in Table 1, where the numbers in parentheses show the number of replies favoring the form in question.

TABLE 1

pneumococcus polysaccharide(14), pneumococcal polysaccharide(5)
horse serum(22), equine serum(1), serum of the horse(1)
precipitin test(18), precipitative test(2), precipitation-test(5)
agglutination reaction(20), agglutinative reaction(3)
protein molecule(20), proteic molecule(2), molecule of protein(2)
diphtheria toxin(19), diphtheric toxin(3), diphtherial toxin(3)
inhibition reaction(14), inhibitive reaction(13)
inhibition zone(10), inhibitive zone(2)
antibody formation(14), antibody-formation(9), formation of antibody(6)
antibody specificity(18), antibody-specificity(6), anticorporeal specificity (0)
antigen molecule(14), antigenic molecule(7), antigen-molecule(3)
flocculation reaction(20), flocculative reaction(3).

It is clear that in most cases the majority were decidedly not in favor of adjectival forms. In regard to "pneumococcus" and "pneumococcal" the percentages run 74 against and only 26 for, but in other cases the verdict is even more conclusive. It will be noted that only one person interrogated preferred "equine serum" to "horse serum," and it may be definitely suspected that this was one of the editors responsible for the recent adjectival rash!

In view of the arguments based upon the obvious tendencies in the evolution of English as a language, the examples from classical authors and the clear indication of preference of those who are actually engaged in publishing the results of immunological research, may we venture to hope that in future the use of adjectives will be left to the authors as a purely personal matter? Surely, in this matter, as in others, we shall progress fastest, not by totalitarian compulsion, but by democratic cooperation.

WILLIAM C. BOYD

BOSTON UNIVERSITY
SCHOOL OF MEDICINE

[1] "Growth and Structure of the English Language," p. 131, 3rd ed. Teubner, Leipzig, 1919.

GEOLOGY TEXTS FOR LATIN AMERICA

IN SCIENCE for July 2, E. Raymond Hall suggested that advanced scientific texts of North American origin be placed within financial reach of Latin American students. To every one interested in improved relations among Portuguese, English and Spanish-speaking Americans the suggestion is worthy not only of consideration but of immediate action.

A considerable proportion of Latin American colleges are the equivalent of North American junior colleges and in these only introductory courses are offered in many sciences. Among fields usually so treated is geology. The demand, both actual and potential, for English texts in geology is small, due both to small enrolments in such courses and to the prohibitive price of English texts. Frequently the text used is either Italian, German or French in origin. There is no reason why the study should be neglected, nor any reason why the attention of the beginning Latin American student should be turned toward the east, when it could be directed northward.

Geological texts by North American authors, in both Portuguese and Spanish, would do much in stimulating interest in the science itself and even more in promoting hemispheric goodwill. Why should there not be set in motion a cooperative project which would make available excellent texts in physical, historical, structural and economic geology, optical mineralogy, paleontology, etc., in a language, format, binding and price with which Latin American students are familiar?

May it be suggested that each of the various geological societies undertake the publication of a text in their respective fields? The project is herewith submitted to members of the societies with these recommendations:

1. Let an appropriate committee of the American Association for the Advancement of Science learn by inquiry of Latin American educators and geological groups what types of texts would be most welcome.

2. Let the appropriate geological society in the U. S. appoint a group of its members who are willing to donate their services and assign to each of the group chapters of the text for which they shall be responsible.

3. Let the appropriate society sponsor translation into Portuguese and Spanish and first publication of the text in a number determined by inquiry of possible demand, say, for the next three or four years.

4. Let the texts be published by one of the many reputable Latin American publishing companies.

5. Let the texts be marketed through the same or similar agencies, at a cost well within reach of the group for whose use it is intended.

6. Let each text carry an introductory page setting forth the name and nature of the sponsoring society, an invitation for closer Inter-American scientific cooperation and a list of contributing authors.

7. And finally, let action be taken now. These are fast-moving times.

HOBART E. STOCKING

WEST VIEW, PA.

COLORED TRANSPARENCIES OF TROPICAL PLANTS

THE Arctic, Desert and Tropic Information Center has recently received requests as to where colored transparencies or colored photographs of tropical plants may be secured for use or for reproduction purposes. This material has been requested for use in intensive courses of instruction being given by various Army Air Forces Training Units. It is desired to assist army personnel in the recognition of both edible and poisonous plants and fruit in the tropical areas of the present world-wide theaters of operation.

Many of the country's larger and better known museums and scientific institutions have been contacted by the Arctic, Desert and Tropic Information Center with rather discouraging results. To date no appreciable number of the desired colored transparencies have been located.

Because of the wide and select distribution of SCIENCE among American scientists, it has occurred to us that the insertion of a brief notice in this journal stating the urgent need for this materiel might bring prompt results.

ELMER W. ELLSWORTH,
Captain, Air Corps; Chief, Information Collecting and Records Section, ADTIC

CROWN-GALL BACTERIA

SCIENCE SERVICE has just published in SCIENCE, 98: 10, August 13, 1943, a note on "Plant tumor bacteria" which I should like to amend since it credits me with investigations which belong to other workers. The article was prepared from an unannotated summary of work on this subject. Science Service erroneously but innocently assumed that the results summarized were all my own. This was not the case.

The work on attenuation of crown-gall bacteria by cultivation on a medium containing glycine was done by Dr. A. J. Riker at the University of Wisconsin; that on the combined action of attenuated crown-gall bacteria and plant-growth-promoting substances was done at the Rockefeller Institute by Drs. Armin C. Braun and T. Laskaris; that on heat therapy of crown-gall disease in the Madagascar periwinkle was done by Drs. L. O. Kunkel and Armin C. Braun, also at the Rockefeller Institute. I should like to disclaim any direct connection with these investigations. Credit for them belongs to Drs. Riker, Braun, Laskaris and Kunkel, not to me.

PHILIP R. WHITE

ROCKEFELLER INSTITUTE
FOR MEDICAL RESEARCH

SCIENTIFIC BOOKS

ORGANIC CHEMISTRY

Organic Syntheses. Collective Volume 2. A Revised Edition of Annual Volumes x–xix. Edited by A. H. BLATT. ix + 654 pp. 6 × 9¼ in. Bound in dark green cloth. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd. 1943. $6.50.

THE advent of this new collective volume, describing