Chlamidomonas and others represent the usual and incorrect sound of upsilon. *Y* and *ph* are letters or combinations that are unfamiliar or unpronounceable to Italians. I doubt if most Italian printers of the seventeenth century even had *y* in their fonts. The omission of initial *h* in Aplosporidium is simply the omission of a silent letter which is not a letter but a diacritical mark in the original Greek. The Germans often used *ö* for *oe* even in Latin words where no transliteration is involved.

The rules are not really precise as to the language in use. Greek and Latin are mentioned, but it is not made clear that we are to transliterate Greek into Latin according to classical Latin custom rather than according to the varying usages of modern languages. *Strombidion* is a correct transliteration from Greek, but the word remains Greek in form, not Latin. Doubtless an educated Roman would have had no difficulty in understanding the Greek ending. The only course seems to be to enforce correct transliteration into Latin by amending such barbarous forms as *Flebotomus*.

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TRANSLITERATION OF RUSSIAN WORDS

WHILE it would appear from Dr. Hoare's note in SCIENCE for December 15, 1944, that my previous note (June 16, 1944) contained a view contrary to his, the truth appears to be that we are "on the same side of the fence."

I agree thoroughly that a universally applicable Russian transliteration system is an admirable idea, and I hope that such a system will be adopted eventually.

The second part of the matter under discussion touches a somewhat different point. I believe that a person using a transliterated Russian word, be it on a file card or in a research notebook, will be compelled, at one time or another, to attempt to pronounce it in talks with the fellow workers. It is at this point that a difficulty will enter if the transliteration system used contains letters or symbols which are not found in this person's native alphabet. I simply feel that this trouble is best resolved by the use of closest phonetic counterparts in any given language for the Russian letters. Thus, for an English-speaking person the use of ordinary English letters would appear to be a good solution. This is essentially what is done in the *Chemical Abstracts* system. Incidentally, I should like to point out that the change of the Russian orthography a quarter of a century ago did not invalidate the C.A. system. In effect, the change of orthography affected only the total number of letters in the alphabet by elimination of letters which already had their phonetic counterparts (much to the delight of schoolboys, I can assure you). Thus, the phonetic features of the language were unchanged and the *Chemical Abstracts* system is perfectly usable as a pretty good phonetic transliteration system for both new and old orthographies.

The spelling of Czech in my note was my own personal oversight. Incidentally, this word presents some interesting points. It seems to me that for an English person the spelling "Chekh" is closer to the currently used pronunciation than is the usual "Czech" spelling. Frankly, I am at a loss as to how an English-speaking person would pronounce the C-z combination.

In closing this discussion, permanently I hope on my part, I wish to add that, inasmuch as Russian is my native language, it is possible that I fail to see some of the difficulties encountered by a non-Russian speaking person. I avoid the transliteration difficulties, etc., by keeping notes, etc., in whichever language is necessary.

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SCIENTIFIC BOOKS

SCIENCE IN THE UNIVERSITY

Science in the University. By members of the Faculties of the University of California. 332 pp. 10 photographic plates. 31 figures. Berkeley and Los Angeles: University of California Press. 1944. $3.75.

THE title of this interesting volume is a misnomer. The individual reader or librarian who should order it under the impression that "Science in the University" relates broadly to either might find the book disappointing. Actually it is a compilation of occasional addresses and papers by 19 scientists[1] of the University of California, published in commemoration of the seventy-fifth anniversary of the university's founding. About half of the chapters are concerned with state and regional topics such as "The California Current," "Evolution of a Sierran Landscape" and "Subsidence and Elevation in the Los Angeles Region," or with specific contributions made by University of California scientists to genetics, hydrography,

[1] Robert Grant Aitken, J. R. Oppenheimer, Joel H. Hildebrand, Carl L. A. Schmidt, G. Ross Robertson, Jakob Bjerknes, H. U. Sverdrup, William C. Putnam, U. S. Grant, O. L. Sponsler, Richard B. Goldschmidt, Charles B. Lipman, Claude E. Zobell, Ralph W. Chaney, Loye Miller, D. R. Hoagland, J. M. D. Olmsted, Knight Dunlap and S. J. Holmes.

paleobotany, ornithology, plant nutrition and other scientific areas. A minority of the chapters in this volume summarize the character and achievements of whole fields of science.

As to the merits of the varied technical presentations, the present reviewer is not competent to judge. As to the papers which are broad in scope, he finds them excellent examples of popular exposition, notably Professor Aitken's paper on astronomy, "Driving Back the Dark"; Professor Putnam's essay on a Sierran landscape; the study of longevity of bacteria in old soil and mud bricks by the late Dean Lipman; and Professor Chaney's "Trees and History."

Citizens of California are entitled to pride in this anniversary record of scientific work at the university which they have so generously supported. Other general readers will find the volume one of rewarding value if they approach it aware of its actual contents, ready to skip judiciously, but braced also to read with care material which is significant and illuminating.

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MEDICAL EDUCATION

Medical Education in the United States Before the Civil War. By WILLIAM FREDERICK NORWOOD. xvi + 487 pp. Philadelphia: University of Pennsylvania Press. 1944. $6.00.

IN the preparation of this history of medical education in the United States before the Civil War, the author undertook a very difficult and arduous task involving the location and study of many documents in widely separated areas.

He has made available in a single volume rather detailed factual data in regard to the medical schools established during the period covered. Much of the material included has until now been relatively inaccessible in the libraries of the country.

The first few chapters are devoted to a consideration of the status of medical practise and the initiation of medical education during the Colonial period. There follows by states and districts a description of the development of the individual medical schools and their history up to the time of the Civil War. The last few chapters deal with various general aspects of the development of the American system of medical education during the period covered.

Although a consideration of the schools on a geographic basis, following in a general way the settlement of the country, is probably the logical method of presentation, it is somewhat difficult in certain instances to follow the historic sequence. The lack of stability of most of the schools and the frequent movement of faculty members from place to place tends to be confusing to the reader. However, it should be pointed out that it is the events themselves rather than the author's presentation that is confusing.

The author is undoubtedly correct in stating that extension of the scope of the study to include developments in the field of medical education after the Civil War "would make of the book too bulky a tome." However, this volume in itself offers little opportunity for correlation with the present and stimulates the hope that it may be supplemented by a history of medical education subsequent to the events so ably recorded by Dr. Norwood.

The bibliography and the index of personal names are in themselves a valuable contribution to the literature on the history of medical education. The activities of many physicians, whose biographies have never been recorded, can be traced through the index of personal names.

In this and other respects the book will prove to be of great value for reference and will be frequently used by those interested in the period covered by it.

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STARCH

Chemistry and Industry of Starch, Starch Sugars and Related Compounds. By RALPH W. KERR. 472 pp. Argo, Ill.: Academic Press, Inc. 1944. $8.50.

WITH the assistance of fourteen co-authors, Dr. Kerr has prepared a very readable text dealing with the art, science and technology of the starch industry. The book is quite comprehensive in its citations to current literature, although the treatment is of necessity brief. The interweaving of scientific information with description of the art and technology has been very well done. Some of the reports of practices in the American industry can be found in no other text.

The subject-matter has been conveniently and somewhat arbitrarily distributed under five major headings: "Occurrence," "Preparation," "Properties," "Reactions" and "Uses." The section on "Properties" suffers as a result of this organization. Much of the material which could be treated in this section has been discussed under other headings; *e.g.,* viscosity and gel properties are discussed as control methods under "Preparation"; hydrogen bonding, as an interpretation of chemical characteristics under "Reactions." The section on "Properties," however, serves the worthwhile purpose of focussing attention on the separation and properties of starch fractions, particularly amylose. Considerable practical information, unavailable elsewhere in organized form, is to be found under the heading of "Uses."

In general the book is free of typographical errors. The shift in style and the repetition often characteristic of books by co-authors have been fairly well elim-