bage and corn—and a few vegetables hitherto little cultivated there—spinach, collards, celery, peas, squash and eggplant. The stations accredited with the various seeds are as follows: California, Connecticut (New Haven), Indiana, Kansas, Massachusetts, Michigan, Minnesota, New Jersey (New York), Cornell, Ohio, Tennessee, Virginia Truck, Washington, Wisconsin and Saskatchewan.

DISCUSSION

WHEN A COMMITTEE VOTES BY MAIL

WHEN it is necessary for a committee to consider a question and render a report without holding a meeting, a vote of the members may be taken by mail. Excepting for questions with the analysis of which all committee members are surely already well acquainted, a satisfactory decision by mail vote is difficult unless special precautions are first taken to make sure that every member has ample opportunity to express his own ideas and to consider ideas that may be expressed by others of the group. Only in such manner can a mail vote be democratically based on free discussion comparable to the discussion that usually precedes a vote taken at an actual meeting, when all members express themselves orally. Because meetings of committees representing scientific organizations in wartime are likely to involve unwonted difficulties of time and travel, votes by mail may now be resorted to more frequently than in recent years. It is therefore timely to consider ways and means by which this form of voting may be best employed. The following suggested plan of procedure involves some ideas expressed in SCIENCE for May 13, 1913, by Dr. Edward C. Pickering, a former chairman of the Executive Committee of the American Association. This plan was approved in principle by the Executive Committee of the American Association at its meeting on October 17, 1942.

(1) A mail ballot may have been authorized by the committee at an actual meeting or may be called for by any member at any time. A suitable memorandum concerning the question or questions to be considered is to be sent by the chairman to every member, with the request that each member shall reply promptly by (a) registering his approval or disapproval of the taking of the proposed mail ballot, also (b) presenting a preliminary statement of his views and (c) registering his vote on the memorandum if he wishes to do so at once.

(2) If a majority of the members vote against taking the proposed mail ballot, the chairman is to announce the adverse decision by means of a second communication to all members and the memorandum, together with the responses thereto, are to be placed on record for oral consideration at the next following session of the committee.

(3) If a majority of the members approve of taking the proposed mail ballot, and if the votes on the memorandum are decisive, the chairman's second communication to members is to be a minute of the action thus taken, announcing approval of the ballot and the resulting decision.

(4) If a majority of the members approve of taking the proposed mail ballot, but if the votes on the memorandum are not decisive, then the chairman's second communication to members is to announce approval of the ballot, at the same time transmitting to each member copies or abstracts of all preliminary statements received from members, with the request that each shall reply promptly by registering his vote for or against the question or questions proposed in the memorandum.

(5) If the votes received in response to this second communication show a majority of the members to be in essential agreement, a third communication from the chairman is to be a minute of the action thus taken. Otherwise, the third communication is to announce that no decision is indicated, and all papers concerning the question or questions involved are to be placed on record for oral consideration at the next following session of the committee.

(6) Actions taken by mail ballot are to become effective immediately unless otherwise provided, and minutes thereof are to be reported at the next following session of the committee.

(7) If any two members should be dissatisfied with the chairman's interpretation of the result of a mail ballot they may unite in calling for a repetition of the ballot, furnishing a suitable memorandum therefor, and the repetition is to be carried out as indicated above.

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SPELLING OF THE ADJECTIVE "HYPOPHYSEAL"

THE following comment was prepared in answer to a request for an opinion from the editors of a prominent scientific journal.

The word "hypophysis" was first used in English to indicate the pituitary gland, about the middle of the nineteenth century; its adjectival form did not appear in Webster's dictionary until the revision of 1890.

The words "apophysis" and "epiphysis," formed from the same root, were however used in English early in the eighteenth century. At first they were commonly written in the French spelling, *apophyse* and *epiphyse*.

The root word, "physis" came into English from the Greek much earlier, in the adjectival form "physic"; but this became a noun and a verb and is now rare as an adjective, so that the present adjectival form is "physical." It seems that by the time the words apophysis, epiphysis and hypophysis were introduced into our language, the words physic and physical had acquired such special connotations that "apophysic" or "apophysical," etc., would not have been clear. These words therefore took adjectival forms according to another standard method by which English adjectives are formed from certain Greek words, namely by adding the suffix -al, making apophysial, epiphysial, hypophysial. This is the only form and the only spelling which has ever been accepted by the lexicographers of England.

In the 1864 revision of Webster, however, epiphyseal appears before epiphysial; in the revision of 1909 apophyseal enters the lists; in the current (1934) revision hypophyseal appears, and the spelling with -eal is preferred in all three cases. There is admittedly no philological defense for this spelling. The suffix -eal is not English; words like lacteal, osteal, have the e in their roots, not in the suffix. Evidently, however, Webster has recorded a trend in the American spelling of these words, which began to show itself by 1864, influencing first the then most commonly used of the three terms, later overtaking the others.

Why have American lexicographers, following our biologists and physicians, introduced an aberrant spelling? Possibly "epiphyseal" goes back to the days when the noun was often written "epiphyse," or possibly some writers thought it was advisable to make the adjectives from the genitives of the Greek nouns (*e.g., epiphyseos, hypophyseos*).

Much more likely, however, the spelling has been influenced by an American trend in the pronunciation. All the dictionaries, British and American, place the primary accent invariably on the third syllable, *e. g.*, hypophýsial. At the present time (and as far as my observation goes, for decades past) American speakers almost universally place the primary accent on the fourth syllable, *e.g.*, hypophyséal, with a secondary accent on the second syllable. This has the practical advantage that the spoken adjective clearly suggests the noun, thus avoiding the mental effort of associating the dissimilar sounds "hypo-fizzial" and "hy-poffy-sis." The shift in pronunciation is, I believe, helpful, inevitable and permanent. Webster and the other dictionaries have simply not caught up with it.

Returning to the question of spelling, it is clear that "hypophyseal" suggests the current pronunciation, while "hypophysial" does not, for *i* before *a* is commonly short and unaccented. In spite of the fact that "-eal" is philologically irregular, I make bold to suggest that it be adopted as standard in American scientific writing, to the exclusion of the form in "-ial," in conformity with our well-nigh general pronunciation of the three words in question. At the price of a trifling deviation from one of the usual habits of word formation in English, too small to have troubled the careful lexicographers of Webster's staff these eighty years past, we choose the clearer, more phonetic form. Recognition of the current pronunciation by the dictionaries will no doubt promptly follow.

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THE UTILIZATION OF SCIENTIFIC RESOURCES

DR. THEODOR ROSEBURY, in the December 25, 1942, issue of SCIENCE voices a plea for the fuller utilization of scientific resources for total war with which every scientist can be in hearty accord. It is not clear, however, what Dr. Rosebury means when he speaks of chemists as on a "business as usual" basis. Perhaps the clue lies in his entirely erroneous statement that "more complete use has been found in war work for physical chemists than for those in other categories." By war work he may be thinking mainly of the development of new methods and new techniques such as those for detecting airplanes, submarines, and the like. As a matter of fact, the great majority of the seventy thousand chemists and chemical engineers in the United States are actively engaged in war work, mostly alon , the well-established lines of mass production of everything which the armed forces will need. This includes literally everything which they use either directly or indirectly in the war. Moreover, it includes adequate support of the civilian production army upon which the armed forces must depend. In addition, it includes a steady flow of chemically trained men and women to fill the expanding ranks of the technical production army.

The fact is that all industrial units can be divided into three categories. Each of these requires more chemical service in wartime than in peacetime. The first group consists of units which have always made materials directly useful in war such as T.N.T. and armor plate. They are expanded at least a hundred fold and need largely increased technical staffs, in-