

efficient in stabilizing the reaction in acid media. A study of the buffer capacity of different slightly soluble phosphates<sup>3</sup> showed that  $\text{Mg}_3(\text{PO}_4)_2 \cdot 22\text{H}_2\text{O}$  can be used for alkaline media. As a result of an x-ray study<sup>4</sup> of these phosphates it was possible to show how to prepare and use them. These experiments enabled me to develop four nutrient mixtures:<sup>5</sup> (1) acid, pH 4.9–5.5; (2) slightly acid, pH 5.5–6.8; (3) neutral, pH 6.9–7.3; (4) alkaline, pH 7.5–8.0.

It is unnecessary to give further details of the work, which has already been published in complete form. I take this opportunity to emphasize once more that the details of the technique of my culture methods (including the aeration of the media to provide the roots with oxygen, the preparation of the salts, etc.) are of fundamental importance. These are fully described in my papers.

In my next work I shall discuss my experiments concerning the rôle of Mn, Si, I, Zn, Al, B, Cu, Li, Na, As, Ni, Co, etc., in mixtures of stable pH value.

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#### A RICH SOURCE OF $\beta$ -CAROTENE

THE difficulty in separating the different carotenes and the danger of oxidation with increased handling have emphasized the desirability of working, where possible, with a source having only one form present. Since many of the richer sources contain mixtures of the two forms, it may be of interest to those working with the carotenes to know that the Perfection pi-

miento is a rich source of  $\beta$ -carotene, apparently free of  $\alpha$ -carotene.

It has been shown<sup>1</sup> that with antimony trichloride  $\alpha$ -carotene shows an absorption band at 542 m $\mu$  and  $\beta$ -carotene shows an absorption band at 590 m $\mu$ .

Using this method and the method of Zechmeister and Cholnoky<sup>2</sup> for the quantitative determination of carotene, dried pimiento shells were found to contain from 200 to 665 mg of  $\beta$ -carotene per kilogram. The quality of the fresh material and the method of preparation have considerable influence on the amount of carotene present in the dried product.

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#### WHAT IS A LOCUST?

ONE of the outstanding difficulties in teaching elementary entomology is the confusion concerning the word "locust." The so-called seventeen-year locust is of course a cicada, belonging to a totally different order from the true locusts. No doubt all teachers of entomology stress this point, but in the "Handbook for Boys," issued by the Boy Scouts of America, of which it appears that 4,792,871 copies have been printed, there is (p. 483) a picture of a cicada, labelled "Locust," without any qualification. This appears in an article by Dr. L. O. Howard, but as the text does not refer to this insect I infer that the illustration was added by the editor. Thus the popular error is reinforced on apparently good authority. Every effort should be made to substitute the unobjectionable term "cicada."

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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### MINUTES OF THE EXECUTIVE COMMITTEE

THE executive committee of the association held its spring meeting in New York City on April 15. By courtesy of the chairman the sessions were held in the office of the Science Press, Grand Central Terminal.

The meeting was called to order at 10 A. M. by the chairman with the following members of the committee present: Cattell (*chairman*), Compton, Conklin, Curtiss, Fox, Livingston, Thorndike, Ward, Wilson, Woods. Dr. Hildebrand was unable to attend. Formal sessions were held morning and afternoon, and following the evening dinner discussion was continued until 10 P. M.

<sup>3</sup> *Comptes rend. Acad. Sci. Paris*, 194: 1924–1927, 1932.

<sup>4</sup> "Phosphorsäure," Berlin, 3: 279–297, 1933.

<sup>5</sup> The term "nutrient mixture" has been found preferable to "nutrient solution." The reason for this choice is fully explained in the publication cited above.

(1) The permanent secretary reported on the proposed project for aiding unemployed scientists through government funds for emergency relief. Under the reorganization of the C.W.A. relief funds are distributed to the states. While provision is made for research projects under state relief commissions, no place was found in government organization for a national project. A communication is to be sent out from the permanent secretary's office advising all correspondents concerning the present situation.

(2) In response to a request for approval of a special measure now before Congress to provide fellowships for unemployed scientists the permanent secretary was advised to call attention to the Science

<sup>1</sup> Karrer, Walker, Schopp and Morf, *Nature*, 132: 16, 1933.

<sup>2</sup> *Ann.*, 455: 70, 1927.