ing of the "seeds" of *Nyssa aquatica*, it, like *Taxodium*, can not come in on an area kept constantly flooded.

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ON "A NEW COLOR REACTION FOR VITAMIN B_1 (THIAMIN, ANEURIN)"

VILLELA and Leal[1] report that pure synthetic Vitamin B_1 produces an intense blue color by the use of ammonium molybdate in sulfuric acid solution and aminonaphthosulfonic acid solution, and prescribe the quantitative method of Fiske and Subbarow, which is primarily used for phosphorus determinations.

The author was interested to ascertain if the blue color would be produced likewise when using stannous chloride as the reducing agent instead of aminonaphthosulfonic acid. Both reagents are used in phosphorus determinations by the blue color methods, and if thiamin interfered in one or both, it should be taken into account. Also since there is a distinct need for an efficient thiamin method, reports should be considered and evaluated.

By employing the stannous chloride reduction method,[2] it has now been found that thiamin (Vitamin B_1 Hydrochlor. Cryst. Merck) gives no blue color. Neither does thiamin give any blue by the Fiske and Subbarow method. Presumably, Villela and Leal[3] used thiamin chloride or hydrochloride, since no report of the isolation of the pure base has yet been made. However, by first treating thiamin chloride hydrochloride with NaOH (to produce the strong base),[4] neutralizing and immediately following with the procedure prescribed by Villela and Leal, no blue resulted. Reagents and procedure were, of course, thoroughly checked.

It is concluded that thiamin, or Vitamin B_1, does not give a blue color by the Fiske and Subbarow method nor by the stannous chloride reduction method. Thus thiamin does not interfere in phosphorus determinations. It is suggested that the blue color indicated by Villela and Leal was probably due to impurities.

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CHRONICA BOTANICA

COMMUNICATIONS from Dr. Fr. Verdoorn in November convey the information that the difficulties arising from the war situation in Europe which threatened the existence of *Chronica Botanica* have been solved.[1] It is announced that this important periodical will be published as a weekly beginning January, 1940, with the number of pages increased to 850 annually, with about 150 illustrations. Publications of all planned volumes of the "New Series of Plant Science Books," including numbers by Lloyd and Reed and H. I. Baldwin, together with the production of Volume 1, "Tree Growth" by MacDougal, will be carried out. The editor advises that urgent letters be sent by air mail and that all other mail be designated via "Holland America Line."

D. T. MACDOUGAL
F. E. LLOYD
H. S. REED

DECEMBER 5, 1939

SCIENTIFIC BOOKS

PHYSICS

Physical Science in Modern Life. By E. G. RICHARDSON. 256 pp. 16 plates. D. Van Nostrand Company, Inc. $3.00. The English Universities Press, Ltd. 8/6d.

THE publisher's blurb on the jacket is: "If you have wondered how an aeroplane flies—what constitutes a quicksand—why it is usually necessary to shake an embrocation, but not a mayonnaise—how a man can glide for four hours in an engineless aircraft—what limits clarity on a television screen and power in broadcasting stations—how a fish swims—whether we shall ever have trips to the moon—here is the book for you."

Certainly there can not be too many works that excite wonder or clarify the problems born in wonderment. The author claims to have set his back to the atom and the molecule and to have faced those recent advances which make contact with everyday existence. Perhaps his incentive came from his aunt, who was fond of lauding the advances in psychic science at the expense of those in the material world. When she asked him what physics had done for her, he replied that the tram had brought her up the hill that day. Thus he says the book might be called "tramway physics."

Perhaps beginning students and others do display glassy eyes when the conversationalist or lecturer begins by mentioning atoms, molecules, electrons, neu-

[1] Gilberto G. Villela and Aluiso M. Leal, SCIENCE, 90: 179, 1939.

[2] Guy E. Youngburg and Mamie V. Youngburg, *Jour. Lab. Clin. Med.*, 16: 158, 1930.

[3] It is to be noted that Villela and Leal use twice as much Molybdate II as Fiske and Subbarow. It made no difference, however, in this application.

[4] R. R. Williams, *Ind. Eng. Chem.*, 29: 980, 1937.

[1] Robert F. Griggs, SCIENCE, 90: 4418, November 3, 1939.