*Apus* or *Lepidurus* to plants as seen in this or any previous season.

A detailed illustrated report of the damage and results of experimental work on control will be published elsewhere.

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### Asphyxiate and "Anoxiate"

I have had occasion to review the literature on anoxia (*Anoxia: its effect on the body.* Univ. Chicago Press, 1942). One chapter, albeit a short one, was entitled "Definition of Terms." In this chapter exception was taken to the unfortunate misuse of the terms asphyxia and anoxia, and an earnest effort was made to distinguish clearly between them. I contended strongly that during anoxia there is no accumulation of $CO_2$ in the alveolar air or, presumably, in the tissues of the body, because the hyperpnea produced by anoxia washes the $CO_2$ out of the lungs. In the conditions of asphyxia exactly the opposite obtains. Precision of explanation requires us not to use the same word for two distinctly different conditions. Accordingly I summarized my view as follows:

"The author believes that it is understood by many that in asphyxial conditions there is an accumulation of carbon dioxide in the lungs and in the tissues of the body. If this actually is the concept that many biologists have of asphyxia, it is not difficult to accept the distinction between anoxia and asphyxia previously mentioned; that is, anoxia designates a diminished supply of oxygen to the tissues, and asphyxia a condition of anoxia combined with an increase of carbon dioxide tension in the blood and tissues. If this distinction were generally accepted, it would do away with much misconception and would distinguish sharply between asphyxia and anoxia" (p. 6).

My distinguished friend and fellow physiologist, the late Yandell Henderson, did not entirely agree with me in the distinctions I made between anoxia and asphyxia. In his stimulating manner he took me mildly to task. One of his criticisms was that the term asphyxiated is firmly established in the literature and that there is no equivalent for this term when a condition of anoxia is actually meant. Granted that this be true, then let us create one: the equivalent would be "anoxiated."

It has seemed to me for some time that the term "anoxiate" (to "anoxiate" or "anoxiated") should have a definite place in our scientific language. It is, for example, quite incorrect to say that a man was asphyxiated because he ascended to such a great height that the oxygen tension was too low to sustain life. This man was not asphyxiated; he was "anoxiated."

I wish, then, to make an earnest plea that the term "anoxiate" be accepted by scientific writers (and perhaps later by laymen). In order for them to do so it is quite necessary, of course, for the editors of scientific journals not only to recognize this descriptive term but actually to encourage its proper use.

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# *Book Reviews*

***Principles of physics II: electricity and magnetism.*** **Francis Weston Sears. Cambridge, Mass.: Addison-Wesley Press, 1946. Pp. 434. (Illustrated.) $5.00.**

This book completes Sears' trilogy of texts for the two-year elementary course in physics at the Massachausetts Institute of Technology. Volume I, on Mechanics, Heat, and Sound, and Volume III, on Optics, were published last year. The present volume, like the others, is intermediate in difficulty and scope between the usual one-year elementary physics texts used at other schools and the specialized, advanced, undergraduate texts. At the beginning of this volume the proofs involve vector equations and integration; at the end, solution of simple differential equations.

A genius for clear explanation runs through the discussions, the derivations, and the beautiful diagrams in Sears' whole series. It falters only once in Volume II, in the half chapter on chemical emf's, which was not written by Sears himself but by a collaborating author. The treatment of the troublesome E and D, B and H, and their relation to atomic behavior and to surface and bulk effects, is the clearest the reviewer has yet seen in a text and should be used for reference by every physics teacher who has ever got lost among these vectors.

The book keeps roughly the traditional order of subject matter, proceeding from electrostatics and steady currents to magnetism, alternating currents, and electromagnetic waves and optical reflection and refraction. But the usual welter of units and viewpoints is brought here into a lucid, teachable orderliness. This improvement comes, first, from putting the fundamental particles at the focus of attention and deriving all from them—fields from electron interactions, poles from fields and currents, and so on; second, from holding to the rationalized mks system of units throughout; and third, from the fine approach to the electric and magnetic vectors noted above.

The reviewer was less pleased by the poorly organized wastebasket chapter on "Electronics" at the end of the book and by the tabloid introductory paragraphs centered around nuclear energy. The latter were evidently hastily inserted just before publication and are, of course, already out of date. They contain several mistakes, such as the invention of the mythical element "triterium."