An interesting remark of Dr. Ojemann is that knowledge "grows by research and only by research." If he means here "experiment," then nearly everything in logic and mathematics will be excluded. So, too, will be the whole thinking, theoretical, hypothetical side of experimental science. If, on the other hand, Dr. Ojemann's meaning is that research and knowledge are synonymous, then many who never performed an experiment or did any other kind of scientific work must be considered research men, some of them very high in the scale.

This ambiguity of the term "research" may partly excuse the poor showing of those who submitted to the questioning which Dr. Ojemann describes. The uncertain or unexamined, status of some of the "basic concepts" to which he refers may be a further excuse. The complete absence of anything which could be considered philosophy of science will excuse still more (in the pupils, not the educators). Whether any sins are left for which the pupils are the ones responsible, or for which the scientists and educators themselves are excusable, is a nice question.

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On Methods of Food Appraisal

In a series of reports published by the Naval Medical Research Institute, Bethesda, Maryland, Cdr. C. M. McCay and associates have described the nutritive value of food consumed at several naval shore stations and at one Army camp. In each of these reports a comparison has been made between the analytical value of the diet consumed and the calculated value of the diet issued. While such comparisons could hardly be expected to show close agreement, they nevertheless serve the valuable purpose of emphasizing the inadequacy of ordinary Tables of Food Composition when used for purposes of appraising cooked, ready-to-serve food. This point is not particularly emphasized in Cdr. McCay's reports, however, and as a result, an occasional question has arisen concerning what might appear to be an unfavorable reflection upon the principle of appraising food "as issued."

The original purpose of appraising Army food as issued was to provide a check on the adequacy of menu planning in relation to levels of nutrients recommended for the promotion of nutritional health. This method was later extended to include the appraisal of uncooked food used in the kitchen. Finally, an average deduction was usually made in recognition of loss of food during preparation for cooking (*i.e.* inedible garbage), and also of the losses of fat (and therefore calories) as well as vitamins during the cooking process itself. Because of the wide variability of both preparation and cooking losses, the usual objective attained was the appraisal of the approximate nutritive value likely to be found at three levels of messing operations, *i.e.* good, fair, and poor.

It is quite obvious that such appraisals were aimed primarily at checking the adequacy of food planning, rather than the exact determination of the nutrients to be found in the food finally consumed. Therein lie the chief differences between the two methods of appraisal used for comparative purposes by Cdr. McCay. As mentioned above, the discrepancies in results point to a possible need for nutritive values of *cooked foods*—but at that point one is immediately faced with some difficult questions, chiefly concerning the degree of applicability of such values. In other words, who could assure duplication of the messing operations that were present when the original nutritive values of cooked foods were obtained? Kitchen operations vary not only from mess to mess but also from day to day within the same mess. Variability in recipes and in final moisture content would present innumerable difficulties. In addition, no one familiar with nutritional surveys would deny the attempts of mess personnel to do better during a survey, and the customary relaxation back to "normal" (poor) cooking practices upon the departure of the "inspectors" from the mess under survey. There are also other nonreproducible factors, particularly related to the variability of the initial nutrient content found in raw as well as canned foods.

It is apparent to the undersigned that in spite of inherent shortcomings, both methods can be used to advantage through the simple process of consolidation. Unannounced spot surveys carried out by the actual analysis of cooked food can give a continuous measure of adequacy of food actually consumed, and can also indicate where emphasis is required in courses of instruction given in service schools training mess personnel. In addition, the initial planning of the food to be issued should be checked routinely by preappraisal of the nutrients likely to be found in the uncooked (A.P.) food listed on the menu. Because of the multiplicity of factors that will affect the terminal nutritive value of such food when cooked, the desirability of spending too much time on preappraisal is doubtful. For this reason there has been developed and described in the literature a short method of evaluation of diets based on the use of nutritive values derived for 15 food groups. It has been shown that when this method is properly adapted, the appraisal of A.P. food which is obtained by its use is reasonably close to that obtained using the "long" method involving individual values for individual foods. It is regrettable that there can be no magic formula for conversion to the values found when the food has been stored, prepared for cooking, cooked, and then finally served, regardless of which method is used, either "short" or "long."

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Growth of Ragweed for Its Medicinal Virtues in the Dominican Republic

In the United States, in Argentina, and perhaps in other countries, ragweed, because of its irritating pollen, is very much condemned as a most troublesome weed.

The junior author of this note, who has been engaged for several years in rubber investigations in the Dominican Republic, wishes to report that ragweed in this

country is esteemed as a plant with beneficial medicinal properties. What has proven to be the species *Ambrosia monophylla* (Walt.) Rydb. (*A. paniculata* Michx.) is cultivated in gardens by the country folk, to be used for poultices in the treatment of various pains and ills. It is actually sold in the market places of the capital city, Trujillo, for this purpose. Plants secured here were grown to the flowering stage and herbarium material prepared under the senior author's field number, 13876, and deposited in the U. S. National Herbarium at Washington, D. C.

During his stay of three years in Costa Rica, where he was engaged in rubber investigations at Turrialba, the junior author saw no ragweeds at any time. In the Dominican Republic they are very uncommon and appear to be unimportant constituents of the flora.

Certain individuals who were highly allergic to ragweed pollens in the United States have found complete freedom in Haiti and the Dominican Republic, apparently because of the scarcity of members of the genus *Ambrosia* here. During a recent extensive collecting trip in the Dominican Republic through November, December, January, and the first week of February, 1945–46, the senior author encountered no wild *Ambrosia* species.

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Book Reviews

The California ground squirrel: a record of observations made on the Hastings Natural History Reservation. **Jean M. Linsdale. Berkeley-Los Angeles: Univ. California Press, 1946. Pp. xi + 475. (Illustrated.) $5.00.**

Students of behavior of wild animals, epidemiologists, administrative heads of rodent control programs in western North America, and students of natural history will find in this book a wealth of sound, basic information that they cannot afford to miss. Seldom has a single species of animal been studied so thoroughly and from so many angles of approach, particularly in its wild surroundings, as has the California ground squirrel. Little has escaped the critical eyes of Dr. Linsdale and his coworkers on the Hastings Reservation. Such inclusive topics as where and how this squirrel lives, communication, behaviorisms, food and shelter, populations, reproduction, diseases, parasites, and general morphology are all treated in more or less detail. There is some repetition in both text and half-tones (the latter of which are not up to the usual standards of the University of California Press), but this does not detract from the real value of the book as source material. The student of populations will have some difficulty in trying to find out how many squirrels there were in a unit area at any season of the year, but perhaps Dr. Linsdale does not consider this phase of population study important.

One of the more interesting conclusions is that the California ground squirrel prefers land that is being cultivated or pastured to those areas where the vegetation, particularly grass, is allowed to grow tall. Control of habitat, then, is the most effective method of controlling these ground squirrels. It is possible that this principle might be applied with success rather generally in the animal world. It might be inferred from the above that these rodents were much less numerous in the past than they are now—that human habitation has made for the squirrels a better place in which to live. Or could it be that the squirrels have changed their habits within historic times?

It is hoped that other studies of this nature will be forthcoming from the Hastings Reservation.

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A treasury of science. **Harlow Shapley, Samuel Rapport, and Helen Wright. (Eds.) New York-London: Harper, 1946. Pp. xii + 772. $3.95.**

First published in 1943, *A treasury of science* continues to be a distinguished anthology of informative, thought-provoking, and entertaining hors d'oeuvres and entrees painstakingly selected by the editors from the vast storehouse of scientific writing. Deliberately chosen for the ubiquitous T. C. Mits, the celebrated man in the street invented by H. G. and L. R. Lieber, these readings will also repay the scientist for his time.

For those who are being introduced to the *Treasury* for the first time it may be useful to outline briefly the basic structure of this anthology.

After a delightful introduction by the principal editor, Harlow Shapley, there follow five additional sections: "Science and the Scientist," "The Physical World," "The World of Life," "The World of Man," and finally, "Atomic Fission." The sequence of sections is reminiscent of the Biblical dictum: "Dust thou art, and unto dust shalt thou return." A modern paraphrase might read: "By fission was life begun; by fission it may end."

The section on "Atomic Fission" is new in this edition and includes selections from the writings of H. D. Smyth, E. O. Lawrence, J. Viner, and R. J. Oppenheimer.

Authors whose writings appear in earlier parts of the book include Oliver La Farge, Eddington, Jeans, Pavlov, Curie, Franklin, Stefansson, Huxley, Heiser, Kaempffert, Moulton, Einstein, and Geddes.

This volume is recommended for rereading as well as reading.

MORRIS C. LEIKIND

Library of Congress, Washington, D. C.