NEW BOOKS

ODOUR PREFERENCES BY R. W. MONCRIEFF (Leonard Hill, London), p. 357, 1966, approx. $12.50).

What constitutes a pleasant or unpleasant odor for an individual human or animal? Current research on the chemical senses is often restricted to isolated aspects, such as the electrophysiology of a nerve fiber or the molecular structure of a stimulant, which does not answer the above question. The author presents his observations and philosophy on odors in the context of the functioning human or animal.

The initial two thirds of the book enumerates detailed results of two experiments. In the first experiments, twelve people arranged 132 odors according to their preferences. In the second experiment, 500 people arranged ten odors according to their preferences. In the latter experiment, 127 people repeated their evaluation. The author interprets the data numerically after dividing the subjects according to sex, personality, and three age groupings of the subjects. Some readers may question the experimental design and the limited statistical analysis of the results. In addition, the interpretation of the author is not always convincing. For example, the data that is used as the basis for the conclusion that males are more reliable than females in their ability to reproduce arrangements of odors could also be used to argue that there is no difference. Similarly, one could argue that the experiments to determine reliability in odor preferences and age may be a measure of motivation rather than odor memory.

One of the least impressive chapters (18) is that devoted to preferences of animals. While the amount of avaliable data on the sensory world of animals is not overwhelming, the author fails to relate his observations and opinions to the information in the literature. Intensive observation of an animal's behavior has merit; however, recommendations based upon the behavior of one dog and two cats are not convincing.

In the final third of the book, the author offers many interesting personal comments and information which are unavailable elsewhere. The references to specific appetite and nutritional wisdom draw attention to the need for more formal research in this area. The author introduces original ideas and a personal excitement. However, it is difficult to know how seriously we should consider suggestions such as: "the very small quantities of pleasantly odoriferous substances taken into the body may have a nutritional action on the neurophysiological apparatus." The summary of conclusions at the end of each chapter is helpful.

The classification of odors was effectively considered twenty years ago by the same author. His original presentation has not been substantially superseded by more recent publications.

The book does not purport to review current research in odor. The presentation does suggest that the purpose was to stimulate thinking rather than to present a systematic scientific argument, and it is in this area that it is most successful.

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ATMOSPHERIC OXIDATION AND ANTIOXIDANTS, Gerald Scott (Elsevier Publishing Company, 528 pages, 1965, $26).

Although not indicated in the index, it is made apparent in the preface that the volume consists of 2 sections. The first part (chapters 1–5) is concerned primarily with fundamental studies in simple systems; chapters 4 and 5 are concerned in detail with the chemistry of antioxidants, and classifies them in accordance with the mechanisms by which they exert their effect. The second part (chapters

6–9) discusses applications of the concepts given in earlier chapters, in technological systems. Although many subjects that fall within the scope of the title are treated only very briefly, the table of contents adequately indicates the subjects that are discussed to greater or lesser extent. Except for the limited and rather general treatment of some of the more important aspects of atmospheric oxidation and antioxidants, the overall organization of the material is good, and the manner of writing is articulate and pleasing.

The design of the volume is such that the useful information is readily accessible, both to those who are interested in academic and basic aspects of the subject matter, and to those who are concerned primarily with industrial applications.

The volume must suffer because it covers much of the same ground that was covered in another, relatively recent and more detailed, publication on essentially the same subject matter, but it does include also some useful information that has not been reviewed elsewhere recently.

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Die Erhaltung der Lebensmittel, by J. Schormuller, Director, Institutes of Food Chemistry and Food Technology, Tech. Univ., Berlin. (Ferdinand Enke Verlag, Stuttgart, 927 p., 1966, $34.75 or DM139.)

This book represents a comprehensive discussion of all aspects of food processing. It is divided into three main sections: the first involves a discussion of physical methods, the second involves chemical methods and the third, various means of packaging. The first section is divided into eleven chapters: Sterilization and Pasteurization; Cooling and Freezing Processing; Drying of Foods; Freeze Drying of Foods; Condensing; Food Preservation through Glaceing; Treatment of Foods with Ultra-Violet Rays; Treatment of Foods by Radiation; Storing Under Protective Gases; Infrared High Frequency and Ultra Sound Treatment of Foods; and Further Physical Processes. The second section has nine chapters: Salting; Pickling; Smoking; Enzyme Acidification; Sweetening; Preservation in Alcohol; Preservation in Acid; Preservation of Eggs in Liquid; and Supplementary Chemical Material in Food Preservation. The third section has four chapters: Common Considerations; Individual Packaging Material: Foil-Packed Foods, and Sales Packaging.

The various chapters are well illustrated with flow sheets, diagrams and pictures of apparatus. Tables and figures present a wealth of data. However, except for a chapter on antioxidants, chemical formulas are seldom used to illustrate the subject material under discussion. The book is of primary use to food engineers who are interested in current equipment in use in Germany. The continued emphasis on keeping food items under ideal storage conditions for a minimum period of time before consumption probably accounts for the excellent palatability of processed food items in Germany.

This book is similar but more comprehensive than The Technology of Food Preservation by N. W. Desrosier. In the food processing industries, it is probably analogous to the position of Oil and Fat Products by A. E. Bailey in the fat processing industry. "Die Erhaltung der Lebensmittel" does cover the field of food preservation more thoroughly than any single American text in this field and would serve as pleasant reading for someone interested in the food processing industry in Germany.

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