

diet resulted in regression of the reaction (Hunt et al., *Proc. Soc. Exp. Biol. Med.* 113, 139). Castrated adult pheasants were administered testosterone, protactin or corticosterone. They increased food intake 38%. Corticosterone reduced adrenal wt 21% and increased hepatic weight 100% and lipid content of the liver 168% (Nagra et al., *Poultry Sci.* 42, 770). The lipids from plasma, aortic intima-media and liver of control cockerels and of birds made hyperlipaemic either by the addition of 1% cholesterol plus 3% peanut oil to the diet or by subcutaneous implantation of stilbestrol tablets have been studied. The fatty acid compositions of cholesteryl esters, triglycerides and phospholipid fractions were determined by GLC. When the conen of any lipid fraction was considerably above the control value, the amt of oleic acid as percentage of the fatty acids of that fraction was increased; often the percentage was more than doubled relative to control values (Blomstrand and Christensen, *J. Atheroscler. Res.* 3, 142). In rooks, high serum lipid values were found, as well as macroscopically visible lipaemia without any symptoms of atherosclerosis. The hyperlipemia was accompanied by lipoproteins of high electrophoretic mobility. Reasons for not finding atherosclerosis in rooks, despite high plasma lipid levels, are discussed (Lelek et al., *Ibid.* 3, 137). The effects of hypercholesterolemia secondary to induced hyperthyroidism of hypercholesterolemia produced by cholesterol feeding on spontaneous atherosclerosis of the White Carnean pigeon was investigated. Feeding cholesterol to normal pigeons did not aggravate the degree of atherosclerosis unless plasma cholesterol levels greater than 1500 mg/100 ml were produced (Kottke et al., *J. Atheroscler. Res.* 3, 129). Leghorn cockerels were fed for 20 months on diets containing either no supplement, whole egg powder, egg oil or these diets in combination with corn sterols. The inclusion of corn oil sterol retarded the atherogenesis that was accentuated by the addition of egg or egg oil. Total fat deposition in the abdominal section of the aorta was reduced in the groups fed the sterols. Egg oil was similar in its atherogenicity to egg powder sterol excretion patterns suggesting that the beneficial effect of the corn sterol was not due to interference with cholesterol absorption alone (Fisher et al., *Proc. Soc. Exp. Biol. Med.* 113, 415). Two experiments were conducted to study the influence of dietary fat on the development of muscular dystrophy in the chick and to investigate whether synergistic relationships existed between selenium, DPPD, cystine and tocopheryl acetate in prevention of the disorder. Birds receiving a fat-free diet had severe breast muscle degeneration. The omission of 4% lard from the basal ration resulted in substantial protection against muscle degeneration by previously ineffective levels of selenium, DPPD and tocopheryl acetate. Replacement of 4% lard with equivalent amt of saturated or unsaturated fatty acids indicated that the inhibiting effect of lard on selenium activity was attributable to its content of linoleic acid (Hutcheson et al., *Poultry Sci.* 42, 846).

### BOOK REVIEW

Several interesting reviews on various phases of the fats and oils field have appeared during the last year. Hanahan and Thompson, Jr. reviewed "Complex Lipids" (*Ann. Rev. Biochem.* 32, 215-240). The metabolism of lipids was reviewed by Mead (*Ibid.* 32, 241-268). A review on gas chromatography with special reference to advances in methodology and applications to problems in lipid biochemistry was prepared by Horning and Vanden Heuvel (*Ibid.* 32, 709-754). Mass spectrometry and its applications to lipid research was reviewed by Biemann (*Ibid.* 32, 755-765). A symposium on "Chemical Modification of Fats and Oils" was published (*JAOCs* 40, 237-255; 302-318). "In vivo Antioxidants and Polyunsaturated Acids Metabolism" was the subject of another symposium (*Ibid.* 40, 353-371). Another symposium dealt with "Special Methods in Lipid Chemistry" (*Ibid.* 40, 395-471). Lectures of the 1963 Short Course on "Advances in Soaps and Detergents" were published (*Ibid.* 40, 609-698). A review of the properties of organic solutions of heavy metal soaps appeared (*Pilpel, Chem. Revs.* 63, 221). In addition, several feature and review articles covering the sources and industrial applications of fats and oils appeared in the *JAOCs*.

New books of interest to chemists in lipid research are as follows:

- Paquot, C., J. Mercier, A. Mathiou, D. Lefoot and R. Perron, "Les Methodes Analytiques Des Lipides Simples," Centre National De La Recherche Scientifique, 281 pp. 1962.
- "Standard Methods of The Oils and Fats, Division of the IUPAC." 5th Ed. Butterworth, Inc., 180 pp. 1962.
- Bennet, H., "Industrial Waxes, Vol. I, Chemical Publishing Co.
- Bennet, H., "Industrial Waxes, Vol. II, Chemical Publishing Co.
- Patton, T. C., "Alkyd Resin Technology. Formulating Techniques and Allied Calculations." John Wiley & Sons, 197 pp. 1962.
- Saunders, J. H. and K. C. Frisch, "Polyurethanes. Chemistry and Technology," Vol. I. Chemistry, John Wiley & Sons, 368 pp. 1962.
- Sittig, M., "Polyacetal Resins." Gulf Publishing Co., 151 pp. 1963.
- Fisk, N. R., Fisk's Paint Year Book and A-Z Buyer's Guide, Fisk, Harrow, Middlesex, 416 pp. 1962.
- Chatfield, H. W., Ed., "The Science of Surface Coatings." Ernest Benn, Ltd., London, 594 pp. 1962.
- Taylor, C. J. A. and S. Marks, Eds., "Convertible Coatings. Paint Technology Manuals. Part III." Chapman and Hall, 318 pp. 1962.
- Harry, R. G., "Modern Cosmeticology." Vol. I, Chemical Publishing Co.
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- Newberger S. H., "A Manual of Cosmetic Analysis." AOAC, Inc., 84 pp. 1962.
- Hibbot H. W., Ed., "Handbook of Cosmetic Science." Macmillan Co., 556 pp. 1963.
- Mellan I., "Industrial Plasticizers." Macmillan Co., 302 pp. 1963.
- Moilliet J. L., Ed., "Waterproofing and Water-Repellency." Elsevier Publishing Co., 502 pp. 1963.
- Ekwall, P. and K. Fontell, "The First Scandinavian Symposium on Surface Activity." Abo, Finland, 231, pp. 1963.
- Osipow, L. I., "Surface Chemistry: Theory and Industrial Applications." Reinhold Publishing Corporation, 467 pp. 1962.
- Szymanski, H. A., "Lectures on Gas Chromatography." Plenum Press, Inc., 282 pp. 1962.
- Stock, R. and C. B. F. Rice, "Chromatographic Methods." Reinhold Publishing Corporation, 206 pp.
- Knapman, C. E. H., Ed. "Gas Chromatography Abstracts—1962." Butterworth, Inc., 195 pp. 1963.
- Van Sway, M., Ed. "Gas Chromatography 1962." Butterworth, Inc., 411 pp. 1962.
- Nogare, S. D., "Gas-Liquid Chromatography. Theory and Practice." John Wiley and Sons, 540 pp. 1962.
- Knox, T. H., "Gas Chromatography." John Wiley and Sons, 126 pp. 1962.
- Fowler, Lewis, Ed., "Gas Chromatography." Academic Press, Inc., 270 pp. 1963.
- Truter, E. V., "Thin Film Chromatography." John Wiley and Sons, 205 pp. 1963.
- Purnell, H., "Gas Chromatography." John Wiley and Sons, 441 pp. 1962.
- Babbit, T. M., "Thin-Layer Chromatography." Reinhold Publishing Corporation, 208 pp.
- "Fat Rancidity." Summary report from the Third Scandinavian Symposium on Fat Rancidity, 108 pp. 1962.
- Frazer, A. C., Ed., "Biochemical Problems of Lipids." Proceedings of The Seventh International Conference on Biochemical Problems of Lipids." Elsevier Publishing Company, 474 pp. 1963.
- Paoletti, R. and D. Kritchevsky, Ed., "Advances in Lipid Research. Vol. I." Academic Press. 4118 pp. 1963.
- Paoletti, R., Ed., "Lipid Pharmacology." Academic Press, 538 pp. 1964.
- Grant, J. K., Ed., "The Control of Lipid Metabolism." Biochemical Society Symposium No. 24, Academic Press, 191 pp. 1963.
- Holman, R. T., Ed., "Progress in The Chemistry of Fats and Other Lipids." Vol. 7, Part I. The Higher Saturated Branched Chain Fatty Acids. Macmillan Company, 164 pp. 1963.
- Hofmann, K., "Fatty Acid Metabolism in Microorganisms." John Wiley and Sons, 78 pp. 1963.
- Wheeler, E., "The Fat Boy Goes Polyunsated." Doubleday, 1963.
- Pelkonen, R., "Plasma Vitamin A and E in The Study of Lipid and Lipoprotein Metabolism in Coronary Heart Disease." Acta Medica Scand. Suppl. 399, Helsinki, 1963.