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FISHERIES RESEARCH IN CANADA

By DR. A. G. HUNTSMAN

UNIVERSITY OF TORONTO

IN fisheries research as in many other things Canada through her intermediate position is powerfully influenced by both Great Britain and the United States, but their differences have permitted her to "call her soul her own" and to follow a somewhat independent course. Her organization for fisheries research did not spring like Minerva "full-armed from the head of Jove," the creation of some master or collective mind, as have many research organizations, but has developed like an organism, in relation to its environment and by learning from experience.

After the forced union of Upper and Lower Canada (Ontario and Quebec) in 1841, the new Province of Canada felt the stimulus of opportunity for self-government. With demands for protection of its fishing population along the shores of the Gulf of St. Lawrence from inroads of fishermen from the colonies of New Brunswick and Nova Scotia and from the New

England states, it considered the services of a British cruiser inadequate and in 1852 appointed Pierre Fortin, a graduate in medicine of McGill University and in later life a Member of Parliament, as magistrate in command of the expedition for the protection of the fisheries in the Gulf of St. Lawrence, building the armed schooner *La Canadienne* for his use. He was not only magistrate, but also counselor and physician to the scattered communities along the coast, and in addition initiated fisheries research. He described the fishes (naming a new species) as well as the fisheries, and developed a system of detailed fishery statistics that was adopted for the rest of Canada and that has given this country these basic data for fishery research, collected in more detail and continuously for a longer period than holds for any other country. On confederation of the province with New Brunswick and Nova Scotia to form the Dominion of Canada in

flavored diet by eight of the rats, while almost equal quantities of the two diets were consumed by the other four rats. In no single case is there any evidence of a preference for the unflavored diet.

These experiments indicate that on an adequate vitamin intake the fats studied are of equal nutritional value for growing rats. They explain how the greater growth of weanling rats on a butter diet in experiments where *ad lib.* feeding is employed may

result simply from a greater food consumption due to the preference of rats for butter flavor. Diets containing all these fats were used with equal efficiency in transformation to body tissue.

HARRY J. DEUEL, JR.

ELI MOVITT

LOIS F. HALLMAN

UNIVERSITY OF SOUTHERN CALIFORNIA
MEDICAL SCHOOL

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A SIMPLE AND EFFICIENT CALOMEL HALF CELL

SOME fifteen years ago a co-worker was told to prepare a calomel half cell using a glass filter tube on the

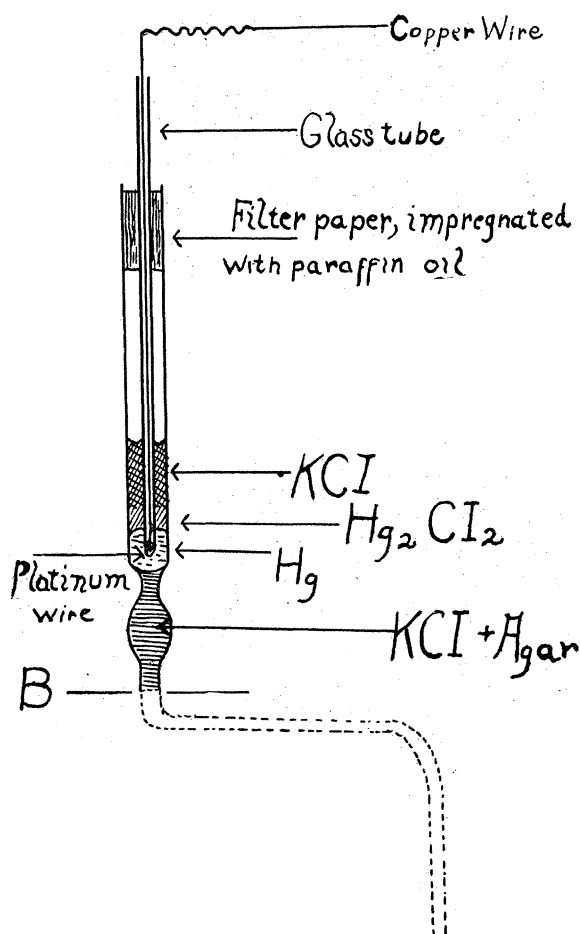


FIG. 1

end of the siphon connecting the cell and the analysis vessel. He covered the glass filter plate with the mercury, added the calomel and the KCl solution and inserted this electrode directly into the analysis vessel.

Evidently, as he stated afterwards, he had suffered from temporary absence of mind, for that electrode could not be expected to work. But the half cell too was absent-minded: it worked. The thin moisture layer on the glass surface was sufficient to form a conductive bridge between the calomel-KCl suspension above the mercury and the filter plate below it.

I remembered this fact later when needing a standard half cell, but lacked the usual implements to construct it and had not the possibility of acquiring them. Here it is (see Fig. 1); it needs only 0.5 ml of mercury, works perfectly and may be useful in teaching and research laboratories. The half cell may be inserted in a flask containing an indifferent solution and connected with the analysis vessel by a siphon; in this case its end (B) may be closed by agar or by a stopper of cotton or filter paper.

To be introduced directly into the analysis vessel, the bottom end has the form indicated by the dotted trace.

F. L. HAHN

INSTITUTO QUÍMICO-AGRÍCOLA NACIONAL,
GUATEMALA, GUATEMALA, C. A.

BOOKS RECEIVED

- COBB, STANLEY. *Borderlands of Psychiatry*. Harvard University Monograph in Medicine and Public Health Number 4. Illustrated. Pp. xiv + 166. Harvard University Press. \$2.50.
- DEGERING, ED. F. *An Outline of the Chemistry of the Carbohydrates*. Illustrated. Pp. viii + 474. John S. Swift Co. \$6.00.
- DODGE, BERNARD and HAROLD W. RICKETT. *Diseases and Pests of Ornamental Plants*. Illustrated. Pp. xi + 638. The Jaques Cattell Press. \$6.50.
- GRANT, J. C. BOILEAU. *An Atlas of Anatomy*. Volume 1. Illustrated. Pp. xv + 214. Williams and Wilkins Company. \$5.00.
- HARRELL, RUTH FLINN. *Effect of Added Thiamine on Learning*. Pp. v + 55. Bureau of Publications, Columbia University. \$1.75.
- SCHOPFER, W. H. *Plants and Vitamins*. Illustrated. Pp. xiv + 293. Chronica Botanica Co. \$4.75.
- STRONG, OLIVER S. and ADOLPH ELWYN. *Human Neuroanatomy*. Illustrated. Pp. x + 417. Williams and Wilkins Co. \$6.00.
- Woods Hole Oceanographic Institution. *Collected Reprints*. 1942.

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THE PHYSICS OF METALS

By FREDERICK SEITZ, Professor of Physics and Department Head, Carnegie Institute of Technology. 331 pages, 6 x 9, illustrated. \$4.00

Here is an entirely non-mathematical treatment of the developments of the physics of metals that have taken place in the past 15 years. It is based on a series of lectures given to metallurgists and physicists at the University of Pennsylvania. The topics treated include the structure of metals, factors determining the stability of alloys, the theory of plasticity of metals, diffusion in metals, the theory of iron-carbon alloys, the electron theory of solids and its applications to cohesion, magnetism, and conductivity.

The book also contains a summary of the theory of dislocations and the role they play in determining plastic flow.

THE STRUCTURE OF METALS. Crystallographic Principles, Techniques, and Data

By CHARLES S. BARRETT, Associate Professor of Metallurgical Engineering, Carnegie Institute of Technology. 563 pages, 6 x 9, illustrated. \$6.00

This is a text and reference book covering structure, properties, and theories of metals and alloys and the crystallographic techniques of physical metallurgy. It includes extensive reviews of (1) preferred orientations and directional properties, (2) effects of cold work and annealing, (3) plastic deformation, (4) dislocation theory, (5) age hardening, (6) transformations, (7) alloy structures, (8) superlattices, (9) electron diffraction, and (10) stress measurement by x-rays.

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HYGIENE Third Edition

By F. L. MEREDITH, M.D.

Professor of Hygiene, Tufts College

183 Illus.
822 Pages
\$3.50 (1941)

This book presents material of vital importance to every student. It appraises the health situations that exist in the life of individuals and peoples, then sets up objectives and instills a desire on the part of the student to do something about attaining them. Very timely is the chapter on diet which gives a splendid summation of the national and world situations and offers sound solutions to these problems. The chapter on food presents the newer knowledge on vitamins. The book is divided into six sections, as follows: Introductory—a discussion of the health situation in the United States. General plan of the body and working of its parts. Types of bodily disorders. Effective use of medical science. Health considerations, and finally, mental health. The material is well organized for the beginning college student and abundantly illustrated.

By the same author

Widely Used

THE SCIENCE OF HEALTH

138 Illus.
427 Pages
\$2.50 (1942)

Written in easy, readable style, this book is designed for use in one-hour, one-semester college courses in hygiene. The following basic aims have been kept in mind: To give facts the student can use in making his own decisions in all health situations; to give opinions generally held by medical science; to weight the material properly giving each subject the space due its importance; to arrange the material so that its order and sequence would be educational in value, and to use scientific terminology in so far as it would help to clarify the student's thinking. The chapters on anatomy and physiology have been held to a minimum of space, while the treatment of nutrition and current health problems is unusually complete.

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