SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-on-Hudson, N. Y.

RESEARCH FOUNDATIONS IN THEIR RELATION TO MEDICINE[1]

AT this time and place, medicine is the central interest, and therefore, so far as a layman can, it is my purpose to discuss "Research Foundations in their Relation to Medicine," and if possible to do this in such a manner as to reveal their significance to those for whose encouragement these ceremonies have been devised.

To accomplish this I intend first to ask you to consider the mental attitude necessary for the appreciation of research foundations and then to describe these foundations broadly—trying to indicate their relations to the universities; the problems which arise in connection with them; the dangers to which they are exposed; and their significance for the progress of medicine, for yourselves and for the development of the spirit of research.

You who are about to pass from the discipline of the school to a more self-dependent phase of your career feel both the fresh pleasure of restraints outgrown and a questing interest in the coming years. You feel too that, broadly speaking, what will happen to medicine during the next fifty years will also happen to you, and that at any moment some of you may be called upon to guide these happenings.

In the face of such responsibilities it becomes a duty as well as a wise precaution, to obtain the broadest possible view across your chosen field and to gain knowledge of the larger changes and improvements taking place within it.

You may have done this several times

[1] Address at the graduation exercises of the Yale Medical School, June 17, 1912.

Streams; Dilution in Large Lakes; Dilution in Oceans and Tidal Estuaries; Sewage Treatment Works; Screening; Plain Sedimentation; Septicization in Connection with Sedimentation; Chemical Precipitation in Conjunction with Sedimentation; Electrolytic Treatment; Strainers, Slate Beds and Colloidors; Broad Irrigation; Intermittent Sand Filtration; Contact Filters; Sprinkling Filters; Aeration; Hypochlorite Treatment; Ozonization; Institutional and Residential Plants; Comparative Summary.

It will be noticed that some of the newer processes, such as ozonization, the use of electrolytically prepared hypochlorite, etc., are also gone into, but with reservations as to their probable utility. In the description of processes, emphasis has been placed on the underlying principles and on the efficiencies obtained by their application, while structures have been described only to a limited extent and the illustrations are relatively meager, The subject of cost is also one that has not been elaborated.

GEORGE C. WHIPPLE

SCIENTIFIC JOURNALS AND ARTICLES

THE contents of the *American Journal of Science* for July are:

"Storm King Crossing of the Hudson River, by the New Catskill Aqueduct, of New York City," J. F. Kemp.

"Lake Parinacochas and the Composition of its Water," G. S. Jamieson and H. Bingham.

"Shell Heaps of Maine," F. B. Loomis and D. B. Young.

"Mixtures of Amorphous Sulphur and Selenium as Immersion Media for the Determination of High Refractive Indices with the Microscope," H. E. Merwin and E. S. Larsen.

"Asymmetry in the Distribution of Secondary Cathode Rays produced by X-rays; and its Dependence on the Penetrating Power of the Exciting Rays," C. D. Cooksey.

"Derivation of the Fundamental Relations of Electrodynamics from those of Electrostatics," L. Page.

"Hydrolysis of Esters of Substituted Aliphatic Acids," W. A. Drushell.

"Some Suggested New Physiographic Terms," DeL. D. Cairnes.

THE following articles are printed in the *Journal of Genetics* for June:

"Species Hybrids of *Digitalis*," W. Neilson Jones.

"Notes on Inheritance of Color and other Characters in Pigeons," L. Doncaster.

"On Heterochromia Iridis in Man and Animals from the Genetic Point of View," C. J. Bond.

"Second Report on the Inheritance of Color in Pigeons, together with an Account of some Experiments on the Crossing of certain Races of Doves, with special reference to Sex-limited Inheritance," Richard Staples-Browne.

"Gigantism in *Primula sinensis*," Frederick Keeble.

RECENT WORK IN SYSTEMATIC AGROSTOLOGY

Beiträge zur Gramineenflora von Misiones: E. L. EKMAN (*Arkiv f. Botanik*, 11: no. 4. 1912).

The author visited for three months in 1907–08, Misiones, that portion of Argentina lying between Uruguay and Paraguay. The above article is a critical account of the grasses collected at this time. The author enumerates 125 species and gives a table showing the relation of these to the surrounding regions. The larger genera are *Panicum* 27 species (23 species as the genus is limited by Hitchcock and Chase), *Paspalum* 19 species and *Andropogon* 14 species (including *Sorghum, Sorghastrum* and *Heteropogon*). There are four beautiful plates, taken from photographs, by the gelatin process, and illustrating the inflorescence, the details of which are excellently shown. The work inspires confidence from the incorporation of numerous critical notes. It is interesting to note that the anomalous *Leptochloa spicata* is transferred to the genus *Tripogon*, a disposition which is well supported by evidence. The descriptions of new species are in Latin, the notes in German.

The Grama Grasses: DAVID GRIFFITHS (*Contr. Nat. Herb.*, 14: 343–428, 1912).

This was reviewed recently by Dr. Bessey[1]

[1] SCIENCE, April 12, 1912, p. 590.