

plutonic masses from which the younger Tertiary basalts—alkaline, trachytes, etc.—were derived. They permeated the Jurassic beds, and the reservoir became charged with waters of fairly uniform composition, carbonate of soda predominating over chloride—in the west. In the east the denudation of the basalt from the intake beds, accompanied by rainfall conditions in early Pleistocene, led to the accession of surface water which is not only displacing earlier accumulations, but also carrying salts downwards from the actual outcrop. The meteoric supply is considered to be the predominant, and the plutonic supply the subordinate, at the present day. Various lines of further inquiry are pointed out, and it is strongly urged that the Government may realise the extremely important and complex nature of the problem, and should sanction some scheme for its thorough study.—T. W. Keele: The Sydney water supply. The author relies upon the present catchment area of 350 square miles, on which there are seven available sites for storage reservoirs, together with the Woronora catchment area of eighty-five square miles, on which there are two sites for reservoirs, together with fifty-five square miles on the cap of the mountain range at Wingecarribee, on which there are two sites for reservoirs; the total storage capacity, including Prospect Reservoir, amounting to 116,337 million gallons, to meet the requirements of Sydney for the next twenty years, or up to the end of 1937, when, he estimates, there will be a population of 2,082,000, with a consumption per head per day of 63 gallons, the total estimated daily consumption being 131,207,000 million gallons.

## PARIS.

Academy of Sciences, September 3.—M. J. Boussinesq in the chair.—G. Humbert: Some properties of binary indefinite quadratic forms.—G. A. Boulenger: The classification of fresh-water fishes.—G. Rémondos: The classification of the transcendental points of the inverse of integral or meromorphic functions.—P. Dejean: The classification of nickel and manganese steels. Steels containing less than 25 per cent. of nickel, giving a critical point at different temperatures on heating or cooling, and usually classified as irreversible, should be divided into two classes: from 0 to 10 per cent. of nickel, the perlitic steels, pseudo- or quasi-reversible, and from 10 to 25 per cent. nickel, martensic, and truly irreversible. The classification of manganese steels is also considered and some modifications suggested.—C. Galaine, C. Lenormand, and C. Houbert: The economic utilisation of the peats of Chateaufort-sur-Rance (Ille-et-Vilaine). The turf is submitted to a hydraulic press giving pressures of 50 to 100 kilograms per square centimetre, and the briquettes thus formed contain only 60 per cent. of water. These are heated in an autoclave for twenty-five minutes to a temperature of 160° C., and on leaving the autoclave are in a condition permitting of rapid air drying down to 25 per cent. of moisture. A recuperative arrangement for the drying is suggested.—A. Cochain: An attempt at an explanation of some peculiarities in the tectonics of the Alpine system.—J. Mascart: The winter of 1916-17.—A. Goris: The utilisation of *Esculus hippocastanum* (horse chestnut).

## BOOKS RECEIVED.

Proceedings of the London Mathematical Society. Second Series. Vol. xv. Pp. liii+454. (London: F. Hodgson.)

A Critical Revision of the Genus *Eucalyptus*. By J. H. Maiden. Vol. iv. Part 1. (Sydney: W. A. Gullick.) 2s. 6d.

Ulugh Beg's Catalogue of Stars. Revised from all NO. 2499, VOL. 100]

Persian Manuscripts existing in Great Britain, with a Vocabulary of Persian and Arabic Words. By E. B. Knobel. Pp. 109. (Washington: Carnegie Institution.)

Department of Marine Biology of the Carnegie Institution of Washington. Papers from the Department. Vol. xi. (Washington: Carnegie Institution.)

The Beginner's Psychology. By Prof. E. B. Titchener. Pp. xvi+362. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 6s. net.

Human Physiology. By Prof. L. Luciani. Translated by F. A. Welby. Vol. iv., The Sense Organs. Pp. x+519. (London: Macmillan and Co., Ltd.) 21s. net.

Artificial Dye-Staffs: Their Nature, Manufacture, and Uses. By A. R. J. Ramsey and H. C. Weston. Pp. ix+212. (London: G. Routledge and Sons, Ltd.) 3s. 6d. net.

Refractory Materials: Their Manufacture and Uses. By A. B. Searle. Pp. xii+444. (London: C. Griffin and Co., Ltd.) 15s. net.

A Concordance to the Poems of John Keats. Compiled and edited by D. L. Baldwin and others. (Washington: Carnegie Institution.)

General Types of Superior Men. By O. L. Schwarz. Pp. 435. (Boston, Mass.: R. G. Badger.) 2.50 dollars net.

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