Introductory Notes on Quantitative Chemical Analysis. By CHARLES WILLIAM FOULK, Professor of Analytical Chemistry in the Ohio State University. Second edition, revised and enlarged. Columbus, Ohio. 1910.

This is a very detailed but simple manual for college work in quantitative analysis. 130 out of 239 pages are given to general principles and methods. Detailed description of 14 practical analyses occupies the remainder of the volume.

E. R.

Qualitative Chemical Analysis, Organic and Inorganic. By F. MOLLWO PERKIN, Ph.D., Late Head of the Chemistry Department, Borough Polytechnic Institute, London. Third edition. New York, Longmans, Green, & Co.

This is an excellent manual of systematic, qualitative, inorganic analysis followed by a manual of qualitative organic analysis; the latter necessarily consists chiefly of special tests. It will doubtless be found useful.

E. R.

Publications of the Astronomical and Astrophysical Society of America. Vol. 1, pp. xxvii + 347. Ann Arbor, Mich. 1910.

This volume, published by authorization of the society at its tenth annual meeting in 1909, is devoted (after a brief introductory sketch) to accounts of its meetings, including the two informal conferences which preceded its organization, and to abstracts of the papers presented. The last occupy by far the greater part of the work. To review them would be practically to give an account of the astronomical work done in this country in the last twelve years.

Perhaps the strongest impression left after glancing over them is of the advance that has been made, both in the means and results of observation, since the first conference was held at the dedication of the Yerkes Observatory in 1897.

To the members of the society nothing is likely to be more prominent in memory than the inspiration resulting from its meetings, with their abundant opportunity for conference and discussion, and the cordial hospitality shown at the various places of meeting.

HENRY NORRIS RUSSELL
PRINCETON UNIVERSITY

SPECIAL ARTICLES

THE "DILUTE" FORMS OF YELLOW MICE[1]

A MODIFIED variety of the dark-eyed black mouse exists in the dilute black or "blue" of the fanciers. When the hairs of these dilute black animals are examined microscopically and compared with those of ordinary or intense blacks, it will be found that a reduction in the number of the pigment granules has taken place. It is not a large reduction, but is nevertheless sufficiently pronounced to be recognized with considerable ease. The same relation is observable between the intense and the dilute varieties of brown, known as "chocolate" and "silver-fawn," respectively, as well as in the corresponding varieties of black-agouti and brown-agouti.

The hairs of cream, or light yellow, mice, as compared with those of ordinary yellow mice, show, when examined microscopically, a very pronounced reduction in the amount of yellow pigment. This reduction is clearly more complete than that seen in the dilute black or dilute brown forms. Moreover, the last two forms named are remarkably constant in their degree of dilution, while cream forms may vary through deep creams to light yellows and from these to deep red-orange forms showing a full complement of pigment granules.

It is known that in the case of brown and black the dilute condition behaves as an independent unit-character, and so can be transferred in crosses from brown to black or *vice versa*. The dilute condition is also recessive to the intense, in crosses, so that dilute animals bred together produce only dilute offspring.

The question now arises whether "cream"

[1] Contributions from the Laboratory of Genetics, Bussey Institution, Harvard University, No. 11.