Essai critique sur l'hypothèse des atomes dans la science contemporaine. ARTHUR HANNEQUIN. Paris, Alcan. 1899. Second Edition. Pp. 457.

Social Phases of Education in the School and the Home. SAMUEL T. DUTTON. New York and London, The Macmillan Company. 1899. Pp. viii + 259.

The Fur Seals and Fur Seal Islands of the North Pacific Ocean. DAVID STARR JORDAN. Washington, Government Printing Office. 1898. Pp. 606 and 13 Plates.

SCIENTIFIC JOURNALS AND ARTICLES.

American Chemical Journal, May. The Action of Metals on Nitric Acid: By P. C. Freer and G. O. Higsley. The reduction of strong acid is due to the metals alone, but with dilute acid both metal and hydrogen take part in the reduction. On the Dissociation of Phosphorus Pentabromide in Solution in Organic Solvents: By J. H. Kastle and W. A. Beatty. On the Color of Compounds of Bromine and of Iodine: By J. H. Kastle. The explanation offered is that the color is due to a slight dissociation of the solid substance. On the Formation of Potassiums B-ferricyanide through the action of Acids on the Normal Ferricyanide: By J. Locke and G. H. Edwards. A very small amount of acid is sufficient to produce this change without the presence of any oxidizing agent. Trinitrophenylmalonic Ester: By C. L. Jackson and J. I. Phinney. The Relation of Trivalent to Pentavalent Nitrogen: By A. Lachman. The authors report the results so far obtained in an attempt to establish the trivalent or pentavalent condition of nitrogen, in various compounds, by the action with zinc ethyl.

J. ELLIOTT GILPIN.

SOCIETIES AND ACADEMIES.

NEW YORK ACADEMY OF SCIENCES—SECTION OF BIOLOGY, MARCH 14, 1899.

OBSERVATIONS on the Germ Layers of Teleost Fishes: F. B. Sumner.

Mr. Sumner showed that Teleost eggs can be divided into two types according to their approach to the holoblastic form of cleavage; that germ disc and yolk cannot strictly be contrasted as epiblast and hypoblast respectively; that the germ-ring arises either by involution or delamination or both; that the 'prostoma' of Kupffer is a reality. Kupffer's contention that the prostoma represents the entire blastopore is, however, wrong. Mr. Sumner showed also that the hypoblast in the stone-catfish is derived partly from the posterior lip of the prostoma and partly from the germ-ring; perhaps wholly from the prostoma in the trout; that the function of Kupffer's vesicle, which arises as a cleft between the prostomal entoderm and the involuted margin of the blastoderm, is probably the absorption of fluid nutriment elaborated from the yolk by the periblast.

Further Notes on the Echinoderms of Bermuda: H. L. Clark. Presented by Professor C. L. Bristol.

Dr. Clark's paper sums up the work on the Echinoderms collected by the New York University Expedition in the summers of '97 and '98, and presents a check list of the Echinoderms thus far reported from Bermuda. The collection of 1898 was especially rich in holothurians, containing many species hitherto collected, adding several others to the list from Bermuda, and one new to science. From his work on *Stichopus* Dr. Clark suggests that the different forms found in Bermuda may be mature and immature individuals of *S. möbii* (Semp.). *Synapta vivipara* was found under conditions widely different from those in Jamaica. The new *Synapta* is allied to *S. inhærens*, and Dr. Clark has named it *S. acanthia*.

The Echinoderms from Bermuda are distributed as follows: Asteroidea, 4; Ophiuroidea, 7; Echinoidea, 8; Holothuroidea, 10.

The Sequence of Moults and Plumages of the Passerine Birds of New York State: Jonathan Dwight, M. D.

Dr. Dwight fully described the process of moulting and its relation to the plumage of about one hundred and fifty species of land birds common to eastern North America. The early plumage of these birds was described, together with the time and method of the acquisition of later plumages. Stress was laid upon the underlying principles of the sequence or succession of plumages peculiar to each species, and the moults and plumages were classified according to a definite scheme by the author.

GARY N. CALKINS,
Secretary.