

is no need of extended notice of the separate essays, which are so well known to scientists, but their publication together, assisted by the preface, tells us that as a unit they still represent Mr. Huxley's views upon evolution and that he has in later years not swerved to any great extent from the position adopted even in the first essay. This collection of essays of Darwinian hypothesis certainly forms a valuable addition to one's library on evolutionary topics. The title is unfortunate, for Professor Huxley has chosen the same title which has been earlier used by Professor Gray for a similar book, and two books with the same title are sure to produce confusion.

*Guide to the Study of Common Plants.* An Introduction to Botany. By VOLNEY M. SPALDING, Professor of Botany in the University of Michigan. Boston, D. C. Heath and Co., 246 p., 1884, 85 cts.

This little book will doubtless prove of great assistance to many teachers of botany in the elementary classes. The author has given an admirable series of exercises, developing a natural and practicable method in the elementary study of plants and plant life. The publication has been suggested by the frequent inquiries of teachers regarding the preparation in botany required for admission to the University of Michigan.

*Summer Birds of Green County, Pa.* By WARREN JACOBS. Waynesburg, Pa., Republican Book and Job Office.

*Bird Life in Labrador.* By WINFRED A. STEARNS. Amherst, Mass. \$1.

THE first of these is a brief pamphlet giving a list of the summer birds of Green County, with a note or two as to their habits.

The second is a somewhat more extended account of the birds of Labrador and takes partly the form of a

narrative of Mr. Stearns's journey in that country. It contains no descriptions of the birds but more in regard to their habits and abundance.

—S. C. Griggs and Company of Chicago have published a book by John P. Davis on "The Union Pacific Railway," which gives a history of the railway in question from its origin to the present time, with special reference to its relations with the United States Government. It tells how the idea of a trans-continental railway originated and how for many years its realization was prevented by the difficulties of the work and the influence of sectional jealousies. The successive attempts that were made to obtain a charter are recounted, with an analysis of the charter under which the road was actually built. A chapter is also devoted to the operations of the Credit Mobilier and the legislative scandal that arose in consequence. The author is inclined to excuse the operations in question on the ground that they were no worse than occurred in the building of other railroads in those days; and yet in his preface he says, speaking of the Union Pacific: "The agencies through which this particular instrument was obtained and applied to use will be found seriously out of harmony with settled political and moral principles." In conclusion, Mr. Davis considers briefly what steps the government ought to take to recover the sum due it from the railway company, which will amount at the maturity of the bonds in 1899 to \$125,000,000. He notices several plans that have been suggested, but comes to no definite conclusion as to which is the most advisable; so that on the practical aspect of the subject he does not shed much light. As a history of the railway, however, the book will doubtless be of use.

# A Tonic

**For Brain-Workers, the Weak and Debilitated.**

## HORSFORD'S ACID PHOSPHATE

is without exception, the Best Remedy for relieving Mental and Nervous Exhaustion; and where the system has become debilitated by disease, it acts as a general tonic and vitalizer, affording sustenance to both brain and body.

**Dr. E. Cornell Esten**, Philadelphia, Pa., says: "I have met with the greatest and most satisfactory results in dyspepsia and general derangement of the cerebral and nervous systems, causing debility and exhaustion."

Descriptive pamphlet free.

**Rumford Chemical Works,**  
Providence, R.I.

Beware of Substitutes and Imitations.

**EXCHANGES.**

[Free of charge to all, if of satisfactory character. Address, N. D. C. Hodges, 874 Broadway, New York.]

**FOR SALE OR EXCHANGE.**—Safe, nearly new, 1,150 pounds. Will sell cheap, or exchange for a Safety Bicycle, Gasoline Engine, Music Instruments, or anything that may suit. Safe has been used but little and is as good as when bought. Address, A. Lagerstrom, St. Peter, Minn.

**LIVING** near the famous "Serpent Mound," Adams County, Ohio. I have had opportunity to make a collection of pre-historic relics. I will sell same to any one interested in archæology. Write me. Warren Cowen, Elmville, Highland County, Ohio.

**TO EXCHANGE.**—Herbarium specimens. Address, H. P. Chandler, Beaver Dam, Wisc.

**KARYOKINETIC FIGURES IN MAMMALIAN TISSUES.**—Since the publication of my Preliminary Notice in *Science* for Dec. 1, 1893, many parties have written me asking for permanent preparations showing mitosis. To these parties I have sent slides, and I now offer to all who desire them slides showing mitotic figures in nuclei of embryo kitten. A good immersion objective is necessary to make out the figures satisfactorily. Send 60 cents in stamps. If the slide is not satisfactory, return it, and I will return the money. I do not care to exchange slides. Frank S. Aby, State University, Iowa City, Iowa.

**FOR SALE.**—A small collection of bird skins, consisting of 135 specimens of New England species, most of which are in good condition and all have full data. Nearly all were collected in the Connecticut valley in Massachusetts. Price, \$10. Address, H. L. Clark, 3922 Fifth Avenue, Pittsburgh, Penna.

**FOR SALE.**—Price \$150, cost originally between \$300 and \$400, a microscope and following accessories: Acme (No. 2), stand and case lost, \$75; Crouch, one-fifth collar adjustment and objective, \$25; Tolles, four-tenths ditto, \$45; Tolles amplifier, \$12; Baush and Lomb, half solid eye piece, \$8; Baush and Lomb, acromatic condenser, \$18; Hartnack Polarizer, \$30; turn-table, \$6; Hartnack, camera lucida, \$20. D. T. Marshall, Metuchen, N. J.

**TO EXCHANGE.**—Works on entomology, botany and palæontology for works on Indians and archæology. H. Justin Roddy, Millersville, Pa.

**WANTS.**

**WANTED.**—A young man to canvass for advertisements for *Science*. The usual commission of thirty per cent will be paid. Apply in person at *Science* Office, 874 Broadway, New York.

**DOUBLE** honor graduate in Science and Philosophy desires any suitable work in science, of the nature of teaching preferred. Address, E. A. Beckett, Trinity College, Toronto, Ontario.

**WANTED.**—Theory of the Earth, by Hutton. Principles of Geology, by Lyell. Manual of Geology, by Phillips. Lehrbuch der Geologie und Petrefactenkunde, by Carl Vogt. Etudes sur le Métamorphisme, by Daubrée

**WANTED.**—Second-hand books on osteology, embryology, and comparative anatomy. Send list, stating condition and cash price. Can offer a few good sets of birds' eggs if desired. R. C. McGregor, Palo Alto, California.

**WE** are engaged in a study of the geographical distribution and osteology of our North American Box Tortoises or *Terrapene (Cistudo)*. Specimens from Georgia, Tennessee, Alabama and the Dakotas are especially desired. Material from other localities would be welcomed. Would gladly pay expressage and return specimens if desirable. Specimens should be enclosed in a small box with but little paper (without alcohol) and addressed, W. E. Taylor, Walker Museum, University of Chicago, Chicago, Ill.

**WANTED.**—Addresses of persons interested in archæology. Copies of the new archæologic journal in exchange for lists of collectors. A collection of 10,000 valuable objects, the results of my nine years' exploration in the Mississippi Valley, for sale. Price, \$7,650. Warren K. Moorehead, Waterloo, Indiana.

**WANTED.**—Extracts made from departmental libraries or archives, and from the Congressional Library at the National Capital; languages translated by an experienced linguist. Address, "Translator," 2020 Fifteenth Street, N.W., Washington, D. C.

**WANTED.**—(1) Data of Cases of Contagious Mental Disorders; (2) "Anatomy of Suicide," by Forbes Winslow; "English Suicide Fields," Radcliffe. State date and price of (2) and (3). Address, James Wood, M.D., 162 St. John's Place, Brooklyn, N. Y.

**SOFTLY STEALS THE LIGHT OF DAY**  
when filtered through windows covered with  
**CRYSTOGRAPHS,**  
a substitute for Stained Glass that is inexpensive,  
beautiful, and easily applied.  
30c. per square foot. Samples and catalogue, 10c.  
**CRYSTOGRAPH CO.,**  
316 North Broad St., Philadelphia.

## Fact and Theory Papers

- I. **THE SUPPRESSION OF CONSUMPTION.** By GODFREY W. HAMBLETON, M.D. 12°. 40c.
- II. **THE SOCIETY AND THE "FAD."** By APPLETON MORGAN, Esq. 12°. 20 cents.
- III. **PROTOPLASM AND LIFE** By C. F. COX. 12°. 75 cents.
- IV. **THE CHEROKEES IN PRE-COLUMBIAN TIMES.** By CYRUS THOMAS. 12°. \$1.
- V. **THE TORNADO.** By H. A. HAZEN. 12°. \$1.
- VI. **TIME-RELATIONS OF MENTAL PHENOMENA.** By JOSEPH JASTROW. 12°. 50c.
- VII. **HOUSEHOLD HYGIENE.** By MARY TAYLOR BISSELL. 12°. 75 cents.

N. D. C. HODGES, Publisher,  
874 Broadway, New York.

## Pennsylvania Bedford Springs Mineral Water

For Liver, Kidney and B. dder Troubles.  
For Gravel, Gall Stones, Jaundice.  
For Dyspepsia, Rheumatism and Gout.  
For Dropsy, Bright's Disease, Diabetes.  
For Hemorrhoids, Etc.

It has been used medicinally and prescribed by physicians for nearly one hundred years.

**DIRECTIONS:**—Take one or two glasses about a half-hour before each meal.  
Case One Dozen Half-Gallon Bottles, \$4.50.  
Case Fifty Quarts (Aerated), \$7.50.

Bedford Mineral Springs Co., Bedford, Pa.  
Philadelphia Office, 1004 Walnut St.

## THE WINNIPEG COUNTRY;

OR,

## ROUGHING IT WITH AN ECLIPSE PARTY.

BY

A. ROCHESTER FELLOW.

(S. H. SCUDDER.)

With thirty-two Illustrations and a Map.  
12°. \$1.50.

"This is a sprightly narrative of personal incident. The book will be a pleasant reminder to many of rough experiences on a frontier which is rapidly receding."—*Boston Transcript*.

"The picture of our desolate North-western territory twenty-five years ago, in contrast with its civilized aspect to-day, and the pleasant features of the writer's style, constitute the claims of his little book to present attention."—*The Dial*.

N. D. C. HODGES, 874 Broadway, N. Y.

## Littell's Living Age,

THE ONLY WEEKLY ECLECTIC.  
1844. 1893.

"The Oldest and the Best."

It selects from the whole wide field of EUROPEAN PERIODICAL LITERATURE the best articles by

THE ABLEST LIVING WRITERS  
in every department of  
*Literature, Science, Politics and Art.*  
OPINIONS.

"Only the best has ever filled its pages; the best thought rendered in the purest English. Nothing poor or unworthy has ever appeared in the columns of THE LIVING AGE."—*The Presbyterian, Phila.*

"Considering its size, it is the cheapest of literary periodicals, and no collection of magazine literature is complete without this foremost of eclectics."—*Educational Courant, Louisville, Ky.*

"It is one of the few periodicals which seem indispensable. . . . It contains nearly all the good literature of the time."—*The Churchman, New York.*

"The fields of fiction, biography, travel, science, poetry, criticism, and social and religious discussion all come within its domain."—*Boston Journal.*

"To read it is itself an education in the course of modern thought and literature."—*Buffalo Commercial Advertiser.*

Published WEEKLY at \$8.00 a year, free of postage.

**Club Rates.**—For \$10.15 THE LIVING AGE and SCIENCE will be sent for a year, postpaid.

Rates for clubbing THE LIVING AGE with other periodicals will be sent on application.

Sample copies of THE LIVING AGE, 15 cents each. Address,

Littell & Co., 31 Bedford St., Boston, Mass.

# THE SCIENCE PRESS.

(JUST ESTABLISHED)

Is prepared to do all kinds  
of Book and Job Printing.

SCIENTIFIC WORK

A SPECIALTY.

We shall be glad to  
give Estimates and think  
they will be found very  
satisfactory.

NEW YORK OFFICE, 874 BROADWAY,