

discussing sun-spots and associated magnetic disturbances over the period 1880-92, "Most of these magnetic disturbances occurred when an exceptionally large spot was visible on the sun near the centre of the disc, or about the time of some great change in a sun-spot." It should be quite evident, then, that this marvellous coincidence between certain positions of the disturbed solar surface and auroral displays is, to say the least, not such a hard-and-fast rule as the exponents of the theory claim. Even did we admit that the evidence put forward was not as discordant as pointed out, and accepting the statement that, "Under the physical conditions existing in interplanetary space" (a matter admitting of considerable discussion even yet), "cosmical dust and debris, there sufficiently abundant to shine by reflected sunlight as the zodiacal column, furnish a conducting medium well fitted to convey by induction these solar electro-magnetic impulses to vast distances."¹ The single fact, as explained under section "G," that different observers see unlike auroras at the same instant at their several points of observation, is conclusive proof, to my mind, that this "cosmical dust and debris," either without or within our atmosphere, have not been made luminous by the conveyance of the "solar electro-magnetic impulses," as the visible aurora under this theory would require.

NOTES AND NEWS.

A PRINTING Exposition is to be held at the Grand Central Palace, New York City, from May 1 to June 1 next. It is intended to show, by object lessons on a magnificent scale, the history, and progress of the printing trade since the establishment of the first press in this city 200 years ago by William Bradford. The aim is to show in operation the first rudimentary press, and the latest perfected web press; also type-setting and moulding, electrotyping, stereotyping, and photo-engraving processes, color work, etc.

—Professor J. Mark Baldwin of the University of Toronto has accepted the position recently offered to him as Stuart Professor in Psychology in Princeton University. A suite of rooms in North College have been set apart for a laboratory for experimental psychology, and a liberal appropriation made for its equipment in time to begin work next September. Professor Baldwin intends to offer advanced courses, both graduate and undergraduate, in all the departments of psychological work.

—An interesting discovery of the rare trout, *Salvelinus oquassa*, in a mountain lake in the vicinity of Ottawa, Canada, the capital of the Dominion, is recorded in the last number of the *Ottawa Naturalist*, by Mr. J. F. Whiteaves, zoölogist of the Geological Survey. *S. oquassa*, the blue-backed trout, sometimes called the "Rangeley Lake Trout," is stated by Jordan and Gilbert ("Synop. Fishes N. America," 1883, p. 318) to be the smallest and handsomest of our trouts, and as yet known only from the Rangeley Lakes in western Maine. In 1891, Mr. V. C. Nicholson of Ottawa visited a small lake known as Lac de Marbre, lying in the Laurentian Hills, in the Township of Wakefield, Province of Quebec, a few miles from Ottawa. He noticed the difference between some trout he there took and the ordinary brook trout (*S. fontinalis*) which occurred plentifully in adjoining lakes and streams. Mr. Nicholson was so impressed with the fact that these were of a different species that he procured a living specimen, which is now to be seen alive in one of the aquaria of the Government Fisheries Department Exhibition at Ottawa. The specimen was referred to Mr. Whiteaves, who determined it to be the above species. The occurrence of this rare fish in Canada will be of interest to ichthyologists.

—Mr. G. W. Lichtenhaler, one of the most earnest, energetic, and eminent of American conchologists, died at San Francisco Feb. 20. For twenty years he has done nothing but travel and collect, and his vast collection embraces 6,000 or 8,000 species of shells, 1,000 species of marine algæ, and 500 species of ferns, besides many thousands of duplicates. This entire collection he bequeathed to the Illinois Wesleyan University at Bloomington,

Ill., the city which has been his home for most of his life. In addition to this valuable collection he bequeathed \$500 to put it in suitable shape for preservation. This gives the Illinois Wesleyan University one of the most valuable conchological collections of the country. The ferns and algæ are from every part of the world, and the ferns have a complete collection of those of the Sandwich Islands, and nearly a complete collection of those of North America. The entire collection will be arranged as speedily as possible, and will be accessible to all students of the subjects, as well as to others.

—The series of Saturday lectures, complimentary to the citizens of Washington, given for some years under the auspices of the Philosophical, Anthropological, and Biological Societies of Washington, was discontinued two or three years ago. It is now proposed to resume the series under the auspices of the Anthropological Society, and to arrange the lectures in such manner that each course will serve as a logical introduction to the study of the Science of Man in some of its various aspects. The lectures will be delivered in the lecture room of the U. S. National Museum, at 4.30 P.M., on the dates specified. Citizens of Washington and their friends are cordially invited to attend. The course provisionally fixed for the present season (1892-'93) of the Anthropological Society is as follows: Saturday, Mar. 25, The Human Body, by Dr. D. S. Lamb; Saturday, Apr. 1, The Anthropology of the Brain, by Dr. D. Kerfoot Shute; Saturday, Apr. 8, Status of the Mind Problem, by Professor Lester F. Ward; Saturday, Apr. 15, The Elements of Psychology, by Major J. W. Powell; Saturday, Apr. 22, The Earth, the Home of Man, by W. J. McGee; Saturday, Apr. 29, The Races of Men, by Dr. Daniel G. Brinton; Saturday, May 6, The Evolution of Inventions, by Dr. Otis T. Mason; Saturday, May 13, Primitive Industries, by Thomas Wilson.

—In the summer of 1892, courses of instruction were offered by professors and instructors of Cornell University in botany, chemistry, mathematics, philosophy, physics, English, French, German, drawing, and physical training. The Summer School has now been made an integral part of the university, and, for the summer of 1893, courses are offered in the following subjects: Greek, Latin, German, French, English, elocution, philosophy, pedagogy, history, political and social science, mathematics, physics, chemistry, botany, drawing and art, mechanical drawing, and physical training. Without excluding others qualified to take up the work, these courses are offered for the special benefit of teachers. They afford a practical scheme of university extension, by which the teachers themselves are taught under university instructors, by university methods, and with access to university libraries, museums, and laboratories. The courses are open to women as well as to men, and the same facilities for work are extended to these students as to the regular students of the university. The amount of work implied in these courses is so great that students are advised to confine their attention to one or two subjects. Opportunity will be given for original research under the guidance and with the assistance of members of the instructing corps. Inquiries regarding these courses should be addressed to those in charge of the several departments. The Sage College for Women, a spacious and well appointed dormitory on the university grounds, will be open during the session of the Summer School to women students and to gentlemen with their wives. Inquiries regarding board and rooms may be addressed to Professor Geo. W. Jones; or applications for board and rooms at Sage College, to the manager, Mr. E. P. Gilbert.

—Messrs. D. Appleton & Co's list of spring announcements includes "The United States," by Elisée Reclus, which forms the third volume on North America in Reclus's great work, "The Earth and its Inhabitants;" "Appleton's Annual Cyclopædia for 1892," which will be issued immediately, and, like Reclus, is sold by subscription; "The Principles of Ethics," Vol. II., by Herbert Spencer; "The Laws and Properties of Matter," by R. T. Glazebrook, a new volume in the "Modern Science Series"; "Appleton's Guide-Book to Alaska and the Northwest Coast," by Miss E. R. Scidmore, which will be uniform with "Appleton's Canadian Guide-Books."

¹ Reprint Astronomy and Astro-Physics, No. 113.