

Griffin, Ga., situated near the northern edge of the path of totality and experiencing a duration of only 38 sec. The reason for the brightness of the air was evidently the sun shining on the clouds, which in turn illuminated the atmosphere. The clouds were cirro-cumulus, and, no doubt, very high.

It is almost too early to tell just how much our knowledge of the sun has been increased, but it is certain that much of scientific value will be added to science as a result of the observations of the eclipse of May 18, 1901.

To astronomers the voyage itself was interesting in showing the stars of the southern hemisphere, and in losing sight for a couple of months, of Polaris, the star that appeals to all of us as a personal friend.

Perhaps, outside the eclipse, the most striking feature of the expedition astronomically was the independent discovery on May 3 of the great comet, the honor belonging to Mr. Dinwiddie of the Naval Observatory. It was indeed a magnificent sight, appearing shortly after sunset, with a sweeping tail visible to the naked eye for more than eight degrees in length. We watched eagerly during every clear night—but unfortunately there were not very many beautiful nights—and it was photographed by Professor Barnard. But, if the great comet was seen, the sudden outburst of the star in Perseus escaped our attention. After leaving San Francisco, heavy weather and cloudy nights were experienced till after leaving Honolulu, February 28. As there is as yet no cable to the Hawaiian Islands—but this, we hope, is to come in the near future—no tidings were received of the new star until after the arrival of the party in Sumatra, when Perseus was no longer visible.

The expedition arrived in San Francisco July 16.

The next eclipse that will be generally

observed is that of August 30, 1905, which will be visible in Labrador, Spain, and northern Africa. The points of investigation will be along the same lines as carried out by the American parties, but it is to be hoped that better weather conditions will be experienced than in the Sumatra eclipse of May 18, 1901.

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SCIENTIFIC BOOKS.

Alaska: Volume I., Narrative, Glaciers, Natives, by JOHN BURROUGHS, JOHN MUIR and GEORGE BIRD GRINNELL; Volume II., History, Geography, Resources, by WILLIAM H. DALL, CHARLES KEELER, HENRY GANNETT, WILLIAM H. BREWER, C. HART MERRIAM, GEORGE BIRD GRINNELL and M. L. WASHBURN. New York, Doubleday, Page and Company. 1901. [Superimprinted] Harriman Alaska Expedition, with the cooperation of the Washington Academy of Sciences. [Edited by DR. C. HART MERRIAM.] With 39 colored plates, 85 photogravure plates, 5 maps and 240 text figures. Pp. xxxvii + 383. Price, \$15.

The Harriman Expedition of 1899 was one of the scientific events of that year; and the issue of this sumptuous summary of results is one of the literary events of the current year. Conceived as a pleasure trip, matured in mind as a summer school for a family and a few friends, the Harriman outing took final form as an expedition for research in a region of paramount present interest to science, industry, commerce and public policy. The sea trip—the essential part of the expedition—was made in the steamer *George W. Elder*, with an aggregate personnel (including officers and crew) of 126. The 'scientific party' numbered 25, and there were three artists, two photographers, two stenographers, a surgeon, an assistant surgeon and a trained nurse, besides eleven hunters, packers and camp hands. Nor was the 'scientific' corps such in name only; none were smatterers, and all ranged from distinction through eminence to preeminence in their respective lines, which included anatomy, botany,

engineering, ethnology, forestry, geography, geology, mineralogy, ornithology, paleontology and zoology. Along all these lines the researches were energetic and successful; and the more general results are incorporated in the two volumes just issued, and in a series of special memoirs now in the course of publication by the Washington Academy of Sciences, but designed for ultimate reissue in volumes supplementary to those under notice. These volumes themselves, produced as they were by leading authorities, must form a standard source of knowledge concerning Alaska; and when the series is completed it will undoubtedly command a high place among the classics of place and country.

The body of the first volume opens with a narrative of the expedition by John Burroughs; then follow chapters on the 'Pacific Coast Glaciers,' by John Muir, and on the 'Natives of the Alaska Coast Region,' by George Bird Grinnell. The second volume comprises 'The Discovery and Exploration of Alaska,' by William Healey Dall; 'Days Among Alaska Birds,' by Charles Keeler; 'Forests of Alaska,' by Bernard E. Fernow; 'General Geography,' by Henry Gannett; 'The Alaska Atmosphere,' by William H. Brewer; 'Bogoslof, Our Newest Volcano,' by C. Hart Merriam; 'The Salmon Industry,' by George Bird Grinnell; and 'Fox Farming in Alaska,' by M. L. Washburn. There is also a preface by Mr. Harriman and an introduction by Dr. Merriam, together with an opening poem by Charles Keeler; while the work ends (save for the excellent Index) with an effective poem by Dall, captioned 'The Song of the Innu'it' and (somewhat tautologically) listed as 'The Innu'it People.' It would be impracticable to abstract the papers prepared by the several contributors; it must suffice to note that they are, without exception, excellent, authoritative, well written, and carefully edited by a participant in the expedition, himself a recognized authority in scientific matters. Merely as examples, it may be noted that the chapter on glaciers came from the pen of the world's most sympathetic student of ice fields and ice streams; that the historical chapter was written by the leading authority on Alaskan exploration; and that the account of

Alaskan geography and the accompanying maps were prepared by our foremost practical geographer. The maps, although small, show the general features of the territory satisfactorily; they are, of course, quite up to date, embracing the results of all surveys up to 1900, including those of the expedition itself, as well as those of the U. S. Geological Survey and the U. S. Coast and Geodetic Survey.

The volumes are especially notable for the beauty and fidelity of the illustrations, most of which were based on photographs. The lithograph plates have never been excelled in delicacy and refinement of both color and form; many of them are pictorial gems, displaying landscape and waterscape, mountain and valley, flower and foliage, fur and feather, with a faithfulness seldom sought and never passed. The photogravures are of corresponding excellence; while the text figures combine artistic quality and graphic fidelity in remarkable degree. The typography, paper and binding are correspondingly sumptuous; so that the book is a thing of beauty as well as an object of utility.

Perhaps the most serious defect of the work (despite evident editorial care, which might well have been more prominently acknowledged) is the discontinuity naturally growing out of the multiple authorship; another defect, which must somewhat discommode librarians and dealers as well as students, is the absence of a definite title. 'Alaska,' indeed, stands out boldly on the title-page in carmine ink, while the publisher's imprint and the expeditionary superimprint and vignette are uniform, but otherwise the title-pages are diverse—and worst of all, the title on the back is not that of the book but that of the expedition.

W J M.

The Protozoa. By GARY N. CALKINS, Ph.D. Columbia University Biological Series, Vol. VI. New York, Macmillan Co. Price, \$3.

It is no easy task to compress into a volume of scarcely more than 300 pages a résumé of even the more important facts and theories relating to a large group of organisms like the Protozoa. The difficulty of the task is apparent when one stops to consider that the very position of the Protozoa in the animal kingdom has of necessity enveloped them in a nimbus of