may be benefited by the reminder that other observers, including some of Mr. Muir's companions on the trip in question, have been unaccountably blind to the remarkable phenomena upon which some of his far-reaching conclusions seem to rest.

Such records as this volume affords, in spite of minor defects, are most creditable to the bureau and its officers; and it is to be hoped that the series may be indefinitely continued.

NEW BOOKS.

*** For full titles see 'Publications received at editor's office.'*

'THE perfect way in diet' (Kingsford) is a translation of a thesis presented, in 1880, by the author, for her degree of doctor of medicine, and is a plea for a return to the natural and ancient food of our race, which is better understood when one knows that Miss Kingsford is a vegetarian. —— 'The Russian revolt' (Noble) gives a history of the development of the country, showing the effects of contact with western civilization, and closes with an appeal for a constitutional government for Russia. —— 'Wanderings of plants and animals' (Hehn and Stallybrass) is an attempt to trace the origin of well-known plants and animals by historic and philologic methods. The author holds that Europe owes much more to Asia than the mere botanist and mere zoölogist are willing to admit; that the flora of southern Europe has been revolutionized under the hand of man; and that the evergreen vegetation of Italy and Greece is not indigenous, but is mainly due to the sacred groves planted around the temples of oriental gods and goddesses. He has much to say of Indo-Europeans, or Aryans, at the time of their settling Europe, and holds that the builders of the lake villages in Switzerland were Aryans at a comparatively advanced period. In fact, the low condition of the Aryans on entering Europe, and their subsequent obligations to other Aryans in Asia, and, above all, to the Semitic races in Palestine, form, perhaps, the central idea of the book. —— 'Chemical conversion tables' (Battle and Dancey) are intended to meet a long-felt want on the part of agricultural analytical chemists for some relief from the time-consuming calculations necessary to convert the result of each separate determination into the customary per cent. They embrace only what is required in the analysis of commercial fertilizers and their derivative constituents. —— 'Notes on the chemistry of iron' (Troilius) gives a description of such chemical methods of analysis in iron and steel manufacture as have come under the author's personal observation. —— 'History of Japan' (Thorpe) is a history of the country from the earliest times, giving an account of the primitive religion, and of the different dynasties, and ends with an account of the recent progress of the country. —— 'The principles of house-drainage' (Putnam) contains lectures delivered before the Suffolk district medical society, the Boston society of architects, and the Massachusetts institute of technology, on house-drainage, and the proper construction of wash-basins, closets, soil and drain pipes, with hints as to the size and general arrangements of piping. —— 'First lessons in amateur photography' (Spaulding) gives the beginner, in a few pages, an account of the general method of taking a negative, and obtaining from it a silver print. The subject-matter is arranged in the form of seven short lectures, which were originally delivered before the senior class of a high school. That portion of the book relating to the camera and lens is treated very briefly, and the description of the process of development of the negative is not stated as fully as might be desired. The general criticism on the book is that there is not quite enough of it. —— 'De l'effet artistique en photographie' (Robinson et H. Colard) begins where most books on photography leave off, treating photography wholly from the artistic side, and doing so in a very thorough and satisfactory manner. We can commend the book to all who wish to study the principles of art in photography, and to those who wish to obtain really artistic pictures, whether of landscapes, groups, or portraits.

GEOGRAPHICAL NOTES.

APROPOS of our comments on the facilities for navigation in Hudson Bay (*Science*, No. 142, p. 350), we learn that the company's annual vessel, with a cargo valued at over a million, was recently driven on the bar at the anchorage near Moose Factory, the port of the region, and became a total wreck.

The whaling fleet in Alaskan waters this summer numbered forty sailing-vessels and eight steamers, with a total tonnage of 14,262 tons. No further disasters had occurred up to the latest advices, and the vessels embayed by ice near Point Barrow had been safely extricated. One hundred and twenty-six whales had been taken.

The fishing fleet of the North Pacific has returned to San Francisco. Fourteen trips were made by twelve vessels, aggregating 2,550 tons. The fish taken in Alaskan waters numbered 922,000, and from the Okhotsk Sea 452,000. The value of the catch is about $150,000. This industry has been successfully prosecuted since 1864.

The boundary between the territory of the Argentine Confederation and Brazil, forming the

western limit of the province of Santa Catherina, has been for some time in doubt. Efforts hitherto made to settle it have been fruitless; and the disputed area between the Uruguay and Iguassu Rivers, a strip some seventy-five miles wide, has been regarded as neutral ground. In the little-known region known as the Missiones, formerly governed by the Jesuit missionaries, an old treaty between Spain and Portugal fixed upon two rivers, the Peperi and San Antonio, flowing respectively north to the Iguassu, and south into the Uruguay, as the boundary in question. The determination in modern times of the particular rivers, out of many existing, which were entitled to bear the above names, has been fraught with difficulty. The two governments have now agreed to a joint exploration of the neutral ground, in order that the matter may be permanently settled.

In the report of Governor Swineford of Alaska, recently made public, an interesting *résumé* of affairs in the territory is presented. Educational matters have made some progress, though a want of tact on the part of the agent of the bureau of education, notwithstanding his energy and ability, has aggravated difficulties which, in the nature of things, were serious enough already. The value of the south-eastern part of the territory is warmly maintained by the governor, who upholds essentially views expressed by many travellers, which it has been the fashion, on the part of ignorant or interested persons, to deride as 'rose-colored.' The success of mining and fishing enterprises, and the practicability of auxiliary agriculture, are insisted upon. Hardy vegetables do well, and cattle are sleek and in the best condition. The white population of this part of the territory amounts to 1,900, and that of the partly civilized natives to 7,000 more.

In this connection the New York *Times* very reasonably points out the usefulness of exploration in Alaska, as compared with arctic expeditions. The prospect of a survey of the very dubiously defined boundary will probably before long require systematic and extensive work in this direction. The indirect results of such investigation can hardly fail to be important.

ASTRONOMICAL NOTES.

Standards of stellar magnitudes. — The third report of the American committee on standards of stellar magnitudes states that the zones following the twenty-four selected equatorial stars have received a second careful revision with the Princeton 23-inch, which should make them include all stars down to about 16.0 mag., and that a revision will probably be made with the Washington 26-inch. Four of the charts have been distributed to all observatories having large telescopes, with requests for all visible additions which will furnish comparisons of the penetrating power of different kinds of telescopes. Certain selected standards in each zone, about 0.5 mag. apart, have been measured at the Harvard college observatory with photometer I, and the two brightest, if not too faint, with the meridian-photometer. A catalogue of these selected standards in the twenty-four zones, giving the positions and provisional magnitudes, is published, and also a table of twenty-one close circumpolars ranging in magnitude from 2.2 to 15.7.

Observing comparison stars. — Dr. Gill expresses the hope (*Astr. nachr.*, 2,688) that some of the numerous well-equipped European or American observatories will take up the systematic observation of stars that have been used in comet comparisons, faint stars whose occulations have been observed, zones of stars employed for scale or screw values, or stars that have been used for geodetic purposes. The editor, Dr. Krueger, heartily seconds the proposal, and announces that Dr. Hirsch, director of the Neuchâtel observatory, stands ready to determine the places of such stars at the request of computers of orbits. He hopes to announce later that other observatories have promised co-operation.

The new observatory of Bordeaux. — This observatory, founded in 1871, has just now (*Comptes rendus*, ci. 690) published its first volume of *Annales*, containing a minute description of the instruments (a meridian-circle of 0.19 m. aperture, two equatorials of 0.22 and 0.39 m., and three clocks), and also a determination of the longitude of the observatory. An important piece of work has been undertaken by the director, M. Rayet, in the re-observation of the 23,000 stars in Argelander's southern zones between — 15° and — 31° of declination.

Longitude of the Cordoba observatory. — In the *Astromische nachrichten*, 2,683, Dr. Gould publishes the finally adopted value of the longitude of the Cordoba meridian-circle, depending upon exchanges of longitude signals with Buenos Aires on the east, and Valparaiso on the west. Buenos Aires was determined by Capt. Green, U.S.N., via Lisbon and Rio de Janeiro, and Valparaiso by Commander Davis, U.S.N., via Washington and Panama, and the two results agree within $0^s.05$, a very satisfactory accordance. Dr. Gould adopts as the final definitive position of the Cordoba meridian-circle: —

$$\phi = -31^\circ\ 25'\ 15''.46$$
$$\lambda = 4^h\ 16^m\ 48^s.2,\ \text{W.}$$