portraits of three hundred and fifty men and women, and over three thousand figures of Indians of the tribes known as Sacs, Foxes, Konzas, Osages, Comanches, Pawnees, Kiowas, Sioux, Omahas, Missouries, Mandans, Flatheads, Blackfeet, Crows, Gros Ventres, Crees, Assineboins, Chippewas, Iroquois, Ottawas, Winnebagoes, and twenty-seven other tribes. Its value as a record of ethnological characters is inestimable.

There were two collections, — one consisting of the original paintings done in the field, exhibited by Mr. Catlin for many years in Europe; the other, copies made at a later date, which was exhibited in the old Smithsonian building many years ago, and now the property of Mr. Catlin's heirs. The collection given to the museum is the original one, and is regarded by artists and ethnologists as by far the most valuable. The pictures, which have been for fifteen years stored away in a warehouse in Philadelphia, are in a remarkably good state of preservation.

There are also on exhibition five paintings by Stanley, — all that remains of the Stanley collection of Indian paintings destroyed by the fire in the Smithsonian building in 1865.

Naval officers in the museum. — In continuance of the policy adopted two years ago, the secretary of the navy has detailed six more ensigns to duty in the museum. These are graduates of the Naval academy in the classes of 1877–79, who have just finished their first three years' cruise, and will now give two years to scientific work under the direction of the officers of the museum. Mr. C. S. McClain has been assigned to the department of marine invertebrates; Mr. C. H. Harlow, to that of arts and industries; Mr. H. M. Witzul, to metallurgy; Mr. H. S. Knapp and Mr. O. G. Dodge, to mineralogy.

Department of mineralogy. — Prof. F. W. Clarke, chemist of the Geological survey, has been appointed honorary curator of minerals, and is preparing a series of minerals for exhibition. Mr. W. S. Yeates, aid in the museum, who has been in temporary charge of the minerals since the death of Dr. Hawes, the former curator, is acting as assistant in this department.

Mr. Joseph Willcox of Philadelphia has deposited his collection of American minerals in the museum, and one thousand of the choicest specimens have been placed on exhibition.

Foods and textiles. — Mr. Romyn Hitchcock is acting as assistant curator, having in charge the collections of foods and textiles. The collection is very rich in the textile products of the Indians, and has considerable quantities of food-materials acquired from foreign governments at the close of the Philadelphia exhibition.

Explorations in Corea. — Mr. Pierre L. Jouy, of the museum staff, is attached to the American embassy in Corea, and is making zoölogical explorations. Ensign J. C. Bernadou, U.S.N., has sailed for Corea, to spend two years in ethnological and mineralogical explorations. Mr. Bernadou was one of the officers detailed to duty at the museum last year.

Voyage of the Albatross. — The steamer Albatross sailed from Norfolk, Jan. 8, for a four-months' cruise in the Caribbean Sea, in the service of the hydrographic office of the navy. She is under command of Lieut. Z. L. Tanner, and carries a special staff of zoölogical workers, including Mr. J. E. Benedict, naturalist in charge; Mr. Willard Nye, jun.; and Ensigns Miner, Garrett, and Ackerman, U.S.N., of the museum staff.

Mammal department. — Mr. Frederick W. True, curator of mammals, is in England, studying methods of investigation and museum administration with Professor Flower, at the Royal college of surgeons in London.

Foraminifera. — Prof. L. A. Lee of Bowdoin college was in Washington, Jan. 3 to Jan. 8, studying the museum collections of foraminifera with reference to his investigations upon the materials obtained by the Fish commission.

Director's office. — During the reconstruction of the east end of the Smithsonian building, Professor Baird is occupying an office in the north-west pavilion of the museum.

NOTES AND NEWS.

ALL the parties sent out by the various governments at the suggestion of the International polar commission have returned home safely, and with valuable meteorological and magnetic records, with the exception of three. The Russian station at the mouth of the Lena will continue its work for another year, on account of delay from storms in reaching its destination. The Finnish, at Sodankyla, although it has finished one good year's work, will continue for another, as the government of Finland has supplied the necessary funds. The misfortunes of the Greely party are too well known.

— The first number of the *Auk*, published under the auspices of the newly organized American ornithologists' union, closely resembles the Bulletin of the Nuttall club, of which it is the continuation, and bids fair to be a credit to American ornithologists. An excellent colored plate forms a frontispiece to the number, and the articles are varied and interesting. One would perhaps justly complain of the space given to disputes over words, and lament the entire absence of papers upon either the anatomy or the general structure of birds, but these are perhaps to come in future numbers; and there is a pleasant flavor of careful out-door observation running through some of the papers, such as those of Messrs. Brewster, Barrows, and Bicknell. The effect of the formation of the union four months ago, is already seen in the plan offered by the committee charged with the subject for co-operative work in the study of bird-migration on this continent. We think a brief account of the formation and purpose of the union would have been a fitting introduction to the number.

— Professor F. M. Snow of the University of Kansas, from observations taken at Lawrence, reports that only three Decembers in the past sixteen years have been milder than that just passed, — 1875, 1877,

and 1881. There were very few days during the month in which building operations were not actively pushed. The sky was clearer, the wind was higher, and the rainfall was more than fifty per cent smaller, than the December average. The remarkable prolonged crimson and orange sunset glow, which was observed in the last week of November, continued with a somewhat intermittent brilliancy during the month of December.

— We take the following personal notes from *Nature*: —

Prof. W. H. Macintosh has been elected to the professorship of comparative anatomy in Trinity college, Dublin, *vice* Professor Macalister, F.R.S., who resigned on his appointment to the anatomy chair at Cambridge. —— By the death of the well-known mathematician, the Rev. W. Roberts, M.A., the Rev. Richard Townsend, M.A., F.R.S., becomes a senior fellow of Trinity college, Dublin, thereby vacating the professorship of natural philosophy held by him since 1870. —— The vacancy in the professorship of geology and mineralogy, in the University of Dublin, has been filled by the election of Professor Sollas of University college, Bristol. This appointment will give great satisfaction, and will afford Mr. Sollas large opportunities for paleontological research; the large collections of fossil plants and vertebrates in the museum in Dublin remaining to this day almost unknown. —— M. Houzeau, who was only recently appointed director of the Brussels observatory, has resigned his post; and it is reported that M. de Konkolly of Gzalla observatory, Hungary, will succeed him.

— The Swedish government intends to establish a botanico-physiological station in the north of Sweden for the study of the flora and the diseases of the crops in that part of the country.

— The Finnish government has ordered a steamer to be specially built in Sweden for the scientific researches about to be prosecuted in the Baltic.

— Lord Rayleigh has reprinted for private circulation, in pamphlet form, several of his most valuable optical papers, including those on the manufacture, reproduction by photography, and theory, of diffraction-gratings, and those on color-mixtures. He has also reprinted some of his papers on electricity and on absolute pitch, from *Nature* and from the reports of the British association, in a convenient pamphlet form.

— At its annual meeting, Jan. 11, the Cambridge entomological club elected the following officers: president, Samuel H. Scudder; secretary, George Dimmock; treasurer, B. P. Mann; librarian, C. C. Eaton; executive committee, Roland Hayward and T. W. Harris.

— Prof. H. Carvill Lewis, of the Academy of natural sciences of Philadelphia, has been appointed lecturer on geology and paleontology at Haverford college, Pennsylvania.

— A dissertation on the 'Proper names of Panjabis,' with special reference to the proper names of villagers in the eastern Panjab, by Capt. R. C. Temple, Bengal staff corps, contains a study of the proper names of the peoples of the Panjab. The book contains, also, long lists of names, showing by what classes of the population the various kinds of them are used, and is provided with an index to over four thousand proper names. The book is published at the Education society's press, Bombay, and by Messrs. Thacker Spink & Co. in Calcutta, and Messrs. Trübner & Co., Ludgate Hill, London.

— Sampson, Low, & Co. announce 'Heath's fern portfolio,' — a series of life-size reproductions of ferns, being in form, color, and venation, accurate representations. The work is to be published in monthly parts.

— The *Publishers' weekly* announces that Rev. A. B. Hervey of Taunton, Mass., has translated Dr. Behren's book on methods of conducting microscopical investigations in the botanical laboratory. He has enhanced the value of the translation by adding the methods of work used in this country.

— Cupples, Upham, & Co., Boston, have ready 'The amphitheatres of ancient Rome,' by Clara L. Wells.

— Schuver, during recent explorations in the Galla country, purchased from them a young negro of a race called Gambil, from whom he obtained interesting details in regard to his people. It appears, from his account in the *Revue géographique*, that the Gambils live on the Komonshi River, an affluent from the right bank of the Sobat, — a name which signifies Cow River, because in the dry season their numerous herds find forage only along its banks. Ostriches and elephants abound. They have a tree which bears a fruit two feet long, weighing ten or twelve pounds, which is softened in water, dried, and eaten. The principal village is Komonshok; but some thirty others were named by this negro, among them Kepil, which is a market where iron, copper, and beads are bought by the Gambils from the Gallas. They eat fowls and eggs, which the Gallas abominate, and raise pigs. They break out the two lower incisors, and wear two little horns of the gazelle or goat on the forehead. Some years since, they were attacked by the Denkas, who almost destroyed the tribe; many of whom, for safety, offered themselves as voluntary slaves to the Lega Gallas.

— At the November meeting of the London society of biblical archaeology, Mr. Pinches read a paper on Babylonian art, as illustrated by Mr. Rassam's latest discoveries. Among the discoveries on the site of the ancient Sippar, Mr. Pinches considers the most important to be a "small egg-shaped object of beautifully veined marble, pierced lengthwise with a rather large hole, and engraved with an inscription of seven lines (two double) containing the name of Sargon of Agade (3800 B.C.)."

Another small object, made of a dark-green stone in a bronze socket engraved or cast in the shape of a

ram's head, bears an inscription stating that it was presented to Samas, the sun-god, by a king of Hana. From the character of the writing, Mr. Pinches places the date of the relic at about 850 B.C., and draws from the fact that it was presented by a foreign king the conclusion that the shrine of the sun-god at Sippar must have attained to great renown.

Another most interesting object of about the date 685 B.C. is a lion's head carved in white limestone, perhaps originally forming a part of some piece of furniture. "The mouth, which was opened threateningly, showed the well-formed teeth. Above the upper lip were, on each side, five curved, sunken grooves, which were formerly inlaid with some material, probably to enable the long feelers or whiskers to be inserted. Wavy grooves for inlaying were also to be seen above the nose. The eyes were inlaid, and the holes for the insertion of the long hairs forming the eyebrows still remained. In the middle of the forehead there had originally been inserted the little winged figure emblematic of the god Assur." The accompanying inscription contains the names of the Assyrian kings Sennacherib and Esarhaddon.

Among other objects mentioned were statues of the sun-god and his attendant deities, all clothed in long robes. The reader pointed out that the specimens of art found by M. Sarzec at Tel-lo are finer than those found by Rassam at Sippar; the former coming from the more polished Akkadian, the latter from the more powerful but less refined Semite.

— The domestication of the ostrich in South Africa is of only some fifteen years standing, all previous product of plumes being due to hunting. At first there was much opposition to the proposal; and it was fancied that the plumes of domesticated birds would prove of inferior quality, which has not turned out to be the case. In 1865 there were only eighty, but in 1883 there are more than a hundred thousand tame ostriches. They have even been introduced into California. In 1880 forty millions of capital was engaged in the business, and a hundred and sixty-three thousand pounds of feathers were exported from the Cape, worth nearly $4,200,000. The birds are kept in enclosures, which, in a natural state, must be twenty or thirty acres in extent per pair. When the area is diminished, they must be supplied with food. They begin to breed at the age of four years, but produce plumes after their first year. The plumes are cut or pulled out. In the latter case injuries sometimes result, both to birds and manipulators; so that the former process is preferred, although after six weeks it is necessary to remove the withered remains of the shaft. The feathers are classed according to their character; as, wing feathers (white), female feathers (white), tail feathers, fancy feathers (black and white), black feathers (long, medium, and short), and lastly gray feathers. Formerly the Cape plumes took only the sixth rank after those from Aleppo, Barbary, Senegal, Egypt, and Mogador, valued in the above-mentioned order. Now, however, the Cape plumes are ranked as high as any. The largest exportation is from Port Elizabeth. England is the great market, followed by France. New York is lately taking an important place in the trade. The value of the feathers has diminished one-third under the increase of production, but the cost of the birds has also diminished. A pair of breeders has been sold within two years for twelve hundred dollars; but at present a pair can be had for two hundred to two hundred and fifty dollars. Under good conditions, a bird produces fifty dollars' worth of plumes per annum, to which must be added the value of the eggs and chicks.

— The Catholic missionaries who have recently established themselves among the Massanzé on the west of Lake Tanganyika are meeting with a good deal of success. The men of the district, great travellers, speak mostly a jargon of several languages. Their own tongue is only heard in purity from the women, by whose aid a grammar and vocabulary have been prepared. An excitement was recently caused by one of the whites cobbling a shoe over an iron last. The natives took this for an actual white man's foot which had been cut off; and one of the missionaries was obliged to take off his foot-gear to satisfy them that white men had toes. The Uambembé, reputed cannibals of the adjacent mountains, who have never suffered any whites to enter their territory before, have welcomed the missionaries, and offered them sites for residence in the villages of the three principal chiefs. This mission-station will be re-enforced very shortly.

— The Stirling Castle, constructed at Glasgow especially for the China trade, during the past season has brought from Woosung to London a cargo of tea in thirty-one days. This is four days shorter than the best previous record. The vessel is supplied with engines of eighty-five hundred horse power, and maintained a perfectly regular speed of eighteen knots throughout the journey.

— In view of the constantly increasing number of meteorological stations in Russia, Rikacheff, vice-director of the Central physical observatory, has undertaken a careful verification of the instruments, methods, and conditions at the different stations.

— A. Roberjot, of the French navy, gives, in the *Bulletin* of the French society of geography, the results of a voyage in 1879 among the New Hebrides, and accompanies them by a small chart and several woodcuts in the text. The naval vessel Second sailed from Noumea, New Caledonia, and touched at various islands, beginning at the south-east with Annatom, and ending with Espiritu Santo to the north-west. Numerous interesting facts in regard to the present condition of the natives, some short lists of words and details in regard to the character of the several islands, are given, and form a useful contribution to our knowledge of a people who are rapidly changing under the influences of missionaries, civilization, and the so-called 'labor-trade,' which appears to be a kind of slavery into which the chiefs sell their unresisting people.