INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

GOVERNMENT ORGANIZATIONS.

Geological survey.

Rocky-mountain division. — This includes the territories of Montana, Dakota, Wyoming, New Mexico, and the state of Colorado, with headquarters at Denver. The corps consists of Messrs. S. F. Emmons, geologist in charge; Ernest Jacal and Whitman Cross, assistant geologists; and W. F. Hillebrand, chemist. This division forms part of the general subdivision of survey-work on mining-geology; i.e., its investigations are devoted more particularly to questions of direct economical importance.

The work already more or less completely accomplished by this division is as follows: —

1°. Monograph on the geology and mining industry of Leadville, which, owing to delays in the government printing-office, is not yet published, but of which an abstract appeared in the Annual report of the director for 1881. 2°. Bulletin on hypersthene andesite, now in press. 3°. Monograph on the geology and mining industry of Ten-mile district. 4°. Monograph on the basaltic mesas near Golden, Col., and their relations to the contiguous tertiary and cretaceous beds. The two latter are expected to be ready for the printer during the spring. 5°. Monograph on the geology and mining-industry of Silver Cliff. The topographic basis for this work is completed, and the geological work will be carried on during the coming summer. 6°. A study of the Denver coal-field. This work is designed to be carried on at intervals when the mountain regions are unapproachable on account of snow. The map, on a scale of one mile to the inch, covering an area of thirty square miles, was commenced in November.

As accessories a number of new and interesting minerals have been discovered in Pike's-Peak region.

Under the orders of the director, collections of typical crystalline rocks are being made, two hundred of each. The plan is, to obtain in time two hundred full suites of typical rocks which have been carefully studied both microscopically and chemically, and which will be distributed to various institutions of learning in the country to serve as a guide for students.

National museum.

Alaskan Fishes. — An important collection of forty-three species of marine fishes from south-eastern Alaska, including a new Triglops, has been recently received from Capt. H. E. Nichols. The collection is a noteworthy one, in that it furnishes proof that the range of the genus Sebastichthys extends far toward the north-west.

PUBLIC AND PRIVATE INSTITUTIONS.

Museum of comparative zoölogy, Cambridge, Mass.

The 'Blake' collections. — The publication of the preliminary reports has made excellent progress during the past year. There now remain unfinished of these, only those upon the fishes, halcyonoids, foraminifera, ostracoids, nemerteans, and some minor groups, as well as the report on the bottoms. It has been decided to publish only the final reports of the fishes of the east coast and of the holothurians. That on the fishes will be published in connection with the U. S. fish-commission, and include many species of shallower waters, first brought to light by the dredgings of the 'Fish-hawk.' Prof. G. B. Goode and Dr. Bean have already prepared the greater part of this report. Dr. H. Theel of Stockholm, who has undertaken to work up the holothurians, hopes next spring to transmit his final report to the Swedish academy of Stockholm, where it is to be published. Prof. Verrill has completed the examination of the east coast Halcyonariae and Actinariae, and is preparing a report of these and of those of the Caribbean Sea and Gulf of Mexico for the museum bulletin. Work is progressing favorably on the other reports. Mr. Agassiz has nearly completed the first part of the final report on the Echini: twenty plates are already on stone, and the remaining plates are well advanced. Mr. W. H. Dall is engaged in preparing the final report on the mollusks. His preliminary reports have already been issued. Mr. P. H. Carpenter has concluded his preliminary report on the Comatulae; and it was published in October, 1881. The crinoids, which had been placed in the hands of the late Sir Wyville Thomson for determination, to be worked up in connection with the 'Challenger' material, have been transferred by Mr. John Murray, of the 'Challenger' office, to Mr. Carpenter. Mr. Carpenter proposes in connection with his father, Dr. W. B. Carpenter, to work out as fully as practicable the minute anatomy of Pentacrinus, for which the material collected by the 'Blake' is quite extensive. In addition to the Pentacrinus material, the museum specimens of Holopus were also placed in his hands. Mr. Carpenter is now preparing a preliminary report on this part of the collection. During the spring, Prof. S. I. Smith completed the report on the Crustacea, collected off the Atlantic coast of the United States during the summer of 1880. The reports already published in the museum bulletin aggregate 465 pp., and 63 pl.; and the collections have also served as the basis of several papers published elsewhere.

Peabody museum of American archaeology, Cambridge, Mass.

Indian portraits. — The museum has received the originals of sixty-eight of the plates given in McKenny and Hall's folio volumes on the 'Indian tribes of North America,' published in 1836, together with thirty-seven other portraits of Indians. These portraits are of life-size, and with few exceptions were painted by Mr. C. B. King, an artist of considerable merit. They were presented to the museum by the heirs of the late E. P. Tileston and Amos Hollingsworth of Boston, and are unquestionably of great ethnological value.

NOTES AND NEWS.

— The editor of SCIENCE will be glad to receive and acknowledge subscriptions to the Balfour memorial fund, mentioned in the leading article of this week's issue: they may also be sent to Prof. H. Newell Martin, of the Johns Hopkins university, Baltimore, who is secretary and treasurer of the American committee.

— Prof. William L. Dudley of Cincinnati has recently succeeded in obtaining a good electro-deposit of iridium, which is susceptible of high polish. The bath is kept of constant strength, by continuous solution of the metal. Thin platinum foil, coated with iridium, retains its flexibility, while the coating does not readily scale. It has been proposed to use this process to give a hard face to copper-plate engravings.

As the iridium does not rust, its advantage over steel plates is obvious. The composition of the bath has not yet been announced.

— Lewis Boss of Dudley observatory, Miles Rock of the national observatory at Washington, and Charles S. Cudlip, photographer, who were sent by the U. S. transit of Venus commission to Santiago, Chili, have just returned home by way of Panama. They had a very clear day, and obtained good observations of all four contacts, and a complete set of photographs (204). Boss observed with a 5-in. Clark refractor, power 200; Rock, with a 3-in. Clark refractor, power 200; and the photographs were taken with a horizontal photoheliograph, of 40 feet focal length, forming an image on the photograph-plate about four and one-half inches in diameter. In the contact observations the images were almost steady, the definition sharp, and no atmospheric and other phenomena like black drop, etc., were observed, but simple geometrical contacts. The narrow ribbon of twilight around Venus was very silvery, and might be mistaken by inexperienced observers for direct sunlight. This twilight ribbon entirely surrounded Venus more than three minutes before second and after third contact.

— The annual meeting of the trustees of the Peabody museum of American archaeology and ethnology, at Cambridge, was held on the 17th inst., under the chairmanship of the Hon. R. C. Winthrop. The treasurer announced that he had received $900 from subscribers in aid of American research, in addition to the $2,550 mentioned in the last annual report; and the curator was authorized to expend the same for the continuation of explorations under his direction. The curator, in presenting his report, stated that he had also received $775 for special purposes, of which $550 were for Miss Fletcher's researches among the Indians. Twenty-five free lectures were given at the museum during the past year. Numerous gifts were made to the library, and the additions to the museum had been larger than in any preceding year; the large increase being chiefly due to the special explorations made either by the curator or under his immediate direction through the liberality of patrons of American research. The great importance of systematic explorations was insisted upon; and the curator showed, by his *résumé* of what the limited expenditure had permitted, what might be done were the museum provided with sufficient means for more extended work. He also called attention to the necessity of prompt action on the part of those who were willing to aid the museum in its work if thorough and systematic explorations were to be made in our country; as every year hundreds of mounds, earth-works, and ancient burial-places were destroyed. In concluding his report, he expressed the hope that some liberal patron of science would provide for an increase of the regular income of the museum; and also for an addition to the building, since the present accommodations would not permit of the exhibition of more than two-thirds of the collections.

— 'Parish botany' was the subject of a lecture which Dr. G. L. Goodale gave last Wednesday evening before the Divinity school at Cambridge, being one of a course addressed to students of theology by officers of other departments of Harvard university. 'The boundary-line between science and religion' was the topic discussed by Prof. John Trowbridge a fortnight ago.

— On the 8th of January was held the first meeting of the Colorado scientific society, an association organized for the promotion of scientific intercourse, observation, and record, in the State of Colorado. Its officers for the first year are S. F. Emmons, president; Richard Pearce, vice-president; Whitman Cross, secretary and treasurer; Richard Pearce, Hermann Beeger, A. Eilers, and W. F. Hillebrand, standing committee. The especial attention of the members will be devoted to geology, mineralogy, and chemistry, and their application to the industrial arts. The society certainly has in Colorado a most interesting field for investigation.

— At the meeting of the Biological society of Washington, Dec. 22, Prof. C. V. Riley pointed out the real nature of the so-called 'lignified snake of Brazil,' found beneath the bark of a tree: it is, in brief, probably nothing but the excrementitious filling of the burrow of a beetle larva, one of the Buprestidae. The head of the supposed serpent is a knot, which has been manipulated to increase the deception its natural form would give; and the tapering and tortuous form of the burrow would be impossible in a snake. Mr. Riley invites the owner to submit his specimen to a crucial test — dissection. Of course the owner declined: his idol would then have perished.

— Capt. Abney has lately delivered four very interesting lectures on recent advances in photography, before the London society of arts. The text is given in full in the last few numbers of the British journal of photography; but an excellent *résumé* may be found in the Popular science monthly for January, 1883.

— The first part of Vogt and Specht's Natural history of mammals has appeared (Munich: F. Bruckmann), with many well-executed drawings by the last-named author. The work is popular in tone.

— The British admiralty surveys in 1881, mostly in Asiatic waters, are summarized in the Nautical magazine (November, 1882, 819–828).

— A representative of the Newfoundland fisheries commission recently visited Washington for the purpose of studying the methods of propagating codfish employed by the U. S. fish-commission, with a view of putting them into practice in Newfoundland.

— A pharmaceutical journal in the German language has just been started in New York by Dr. F. Hoffmann, analyst to the State board of health. It is to be published monthly; and the January number, which has just reached us, contains original papers on Rhus cotinoïdes, by Prof. K. Mohr; on The position of pharmacy in regard to mysterious remedies in North America, by Prof. Dr. Maisch; a Report of the changes of the state of the pharmacopeia, by Dr. A. Tscheppe, besides two unsigned articles. Eight pages are given up to a monthly classified *rundschau* of pharmacy, excellently done.

— Dr. S. M. Burnett spoke at the meeting of the Washington philosophical society, Jan. 13, on Refraction in the principal meridian of a triaxial ellipsoid; regular astigmatism and cylindrical lenses; and was followed by Prof. William Harkness on the Monochromatic aberration of the human eye in aphakia. Jan. 27, Mr. H. H. Bates read a paper on the Nature of matter.

— At a meeting of the section of mechanics and engineering of the Ohio mechanics' institute, Jan. 23, papers were presented on Governors and fly-wheels, by Mr. James B. Stanwood; The wastage of water, by Mr. Thomas J. Bell; Saving of fuel, and smoke-prevention, by Mr. J. P. Kilbreth. A report on Pumping-engines for public water-supply was presented by John W. Hill, M.E.; and Prof. R. B. Warder made some remarks on The duty of steam-engines.

— At the Philosophical society of Washington, Feb. 10, Dr. A. F. A. King read a paper on the 'Prevention of malarial diseases, illustrating, *inter alia*, the conservative function of ague.' Mr. E. J. Farquhar and Dr. J. S. Billings took exception to the theories advanced. Capt. C. E. Dutton exhibited a series of oil-paintings illustrative of the volcanic phenomena of the Hawaiian islands.

— At the meeting of the American academy of arts and sciences, Feb. 14, the following papers were presented: Quantitative researches in photography, by Mr. W. H. Pickering; Photography as a means of determining the light and color of the stars, by Messrs. E. C. and W. H. Pickering; The historical hydrography of the west coast of North America, by Mr. J. Winsor.

— At the meeting of the Biological society of Washington, Feb. 16, Dr. Coues' paper on zoölogical nomenclature applied to histology was discussed, and papers were read on Biology and classification, by Mr. Newton P. Scudder; On the structures of protoplasm and karyokinesis, by Mr. John S. Ryder; The human fauna of the District of Columbia, by Prof. Otis T. Mason; Section cutting and mounting of hard woods, with illustrations, by Dr. Thomas Taylor.

— A lecture on the development of civilization was delivered in the U.S. national museum by Prof. E. A. Fay of the National deaf-mute institute, on Jan. 26, before the students of the latter institution. The gesture-language was delivered with remarkable ease and grace. The audience was very attentive throughout the lecture, and showed its appreciation of the points made by the speaker, by nods and movements of the fingers.

— We learn from the daily papers, that a proposition to abolish the geographical survey of New Jersey is meeting with favor on the part of some would-be economists in the legislature of that state. Apart entirely from its scientific worth, it would be hard to point out a state in the Union where the quiet inexpensive work of the state geologist has been so fruitful in economical value as here.

— A course of ten lectures on zoölogy is being given by Prof. A. S. Bickmore in the American museum of natural history, Central Park, New York, on Saturday mornings. The lectures commenced on Jan. 20, and are almost wholly upon the higher vertebrates, those in March being upon monkeys and the different races of men. We understand the course is very well attended; but the small lecture-room is a disgrace to such an institution if it contemplated such courses at the outset.

— In recognition of their scientific services at the international geological congress held last year at Bologna, the Italian government has created Prof. James Hall of Albany a Commander of the ancient order of Sts. Mauritius and Lazarus, and given Dr. T. Sterry Hunt of Montreal the rank and decoration of Officer of the same order.

— The first half of the second course of scientific lectures delivered in the National museum, under the auspices of the biological and anthropological societies of Washington, now completed, has met with the most remarkable and flattering success. The audiences increased in size from the first; the number of persons attending lectures far exceeding the seating-capacity of the hall, and in one instance exceeding two thousand. The first lecture by Capt. Clarence E. Dutton, on Rivers, although brief and not illustrated, contained a clear, and in many respects original, exposition of the *rôle* of rivers in the great drama of the globe. Prof. Otis T. Mason, who delivered the second lecture on the 20th ult., took for his topic The races of men, and gave a brief but succinct summary of the present condition of knowledge in this branch of anthropology. The lecture was illustrated by busts and casts of different races of men, from the museum collection, and by diagrams. Mr. George Kennan, who was third in the course, delivered an eloquent lecture on the Mountains and mountaineers of the Caucasus, and was listened to with closest attention during the two hours occupied in its delivery. Dr. D. W. Prentiss happily selected for his theme, Mesmerism in animals, — a topic which, although attracting much attention among French *savants*, is familiar to the

American public almost exclusively through the insufficient medium of the newspapers. Dr. Theo. Gill, who lectured on the 10th inst. on Mythical animals, departed from the consideration of animals which exist in fact, and gave his audience an account of some which exist in fancy. Dr. John S. Billings closed the first half of the course, taking for his theme, Germs and epidemics. He gave a concise account of the results of the latest investigations of Pasteur and others, regarding the relations of microscopic organisms to disease; weaving in, to a greater or less extent, his own views upon the matter.

The programme for the second half of the course is as follows: Feb. 24, Prof. L. F. Ward, the Plant life of the globe, past and present; March 3, Mr. W. H. Dall, Pearls and pearl-fisheries; March 10, Major J. W. Powell, Indian mythology; March 17, Prof. C. V. Riley, Adaptation and interdependence between plants and insects; March 24, Prof. C. A. White, the Teachings of paleontology; March 31, Dr. R. Fletcher, U. S. A., Human proportion in art and anthropometry.

RECENT BOOKS AND PAMPHLETS.

[*Continuations and brief papers extracted from serial literature without repagination are not included in this list. Exceptions are made for annual reports of American institutions, newly established periodicals, and memoirs of considerable extent.*]

Baltimore — Johns Hopkins university. Studies in historical and political science; ed. by Herbert B. Adams. Baltimore, *University*. 1882-83. 8°.

I. An introduction to American institutional history; by Edward A. Freeman. 1882. p. 39.
II. The Germanic origin of New England towns; by H. B. Adams. With notes on cooperation in university work. 1882. p. 57.
III. Local government in Illinois; by Albert Shaw: Local government in Pennsylvania; by E. R. L. Gould. Jan., 1883. p. 37.
IV. Saxon tithing-men in America; by H. B. Adams. Feb., 1883. p. 23.

Bible myths, and their parallels in other religions; being a comparison of the old and new testament myths and miracles with those of heathen nations of antiquity, considering also their origin and meaning. N. Y., *Bouton*. 1883. 650 p. 8°.

Bouchon-Brandely. Rapport au ministre de la marine sur la génération et la fécondation artificielle des huîtres portugaises. Paris, 1882. 51 p. 8°.

Brubaker, A. P. Physiology. Philad., *Blakiston*. 1883. 133 p. 12°.

Buet, Charles. Madagascar, la reine des îles africaines: histoire, moeurs, religion, flore, etc. Paris, *Palmé*. 1883. 12+391 p. 8°.

Cambridge entomological club. Annual reports for 1882. Cambridge, *Club*. 1883. 31 p. 32°.

Connecticut agricultural experiment station. Annual report for 1882. New Haven, *State*. 1883. 114 p. 8°.

Conn. — Shell fish commissioners. Second report. Middletown, *State*. 1883. 44 p., map. 8°.

Davy, Humphry. Les derniers jours d'un philosophe. Entretiens sur la nature, les sciences, les métamorphoses de la terre et du ciel, l'humanite, l'âme, et la vie eternelle. Ouvrage traduit de l'anglais, accompagné d'une préface et de notes, par C. Flammarion. *9e éd.* Paris, *Didier*. 1882. 32+374 p. 18°.

Fabre, J. Henri. Histoire naturelle. Géologie (programme officiel du 3 août 1880 et instructions ministérielles du 18 oct. 1881). *3e ann.* Paris, *Delagrave*. 1882. 260 p. 12°.

Ferris, B. G. A new theory of the origin of species. N. Y., *Fowler and Wells*. 1883. 278 p. 12°.

Gerhard, W. Paul. House drainage and sanitary plumbing. N. Y., *Van Nostrand*. 1882. 205 p. 24°.

Girardin, J. Leçons de chimie élémentaire appliquée aux arts industriels. *6e éd.* Tom. iii. Chimie organique. Paris, *Masson*. 1883. 620 p., 330 fig. 8°.

Grand, S. L'industrie huitrière à Marennes; la Seudre et ses rivages; des claires à verdir, soins annuels à donner aux claires, etc. Paris, *Michelet*. 1883. 31 p. 8°.

Guérin, Victor. Rapports addressés à M. le ministre de l'instruction publique, sur sa mission scientifique dans le Liban. Paris, *imp. Levé*. 1883. 28 p. 8°.

Hale, P. M. The woods and timbers of North Carolina; a compilation from the botanical and geological reports of Drs. Curtis, Emmons, and Kerr; to which are added information obtained from the census bureau and accurate reports from the several counties. Raleigh, *Hale*. 1883. 272 p., map. 12°.

Indiana. — Department of geology and natural history. Eleventh annual report, 1881. John Collett, state geologist. Indianapolis, *State*. 1882. 414 p., 5 maps, 55 pl. 8°.

Kuhff, G. A. Les organes génitaux de l'homme et de la femme, structure et fonctions, etc. *2e éd.* Paris, *Ballière*. 1883. 64 p. 8°.

Latteux, Paul. Manuel de technique microscopique, ou Guide pratique pour l'étude et le maniement du microscope. *2e éd.* Paris, *Delahaye*, etc. 1883. 11+477 p., 177 fig. 18°.

Lecouteux, Edouard. Le blé, sa culture intensive et extensive. Paris, *imp. Chaix*. 1882. 8+413 p., 60 fig. 18°.

Marchand, Léon. Botanique cryptogamique pharmaco-médicale; programme raisonné d'un cours professé à l'école supérieure de pharmacie de Paris. Tom. i. Paris, *Doin*. 1883. 481 p. 8°.

Milne-Edwards, Alphonse. Anatomie et physiologie animales. Paris, *Masson*. 1883. 4+406 p. 311 fig. 18°.

Mortillet, Gabriel de. Le préhistorique: antiquité de l'homme (Bibl. sciences contemp.). Paris, *Reinwald*. 1883. 642 p. 8°.

New York. — Linnaean society. Transactions. Vol. i. N.Y., *Society*. 1882. 168 p., portr. l. 8°.

Niox, *Comm.* Géographie militaire. v. Europe orientale et bassin de la Méditerranée. 1e partie: péninsule des Balkans. Paris, *Baudoin*. 1882. 8+231 p. 18°.

O'Donovan, E. The Merv oasis. Travels and adventures east of the Caspian during 1879-81, including five months' residence among the Tekkés of Merv. 2 vol. N.Y. 1883. illustr. 8°.

Pharmaceutische rundschau und zeitung für die wissenschaftlichen gewerblichen interessen der pharmacie und verwandten berufs- und geschäftszweige in den Vereinigten Staaten; herausg. von Dr. Fr. Hoffmann. Bd. i. no. i. N. Y. 1883. 28 p., *m.* 4°.

Pioger, L. M. Dieu dans ses oeuvres; les splendeurs de l'astronomie, ou Il y a d'autres mondes que le nôtre. Paris, *Haton*. 1883. 18°.

La lune. 4+315 p.
Le soleil. 8+373 p.

Poitevin, A. Traité des impressions photographiques. Suivi d'appendices relatifs aux procédés, par M. Léon Vidal. *2e éd.* Paris, *Gauthier-Villars*. 1883. 14+280 p., portr. 18°.

Proctor, R. A. The great pyramid, observatory, tomb and temple. N.Y., *Worthington*. 1883. 8+323 p. illustr. 12°.

Rawlinson, G. The religions of the ancient world, including Egypt, Assyria and Babylonia, Persia, India, Phoenicia, Etruria, Greece, Rome. N.Y., *Scribner*. 1883. 12+249 p. illustr. 12°.

Rochas, Albert de. La science des philosophes et l'art des thaumaturges dans l'antiquité. Paris, *Masson*. 1883. 220 p. 24 pl. 8°.

Selvatico, Silvestro. Sur le développement embryonnaire des bombycieus. Traduction par J. Pelletan. Paris, *Doin*. 1883. 31 p., 7 pl. 8°.

Tissandier, Gaston. Les martyrs de la science. *2e éd.* Paris, *Dreyfous*. 1883. 334 p., 34 pl. 8°.

Tyndall, J. Heat as a mode of motion. *New enl. ed.* N.Y., *Appleton*. 1883. illustr. 12°.

U.S. — Corps of engineers U.S. army. Professional papers, no. 24. Primary triangulation of the lake survey; by Lieut.-Col. C. B. Comstock, U.S.A. Wash., *Government*. 1882. 920 p. 4°.

Waldmann, F. Der bernstein im alterthum; historisch-philologische skizze. Fellin. 1883. 87 p. 4°.

Wharton, W. J. L. Hydrographical surveying; a description of the means and methods employed in constructing marine charts. London. 1882. 8°.

Yung, Emile. Le sommeil normal et le sommeil pathologique; magnetisme animal, hypnotisme, névrose hystérique. (Bibl. biol. intern.) Paris, *Doin*. 1883. 196 p. 18°.