language may be indicated, as in chemistry, by a symbol; as, Cβ 1 H. = Corean, Tibetan, etc. — (*Journ. anthrop. inst.*, xiii. 32–52.) O. T. M. [439

Muskoki strategy. — The following method of Indian stratagem is told for the first time by Mr. H. S. Halbert. When a small party of Muskokis wished to attack a Choctaw village, they would arrange themselves in ambush at convenient intervals to within three hundred yards of the village. The bravest man would now crawl up as near the village as practicable, dig a pit and place himself in it, where he would wait until daybreak. The first Choctaw whom he then saw stirring about near his ambuscade he would shoot down, spring forward, and scalp him in the twinkling of an eye. He would then flee toward the second ambuscader. If he was pursued, which was generally the case, the pursuer received the fire of this ambuscader. The two warriors then fled to the third man in ambush. If the pursuers still followed, they received the fire of this man. The three now ran to the fourth ambushed warrior, where the same scene was enacted; and so on until the place of the last man was reached. — (*Amer. antiq.*, v. 277.) J. W. P. [440

INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

GOVERNMENT ORGANIZATIONS.

Geological survey.

Paleontology. — Mr. Lester F. Ward, paleobotanist of the survey, is at work preparing a catalogue of fossil plants, with their geological relations, which will probably be published during the coming spring. Fifty-one boxes of Fort Union fossil plants, collected by Mr. Ward near Glendive, Montana, last July, have been received at the office of the survey.

A paleontological report on the paleozoic fossils of the Eureka district of Nevada, by Mr. Charles D. Walcott, is almost ready for the press. The number of paleozoic fossils from this district exceeds four hundred species.

During the month of October a large number of Potsdam fossils from Saratoga, N.Y., and some Trenton fossils from Trenton Falls, N.Y., were added to the collections in the hands of Mr. Walcott, who has charge of the department of paleozoic paleontology.

One of the papers in the fourth annual report of the survey is 'A review of the North-American fossil Ostreidae,' by Dr. C. A. White. It will be illustrated by forty-eight full-page plates of figures, giving figures of all the leading species of fossil forms of oysters, and of the leading varieties of Ostrea virginica, for comparison. For it, also, Professor Angelo Heilprin furnishes a revised catalogue of the tertiary oysters; and Mr. John A. Ryder adds a concise life-history of the common oyster, illustrating its anatomy, and giving the results of his recent experiments in the artificial propagation of oysters.

Chemistry. — A laboratory, to be in charge of Prof. F. W. Clarke, is being organized in connection with the survey. Heretofore the chemical work of the survey has been done at various laboratories scattered through the country, and at the field-laboratories at Denver, Salt Lake City, and San Francisco. A laboratory for physical experiments will probably be established in connection with the chemical division.

West-Virginia forests. — During September and October, Col. George W. Shutt examined the southern and eastern portions of West Virginia with especial reference to the distribution of timber, its economic value, and the facilities of transportation to market *viâ* the streams of the region. He travelled over a thousand miles by wagon, and two hundred on horseback, and expresses the opinion that nearly one-half of the state is covered with a virgin forest, the value of which, if rendered marketable, would amount to billions of dollars.

Geology. — In making an excavation a few weeks ago for a building on Connecticut Avenue, in the north-western section of Washington, D.C., the interesting discovery was made of the remains of a subterranean forest. The fact was mentioned at the meeting of the Biological society of Washington, Nov. 2, by Professor Lester F. Ward; and, from the excellent preservation of the wood, the opinion was expressed that it was simply a collection of drift-wood that had been washed into a ravine in comparatively recent time. Mr. W. J. McGee of the Geological survey, who has been working up the geological structure of the District of Columbia for some time, had also examined the locality in question, and was of the opinion that the deposit was of quaternary or prequaternary age. A few days after the meeting of the Biological society, above mentioned, he, with Professor Ward, Mr. G. K. Gilbert, and Mr. J. B. Marcou, re-examined the buried forest; and Mr. McGee's opinion was confirmed, — the stratum was found to underlie the quaternary gravels of the district. The occurrence is of interest, since the slightly altered wood undoubtedly represents the end of the long interval extending from the cretaceous to the beginning of the quaternary, during which the lignite beds and iron-ore deposits, so common in the region, were formed.

Publications. — The survey has just issued a miscellaneous work, one of a series of statistical papers, which is distinct from the Monographs and Bulletins, but, like them, is for sale at cost price (fifty cents in this case). The title of this work is, 'Mineral resources of the United States,' by Albert Williams, jun., chief of division of mining statistics and technology. In its 813 pages it gives the statistics of our mineral production for the year ending June, 1883, and also a mass of information in relation to the production of coal, petroleum, iron, copper, lead, and zinc. It also treats of building-stones, clays, fertili-

zers, etc., and gives lists of the useful minerals of the United States, with localities, and concludes with extracts from the new tariff relating to import duties upon chemical products, metals, mineral products, etc. It will therefore be seen that the work is of practical value; and this fact is also indicated by the demand for it, which comes largely from miners and mine-owners, particularly from the west.

Bulletin no. 2 of the survey is also by Albert Williams, jun. Its title is, 'Gold and silver conversion-tables, giving the coining values of Troy ounces of fine metal, and the weights of fine metal represented by given sums of United States money.' It is a pamphlet of eight pages, and is of especial value to assayers and bullion-dealers.

The third annual report is printed, and waiting for a few of the illustrations. The fourth annual report, with the exception of the index, is in type. Both these reports will probably be issued early during the forthcoming year.

Dutton's 'Tertiary history of the Grand Cañon district, with atlas' (volume ii. of the Monographs of the survey) has been distributed to European institutions, and will now be distributed to American institutions.

Volume iii. of the Monographs, 'Geology of the Comstock lode and Washoe district,' with atlas, by George F. Becker, is being delivered to the survey by the government printer, and will soon be ready for distribution.

The Monographs of the survey are not for gratuitous distribution. They can only be distributed through a fair exchange for books needed in the library of the survey. Copies over and above the number needed for such exchange are for sale. The price of volume ii. is $10.12, and of volume iii., $11.

NOTES AND NEWS.

THOSE who are interested in our leading article this week will be pleased to learn, that, in his will, Barrande bequeathed his collections, library, and undistributed copies of his publications, to the museum at Prague. He further provided for the continuation of his work by a bequest of ten thousand florins to the museum, which, by its acceptance, pledges itself to fulfil his wishes. Drs. Krejči, Frič, Kořiska, Prachenský, and Bellot were appointed by him a commission to see that his designs are carried out; and Drs. Waagen and Novák, well-known paleontologists, designated to execute the work, — the former to complete the 'colonies,' gasteropods, and echinoderms; the latter, the bryozoans and corals.

The museum proposes to establish a Barrande fund for supporting further studies on the Silurian formation of Bohemia; and any gifts that may come from America for that purpose would, we are assured, be deemed particularly valuable. The editor of SCIENCE will be pleased to forward to the museum at Prague any contributions that American naturalists may desire to make, and to acknowledge the same in these columns.

— Sir Charles William Siemens died in London, Nov. 20. He was born at Leuthe, in Hanover, in 1823. From 1844 he resided in England. In 1858 he established, with his brother, the firm which has become famous through the telegraph-cables they have made. For ten years (1853-63) Dr. Siemens was engaged on the regenerative gas-furnace, and since that time his methods of manufacturing steel have met with the greatest success.

— Information has been received from Sunda Straits, giving details of the hydrographical and topographical changes due to the great Java earthquake. These seem to be less extensive than heretofore reported by the press. Commander P. F. Harrington, U.S.N., reports the hills and trees in the vicinity of St. Nicholas Point covered with ashes, but otherwise unchanged. The soundings here remain the same. The sea has rushed through the valleys of Thwartway Island, tearing away the vegetation, and leaving the low land bare; and, from a distance, these breaks in the forest give it the appearance of five islands, but there is no change in the shore-line or soundings. The same is true of Anjer, where the base of the lighthouse at Fourth Point, and the buoys of the submarine cable, are the only monuments of that populous town. The plains have been swept by the sea, and show only uprooted palms, and ghastly relics of the inhabitants. Krakatoa volcano appeared active; but on a nearer approach it was found that the appearance resulted from ashes, etc., falling down the precipitous cliffs, and carried off by the wind.

The north-western part of Krakatoa Island has disappeared. The immense mass which is missing seems to have formerly been the choked-up crater; and its material has probably modified the sea-bottom northward from its place. No bottom could be found in the vacant spot with twenty fathoms of line. Prior to the eruption, Verlaten and Lang islands were covered with verdure. Their contour has been but slightly changed, but they are covered with scoria. A small island has formed eastward from Verlaten. The Polish Hat has disappeared, and where it stood is more than twenty fathoms water. A new rock, about twenty feet in height, has risen in eight fathoms, near the southern point of Lang Island. The channel south from Bezee Island has been closed to navigation by reefs and islets not yet surveyed. From the northern end of the island a reef extends in a north-westerly direction, apparently connecting with other islands to the westward.

The whole coast of Java between Second and Fourth points has been swept clean by the sea, but there is no essential change in the shore-line and soundings. Masses of floating pumice are wedged in Lampong Bay, and interrupt communication with Telok Betong. The lighthouse at Java Head remains undisturbed, as does that at Flat Point. Other dangers may be developed on a careful survey, but the main gate of the Straits of Sunda seems unimpeded.

— Mr. W. F. Denning of Bristol, Eng., noting the fact that accounts of large meteors form a frequent subject of correspondence in the columns of scientific journals, but that it is not often the case that the