

ANTHROPOLOGY.

Are the stone graves modern?—Throughout Kentucky, Tennessee, and other sections draining into the Ohio, the aborigines, at some former period, buried their dead in stone boxes or cists, made of thin slabs of limestone, and other rock. There are those who maintain that this form of burial was practised by a highly cultured race of people, who passed away before our modern Indians set foot in that country. Dr. Charles Rau, in a paper before the American association at Montreal, gave an account of graves opened by Dr. Wislizenus, in Randolph County, Ill., containing both of Dr. Morton's types of North-Americans,—the Toltec, and the true American. Dr. H. Shoemaker opened a stone grave, in Monroe County, Ill., which contained the remains of a Kickapoo Indian. Dr. Rau concludes that the stone graves owe their origin to the race inhabiting within historic times, or even earlier, the district where they are found. — (*Amer. nat.*, Feb.) J. W. P. [802]

Cup-shaped sculpture.—One of the enigmas of the stone age is the occurrence of cup-shaped cuttings, singly or in groups, from the size of a half-bullet upwards, upon small, movable bowlders, as well as upon large stationary rocks. Dr. Rau, in his paper on "Cup-shaped and other lapidarian sculpture in the old world and in America," has ransacked the literature of Great Britain, France, Switzerland, Germany, Scandinavia, and India, for old-world examples. Many of these are very elaborately carved and encircled, giving evidence of connection with ancient mystic rites. The American specimens are much ruder; and the cautious author is disinclined to attribute to them the same mystery that hangs over those in the eastern world. — (*Contr. N. A. ethnol.*, v.) O. T. M. [803]

EGYPTOLOGY.

The Fayoum.—The good work done by Mr. Cope Whitehouse (*Rev. archéol.*, Juin, 1882; *Bull. Amer. geogr. soc.*, 1882, No. 2) on the boundaries of the ancient Lake Moeris is to be supplemented by further researches into the formation of the pyramids, and the possibilities of irrigation in the Fayoum. Mr. Whitehouse is now in Cairo; and, with the aid of government surveyors, he hopes to verify his theories, which have been somewhat misunderstood. — (*Athenaeum*, March 24.) H. O. [804]

Ancient Egyptian economy.—Broken crockery was not entirely lost to the Egyptians, for he saved the pieces to have inscribed on them the tax-gatherer's

receipts. Immense numbers of these inscribed fragments have been found; and, from the collection in the British museum, Dr. Birch has given a series of translations, showing the tax in Egypt under the early Caesars. — (*Proc. soc. bibl. arch.*, March 6.) H. O. [805]

New discoveries.—This year promises large results in new discoveries. The director of the Boolak museum, Maspero, though with scanty means, has made great progress in new work. He has obtained a royal sarcophagus of the twenty-fifth dynasty, and several valuable mummies. He has also found an Egyptian crypt containing an early Coptic church, with all its ecclesiastical furniture intact. — (*Academy*, March 24.) H. O. [806]

Work in progress.—The mural decorations of the tomb of Seti I. (Belzoni's tomb) at Bab-el-Molook are now being copied by Lefébure, Loret, and Bourgoin, members of the French college of archeology at Cairo. The temple of Luxor is to be excavated in the autumn. Maspero is to resume the excavation of the pyramid at Lisht in May. — (*Academy*, March 24.) H. O. [807]

EARLY INSTITUTIONS.

Manumissions at four roads.—F. E. Warren finds proof, in the Leofric missal, — a X.-XI. cent. MS. preserved at the Bodleian in Oxford, — of the existence, in England, of the custom of manumitting slaves at places where four roads meet (*on feower wegas*). The passage is given in full from the MS. — (*Rev. cel.*, Jan., 1882. Cf. *Rep. Devonsh. ass. adv. soc.*, viii. 417, 1876.) D. W. R. [808]

Ostracism.—M. Houssaye gives a brief history of ostracism as it obtained in Athens and other Greek cities and colonies, *à propos* of the effort to introduce something like it in France. — (*Rev. deux mondes*, 15 Fév.) D. W. R. [809]

Moslem property-law.—Baron von Tornauf writes at length upon this subject. It has been generally maintained, in regard to the land in Moslem countries, that it has been the common property of the people (*der moslemischen religionsgenossenschaft*); that the individual has had no real right of property in it, only a usufruct (*nutzungsrecht*). The writer attempts to show, that according to the Koran, according to tradition, and according to the law-books (*scheriätbüchern*), private property in land, in the fullest sense of the term (*volles eisenhumsrecht auf grund und boden*), existed everywhere. The writer gives a list of sources (34 titles). — (*Zeitschr. deutsch. morgenl. gesellsch.*, xxxvi. ii.) D. W. R. [810]

INTELLIGENCE FROM AMERICAN SCIENTIFIC STATIONS.

PUBLIC AND PRIVATE INSTITUTIONS.

Peabody museum of American archaeology, Cambridge, Mass.

The ancient cemetery at Madisonville, O.—In his recent explorations in connection with Dr. G. L. Metz, Mr. Putnam made extensive researches at this place. Near the cemetery are several earth-circles, from forty-three to fifty-eight feet in diameter. Trenches run through four of them revealed in the centre of two, on the clay bottom, beds of ashes in which were potsherds, flint-flakes, and burnt bones, with a perforated clam-shell. In the trench, on the clay, there were found a rudely chipped stone hoe, a rude stone axe with a groove, a split pebble, a fragment of a stone gorget, worked antler-tips, and several rude

arrow-points. The results of the examination of these circles proved them to be the sites of habitations, over which from one to two feet of leaf-mould has formed since the central fires were deserted and the circular structures fell from decay. The few things found within the circles, and the abundance of household utensils, implements, and refuse, found in the ash-pits, suggest the possibility, that on special occasions all the articles in the house, with ornaments, implements, and other personal objects, were partly destroyed by fire, and the remnants, being gathered up with the ashes, were deposited in a pit dug for the purpose; while the great number of broken bones of various animals, mixed with the ashes, indicates that at such times feasts were held. Such a custom would

account for the character of the contents of the pits, and the great number of the pits would indicate a long-continued occupation of the village.

Houghton Farm, Mountainville, N.Y.

Soil-temperatures. — During the past year observations upon soil-temperature were carried on by means of mercurial thermometers of special form, adjusted to slow action. It was sought, however, to overcome the inconveniences of their use, since they require to be drawn at each reading. Recourse was therefore had to an electrical thermometer, which is now in use, supplementary to, and in extension of, the mercurial thermometers, which will continue to be employed. The thermo-apparatus is really one of Becquerel's electrical thermometers, though some slight modifications have been introduced in the method of balancing the current. The apparatus, as now in use, may be described as follows:—

Couples are formed by soldering copper wires to the iron line-wire at such intervals as are required. These are then enclosed in an hermetically-sealed tube, filled with perfectly dry sand, free from iron, and brought to a common level above ground, where they are firmly connected with binding-screws. The cap carrying the binding-screws is of wood, three inches greater in diameter than the tube, and painted white to prevent any possibility of radiation from the latter. The tube is then planted in the soil, wherever needed, at the required depth, and such connection made with the office as may be desired. A duplicate set of couples, exactly like those in the tube, is provided in case a test is necessary. The wires are of the same size all the way through, and are No. 8 copper, insulated, and No. 8 telegraph wire. In the office a second couple of the copper and iron wires is carried down into a well of wood, having a diameter of one inch and a quarter inside, with walls of two inches thickness. This is provided with a stop-cock and overflow attachment. From a convenient support, immediately above the mouth of the well, depend a thermometer, the bulb of which is brought to the same level with the couple, and two glass tubes, which supply hot and cold water from reservoirs placed upon a shelf at convenient distance. A switch-board is introduced into the line of copper wire, while a very sensitive galvanometer is introduced into the line of iron wire. A deflection of the galvanometer-needle to the right or left is neutralized by balancing the current with the hot or cold water, as the case may require, and readings taken when the needle comes to zero. I believe this is the first attempt in this country to apply this apparatus to so extended use.

So far as observations have gone, the advantages which this instrument possesses over mercurial thermometers seem to be: 1. Greater accuracy; 2. Expedition; 3. Greater durability; 4. Personal comfort, and absence of those annoyances inseparably connected with an instrument which must be drawn from the ground in all kinds of weather, and at all times of day and night.

NOTES AND NEWS.

Since the leading article of this issue was ready for the press, the circular issued by the council of the British association to its members has come to hand; and from this it would appear that the meeting in Montreal is regarded as substantially determined on, and that the time fixed for it will probably

be the last week of August, or the first week of September, 1884.

—The director of the Illinois state laboratory of natural history, Dr. S. A. Forbes, to whose office that of the state entomologist was recently attached, has made a special report to the state board of education, in which he states that the field-work of the botanical and zoölogical survey of Illinois is substantially done, and recommends the immediate preparation and publication of systematic reports on the natural history of the state, having special reference to economic ends. He estimates four volumes as necessary to cover the zoölogy (exclusive of injurious insects) and cryptogamic botany. No additional appropriations appear to be asked for, but rather the diversion of the ordinary funds from field-work to publication. The board of education, which controls the laboratory in Illinois, was so appreciative of the excellent work which Dr. Forbes has been doing as to vote him \$500 more than he asked. We wish Dr. Forbes success in his new departure, and shall anticipate volumes of unusual interest.

—Professor Weyenberg of Cordoba, who has written upon many branches of zoölogy since he has been in the Argentine Republic, is now engaged, also, in publishing a manual of histology in Spanish, under the title 'Principios histológicos.'

—Mr. Dörfleger, of the Milwaukee natural history society, has recently made a minute examination of the methods of installation and details of administration in the National museum, with a view of introducing the best features into the new museum to be established by the city of Milwaukee, upon the basis of the collections of the society. Mr. Dörfleger will visit the natural history museums in the larger eastern cities before returning to the west.

—Major-Gen. Pitt-Rivers, of the English army, has spent the most of his leisure in collecting the most valuable anthropological museum in the world, from one point of view. Discarding areas, races, and epochs, his aim has been to collect from all parts of the world the products and implements of human industry in such numbers and variety as to illustrate the evolution of art. Having offered this splendid collection to the university of Oxford on condition that they would erect a building adequate to contain and to display it properly, Gen. Pitt-Rivers has the satisfaction of knowing that the university authorities will comply with his request. The delegates of the museum have elected Dr. E. B. Tylor to be keeper of the collection.

—Under the title "Mittheilungen über die arbeiten der moor-versuchs-station in Bremen in den jahren 1877-1882 (von Dr. M. Fleischer)," the last number of the *Landwirthschaftliche jahrbücher* (xii., no. 192) contains an account of the founding of this station, which is devoted to the investigation of questions connected with the reclamation and cultivation