heat flowed easily, being carried off by a quantity of cold water resting on it, the water being continually renewed so as to maintain at this end nearly a constant low temperature. The difference of temperature between the two faces was about 200° C. The most successful experiments were made on slate and granite. Each experiment lasted about two hours, and after the first hour the temperature of the three thermo-electric junctions remained sensibly constant.

The results showed in both cases that the conductivity at the higher temperature was less than at the lower. The differences were very decided and such as must certainly be taken into account in all discussions of the transmission of heat by conduction in hot bodies. The work is very important and should be, as it doubtless will be, extended to greater variety of material and wider range of temperature.

T. C. M.

SCIENTIFIC NOTES AND NEWS.

PITHECANTHROPUS ERECTUS.

Mr. Arthur Keith contributes to the July number of *Science Progress* a careful account of human fossil remains; he summarizes his conclusions as follows:

"Our human geological record stretches as yet back only to an early post-tertiary period.[1] The millions of men that must have lived in these early times are known to us by only four specimens complete enough to permit of their reconstruction. But, taking these as samples of their race, we can say with some assurance that man has not changed much since the Tertiary period of the earth's history closed. The majority of men were distinctly and considerably smaller-brained than the great majority of the men that now people the earth's surface. Their faces, jaws, teeth and muscular ridges were more pronounced. Since Tertiary times the human structural progress has lain in an increase of brain and a diminution in the masticatory and alimentary systems. In these features we may suppose that early Quaternary man approached the primate ancestors of the race; in these features he certainly comes nearer the present simian type. But, for the purpose of giving us a clue to the human line of descent, the fossil remains at present known assist us not one single jot. Their configuration is quite conformable to the theory of a common descent; they bear out the truth of that theory. They also show us that man since the Tertiary period has changed structurally very little. There is nothing remarkable in this, for allied primitive forms (*Paleopithecus sivalenses*[1] and *Dryopithecus*[2]) demonstrate to us that, since the Miocene period, the anthropoid type has changed but slightly. We need not then be surprised at being obliged to seek deep within the Tertiary formations the evidences of human descent."

A PROPOSED COUNTY PARK SYSTEM.

At a recent meeting of the Natural Science Association of Staten Island, Mr. Walter C. Kerr, President of the Association, read a paper on 'A proposed County Park System.' Mr. Kerr urged the desirability of putting into execution, before it is too late, some plan to preserve what still remains of the dense forests which covered the island in earlier times. He does not consider it feasible to establish at once a series of parks with the attendant expenses of immediate improvements, but simply "the purchase by the county, at reasonable prices, of various tracts to be held as public land, and eventually, when the county becomes more densely populated, to become a park system joined by county roads. The larger and more distant tracts, however, would possess, as the years go by, an interest far greater than any conventional park could yield, for with the extensive flora of

this island, including 1,320 plants out of about 1,800 in the whole State, a little care and skill would soon convert these areas into botanical museums without destroying their rugged wildness. In this respect a word may not be amiss concerning the advanced and most practical ideas of what should constitute a park. The days of gravel walks, iron benches and notices to 'keep off the grass' have passed, while landscape gardening has in the hands of masters of the art become largely the preservation of nature rather than supplanting it with forced growths. Asphalt drives have yielded to woodland roads, while paths wind through the valleys and between the trees instead of the trees bordering paths laid out in geometrical lines and curves. One of the oldest parks in Chicago is being modified from its conventional character and devoted to the display of native wild plants and flowers that grow or have grown within twenty-five miles of the city."

GENERAL.

STEPS are being taken toward the erection of memorials in honor of Huxley. The Dean of Westminster has signified his willingness that a tablet be placed in the Abbey. It is proposed to establish at Charing-cross Hospital Medical School, of which Mr. Huxley was a student, an annual lecture and a science scholarship and medal. It is also suggested that a statue of the deceased naturalist should be placed in the great hall of the Museum of Natural History at South Kensington, beside those of Darwin and Owen.

THE *American Naturalist* reports an address by Mr. Hedley on the faunal regions of Australia given before the Adelaide meeting of the Australian Association for the Advancement of Science. Mr. Hedley concludes that "superimposed, one above another, may be distinguished three divisions of Australian life. The earliest is the Autochthonian. Possibly this arrived from the Austro-Malayan islands in or before the Cretaceous era and spread over the whole of Australia. The next is the Euronotian. Probably this reached Tasmania from South America, not later than the Miocene epoch; many of the original inhabitants, particularly on the east coast, probably disappeared before the invaders. Thirdly, a contingent of Papuan forms seized on the Queensland coast, late in the Tertiary, and likewise largely exterminated their predecessors."

PROFESSOR SWARTZ, Baron von Müller and Professor Engelmann have been elected correspondents of the Paris Academy of Sciences.

THE Department of Agriculture has obtained from Peru samples of a giant species of maize. The size of the grains is four times as large as those of the species grown in the United States. The plant is very prolific and it is hoped that it will be possible to introduce it into America. Professor E. L. Sturtevant is making a study of this cereal, to which the name of 'Zea amylacæ' has been given, with a view to finding out how it may be cultivated most advantageously.

EXTENSIVE studies of the upper atmosphere have been planned by Professor A. McAdie, of the Weather Bureau, by the means of flying kites. Ten kites, the two leaders measuring six feet high by seven wide and eight others following five feet high by six feet wide, will be flown, if possible, to the hight of two miles. It is hoped, by the means of these experiments and others which will follow them, to make possible the drawing of a map of the atmosphere in which temperature and barometric curves, electric currents, etc., will be located for various parts of the country and for different seasons of the year. The kites will be kept in the air twelve hours, if possible. In order that accurate temperature

curves may be taken, a registering thermometer will be attached near the top of line. A surveyor's transit will be used to calculate the height to which the kites ascend, the differences being worked out by triangulation.

The Third International Congress of Agriculture will be held at Brussels from September 8th to 16th.

An International Exhibition of Hygiene, organized under the direction of M. Brouardel, was opened at Paris on Thursday last. The exhibits are divided into five groups, referring respectively to (1) the hygiene of private houses; (2) city hygiene; (3) the prophylactics of zymotic diseases, demography, sanitary statistics, etc.; (4) the hygiene of childhood, including alimentary hygiene, questions of clothing and physical exercises; (5) industrial and professional hygiene.—*Nature.*

A return has been issued showing the number of experiments performed on living animals in 1894 under licenses, as required in Great Britain. The total number of persons holding licenses during the year was 185, and of these 56 performed no experiments. 3104 experiments were performed in all.

The second Italian Geographical Congress will be held in Rome during the latter part of September, 1895, the days not yet having been designated. Information concerning the Congress, which is held under the patronage of the King of Italy and promises to be one of great importance, can be obtained from the President of the committee, Via del Plebiscito 102, Rome.

The Academy of Sciences of Prague has begun the publication of a *Bulletin Internationale.*

There remains in the treasury of the city of Baltimore about $280,000 left from the fund of $1,000,000 obtained by the issue of city bonds for the purpose of completing the purchase of Clifton Park from the Johns Hopkins estate. It is proposed to use this money in the construction of a Boulevard from Druid Hill Park to Clifton Park.

Professor Sikorski, of the University of Kief, writing in the *Kievlianin* upon the psychology of the Russian people, brings forward some interesting statistics concerning the frequency of suicide in the different nations of Europe. According to these figures the death-rate from suicide per million living is in Saxony 311, in France 210, in Prussia 133, in Austria 130, in Bavaria 90, in England 66, while in Russia it is as low as 30. Further, it is found that during the last thirty years the suicide-rate has in Russia remained stationary, while in all other European countries it has increased by 30 or 40 per cent. The exact significance of figures such as these, relating to so complex a phenomenon as suicide, is not easily brought out. Few, however, will be disposed to question the assertion that much of the explanation of the low rate in Russia is to be found in the patience and long suffering of the Russian peasant under even the worst misfortunes. Among other characteristics Professor Sikorski also finds a certain indecision of character which fears to say a word or do an action which shall not admit of retreat or withdrawal. Crime is comparatively rare in Russia; thus, the number of persons tried for murder per million living in the year 1887 was in Italy 96, in Spain 55, in Austria 22, in France 14, in Russia 10, in Germany 9, and in England only 6.—*The Lancet.*

At the annual meeting of the American Institute of Electrical Engineers Professor F. B. Crocker presented a preliminary report from the committee on indexing electrical literature. The committee reported that it was very desirable for the Institute to undertake a complete index of electrical literature, and that the past, rather than

current, literature should be cared for first as being the more important. The expense of this undertaking would be from $16,000 to $30,000. The committee believed that the index should include brief notes as to the character or scope of articles, since a single line of description would save the looking up of probably seven-eighths of the possible references.

IN *The Atlantic Monthly* for August Mr. Percival Lowell concludes his series of articles on Mars treating the 'oases.' He reviews the evidence on which he finds it probable that we see the effects of local intelligence on the surface of the planet as follows: "We find, in the first place, that the broad physical conditions of the planet are not antagonistic to some form of life; secondly, that there is an apparent dearth of water upon the planet's surface, and, therefore, if beings of sufficient intelligence inhabited it, they would have to resort to irrigation to support life; thirdly, that there turns out to be a network of markings covering the disc precisely counterparting what a system of irrigation would look like; and, lastly, that there is a set of spots placed where we should expect to find the lands thus artificially fertilized, and behaving as such constructed oases should."

DR. D. W. MCGEE, lecturer in Oriental literature in Toronto University, was drowned on July 22d.

DR. ERNEST HENRI BAILLON, the well-known naturalist, died recently in Paris at the age of seventy-two. He was professor of medical botany in the School of Medicine, and of hygiene in the Central School of Arts and Manufactures. He was the author of a number of books on botanical subjects.

PROFESSOR CHARLES C. BABINGTON, professor of botany in Cambridge University, died in Cambridge on July 22d, at the age 87 years.

DR. NORTON S. TOWNSHEND, professor of agriculture in the State University of Ohio, died recently at the age of seventy-nine. He was a student of medicine and graduated in New York in 1840. In 1863 he was appointed medical inspector in the United States army, in which capacity he served until the end of the war. In 1869 he accepted the professorship of agriculture in Iowa Agriculture College, of which he was one of the founders. He resigned a year later to assist in founding the Agricultural and Mechanical College of Ohio, in which institution, now known as the University of Ohio, he held the chair of agriculture from 1873 to the time of his retirement as professor emeritus.

PROFESSOR JULIUS ZUPITZA, the celebrated philologist, died recently in Berlin at the age of 51. He held the chair of English in Berlin University for nineteen years.

UNIVERSITY AND EDUCATIONAL NEWS.

THE Board of Trustees of the City of New York have selected a site for the new College Building on Covent Hill. It consists of 127 city lots bound north by 138th street, south by 140th street, east by St. Nicholas avenue and west by Amsterdam avenue. The appropriation for the site is limited to $600,000, but it is believed that the price of this land will come within the required limits.

THE accommodation of Radcliffe College has been enlarged by the purchase of a new house.

THE trustees of the estate of the late Miss Margaret Harris have given securities valued at £14,000 and yielding about £470 to establish a chair of physics in the Dundee University College.

IT IS proposed to establish an economic museum in the University of Pennsylvania. The museum will contain samples of the products and materials of all the arts, in-