some fragments of wheel-made pottery on the surface of the older tumulus, as well as in the neighboring irrigation column, seems to represent a transition from the older to the newer. This suggests the possibility that the gap was filled by the strata which has disappeared through wind and water erosion, and which must, in any event, have been of considerable thickness.

Through all the cultures except the last—that of the iron stage—there ran a remarkable and characteristic burial custom. The children—at least certain children—and seemingly only children, were buried in the houses, under the floor, in a layer of fire-hardened earth. I was struck last year by the fact that all the human bones I sent from here to Professor Zittel were those of children. The skeletons lie on the side with the knees drawn up in the 'liegende höcker' position. With them have been found beads of turquoise, lapis lazuli, carnelian and other minerals. Eighteen of such burials have been studied.

THE GOLDEN TROUT OF MT. WHITNEY.

THE most beautiful and in many respects the most interesting of all the trouts is the famous golden trout of Mount Whitney. It is known only from a few small mountain streams high up in the Sierras on the western slopes of Whitney, the highest mountain in the United States. It was formerly abundant in Volcano Creek, tributary to the South Fork of Kern River, and has been introduced into Cottonwood Creek and perhaps other streams on the east slope of the Sierras, tributary to Owens Lake. Its original home seems to have been Volcano Creek and in that stream only above the falls.

During the last few years many camping parties have gone into the region and reports have reached the Bureau of Fisheries that the species is in danger of extermination. Recently Stewart Edward White, the author of 'The Blazed Trail,' called attention to the danger, and President Roosevelt, the true naturalist that he is and always alive to more matters of interest than any one else, addressed a letter to the Commissioner of Fish and Fisheries, asking that an investigation be made to determine what steps should be taken for its preservation.

In compliance with the President's request, Commissioner Bowers is sending a party to the Mount Whitney region to find out all they can about the golden trout. It is intended to determine its present distribution, in what streams it is now found, into what it has been transplanted, into what additional streams it might be introduced, and whether the species can be propagated artificially. It is believed there will be no difficulty with cultivating the species if a few individuals for breeding stock can be gotten to one of the government fish hatcheries. This will not be an easy task, as the fish will have to be carried on packhorses for 24 to 48 hours down the east slope of the Sierras through a semi-desert region to Lone Pine, or 3 or 4 days to Visalia.

The expedition that will conduct these investigations will be under the immediate direction of Dr. Barton W. Evermann, assistant in charge Scientific Inquiry in the Bureau of Fisheries. The other members of the party will be Dr. Oliver P. Jenkins and Professor Rufus L. Green, of Stanford University, Professor Chancey Juday, of the University of Colorado, and Captain Charles B. Hudson, the artist, who will paint the golden trout in life colors. Professor Juday will make a special study of the food and feeding habits of the trout, Professor Green will study the physical characters of the streams to be examined, while Drs. Evermann and Jenkins will give their attention to the biological and fish-cultural problems involved and to the geographic distribution of the species. The party will outfit early in July at Visalia, California, with pack outfit and enter the High Sierra by way of Three Rivers and Mineral King. About a month's time will be devoted to the investigations and it is believed that the results will be of great interest to anglers and fish-culturists.

SCIENTIFIC NOTES AND NEWS.

HARVARD UNIVERSITY has conferred the degree of doctor of laws on Dr. William Osler, professor of medicine at the Johns Hopkins University.

Yale University has conferred the degree of doctor of laws on President Charles R. Van Hise, of the University of Wisconsin, and on Dr. W. S. Halsted, professor of surgery in the Johns Hopkins University.

Amherst College has conferred the degree of doctor of laws on Dr. J. H. Tufts, of the class of 1884, now head of the department of philosophy of the University of Chicago.

Hamilton College has conferred the doctorate of science on Dr. E. S. Burgess, the botanist, professor of natural science in the Normal School, New York City.

Dr. A. W. Harris, president of the Jacob Tome Institute and formerly director of the Office of Experiment Stations of the U. S. Department of Agriculture, has been given the doctorate of science by Wesleyan University, where he graduated in 1880.

Mr. Theodore N. Ely, chief of motive power of the Pennsylvania Railroad, has been made a doctor of science by Hamilton College.

Dr. E. Pflüger, the eminent physiologist of the University of Bonn, recently celebrated his seventy-fifth birthday.

Dr. Roux has been elected director of the Pasteur Institute in the room of the late M. Duclaux. Drs. Chamberland and Metchnikoff have been elected sub-directors of the institute.

Dr. Michelerhana, of the Observatory at Milan, has been made director of the Observatory at Bologna.

President Roosevelt has appointed Rear Admiral Robley D. Evans, Rear Admiral Henry N. Manney, Brigadier-General A. W. Greely, Lieutenant-Commander Joseph L. Jayne and Professor Willis L. Moore, chief of the Weather Bureau, a board to consider the question of wireless telegraphy in the service of the government.

Dr. Robert Koch has returned to Berlin after his investigations in southwest Africa, where he has been engaged for nearly a year and a half.

It is reported that Captain Bernier will start in a fortnight for the polar regions. The arctic steamer *Gauss,* recently purchased from the German government, is now being refitted and provisioned at Quebec, and she will probably go to Halifax to secure part of her crew. She will then proceed around Cape Horn to Vancouver, and thence to Herschell Island, at the mouth of McKenzie River, with a party of Northwest mounted police to relieve the party stationed at that post. From that point Captain Bernier will make an effort to reach the pole.

Professor F. W. Rane, of the New Hampshire College of Agriculture, is spending the summer studying forest conditions in the northwest.

The address on 'The Continuous Advance of Electrochemistry,' by Professor Joseph W. Richards, published in the issue of Science for June 17, was the presidential address before the Electrochemical Society, delivered at Washington on April 8, 1904.

It is hoped that the statue of Pasteur on the Place de Breteuil, Paris, will be unveiled on the thirteenth of July, the day of the national fête.

The Berlin municipal council has decided to erect, at the cost of the city, a monument in honor of Rudolf Virchow.

Dr. Frederick Knapp, for many years professor of applied chemistry in the Chemical Institute at Brunswick, died on June 8, in his ninety-first year. Dr. Knapp was a former student and a son-in-law of Liebig's.

The deaths are also announced of M. Victor de Luynes, professor of the Paris Conservatory of Arts and Measures; of Professor Carl Weibrecht, director of the Technological Institute of Stuttgart, and of Dr. Albert Rilliet, associate professor of physics in the University of Geneva.

A new museum of anthropology has been established at Hamburg.

M. Charles E. Potron has bequeathed 20,000 francs to the French Geographical Society.

The American Institute of Electrical Engineers held a meeting at Chicago under the presidency of Mr. Bion J. Arnold. The meeting was devoted to a discussion of high tension transmission.

MR. ANDREW CARNEGIE has given to the British Museum the restoration of a skeleton of Diplodocus, made under the direction of Mr. J. B. Hatcher. Invitations were sent by Dr. E. J. Holland, director of the Carnegie Museum, to view the restoration on June 30.

THE council of the jubilee foundation for German industry, which recently met in Berlin, has made appropriations amounting to over $12,000. Among the subsidies is one of $2,500 to Dr. Garbe, of Berlin, to study the American railway system, and one of $1,200 to Professor Nernst at Göttingen for researches at high temperatures.

AT the forty-fifth meeting of the Society of German Engineers, held recently at Frankfort, it was announced that the lexicon of technology undertaken by the society is about half completed. The cost of this work will be over $100,000, for which the society has made itself responsible.

A LABORATORY for the study of beet sugar manufacture, a branch of the Agricultural School of Berlin, was opened on May 8.

THE London *Times* states that Mrs. Percy Sladen, of Northbrook-park, Devonshire, in the desire to perpetuate the memory of her late husband, Mr. Walter Percy Sladen, sometime secretary and vice-president of the Linnæan Society, has undertaken to devote the sum of £20,000 to the promotion of scientific research, particularly in the subjects in which he was chiefly interested. She proposes to assign this sum under the name of the Percy Sladen Memorial Fund to certain trustees, in the first place of her own appointment, who are directed to employ the income arising therefrom, in their uncontrolled discretion, to 'any research or investigation in natural science, and more especially in the sciences of zoology, geology and anthropology.' They are also empowered, if they think fit, to accumulate the income for the purpose of fitting out, or assisting to fit out, any expedition designed to further such research. The following gentlemen, whom Mrs. Sladen has requested to be the first trustees, have consented to serve: Her brother, Dr. Tempest Anderson, of York; Mr. Bailey Saunders, Mr. Henry Bury, Dr. Henry Woodward, F.R.S., Professor Howes, F.R.S., and Professor Herdman, F.R.S. On the occurrence of any vacancy among these trustees Mrs. Sladen reserves to herself the right to nominate their successors; but by the deed of endowment it is provided that eventually five trustees shall be severally nominated for a period of five years each by the following bodies in rotation, so far as they may have signified their acceptance of the power of appointment; the Royal Society, the Linnæan Society, the trustees of the British Museum and the Universities of Oxford and Cambridge.

FROM September 15 to 18, 1903, a conference of the engineers of the Reclamation Service was held at Ogden, Utah. At the time of this meeting the Reclamation Service had been in active operation for over a year and projects in each state had reached a point at which their relative merits demanded consideration. It was, therefore, deemed advisable to bring the principal engineers together, in order to discuss somewhat informally the methods and results of work. The eleventh irrigation congress was in session then at Ogden, and delegates were in attendance from the thirteen states and three territories named in the reclamation law, as well as from Texas and the country farther east. The engineers of the Reclamation Service were thus enabled to meet public men and others who are interested in the work of irrigation and to exchange views freely with them. The proceedings of this conference of reclamation engineers, compiled by Mr. F. H. Newell, chief engineer, have been recently published by the United States Geological Survey as No. 93 of its series of Water-Supply and Irrigation Papers, a volume of about 350 pages filled with valuable data. Besides the purely technical discussions and addresses, the paper includes several interesting speeches made to the engineers by various governors, senators and other prominent people. It is published for gratuitous distribution and may be obtained by application to the Director of the U. S. Geological Survey, Washington, D. C.

THE Paris correspondent of the London *Times* reports that some fifty men of science

assembled on June 19 at the house of the Prince of Monaco to listen to a paper read by M. Charles Rénard, a member of the permanent committee of the International Naval Association, on a new scheme for a polar expedition. M. Bénard holds that only two kinds of exploration in the polar basin are at present rational—namely, annual explorations along the perimeter of the Arctic Circle, like that of the Prince of Monaco in Red Bay or that of Greely in Port Conger Bay, or else great expeditions well within the Polar Sea, with special boats fitted up as observatories and laboratories, solid enough to resist the ice pack, and capable of carrying provisions for the length of time required by the itinerary. M. Bénard explained at length why the only feasible and rational route of penetration of the Polar Sea is one a little north of that followed by the *Fram*. The expedition ought to start from a Norwegian port, cross the southern portion of Barents Sea, take in dogs at Karabora, coast along Yalmal, ship at Port Dickson its coal, transported thither by special steamer, pass at the end of the summer along the Peninsula of Taimyr, arrive by the end of the autumn at the islands of New Siberia, and then, instead of going northward, as did the *Fram*, manage at all costs, even if it be necessary to winter in the Liakhoff or Bennett Islands, to reach a point on the 150th degree of east longitude. Thence the ship or ships need only drift with the ice. M. Bénard urged the utility of having the expedition composed of two vessels in touch with each other by means of wireless telegraphy. The expedition should take three years, but be provisioned for five. It would not cost more than $300,000. The company signed a memorandum declaring this expedition to be of scientific utility.

It is stated in the London *Times* that the man-lifting kite, as invented by Mr. Cody, has during the last few days been subjected to further trials at Aldershot with the view of testing its feasibility and usefulness for observation purposes in war time. The main features claimed for the kite are, first, its extreme simplicity and the ease with which the various component parts required to work it can be transported from place to place; and, secondly, that it can be flown in heavy wind such as would render the use of the war balloon almost impossible. A number of Royal Engineers are now under instruction in the working of the kite in order that it may be thoroughly tested.

UNIVERSITY AND EDUCATIONAL NEWS.

Mrs. Henry Whitman, of Boston, has made public bequests aggregating more than $200,000, including $110,000 to Radcliffe College and $10,000 to Harvard University.

Mr. George Ehret, of New York, has given $10,000 to the permanent fund of Hamilton College.

The Secretary of the Interior has approved the application of the board of trustees of the Columbian University of Washington to change the name of that institution to the George Washington University.

Dr. C. Alphonso Smith, professor of English literature at the University of North Carolina, has been elected president of the University of Tennessee, succeeding Dr. Charles W. Dabney, who has become president of the University of Cincinnati.

Professor George S. Williams, of the College of Civil Engineering, in Cornell University, has resigned to accept the chair of civil engineering in the University of Michigan, made vacant by the death of Professor Greene.

Carl C. Thomas, instructor in marine engineering at the University of California, has accepted a call to Cornell University to the assistant professorship in marine engineering at Sibley College. He will succeed Professor William F. Durand, principal of the graduate school in marine engineering, who has been called to Stanford University.

Dr. T. F. Nichols has been appointed professor of applied mathematics at Hamilton College.

Dr. C. C. Stewart, of the University of Pennsylvania, has been appointed professor of physiology at Dartmouth College. At the same institution C. A. Holden, in mathematics, and G. R. Lyman, in botany, have been appointed to assistant professorships.