

of Akron will furnish space and to a certain extent equipment.

UNIVERSITY AND EDUCATIONAL NEWS

THE late W. J. Murphy, owner and publisher of the Minneapolis *Tribune*, left a large part of his fortune in trust for the establishment of a school of journalism in the University of Minnesota.

THE endowment fund being raised for the establishment of a University College in Swansea has been augmented by donations of £25,000 from Mr. F. Cory Yeo and £10,000 from Mr. W. T. Farr, retiring directors of the Graigola Merthyr Co., Ltd. More than £100,000 have so far been subscribed.

THE sum of £1,000 has been given to the City of London School by Professor Carlton Lambert for the foundation of a science scholarship.

DR. HERMAN CAREY BUMPUS, president of Tufts College for the past four years, has resigned. Dr. Bumpus had been previously professor of comparative anatomy, at Brown University and director of the American Museum of Natural History.

PRESIDENT EDMUND J. JAMES, of the University of Illinois, has withdrawn his resignation. Some time ago he asked to be permanently relieved of his duties at the university in order that he might devote all his time to war work. With the signing of the armistice he has reconsidered that decision.

DEAN E. C. JOHNSON, for the past seven years dean of the division of extension at Kansas State Agricultural College, has accepted an appointment as dean of the College of Agriculture and director of the Experiment Station at the State College of Washington.

DR. LAWRENCE JOSEPH HENDERSON has been promoted to be professor of biological chemistry at Harvard University.

STEPHEN S. VISHER, Ph.D. (Chicago, '14), has accepted an assistant professorship in geography in the University of Indiana.

MR. HARRY L. COLE, who has been in the Aviation Service while on leave from the State College of Washington, will resume his academic duties on January 15, as instructor in the department of chemistry.

DISCUSSION AND CORRESPONDENCE SYNTHESIS OF PALEONTOLOGY AND MEDICAL HISTORY

THE study of the ancient evidences of disease, for which the term paleopathology was proposed by Ruffer in 1914 during his studies on the pathology of ancient Egyptian mummies, is a phase of medical history which must depend upon paleontological data for its extension. That pathological lesions, especially those on the bones, retain all of their characteristics after many hundreds of thousands and millions of years has been clearly shown and distinct evidences of disease are known as far back in geological time as the Carboniferous. Evidences of traumatism, fractures with the formation of callosities on the inner surface of the shells of brachiopods have been seen as old as the middle of the Ordovician. Reasoning from the theoretical aspects of paleopathology, on the basis of possible parasitism of early hosts, disease may have originated in the Archeozoic but there is no definite recorded evidence prior to the Pennsylvanian.

The relation of paleontological data to medical history is based on the assumption that the manifestations of disease are the same whether seen on man or in animals, and the infection of a Cambrian crustacean by Protozoa is as much a matter of medical history as the presence of osteophytes on the femur of *Pithecanthropus*, the fractured ulna of the Neanderthal man, or bilharziosis among ancient Egyptians.

Many lesions are so commonly seen among fossil vertebrates especially that paleontologists have not referred to them at all, or merely mentioned them incidentally, forgetting that such evidences are of extreme importance in tracing the origin and antiquity of phenomena which are of such vital importance to humanity to-day.

The importance of paleopathology is that it gives an opportunity of studying evidences of disease over a great period of time, and especially is this true in regard to the data offered by paleontology. That the study of these evidences may aid in the solutions of problems which are at present not solved is evident when we consider that many epidemics which sweep the world, such as the one just past, are doubtless the result of an accumulation of changes over a long period of time. It is well known in medical history how whole populations have been swept away by scourges, which, had the people understood them, could have been avoided, and in the future when we come to understand all of the events of past history we may be better prepared to avoid future conditions of a like nature.

A disadvantage under which the student of paleopathology works is that the results of epidemics are scarcely ever recorded especially in paleontological material. The presence of tsetse flies in the Oligocene of Colorado suggests the possibility of trypanosomiasis among the herds of artiodactyls and perissodactyls of the early Tertiary but it can be considered merely suggestive. The search for such evidences is, however, just begun, and we may in future learn more of the epidemics which, in the past, must have swept through the herds of early animals.

The careful description, illustration and study of ancient cases of fracture, of diseased bones or any evidences of pathology is extremely desirable and will advance the study of paleopathology. Evidences of disease may be detected in the positions assumed by animals at death, the opisthotonos, the pleurothotonos and related phenomena. It is a question open to discussion whether the opisthotonic attitude is a manifestation of disease, but it is as suggestive of neuro-toxic disturbances as may well be. Whether the position assumed by the fossilized skeleton is the same as the animal assumed at death, how much is due to shifting before fossilization, are matters of minor importance to the student of medical history who is chiefly impressed with the fact that a dinosaur preserved in the opisthotonic

attitude suggests to him the spasms seen in many recent diseases. The student of medical history is interested in a Mesozoic fracture because it extends his knowledge of traumatism, and if the study of the fracture is complete it adds to his knowledge of general pathology.

The relation of disease to extinction, and other more important relations, may be cleared to some extent by a study of paleontological material. The part disease has played in the evolution of forms, whether retarding, changing, or ending their development also attracts the attention of the student of paleopathology.

Medical history, like all other histories, is based on an accumulation of data from widely different fields, and it is the privilege of paleontologists to add to the great wealth already accumulated, more data as to what happened among the animals with which they are familiar, representing the inhabitants of the earth millions of years ago. The subject is worthy of more careful consideration than has been given it in the past. Paleopathology has attracted scant attention among paleontologists but eminent students such as Cuvier, Soemmering, Goldfuss, Schmerling, Leidy, Williston have found the subject of interest. It remained for the men who had been trained in pathology, men like von Walther, Mayer and Virchow, to show the exact relation of pathological lesions among extinct animals to the general problems of disease which are interesting men to-day.

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A RECENTLY DISCOVERED ART CAVERN IN FRANCE

UNDER the auspices of the French Académie des Inscriptions and over the signature of M. Ch. Dauzats, there appeared in *Le Figaro* of September 7 an interesting notice of another remarkable discovery of ancient cave paintings in southern France. A translation of the article follows:

These are the most ancient records of human art, as M. Salomon Reinach was remarking yesterday when congratulating Count Begouen who, with his three sons, has just