

THE presidency of Tulane, vacant by the resignation of President Craighead a year ago, has been filled by the election of Professor Robert Sharp, dean of the graduate school, acting president during the past year, and for thirty-two years a member of the faculty.

MR. GEORGE WHEELER HINMAN, until recently editor and proprietor of the *Chicago Inter-Ocean*, has been elected president of Marietta College to succeed the late Alfred T. Perry.

MISS JOSEPHINE T. BERRY, of the Washington State College, has been elected professor of nutrition and home economics at the University of Minnesota.

HARRY G. HAKE, of the University of Illinois, has been appointed assistant professor of electrical engineering at Washington University. Joseph C. Stephenson has been appointed instructor in zoology.

At Vassar College Winifred J. Robinson, Ph.D. (Columbia, 1910), has been advanced from instructor to assistant professor of botany.

MR. W. A. MACDONALD, B.S.F. (Michigan Agricultural College, 1913), has been appointed instructor in forestry in the New York State College of Forestry at Syracuse University.

#### DISCUSSION AND CORRESPONDENCE

##### THE LAWS OF NOMENCLATURE IN PALEONTOLOGY

TO THE EDITOR OF SCIENCE: In the course of an interesting and able communication by Dr. Matthew upon "The Laws of Nomenclature in Paleontology" in SCIENCE of May 23, 1913, pp. 788-792, the following paragraph occurs on page 792. The italics here are those of the present writer.

*Deinodon* Leidy is determinable as to family, but is not determinable generically, as the genera of carnivorous dinosaurs are now distinguished. The same is true of a whole series of genera and species described by Leidy and Cope from the Judith River. The treatment of types and referred specimens of these genera by paleontologists as specifically distinguishable or identical has *sadly misled* Dr. Peale in his recent discussion of the vertebrate evidence as to the age of the Judith River beds, leading him to present as conclusive

*evidence of identity in age a correspondence in fauna* which to those who know the nature of the specimens on which the lists are based is no evidence at all.

Inasmuch as the writer hereof is mentioned in this paragraph and this mention may lead to some misapprehension, the following notes are presented. Now as to *Deinodon*, it is submitted that what has been done or is to be done with this genus in the future does not seem to enter the case. Suffice it to say that not only is it mentioned generically by Hatcher and others, but Hatcher in Bulletin 257 of the U. S. Geological Survey (p. 85) gives also a number of species of the genus, and I believe that I am not assuming too much when I take it for granted that others who have referred to these species, or any of them, were referring to the same thing. That the paleontologists may have been at sea in regard to the exact determinations, and that the material is fragmentary and imperfect was as well known to me at the time of writing as to the paleontologist himself, but as the names are a matter of record I think I was justified in using them, no matter what becomes of them in the future, especially as Hatcher, Osborn and others have made important deductions from their occurrence. These remarks apply to the whole series of genera and species referred to by Dr. Matthew. It is rather interesting to have a vertebrate paleontologist make the statement that "correspondence in fauna is not conclusive evidence of identity in age," especially as it rather confirms the statement made by me in my article on the Judith River formation (*Journal of Geology*) wherein, in discussing the evidence of vertebrate fossils on the question of the age of the Judith formation, I say:

Either the beds are identical in age or vertebrate paleontology has no place in stratigraphic geology and *non geologia sine paleontologia* becomes *non paleontologia sine geologia*.

The writer does not pretend to be a vertebrate paleontologist, nor is he able or willing to pass upon the value of the material studied by them, but he submits that he must be confined to what has been published by them, as

must all who use their material. It is impossible to go back of their record. As they (the vertebrate paleontologists), although fully aware of the fragmentary condition of the material they dealt with, gave not only generic but specific names and made certain deductions from their use, I do not quite understand why I was so sadly misled in using the names as I did, unless, as I said in my paper, vertebrate paleontology is of no use to the stratigraphic geologist. I wish to state here that I thoroughly believe in the value of the evidence of vertebrate paleontology.

While upon this subject, I wish to refer to another point, not, however, mentioned by Dr. Matthew. By some I have been criticized for not including in the lists of vertebrate fossils in my paper all that have been in any way referred to the Judith River formation, from all localities in Montana and in Canada, but it was my idea to limit the list to those found in the typical region of the Judith River formation, and on page 753 of my article on the "Stratigraphic Position and Age of the Judith River Formation" it is distinctly stated that Hatcher's list of Judith River vertebrates is used after the elimination of "all the species which are duplicated under other names" and also of all which come from beds not certainly of Judith age or that occur outside the typical area (the Judith Basin of Montana).  
A. C. PEALE

#### ICE CAVES

THE contribution to *The Popular Science Monthly* for March on "The Sweden Valley Ice Mine," by Marlin O. Andrews, calls for some comment and criticism. In the first place it is calculated to convey the impression that such phenomena as he describes are exceedingly rare, whereas they are fairly common in middle latitudes—especially in limestone districts. In the second place the explanation given of such phenomena is faulty.

The writer of the above mentioned article appears to have come to his subject rather poorly equipped as regards geological knowledge, and though by his own statements supplied by the Federal Survey with information

concerning the literature of the subject, to have availed himself very little of it. To begin with, his introduction detailing tradition as to presence in the region of silver mines known only to the Indians, in regard to the reliability of which he appears to have little doubt, does not serve to enhance our confidence in his ability to describe or explain geological phenomena.

Such traditions of "lost silver mines" prevail in nearly every community, but we hardly expect to find a man of science giving credence to them; especially if it is in a region where such mines are a geological impossibility. Potter County, Pa., is in such a region. It may be true that the county has never been covered by a detailed geological survey (a portion of it however has been covered by the Federal Survey and an account given of it in the Gaines Folio), but enough is known geologically of that portion of Pennsylvania to enable us to postulate the presence there of unaltered and little deformed sandstones and shales of Devonian and Carboniferous age, and to assert the entire absence from them of deposits in appreciable amounts of either lead or silver ores. Will the time never come when the diffusion of elemental geological knowledge is such as to render impossible the floating of such absurd "lost-silver-mine-known-only-to-the-Indian traditions"? Where did these Indians acquire their expert mineralogical and metallurgical knowledge that would enable them to detect silver in an ore or extract it therefrom? We know that when discovered by white men the American Indian was living in the "Stone Age" and utterly unacquainted with the extraction of metals from their ores.

When it comes to the account of the ice mine itself, the description in the article must be considered very inadequate from a geological point of view. Was the shaft sunk on undisturbed strata or on talus accumulation? If on the latter, we appear to have here a case of "talus ice accumulation," of which there are many instances. There is at least one other of these in Pennsylvania, if I remember cor-