ing perhaps no fossil remains which will ever be detected.[2]

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SPECIAL ARTICLES

NOTE ON THE UPPER EOCENE TITANOTHEROID TELMATHERIUM (?) INCISIVUM DOUGLASS FROM THE UINTA BASIN

IN describing the type of this species (a skull, No. 2,398 Carnegie Museum Catalogue of Vertebrate Fossils) Mr. Douglass[1] said:

I think that this skull represents a different genus from *Telmatherium*, but I prefer to place it provisionally here rather than establish another genus.

Through the courtesy of Mr. Douglass, Director Holland and Professor Osborn, the present writer has been enabled to compare this type with the extensive Eocene Titanothere material in the American Museum of Natural History. With the approval of these gentlemen the species *Telmatherium (?) incisivum* Douglass is hereby made the type of a new genus or subgenus *Sthenodectes*.[2] This genus is distinguished from *Telmatherium ultimum* Osborn by the following assemblage of characters: (1) The incisors are far larger and more advanced in evolution, i^1 being closely appressed to its fellow in the median line, with anterior face elongate, anterointernal tip blunt, median basin large, posterior wall or cingulum very massive; i^2, i^3 extremely large with low recurved tips and very heavy posterior cingula. (2) The postcanine diastema is reduced or absent. (3) Superior premolars 2, 3, 4 are much more advanced than in *T. ultimum*, having very heavy internal cingula, pronounced external cingula, high slender internal cusps (deuterocones); p^2 especially is in a relatively advanced stage, as compared with *T. ultimum*. (4) The least transverse diameters of p^4 and of the anterior lobe of m^1, are greater, that of m^3 much less, than in *T. ultimum*. (5) The basicranial region differs in many details, such as the apparent junction of the post-glenoid and post-tympanic processes below the auditory meatus. (6) The occiput is low with a sharp, long, sagittal crest. (7) The forehead is relatively wide. (8) The nasals taper distally.

From *Manteoceras* (especially *M. uintensis*) the genus under consideration is distinguished by: (1) The form and size of the incisors and canines, (2) the much more advanced stage of evolution of the premolars, (3) the shorter anteroposterior diameter of m^2, (4) the reduction of the post-canine diastema, (5) the arched and spreading zygomata; etc.

From *Dolichorhinus* and *Mesatirhinus* it is separated by the shortness and relative breadth of the skull, the great size of the incisors, the relatively heavy zygomata and many other details.

The genus or subgenus *Sthenodectes* is apparently allied to *Metarhinus* and may well be related to *Metarhinus earlei* Osborn from the Upper Washakie, which it resembles in important characters of the premolars and molars, form of the basis cranii and occiput, marked constriction of the face in front of the orbits as seen from above. The narrow tapering nasals and other characters also suggest affinity with *Metarhinus diploconus*. The type skull of *Sthenodectes incisivum* differs from all known *Metarhinus* material in the form and in the very large size of the incisors and canines, in the much stronger internal cingula on the premolars, stout zygomata, junction of the post-glenoid and post-tympanic processes below the auditory meatus. The forms of the premaxillary and of the subnasal incisure also differ from those of *Metarhinus*. The supposed vacuities in the lachrymal region, although indicated on both sides, may be artifact.

WILLIAM K. GREGORY

[2] The Cichlidæ, with a very similar distribution, have left us beautifully preserved fossils of Eocene age in Wyoming, but not elsewhere.

[1] *Ann. Carnegie Mus.*, Vol. VI., No. 2, 1909, p. 305.

[2] $\sigma\theta\acute{\epsilon}\nu os$, strength, $\delta\eta\kappa\tau\acute{\eta}s$, a biter, in allusion to the great power and development of the incisors and canines.

OIL CONCENTRATION ABOUT SALT DOMES

IN several national, state and private publications the writer has called attention to the remarkable concretionary growth and bodily

movement upwards of huge masses of rock salt in Cenozoic deposits along the Gulf border. The bearing of the structures produced in the neighboring beds by such growths and movements on oil concentration was duly set forth in Bulletin 429 of the United States Geological Survey. Recently he has had the opportunity of testing the value of his "dome theory" for locating oil "pools" in a region far away from any known oil occurrences. Reference is here made to Pine Prairie, south central Louisiana, where the Myles Mineral Co. has had the courage to try out the theory and has discovered by the means a new oil field. The director writes "I consider this a most remarkable vindication of a theory originated by you, and we attribute a large measure of our success thus far to your advice."

Space should not be taken here to discuss the probable exact location of oil in connection with these domes; that is a matter depending largely on the approach of the salt dome to the surface, size, location, etc. These matters have been outlined at least in the U. S. Geological Survey Bulletin already referred to. But the location of oil by means of a theory unheard of ten years ago does seem worthy of record at this time. Another fact that should be impressed upon the mind of the public now is the absolute worthlessness of stock in companies putting down wells "near" the discovery well. This matter has, however, been discussed in Bulletin 429.

G. D. HARRIS

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THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE SECTION D

DR. J. A. HOLMES, director of the Bureau of Mines, was elected vice-president of the association and chairman of Section D for the next meeting, at Cleveland. Professor O. P. Hood was elected a member of the council for the Cleveland meeting and Major W. W. Crosby a member of the sectional committee for five years, *vice* Professor J. E. Boyd, whose term expired. Mr. W. Bowie represented the section in the general committee.

The meetings of the section were presided over by Vice-president C. S. Howe, of Cleveland. The section held its first session on Wednesday morning, December 27, at Georgetown Law School. Two sessions were held on Thursday at the same place. On Friday morning and afternoon the section met in the Institute for Industrial Research. On Saturday, visits of inspection, under the direction of Professor A. H. Blanchard, were made to the office of good roads and to the sites of actual road construction in the vicinity of Washington and Baltimore.

On Thursday afternoon, following the address of retiring Vice-president A. L. Rotch, the following resolutions were adopted:

WHEREAS, the new and important art of navigating the air requires for its proper development exclusive investigations in aerodynamics, and thorough comparative tests of practical aerial machines, and

WHEREAS, the Aero Club of America proposes to secure the endowment of a laboratory for such investigations and comparative tests, therefore be it

Resolved, That the Engineering Section of the American Association for the Advancement of Science expresses to the Aero Club of America its appreciation of the urgent need for such a laboratory, and heartily commends its efforts to secure an adequate endowment, and be it further

Resolved, That a copy of these resolutions be sent to the Aero Club of America, with best wishes for the success of its efforts.

On Friday afternoon, resolutions were adopted extending the thanks and appreciation of the section to Dr. A. S. Cushman, director of the Institute for Industrial Research, for the use of the laboratory for the meetings on that day. The secretary takes this occasion to express his appreciation of the valuable assistance of Dr. C. S. Howe and Professor A. H. Blanchard in securing papers for the program and to the members and non-members who contributed.

The Washington meeting of Section D was successful beyond expectations, the papers being valuable and interesting and the attendance at the sessions encouraging as to numbers and interest manifested.

Abstracts and titles are listed below by groups.

MISCELLANEOUS PAPERS AND TITLES

Analysis of the Deflections and Stresses in Reinforced Concrete Floor Slabs Constructed on