

of the eruption of Vesuvius in 1898, and read a note by Professor Plalanía on the recent eruption of Etna.

An interesting investigation, initiated by Professor Kendall and others, is being carried on to ascertain the course of the underground waters in the Craveri (Carboniferous Limestone) district of Yorkshire. Common salt, salts of ammonia, and fluorescein were placed in quantity in the 'sinks' and the water issuing miles away was periodically analyzed with the result of tracking the course of several underground drainage systems.

The Geological Photograph Committee exhibited a large series of prints and gave an account of the year's collection. It was resolved to publish a representative series of geological photographs if sufficient support was guaranteed to make the scheme self-supporting.

W. W. WATTS.

#### SCIENTIFIC BOOKS.

*The Mysterious Mammal of Patagonia, Grypotherium Domesticum.* By RUDOLPH HAUTHAL, SANTIAGO ROTH and ROBERT LEHMANN NITSCHKE. *Revista del Museo de La Plata.* Vol. IX. Pp. 409-474.

Under the above title the authors have issued a series of papers containing 65 pages of text and accompanied by five plates; dealing principally with that curious mammal to which Dr. Ameghino some two years ago gave the name of *Neomylodon Listai*.

Ameghino based his generic and specific descriptions upon a few small endermal ossicles and certain stories or traditions said to be current among the Indians of Patagonia concerning the existence of such an animal, and upon verbal descriptions of a piece of skin presumably belonging to a large gravi-grade edentate. This piece of skin was found in a desiccated condition by Dr. Otto Nordenskjöld and Mr. Hermann Eberhard in a cavern near Consuelo Cove, in Last Hope Inlet, on the west coast of southern Patagonia.

Dr. Ameghino's announcement aroused great

interest and has been frequently noted, both in scientific and popular journals, chiefly on account of the opinion advanced by him that this great sloth still exists in the interior of Patagonia and at present causes extreme terror among the Indians by its intensely predaceous habits!

During the past season Dr. Hauthal visited the cave from which the first piece of skin was obtained by Dr. Nordenskjöld and was successful in securing other pieces of skin associated with many bones and parts of skulls, showing the complete dentition. Associated with these remains he also found bones of other animals, principally belonging to the following genera: *Homo*, *Felis*, *Canis*, *Equus*, *Onohippidium*, *Auchenia*, *Mephitis*, *Rhea*, etc., together with stone and bone implements, mingled with charcoal and charred fragments of bones.

Dr. Hauthal gives a description of the cave with a diagram, showing where the more important finds were made. He also mentions several other unexplored caves in the same neighborhood.

Dr. Roth gives a classification and description of the different mammalian remains found, and reaches the conclusion that the sloth to which the skin, described at second hand by Ameghino belonged, does not represent a new genus. This is shown by a study of the skulls, teeth and other parts of the skeleton, found associated with pieces of skin, and which, according to Roth are not generically distinguishable from *Grypotherium* of Reinhardt, from the Pampean beds further north.

Dr. Roth places little reliance on the tales purporting to come from the Indians regarding the terrible animal frequenting regions adjacent to the larger lakes and rivers of the interior and which are said to attack and carry off their horses. He believes that at most this is only a tradition among them of the former existence of a very large cat, a few remains of which were found in the cave, and which though at present extinct may have existed contemporaneously with the present Indians of Patagonia several generations ago.

The habits attributed to this terrible animal, according to Ameghino by the Indians, are certainly more like those we should expect to find

among the larger members of the Felidæ than among the slow moving, inoffensive and herbivorous Edentates. Consequently if there be any truth whatever in these tales or traditions they probably refer to this large cat. Dr. Roth has referred these cat remains to Ameghino's species, retaining the specific name of *Listai* proposed by Ameghino. He rejects the generic name of *Neomylodon*, which would then clearly be a misnomer and substitutes the Indian name of *Iemisch* by which, according to Ameghino, the animal is known among the Indians. Two objections may be offered to this generic name, first its barbarous origin, which though not absolutely prohibited by rules governing the formation of such names should nevertheless be discouraged, and second, the material upon which it is based has not been shown to be distinct from either *Smylodon* or *Felis*.

In *Iemisch Listai* we have an instance in Zoological Science, which if not unique, it surely ought to be, of a species in which the original type may be fairly said to consist of traditions, collected among an entirely uncivilized people. For it is upon these Indian tales that the description given by Dr. Ameghino not only as to the habits but also as to the color, number and character of the toes on each foot, size of head, length and prehensile nature of tail, etc., are based.

Regarding the existence of such traditions among the Indians of Patagonia, I can only say that during the three years spent by myself there, during which I was frequently thrown among the southern Indians, I learned of no such traditions from the Indians themselves. If any such traditions exist among them, they certainly have not engendered that feeling of terror and fear of this animal as pictured by Ameghino, for I have frequently camped with the Indians in regions said by Ameghino to be the traditional or reported haunts of *Iemisch*, and have never observed them to take any special care for themselves or their horses, leaving the latter loose, picketed and hobbled in great numbers night and day alike.

From a study of the cave and the condition in which the remains were found, Dr. Hauthal concludes that man and all the other animals of which associated remains were found, coëxisted

here during an interglacial period and that these caves were occupied as habitations by the men who shared them with certain domesticated animals among which was the large Edentate, *Grypotherium domesticum*. This opinion is also shared by Dr. Roth and less strongly, if I mistake not, by Dr. Nitsche who discusses the material from an archæologic standpoint.

The papers are extremely interesting and are important not only for the light they throw on the nature of the '*Mysterious Mammal of Patagonia*,' but also for the additional evidence afforded of the existence of representatives of the Pampean fauna in comparatively very recent times. We may expect further explorations of these cave deposits to bring to light additional remains and perhaps establish their correlation with deposits in the north.

J. B. HATCHER.

*Maryland Weather Service*. Volume I. Baltimore, Md., The John Hopkins Press. 1899. 4to. Pp. 566. Charts LIV. Figs. 61.

If the succeeding volumes of the Maryland State Weather Service are kept up to the standard and size of the first volume, and if the scheme of work outlined in the present publication is followed out, it is safe to say that a new era has opened for climatology in this country. That this rich promise for the future will be fulfilled no one can doubt who knows the men in charge of, and interested in the Maryland Weather Service, and who appreciates the peculiarly favorable position which this service occupies, carried on as it is under the joint auspices of the Johns Hopkins University and of the United States Weather Bureau.

The Director of the Service is Professor William B. Clark, of Johns Hopkins University, whose special interest in geology has never caused him to neglect the scientific study of meteorology. The Secretary and Treasurer is Professor Milton Whitney, Chief of the Division of Soils of the Department of Agriculture, who represents the Maryland Agricultural College, and is well known in connection with his work on the relations of soils to climate and crops. The Meteorologist in charge is Mr. F. J. Walz, of the United States Weather Bureau, who is