other sources of evidence that the margin of consciousness carries the meaning. Disturbances of apperceptive functioning in apraxia and sensory aphasia form a basis for a theory of apperceptive degrees which may explain the different meanings which at different times may be read into the same complex of sensations. Flechsig's researches on the functions of the 'silent areas' of the cortex furnish a psychophysical basis for this position. The kinæsthetic theory of meaning is, in general, confirmed by genetic studies of language and by the data of anatomy, especially those facts concerning the increase in the diameter of the pyramidal tracts and the increased differentiation of the muscular system in the higher orders.

The following were read by title:

'Vertical Movements of *Entomostraca*,' M. J. Elrod.

'The Reduction of Nitro Compounds of Benzole,' W. D. Harkins, University of Montana.

'Volcanic Ash Beds of Montana,' J. P. Rowe.

'Caves in Montana,' J. P. Rowe.

J. P. ROWE,
*Secretary pro tem.*

## DISCUSSION AND CORRESPONDENCE.

### SMITHSON'S REMAINS.

TO THE EDITOR OF SCIENCE: James Smithson, the founder of the Smithsonian Institution, is about to be turned out of his grave in Genoa, Italy, to make room for a quarry! Why should not the United States Government bring his body to this country and give him a permanent resting place in the grounds of the institution which he founded?

Smithson left his entire fortune 'to the United States of America' to promote 'the increase and diffusion of knowledge among men.' Congress accepted the trust and established 'The Smithsonian Institution' which has done so much to advance science during the last fifty years. Now let the nation that has benefited by Smithson's generosity show its appreciation and gratitude. He left no descendants to care for his remains; let us accept them, too, as a sacred trust and bring them to the United States to be deposited with all reverence in the Smithsonian Institution at Washington. GILBERT H. GROSVENOR.

WASHINGTON, D. C.

### THE DESTRUCTION OF FROGS.

TO THE EDITOR OF SCIENCE: The Erie Railroad, near Meadville, Pa., runs parallel to and near French Creek. In the early spring of 1901, at about the time when the frogs were becoming active after their hibernation, I noticed, while walking along the tracks of the above railroad, a number of frogs that had been crushed by the passing trains. I counted no less than thirty-six frogs that had been killed on half a mile of single-track road. One fact noticed was that *nearly every* frog had been cut across the middle line, so that the hind legs lay on one side of the rail, and the fore legs and head on the other side. The rails were the heavy T rails ordinarily used on such roads. At about the same time I noticed on one of the streets of Meadville that was near the creek, a great number of frogs that had been similarly crushed by the electric cars that ran on that street. As the rails of the street railway were laid flush with the level of the street, it was not so surprising that many frogs were crushed, since they were very numerous in that part of town; but how so many of them should be caught on top of a six-inch T rail, and why they should practically all be cut in two, transversely, is not so easy to explain. ALBERT M. REESE.

### THE GREAT AUK.

TO THE EDITOR OF SCIENCE: Permit me most emphatically to dissent from the deduction of Professor Hitchcock 'that the great auk was once a resident of Florida, and presumably of the whole Atlantic coast.' This deduction is based on the finding at Ormond, Fla., of two humeri of the great auk in one section of a large shell heap. This is a small basis for so sweeping a generalization, and it is all the smaller in the light of the fact that these two humeri are the only traces of this bird that, so far as I am aware, have come to light south of Block Island, although scores of shell heaps

have been explored and thousands of the bones of other animals recovered. It is quite possible that the great auk may have straggled so far south during severe winters, since there is some reason to believe that it was not rare off the coast of Virginia, but that it was a *resident* anywhere south of Nova Scotia is open to doubt, and that it bred even there is open to argument. Mr. McGuire tells me that foreign vessels traded along the eastern coast of North America to a much greater extent than is generally known, and as the great auk was frequently salted down for ships' stores, it may well have been carried south in this form, and found its way to an Indian village. As bearing on the value of the evidence of stray bones found in shell heaps, it is to be noted that the same part of the heap in which the bones of the great auk were found yielded a humerus of a typical dachshund. (My anthropological friends will cheerfully correct me if I err in saying that this breed of dogs was unknown on the American continent in prehistoric times.) Are we then to at once conclude that the dachshund was common among the Indians? F. A. LUCAS.

WASHINGTON, D. C.

## *RECENT ZOOPALEONTOLOGY.*

### AN UPPER PLIOCENE CAVE.

PROFESSOR BOYD DAWKINS recently (January 7, 1903) described, before the Geological Society of London, an Upper Pliocene Cave discovered in 1901. This cave is of far greater antiquity than the familiar caves of the Pleistocene and contains a mammalian fauna including the mastodon, elephant, rhinoceros, horse and saber-toothed tiger in an Upper Pliocene stage of evolution, similar to that of the Val d'Arno of Italy. In course of the abstract he says:

"Some of the bones present the characteristic teeth-marks of the hyenas; and the preponderance of the remains of the young over the adult mastodons points to the selection by the hyenas, who could easily master the calves, while they did not as a rule attack the large and formidable adults. The author has observed a similar selection in the case of mammoths in hyena-dens, into which the remains had been brought by those cave-haunting animals." At the same time the author presented a map illustrating the physical geography of the British Isles in the Upper Pliocene Age.

### A NEW RHINOCEROS FROM SOUTHERN BAVARIA.

DR. ERNST STROMER, working in the Paleontological Museum of Munich, has recently described* a new rhinoceros, *Aceratherium bavaricum*, from the Upper Miocene of Bavaria. The skull is of similar type to the well-known *Aceratherium tetradactylum* of Sansan, and the *A. incisivum* of the Lower Pliocene of Eppelsheim. Unfortunately the tip of the nasals is lacking, a fact which renders it difficult to determine to which series of rhinoceroses this animal belongs. (2) The same author gives a valuable summary of the geological history of northern Africa.† (3) He has also published a comparative paper upon the entepicondylar foramen and third trochanter,‡ primitive characters of the fore and hind limbs of mammals. (4) A more extensive work is his memoir entitled 'Die Wirbel der Land-Raubtiere,' based principally upon the extensive collections in the Museum of Munich and worked out at the suggestion of Dr. Max Schlosser.

### THE BASAL EOCENE MAMMALIAN FAUNA IN THE FT. UNION BEDS OF MONTANA.

THE very important discovery of bones and teeth of mammals in the Ft. Union beds of Montana has been reported by Earl Douglass of the Carnegie Museum, in a paper entitled 'A Cretaceous and Lower Tertiary Section

* 'Ein Aceratherium-Schädel aus dem Dinotherien-Sand von Niederbayern,' Abdr. a. d. *Geognostichen Jahresheften*, 1902. 15. Jahrgang, 1902.

† 'Betrachtungen über die geologische Geschichte Aethiopiens,' Abdr. a. d. *Zeitschr. d. Deutsch. geolog. Gesellschaft*, Jahrg., 1901.

‡ 'Ueber die Bedeutung des Foramen entepicondyloideum und des Trochanter tertius der Säugethiere,' Sep. Abdr. *Morphologisches Jahrbuch*, XXIX., 4.