

*Treasurer*—J. W. Gidley.

*Councilors*—A. D. Hopkins, J. N. Rose, A. K. Fisher, A. B. Baker, David White.

President Stejneger was nominated as a vice-president of the Washington Academy of Sciences.

M. C. MARSH,  
*Recording Secretary*

THE AMERICAN CHEMICAL SOCIETY. NEW YORK  
SECTION

THE fourth regular meeting of the session of 1907-8 was held at the Chemists' Club, 108 West 55th Street, on January 10.

Dr. McMurtrie read a short obituary of the late Peter Townsend Austen who was closely identified with the section since its foundation. Dr. Austen served twice as chairman and contributed much to the society from his vast fund of information and experience in the field of chemistry.

Mr. T. J. Parker described the winter meeting in Chicago, speaking of the elaborate preparations made and the cordial reception extended to visiting chemists, of whom there was a good representation. Mr. Parker also spoke of the business transacted by the council, especially that relating to the publication of a journal of industrial chemistry. This journal together with those now issued would place the American Chemical Society ahead of any society of its kind in the extent of chemical knowledge recorded in its publications.

The following papers were read:

"Drop Weights and the Law of Tate. The Determination of the Molecular Weight in the Liquid State by the Aid of Drop Weights," by J. L. R. Morgan and Reston Stevenson.

"Note on the Precipitation of Zinc as Sulphide," by W. Geo. Waring.

C. M. JOYCE,  
*Secretary*

DISCUSSION AND CORRESPONDENCE

BAPTANODON NOT A "TOOTHLESS" ICHTHYOSAUR

WHILE it may appear to be ungracious to point out the errors of others, especially of those who are valued scientific friends, nevertheless scientific accuracy and the truth of nature sometimes make it necessary to do so.

In the year 1880 Professor O. C. Marsh coined the word *Baptanodon* as the generic name of an ichthyosaurian which in the previous year he had designated as *Sauranodon*, which was preoccupied. Both names indicated the toothless character of the creature for which they stood, and Professor Marsh in his writings maintained the toothless character of *Baptanodon*.

In January, 1905, Dr. Henry Fairfield Osborn published an article in the *Century Magazine* upon ichthyosaurs, in which he speaks of the Jurassic ichthyosaurs included in the genus *Baptanodon* as "belonging to a race which, like certain of the whale tribe, lost their teeth because they had selected for food the softer marine organisms, such as the squids." Elsewhere he speaks of them as "toothless sea-robbers."

In hastily glancing over the pages of the second revised edition of Professor W. B. Scott's "Introduction to Geology," I discover on page 692 the following statement: "*Baptanodon*, found in Wyoming, is an ichthyosaur without teeth, and must have fed upon small and soft marine invertebrates, as do the toothless whales."

As both Professor Osborn and Professor Scott address themselves in their writings to large audiences, and their repetition of the error into which Professor Marsh fell, if backed by their great names, is likely to become very widely accepted, it seems proper for me to call the attention of men of science to the fact that in December, 1902, Mr. C. W. Gilmore in the columns of *SCIENCE*, N. S., Vol. XVI., pp. 913-914, called attention to the fact that *Baptanodon* was *not* a toothless reptile. Early in the spring of 1904 the Carnegie Museum published a Memoir by Mr. Gilmore entitled "The Osteology of *Baptanodon* Marsh," in which, at page 98, he shows that *Baptanodon*, like the English *Ophthalmosaurus*, is provided with teeth, and figured the teeth, and on page 121 he alludes to the fact that a tooth exists in the jaw of the type of the genus, No. 1,952, preserved in the collections of the Yale Museum, a fact which Professor Marsh had entirely overlooked.

*Baptanodon* is a misnomer, which, neverthe-

less, according to the laws of priority, must stand. The "toothless diver" of Marsh was *far from being toothless*, as is shown by the splendid material in the Carnegie Museum, as well as by Professor Marsh's own type specimens.

W. J. HOLLAND

CARNEGIE MUSEUM,  
January 6, 1908

"TROTTING AND PACING, DOMINANT AND  
RECESSIVE?"

TO THE EDITOR OF SCIENCE: I have noted with interest, in your issue for December 27, on page 908, the communication of Mr. W. Bateson, under the caption "Trotting and Pacing, Dominant and Recessive?" Regarding it I would beg to say that his informants who state that they have "never known a natural trotter produced by two natural pacers," while stating the results of their own experience, have, in that experience, missed, very evidently, a result that is not uncommon in the breeding of harness horses. I have personally known of numerous cases in which the produce from the mating of natural pacers has produced a natural trotter; and, as a matter of direct evidence, may cite a case which has very lately come under my notice.

One of the most celebrated pacing stallions of recent times is Direct Hal. He never lost a race and his record, 2.04½, made in the first and only season (1902) that he was raced, has never been beaten by a stallion under the same conditions. Direct Hal was a natural pacer. His sire, Direct, was a natural trotter, and was first trained to trot, and given a record of 2.18½ at that gait. He was then taught to pace and given a record of 2.05½ at that gait. He was himself a trotting-bred horse, but the majority of his get have been pacers. The dam of Direct Hal was Bessie Hal, a pacing mare, and pacing bred with the exception of a trotting cross on her dam's side.

One of the most celebrated pacing mares of recent times is Lady of the Manor. She won nearly all her races and also took a record of 2.04½; which, when made (1899), was the fastest on record for a pacer of her sex. She was by Mambrino King, a trotting horse, with but

a remote and attenuated pacing inheritance. Her dam was also a trotting mare, strongly trotting bred and with no near, or, supposedly, influential, pacing blood. Nevertheless, Lady of the Manor was a natural pacer. As she was bred to trot, she was first trained to trot; hobbles and heavy shoes and toe-weights being used to force her to adopt that gait, but the effort was unsuccessful. She was then allowed to pace, with the result above noticed.

After their retirement from racing, these two remarkable pacers were mated, and one of their produce, a filly, foaled in 1905, is now owned by a gentleman of my acquaintance, resident in this city, who has her in training at a farm near here. Both this gentleman and his trainer inform me that this filly is a square trotter, that has, since under their observation, never been seen to pace, either in or out of harness.

This is only one case of a number of similar ones that could be cited.

The whole question of the relation between the trot and the pace is a perplexing one. I have, I may say, devoted many years to its study, during which I have been afforded an embarrassment of riches so far as material for investigation was concerned. During this period I have at various times been of various opinions, which, for the time being, I have believed to be definitely established, but have again and again been unsettled as new evidence, not to be gainsaid, has presented itself. One thing is, however, incontestably true, viz., that pacers are much oftener produced by trotting parents, than trotters by pacing parents. Personally, I much doubt what Mr. Bateson says he has been given to understand—"that the distinction between the natural trotter and the natural pacer is so definite that doubtful cases are exceptional"—and consider the reverse to be, if anything, as probable.

JOHN L. HERVEY

INHERITANCE OF FLUCTUATING VARIATIONS

TO THE EDITOR OF SCIENCE: Referring to Dr. Ortmann's interesting article in SCIENCE of November 29, I should like to ask him how he accounts for the well-known phenomenon of