graph Tests: Principles and Facts Relating to the Distribution of the Strains in the Base of Rails under Moving Trains.' This paper is published above.

S. A. Mitchell,
Secretary.

COLUMBIA UNIVERSITY GEOLOGICAL JOURNAL CLUB.

March 27.—Professor Grabau reviewed a paper by F. Noetling on 'Beiträge zur morphologie der Pelecypoden' (*Neues Jahrbuch*, 1902). Mr. C. W. Dickson reviewed the Quebec Group, especially in reference to its history and correlation.

April 3.—Professor Kemp reviewed several late papers from the *Transactions of the American Institute of Mining Engineers.*

April 17.—Professor Kemp exhibited and made a few remarks on the late folios of the U. S. Geological Survey. He also gave a short summary of 'The Two Islands,' an interesting book by Professor Thomas Condon, professor in geology in the University of Oregon. Professor Condon discussed in a semi-popular manner the geological history of these Archean islands, the one in the southeast and the other in the northwest part of Oregon. Dr. G. I. Finlay reviewed a paper by W. M. Davis on the 'River Terraces in New England' (*Bull. of Mus. of Comp. Zool.*, Vol. 38). Mr. C. W. Dickson reviewed several late papers from the American Institute of Mining Engineers. H. W. Shimer.

AMERICAN CHEMICAL SOCIETY.

NORTHEASTERN SECTION.

The forty-fourth regular meeting of the section was held at the rooms of the Technology Club, Boston, Friday, April 24, at 8 P.M. President A. H. Gill in the chair. Seventy-five members were present.

Mr. George W. Priest addressed the section on 'The Manufacture of Chrome Leather,' describing the usual method of preparing the raw hide for tanning, and the two methods used for chrome tanning, known as the one-bath and two-bath processes. The lecturer also described the new process for making patent leather from chrome-tanned skins, and exhibited specimens of leather tanned in various ways. The address was followed by a general discussion of the subject by members interested in the tanning industry.

Arthur M. Comey,
Secretary.

PSYCHOLOGICAL CLUB OF CORNELL UNIVERSITY.

The following papers have been read during the session of 1903:

Mr. B. L. Andrews: 'Tests of Audition: Clinical, Anthropometrical, Psychophysical.'

Dr. J. W. Baird: 'The Influence of Convergence and Accommodation upon the Perception of the Third Dimension.'

Professor I. M. Bentley: 'Clearness as an Attribute of Sensation'; 'Experimental Æsthetics.'

Dr. L. P. Boggs: 'Mental Elements and Mental Units.'

Dr. M. E. Schallenberger: 'Mind in the First Week of Infancy.'

Mr. H. C. Stevens: 'The Physiological Factors in the Normal Plethysmogram.'

Professor Titchener: 'The Method of Minimal Changes'; 'The Law of Error'; 'The Method of Average Error'; 'The Method of Right and Wrong Cases.'

DISCUSSION AND CORRESPONDENCE.

WALBAUM AND BINOMIALISM.

Mr. Henry W. Fowler, in Science for April 10, 1903 (p. 595), has expressed the opinion that 'Walbaum is non-binomial.' This assertion involves the names of many of our most common fishes and would necessitate numerous changes in nomenclature if true. Therefore, a restatement of facts in question appears to be called for. In fact, Walbaum is as binomial as Linnæus, if not more so.

Linnæus himself did not regard what is now called binomial nomenclature of much importance; indeed, he considered it to be simply a device for temporary purposes or for the facilitation of tabulation. What he did take pride in and credit for was the use of the specific name ('nomen specificum'), but this so-called name was not binomial, but of the nature of a diagnosis; really it was a diagnosis, as he claims: 'Nomen specificum est itaque differentia essentialis.' This was his boast: 'Primus incepi nomina specifica es-

sentialis condere, ante me nulla differentia digna exstitit.' What is now known as a binomial name was called by Linnæus a 'nomen triviale,' and he regarded it as of trivial importance. Indeed, he contemptuously accredited his predecessors with the use of such; he expressly affirmed, 'Trivialia erant antecessorum et maxime trivialia erant antiquissimorum botanicorum nomina.'

In the 'Systema Naturæ,' the 'nomen specificum,' or diagnosis, was given the prime place in the text in connection with each species under the generic diagnosis, and the 'nomen triviale' was thrown in on the margin of the page so that it should readily catch the eye. The treatment of one and the same genus by Linnæus in the 'Systema Naturæ,' by Artedi in his 'Genera Piscium,' and by Walbaum in his edition of Artedi's work, will illustrate. *Cobitis,* the second of the Artedian genera, will do.

By Linnæus, the species were thus named:

149. COBITIS. [Diagnosis follows.]

Anableps. 1. C. capite inermi depresso, oculis prominulis.

Barbatula. 2. C. cirris oris 6, capite inermi compresso.

Taenia. 3. C. cirris oris 6, spina suboculari.

fossilis. 4. C. cirris oris 8, spina supra-oculari.

These corresponded to the three species of Artedi named by him as follows:

1. Cobitis *aculeo bifurco infra utrumque oculum* [etc.] (*a*).

2. Cobitis *tota glabra maculosa* [etc.] (*b*).

3. Cobitis *coerulescens;* [etc.] (*c*).

In footnotes, Walbaum coordinates these with the Linnæan names as follows:

(*a*) 1. Cobitis, *Taenia,* cirris 6; spina suboculari. *L. S. N.* 499.

[Diagnosis follows.]

(*b*) 2. Cobitis *Barbatula,* cirris 6; capite inermi, compresso. *L. S. N.* 499.

[Diagnosis follows.]

(*c*) 3. Cobitis, *fossilis,* cirris octo; spina superoculari. *L. S. N.* 500.

[Diagnosis follows.]

Walbaum then added several later discovered species and continued the numeration from the Artedian system. The additions were:

4. Cobitis, *Anableps;* Vide in sequentibus genus Anableps *Artedi.*

The reference is to page 160, where Walbaum calls the species 'Cobitis, *Anableps*' [etc.], refusing to adopt the genus *Anableps.*

5. Cobitis, *heteroclita,* capite imberbi; [etc.].

6. Cobitis, *japonica. Iapanse Meirshlang. Hoattuyn* [Houttuyn, etc.].

After these he added several species he considered for the present doubtful (*'Species adhuc dubiae'*), but continued the numeration:

7. COBITIS, *macrolepidota,* albo fasciata. *W.*

8. COBITIS, *majalis,* nigro in longitudinem et ad caudam transversim lineatus. *W.*

These species are at present mostly known by the following names:

1. Cobitis taenia.
2. Nemochilus barbatula.
3. Misgurnus fossilis.
4. Anableps anableps.
5. Fundulus heteroclitus.
6. Saurida argyrophanes?
7. Fundulus heteroclitus macrolepidotus.

Now it will appear, from a comparison of the names used by Walbaum and Linnæus, that Walbaum acted more in conformity with the present usage of naturalists than did Linnæus. He placed the 'nomen triviale' immediately after the generic name and before the diagnosis, indicating its character by italics generally and its interposition between the generic name and 'nomen specificum' or diagnosis, by commas. In other words, Walbaum interpolated the 'nomen triviale,' while Linnæus was wont to put it by the side.

The 'Genera Piscium' was well edited by Walbaum (or Wallbaum, as he often called himself). He gave the text as it was left by Linnæus and indicated the original pages by marginal numbers. He brought the work up to date by additions given in foot-names, which consequently greatly added to the volume. He has been recognized by all authors as a binomialist till Mr. Fowler challenged his right to be considered such, and a binomialist he certainly was.

In the typographical expression of the

synonymy of the species mentioned, Mr. Fowler has committed an assault upon typographical custom which ought almost to have caused a strike among the printers and must have excited the disgust of the proof-reader. Such a monstrosity as '*C.(ephaloptera) vampyrus,*' or even '(*Raja.*) *Manatia,*' unhappily, is not unparalleled, but because it is not, and a bad example had been set before, a protest now is all the more timely. Some deference should be paid to the reader, and if he is not intelligent enough to know that *C[ephaloptera] vampyrus* is the full expression of *C. vampyrus,* and that the bracketed letters were substituted for the period, indicating abbreviation, he certainly would not be intelligent enough to appreciate any part of the article in question. Such flagrant abuses of typographical methods should not be tolerated. The first volume of an otherwise excellent work by a distinguished naturalist was recently published marred by similar blemishes, but the author relieved himself of such eccentricities in the succeeding volume. It is to be hoped that Mr. Fowler will profit by the later example in the same measure as he was misled by the former.

It is proper to add that Mr. Fowler and his predecessor were simply actuated by a laudable desire for perfection of quotation in their strange typographical devices, but surely there should be some limit to deviation from customary methods and to pandering to ignorant and incompetent students.

Theo. Gill.

Cosmos Club, Washington.

THE NEW MEXICO NORMAL UNIVERSITY.

The whole faculty of the New Mexico Normal University resigns at the end of the present school year, under circumstances which should be widely known. Predatory organizations of a political character exist in New Mexico as elsewhere, and it is in the nature of things that they should interfere in various ways and degrees with educational institutions. During my connection with the New Mexico Agricultural College (1893–1900) I had many opportunities for learning the character and motives of this interference, and the time may come when it will be expedient to tell the story in some detail. Some idea of the prevalent conditions may be gathered from the fact that within a period of eight years (1894–1901) the college had five successive presidents, namely, Hadley, McCrea, Jordan, Sanders and Foster. In spite of everything, a great deal of good and useful work was done; but it was lamentable to see the waste of opportunity, time and money resulting from the actions of self-interested, ignorant and prejudiced people. I have before me copies of the letter of Dr. Sanders, fourth president of the college, to his board of regents, and of his second annual report, both written in 1901. In these carefully prepared and exceedingly outspoken documents the case against the politicians is presented in the clearest manner, with abundant details; but they are too voluminous to be published in Science.

The Turkish have a proverb: 'The fish stinks from the head.' It can not be overlooked that the governors of New Mexico, who appoint the regents of the higher institutions, are responsible for the generally unsatisfactory character of these bodies. It is pertinent to ask why the presidents of the United States have not, at least within recent years, seen it possible to give us even tolerably good governors. The explanation lies, of course, in the so-called policy of home rule, which in this case results in practically giving the appointment of the chief executive into the hands of the then dominant predatory organization. It would seem more logical either to make us a state and let us make our own muddle, or treat us as a child-commonwealth and provide us with competent rulers.

The New Mexico Normal University, which opened its doors five years ago, has had until now a most fortunate immunity from political interference. In spite of its rather ridiculous name, it has prospered under the guidance of men who understood its proper aims and needs. This has been principally due to the wisdom and influence of Mr. Frank Springer, the well-known authority on crinoids, who has been president of the board of regents. Mr. E. L. Hewett, the president of the school, is a well-