

in a fair way to be more amazed at their own intellectual production than at any thing that has yet happened in human history.

LETTERS TO THE EDITOR.

**** Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.*

The Hall effect.

IN your account of the proceedings of the section of physics, at the Philadelphia meeting of the American association, occurs the passage: "He [Mr. Hall] used not only gold-leaf, but strips of steel, tinfoil, and other metals, and clamped them sometimes at both ends, sometimes in the middle, and sometimes only at one end; and in all cases the action was the same, with the same metal, irrespective of the clamping."

This statement is not accurate. I have subjected soft steel only to the test here described, and I did not with this metal try the experiment of clamping it at one end only.

Again, it is not quite accurate to say that Mr. Bidwell attributes the action under discussion, to "one edge [of the metal strip] being compressed and the other stretched." One can best understand Mr. Bidwell's explanation by examining the illustrations accompanying his article in the *Philosophical magazine* for April, 1884.

E. H. HALL.

Cambridge, Sept. 20.

Iroquois pronouns.

Allow me to correct the entire misconception of my Montreal paper by your reporter of the anthropological section. I did not affirm that the "missionaries and all other authorities who have heretofore written on the Iroquois languages were mistaken," etc. On the contrary, I proved that my conclusions concerning the existence of an *it*, and the non-existence of *on*, were correct by quoting the 'exceptions' and so-called 'idioms' resorted to by the French missionaries to sustain their adaptation of the language to the French form of two genders, etc. This adaptation, which simplified the study for the young priests, I affirmed would be folly for us to follow when writing upon Iroquois construction for English students. I proved my position by numerous examples from the best native authority, from those who understood English or French as well as myself. I might remark here that such authority presents a vast contrast to that which the pioneer missionary could obtain, and greatly facilitates investigation. I could refer your reporter to 'vocabularies' by long-resident missionaries which to-day are worthless from this fact. As to the 'English missionaries' referred to, I know of none who have contributed to Iroquois grammar.

I mentioned Rev. Ashur Wright, an American, as recognizing three genders; also Hon. Lewis Morgan, author of the 'League of the Iroquois.'

Upon so-called 'hazardous assertions' depends the march of science, and I venture to re-assert, '*it* still moves.'

ERMINNIE A. SMITH.

Jersey City, Oct. 1.

Classification of Mollusca.

In Professor Gill's instructive comment on molluscan classification, he unintentionally misquotes me. The review in question said that no single instance of

a calcified jaw 'occurs to us,' the two words in italics (omitted by Professor Gill) making all the difference between a positive assertion and a provisional one. The Nautilus, as Owen, Lankester, and others state, has been regarded as having a calcified jaw; and I am quite confident that it is the single instance known among recent mollusks. However, there is reason to believe that the expression of Owen was used in a less precise sense than has been supposed by later writers, and that the calcification, if actually present, is at most partial, and perhaps a mere individual trait. In the only specimen of Nautilus I have had the good fortune to be able to examine, the visible parts of the jaw were wholly free from any calcification. Whether the portions embedded in the muscular tissue, or otherwise hidden from view, may have been calcified, could not be determined, the specimen being held too precious to dissect. The composition of the jaw of Spirula is entirely like that of ordinary cuttles, as far as the eye could determine; and it is evidently desirable that we should have further investigation in regard to that of Nautilus.

In regard to the Acepchala, it does not seem to me necessary that they should be ordinarily divided, unless good ordinal characters can be found; and, if the characters now used are imperfect, there is no reason for retaining the divisions founded on them, except in a provisional sense.

I fully agree with Professor Gill, that the present Dimyaria are not derived from the present Monomyaria; but whether both may not have had a monomyarian ancestor, it is still too early to decide, as it is (in a less degree) about the exact homologies of the shell glands in Chitons and ordinary gastropods, whose common characters seem to me largely adaptive.

It may be added, that while, so far as we know, Ovulum has a purely involute shell, Pedicularia, in its early stages, resembles a small Erato with a distinct spire.

W. H. DALL.

U.S. national museum, Oct. 4.

The primitive Conocoryphean.

Your notice of Mr. G. F. Matthews's paper, read before the British association, though complimentary, gave no idea of the contents. Part of this communication was of exceptional importance. All accurate histories of the development of single animals are now thought well of; but Mr. Matthews has traced not only the transformations of the larval, but the characteristics of the adult period, and the transformations of old age. This author has also added the general history of the evolution of some of the most ancient groups of the trilobites, and shown that the changes they pass through correspond with the changes which the individuals of one of the groups, the Ctenocephalus Matthews, passed through during its growth. Opportunities for doing this sort of work are rare, and the men who do it still rarer.

ALPHEUS HYATT.

[It was impossible for us, in the brief space at command, in reporting promptly two scientific meetings of a week each in quick succession, to do justice to any paper. Many were altogether omitted. — ED.]

Book-postage in the United States.

In reference to your remarks on the expense of using libraries through the mails, allow me to point out that this expense is in America exactly double what it is, and has been for many years, in England, and even in Canada. The English and Canadian