

plans during the war, but the council has already made recommendations which, if adopted, will, it believes, secure that all that is practicable in existing circumstances shall be done.

### UNIVERSITY AND EDUCATIONAL NEWS

AN endowment of \$70,000, to create the "Howison Foundation," has been given to the University of California by George Holmes Howison, professor of philosophy, emeritus, in the University of California, and Lois Caswell Howison, his wife. Subject to an annuity during their lifetime, the endowment is to maintain the Howison Traveling Fellowship, of \$1,200 to \$1,500 a year, \$600 a year to constitute the Lois Caswell Fund for the Dean of Women to aid deserving women students, and three or four Anne Sampson scholarships or fellowships, in honor of Mrs. Howison's mother, for women students in English literature and criticism.

DR. ALICE ROHDE has been appointed instructor in research medicine in the George Williams Hooper Foundation for Medical Research of the University of California. A graduate of the University of Chicago of 1903 and of Johns Hopkins Medical School of 1910, Dr. Rohde has had special training in research medicine under Professor Walter Jones and Professor J. J. Abel at the Johns Hopkins University and under Dr. Emil Fischer at Berlin.

DR. JOSEPH H. GROSSMAN, of Cleveland, has been appointed lecturer on diagnosis of tuberculosis in the school for applied social sciences of Western Reserve University.

AT the last meeting of the corporation of the Massachusetts Institute of Technology the following assistant professors were promoted to be associate professors: Daniel F. Comstock, theoretical physics; George L. Hosmer, topographical surveying; C. L. E. Moore, mathematics; Ellwood B. Spear, inorganic chemistry; William E. Wickenden, electrical engineering. The following instructors were made assistant professors: James M. Barker, structural engineering; Ralph G. Hudson and Waldo V. Lyon, electrical engineering, Earl B.

Millard, theoretical chemistry; Thomas H. Huff, aeronautical engineering.

MR. T. E. GORDON has been appointed professor of surgery in Trinity College, Dublin, in succession to Professor E. H. Taylor.

PROFESSOR J. J. VAN LOGHEM has been appointed to the newly founded chair of tropical hygiene in the University of Amsterdam.

### DISCUSSION AND CORRESPONDENCE

#### AMBLYSTOMA NOT AMBYSTOMA

TO THE EDITOR OF SCIENCE: In a letter printed in SCIENCE for June 30, 1916 (43: 929), Dr. M. W. Lyon, Jr., presents and defends the thesis, "*Ambystoma* not *Amblystoma*." If so, the spotted salamander has another spot on his name. *Ambystoma* is a dark saying. Dr. Lyon refers to the original paper of the author, Tschudi, 1839 (Scudder gives 1838), and says that the name is "written by him *Ambystoma* in four different places in his work, and only in that manner." He adds: "The derivation of the word is not given by him, and there is nothing to indicate that he intended *Amblystoma* and made a lapsus calami."

But outside of Tschudi's print, there is something to indicate that he intended *Amblystoma*, and made a lapsus of some sort; namely, the fact that *Ambystoma* has no assignable meaning in any known language, while *Amblystoma* has an assignable meaning in the language of science—that European or cosmopolitan Latin which has supplied the main vocabulary of science, and will probably supply it for ages to come; being, like the rustic's indolent river, *in omne volubilis aevum*.

In this voluble vocabulary *Amblystoma*, or the adjective latent behind this name, means "having a blunt mouth." In form and meaning it is parallel to *Amblystomus*, the name of a genus of beetles, and to *Amblyrhynchus*, the name of a genus of lizards—which are cousins, once removed, of salamanders. These are but three of a long string of zoologic names beginning with *Ambly*-. But *Ambystoma* stands alone, though it appeared in the same decade with most of the others.

Whether *Amblystoma*, with the sense "having a blunt mouth," is an accurate or a suita-

ble name for the hapless salamanders to which it, or *Ambystoma*, has been applied, is a separate question.

If the framer of the word which first appeared as *Ambystoma* did not state the intended formation or the intended meaning, and if his description does not give a clue, it was a case in which science, for once, made a mistake—it left uncertain what it might have made certain.

One must guess, or reason out, what the author meant. His hand wrote—what? His printer printed *Ambystoma*. He printed it four times, we are told; but the second, third and fourth times may merely prove the meticulous care of the printer to repeat the first error, and thereby to secure that pleasing uniformity of error which is the undying passion of that deserving tribe. (What the tribe deserves I will not here disclose.)

Now, any scientific gentleman who thinks that it is a proper plan to form, print or defend a word *Ambystoma*, as a name for even the humblest of God's creatures, ought to consider whether he can "get across" with it. He may, indeed, find champions among his learned associates, especially among those to whom a printed error in a scientific work, if made early in the morning (I allude, of course, to one aspect of the rule of priority), has a Mohammedan or Shakespearian sacrosanctity; and some of these champions may try to support the error by daring flights into the clouds of etymology; as, in this case, the attempt mentioned by your correspondent, to support *Ambystoma* by capturing as its source a Greek phrase that is erroneous in itself, is non-existent (except in the clouds), and could not without violence be persuaded to assist in forming such a word.

The fact that this imagined Greek phrase is in *SCIENCE* printed with one error in each of its three words, exonerates the printer from the censure of Mohammedan superstition. If I were to repeat the phrase here, he would be quite willing, I am sure, to oblige us with other variations. The printer of Tschudi was more rigid: "What I say *four* times is true."

But supposing that *Ambystoma* does not

mean anything, what of it? Are we not often told that a name in zoology need not mean anything—that it may be a mere label, like a number?

This answer, however, does not meet the point. Names that *seem* to be formed from the Latin or Greek vocabulary in the usual manner will for ever be compared with their apparent sources; and anomalous names like *Ambystoma* or *Liopa* or *Fedoa* will for ever be challenged by scholars; and no agreement by a committee to take the first form found in print, or to acquiesce in de-facto fictions, will settle the question or the questioning. *Ambystoma*, so printed, *seems* to be intended for a word of the usual Latin and Greek vocabulary; but it means nothing, and it looks as if it were an error for *Amblystoma*; and to that form Agassiz corrected it.

I will not dwell upon the fact that *Amblystoma*, though a deliberately corrected form, is itself, considered as a neuter noun requiring a neuter specific adjective (*Amblystoma maculatum*), etymologically incorrect. But this point has been ignored in the framing of many New Latin names: and to consider it here were perhaps to consider it too curiously. Nevertheless, a fact ignored is still a fact *there*.

*Ambystoma*, then, it seems, has no right except the right of having started wrong. But the right of having started wrong is a right which the world is much disposed to admit. This is the case with many respectable sects and parties that have continued long upon the wrong road, and now obey at eve the erring voice which they obeyed at prime; or hold extra conventions to ascertain their principles. Whatever *was*, is right. Personally and scientifically, I do not believe this; but it is evident that many persons find a satisfaction in dogmas of literature and zoology, and in names and forms of words, that arose in former times. The glamour is in the preterition. These things *were*. That is something. The past, at least, is secure. Such things have a history; and they are at any rate free from the vice of being up to date.

It should be noted that the difference between *Ambystoma* and *Amblystoma* is not,

really, a difference of "spelling." *Scimitar*, *simitar*, *simiter*, *cimiter*, are four out of more than thirty spellings of one word, and *amoeba* and *ameba* are two spellings of one word; but *Ambystoma* and *Amblystoma*, whatever their status may be in zoology, are either two different words, or else two forms, one erroneous, of one word. No one asserts that they are two different words. All who have spoken agree that one is an erroneous form of the other. Which was intended? Let it be decided.

In all scientific compound names, intention is supposed to be present; and for this reason it will always be necessary that "science" shall correct what "science" has erroneously published; in other words, that Jones and Robinson shall correct the errors of their distinguished predecessors Brown and Smith. This is good science, and good fun, too, for Jones and Robinson. What but this, indeed, is the progress of science?

Is there not a scientific error in the attitude of those scientific men who prefer to take the first form and "have done with it"? Can science have done with anything? What the advocates of priority do is, in fact, to turn over an unfinished job to other men. This is reasonable enough, if they will let the other men finish it.

It were to be wished that the advocates of rule in zoologic nomenclature would play one game or the other—either the good old Presbyterian euchre, in which words are borrowed or manufactured orthodoxly from Greek and Latin sources (admitting, also, some heathen of the better sort), or else the less exacting Mohammedan solitaire, whose first law is the chance priority of print. It is hardly fair to mix with cards bearing the good old Presbyterian names of *Amblycephalus*, *Amblychila*, *Amblycorypha*, *Amblyopsis*, *Amblyrhynchus*, and the rest, a card bearing the Mohammedan and solitaire appellation of *Ambystoma*. (I am assuming that euchre and solitaire are played with cards.)

If this isolated *Ambystoma* is correctly formed, tell us how it is done and what it means. And then throw it out, nevertheless; for the scientific reason that it would be for-

ever confusable with the similar-seeming words with which, on the Mohammedan theory, it has no connection.

Notwithstanding all the politic reports and mosaic codes of the committees on nomenclature, committees which have done an inestimable service to science, and which should be liberally supported by money and advice (two sources of enrichment, of which one will never fail), I hold that it is the duty of scientific men to correct the errors which they find within their own domain; or at least not to enforce or prolong any error, great or small, by devotion to any rule of priority or any other hand-made rule intended to serve convenience in registration, regulation, indexing or proofreading. It is not right to make a rule out of chance and to call it a rule of order. It is not right to set up priority, which is a part of history, and to call it science, which is a part of reason.

If we will use the language of science, we must apply the science of language. And we must not ignore or reject that science on the ground that "the authorities differ" or that "the doctors disagree." Let me end with a hard saying: The doctors do not disagree. It is only some writers and advisers and committee men who disagree. The rest of us are agreeably unanimous. Let every man of science place his hand upon his heart, and agree!

CHARLES P. G. SCOTT

YONKERS,

July 28, 1916

#### AMBYSTOMA

IN connection with Professor M. W. Lyon, Jr.'s note on "*Ambystoma* not *Amblystoma*," I may mention the fact that Dr. Willard G. Van Name used *Ambystoma* as the scientific generic name of the spotted salamander in Webster's "New International Dictionary" which was published in 1909.

F. STURGES ALLEN

#### THE LIME REQUIREMENT OF SOILS.

TO THE EDITOR OF SCIENCE: At this time when methods for the determination of the lime requirement of soils are receiving much