

which contain a protein residue, and Dyson,⁴ has secured histological evidence which supports the belief that the mother-substance of the melanins is a protein. From my "melano-protein" (*i. e.*, melanin containing the protein residue) I split off the pigment portion by a short boiling with acid, and obtained a nearly clear solution of amino acids and polypeptides. *By a longer boiling of these amino acids and polypeptides with hydrochloric acid, I obtained a considerable amount of humin.* In this instance both a melanin and humin were obtained from the same protein and are, therefore, very probably not identical. If humin is substituted for melanin in referring to the products of protein hydrolysis, there will be less danger of confusing those who are not chemists, and who are accustomed to scientific terms which have a definite meaning.

A second instance of *possible* misuse⁵ of the term occurs in a recent article in SCIENCE (N. S., 35, p. 765). In speaking of the coat-colors of cow-peas Dr. Spillman states that "breeding experiments lead me to think that buff, brown and black were pigments related to melanin." Just how they were related chemically is not stated, but presumably it is by color and solubility, but as seen in the case of humin these are no criterion. Inasmuch as melanins are everywhere defined as *animal pigments*, or *pigments of animal origin*, it is as impossible for a melanin to appear in the vegetable kingdom as for the coat color of a rabbit to be due to anthrocyan. It would be far better to coin a new term for these plant pigments, and reserve melanin for *those dark pigments, which occur normally or pathologically, in the animal body, skin, hair or feathers.*

ROSS AIKEN GORTNER

COLD SPRING HARBOR, N. Y.,

June 19, 1912

⁴J. Path. and Bact., 15, p. 298.

⁵Dr. Spillman does not say these pigments are melanins, but that they are "related to the melanins." Dr. Mann, in a later note (SCIENCE, N. S., XXXV., p. 1004), does state that a yellow or brassy-brown pigment and an intense black pigment are melanins.

"PRONOUNCED GĒN"

TO THE EDITOR OF SCIENCE: One of your correspondents, Dr. G. H. Shull, discussing in SCIENCE for May 24, 1912, the spelling and pronunciation of the word *gene*, used by writers on genetics, says that it is "pronounced gēn."

This is a good example of the dilemma in which men of science are placed. They must use language, they must translate and transliterate language, they must concern themselves endlessly with nomenclature, they must strive to change nomenclature or strive to prevent any change. And they must at times mention pronunciations, if only to object to them. Sometimes they seriously wish to convey a pronunciation on paper to their intelligent readers. And here is a case. Dr. Shull, a trained man of science, writes to the intelligent readers of SCIENCE, and says that a certain artificial word is "pronounced gēn."

And what does that mean? It means one of two, three or four or more possible pronunciations. The reader has to *guess* what pronunciation is intended. In other words, a man of science, writing in a journal of science, about an elementary matter, completely fails to accomplish his purpose.

Why? Because some orthodox men of science object to any accurate indication in print of the sounds of the human voice; because they object to any representation of sounds that is not contained in certain traditional spelling-books and dictionaries (that is, in certain stereotype plates owned by certain dealers in printed ware); because they will not give a hearing to the men of science who understand the subject; because they close their minds and their journals to science itself, when it mentions language. The Jaspers of science will not listen to the astronomers. "The sun do move," and we won't hear another word! And so our real men of science, when they wish to state facts of language, must express their meaning imperfectly or ambiguously, or else keep silence. But silence also is ambiguous.

How long is this condition to continue? How long will the controlling men of science

oppose the introduction into science of a correct and intelligible way of indicating the sounds of the human voice? How long will the American men of science who control scientific societies and scientific institutions and scientific journals, ignore or suppress the proposals of philological scholars to provide a definite system of indicating the sounds of the English language? How long will they oppose the movement to bring about a regulation of English spelling, so that English words may be spelt correctly and intelligibly, and so that a given man of science, in a journal devoted to science, and bearing the name of SCIENCE may present a simple idea, in simple letters, in a sure and certain way? How long? Ask our respected friends President X and Professor Y and Dr. Z, Editor P and Director Q, who sit at the gates of science, and scrutinize the tickets, and exclude every man who does not spell according to their Mohammedan way. In the name of the Prophet, phigs!

In the meantime the leaders in science will be writing in SCIENCE statements about language that are in fact futile, because, as we lawyers say, they are "void for uncertainty."

Of course I know, and you know, Mr. Editor, what Dr. Shull means when he says "pronounced gēn"; but we know it by a process of inference, and by a course of special study. No one else can tell what he means, except through the same process. The man of science wishes to be clear, but his colleagues won't let him. In the name of the Prophet, phigs!

CHARLES P. G. SCOTT

YONKERS, N. Y.,

June 24, 1912

FORMATION OF SPURRED FLOWERS IN HYBRID CALCEOLARIAS

WEBBER¹ refers to hybridization as the apparent causal agent in the development of a marked spur or horn on the lip of a hybrid *Calceolaria*. Characters apparently new are said to appear rather commonly in hybrids and the idea is advanced that the teratological structure just mentioned may be a new unit character of the genus *Calceolaria*. The statement is made that "no such character, so far

¹ SCIENCE, N. S., 35, p. 606, April 19, 1912.

as can be learned, is known in the *Calceolarias*, and it would seem to have been caused by the hybridization."

M. T. Masters² states that the formation of spurs or spur-like tubes is very frequent in some seasons in the corolla of certain *Calceolarias* (*C. floribunda*). An excellent figure (Fig. 169) is also given.

ORLAND E. WHITE

BUSSEY INSTITUTION,
HARVARD UNIVERSITY,
June 18, 1912

SCIENTIFIC BOOKS

High School Education. Edited by CHARLES HUGHES JOHNSTON, Ph.D. Charles Scribner's Sons. 1912.

To designate this book a notable effort in pioneer-work is to indicate at once its merits and its inevitable limitations. In its arrangement, in the assignment of general and of specific topics to writers whose interests concentrate in their respective fields of inquiry, it proclaims the fundamental belief that no single writer can hope to do justice to all the issues involved in secondary education. Where questions of general policy, of programs of study, of curricula and of method in individual subjects must be weighed to promote the ideals of efficiency, it is desirable that the inquiring teacher shall have the guidance of a number of experts whose utterances will help him to plot his own line of procedure. It speaks well for the firmness of the editor that his collaborators represent almost without exception a uniform tendency, though they are permitted full leeway in the advocacy of their individuality. Professor Johnston has on the whole been fortunate in the choice of his cooperating writers; even for some of the subjects that have not yet found general recognition in our high schools he has secured contributors of distinctly originaive ability. Even though this book may be superseded before long by similar studies of greater value, it may claim the merit of having led the way to a proper consideration of the manifold problems of the secondary school.

² "Vegetable Teratology," 1869, p. 316.