

flattened area on the face, but without groove or channel. Zapupe azul, in habit, form of leaf and spines seems to agree perfectly with Tequila azul, *Agave tequilana* Web., cultivated extensively in the region of Tequila, Jalisco, for the production of 'Tequila wine.' The plant is not used for the production of liquor in eastern Mexico. It is said to have been introduced in that region and its origin seems uncertain. Zapupe verde has long been cultivated for fiber by the Indians of Tautoyuca, Vera Cruz. The zapupe fiber morales made by these Indians are among the finest to be found in Mexico. This plant may be *Agave angustifolia* Haw. which has been referred somewhat doubtfully as a synonym of *A. rigida*.

The fibers of both species of zapupe are very similar in character. They belong to the sisal group among the hard fibers used for twines and cordage. They are finer, and more flexible than either Yucatan or Bahama sisal, approaching the better grades of Bahama sisal in general character. In a test for tensile strength they compare favorably with the better grades of sisal.

M. C. MARSH,

Recording Secretary

DISCUSSION AND CORRESPONDENCE

THE FIRST SPECIES RULE

I HAVE read with a great deal of interest all that has been more recently published in SCIENCE on this topic, because the adoption of and strict adherence to the rule making the 'first species' the generic type will make about as many changes in the nomenclature of the lepidopterous family in which I am especially interested as can well be crowded into it. It will bring up names that have dropped out of use for fifty years and it will completely change the conceptions of a large number of genera that have been in common use for nearly or quite as long a period.

I was particularly interested in the essay by J. A. Allen in the April 5 number of SCIENCE and especially in the following, on p. 548:

Of course, an author often states that certain species are referred to a given genus provisionally, or are given as doubtfully belonging to it. In all such cases the rules of our standard codes prohibit

the taking of any such doubtfully referred species as the type of a genus.

Ordinarily when an author characterizes a genus he has some definite idea that represents his genus—a combination of structures which, taken together, make his generic conception. Whenever there is any change in this association by extension or limitation the genus as first proposed is no longer in existence. As limited or enlarged the association of species represents the conception of the person that limits or extends.

In 1890, in a revision of the species listed under *Agrotis* in our catalogues, I proposed the name *Rhynchagrotis* for an assemblage most prominently characterized by a palpal structure that bore a resemblance to a short snout or beak. There were other characters as well and the combination of those characters made up my genus for which no type was designated.

Among the species referred to this new association was *Agrotis chardynii* (*gilvipennis* Grt.), an oddity in our fauna, standing by itself and differing markedly from all our other forms. It did not really agree with my definition of *Rhynchagrotis* and so I stated; my reason for placing it there being that I believed it would prove to be properly referable to an exotic genus to which I did not care to risk making a synonym.

In accordance with my usual practise in revisional work I prepared a table of species, and for convenience in tabular arrangement I usually separate the oddities first. Thus, *chardynii* being the only one of our species with yellow secondaries was the first to be excluded in the synoptic arrangement, and the list of species described under *Rhynchagrotis* begins with that name.

Recently, Sir George Hampson, in his monumental catalogue of the Phalænæ in the British Museum, treated the Agrotids in his Volume IV., and as his basis for generic combinations did not coincide with mine, there were some shifts. Among others my association under *Rhynchagrotis* was broken up, and of all species in the world *chardynii*, which I felt sure could not remain in it, has now become the 'type,' because it happened to

head the list. The name still is *Rhynchagrotis* Smith; but any student who attempts to identify the Smith genus as it stands now, from the Smith description as it was written, will inevitably fail to understand how Smith could have written up such an inapplicable set of characters for his genus. My genus no longer has any existence, though the name proposed by me remains to represent a set of characters specified by Hampson.

It does seem to me as if, when an author has recorded a given set of characters as representing his conception of a genus, any arbitrary rule that limits his generic term to any species or set of species that does not include that combination is both illogical and unscientific. It seems like holding to the letter to avoid an inquiry into the spirit of truth.

JOHN B. SMITH

NEW BRUNSWICK, N. J.,
April 22, 1907

THE ANTHROPOLOGICAL EXHIBITS IN THE AMERICAN MUSEUM OF NATURAL HISTORY

TO THE EDITOR OF SCIENCE: The communication in your issue of April 12, by Dr. Dorsey on 'The Anthropological Exhibits in the American Museum of Natural History' suggests the important question: For whom should the public exhibits in such museums be designed? Should they be for scientists, for college students or for the general public?

The needs of these three groups are so very different that it is quite evident that the same style of exhibit can not be satisfactory to all. If designed for the public the exhibit should come within its comprehension and should lead in a definite manner to a general appreciation of some of the more important features of the subject; for it is to be presumed that the public will see little beyond that which is prepared for them. If they are to obtain definite ideas it is best that the exhibit aim to impart a limited number of fundamentals rather than lose itself in a multitude of details. In other words, effectiveness is dependent on concentration in aim and in limiting the number of objects shown. It is unavoidable that such an exhibit should partake somewhat of the character of a text-book

illustrated by specimens, though it is probably advisable to disguise as far as possible the mechanism of this; for people like better to think they are discovering facts and principles than that these are forced upon them. However, if any considerable portion of the public is to be guided aright it is necessary that the text-book character of the labels shall be at least pronounced enough to be discernible to the trained specialist and consequently to be offensively kindergartenish to him if he imagines that the exhibit was made for him.

An exhibit designed for students having had the advantages of text-book and oral instruction would needs be more advanced, less explanatory, and with a greater wealth of detail.

For an advanced specialist an exhibit of all the material in the museum, each specimen accompanied by its field label, would probably be as satisfactory an arrangement as could be made in exhibition cases; but I am very certain that most anthropologists, like mammalogists and ornithologists, would prefer to have the specimens in trays in storage cases where they could be handled and minutely examined.

The exhibits in our museums twenty or twenty-five years ago were largely of a character that reached no class of people as they should be reached; but catered principally to naturalists. Those were the days when the exhibit expressed what the official occasionally put into words: "The public be d——." Within a very few years it seems to have come to most museums that they were on the wrong track; that their exhibits were not conducive to the best use of the specimens by naturalists and that they utterly failed to reach the public. The keeping open to the public of the halls of a large museum is a matter of great expense, justifiable only on the ground of public instruction, and quite uncalled for if the exhibits are not intended for them.

Most museums are supported to a considerable extent by their communities and therefore the taxpayer has a right to demand that something be done for him; and every fair-minded museum director will see to it that he receives considerate treatment.