world. The genus *Leucozona* includes a single species, possibly two. In accordance with this iniquitous, *ex post facto* law of the 'First Reviser' it is now proposed to apply the name *Syrphus* to this single species and to give to the hundreds now called by that name, the name of a synonym made years ago by the greatest blunderer that ever wrote on entomology. Schiner was remarkably conscientious, following the usages and rules of his time closely. He, of course, could not imagine that the future historical naturalist would impose so absurd a rule as would make the carelessly designated and wholly unwarranted 'type' of Curtis compulsory; did not dream that it was necessary for him to look through the writings of every author of high and low degree to see whether Fabricius's types had been arbitrarily fixed. His work was done in good faith.

This is but one example of the workings of this newly proposed, *ex post facto* law. There are scores of others not unlike it; in fact, dipterology will be a small chaos until all the present works on the science have been rewritten, and a paradise of the name tinkerer, if such a rule obtains.

I should not object to the 'first species' rule, if it were not made retroactive in such cases as would upset other names established by elimination. Surely those of the past who have done able and conscientious work under accepted usages should not be stigmatized at the caprice of any self-constituted authority. And what assurance have we that a few years hence some other *ex post facto* law will not be invoked to do the work all over again? New writers will have little opportunity to propose new generic names unless some such historical mine is opened up.

I really believe that the final solution of the ever-growing controversies and apparently never-ceasing changes will be some such commission as Dr. Davenport has recently suggested, an accepted commission to pass upon the validity of names without regard to priority or anything else. And one of the first rules that I should attempt, were I a member of such a commission, would be that he who digs up a name that has been buried for fifty years to replace some other in common use, should be ostracised and debarred from all further use of reputable scientific journals.

S. W. WILLISTON

TYPES OF GENERA BY FIRST SPECIES

IN a recent article[1] it is claimed that the first species method is opposed to the law of priority, since it supersedes the action of the first reviser. It is only necessary to reply that the action of the original author always precedes that of any possible reviser, and since the first species method determines the type of the genus solely from the first publication of the original author, it is obviously more in accord with the law of priority than any other method.

The same writer makes the surprising statement that the method of elimination and that of the first reviser are parts of one method. As a matter of fact, they are almost diametrically opposed. The elimination method, or the method of residues, tends to leave as the type of the original genus the one left last after all removals. This is usually the most obscure or unrecognizable species, since the more prominent ones are generally first selected as the types of new genera, or are otherwise removed. The first reviser method, or that of the nomination of types, tends to select some prominent species as the type of the old genus, since such will naturally be first selected by some later author as an illustration. These two opposed rules are, unfortunately, capable of being mixed in various ways (one of which is illustrated in the article here referred to), allowing of almost an infinitude of methods of selecting types. It is this extreme and most undesirable latitude in the rules that renders those most lately promulgated so unsatisfactory and impracticable.

HARRISON G. DYAR

U. S. NATIONAL MUSEUM,
April 19, 1907

A SHEEP-GOAT HYBRID

WHAT seems to be a hybrid between a sheep and a goat was produced this spring on the

[1] SCIENCE, n. s., XXV., 625, 1907.

farm of Mr. E. Arnaud, Monett, Mo. Mr. Arnaud maintains a herd of sheep and with them keeps two goats, a male and a female. There is only one female goat on the place, and she brought a kid three weeks after the animal in question was born. The hybrid is a twin to a lamb that is not a hybrid. The maternity of the supposed hybrid is not absolutely certain. Mr. Arnaud found the lambs when they were perhaps an hour old. No other sheep or goats were near, though there were others within the same enclosure. The ewe evidently regarded both the animals as her progeny. The twins are inseparable, one being an ordinary lamb, the other in most respects a goat. The tail is intermediate in length between that of a sheep and a goat, and the ears closely resemble those of a sheep. The coat is apparently that of a goat. The male goat on the farm is of mixed breeding and is white with a few reddish hairs showing on the upper part of the neck. The supposed hybrid has most of the hairs of the body of this reddish color. Mixed with them are much shorter hairs which appear like white wool. They have not yet been submitted to examination to ascertain their real nature.

While the evidence is not absolutely conclusive, there is strong reason for believing this individual to be a hybrid. Mr. Arnaud fully appreciates the importance of the freak, and will preserve it for future study and experiment. The writer would greatly appreciate information concerning other hybrids of this character.

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U. S. Department of Agriculture

SPECIAL ARTICLES

THE SIGNIFICANCE OF LATENT CHARACTERS[1]

Those of you who were present at the last annual meeting of the Botanical Society, at New Orleans, will remember that I presented a paper upon the latent characters of a white bean, showing that the appearance of two new characters in the F_1 hybrid offspring of a white bean when crossed with a plain brown or yellow bean, demonstrated the presence of a color-pattern, and of a pigment-changer as 'latent' characters in the white bean, latency meaning simply *invisibility* and not dormancy. On this basis it was predicted that in the second generation five forms would appear according to the well-known tripolyhybrid ratio, 27:9:9:3:16. These forms in the order of the ratio are purple mottled, black (dark purple), brown mottled, brown, and white. I show you to-day samples of these five predicted types taken from the second generation.

The ratios of these several groups have not yet been determined because not all of the material has been worked over, but the presence of the predicted types—especially the presence of the two forms, plain black and brown mottled, which were not known to have ever occurred in the ancestry on either side—sufficiently demonstrates the correctness of my interpretation of the allelomorphic composition of the parents. Some additional unexpected types were found which must await further breeding experiments before their significance can be profitably discussed.

It will be remembered that the condition I assumed for these hybrid beans was used to bring into harmony with simple Mendelian hybrids the apparently anomalous results of Tschermak, Emerson, Lock, Bateson, Correns, Cuénot and Castle. The prediction that the same conception of latent characters in the sense of *invisible*, not *inactive* ones would without doubt give a solution to the intricate and otherwise apparently inexplicable behavior of stocks and sweet-peas, as studied by Bateson, was fulfilled with unexpected promptness, as the third report[2] to the Evolution Committee presented in March, 1906, and published later in the same year, adopts the same theory and shows that in this way practically all of the apparent anomalies of stocks and sweet-peas may be explained upon the simple basis of typical Mendelian behavior without recourse to the hypallelomorphs or compound units earlier assumed by Bateson.

[1] Read before the Botanical Society of America, at New York, December 29, 1906.

[2] Bateson, W., Saunders, Miss E. R., Punnett, R. C., 'Experimental Studies in the Physiology of Heredity,' Reports to the Evolution Committee of the Royal Society, Report III., 53 pp., London, 1906.