visible many miles in every direction. The formations are extraordinary in shape and beautiful in coloring. Unusual caves and subterranean passages add to the beauty of the Pinnacles National Monument. According to the custodian of the monument, W. I. Hawkins, the caves are of a type he has encountered nowhere else, and represent vividly the processes of world-building. In his opinion the massive grandeur of these caves is second only to the Carlsbad Caverns in the national park of that name. In addition to the area of almost 2,000 acres which the County of San Benito donated for the enlargement of the monument, condemnation proceedings are now under way for the purpose of acquiring a private holding of 160 acres which was embraced within the original monument boundaries.

Nature describes an exhibition of British glass and glassware held in the exhibition hall of Messrs. Selfridge and Company. The exhibition was organized by the Glass Manufacturers' Federation in order to indicate to the general public the variety and quality of the products of the glass industry. The exhibits included artistic glassware and fine crystal tableware; glass bottles and jars of various shapes and sizes; sheet-glass in different forms and plate-glass from ⅛-inch in thickness to 1½-inch; glass transparent to ultra-violet light, and glass which excludes about 80 per cent. of the heat rays. The varied range of exhibits of chemical, scientific, laboratory and medical glassware, and of fused silica glassware, gave evidence of the remarkable progress that has been made in these branches of the industry. The application of glass in the electrical industry was illustrated by wireless valve bulbs; electric lamp bulbs, which are produced by automatic machinery; a 10 kw. electric lamp, such as is used in lighthouses and in aerodrome pilot lights; photocells; and neon lights for decorative and publicity purposes. Two large blocks of fine optical glass were shown, and also a polished telescope disc of 24 inches diameter. Amongst the spectacle lenses exhibited were samples of specially computed cataract lenses of light weight and trifocal lenses made by fusing as many as six pieces of glass to form the complete lens. Spun glass, known as glass silk or glass wool, was shown in skeins and also woven into cloth and mats. This is now being largely manufactured and used for heat insulation purposes on boilers and steam-pipes. It is more efficient than many other substances used for this purpose, and, in the form of mattresses or strips, can be easily and quickly applied or removed.

DISCUSSION

IS AN INTERNATIONAL ZOOLOGICAL NOMENCLATURE PRACTICABLE?

THE article under this title by Dr. C. W. Stiles in SCIENCE for January 3 suggests that an affirmative answer to his question meets with grave difficulties (in which we shall all agree), and that those difficulties have been increased by events at the last International Congress of Zoologists, held in Padua, 1930. Is it not possible to take a more hopeful view of the situation?

When one looks back at the great divergences in principle and practice that obtained only 35 years ago, one must concede that the International Commission on Zoological Nomenclature has worked wonders, and no small part of its success has been due to the labors of Dr. Stiles himself as its secretary. That the ground thus gained is to be given up because of a temporary setback is hardly to be admitted. That, however, could scarcely fail to be the result if a local section of zoologists, especially so important a section as the zoologists of the United States, were to break away and adopt their own code. Their example might well be followed by other groups and the curse of Babel would redescend upon us.

As one who has been striving for many years to harmonize conflicting views, and to help on united action, I beg permission to make a few plain comments on the remarks of my friend and colleague, Dr. Stiles.

The source of the trouble was an interpretation of the phrase "Binary Nomenclature." What Dr. Stiles in his heart of hearts thinks this means I don't know; he has, I fancy, not always held the same view. As secretary to the commission, however, he has, ever since the phrase was interpreted by an opinion of the commission, very properly upheld that interpretation. Some of us, both within the commission and outside it, have always questioned the correctness, even the validity, of that opinion, and a movement to alter the opinion has been gathering force, with the result that at Padua there was in the section of nomenclature a large majority in favor of the change—a change, be it noted, not of the rules but of their interpretation. As I pointed out in the meeting, the adoption of this interpretation, while satisfying what I may call the intellectual conscience of the majority, need not cause the alteration of a single name.

Now I do not propose, any more than Dr. Stiles, to discuss this particular proposition. There are arguments on both sides. The real trouble is this. The resolution of the section upset an opinion of the commission; but the chairman of the section was bound to transmit the resolution to the general session of the congress. Here I entirely agree with Dr.

Stiles that the congress should have referred the question back to the commission, with or without a recommendation in its favor. To everybody's surprise, the president put the bare question and declined discussion. Naturally, in the circumstances, the motion was carried. Certainly this was a pure mischance. There was no deep-laid conspiracy to override the commission. Looking back after the event one sees that either the chairman of the commission or its secretary should at once have protested on a point of order. Unfortunately they, like the rest of us, were taken aback by the totally unexpected action of the president. But because of a frank difference of opinion on a relatively "trivial" question (I use Dr. Stiles' own epithet), and of an unpremeditated irregularity in parliamentary procedure, it is suggested that the bonds of union are *ipso facto* broken. Whatever our particular opinions, surely we must dismiss such an idea as out of the question.

What the best alternative may be, I am not sure. It is a pity that another resolution, rather suddenly sprung on the congress, prevents it from meeting again for five years. We can not wait so long. The question of procedure might well be laid before the permanent committee of the congress, which should be competent to smooth out the difficulty. If it is not competent no local group of zoologists can undertake the decision.

Such is the situation, and such is a possible way out. I have left on one side many subjects which Dr. Stiles brought into the discussion, because I do not wish to complicate a simple issue. There is only one on which I would beg leave to say a word. Rightly or wrongly, my friend Dr. Stiles speaks as though this were a dispute between Americans and Europeans. What he means by "Americans" I am not sure. "Europeans" also is a term occasionally construed in more than one sense. However that may be, there are zoologists in Asia, Africa and Australasia who may claim consideration. Then he seems to write as though all "Americans" held (or might be expected to hold) one view, and all "Europeans" another. So far as the latter are concerned that certainly is not the case. Dr. Stiles indeed admits a divergence of view in Berlin; there is no less difference of opinion in London. We have as much respect for law as the citizens of the United States, but we set science before nationality and allow the individual a right to his opinion. We wonder at, but have not yet learned to imitate, the well-drilled organization of American zoologists.

Perhaps the contrast between our views may be made clearer if I suggest that Dr. Stiles takes an "international congress" to mean a meeting of nations through their official representatives; I take it, so far as pure science is concerned, to mean a meeting of men and women from all parts of the world, irrespective of nationality and rising above it.

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A CONFERENCE ON HEREDITY AS APPLIED TO MAN

DR. LYON'S[1] appeal for a conference on the subject of heredity as applied to man is a most timely one and should receive the most serious consideration. That such a conference has never been held may be ascribed chiefly to two causes. The first is that some biologists (there are of course many exceptions) have been rather unwilling to accept the pedigrees of human families, which for the most part do not extend over three generations, as adequate evidence of the inheritance of certain characters. They maintain that the matings were not controlled; the genetic constitution of the parents was unknown and the results can not be accepted. They have ignored the statistical side of the problem. Although statistics has its limitations in the solving of the problems of inheritance, it may be of advantage in some places. For example, in a family in which many members had died of cancer, Pearl found that the death-rate from this disease was twice that of the population at large from the same cause. This would suggest that cancer was inherited in this family, but the proof would not be unassailable. When, however, the death-rate from cancer was calculated for the corresponding age groups from the population in general that had been represented in this family, it was found that cancer was 196 times as prevalent in this family as in the general population. Such figures leave little room for argument.

Again, when a family is reported in which a disease has been present in four or five members through two or three generations, such evidence is not always accepted as proof of heredity. When, however, to such a statement is added the fact that this disease is one which many practitioners never encounter in a lifetime of practice due to its rarity, the significance of the high incidence in one family is multiplied many times.

The second cause for the lack of interest in the subject is the ignorance of the medical profession as a whole of the importance of heredity as an etiological factor in the production of disease. Their ignorance arises through the fact that as medical students the vast majority received little or no training in the field of genetics. That which they did get held little application, as far as they could see, to the art of healing. They obtained no instruction whatever in

[1] SCIENCE, 73: 421, 1931.