DISCUSSION

AMERICAN SCIENTIFIC ORGANIZATIONS CALL FOR STABILITY OF RULES OF ZOOLOGICAL NOMENCLATURE

STABILITY of the rules of zoological nomenclature is becoming increasingly important. The action of the International Zoological Congress, at Padua, Italy, in 1930, in adopting the Horn resolution,[1] stimulated interest in this subject, and led to a meeting in Washington, D. C., of members of the nomenclature committees of several local, national and international American societies interested in zoology.

At this meeting on May 8, 1931, the following resolution was approved:

> We, the undersigned, members of the committees on nomenclature of the various scientific societies listed below, view with alarm the action taken on the Horn Resolution at the International Zoological Congress held in Padua, Italy, in 1930, and consider that this action establishes a precedent which seriously jeopardizes the stability of zoological nomenclature. The adoption of the Horn Resolution by the Congress was contrary to the 1901 agreement, which provided that proposals regarding the international rules of zoological nomenclature would not be submitted to the Congress without the unanimous recommendation of the International Commission on Zoological Nomenclature. We believe that the passage of the Horn Resolution was unparliamentary, contrary to the methods of procedure approved by the International Commission on Zoological Nomenclature, and, consequently, invalid. We, therefore, reaffirm our adherence to the International Rules of Zoological Nomenclature as constituted under the 1901 agreement.

The foregoing resolution has been formally adopted by the following ten organizations:

American Society of Zoologists,
Section F, American Association for the Advancement of Science,
American Society of Mammalogists,
American Society of Parasitologists,
American Society of Ichthyologists and Herpetologists,
American Malacological Union,
Biological Society of Washington,
Entomological Society of Washington,
Helminthological Society of Washington,
Geological Society of Washington.

This matter is here brought to the attention of American zoologists to acquaint them with the action taken. If this position be endorsed by additional organizations (academies, faculties, societies, etc.), it is requested that copies of their resolutions of endorsement be sent to the undersigned.

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[1] *Cf.* Stiles, SCIENCE, n. s., lxxiii, 1892, pp. 351–352, April 3, 1931.

BACTERIA IN PENNSYLVANIA ANTHRACITE

SEVERAL times during the last few years notes have appeared in scientific journals and newspapers calling attention to the discovery by Dr. C. B. Lipman of living bacteria in Pennsylvania anthracite. According to Lipman[1] these bacteria are "descendants directly from cells which have lain dormant there from the time of the coal's formation, which, according to one method of the geologist's reckoning, would be fifteen million years, and according to another method, from one to two hundred million years."

In accordance with commonly accepted theories, anthracite was formed from coals of lower rank through the action of dynamic metamorphism or by contact with igneous rocks. A microscopical examination of Pennsylvania anthracite[2] shows that the most resistant plant substances, such as waxes, gums, and resins, have been changed to anthracite. Furthermore, the original argillaceous sediments associated with the vegetation have been changed to shale and slate-like rocks containing micas and other metamorphic minerals. It seems unreasonable, therefore, to expect a relatively perishable substance like the protoplasm of bacteria or the spores thereof to be exempt from the changes which have taken place in their vastly more resistant associates.

Mr. M. A. Farrell and the writer made a careful study of Pennsylvania anthracite taken from the same bed and same mine from which Dr. Lipman secured his samples and concluded that this anthracite contains no bacteria other than common living forms which have found ingress through fracture cracks and coal laminae communicating with surface water and air.[3]

The samples which we examined were collected by ourselves from the Primrose vein in the Otto colliery of the Philadelphia and Reading Coal and Iron Company at Pottsville, Pennsylvania. This location was selected because it was the same one from which Lipman's samples were secured. The fact that we collected our own samples and studied the condition of the coal in place, together with the structural nature of each sample, may have some bearing on the fact that our findings differ from those of Lipman. Apparently Lipman was not aware that his samples came from the side of a pitching syncline outcropping at the surface, and that the outcrop was badly breached, giving free access to surface waters. Lip-

[1] C. B. Lipman, "Living Microorganisms in Ancient Rocks," *Jour. of Bacteriology*, xxii, No. 3.

[2] H. G. Turner, "Constitution and Nature of Pennsylvania Anthracite with Comparison to Bituminous Coal," *Trans. A. I. M. E.*, February, 1930.

[3] M. A. Farrell and H. G. Turner, "Bacteria in Anthracite Coal," *Jour. of Bacteriology*, xxiii, No. 2, February, 1932.