DISCUSSION

THE TEACHING OF EVOLUTION IN ARKANSAS

THERE can be no doubt but that a great effort will be made to induce the Forty-Sixth General Assembly of the State of Arkansas to enact a law to prohibit the teaching of evolution in tax-supported schools and colleges of Arkansas.

I am giving below a correct copy of a petition which will be presented to the Legislature when it meets in regular session January 1, 1927.

"To the Forty-Sixth General Assembly of the state of Arkansas: We, the undersigned citizens, voters and taxpayers of the State of Arkansas and County of Randolph, believing in the Mosaic account of Creation, and believing the Darwinian theory of the origin of man to be erroneous, false, and misleading, and calculated in its nature to lead men from the truth of God and to instill in the spirit of infidelity;

"Do, therefore, petition your honorable body to enact a law, similar to the 'Tennessee Anti-Evolution Law' with just such changes and modifications as will make it applicable to the state of Arkansas.

Explanation

"We believe in Evolution just as far as it goes; we believe in Evolution in the mineral, vegetable, and animal kingdoms.

"We believe Evolution has produced changes in the earth. Its influence is recognized in the development of machinery and in the formation of languages and of governments. It produces many varieties of beautiful and useful things as flowers, apples, etc., of hogs, sheep, cattle, etc. It has no doubt produced varieties of men and of monkeys, but we do not believe that any process of Evolution whatever can produce an apple tree from a mustard seed, a milk cow from a bull frog, or a man from a monkey. Such a belief not only disputes reason and science, but it disputes the decrees of the Most High as recorded by His servant, Moses, in Genesis 1: 11, 1: 24, 1: 26.

"We ask the *Star Herald* and its exchanges to give this petition publicity. To afford ample notice, we ask all publishers in the state to publish this, however it may come to their notice. We hope that the citizens of every county of the state will petition their representatives to support this measure."

Respectfully,
J. Will Henley, Minister Christian Church.
W. E. Hall, Pastor M. E. Church, South.
O. A. Greenleaf, Baptist Pastor.
Jos. Froitzheim, Pastor St. Paul's Catholic Church.
G. W. Million, County and Probate Judge.
Rufus A. Mock, County School Superintendent.
J. W. Brown, M.D.
Geo. M. Booth, Prosecuting Attorney-Elect.
W. L. Pope, Ex-Circuit Judge.
Wm. H. Johnson.

—Pocahontas *Star Herald*

It is indeed unfortunate that a petition like the one above is to be presented to the Arkansas State Legislature at this time as in the next general election an amendment to the constitution will be voted on, which will permit school districts to increase the local school tax from 12 to 18 mills to relieve the high schools of the state, Arkansas' new governor is pledged to support proposed measures which have as their object the relief of the public schools and the colleges and the university, and demands for the passage of anti-evolution laws will retard the progress of Arkansas schools just at a time when people are awakening to the real needs for better educational institutions.

C. BUSH

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THE CONCILIUM BIBLIOGRAPHICUM

A PREVIOUS note[1] called attention to the fact that the bibliography of the Concilium Bibliographicum is incomplete so far as the Oligochaeta are concerned. Other groups are similarly incomplete. The director[2] has explained that the number of cards required by the present rate of publication of biological papers is so large that the cost of subscription will be greater than the appropriations for bibliographic purposes of the subscribing European institutions. As the Concilium apparently can print only as many cards as the majority of its subscribers can afford, a selection must be made, the bases for which Dr. Strohl has explained in the note just mentioned. It is evident of course that the value of any bibliography varies according to its completeness, and while the Concilium is at present making a valuable contribution to the advancement of zoological investigation, its aid to zoologists is not as great as is possible. Those who are especially dependent upon this service for bibliographic information are correspondingly handicapped by its deficiencies. It would be greatly to the advantage of such workers if some scheme could be devised to enable the Concilium to publish its accumulated manuscripts, to make its service complete and to expedite the issue of its cards so as to form a more nearly contemporary announcement of the publication of papers. Such an improved service would undoubtedly attract a greater number of individual subscribers to various groups or subjects. The scheme might take the form of a loan to enable the publication of cards that can not be financed from subscriptions. As the financial situation improves, the accumulated cards will doubtless be taken up by the subscribing institutions. In the meanwhile those institutions and individuals who can afford it will have had the benefit of the more complete bibliography.

[1] SCIENCE, July 3, 1925.
[2] Strohl, SCIENCE, Feb. 25, 1926.

In spite of this incompleteness of the bibliography the Concilium service is exceedingly valuable and the writer has been surprised to discover that many zoologists, especially among the younger investigators, are ignorant of the Concilium Bibliographicum and the assistance which its services can render. It is not necessary in this connection to call attention to the difficulties caused by disregard of previous or contemporary work, or by wrong, inadequate and incomplete references. Practically every investigator has had experience with such difficulties. Nor is it necessary to give any explanation as to the value of the card index system. Its handy size, flexibility, rapidity of adjustment and ease of use are well known to-day. It is not so well known, however, that one can procure at short notice the printed cards of the index size from the Concilium Bibliographicum at Zürich, bearing the usual bibliographic information and in addition brief notes as to new categories in systematic works, or as to data or discussions contained in the paper which may not be suggested by the title. It makes no difference whether one wishes a bibliography of the literature on metamorphosis, the insects of Palestine, the fauna of Japan or the coelenterates of the world or any one of numerous other subjects that might be suggested.

This service is valuable to many sorts of workers and in many ways but appears to the writer to be most valuable to those who are working with inadequate literary facilities. A young zoologist, for instance, in an Asiatic country or in a small college here finds himself confronted by a new and important problem which promises to be of considerable interest. Libraries may be lacking, very distant, or if available hopelessly inadequate, funds are notoriously difficult to obtain, and the need of literature is often not appreciated by those who control the budgeting of appropriations. Back numbers of journals are difficult to secure, expensive, and when obtained may contain only a small amount of material which will be immediately useful for the problem in hand. With the cards of the Concilium and the notes they furnish as to subject-matter, number of pages, illustrations, etc., it is possible to determine to some extent at least the relative importance of the papers and plan the expenditure of limited funds more wisely than would otherwise be possible. Reprints, odd number of journals, monographs, can then be secured from dealers or authors, and arrangements made for loans from libraries at a distance.

Furthermore, one can subscribe for the cards of any group in which one is especially interested. This service is again particularly valuable to those working under the handicap of inadequate literary equipment, as the cards constitute announcement of publication of papers that might not otherwise be encountered. Even those who have occasional or frequent access to large libraries find their task simplified by this aspect of the service.

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THE DISCOVERY OF VITAMINES

LAFAYETTE B. MENDEL, in his "Nutrition, the Chemistry of Life" (p. 59), has, by a quotation from Pereira's "Treatise on Food and Diet" (New York, 1843), reminded us of the fact that, long before Lunin, the existence was surmised of those substances in food which, at Funk's proposal, have been combined under the name of vitamines.

Without in the least derogating from Hopkins' great deserts in this matter, but only for the sake of completeness, I venture to state that in 1905, a year before Hopkins published his interesting communication in the *Analyst,* the late C. A. Pekelharing, professor of physiological chemistry and histology at the University of Utrecht, delivered an address at the annual meeting of the Netherlands Medical Society[1] which, appearing only in Dutch, did not, we regret to say, become known abroad, and in which the following passage occurs:

> When white mice are fed on bread baked with casein, albumin, rice-flour, lard and a mixture of all the salts which ought to be found in their food, while they are only given water to drink, the animals starve to death. During the first few days all is well. The bread is eagerly nibbled and the mice look healthy. But soon they get thinner, their appetite diminishes and in four weeks all the animals are dead. If, however, instead of water they are given milk to drink, they keep in good health, though the quantity of albumen, lactose and fat which they assimilate with the milk is quite negligible in comparison with what the bread on which they are fed contains. The element in the milk which keeps the animals alive also occurs in the whey from which casein and fat have been eliminated. Till now my efforts constantly repeated during the last few years, to separate this substance from the whey and get to know more about it, have not led to a satisfactory result, so I shall not say any more about them. My intention is only to point out that there is a still unknown substance in milk, which, even in very small quantities, is of paramount importance to nourishment. If this substance is absent, the organism loses the power properly to assimilate the well-known principal parts of food, the appetite is lost and with apparent abundance the animals die of want. Undoubtedly this substance not only occurs in milk but in all sorts of foodstuffs, both of vegetable and animal origin.

[1] *Nederlandsch Tijdschrift voor Geneeskunde,* 1905, II, p. 111.