We can scarcely refrain from suggesting, in the present depleted state of our Treasury Department, that all revenue laws should be constructed for "spirit" attachments.

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ALTERNATE BEARING OF FRUIT TREES

IN view of the heightened interest in the alternate bearing of fruit trees and in fruit bud formation it may be interesting to quote the following passage from the *Magazine of Horticulture* for 1847, volume 13, page 438. The note was written by Charles M. Hovey, editor of the magazine, author of several well-known horticultural works, and often called the father of the American strawberry, after a visit to the Pomological Gardens at Salem, Massachusetts, of Robert Manning, one of the most thorough and accurate students of horticulture in the early days when amateur interest in fruits ran high:

> Passing a Baldwin apple tree in full bearing, Mr. Manning stated that it was one on which he tried the experiment of changing the bearing year. It is well known that the Baldwin only bears every other year. To obviate this was the object of Mr. Manning; and, in the spring of 1846, he spent nearly two days in cutting off all the blossoms. It had the desired effect; this year, the tree is completely loaded with fruit. This experiment is valuable, for it shows that, in a large orchard, when the trees, by chance, nearly all fruit the same year, any number of them can be made to fruit in the alternate year simply by the labor of destroying all the blossoms.

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THE WRITING OF POPULAR SCIENCE

TO THE EDITOR OF SCIENCE: In looking through the "List of One Hundred Popular Books in Science" prepared by the Washington Academy of Sciences for the guidance of libraries with limited income, one is struck by the number of foreign books. There are thirty-five British authors, two French (Fabre and Maeterlinck) and one German (Einstein); that is, in searching for the best books on the various sciences, regardless of nationality, it was found necessary to go abroad for 38 per cent. of them.

This is curious since in writing for American readers an American author has a decided advantage in that he understands their point of view and can use more or less local illustrations and comparisons and make allusions to familiar things, which are important factors in the popular presentation of scientific questions.

In spite of this natural handicap on the foreign author, British books form more than a third of this carefully selected list, so it is evident that the British are doing better work in the popularization of science than we are, a conclusion that is confirmed by a comparison of imported and domestic books in publishers' catalogues. We have in this country, for instance, nothing to compare in style of writing and attractive illustrations with the "Outline of Science" edited by Professor J. Arthur Thomson, which is now being published in parts at 1 shilling, 2 pence, as was Wells' "Outline of History." I may add that Science Service, which has been scouring the country for a year for popular science writers, has been obliged to go to England for them in many cases.

This is difficult to account for since our American schools give much more attention to the sciences and to the teaching of English composition than do the British schools and since we have such an abundance of fluent and facile writers in fiction and journalism and since we have a wider reading public than any other country. But it is questionable whether the interest of the American people in scientific questions has kept pace with the growing importance of science in human life. In fact some say that science is losing ground in popular esteem. For instance, Dr. Alfred H. Brooks, of the U. S. Geological Survey, said in his recent presidential address to the Washington Academy of Sciences:

> I venture the opinion that there is to-day relatively less popular knowledge of science and less interest in its methods and achievements than there was a generation ago.

This is a discouraging statement in view of

the unprecedented expenditure of money on scientific education in American schools.

EDWIN E. SLOSSON
SCIENCE SERVICE,
WASHINGTON, D. C.

QUOTATIONS

WILLIAM JENNINGS BRYAN ON EVOLUTION[1]

THE only part of evolution in which any considerable interest is felt is evolution applied to man. A hypothesis in regard to the rocks and plant life does not affect the philosophy upon which one's life is built. Evolution applied to fish, birds and beasts would not materially affect man's view of his own responsibilities except as the acceptance of an unsupported hypothesis as to these would be used to support a similar hypothesis as to man. The evolution that is harmful—distinctly so—is the evolution that destroys man's family tree as taught by the Bible and makes him a descendant of the lower forms of life. This, as I shall try to show, is a very vital matter.

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The latest word that we have on this subject comes from Professor Bateson, a high English authority, who journeyed all the way from London to Toronto, Canada, to address the American Association for the Advancement of Science the 28th day of last December. His speech has been published in full in the January issue of SCIENCE.

Professor Bateson is an evolutionist, but he tells with real pathos how every effort to discover the origin of species has failed. He takes up different lines of investigation, commenced hopefully but ending in disappointment. He concludes by saying, "Let us then proclaim in precise and unmistakable language that our faith in evolution is unshaken," and then he adds, "our doubts are not as to the reality or truth of evolution, but as to the origin of species, a technical, almost domestic problem. Any day that mystery may be solved." Here is optimism at its maximum. They fall back on faith. They have not yet found the origin of species, and yet how can evolution explain life unless it can account for change in species? Is it not more rational to believe in creation of man by separate act of God than to believe in evolution without a particle of evidence?

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The objection to Darwinism is that it is *harmful,* as well as groundless. It entirely changes one's view of life and undermines faith in the Bible. Evolution has no place for the miracle or the supernatural. It flatters the egotist to be told that there is nothing that his mind cannot understand. Evolution proposes to bring all the processes of nature within the comprehension of man by making it the explanation of everything that is known. Creation implies a Creator, and the finite mind cannot comprehend the Infinite. We can understand some things, but we run across mystery at every point. Evolution attempts to solve the mystery of life by suggesting a process of development commencing "in the dawn of time" and continuing uninterrupted up until now. Evolution does not explain creation; it simply diverts attention from it by hiding it behind eons of time. If a man accepts Darwinism, or evolution applied to man, and is consistent, he rejects the miracle and the supernatural as impossible. He commences with the first chapter of Genesis and blots out the Bible story of man's creation, not because the evidence is insufficient, but because the miracle is inconsistent with evolution. If he is consistent, he will go through the Old Testament step by step and cut out all the miracles and all the supernatural—the virgin birth of Christ, His miracles and His resurrection, leaving the Bible a story book without binding authority upon the conscience of man.

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Christians do not object to freedom of speech; they believe that Biblical truth can hold its own in a fair field. They concede the right of ministers to pass from belief to agnosticism or atheism, but they contend that they should be honest enough to separate themselves from the ministry and not attempt to debase the religion which they profess.

And so in the matter of education. Christians do not dispute the right of any teacher to be agnostic or atheistic, but Christians do deny

[1] From an article in the New York *Times* for February 25. The editor states that Mr. Bryan will be answered by Professor Henry Fairfield Osborn and Professor Edwin Grant Conkin in the issue for March 2.