

strictly confined to members whose radio knowledge is beyond question, and every effort will be made to keep the standard of efficiency as high as possible.

ACCORDING to the annual report of the British Museum the total number of visitors to the Natural History Museum during 1924 was 521,901, the largest since 1920, and an increase of 29,401 as compared with 1923. The attendance on Sunday afternoons, the highest recorded since the institution of Sunday opening in 1896, was 84,844, as against 72,931 in the previous year. The museum specialists continued to advise on a great variety of economic problems referred to them. Inquiries dealt with by the department of entomology included many relating to the cotton boll weevil and the pink boll worm, which cause enormous damage to cotton crops. The report states that knowledge as to the extent of the ravages of these pests seems to have been spread considerably through the British Empire Exhibition.

UNIVERSITY AND EDUCATIONAL NOTES

MRS. ANNA RAYMOND has given \$100,000 to the University of Chicago to establish a James Nelson and Anna Louise Raymond professorship in the School of Medicine. The subject in which the professorship is to be established is left to the discretion of the trustees.

CONSTRUCTION is to be started at once on a new wing to the main building of the University of Wisconsin, to cost \$470,000. This sum was recently appropriated by the state legislature.

THE vice-chancellor of the University of Cambridge has announced that the Board of Trade has approved of the Joint Coal Mining Diploma granted by the Universities of Cambridge and Birmingham on satisfactory completion of their joint course in science and coal mining.

DR. J. H. HANCE, assistant chief of the Illinois Geological Survey, has been appointed head of the department of geology at the Texas Agricultural and Mechanical College.

DR. THOMAS G. PHILLIPS, professor of agricultural chemistry at the Ohio State University, has been appointed professor of agricultural chemistry and chemist in the New Hampshire University and Experiment Station.

EARL B. SMITH, who for the past nine years has been in charge of the engineering and research laboratories of the United States Bureau of Public Roads, has resigned to become professor of mechanical engineering at the Iowa State College.

DR. ROBERT M. ISENBERGER has been appointed asso-

ciate professor in the department of physiology and pharmacology at the University of Kansas School of Medicine.

DR. CHARLES DALE BEERS, of the Johns Hopkins University, and Dr. Harold Kirby, Jr., of the University of California, have been appointed instructors in biology at Yale University.

DR. ROBERT L. PENDLETON, director of agriculture in Gwalior State, India, has been appointed professor of soil technology at the University of the Philippines and in charge of the work in soils in the department of agronomy.

DR. G. M. SHRUM, who has been associated with the low temperature laboratory at the University of Toronto since its inception, has been appointed assistant professor in physics at the University of British Columbia, Vancouver.

PROFESSOR GUSTAV HERGLOTZ, of the University of Leipzig, has been appointed professor of mathematics at the University of Göttingen.

DISCUSSION AND CORRESPONDENCE

DR. W. D. RILEY ON EVOLUTION

PRIOR to listening to a debate upon evolution I was moved to wonder just what an anti-evolutionist would have to talk about, and since many readers of SCIENCE must be in a like frame of mind I should like to report briefly upon the debate between Dr. Riley, representative of the Christian Fundamentalists, and Dr. Cantrell, of the Science League of America. The debate, which occurred at the Armory at Eugene, on July 9, was one of a series between the two men which took place in various cities on the Pacific coast. This article is based upon notes taken at the time, and upon my memory of the proceedings. I have checked my statements by submitting them to others who attended the meeting. I was seated where I could simultaneously see both the speaker and the larger part of the audience.

Dr. Riley represented himself as a lover of science and of verified knowledge. He maintained, however, that the fundamentalist was the true scientist, the so-called scientists being unworthy of the title. There was a difference between the fundamentalist and the so-called scientist, which Dr. Riley felt himself called upon to sturdily proclaim. The doctrine of evolution was unscientific because it was a theory. Huxley and Darwin had both called it such. Evolution presupposed that one species came from another. This idea Dr. Riley "held to scorn." "Every species," he continued, "produces after its kind." After some extension of this idea Dr. Riley related an anecdote of a personal meeting, on a train, with a young instructor

in biology, who had attempted to defend evolution, and who, after being led to her undoing by means of appropriate questions, was utterly discomfited. The audience received the account of this episode with ill-restrained hilarity.

Dr. Riley dwelt to a considerable extent upon the reluctance of Dubois to permit any one to view the remains of *Pithecanthropus*. From his remarks I would have obtained, did I know no better, the impression that nobody but Dubois had examined the fossils, although I do not think that Dr. Riley stated that that was the case. Dr. Riley then read excerpts from Van Loon's "Story of Mankind," which he represented as a typical book upon evolution, used as a text in certain schools. He interpolated jocular remarks of his (Dr. Riley's) own as he read. Then for comparison, although without the jocular interpolations, he read the account of creation from Genesis. With the account of the creation of man in the image of the Creator ringing in their ears, he left it to his hearers to choose the account they preferred.

Dr. Cantrell took up some of the evidences of inorganic evolution, outlined the evidence from paleontology and dwelt upon the evidence offered by embryological development. He found his audience attentive but unsympathetic, and, in my opinion, he made little headway in getting in touch with them. I should judge that most of his points were lost because his hearers failed to understand what the argument was about. I was impressed with the energy he displayed after having spoken to a succession of rather hostile crowds.

In spite of its rather unsympathetic reception, Dr. Riley attempted to refute Cantrell's evidence from paleontology. He pooh-poohed the claim of definite age for any fossil by pointing out that it could be buried to or sink to the required position. He felt that the tail and teeth of *Archaeopteryx* were merely one of the creative acts. Dr. Riley then related an anecdote of a dentist who had sent an abnormal tooth to eleven scientists (not named) all of whom had unhesitatingly pronounced it as having come from a huge primitive man. When Dr. Riley divulged the fact that the tooth had been extracted from a little ninety-pound woman, the audience rolled in ecstasy. Dr. Riley also related a story about a tail-rapping dog whose ostensible omniscience had fooled all the scientists. These men, Dr. Riley pointed out, rejected divine revelation, while accepting the message from the tail of a dog!

Seemingly stung a little by Cantrell's charge of inconsistency in the literal account of creation in Genesis, Dr. Riley (*mirabile dictu*) declared that there was "no inharmony between Genesis and geology." He bolstered up this assertion by the remark that the

Bible mentions the early creation of "grasses," while it is a well-known fact that the algae were one of the first forms of life! Perhaps the choicest thing of the evening was, however, Dr. Riley's attempted rebuttal of Cantrell's statement that any new idea is subjected to opposition. Cantrell had specifically mentioned railroads. Whereupon Dr. Riley read a passage from the Bible purporting to be a biblical prophecy of railroads! This finesse in rebuttal brought about, in his adherents, a jubilation bordering upon frenzy.

A standing vote of the audience, in the proportion of about ten to one, upheld the resolution that the doctrine of evolution was a fallacy, and should not be taught in the public schools of America. I made no count of the number of people attending, but I would estimate the number to have been about five hundred.

This mixture of misrepresentation, irrelevance and inconsistency was the case against evolution as propounded by a man advertised as being a prominent fundamentalist. These and similar "arguments" may well bring about, in Oregon and other states, laws which forbid the teaching of evolution in the tax-supported schools. People who sit and applaud such puerilities have a lot to learn. Scientists who find themselves, at such a time, out of touch with and therefore distrusted by the mass of the people, with their capital tied up in a position their tenure of which is subject to the caprice or fears of those in authority, may, in my opinion, take certain lessons to heart also.

R. R. HUESTIS

UNIVERSITY OF OREGON

THE SCIENCE LEAGUE OF AMERICA

WILL you permit me to answer briefly Mr. Cardiff's letter in the issue of *SCIENCE* for July 31?

The Science League of America was founded in San Francisco last September, for the specific purpose of protecting the teaching of evolution in tax-supported schools and colleges, and of preventing any attempt at a union of church and state by the fundamentalists. It has never claimed any connection with the American Association for the Advancement of Science and the only newspaper item we ever saw making such a mistake was corrected in a two-column editorial.

Nevertheless, the vast majority of our members (including the president and founder) are members of the American Association. We have just completed formation of a national advisory board almost exclusively made up of eminent scientists, members and in many cases fellows of the A. A. A. S. Our relations with the society have been most friendly, and I should like to have the American Association regard us as