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The Dark Ages: A Survival in Kentucky.

IT is probable that Mr. Bateson would not have been surprised to find that some points in his address on "Evolutionary Faith and Modern Doubts," delivered at Toronto before the American Association for the Advancement of Science (see NATURE, April 29), gave rise to a certain amount of criticism and discussion; but we should have thought that neither he nor any one else could have anticipated that this able deliverance would be used as a text on which to found a violent attack upon the teaching of evolution in the schools of a civilised State. Such, however, is the fact; and the attempt to force this remarkable form of prohibition upon the Kentucky Legislature was only defeated, after repeated divisions, by a single vote. That an occurrence of this kind should be possible at the present date may well cause astonishment, and the accounts which have reached us of the discussion which took place in the House of Representatives reveal an amount of ignorance and prejudice on the part of responsible legislators which would be ludicrous if it were not lamentable. One of the promoters of the measure, we are told, who spoke for nearly an hour amidst cheers and applause, made a division between "sheep" and "goats," placing the principal opponents and various zoology text-books in one class, and the Bible, the Declaration of Independence, and himself in the other. He wound up his discourse by throwing one of the text-books on the floor and trampling it underfoot. The gentleman by whose single vote the proposal was eventually negatived "believed that what was would be anyhow," but said that he would have to discard his religion and vote "No." Why his declared belief should necessitate such a renunciation does not seem to have been stated.

It is unfortunately impossible not to take these exhibitions of irrationality seriously. If they concerned merely the proceedings of a debating society they might be passed over with a smile, but what is here involved is the whole scheme of education in an important section of a great community. It is nothing less than a shock to civilised opinion to find that half the members of a State legislature are oblivious of the fact that, in spite of domestic differences as to the methods of evolution, not a single scientific man of any repute doubts the fact of evolution itself. A refusal to recognise evolution as an established principle is equivalent to eliminating from the teaching of the rising generation the whole body of modern science, chemical and physical no less than biological.

A more disastrously retrograde step in education could scarcely be imagined. It is not too much to say that those who would forbid the teaching of evolution

on religious grounds are doing their best to discredit the religion they profess. We cannot believe that sane opinion in any civilised country would regard the success of such a proposal with anything but the strongest disapproval, and would not heartily commend the utterance of one of the Kentucky representatives who said in the course of the discussion, "I am ashamed of this day in the Kentucky Legislature." If the proposal which was defeated by so narrow a margin had been carried, it would have meant that the State of Kentucky chose deliberately to stand aside from the stream of modern progress, and was content in scientific matters to revert to the intellectual conditions of the dark ages. Some excuse may possibly be alleged for the attitude of the authorities of the time towards the discoveries of Galileo, and even for the distrust with which the work of the early geologists and of Darwin himself was generally received. No such palliation can be pleaded to-day, but the astonishing fact remains that Mr. Rudyard Kipling's imaginary "Village that voted that the Earth was Flat" has been all but paralleled by a State of the American Union.

It would be well if this outburst were a solitary instance of the absurdities that may result from placing the decision of important educational questions in the hands of those entirely incompetent to deal with them. But it is unfortunately the case that the same, or a similar spirit of ignorant intolerance has manifested itself in other quarters besides Kentucky. In the State of South Carolina, a provision has passed the Senate, apparently without opposition, to the effect that "no moneys appropriated for public education or for the maintenance and support of state-supported institutions shall be used or paid to any such school or institution teaching, or permitting to be taught, as a creed to be followed, the cult known as 'Darwinism.'" It is true that this provision was ultimately rejected by the action of a joint committee of the House and Senate, but it is said that another attempt will probably be made to pass it on a future occasion. In explanation of the somewhat curious wording of the proposal, it was stated by its promoter that it was intended to apply only to Darwinism, and not to the theories of Lamarck, Bergson, Le Dantec, Baldwin, or Osborn; further, that it only attempted to penalise Darwinism when taught or permitted to be taught "as a creed to be followed."

It is, of course, true that many convinced evolutionists cannot properly be described as Darwinians; but even if Darwinism, defined as the theory of the origin of species by natural selection, were far more generally discredited among evolutionists than is actually the case, there would seem to be no reason for making a special exception in its disfavour, while

allowing teachers to inculcate any of the theories of Lamarck, Bergson and the rest "as creeds to be followed." Whatever may be the ultimate fate of the Darwinian theory, which it is not our present purpose to discuss, it will remain in history, as a recent writer has said, "as the working hypothesis which has led to the establishment of the fact of organic evolution." The attempt, on any ground, to exclude the broad doctrine of evolution or an adequate presentation of the Darwinian theory from the education of the young, is a piece of folly comparable only to the futile endeavour of Mrs. Partington with her mop to stay the advance of the Atlantic Ocean. F. A. D.

Endocrines in Excelsis.

The Glands Regulating Personality: A Study of the Glands of Internal Secretion in Relation to the Types of Human Nature. By Dr. L. Berman. Pp. vi+300. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd., 1921.) 18s. net.

AS we watch the progress of history as unfolded by the daily press we often find it hard to say whether the event just brought under our notice is an affair of John Smith being sold up because he has failed to pay his rates—a merely local matter—or one of a John Hampden being distrained on account of ship-money—an event destined to be wide reaching in its effects. It is so in the progress of science; of this one is forcibly reminded in the chapters of this book, wherein its author, Dr. Louis Berman, traces the rise and progress of our knowledge regarding the action of internal secretions on the growth, health, and behaviour of the animal body. He duly notes that in the eighteenth century Bordeu of Paris explained the effects of castration on a theory of internal secretions, and he might also have recorded the results of John Hunter's experiments in transplanting the genital glands as well as the spurs of cocks and hens. He notes the very decisive experiments made on cocks by Berthold of Göttingen in 1849. He gives Dr. Thomas Addison full credit for showing, in 1856, that disease of the adrenals was followed by definite changes in the human body. Brown-Séquard has full justice done to him; in 1889, at the age of 73, it is related how he put his theory of internal secretions to the test of practice by seeking for rejuvenescence of his body and brain by the help of testicular extracts. By pooling the experience of Gull, Ord, Kocher, Reverdin, Schiff, and Horsley, the late Sir Felix Semon, as our author notes, was able in 1888 to convince medical men that the ductless thyroid gland had a most potent action on the health and appearance of the body.

That the pituitary gland has an influence on the