

are now protected against infection. Our troops, on the contrary, are vaccinated. Let us introduce the virus to these, our enemies, so that it may spread among them extensively before they have time to protect themselves by vaccination. Of those that contract the disease the attempts to limit its spread by local quarantine and the interference with ordinary pursuits necessitated by vaccinating every one, will so demoralise the populace and occupy the attention of the authorities that we may make our descent on their coasts with diminished risk to ourselves and good prospects of success. We will introduce the virus as follows. We will secure a number of persons who have been vaccinated when infants but not since. We will expose these to the infections from virulent smallpox cases. Some of them will take the disease in a mild form, and the few vesicles and pustules that appear on them may easily escape observation. We will let these people be captured by the enemy after pretended shipwrecks or during attempted landings. They will infect their unprotected guards, and these their families, and so leaven the whole community with the virus of smallpox. Then will follow our grand invasion."

Advertiser 16/6/21

The following have been appointed members of the Nurses' Board, in pursuance of the Act passed last session:—Drs. B. H. Morris (chairman), T. G. Wilson, and A. A. Lendon, Miss Eva Mary Penrose (secretary of the Royal British Nurses' Association), Mrs. Louisa Drew, and Messrs. P. F. N. M.P., and S. B. Rudall.

Register 19/6/21

Professor Sir W. T. Edgeworth David, C.M.G., D.S.O., B.A., F.R.S., F.G.S., is expected to reach Adelaide by the express from Melbourne this morning. The distinguished scientist has for 28 years been Professor of Geology and Physical Geography in the University of Sydney, and he has done much valuable work. He practically discovered and surveyed the coal measures of Maitland (N.S.W.), led a scientific expedition to the Ellice Islands in 1897, and has taken more than a passing interest in the geology of South Australia, having worked during many years in conjunction with Professor Howchin, in the elucidation of the evidences of glacial action in the line of rocks from Victor Harbour, through Hallett's Cove and northward to Peterborough. In 1906, Professor David represented Australia at the Geological Congress in Mexico, and in that year conducted special investigations on the spot into the effects of the San Francisco earthquake. From 1905 until 1907 he was President of the Australasian Association for the Advancement of Science. He accompanied Sir Ernest Shackleton's expedition to the antarctic and shared in its perils and difficulties in the pursuit of scientific knowledge in regard to the nature of the ice-clad rocks. In that undertaking, Professor David led the party which reached the south magnetic pole on January 16, 1909. At the outbreak of the war he was one of the most foremost men in Sydney in connection with the recruiting campaign. In November, 1915, he offered his services as a geological expert with the Mining Engineers' Corps, was sent to the front with the rank of major, and did much valuable work in connection with tunnelling and other underground operations. He was prominently associated with the now famous Messines "blow up." He was promoted to the rank of lieutenant-colonel. Among other honours, he has received the King's Polar Medal. A scientific expedition into Central Australia, consisting of Professor Sir Edgeworth David, Professor Howchin, and Capt. S. A. White, will leave Adelaide for the north on Wednesday next. Sir Edgeworth will stay with Sir Douglas Mawson at Brighton. The Graduates' Association of the Adelaide University has improved the opportunity of Sir Edgeworth's presence in Adelaide to secure his services for a lecture, which will be delivered on Monday evening, in the Prince of Wales Theatre, University, on the subject of "A people's university." The lecture is open to all graduates and holders of diplomas or certificates.

### "DISEASE AND MATERIALISM."

#### A COUNTER-CRITICISM.

(By J. T. Hackett.)

"A Believer in Evolution" raises many important questions that I regret must be dealt with briefly:—1. It seems to me that your correspondent is confusing my references to evolution and Darwinism, and I had better put the matter simply. Evolution was a theory held by Lamarck, Herbert Spencer, and others before Darwin. The Darwinian hypothesis was an attempt to explain how evolution worked, the origin of species being attributed to the blind mechanical operation of the struggle for existence or natural selection. It is this hypothesis, not evolution, that I said was now exploded. It is now seen to be self-evident that the struggle for existence is destructive only, not creative; and there are numerous other reasons for discarding the hypothesis, which it would take too long to set out here. 2. Sir Arthur Keith cannot be described as "the foremost anthropologist of to-day." No Englishman can be so described, for the French, now as always, lead the world in anthropology. Professor Sollas refers to this in his "Ancient Hunters." We are indeed terribly to be blamed as a nation in regard to this science. We have for ever lost an invaluable source of knowledge by allowing the Tasmanian blacks to die out without scientific investigation. I see that Professor Wood Jones is endeavouring to avert a similar calamity with regard to the Australian blacks by asking for subscriptions to found a Chair of Anthropology. A much more important authority than Keith is Professor Boule, whose "Les Hommes Fossiles," published early this year, gives the best statement of the anthropological evidence at present. His views are totally opposed to those of Sir Arthur Keith in many particulars. Even since his book was written, further evidence has appeared, as I showed in a long letter from Mentone published in Adelaide on February 24. The evidence generally is against evolution except as strengthened by the mutation theory. In particular the Pithecanthropus is simply an ape and not one of the missing links necessary to connect man with the lower animals has yet been found. If Sir Arthur Keith makes the statement about Darwinism, which your correspondent tells us, he stands alone in his opinion—and, of course, it is a question to be settled rather by biologists than by an anthropologist. 3. No one denies that the struggle for existence is a great factor in nature; but it is not the cause of the origin of species. Also one is apt to over-rate this factor, so that the world is pictured as a huge charnal-house. Actually the young animal gambols and the bird sings and loves, has the joy of parentage and rejoices in the spring—even when a violent death overtakes it—it has little of the pain that our highly-wrought nervous system inflicts upon us. Even our mental pains, griefs, remorse, &c., are as poignant as any physical pain.

#### —Conquering Nations.—

The Register correspondent, as also apparently Sir Arthur Keith, appears to believe the fables of the historians as to whole nations having been exterminated in the past. Conquering nations must have needed the conquered as servants, and would not only preserve them but were often absorbed by them. Consider how troublesome it would be to kill, say, 50,000 people and bury them (to prevent pestilence). The various conquerors of Great Britain did not destroy its inhabitants. The Armenians have probably suffered the greatest slaughter in the history of the world from the Turks, armed with modern weapons and instructed with devilish ingenuity by the Germans—and yet they are by no means exterminated. 4. The correspondent is mistaken in supposing that the mutation theory has anything to do with the old cataclysm theory. It is simply an hypothesis which Professor J. Arthur Thomson and many other leading biologists have been compelled to adopt in order to account for the origin of species—seeing that there are endless insuperable difficulties in the way of explaining how species can arise from the accumulation of small variations. Indeed, without some such hypothesis, the theory of evolution can no longer be accepted. (I may mention that this mutation theory was expounded by Professor Bateson in his presidential address to the British Association at its meeting in Sydney and Melbourne in 1914.) There appear suddenly at times in some individuals of a species large modifications of structure and function which are transmitted fully to their offspring, and these often persist as "specific characters" independently of, and indeed in spite of, natural selection. These "mutations" really occur, and sometimes in large numbers of individuals throughout several generations. Now this theory, ap-

plied to the origin of species, can mean nothing less than that new species suddenly and unaccountably appear—and in what respect does this differ from special creation? 5. As regards the Book of Genesis, inspiration or revelation is not limited to one race or one period. I do not know if the story of the Creation came from the Babylonians, but the Jews learnt their highest truths from that nation during the captivity. It is astonishing to what an extent the Mosaic history of creation agrees with facts we now learn from geology. 6. I quite agree with your correspondent, as indeed most leading theologians do, that a belief in evolution is in no way incompatible with a belief in Christianity. "J. T. C.'s" long series of arbitrary assertions and opinions is one of those easily fabricated "Joseph McCabe" compositions, which it would take columns of space to properly dissect and controvert. There is no scientific authority of evidence given for any single statement and, therefore, the letter has little to do with my article, which is a statement of well-known facts and gives the testimony of very important thinkers. I quoted from Darwin, Herbert Spencer, Professor Eddington a leading astronomer and experimental philosopher, McDougall undoubtedly our greatest psychologist and Professor Moore a leading bio-chemist. ("J.T.C.") may note that Darwin and Spencer had, and McDougall has no religious convictions. I do not know as to the others). Would the correspondent like some more names? The ground is too extensive and I shall restrict myself to physicists.

#### —Biology and Materialism.—

But first let me point out, as McDougall does in "Body and Mind," the curious fact that any materialists who still survive are to be mostly found among biologists (and, I may add, the kindred body of medical men). One does not find the supporters of this mechanical theory of the universe among the physicists, who

should be most biased in its favour! The following are some great physicists who certainly give no support to the "dogma" of materialism:—Lord Kelvin, Sir G. Stokes, Clerk Maxwell, P. G. Tait, Balfour Stewart, Sir W. Crookes, Sir O. Lodge, Sir J. J. Thomson, Sir J. Larmor, Professor Poynton. Even this great array of names could no doubt be added to enormously, if the other physicists had had occasion to express their views on the subject. "J.T.C." can have little notion of present-day knowledge, for he says "The line that divides the natural from the supernatural is receding further and further as the years go on." All our recent discoveries simply add to "the burden of the mystery of all this unintelligible world." And when he speaks of the misleading effect of "our preconceived traditional ideas," he should rather speak of the misleading materialist atmosphere in which we have lived. Although the thinking world has now as a whole abandoned materialism, we of the older generation were brought up during the materialist period, which had coloured our views and impressed itself on our habits of thought. And unfortunately this has spread from us to the younger generation. There is, I believe, a Chinese proverb which says that we are more the children of our age than of our parents. The proper view is that the religious sentiment is essentially an attribute of humanity as our reasoning faculty or our moral tendencies. One and all are alike part of the evidence from which to deduce the true scheme of the universe. I shall simply make one quotation in order to show how utterly impossible it is to deal with "J. T. C.'s" many assertions. He tells us that materialism will lead us to the true God, "the God within the mind—ideal man, of whom we have a not unworthy pattern in the man Christ Jesus." First we vainly ask ourselves what meaning is intended to be conveyed by these words. Next, noting the words "a not unworthy pattern," we see that the writer is utterly incapable of understanding or appreciating the unsurpassable beauty and value of Our Lord's ethical teaching and its exemplification in His life. And again one asks, how can a materialist in the very nature of things have any ideals whatever? George Eliot tried to manufacture an ideal and wrote her well-known poem, "O May I Join the Choir Invisible;" but, if we are simply machines or automata (or, indeed, I might go further and say, if there is no future life) we can have no duty or aspiration to elevate our own characters, and certainly no duty towards our neighbour.

Sir Edgeworth David, professor of geology and physical geography, of the University of Sydney, and one of the most conspicuous figures in the scientific world, arrived in Adelaide yesterday, and will on Wednesday next begin an expedition to Central Australia. He was met at the train by Sir Douglas Mawson (whose guest he will be at Brighton for a few days) and other friends. Professor David was born in 1868, his father being the Rev. W. David, of St. Fagan's rectory, near Cardiff, and his mother was a Canadian. He was a scholar of New College, Oxford, where he won high honors. He was, in his young days, a champion gymnast and athlete, played cricket and football, and rowed bow in the New College eight. Though now 63 years of age he retains his athletic appearance, and he is wonderfully active. At the close of a successful University career he engaged in geological research in Glamorganshire and Brecknockshire. He went to New South Wales in 1892 as assistant geological surveyor, and it chanced that on the R.M.S. Potosi, by which he travelled from England, was Miss G. M. Mallett, now Lady David, who had received an appointment at Hurlstone College, under the Education Department. During his residence in Australia Professor David has been identified with a great deal of important research and exploratory work. He was leader of an expedition to



Sir Edgeworth David.

the Ellice Islands in 1897, and scientific officer with the Shackleton Antarctic Expedition of 1907-9. He led the party which reached the South Magnetic Pole on January 16, 1903. The professor enlisted in 1915, after recruiting the Australian Mining Corps, and rendered valuable assistance to the Allied cause in connection with the tunnelling and mining operations in France. He was appointed geologist to the British armies on the Western front in 1918-1919 and was mentioned in dispatches, and awarded the D.S.O. The knighthood conferred upon him last year was a well-merited recognition of an honorable and a brilliant career. In a personal sketch of Sir Edgeworth David, published recently in the "Sydney Mail," the writer remarked:—"The professor seems to have been born a professor. When you look at the bronzed face, with its grey-blue eyes that have never had a pair of spectacles in front of them, the fine, broad forehead, and the silvery hair, you feel you are looking at a healthy, hard-thinking man, a man who has had no time in his life to waste on the follies of youth or maturity. His history is that of a clean life, of one devoted to cultivation of mind and body. He neither smokes nor drinks as habits, though he is not averse to either. His recreation is work—always work, engrossing, absorbing."

Register 20/6/21

At the University to-night Sir Edgeworth David will give a lecture before the Graduates' Association on "A people's university." All graduates and holders of final certificates or diplomas are invited to be present.