

Science Notes.

Professor John Collett believes that the mastodon was alive in North America much more recently than naturalists commonly suppose. Thirty skeletons have been discovered in the marshes of Indiana alone; and one skeleton was found imbedded in wet peat of a recent formation. It is stated that in some cases the large bones contained marrow, which the bog cutters extracted and used as grease for their boots.

M. Paul Bert has recently communicated to the Academy of Sciences the results of his experiments in anæsthetics. He finds that the fatal dose is, curiously, just double that which is sufficient to produce insensibility. He calls the interval between these points the working zone, and states that an animal which has been made to breathe a mixture of the anæsthetic which is about the middle of the zone is quickly anæsthetised. The working zone is often narrow—for instances, eight grammes of chloroform failed to render a dog insensible, while twenty grammes kills. Ether, M. Bert finds, is much less dangerous; and protoxide of nitrogen has a more extensive working zone than any of the other anæsthetics tried.

A German medical paper gives an account of a series of observations by Professor Gerhardt, of Warrburg, on the liability of pheasants, pigeons, turkeys, domestic fowls, &c., to the attack of diphtheritis, and the possibility of disseminating that disease by this means. In 1881 some hundreds of fowls were sent from the neighbourhood of Verona to Nesselhausen, in Baden, where there is a fowl-raising establishment. Some of these were affected with diphtheritis before starting, and in the end nearly half died; five cats caught the malady; and a parrot also was invalided. A diseased hen bit a man's wrist, and he presently became ill, and had a most tedious recovery. Many of the workmen at Nesselhausen caught the disease, and in one case a man conveyed it to his children.

When rain falls upon a dry soil and moistens it to some depth, this moistening actually warms both soil and water. A. Stellwaag has recently made experiments on various kinds of soils, and finds that a humous chalky soil was raised as much as 15 degrees, and clay 9½ degrees by first finely pulverising them and then moistening with water. Thus we are justified in assuming that the light humous chalky soil which covers the chalk downs of England is, after dry weather, raised about 10 degrees by a smart shower of rain. This rise of temperature is due to the adhesion of the water to the surface of the solid. Such adhesion effects a certain degree of condensation, and condensation in that as in other cases is attended with evolution of the heat. The greater the surface exposed the greater the effect, and the pulverisation of course increases such surface.

It is known that deaf mutes can be taught to speak in a manner. According to M. Hémet, the individuals so taught have the peculiar accent of their native place. Since they cannot have acquired this by imitation, being deaf, he supposes that the fact indicates organic conformations similar to those of their parents: a new example of physical resemblance, transmitted hereditarily. M. Blanchard (in the French Academy) expressed doubts about this. The hoarse, metallic, guttural sounds produced by persons deaf from birth, without modulations or inflexions, seemed to him to be beyond the characterisation of accents by which human voices are distinguished. The question, as to whether the presence or absence of certain articulations, in the idioms of peoples, was connected with peculiarities of the phonetic apparatus, was (in his opinion) quite uncertain. The probabilities of such peculiarities he was disposed to affirm some time since, considering such facts as that the Chinese substitute *r* for *r* in French or English words (*Eu/rope*, or *Ame/rica*), but he had since met a Chinaman, familiarised with French, who articulated the *r* distinctly.

It is often found that silkworm caterpillars come out of the egg at a time when, through bad weather, the foliage of the mulberry has not reached its full development, and large numbers perish in consequence. To meet this evil, a Milan engineer, S. Suzani, throws the eggs into a lethargic state by application of a temperature near zero. They may thus be kept an indefinite time, awaiting the full development of mulberry leaves, and a means is also afforded of equalising the results of years of rich and of poor foliage.

THE BIBLE AND PROTESTANTISM.

It is truly astonishing and bewildering, when we read the Bible, to think that any person gifted with even an ordinary amount of perception, could believe that book to be the word of God. If people would only take it as they should on its merits like any other book, read it by the light of reason, if they are truthful and honest people, they must condemn it as being of divine origin. I have read it through from beginning to end several times, and of course, amongst very much wickedness, and quantities of rubbish, we read some high, true, good thoughts, but certainly not more so than can be read at intervals in the Bible of the Brahmins, Buddhists, the followers of Confucius, Mahomet, &c. These latter all teach as high a moral standard, and some higher, than does our Bible, for where our Bible teaches goodness it always holds out a reward, either in this world or in the world to come, whilst several of the others I have mentioned teach goodness not for any reward, but because it *is* goodness; purity because it is purity. In the Christian Bible we cannot find any more *proof* of its divine origin than the others can offer. Then I say it is astonishing that anyone can have the assurance to still insult human intelligence by asserting that it is God's word to man. The Protestants seem to be making the greatest commotion against Freethought. They try at times to be quite valiant. This is very ludicrous, when we remember that even if they could prove the Bible to be true, they have no right to it. If it were the word of God, every promise and blessing in it means *curse* to the Protestant. This Bible, whether it be true or not, does not belong to the Protestants; it was stolen from the Roman Catholics. I will endeavor to explain what I mean. To begin with, of course we must carefully bear this in mind, that if Jesus of Nazareth was God, as all Christians believe and teach, he must have been infallible—all he did and said must be taken as unerring truth. You cannot love Him if you doubt what he said, and St. Paul says, 1 Cor. xvi 22, "If any man love not the Lord Jesus Christ, let him be anathema maranatha." That is, let him be under the curse of excommunication. Now, I deny that the Church of England is *the* Church founded by the Apostles of Jesus of Nazareth, and of course if the Church of England is but an imitation, then its offshoots, Wesleyanism, Calvinism, Presbyterianism, and all the other isms must be false too. We read that Jesus very clearly chooses twelve Apostles to preach to all nations, and he gave them all power equal to his own. You will read of this in the 10th chapter of Mathew, 3rd chapter of Mark, 6th chapter of Luke. In John there is no account of the choosing of the twelve Apostles, but in the 20th chapter, Jesus, after his death, is supposed to have appeared to the disciples, and, among other things which he spoke to them, in the 23rd verse he said, "Whosoever sins ye remit, they are remitted unto them, and whosoever sins ye retain they are retained." Here you see Jesus gave all the disciples power to forgive sins. In the 16th chapter of Mathew, the 18th and 19th verses, Jesus appoints Peter as the head of the Church, for he said to him, "Thou art Peter, and upon *this* rock I will build my Church, and the gates of hell shall not prevail against it, and I will give unto thee the keys of the Kingdom of Heaven; and whatsoever thou shalt bind on earth shall be bound in heaven; and whatsoever thou shalt loose on earth shall be loosed in heaven." If we believe the words of Jesus at all, we *must* believe that he made St. Peter supreme ruler of the Church, and of the Apostles. He did not say to all the Apostles, "Upon these rocks I will build my Churches." No; he very plainly, in the presence of the other Apostles, chose Peter (whose name in the Syro-Chaldaic tongue means rock). Peter was the rock on whom he would build his Church. *One* rock and *one* Church. Jesus then evidently