

EARLY INHABITANTS OF BRITAIN.

At the Thursday evening lecture at the London Institution last week Professor Boyd Dawkins gave an interesting summary of what has been learnt of the early inhabitants of this country from pit and cave explorations. Enough, he said, was now known of them for some of their characteristics to be traced in the present population. The claims of race have lately been urged in the cry of Pan-Slavism, and we ourselves take pride in recognising an Englishman as an Englishman, whether he is born in Britain, Australia, or America. The history of the "English" from their invasion of this country in 449 is fairly well known. It took two centuries for their first landing at the Isle of Thanet for them to drive back, district by district, the inhabitants they found here, whom we should call the Welsh or Iberian people. It was not until 607 the invaders took Chester. His object was to speak of this earlier people turned out by the English. He wished first to mention that the Roman invasion had no more influence, so far as blood was concerned, than has British rule in India at the present time on blood there. The history of our island begins with the age of steel and iron—with that civilisation of which the term "iron age" is accepted as typical. He had to deal with the pre-historic people. Before the iron age there was what is known as the "bronze age" of civilisation, and further back again than that the "polished stone" age. It was this "polished stone" age of which he had to speak. The habitations of the people of this age are now known to us from the examination of such traces of groups of dwellings as are met with at Cisbury. The people lived in huts which had roofs to them. Their animals, most probably domesticated, were sheep, goat, ox, hog, and horse, and there is evidence from the bones that the horse was used for food. The fact that the horse has ceased to be animal for food is due to the "ecclesiastical" superstition that, as it was used sacrificially, it was not to be eaten. It came to be not the "correct thing" to eat horse. The dog, too, was used for food, as well as for herding and other purposes. In all the sites of old dwellings broken and cut bones of dogs are met with. All the bones show they were large dogs, not diminutive pets. Still more can be learnt of the people from their implements. They had pottery made by hand, not turned on a wheel. They struck lights from iron pyrites, not from steel, as steel was not invented. They ground corn. The needles found point to the tailors' and dressmakers' art being in a fashion followed. They spun and wove apparently, for some of the implements found could hardly have been used for other purposes. As now, so then, the ear was adorned, and perhaps, nose rings were worn. The people, too, were warlike, and their spears, bows, battle-axes, and stones for slings show that they liked then as much as "civilised" people do now to try the effect of weapons of destruction. They were evidently not a nomadic people, for their centres of habitations were well fortified, and General Lane Fox is of opinion that the work shows as much engineering skill as any fortification works of our own day. The number of strongly-fortified places seems to indicate many tribes who enjoyed warfare. There is evidence from implements found, that these people were miners. With all this they were a religious and a superstitious people. Avebury might be called their Westminster Abbey. It was an imposing grand temple, and graves clustered around it as burying-places are now associated with places of divine worship. The tombs contain such things as the departed might want in his future state, and in and around important tombs have been found relics of funeral feasts or "wakes." That there were family vaults is well established, and family peculiarities can be traced in the skulls. Looking at the sum total of what we know of these people, we find in them many of the rudiments of that culture which we now enjoy. Turning to the evidence as to where this people originally came from, the work of archaeologists on the Continent has shown that this Iberian, or, as he would call it, Welsh, race was widespread over Europe. The small dark Basque of the Western Pyrenees showed many features identical with what could be made out of the old people. At fairs in some of the Welsh towns, too, the Iberian element could be traced in some of the people who came to them from out-of-the-way places. St. Asaph was remarkable in this respect. In Ireland, too, small dark men are to be seen who, if put side by side with the Basque, could not be distinguished as regards type. The English who invaded the old "Welsh" or Iberians of our islands were, on the contrary, tall, fine people, with light hair and blue eyes, as is known from history. Although these old Welsh were driven to the mountain fastnesses, there can be hardly a doubt that the raven tresses and flashing dark eyes we sometimes come across in modern English people are traceable to them. We, at any rate, can trace that they enjoyed

the basis of a civilisation of which ours might be an outcome, except where we can trace other influences.

LIGHT AND LIFE.

The question as to how life is affected by the different colours of the spectrum has at various times engaged attention, and plant life has apparently been more studied in this respect than animal. Two distinct series of researches lately described to the French Academy seem to afford some fresh insight into the matter, and it is interesting to compare them together. One series, by M. Bert, was on plants; the other, by M. Yung, on the eggs of certain animals. M. Bert kept plants within a glass trough enclosure, containing an alcoholic solution of chlorophyll (very frequently renewed) and exposed them thus in a good diffuse light. The solution, which was very weak, and in a very thin layer, intercepted little more than the characteristic region of the red in the spectrum. This excluded part, then, was proved to be the indispensable part of white light, for the plants immediately ceased to grow, and before long died. It is this red region (as M. Timirigzeff has lately shown) that the greatest reduction of carbonic acid takes place. If red rays are kept from the leaf the plant can no longer increase its weight, it is reduced to consuming reserves previously accumulated, exhausts itself and dies. This part of the spectrum, however, though necessary, is not sufficient. Behind red glass plants may no doubt live long, but they get excessively elongated and slender, and their leaves become narrow and little-coloured. This is owing to the absence of the blue violet rays. Thus each region of the spectrum contains parts that play an active rôle in the life of plants. Now turn to animals: M. Yung has experimented during three years on the effect of different spectral colours on the development of the eggs of frogs (the common frog and the edible frog), of trout, and of fresh-water snails. It was found that violet light favoured the development very remarkably; blue light comes next in this respect, and is followed by yellow light and white light (which two gave nearly similar effects). On the other hand, red and green appear to be positively injurious, for it was found impossible to get complete development of the eggs in these colours. Darkness does not prevent development, but, contrary to what some have affirmed, retards it. Tadpoles of the same size, and subjected to the same physical condition previous to experiment, died more quickly of inanition when deprived of food in violet and blue rays than in the others.

Queries and Answers.

A CORRESPONDENT enquires for a remedy to prevent new crucibles from cracking when first exposed to fire.

Ans.—We have received the following receipt from a practical mechanic: Coat the inside with albumen (that is, the white of an egg); when well absorbed and dry, apply a second coat. If any of our readers know a better plan, we should like to publish the result of their experience.—EDITOR S. C.

Correspondence.

To the Editor of the SCIENTIFIC CANADIAN:

DEAR SIR,—Whilst appreciating the great improvements made in your valuable magazine during the past two years, could you not also improve the *Patent Office Record*? The smallness of the diagrams, and particularly the lettering, render it almost impossible to understand them, and they are utterly useless for comparing with the words of the claim. In the United States there is always a brief given of the specification, sufficient to describe the use and workings of the machine patented, and one can always obtain, for a few cents, a full-sized copy of the drawing from the U. S. Patent Office. I think if you would give this matter consideration and do something to improve the *Patent Record*, you would have many more subscribers.

Respectfully yours,

Kingston.

J. W. BROWN,
Carriage Builder.

[This matter rests entirely with the Patent Office Department. The publishers only have the privilege of giving the *Patent Office Record* as a supplement to the subscribers to the SCIENTIFIC CANADIAN. However, as we have already received several complaints on this matter, we shall be happy to draw the attention of the Patent Office to the subject of our correspondent's suggestion.]—ED. S. C.