

problems of this industry. There can be no doubt as to the value of the opportunity offered for research, the attractiveness of the subjects for investigation, and the huge difficulties to be surmounted. The ideal director for this association is not an individual research worker whose glory is to work in splendid isolation, but is he who will bring expert knowledge of the methods of scientific research to bear upon these complex problems, who possesses such personality as to attract promising young research workers to his side, and who is also an administrator qualified to secure the carrying on of a large volume of research work along a broad front touching the various sectional interests concerned, and to co-ordinate the efforts being made through the various laboratories, institutions, and works to which specific research and experimental work will be allotted.

In an advertisement which has appeared for a director of research a lower limit to the salary has been mentioned, but it may here be stated that the council intends to pay a salary commensurate with the qualifications of the candidate selected to fill the office, and it will be very considerably higher than the figure mentioned if the council can obtain its ideal director.

There are brilliant opportunities in this field of scientific investigation for the chemist, the physicist, and the engineer. Glass engineering in particular is in its infancy in this country, and the modern problems of glass manufacture are rapidly resolving themselves into those to be solved mainly by the highly trained engineer who specialises in the study of glass-making processes.

The Glass Research Association is an earnest effort to carry out co-operative research on an extensive scale for an industry of prime national importance, and it has been launched with great promise. Everything now depends upon the support of the whole industry and upon the calibre of the scientific workers who will undertake the investigations.

It is not too much to hope that the present membership will soon be doubled, and that scientific ability and genius of the highest order will be found to energise this great undertaking and ensure its success.

EDWARD MEIGH.

THE TOBACCO BEETLE.

BULLETIN No. 737 of the United States Department of Agriculture, published last March, has for its subject "The Tobacco Beetle: An Important Pest in Tobacco Products," and on reading what its writer, Mr. G. H. Runner, has to say about the pest, one is almost tempted to believe that the "precious herbe" is fitted for nothing so much as the breeding of maggots. At any rate, Mr. Runner makes it quite clear that tobacco at every stage of its manufacture, from the dried leaf up to the finished product, is a most attractive diet for the grub or larva, and that the conditions under which the leaf is usually manufactured and stored are almost ideal for the development and reproduction of the beetle. What a pity King James did not know all this when he wrote his "Counterblaste," and was led in irony to exclaim, "O omnipotent power of tobacco!" But the tobacco beetle, *Lasioderma serricorne*, was probably altogether unknown in his days, and even now is not at all common in England. It cannot withstand exposure to extreme cold for any great length of time, and thrives best, sometimes reproducing at the unusual rate of three or more generations each year, where a warm, equable temperature, a moist atmosphere, and suitable food for the grub occur together. That is why it is so much better known in America, especially in the States bordering on the Gulf of Mexico, than it is

in this country. It is well known also in India and the islands of the Far East.

Here in England the tobacco beetle is an imported species, only occasionally met with, though sometimes in very large numbers, as was the case not many years ago when it swarmed in the warehouses around one of the London docks, whither it had come in a cargo of turmeric from India. Its larvæ feed, like those of the common "biscuit weevil" or "drug-store beetle," *Sitodrepa panicea*, which belongs to the same family, on almost every kind of dried product of vegetable origin. Hence the beetle is almost as much at home with the druggist and the grocer as it is with the tobacconist. Tobacco, however, except in the green or growing state, which it does not touch, appears to be its principal food, and, according to Mr. Runner, it selects the higher grades of leaf, cigar, and cigarette in preference to those of inferior quality.

Methods to be taken for the destruction or control of the little pest, and various experiments and trials made with that object in view, are described at some length in the bulletin, which contains as well a full account of the whole life-history of the insect illustrated by figures, some of which are particularly well done, and there is also a list of special memoirs and other papers relating to the subject. The bulletin, therefore, although apparently prepared more especially for the benefit of the tobacco manufacturer and dealer, will be of considerable value to the practical entomologist, and ought, indeed, to have some interest also for every true lover of the weed.

THE BRITISH ASSOCIATION AT BOURNEMOUTH.

SECTION H.

ANTHROPOLOGY.

OPENING ADDRESS BY PROF. ARTHUR KEITH, M.D., LL.D., F.R.S., PRESIDENT OF THE SECTION.

The Differentiation of Mankind into Racial Types.

For a brief half-hour I am to try to engage your attention on a matter which has excited the interest of thoughtful minds from ancient times—the problem of how mankind has been demarcated into types so diverse as the Negro, the Mongol, and the Caucasian or European. For many a day the Mosaic explanation—the tower of Babel theory—was regarded as a sufficient solution of this difficult problem. In these times most of us have adopted an explanation which differs in many respects from that put forward in the book of Genesis; Noah disappears from our theory and is replaced in the dim distance of time by a "common ancestral stock." Our story now commences, not at the close of an historical flood, but at the end of a geological epoch so distant from us that we cannot compute its date with any degree of accuracy. Shem, Ham, and Japheth, the reputed ancestors of the three great racial stocks of modern times—the white, black, and yellow distinctive types of mankind—have also disappeared from our speculations; we no longer look out on the world and believe that the patterns which stud the variegated carpet of humanity were all woven at the same time; some of the patterns, we believe, are of ancient date and have retained many of the features which marked the "common ancestral" design; others are of more recent date, having the ancient pattern altered in many of its details. We have called in, as Darwin has taught us, the whole machinery of evolution—struggle for existence, survival of the fittest, spontaneous origin of structural variations, the inheritance of such variations—as the loom by which Nature