

paths marked out by ancient trails and where a need has arisen for the earnest consideration of a town-planning system. Our further progress must be based upon principles that modern experience has indicated as being fundamental to a rightly conceived and an orderly development of future investigation.

Insect behaviour constitutes the basis of applied entomology and, while that fact may now be more generally realized, I feel that if the point of view such a conception implies were constantly borne in mind we should be able to approach the solution of our problems in a manner that would lead to even greater success than has already crowned our efforts.

Action is the result of the manner in which man experiences. So, also, the reaction of an insect to its environment finds expression in the behaviour of the insect. Behaviour, as Jennings has stated, "is merely a collective name for the most obvious and most easily studied of the processes of the organism, and it is clear that these processes are closely connected with, and are indeed outgrowths from, the more recondite internal processes." Stated briefly in another way, behaviour consists in the adaptation of the insect to its environment. Anything injurious to the insect causes changes in its behaviour and conversely anything advantageous to it produces a change in the behaviour. Of the factors which regulate behaviour in insects, as in other organisms, internal conditions and processes are effective no less than external, and both may be, and generally are, the product of environment. Further, to be effective the external stimulus of the environment, whether it be physical or biological, must produce a change in the physiological state of the organism.

The activities of injurious insects which furnish the problems of applied entomology are more pronounced in countries where, for various reasons, the stability of the physical and biological environment is changed. This affords the reply to a question often asked, namely, why entomologists are faced with more problems in newer countries, such as our own, than in older countries? One of the chief causes affecting the stability of the environment and consequently the activities of the insects in such countries as the United States and Canada is the extension and development of agriculture and of agricultural areas. In countries of an older civilization the environmental conditions, particularly the agricultural conditions, are fairly stable by reason of the long period of their gradual development. In such countries we find a conservative type of husbandry with which careful rotations of crops and a fairly intensive system of cultivation are associated. In the newer countries, not only has widespread development within comparatively brief periods of time been responsible for