extensive changes in environmental conditions, but such development, particularly in agriculture, has necessitated, among other things, the importation of large quantities of the natural products, including vegetation, from older countries with the inevitable introduction of the insects affecting those products, thereby not only modifying the environmental conditions for the native insects in the new country, but also introducing into a new environment insects from another country and from a native environment more conducive to stability in behaviour Thus the conditions are altered for both the insects native to the new country and the insects fortuitously introduced.

Formerly, the investigations of the entomologists did not extend very far beyond a study of the life-histories of insects, and control measures were largely based on such knowledge supplemented by a limited study of the insects' habits; the idea being, as we were told, "to find the weak spot in the insect's life-history." The limitations of such methods of solving entomological problems were demonstrated by an inability either to account for the outbreaks of certain insects or to discover effective means of control. Not until the behaviour of insects, that is, their reactions to their environment, to each other and to the different biological constituents of that environment, was studied with true appreciation was it possible to make satisfactory progress in the control of certain serious pests. The corn root-aphis (*Aphis maidi-radicis*) furnishes a good example of this fact. It was not until Forbes and his assistants worked out the relation of this insect to the ant *Lasius niger americanus*, on which it depends for its well-being, that any success in controlling this serious corn pest could be attained; and such control measures as the breaking up of the ant colonies in the spring and the destruction of weeds on which the ants plant their wingless aphid captives before the growth of the corn, are based solely on a knowledge of behaviour.

The reaction of an organism to environmental influences is known as a tropic reaction or a *tropism*. The external stimulus may induce a physiological state that exhibits response in movement, or the physiological condition of the organism may be changed in a more fundamental manner with the result that not only is the organism itself affected permanently, but the progeny experience the effects of the stimulus and react by a change in behaviour or even in structure. For the sake of convenience we may term such tropic reactions as *individual* and *racial*, respectively.

It will not be possible in the time at my disposal to deal with more than the main types of tropic reactions to physical factors and a treatment of these must of necessity be brief in character. Let us, therefore, consider the chief tropisms: Chemotropism, thermotropism,