nature. The wonderful contrivances for the cross-fertilization of Orchids, so graphically detailed in Mr. Darwin's new work, and which rival all that had been previously observed in the singular economy of insect life, had been hitherto unsuspected even by those botanists who had specially devoted themselves to that family. And this is but a sample of that extraordinary variety of facts collected by him and brought to bear upon his theories, which must be patent to every impartial reader of his works, whilst all who have had an opportunity of watching his *modus operandi* are well aware that he never brings forward an observation without taking every precaution to ensure its accuracy, thoroughly sifting every circumstance that appears to militate against it. It is indeed to be hoped that, without waiting for the completion of the great work that is to embody the whole series of his *pièces justificatives*, Mr. Darwin will continue to illustrate separate portions of his subject, each one of which is sufficient to give a lasting name to its author. In the meantime let every lover of nature who, from his residence in the country, may have leisure and opportunities of observing, follow in the track thus opened out. If he will carefully watch the gradual development and daily habits, at all seasons of the year, of the animal or vegetable productions which are around him in the greatest abundance, he will detect many a curious arrangement by which nature, in causing animals and plants, or different species of each, to act and react on each other, provides for the perpetuation of species, races,

or individual varieties, against the ever-present causes of destruction, and at the same time checks that over-multiplication which might result from those very provisions. Those sudden appearances of myriads of insects known in rural districts under the name of blight, their enormous means of multiplication, and their almost total disappearance the following season are as yet a mystery to us, both as to their cause and their influences. The perusal of Mr. Darwin's first chapters will show that there is much still to ascertain in the action of insects even on our common Orchids; and how little do we know of the real history of the life of those sets of plants upon whose external forms volumes have been published! How is it that when our hedges are annually loaded with the fruit of the bramble, or our fields covered with the down of *Carduus arvensis*, we seldom see a seedling of the one or the other?—nature having concurrently provided for their propagation by the inarching and rooting stems of the former and the creeping rhizomes of the latter. How is it that in many localities every individual *Epilobium montanum*, before it dies down in the autumn, has surrounded itself not only by numerous offshoots, each one armed against the rigours of winter so as to form an independent new plant in the spring, but also by a wide-spreading progeny already born from the hundreds or even thousands of seeds it has shed; and yet when we examine the same spot the following year, the number of *Epilobiums* has not increased, and you may look long before you find among them a single seedling, every individual you uproot proving to be the result of a previous year's offshoot? In this excessive multiplication of autumn seedlings have we perchance a provision in aid of insect or other animal life—something analogous to that concurrence of natural causes, which at one of your last year's meetings was described as insect horticulture? We usually close our observation of living plants in October, and recommence it in March, when in many respects a total change has taken place: the gradual progress of that change remains to be watched. I am well aware that numerous papers on the life and development of plants have been published, more especially in French and German periodicals, and must be consulted by observers before they can safely draw any conclusion; but many of these treat the subject solely with a view to specific distinction, and scarcely ever in relation to habits induced by external influences of station and climate, still less with reference to that connexion with insect life revealed by Mr. Darwin. We have had enough of splitting of hairs and counting of spots, and of idle controversies as to whether

they indicate species, varieties, or individual differences. Let us adopt for the insects and plants of our islands the nomenclature and classification the most convenient for study, and devote our attention to their economy and development, to the complicated structures disclosed by the microscope, and to those innumerable influences which we term accidental, but which appear all to form part of one general plan for the balance of power in the natural world. If, at this time next year, I am still honoured by a seat in this Chair, I hope to lay before you a sketch of the state of those branches of our studies which I have now been unable to touch upon; and it will be a matter of great gratification to me, if I have to report that many a Fellow of the Society may have taken a leaf out of Mr. Darwin's book, and commenced a series of observations on some of the subjects I have alluded to.