

and the food that forms their usual support is in the greatest abundance.

There seems to be some analogy between the birds that migrate annually to warmer climates to spend their winter, and those animals, which remaining in a country, seek a subterranean, or other close retreat, to shelter them from the rigours of that season, and in which they continue in a torpid state, till spring revives them and they issue from their hiding-places to fulfil the first law of their Creator. Several instances also are upon record, even with regard to birds that usually migrate, of their having been found torpid in the clefts and cavities of trees; and Spallanzani relates experiments which prove that swallows can bear a certain degree of cold when torpid. I do not recollect any observations which serve to prove that hibernating animals are regulated by the temperature as to the season at which they prepare to retire for the winter, except as to insects, which, with few exceptions, are of that description. My learned coadjutor, Mr. Spence, in our "Introduction to Entomology," has some remarks on this subject, which seem, at first sight, to prove that the disappearance of insects, at least those of the *Coleoptera* order or beetles, is not preceded by any remarkable lowering of the temperature; on the contrary, he observed a great number of various genera congregating with this view when the thermometer was fifty-eight degrees in the shade.\* This was about the middle of October. But there is one circumstance to which he has not adverted, which may tend to reconcile this fact with the received opinion. The nights at this time of the year are often cold when the days are hot, the latter also are much shortened and the former lengthened, so that the sum-total of heat received from the sun is very much diminished, which may be the exciting cause of their hyber-

\* Introd. to Ent. ii. 433.