allowing of the growth of a temperate flora in Greenland. As Dr. Brown has shown,* and as I have elsewhere argued, the absence of light in the Arctic winter is no disadvantage, since, during the winter, the growth of deciduous trees is in any case suspended; while the constant continuance of light in the summer is, on the contrary, a very great stimulus and advantage.

It is a remarkable phenomenon in the history of genera of plants in the later Mesozoic and Tertiary, that the older genera appear at once in a great number of specific types, which become reduced as well as limited in range down to the modern. This is, no doubt, connected with the greater differentiation of local conditions in the modern; but it indicates also a law of rapid multiplication of species in the early life of genera. The distribution of the species of *Salisburia*, *Sequoia*, *Platanus*, *Sassafras*, *Liriodendron*, *Magnolia*, and many other genera, affords remarkable proofs of this.

Gray, Saporta, Heer, Newberry, Lesquereux, and Starkie Gardner have all ably discussed these points; but the continual increase of our knowledge of the several floras, and the removal of error as to the dates of their appearance, must greatly conduce to clearer and more definite ideas. In particular, the prevailing opinion that the Miocene was the period of the greatest extension of warmth and of a temperate flora into the Arctic, must be abandoned in favour of the later Cretaceous and Eocene; and, if I mistake not, this will be found to accord better with the evidence of general geology and of animal fossils.

In these various revolutions of the later Cretaceous and Kainozoic periods, America, as Dr. Gray has well pointed out, has had the advantage of a continuous stretch of high land from north to south, affording a more sure

* "Florula Discoana."