

bird-migration, which is another interesting index. Suffice it to say that my plant notes and bird notes, and the weather records kindly furnished me by Mr. Stupart, the director of the meteorological service, alike show these last two springs to have been both unusually early. Both had in March and April almost the same mean temperatures, which were in March 10.9° (1902) and 11.4° (1903) higher than the average for twenty years,* and in April 4.5° (in 1902) and 2.9° (in 1903) higher than the normal. And the hot, dry month of May, 1903, of which we have spoken at length above, was 3.6° hotter than the normal, while May, 1902, was 1.7° cooler than the normal, and June of both years cooler than the average by 4.4° and 2.4° respectively.

Comparing the past two springs with the previous two, we see again how remarkably early they were. The mean monthly temperature of March, in 1900, was 18.6° , in 1901 it was 24.3° , while in 1902 it was 33.9° and in 1903 34.4° . It is little wonder that hepaticas and silver maples bloomed earlier in 1902 and 1903 than in 1900 and 1901. But why they should have bloomed from two to three weeks earlier is not so apparent, when we consider the interesting fact that the *temperature of April was about the same for all four years*. But happily we are not left without an explanation, which lies in the state of the soil. In the falls of 1901 and 1902 snow fell early and steadily before the frost had entered the ground, consequently there was no frost in the ground to retard vegetation when the snow went off in the spring. In the previous two years the conditions were precisely the contrary: the frost got well into the ground before the frost came, so that the succeeding springs of 1900 and 1901 were much retarded not

* These mean temperatures are somewhat higher than that of March, 1898, which was the warmest March of which we have any record prior to 1902, its average maximum temperature even exceeding those of the Marches of 1902 and 1903 by a small fraction of a degree, being 42.36° . Miss V. Lees informs me that she found hepaticas in bloom on Pine Hill, New Edinboro', on the 27th of that month, which is the earliest record for hepaticas of which I have heard. While this article is printing I am able to state that this spring hepaticas have not, so far as I know, been found in bloom earlier than the 16th April, and up to to-day (23rd April) I have seen no other wild plants in bloom. Till to-day the temperature has not reached 50° . One swallow does not make a summer, nor one hepatica a spring !