

the openings by which they reached the surface, they simply work their way into the snow wherever they may be. Probably when the bed of snow is shallow and soft, they soon get down to the ground, but on this occasion their progress earthwards was decidedly slow. For more than a week after they had left the surface they were still to be found scattered through the snow at various depths. Trenches dug in the snow at several points revealed three crusts—the result of thaws earlier in the winter—each about an inch thick and separated one from the other by from three to seven inches of loose, dry snow. The tiny creatures seemed to have had little trouble in finding passages through the upper crusts, but the bottom crust was solid ice, and here in the first days of my investigations I found the snow-fleas accumulated in considerable numbers. Later on, these insects gradually disappeared. Although lacking any direct evidence, I am of the opinion that by degrees many of them worked their way along through the snow until they encountered some twig or root that pierced the crust and enabled them to crawl down to the earth. There is no doubt, however, that a very large number of the adventurers perish. The fact is that in six years' observation of their winter habits, I have never seen two large emergencies occurring in the same locality, indicates that a great destruction of the insects must take place on every excursion.

After all that has been said about their appearances in the winter, it might be thought that the insects only come out when the ground is covered with snow. The truth is that in favourable weather they emerge just as readily when the ground is bare, but, of course, they do not then attract attention as when they are set off by the vivid background of the snow.

One calm misty morning in that golden prime of spring when the first wild flowers are all out and the mosquitoes aren't, I came down through the woods, leafless as yet, to a marsh that was flooded a couple of feet deep with the high water from the Ottawa River. The whole half mile of swamp, I remember, was ringing from end to end with an astonishing chorus of frogs,—a great volume of sound, but so steady and sustained that presently, like the music of the spheres; it went out of my consciousness, until suddenly I was made aware of it again by the startling abruptness with which it stopped: a marsh hawk sweeping over the water had struck the massed choirs instantaneously dumb. As I worked my way through the alders along the edge of the water, I noticed a good many *A. socialis* climbing in the withered "beaver hay," the blue black colour of the minute insects rendering them conspicuous in the yellow grass. As I advanced they became thicker, and here and there strings of them floated down runlets from the woods. And then I came on the springtail metropolis. It was a large, moss-covered log so rotten that its species could not be determined, but it was probably a pine. It was bedded on the dead leaves of yester year just at the edge of the water, and from a crevice in its brown crumbling side, *A. socialis* were emerging in solid dark blue masses. The easiest way to appraise them would have been by dry measures. There must have been something over an imperial pint of them visible, and more were continually coming out of the log. On the damp leaves they were gathered into several patches six inches in diameter and fully half an inch thick. I filled a number of collecting tubes chockfull by merely scooping two or three times into these masses. A fine spray of leaping insects played continually over the side of the