

Natural South Marysburgh

Watching Insects in March

The late Brian Tobin, and his wife Joan, once owned a beautiful acreage that fronted Black Creek. Getting to their creekside chalet meant navigating a two-kilometre driveway from County Road 13. The chalet was nestled within a 30-acre established forest comprising both hardwoods and conifers. On the remaining 100 acres, the duo worked with agencies to convert the abandoned farm into a managed forest, planting some 50,000 trees.

Because the Tobins appreciated the scores of wildlife species that the property attracted, they always welcomed the public to explore Stillwater Forest. I was a frequent visitor there and worked with Joan, after Brian tragically was killed in a highway accident, by co-leading several guided hikes, back in the days when I ran an outdoor interpretive programme.

I was returning from one of my solitary early March walks some years ago when my curiosity was piqued by what appeared to be soot in the tracks that had been left by my snowshoes on the trek in an hour earlier. When I stooped closer to have a better look, the soot began to dance as though activated by some mysterious static electricity.

Although the air temperature was near zero, the snow was still quite cold and was nowhere near melting. Still, these were minute insects I was witnessing—snow fleas actually, more accurately known as springtails, and they were in no pain. They're used to playing in the snow. A few days earlier, a Hillier resident e-mailed me upon her discovery of these critters too in her travels.

Springtails, although resembling fleas as they jump about, are in no way related to fleas. They are so primitive they have no wings, and there is no evidence they ever did. In short, their evolution stopped long before wings came on the scene, and that was a very long time ago indeed. Springtails are aptly named, for that is precisely what they do, with their tail. It is an ingenious piece of equipment, forked and normally bent underneath the abdomen and fastened with a spring release under pressure. When released it hits the ground and propels the insect upwards, up to 100 times its body length. Very handy for escaping enemies.

We always seem very intrigued when we see insects actively moving about in the winter. Woolly bears out on warm winter days never fail to shock us. So, what are these snow fleas doing out? Warm winter days draw them out in large masses to feed on algae and fungal spores on old snowbanks. They are so tiny that 100,000 in a one square metre of surface is not an unusual number. When under the snow, they play an important role in recycling organic material. You can nearly always find a few if you look in the silvery fur of the winter rosettes of mullein.

Interestingly, they have a tendency in winter to accumulate in low places; hence, the reason we see them in our foot tracks in the snow. If you want to get a close-up view of these little critters, simply take a look at them through the opposite end of your binoculars, which will transform your binoculars into a handy magnifying glass.

We tend to call them insects, but technically I suppose they are not, although they are six-legged and certainly share a common ancestor. Their scientific name, *Collembolla* from 'coll', meaning glue and 'embol', meaning peg, refers to a rather fascinating feature about this creature. Don't attempt to see this feature through the wrong end of your binoculars for you will likely fail in your attempt. They have a tube which projects down from the underside of the abdomen, and which exudes a glue-like substance for adhesion on slippery surfaces—certainly useful, I would suspect, if they are out and about on a windy day. That same organ also controls fluid balance in the body.

By living this rather unorthodox life style, and spending the summer lying dormant while other insects are out and about, they avoid the usual survival problems of summer. With small birds and large predatory insects fewer in number in the winter than in summer, springtails may even realize this as they come out to dance in the snow. While I may have crushed several thousand springtails as I hiked back to my parked car, there were probably more than a million left behind that were untouched.



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