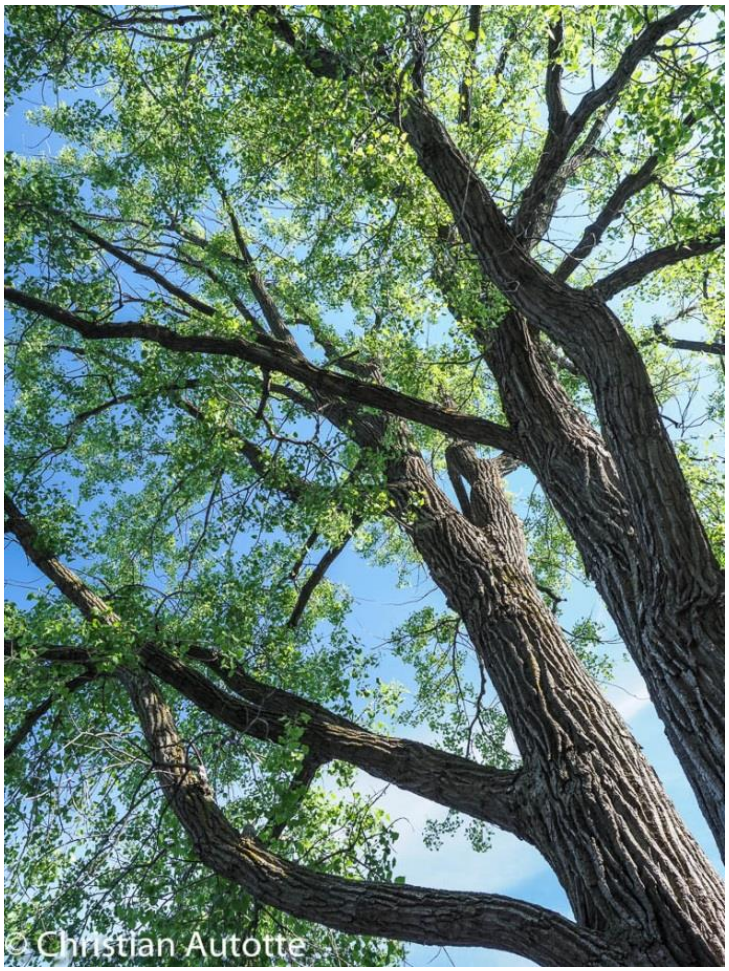
SNOW IN SUMMER?

With the return of summer in our northern latitudes many plants are busy reproducing. Flowers are blooming everywhere, not only in the undergrowth but also in trees. Many people tend to forget that trees are also flowering plants, and most of them can produce flowers in truly amazing numbers.

One such tree is the cottonwood, so named for the cottony fibres that allow its seeds to float some distances from the tree, especially on breezy days. The female flower producing those seeds measure between 15 and 30 cm. it has been estimated that a single tree can produce as many as 48 million seeds! So imagine what can happen when a whole forest of cottonwood start shedding their seeds at the same time…



Cottonwoods are tall and handsome trees, usually growing along waterways.

Open seed pods releasing their load of cottony seeds.

Seen from a distance, the seed pods look just like balls of cotton.

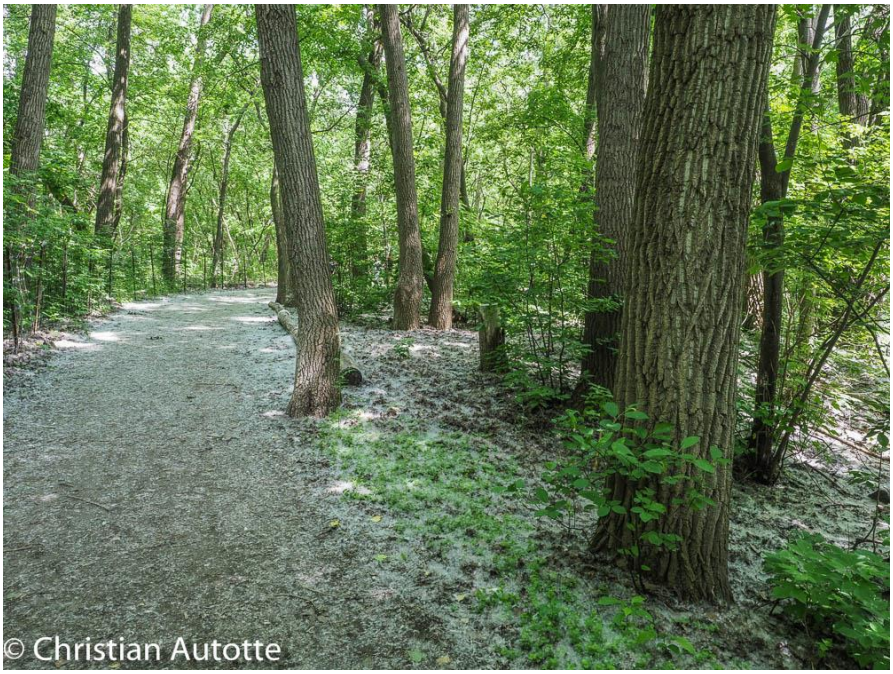
The seeds form inside capsules. Once ripe, the capsules burst open and release their seeds; the slightest breeze will then blow the seeds away and disperse them over great distances. Falling seeds accumulate on the ground by millions, forming great fluffy mats that can look like light fluffy snow. This spectacle doesn't last long: as soon as they become wet, the soft fibers almost seem to melt away and virtually disappear, leaving only the tiny seed behind.

Pods can fall off the tree before all the seeds have been released, but considering their productivity it doesn't make much of a difference to the reproductive success of the trees.

Once a seed pod has released its seeds it simply falls to the ground, its useful task completed.

The individual seeds are tiny, especially when compared to the giant organism that has the potential of growing from it.

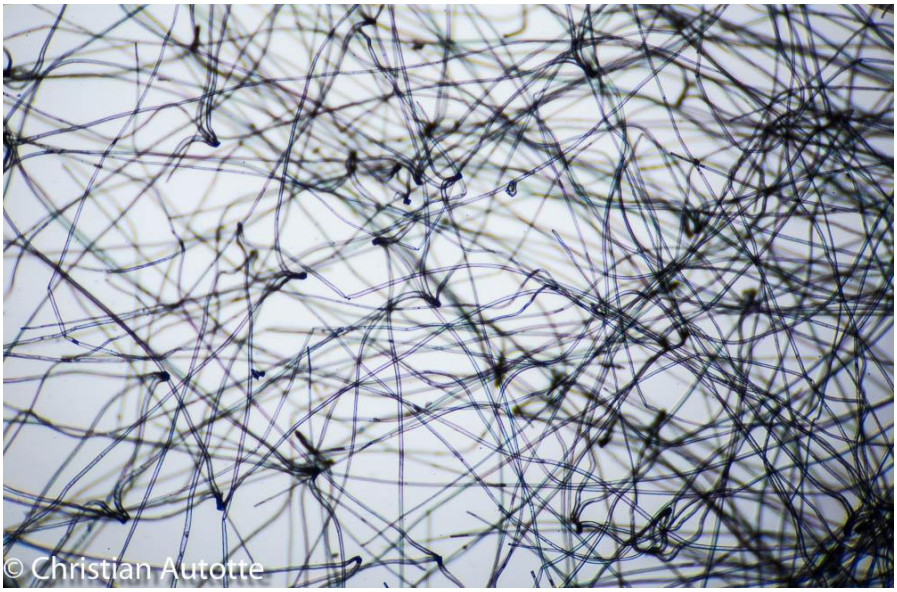
The snow that isn't snow…. When the trees are in full bloom their seeds can accumulate in great mats that swirl up behind anybody walking along those paths.



Of course, I had to take a look at these fibres under some magnification, and gathering a few specimens was not a problem…

The fibres are attached only to one end of the seed. They are not simple continuous threads; there is a lot of "kinks" that may result from the way they grow inside the seed pod. That may be something else to investigate for the curious microscopist that I am…

Tip of a seed showing cotton fibers attachment. 100x.



Cottonwood seed fibers, 100x.

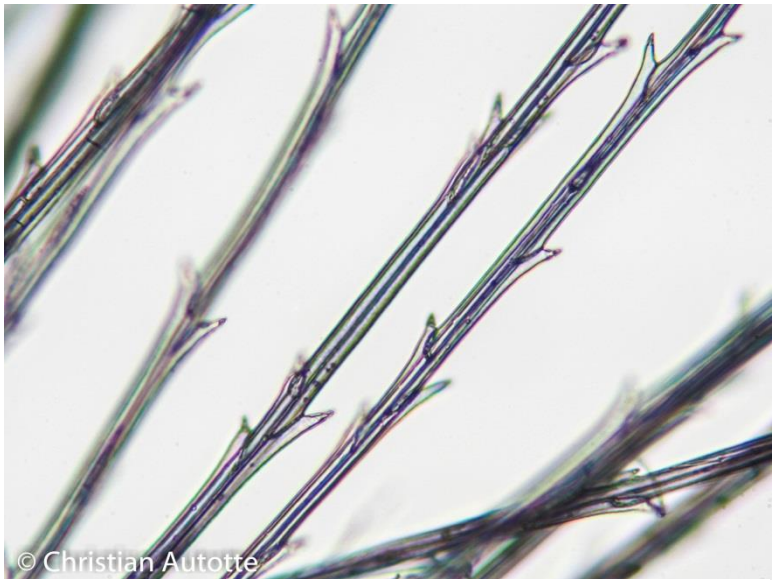
I have found through many observations that a lot of such plant fibres associated with floating seeds can be interesting to see under polarizing light; the cottonwood seed is no exception.

Seed and fibers, 40x in polarized light.

Dandelion seed head.

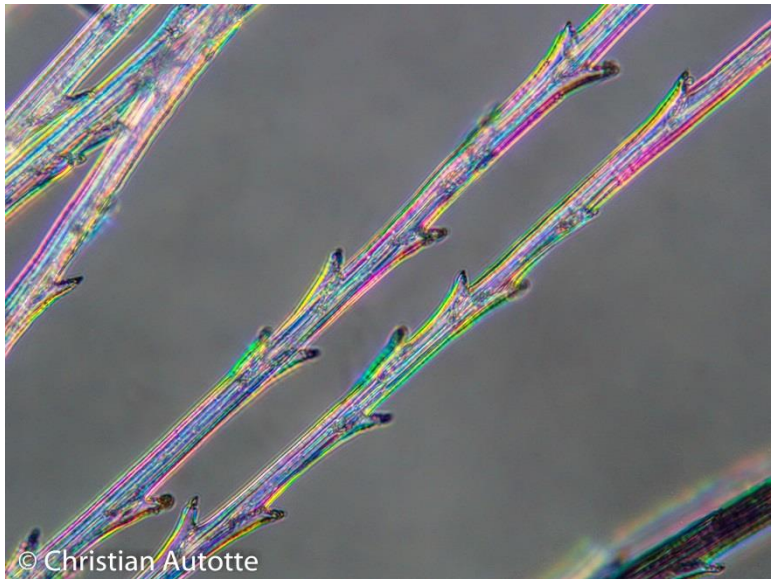
Other floating seeds come from the common dandelion. As anyone who has blown on a seed head can tell, each seed is equipped with its own little parachute. Carried by this parachute a seed can travel as much as a kilometer. Its bristles, which can number up to one hundred, have “thorns”, whose purpose I can’t figure out; they may increase the surface of the fibres and improve its portability. We do know that those seeds float on what is known as a “vortex ring” which was previously believed to be too unstable to occur naturally.

Dandelion seed head with some seeds missing.

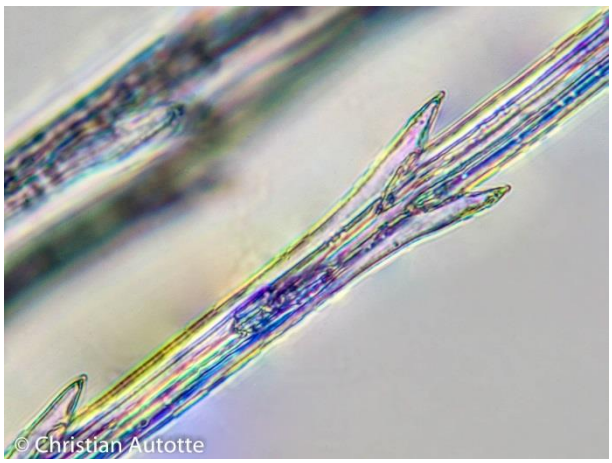


Parachute fibers at 200x.

The base of a dandelion seed parachute in polarized light, 40x.



Parachute fibers at 200x, polarized light



Parachute fibers 400x, stack of 5 images.

In North America we also have the milkweed, with seeds that are bigger than the dandelion but are kept aloft with a larger parachute. Those fibres are also beautiful of look at under polarized light. Many more plant fibers are worth a look, with or without polarized light.

Milkweed seed pod.

Milkweed seed fibers in polarized light, 40x.

Unknown seed fibers, polarized light.

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Published in the June 2020 issue of Micscape magazine.
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