



May 2023: Alberta PlantWatch Annual Newsletter

A big Thank You! to all our Alberta volunteers, for watching our selected plants and reporting bloom dates! This information helps us understand the impacts of climate change, and to predict the best timing for practices in fire management, forestry, agriculture, human health, remote sensing, and even forensic medicine!

2022 Weather In Alberta

Alberta had its third warmest summer in 75 years, and at least 4 major thunderstorms swept through - <https://www.canada.ca/en/environment-climate-change/services/top-ten-weather-stories/2022.html#toc5>. See number 7. Super storms track across the Prairies in July.

2023 El Niño prediction

The WMO (World Meteorological Organization) predicts “a strong likelihood of El Niño onset in the early second half of 2023, and its continuation during the remainder of the six-month forecast period.” El Niño events usually bring hotter, drier conditions to Alberta.



Red pollen sacs on male catkins of balsam poplar (left) and aspen (right) [photos L.Kershaw & E.Beaubien]

Loss of Poplar Catkins

Prairie crocus generally starts blooming about the same time that aspen starts to shed pollen. In early spring 2022 the poplars flowered on and off over a long period. This was due to alternating warm days and then frosts. In many areas the male catkins froze. With global climate changes, will we see colder spring weather more often?

B. Bolton, Leduc County. Curious...the poplar pollen sacks were barely pink; they are usually quite prominently colored. (EB: Loss of color happens when the pollen sacs freeze and die.)

E. Beaubien, Edmonton. May 2, columnar male poplars were dropping catkins with dead, purple pollen sacs. They flowered early and their catkins were killed by frost, so no pollen shed. In Rosebud and Drumheller in mid-May, I saw more dead catkins from tall cottonwoods. Large, pink-purple male catkins were abundant on the sidewalks. On May 16 in west Calgary: planted balsam poplar hybrids also dropped their male catkins. No pollen shed from those trees!

M.J. Davies & Z. Kondra, Carstairs. May 8-9 it was very warm, then on May 10th it was -2 C° with frost. Aspen catkins were mostly at full bloom. Later, I could find no aspen with seeds, and just a few balsam poplar trees with seeds.



Cones filled the crowns of masting white spruce trees [photo L.Kershaw]

Spruce! Tons of pollen, then abundant seed cones

“Masting” is the production of many seeds by a plant, every few years, in regional synchrony with other plants of the same species. 2022 was definitely a ‘mast year’ for some conifers. Biologists suggest that the heat and dryness of the 2021 summer triggered the massive flowering of white and blue spruce in 2022. If survival seems unlikely,

it's a good approach for trees to produce lots of seeds for future generations. The trees produce so many seeds that it's impossible for all of them to be consumed by squirrels, birds, mice, etc. This intense flowering occurs across a wide geographic area.



Mature pollen cones on a Colorado blue spruce tree
[photo E.Beaubien]



Dense seed cones on a masting white spruce tree
[photo L.Kershaw]

Heavy clouds of yellow spruce pollen in spring were followed by massive amounts of cones at the tops of spruce trees. Some creatures are being very well fed, so we can expect a bumper crop of squirrels and Red-breasted Nuthatches in 2023.

E. Beaubien, Edmonton. May 16, white spruce were shedding pollen from abundant red cones. Colorado Blue spruce shed pollen a week later.

P. Englefield, Edmonton. What a year for pollen! The blue spruce in our back yard has hundreds of cones. I can't wait until the squirrels start dropping them on the shed roof in the middle of the night... Bang! Bang! Bang!



With so many cones to cache, squirrels had a great year
[photo C.Bird]

D. Murray, Red Deer. May 24-27, spruce pollen was thick on all surfaces outdoors.

B. MacCallum, Hinton. Aug 11. Red squirrels have been busily cutting spruce cones off the trees in our yard for some time now. Recently, I've

noticed Pine Siskins eating the seeds out of drying cones on the driveway. We have a bumper crop of siskins this year - sometimes as many as 60 birds, adults and young, at the feeders.

M.J. Davies & Z. Kondra, Carstairs. The white spruce produced a tremendous number of cones; even the small trees 4-5 feet tall.

2022 Observer Comments

Northern Alberta

Tyler Hermansen, Fort Chipewyan. There was a lack of berries due to the crazy hot summer. Wonder how the bears will do if it happens too often? There've been multiple reports about bears and cabins, or bears and dumps, or bears waking up early from hibernation in Saskatchewan. I'm worried about the bears if there are no berries for them to eat. I know they eat goose grass, joint grass and horsetails in the spring and summer. There is plenty of that, so they at least have some food.

T. Hrab, Peace River. Saskatoons did well in this area. Wild strawberries and blueberries were also plentiful due to rain.

V. Hudson, St. Paul. The saskatoon berry crop was quite good this year.



The saskatoon crop was good in many areas
[photo Edmonton Area Land Trust]

R. Creelman, Lac La Biche. Very few pollinators. Mostly hover flies and solitary bees. Bumblebees did not build up until mid-July. Few butterflies.

E. Slatter, Athabasca. Snowpack disappeared by early May. It was generally cool and wet in April-May, but by May 10 the ground cover was VERY dry despite abundant winter snow. After a slow start and unsettled weather in June, some heat and better growing conditions arrived in July.



A carpet of tiny twinflowers [photo C.Wallis]

Insect pollinators were largely absent early in the season, and fewer than last year after that. Few bees in June, then more (but not abundant) in July-August. Fewer wasps and dragonflies this year, but plentiful mosquitoes. Aspen saplings had a leaf miner, and their leaves curled, browned and died. There were magnificent carpets of bunchberry, wild lily-of-the-valley, pink wintergreen, twinflower, and starflower. Berry production wasn't great on some species. Buffaloberries were almost nonexistent here and were also poor in Jasper.

H. Zieger, Barrhead. Cool dry spring. Very few wild lilies. First good rain June 14-15.

J. Henry, Peers. Northern bedstraw patches were huge and the plants larger than I have ever seen. The Cedar Waxwings came in spring and ate all the flower petals on my crabapple trees. I'd never seen that before. But I still got crabapples!



Cedar Waxwings love to nibble on apple blossom petals [photo L.Kershaw]

J. & N. Fuller, Athabasca. A wet, cold spring seemed to have pushed back the dates for most plants. Extremely dry after June. We had almost no blueberries, saskatoons, or cherries despite glorious

flower sets. The bunchberry and buffaloberry crops were small as well.

L. Dahl, Wembley. We had a lot of east winds this spring which, in the past, has indicated a dry summer (in the farming community).

Central Alberta

D. Crowe, Stony Plain. There were many berries on the mountain ash trees.

B. Bolton, Leduc County. Apple blossoms were 10-14 days later than usual, but we had an excellent crop of fruit so maybe the bees were late too. It wasn't just the vegetation; we did not hear frogs until late April. Our regular pairs of geese and mallards arrived, but no goslings or ducklings??? Even the first appearance of does and fawns was two weeks later than usual. Once the monsoon hit (June 14-25) you could almost watch things grow.



Beaked hazelnut fruits are coated in tiny spines [photo L.Kershaw]



White-tailed deer always alert to danger! [photo D.McIntyre]

B. Tamboline, Drayton Valley. Bees were bringing in aspen pollen April 3, but then snow hammered the blooms. In late April, honeybees brought in orange, yellow and grey pollen. Very few pollinators in July.

R. Petersen, St. Albert. A chilly snowy spring, with a dump of snow April 19.

A. Mioduchowska, Edmonton. 2022 was the year of the beaked hazelnut. I've never seen so many nuts in the Edmonton River valley. Also, the year of the butterfly.

T. Abbott, Leduc. The cool, wet spring was good, as everything was dry last fall. It was dry enough to get vegetables and crops planted; then wet enough that everything started to grow. After June it was dry and we were watering. We had to water before we dug potatoes and carrots so that we could get tools into the ground. Great weather for harvesting. Berries and apples were good, but they were drying up on the trees and bushes and the branches were bowing down. Our dogwoods had no flowers this year because we had a moose in the garden last winter and they were well pruned! After a good shower in mid-September, the leaves changed color instead of just drying up. Lovely fall colors.



Beautiful red-osier dogwood flowers – but none are left after the moose have stopped by [photos L.Kershaw]

C. Pattenden, Tofield. Aspen flowers seem to come open all at once. Wildflowers bloomed in profusion, particularly the wild roses. Honeybee and butterfly numbers appeared to be low this year. There was more than usual fruit on dogwood, cranberry and rose. Fall colors were spectacular!

P. Jevne, Wetaskiwin. Cool spring. Lots of moisture until June. Very little rain in summer. Good crop of saskatoons.

M. Predy, Ponoka. Spring started out dry. Then, from June 15 to the end of July we had 28 cm of rain. Then it turned hot and dry in August. Lots of apples but poor saskatoon and black currant crops.

J. Potter, Pine Lake (SE of Red Deer). It was very dry this summer - barely enough showers to see us through. We would have had a good crop of

lowbush cranberries, but as they started to ripen, they dried up. Same with chokecherries.

J. Henderson, Innisfail area. Very windy for all of May, and no rain until June 4. Hardly any bees on the fruit trees. Lilac blooms opened after the first rain. It was very hot in July.

D. Murray, Red Deer. More northern pearl crescent butterflies than ever before. Amazing season for early blue violets and spreading dogbane, with abundant blossoms. Early blue violets were especially robust, with more and larger blossoms than in the past 35 years – they bloomed well into June, produced heavy crops of seed, and spread so much that we anticipate another big bloom next year.



Early blue violet is one of our loveliest and most widespread spring wildflowers [photo L.Kershaw]

T. Krause, Red Deer County. The winter brought little snow. A couple of deep freezes once again hindered the sour cherries with some winter kill and poor fruit crop. Spring was fairly normal until June, when the monsoons set in and started to drown my pea crop. Many vegetables were delayed due to the lack of heat. In mid-July we had the worst hail storm in our 15 years here. It devastated much of the garden. A 2nd hail event in early August added insult to injury. Rain was very scarce in July-September, and we went into the fall very dry.

W. Daley, Olds. Early May was cold and dry. By the end of May it had warmed up, but the leaves and flowers seemed to emerge more slowly than usual. June had above average rain, with 51 mm on June 14th alone! July-August-September was hot and dry. In August, heat warnings were issued for 30°C temperatures and it didn't cool off at night. Cherries, saskatoons and apples had profuse fruit.

P. Porter, Wainwright. It was an interesting year weather-wise, pretty much the opposite to 2021. Flowering seemed to be delayed a week or so. Ample moisture in May to mid-July. Hotter spells in late July to mid-September. Very dry, but most vegetation remained green until early September. Cereal crop yield was average to above average and hay crops were very productive in east-central Alberta. It was a great year for native plants, with lots of seed produced.

C. Lumley, Elk Point. Far too hot and dry this year, but the best crop of beaked hazelnuts ever and those shrubs are thriving!

Foothills/Mountains

E. Beaubien, Switzer Park. Very few berries on lingonberry, buffaloberry, blueberry, bunchberry, and bearberry. Luckily, it was a good year for raspberries!

S. Kinzel, Blue Hill Fire Tower (near Sundre). Barely had a summer. Snow stayed late. Planted and tarped the garden June 1, but then more snow. June 23 was last snowfall (8 cm). Even with summer warming, nothing survived in the garden. Most years it is challenging.

L. Dowling, Banff. It was a heavy snow winter followed by an unusually long, cold spring. The morning of June 24 was -1°C. Most flowers were late this year, including the subalpine flowers. Then the summer was a very hot, and for the second year in a row we had a gazillion bugs: mosquitoes, moths, wasps, hornets, horseflies and more (there is no 'insect apocalypse' in Banff!). My vegetable garden did poorly. Very few potatoes and peas. Lettuce and spinach bolted early. Beets and radishes produced only greens. In mid-September when we were treated to fresh snow on the mountains, then an exceptionally long and dry Indian summer.



Flower-like clusters of tiny bunchberry blooms [photo E.Beaubien]

J. Buchanan-Mappin, Canmore. Overnight lows in April were always below freezing, with double digit sub-zero lows until April 18.

It was late spring for flowering. Incredible numbers of early blue violets, wild strawberries, bunchberries, northern bedstraw and yarrow. Sadly, it was another poor year for buffaloberries. Maybe the heavy frosts in April impacted this. Bears in the mountains usually eat masses of buffaloberries to fatten up before hibernation.

M. Halvorson, Sundre. Our vegetables were quite good if heavily watered. Beans especially thrived. Apple trees had beautiful blossoms, then a generous fruit crop. I spent a month peeling, coring, and freezing. Chickadees, Nuthatches etc. have been lined up for birdseed since August.



Black-capped Chickadee is one of the most common visitors to Alberta birdfeeders [photo R.Bunting]

Sheila Couture, Jasper. My observed patch of prairie crocus has always had at least 80 buds and blooms, so I was very surprised at the lack of flowering this year. On May 1, there were 6 blooms and no new buds. On May 3 Parks Canada closed the area for a prescribed burn. I went to check my

patch on May 15 and there was one poor little damaged flower; everything else was burned (editor’s note: Luckily, prairie crocus often blooms abundantly after fires, perhaps because the competing grasses are cleared away.)

D. McIntyre, Crowsnest River. April 9 hundreds of both prairie crocus and yellow bells; early buttercups past full bloom.



In early spring, prairie crocuses add welcome bursts of color to dry, grassy slopes [photo J.Novak]

Southern Alberta

M.J. Davies & Z. Kondra, Carstairs. Flowering times were later than in 2021. In May-June we had a lot of bumblebees! Lots of fritillary butterflies in June, and later lots of swallowtail butterflies.



Swallowtail butterfly lunches on apple blossom nectar [photo L.Kershaw]

L. Sudrich, Calgary. February-March was mild with very little snow. It was a strange weather year! I used the www.accuweather.com monthly report to calculate weather for the ‘week before bloom’ dates. April-May were colder and drier than average. June was rainy and cool. 10 cm of rain on

June 13-15 made everything green and everyone happy. July-Aug was very, very hot and dry.

W. Brideaux, Calgary. For the first time in my years reporting, I’m unable to state a definitive date for prairie crocus mid-bloom! Many episodes of cold weather from April 8 (first flowers) through May, resulted in intermittent blooming. Heavy June rains fueled the most abundant fleabanes, campanulas, and buttercups in the last 20 years! Otherwise, we had ‘near drought’ conditions.



Bronze copper butterfly is found across most of Alberta [photo R.Bunting]



Crab spider waits for lunch on a smooth fleabane [photo L.Kershaw]

P. Kroeker, Foothills. Nanking cherry and mock orange bushes had a fair bit of dieback. Wildflowers in pasture were abundant and beautiful.

D. Ramsay & P. Kroeker, Foothills (SW of Calgary). Both agree, they had a bumper crop of delicious saskatoons!

Acknowledgements

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Here's to another great year!

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