

Alberta Plantwatch Annual Newsletter: Spring 2009



After the snowy winter of 2008-9, spring is very welcome, and Plantwatch citizen scientists prepare to visit their chosen plants and report bloom time. We've already received over 1200 observations for 2008 from 103 observers. (It's never too late to send in your dates!) This 'pulse of the planet' information is valuable to see the effects of climate warming and to predict timing for allergies, gardening, farming and forestry. As an observer you can contribute to science while connecting with nature. Savor and enjoy spring's unfolding while increasing your observation skills.

The first step for new observers is to review the list of possible Alberta plants to observe and select one or more that are close to home, school or work and easy to check at least every 2 days. When first and mid-bloom occurs, record these dates and report either on the web, by email, or on the paper data form. Learn about the program on the Alberta website (www.plantwatch.fanweb.ca).

Don and Grace Darnell
discovering male
aspen catkins



PROGRAM NEWS

Marlene Doyle, the NatureWatch coordinator for Environment Canada, has been working with Plantwatch coordinators to update the website at www.plantwatch.ca. See this site for info on the four new species added to our list of 21 Alberta plants to observe: white birch, starflower, cloudberry and lingonberry. We have added more plant photographs to help volunteers recognize growth stages.

The Canada Plantwatch booklet has been revised to add more information and species. Next year separate booklets will be printed for each province and territory, with 2 pages per species. This winter, I donated the Alberta Plantwatch Teacher's guide to Environment Canada and helped revise it for wider use across Canada. Once translated, it will be posted to the above website in English and French, with curriculum links for territories and provinces.

The USA National Phenological Network (www.usanpn.org) is now launched. Their data will help resource managers predict wildfires and pollen production, detect and control invasive species, monitor droughts, and assess the vulnerability of various plant and animal species to climate change.

My PhD thesis, with current title "Plant phenology in response to climate and climate change in Alberta", is progressing well. I've now completed courses and my candidacy exam (yay!). Early analysis shows that the first bloom time of many Plantwatch species is closely tied to temperature. Each year the sequence of plant appearances shifts to earlier or later timing depending on the spring warmth. In years with higher spring temperatures, all of the plants appear earlier than usual.

WEATHER

Environment Canada predicts that April to June 2009 may be cooler than average for much of Alberta (http://www.weatheroffice.gc.ca/saisons/image_e.html?img=sfe1t_s). It seems our short term weather is getting more variable! In Edmonton, temperatures soared to +7°C on March 13th, after they plummeted to -42.7 °C on March 10th. This was the coldest March temperature ever recorded at Edmonton International Airport. Edmonton had the 2nd coldest March in 35 years, with the deepest snow in 25 years at month's end.

You can find seasonal trends in temperature and precipitation across Canada at http://www.msc-smc.ec.gc.ca/ccrm/bulletin/regional_e.cfm. The winter of 2007-8 in Alberta had average temperatures, but 10-30% less precipitation than normal. Spring (March to May) also had average temperatures for

much of Alberta. The northeast corner of the province was dry, but much of the middle and south had up to 30% more precipitation than usual! Then the summer was dry for most of the province.

OBSERVERS' COMMENTS ON THE 2008 SEASON, FROM SOUTH TO NORTH

South of Calgary: large accumulations of snow until early to mid-May made flowering later than usual at many locations and all elevations. (D. Sheppard, Beaver Mines). The bear grass bloom was spectacular in Waterton N.P. (B. Johnston).

After heavy snow and rain in the 3rd week of April, there were crocuses all over the hills. Sharp-tailed grouse are returning due to great grass cover. Frogs had a wonderful spring. Their songs sent us to sleep every night for 2 months. (E. Gillespie of Finnegan)

Kananaskis: Crocuses were late, as April was colder than normal and there was 87 cm of snow on May 7-8th plus 167 mm of rain May 20-26th. Incredible twinflowers! (J. Buchanan- Mappin)



Calgary: Blooming was 10 days behind an average year (D. Choy reported 63 observations from 3 areas!). Golden bean in Fish Creek area started to bloom May 4th but then weather turned very cold, then very hot! (D. Ramsay). Early blue violets and golden bean were abundant in NW Calgary (W. Brideaux).

Sundre: had a cool wet spring and early summer. Lilac blooms lasted longer than usual. Wild and tame roses had many dead branches (M. Halvorson). With an extremely snowy spring, grass didn't green until May 18th (S. Kinzel, Blue Hill Forest Tower).

Caroline: Poplars started to show green May 15, but by May 26 many were leafless because of 'bugs'. By June 15 there was a tinge of new green, but in mid August, many leaves were eaten again. There were few strawberries, and too much snow to see the saskatoon blooms (K. Edwards).

Bowden: Dandelion flowers were very small, but early blue violets bloomed profusely. The wild berry crop (saskatoons, chokecherries, and gooseberries) was poor. (S. Paton).

Innisfail: Saskatoon, raspberry and black currant crops were poor (E. Scott). The only trees with fruit were sea buckthorn and elder (J. Henderson).

Markerville: a 'funny' summer, June was cool and wet, July was hot and dry. Prairie crocus, strawberry, bedstraw, and yarrow were scarce (P. and C. Anderson).

Clive: a 'trying' spring, with endless showers and wind, and slow germination of gardens and crops. Everything was about 2 weeks behind; fruit blossoms lost to heavy showers and wind (B. Walters).

Alix: lots of rain and one dry spell. Chokecherries were plentiful but small (S. Bargholz).

Wainwright: very slow start. 35-45 cm wet snow on April 20th slowed early flowering by at least 10-14 days (P. Porter). Fantastic growth on trees, shrubs, forest undergrowth in July. Lots of Saskatoon blossoms and fruit after several years with no berries (C. Snyder, Clear Lake).

Elk Point: a funny year, with long periods of cold and damp. Chokecherries, blueberries and lingonberries were wonderful, but wild saskatoons and pincherries were sparse, probably because it was cold and windy when they were blooming (C. Lumley).

Ranfurly: The last spring frost was May 10, and it was still very dry at the end September.

C. Mock also noted "sprayed 3 times by airplane, drift came over yard. Three dead swallows along the fence line next to the spray zone. The crop sprayed was canola and they used a fungicide, spraying three times in two weeks. Blossoms on some of the fruit trees dried up. Maybe Alberta Healthcare should be looking at all the poison going into our food chain!"

Camrose: Usually roses bloom around June 1, but in 2008 they began June 14. Much more goldenrod and less yarrow than usual. A great year for gardening, lots of tame raspberries, green/yellow beans and sunflowers, few cutworms; ants were everywhere: gardens, yards, even pavement! (L. Woods)

Wetaskiwin: had a very dry season, with brown underbrush (P. Jevne).

Beaumont area: Spring was later than previous years. The country is very dry and ants are everywhere. Many deer and moose visited the yard during the day to drink at the slough (B. Bolton).

wild moose enjoys
farmyard pool,
sent by Jen Kershaw



Sherwood Park: had very few wild saskatoons, but the tame ones yielded well (L. McDonell).

Edmonton: The weather was often extreme. There were leaf rollers (tiny caterpillars) on the aspen, and the wolf willows produced lots of seed (D. Clandfield).

Devon: Prairie crocus bloomed at 60 growing degree days, well below the average of 90-100. Twinflowers spectacular again (B. Janz).

Drayton Valley: had an incredible year for wildflowers, especially wood lilies (F. McKay). At the Pass Creek Fire tower, NW of Whitecourt, deciduous leafout happened in just 2.5 days, due to high temps May 17-19! May was warm and dry, with virtually no mosquitoes or blackflies (M. Lousier).

Jasper : Aspen trees were late leafing out. No ripe buffaloberries until Aug 1st; at higher elevation not until after Labour Day (likely good for wildlife that was withdrawing from valley bottoms). There was a great crop of chokecherries and no major insect infestations (E. Slatter).

Wildwood: only 4 mm of precipitation from September 1st to mid November. If it were not for beaver, the Lobstick River would have been dry. The boreal forest was like tinder (D. Schindler).

Morinville: No bluebirds at all around this season (L. Horstman).

Saugudo: Saskatoons: lots of flowers, no frost, no bees and no berries (E. Liss).



Linda Kershaw

Athabasca: Snow on April 19-21 delayed aspen development. All of the pollen sacs on the male trees then shriveled with no pollen shed, and later there was no aspen seed on female trees (G. Griffiths).

Lac LaBiche: There were very few bees and other pollinating insects this year. Most plants bloomed and went to seed very quickly due to the hot, dry weather (R. Creelman).

Wembley: The poplars didn't flower and in June the trees were defoliated by loopers. It was very dry in July to mid-August. Lots of wolf willow blooms (H. Hrychiw). Spring and summer were so dry that many flowers bloomed very quickly. Saskatoons were abundant but dried on the bushes. (E. Craig).

Ft. McMurray: Some aspen trees did not bloom this year, due to past tent caterpillar damage (R. Grey).

Manning: May to June 16 was dry and warm, then it was rainy and cool to July 16. Small aspen and willows grew well. Saskatoons and chokecherries had sparse blossoms. Wild strawberries thrived when the rain came (R. Cowie).

Fort Vermilion: Spring was wet, then dry and cool; moisture from the fall of 2007 kept the garden growing. July had many +30C days, soil dried and cracked. Tame raspberries, choke and pin cherries

produced good fruit. There were no grasshoppers, lots of mosquitoes and dragonflies and quite a few wasps/ hornets. The few bumble bees disappeared in late June (W. Askin).

GENERAL OBSERVATIONS

Saskatoon fruit: The 2008 'crop' of saskatoons was poor across the province. Only observers in Wainwright and Lloydminster reported good saskatoon berries on wild bushes.

Insects

Several observers reported that bee numbers were down in 2008. In Clive, as last year, there were not many honeybees, but huge bumblebees were plentiful (B. Walters). Sherwood Park: had lots of bees in late May and June, but very few after this, despite lots of flowers (L. McDonell). In Bon Accord during the last 2 weeks of May there were very few bees in the apple trees. In past years, the hum of bees among the blossoms could be heard from a distance - not this year (B. Collier).

In Bon Accord in early July, strange 'cones' appeared on young white spruce (B. Collier). These are galls are caused by an insect called the 'cooley spruce gall adelgid'. They were also common in Edmonton (editor's note).

Many observers noted an abundance of ants and early blue violets this year. Since ants carry and disperse violet seeds, these events may be connected! These helpful insects chew off the tasty 'ant snack' on each seed and discard the rest, often in the sandy soil that both ants and violets prefer. Thanks to the hole chewed through the hard seed coat, water enters and plant germination begins.

Frogs were abundant in Finnegan (E. Gillespie) but not in Sundre despite good moisture (M. Halvorson). At the JJ Collett Natural Area near Lacombe, frogs were calling at the slough on April 12th (J Meeres).

Join us for Plantwatching in 2009! In the first year of Alberta Plantwatch (1987), observer Alberta McKinstry of Oyen said "I do think we gain immeasurably by participation in a survey of this kind. There is so much beauty in nature - that passes us by if we never learn to observe it". Timing is everything, and your observations will make a big difference!



Early blue
violets, by
Linda
Kershaw

Thanks to the following! Linda Kershaw for photos and editing help, Dr. Andreas Hamann for thesis guidance and financial support, the Federation of Alberta Naturalists for webpage support, Environment Canada for NatureWatch coordination, and all of our Alberta Plantwatch observers for participation!

Elisabeth Beaubien
Alberta Plantwatch Coordinator
Department of Renewable Resources
751 General Services
University of Alberta
Edmonton, AB, Canada
T6G 2H1



**RENEWABLE
RESOURCES**



**Federation of
Alberta Naturalists**



**Environment
Canada**

**Environnement
Canada**