2024 May Plant Count Report

Quinn and Edith Murray, the youngest participants of the 2024 Kleskun Hills MPC, were very excited to search for flowers! Photo: Trevor Floreani.

Background

The annual Alberta May Plant Count (MPC) takes place from 25-31 May to record the flowering stage (**phenology**) of vascular plants at numerous locations across the province. This citizen science initiative is a joint effort between Nature Alberta (NA) and the Alberta Native Plant Council (ANPC), with a dedicated committee recently established within the latter organization. This event has observers conduct their own counts or join up with an established counting site. Observers are instructed to record plants that are in bloom using reproductive phenology codes borrowed from Dierschke (1972) between stages 3 to 9.

Reproductive code descriptions from Dierschke (MPC focuses on flowering stages just as blooming starts to when it fades)		
Phenology Code	**Herb/Deciduous Tree or Shrub**	**Graminoids**
0	Without blossom buds	Without recognizable inflorescence
1	Blossom buds recognizable	Inflorescence recognizable, closed
2	Blossom buds strongly swollen	Inflorescence partly visible
3	Shortly before flowering	Inflorescence fully visible, not unfolded
4	Beginning bloom	Inflorescence unfolded
5	Up to 25% in blossom	First blooms pollinizing
6	Up to 50% in blossom	Up to 50% pollinized
7	Full bloom	Full bloom
8	Fading	Fading
9	Completely faded	Completely faded
10	Bearing green fruit	Bearing fruit
11	Bearing ripe fruit	Fruit or seed dispersal
12	Bearing overripe fruit	
13	Fruit or seed dispersal	

Volunteers

Without people, this event simply would not happen. First and foremost, the MPC acknowledges all the participants who sent submissions, either by iNaturalist or by old-fashioned spreadsheets. A full list of participants can be found in the back of this report, so take a gander and see if you can spot yourself or a friend!

The number crunchers deserve a shout for making sure the 2024 data made its way into a compiled document and properly housed in iNaturalist: **Kimberley Gould**, **Fiona Hossack**, **LeeAnne Johnston**, and **Trevor Floreani**.

A big thank you to **Kristyn Mayner**, Volunteer Coordinator with the ANPC, who was instrumental in allowing the MPC to have its own committee with the organization. While our core volunteer numbers are low, the future is looking optimistic.

A special thank you to **Rick Murray**, who has organized several counts at the Boreal Wetland Centre and Kleskun Hills, among other spots, near Grande Prairie. He will be stepping back in his role due to other commitments, but we wanted to acknowledge his willingness to engage in the MPC, even though he is more of a *soils* guy (we won't hold that against him).

We also thank the continued guidance from the likes of **Patsy Cotterill**, **Elisabeth Beaubien**, **Eileen Ford**, and **Brenda Leptizki**, who have helped offer their thoughts in the

past year (and before that) and stay very dedicated to the count. I cannot list everyone, so know that if you have been faithfully conducting counts over the years you are viewed as an all-star, or perhaps an all-*Stellaria*, if you will.

The 2024 count saw 64 total participants (2023 had 68), with 38 of those using the iNaturalist platform (up from 18 iNaturalist users in 2023). If you participated in iNaturalist and would like your *real* name known to the public, just let us know and we can acknowledge you properly in the future!

2024 Numbers

We always like to start things off with a kindly disclaimer: these are citizen science data. Not that this means you should take this as worthless, but bear in mind that we have a wide variety of user experiences taking part, from complete beginner to professional plant taxonomist. If you wish to take a deep-dive into any of the data, please reach out and we will be happy to assist. You are also encouraged to visit the iNaturalist project where you can filter data and view count sites spatially: https://www.inaturalist.org/projects/alberta-may-plant-count. Another thing to note is that while the official MPC is from 25-31 May, data were also counted from May 24 and June 1, 2025 as some sites were recorded outside the technical last calendar week of May due to logistical reasons.

Total Participants	iNaturalist Participants	Total Observations	Total Species
64	38	1041*	301*

*values subject to change upon further review; data pulled from March 2025.

Penstemon nitidus (Wax-leaf beardtongue) snapped at Glenbow Ranch PP. Photo: Brayden Hutchings (bhutchings).

Only data that were identified to species level and had a phenology code were counted. Bryophytes and lichens were also removed from the data set. Further refinement of data, for example if an observation was identified to the genus level, may be added to the dataset upon research-grade status being met at a later date. Data should be downloaded and checked regularly if one wants the most up to date numbers. The MPC makes no guarantees that a species identification is correct.

There were 21 species that had 10 observations or more, with the top species ranked in the table below:

Top Observed Species				Phenology Score Stats			
Rank	Scientific Name	Common Name	Observat-ions	Min	Max	Mode	Mean
1	*Fragaria virginiana*	Wild strawberry	26	3	7	6	5.65
2	*Viola adunca*	Early blue violet	24	5	8	7	6.80
3	*Amelanchier alnifolia*	Saskatoon	23	4	8	7	6.56
	Maianthemum stellatum	Star-flowered false Solomon's seal	23	3	7	6	5.13
4	*Arctostaphylos uva-ursi*	Common bearberry	18	4	9	7	6.00
	Comandra umbellatum	Bastard toadflax	18	3	6	3	3.94
5	*Geum triflorum*	Three-flowered avens	16	4	7	7	6.12
6	*Taraxacum officinale*	Common dandelion	15	7	6	7	6.80
	Thermopsis rhombifolia	Golden bean	15	7	6	7	6.80
7	*Viola canadensis*	Canada violet	14	3	7	7	5.78
8	*Cerastium arvense*	Mouse-ear chickweed	13	4	7	7	6.15
	Ribes oxyacanthoides	Northern gooseberry	13	3	9	6	5.84
9	*Prosartes trachycarpa*	Rough-fruited fairybells	12	4	7	7	6.33
	Prunus virginiana	Chokecherry	12	3	7	3	4.33
	Rubus pubescens	Dwarf raspberry (dewberry)	12	3	7	4	4.08
10	*Hedysarum boreale*	Boreal sweet-vetch	11	3	7	6	5.36

Fragaria virginiana (wild strawberry) remains the king of observation counts, which was similar to the previous year. The 2023 MPC featured a few of the same species in the top 10 ranked spots, however there are some marked differences. Notably, *Cornus sericea* (red osier dogwood), *Aralia nudicaulis* (wild sarsaparilla), *Rosa acicularis* (prickly rose), *Mertensia paniculata* (tall lungwort), and *Lonicera dioica* (twining honeysuckle) were in the 2023 top 10, and not in 2024. The top species observed in 2024 are more like the 2022 MPC, which also had *Ribes oxyacanthoides* (northern gooseberry), *Viola canadensis*

(Canada violet), and *Prosartes trachycarpa* (rough-fruited fairybells) listed. Overall the 2024 MPC most-observed species appears to be mostly typical with the common early-blooming plants noticed the most, which is not unexpected.

This provincial overview of the top observed species provides a snapshot of the data and some very broad trends – showing which species tend to be in an earlier flowering stage and which ones are later. The mean or average value is somewhat difficult to interpret and may not be a true reflection of the general population, given the nature of the categorical data, and so the modal phenology value is also included to show what value was most recorded. These data would be interesting to breakdown by natural ecoregion, but this was not explored due to time and resource constraints.

Left: *Erigeron compositus* (cut-leaf fleabane) observed in Red Rock Canyon, Waterton Lakes NP on May 31; photo: meandmybikes. Right: *E. compositus* observed at Kleskun Hill, east of Grande Prairie on May 26; photo: Trevor Floreani (trevorf).

2024 Review & Highlights

In true Alberta fashion, the 2024 MPC was quite different than the previous years. Welcome to the invariable land of variability! Whereas 2023 saw us wrapping up one of the most extreme fire season starts in recent memory, with dry conditions prevailing, 2024 was a year of “late spring”, as our notetakers have indicated. Anecdotal statements that we

received made frequent comments about lower temperatures and less sun in the weeks leading up to the count, making for fewer flower observations in some cases.

Ribes triste (northern redcurrant) - prolific flowering in 2024 at the Warrensville ACA Conservation site; photo: Trevor Floreani (trevorf).

Patsy Cotterill, while out at the Wagner fen noted that there was plenty of evidence of the lateness of spring, with various sedges that are normally past flowering stage (completely faded) being in flower. *Caltha palustris* (marsh marigold) was also noted to be in the range of phenology score of 6-7, rather than the typical 7-8.

Brenda Lepitzki reported an estimated 2-3 week delay in spring flower development owing to the cool spring weather in the Banff area. Greater variations in flowering stage were noticed as open sunny areas were noticeably further along. Similar setbacks to flowering in the foothills and montane were noted by Ashely Hillman *et al*. at the Beaver Boardwalk in Hinton, as well as by Elizabeth Williams on the Merlin View Trail near Bragg Creek.

Left: *Carex alascana* (northern bog sedge) in full bloom during the Clyde Fen count; photo: Callum McKenzie (papillionaceous). Right: *Oryzopsis asperifolia* (white-grained mountain-ricegrass) starting to bloom during the Clyde Fen count; photo: Kallum McDonald (kallummcdonald).

Pat and Graeme Greenlee noted that the Lethbridge area also had a cool, wet spring. Their usual count at Six Mile Coulee had more mustard species than usual, with plentiful yellow flowers that are normally not so bountiful.

Thermopsis rhombifolia (goden bean) flowering in Confluence Park in Calgary; photo: poisha.

Similar cooler conditions were also reported by Eileen Ford *et al*. in their counts in central Alberta. The counts from the Peace Country in the northwest were also cooler and a bit delayed. Some of the wetland soils at the Boreal Wetland Centre south of Grande Prairie were still solidly frozen a few centimetres down.

A more in-depth look into weather data would surely be interesting to combine with the MPC data. One day we will get there, so if you think you might want to take a stab at it, please let us know so you can join our data analysis team.

Looking Ahead

For those that want to totally nerd out, you are welcome to pour over the data from any time period in the MPC as found on iNaturalist. Feel free to filter by observations that still require ID and try your hand at helping to make things “research grade”. We also have some older data that is housed electronically, but is not available publicly yet. One of our legacy projects is to have this fully sorted and compiled for anyone to easily nab it.

iNaturalist has built-in phenology annotations available for all observations and can be added when using the desktop version of the website. Any and all users are welcome to add these annotations, which relate to flowers, fruit, and leaf stage to MPC observations as well as any observation in Alberta at any time of year. While these annotations are much more broad than the MPC ones, they are still useful for looking at large-scale trends for leaf-out, senescence, flowering, and fruit-set dates as they vary across time and space.

Knowing that there are built-in, easy to use phenology annotations in iNaturalist may change the direction of the MPC in the future. The MPC may find itself splitting into a couple tiers: one dedicated to hardcore reproductive phenology that records the Dierschke codes at select sites by select folks (*i.e.* expert level) and one for any user of any level of experience that is just a focus on capturing plants in flower. This could also mean that the MPC itself is just focused on ensuring select benchmark sites are collected each year, whereas generic "flowering" data could be extended to the entire growing season – necessitating a general plant phenology project that does not just focus on plants in bloom, but may also focus on leaf and fruit stages. If you have any interest in being a part on deliberating and discussing the direction of phenology projects in AB, please contact us and we will most assuredly save you a seat.

Calypso bulbosa var. *americana* (eastern fairy-slipper) observed near the foot of Old Goat Mountain in Kananaskis; photo: Blake Weis (blakeweis).

2024 MPC Participants

First Name	Last Name	iNaturalist username
Elisabeth	Beaubien	
Richard	Bruins	methirsty
Maureen	Carey	
Patsy	Cotterill	
Monica	Dahl	mldahl
Jessica	Dubiel	jessicadubiel
Eileen	Ford	
Trevor	Floreani	trevorf
Cohan	Fulford	cohanf
Andrew	Godslave	
Delilah	Gould	
Kimberly	Gould	
Taylor	Glover	Taylor
Graeme	Greenlee	
Pat	Greenlee	
Sherry	H.	sheschuk
Carmen	Hamel	carmenh99
Jessica	Hayes	jessica_hayes/jessicahayes
Margot	Hervieaux	
Ashley	Hillman	
Jennifer	Hogan	jennnipurr
Brayden	Hutchings	bhutchings
Ryan	James	rynox
Katrine	Konopnicki	katrinekonopnicki
Annette	Le Faive	ammlmt
Brenda	Lepitzki	bbrambler
Dwayne	Lepitzki	
Beth	MacCallum	
Kallum	McDonald	kallummcdonald
Diane	McIvor	
Mike	McIvor	
Callum	McKenzie	papillionaceous
Edith	Murray	
Quinn	Murray	
Rick	Murray	
Lorraine	Nordstrom	
Don	Nordstrom	
Sue	Neuman	susanneuman
Lysandra	Pyle	
Michael	Rudy	
Georgi	Shinnour	
Melissa	Smith	melissa_smith
Dustin	Snider	dustin777
Joanne	Susut	
Jason	Tillapaugh	jt_trekking
Matt	Wallace	wowokayyes
Blake	Weis	blakeweis
Elizabeth	Williams	
Twyla	Yacyshyn	twyla_yacyshyn
Margie	unknown	
unknown	unknown	petriejr
unknown	unknown	bohmer34
unknown	unknown	meandmybikes
unknown	unknown	wildflower21
unknown	unknown	gracekwong
unknown	unknown	rnrHJ
unknown	unknown	ktnaturemacros
unknown	unknown	tania03
unknown	unknown	mlynds
unknown	unknown	poisha
unknown	unknown	tstriker
unknown	unknown	wlove673
unknown	unknown	defeater420
unknown	unknown	shannonyac

THANK YOU FOR PARTICIPATING!