Appendix S1

Growth rings show constrained evidence for ungulates' potential to suppress shrubs across the Arctic

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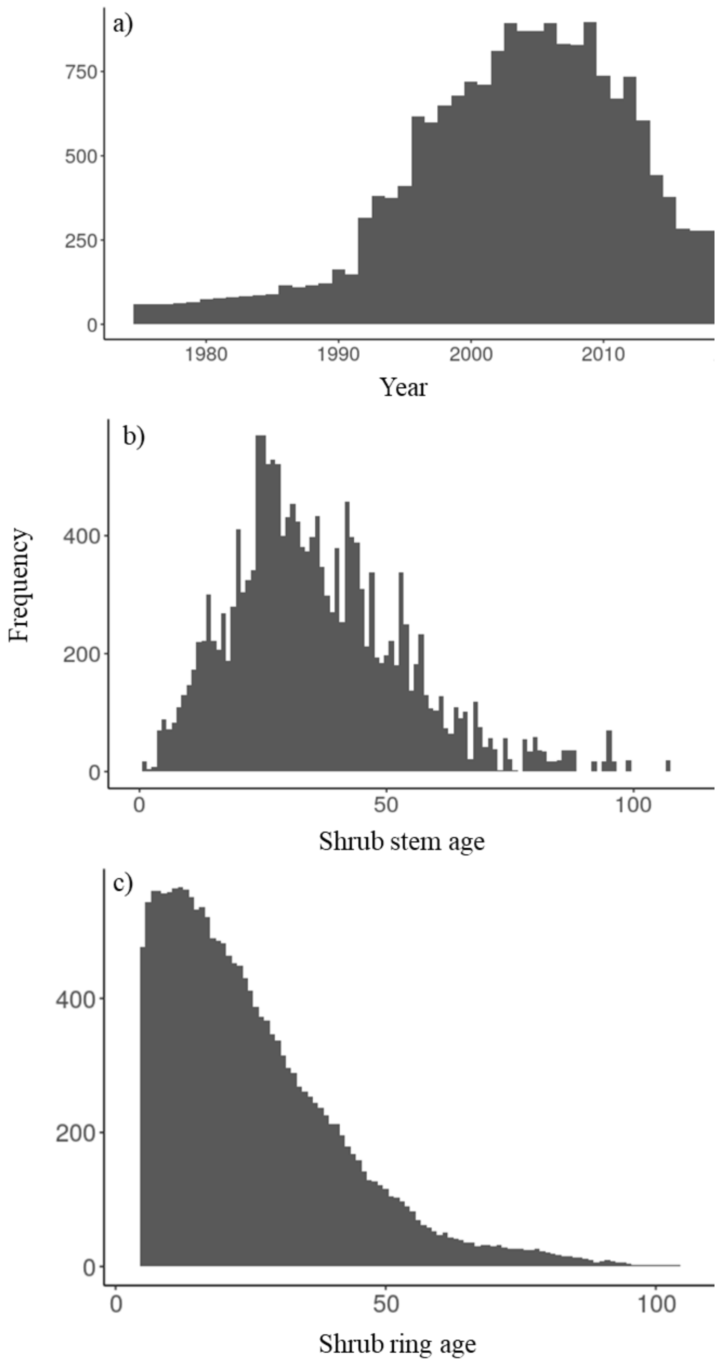
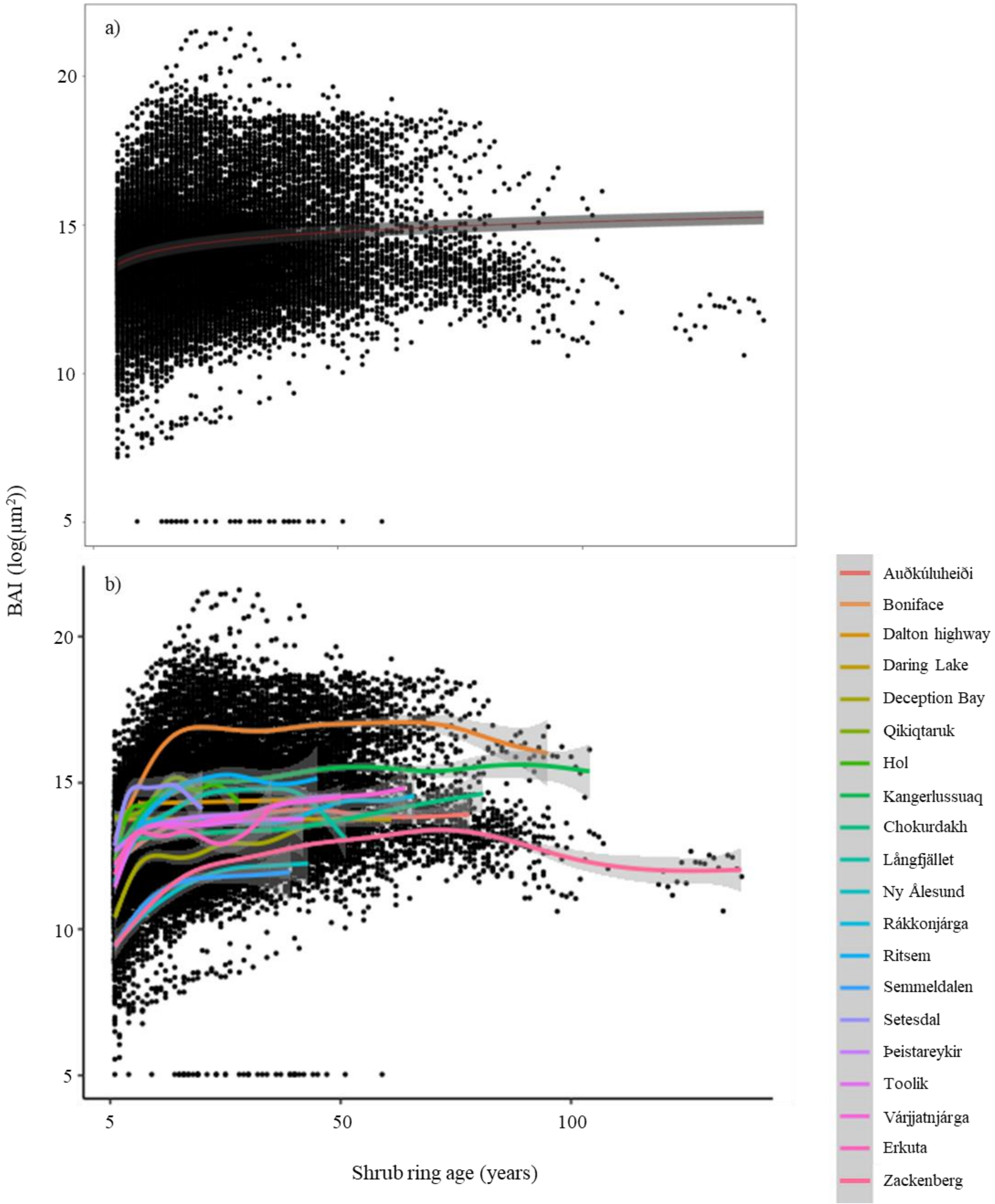
Supplementary Methods 1: Precipitation data for Dalton Highway and Svalbard

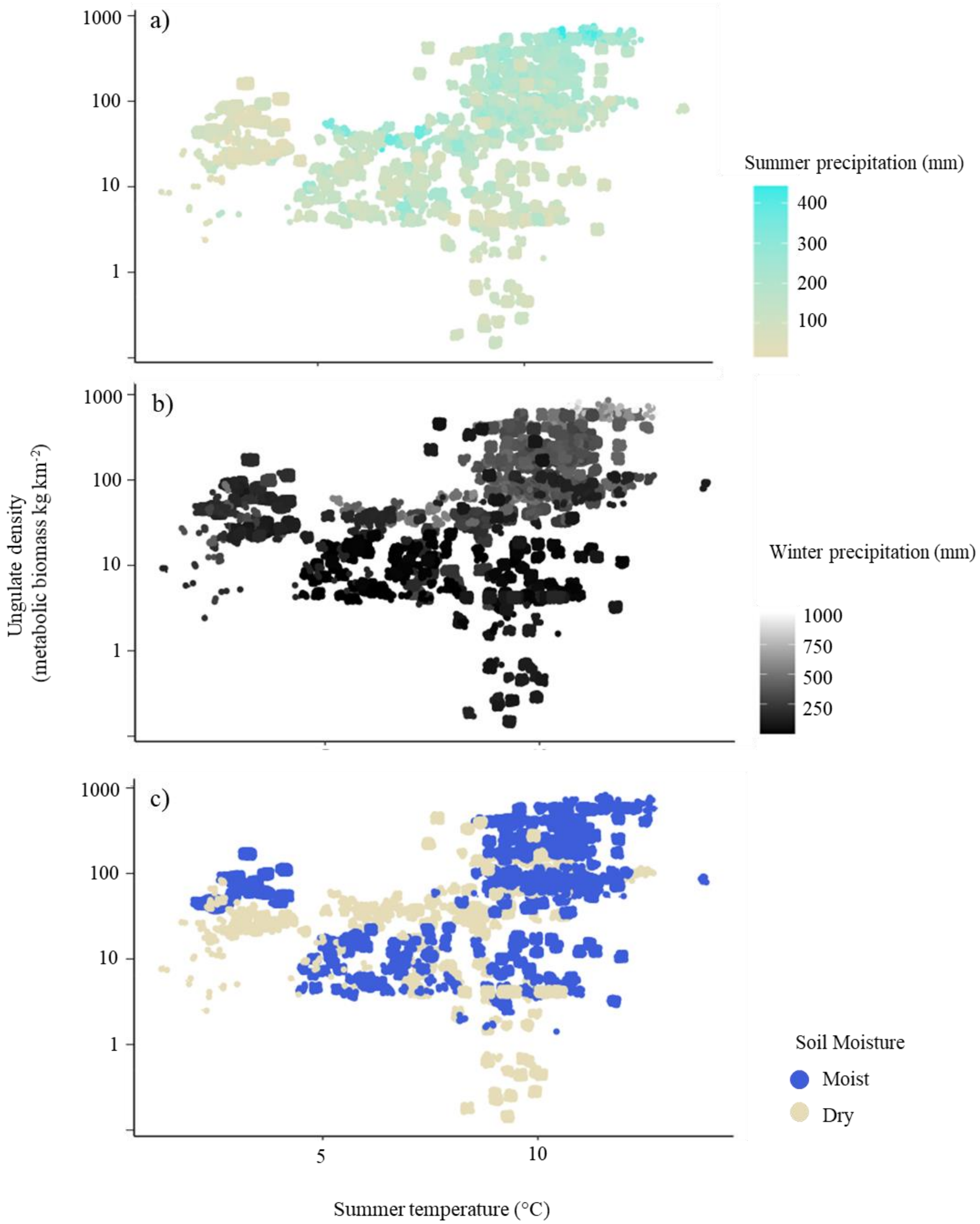
Monthly precipitation data for Dalton highway sampling locations was obtained from the Scenarios Network for Alaska & Arctic Planning group (SNAP, 2019). This data is downscaled from the global Climate Research Unit time series v. 4.0 (Harris et al., 2014; Walsh et al., 2018) to spatial resolution of 1 km^2, and spans the time period from 1901 to 2015. Daily precipitation data for Semmeldalen and Ny-Ålesund (Svalbard) were obtained from the eKlima service of the Norwegian Meteorological Institute (Meteorologisk institute, MET). These are observational data from the nearest weather stations at Svalbard Lufthavn and Ny-Ålesund, located 28 and 6 km from the shrub sampling sites, respectively.



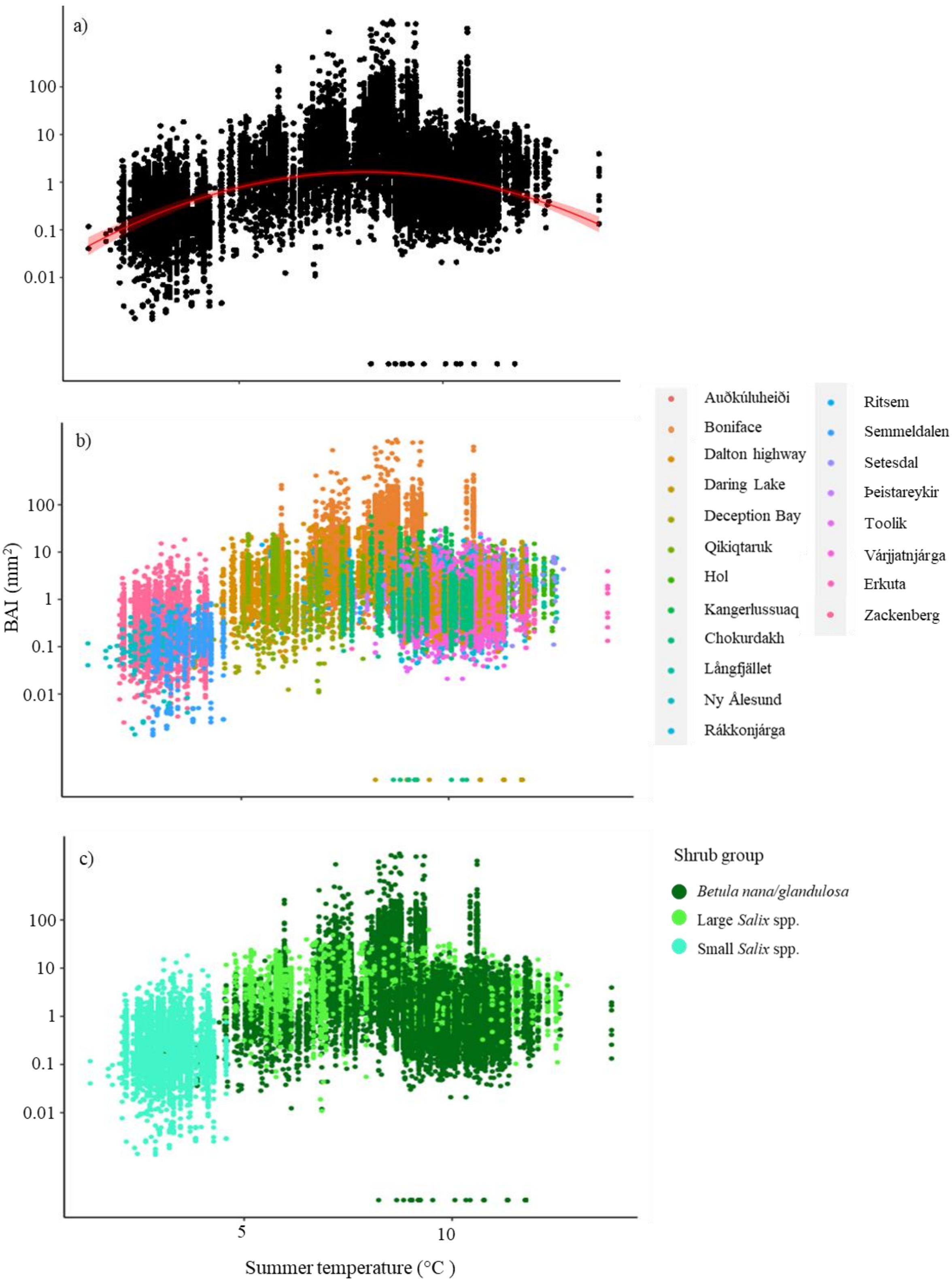
Supplementary Figure 1. Distribution of data in the analysis looking into the effects observed ungulate density, for each year (a), shrub stem age (b), and shrub ring age (c).



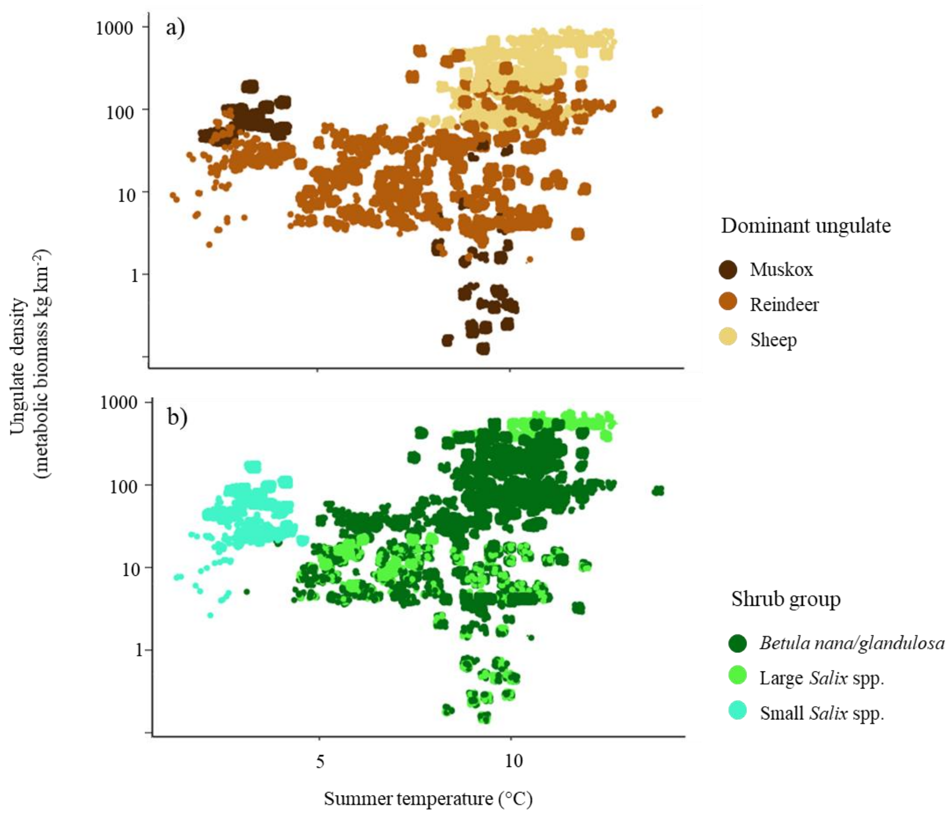
Supplementary Figure 2. Remaining age pattern in shrub basal area increment (BAI) after removing the first 5 years of growth as predicted from the model ±SE (a), and for each site as smoothed conditional means produced by the geom_smooth-function of ggplot2-package with gam-method (Wickham, 2011).



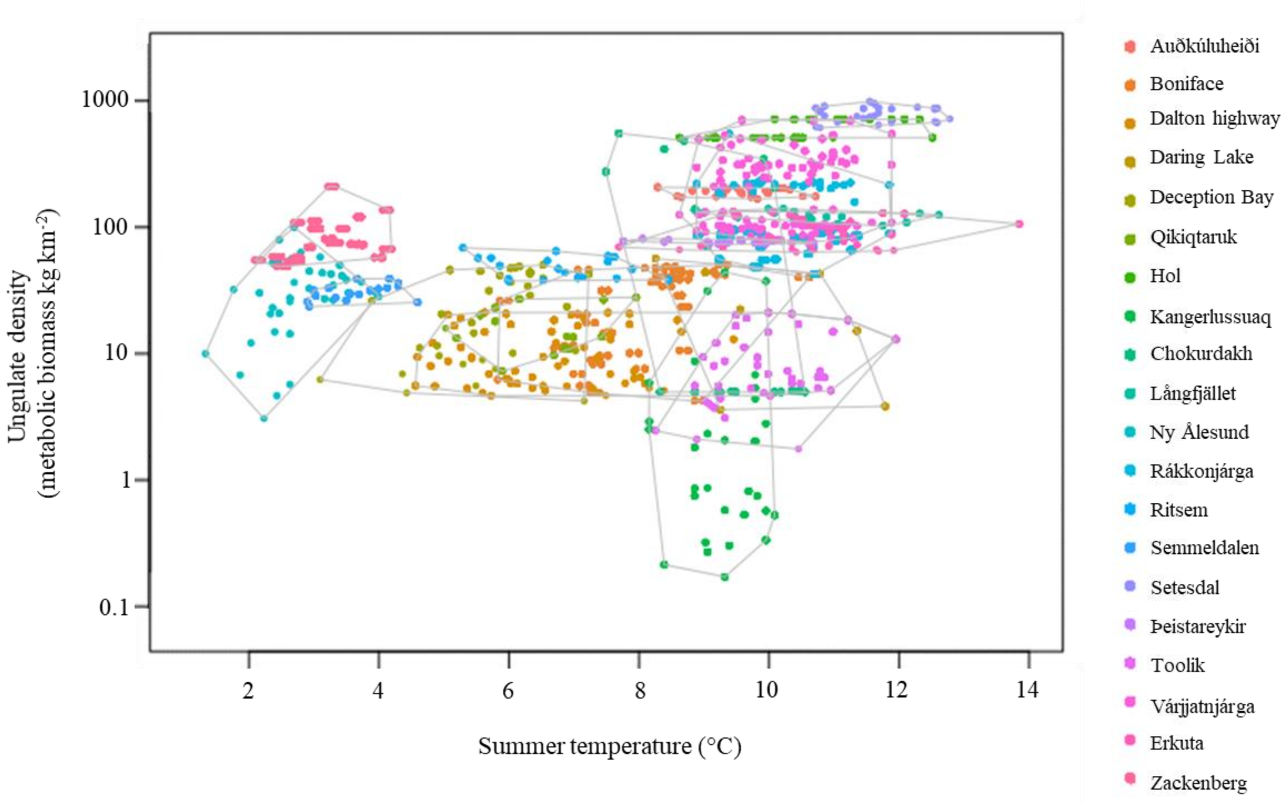
Supplementary Figure 3. Shrub ring measurement points on the annual ungulate metabolic biomass density and summer (June-August) temperature plane, coloured by summer (June-August) precipitation (a), winter (October-April) precipitation (b), and soil moisture class (c). This presentation enables comparison with Fig. 2 to see the connections between all studied variables. The points have been jittered for better visibility (0.1 units on both axes).



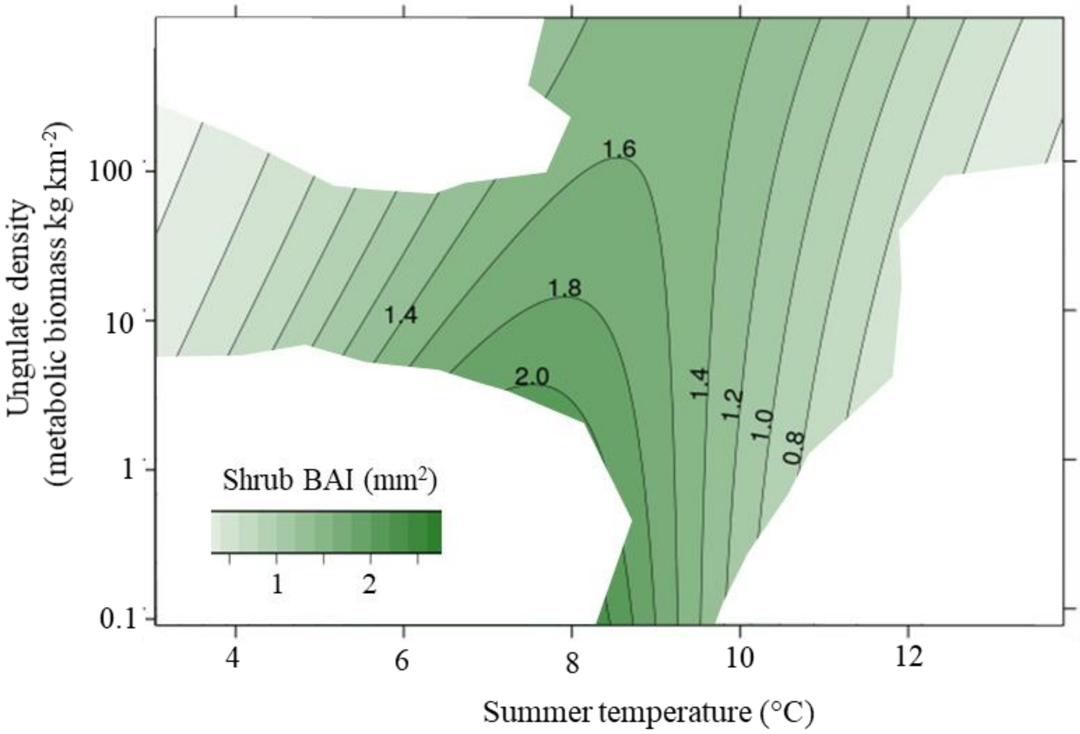
Supplementary Figure 4. Shrub basal area increment (BAI) as a response to summer temperature (June-August) at average ungulate densities (a), with points coloured for sites (b) and for the functional group of the shrubs (c). The prediction line (±SE) in panel a is based on the model prediction under average ungulate densities across the data. Note that as we detected an interaction of summer temperature and ungulate density (Fig. 2, Table 1), the summer temperature effect presented here should not be interpreted separately from the ungulate density effect.



Supplementary Figure 5. Shrub ring measurement points on the annual ungulate metabolic biomass density and summer (June-August) temperature plane, coloured by dominant ungulate species (a), and functional type of the shrub (b). This presentation enables comparison with Fig. 2 to visualise connections between all studied variables. The points have been jittered for better visibility (0.1 units on both axes).



Supplementary Figure 6. Observation points in the annual ungulate metabolic biomass density and summer temperature (June-August) plane, divided by convex hulls for each site.



Supplementary Figure 7. Predicted *Betula nana*/*glandulosa* basal area increment (BAI) shown as green colour at different ungulate densities and summer (June-August) temperatures. The darker the green colour, the higher the BAI. White sections are contexts we did not have data from, i.e. combinations of ungulate density and summer temperature values that did not exist in our data. The underlying model was constructed similar to what is described for the analysis on whole data in the Methods section. When temperature increases from 3 to ~8°C, BAI increases, but when temperatures go above ~8°C, BAI starts decreasing. Ungulate density affects growth negatively strongest at ~8°C (isoclines bend more horizontal), but summer temperature becomes more important towards colder and warmer ends of the summer temperature gradient (isoclines more vertical). This pattern is close to prediction for whole dataset (Fig. 2).

Table S1. Site-genus specific shrub metadata, ordered along longitude. We included data from sites where both shrub growth and ungulate abundance data were available, irrespective of their study design. However, we did not include shrub individuals subjected to any experimental treatments except ungulate exclusion. The majority of data originated from randomly sampled shrubs with chronologies established at the stem base; however, a portion of the data came from selectively chosen large individuals (stratified sampling involving only one part of the population) and chronologies that were measured at the root collar. Selection criteria refers to randomly sampled shrub individuals (R), selective sampling targeting large shrub individuals (L), and selective sampling targeting large, undamaged shrub individuals (LU). The chronologies that were long enough were cross-dated to other shrub individuals at the same site (I), shorter ones only within each stem section (S). In most cases, one cross-section with four measured radii was sampled for each shrub, and these four radii measurements were averaged for each shrub. If multiple sections were acquired from the same shrub individual, measurements were first averaged at the individual shrub level to acquire one chronology for each shrub. Shrub species canopy heights are based on (Myers-Smith et al., 2015). Observations refers to number of shrub rings per site.

Site	**Shrub species (max canopy height cm)**	**Data contributors**	**Chronology period**	**Reference**	**Mean stem age**	**Selection criteria**	**Cross-dating**	**Part of the shrub sampled**	**Exclosures**	**Dominant ungulate**	**Observations**	**Individuals**	**Number of subsites**	**Longitude**	**Latitude**
Toolik	*Betula nana* (100)	Peter Frank, Ruby An, Jeffrey Welker, Agata Buchwal, Laura Gough	1975-2018	Unpublished	31	R	I	Base	yes	Caribou	1030	39	5	-149.608	68.626
Toolik	*Salix pulchra* (450)	Peter Frank, Ruby An, Laura Gough	1991-2018	Unpublished	27	R	I	Base	yes	Caribou	188	12	3	-149.612	68.624
Dalton highway	*Betula nana* (100)	Peter Frank	1975-2018	Unpublished	36	R	S	Base	no	Caribou	1051	38	20	-149.439	68.313
Dalton highway	*Salix glauca* (600), *Salix pulchra* (450)	Peter Frank	1975-2018	Unpublished	28	R	S	Base	no	Caribou	868	40	20	-149.448	68.323
Qikiqtaruk	*Salix richardsonii (650), Salix pulchra* (450), *Salix glauca* (600)	Isla Myers-Smith, Sandra Angers-Blondin	1986-2015	(Myers-Smith et al., 2011)	7	R	I	Root collar	no	Caribou	1347	66	3	-138.905	68.575
Daring Lake	*Betula glandulosa* (300)	Paul Grogan, Rhett Andruko	1952-2016	Unpublished	35	L	I	Base	no	Caribou	387	55	5	-111.583	64.867
Boniface river	*Betula glandulosa* (300)	Pascale Ropars, Stéphane Boudreau	1915-2009	(Ropars, 2015)	43	L	S	Root collar	no	Caribou	3426	115	9	-76.033	57.982
Deception Bay	*Betula glandulosa* (300)	Jean-Pierre Tremblay, Clara Morrissette-Boileau	1966-2013	(Morrissette-Boileau et al., 2018; Morrissette-Boileau et al., 2018)	11	R	I	Base	no	Caribou	364	202	5	-74.692	62.140
Kangerlussuaq	*Betula nana* (100)	Eric Post, Paddy Sullivan	1903-2013	(Gamm et al., 2018)	26	L	I	Base	no	Muskox	2001	42	5	-50.318	67.112

Kangerlussuaq	*Salix glauca* (600),	Eric Post, Paddy Sullivan	1935-2013	(Gamm et al., 2018)	19	L	I	Base	no	Muskox	960	32	5	-50.315	67.100
Zackenberg	*Salix arctica* (25)	Signe Normand, Sigrid Nielsen	1996-2014	Unpublished	46	R	I	Root collar	no	Muskox	3111	176	6	-20.559	74.510
Audkuluheidi	*Betula nana* (100)	Isabel C. Barrio, Katariina E. M. Vuorinen	1941-2018	(Mulloy et al., 2019)	31	R	S	Base	yes	Sheep	582	12	12	-19.674	65.133
Theistareykir	*Betula nana* (100)	Isabel C. Barrio, Katariina E. M. Vuorinen	1969-2018	(Mulloy et al., 2019)	39	R	S	Base	yes	Sheep	446	12	12	-17.087	65.901
Setesdal	*Salix glauca* (600),	Katariina E. M. Vuorinen, Gunnar Austrheim	2000-2018	Unpublished	15	R	S	Base	no	Sheep	166	12	4	7.218	59.026
Hol	*Salix glauca* (600), *Salix lapponum* (120), *Salix lanata* (700)	James D. M. Speed, Gunnar Austrheim	1979-2010	(Speed et al., 2013)	16	R	S	Base	yes	Sheep	2062	159	9	7.936	60.698
Långfjället	*Betula nana* (100)	Fredrik Dalerum, Katariina E. M. Vuorinen	1966-2016	Unpublished	36	R	S	Base	yes	Reindeer	547	16	3	12.272	62.115
Ny Ålesund	*Salix polaris* (9)	Mathilde Le Moullec, Lisa Sandal, Brage B. Hansen	1972-2014	(Le Moullec et al., 2020)	15	LU	I	Base	no	Reindeer	163	5	1	11.693	78.959
Semmeldalen	*Salix polaris* (9)	Mathilde Le Moullec, Lisa Sandal, Brage B. Hansen	1979-2014	(Le Moullec et al., 2019)	11	LU	I	Base	no	Reindeer	711	30	10	15.343	77.992
Ritsem	*Betula nana* (100)	Mats Björkman, Robert Björk, Katariina E. M. Vuorinen	1972-2016	Unpublished	26	R	S	Base	yes	Reindeer	513	21	3	17.536	67.773
Rákkonjárga	*Betula nana* (100)	Hans Ivar Hortman	1992-2018	Unpublished	35	R	S	Base	no	Reindeer	2772	118	5	28.925	70.756
Várjjatnjárga	*Betula nana* (100)	Hans Ivar Hortman	1992-2018	Unpublished	34	R	S	Base	no	Reindeer	2902	119	5	29.558	70.310
Erkuta	*Betula nana* (100)	Katariina E. M. Vuorinen, Dorothee Ehrich, Aleksandr Sokolov, Natalya Sokolova	1984-2018	Unpublished	22	R	S	Base	yes	Reindeer	304	16	4	69.184	68.206
Chokurdakh	*Betula nana* (100)	Rúna Íris Magnússon, Monique Heijmans, Bingxi Li, Ute Sass-Klaassen	1933-2013	(Li et al., 2016)	42	LU	I	Base	no	Reindeer	1070	51	10	147.467	71.000

Table S2. Site-genus specific climate and herbivory values averaged over the study periods at each site, ordered along longitude.

		Summer temperature (°C)			Summer precipitation (mm)			Winter precipitation (mm)			NPP	Average metabolic biomass kg km^{-2}		
Site	**Shrub species**	**min**	**average**	**max**	**min**	**average**	**max**	**min**	**average**	**max**		**Sheep**	**Reindeer/ Caribou**	**Muskox**
Toolik	*Betula nana*	8.2	10.0	11.9	68	104	191	12	25	44	3.69	0.0	8.7	0.0
Toolik	*Salix pulchra*	8.8	10.1	11.9	68	109	191	14	26	44	3.69	0.0	6.6	0.0
Dalton highway	*Betula nana*	3.8	6.8	11.9	68	123	270	2	10	44	0.89	0.0	11.3	0.0
Dalton highway	*Salix glauca, Salix pulchra*	3.8	7.1	11.9	68	124	270	2	11	44	0.89	0.0	12.5	0.0
Qikiqtaruk	*Salix richardsonii, Salix pulchra, Salix glauca*	5.0	6.5	7.9	55	86	124	9	18	29	3.19	0.0	12.1	6.5
Daring Lake	*Betula glandulosa*	6.4	9.9	12.0	63	103	131	79	94	121	4.02	0.0	20.4	0.0
Boniface river	*Betula glandulosa*	5.4	7.9	10.6	66	183	285	92	218	341	2.51	0.0	23.5	0.0
Deception Bay	*Betula glandulosa*	2.6	6.1	8.1	121	135	153	145	156	175	2.90	0.0	36.6	0.0
Kangerlussuaq	*Betula nana*	6.7	8.7	10.1	29	86	129	40	88	142	1.57	0.0	0.6	0.1
Kangerlussuaq	*Salix glauca*	6.7	8.8	10.1	29	90	129	40	95	142	1.57	0.0	0.1	0.1
Zackenberg	*Salix arctica*	2.1	3.2	4.2	19	57	113	86	171	290	0.54	0.0	0.0	89.8
Audkuluheidi	*Betula nana*	7.4	9.1	10.7	63	149	271	165	334	493	0.86	74.4	0.0	0.0
Theistareykir	*Betula nana*	6.8	9.2	10.7	71	172	305	311	486	675	1.51	40.6	0.0	0.0
Setesdal	*Salix* sp.	10.2	11.7	12.8	214	324	444	501	797	1043	2.66	382.5	0.0	0.0
Hol	*Salix glauca, Salix lapponum, Salix lanata*	8.6	10.9	12.5	150	237	300	297	496	658	2.31	831.2	0.0	0.0
Langfjallet	*Betula nana*	8.2	10.4	12.6	126	253	356	210	294	412	2.84	0.0	35.9	0.0
Ny Ålesund	*Salix polaris*	1.3	2.8	4.0	84	129	211	165	334	478	0.42	0.0	36.7	0.0
Semmeldalen	*Salix polaris*	1.7	3.6	4.7	79	120	187	180	305	402	1.24	0.0	34.4	0.0
Ritsem	*Betula nana*	4.0	6.7	8.4	178	299	456	314	499	685	2.81	0.0	16.4	0.0
Rákkonjárga	*Betula nana*	8.9	10.3	11.9	102	191	257	237	352	440	1.69	25.8	79.0	0.0
Várjjatnjárga	*Betula nana*	8.6	10.2	11.9	104	203	294	221	350	455	1.98	210.6	102.9	0.0
Erkuta	*Betula nana*	7.7	10.8	13.8	79	123	161	100	129	163	3.72	0.0	88.7	0.0
Chokurdakh	*Betula nana*	6.5	8.9	10.6	37	85	157	32	75	162	1.66	0.0	245.1	0.0

Table S3. Coefficients for the main model with missing rings excluded: estimates, standard errors, adjusted standard errors, t-values and Wald-test based p-values. Variance inflation factors (VIF-values) are given for the main effects. Marginal R^2 of the model was 0.34, df=17844. Variables with superscipt 2 refer to quadratic effects. This analysis was conducted to check for the sensitivity of the analysis to the missing rings.

	VIF	Est.	Std.Error	t	p
Intercept		8.25	0.413	20.0	<0.0001
Ungulate density	1.10	0.35	0.255	1.4	0.17
Summer temperature	1.10	1.13	0.108	10.5	<0.0001
Summer temperature ^{2}		-0.07	0.007	-10.2	<0.0001
Ungulate density : Summer temperature		-0.18	0.060	-2.9	0.0033
Ungulate density : Summer temperature ^{2}		0.01	0.004	4.0	0.00010
Summer precipitation	1.60	0.54	0.074	7.4	<0.0001
Winter precipitation	1.50	0.04	0.031	1.2	0.24
Age	1.00	0.48	0.014	33.9	<0.0001

Table S4. Ungulate datasets included in the study, ordered along longitude. Data on body size variation within ungulate populations was not available in most cases, and thus we used average male weight to acquire the potential maximum metabolic biomass density. The weights used were 300kg for muskox, 150kg for reindeer/caribou, 85kg for Norwegian sheep and 65kg for Icelandic sheep (Olesen et al., 1994; Ross et al., 2016), with the exception of Yamal and Svabard reindeer that are known to be smaller (127kg and 90kg, respectively). Even when not precise on the absolute biomass scale, we expect this measure to capture the interannual variation and approximate site differences in ungulate density. The size of the area over which ungulate numbers were estimated differed among studies, and therefore the metabolic biomass estimates should be regarded as approximations that vary in spatial precision; area size refers to the area over which herbivory number or density has been estimated. Herbivory density was interpolated for missing years, unless the column "Covered years" states otherwise.

Site	Data type	Estimation area(s)	Area size(s) km^2	Covered years	Animal weight (kg)	Reference for density/number data
Toolik and Dalton highway	Caribou number	Central Arctic Herd area	136 000	1978, 1981, 1983, 1991, 1992, 1995, 1997, 2000, 2002, 2008, 2010, 2013, 2016 and 2019	150	(Alaska Department of Fish and Game, 2017; Healy, 2003) The most recent estimate (2019) was obtained in communication with Beth Lenart, Northeast Alaska Wildlife Area Biologist, Alaska Department of Fish and Game, Division of Wildlife Conservation, 1300 College Rd, Fairbanks, AK 99708.
Qikiqtaruk	Caribou and muskox number	Qikiqtaruk – Herschel Island	116	1986-2015	300 150	Qikiqtaruk Ecological Monitoring Database (DOI 10.5281/zenodo.2397996; https://zenodo.org/record/2397996#.X2scO2gzZa)
Daring Lake	Caribou number	Bathurst Herd area	350 000	1986, 1990, 1996, 2003, 2006, 2009 2012 and 2015,	150	(Adamczewski, 2018)
Deception Bay and Boniface	Caribou number	Riviere-aux-Feuilles Herd area	524 300	1975, 1983, 1987, 1991, 2001, 2011 and 2016	150	(Morrissette-Boileau et al., 2018; Morrissette-Boileau et al., 2018)
Kangerlussuaq	Muskox and reindeer number	Kangerlussuaq census area	100	1993 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014; Extrapolation between 1993 and 2002 was deemed unreasonable and was thus not applied.	300 150	Unpublished data by Post E., Kerby J. and John C.: daily animal observations for May and June
Zackenberg	Muskox number	Zackenberg muskox census area	47	1996-2017	300	(Schmidt et al., 2015; Tomassini et al., 2019)
Audkuluheidi and Theistareykir	Sheep number	Norðurland Vestra and Norðurland Eystra	12 737 and 21 968	1998-2018	65	(Statistics Iceland, 2019) In addition, sheep exclosures provided zero herbivory years.
Setesdal	Sheep number	Suleskar and Nomeland	205 and 247	2000-2019	85	Data from local sheep farmers and (Rekdal and Angeloff, 2007) In addition, sheep exclosures (Speed et al., 2014) provided zero herbivory years.

Hol	Sheep density	Study fence of (Austrheim et al., 2014)	0.3 (for each fence section)	1975-2010	85	(Austrheim et al., 2014)
Långfjället and Ritsem	Reindeer density	Idre and Baste herding areas	5 477 and 3 355	1995-2013	150	(Vowles et al., 2017)
Semmeldalen and Ny-Ålesund	Reindeer number	Colesdalen-Reindalen and Brøgger Peninsula	940 and 188	1972-2015	90	Data for Semmeldalen was extracted from (Lee et al., 2015). Data for Brøgger Peninsula was provided by Norwegian Polar Institute, acquired in communication with Åshild Ønvik Pedersen (Hansen et al., 2019).
Rákkonjárga and Várjjatnjárga	Reindeer number	Rákkonjárga and Várjjatnjárga herding areas	2 185 and 2 228	1992-2018	150	Data was provided first-hand by Trade The Norwegian Agriculture Agency (Landbruksdirektoratet). See also (Landbruksdirektoratet, 2019) and
	Sheep number	Nesseby, Vadsø and Berlevåg	210 and 294	1992-2018	85	(Norsk institutt for bioøkonomi, 2019).
Erkuta	Reindeer number	Yamal Peninsula	122 000	1985, 1990, 1995, 1998, 2000, 2006, 2010, 2014-2018	126,5	(Golovatin et al., 2012); local expert knowledge of Alexander Volkovitskiy and Alexandra Terekhina (Yuzhakov, 2003). In addition, reindeer exclosures (Baubin et al., 2016) provided zero herbivory years.
Chokurdakh	Reindeer number	Kytalyk Nature Reserve	16 000	1992 2012	150	Communication with Kytalyk Nature Reserve manager Tatyana Stryukova, Ministry of Nature Protection of the Allaikhovsky Region, Naberezhnaya 9, Chokurdakh
	Muskox number	Allaikha district	107 300	2000, 2009 and 2011	300	(Kirillin, 2012)

Table S5. Number of shrub ring measurements (n), number of shrub individuals, start and end year of the used chronologies, and chronology length for each site entering the additional the analysis looking into the effects of experimental presence-absence of ungulates.

Site	n	Number of shrub individuals	Chronology start year	Chronology end year	Number of exclusion years
Toolik	898	51	1997	2018	22
Auðkúluheiði	36	12	2016	2018	3
Þeistareykir	36	12	2016	2018	3
Setesdal	165	12	2001	2018	18
Hol	971	107	2001	2010	10
Långfjället	333	16	1996	2016	21
Ritsem	417	21	1996	2016	21
Erkuta	80	16	2014	2018	5

Table S6. Coefficients for the models testing time-delayed effects of ungulates and climatic factors by explaining BAI with ungulate density and climatic factors from one, two and three years before the shrub growth took place: estimates, standardized estimates, standard errors, adjusted standard errors, t-values and Wald-test based p-values. Partial R^2s (±CL) are given for the main effects. Variables with superscript 2 refer to quadratic effects. Marginal R2 of the models were 0.33, 0.32 and 0.28, and dfs 17832, 17833 and 17824, respectively. Partial R2s were calculated by r2beta-functiona in r2glmm-package. The results point to the same direction as the main analysis with no time delays (Table 1). Note, however, that rather than being true time-delayed effects, these effects may also be artefacts caused by the fact that the observed main effects arise from the variation between sites rather than from variation in time (Figure S4b, Fig. 3), meaning that the year from which the ungulate and climate data comes from plays little role.

	R2	Est.	Std. Est.	Std. Err.	t	p
Delay 1 year						
Intercept		6.14	14.29	0.66	9.27	<0.0001
Ungulate density	0.01±0.003	0.25	-0.18	0.18	1.35	0.1773
Summer temperature	0.01±0.0005	1.69	0.03	0.18	9.59	<0.0001
Summer temperature ^{2}	0.114±0.009	-0.1	-0.56	0.01	-9.96	<0.0001
Ungulate density : Summer temperature	0.009±0.003	-0.1	0.18	0.05	-2.76	0.0058
Ungulate density : Summer temperature ^{2}	0.006±0.002	0.01	0.13	0.00	3.57	0.0004
Summer precipitation	0.052±0.006	0.6	0.43	0.07	8.03	<0.0001
Winter precipitation	0.01±0.0005	0.02	0.03	0.03	0.78	0.4369
Age	0.071±0.007	0.48	0.32	0.01	33.48	<0.0001
Delay 2 years						
Intercept		5.41	14.37	0.56	9.64	<0.0001
Ungulate density	0.004±0.002	0.41	-0.12	0.15	2.68	0.0073
Summer temperature	0.01±0.0005	1.83	-0.02	0.16	11.44	<0.0001
Summer temperature ^{2}	0.136±0.009	-0.1	-0.60	0.01	-11.17	<0.0001
Ungulate density : Summer temperature	0.004±0.002	-0.1	0.12	0.04	-3.50	0.0005
Ungulate density : Summer temperature ^{2}	0.008±0.003	0.01	0.14	0.00	3.90	0.0001
Summer precipitation	0.04±0.006	0.53	0.37	0.08	6.89	<0.0001
Winter precipitation	0.001±0.001	0.04	0.06	0.03	1.31	0.19
Age	0.071±0.007	0.47	0.32	0.01	33.13	<0.0001
Delay 3 years						
Intercept		5.87	14.41	0.50	11.75	<0.0001
Ungulate density	0.002±0.001	0.26	-0.07	0.14	1.91	0.0559
Summer temperature	0.01±0.0005	1.7	-0.03	0.15	11.46	<0.0001
Summer temperature ^{2}	0.15±0.009	-0.1	-0.62	0.01	-10.98	<0.0001
Ungulate density : Summer temperature	0.004±0.002	-0.1	0.11	0.04	-2.56	0.0104
Ungulate density : Summer temperature ^{2}	0.005±0.002	0.01	0.10	0.00	2.94	0.0033
Summer precipitation	0.035±0.006	0.5	0.34	0.08	6.35	<0.0001
Winter precipitation	0.002±0.001	0.05	0.07	0.03	1.63	0.1022
Age	0.069±0.008	0.47	0.31	0.01	32.41	<0.0001

Table S7. Coefficients for the analysis looking into the effects of experimental presence-absence of ungulates: estimates, standardized estimates, standard errors, adjusted standard errors, t-values and Wald-test based p-values. Variance inflation factors (VIF-values) are given for the main effects. Marginal R^2 of the model was 0.17. Variables with superscipt 2 refer to quadratic effects.

	VIF	Estimate	Std. Estimate	SE	Adj. SE	z-value	p
Intercept		15.07	13.91	1.42	1.42	10.64	<0.0001
Ungulates present	1.0	-1.03	0.19	0.90	0.90	1.15	0.25
Summer temperature	1.1	-0.44	0.03	0.29	0.29	1.50	0.13
Summer temperature ^{2}		0.02	0.08	0.01	0.02	1.58	0.11
Ungulates present : Summer temperature		0.22	0.10	0.20	0.20	1.13	0.26
Ungulates present : Summer temperature ^{2}		-0.01	-0.06	0.01	0.01	0.79	0.43
Summer precipitation	1.1	0.39	0.35	0.05	0.05	7.23	<0.0001
Age	1.0	0.40	0.33	0.03	0.03	15.47	<0.0001

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