

Table S1. Contents of simple phenolics and A-type proanthocyanidins ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Arbutin		Hydroquinone		2-O-Caffeoylarbutin		Procyanidin A1		Procyanidin A2		Procyanidin A4	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	64151.3 \pm 1090.6*	67158.7 \pm 2552.0	22.5 \pm 0.8	0.4 \pm 0.0	3516.5 \pm 42.2	2859.6 \pm 108.7	7206.4 \pm 158.5*	5917.4 \pm 59.2	987.7 \pm 15.8*	1310.4 \pm 32.8*	154.6 \pm 8.0*	136.1 \pm 1.4*
Jan. 24	60261.1 \pm 2531.0	67049.2 \pm 2413.8	5.3 \pm 0.2	2.9 \pm 0.1	3510.2 \pm 147.4	3079.4 \pm 110.9	6449.7 \pm 141.9	5666.3 \pm 164.3	923.5 \pm 30.5	964.6 \pm 28.0	141.5 \pm 3.1*	88.7 \pm 2.6
Feb. 7	60655.6 \pm 1941.0	68945.1 \pm 1999.4	8.6 \pm 0.3	5.3 \pm 0.2	3373.3 \pm 107.9	3260.7 \pm 94.6*	6344.5 \pm 190.3	5601.1 \pm 61.6	826.8 \pm 27.3	988.7 \pm 28.7	107.9 \pm 3.2	88.8 \pm 1.0
Feb. 21	65851.7 \pm 1909.7*	62239.1 \pm 2053.9	55.6 \pm 2.2	15.2 \pm 0.5	3587.6 \pm 104.0	3069.7 \pm 101.3	6381.4 \pm 287.2	5505.1 \pm 187.2	830.9 \pm 24.1	1033.4 \pm 34.1	98.7 \pm 4.4	91.5 \pm 3.1
Mar. 7	59887.9 \pm 2215.9	61940.2 \pm 1114.9	29.8 \pm 1.1	15.5 \pm 0.3	3634.7 \pm 134.5	2629.1 \pm 23.7	5387.1 \pm 188.5	3970.7 \pm 87.4	849.6 \pm 14.4	910.5 \pm 16.4	98.9 \pm 3.5	77.7 \pm 1.7
Mar. 21	62091.3 \pm 1862.7	61380.8 \pm 1534.5	41.7 \pm 1.2	9.5 \pm 0.2	3623.7 \pm 108.7	2604.0 \pm 65.1	5721.6 \pm 206.0	4065.2 \pm 182.9	853.4 \pm 25.6	951.2 \pm 23.8	99.8 \pm 3.6	76.9 \pm 3.5
Apr. 4	60535.3 \pm 1816.1	58170.2 \pm 988.9	31.5 \pm 0.9	15.1 \pm 0.3	3600.1 \pm 108.0	2608.4 \pm 70.4	5398.5 \pm 118.8	4137.1 \pm 157.2	750.6 \pm 22.5	941.6 \pm 23.5	79.9 \pm 2.6	67.2 \pm 2.6
Apr. 17	58508.5 \pm 1462.7	62416.8 \pm 1872.5	17.0 \pm 0.4	8.4 \pm 0.3	3618.6 \pm 90.5	2669.1 \pm 80.1	4631.0 \pm 194.5	4355.2 \pm 156.8	729.9 \pm 7.3	951.4 \pm 16.2	85.0 \pm 3.6	78.5 \pm 2.8
May 1	22669.7 \pm 430.7	61517.3 \pm 1845.5	2.8 \pm 0.1	9.2 \pm 0.3	3293.5 \pm 72.5	2261.9 \pm 13.6	2040.4 \pm 65.3	4172.3 \pm 121.0	366.8 \pm 9.2	1006.2 \pm 30.2	15.7 \pm 0.5	86.9 \pm 2.5
May 15	26987.7 \pm 593.7	60209.7 \pm 1746.1	16.0 \pm 0.4	10.4 \pm 0.2	3569.3 \pm 78.5	2343.1 \pm 67.9	2164.6 \pm 41.1	4158.9 \pm 95.7	416.6 \pm 7.9	1049.4 \pm 31.5	20.9 \pm 0.4	90.2 \pm 3.0
May 29	28991.5 \pm 869.7	60189.2 \pm 1986.2	169.6 \pm 5.9	115.6 \pm 3.5	3836.0 \pm 115.1	1933.9 \pm 44.5	1950.8 \pm 60.5	4302.3 \pm 94.7	402.9 \pm 10.1	1086.5 \pm 25.0	19.7 \pm 0.6	84.0 \pm 1.8
Jun. 13	29163.1 \pm 904.1	63852.9 \pm 2873.4	434.8 \pm 17.8*	154.9 \pm 7.0	4158.3 \pm 128.9	2333.4 \pm 105.0	2005.4 \pm 20.1	4133.1 \pm 103.3	457.0 \pm 5.0	1132.1 \pm 53.2	22.5 \pm 0.2	86.4 \pm 3.0
Jun. 28	30708.5 \pm 1044.1	62728.7 \pm 2195.5	372.8 \pm 12.7	144.0 \pm 5.0	4267.4 \pm 145.1	2434.9 \pm 85.2	2043.9 \pm 45.0	4277.1 \pm 141.1	305.4 \pm 10.4	1079.0 \pm 18.3	21.5 \pm 0.5	86.8 \pm 3.7
Jul. 15	34773.3 \pm 973.7	63875.4 \pm 2235.6	370.7 \pm 10.4	129.6 \pm 4.5	4602.9 \pm 197.9	2511.9 \pm 105.5	2104.7 \pm 71.6	4397.5 \pm 70.4	386.5 \pm 7.0	1090.5 \pm 16.4	29.2 \pm 1.0	81.7 \pm 2.1
Jul. 29	35342.4 \pm 565.5	65875.5 \pm 1778.6	368.6 \pm 9.6	150.2 \pm 4.1	4646.7 \pm 199.8	2728.9 \pm 87.3	2160.3 \pm 23.8	4384.1 \pm 65.8	367.2 \pm 10.7	1117.8 \pm 33.5	28.3 \pm 0.3	85.3 \pm 1.3
Aug. 11	41493.8 \pm 1286.3	64573.3 \pm 2324.6	371.8 \pm 11.5	143.6 \pm 5.2	5045.3 \pm 196.8	2665.5 \pm 96.0	3777.7 \pm 117.1	4455.8 \pm 187.1	484.1 \pm 12.1	1137.7 \pm 26.2	28.6 \pm 0.9	80.1 \pm 3.4
Aug. 24	41701.9 \pm 625.5	72877.4 \pm 2405.0*	384.4 \pm 5.8	174.3 \pm 5.8	5724.7 \pm 143.1*	2659.6 \pm 87.8	4059.4 \pm 105.5	4461.6 \pm 142.8	448.6 \pm 6.7	1032.6 \pm 16.5	32.1 \pm 0.8	84.0 \pm 2.7
Sep. 6	55664.9 \pm 1391.6	71075.8 \pm 2132.3*	286.6 \pm 7.2	177.3 \pm 5.3	4747.6 \pm 118.7	2822.3 \pm 84.7	4715.0 \pm 89.6	4954.8 \pm 143.7	474.3 \pm 16.6	1058.9 \pm 22.2	35.5 \pm 0.7	79.3 \pm 2.0
Sep. 20	66370.7 \pm 1858.4*	71798.8 \pm 3015.5*	277.6 \pm 7.8	191.6 \pm 8.0*	4474.0 \pm 125.3	2891.0 \pm 121.4	4998.0 \pm 115.0	4744.3 \pm 128.1	591.0 \pm 17.1	1082.7 \pm 34.6	87.7 \pm 2.0	88.5 \pm 3.3
Oct. 4	64099.5 \pm 1025.6*	71628.9 \pm 1934.0*	222.0 \pm 3.6	89.4 \pm 2.4	3956.3 \pm 63.3	2794.8 \pm 75.5	5014.2 \pm 90.3	4895.6 \pm 122.4	591.3 \pm 9.5	1160.0 \pm 44.1	87.7 \pm 1.6	91.7 \pm 2.3
Oct. 19	63837.3 \pm 1979.0*	71893.0 \pm 2588.1*	225.3 \pm 7.0	39.4 \pm 1.8	4066.1 \pm 126.0	2756.9 \pm 71.7	5829.2 \pm 180.7	5042.6 \pm 95.8	815.5 \pm 34.3	1071.0 \pm 46.1	96.5 \pm 2.0	87.1 \pm 1.7
Nov. 1	70777.2 \pm 1061.7*	73650.4 \pm 2430.5*	54.7 \pm 2.5	13.2 \pm 0.4	4058.0 \pm 60.9	2803.6 \pm 92.5	6189.3 \pm 185.7	5087.3 \pm 127.2	815.3 \pm 26.1	1077.9 \pm 42.0	106.6 \pm 3.2	88.1 \pm 2.2
Nov. 16	72168.0 \pm 1371.2*	69164.0 \pm 2282.4*	60.5 \pm 3.0	14.6 \pm 0.6	4056.7 \pm 77.1	2899.7 \pm 95.7	6465.3 \pm 148.7	5071.5 \pm 177.5	918.9 \pm 26.6	1181.8 \pm 39.0	116.3 \pm 2.7	94.4 \pm 1.4
Nov. 29	67706.9 \pm 2843.7*	69502.0 \pm 2988.6*	23.2 \pm 1.0	8.2 \pm 0.4	3907.3 \pm 164.1	2959.6 \pm 127.3	6286.0 \pm 276.6	6298.7 \pm 69.3*	910.5 \pm 15.5	1408.8 \pm 49.3*	115.0 \pm 5.1	132.7 \pm 1.5*
Dec. 13	66027.7 \pm 2112.9*	67314.7 \pm 1952.1	20.1 \pm 0.6	3.0 \pm 0.1	3969.1 \pm 127.0	2868.2 \pm 83.2	6673.4 \pm 233.6	6048.8 \pm 163.3*	992.4 \pm 11.9*	1394.5 \pm 54.4*	117.2 \pm 1.8	137.0 \pm 3.7*
Dec. 28	69436.7 \pm 2013.7*	68303.3 \pm 2254.0	20.7 \pm 0.6	3.2 \pm 0.1	3636.1 \pm 105.4	2886.1 \pm 95.2	6713.8 \pm 235.0	6160.4 \pm 184.8*	961.1 \pm 27.9*	1385.7 \pm 47.1*	122.5 \pm 3.1	135.9 \pm 4.1*

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S2. Contents of catechins and B-type proanthocyanidins ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	(+)-Catechin		(-)-Epicatechin		Procyanidin B1		Procyanidin B2		Procyanidin B3		Procyanidin C1	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	16561.6 \pm 281.6*	14760.7 \pm 560.9*	2616.7 \pm 44.5	2938.0 \pm 111.5	6336.9 \pm 190.1*	5351.9 \pm 133.8	2595.4 \pm 44.1*	3532.9 \pm 63.6	9594.8 \pm 163.1*	7680.5 \pm 291.9	4782.1 \pm 81.3*	4584.4 \pm 128.4
Jan. 24	15309.4 \pm 643.0	12113.6 \pm 436.1	2442.3 \pm 102.6	1813.6 \pm 65.3	5462.5 \pm 125.6	4258.1 \pm 149.0	2290.8 \pm 96.2	2828.6 \pm 101.8	7926.0 \pm 332.9	6194.1 \pm 223.0	4050.4 \pm 170.1	3997.6 \pm 143.9
Feb. 7	15108.0 \pm 483.5	13672.3 \pm 533.2	2167.0 \pm 69.3	1823.6 \pm 71.1	5374.7 \pm 236.5	3964.6 \pm 43.6	2169.6 \pm 69.4	2757.8 \pm 80.0	8018.2 \pm 256.6	6456.5 \pm 187.2	4077.1 \pm 130.5	3836.6 \pm 149.6
Feb. 21	15009.6 \pm 435.3	13210.1 \pm 435.9	2097.4 \pm 60.8	1959.1 \pm 64.7	5358.7 \pm 241.1	3981.7 \pm 135.4	2201.8 \pm 63.9	2824.2 \pm 93.2	7715.7 \pm 146.6	6436.4 \pm 212.4	4201.1 \pm 121.8	3778.2 \pm 124.7
Mar. 7	15105.9 \pm 558.9	10307.0 \pm 185.5	2097.6 \pm 77.6	1990.6 \pm 35.8	5045.5 \pm 176.6	4028.2 \pm 88.6	2200.9 \pm 81.4	2769.1 \pm 49.8	6386.7 \pm 236.3	4753.4 \pm 85.6	4022.8 \pm 148.8	3750.7 \pm 67.5
Mar. 21	15097.3 \pm 452.9	10198.3 \pm 255.0	2172.3 \pm 65.2	2020.4 \pm 50.5	5080.7 \pm 182.9	4693.1 \pm 211.2	2138.9 \pm 64.2	2813.3 \pm 70.3	6257.1 \pm 187.7	4819.7 \pm 120.5	3920.0 \pm 117.6	3472.1 \pm 121.5
Apr. 4	13346.1 \pm 440.4	10480.2 \pm 199.1	2167.8 \pm 65.0	2085.0 \pm 52.1	4974.1 \pm 109.4	4749.5 \pm 180.5	2164.2 \pm 64.9	2753.9 \pm 68.8	6486.3 \pm 214.0	5462.4 \pm 103.8	3954.4 \pm 87.0	3674.3 \pm 95.5
Apr. 17	13330.1 \pm 439.9	12884.8 \pm 541.2	1707.4 \pm 51.2	2208.2 \pm 37.5	4755.8 \pm 199.7	4614.4 \pm 166.1	2079.4 \pm 62.4	3202.8 \pm 54.4	5693.5 \pm 187.9	6197.6 \pm 260.3	3790.8 \pm 113.7	4010.1 \pm 68.2
May 1	11273.5 \pm 484.8	11386.4 \pm 250.5	796.7 \pm 19.9	2277.3 \pm 68.3	2044.2 \pm 65.4	4532.6 \pm 86.1	1047.3 \pm 26.2	3139.1 \pm 94.2	2919.6 \pm 125.5	5754.7 \pm 126.6	1477.8 \pm 37.0	2897.8 \pm 86.9
May 15	11280.3 \pm 248.2	11356.0 \pm 329.3	1062.5 \pm 20.2	2303.7 \pm 69.1	1728.8 \pm 50.1	4815.4 \pm 158.9	864.3 \pm 16.4	3066.7 \pm 92.0	2915.5 \pm 64.1	5664.8 \pm 220.9	1934.1 \pm 36.8	3195.0 \pm 47.9
May 29	4043.9 \pm 121.3	7118.8 \pm 163.7	1086.1 \pm 27.2	2313.9 \pm 53.2	1889.0 \pm 69.9	4712.8 \pm 160.2	900.6 \pm 22.5	3074.9 \pm 70.7	3065.2 \pm 92.0	5787.1 \pm 133.1	2162.8 \pm 75.7	3415.5 \pm 95.6
Jun. 13	2329.2 \pm 72.2	8407.1 \pm 378.3	1062.1 \pm 32.9	2339.4 \pm 110.0	972.7 \pm 15.6	4816.5 \pm 53.0	659.7 \pm 7.3	3060.8 \pm 143.9	1591.9 \pm 49.3	5676.1 \pm 255.4	2634.5 \pm 39.5	3525.6 \pm 102.2
Jun. 28	2094.5 \pm 71.2	8347.9 \pm 308.9	1010.8 \pm 34.4	2288.0 \pm 84.7	998.3 \pm 15.0	4683.5 \pm 145.2	765.3 \pm 26.0	3126.3 \pm 53.1	1055.6 \pm 35.9	5496.5 \pm 148.4	2635.6 \pm 29.0	3771.9 \pm 94.3
Jul. 15	3072.1 \pm 86.0	7213.5 \pm 180.3	1051.3 \pm 29.4	2161.7 \pm 54.0	1492.3 \pm 32.8	4817.5 \pm 144.5	1116.4 \pm 31.3	3168.3 \pm 79.2	1276.4 \pm 35.7	5779.7 \pm 86.7	2787.4 \pm 64.1	3867.1 \pm 120.0
Jul. 29	2952.0 \pm 47.2	6926.5 \pm 187.0	1060.6 \pm 30.7	2135.2 \pm 64.1	1497.9 \pm 67.4	4607.9 \pm 101.4	1125.3 \pm 32.6	2970.3 \pm 89.1	1407.1 \pm 22.5	5874.6 \pm 158.6	3012.7 \pm 141.6	3943.5 \pm 134.1
Aug. 11	3238.9 \pm 100.4	6889.2 \pm 248.0	1053.7 \pm 26.3	2140.3 \pm 49.2	3190.7 \pm 121.2	4560.0 \pm 191.5	1393.3 \pm 34.8	3015.8 \pm 69.4	2766.3 \pm 85.8	5917.9 \pm 213.0	3210.8 \pm 54.6	4125.4 \pm 94.9
Aug. 24	4521.5 \pm 67.8	9091.1 \pm 327.3	1205.9 \pm 18.1	2190.3 \pm 78.9	3810.7 \pm 99.1	4479.9 \pm 143.4	1384.6 \pm 20.8	3074.8 \pm 49.2	4764.9 \pm 71.5	6135.4 \pm 220.9	3672.6 \pm 55.1	3953.7 \pm 142.3
Sep. 6	8525.8 \pm 298.4	11284.9 \pm 338.5	1271.5 \pm 44.5	2275.1 \pm 68.3	4196.5 \pm 79.7	4370.8 \pm 126.8	1459.3 \pm 51.1	3352.2 \pm 70.4	5171.7 \pm 181.0	6489.6 \pm 194.7	4070.7 \pm 142.5	4321.3 \pm 129.6
Sep. 20	13126.1 \pm 367.5	11414.7 \pm 479.4	1773.5 \pm 51.4	2375.0 \pm 99.8	5056.2 \pm 116.3	4450.3 \pm 164.7	1708.7 \pm 49.6	3311.1 \pm 139.1	6758.1 \pm 121.6	6518.9 \pm 273.8	4505.9 \pm 130.7	4293.4 \pm 128.8
Oct. 4	13877.8 \pm 222.0	14155.1 \pm 523.7	1755.7 \pm 28.1	2747.1 \pm 101.6	5301.2 \pm 95.4	6260.1 \pm 156.5	1671.4 \pm 26.7	3605.0 \pm 133.4	6763.8 \pm 108.2	6606.3 \pm 244.4	4492.3 \pm 71.9	4478.1 \pm 120.9
Oct. 19	15313.4 \pm 520.7	12931.9 \pm 465.6	2495.2 \pm 84.8	2703.1 \pm 97.3	5289.0 \pm 158.7	4345.7 \pm 117.3	2264.0 \pm 77.0	3545.4 \pm 127.6	7901.5 \pm 268.7	6649.6 \pm 239.4	4646.9 \pm 58.0	4433.6 \pm 159.6
Nov. 1	15938.9 \pm 239.1	13411.6 \pm 442.6	2578.5 \pm 38.7	2757.7 \pm 91.0	5404.1 \pm 135.1	5285.0 \pm 158.6	2317.9 \pm 34.8	3506.0 \pm 115.7	8522.8 \pm 127.8	7109.4 \pm 234.6	4573.1 \pm 68.6	4539.1 \pm 149.8
Nov. 16	16154.6 \pm 468.5*	13917.0 \pm 459.3	2870.0 \pm 83.2	2778.3 \pm 91.7	6140.7 \pm 135.1	5351.3 \pm 32.1	2599.3 \pm 75.4*	3737.8 \pm 123.3*	8632.0 \pm 250.3	7314.8 \pm 241.4	4713.5 \pm 96.7*	4800.3 \pm 158.4
Nov. 29	16110.9 \pm 676.7*	15211.5 \pm 654.1*	2931.3 \pm 99.1*	3441.6 \pm 148.0*	5557.6 \pm 122.3	6733.8 \pm 195.3*	2634.9 \pm 110.7*	3998.4 \pm 171.9*	8394.2 \pm 352.6	8357.4 \pm 359.4*	4793.9 \pm 201.3*	5016.6 \pm 215.7*
Dec. 13	16211.4 \pm 518.8*	13869.0 \pm 540.9	3014.1 \pm 96.5*	3029.6 \pm 118.2	6067.9 \pm 182.0	6259.7 \pm 156.5	2642.3 \pm 84.6*	3801.2 \pm 148.2*	8542.4 \pm 273.4	8250.6 \pm 321.8*	4960.2 \pm 158.7*	5004.7 \pm 195.2*
Dec. 28	16248.8 \pm 471.2*	14483.2 \pm 477.9*	2759.5 \pm 80.0	3041.7 \pm 130.8	6435.9 \pm 135.2*	5499.2 \pm 104.5	2646.7 \pm 76.8*	3805.1 \pm 163.6*	9112.6 \pm 264.3	8059.2 \pm 266.0	4886.4 \pm 117.3*	4804.1 \pm 62.5

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S3. Contents of flavonol aglycones and phenolic acids ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Quercetin		Kaempferol		Chlorogenic acid		Cryptochlorogenic acid		Neochlorogenic acid		<i>p</i> -Coumaric acid	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	68.8 \pm 1.9	61.9 \pm 1.7	NQ	NQ	495.5 \pm 8.4	531.8 \pm 9.6	1166.5 \pm 18.7	811.8 \pm 12.2	59.7 \pm 0.7	80.9 \pm 3.1	308.4 \pm 5.2	171.8 \pm 2.1
Jan. 24	71.5 \pm 3.0	70.4 \pm 2.5	NQ	NQ	490.5 \pm 5.9	530.3 \pm 13.8	1102.8 \pm 36.4	772.3 \pm 22.4	61.5 \pm 2.6	77.6 \pm 2.8	277.7 \pm 12.5	177.7 \pm 6.4
Feb. 7	70.8 \pm 2.3	67.1 \pm 2.6	NQ	NQ	541.5 \pm 11.9	513.5 \pm 14.9	1020.4 \pm 43.9	793.9 \pm 23.0	71.0 \pm 1.6*	67.9 \pm 0.6	294.7 \pm 12.4	179.9 \pm 5.2
Feb. 21	71.1 \pm 2.8	69.7 \pm 1.6	NQ	NQ	546.6 \pm 10.4	446.1 \pm 5.8	999.8 \pm 39.0	779.2 \pm 17.9	59.5 \pm 1.7	62.4 \pm 2.1	323.9 \pm 12.6	177.9 \pm 4.1
Mar. 7	72.3 \pm 2.7	67.7 \pm 1.2	NQ	NQ	463.7 \pm 7.9	474.4 \pm 13.3	883.3 \pm 15.0	678.2 \pm 12.2	52.0 \pm 1.9	62.3 \pm 0.6	325.7 \pm 12.1	187.3 \pm 3.4
Mar. 21	67.3 \pm 2.0	67.3 \pm 1.7	NQ	NQ	682.5 \pm 14.3	448.2 \pm 15.7	896.9 \pm 26.9	677.0 \pm 16.9	48.6 \pm 1.5	68.7 \pm 1.7	332.2 \pm 11.3	165.7 \pm 2.5
Apr. 4	68.3 \pm 2.3	66.7 \pm 1.3	NQ	NQ	393.1 \pm 5.1	424.7 \pm 8.1	531.7 \pm 11.7	651.6 \pm 16.3	48.8 \pm 1.5	73.0 \pm 2.0	277.3 \pm 11.6	156.3 \pm 3.9
Apr. 17	66.6 \pm 2.2	67.9 \pm 2.8	NQ	NQ	234.1 \pm 5.4	419.4 \pm 13.4	545.6 \pm 12.0	661.8 \pm 11.3	35.1 \pm 0.9	74.5 \pm 2.2	149.9 \pm 4.5	122.6 \pm 2.1
May 1	59.1 \pm 0.8	65.8 \pm 2.1	3.5 \pm 0.1	NQ	217.1 \pm 5.0	394.4 \pm 16.6	433.8 \pm 11.3	628.1 \pm 15.7	35.6 \pm 0.8	76.1 \pm 1.2	107.2 \pm 1.6	147.3 \pm 6.0
May 15	67.3 \pm 1.5	68.5 \pm 1.3	3.6 \pm 0.1	NQ	355.1 \pm 7.8	391.6 \pm 15.3	791.1 \pm 14.2	632.0 \pm 9.5	42.1 \pm 0.9	80.6 \pm 2.3	203.1 \pm 3.7	190.7 \pm 2.9
May 29	72.2 \pm 2.2	69.9 \pm 1.6	4.0 \pm 0.1	3.7 \pm 0.1	416.2 \pm 12.5	399.8 \pm 9.2	872.1 \pm 34.0	613.6 \pm 18.4	45.0 \pm 0.9	80.6 \pm 1.9	303.1 \pm 11.5	182.9 \pm 6.4
Jun. 13	100.2 \pm 4.1	80.4 \pm 2.0	10.3 \pm 0.2*	4.2 \pm 0.1*	765.5 \pm 23.7	460.3 \pm 11.5	1143.6 \pm 40.0	697.3 \pm 23.0	44.7 \pm 1.4	80.3 \pm 3.6	701.7 \pm 17.4*	215.6 \pm 4.5
Jun. 28	161.6 \pm 7.1*	82.5 \pm 2.2	13.1 \pm 0.4*	4.3 \pm 0.1*	714.7 \pm 30.0	544.9 \pm 14.7	1131.8 \pm 39.6	694.1 \pm 25.0	46.8 \pm 1.6	79.2 \pm 2.7	614.3 \pm 9.2	229.3 \pm 3.0
Jul. 15	130.5 \pm 3.7	94.7 \pm 1.4*	4.6 \pm 0.2	4.4 \pm 0.1*	797.9 \pm 30.3*	478.7 \pm 7.2	1277.7 \pm 17.1*	713.6 \pm 15.7	50.2 \pm 2.2	82.7 \pm 3.5	579.5 \pm 8.7	231.0 \pm 2.8
Jul. 29	132.5 \pm 2.1	90.3 \pm 2.4*	4.6 \pm 0.1	4.4 \pm 0.1*	782.2 \pm 20.3*	526.7 \pm 9.0	1266.3 \pm 44.3*	720.4 \pm 16.6	50.3 \pm 0.7	80.3 \pm 2.6	611.0 \pm 21.4	239.6 \pm 7.2
Aug. 11	126.6 \pm 5.2	87.8 \pm 2.3*	4.8 \pm 0.2	4.1 \pm 0.1	797.1 \pm 24.7*	597.6 \pm 15.5	1275.6 \pm 39.5*	767.7 \pm 20.7	55.6 \pm 2.2	78.1 \pm 2.8	599.6 \pm 10.2	238.1 \pm 3.6
Aug. 24	117.8 \pm 4.1	88.9 \pm 2.3*	4.8 \pm 0.2	4.1 \pm 0.1	809.7 \pm 36.4*	579.7 \pm 15.1	1338.9 \pm 45.5*	835.9 \pm 30.9	51.7 \pm 1.3	73.1 \pm 2.4	651.1 \pm 22.7	220.9 \pm 5.7
Sep. 6	107.4 \pm 3.8	92.6 \pm 2.8*	4.7 \pm 0.2	4.0 \pm 0.1	814.7 \pm 28.5*	599.7 \pm 12.6	1329.4 \pm 46.5*	871.9 \pm 18.3	55.7 \pm 1.4	75.7 \pm 2.3	533.1 \pm 20.3	257.9 \pm 3.1
Sep. 20	93.4 \pm 3.5	79.7 \pm 2.5	4.2 \pm 0.1	4.1 \pm 0.1	787.4 \pm 14.2*	584.6 \pm 24.6	1330.0 \pm 38.6*	893.4 \pm 28.6	57.1 \pm 1.6	79.3 \pm 3.3	499.5 \pm 14.5	239.2 \pm 5.3
Oct. 4	83.6 \pm 1.3	73.5 \pm 2.7	3.9 \pm 0.1	4.2 \pm 0.2*	733.1 \pm 19.1	670.7 \pm 18.1*	1308.1 \pm 20.9*	936.0 \pm 16.8*	55.6 \pm 0.9	80.4 \pm 2.2	430.2 \pm 5.6	274.8 \pm 3.3
Oct. 19	82.7 \pm 2.8	69.6 \pm 2.5	3.9 \pm 0.1	NQ	756.2 \pm 25.7	667.3 \pm 17.4*	1291.1 \pm 54.2*	837.0 \pm 19.3	56.9 \pm 1.8	80.4 \pm 2.1	443.6 \pm 14.6	249.1 \pm 3.0
Nov. 1	82.7 \pm 1.2	71.0 \pm 2.3	3.5 \pm 0.1	3.6 \pm 0.1	764.3 \pm 11.5	634.7 \pm 8.3	1309.6 \pm 41.9*	808.3 \pm 15.4	57.7 \pm 0.9	93.1 \pm 3.1*	413.2 \pm 12.0	302.3 \pm 7.3
Nov. 16	83.0 \pm 2.4	72.2 \pm 2.4	3.5 \pm 0.1	NQ	768.7 \pm 24.6	625.2 \pm 14.4	1280.2 \pm 37.1*	753.4 \pm 24.9	56.6 \pm 1.1	79.1 \pm 2.6	387.2 \pm 8.9	376.3 \pm 6.4*
Nov. 29	76.9 \pm 3.2	69.1 \pm 3.0	NQ	NQ	754.3 \pm 31.7	673.0 \pm 15.5*	1118.7 \pm 19.0	982.0 \pm 14.7*	59.8 \pm 2.5	81.6 \pm 3.5	378.1 \pm 6.8	398.8 \pm 9.2*
Dec. 13	76.3 \pm 2.4	66.1 \pm 1.3	NQ	NQ	767.4 \pm 26.1	650.1 \pm 12.4*	1217.5 \pm 51.1	963.6 \pm 18.3*	65.7 \pm 2.8	80.5 \pm 2.3	363.5 \pm 8.0	283.2 \pm 5.4
Dec. 28	72.2 \pm 2.1	64.6 \pm 2.1	NQ	NQ	518.2 \pm 15.0	551.4 \pm 12.7	1172.4 \pm 57.4	889.5 \pm 21.3	62.3 \pm 1.8	79.5 \pm 2.6	362.4 \pm 10.5	264.5 \pm 6.1

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples. ND—not detected, NQ—not quantified (amount below the limits of quantification (LOQ)).

Table S4. Contents of kaempferol and quercetin glycosides ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Nicotiflorin		Astragalin		Afzelin		Quercitrin		Quercetin-HMG-rhamnoside		6"-O-acetylisoquercitrin	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	74.0 \pm 1.2	54.8 \pm 1.4	65.3 \pm 1.0	51.1 \pm 1.3	73.4 \pm 1.2	73.8 \pm 3.1	1110.9 \pm 52.2	1338.6 \pm 37.5	1407.4 \pm 38.0	1278.0 \pm 23.0	75.4 \pm 1.2	60.9 \pm 0.9
Jan. 24	66.4 \pm 2.2	55.1 \pm 1.6	63.9 \pm 2.1	55.3 \pm 1.6	73.1 \pm 3.3	68.4 \pm 2.5	1161.2 \pm 48.8	906.6 \pm 32.6	1061.0 \pm 12.7	1178.5 \pm 30.6	77.2 \pm 2.5	60.0 \pm 1.7
Feb. 7	68.5 \pm 2.3	65.5 \pm 1.9	69.0 \pm 3.0	60.3 \pm 1.7	73.2 \pm 3.1	68.5 \pm 2.0	1043.2 \pm 33.4	1494.8 \pm 23.3*	1077.1 \pm 23.7	1252.5 \pm 36.3	77.3 \pm 3.3	56.7 \pm 1.6
Feb. 21	85.9 \pm 3.3	61.6 \pm 1.4	67.8 \pm 2.6	62.6 \pm 1.4	77.9 \pm 3.0	66.9 \pm 1.5	1117.3 \pm 32.4	1146.0 \pm 37.8	1126.1 \pm 21.4	1284.8 \pm 42.4	77.6 \pm 3.0	57.4 \pm 1.3
Mar. 7	83.2 \pm 1.4	64.3 \pm 1.2	72.4 \pm 1.2	65.4 \pm 1.2	88.8 \pm 3.3	63.4 \pm 1.1	1081.4 \pm 40.0	969.5 \pm 17.5	1179.7 \pm 20.1	1200.3 \pm 33.6	73.9 \pm 1.3	42.0 \pm 0.8
Mar. 21	102.3 \pm 3.1	65.1 \pm 1.6	94.2 \pm 2.8	66.7 \pm 1.7	94.8 \pm 3.2*	60.6 \pm 0.9	1216.5 \pm 36.5	982.7 \pm 24.6	1042.9 \pm 21.9	1169.1 \pm 40.9	82.0 \pm 1.5*	39.9 \pm 1.0
Apr. 4	103.4 \pm 3.1	65.0 \pm 1.6	101.9 \pm 3.1	66.0 \pm 1.6	84.5 \pm 3.5	56.1 \pm 1.4	972.6 \pm 21.4	946.4 \pm 24.6	1097.9 \pm 14.3	1112.7 \pm 21.1	65.6 \pm 2.0	39.5 \pm 1.0
Apr. 17	105.1 \pm 4.4	74.5 \pm 2.0	87.7 \pm 3.7	71.7 \pm 1.2	79.1 \pm 2.4	55.5 \pm 0.9	966.9 \pm 29.0	1408.6 \pm 23.9	1126.6 \pm 37.2	1059.6 \pm 23.3	66.6 \pm 2.8	44.5 \pm 0.8
May 1	88.2 \pm 3.1	67.4 \pm 2.0	88.5 \pm 2.3	67.9 \pm 1.7	32.5 \pm 0.5	44.4 \pm 1.8	354.0 \pm 8.8	1025.9 \pm 30.8	1081.2 \pm 24.9	1193.7 \pm 26.3	24.0 \pm 0.6	46.4 \pm 1.2
May 15	94.8 \pm 2.8	74.9 \pm 2.2	89.7 \pm 1.6	76.5 \pm 1.1	24.9 \pm 0.4	46.2 \pm 1.2	348.2 \pm 6.6	1115.0 \pm 16.7	1064.3 \pm 23.4	1114.5 \pm 43.5	25.8 \pm 0.5	49.2 \pm 0.7
May 29	99.9 \pm 3.5	74.1 \pm 1.7	95.8 \pm 3.7	69.7 \pm 2.1	25.7 \pm 0.7	45.0 \pm 1.6	404.8 \pm 14.2	819.0 \pm 22.9	1372.3 \pm 41.2	948.0 \pm 21.8	26.2 \pm 1.0	45.5 \pm 1.4
Jun. 13	240.8 \pm 9.9*	82.0 \pm 2.2	212.3 \pm 9.6*	70.0 \pm 1.6	24.7 \pm 1.0	52.4 \pm 1.1	473.1 \pm 7.1	1235.4 \pm 35.8	2415.9 \pm 74.9	983.9 \pm 24.6	28.4 \pm 1.0	48.7 \pm 1.6
Jun. 28	235.7 \pm 8.0*	77.9 \pm 1.3	161.1 \pm 7.2	66.1 \pm 1.1	24.3 \pm 0.4	59.1 \pm 2.0	513.9 \pm 5.7	1226.6 \pm 30.7	2644.7 \pm 111.1*	1382.6 \pm 37.3	25.6 \pm 0.4	56.7 \pm 2.0
Jul. 15	184.2 \pm 3.3	81.1 \pm 1.2	112.7 \pm 3.3	65.4 \pm 2.0	18.3 \pm 0.3	59.7 \pm 2.5	548.3 \pm 12.6	1124.8 \pm 34.9	2464.5 \pm 93.7	1435.3 \pm 21.5	30.0 \pm 0.9	55.7 \pm 2.3
Jul. 29	127.2 \pm 5.0	78.0 \pm 2.3	107.6 \pm 3.8	71.6 \pm 1.6	21.5 \pm 0.5	57.0 \pm 1.7	511.5 \pm 18.9	1155.1 \pm 39.3	2101.6 \pm 54.6	1405.8 \pm 23.9	29.2 \pm 1.0	54.2 \pm 1.2
Aug. 11	139.2 \pm 3.5	84.4 \pm 1.9	118.6 \pm 4.9	63.0 \pm 1.7	38.3 \pm 0.7	59.0 \pm 0.9	649.1 \pm 11.0	1021.7 \pm 23.5	2067.9 \pm 64.1	1406.7 \pm 36.6	43.9 \pm 1.8	52.9 \pm 1.4
Aug. 24	150.3 \pm 6.8	83.2 \pm 1.3	121.3 \pm 4.1	65.0 \pm 1.1	59.9 \pm 1.3	66.3 \pm 2.4	695.1 \pm 10.4	927.0 \pm 33.4	1741.5 \pm 78.4	1477.1 \pm 38.4	52.4 \pm 1.8	59.1 \pm 2.2
Sep. 6	125.1 \pm 4.4	95.7 \pm 2.0*	95.9 \pm 3.4	88.1 \pm 1.9	56.4 \pm 2.1	62.7 \pm 2.6	711.0 \pm 24.9	1187.7 \pm 35.6	1437.9 \pm 50.3	1578.5 \pm 33.1	51.6 \pm 1.8	59.2 \pm 1.2
Sep. 20	116.4 \pm 3.4	95.3 \pm 3.1*	101.5 \pm 2.9	104.9 \pm 3.4*	66.2 \pm 1.9	62.6 \pm 2.6	708.6 \pm 20.5	966.6 \pm 29.0	1436.9 \pm 25.9	1586.6 \pm 66.6	53.6 \pm 1.6	60.4 \pm 1.9
Oct. 4	94.9 \pm 1.5	60.8 \pm 1.1	90.0 \pm 1.4	105.7 \pm 1.9*	60.8 \pm 0.8	65.1 \pm 2.7	690.0 \pm 11.0	1231.9 \pm 33.3	1410.1 \pm 36.7	1409.1 \pm 38.0	54.4 \pm 0.9	58.4 \pm 1.1
Oct. 19	88.5 \pm 3.7	50.9 \pm 2.2	86.2 \pm 3.6	95.4 \pm 4.1	69.7 \pm 2.3	67.7 \pm 0.8	962.3 \pm 32.7	984.2 \pm 35.4	1483.1 \pm 50.4	1414.8 \pm 36.8	67.7 \pm 2.8	63.1 \pm 2.7
Nov. 1	97.9 \pm 3.1	48.0 \pm 0.9	100.3 \pm 3.2	91.8 \pm 1.7	76.8 \pm 2.2	67.8 \pm 2.0	1037.7 \pm 15.6	1106.3 \pm 36.5	1635.4 \pm 24.5	1383.1 \pm 18.0	69.9 \pm 2.2	65.6 \pm 1.2
Nov. 16	93.0 \pm 2.7	51.7 \pm 1.7	97.9 \pm 2.8	67.7 \pm 2.2	77.6 \pm 1.8	68.4 \pm 1.2	1072.9 \pm 31.1	968.8 \pm 32.0	1890.9 \pm 60.5	1519.1 \pm 34.9	68.5 \pm 2.0	63.0 \pm 2.1
Nov. 29	91.2 \pm 1.6	50.7 \pm 1.8	83.8 \pm 1.4	70.8 \pm 2.5	73.5 \pm 1.3	84.1 \pm 1.9*	1057.2 \pm 44.4	1305.9 \pm 56.2	1634.2 \pm 68.6	1735.1 \pm 39.9*	69.8 \pm 1.2	71.2 \pm 2.5*
Dec. 13	79.8 \pm 3.4	45.0 \pm 0.9	78.1 \pm 3.3	50.4 \pm 1.0	77.2 \pm 1.7	73.8 \pm 2.9	1367.1 \pm 43.7*	1114.2 \pm 21.2	1538.1 \pm 52.3	1390.3 \pm 26.4	74.0 \pm 3.1	62.0 \pm 1.2
Dec. 28	62.8 \pm 3.1	50.5 \pm 1.2	64.0 \pm 3.1	51.3 \pm 1.2	73.7 \pm 2.1	76.7 \pm 1.8	1310.6 \pm 57.7*	1220.8 \pm 15.9	1465.6 \pm 42.5	1380.7 \pm 45.6	74.9 \pm 3.7	62.0 \pm 1.5

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S5. Contents of quercetin glycosides ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Rutin		Hyperoside		Isoquercitrin		Reynoutrin		Guaiaverin		Avicularin	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	727.4 \pm 12.4	444.0 \pm 12.4	2573.7 \pm 43.8	1906.1 \pm 34.3	751.3 \pm 39.1	640.6 \pm 6.4	592.5 \pm 10.1	507.5 \pm 9.1	1062.4 \pm 18.1	911.4 \pm 16.4	3379.9 \pm 98.0	2286.0 \pm 75.4
Jan. 24	806.0 \pm 33.9	676.5 \pm 24.4	2625.6 \pm 110.3	2019.2 \pm 72.7	801.2 \pm 17.6	680.7 \pm 19.7	567.4 \pm 23.8	546.7 \pm 19.7	1146.9 \pm 48.2	925.2 \pm 24.1	3126.0 \pm 146.9	2159.2 \pm 54.0
Feb. 7	853.9 \pm 27.3	692.2 \pm 27.0	2734.7 \pm 114.9	1926.9 \pm 55.9	712.3 \pm 21.4	888.4 \pm 9.8*	626.5 \pm 26.3	581.8 \pm 16.9	1177.7 \pm 49.5	849.1 \pm 24.6	3500.9 \pm 115.5	2182.6 \pm 63.3
Feb. 21	907.1 \pm 26.3	715.1 \pm 23.6	2876.8 \pm 83.4	1780.9 \pm 58.8	727.5 \pm 32.7	645.2 \pm 15.5	680.0 \pm 19.7	528.7 \pm 17.4	1431.2 \pm 41.5	872.5 \pm 20.1	3783.5 \pm 87.6*	2153.4 \pm 49.5
Mar. 7	947.1 \pm 35.0	670.1 \pm 12.1	3240.0 \pm 119.9*	1703.0 \pm 47.7	747.2 \pm 26.2	631.2 \pm 7.6	671.3 \pm 24.8	441.1 \pm 7.9	1568.9 \pm 73.7	783.1 \pm 21.9	2881.9 \pm 49.0	1842.8 \pm 33.2
Mar. 21	1220.3 \pm 36.6	696.8 \pm 17.4	3754.9 \pm 127.7*	1794.8 \pm 44.9	819.0 \pm 37.7	642.3 \pm 28.9	841.3 \pm 28.6*	412.7 \pm 6.2	1770.2 \pm 77.9*	829.0 \pm 12.4	2914.4 \pm 122.4	1945.1 \pm 48.6
Apr. 4	1202.9 \pm 36.1	667.1 \pm 16.7	2722.9 \pm 81.7	1529.9 \pm 38.2	739.6 \pm 23.7	622.5 \pm 17.4	628.1 \pm 26.4	398.8 \pm 10.0	1305.1 \pm 39.2	710.2 \pm 17.8	2911.7 \pm 87.3	1698.2 \pm 25.5
Apr. 17	1095.2 \pm 32.9	751.4 \pm 12.8	2262.4 \pm 67.9	1489.9 \pm 25.3	813.4 \pm 34.2	686.6 \pm 24.7	551.2 \pm 16.5	413.1 \pm 7.0	1101.8 \pm 45.2	817.5 \pm 13.9	2558.0 \pm 107.4	2039.2 \pm 55.1
May 1	1054.4 \pm 26.4	681.4 \pm 20.4	867.5 \pm 21.7	1514.3 \pm 45.4	303.2 \pm 3.6	516.0 \pm 20.1	223.2 \pm 3.3	408.0 \pm 16.7	432.8 \pm 6.5	775.7 \pm 32.6	992.3 \pm 15.9	2050.7 \pm 71.8
May 15	1186.1 \pm 22.5	670.6 \pm 7.4	823.1 \pm 15.6	1967.2 \pm 21.6	763.5 \pm 14.5	596.4 \pm 19.7	267.9 \pm 5.1	438.7 \pm 9.2	441.8 \pm 8.4	897.7 \pm 27.8	1065.5 \pm 19.2	2072.0 \pm 31.1
May 29	1314.1 \pm 32.9	613.0 \pm 14.1	974.3 \pm 24.4	1986.9 \pm 49.7	819.6 \pm 27.0	546.4 \pm 9.3	245.0 \pm 6.1	437.7 \pm 15.3	488.7 \pm 12.2	822.6 \pm 20.6	1130.6 \pm 44.1	2042.3 \pm 61.3
Jun. 13	2312.4 \pm 71.7*	726.5 \pm 34.1	1052.3 \pm 31.6	1870.1 \pm 35.5	1436.5 \pm 44.5*	547.3 \pm 8.8	221.6 \pm 6.6	480.8 \pm 9.1	455.5 \pm 13.7	856.1 \pm 24.8	1098.5 \pm 27.5	2073.1 \pm 47.7
Jun. 28	2218.8 \pm 119.8*	723.6 \pm 26.8	1051.2 \pm 11.6	1963.2 \pm 49.1	1204.3 \pm 20.5	550.6 \pm 8.3	224.7 \pm 2.5	485.9 \pm 17.0	413.8 \pm 4.6	918.0 \pm 32.1	1161.5 \pm 52.3	2120.2 \pm 33.9
Jul. 15	1518.2 \pm 42.5	726.0 \pm 25.4	1039.7 \pm 15.6	1880.3 \pm 67.7	1068.3 \pm 36.3	682.1 \pm 13.0	272.4 \pm 7.9	485.8 \pm 7.3	435.5 \pm 6.5	876.7 \pm 31.6	1101.0 \pm 31.9	2017.1 \pm 86.7
Jul. 29	1524.4 \pm 59.5	704.1 \pm 14.8	1141.8 \pm 43.4	2017.1 \pm 44.4	1108.2 \pm 38.8	657.8 \pm 8.6	256.2 \pm 10.0	463.6 \pm 9.7	500.2 \pm 19.0	932.1 \pm 20.5	1035.7 \pm 36.2	2114.2 \pm 48.6
Aug. 11	1597.9 \pm 39.9	674.3 \pm 15.5	2123.8 \pm 74.3	1926.8 \pm 28.9	1110.5 \pm 18.9	627.7 \pm 11.3	409.9 \pm 6.1	371.7 \pm 8.5	927.4 \pm 29.7	904.6 \pm 13.6	2045.2 \pm 83.9	2201.1 \pm 59.4
Aug. 24	1598.4 \pm 24.0	768.7 \pm 27.7	2057.5 \pm 57.6	1992.8 \pm 29.9	1075.9 \pm 26.9	730.8 \pm 8.0	445.9 \pm 6.7	476.4 \pm 17.1	993.2 \pm 27.8	879.6 \pm 13.2	2161.3 \pm 73.5	2040.9 \pm 34.7
Sep. 6	1573.9 \pm 59.8	1026.4 \pm 22.6*	2347.5 \pm 91.6	2347.3 \pm 49.3	1078.8 \pm 20.5	734.6 \pm 18.4	458.4 \pm 17.4	516.2 \pm 11.4	1027.5 \pm 29.8	1054.5 \pm 43.2	2233.3 \pm 78.2	2085.9 \pm 43.8
Sep. 20	1463.6 \pm 42.4	959.7 \pm 40.3*	2717.2 \pm 78.8	2314.7 \pm 97.2	1190.4 \pm 39.3	735.2 \pm 12.5	578.6 \pm 16.8	554.2 \pm 23.3	1048.2 \pm 40.9	966.9 \pm 40.6	2769.4 \pm 108.0	2109.8 \pm 67.5
Oct. 4	1224.4 \pm 19.6	842.5 \pm 31.2	2540.2 \pm 61.0	2257.3 \pm 38.4	1046.4 \pm 18.8	723.7 \pm 10.9	561.0 \pm 13.5	532.8 \pm 22.4	1210.7 \pm 29.1	974.4 \pm 16.6	2660.6 \pm 42.6	2315.3 \pm 41.7
Oct. 19	1160.4 \pm 39.5	823.6 \pm 29.6	2800.4 \pm 123.2	2190.0 \pm 78.8	1018.6 \pm 21.4	680.3 \pm 12.9	633.6 \pm 14.6	538.5 \pm 11.8	1281.7 \pm 56.4	985.0 \pm 35.5	3022.3 \pm 126.9	2413.5 \pm 55.5
Nov. 1	1283.1 \pm 19.2	772.8 \pm 25.5	2826.0 \pm 98.9	2277.4 \pm 29.6	1066.0 \pm 32.0	698.6 \pm 10.5	703.6 \pm 27.4	503.0 \pm 14.6	1293.2 \pm 45.3	1032.9 \pm 13.4	3273.3 \pm 104.7	2498.0 \pm 47.5
Nov. 16	1202.0 \pm 34.9	772.3 \pm 25.5	2843.8 \pm 139.3	2453.2 \pm 81.0*	1123.4 \pm 25.8	651.3 \pm 9.8	679.9 \pm 22.4	539.5 \pm 9.2	1396.2 \pm 68.4	1068.5 \pm 35.3	3165.7 \pm 91.8	2683.0 \pm 88.5*
Nov. 29	1039.5 \pm 43.7	734.3 \pm 31.6	2790.7 \pm 117.2	2583.8 \pm 59.4*	1046.1 \pm 46.0	721.7 \pm 7.9	647.9 \pm 27.2	651.3 \pm 15.0*	1221.9 \pm 51.3	1226.4 \pm 15.9*	3172.5 \pm 149.1	2793.7 \pm 69.9*
Dec. 13	1006.5 \pm 32.2	521.4 \pm 20.3	2778.9 \pm 88.9	1435.5 \pm 56.0	973.5 \pm 24.3	683.7 \pm 11.6	640.5 \pm 26.9	561.0 \pm 16.3	1141.3 \pm 36.5	1241.2 \pm 48.4*	3122.2 \pm 131.1	2355.7 \pm 54.2
Dec. 28	692.2 \pm 20.1	502.5 \pm 6.5	2526.2 \pm 73.3	1624.2 \pm 21.1	821.4 \pm 20.5	721.4 \pm 10.1	561.3 \pm 16.3	560.7 \pm 7.3	1158.4 \pm 33.6	902.1 \pm 11.7	3530.1 \pm 113.0	2520.1 \pm 47.9

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S6. Contents of triterpenoid acids and sterols ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Maslinic acid		Corosolic acid		Betulinic acid		Oleanolic acid		Ursolic acid		β -Sitosterol	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	138.8 \pm 2.4	136.9 \pm 5.2	68.9 \pm 1.2	111.0 \pm 4.2	15.7 \pm 0.5	31.8 \pm 1.1	107.9 \pm 1.8	121.3 \pm 2.2	504.3 \pm 18.7	356.7 \pm 6.4	221.4 \pm 3.8	105.7 \pm 1.9
Jan. 24	128.6 \pm 5.4	136.8 \pm 4.9	81.2 \pm 1.8*	152.7 \pm 5.5*	16.4 \pm 0.2	22.3 \pm 0.8	96.2 \pm 4.0	109.2 \pm 4.3	486.7 \pm 20.4	435.9 \pm 15.7	200.1 \pm 8.4	118.4 \pm 3.1
Feb. 7	128.6 \pm 4.1	129.8 \pm 5.1	75.4 \pm 2.4	92.4 \pm 3.6	7.6 \pm 0.3	12.9 \pm 0.1	94.8 \pm 3.0	75.5 \pm 2.2	380.8 \pm 12.2	454.4 \pm 13.2	140.1 \pm 5.9	146.6 \pm 4.3
Feb. 21	120.1 \pm 3.5	132.8 \pm 4.4	59.1 \pm 1.7	95.8 \pm 3.2	5.6 \pm 0.1	13.9 \pm 0.5	69.1 \pm 2.0	83.1 \pm 2.7	366.1 \pm 7.0	461.2 \pm 15.2	137.1 \pm 2.6	161.8 \pm 3.7
Mar. 7	122.5 \pm 4.5	126.6 \pm 6.1	51.5 \pm 1.9	88.1 \pm 1.6	NQ	NQ	55.5 \pm 2.1	96.9 \pm 1.7	317.0 \pm 5.4	453.4 \pm 12.7	109.4 \pm 3.0	163.9 \pm 4.6
Mar. 21	119.5 \pm 3.6	121.7 \pm 3.0	52.5 \pm 1.7	41.0 \pm 0.6	NQ	NQ	49.8 \pm 1.5	93.9 \pm 2.3	303.7 \pm 9.1	468.1 \pm 11.7	102.5 \pm 4.5	153.8 \pm 2.3
Apr. 4	126.6 \pm 1.6	135.5 \pm 3.9	48.4 \pm 1.5	44.5 \pm 1.1	NQ	NQ	49.5 \pm 1.5	105.4 \pm 2.6	306.3 \pm 10.1	503.4 \pm 19.6	101.0 \pm 2.6	141.0 \pm 3.5
Apr. 17	111.7 \pm 3.7	141.6 \pm 5.9	34.5 \pm 1.0	47.4 \pm 0.8	NQ	NQ	45.5 \pm 1.4	117.4 \pm 2.0	294.7 \pm 9.7	543.3 \pm 22.8	109.3 \pm 4.5	141.6 \pm 2.4
May 1	73.3 \pm 3.2	98.5 \pm 2.2	28 \pm 0.7	46.4 \pm 1.4	NQ	NQ	42.8 \pm 1.1	119.8 \pm 3.6	270.9 \pm 11.7	624.9 \pm 13.7	76.7 \pm 1.2	143.8 \pm 4.6
May 15	61.9 \pm 1.4	80.6 \pm 2.3	29.2 \pm 0.6	58.1 \pm 1.7	NQ	NQ	49.6 \pm 0.9	103.5 \pm 3.1	297.4 \pm 6.5	569.2 \pm 22.2	62.7 \pm 1.2	153.5 \pm 4.8
May 29	16.2 \pm 0.4	23.6 \pm 0.5	8.5 \pm 0.2	44.2 \pm 1.0	NQ	NQ	49.4 \pm 1.2	106.4 \pm 2.4	181.0 \pm 5.4	588.2 \pm 13.5	52.6 \pm 1.3	162.0 \pm 5.7
Jun. 13	3.2 \pm 0.1	36.6 \pm 1.6	9.7 \pm 0.3	59.9 \pm 2.9	NQ	NQ	62.3 \pm 0.7	99.8 \pm 4.7	286.2 \pm 8.9	624.5 \pm 28.1	196.1 \pm 4.1	207.8 \pm 8.1
Jun. 28	4.8 \pm 0.2	45.8 \pm 1.2	8.8 \pm 0.2	62.7 \pm 2.9	NQ	NQ	64.8 \pm 2.2	111.9 \pm 5.3	363.4 \pm 8.7	647.2 \pm 17.5	221.0 \pm 6.9	200.3 \pm 7.0
Jul. 15	6.3 \pm 0.2	45.6 \pm 1.6	10.6 \pm 0.2	85.9 \pm 2.1	NQ	NQ	70.6 \pm 1.3	117.9 \pm 2.9	369.5 \pm 6.7	658.9 \pm 29.7	228.4 \pm 8	192.1 \pm 3.1
Jul. 29	10.0 \pm 0.2	52.2 \pm 1.4	10.4 \pm 0.3	86.5 \pm 2.6	NQ	NQ	74.3 \pm 2.2	120.6 \pm 3.6	374.9 \pm 6.0	638.0 \pm 17.2	246.5 \pm 9.4	218.0 \pm 4.8
Aug. 11	17.7 \pm 0.5	48.7 \pm 1.8	22.4 \pm 0.6	76.1 \pm 1.8	NQ	8.5 \pm 0.4	80.3 \pm 2.0	131.0 \pm 3.7	447.6 \pm 13.9	636.1 \pm 22.9	244.8 \pm 7.8	208.9 \pm 3.1
Aug. 24	18.9 \pm 0.3	36.8 \pm 1.3	19.3 \pm 0.3	79.4 \pm 2.9	NQ	9.8 \pm 0.3	82.7 \pm 1.2	132.9 \pm 2.1	474.6 \pm 7.1	685.7 \pm 24.7	226.2 \pm 6.3	206.3 \pm 3.1
Sep. 6	16.1 \pm 0.4	36.2 \pm 1.1	22.2 \pm 0.8	95.2 \pm 3.5	NQ	10.7 \pm 0.3	78.8 \pm 1.2	142.6 \pm 3.0	453.9 \pm 15.9	690.7 \pm 20.7	245.9 \pm 7.1	255.1 \pm 10.5
Sep. 20	17.7 \pm 0.5	41.2 \pm 1.7	21.5 \pm 0.6	98.2 \pm 4.1	13.1 \pm 0.3	21.3 \pm 0.8	93.0 \pm 2.7	139.9 \pm 5.9	500.9 \pm 9.0	697.9 \pm 29.3	259.3 \pm 10.1	252.9 \pm 10.6
Oct. 4	15.9 \pm 0.3	43.3 \pm 1.6	27.8 \pm 0.4	88.0 \pm 3.3	14.1 \pm 0.3	21.2 \pm 0.5	99.3 \pm 1.6	164.6 \pm 6.1	505.7 \pm 8.1	832.1 \pm 30.8	267.8 \pm 3.7	294.6 \pm 5.0
Oct. 19	18.2 \pm 0.6	76.3 \pm 2.7	25.7 \pm 0.9	84.8 \pm 3.1	11.2 \pm 0.3	30.1 \pm 0.8	101.2 \pm 3.4	191.7 \pm 6.9*	554.9 \pm 18.9	902.7 \pm 32.5*	276.2 \pm 12.2	390.7 \pm 18.0*
Nov. 1	43.0 \pm 0.6	67.6 \pm 2.2	30.4 \pm 0.5	81.0 \pm 2.7	12.8 \pm 0.3	28.0 \pm 0.8	102.6 \pm 1.5	185.0 \pm 6.1*	582.2 \pm 8.7*	834.8 \pm 27.5	294.3 \pm 4.4	375.5 \pm 12.4*
Nov. 16	62.1 \pm 1.8	81.6 \pm 2.7	36.3 \pm 1.1	100.2 \pm 3.3	18.6 \pm 0.2	29.2 \pm 0.5	102.2 \pm 3.0	170.5 \pm 7.6	559.9 \pm 16.2	754.2 \pm 24.9	431.2 \pm 21.1*	351.2 \pm 8.1
Nov. 29	64.6 \pm 2.7	154.3 \pm 7.4	60.4 \pm 1.9	100.3 \pm 4.3	21.3 \pm 0.5	29.8 \pm 0.9	104.3 \pm 4.0	178.1 \pm 7.7	587.7 \pm 24.7*	722.6 \pm 31.1	401.7 \pm 16.9*	314.8 \pm 4.1
Dec. 13	104.6 \pm 3.3	174.3 \pm 3.8*	56.4 \pm 1.8	90.6 \pm 3.5	33.7 \pm 1.0*	54.8 \pm 1.4*	125.7 \pm 2.8*	169.3 \pm 6.6	606.6 \pm 19.4*	729.6 \pm 28.5	307.4 \pm 12.9	243.6 \pm 9.5
Dec. 28	155.0 \pm 7.6*	136.9 \pm 4.5	69.3 \pm 2.0	88.8 \pm 3.8	29.8 \pm 0.6*	50.8 \pm 1.5*	124.6 \pm 3.6*	142.4 \pm 6.1	499.9 \pm 14.5	526.0 \pm 17.4	277.0 \pm 8.0	159.1 \pm 2.1

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples. NQ—not quantified (amount below LOQ).

Table S7. Contents of neutral triterpenoids ($\mu\text{g/g DW} \pm \text{SD}$) in young and old lingonberry leaves, collected throughout one year.

Date	Betulin		Erythrodiol		Uvaol		Lupeol		α -Amyrin		β -Amyrin		Friedelin	
	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves	Young leaves	Old leaves
Jan. 11	192.7 \pm 3.3	131.5 \pm 2.4	78.4 \pm 1.3	95.5 \pm 2.7	110.0 \pm 4.6	129.4 \pm 1.3	57.9 \pm 0.9	118.8 \pm 3	760.6 \pm 14.5*	456.8 \pm 15.1	82.2 \pm 1.4	52.3 \pm 0.9	127.5 \pm 6.0*	38.0 \pm 1.1
Jan. 24	206.5 \pm 8.7	92.5 \pm 2.4	78.4 \pm 3.3	107.0 \pm 3.9*	124.5 \pm 2.7*	125.6 \pm 3.6	41.4 \pm 1.4	74.2 \pm 2.2	801.8 \pm 37.7*	874.5 \pm 21.9	91.6 \pm 3.8	91.5 \pm 3.3	93.1 \pm 3.9	51.2 \pm 1.8
Feb. 7	138.2 \pm 4.4	92.0 \pm 3.6	36.9 \pm 1.2	47.9 \pm 1.9	74.8 \pm 2.2	143.0 \pm 1.6	26.0 \pm 0.9	8.1 \pm 0.2	781.8 \pm 25.8*	857.9 \pm 24.9	79.0 \pm 3.3	89.4 \pm 2.6	64.6 \pm 2.1	61.5 \pm 1.8
Feb. 21	141.9 \pm 4.1	106.6 \pm 3.5	24.6 \pm 0.7	42.8 \pm 1.4	33.8 \pm 0.8	142.8 \pm 3.4	21.6 \pm 0.8	10.1 \pm 0.1	721.5 \pm 28.1	697.0 \pm 16.0	68.5 \pm 2.0	94.7 \pm 3.1	60.7 \pm 1.8	75.5 \pm 2.5
Mar. 7	104.9 \pm 3.9	90.7 \pm 1.6	19.3 \pm 0.7	43.1 \pm 1.6	31.6 \pm 0.8	151.5 \pm 1.8	17.1 \pm 0.3	10.5 \pm 0.2	496.5 \pm 8.4	911.5 \pm 16.4	58.5 \pm 1.6	94.4 \pm 1.7	51.7 \pm 1.9	68.7 \pm 1.2
Mar. 21	99.0 \pm 3.0	92.4 \pm 2.3	14.6 \pm 0.4	17.8 \pm 0.4	24.5 \pm 1.1	166.4 \pm 7.5	18.6 \pm 0.4	21.0 \pm 0.5	481.4 \pm 20.2	975.8 \pm 24.4	59.1 \pm 2.0	107.1 \pm 1.6	41.9 \pm 1.3	65.7 \pm 1.6
Apr. 4	102.9 \pm 3.1	90.8 \pm 2.3	14.9 \pm 0.3	20.3 \pm 0.5	30.8 \pm 1.0	155.6 \pm 4.4	21.3 \pm 0.6	23.4 \pm 0.6	435.2 \pm 13.1	979.1 \pm 14.7	63.5 \pm 2.7	118.9 \pm 3.0	63.7 \pm 1.4	70.7 \pm 1.8
Apr. 17	100.1 \pm 3.0	103.4 \pm 1.8	14.1 \pm 0.4	41.3 \pm 0.7	28.8 \pm 1.2	154.1 \pm 5.5	21.9 \pm 0.7	36.0 \pm 1.0	279.0 \pm 11.7	955.6 \pm 25.8	50.5 \pm 1.2	117.3 \pm 2.0	43.4 \pm 1.3	75.8 \pm 1.3
May 1	81.3 \pm 2.0	102.3 \pm 3.1	13.4 \pm 0.3	54.6 \pm 1.6	23.6 \pm 0.3	163.1 \pm 6.4	20.7 \pm 0.7	46.9 \pm 1.4	297.0 \pm 4.8	1059.0 \pm 26.5	42.5 \pm 0.6	111.8 \pm 4.6	35.4 \pm 0.9	66.0 \pm 2.0
May 15	93.9 \pm 1.8	82.9 \pm 0.9	12.9 \pm 0.2	33.8 \pm 0.4	22.0 \pm 0.4	116.7 \pm 3.8	13.2 \pm 0.3	48.0 \pm 1.4	297.9 \pm 5.4	870.1 \pm 13.1	46.2 \pm 0.9	106.1 \pm 2.2	25.4 \pm 0.5	71.4 \pm 1.1
May 29	56.1 \pm 1.4	40.2 \pm 0.9	6.8 \pm 0.2	31.6 \pm 1.1	33.0 \pm 1.1	144.8 \pm 2.5	8.8 \pm 0.3	42.9 \pm 1.0	260.2 \pm 7.5	936.3 \pm 28.1	14.6 \pm 0.4	114.0 \pm 4.0	15.0 \pm 0.5	76.4 \pm 2.1
Jun. 13	64.4 \pm 2.0	42.3 \pm 1.6	5.8 \pm 0.2	27.8 \pm 0.5	26.1 \pm 0.8	133.8 \pm 3.5	12.0 \pm 0.5	36.5 \pm 1.0	239.5 \pm 6.0	1308.9 \pm 43.2	14.7 \pm 0.2	114.3 \pm 2.2	9.7 \pm 0.1	76.6 \pm 2.2
Jun. 28	51.4 \pm 2.8	40.8 \pm 1.5	5.6 \pm 0.1	30.6 \pm 1.1	51.5 \pm 0.9	148.4 \pm 2.2	25.9 \pm 0.6	39.1 \pm 0.7	338.6 \pm 15.2	1341.5 \pm 21.5	16.1 \pm 0.2	131.3 \pm 1.9*	32.0 \pm 0.4	107.7 \pm 3.8
Jul. 15	53.2 \pm 1.5	28.0 \pm 1.0	5.0 \pm 0.1	34.6 \pm 1.2	50.8 \pm 1.7	128.6 \pm 5	22.1 \pm 0.4	47.8 \pm 0.7	345.7 \pm 10.0	1327.6 \pm 57.1	18.4 \pm 0.5	107.5 \pm 1.6	43.9 \pm 1.0	93.0 \pm 2.9
Jul. 29	47.7 \pm 1.9	44.8 \pm 0.9	4.8 \pm 0.2	37.1 \pm 0.8	46.6 \pm 1.2	128.4 \pm 4.2	22.9 \pm 0.9	65.5 \pm 2.0	300.3 \pm 10.5	1389.5 \pm 32.0	17.2 \pm 0.7	107.5 \pm 2.3	42.6 \pm 0.7	93.0 \pm 3.2
Aug. 11	65.9 \pm 1.6	46.7 \pm 1.1	6.2 \pm 0.2	37.3 \pm 0.6	44.5 \pm 0.8	136.5 \pm 2.5	29.9 \pm 0.7	59.9 \pm 1.4	368.0 \pm 15.1	1336.0 \pm 36.1	30.0 \pm 0.4	120.6 \pm 2.8	66.1 \pm 1.1	104.0 \pm 2.4
Aug. 24	63.7 \pm 1.6	45.5 \pm 0.7	36.8 \pm 0.7	35.6 \pm 1.2	54.9 \pm 1.4	151.9 \pm 4.7	36.4 \pm 0.9	70.3 \pm 2.5	381.6 \pm 13.0	1417.1 \pm 24.1	30.6 \pm 0.5	122.2 \pm 4.4	72.1 \pm 1.1	101.8 \pm 3.7
Sep. 6	53.0 \pm 1.0	53.2 \pm 2.2	42.3 \pm 1.2	80.3 \pm 1.7	55.8 \pm 1.1	272.7 \pm 6.8*	42.4 \pm 1.1	83.6 \pm 1.8	366.6 \pm 9.2	1954.7 \pm 60.6*	32.0 \pm 1.2	126.8 \pm 2.4	71.6 \pm 1.8	143.3 \pm 4.7
Sep. 20	80.1 \pm 2.3	67.6 \pm 1.5	51.3 \pm 1.5	96.0 \pm 4.0	68.0 \pm 2.2	278.6 \pm 9.9*	54.3 \pm 1.6	84.6 \pm 3.6	469.4 \pm 18.3	1450.0 \pm 46.4	45.2 \pm 1.3	119.7 \pm 5.0	82.7 \pm 1.6	141.8 \pm 4.3
Oct. 4	83.3 \pm 1.3	71.0 \pm 1.2	49.8 \pm 1.2	98.2 \pm 1.7	69.0 \pm 1.2	267.0 \pm 6.7*	53.4 \pm 0.9	88.4 \pm 1.6	465.8 \pm 7.5	1198.8 \pm 21.6	48.9 \pm 1.2	117.6 \pm 3.8	88.4 \pm 1.4	142.9 \pm 3.9
Oct. 19	120.6 \pm 4.1	101.0 \pm 3.6	59.8 \pm 2.6	109.6 \pm 3.9*	82.5 \pm 1.7	234.8 \pm 4.5	66.1 \pm 2.8	80.9 \pm 3.5	611.8 \pm 13.5	1226.4 \pm 40.5	53.8 \pm 1.2	122.8 \pm 2.7	87.7 \pm 2.1	150.6 \pm 2.4*
Nov. 1	115.8 \pm 2.9	98.2 \pm 1.3	56.3 \pm 1.4	108.1 \pm 3.6*	81.2 \pm 1.8	215.3 \pm 7.5	52.1 \pm 1.7	90.2 \pm 1.7	621.9 \pm 19.9	1324.3 \pm 25.2	72.4 \pm 2.8	120.5 \pm 3.5	83.6 \pm 1.3	141.9 \pm 4.7
Nov. 16	179.3 \pm 5.2	101.8 \pm 3.4	53.3 \pm 2.6	106.7 \pm 3.5*	89.0 \pm 2.0	171.9 \pm 2.6	94.4 \pm 2.7*	145.4 \pm 4.8*	683.9 \pm 19.8	1250.4 \pm 41.3	98.4 \pm 3.2*	107.4 \pm 1.8	87.2 \pm 2.5	93.2 \pm 3.1
Nov. 29	179.3 \pm 7.5	129.1 \pm 4.3	53.4 \pm 1.2	107.3 \pm 3.5*	78.6 \pm 1.9	147.9 \pm 4.6	94.4 \pm 1.6*	141.3 \pm 4.9*	710.8 \pm 33.4	696.2 \pm 17.4	98.6 \pm 4.1*	110.5 \pm 2.5	95.3 \pm 4.0	72.9 \pm 3.1
Dec. 13	272.8 \pm 8.7*	163.7 \pm 3.1*	88.9 \pm 2.8*	93.9 \pm 3.7	98.4 \pm 1.5	131.7 \pm 2.2	96.8 \pm 2.1*	145.4 \pm 5.7*	717.1 \pm 8.6	783.3 \pm 18.0	84.8 \pm 3.6	107.3 \pm 3.1	102.0 \pm 3.3	74.2 \pm 1.4
Dec. 28	201.6 \pm 5.8	138.9 \pm 1.8	85.8 \pm 1.6*	100.8 \pm 3.3	105.3 \pm 1.6	117.3 \pm 1.6	69.0 \pm 2.7	122.5 \pm 5.4	785.9 \pm 25.1*	692.2 \pm 13.2	89.4 \pm 2.6	82.3 \pm 1.1	135.1 \pm 4.6*	63.0 \pm 0.8

Results are presented as means \pm SD of the samples collected at different dates in a certain forest plot. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

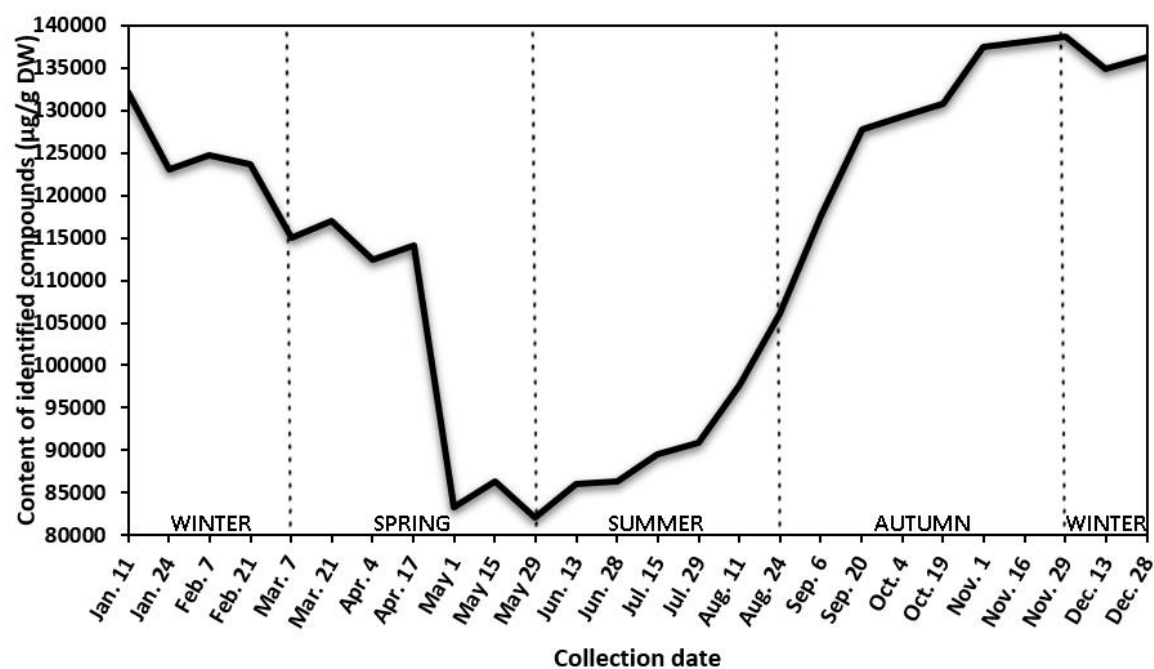


Figure S1. Variation of total identified secondary metabolites (µg/g DW) in lingonberry leaves, collected throughout one year.

Table S8. Contents of simple phenolics and A-type proanthocyanidins ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	Arbutin	Hydroquinone	2-O-Caffeoylarbutin	Procyanidin A1	Procyanidin A2	Procyanidin A4
Apūniškis	65172.6 \pm 1448.0	121.9 \pm 2.5	3375.1 \pm 152.8	5079.8 \pm 36.8	797.4 \pm 52.7	72.9 \pm 3.0
Plunksnuočiai	58029.1 \pm 2840.6	423.2 \pm 14.4*	1564.5 \pm 77.3	4421.8 \pm 169.4	1009.8 \pm 25.6	37.8 \pm 3.9
Šakarva	63442.3 \pm 2851.0	128.6 \pm 2.7	2649.2 \pm 92.3	4515.8 \pm 271.6	1115.3 \pm 72.9	63.8 \pm 1.8
Andrioniškis	62054.5 \pm 2476.8	160.9 \pm 2.9	2078.9 \pm 98.4	3965.0 \pm 251.5	824.0 \pm 66.1	51.5 \pm 2.1
Jurgionys	98000.9 \pm 497.9*	269.3 \pm 16.3	4039.4 \pm 171.3	5025.8 \pm 315.7	1187.7 \pm 66.5	56.1 \pm 3.3
Kernai	70986.5 \pm 1830.9	215.6 \pm 6.7	4288.6 \pm 98.5*	4103.8 \pm 84.1	622.0 \pm 19.4	36.0 \pm 0.8
Žadeikiai	67230.0 \pm 3094.0	83.7 \pm 2.6	3265.8 \pm 193.4	4082.7 \pm 226.1	802.9 \pm 45.0	62.1 \pm 3.6
Galvokai	75229.3 \pm 1447.8	92.3 \pm 0.3	4507.0 \pm 239.3*	3592.1 \pm 60.9	334.9 \pm 0.8	25.4 \pm 0.4
Giteniškė	59305.5 \pm 1944.2	449.6 \pm 2.1*	842.7 \pm 36.7	4943.0 \pm 182.7	722.3 \pm 18.7	99.9 \pm 3.7*
Šalčininkėliai	67886.3 \pm 2689.8	93.2 \pm 0.1	2338.2 \pm 73.9	4573.5 \pm 168.8	762.2 \pm 38.6	67.9 \pm 2.6
Bitėnai	46681.1 \pm 423.1	217.8 \pm 0.9	1742.4 \pm 18.7	3411.4 \pm 22.3	540.1 \pm 18.1	31.0 \pm 0.4
Pagramantis	70039.5 \pm 1212.1	92.6 \pm 2.9	2517.5 \pm 53.1	3298.2 \pm 2.6	4677.8 \pm 0.3*	68.5 \pm 2.1
Kūprė	54883.3 \pm 1653.7	260.9 \pm 13.2	1481.6 \pm 13.9	4927.3 \pm 118.1	682.9 \pm 4.4	95.6 \pm 4.1
Brūknyne	78305.7 \pm 2069.3	144.6 \pm 5.9	2886 \pm 133.9	5235.8 \pm 97.3*	959.5 \pm 51.6	78.0 \pm 4.9
Viršilai	68555.9 \pm 743.6	179.0 \pm 3.9	1902.9 \pm 51.1	5193.5 \pm 158.7*	1125.0 \pm 42.6	53.3 \pm 0.9
Labanoras (a)	61384.8 \pm 811.0	259.4 \pm 7.5	40.7 \pm 0.1	3985.0 \pm 59.5	1661.7 \pm 42.5	96.6 \pm 4.0*
Labanoras (b)	65985.3 \pm 859.9	141.5 \pm 2.6	3117.3 \pm 118.7	4669.9 \pm 60.8	936.0 \pm 20.5	84.3 \pm 3.3
Komarinė	51452.3 \pm 616.9	210.9 \pm 1.4	1581.8 \pm 34.7	3829.6 \pm 37.3	662.3 \pm 2.5	37.4 \pm 1.5
Marcinkonys	58928.3 \pm 2507.3	246.6 \pm 5.2	1583.7 \pm 58.1	4000.9 \pm 23.3	782.2 \pm 4.6	47.4 \pm 2.3
Šilainė	70974 \pm 3069.6	289.8 \pm 14.2	525.9 \pm 28.4	5060.3 \pm 182.6	625.1 \pm 10.0	88.8 \pm 5.1
Smėlynė	75292.1 \pm 4063.1	123.6 \pm 6.9	3252.9 \pm 13.6	4748.3 \pm 192.9	1680.1 \pm 73.4	85.3 \pm 0.5
Ilgalaukiai	64711.6 \pm 2566.1	235.2 \pm 12.2	2572.0 \pm 67.1	5723.2 \pm 243.0*	1271.1 \pm 66.7	76.7 \pm 5.2
Vosniūnai	70645.2 \pm 2058.3	72.3 \pm 1.5	3526.4 \pm 120.2	4621.1 \pm 77.6	508.2 \pm 16.3	63.1 \pm 0.8
Kukuliškiai	61503.5 \pm 2353.3	173.3 \pm 8.9	1507.6 \pm 66.1	4426.7 \pm 207.9	630.3 \pm 43.9	44.3 \pm 2.4
Tolkūnai	85325.6 \pm 2614.3	190.1 \pm 5.4	3015.7 \pm 131.2	5096.4 \pm 208.5	1220.6 \pm 99.8	85.8 \pm 1.8
Bakūriškis	70383.1 \pm 2201.9	231.9 \pm 5.2	3394.7 \pm 115.7	2474.9 \pm 86.1	2280.1 \pm 120.2	44.0 \pm 1.3
Šilinė	62953.5 \pm 1657.3	215.4 \pm 5.0	1874.8 \pm 85.3	3553.1 \pm 84.1	499.6 \pm 3.9	36.2 \pm 1.5
Tyrelis	71061.4 \pm 1029.7	139.5 \pm 2.0	2684.5 \pm 75.3	3257.1 \pm 92.2	4546.9 \pm 88.6*	107.9 \pm 4.4*
Pažemys	40280.9 \pm 1071.5	152.9 \pm 1.5	1403.5 \pm 68.5	4411.7 \pm 130.2	625.7 \pm 16.7	62.3 \pm 1.0

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S9. Contents of catechins and B-type proanthocyanidins ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	(+)-Catechin	(-)-Epicatechin	Procyanidin B1	Procyanidin B2	Procyanidin B3	Procyanidin C1
Apūniškis	13297.9 \pm 124.7*	3375.1 \pm 152.8	5810.5 \pm 23.7*	2294.4 \pm 63.0	6874.0 \pm 214.4*	4130.0 \pm 148.6
Plunksnuočiai	6652.1 \pm 158.9	1564.5 \pm 77.3	3118.3 \pm 82.1	2079.4 \pm 41.4	4209.0 \pm 213.8	2929.4 \pm 138.9
Šakarva	9848.1 \pm 397.9	2649.2 \pm 15.5	4422.0 \pm 28.6	2597.2 \pm 107.1	4975.3 \pm 160.1	3024.7 \pm 195.1
Andrioniškis	7432.6 \pm 189.1	2078.9 \pm 98.4	3325.9 \pm 129.1	2183.5 \pm 43.3	4225.0 \pm 22.4	2762.6 \pm 21.1
Jurgionys	10043.1 \pm 357.6	4039.4 \pm 225.0	3748.7 \pm 147.7	2564.2 \pm 125.8	4240.0 \pm 212.5	3465.8 \pm 44.5
Kernai	7360.1 \pm 48.9	4288.6 \pm 98.5*	5100.0 \pm 182.7	1401.5 \pm 19.1	3624.6 \pm 179.0	2927.1 \pm 4.3
Žadeikiai	11232.0 \pm 119.6	3265.8 \pm 116.6	3243.8 \pm 118.8	2934.2 \pm 153.7	5990.0 \pm 331.2	3307.7 \pm 146
Galvokai	11192.2 \pm 497.8	4506.9 \pm 85.7*	3743.5 \pm 133.5	1428.9 \pm 3.5	5087.3 \pm 88.1	2423.3 \pm 46.6
Giteniškė	9930.6 \pm 235.3	842.7 \pm 36.7	3835.5 \pm 138.6	1283.9 \pm 20.1	4258.7 \pm 201.3	2404.7 \pm 100.4
Šalčininkėliai	12078.2 \pm 428.1	2338.2 \pm 73.9	4248.1 \pm 188.6	2548.7 \pm 62.7	6231.6 \pm 297.1	2861.8 \pm 121.0
Bitėnai	3429.6 \pm 127	1742.4 \pm 18.7	1112.4 \pm 19.7	1430.4 \pm 40.5	2818.6 \pm 16.7	1818.4 \pm 15.1
Pagramantis	7353.1 \pm 253.3	2517.5 \pm 53.1	4843.7 \pm 231.5	6990.2 \pm 129.2*	3822.8 \pm 55.6	4392.1 \pm 80.6
Kūprė	9301.8 \pm 259.8	1481.6 \pm 90.6	5099.7 \pm 207.8	1750.0 \pm 97.1	5937.2 \pm 100.2	3375.7 \pm 162.3
Bruknynė	12828.7 \pm 239.2	2886.0 \pm 133.9	4831.9 \pm 123.8	2874.0 \pm 59.0	6767.8 \pm 83.1*	3293.7 \pm 162.7
Viršilai	7535.7 \pm 227.3	1957.2 \pm 51.2	3842.0 \pm 177.8	1891.5 \pm 63.9	3389.3 \pm 170.6	2433.5 \pm 70.2
Labanoras (a)	9255.6 \pm 26.4	40.7 \pm 0.1	5172.6 \pm 133.0	4281.5 \pm 130.4	5193.4 \pm 89.4	2519.4 \pm 126.6
Labanoras (b)	11614.9 \pm 444.7	3117.2 \pm 42.0	6181.6 \pm 110.4*	2629.2 \pm 49.0	5834.7 \pm 144.6	3837.1 \pm 82.5
Komarinė	6188.1 \pm 154.2	1581.8 \pm 34.7	2853.5 \pm 64.2	1615.7 \pm 33.9	3304.7 \pm 33.1	2529.6 \pm 0.2
Marcinkonys	8306.6 \pm 263.9	1583.7 \pm 58.1	4465.1 \pm 187.2	2599.6 \pm 55.5	4966.6 \pm 44.3	3233.2 \pm 71.8
Šilainė	14101.3 \pm 443.6*	525.9 \pm 28.4	4684.7 \pm 88.3	2403.5 \pm 80.1	7135.9 \pm 202.6*	2894.2 \pm 191.2
Smėlynė	13235.7 \pm 187.9*	3252.9 \pm 90.4	6044.4 \pm 143.5*	3832.2 \pm 168.9	6213.6 \pm 330.9	5053.3 \pm 137.9*
Ilgalaukiai	12446.1 \pm 143.9	2572.0 \pm 67.1	4069.5 \pm 176.9	2479.9 \pm 99.7	5732.8 \pm 125.2	3178.9 \pm 142.6
Vosniūnai	11493.0 \pm 148.5	3526.4 \pm 43.4	4354.3 \pm 98.6	1483.1 \pm 33.6	4640.4 \pm 182.6	3719.1 \pm 95.2
Kadagnai	7637.5 \pm 347.7	1507.6 \pm 66.1	3815.7 \pm 76.4	1640.7 \pm 39.4	4798.2 \pm 242.2	3048.2 \pm 146.4
Tolkūnai	11483.9 \pm 178.1	3015.7 \pm 131.2	4864.7 \pm 119.4	2877.0 \pm 146.7	4870.3 \pm 199.4	4620.5 \pm 59.8*
Bakūriškis	6335.4 \pm 198.9	3394.7 \pm 115.7	3670.7 \pm 149.1	5318.1 \pm 163.1	3690.7 \pm 83.5	4292.3 \pm 234.8
Šilinė	7711.0 \pm 141.8	1847.7 \pm 46.9	4305.2 \pm 50.8	1652.5 \pm 88.8	4717.8 \pm 65.8	2777.6 \pm 122.3
Tyrelis	7951.3 \pm 262.5	2684.5 \pm 75.3	5120.1 \pm 142.6	6883.3 \pm 225.3*	3768.3 \pm 91.3	4237.6 \pm 78.3
Pažemys	10598.9 \pm 148.9	1403.5 \pm 68.5	3418.8 \pm 161.3	1736.4 \pm 69.5	5933.4 \pm 64.3	2697.2 \pm 134.8

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S10. Contents of flavonol aglycones and phenolic acids ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	Quercetin	Kaempferol	Chlorogenic acid	Cryptochlorogenic acid	Neochlorogenic acid	<i>p</i> -Coumaric acid
Apūniškis	69.1 \pm 4.1	3.8 \pm 0.1	553.6 \pm 10.4	1044.5 \pm 11.9	58.0 \pm 1.9	382.9 \pm 20.3*
Plunksnuočiai	58.8 \pm 0.9	ND	3382.1 \pm 115.2*	326.8 \pm 11.7	24.8 \pm 0.2	351.0 \pm 18.1
Šakarva	64.5 \pm 0.2	ND	2223.7 \pm 52.1	405.4 \pm 22.9	30.8 \pm 1.0	287.1 \pm 8.0
Andrioniškis	70.5 \pm 2.0	4.3 \pm 0.1	1176.4 \pm 8.2	936.9 \pm 54.4	47.6 \pm 2.7	214.4 \pm 3.1
Jurgionys	67.2 \pm 3.5	NQ	152.4 \pm 3.4	784.6 \pm 16.7	59.2 \pm 1.1	143.4 \pm 4.4
Kernai	62.3 \pm 0.5	3.8 \pm 0.0	2430.4 \pm 7.8	798.9 \pm 4.4	42.7 \pm 0.1	130.8 \pm 1.5
Žadeikiai	75.8 \pm 1.9	NQ	489.0 \pm 19.3	1008.8 \pm 35.5	109.7 \pm 4.3	129.0 \pm 5.2
Galvokai	71.7 \pm 2.8	ND	464.8 \pm 11.4	1471.1 \pm 14.6	138.4 \pm 0.1	254.2 \pm 6.7
Giteniškė	75.5 \pm 1.7	3.9 \pm 0.1	906.0 \pm 37.7	563.8 \pm 17.3	39.2 \pm 0.5	262.6 \pm 12.5
Šalčininkėliai	73.7 \pm 0.6	4.2 \pm 0.0	745.5 \pm 26.2	963.0 \pm 51.5	90.2 \pm 4.7	271.9 \pm 2.9
Bitėnai	62.5 \pm 0.4	NQ	321.7 \pm 2.9	161.7 \pm 0.9	21.4 \pm 1.4	289.6 \pm 3.4
Pagramantis	64.1 \pm 0.2	ND	1481.8 \pm 10.8	468.1 \pm 3.1	42.8 \pm 0.3	254.3 \pm 1.7
Kūprė	80.1 \pm 3.8	4.2 \pm 0.1	1473.0 \pm 41.3	947.2 \pm 32.4	46.3 \pm 1.4	342.3 \pm 8.4
Bruknynė	77.9 \pm 0.7	4.2 \pm 0.3	723.7 \pm 16.9	998.8 \pm 1.5	97.7 \pm 4.4	295.5 \pm 10.9
Viršilai	62.5 \pm 2.7	NQ	3188.6 \pm 153.0	670.8 \pm 1.3	37.4 \pm 3.0	156.6 \pm 4.0
Labanoras (a)	73.3 \pm 0.2	3.9 \pm 0.2	3510.7 \pm 22.0*	386.1 \pm 0.4	66.7 \pm 2.7	98.1 \pm 0.5
Labanoras (b)	75.6 \pm 0.8	3.9 \pm 0.2	3346.6 \pm 71.9*	453.5 \pm 8	30.6 \pm 0.5	238 \pm 5.7
Komarinė	78.1 \pm 1.3	4.2 \pm 0.2	1690.9 \pm 46.4	450.8 \pm 5.5	32.7 \pm 0.8	179.4 \pm 1.1
Marcinkonys	121.1 \pm 5.9*	7.8 \pm 0.4*	1485.1 \pm 36.7	240.0 \pm 2.5	27.1 \pm 0.2	199.8 \pm 3.1
Šilainė	92.5 \pm 1.3	5.4 \pm 0.2	2104.1 \pm 122.4	598.1 \pm 10.5	38.5 \pm 1.2	365.2 \pm 22.0
Smėlynė	90.6 \pm 1.0	4.1 \pm 0.1	3304.2 \pm 163.9*	1830.1 \pm 20.3*	113.8 \pm 0.7	353.0 \pm 7.4
Ilgalaukiai	69.6 \pm 1.5	4.1 \pm 0.2	799.8 \pm 36.4	991.0 \pm 29.6	44.6 \pm 0.3	245.0 \pm 8.0
Vosniūnai	70.4 \pm 0.9	3.7 \pm 0.2	913.7 \pm 26.8	849.5 \pm 18.0	70.5 \pm 3.4	252.9 \pm 7.5
Kadagynai	73.1 \pm 1.9	4.1 \pm 0.1	2192.5 \pm 89.7	693.6 \pm 21.1	41.0 \pm 2.1	223.9 \pm 4.9
Tolkūnai	82.4 \pm 4.0	4.1 \pm 0.2	395.1 \pm 16.2	470.9 \pm 28.8	46.3 \pm 1.8	411.9 \pm 10.7*
Bakūriškis	94.4 \pm 1.1	4.5 \pm 0.0	151.6 \pm 0.2	1532.4 \pm 32.9	161.7 \pm 1.2*	400.3 \pm 15.5*
Šilinė	72.8 \pm 1.7	3.7 \pm 0.2	500.2 \pm 29.3	1002.4 \pm 9.9	89.7 \pm 5.3	203.4 \pm 10.1
Tyrelis	65.2 \pm 0.4	3.6 \pm 0.1	1157.2 \pm 10.8	543.0 \pm 8.8	38.3 \pm 1.3	270.9 \pm 6.5
Pažemys	85.8 \pm 0.6	4.8 \pm 0.0	1362.7 \pm 63.3	1477.1 \pm 14.3	75.5 \pm 4.3	154.9 \pm 3.4

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples. ND—not detected, NQ—not quantified (amount below LOQ).

Table S11. Contents of kaempferol and quercetin glycosides ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	Nicotiflorin	Astragalin	Afzelin	Quercitrin	Quercetin-HMG-rhamnoside	6''-O-acetylisoquercitrin
Apūniškis	66.6 \pm 3.3	73.8 \pm 4.2	66.8 \pm 2.6	889.9 \pm 45.9	1284.6 \pm 44.7	52.2 \pm 2.5
Plunksnuočiai	3.9 \pm 0.8	10.3 \pm 0.1	37.2 \pm 1.5	637.4 \pm 32.7	1092.3 \pm 48.2	10.4 \pm 0.2
Šakarva	72.5 \pm 2.1	31.4 \pm 1.2	101.2 \pm 1.4	1449.8 \pm 40.2	1197.2 \pm 22.1	26.7 \pm 0.7
Andrioniškis	104.4 \pm 5.3	50.8 \pm 2.6	58.5 \pm 0.1	1005.9 \pm 24.5	1327.0 \pm 40.8	32.5 \pm 1.0
Jurgionys	122.1 \pm 5.9	81.1 \pm 2.5	51.3 \pm 1.3	296.2 \pm 33.9	741.5 \pm 9.8	26.8 \pm 0.6
Kernai	78.7 \pm 5.4	55.5 \pm 2.6	124.1 \pm 4.0	1240.0 \pm 60.7	1685.1 \pm 84.7	21.6 \pm 1.1
Žadeikiai	NQ	21.6 \pm 0.3	47.0 \pm 3.5	1067.6 \pm 16.9	2022.0 \pm 66.3	25.4 \pm 0.9
Galvokai	3.3 \pm 1.8	35.0 \pm 1.5	69.8 \pm 1.5	950.2 \pm 37.9	1392.0 \pm 46.4	20.2 \pm 0.1
Giteniškė	52.0 \pm 2.7	42.8 \pm 2.4	40.9 \pm 2.4	840.9 \pm 42.5	1092.8 \pm 68.1	31.7 \pm 1.2
Šalčininkėliai	78.6 \pm 1.0	61.0 \pm 0.4	70.8 \pm 1.9	974.1 \pm 12.1	1551.9 \pm 33.7	46.6 \pm 2.8
Bitėnai	34.5 \pm 1.2	18.0 \pm 0.0	26.5 \pm 1.1	703.7 \pm 2.3	778.2 \pm 8.7	11.2 \pm 0.1
Pagramantis	87.5 \pm 4.0	60.1 \pm 2.5	63.4 \pm 2.1	840.3 \pm 36.6	1394.2 \pm 50.6	28.9 \pm 1.6
Kūprė	4.1 \pm 0.6	16.9 \pm 0.2	58.5 \pm 3.6	845.1 \pm 28.8	1738.6 \pm 76.6	56.7 \pm 2.6
Bruknynė	98.4 \pm 2.5	70.7 \pm 1.7	74.9 \pm 0.9	967.9 \pm 222.1	1584.2 \pm 21.8	47.9 \pm 0.4
Viršilai	NQ	6.6 \pm 0.7	37.8 \pm 2.9	699.9 \pm 36.9	1214.0 \pm 20.3	18.3 \pm 0.3
Labanoras (a)	49.3 \pm 0.2	32.6 \pm 0.2	89.4 \pm 0.2	3125.3 \pm 17.8*	71.3 \pm 0.9	51.6 \pm 0.2
Labanoras (b)	84.5 \pm 3.1	54.6 \pm 1.6	141.9 \pm 8.1	1962.1 \pm 76.2	898.7 \pm 17.3	46.6 \pm 2.6
Komarinė	157.8 \pm 13.1	79.7 \pm 2.8	56.1 \pm 0.9	980.5 \pm 65.3	1537.4 \pm 28.3	23.9 \pm 0.9
Marcinkonys	187.1 \pm 12.6	89.8 \pm 1.3	96.1 \pm 2.0	1584.3 \pm 88.5	1051.9 \pm 62.4	73.0 \pm 2.7
Šilainė	128.4 \pm 7.5	65.5 \pm 4.0	28.7 \pm 1.6	514.5 \pm 20.1	965.2 \pm 26.3	39.0 \pm 1.4
Smėlynė	329.5 \pm 13.5*	182.7 \pm 5.0	71.6 \pm 0.5	873.4 \pm 47.9	1579.1 \pm 34.8	90.1 \pm 2.0*
Ilgalaukiai	132.0 \pm 3.2	81.3 \pm 7.5	90.4 \pm 3.3	1621.4 \pm 47.5	2005.9 \pm 83.9	32.3 \pm 0.6
Vosniūnai	197.3 \pm 9.6	100.9 \pm 4.6	69.4 \pm 2.3	855.2 \pm 57.5	1288.5 \pm 63.2	36.1 \pm 0.2
Kadagynai	175.8 \pm 6.5	80.4 \pm 3.3	58.9 \pm 2.3	981.6 \pm 13.4	1633.4 \pm 34.7	30.8 \pm 1.8
Tolkūnai	293.5 \pm 4.9	226.9 \pm 5.5*	49.3 \pm 1.1	1607.3 \pm 59.8	1948.8 \pm 61.9	46.4 \pm 0.2
Bakūriškis	NQ	28.3 \pm 1.8	201.0 \pm 2.3*	2437.6 \pm 12.8	2684.9 \pm 12.1*	31.7 \pm 1.0
Šilinė	184.2 \pm 9.9	69.4 \pm 4.0	45.3 \pm 1.5	578.1 \pm 20.0	882.3 \pm 26.6	37.8 \pm 0.7
Tyrelis	78.4 \pm 1.4	54.1 \pm 3.3	58.2 \pm 2.1	710.5 \pm 37.9	1226.4 \pm 60.1	23.7 \pm 0.8
Pažemys	167.2 \pm 5.0	119.5 \pm 2.7	103.9 \pm 3.7	1526.7 \pm 31.4	2127.3 \pm 46.0	79.7 \pm 2.4

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples. NQ—not quantified (amount below LOQ).

Table S12. Contents of quercetin glycosides ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	Rutin	Hyperoside	Isoquercitrin	Reynoutrin	Guaiaverin	Avicularin
Apūniškis	806.4 \pm 57.0	2285.6 \pm 136.3	714.3 \pm 17.9	515.1 \pm 16.8	1043.5 \pm 16.9	2376.2 \pm 69.0
Plunksnuočiai	154.2 \pm 11.4	213.3 \pm 14.1	80.9 \pm 4.6	76.5 \pm 1.0	98.9 \pm 6.7	351.9 \pm 21.6
Šakarva	595.1 \pm 20.6	654.0 \pm 18.4	234.0 \pm 6.6	250.5 \pm 7.0	295.2 \pm 7.7	1067.6 \pm 33.4
Andrioniškis	964.4 \pm 54.0	1037 \pm 44.7	400.1 \pm 25.3	388.0 \pm 17.8	481.1 \pm 19.6	1420.8 \pm 6.7
Jurgionys	974.8 \pm 12.4	975.1 \pm 27.6	549.6 \pm 22.3	455.2 \pm 9.6	491.6 \pm 16.3	1327.3 \pm 83.9
Kernai	658.2 \pm 22.2	665.1 \pm 32.0	304.5 \pm 18.2	227.8 \pm 9.2	274.2 \pm 8.3	906.1 \pm 43.6
Žadeikiai	73.0 \pm 2.9	2136.8 \pm 118.3	393.4 \pm 24.3	460.7 \pm 25.1	951.6 \pm 55.3	1981.1 \pm 38.7
Galvokai	209.4 \pm 12.1	2325.3 \pm 92.3	470.8 \pm 15.3	515.0 \pm 25.6	1002.9 \pm 28.9	2097.3 \pm 57.0
Giteniškė	525.2 \pm 16.5	897.5 \pm 15.5	326.4 \pm 4.6	323.7 \pm 23	370.6 \pm 13.8	1279.1 \pm 13.3
Šalčininkėliai	571.4 \pm 1.3	1963.5 \pm 36.6	513.8 \pm 3.6	639.4 \pm 14.8	1016.5 \pm 14.4	2170.0 \pm 49.3
Bitėnai	402.7 \pm 2.1	237.3 \pm 4.6	144.6 \pm 1.6	120.8 \pm 2.3	101.5 \pm 1.0	442.3 \pm 5.3
Pagramantis	746.5 \pm 42.1	783.7 \pm 42.8	389.6 \pm 23.5	343.8 \pm 18.3	320.8 \pm 17.9	1087.2 \pm 55.2
Kūprė	63.3 \pm 2.9	1773.9 \pm 75.8	284.2 \pm 5.2	528.7 \pm 24.5	731.7 \pm 3.2	2201.2 \pm 36.1
Bruknyė	734.3 \pm 29.4	1973.8 \pm 77.0	583.5 \pm 19.0	663.9 \pm 27.8	1022.9 \pm 18.5	2234.1 \pm 43.8
Viršilai	15.4 \pm 0.1	692.4 \pm 51.2	110.6 \pm 3.6	168.9 \pm 9.1	376.1 \pm 4.3	713.5 \pm 18.5
Labanoras (a)	1034.1 \pm 1.5	998.7 \pm 13.2	444.1 \pm 3.0	539.4 \pm 6.7	557.7 \pm 5.6	1847.4 \pm 15.7
Labanoras (b)	889.0 \pm 17.0	1924.9 \pm 34.4	530.3 \pm 30.6	594.3 \pm 32.5	878.3 \pm 14.5	2316.6 \pm 117.8
Komarinė	816.4 \pm 43.6	947.4 \pm 13.8	407.2 \pm 11.4	385.7 \pm 1.1	406.6 \pm 30.0	1390.7 \pm 20.1
Marcinkonys	1474 \pm 94.6	1684.1 \pm 22.8	668.7 \pm 37.7	512.6 \pm 12.5	893.4 \pm 2.8	1966.3 \pm 70.7
Šilainė	870.2 \pm 44.7	1348.1 \pm 36.9	409.6 \pm 31.2	415.6 \pm 16.8	619.0 \pm 22.5	1671.7 \pm 62.0
Smėlynė	2136.4 \pm 59.7*	3409.7 \pm 108.4*	1241.3 \pm 33.1*	853.8 \pm 39.3*	1345.3 \pm 37.1*	3473.4 \pm 136.6*
Ilgalaukiai	777.2 \pm 14.0	717.9 \pm 43.1	407.0 \pm 7.8	319.6 \pm 12.1	362.3 \pm 15.3	1187.9 \pm 42.0
Vosniūnai	1674.3 \pm 89.7	2062.1 \pm 118.5	816.4 \pm 44.6	494.5 \pm 28.2	954.0 \pm 55.6	2087.1 \pm 112.2
Kadagnai	1087.3 \pm 82.4	958.0 \pm 5.8	468.9 \pm 37.5	397.6 \pm 7.2	410.2 \pm 34.0	1535.6 \pm 42.5
Tolkūnai	2094.3 \pm 59.4*	1691.5 \pm 93.5	1298.0 \pm 46.7*	760.7 \pm 2.5	1049.6 \pm 26.0	2739.1 \pm 45.4
Bakūriškis	27.9 \pm 2.2	2724.2 \pm 48.5	420.7 \pm 11.0	740.5 \pm 29.7	1202.2 \pm 27.4	2756.9 \pm 74.3
Šilinė	1346.6 \pm 78.8	1124.4 \pm 80.9	502.6 \pm 4.4	334.0 \pm 13.3	484.8 \pm 19.6	1378.3 \pm 61.4
Tyrelis	627.7 \pm 42.8	613.3 \pm 21.6	327.1 \pm 18.1	289.7 \pm 9.3	263.8 \pm 7.7	927.9 \pm 34.7
Pažemys	830.4 \pm 21.8	2336.4 \pm 38.4	638.8 \pm 14.8	649.0 \pm 11.5	1045.9 \pm 35.3	2726.7 \pm 56.4

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

Table S13. Contents of triterpenoid acids and sterols ($\mu\text{g/g DW}$) \pm SD in lingonberry leaves, collected at different locations.

Location	Maslinic acid	Corosolic acid	Betulinic acid	Oleanolic acid	Ursolic acid	β -Sitosterol
Apūniškis	26.8 \pm 1.3	85.4 \pm 2.4	NQ	157.4 \pm 2.7	912.2 \pm 20.4	428.8 \pm 12.1*
Plunksnuočiai	23.6 \pm 0.8	58.3 \pm 2.1	NQ	241.5 \pm 0.7	947.0 \pm 30.2	341.4 \pm 12.3
Šakarva	15.6 \pm 0.2	77.7 \pm 2.4	16.5 \pm 0.3	287.5 \pm 3.7	1247.8 \pm 28.2	347.9 \pm 2.9
Andrioniškis	24.1 \pm 1.5	79.8 \pm 1.4	6.5 \pm 0.6	215.3 \pm 2.7	1132.1 \pm 62.7	376.6 \pm 9.6
Jurgionys	12.1 \pm 0.5	56.1 \pm 0.6	20.3 \pm 0.7	191.5 \pm 4.0	957.4 \pm 15.2	440.8 \pm 3.9*
Kernai	12.0 \pm 0.5	74.7 \pm 2.9	NQ	235.3 \pm 2.9	1197.6 \pm 33.9	410.5 \pm 0.3*
Žadeikiai	26.4 \pm 0.8	91.1 \pm 2.7	ND	277.7 \pm 3.7	1220.8 \pm 22.6	375.8 \pm 9.4
Galvokai	13.8 \pm 0.2	67.1 \pm 0.2	ND	249.9 \pm 5.4	1275.9 \pm 33.0	393.8 \pm 18.0
Giteniškė	23.1 \pm 1.3	47.8 \pm 2.0	12.7 \pm 0.1	168.0 \pm 1.9	805.8 \pm 10.7	321.5 \pm 11.2
Šalčininkėliai	33.6 \pm 1.6	71.4 \pm 3.5	NQ	229.3 \pm 4.6	1158.0 \pm 10.6	395.4 \pm 11.6
Bitėnai	9.1 \pm 0.3	75.2 \pm 2.8	NQ	219.9 \pm 6.2	1118.9 \pm 8.6	285.8 \pm 2.6
Pagramantis	30.6 \pm 1.1	84.6 \pm 4.9	ND	309.8 \pm 14.5	1432.4 \pm 72.4	346.8 \pm 2.6
Kūprė	29.4 \pm 0.8	47.4 \pm 1.8	17.0 \pm 0.2	130.3 \pm 2.2	580.3 \pm 18.4	441.1 \pm 2.5*
Bruknynė	34.7 \pm 0.2	74.3 \pm 4.0	ND	228.4 \pm 3.7	1150.1 \pm 24.1	410.1 \pm 16.7*
Viršilai	7.1 \pm 0.1	38.2 \pm 1.9	NQ	212.8 \pm 0.2	1078.8 \pm 17.9	326.4 \pm 12.2
Labanoras (a)	62.8 \pm 1.7*	205.3 \pm 4.7*	84.3 \pm 3.2*	1333.6 \pm 48.9*	1626.3 \pm 55.8*	438.7 \pm 13.0*
Labanoras (b)	16.1 \pm 0.1	50.2 \pm 1.2	23.9 \pm 1.9	364.3 \pm 12.7	755.6 \pm 21.5	373.0 \pm 13.5
Komarinė	22.7 \pm 1.0	81.1 \pm 3.5	ND	309.5 \pm 9.7	698.2 \pm 35.6	330.5 \pm 3.9
Marcinkonys	33.7 \pm 1.6	96.5 \pm 2.5	16.3 \pm 1.1	213.0 \pm 2.5	867.8 \pm 11.9	319.3 \pm 15.7
Šilainė	8.4 \pm 0.1	51.3 \pm 1.2	27.3 \pm 0.7	158.1 \pm 5.3	704.3 \pm 36.9	314.7 \pm 9.1
Smėlynė	10.2 \pm 0.6	50.4 \pm 0.5	4.1 \pm 0.5	201.2 \pm 12.0	940.6 \pm 4.1	391.3 \pm 4.0
Ilgalaukiai	12.6 \pm 0.4	61.4 \pm 1.0	3.6 \pm 0.2	247.8 \pm 12.8	1201.8 \pm 62.7	302.0 \pm 7.0
Vosniūnai	7.1 \pm 0.4	54.7 \pm 3.3	40.7 \pm 3.1	182.5 \pm 2.5	814.8 \pm 4.5	311.8 \pm 16.2
Kadagynai	11.4 \pm 0.4	66.4 \pm 3.5	36.3 \pm 0.4	208.7 \pm 6.9	789.2 \pm 5.7	348.1 \pm 19.5
Tolkūnai	32.7 \pm 0.9	172.0 \pm 6.8	56.7 \pm 1.6	269.4 \pm 12.4	1265.0 \pm 62.3	408.7 \pm 6.0*
Bakūriškis	8.6 \pm 0.9	117.2 \pm 5.1	30.7 \pm 1.3	193.9 \pm 2.6	904.5 \pm 32.8	396.1 \pm 3.1
Šilinė	44.4 \pm 1.4	193.1 \pm 1.2*	28.3 \pm 1.4	237.3 \pm 3.1	1118.0 \pm 46.9	359.2 \pm 17.1
Tyrelis	16.8 \pm 0.5	89.7 \pm 2.8	ND	263.5 \pm 14.5	1265.7 \pm 15.6	346.7 \pm 10.8
Pažemys	17.2 \pm 0.1	91.2 \pm 0.5	20.8 \pm 1.4	361.4 \pm 16.8	832.9 \pm 13.2	379.5 \pm 13.9

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples. ND—not detected, NQ—not quantified (amount below LOQ).

Table S14. Contents of neutral triterpenoids ($\mu\text{g/g DW} \pm \text{SD}$) in lingonberry leaves, collected at different locations.

Location	Betulin	Erythrodiol	Uvaol	Lupeol	α -Amyrin	β -Amyrin	Friedelin
Apūniškis	128.7 \pm 4.0	30.8 \pm 1.2	136.2 \pm 3.5	157.3 \pm 3.0	2145.4 \pm 14.5	148.5 \pm 5.4	172.7 \pm 7.0
Plunksnuočiai	148.8 \pm 6.7	52.8 \pm 1.0	102.6 \pm 2.0	445.7 \pm 5.8	677.3 \pm 14.9	1349.9 \pm 67.0*	80.5 \pm 3.3
Šakarva	120.4 \pm 0.5	41.6 \pm 1.3	165.7 \pm 1.2	852.5 \pm 25.7	742.8 \pm 15.7	1058.4 \pm 18.0	54.0 \pm 2.2
Andrioniškis	186.3 \pm 0.6	39.0 \pm 1.8	190 \pm 6.8	398.9 \pm 1.2	1462.1 \pm 24.1	131.9 \pm 5.4	505.8 \pm 13.1
Jurgionys	227.0 \pm 5.5	57.3 \pm 1.5	183.2 \pm 1.3	1142.3 \pm 6.6	1034.7 \pm 23.7	101.2 \pm 0.7	251.1 \pm 11.8
Kernai	293.4 \pm 5.3	31.0 \pm 0.3	123.5 \pm 7.0	526.8 \pm 16.0	963.7 \pm 4.1	224.4 \pm 11.0	2020.2 \pm 19.5*
Žadeikiai	315.7 \pm 12.3*	101.7 \pm 5.4	328.6 \pm 6.9	173.4 \pm 8.4	2303.3 \pm 75.1	155.5 \pm 5.7	234.5 \pm 12.0
Galvokai	275.8 \pm 9.5	92.2 \pm 1.9	129.6 \pm 3.8	210.8 \pm 2.0	3266.1 \pm 123.5*	224.3 \pm 3.0	217.1 \pm 4.5
Giteniškė	182.4 \pm 1.7	35.9 \pm 0.7	51.9 \pm 1.7	1489.4 \pm 23.8	819.6 \pm 30.6	120.3 \pm 0.1	127.9 \pm 5.4
Šalčininkėliai	280.2 \pm 0.4	45.1 \pm 2.2	150.2 \pm 2.5	346.1 \pm 18.6	1285.9 \pm 7.6	160.5 \pm 4.3	620.7 \pm 4.6
Bitėnai	123.9 \pm 5.5	26.2 \pm 1.5	81.7 \pm 3.8	696.1 \pm 27.3	1018.2 \pm 22.1	197.7 \pm 1.6	1255.0 \pm 17.0
Pagramantis	212.1 \pm 7.6	52.7 \pm 1.5	124.4 \pm 6.8	152.8 \pm 6.5	1698.6 \pm 54.7	267.9 \pm 7.4	195.5 \pm 8.4
Kūprė	248.9 \pm 0.4	96.2 \pm 5.1	67.7 \pm 0.6	144.8 \pm 8.3	857.6 \pm 16.3	93.7 \pm 3.1	183.1 \pm 4.0
Bruknynė	298.5 \pm 3.5	50.0 \pm 1.8	149.4 \pm 8.4	569.5 \pm 3.9	1294.7 \pm 9.6	135.0 \pm 3.0	457.8 \pm 10.7
Viršilai	128.4 \pm 5.6	24.4 \pm 1.8	81.2 \pm 1.2	220.3 \pm 10.9	1663.1 \pm 53.2	244.1 \pm 10.8	115.8 \pm 4.0
Labanoras (a)	218.4 \pm 1.8	306.4 \pm 7.8*	437.8 \pm 9.7*	1103.0 \pm 55.7	3249.3 \pm 41.3*	1175.5 \pm 7.0	244.7 \pm 8.3
Labanoras (b)	107.0 \pm 3.9	64.1 \pm 2.0	221.8 \pm 0.2	869.5 \pm 22.1	1287.7 \pm 28.9	492.6 \pm 23.3	324.2 \pm 15.8
Komarinė	154.7 \pm 3.0	67.9 \pm 3.9	100.5 \pm 4.2	318.8 \pm 7.8	1268.0 \pm 14.7	957.4 \pm 38.7	186.4 \pm 7.0
Marcinkonys	137.1 \pm 0.7	31.1 \pm 2.0	145.9 \pm 4.6	591.7 \pm 19.4	1743.7 \pm 46.2	427.5 \pm 4.0	288.1 \pm 12.2
Šilainė	237.1 \pm 4.2	17.5 \pm 0.4	72.8 \pm 3.7	1933.5 \pm 19.1*	1123.8 \pm 39.8	155.4 \pm 1.0	82.7 \pm 3.7
Smėlynė	171.7 \pm 6.6	13.3 \pm 1.1	95.0 \pm 3.3	851.5 \pm 14.4	2024.7 \pm 37.8	148.1 \pm 5.9	190.5 \pm 4.3
Ilgalaukiai	170.1 \pm 5.4	16.4 \pm 0.2	100.8 \pm 3.3	527.5 \pm 7.5	1055.9 \pm 44.7	139.1 \pm 5.2	686.9 \pm 23.0
Vosniūnai	110.8 \pm 2.2	29.4 \pm 1.0	127.1 \pm 0.8	183.2 \pm 4.1	1715.4 \pm 28.8	121.3 \pm 4.1	196.9 \pm 8.9
Kadagnai	162.3 \pm 6.6	20.3 \pm 0.6	47.9 \pm 1.8	592.1 \pm 10.6	1147.5 \pm 57.5	339.8 \pm 1.9	148.1 \pm 0.8
Tolkūnai	146.5 \pm 3.0	38.3 \pm 1.1	152.2 \pm 2.6	141.1 \pm 6.2	2556.0 \pm 57.8	112.9 \pm 6.4	166.1 \pm 5.8
Bakūriškis	223.8 \pm 8.3	16.4 \pm 1.1	69.9 \pm 1.8	239.0 \pm 9.5	2084.8 \pm 76.1	116.3 \pm 2.7	268.1 \pm 3.9
Šilinė	276.7 \pm 9.4	25.5 \pm 1.6	62.0 \pm 3.5	1232.6 \pm 12.3	1104.8 \pm 23.8	113.1 \pm 4.6	1891.8 \pm 49.4
Tyrelis	216.6 \pm 2.6	22.9 \pm 0.9	63.3 \pm 1.7	189.7 \pm 3.1	1699.2 \pm 45.6	267.4 \pm 6.1	272.7 \pm 13.2
Pažemys	325.0 \pm 16.4*	64.7 \pm 2.7	69.5 \pm 0.3	645.6 \pm 1.3	978.9 \pm 44.5	994.7 \pm 14.1	368.1 \pm 1.8

Results are presented as means \pm SD of the samples collected at different locations at the end of September 2019. Values marked with * in the same column indicate the highest ($p < 0.05$) amounts in samples.

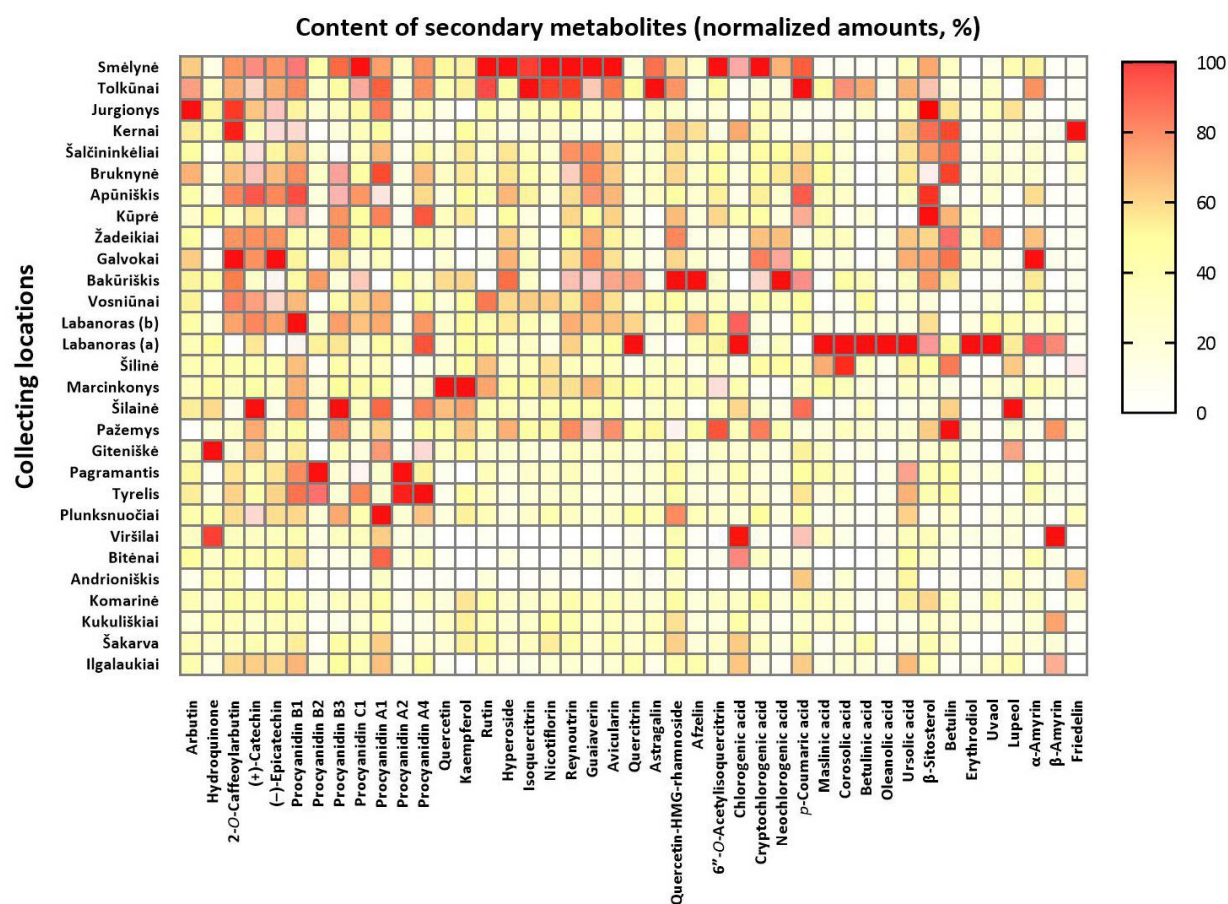


Figure S2. Heatmap estimating contents of phenolic and triterpenic compounds in lingonberry leaves based on their collecting locations.

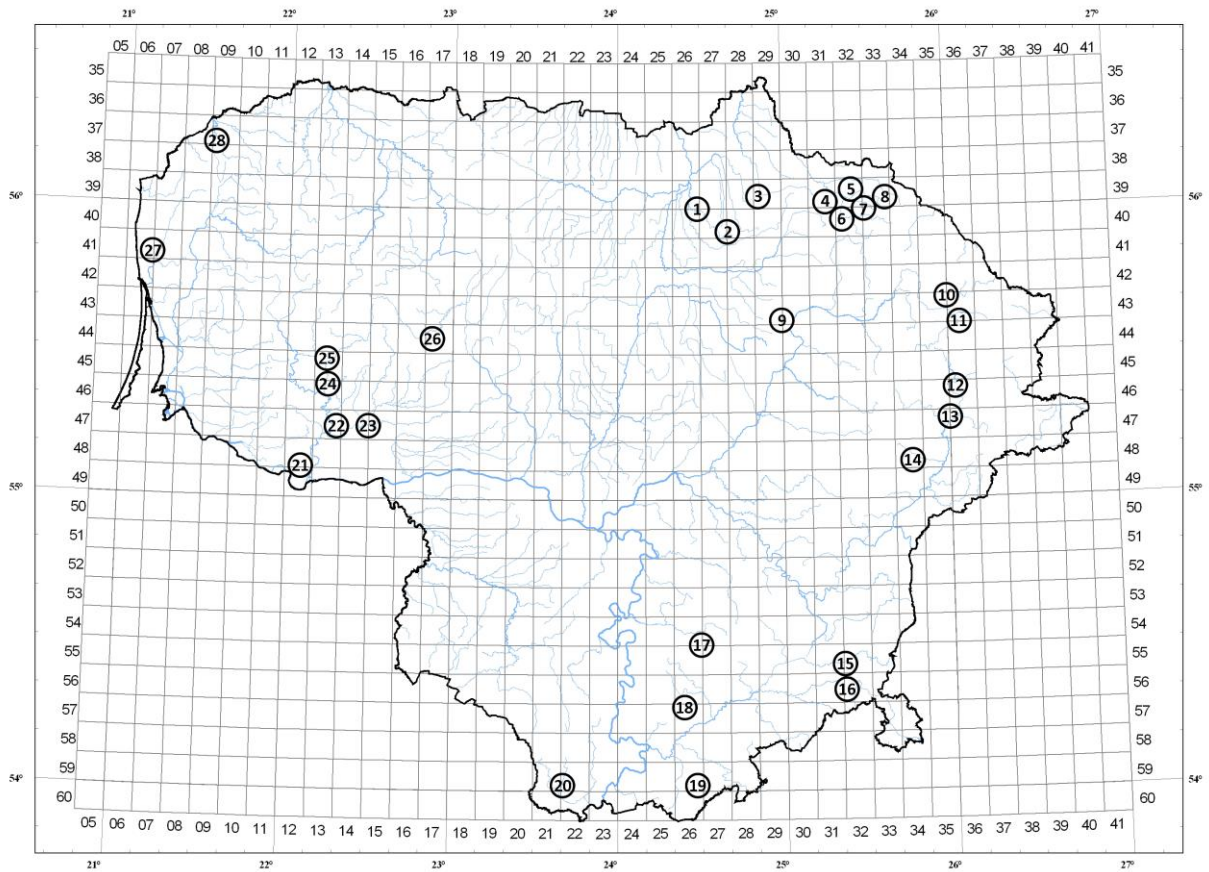


Figure S3. Collecting locations of lingonberry leaves samples in Lithuania: (1) Žadeikiai, (2) Vosniūnai, (3) Galvokai, (4) Viršilai, (5) Plunksnuočiai, (6) Ilgalaukiai, (7) Apūniškis, (8) Bakūriškis, (9) Andrioniškis, (10) Pažemys, (11) Giteniškę, (12) Smėlynė, (13) Šakarva, (14) Labanoras (a, b), (15) Šalčininkėliai, (16) Bruknyne, (17) Jurgionys, (18) Tolkūnai, (19) Marcinkonys, (20) Šilainė, (21) Bitėnai, (22) Šilinė, (23) Komarinė, (24) Pagramantis, (25) Tyrelis, (26) Kūprė, (27) Kukuliškiai, (28) Kernai.

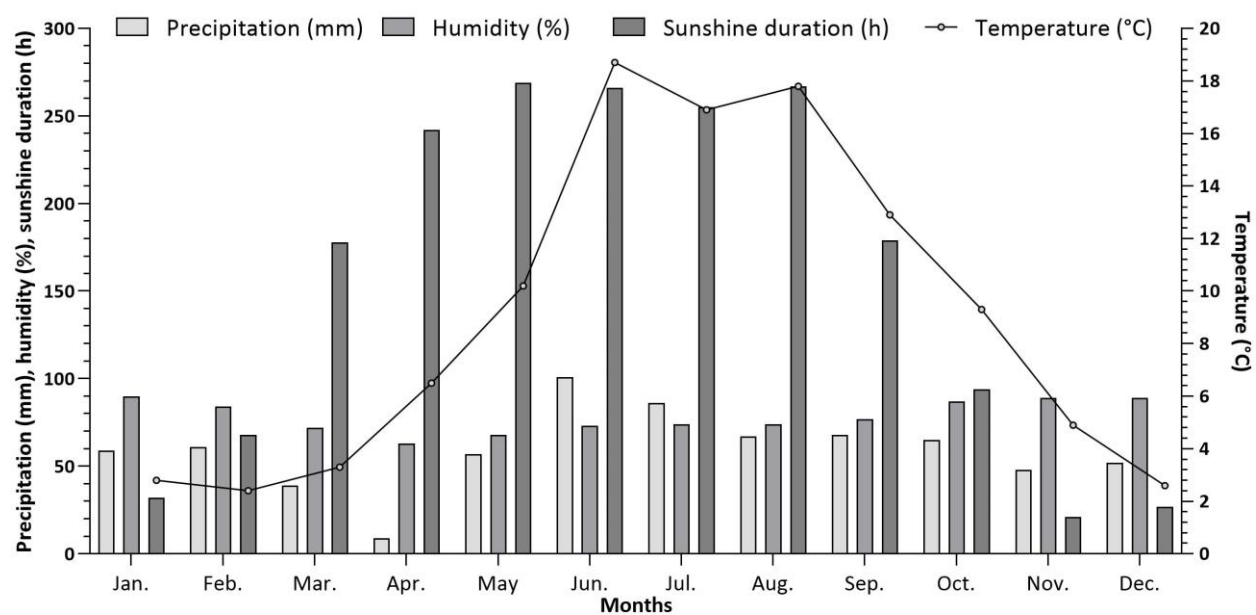


Figure S4. Dynamics of meteorological factors during one year testing period in Lithuania.