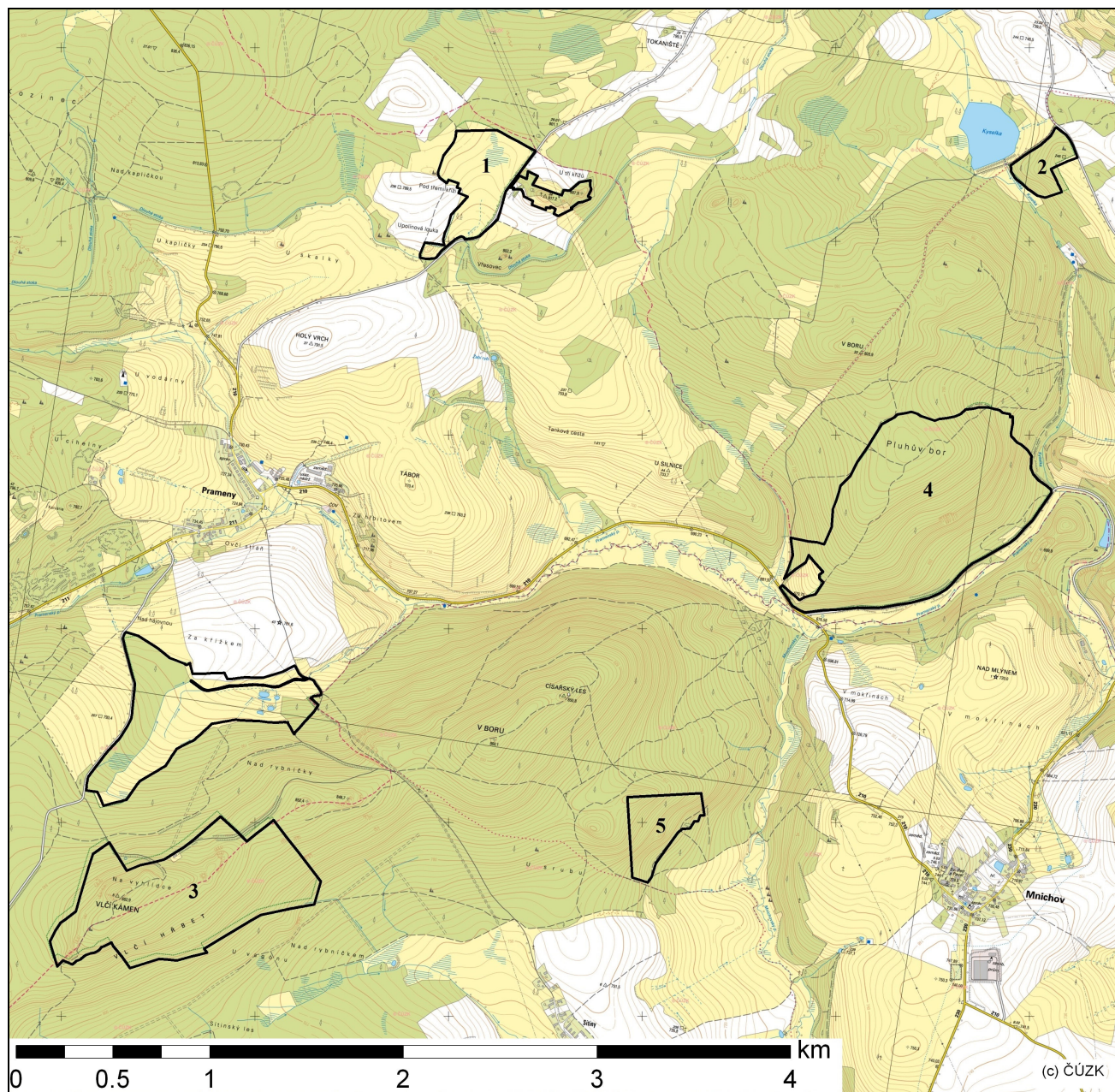


Vít P., Wolfová K., Urfus T., Tájek P. & Suda J. (2014): Interspecific hybridization between rare and common plant congeners inferred from genome size data: assessing the threat to the Czech serpentine endemic *Cerastium alsinifolium* (Caryophyllaceae). – Preslia 86/1: 95-117.

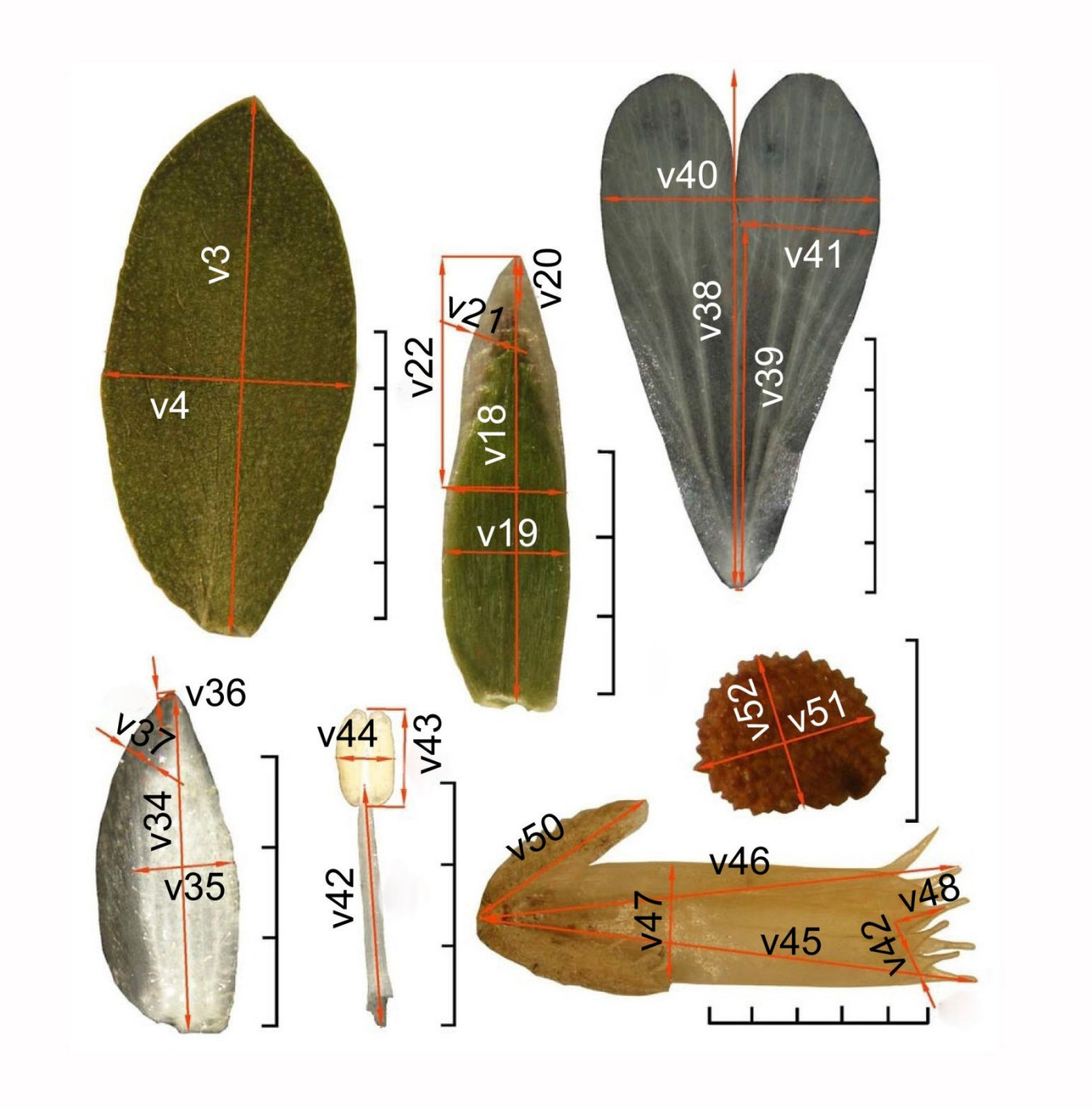
Electronic Appendix 1. – Locality details of studied *Cerastium* populations in the Czech Republic and the location of sampling sites in the Slavkovský les Mts. in western Bohemia. Intensive sampling was done over the entire range of five serpentine localities in the Slavkovský les Mts. (see the map below), geographic co-ordinates therefore refer only to one particular microsite within the locality. Borders of nature reserves are shown in the map: 1 – Křížky, 2 – Dominova skalka, 3 – Vlček, 4 – Pluhův Bor, 5 – Planý vrch.

Locality description	Latitude (°N)	Longitude (°E)	Altitude (m a.s.l.)	No. of samples
<i>Cerastium alsinifolium</i> , <i>C. arvense</i> , interspecific hybrids				
W Bohemia, Slavkovský les: Nová Ves, Dominova skalka serpentine rock	50.0714775	12.7863617	745	516
W Bohemia, Slavkovský les: Prameny, Křížky serpentine rock	50.0657283	12.7495978	810	452
W Bohemia, Slavkovský les: Prameny, Pluhův bor forest	50.0529639	12.7846222	680	266
W Bohemia, Slavkovský les: Mnichov, Planý vrch hill	50.0371289	12.7645142	765	437
W Bohemia, Slavkovský les: Sítiny, Vlček hill	50.0301264	12.7277264	875	415
<i>Cerastium arvense</i>				
W Bohemia: Komorní hůrka, dry grassland	50.1002058	12.3394419	475	5
W Bohemia: Domažlice, roadside	49.4339592	12.9658258	435	10
W Bohemia: Rokycany, urban area	49.7326928	13.6033700	375	10
SW Bohemia: Chanovice, urban area	49.4047811	13.7169569	550	2
SW Bohemia: Horažďovice, field margin	49.3283439	13.7456519	435	10
C Bohemia: Smečno, margin of forest path	50.1880314	14.0257058	370	10
C Bohemia: Kladno, urban area	50.1410903	14.0846750	400	10
C Bohemia: Beroun, dry grassland	49.9607658	14.0889353	220	1
C Bohemia: Kutná hora, urban area	49.9466842	15.2659719	230	10
S Bohemia: Holubov, open grassland on serpentine bedrock	48.8906822	14.3404228	485	9
S Bohemia: Soběslav, railway bank	49.2613981	14.7257519	420	3
S Bohemia: Suchdol nad Lužnicí, urban area	48.8921133	14.8851167	450	1
S Bohemia: Albeř, field margin	49.0254639	15.1329317	615	1
NE Bohemia: Jilemnice, dry grassland	50.5982308	15.5205256	460	1
E Bohemia: Borek u Chotěboře, abandoned serpentine quarry	49.7929542	15.5787561	405	12

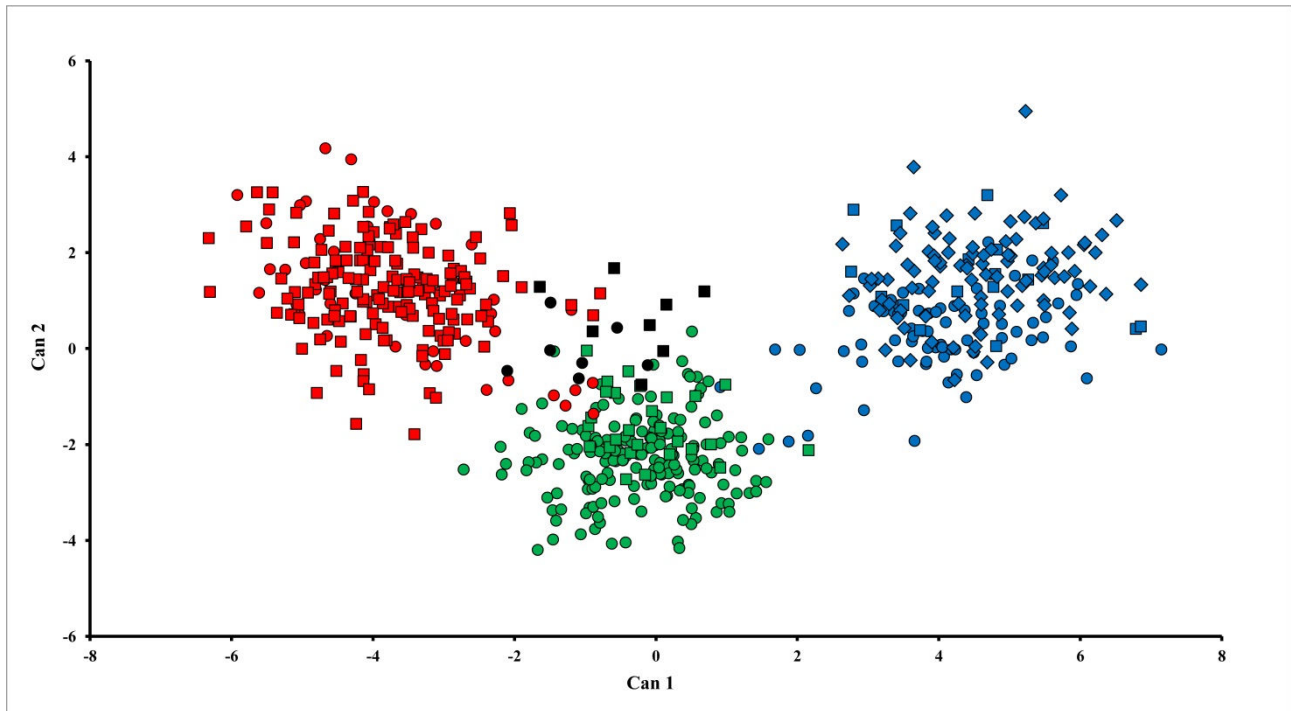
E Bohemia: Přelouč, urban area	50.0386208	15.5788622	210	10
E Bohemia: Česká Třebová, dry grassland	49.9019769	16.4713414	420	10
S Moravia: Mohelno, serpentine steppe	49.1094150	16.1852808	380	1
S Moravia: Vyškov, urban area	49.2980119	16.9777792	280	10
N Moravia: Hranice, urban area	49.5720097	17.7272275	215	10



Electronic Appendix 2. – Pictures of individual plant parts (leaf, bract, petal, sepal, stamen, capsule, and seed) with superimposed variables (see Table 1). The bar represents 1 mm.



Electronic Appendix 3. – Canonical discriminant analysis of 616 *Cerastium* samples classified into three groups (*C. alsinifolium*, *C. arvense*, interspecific hybrids) using 69 characters (see Table 1 for character description; character v41 was excluded due to its very tight correlation with v40). *C. alsinifolium* – red, *C. arvense* – blue, F1 hybrids – green, polyploid hybrids – black. Samples from open rocky outcrops and (semi)shaded forest habitats are depicted by circles and squares, respectively. Diamonds denote samples of *C. arvense* outside the Slavkovský les Mts. The first and the second canonical axes explain 79.5% and 18.5% of the total variation, respectively.



Relative contributions of individual characters to canonical axes. Ten and five canonical correlates with the highest absolute loadings on the first and the second canonical axes, respectively, are highlighted in bold type face. Numbers in parentheses are ranks of the strength of the correlation of each variable with the canonical axes. See Table 1 for character description.

Variable	Can1	Can2
v1	0.45415 (32)	0.30768 (14)
v2	0.65659 (16)	0.32336 (13)
v3	0.62536 (19)	0.28596 (18)
v4	-0.40439 (36)	0.22830 (29)
v5	-0.30087 (44)	-0.20564 (34)
v6	0.26885 (47)	-0.20082 (35)
v7	-0.71547 (12)	0.23044 (28)
v8	0.73069 (10)	0.27520 (21)
v9	-0.36339 (39)	0.12943 (46)
v10	-0.11985 (62)	-0.17642 (40)
v11	0.42790 (34)	-0.27535 (20)
v12	-0.76054 (7)	0.17745 (38)
v13	0.76601 (5)	0.24712 (25)
v14	-0.31315 (43)	0.07872 (54)
v15	0.21289 (51)	-0.13172 (45)
v16	0.58217 (22)	-0.16176 (42)
v17	-0.73002 (11)	0.11433 (49)
v18	0.10431 (65)	0.29556 (17)
v19	-0.16329 (56)	0.24193 (27)
v20	0.51263 (28)	-0.14050 (44)
v21	0.60483 (21)	-0.17263 (41)
v22	0.79944 (3)	-0.10302 (51)
v23	-0.02508 (67)	-0.17775 (37)
v24	0.21931 (49)	-0.30689 (15)
v25	-0.41901 (35)	0.24198 (26)
v26	0.27678 (46)	0.21493 (32)
v27	0.10682 (63)	0.10598 (50)
v28	0.46873 (30)	-0.12925 (47)
v29	0.57404 (24)	-0.17674 (39)
v30	0.75882 (8)	-0.14604 (43)
v31	-0.17969 (55)	-0.03321 (62)
v32	0.00544 (69)	-0.07911 (53)
v33	-0.21420 (50)	0.07332 (56)
v34	0.73728 (9)	0.06358 (58)
v35	0.48712 (29)	0.04334 (61)

v36	0.35525 (40)	0.00832 (67)
v37	0.43509 (33)	0.05104 (60)
v38	0.65260 (17)	0.43226 (9)
v39	0.55454 (26)	0.43957 (8)
v40	0.66616 (14)	0.22052 (30)
v42	0.36885 (38)	0.50850 (6)
v43	0.65741 (15)	0.42581 (10)
v44	0.27702 (45)	0.57045 (3)
v45	0.01344 (68)	0.65911 (2)
v46	-0.10575 (64)	0.68095 (1)
v47	0.15480 (57)	0.52112 (5)
v48	0.61828 (20)	-0.09086 (52)
v49	0.56014 (25)	0.17845 (36)
v50	0.80790 (2)	0.00211 (69)
v51	0.14838 (58)	-0.21921 (31)
v52	0.24751 (48)	0.01418 (64)
v53	-0.76233 (6)	0.07518 (55)
v54	-0.79841 (4)	-0.01193 (66)
v55	-0.82637 (1)	-0.03298 (63)
v56	-0.35194 (42)	-0.01342 (65)
v57	0.54868 (27)	-0.25480 (24)
v58	0.69768 (13)	-0.26567 (22)
v59	-0.20742 (52)	-0.11984 (48)
v60	0.46662 (31)	-0.21367 (33)
v61	0.63929 (18)	-0.29980 (16)
v62	-0.19148 (54)	-0.00792 (68)
v63	-0.19807 (53)	0.07134 (57)
v64	0.12430 (61)	-0.25496 (23)
v65	-0.13232 (60)	0.47569 (7)
v66	-0.35409 (41)	0.32509 (12)
v67	-0.39928 (37)	0.05159 (59)
v68	0.07722 (66)	-0.39748 (11)
v69	-0.57614 (23)	0.54136 (4)
v70	0.13955 (59)	0.27614 (19)

Electronic Appendix 4. – A modified determination key (with data on pollen fertility) for large-flowered *Cerastium* plants occurring in the Slavkovský les Mts. Values of quantitative characters are expressed as (minimum–) 5 percentile – 95 percentile (–maximum).

- 1a** Pollen fertility high (more than 70% of stainable grains)
..... **2**
- 1b** Pollen fertility considerably reduced (less than 60% of stainable grains)
..... *C. alsinifolium* × *C. arvense*
- 2a** Median and upper cauline leaves (2.5–) 3.6–10.2 (–14.7)-times longer than broad, (6.6–) 9.6–22.2 (–29.6) mm long, sterile shoots in leaf axils usually well-developed, (0–) 2–10 (–14) in number, scarious margin of the lowermost bract (1.1–) 1.7–4.2 (–4.9) mm long, always reaching beyond the apical third (usually considerably further), scarious margin of the second lowermost bract (0.8–) 1.6–3.6 (–4.8) mm long, calyx (excluding the scarious margin) (3.7–) 4.2–5.9 (–6.9) mm long, petals (7.0–) 7.9–11.6 (–12.6) mm long, anthers (0.6–) 0.9–1.3 (–1.4) mm long, capsule (1.1–) 1.3–2.2 (–2.6)-times longer than calyx, plants of comparatively dry and open habitats *C. arvense* L.
- 1b** Median and upper cauline leaves (1.2–) 1.6–3.7 (–5.3)-times longer than broad, (2.7–) 4.7–12.2 (–19.4) mm long, sterile shoots in leaf axils lacking or a few (usually less than 3), scarious margin of the lowermost bract indistinct, 0–1.8 (–2.7) mm long, mostly confined to the apical third of the bract (rarely reaches its bottom half), scarious margin of the second lowermost bract (0–) 0.2–2.2 (–2.8) mm long, calyx (excluding the scarious margin) (2.6–) 3.0–4.6 (–5.1) mm long, petals (5.6–) 6.4–9.1 (–10.3) mm long, anthers (0.5–) 0.6–1.0 (–1.2) mm long, capsule (1.1–) 1.6–3.2 (–3.6)-times longer than calyx, plants of moist and (semi-)shaded habitats, usually in in spring areas in spruce forests
..... *C. alsinifolium* Tausch

Electronic Appendix 5. – Linear discriminant functions for the classification of large-flowered *Cerastium* plants in the Slavkovský les Mts. (see Table 1 for character description). Quantitative values should be measured with an accuracy of tenths of a millimetre. The higher function value indicates the most likely taxonomic assignment.

I)

***C. arvense*:** $-78.99344 + 0.74353*v2 + 1.79166*v8 - 1.75607*v13 + 2.23983*v22 + 8.13115*v38 + 48.91713*v43 - 0.69258*v54 + 2.18482*v55$

***C. alsinifolium* or interspecific hybrid:** $-42.07815 + 0.20399*v2 + 1.27042*v8 - 1.32432*v13 + 0.89028*v22 + 6.52059*v38 + 35.95788*v43 - 0.72659*v54 + 1.35801*v55$

II)

***C. alsinifolium*:** $-6.80755 - 1.93012*v22 + 0.39981*v30 + 2.00856*v53 + 1.64509*v54 + 0.968*v55 + 6.93086*v58 + 4.71494*v61$

Interspecific hybrid: $-14.72451 - 2.81857*v22 + 2.61653*v30 + 2.65236*v53 + 2.15931*v54 + 1.16068*v55 + 16.57011*v58 + 1.7863*v61$