

SUPPLEMENTARY MATERIALS

to the article A.V. Agafonov, S.V. Asbaganov, E.V. Shabanova (Kobozeva) , I.V. Morozov, A.A. Bondar "Genome constitution and differentiation of subgenomes in Siberian and Far Eastern endemic species of the genus *Elymus* (Poaceae) according to the sequencing of the nuclear gene *waxy*"

Supplementary Material 1

Accessions of *Elymus* species and their clones included in the comparative study of the *GBSS1* gene sequences

No.	<i>Elymus</i> species Accession	Clones in the author's catalogue	Clones in NCBI	Locality and Collectors
1	<i>E. kamczadalarum</i> (Nevski) Tzvel. KSO-9623	kamKSO23_2-St kamKSO23_1-H	MN126576 MN126577	Kamchatka Krai, Elizovskiy district, Sosnovka, alt. 247 m, N 53°5.046' E 158°17.918' (A. Agafonov, B. Salomon)
2	<i>E. charkeviczii</i> Probat. KES-9670	chaKES70_1-St chaKES70_6-H	MN126578 MN126579	Kamchatka Krai, Bistrinskiy district, Esso, alt. 484 m, N 55°55.014' E 158°42.116' (A. Agafonov, B. Salomon)
3	<i>E. kronokensis</i> (Kom.) Tzvel. KES-9603	kroKES03_2-St kroKES03_1-H	MN126581 MN126580	Kamchatka Krai, Bistrinskiy district, Esso, alt. 627 m, N 55°55.945' E 158°41.275' (A. Agafonov, B. Salomon)
4	<i>E. lenensis</i> (M. Pop.) Tzvel. 12-0125	len0125_3-St len0125_4-H	MN136100 MN136099	Taymyr Peninsula, alt. 39 m, N 72°39.613' E 101°17.079' (I. Pospelov)
5	<i>E. subfibrosus</i> (Tzvel.) Tzvel. ANA-1181	subANA81_3-St subANA81_2-H	MN136102 MN136101	Chukotka Autonomous Okrug, Anadyr (D. Lisenko)
6	<i>E. macrourus</i> (Turcz.) Tzvel. 12-0135	mac0135_8-St mac0135_1-H	MN136104 MN136103	Taymyr Peninsula, alt. 2 m, N 72°37.363' E 101°17.793' (E. Pospelova)
7	<i>E. jacutensis</i> (Drob.) Tzvel. 13-0443	jac0443_1-St jac0443_5-H	MN136106 MN136105	Taymyr Peninsula, alt. 218 m, N 71°15.250' E 105°37.452' (I. Pospelov)
8	<i>E. komarovii</i> (Nevski) Tzvel. GAR-0501	komGAR01_2-H	MN136107	Republic of Buryatia, Okinskiy district, alt. 1607 m, N 52°5.947' E 100°23.005' (D. Gerus, A. Agafonov)
9	<i>E. komarovii</i> AUK-9803	komAUK03_3-St komAUK03_1-H	MN164816 MN164817	Altai Republic, Kosh-Agachskiy district, alt. 2120 m, N 49°33.455' E 87°58.329' (A. Agafonov)
10	<i>E. margaritae</i> A.V. Agaf., Kobozeva et Salomon GUK-1709	marGUK09_1-H	MN164818	Altai Republic, Ust-Koksinskiy, Krasnaya mountain, alt. 2028 m, N 50°4.495' E 85°13.073' (D. Nikonova, E. Kobozeva)
11	<i>E. margaritae</i> AUK-0650	marAUK50_4-St marAUK50_2-H	MN164819 MN164820	Altai Republic, Kosh-Agachskiy district, alt. 2438 m, N 49°30.418' E 88°05.012' (A. Agafonov, B. Salomon)
12	<i>E. transbaicalensis</i> (Nevski) Tzvel. GAR-0530	trnGAR30_4-St trnGAR30_1-H	MN164821 MN164822	Republic of Buryatia, Okinskiy district, alt. 1610 m, N 52°05.947' E 100°23.005' (A. Agafonov, D. Gerus)
13	<i>E. sajanensis</i> (Nevski) Tzvel. ZUN-0502	sajZUN02_2-St sajZUN02_4-H	MN164823 MN164824	Republic of Buryatia, Okinskiy district, alt. 1682 m, N 52°10.092' E 100°57.581' (A. Agafonov, D. Gerus)
14	<i>E. confusus</i> (Roshev.) Tzvel. BER-0807	conBER07_2-St conBER07_1-H	MN164825 MN164826	Republic of Buryatia, Eravnenkiy district, Isinga, alt. 958 m, N 53°00.776' E 112°03.673' (O. Anenkhonov)
15	<i>E. confusus</i> TAR-0730	conTAR30_1-St conTAR30_4-H	MN164827 MN164828	Tyva Republic, Tes-Khemskiy district, alt. 1545 m, N 50°36.870' E 95°10.729' (I. Artemov)

Table (end)

No.	<i>Elymus</i> species Accession	Clones in the author's catalogue	Clones in NCBI	Locality and Collectors
16	<i>E. peschkovae</i> Tzvel. AMU-8804	pesAMU04_3-St pesAMU04_1-H	MN164829 MN164830	Amurskaya oblast, alt. 445 m, N 54°56.216' E 125°21.854' (O. Potemkin)
17	<i>E. peschkovae</i> MJA-1106	pesMJA06_3-St pesMJA06_2-H	MN164831 MN164832	Magadanskaya oblast, Khasinskiy district, alt. 755 m, N 60°19.467' E 151°10.540' (D. Lisenko)
18	<i>E. sibiricus</i> L. JAC-1504	sibJAC04_1-St sibJAC04_2-H	MN164833 MN164834	Sakha Republic, Yakutsk (E. Kobozeva, S. Asbaganov)
19	<i>E. uralensis</i> (Nevski) Tzvel. ABZ-1628	uraABZ28_2-St uraABZ28_1-H	MN164835 MN164836	Republic of Bashkortostan, Beloretskiy district, Novoabzakovo, alt. 497 m, N 53°48.105' E 58°37.926' (A. Agafonov, S. Asbaganov)
20	<i>E. viridiglumis</i> (Nevski) Czer. UKU-1618	virUKU18_3-St virUKU18_1-H	MN164837 MN164838	Republic of Bashkortostan, Beloretskiy district, Novoabzakovo, alt. 619 m, N 53°48.718' E 58°40.377' (A. Agafonov, S. Asbaganov)
21	<i>E. caninus</i> (L.) L. ABZ-1654	canABZ54_2-St canABZ54_1-H	MN164839 MN164840	Republic of Bashkortostan, Beloretskiy district, Novoabzakovo, alt. 603 m, N 53°48.309' E 58°36.913' (A. Agafonov, S. Asbaganov)
22	<i>E. mutabilis</i> (Drob.) Tzvel. ABZ-1606	mutABZ06_1-St mutABZ06_2-H	MN164841 MN164842	Republic of Bashkortostan, Beloretskiy district, Novoabzakovo, alt. 546 m, N 53°47.845' E 58°37.291' (A. Agafonov, S. Asbaganov)

Supplementary Material 2

Accessions drawn from the NCBI GenBank (<http://www.ncbi.nlm.nih.gov/nuccore>)

<i>Elymus</i> species	Accession Origin	Clones in NCBI (references*)	Designation on trees
<i>Elymus gmelinii</i> (Ledeb.) Tzvel.	PI 499447 China	St GQ847726 ¹ Y GQ847727	gme_7726_S gme_7727_Y
<i>E. pendulinus</i> (Nevski) Tzvel.	PI 499452 China	St GQ847731 ¹ Y GQ847732	pen_7731_S pen_7732_Y
<i>E. caninus</i>	PI 314612 Kazakhstan	St b-HM035270 ² H a-HM035271	can_5270_S can_5271_H
	PI 499413 China	St a-HM035272 ² H b-HM035273	can_5272_S can_5273_H
	PI 531571 Poland	St a-HM035274 ² H b-HM035275	can_5274_S can_5275_H
<i>E. mutabilis</i>	PI 628704 Russia, Rep. Altai, Chike-Taman pass	St c-DQ159331 ² H a-DQ159330	mut_9331_S mut_9330_H
	PI 499449 China	St a-HM035278 ² H b-HM035279	mut_5278_S mut_5279_H
<i>E. sibiricus</i>	PI 628699 Russia, Khabarovskij kraj, Sovetskaya Gavan	St b-HM035280 ² H a-HM035281	sib_5280_S sib_5281_H
	PI 499461 China	St a-HM035282 ² H b-HM035283	sib_5282_S sib_5283_H
<i>E. canadensis</i> L.	PI 531568 USA	St c-HM035284 ³ H a-HM035285	cana_284_S cana_285_H
<i>E. elymoides</i> (Raf.) Swezev	PI 531606 USA	St a2-AY010992 ³ H d2-AY010965	elym_992_S elym_965_H
<i>E. glaucus</i> Buckley	W6 10215 USA	St b-AY010980 ³ H a-AY010967	glau_980_S glau_967_H
<i>E. lanceolatus</i> (Scribn. & J.G. Sm.) Gould	PI 632507 USA	St a-AY010993 ³ St d-AY010984 H aa-AY010969	lanc_993_S lanc_984_S lanc_969_H
<i>E. trachycaulus</i> (Link) Gould ex Shinners	PI 372500 Canada	St b1-AY010986 ³ H a1-AY010972	trac_986_S trac_972_H
	PI 452446 Canada	St d-AY010987 ³ H a-AY010973	trac_987_S trac_973_H
<i>E. virginicus</i> L.	RJMG 161 USA	St d-AY010995 ³ H a-AY010975	virg_995_S virg_975_H
<i>E. wawawaiensis</i> J. Carlson & Barkworth	PI 285272 USA	St c-AY010996 ³ H a-AY010977	wawa_996_S wawa_977_H
	PI 598812 USA	St b-AY010997 ³ H d-AY010978	wawa_997_S wawa_978_H
<i>Hordeum jubatum</i> L.	RJMG 106 USA	H AY010963.1 ³	H.jub_63_H
<i>H. californicum</i> Covas & Stebbins	MA-138-1-4 USA	AF079273	H.cal_73_H
<i>H. bogdanii</i> Wilensky	PI 531760 China	H EU282317 ⁴	H.bog_17_H
<i>H. brevisubulatum</i> (Trin.) Link	PI 401387 Iran	H AY010961 ³	H.bre_61_H
<i>H. pusillum</i> Natt.	Clho 15654 USA	H EU282321 ⁴	H.pus_21_H
<i>Pseudoroegneria libanotica</i> (Hack.) D.R. Dewey	PI 228391 Iran	St EU282324 ⁴	P.lib_324
<i>P. tauri</i> (Boiss. & Balansa) A. Löve	PI 380652 Iran	St EU282326 ⁴	P.tau_326
<i>P. spicata</i> (Pursh) A. Löve	PI 232117 USA	St AF079281 ⁶	P.spi_281
<i>P. spicata</i>	PI 236681 Canada	St AY010998 ³	P.spi_998
	PI 610986 USA	St AY010999 ³	P.spi_999
	D 2844 USA	St AY011000 ³	P.spi_000
	RJMG 112 USA	St AY011001 ³	P.spi_001
<i>P. strigosa</i> (M. Bieb.) A. Löve	PI 499637 China	St EU282323 ⁴	P.str_323
<i>P. strigosa</i>	PI 531755 China	St AY360823 ⁵	P.str_823
<i>Bromus tectorum</i> L.		AY362757 ⁵	Bromus_AY3

¹ Mason-Gamer et al., 2010a; ² Mason-Gamer et al., 2010b; ³ Mason-Gamer, 2001; ⁴ Mason-Gamer, 2008; ⁵ Mason-Gamer, 2004; ⁶ Mason-Gamer, 1998.