

M. P. Rayko, A. V. Rodionov. Phylogenetic relationships of the genera *Anthoxanthum*, *Ataxia*, *Hierochloë*, and *Phalaris* (*Poaceae*)

М. П. Райко, А. В. Родионов. Филогенетические отношения родов *Anthoxanthum*, *Ataxia*, *Hierochloë* и *Phalaris* (*Poaceae*)

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Supplementary materials

Appendix

Table A1. List of samples whose ITS1–5.8S rDNA–ITS2 and *trnL* sequences were sequenced and analyzed in this study

Number	Species	Collection info, voucher number or sample source	GenBank accession number	
			<i>trnL</i>	ITS
1	<i>Anthoxanthum odoratum</i> L.	Alt-248. Republic of Altai, on the border of Shebalino and Onguday districts. Seminsky Ridge, slopes of Mt. Sarlyk, in a meadow, 51°05' N 85°40' E, 1500 m a. s. l., 12 VIII 2006. Coll.: A. V. Rodionov, E. O. Punina, M. P. Rayko, S. A. Dyachenko. Determ.: N. N. Nosov		FJ010630
2	<i>A. odoratum</i> L.	Alt-247. Republic of Altai, on the border of Shebalino and Onguday districts. Seminsky Ridge, slopes of Mt. Sarlyk, in a meadow, 51°05' N 85°40' E, 1500 m a. s. l., 12 VIII 2006. Coll.: A. V. Rodionov, E. O. Punina, M. P. Rayko, S. A. Dyachenko. Determ.: N. N. Nosov	KC698979	KC512869
3	<i>A. odoratum</i> L.	AH-40. Tver Region, shore of the Lower Nevochansk Reservoir. Coll.: E. O. Punina. Determ.: N. N. Nosov		KC512877
4	<i>A. odoratum</i> L.	AH41. Krasnoyarsk Territory, Shushensky District, vicinity of Sred. Shush village, 10 VI 1964. Coll. and determ.: A. Kuminova, B. Gerasimova		KC512878
5	<i>A. odoratum</i> L.	AH4. Canada, British Columbia, 28 III 1976. Coll.: J. Pojar	KC698980	KC512875
6	<i>A. alpinum</i> Á. Löve et D. Löve (syn.: <i>A. nipponicum</i> Honda)	T-88. Karachay-Cherkess Republic, Teberda Nature Reserve, valley of the Kyskhadzher River, 2800 m a. s. l., 23 VIII 2003. Coll.: A. V. Rodionov, E. O. Punina, S. V. Bondarenko, Yu. M. Punin. Determ.: N. N. Tzvelev, E. O. Punina		KC512879
7	<i>A. alpinum</i> Á. Löve et D. Löve (syn.: <i>A. nipponicum</i> Honda)	Alt-254. Republic of Altai, slopes of Mt. Sarlyk, 2180 m a. s. l., 12 VIII 2006. Coll.: A. V. Rodionov, E. O. Punina, M. P. Rayko, S. A. Dyachenko. Determ.: N. N. Nosov		FJ010629
8	<i>A. alpinum</i> Á. Löve et D. Löve (syn.: <i>A. nipponicum</i> Honda)	CSBS9. Khakass Autonomous Soviet Socialist Republic, Abakan Range, upper reaches of the Askiz River, 53°35' N, 89°50' E, 1100 m a. s. l., 19 VI 1991. Coll. and determ.: E. Ankipovich, O. Ivanov, M. Vinogradov		KC512870
9	<i>A. alpinum</i> Á. Löve et D. Löve	Ma7. Yamalo-Nenets Autonomous District, Polar Urals, Bolshaya Poipudyna River, 2004. Coll.: E. M. Machs. Determ.: S. S. Kholod		KC512873
10	<i>A. nipponicum</i> Honda	AH19. Iturup Island, coastal meadow, 1981. Coll.: E. M. Egorov, I. I. Gusanovich		KC512876
11	<i>A. aristatum</i> Boiss.	AH47. Pontevedra, Cabo Silleiro, Spain (Quintanar et al., 2007). The native range of this species is Macaronesia, Western and Central Mediterranean. It is an annual and grows primarily in the subtropical biome	KC698976	KC512875

Number	Species	Collection info, voucher number or sample source	GenBank accession number	
			<i>trnL</i>	ITS
12	<i>A. ovatum</i> Lag.	Spain, Cádiz Province, Alcornocales Park, Tiradero Stream, 5 VI 2001. Coll.: R. Pimentel, M. Pimentel. Determ.: M. Pimentel, E. Sahuquillo. Voucher 53400		KC512880
13	<i>A. amarum</i> Brot.	Spain, Pontevedra Province, As Neves (Quintanar et al., 2007)	KC698975	DQ539584
14	<i>A. piielii</i> Lecoq et Lamotte	AH7. Canada, Quebec Province, Mt. Tremblant, 46°30' N 75°30' W, 30 VII 1956. Coll.: F. Rolland-Germain, A. Courtemanche	KC698981	KC512871
15	<i>A. hookeri</i> (Griseb.) Rendle	MHA1472. China, Yunnan Province, 1984. Coll.: V. Bartholomew	KC698977	KC512897
16	<i>A. horsfieldii</i> (Kunth ex Benn.) Reeder (syn.: <i>A. siamense</i> Bor)	VS10. Northern Thailand, Chang Hai Province, western flank of Doi Intanon, 18°40' N 98°25' E. Expedition of the Rijksherbarium, Leiden	KC698982	KC512898
17	<i>Hierochloë hirta</i> subsp. <i>arctica</i> (Presl) G. Weim. (syn.: <i>Anthoxanthum nitens</i> (Weber) Y. Schouten et Veldkamp)	E6. Arkhangelsk Region, Nenets Autonomous Okrug, middle course of the Korotayikha River, 29 VII 1964. Coll.: O. V. Rebristaya, S. A. Tokarevskikh. Determ.: G. Weimark	KC698984	KC512889
18	<i>H. odorata</i> (L.) P. Beauv. (syn.: <i>Anthoxanthum nitens</i> (Weber) Y. Schouten et Veldkamp)	LE163. Tuva ASSR, Yenisei River Basin, along the banks of the Kopto River, 11 VII 1975. Coll.: I. Krasnoborov, A. Choodu		KC512882
19	<i>H. repens</i> (Host.) P. Beauv. (syn.: <i>Anthoxanthum repens</i> (Host) Veldkamp)	LE6295. Volgograd Region, south of the city of Kamyshinsk, 19 VI 1971. Coll.: S. S. Ikonnikov, N. P. Litvinova, V. N. Gladkova. Determ.: N. N. Tzvelev	KC698990	LE6295 KC512883
20	<i>H. repens</i> (Host.) P. Beauv. (syn.: <i>Anthoxanthum repens</i> (Host) Veldkamp)	LE3231. Kuibyshev Region (now Samara), Samarskaya Luka, Zhiguli Mountains, nature reserve, 10 VI 1986. Coll.: S. V. Saklonov, V. P. Vekhnick. Determ.: A. O. Haare		KC512884
21	<i>H. pauciflora</i> R. Br. (syn. <i>Anthoxanthum arcticum</i> Veldkamp)	LE226. Nenets National District, 14–15 km south-southeast of Amderma settlement, 30 VII 1980. Coll. and determ.: I. P. Serditov, V. V. Shumilov, A. I. Lavrenko		KC512889
22	<i>H. hirta</i> (Schrank) Borbás (syn.: <i>Anthoxanthum nitens</i> (Weber) Y. Schouten)	LE125. Leningrad Region, Gatchina, near Pudost station, 15 VI 1989. Coll. and determ.: N. N. Tzvelev		KC512885
22a	22a. <i>H. hirta</i> subsp. <i>arctica</i> (J. Presl) G. Weim. (syn.: <i>Anthoxanthum nitens</i> (Weber) Y. Schouten)	LE746. Arkhangelsk Region, Nenets Autonomous Okrug, middle course of the Korotayikha River, 29 VII 1964. Coll.: O. V. Rebristaya, S.A. Tokarevskikh. Determ.: E. Weimark		KC512881
23	<i>H. glabra</i> subsp. <i>bungeana</i> (Trin.) Peschkova (syn. <i>Anthoxanthum glabrum</i> (Trin.) Veldkamp)	Alt-495. Altai Mountains, Kosh-Agach District, 2250 m a. s. l., 26 VIII 2006. Coll.: M. P. Rayko, A. V. Rodionov, E. O. Punina. Determ.: N. N. Tzvelev		KC512886
24	<i>H. glabra</i> subsp. <i>sibirica</i> (Tzvelev) Tzvelev (syn.: <i>Anthoxanthum glabrum</i> subsp. <i>sibiricum</i> (Tzvelev) Röser et Tkach)	E5. Kemerovo Region, Belovsky District, vicinity of Permyaki village, mixed-grass meadow, 23 V 2003. Coll.: S. A. Sheremetova, Yu. A. Manakov, V. N. Berseneva, D. V. Chusovlyanov. Determ.: D. V. Chusovlyanov	KC698991	KC512887
25	<i>H. australis</i> Roem. et Schult. (syn. <i>Anthoxanthum australe</i> (Schrud.) Veldkamp)	LE4054 (AH10). Leningrad Region, Karelian Isthmus, along the road from Priozersk to Kuznechnoye, 20 VI 1955. Coll. and determ.: S. Yuzepchuk	KC698983	KC512894

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			<i>trnL</i>	ITS
26	<i>H. australis</i> Roem. et Schult. (syn: <i>Anthoxanthum australe</i> (Schräd.) Veldkamp)	LE12817. 1984, Finland, Nurmijärvi		KC512895
27	<i>H. alpina</i> (Sw. ex Willd.) Roem. et Schult. (syn.: <i>Anthoxanthum monticola</i> (Bigelow) Veldkamp)	AH13. Murmansk Region, Dalniye Zelentsy, 1 VIII 2004. Coll.: S. V. Chinenko. Determ.: S. V. Chinenko, V. V. Petrovsky	KC698988	EF577511
28	<i>H. equisetata</i> Zotov (syn.: <i>Anthoxanthum equisetatum</i> (Zotov) de Lange et C. J. James)	AH43. New Zealand, South Island		KC512890
29	<i>H. fusca</i> Zotov (syn.: <i>Anthoxanthum fuscum</i> (Zotov) de Lange et C. J. James)	AH45. USA, 13.57° N 24.68° W, 31 I 2001. Coll.: C. Grant		KC512896
30	<i>H. novae-zelandiae</i> Gand. (<i>Anthoxanthum novae-zelandiae</i> (Gand.) de Lange et C. J. James)	AH44. New Zealand, Stewart Island		KC512891
31	<i>H. rariflora</i> Hook. f. (syn.: <i>Anthoxanthum rariflorum</i> (Hook. f.) Veldkamp)	P5762. Australia, New South Wales, 36°81' S, 150°02' E, 24 IX 1983. Coll.: E. M. Camning	VS9 KC698989	KC512893, KC698989
32	<i>H. occidentalis</i> Buckley (syn.: <i>Anthoxanthum occidentale</i> (Buckley) Veldkamp)	AH30. USA, Northern California, 41°09' N 123°55' W, 1989. Coll.: M. S. Ignatov, K. O. Korotkov	KC698986	KC512892
33	<i>H. glabra</i> subsp. <i>sachalinensis</i> (Printz) Tzvelev (syn.: <i>Anthoxanthum glabrum</i> (Trin.) Veldkamp)	AH20. Sakhalin, vicinity of Promyslovy settlement, 13 IX 1969. Coll.: A. M. Alekseeva, T. N. Pavlova. Determ.: N. Probatova		KC512888
34	<i>Phalaris paradoxa</i> var. <i>praeramosa</i> (Lam.) Paunero	MIIA. Morocco, 1995. Coll.: J. Lambinon (MIIA)	KC698999	KC512899
35	<i>P. canariensis</i> L.	Cultivar, purchased at a pet store, Saint-Petersburg, Russia, 2006		FJ178782
36	<i>P. canariensis</i> L.	Quintanar et al., 2007	KC698994	DQ539580
37	<i>P. brachystachys</i> Link	MHA17747. France, Vaucluse Department, 15 VI 1995. Coll.: B. Girerd	KC698993	KC512902
38	<i>P. truncata</i> Guss.	AI26. Italy, 1991. Determ.: A. M. Baldini. MHA	KC699000	KC512903
39	<i>P. truncata</i> Guss.	Hsiao et al., 1995		L36522
40	<i>P. aquatica</i> L.	MHA: 14815. France, Corsica, 12 VI 1979. Coll.: J. Lambinon	KC698996	KC512901
41	<i>P. coeruleascens</i> Desf.	MHA:15821. Italy, 13 V 1991. Coll. and determ.: M. Iberite	KC698995	KC512900
42	<i>P. arundinacea</i> L.	AH50. South Korea, 2009. Kim Y.-D., Kim K.-J., Kim S.-H., Lee J.-H.	KC698998	FJ766174
43	<i>Cinna latifolia</i> (Trevir. ex Göpp.) Griseb.	Altai Mountains, Sentelek Range, Inya River Valley. Coll.: E. O. Punina. Determ.: N. N. Nosov	DQ631432	FJ026731

Table A2. Species from the closely related genera obtained from the GenBank

Number	Species	Accession
44	<i>Aira caryophyllea</i> Bertol. (syn.: <i>Deschampsia media</i> (Gouan) Roem. et Schult.)	AM049252 (Chiapella, 2007)
45	<i>A. cupaniana</i> Guss.	DQ631442 (Quintanar et al., 2007)
46	<i>Arrhenatherum elatius</i> (L.) P. Beauv. ex J. Presl et C. Presl	DQ336841 (Quintanar et al., 2007), DQ995405 (Nikoloudakis et al., 2008)
47	<i>A. calderae</i> A. Hansen	DQ631462 (Quintanar et al., 2007), AJ632231 (S. C. Nisa, direct submission, 2004)
48	<i>Avena sativa</i> L.	EU833881 (Peng et al., 2010), AY520821 (Rodionov et al., 2005)
49	<i>A. longiglumis</i> Durieu	DQ631463 (Quintanar et al., 2007), AY522436 (Rodionov et al., 2005)
50	<i>A. macrostachya</i> Balansa et Durieu (syn.: <i>Helictotrichon macrostachyum</i> (Balansa et Durieu) Henrard)	EU833877 (Peng Y. Y., direct submission, 2008), AY522433 (Rodionov et al., 2005)
51	<i>Helictotrichon hookeri</i> (Scribn.) Romero Zarco	FN984916 (Winterfeld et al., 2011)
52	<i>H. agropyroides</i> (Boiss.) Romero Zarco	FN984898 (Winterfeld et al., 2011)
53	<i>Koeleria pyramidata</i> (Lam.) P. Beauv.	DQ336847, DQ336827 (Quintanar et al., 2007)
54	<i>K. vallesiana</i> (Honk.) Gaudin	DQ631468, DQ336829 (Quintanar et al., 2007)
55	<i>Trisetum sibiricum</i> Rupr. (<i>Sibirotrisetum sibiricum</i> (Rupr.) Barberá)	FJ766189 (Kim Y.-D., Kim K.-J., Lee J.-H., and Kim S.-H., direct submission, 2009)
56	<i>T. spicatum</i> (L.) K. Richt. (syn.: <i>Koeleria spicata</i> (L.) Barberá)	AY752486 (R. C. Gardner, direct submission, 2004)
57	<i>T. hispidum</i> Lange (syn.: <i>Koeleria haspanica</i> Barberá, Quintanar, Soreng et P. M. Peterson)	Q336851 (Quintanar et al., 2007)
58	<i>T. ovatum</i> Pers. (syn.: <i>Trisetaria ovata</i> (Pers.) Paunero)	DQ336852 (Quintanar et al., 2007)
59	<i>Grappophorum wolfii</i> (Vasey) Coult.	DQ336843, DQ336823 (Quintanar et al., 2007)
60	<i>Agrostis stolonifera</i> L.	DQ336835 (Quintanar et al., 2007), FJ042868 (Rotter et al., 2010)
61	<i>A. canina</i> L.	FJ042870 (Rotter et al., 2010)
62	<i>Avenula bromoides</i> (Gouan) H. Scholz (syn.: <i>Helictochloa bromoides</i> (Gouan) Romero Zarco)	DQ631459 (Quintanar et al., 2007)
63	<i>A. pubescens</i> (Huds.) Dumort.	DQ631460 (Quintanar et al., 2007)
64	<i>Apera interrupta</i> (L.) P. Beauv.	EU792439, EU792364 (Gillespie et al., 2008)
65	<i>Calamagrostis scopulorum</i> M. E. Jones	J377654 (Saarela et al., 2010)
66	<i>C. epigejos</i> (L.) Roth	AJ306448 (S. S. Jakob and F. R. Blattner, direct submission)
67	<i>C. arundinacea</i> Wibel (syn.: <i>C. acutiflora</i> (Schrad.) DC.)	DQ631455 (Quintanar et al., 2007)
68	<i>C. villosa</i> (Chaix) J. F. Gmel.	EU119355 (Schardl et al., 2008)
69	<i>Polypogon viridis</i> (Gouan) Breistr.	DQ146796 (Reichman et al., 2006)
70	<i>P. australis</i> Brong.	FJ377671 (J. M. Saarela, P. M. Peterson, Q. Liu, and B. Paszko, direct submission, 2008)
71	<i>P. fugax</i> Nees ex Steud.	EU639581 (Xu C. M., Yu W. G., and Li F. Z., direct submission, 2008)
72	<i>P. maritimus</i> Willd.	DQ336838 (Quintanar et al., 2007)

Number	Species	Accession
73	<i>Deschampsia flexuosa</i> (L.) Trin. (syn.: <i>Avenella flexuosa</i> (L.) Drejer)	DQ631439 (Quintanar et al., 2007), AY237846 (Brysting et al., 2004)
74	<i>D. cespitosa</i> (L.) P. Beauv.	DQ631441 (Quintanar et al., 2007), AF532929 (Catalán et al., 2004)
75	<i>D. chapmanii</i> Petrie	AM041226 (Chiappella, 2007)
76	<i>D. antarctica</i> É. Desv.	EU792463 (Gillespie et al., 2008)
77	<i>Zingeria biebersteiniana</i> subsp. <i>trichopoda</i> (Boiss.) R. R. Mill (syn.: <i>Colpodium trichopodum</i> (Boiss.) Röser et Tkach)	FJ196301 (Rodionov et al., 2008)
78	<i>Catabrosella araratica</i> (Lipsky) Woronow ex Grossh. (syn.: <i>Hyalopodium araraticum</i> (Lipsky) Röser et Tkach)	DQ353966 (Gillespie et al., 2007), EU792345 (Gillespie et al., 2008)
79	<i>Alopecurus borealis</i> Trin. (syn.: <i>A. magellanicus</i> Lam.)	DQ353966 (Gillespie et al., 2007), EU792345 (Gillespie et al., 2008)
80	<i>A. gerardii</i> (All.) Vill.	EU792432, EU792344 (Gillespie et al., 2008)
81	<i>A. pratensis</i> L.	EU434101 (Sungkaew et al., 2009)
82	<i>Phleum phleoides</i> (L.) H. Karst.	AF498396 (Subbotin et al., 2004)
83	<i>P. pratense</i> L.	DQ353964 (Gillespie et al., 2007), EU792341 (Gillespie et al., 2008)
84	<i>Beckmannia syzigachne</i> (Steud.) Fernald	DQ353965 (Gillespie et al., 2007), EU792342 (Gillespie et al., 2008)
85	<i>Milium effusum</i> L.	DQ631435 (Quintanar et al., 2007), GQ324477 (Gillespie et al., 2009)
86	<i>M. vernale</i> M. Bieb.	EU792340 (Gillespie et al., 2008)
87	<i>Briza minor</i> L.	EU395903 (Essi et al., 2008), EU935584 (Rodionov et al., 2008)
88	<i>B. media</i> L.	DQ631446 (Quintanar et al., 2007), FM179393 (Schneider et al., 2009)
89	<i>Ammophila arenaria</i> (L.) Link (syn.: <i>Calamagrostis arenaria</i> (L.) Roth)	DQ631456 (Quintanar et al., 2007)
90	<i>Catabrosa aquatica</i> (L.) P. Beauv.	DQ631429 (Quintanar et al., 2007), EF577510 (Rodionov et al., 2008), EU792333 (Gillespie et al., 2008)
91	<i>C. werdermannii</i> (Pilg.) Nicora et Rùgolo (syn.: <i>Catanellia werdermannii</i> (Pilg.) L. J. Gillespie et Soreng)	EU792431, EU792333 (Gillespie et al., 2008)
92	<i>Sesleria insularis</i> Sommier	DQ353957 (Gillespie et al., 2007), EU792326 (Gillespie et al., 2008)
93	<i>S. caerulea</i> (L.) Ard.	DQ631450 (Quintanar et al., 2007), EF565132 (Rodionov et al., 2008)
94	<i>Deyeuxia avenoides</i> (Hook. f.) Buchanan (syn.: <i>Calamagrostis avenoides</i> (Hook. f.) Cockayne)	AY705889 (R. C. Gardner et al., direct submission, 2004)
95	<i>D. aucklandica</i> (Hook. f.) Zotov	AY705888 (R. C. Gardner et al., direct submission, 2004)
96	<i>Dactylis glomerata</i> L.	AF533028, AF393013 (Catalán et al., 2004)
97	<i>D. hispanica</i> Roth (<i>D. glomerata</i> subsp. <i>hispanica</i> (Roth) Nyman)	AF533027, AF393014 (Catalán et al., 2004)
98	<i>Dupontia fisheri</i> R. Br.	DQ353968 (Gillespie et al., 2007), EU792346 (Gillespie et al., 2007)

Number	Species	Accession
99	<i>Lolium perenne</i> L.	EF378973, EF379075 (Inda et al., 2014)
100	<i>L. rigidum</i> Gaudin	EF378981, EF379083 (Inda et al., 2014)
101	<i>Arctophila fulva</i> (Trin.) Andersson (syn.: <i>Dupontia fulva</i> (Trin.) Röser et Tkach)	DQ354058 (Gillespie et al., 2007), EU792386 (Gillespie et al., 2008)
102	<i>Arctopoa schischkinii</i> (Tzvelev) Prob.	EU935583 (Rodionov et al., 2008)
103	<i>Poa annua</i> L.	EU792452, EU792386 (Gillespie et al., 2008)
104	<i>P. trivialis</i> L.	GQ324462 (Gillespie et al., 2008), AF532932 (Catalán et al., 2004)
105	<i>P. pratensis</i> L.	AY819764 (S. D. Stoneberg-Holt, direct submission), GQ324542 (Gillespie et al., 2009)
106	<i>Festuca arundinacea</i> Vill. (syn.: <i>F. rubra</i> L.)	EF378954, EF379049 (Inda et al., 2014)
107	<i>F. gigantea</i> (L.) Vill. (syn.: <i>Lolium giganteum</i> (L.) Darbysh.)	EF378961, EF379059 (Inda et al., 2014)
108	<i>Brachypodium distachyon</i> (L.) P. Beauv.	AF478500 (P. Torrecilla and P. Catalán, direct submission)
109	<i>B. sylvaticum</i> (Huds.) P. Beauv.	EF137593 (Bouchenak-Khelladi et al., 2009)
110	<i>Secale cereale</i> L.	AF478501, AF303400 (P. Catalán and P. Torrecilla, direct submission)

References

- Bouchenak-Khelladi Y., Verboom G. A., Hodkinson T. R., Salamin N., Francois O., Chonghaile G. N., Savolainen V. 2009. The origins and diversification of C₄ grasses and savanna-adapted ungulates // *Global Change Biol.* Vol. 15, № 10. P. 2397–2417. <https://doi.org/10.1111/j.1365-2486.2009.01860.x>
- Brysting A. K., Fay M. F., Leitch I. J., Aiken S. G. 2004. One or more species in the arctic grass genus *Dupontia*? — a contribution to the Panarctic Flora project // *Taxon.* Vol. 53, № 2. P. 365–382. <https://doi.org/10.2307/4135615>
- Catalán P., Torrecilla P., Rodríguez J. A. L., Olmstead R. G. 2004. Phylogeny of the festucoid grasses of subtribe *Lolliinae* and allies (*Poeae*, *Pooideae*) inferred from ITS and *trnL*-F sequences // *Molec. Phylogen. Evol.* Vol. 31, № 2. P. 517–541. <https://doi.org/10.1016/j.ympev.2003.08.025>
- Chiappella J. 2007. A molecular phylogenetic study of *Deschampsia* (*Poaceae*: *Aveneae*) inferred from nuclear ITS and plastid *trnL* sequence data: support for the recognition of *Avenella* and *Vahlodea* // *Taxon.* Vol. 56, № 1. P. 55–64. <https://doi.org/10.2307/25065735>
- Essi L., Longhi-Wagner H. M., de Souza-Chies T. T. 2008. Phylogenetic analysis of the *Briza* Complex (*Poaceae*) // *Molec. Phylogen. Evol.* Vol. 47, № 3. P. 1018–1029. <https://doi.org/10.1016/j.ympev.2008.03.007>
- Gillespie L. J., Archambault A., Soreng R. J. 2007. Phylogeny of *Poa* (*Poaceae*) based on *trnT*-*trnF* sequence data: major clades and basal relationships // *Aliso.* Vol. 23, № 1. P. 420–434. <https://doi.org/10.5642/aliso.20072301.33>
- Gillespie L. J., Soreng R. J., Bull R. D., Jacobs S. W., Refulio-Rodriguez N. F. 2008. Phylogenetic relationships in subtribe *Poinae* (*Poaceae*, *Poeae*) based on nuclear ITS and plastid *trnT*-*trnL*-*trnF* sequences // *Botany.* Vol. 86, № 8. P. 938–967. <https://doi.org/10.1139/B08-076>
- Gillespie L. J., Soreng R. J., Jacobs S. W. L. 2009. Phylogenetic relationships of Australian *Poa* (*Poaceae*: *Poinae*), including molecular evidence for two new genera, *Saxipoa* and *Sylvoipoa* // *Austral. Syst. Bot.* Vol. 22. P. 413–436. <https://doi.org/10.1071/SB09016>
- Inda L. A., Sanmartín I., Buerki S., Catalán P. 2014. Mediterranean origin and Miocene-Holocene Old World diversification of meadow fescues and ryegrasses (*Festuca* subgenus *Schedonorus* and *Lolium*) // *J. Biogeogr.* Vol. 41, № 3. P. 600–614. <https://doi.org/10.1111/jbi.12211>
- Nikoloudakis N., Skaracis G., Katsiotis A. 2008. Evolutionary insights inferred by molecular analysis of the ITS1–5.8S–ITS2 and IGS *Avena* sp. sequences // *Molec. Phylogen. Evol.* Vol. 46, № 1. P. 102–115. <https://doi.org/10.1016/j.ympev.2007.10.007>
- Peng Y. Y., Baum B. R., Ren C. Z., Jiang Q. T., Chen G. Y., Zheng Y. L., Wei Y. M. 2010. The evolution pattern of rDNA ITS in *Avena* and phylogenetic relationship of the *Avena* species (*Poaceae*: *Aveneae*) // *Hereditas.* Vol. 147, № 5. P. 183–204. <https://doi.org/10.1111/j.1601-5223.2010.02172.x>
- Reichman J. R., Watrud L. S., Lee E. H., Burdick C. A., Bollman M. A., Storm M. J., King G. A., Mallory-Smith C. 2006. Establishment of transgenic herbicide-resistant creeping bentgrass (*Agrostis stolonifera* L.) in nonagronomic habitats // *Molec. Ecol.* Vol. 15, № 13. P. 4243–4255. <https://doi.org/10.1111/j.1365-294X.2006.03072.x>
- Quintanar A., Castroviejo S., Catalán P. 2007. Phylogeny of the tribe *Aveneae* (*Pooideae*, *Poaceae*) inferred from plastid *trnT*-F and nuclear ITS sequences // *Amer. J. Bot.* Vol. 94, № 9. P. 1554–1569. <https://doi.org/10.3732/ajb.94.9.1554>
- Rodionov A. V., Tyupa N. B., Kim E. S., Machs E. M., Loskutov I. G. 2005. Genomic configuration of the autotetraploid oat species *Avena macrostachya* inferred

- from comparative analysis of ITS1 and ITS2 sequences: on the oat karyotype evolution during the early events of the *Avena* species divergence // Russ. J. Genet. Vol. 41, № 5. P. 518–528. <https://doi.org/10.1007/s11177-005-0120-y>
- Rodionov A. V., Kim E. S., Nosov N. N., Rayko M. P., Machs E. M., Punina E. O. 2008. Molecular phylogenetic study of the genus *Colpodium* sensu lato (*Poaceae: Poeae*) // Ecol. Genetics. Vol. 6, № 4. P. 34–46. [In Russian] (Родионов А. В., Ким Е. С., Носов Н. Н., Райко М. П., Мачс Э. М., Пунина Е. О. 2008. Молекулярно-филогенетическое исследование видов рода *Colpodium* sensu lato (*Poeae, Poaceae*) // Экол. генетика. Т. 6, № 4. С. 34–46).
- Rotter D., Ambrose K. V., Belanger F. C. 2010. Velvet bentgrass (*Agrostis canina* L.) is the likely ancestral diploid maternal parent of allotetraploid creeping bentgrass (*Agrostis stolonifera* L.) // Genet. Resources Crop Evol. Vol. 57. P. 1065–1077. <https://doi.org/10.1007/s10722-010-9548-6>
- Saarela J. M., Liu Q., Peterson P. M., Soreng R. J., Paszko B. 2010. Phylogenetics of the grass ‘Aveneae-type plastid DNA clade’ (*Poaceae: Pooideae, Poeae*) based on plastid and nuclear ribosomal DNA sequence data // O. Seberg, G. Petersen, A. Barfod, J. I. Davis (eds.) Diversity, phylogeny, and evolution in the monocotyledons. Aarhus: Aarhus Univ. Press. P. 557–587.
- Schardl C. L., Craven K. D., Speakman S., Stromberg A., Lindstrom A., Yoshida R. 2008. A novel test for host-symbiont codivergence indicates ancient origin of fungal endophytes in grasses // Syst. Biol. Vol. 57, № 3. P. 483–498. <https://doi.org/10.1080/10635150802172184>
- Schneider J., Döring E., Hilu K. W., Röser M. 2009. Phylogenetic structure of the grass subfamily *Pooideae* based on comparison of plastid *matK* gene–*3'trk* exon and nuclear ITS sequences // Taxon. Vol. 58, № 2. P. 405–424. <https://doi.org/10.1002/tax.582008>
- Subbotin S. A., Krall E. L., Riley I. T., Chizhov V. N., Staelens A., De Loose M., Moens M. 2004. Evolution of the gall-forming plant parasitic nematodes (*Tylenchida: Anguinidae*) and their relationships with hosts as inferred from Internal Transcribed Spacer sequences of nuclear ribosomal DNA // Molec. Phylogen. Evol. Vol. 30, № 1. P. 226–235. [https://doi.org/10.1016/S1055-7903\(03\)00188-X](https://doi.org/10.1016/S1055-7903(03)00188-X)
- Sungkaew S., Stapleton C. M. A., Salamin N., Hodgkinson T. R. 2009. Non-monophyly of the woody bamboos (*Bambuseae; Poaceae*): a multi-gene region phylogenetic analysis of *Bambusoideae* s. s. // J. Pl. Res. Vol. 122, № 1. P. 95–108. <https://doi.org/10.1007/s10265-008-0192-6>
- Winterfeld G., Perner K., Röser M. 2011. Genome composition and origin of the polyploid Aegean grass *Avenula agropyroides* (*Poaceae*) // J. Biogeogr. Vol. 38, № 4. P. 727–741. <https://doi.org/10.1111/j.1365-2699.2010.02428.x>