

TABLE 1. Fossil plant assemblages from Europe and Asia Minor (hereafter “test set of fossil assemblages”) covering the period from the early Eocene to the Pleistocene, their ages, fossil record, and references. Country abbreviations. GB, Great Britain; DE, Germany; CZ,

Czech Republic; AT, Austria; HU, Hungary; PL, Poland; FR, France; TY, Turkey; GR, Greece; IT, Italy; AM, Armenia.

Country	Studied fossil floras	ID in Figure 1	GPS coordinates	References	Series	Age/Stage	Regional Stage/Biozone	Ma	Fossil record	Additional information
GB	Hampshire Basin	1		Collinson (1983)	early Eocene			56-49	fruits	
GB	London Clay	2		Collinson (1983)	early Eocene			56-49	fruits	
DE	Messel	3	N 49°56' E 8°44'	Collinson et al. (2012), Sturm (1971), Wilde (1989), Wilde et al. (2005)	early middle Eocene	lower Geiselian	Europ. Vertebrate zone MP 11		leaves, fruits	
DE	Geiseltal	4	N 51°18'28" E 11°52'09"	Mai (1976), Wilde (1995), Kahlert and Rufflé (2007)	middle Eocene				leaves, fruits	
DE	Profen-Scheiplitz	5	N 51°7'32.45" E 12°12'56.56"	Fischer (1991), Mai and Walther (2000)	late middle Eocene				leaves, fruits	
CZ	Staré Sedlo	6	N 50° 10' 54.39" E 12° 43' 11.37"	Knobloch et al. (1996), Teodoridis et al. (2012)	late Eocene	Priabonian		?	leaves, pollen (morphotaxa)	Staré Sedlo s.l.
DE	Flörsheim	7	N 50°01' E 08°26'	Kvaček (2004)	early Oligocene	Rupelian	Nannoplankton zone NP23		leaves	
DE	Rauenberg	8	N 49°16'04" E 8°42'13"	Kovar-Eder (2016)	early Oligocene	Rupelian	Nannoplankton zone NP23		leaves	
DE	Seifhennersdorf	9	N 50°56' 7.02" E 14°36'26.99"	Walther and Kvaček (2007)	early Oligocene	Rupelian		30.44 ± 1.25	leaves	
AT	Linz, Ebelsberg Fm.	10	N 48°18' E 14°17'	Kovar (1982)	early Miocene	Aquitanian	lowermost upper Egerian, nannoplankton zone NN1	app. 21.6-23	leaves	
AT	Oberdorf	11	N 47°04' E 15°07'	Kovar-Eder et al. (2001)	early Miocene	upper Burdigalian	Ottnangian/Karpatian		leaves, fruits	
HU	Mecsek Mts.	12	N 46°14' E 18°17'	Hably (2020)	late early Miocene	upper Burdigalian	Karpatian	16.82± 0.65 K/Ar date from fossiliferous Komló claymarl	leaves	
DE	Wackersdorf	13	N 49° 18'50.96" E 12°10'39.46"	Knobloch and Kvaček (1976), Gregor (1978), Günther and Gregor (1993)	early Miocene	Burdigalian	Karpatian	14.5 – 17.3	leaves, fruits	
CZ	Horní Břiza	14	N 49°50'28.79" E 13°21'28.56"	Němejc et al. (2003)	middle Miocene	Serrevalian	upper Badenian / lower Sarmatian	11.6–13.8	leaves, fruits	
DE	Randek Maar	15	N 48°34'08" E 9°30'77"	Rufflé (1963), Rasser et al. (2013)	late early/early middle Miocene	upper Burdigalian/Langhian	Neogene Mammal zone MN 5		leaves, fruits, pollen	
AT	Parschlug	16	N 47°28'50.7" E 15°17'15.3"	Kovar-Eder et al. (2004)	early/middle Miocene	uppermost Burdigalian/lowermost Langhian	Karpatian/lower Badenian	?	leaves	

Western and Central Europe

Country	Studied fossil floras	ID in Figure 1	GPS coordinates	References	Series	Age/Stage	Regional Stage/Biozone	Ma	Fossil record	Additional information
PL	Wieliczka	17	N 9°59'22" E 20°3'58"	Łańcucka- Środniowa (1984), Łańcucka- Środniowa and Zastawniak (1997)	middle Miocene	Langhian	middle Badenian, Wieliczian		mainly fruits	
PL	Gdów Bay	18	N 49°54'26" E 20°11'55"	Łańcucka- Środniowa (1966)	middle Miocene	Langhian	middle Badenian, Wieliczian		fruits	
PL	Staré Gliwice	19	N 50°17' E 18°40'	Szafer (1961)	middle Miocene	Serravallian	lower Sarmatian, Buhlovian		fruits	
PL	Holy Cross Mts.	20	N 50°33'0" E 20°43'24"	Zastawniak (1980)	middle Miocene	Serravallian	lower Sarmatian		leaves	Młyny, Stawiany
HU	Erdőbénye	21	N 48°16'5.59" E 21°21'22.00"	Kóvats 1856a, 1956b, Andreánszky (1959) Erdei and Hír (2002)	late middle Miocene	middle Sarmatian			leaves	Barnamaj, Kövágó-oldal, Tálya
FR	Arjuzanx	22	N 44°00'48" W 0°51'16"	Kvaček et al. (2011)	late middle/ early late Miocene	Floral Assemblage Düren			leaves	
AT	Mataschen	23	N46°54' E 15°57'	Kovar-Eder and Hably (2006)	late Miocene	lower Tortonian	Pannonian A/B		leaves, fruit, pollen	
AT	Lohnsburg	24	N 48°08'42" E 13°24'23"	Kovar-Eder (1988)	late Miocene	lower Tortonian	lower Pannonian, Neogene Mammal zone MN 9		leaves, pollen	incl. Großenreith, Schneegattern
CZ	Poštorná- Moravská Nová Ves	25	N 48°45'5.17" E 16°52'1.47"	Knobloch (1969)	late Miocene	Messinian	Pontian, former Pannonian F	7.2–11.6	leaves	
PL	Sońnica	26	N 51°01'58.7" E 16°47'00.3"	Goeppert (1855), Stachurska et al. (1973), Walther and Zastawniak (1991), Zastawniak and Walther (1998), Collinson et al. (2001), Kohlman- Adamska et al. (2004); Manchester and Zastawniak (2007)	late Miocene	Tortonian - Messinian		?	leaves, fruits, pollen	
PL	Ruszków	27	N 51°24'02" E 15°10'59"	Hummel (1983), Hummel (1991), Dyor et al. (1998)	late Miocene				leaves, fruits, pollen	
FR	Sessenheim	28	N 48°48' E 7°59'	Günter and Gregor (1989), Teodoridis et al. (2009)	Pliocene				fruits	
FR	Auenheim	29	N 48°48'44" E 8°00'38"	Kvaček et al. (2008), Teodoridis et al. (2009)	Pliocene				leaves, fruits	
CZ	Tachov Graben	30	N 49°45'1.18" E 12°46'53.52"	Bůžek et al. (1985), Stuchlík (1982); Teodoridis et al. (2017)	Pliocene	Zanclean	Brunssumian	2.6–4.5	leaves, fruits, pollen	

Western and Central Europe

Country	Studied fossil floras	ID in Figure 1	GPS coordinates	References	Series	Age/Stage	Regional Stage/Biozone	Ma	Fossil record	Additional information
DE	Kaltensundheim	31	N 50°36'21.643", E 10°09'22.740"	Mai and Walther (1988)	late Pliocene	Piacenzian	Reuverian	3.4	fruits	
CZ	Vildštejn Fm. Pluto Clay	32	N 50°09'19.74", E 12°22'43.99"	Bůžek et al. (1985), Stuchlik (1982); Teodoridis et al. (2017)	late Pliocene	Piacenzian	Reuverian	? 2.6–4.5	leaves, fruits, pollen	Vonšov Mb.
CZ	Vildštejn Fm., Nero Clay	33	N 50°09'19.74", E 12°22'43.99"	Bůžek et al. (1985), Stuchlik (1982); Teodoridis et al. (2017)	Pliocene	Piacenzian	Reuverian	? 2.6–4.5	fruits, pollen	Nová Ves Mb.
DE	Gerstungen	34	N 50°57'49.799" E 10°04'5.099"	Mai and Walther (1988)	Pliocene, ? early, ? late				fruits	
DE	Kranichfeld	35	N 50°51'25.596" E 11°12'11.499"	Mai and Walther (1988)	late Pliocene	Piacenzian	Reuverian		fruits	
DE	Berga	36	N 51°27'21.355" E 11°0'30.913"	Mai and Walther (1988)	late Pliocene	Piacenzian	Reuverian	2.5	leaves, fruits	
CZ	Vildštejn Fm., lignite beds	37	N 50°09'19.74", E 12°22'43.99"	Bůžek et al. (1985), Stuchlik (1982); Teodoridis et al. (2017)	Pleistocene	Piacenzian	Reuverian	1.5–2.6	leaves, fruits, pollen	Nová Ves Mb.
DE	Rippersroda	38	N 50°46'14.94" E 50°38'29.13"	Mai and Walther (1988)	late Pliocene/ Pleistocene		Reuverian Tiglian C	1.5–2.6	fruits	
CZ	Vildštejn Fm., upper beds	39	N 50°09'19.74" E 12°22'43.99"	Bůžek et al. (1985), Stuchlik (1982); Teodoridis et al. (2017)	Pleistocene		Praetiglian	1.5–2.6	(leaves, fruits), pollen	Nová Ves Mb.
DE	Nordhausen	40	N 51°29'51.47" E 10°47'50.59"	Mai and Walther (1988)	latest Pliocene/ Pleistocene	uppermost Pliocene to Tiglian A		1.65	fruits	
DE	Klinger beds	41	N 51°45'38" E 14°20'03"	Striegler (2008)	Pleistocene	Eem Interglacial			leaves	
TY	Güvem	42	N 40°28'11" E 32°39'02"	Denk et al. (2017)	early Miocene	Burdigalian	Neogene Mammal Zone MN3	20-18	leaves	
GR	Kymi	43	N 38°38' E 24°06'	Velitzelos et al. (2002)	early Miocene			13	leaves	
TY	Yatagan Basin	44	N 37°35' E 28°14'	Güner et al. (2017)	middle Miocene	upper Langhian/ lower Serravallian			leaves	
GR	Pitsidia	45	N 34°59'43.99" E 24°45'0.03"	Zidianakis et al. 2015, 2016, 2020)	late Miocene	lower-upper Tortonian			leaves	
IT	Mt. Tondo	46	N 44°17' E 11°35'	Teodoridis et al. (2015)	late Miocene	Messinian		appr. 5.7	mainly leaves	Vena del Gesso Fm.
IT	Tossignano	47	N 44°17' E 11°35'	Teodoridis et al. (2015)	late Miocene	Messinian		appr. 5.7	leaves, pollen	Vena del Gesso Fm.
IT	Ca' Viettone	48	N 45°19', E 7°36'	Bertoldi and Martinetto (1995)	Pliocene	upper Zanclean (probably)			leaves, pollen, fruits	

Country	Studied fossil floras	ID in Figure 1	GPS coordinates	References	Series	Age/Stage	Regional Stage/Biozone	Ma	Fossil record	Additional information
South Europe and Asia Minor	AM Shamb 1b+A1	49	N 39°28'03" E 46°09'00"	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		1.298	leaves, pollen	
	AM Shamb 1f+B1	50	N 39°28'03" E 46°09'00"	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		1.275	leaves, pollen	
	AM Darbas 2/d	51	N 39°26'24" E 46°07'20"	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		1.0715	leaves, pollen	
	AM Uyts-2/a + Uts-2 PZ23	52	N 39°31' E 46°03'	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		1.0715	leaves, pollen	
	AM Darbas-2/f + Drb-2 PZ6	53	N 39°26'24" E 46°07'20"	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		1.030	leaves, pollen	
	AM Tolors 2	54	N 39°27'38" E 46°02'46"	Bruch and Gabrielyan (2002), Bruch et al. (unpublished)	early Pleistocene	Calabrian		0.998	leaves, pollen	

TABLE 2. Results of applying the Drudges 1 and 2 on the test set of fossil assemblages. Listed are the five best fitted results for every site/assemblage for the IPR Similarity, Taxonomic Similarity (TS), and Results Mix (hereafter “similarity approaches”) for both Drudges. For every individual site, 25 proxies are listed (five for each of the similarity approaches). Note that TS is counted only once because it is identical for Drudge 1 and 2. The number for all proxies for every similarity approach is 270 (54x5). The number of all proxies for all sites and all similarity approaches is 1350 (54x5x5).

		Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference
Drudge 1													
Site/results		Hampshire Basin		London Clay		Messel		Geiseltal		Profen-Scheiplitz		Staré Sedlo	
Results - IPR Similarity	1	China 17	3.0	China 17	3.2	Japan 07	2.1	Japan 07	6.2	Japan 13	4.0	Japan 08	4.0
	2	China 89	4.3	China 34	4.4	Japan 08	6.6	China 18	7.3	Japan 12	4.1	D032	5.3
	3	D032	4.7	China 32	4.5	China 34	6.8	China 34	9.6	China 16	4.5	China 89	5.4
	4	China 32	4.9	D032	5.8	D032	6.9	China 19	11.0	Japan 11	4.8	Japan 07	7.2
	5	China 34	6.5	Japan 07	6.7	China 17	8.6	Japan 08	11.4	China 22	5.7	China 17	8.0
Results - Taxonomic Similarity	1	Japan 06	18.3%	Japan 06	13.5%	China 17	7.5%	China 57	17.9%	China 17	23.7%	China 34	5.7%
	2	China 77	18.3%	China 57	12.7%	Japan 14	6.8%	China 61	14.9%	China 21	21.1%	China 38	5.0%
	3	Japan 01	17.2%	China 77	12.7%	China 57	6.2%	China 38	13.4%	Japan 11	21.1%	China 13	5.0%
	4	Japan 02	17.2%	Japan 01	12.7%	Japan 01	6.2%	China 58	13.4%	Japan 12	21.1%	China 14	5.0%
	5	China 57	17.2%	Japan 02	12.7%	Japan 02	6.2%	China 60	11.9%	China 38	21.1%	Japan 01	5.0%
Results - Mix	1	China 17	85.0	China 17	89.7	China 17	92.9	China 34	90.1	Japan 12	79.1	China 34	94.8
	2	China 32	88.3	China 32	91.4	Japan 08	95.4	China 32	90.5	Japan 11	79.1	China 36	96.9
	3	China 01	89.8	China 01	91.6	Japan 14	96.0	China 33	91.8	China 21	79.8	China 89	97.3
	4	China 36	90.9	China 36	93.1	China 19	96.8	China 17	91.9	Japan 10	81.8	China 30	97.6
	5	China 33	91.0	China 33	93.3	China 33	96.9	China 36	93.4	China 20	81.9	China 32	97.7
Drudge 2													
Site/results		Hampshire Basin		London Clay		Messel		Geiseltal		Profen-Scheiplitz		Staré Sedlo	
Results - IPR Similarity	1	China 32	4.8	China 34	3.3	China 34	8.6	China 30	7.8	China 20	10.3	China 89	12.8
	2	China 34	6.4	China 32	4.3	China 19	11.4	China 19	13.3	China 16	12.9	China 30	12.8
	3	China 36	10.5	China 33	12.1	China 32	12.4	China 33	13.5	China 21	14.1	China 36	17.4
	4	China 01	12.7	China 01	12.2	China 33	12.4	China 34	14.8	China 22	15.0	China 17	17.5
	5	China 19	15.9	China 19	12.7	China 30	13.5	China 21	16.1	China 31	15.0	China 34	17.5
Results - Taxonomic Similarity	1	Japan 06	18.3%	Japan 06	13.5%	China 17	7.5%	China 57	17.9%	China 17	23.7%	China 34	5.7%
	2	China 77	18.3%	China 57	12.7%	Japan 14	6.8%	China 61	14.9%	China 21	21.1%	China 38	5.0%
	3	Japan 01	17.2%	China 77	12.7%	China 57	6.2%	China 38	13.4%	Japan 11	21.1%	China 13	5.0%
	4	Japan 02	17.2%	Japan 01	12.7%	Japan 01	6.2%	China 58	13.4%	Japan 12	21.1%	China 14	5.0%
	5	China 57	17.2%	Japan 02	12.7%	Japan 02	6.2%	China 60	11.9%	China 38	21.1%	Japan 01	5.0%
Results - Mix	1	China 32	88.3	China 32	91.4	China 17	95.7	China 34	90.8	China 21	80.2	China 34	95.9
	2	China 01	90.2	China 01	92.1	China 19	96.6	China 32	91.5	Japan 12	82.1	China 30	96.6
	3	China 17	90.3	China 33	92.9	China 33	96.7	China 33	92.0	Japan 11	82.2	China 38	97.7
	4	China 33	90.7	China 36	93.0	China 21	97.6	China 38	92.3	China 20	82.2	China 36	98.0
	5	China 36	90.9	China 17	94.4	China 34	97.6	China 17	93.3	China 31	82.9	China 89	98.0

		Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference
Drudge 1													
Site/results		Flörsheim		Rauenberg		Seifhennersdorf		Linz, Ebelsberg Fm.		Oberdorf		Mecsek Mts.	
Results - IPR Similarity	1	China 18	6.4	J037	14.5	China 84	4.9	H001	1.6	H001	1.4	F001	1.7
	2	Japan 07	9.5	Japan 07	15.0	F166	4.9	C045	5.4	China 36	4.6	C008	2.8
	3	China 19	10.3	China 18	15.7	F169	5.1	Japan 04	5.5	C045	6.0	F030	3.2
	4	China 33	10.7	Japan 08	18.7	China 38	5.2	China 35	5.9	Japan 04	7.1	D056	4.4
	5	China 34	11.9	China 19	19.4	China 28	7.2	China 37	5.9	China 35	7.5	D042	4.9
Results - Taxonomic Similarity	1	Japan 05	15.9%	China 35	22.8%	Japan 05	41.2%	China 62	38.7%	China 60	31.5%	China 78	27.6%
	2	China 38	15.9%	China 37	22.8%	China 57	41.2%	Japan 01	35.5%	Japan 05	30.0%	Japan 05	26.3%
	3	China 77	14.3%	China 34	19.3%	China 67	41.2%	China 60	35.5%	Japan 06	26.2%	China 67	26.3%
	4	J019	14.3%	China 38	17.5%	China 60	39.7%	China 67	32.3%	Japan 14	25.4%	China 61	25.0%
	5	J022	14.3%	F009	17.5%	China 61	39.7%	China 57	32.3%	China 57	25.4%	China 68	23.7%
Results - Mix	1	China 34	88.1	China 34	83.1	China 67	60.3	China 67	72.7	China 17	76.6	H002	83.9
	2	China 33	89.5	China 33	84.8	China 56	65.0	China 32	74.0	China 36	82.4	China 67	83.9
	3	Japan 11	89.8	China 35	86.4	China 57	67.1	China 36	74.5	China 67	82.6	F156	85.7
	4	Japan 08	90.1	China 37	86.4	China 60	67.9	China 62	75.5	Japan 04	82.6	J017	85.8
	5	Japan 12	90.2	China 22	88.3	China 61	68.8	China 59	78.4	China 60	83.0	China 14	86.3
Drudge 2													
Site/results		Flörsheim		Rauenberg		Seifhennersdorf		Linz, Ebelsberg Fm.		Oberdorf		Mecsek Mts.	
Results - IPR Similarity	1	China 33	10.3	China 33	16.1	China 38	4.9	China 38	15.9	Japan 04	10.7	D042	16.2
	2	China 19	13.0	China 30	18.5	China 59	9.7	China 89	16.5	China 36	11.5	D002	20.6
	3	China 30	13.1	China 19	19.4	China 67	10.0	China 36	19.0	China 38	11.8	G076	23.4
	4	China 34	13.7	China 34	19.7	Japan 04	10.5	China 59	20.3	China 35	13.7	D045	24.1
	5	China 21	17.0	Japan 09	21.5	China 35	12.9	Japan 04	20.4	China 37	13.7	D064	24.3
Results - Taxonomic Similarity	1	Japan 05	16%	China 35	23%	Japan 05	41.2%	China 62	39%	China 60	31.5%	China 78	27.6%
	2	China 38	16%	China 37	23%	China 57	41.2%	Japan 01	36%	Japan 05	30.0%	Japan 05	26.3%
	3	China 77	14%	China 34	19%	China 67	41.2%	China 60	36%	Japan 06	26.2%	China 67	26.3%
	4	J019	14%	China 38	18%	China 60	39.7%	China 67	32%	Japan 14	25.4%	China 61	25.0%
	5	J022	14%	F009	18%	China 61	39.7%	China 57	32%	China 57	25.4%	China 68	23.7%
Results - Mix	1	China 34	88.4	China 34	83.1	China 67	59.7	China 67	72.7	China 17	78.4	China 67	81.1
	2	China 33	89.5	China 33	84.0	China 57	65.0	China 62	72.9	China 60	80.4	J017	85.9
	3	China 36	90.3	China 35	85.4	China 56	65.3	China 32	76.4	China 67	81.7	China 59	86.6
	4	Japan 11	90.4	China 37	85.4	China 60	66.0	China 36	76.6	China 33	82.8	G056	87.9
	5	Japan 12	90.5	China 30	87.9	China 58	68.0	China 59	76.9	Japan 04	83.0	D052	89.3

		Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/ Taxonomic Similarity / Total difference
Drudge 1													
Site/results		Wackersdorf		Horní Břiza		Randeck Maar		Parschlug		Wieliczka		Gdów Bay	
Results - IPR Similarity	1	Japan 04	2.2	F139	3.2	F026	3.1	G043	2.2	F169	1.8	F107	2.5
	2	C045	2.6	F137	3.3	D030	4.2	F098	2.6	Japan 15	4.5	F117	3.6
	3	F163	3.6	China 13	3.9	D011	4.7	K022	2.7	China 38	5.1	Japan 02	3.7
	4	H001	4.0	D064	4.1	D056	5.0	G074	3.4	China 84	5.7	China 79	3.8
	5	China 35	5.1	F084	5.0	K009	5.4	K015	4.0	C042	6.5	F157	4.2
Results - Taxonomic Similarity	1	Japan 06	31.0%	China 57	46.4%	China 57	23.8%	China 68	32.8%	Japan 06	39.2%	Japan 05	37.5%
	2	Japan 05	29.1%	China 67	42.9%	Japan 05	21.4%	China 81	31.3%	Japan 05	37.7%	China 60	32.5%
	3	China 57	27.8%	China 68	39.3%	China 56	21.4%	Japan 05	29.7%	China 57	36.2%	China 68	30.0%
	4	China 60	27.8%	China 78	39.3%	China 68	20.2%	Japan 06	29.7%	China 60	33.1%	China 81	30.0%
	5	China 67	24.7%	China 60	39.3%	China 32	20.2%	China 60	29.7%	China 61	29.2%	Japan 01	30.0%
Results - Mix	1	China 67	78.7	China 57	61.7	China 35	86.5	China 13	79.2	China 57	72.9	Japan 05	62.8
	2	China 36	81.0	China 67	62.7	China 37	86.5	D052	79.3	China 67	73.5	China 60	68.0
	3	China 17	82.3	China 60	67.8	China 56	87.2	G072	80.2	China 60	75.2	Japan 01	70.9
	4	China 35	83.1	China 56	69.4	China 67	87.3	Japan 01	80.8	Japan 05	76.3	China 68	71.9
	5	China 37	83.1	Japan 01	70.3	China 32	88.6	C046	82.0	China 58	77.2	China 81	72.2
Drudge 2													
Site/results		Wackersdorf		Horní Břiza		Randeck Maar		Parschlug		Wieliczka		Gdów Bay	
Results - IPR Similarity	1	China 38	5.5	China 87	18.0	D042	13.3	G032	17.1	China 38	5.2	G017	10.7
	2	Japan 04	6.1	China 65	18.9	G076	17.7	G071	21.5	China 59	11.0	G018	11.1
	3	China 35	7.4	F075	20.4	D002	18.3	D064	22.5	Japan 04	12.5	F171	12.8
	4	China 37	7.4	China 63	20.6	D064	19.9	D042	24.2	China 67	14.4	F075	12.8
	5	China 36	10.1	China 59	20.9	China 38	20.2	G030	24.3	China 35	15.2	G056	13.6
Results - Taxonomic Similarity	1	Japan 06	31.0%	China 57	46.4%	China 57	23.8%	China 68	32.8%	Japan 06	39.2%	Japan 05	37.5%
	2	Japan 05	29.1%	China 67	42.9%	Japan 05	21.4%	China 81	31.3%	Japan 05	37.7%	China 60	32.5%
	3	China 57	27.8%	China 68	39.3%	China 56	21.4%	Japan 05	29.7%	China 57	36.2%	China 68	30.0%
	4	China 60	27.8%	China 78	39.3%	China 68	20.2%	Japan 06	29.7%	China 60	33.1%	China 81	30.0%
	5	China 61	27.8%	China 60	39.3%	China 32	20.2%	China 60	29.7%	China 61	29.2%	Japan 01	30.0%
Results - Mix	1	China 67	77.7	China 57	58.9	China 67	85.9	China 68	81.2	China 57	71.2	Japan 05	69.7
	2	China 60	80.8	China 67	61.0	China 35	87.0	China 38	81.6	China 67	73.0	China 68	71.9
	3	China 36	81.0	China 60	65.3	China 37	87.0	China 81	82.5	China 60	73.6	China 81	71.9
	4	China 57	81.2	China 78	67.1	China 57	87.4	China 60	82.5	Japan 05	74.2	China 60	72.9
	5	China 35	83.2	China 56	68.9	China 56	88.0	China 67	83.0	China 58	75.7	China 63	75.3

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Drudge 1													
Site/results		Staré Gliwice		Hóly Cross Mts.		Erdöbenye		Arjuzanx		Mataschen		Lohnsburg	
Results - IPR Similarity	1	Japan 01	0.7	G032	1.2	C009	0.2	D033	3.8	C042	5.3	Japan 02	1.5
	2	F054	2.5	G051	5.6	D017	1.0	Japan 17	6.8	C045	5.5	F107	1.7
	3	F065	2.6	L008	5.7	F010	1.4	D030	7.3	Japan 17	7.2	F129	3.1
	4	F130	2.6	K016	7.1	F011	1.4	Japan 18	8.9	H001	8.5	Japan 05	3.4
	5	F131	2.7	J009	7.1	D035	1.5	D061	9.3	F169	9.2	F113	3.6
Results - Taxonomic Similarity	1	Japan 06	48.5%	China 68	37.5%	China 57	50.0%	Japan 05	28.4%	Japan 01	25.6%	China 60	60.0%
	2	Japan 05	46.6%	China 81	35.0%	China 60	48.2%	Japan 06	28.4%	Japan 06	24.8%	China 67	58.6%
	3	China 68	43.7%	D052	35.0%	China 61	46.4%	China 60	28.4%	China 60	24.1%	China 61	57.1%
	4	China 81	43.7%	Japan 05	32.5%	China 68	46.4%	China 57	27.2%	China 68	21.1%	China 68	55.7%
	5	Japan 01	40.8%	China 61	32.5%	China 78	46.4%	China 61	26.0%	China 81	21.1%	Japan 06	54.3%
Results - Mix	1	Japan 05	55.5	D052	75.0	Japan 01	60.0	China 67	80.2	China 36	85.0	China 60	41.3
	2	Japan 06	56.1	H002	77.7	China 57	65.1	China 36	80.7	Japan 17	85.3	China 61	43.8
	3	Japan 01	59.2	C013	78.8	China 60	66.3	China 38	84.1	China 38	85.5	China 68	46.4
	4	China 68	62.3	F033	79.5	H002	66.7	Japan 17	84.9	China 67	85.6	Japan 06	46.7
	5	China 81	62.9	F139	80.0	Japan 03	66.8	China 60	85.1	China 32	86.0	China 57	48.1
Drudge 2													
Site/results		Staré Gliwice		Holy Cross Mts.		Erdöbenye		Arjuzanx		Mataschen		Lohnsburg	
Results - IPR Similarity	1	F075	10.5	G032	1.1	G032	15.5	China 38	13.0	China 89	15.2	China 79	5.3
	2	China 87	10.6	G071	27.2	G071	19.8	Japan 04	17.5	China 17	19.0	China 63	6.1
	3	F171	11.6	J009	30.6	D064	21.5	China 36	18.1	D002	20.0	China 62	9.7
	4	G017	14.6	G036	30.8	G036	21.9	China 37	19.6	China 38	20.1	China 57	11.1
	5	G036	14.9	G051	31.8	F075	21.9	China 35	19.6	F169	20.9	China 60	11.3
Results - Taxonomic Similarity	1	Japan 06	48.5%	China 68	37.5%	China 57	50.0%	Japan 05	28.4%	Japan 01	25.6%	China 60	60.0%
	2	Japan 05	46.6%	China 81	35.0%	China 60	48.2%	Japan 06	28.4%	Japan 06	24.8%	China 67	58.6%
	3	China 68	43.7%	D052	35.0%	China 61	46.4%	China 60	28.4%	China 60	24.1%	China 61	57.1%
	4	China 81	43.7%	Japan 05	32.5%	China 68	46.4%	China 57	27.2%	China 68	21.1%	China 68	55.7%
	5	Japan 01	40.8%	China 61	32.5%	China 78	46.4%	China 61	26.0%	China 81	21.1%	Japan 06	54.3%
Results - Mix	1	Japan 05	59.8	China 68	80.8	China 57	62.2	China 67	78.5	Japan 01	84.1	China 60	41.6
	2	China 81	60.4	D052	82.8	China 60	63.5	China 36	80.8	China 17	86.3	China 61	45.9
	3	China 68	61.0	China 81	82.9	China 67	65.8	China 60	82.1	F033	86.7	China 67	46.4
	4	Japan 06	61.6	Japan 05	83.2	China 78	66.9	China 57	83.5	China 67	86.7	China 57	48.4
	5	China 57	66.0	D064	84.0	China 61	67.0	China 38	83.9	Japan 02	87.3	China 63	49.0

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Drudge 1													
Site/results		Pošterná-Moravská Nová Ves		Sošnica		Ruszów		Sessenheim		Auenheim		Tachov graben	
Results - IPR Similarity	1	F143	1.0	F130	2.0	F037	0.9	Mongolia 1	3.3	F159	2.0	F157	1.4
	2	H002	1.3	Japan 01	2.7	F157	1.2	F112	3.8	F113	2.5	F117	2.8
	3	F138	1.8	F054	3.3	F150	1.8	China 56	6.0	F047	2.6	F037	3.4
	4	F033	1.9	G038	3.9	F104	2.7	China 88	6.4	Japan 05	2.7	F123	3.7
	5	H003	3.9	F065	4.5	F117	2.7	F069	6.5	F083	3.2	F150	4.0
Results - Taxonomic Similarity	1	Japan 06	48.8%	Japan 06	45.3%	China 67	33.9%	Japan 05	36.5%	China 67	56.0%	Japan 06	47.2%
	2	China 61	46.3%	China 68	44.2%	Japan 05	33.1%	Japan 06	36.5%	China 81	52.0%	China 81	41.7%
	3	China 68	46.3%	Japan 01	42.1%	Japan 06	33.1%	Japan 01	35.6%	China 57	52.0%	Mongolia 1	38.9%
	4	China 81	43.9%	China 60	41.1%	China 60	32.3%	China 57	33.7%	China 61	52.0%	China 63	38.9%
	5	Japan 01	43.9%	China 81	40.0%	China 68	32.3%	China 61	33.7%	China 63	50.7%	China 68	36.1%
Results - Mix	1	Japan 01	58.2	Japan 01	58.0	Japan 05	67.6	Japan 01	66.1	China 81	49.7	Japan 06	54.9
	2	China 61	60.3	Japan 06	59.6	Japan 01	68.0	China 67	67.1	China 61	50.2	China 63	61.7
	3	China 56	60.3	China 60	61.0	China 60	68.6	Japan 05	67.3	China 57	50.4	China 81	61.9
	4	China 62	61.7	China 68	62.4	Japan 06	68.9	China 57	67.7	China 63	50.9	Mongolia 1	62.3
	5	China 57	62.3	Japan 05	65.2	China 57	70.1	China 61	67.9	Japan 05	52.1	Japan 05	64.5
Drudge 2													
Site/results		Pošterná-Moravská Nová Ves		Sošnica		Ruszów		Sessenheim		Auenheim		Tachov graben	
Results - IPR Similarity	1	China 65	16.3	F075	10.1	G018	8.9	China 65	14.0	Japan 05	8.6	D063	10.8
	2	China 87	16.6	F171	10.6	G017	9.1	F075	14.7	China 79	8.7	D013	11.6
	3	China 59	16.7	China 87	12.1	F075	9.9	China 59	15.7	China 78	9.7	China 85	11.7
	4	F075	17.1	G018	14.4	F171	10.5	China 67	16.1	China 63	11.4	C017	12.2
	5	China 67	19.0	G017	14.5	F063	10.5	China 58	17.2	China 57	13.1	D054	12.4
Results - Taxonomic Similarity	1	Japan 06	48.8%	Japan 06	45.3%	China 67	33.9%	Japan 05	36.5%	China 67	56.0%	Japan 06	47.2%
	2	China 61	46.3%	China 68	44.2%	Japan 05	33.1%	Japan 06	36.5%	China 81	52.0%	China 81	41.7%
	3	China 68	46.3%	Japan 01	42.1%	Japan 06	33.1%	Japan 01	35.6%	China 57	52.0%	Mongolia 1	38.9%
	4	China 81	43.9%	China 60	41.1%	China 60	32.3%	China 57	33.7%	China 61	52.0%	China 63	38.9%
	5	Japan 01	43.9%	China 81	40.0%	China 68	32.3%	China 61	33.7%	China 63	50.7%	China 68	36.1%
Results - Mix	1	China 62	60.1	China 68	60.4	China 81	69.2	China 67	68.3	China 57	49.7	Mongolia 1	63.7
	2	China 57	61.4	China 60	63.3	China 68	69.5	Japan 05	69.2	China 63	50.6	China 13	65.8
	3	China 56	61.4	Japan 06	63.7	China 67	71.7	China 57	69.8	China 61	50.7	D011	66.1
	4	China 67	61.5	China 81	63.7	China 63	73.1	China 68	71.2	China 67	51.3	China 81	68.4
	5	China 61	61.7	China 71	64.4	China 60	73.9	China 61	71.7	Japan 05	52.7	China 83	68.9

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Drudge 1													
Site/results		Kaltensundheim		Vildstejn Fm., Pluto Clay		Vildstejn Fm., Nero Clay		Gerstungen		Kranichfeld		Berga	
Results - IPR Similarity	1	F119	0.6	China 04	1.7	F123	0.5	China 56	0.4	China 59	2.7	F123	1.3
	2	China 63	2.2	F123	4.6	F150	2.7	China 88	2.4	F146	3.5	F157	1.8
	3	China 79	3.6	China 62	4.8	F157	3.0	China 65	4.8	China 67	3.6	F150	2.1
	4	China 85	4.4	China 80	4.8	F037	3.4	China 58	5.5	China 66	3.7	F037	2.5
	5	China 61	5.2	China 60	5.2	F142	3.5	Mongolia 2	6.3	Mongolia 2	5.0	F104	3.9
Results - Taxonomic Similarity	1	F033	45.9%	Japan 05	29.0%	China 68	33.7%	Japan 05	53.8%	China 68	48.6%	Japan 01	33.8%
	2	China 68	43.2%	Japan 06	28.0%	Japan 06	30.2%	Japan 06	48.7%	Mongolia 1	48.6%	F033	33.8%
	3	F024	43.2%	China 68	28.0%	China 81	29.1%	Mongolia 1	43.6%	F013	45.9%	F035	33.8%
	4	Mongolia 1	40.5%	China 81	27.0%	Japan 05	29.1%	Japan 01	43.6%	Japan 05	43.2%	China 68	32.3%
	5	F013	40.5%	F033	26.0%	F033	27.9%	China 68	41.0%	China 71	43.2%	F031	32.3%
Results - Mix	1	China 68	58.4	Japan 05	72.3	China 68	70.2	Japan 05	51.8	Mongolia 1	52.9	Japan 01	66.5
	2	F033	61.6	Japan 06	74.6	Japan 05	72.0	Mongolia 1	57.1	F013	64.5	F035	66.6
	3	Mongolia 1	62.2	China 61	75.3	Japan 06	72.3	Japan 06	58.6	D011	64.7	F031	68.3
	4	China 81	63.9	China 68	75.7	Japan 01	73.6	Japan 01	59.7	Japan 05	65.4	F033	68.6
	5	F035	64.0	Mongolia 1	76.4	F033	74.1	China 67	62.1	China 68	66.2	China 68	71.2
Drudge 2													
Site/results		Kaltensundheim		Vildstejn Fm., Pluto Clay		Vildstejn Fm., Nero Clay		Gerstungen		Kranichfeld		Berga	
Results - IPR Similarity	1	D041	6.9	F054	9.0	C037	5.9	China 88	11.9	D011	11.1	G038	5.4
	2	G001	7.3	G055	9.3	F130	6.6	China 85	14.8	D013	11.8	F054	6.8
	3	F152	7.7	G038	9.5	F054	6.6	G056	17.5	D030	12.3	F016	6.9
	4	D058	8.1	F069	9.6	China 83	8.4	D064	17.5	D016	13.5	F069	7.3
	5	F064	8.1	C037	9.7	F045	9.0	G055	17.5	D063	13.5	F053	7.9
Results - Taxonomic Similarity	1	F033	45.9%	Japan 05	29.0%	China 68	33.7%	Japan 05	53.8%	China 68	48.6%	Japan 01	33.8%
	2	China 68	43.2%	Japan 06	28.0%	Japan 06	30.2%	Japan 06	48.7%	Mongolia 1	48.6%	F033	33.8%
	3	F024	43.2%	China 68	28.0%	China 81	29.1%	Mongolia 1	43.6%	F013	45.9%	F035	33.8%
	4	Mongolia 1	40.5%	China 81	27.0%	Japan 05	29.1%	Japan 01	43.6%	Japan 05	43.2%	China 68	32.3%
	5	F013	40.5%	F033	26.0%	F033	27.9%	China 68	41.0%	China 71	43.2%	F031	32.3%
Results - Mix	1	F033	56.0	China 68	75.0	China 68	70.2	Japan 05	65.1	Mongolia 1	55.2	F033	68.7
	2	F024	59.2	China 81	75.5	F033	73.9	China 85	65.8	D011	60.5	Japan 01	69.8
	3	Mongolia 1	60.5	F033	76.4	China 81	74.3	China 68	66.2	F013	61.9	China 68	69.9
	4	F035	62.9	China 71	79.4	Japan 01	76.0	China 81	66.4	D016	63.6	F031	70.3
	5	F013	63.0	Japan 01	79.4	D052	77.3	Japan 01	67.8	China 68	64.1	China 81	71.0

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Drudge 1													
Site/results		Vildstejn Fm., lignite beds		Rippersroda		Vildstejn Fm., upper beds		Nordhausen		Klinger beds		Güvem	
Results - IPR Similarity	1	F142	2.9	China 78	2.4	F157	1.4	China 04	3.0	China 78	1.2	C008	0.5
	2	F155	3.6	China 77	2.6	F117	2.8	Mongolia 1	3.8	F144	4.9	F001	1.3
	3	F069	4.1	Japan 06	3.5	F037	3.4	F142	4.7	F119	5.7	D056	1.9
	4	Mongolia 1	5.0	China 71	4.3	F123	3.7	F123	6.0	China 83	5.8	D042	3.1
	5	F130	5.7	F144	4.8	F150	4.0	China 65	6.3	Japan 06	5.9	F030	3.3
Results - Taxonomic Similarity	1	Japan 06	31.3%	China 68	57.6%	Japan 06	47.2%	F031	40.9%	Japan 05	75.0%	Japan 01	26.0%
	2	Mongolia 1	31.3%	China 81	45.5%	China 81	41.7%	F033	31.8%	China 68	75.0%	Japan 05	26.0%
	3	China 81	29.9%	Mongolia 1	42.4%	Mongolia 1	38.9%	F042	31.8%	F043	68.8%	China 57	26.0%
	4	Japan 01	28.4%	F043	42.4%	China 63	38.9%	Japan 01	31.8%	China 13	68.8%	Japan 06	25.0%
	5	China 68	28.4%	Japan 06	42.4%	China 68	36.1%	China 80	31.8%	China 71	65.6%	China 60	24.0%
Results - Mix	1	Mongolia 1	68.8	China 68	42.7	Japan 06	54.9	F031	61.3	Japan 05	26.0	F007	83.9
	2	Japan 01	72.0	China 81	54.9	China 63	61.7	China 80	68.7	China 68	26.4	Japan 17	86.1
	3	Japan 06	73.1	Japan 06	57.7	China 81	61.9	Japan 01	69.1	F043	35.2	Japan 01	86.2
	4	F033	74.0	F043	59.9	Mongolia 1	62.3	F033	70.2	China 71	35.2	China 67	87.1
	5	Japan 05	75.4	Mongolia 1	63.3	Japan 05	64.5	F042	70.8	China 81	35.7	China 12	87.1
Drudge 2													
Site/results		Vildstejn Fm., lignite beds		Rippersroda		Vildstejn Fm., upper beds		Nordhausen		Klinger beds		Güvem	
Results - IPR Similarity	1	C017	6.3	F165	8.8	D063	10.8	F022	7.0	F171	15.0	D042	16.0
	2	D013	8.5	F029	9.2	D013	11.6	F050	7.4	G017	15.2	D002	20.8
	3	F130	9.4	F047	9.8	China 85	11.7	G001	7.9	China 87	15.5	G076	23.1
	4	China 13	9.5	D039	9.9	C017	12.2	F152	7.9	China 63	15.9	China 38	23.8
	5	C013	9.8	F046	10.1	D054	12.4	D041	8.0	China 81	16.2	D045	24.4
Results - Taxonomic Similarity	1	Japan 06	31.3%	China 68	57.6%	Japan 06	47.2%	F031	40.9%	Japan 05	75.0%	Japan 01	26.0%
	2	Mongolia 1	31.3%	China 81	45.5%	China 81	41.7%	F033	31.8%	China 68	75.0%	Japan 05	26.0%
	3	China 81	29.9%	Mongolia 1	42.4%	Mongolia 1	38.9%	F042	31.8%	F043	68.8%	China 57	26.0%
	4	Japan 01	28.4%	F043	42.4%	China 63	38.9%	Japan 01	31.8%	China 13	68.8%	Japan 06	25.0%
	5	China 68	28.4%	Japan 06	42.4%	China 68	36.1%	China 80	31.8%	China 71	65.6%	China 60	24.0%
Results - Mix	1	Mongolia 1	70.2	China 68	46.6	Mongolia 1	63.7	F031	61.9	China 68	32.5	China 67	84.5
	2	Japan 01	73.9	China 81	55.5	China 13	65.8	China 80	68.7	Japan 05	34.3	China 59	85.5
	3	F033	74.7	F043	58.6	D011	66.1	F042	68.9	China 81	38.0	China 57	87.5
	4	China 81	77.1	Mongolia 1	66.0	China 81	68.4	Japan 01	69.3	China 71	38.5	F007	87.6
	5	F043	77.6	China 13	66.0	China 83	68.9	F024	69.7	China 63	40.7	China 58	87.9

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Drudge 1													
Site/results		Kymi		Yatagan Basin		Pitsidia		Mt. Tondo		Tossignano		Ca' Viettone	
Results - IPR Similarity	1	K027	3.1	F019	1.4	G066	1.2	F026	1.6	D016	0.7	C045	2.0
	2	C038	4.3	China 14	1.4	G014	1.2	D030	1.8	F136	2.3	C042	2.1
	3	F023	6.9	D054	2.0	F002	1.5	D011	2.5	D011	2.9	Japan 04	6.3
	4	G042	7.2	G030	2.0	F008	1.5	F136	4.1	K009	3.7	China 38	6.4
	5	C019	8.0	G041	3.0	F082	1.6	K009	4.6	F026	4.4	H001	6.6
Results - Taxonomic Similarity	1	China 68	27.9%	China 57	40.6%	China 61	36.4%	Japan 05	33.9%	China 57	29.9%	Japan 06	34.8%
	2	China 81	26.2%	China 61	39.1%	China 62	36.4%	Japan 06	33.9%	China 61	29.9%	Japan 05	34.2%
	3	Japan 05	26.2%	China 67	39.1%	China 63	34.1%	China 61	33.9%	China 67	28.7%	Japan 01	28.4%
	4	Japan 06	24.6%	China 68	37.5%	China 67	34.1%	China 68	33.9%	Japan 05	27.6%	China 60	27.1%
	5	China 32	24.6%	China 77	35.9%	China 68	34.1%	China 57	32.3%	Japan 06	27.6%	China 68	26.5%
Results - Mix	1	F009	85.6	H002	69.6	Japan 01	69.4	China 67	74.3	China 67	76.7	China 17	78.0
	2	China 38	86.0	Japan 01	71.1	China 62	72.7	China 56	78.0	China 56	79.4	China 67	79.1
	3	D016	86.1	China 67	71.3	D052	72.7	China 36	78.6	China 13	81.4	Japan 17	79.5
	4	G072	87.0	C046	71.9	China 61	73.4	Japan 01	78.8	China 36	81.4	Japan 15	80.8
	5	F007	87.3	China 12	72.3	China 67	73.5	F162	78.9	China 57	81.4	China 36	81.5
Drudge 2													
Site/results		Kymi		Yatagan Basin		Pitsidia		Mt. Tondo		Tossignano		Ca' Viettone	
Results - IPR Similarity	1	D042	17.0	G032	17.0	G032	19.7	D042	17.1	D042	12.4	China 38	14.4
	2	D002	21.2	G071	22.8	F075	20.0	China 38	18.3	G076	12.6	China 89	15.1
	3	D045	22.4	F075	24.1	China 87	20.2	China 59	21.3	K009	12.8	Japan 04	18.4
	4	J048	23.1	D064	24.8	G036	20.7	D002	22.0	D064	13.3	D042	19.3
	5	J009	24.1	G036	25.5	G071	20.9	D064	22.8	G041	13.8	China 59	19.5
Results - Taxonomic Similarity	1	China 68	27.9%	China 57	40.6%	China 61	36.4%	Japan 05	33.9%	China 57	29.9%	Japan 06	34.8%
	2	China 81	26.2%	China 61	39.1%	China 62	36.4%	Japan 06	33.9%	China 61	29.9%	Japan 05	34.2%
	3	Japan 05	26.2%	China 67	39.1%	China 63	34.1%	China 61	33.9%	China 67	28.7%	Japan 01	28.4%
	4	Japan 06	24.6%	China 68	37.5%	China 67	34.1%	China 68	33.9%	Japan 05	27.6%	China 60	27.1%
	5	China 32	24.6%	China 77	35.9%	China 68	34.1%	China 57	32.3%	Japan 06	27.6%	China 68	26.5%
Results - Mix	1	China 38	84.2	China 67	68.6	China 62	69.7	China 67	72.7	China 67	78.2	China 17	78.2
	2	Japan 03	87.2	China 57	70.2	China 63	71.0	China 62	77.0	Japan 03	79.5	China 67	79.6
	3	China 36	87.9	China 63	72.2	China 67	71.5	China 59	77.2	China 59	82.5	Japan 05	82.7
	4	China 32	89.6	China 56	73.9	China 57	72.8	China 63	77.8	China 68	82.5	China 36	83.3
	5	China 68	89.6	China 61	74.0	China 61	72.9	China 36	78.7	China 63	82.5	China 60	83.7

		Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference	Modern vegetation	Mathematical difference/Taxonomic Similarity / Total difference
Drudge 1													
Site/results		Shamb 1b+A1		Shamb 1f+B1		Darbas 2/d		Uyts-2/a + Uts-2 PZ23		Darbas-2/f + Drb-2 PZ6		Tolors 2	
Results - IPR Similarity	1	D055	1.6	G028	1.9	G040	1.7	G022	0.8	F022	1.0	F035	0.4
	2	F090	2.0	C044	2.0	D028	2.0	G019	1.5	F068	1.1	G018	1.4
	3	F018	2.2	D012	2.4	G023	2.4	G020	1.6	D041	1.2	F063	1.7
	4	D036	2.6	G060	2.6	F153	2.8	L001	1.9	G056	1.3	F031	1.8
	5	China 10	2.7	F092	2.8	F094	2.8	G010	2.4	F029	1.4	F028	1.9
Results - Taxonomic Similarity	1	Japan 06	26.5%	China 71	53.3%	China 71	65.4%	China 71	48.2%	Japan 06	54.1%	China 71	33.3%
	2	China 71	24.5%	China 68	50.7%	China 68	56.8%	China 68	46.5%	China 81	49.2%	F013	31.4%
	3	Japan 05	24.5%	Japan 05	49.3%	China 81	55.6%	Japan 05	43.0%	Japan 05	49.2%	L014	29.4%
	4	L014	22.4%	Japan 06	45.4%	Japan 01	55.6%	China 78	42.1%	China 68	44.3%	China 60	27.5%
	5	China 63	22.4%	F073	45.4%	Japan 06	54.3%	China 81	41.2%	China 71	44.3%	China 63	27.5%
Results - Mix	1	L014	81.1	D052	57.6	Japan 01	45.5	China 71	61.2	Japan 06	49.5	China 71	69.5
	2	Japan 05	81.9	Japan 05	59.0	China 71	46.0	Japan 05	61.6	Japan 05	52.2	L014	70.7
	3	F033	82.4	F073	59.8	D052	47.4	China 68	63.2	China 81	56.2	D052	73.1
	4	H002	82.8	C046	60.4	F031	48.2	D052	64.0	F043	59.3	Japan 05	73.1
	5	Japan 06	82.9	F033	60.6	F032	49.2	F043	65.1	China 71	59.8	F013	73.4
Drudge 2													
Site/results		Shamb 1b+A1		Shamb 1f+B1		Darbas 2/d		Uyts-2/a + Uts-2 PZ23		Darbas-2/f + Drb-2 PZ6		Tolors 2	
Results - IPR Similarity	1	G040	7.8	G071	6.8	G036	3.9	G058	4.5	China 83	8.7	D053	5.9
	2	C047	8.1	G036	7.2	G008	7.8	G062	5.4	G055	9.2	D018	7.2
	3	G039	8.9	G060	7.9	F171	8.1	G010	5.8	G039	9.6	G004	8.4
	4	G019	9.2	G058	8.0	F052	9.2	G024	6.0	G056	10.1	C046	8.7
	5	D053	9.5	G010	8.8	G018	9.4	G025	6.8	China 85	10.2	F018	8.8
Results - Taxonomic Similarity	1	Japan 06	26.5%	China 71	53.3%	China 71	65.4%	China 71	48.2%	Japan 06	54.1%	China 71	33.3%
	2	China 71	24.5%	China 68	50.7%	China 68	56.8%	China 68	46.5%	China 81	49.2%	F013	31.4%
	3	Japan 05	24.5%	Japan 05	49.3%	China 81	55.6%	Japan 05	43.0%	Japan 05	49.2%	L014	29.4%
	4	L014	22.4%	Japan 06	45.4%	Japan 01	55.6%	China 78	42.1%	China 68	44.3%	China 60	27.5%
	5	China 63	22.4%	F073	45.4%	Japan 06	54.3%	China 81	41.2%	China 71	44.3%	China 63	27.5%
Results - Mix	1	L014	78.5	China 71	52.4	China 71	39.1	China 71	56.4	China 81	58.3	L014	71.8
	2	China 71	83.1	China 68	54.7	China 68	47.3	China 68	57.2	China 68	60.9	F013	72.2
	3	G056	83.6	F073	60.7	China 81	49.2	China 81	63.8	China 71	62.2	D052	74.0
	4	H002	84.7	D052	60.8	G022	53.1	D052	65.6	F043	62.4	L006	75.4
	5	G037	85.0	China 81	61.1	F032	53.2	F043	66.5	China 13	65.1	C043	75.8

TABLE 3. East Asian vegetation types and European vegetation formations as applied in this study.

Teodoridis et al. (2020)		this paper		
vegetation units (ID code)	vegetation types/formations	vegetation units (ID code)	vegetation types/formations	acronym
		China 23-28	Tropical Rain Forests China	"Tropical Rain Forest China"
China 17, 28, 30-38	Broad-leaved Evergreen Forest, China	China 01,15-22, 29-38, Japan 04, 07-14	Broad-leaved evergreen forest, China, Japan	"BLEF China, Japan"
Japan 04, 07, 08	Broad-leaved Evergreen Forest, Honshu, Japan			
China 13, 14	Meili Snow Mt. - Sclerophyllous and broad-leaved forest zone (2580-3650 m alt)	China 11- 14	Meili Snow Mt. - Sclerophyllous and broad-leaved forest zone (2580-3650 m alt)	"Meili Snow Mt. high altitude SCL and BLF, China"
		China 39-55	Grasslands and Desert China, Mongolia	
China 56-61	Mixed Mesophytic Forest of the lower Yangtze Provinces	China 02, 56-61	Mixed Mesophytic Forest, lower Yangtze Provinces	"MMF China"
China 03	Mt. Emei evergreen or deciduous broad-leaved mixed forest zone		excluded (see section Reference set of modern vegetation)	
China 04, 62-67	Broad-leaved Deciduous Forest, Upper Yangtze Provinces and Mt. Emei	China 04-10, 62-67, Japan 01-03,05	Broad-leaved Deciduous Forest, Upper Yangtze Provinces, Mt. Emei, and Honshu	"BLDF Upper Yangtze, Honshu"
Japan 01-03,05	Broad-leaved deciduous forests Shirakami Sanchi, and Mt. Fuji			
China 68-79	Broad-leaved Deciduous Forests of the Northern and Northeastern Provinces	China 68-79	Broad-leaved Deciduous Forests of the Northern and Northeastern Provinces (China)	"BLDF N and NE Provinces, China"
China 80-89	Montane Coniferous Forests, China, Taiwan	China 80-89, Japan 06, 15-18	Montane Coniferous Forest China, Honshu, Yakushima	"MCF China, Japan"
Japan 06	Mt. Fuji-Upper montane and subalpine coniferous belt, 1800-2500 m, Vaccinium-Picea region			

Teodoridis et al. (2020)		this paper		
vegetation units (ID code)	vegetation types/formations	vegetation units (ID code)	vegetation types/formations	acronym
		O001-O009	O - Deserts	
		N001-N008	N - Oroxerophytic vegetation (thorn-cushion communities, tomillares, mountain steppes, in part scrub)	
		M001-M021	M - Steppes	
		L001-L017	L - Forest steppes (Meadow steppes alternating with nemoral deciduous forests) and dry grasslands alternating with dry scrub	
K001-K033	K - Xerophytic coniferous forests, coniferous woodland and scrub	K001-K033	K - Xerophytic coniferous forests, coniferous woodland and scrub	
J001-J053		J001-J053	J - Mediterranean sclerophyllous forests and scrub	
Europe H001-H003	H - Hygrophilous thermophytic mixed deciduous broadleaved forests	H001-H003	H - Hygrophilous thermophytic mixed deciduous broadleaved forests	
G001-G077	G - Thermophilous mixed deciduous broadleaved forests	G001-G077	G - Thermophilous mixed deciduous broadleaved forests	
F001-F172	F - Mesophytic broadleaved deciduous and mixed broad-leaved/conifer forests	F001-F172	F - Mesophytic broadleaved deciduous and mixed broadleaved/conifer forests	
D001-D064	D - Mesophytic and hygromesophytic coniferous and mixed broad-leaved-coniferous forests	D001-D064	D - Mesophytic and hygromesophytic coniferous and mixed broad-leaved-coniferous forests	
C001-C047	C - Subarctic, boreal and nemoral-montane open woodlands as well as subalpine and oro-Mediterranean vegetation	C001-C047	C - Subarctic, boreal and nemoral-montane open woodlands as well as subalpine and oro-Mediterranean vegetation	

TABLE 4. Distribution of the modern East Asian and European vegetation proxies. More detailed information is available in Appendix 8.

Vegetation types East Asia	"Tropical Rain Forest China"	"Meili Snow Mt. high altitude SCL and BLF, China"	"BLEF China, Japan"	"MMF China"	"BLDF Upper Yangtze, Honshu"	"BLDF N and NE Provinces, China"	"MCF China, Japan"	Sum
Number of units	6	4	28	7	17	12	18	
Number of units delivered as proxies	1	3	26	6	11	5	14	
Number of units delivered as proxies in percent	17%	75%	93%	86%	65%	42%	78%	
Scores in the IPR Similarity, Drudge 1	1	2	45	6	15	6	20	95
in percent	0.4%	0.7%	17%	2%	6%	2%	7%	35%
Scores in the IPR Similarity, Drudge 2	0	1	70	12	13	3	18	117
in percent	0.0%	0.4%	26%	4%	5%	1%	7%	43%
Scores in the TS	0	3	18	54	68	49	56	248
in percent	0.0%	1.1%	7%	20%	25%	18%	21%	92%
Scores in the Results Mix, Drudge 1	0	5	61	35	64	17	37	219
in percent	0.0%	2%	23%	13%	24%	6%	14%	81%
Scores in the Results Mix, Drudge 2	0	4	58	48	55	30	32	227
in percent	0.0%	1.5%	21%	18%	20%	11%	12%	84%
Scores IPR Similarity, TS, Results Mix in Drudge 1	1	10	124	95	147	72	113	562
in percent of the overall scores	0.1%	0.7%	9%	7%	11%	5%	8%	42%
Scores IPR Similarity, TS, Results Mix in Drudge 2	0	8	146	114	136	82	106	592
in percent of the overall scores	0.0%	0.6%	11%	8%	10%	6%	8%	44%
Overall scores IPR Similarity, TS, Results Mix, both Drudges	1	15	252	155	215	105	163	906
in percent	0.1%	1%	19%	11%	16%	8%	12%	67%

Vegetation formations Europe	L	K	J	H	G	F	D	C	Sum of scores Europe	Sum
Number of units	17	33	53	3	77	172	64	47		
Number of units delivered as proxies	4	5	6	3	35	77	26	13		
Number of units delivered as proxies in percent	24%	15%	11%	100%	45%	45%	41%	28%		
Scores in the IPR Similarity, Drudge 1	2	7	2	7	20	96	27	14	175	175
in percent	0.7%	3%	0.7%	3%	7%	36%	10%	5%	65%	65%
Scores in the IPR Similarity, Drudge 2	0	1	3	0	58	39	44	8	153	153
in percent	0.0%	0.4%	1.1%	0.0%	21%	14%	16%	3%	57%	57%
Scores in the TS	2	0	2	0	0	17	1	0	22	22
in percent	0.7%	0.0%	0.7%	0.0%	0.0%	6%	0.4%	0.0%	8%	8%
Scores in the Results Mix, Drudge 1	2	0	1	5	2	28	9	4	51	51
in percent	0.7%	0.0%	0.4%	2%	0.7%	10%	3%	1.5%	19%	19%
Scores in the Results Mix, Drudge 2	3	0	1	1	4	22	11	1	43	43
in percent	1.1%	0.0%	0.4%	0.4%	1.5%	8%	4%	0.4%	16%	16%
Scores IPR Similarity, TS, Results Mix in Drudge 1	6	7	5	12	22	141	37	18	248	248
in percent of the overall scores	0.4%	0.5%	0.4%	0.9%	2%	10%	3%	1.3%	0%	18%
Scores IPR Similarity, TS, Results Mix in Drudge 2	5	1	6	1	62	78	56	9	218	218
in percent of the overall scores	0.4%	0.1%	0.4%	0.1%	5%	6%	4%	0.7%	0%	16%
Overall scores IPR Similarity, TS, Results Mix, both Drudges	9	8	9	13	84	202	92	27	444	444
in percent	0.7%	0.6%	0.7%	1.0%	6%	15%	7%	2%	33%	33%