

Table S1. List of sampled taxa with voucher information

Taxa	Voucher	Locality	Sources
<i>Ampelocissus abyssinica</i>	19971047	--	Ma et al., 2021
<i>Ampelocissus acapulcensis</i>	Wen 8696	Mexico, Chiapas	This study
<i>Ampelocissus ascendifolia</i>	Wen 11822	Malaysia, Pasoh	Ma et al., 2021
<i>Ampelocissus elephantina</i>	Wen 9581	Madagascar, Antsiranana	Ma et al., 2021
<i>Ampelocissus javalensis</i>	Wen 6920	Costa Rica	This study
<i>Ampelocissus latifolia</i>	AKlandRay8001	--	Ma et al., 2021
<i>Ampelocissus mesoamericana</i>	Wen 8697	Mexico, Chiapas	Ma et al., 2021
<i>Ampelocissus mesoamericana</i>	Wen 8708	Mexico, Chiapas	Ma et al., 2021
<i>Ampelocissus thyrsoiflora</i>	Wen 12394	Indonesia, Java	Ma et al., 2021
<i>Parthenocissus quinquefolia</i>	Wen 13458	USA, Missouri	Ma et al., 2021
<i>Vitis acerifolia</i>	Wen 13461	USA, Oklahoma	This study
<i>Vitis adenoclada</i>	Wen 12339	China, Yunnan	Ma et al., In press
<i>Vitis aestivalis</i>	Wen 13393	USA, South Carolina	Ma et al., 2021
<i>Vitis aestivalis</i>	Wen 13398	USA, South Carolina	This study
<i>Vitis aestivalis</i>	Wen 13399	USA, Maryland	This study
<i>Vitis aestivalis</i>	Wen 13410	USA, Connecticut	This study
<i>Vitis aestivalis</i>	Wen 13456	USA, Missouri	This study
<i>Vitis aestivalis</i>	Wen 16264	USA, Virginia	This study
<i>Vitis aestivalis</i>	Wen 16982	USA, Virginia	This study
<i>Vitis aestivalis</i>	Wen 16990	USA, Virginia	This study
<i>Vitis amurnensis</i>	Wen 13068	China, Beijing	Ma et al., 2021
<i>Vitis arizonica</i>	Ickert-Bond 2004-A	USA, Utah	This study
<i>Vitis arizonica</i>	Ickert-Bond#2MC	USA, Arizona	Ma et al., 2021
<i>Vitis arizonica</i>	Wen 15098	USA, New Mexico	This study
<i>Vitis arizonica</i>	Wen 15914	USA, Arizona	This study
<i>Vitis balanseana</i>	Wen 13600	China, Hong Kong	Ma et al., In press
<i>Vitis berlandieri</i>	Wen 12653	USA, Texas	This study
<i>Vitis berlandieri</i>	Wen 12679	USA, Texas	This study
<i>Vitis biformis</i>	Wen 12745	USA, California	This study
<i>Vitis blancoi</i>	Wen 8674	Mexico, Oaxaca	This study
<i>Vitis bryoniifolia</i>	Wen 13638	China, Hubei	Ma et al., In press
<i>Vitis bryoniifolia</i>	Wen 13666	China, Hunbei	Ma et al., In press
<i>Vitis californica</i>	Wen 13488	USA, California	Ma et al., 2021
<i>Vitis californica</i>	Wen 13500	USA, California	This study
<i>Vitis californica</i>	Wen s.n.	USA, California	This study
<i>Vitis chunganensis</i>	Wen 13319	China, Guangdong	Ma et al., In press
<i>Vitis chungii</i>	Wen 13674	China, Hubei	Ma et al., In press
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 12629	USA, Illinois	This study
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 12640	USA, Oklahoma	This study
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 12680	USA, Texas	Ma et al., 2021
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 12697	USA, Louisiana	This study

<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 12777	USA, Florida	This study
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 13388	USA, Georgia	This study
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 13455	USA, Missouri	This study
<i>Vitis cinerea</i> var. <i>cinerea</i>	Wen 13467	USA, Missouri	This study
<i>Vitis cinerea</i> var. <i>baileyana</i>	Wen 12612	USA, Virginia	This study
<i>Vitis cinerea</i> var. <i>baileyana</i>	Wen 12804	USA, North Carolin	This study
<i>Vitis cinerea</i> var. <i>baileyana</i>	Wen 13828	USA, Virginia	This study
<i>Vitis cinerea</i> var. <i>floridana</i>	Wen 16260	USA, Maryland	This study
<i>Vitis cinerea</i> var. <i>floridana</i>	Wen 16267	USA, Maryland	This study
<i>Vitis cinerea</i> var. <i>floridana</i>	Wen 16271	USA, Virginia	This study
<i>Vitis cinerea</i> var. <i>floridana</i>	Wen 16991	USA, Virginia	This study
<i>Vitis cinerea</i> var. <i>floridana</i>	Wen 16992	USA, Virginia	This study
<i>Vitis davidii</i>	Wen 13333	China, Guangdong	Ma et al., 2021
<i>Vitis doaniana</i>	Wen 12647	USA, Oklahoma	This study
<i>Vitis doaniana</i>	Wen 13465	USA, Oklahoma	This study
<i>Vitis flexuosa</i>	Wen 13636	China, Hubei	Ma et al., In press
<i>Vitis girdiana</i>	Wen 12713	USA, California	This study
<i>Vitis girdiana</i>	Wen 13510	USA, California	This study
<i>Vitis girdiana</i>	Wen 13528	USA, California	This study
<i>Vitis labrusca</i>	Wen 13407	USA, Connecticut	This study
<i>Vitis labrusca</i>	Wen 13421	USA, Massachusetts	This study
<i>Vitis lanceolatifolia</i>	Wen 13671	China, Hubei	Ma et al., In press
<i>Vitis monticola</i>	Wen 12662	USA, Texas	This study
<i>Vitis monticola</i>	Wen 12676	USA, Texas	Ma et al., In press
<i>Vitis mustangensis</i>	Wen 12673	USA, Texas	This study
<i>Vitis mustangensis</i>	Wen 12681	USA, Texas	This study
<i>Vitis novae-angliae</i>	Wen 12247	USA, Connecticut	This study
<i>Vitis novae-angliae</i>	Wen 13403	USA, Connecticut	This study
<i>Vitis novae-angliae</i>	Wen 13420	USA, Massachusetts	This study
<i>Vitis palmata</i>	Wen 12631	USA, Illinois	This study
<i>Vitis palmata</i>	Wen 12633	USA, Illinois	This study
<i>Vitis palmata</i>	Wen 13469	USA, Illinois	This study
<i>Vitis peninsularis</i>	Wen 12744	USA, California	This study
<i>Vitis piasezkii</i>	Wen 12847	China, Shanxi	Ma et al., In press
<i>Vitis popenoei</i>	Wen 13506	Mexico	This study
<i>Vitis pseudoreticulata</i>	Wen 13734	China, Hunan	Ma et al., In press
<i>Vitis retordii</i>	Wen 13724	China, Guangdong	Ma et al., In press
<i>Vitis riparia</i>	Wen 12626	USA, Illinois	This study
<i>Vitis riparia</i>	Wen 13406	USA, Connecticut	This study
<i>Vitis riparia</i>	Wen 13419	USA, Massachusetts	This study
<i>Vitis riparia</i>	Wen 13426	USA, New Hampshire	This study
<i>Vitis riparia</i>	Wen 13429	USA, New Hampshire	This study
<i>Vitis riparia</i>	Wen 13430	USA, New Hampshire	Ma et al., 2021

<i>Vitis riparia</i>	Wen 16272	USA, Virginia	This study
<i>Vitis rotundifolia</i>	Wen 12784	USA, Florida	Ma et al., 2021
<i>Vitis rupestris</i>	Wen 13448	USA, Missouri	This study
<i>Vitis rupestris</i>	Wen 13453	USA, Missouri	This study
<i>Vitis shenxiensis</i>	Wen 13145	China, Shaanxi	Ma et al., In press
<i>Vitis shuttleworthii</i>	Wen 12772	USA, Florida	This study
<i>Vitis tiliifolia</i>	Wen 11948	Panama	This study
<i>Vitis tiliifolia</i>	Wen 6807	Costa Rica, Puntarenas	This study
<i>Vitis tsoii</i>	Wen 13362	China, Guangdong	Ma et al., In press
<i>Vitis vinifera</i> ssp. <i>sylvestris</i>	Wen 14954	USA	This study
<i>Vitis vinifera</i> ssp. <i>sylvestris</i>	Wen 13508	USA, California	Ma et al., 2021
<i>Vitis vinifera</i> ssp. <i>vinifera</i>	--	--	Jaillon et al., 2007
<i>Vitis vulpina</i>	Wen 12585	USA, Virginia	This study
<i>Vitis vulpina</i>	Wen 12597	USA, Virginia	Ma et al., 2021
<i>Vitis vulpina</i>	Wen 13396	USA, South Carolina	This study
<i>Vitis vulpina</i>	Wen 13446	USA, Missouri	This study
<i>Vitis vulpina</i>	Wen 14150	USA, Virginia	This study
<i>Vitis vulpina</i>	Wen 16268	USA, Maryland	This study
<i>Vitis vulpina</i>	Wen 16984	USA, Virginia	This study
<i>Vitis vulpina</i>	Wen 16985	USA, Virginia	This study
<i>Vitis wuhanensis</i>	Wen 13640	China, Hubei	Ma et al., In press

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Table S2. Divergence estimates in *Vitis* among four calibration schemes and comparison with previous reports. Texts in red indicate calibration points with fossil evidence.

	nuclear					plastid						
Node	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Wan et al. 2013	Scheme 1	Scheme 2	Scheme 3	Scheme 4	Zecca et al. 2012	Liu et al. 2016	Wen et al. 2018
Vitaceae - <i>Leeaceae</i>					90.7 +/- 1.0					85	90.7	
<i>Parthenocissus</i> - <i>Vitis</i>					58.5 +/- 5.0						70.5 [57.90, 82.00]	
<i>Vitis</i> - <i>Ampelocissus</i>	59.82 [59.22, 60.43]	69.81 [67.21, 72.50]	61.13 [60.05, 61.16]	70.61 [67.89, 73.43]		59.82 [59.25, 60.41]	67.28 [58.89, 81.98]	59.02 [58.83, 59.50]	65.38 [58.88, 74.35]		58.5	58.5
stem <i>Vitis</i> (<i>A.</i> <i>acapulcensis</i>)	51.44 [50.50, 52.39]	60.02 [58.89, 61.16]	52.58 [51.65, 53.53]	60.46 [59.33, 61.16]		53.37 [49.44, 57.61]	60.02 [58.89, 61.16]	52.65 [48.85, 56.74]	59.76 [58.88, 60.91]			
crown <i>Vitis</i>	31.76 [30.06, 33.57]	37.06 [36.21, 37.94]	36.82 [36.15, 37.50]	37.62 [36.89, 38.36]		40.97 [32.80, 51.18]	46.08 [44.42, 47.8]	40.42 [36.64, 49.08]	41.81 [40.98, 42.65]		39.4 [32.60, 48.60]	
stem subgenus <i>Vitis</i>	29.59 [27.64, 31.67]	34.53 [33.67, 35.40]	35.39 [35.38, 36.56]	35.79 [35.38, 36.95]	28.32 [16.23, 41.25]	38.28 [27.63, 51.18]	43.06 [41.34, 44.84]	37.77 [36.64, 37.89]	37.12 [35.99, 37.66]	18.6-19.05	37.3 [30.90, 45.10]	34.03 [19.64, 49.55]
crown subgenus <i>Vitis</i>	16.86 [15.66, 18.17]	19.68 [18.59, 20.83]	20.19 [19.37, 21.04]	20.41 [19.58, 21.28]	17.82 [10.14, 26.71]	14.2 [8.63, 23.36]	15.97 [11.62, 22.66]	14.01 [9.92, 19.77]	13.94 [11.34, 17.14]	6.31-6.55	35	12.85 [6.74, 21.73]
Subgenus <i>Vitis</i> NW1	15.11 [13.61, 16.78]	17.64 [16.24, 19.16]	18.1 [17.15, 19.09]	18.3 [17.32, 19.33]		13.15 [6.61, 23.36]	14.79 [11.62, 18.82]	12.98 [7.53, 19.77]	12.95 [10.83, 15.49]			11.38 [5.72, 19.43]
Subgenus <i>Vitis</i> NW2	16.03 [14.64, 17.55]	18.7 [17.38, 20.11]	19.18 [18.29, 20.12]	19.4 [18.48, 20.36]		4.45 [2.13, 9.29]	5.00 [3.08, 8.68]	4.39 [2.36, 8.15]	5.20 [3.68, 7.75]			4.57 [2.46, 7.77]

Subgenus	9.84	11.48	11.77	11.90		3.00	3.37	2.96	3.06			
<i>Muscadinia</i>	[8.59, 11.27]	[11.22, 11.75]	[11.38, 12.17]	[11.52, 12.30]		[1.21, 7.44]	[3.25, 3.49]	[1.22, 7.19]	[3.00, 3.11]			
Eurasian clade	15.75	18.38	18.86	19.07	11.12	14.20	15.97	14.01	13.94	6.31-6.55		12.85
	[14.4, 17.23]	[17.11, 19.75]	[17.98, 19.78]	[18.17, 20.02]	[6.59, 16.58]	[8.63, 23.36]	[11.62, 22.66]	[9.92, 19.77]	[11.34, 17.14]			[6.74, 21.73]
European –	13.71	15.99	16.41	16.59	6.36	13.15	14.79	12.97	12.91			9.50
Asian split	[11.96, 15.71]	[15.05, 16.99]	[15.71, 17.13]	[15.88, 17.33]	[3.36, 9.8]	[6.23, 23.36]	[11.62, 18.82]	[7.11, 19.77]	[11.2, 14.88]			[4.84, 16.22]

Table S3. Cleaned fossil records of *Vitis* with GPS information obtained from GBIF and Palaeobiology database.

gbifID	scientificName	verbatimScientificName	preparations	continent	stateProvince	county	municipality	decimalLatitude	decimalLongitude	earliestEpoch	OrLowestSeries
1039362506	<i>Vitis</i>	<i>cf. Vitis oliriki</i>		NORTH_AMERICA	Wyoming	Park County	Meeteetse	43.97551	-108.98541	Early Eocene	
1698171148	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698177084	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698177082	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698177038	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698175914	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698175905	<i>Vitis</i>		seed/fruit		Tomsk			56		83 Early Miocene	
1698175174	<i>Vitis</i>		seed/fruit		Omsk			56.5	74.5	Early Miocene	
1698174911	<i>Vitis</i>		seed/fruit		Tomsk			52		83 Early Miocene	
1698174892	<i>Vitis</i>		seed/fruit		Tomsk			52		83 Early Miocene	
1698174626	<i>Vitis</i>		seed/fruit		Omsk			57.5	72.5	Early Miocene	
1698174599	<i>Vitis</i>		seed/fruit		Omsk			56.5	74.5	Early Miocene	
1698132790	<i>Vitis</i>		seed/fruit	NORTH_AMERICA	Vermont	Rutland		43.833332	-73.050003	Early Miocene	
1039378742	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039377608	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039376538	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039372723	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039363036	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039357817	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039354456	<i>Vitis</i>	<i>Vitis muscadinioides</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.167176	-112.114076	Early Oligocene	
1039352204	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039348854	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039347113	<i>Vitis</i>	<i>Vitis washingtonensis</i>	part	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039346917	<i>Vitis</i>	<i>Vitis washingtonensis</i>	counterpart	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039338372	<i>Vitis</i>	<i>Vitis washingtonensis</i>	counterpart	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039332067	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039330869	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039322485	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039320212	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039319104	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039318252	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039307714	<i>Vitis</i>	<i>Vitis washingtonensis</i>	counterpart	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039305054	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039304758	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039302218	<i>Vitis</i>	<i>Vitis washingtonensis</i>	part	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039301388	<i>Vitis</i>	<i>Vitis washingtonensis</i>	counterpart	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039297136	<i>Vitis</i>	<i>Vitis muscadinioides</i>		NORTH_AMERICA	Montana	Madison Count	Metzel Ranch	45.196987	-112.142728	Early Oligocene	
1039294605	<i>Vitis</i>	<i>Vitis washingtonensis</i>	part	NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039294102	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039294015	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039293811	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039292700	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039291487	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1039290683	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	Madison Count	Upper Ruby Riv	45.201592	-112.172125	Early Oligocene	
1698315036	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Oregon	Crook		44.139721	-120.273613	Early Oligocene	
1698452384	<i>Vitis</i>	<i>Vitis</i>		EUROPE	Alpes Maritimes			43.765556	7.458889	Early Pleistocene	
3332106320	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Colorado	Rio Blanco		39.729294	-107.978086	Eocene	
1989833644	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Coos		43.156293	-123.961988	Eocene	
1945413692	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Colorado	Rio Blanco		39.729294	-107.978086	Eocene	
1852485054	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.57765	-120.269917	Eocene	
1457741583	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457736232	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Colorado	Rio Blanco		39.729294	-107.978086	Eocene	
1457732533	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Colorado	Rio Blanco		39.652325	-108.640742	Eocene	
1457732531	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Colorado	Rio Blanco		39.652325	-108.640742	Eocene	
1457716978	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Crook		44.162	-120.407667	Eocene	
1457712566	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712562	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712556	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712552	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712548	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712547	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712542	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712534	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712531	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712528	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712523	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712522	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712517	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712516	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712514	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712513	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712511	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712510	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712509	<i>Vitis magtiis</i>	<i>Vitis magnisperma</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712507	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712505	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712500	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712499	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712497	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712489	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457712481	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457711919	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457708284	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Wyoming	Sweetwater		41.798667	-109.58365	Eocene	
1457708283	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Wyoming	Sweetwater		41.798667	-109.58365	Eocene	
1457708256	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Wyoming	Sweetwater		41.798667	-109.58365	Eocene	
1457704216	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1		Wyoming	Sweetwater		41.798667	-109.58365	Eocene	
1457694314	<i>Vitis magtiis</i>	<i>Vitis magnisperma</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694154	<i>Vitis magtiis</i>	<i>Vitis magnisperma</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694094	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694093	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694086	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694084	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694083	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694078	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	
1457694075	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1		Oregon	Wheeler		44.923222	-120.431622	Eocene	

1457694073	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694072	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694071	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694070	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694069	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694068	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694067	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694065	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694064	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694062	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694061	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694060	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694059	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694057	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694056	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694055	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694054	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694053	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694052	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694051	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694049	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694045	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694041	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694036	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694033	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694031	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694025	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694019	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694009	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694006	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457694003	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457693998	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457693993	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457692846	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Utah	Uintah	39.952917	-109.149781	Eocene
1457691610	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457691603	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457691595	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457691586	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457691048	<i>Vitis</i>	<i>Vitis tiffneyi</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1457691028	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Oregon	Wheeler	44.923222	-120.431622	Eocene
1699292451	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Alaska	56.877998	-133.820999	Eocene
1699207604	<i>Vitis</i>	<i>Vitis</i>	leaf	NORTH_AMERICA	British Columbia	50.783333	-121.133331	Eocene
1698226552	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Hampshire	50.700001	-1.733333	Eocene
1699028169	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Great Abao Island	26.466667	-77.083336	Holocene
1039322950	<i>Vitis</i>	<i>aff. "Vitis" stantoni</i>		NORTH_AMERICA	North Dakota	46.346806	-103.874724	Late Cretaceous
1698312302	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Wyoming	43.168888	-104.591393	Late Cretaceous
1698312203	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Wyoming	43.15472	-104.611115	Late Cretaceous
1698311922	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Wyoming	43.094166	-104.529724	Late Cretaceous
1698311912	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Wyoming	43.094166	-104.609169	Late Cretaceous
1039372540	<i>Vitis</i>	<i>Vitis washingtonensis</i>	counterpart	NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039363562	<i>Vitis</i>	<i>Vitis washingtonensis</i>	part	NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039359166	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039356318	<i>Vitis</i>	<i>Vitis sp.</i>		NORTH_AMERICA	Oregon	44.919827	-120.431057	Late Eocene
1039356029	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039351604	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039350751	<i>Vitis</i>	<i>Vitis sp.</i>		NORTH_AMERICA	Oregon	44.919827	-120.431057	Late Eocene
1039350279	<i>Vitis</i>	<i>Vitis florissantella</i>		NORTH_AMERICA	Colorado	38.9458	-105.2889	Late Eocene
1039349221	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039347956	<i>Vitis</i>	<i>Vitis florissantella</i>		NORTH_AMERICA	Colorado	38.9458	-105.2889	Late Eocene
1039345802	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1039325326	<i>Vitis</i>	<i>Vitis florissantella</i>		NORTH_AMERICA	Colorado	38.9458	-105.2889	Late Eocene
1039324885	<i>Vitis</i>	<i>Vitis sp.</i>	cast	NORTH_AMERICA	Oregon	44.919827	-120.431057	Late Eocene
1039295811	<i>Vitis</i>	<i>Vitis washingtonensis</i>		NORTH_AMERICA	Montana	45.201592	-112.172125	Late Eocene
1698160697	<i>Vitis</i>	<i>Vitis</i>	unassigned	NORTH_AMERICA	Nebraska	42	-100.433334	Late Miocene
1698132251	<i>Vitis</i>	<i>Vitis</i>	unassigned	ASIA	Gunma	36.25	138.75	Late Miocene
1698131541	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Elsass	48.799999	7.983333	Late Miocene
1698131531	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Elsass	48.799999	7.983333	Late Miocene
1698131508	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Elsass	48.799999	7.983333	Late Miocene
1699182521	<i>Vitis</i>	<i>Vitis</i>		EUROPE	Oise	49.34861	2.735556	Late Paleocene
1699248183	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Virginia	38.086109	-79.656944	Late Pleistocene
1698303547	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Florida	27.638332	-80.397499	Late Pleistocene
1698303473	<i>Vitis</i>	<i>Vitis</i>		NORTH_AMERICA	Florida	27.638332	-80.397499	Late Pleistocene
1699017226	<i>Vitis messek</i>	<i>Vitis messelensis</i>	seed/fruit	EUROPE	Hesse	49	8	Middle Eocene
1698132264	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Oregon	44.943333	-120.426109	Middle Eocene
1698132055	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Oregon	44.943333	-120.426109	Middle Eocene
1698177275	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Toms	57.5	84	Middle Miocene
1457704523	<i>Vitis</i>	<i>Vitis sp.</i>	Cataloged - 1	Idaho	Shoshone	46.991478	-116.276314	Miocene
1457704247	<i>Vitis</i>	<i>"Vitis" washingtonensis</i>	Cataloged - 1	Idaho	Idaho	45.785	-116.272433	Miocene
1457704245	<i>Vitis</i>	<i>"Vitis" washingtonensis</i>	Cataloged - 1	Idaho	Idaho	45.785	-116.272433	Miocene
1457704244	<i>Vitis</i>	<i>"Vitis" washingtonensis</i>	Cataloged - 1	Idaho	Idaho	45.785	-116.272433	Miocene
1024301723	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301674	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301661	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301649	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301636	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301625	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301613	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301608	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301589	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301584	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301583	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301579	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301576	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301564	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301559	<i>Vitis</i>	<i>Vitis sp.</i>		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301558	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301557	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene
1024301555	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN		EUROPE	Rhône-Alpes	44.67	4.67	Miocene

1024301549	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301547	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301544	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301542	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301538	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301534	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301533	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301532	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301527	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301525	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301524	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301523	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301520	<i>Vitis</i>	<i>Vitis</i> sp.	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301519	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301517	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301515	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301514	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301513	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301507	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301499	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301495	<i>Vitis</i>	<i>Vitis</i> sp.	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301491	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301490	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301483	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301476	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301475	<i>Vitis</i>	<i>Vitis</i> sp.	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301472	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301465	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1024301461	<i>Vitis</i>	<i>Vitis teutonica</i> Al. BRAUN	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792873	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792843	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792835	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792829	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792807	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792800	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792795	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792792	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792713	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792711	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792698	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792693	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792692	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792685	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792680	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1019792629	<i>Vitis</i>	<i>Vitis teutonica</i> A. BRAUN, 1854	EUROPE	Rhône-Alpes	Ardèche	Saint-Bauzile	44.67	4.67	Miocene
1698132686	<i>Vitis</i>	unassigned	ASIA	Nagano			36.583332	138.166672	Miocene
1698132445	<i>Vitis</i>	unassigned	ASIA	Gunma			36.666668	138.833328	Miocene
1039346680	<i>Vitis</i>	<i>Vitis</i> sp.	NORTH_AMERICA	Oregon	Lincoln County Fossil		44.935855	-120.406638	Oligocene
1698331210	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Montana	Madison		45.5	-112.5	Oligocene
1698170412	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana	Madison		45.5	-112.5	Oligocene
1698170379	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana	Madison		45.5	-112.5	Oligocene
1457736284	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.636217	-105.521367	Paleocene
1457715525	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.387833	-105.7585	Paleocene
1457715304	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715301	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715299	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715296	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715294	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715284	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
1457715283	<i>Vitis</i>	<i>Vitis lobata</i>	Cataloged - 1	Montana	Custer		46.641	-105.522167	Paleocene
419432671	<i>Vitis</i>	<i>Vitis arvensis</i> SAPORTA	EUROPE	Auvergne	Puy de Dôme Menat		46.11	2.89	Paleocene
1698564611	<i>Vitis</i>	leaf	NORTH_AMERICA	Wyoming			41.366943	-109.206665	Paleocene
1698564536	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Wyoming			43.453609	-108.724998	Paleocene
1698564512	<i>Vitis</i>	leaf	NORTH_AMERICA	Wyoming			43.933334	-108.650002	Paleocene
1698534721	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana			48.903889	-104.918892	Paleocene
1698528369	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana			46.408001	-105.839996	Paleocene
1698528331	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana			46.583332	-105.883331	Paleocene
1698526992	<i>Vitis</i>	unassigned	NORTH_AMERICA	Colorado			37.033333	-107.199997	Paleocene
1698526949	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado			39.316666	-105.900002	Paleocene
1698526469	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado	El Paso		39.116669	-104.166664	Paleocene
1698526300	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado			39.033333	-104.300003	Paleocene
1698390843	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado			37.616669	-104.783333	Paleocene
1698390737	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado			37.400002	-104.650002	Paleocene
1698360858	<i>Vitis</i>	leaf	NORTH_AMERICA	Wyoming			41.266666	-110.966667	Paleocene
1698360630	<i>Vitis</i>	leaf	NORTH_AMERICA	Montana			47.099998	-104.716667	Paleocene
1698360274	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado			39.433334	-102.966667	Paleocene
1698360159	<i>Vitis</i>	leaf	NORTH_AMERICA	Colorado	Grand		40.066666	-106.099998	Paleocene
1698311195	<i>Vitis</i>	<i>Vitis</i>	NORTH_AMERICA	Alberta			53.345833	-114.408333	Paleocene
1457729941	<i>Vitis</i>	<i>Vitis</i> sp.	Cataloged - 1	Florida	Sarasota		27.059883	-82.260339	Pleistocene
1457729627	<i>Vitis</i>	<i>Vitis</i> sp.	Cataloged - 1	Florida	Sarasota		27.059883	-82.260339	Pleistocene
1457729626	<i>Vitis</i>	<i>Vitis</i> sp.	Cataloged - 1	Florida	Sarasota		27.059883	-82.260339	Pleistocene
1457729603	<i>Vitis</i>	<i>Vitis</i> sp.	Cataloged - 1	Florida	Sarasota		27.059883	-82.260339	Pleistocene
1457731294	<i>Vitis</i>	<i>Vitis rotundifolia</i>	Cataloged - 1	Alabama	Mobile		30.729	-88.142833	Pliocene
1457731287	<i>Vitis</i>	<i>Vitis rotundifolia</i>	Cataloged - 1	Alabama	Mobile		30.729	-88.142833	Pliocene
1457731273	<i>Vitis</i>	<i>Vitis rotundifolia</i>	Cataloged - 1	Alabama	Baldwin		30.347144	-87.481703	Pliocene
1698517414	<i>Vitis</i>	seed/fruit	EUROPE	Umbria			42.653332	12.489444	Pliocene
1698517385	<i>Vitis</i>	seed/fruit	EUROPE	Umbria			42.653332	12.489444	Pliocene
1698517357	<i>Vitis</i>	seed/fruit	EUROPE	Umbria			42.653332	12.489444	Pliocene
1698277648	<i>Vitis</i>	seed/fruit	EUROPE	Dorset			50.983334	-2.616667	Middle Eocene
1698236192	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698236113	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698236103	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698236068	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698235778	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698235681	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698235654	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.366669	12.183333	early Miocene
1698235412	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.266666	12.166667	early Miocene
1698235404	<i>Vitis</i>	seed/fruit	EUROPE	Bayern			49.266666	12.166667	early Miocene

1698235396	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698235388	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698235379	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698234126	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698234116	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698234035	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698234015	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
1698233993	Vitis	Vitis	seed/fruit	EUROPE	Bayern		49.266666	12.166667	early Miocene
2990942867	Vitis	Vitis ?	unknown	NORTH_AMERICA	New Mexico	Hidalgo County	31.914168	-108.71498	Late Cretaceous
1698219903	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		50.933334	14.616667	late Oligocene
1698214919	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.650002	14.033333	late Oligocene
1698211865	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.433334	14.6	late Oligocene
1698183964	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.383331	14.616667	late Oligocene
1698181142	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.349998	14.583333	late Oligocene
1698181066	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.049999	14.666667	late Oligocene
1698179055	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.283333	14.016667	late Oligocene
1698174629	Vitis	Vitis	seed/fruit		Tomsk		56.5	82.5	late Oligocene
1698174483	Vitis	Vitis	seed/fruit		Tomsk		56.5	82.5	late Oligocene
1698169754	Vitis	Vitis	seed/fruit		Tomsk		59.049999	81	late Oligocene
1698167489	Vitis	Vitis	seed/fruit		Tomsk		59.049999	81	late Oligocene
1698167157	Vitis	Vitis	seed/fruit		Tomsk		59.049999	81	late Oligocene
1698166394	Vitis	Vitis	seed/fruit		Tomsk		59.049999	81	late Oligocene
1698138064	Vitis	Vitis	seed/fruit		Tomsk		57	83	late Oligocene
1698312763	Vitis	Vitis		NORTH_AMERICA	Alberta		55.683334	-120.099998	Late Cretaceous
1698434574	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.313332	-103.881943	Late Cretaceous
1698434549	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.149723	-103.816109	Late Cretaceous
1698434505	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.018612	-103.764442	Late Cretaceous
1698434472	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.313332	-103.881943	Late Cretaceous
1698434349	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.327221	-103.942728	Late Cretaceous
1698434336	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.31028	-103.861664	Late Cretaceous
1698434328	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.394169	-103.938332	Late Cretaceous
1698434291	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.140835	-103.818886	Late Cretaceous
1698434287	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.394169	-103.938332	Late Cretaceous
1698434286	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.135555	-103.799446	Late Cretaceous
1698434021	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.295834	-103.871109	Late Cretaceous
1698434001	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.136391	-103.856941	Late Cretaceous
1698433977	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.295834	-103.871109	Late Cretaceous
1698433976	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.418056	-103.976387	Late Cretaceous
1698433957	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.31028	-103.861664	Late Cretaceous
1698433953	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.018612	-103.764442	Late Cretaceous
1698433910	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.379166	-103.947777	Late Cretaceous
1698433909	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.313332	-103.881943	Late Cretaceous
1698433905	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.313332	-103.881943	Late Cretaceous
1698433902	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.018612	-103.764442	Late Cretaceous
1698433901	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.459442	-104.00528	Late Cretaceous
1698433900	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.389168	-103.941666	Late Cretaceous
1698433896	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.213055	-103.791115	Late Cretaceous
1698433891	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.418056	-103.976387	Late Cretaceous
1698433890	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.136391	-103.856941	Late Cretaceous
1698433889	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	45.389721	-103.941391	Late Cretaceous
1698433886	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.140835	-103.818886	Late Cretaceous
1698433881	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.299721	-103.889999	Late Cretaceous
1698433869	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Bowman	46.163055	-103.831665	Late Cretaceous
1698433862	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.32	-103.964722	Late Cretaceous
1698433846	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.31028	-103.861664	Late Cretaceous
1698208859	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.346943	-103.874443	Late Cretaceous
1698208814	Vitis	Vitis	leaf	NORTH_AMERICA	North Dakota	Slope	46.346943	-103.874443	Late Cretaceous
1698232824	Vitis	Vitis	unassigned	ASIA	Hirakata		36.083332	139.166672	middle Miocene
1698236557	Vitis	Vitis	seed/fruit	EUROPE	Silesia		50.266666	18.666668	middle Miocene
1698236548	Vitis	Vitis	seed/fruit	EUROPE	Silesia		50.266666	18.666668	middle Miocene
1698236518	Vitis	Vitis	seed/fruit	EUROPE	Silesia		50.266666	18.666668	middle Miocene
1698236512	Vitis	Vitis	seed/fruit	EUROPE	Silesia		50.266666	18.666668	middle Miocene
1698236300	Vitis	Vitis	microspore	EUROPE	Silesia		50.266666	18.666668	middle Miocene
1698232934	Vitis	Vitis	seed/fruit	EUROPE	Jylland		54.933334	10.266667	middle Miocene
1698232867	Vitis	Vitis	seed/fruit	EUROPE	Jylland		54.933334	10.266667	middle Miocene
1698224860	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.533333	13.8	middle Miocene
1698224798	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.533333	13.8	middle Miocene
1698224620	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.533333	13.75	middle Miocene
1698224046	Vitis	Vitis	seed/fruit	EUROPE	sachsen		51.950001	14.683333	middle Miocene
1698223971	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.549999	14.366667	middle Miocene
1698223963	Vitis	Vitis	seed/fruit	EUROPE	sachsen		51.950001	14.683333	middle Miocene
1698167530	Vitis	Vitis	seed/fruit	EUROPE	Saxen		51	14.883333	middle Miocene
1698164444	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698164396	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698162876	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698160394	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.549999	13.75	middle Miocene
1698224096	Vitis	Vitis		NORTH_AMERICA	Indiana	Grant	40.454445	-85.791946	late Miocene
1699175978	Vitis	Vitis		NORTH_AMERICA	Montana	Carter	45.888802	-104.552696	late Cretaceous
1698535860	Vitis	Vitis		NORTH_AMERICA	Saskatchewan		49.516666	-108.816666	late Cretaceous
1698278173	Vitis	Vitis	seed/fruit		Dorset		50.700001	-2	middle Eocene
1698278167	Vitis	Vitis	seed/fruit		Dorset		50.700001	-2	middle Eocene
1698278152	Vitis	Vitis	seed/fruit		Dorset		50.700001	-2	middle Eocene
1698278124	Vitis	Vitis	seed/fruit		Dorset		50.700001	-2	middle Eocene
1698277691	Vitis	Vitis	seed/fruit		Dorset		50.716667	-1.8	middle Eocene
1698872655	Vitis	Vitis		NORTH_AMERICA	North Dakota	Emmons	46.533333	-100.466667	Late Cretaceous
1698222160	Vitis	Vitis	seed/fruit	EUROPE	Sachsen		51.433334	14.6	late Miocene
1698223911	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.516666	14.016667	Middle Miocene
1698222084	Vitis	Vitis	seed/fruit	EUROPE	Brandenburg		51.433334	14.6	Middle Miocene
1698230928	Vitis	Vitis	seed/fruit	EUROPE	North Rhine	Westphalia	50.966667	6.65	Pliocene
1698134485	Vitis	Vitis	seed/fruit	EUROPE	Thuringen		50.766666	10.866667	Pliocene
1698133924	Vitis	Vitis	seed/fruit	EUROPE	Thuringia		51.466667	11.3	Pliocene
1698227619	Vitis	Vitis	seed/fruit			Hampshire	50.75	-1.6	late Eocene
1698135283	Vitis	Vitis	unassigned	NORTH_AMERICA	Washington	King	47.25	-121.966667	late Eocene
1698059164	Vitis	Vitis	leaf	NORTH_AMERICA	Wyoming		44	-109	Paleocene
1698058533	Vitis	Vitis		NORTH_AMERICA	Wyoming		45	-109	Paleocene
1698058441	Vitis	Vitis	leaf	NORTH_AMERICA	Wyoming		45	-109	Paleocene
1698654050	Vitis	Vitis	microspore	NORTH_AMERICA	Michigan	Saint Clair	43.049999	-82.616669	Late Pleistocene
1698551392	Vitis	Vitis		NORTH_AMERICA	South Carolina	Dorchester	32.96722	-80.151665	Oligocene

1698276419	<i>Vitis</i>	<i>Vitis</i>	leaf	EUROPE			50.516666	13.5	Oligocene
1698227600	<i>Vitis</i>	<i>Vitis</i>	seed/fruit			Devonshire	50.583332	-3.683333	Oligocene
1698227517	<i>Vitis</i>	<i>Vitis</i>	seed/fruit			Devonshire	50.583332	-3.683333	Oligocene
1698224221	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.566666	14.183333	middle Miocene
1698224114	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.566666	14.183333	middle Miocene
1698224101	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.566666	14.183333	middle Miocene
1698224068	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.566666	14.183333	middle Miocene
1698223920	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.516666	14.016667	middle Miocene
1698223820	<i>Vitis</i>	<i>Vitis</i>	leaf	EUROPE	Brandenburg		51.516666	13.883333	middle Miocene
1698223455	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Sachsen		51.400002	14.783333	middle Miocene
1698223353	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Sachsen		51.400002	14.783333	middle Miocene
1698219397	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.333332	14.6	middle Miocene
1698166941	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698166545	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698164578	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698164283	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698162287	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698162216	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698161962	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.549999	13.9	middle Miocene
1698159561	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.599998	14.2	middle Miocene
1698142140	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.583332	14	middle Miocene
1698142106	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.583332	14	middle Miocene
1698142101	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.583332	14	middle Miocene
1698139924	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Saxen		51.433334	14.183333	middle Miocene
1698139905	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Saxen		51.433334	14.183333	middle Miocene
1698139883	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.733334	13.766667	middle Miocene
1698139758	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Brandenburg		51.733334	13.766667	middle Miocene
1698139404	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Saxen		51.433334	14.183333	middle Miocene
1698139347	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	Saxen		51.433334	14.183333	middle Miocene
1698328542	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Surrey		51.516666	-0.083333	late Paleocene
1698284160	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE		Brabant	50.783001	5.083	late Paleocene
1698284139	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE		Brabant	50.783001	5.083	late Paleocene
1698058764	<i>Vitis</i>	<i>Vitis</i>	leaf	NORTH_AMERICA	Wyoming		45	-109	early Paleocene
1698277900	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698277827	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698230801	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698230495	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698230415	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698230289	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698230232	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	late Miocene
1698229961	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229915	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229902	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229884	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229801	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229784	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	51	6.566667	late Miocene
1698229653	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698229262	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698229126	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698229020	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698228987	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698228950	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.816666	6.266667	late Miocene
1698131773	<i>Vitis</i>	<i>Vitis</i>	unassigned	ASIA	Gunma		36.25	139	late Miocene
1698131330	<i>Vitis</i>	<i>Vitis</i>	unassigned	ASIA	Gunma		36.5	139	late Miocene
1698368582	<i>Vitis</i>	<i>Vitis</i>		EUROPE			48.299999	19.763056	Pliocene
1698328744	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328730	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328728	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328723	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328709	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328699	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328683	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328671	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328665	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328659	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328658	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328634	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328633	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.716667	-2	early Eocene
1698328613	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328610	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328608	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328579	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		Dorset		50.700001	-2.033333	early Eocene
1698328461	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	0.083333	early Eocene
1698241997	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England	Hantshire	50.933334	-1.483333	early Eocene
1698200770	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England	Hantshire	50.933334	-1.483333	early Eocene
1698200705	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England	Berkshire	51.416668	-0.75	early Eocene
1698200688	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England	Hantshire	50.933334	-1.483333	early Eocene
1698200629	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England	Hantshire	50.933334	-1.483333	early Eocene
1698196871	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	England	South East Engl Kent	51.366669	1.133333	early Eocene
1698133184	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133183	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133177	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133173	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133161	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133160	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133148	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133119	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133090	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698133084	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		50.783333	-0.65	early Eocene
1698132861	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Virginia	Stafford	38.285	-77.367226	early Eocene
1698132844	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	NORTH_AMERICA	Virginia	Stafford	38.285	-77.367226	early Eocene
1698132063	<i>Vitis</i>	<i>Vitis</i>	seed/fruit		England		52	0.816667	early Eocene
1698231087	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.916668	6.75	Pliocene
1698230735	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.966667	6.65	Pliocene
1698230661	<i>Vitis</i>	<i>Vitis</i>	seed/fruit	EUROPE	North Rhine	Westphalia	50.783333	6.466667	Pliocene
1039379019	<i>Vitis</i>	<i>"Vitis" stantoni</i>		NORTH_AMERICA	North Dakota	Bowman County	46.140505	-103.815714	Late Cretaceous
1039378461	<i>Vitis</i>	<i>"Vitis" stantoni</i>		NORTH_AMERICA	North Dakota	Slope County	45.996034	-103.792155	Late Cretaceous
1039373544	<i>Vitis</i>	<i>"Vitis" stantoni</i>		NORTH_AMERICA	North Dakota	Bowman County	46.140505	-103.815714	Late Cretaceous

1039372990	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039372956	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Hot Springs Co	South Bighorn	43.913251	-108.355973	Late Cretaceous
1039371718	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Niobrara Count	Lance Creek	43.044513	-104.279354	Late Cretaceous
1039371535	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039369208	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039368342	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Hot Springs Co	South Bighorn	43.913251	-108.355973	Late Cretaceous
1039367430	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039365081	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Emmons Count	Linton	46.266657	-100.232892	Late Cretaceous
1039364538	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039363986	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039363292	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039361580	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039361021	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Hot Springs Co	South Bighorn	43.913251	-108.355973	Late Cretaceous
1039360810	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039359500	<i>Vitis</i>	<i>Vitis stantoni</i>	NORTH_AMERICA	Wyoming	Niobrara Count	Lance Creek	43.027656	-104.643983	Late Cretaceous
1039359221	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039358725	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039358609	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Slope County		45.996034	-103.792155	Late Cretaceous
1039357261	<i>Vitis bronne</i>	<i>Vitis bruneri</i>	NORTH_AMERICA	Colorado	Fremont Count	Florence	38.3903	-105.1181	Late Cretaceous
1039356091	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039355696	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039355426	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039354834	<i>Vitis</i>	<i>Vitis stantoni</i>	NORTH_AMERICA	Wyoming	Niobrara Count	Lance Creek	43.027656	-104.643983	Late Cretaceous
1039354328	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039353397	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039353378	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039352653	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Meeteetse	44.170911	-108.883106	Late Cretaceous
1039351159	<i>Vitis</i>	<i>Vitis dakotana</i>	NORTH_AMERICA	Wyoming	Niobrara Count	Lance Creek	43.027656	-104.643983	Late Cretaceous
1039350761	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Hot Springs Co	South Bighorn	43.913251	-108.355973	Late Cretaceous
1039350387	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039350131	<i>Vitis</i>	<i>Vitis stantoni</i>	NORTH_AMERICA	Wyoming	Sweetwater Cou	Point of Rocks	41.68024	-108.785668	Late Cretaceous
1039350075	<i>Vitis</i>	<i>Vitis stantoni</i>	NORTH_AMERICA	Wyoming	Niobrara Count	Lance Creek	43.027656	-104.643983	Late Cretaceous
1039349275	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039348944	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Slope County		45.996034	-103.792155	Late Cretaceous
1039348419	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	North Dakota	Bowman County		46.140505	-103.815714	Late Cretaceous
1039348267	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH_AMERICA	Wyoming	Park County	Elk Basin	44.935591	-108.856272	Late Cretaceous
1039346136	<i>Vitis</i>	<i>Vitis</i>	NORTH_AMERICA	Montana	Dawson County	Glendive	47.106401	-104.710793	Late Cretaceous

1039294700	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH AMERICA	North Dakota	Bowman County	46.140505	-103.815714	Late Cretaceous
1039294609	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH AMERICA	North Dakota	Bowman County	46.140505	-103.815714	Late Cretaceous
1039293039	<i>Vitis</i>	<i>"Vitis" olrikii</i>	NORTH AMERICA	Montana	Dawson County Glendive	47.106401	-104.710793	Late Cretaceous
1039292817	<i>Vitis</i>	<i>Vitis stantoni</i>	NORTH AMERICA	Wyoming	Sweetwater Cou Black Buttes	41.554962	-108.802057	Late Cretaceous
1039292481	<i>Vitis</i>	<i>"Vitis" stantonii</i>	NORTH AMERICA	Wyoming	Hot Springs Coi South Bighorn	43.913251	-108.355973	Late Cretaceous
1039291750	<i>Vitis</i>	<i>"Vitis" stantoni</i>	NORTH AMERICA	North Dakota	Bowman County	46.140505	-103.815714	Late Cretaceous
1039291190	<i>Vitis</i>	<i>"Vitis" stantonii</i>	NORTH AMERICA	Wyoming	Park County Elk Basin	44.935591	-108.856272	Late Cretaceous
1039289562	<i>Vitis bronni</i>	<i>Vitis bruneri</i>	NORTH AMERICA	Colorado	Fremont Count Florence	38.3903	-105.1181	Late Cretaceous

Table S4. Statistics for the six models considered in the nuclear-based analysis in BioGeoBEARS. The best-fitting model is indicated in bold.

Model	LnL	# parameters	AIC	Δ AIC	AW
DEC	-45.79	2	95.57	23.07	5.1e-06
DEC+J	-33.25	3	72.5	0	0.52
DIVALIKE	-46.23	2	96.45	23.95	3.3e-06
DIVALIKE+J	-33.78	3	73.56	1.06	0.31
BAYAREALIKE	-54.78	2	113.57	41.07	6.3e-10
BAYAREALIKE+J	-34.35	3	74.7	2.2	0.17

Table S5. Statistics for the six models considered in chloroplast-based analysis in BioGeoBEARS. The best-fitting model is indicated in bold.

Model	LnL	# parameters	AIC	Δ AIC	AW
DEC	-51.18	2	106.9	29.94	2.0e-07
DEC+J	-35.79	3	77.57	0.61	0.36
DIVALIKE	-52.87	2	109.7	32.74	3.7e-08
DIVALIKE+J	-35.48	3	76.96	0	0.48
BAYAREALIKE	-60.73	2	125.5	48.54	1.4e-11
BAYAREALIKE+J	-36.68	3	79.16	2.2	0.16

Table S6. Topological statistics of gene trees inferred from phyckle analysis.

gene	nuclear	chloroplast	bestone	best	secondbest	diffbestsecondbest
LOC100264881.fasta.mafft.trimal-103	-37951.196	-38332.86903	nuclear	-37951.196	-38332.86903	381.672794
LOC100262251.fasta.mafft.trimal-103	-53376.589	-53429.87989	nuclear	-53376.589	-53429.87989	53.291334
LOC100250073_1.fasta.mafft.trimal-103	-17720.808	-17771.6811	nuclear	-17720.808	-17771.6811	50.873022
LOC100250255.fasta.mafft.trimal-103	-34177.659	-34225.18265	nuclear	-34177.659	-34225.18265	47.523797
LOC100242135.fasta.mafft.trimal-103	-41144.037	-41190.9795	nuclear	-41144.037	-41190.9795	46.942887
LOC104881127.fasta.mafft.trimal-103	-33178.853	-33221.17838	nuclear	-33178.853	-33221.17838	42.325779
LOC100260100_1.fasta.mafft.trimal-103	-12822.242	-12859.60199	nuclear	-12822.242	-12859.60199	37.359937
LOC100258888.fasta.mafft.trimal-103	-31013.875	-31048.96396	nuclear	-31013.875	-31048.96396	35.088758
LOC100259461.fasta.mafft.trimal-103	-8651.6745	-8686.05664	nuclear	-8651.6745	-8686.05664	34.382207
LOC100241749.fasta.mafft.trimal-103	-20999.417	-21029.37729	nuclear	-20999.417	-21029.37729	29.959901
LOC100264811.fasta.mafft.trimal-103	-19671.927	-19700.65434	nuclear	-19671.927	-19700.65434	28.727835
LOC100255394_1.fasta.mafft.trimal-103	-39814.577	-39843.20331	nuclear	-39814.577	-39843.20331	28.626424
LOC100262993_2.fasta.mafft.trimal-103	-14166.748	-14195.07158	nuclear	-14166.748	-14195.07158	28.32376
LOC100267626.fasta.mafft.trimal-103	-24334.46	-24360.56421	nuclear	-24334.46	-24360.56421	26.104404
LOC100262667_2.fasta.mafft.trimal-103	-41066.239	-41092.30504	nuclear	-41066.239	-41092.30504	26.066139
LOC100266806_1.fasta.mafft.trimal-103	-21629.605	-21653.70139	nuclear	-21629.605	-21653.70139	24.096331
LOC100248560.fasta.mafft.trimal-103	-10862.943	-10885.98016	nuclear	-10862.943	-10885.98016	23.037145
LOC100246733_1.fasta.mafft.trimal-103	-12877.904	-12900.90767	nuclear	-12877.904	-12900.90767	23.00366
LOC100261915.fasta.mafft.trimal-103	-32122.508	-32144.70598	nuclear	-32122.508	-32144.70598	22.197581
LOC100251495_3.fasta.mafft.trimal-103	-10233.625	-10254.85461	nuclear	-10233.625	-10254.85461	21.229469
LOC104880503.fasta.mafft.trimal-103	-28904.708	-28925.34365	nuclear	-28904.708	-28925.34365	20.635428
LOC100243428_2.fasta.mafft.trimal-103	-24856.752	-24876.72395	nuclear	-24856.752	-24876.72395	19.972125
LOC100263241_2.fasta.mafft.trimal-103	-17561.825	-17581.47547	nuclear	-17561.825	-17581.47547	19.649983
LOC100255229_2.fasta.mafft.trimal-103	-19034.42	-19053.16129	nuclear	-19034.42	-19053.16129	18.741181
LOC100247288_1.fasta.mafft.trimal-103	-18982.535	-19000.08531	nuclear	-18982.535	-19000.08531	17.550588
LOC100255551_1.fasta.mafft.trimal-103	-17203.05	-17220.58039	nuclear	-17203.05	-17220.58039	17.530875
LOC100258021.fasta.mafft.trimal-103	-25942.44	-25959.75249	nuclear	-25942.44	-25959.75249	17.312482
LOC100243733.fasta.mafft.trimal-103	-24477.921	-24495.09299	nuclear	-24477.921	-24495.09299	17.171787
LOC100253086.fasta.mafft.trimal-103	-52591.785	-52608.85445	nuclear	-52591.785	-52608.85445	17.069491
LOC100255916_1.fasta.mafft.trimal-103	-13674.103	-13691.05636	nuclear	-13674.103	-13691.05636	16.95385
LOC100252311.fasta.mafft.trimal-103	-43093.102	-43109.31678	nuclear	-43093.102	-43109.31678	16.214641
LOC100254609_2.fasta.mafft.trimal-103	-75280.194	-75296.04175	nuclear	-75280.194	-75296.04175	15.847796
LOC100255229_1.fasta.mafft.trimal-103	-37077.221	-37092.68869	nuclear	-37077.221	-37092.68869	15.467733
LOC100260774.fasta.mafft.trimal-103	-27376.89	-27392.00159	nuclear	-27376.89	-27392.00159	15.111105
LOC100252532.fasta.mafft.trimal-103	-21206.726	-21221.10813	nuclear	-21206.726	-21221.10813	14.382425
LOC100246653.fasta.mafft.trimal-103	-8983.086	-8996.802111	nuclear	-8983.086	-8996.802111	13.716161
LOC104877308_2.fasta.mafft.trimal-103	-13687.252	-13700.68362	nuclear	-13687.252	-13700.68362	13.43172
LOC100264670.fasta.mafft.trimal-103	-12757.745	-12770.85146	nuclear	-12757.745	-12770.85146	13.106529
LOC100242836.fasta.mafft.trimal-103	-6628.9597	-6641.778083	nuclear	-6628.9597	-6641.778083	12.818422
LOC100254500.fasta.mafft.trimal-103	-36446.219	-36458.3567	nuclear	-36446.219	-36458.3567	12.137234
LOC100259510_2.fasta.mafft.trimal-103	-23328.406	-23340.45801	nuclear	-23328.406	-23340.45801	12.05175
LOC100261013.fasta.mafft.trimal-103	-30035.904	-30047.6856	nuclear	-30035.904	-30047.6856	11.781133
LOC100256476.fasta.mafft.trimal-103	-7743.0719	-7754.630732	nuclear	-7743.0719	-7754.630732	11.558878
LOC100251847_3.fasta.mafft.trimal-103	-16182.706	-16194.11097	nuclear	-16182.706	-16194.11097	11.405245
LOC100257554.fasta.mafft.trimal-103	-11912.077	-11923.4278	nuclear	-11912.077	-11923.4278	11.351006
LOC100254202_1.fasta.mafft.trimal-103	-20195.584	-20206.44057	nuclear	-20195.584	-20206.44057	10.856563
LOC100261914_1.fasta.mafft.trimal-103	-28027.814	-28038.5056	nuclear	-28027.814	-28038.5056	10.691502
LOC100262433_1.fasta.mafft.trimal-103	-8529.6183	-8540.258814	nuclear	-8529.6183	-8540.258814	10.640544
LOC100251720.fasta.mafft.trimal-103	-23158.706	-23169.07655	nuclear	-23158.706	-23169.07655	10.370678
LOC100241424.fasta.mafft.trimal-103	-12715.699	-12725.91215	nuclear	-12715.699	-12725.91215	10.213143
LOC100263244_2.fasta.mafft.trimal-103	-21466.427	-21476.32969	nuclear	-21466.427	-21476.32969	9.903011
LOC100252259_3.fasta.mafft.trimal-103	-14448.038	-14457.5392	nuclear	-14448.038	-14457.5392	9.501226
LOC100256861.fasta.mafft.trimal-103	-22167.564	-22177.05734	nuclear	-22167.564	-22177.05734	9.493083
LOC100254115_2.fasta.mafft.trimal-103	-16200.512	-16209.93466	nuclear	-16200.512	-16209.93466	9.422161
LOC100242749_2.fasta.mafft.trimal-103	-11336.797	-11345.92219	nuclear	-11336.797	-11345.92219	9.124993
LOC100267043.fasta.mafft.trimal-103	-12571.798	-12580.60956	nuclear	-12571.798	-12580.60956	8.81169
LOC100262433_2.fasta.mafft.trimal-103	-12468.799	-12477.24368	nuclear	-12468.799	-12477.24368	8.444903
LOC100262667_1.fasta.mafft.trimal-103	-46151.866	-46160.20752	nuclear	-46151.866	-46160.20752	8.341261
LOC100240988.fasta.mafft.trimal-103	-31463.611	-31471.91232	nuclear	-31463.611	-31471.91232	8.301602
LOC100266606_2.fasta.mafft.trimal-103	-20219.692	-20227.65181	nuclear	-20219.692	-20227.65181	7.959683
LOC100248442.fasta.mafft.trimal-103	-22497.694	-22505.39179	nuclear	-22497.694	-22505.39179	7.698265
LOC100243428_4.fasta.mafft.trimal-103	-29680.222	-29687.84528	nuclear	-29680.222	-29687.84528	7.623312

LOC100241276_1.fasta.mafft.trimal-103	-27184.541	-27192.09449	nuclear	-27184.541	-27192.09449	7.553531
LOC100257410_2.fasta.mafft.trimal-103	-29954.967	-29962.42923	nuclear	-29954.967	-29962.42923	7.462477
LOC100259875_1.fasta.mafft.trimal-103	-26062.132	-26069.5793	nuclear	-26062.132	-26069.5793	7.446884
LOC100262446_3.fasta.mafft.trimal-103	-19035.937	-19043.07199	nuclear	-19035.937	-19043.07199	7.135466
LOC100262916.fasta.mafft.trimal-103	-12270.392	-12276.92144	nuclear	-12270.392	-12276.92144	6.52924
LOC100854417.fasta.mafft.trimal-103	-8470.1081	-8476.582111	nuclear	-8470.1081	-8476.582111	6.473968
LOC100241808_3.fasta.mafft.trimal-103	-23354.562	-23360.53454	nuclear	-23354.562	-23360.53454	5.972338
LOC100257691_2.fasta.mafft.trimal-103	-17125.468	-17131.21889	nuclear	-17125.468	-17131.21889	5.751179
LOC100266579_1.fasta.mafft.trimal-103	-42030.604	-42036.14647	nuclear	-42030.604	-42036.14647	5.542544
LOC100260472_2.fasta.mafft.trimal-103	-29044.121	-29049.55245	nuclear	-29044.121	-29049.55245	5.431205
LOC100250036_3.fasta.mafft.trimal-103	-6062.4332	-6067.796713	nuclear	-6062.4332	-6067.796713	5.363471
LOC100265617_2.fasta.mafft.trimal-103	-12429.244	-12434.32054	nuclear	-12429.244	-12434.32054	5.076285
LOC100255332_1.fasta.mafft.trimal-103	-5759.2286	-5764.294505	nuclear	-5759.2286	-5764.294505	5.065932
LOC100247893.fasta.mafft.trimal-103	-17364.961	-17369.90151	nuclear	-17364.961	-17369.90151	4.94069
LOC104877308_3.fasta.mafft.trimal-103	-9367.4569	-9372.384361	nuclear	-9367.4569	-9372.384361	4.927413
LOC100245064_1.fasta.mafft.trimal-103	-24825.071	-24829.67715	nuclear	-24825.071	-24829.67715	4.605952
LOC100245228.fasta.mafft.trimal-103	-24492.803	-24497.36615	nuclear	-24492.803	-24497.36615	4.563201
LOC100258308_1.fasta.mafft.trimal-103	-20639.733	-20644.16973	nuclear	-20639.733	-20644.16973	4.436427
LOC100255229_3.fasta.mafft.trimal-103	-10967.409	-10971.79589	nuclear	-10967.409	-10971.79589	4.387274
LOC100242495_2.fasta.mafft.trimal-103	-11141.021	-11145.05935	nuclear	-11141.021	-11145.05935	4.037884
LOC100244234_1.fasta.mafft.trimal-103	-6212.3488	-6216.344404	nuclear	-6212.3488	-6216.344404	3.995629
LOC100259260_1.fasta.mafft.trimal-103	-9979.0662	-9982.890688	nuclear	-9979.0662	-9982.890688	3.824533
LOC100261604_2.fasta.mafft.trimal-103	-20059.286	-20063.04083	nuclear	-20059.286	-20063.04083	3.754674
LOC100241246.fasta.mafft.trimal-103	-11413.601	-11417.33118	nuclear	-11413.601	-11417.33118	3.730552
LOC100259168_2.fasta.mafft.trimal-103	-4378.2053	-4381.893621	nuclear	-4378.2053	-4381.893621	3.688357
LOC100264117.fasta.mafft.trimal-103	-11004.38	-11007.92156	nuclear	-11004.38	-11007.92156	3.541326
LOC100245032_3.fasta.mafft.trimal-103	-8213.4117	-8216.931026	nuclear	-8213.4117	-8216.931026	3.519374
LOC100263897_1.fasta.mafft.trimal-103	-9707.6959	-9711.106996	nuclear	-9707.6959	-9711.106996	3.411134
LOC100250457.fasta.mafft.trimal-103	-16520.454	-16523.70606	nuclear	-16520.454	-16523.70606	3.252428
LOC100251847_4.fasta.mafft.trimal-103	-10258.699	-10261.72145	nuclear	-10258.699	-10261.72145	3.022365
LOC100265049_1.fasta.mafft.trimal-103	-11511.926	-11514.92224	nuclear	-11511.926	-11514.92224	2.996506
LOC100262446_1.fasta.mafft.trimal-103	-26950.569	-26953.52377	nuclear	-26950.569	-26953.52377	2.954269
LOC100267580.fasta.mafft.trimal-103	-30334.373	-30337.28879	nuclear	-30334.373	-30337.28879	2.916192
LOC100260972_1.fasta.mafft.trimal-103	-19850.886	-19853.6687	nuclear	-19850.886	-19853.6687	2.782566
LOC100265579.fasta.mafft.trimal-103	-5850.0977	-5852.647931	nuclear	-5850.0977	-5852.647931	2.55028
LOC100250064_2.fasta.mafft.trimal-103	-13717.074	-13719.5663	nuclear	-13717.074	-13719.5663	2.491877
LOC104877308_1.fasta.mafft.trimal-103	-7140.0847	-7142.489893	nuclear	-7140.0847	-7142.489893	2.405181
LOC100262446_2.fasta.mafft.trimal-103	-7818.2038	-7820.585715	nuclear	-7818.2038	-7820.585715	2.381965
LOC100246394.fasta.mafft.trimal-103	-16312.312	-16314.65176	nuclear	-16312.312	-16314.65176	2.3396
LOC100254750_1.fasta.mafft.trimal-103	-29343.068	-29345.34487	nuclear	-29343.068	-29345.34487	2.276462
LOC100266782.fasta.mafft.trimal-103	-4297.7302	-4299.843506	nuclear	-4297.7302	-4299.843506	2.113304
LOC100254115_7.fasta.mafft.trimal-103	-13757.438	-13759.52981	nuclear	-13757.438	-13759.52981	2.092153
LOC100253258_1.fasta.mafft.trimal-103	-17696.795	-17698.87146	nuclear	-17696.795	-17698.87146	2.07681
LOC100265049_3.fasta.mafft.trimal-103	-5479.6646	-5481.728051	nuclear	-5479.6646	-5481.728051	2.063483
LOC100245032_2.fasta.mafft.trimal-103	-6579.3374	-6581.37693	nuclear	-6579.3374	-6581.37693	2.039488
LOC100241489.fasta.mafft.trimal-103	-18836.751	-18838.77137	nuclear	-18836.751	-18838.77137	2.020738
LOC100256414_2.fasta.mafft.trimal-103	-20494.618	-20496.57746	nuclear	-20494.618	-20496.57746	1.959128
LOC100262146_2.fasta.mafft.trimal-103	-10563.019	-10564.76086	nuclear	-10563.019	-10564.76086	1.741684
LOC100256585.fasta.mafft.trimal-103	-22783.801	-22785.5342	nuclear	-22783.801	-22785.5342	1.733342
LOC100254523.fasta.mafft.trimal-103	-26565.703	-26567.38605	nuclear	-26565.703	-26567.38605	1.68285
LOC100262883_1.fasta.mafft.trimal-103	-10905.096	-10906.7427	nuclear	-10905.096	-10906.7427	1.64642
LOC100254750_2.fasta.mafft.trimal-103	-23774.585	-23776.19559	nuclear	-23774.585	-23776.19559	1.610256
LOC100241276_4.fasta.mafft.trimal-103	-23316.51	-23318.07144	nuclear	-23316.51	-23318.07144	1.56139
LOC100263969_1.fasta.mafft.trimal-103	-7997.6538	-7999.208824	nuclear	-7997.6538	-7999.208824	1.55501
LOC100259260_2.fasta.mafft.trimal-103	-89249.285	-89250.81539	nuclear	-89249.285	-89250.81539	1.530377
LOC100258083_1.fasta.mafft.trimal-103	-11611.074	-11612.54652	nuclear	-11611.074	-11612.54652	1.472653
LOC100246888_2.fasta.mafft.trimal-103	-8434.224	-8435.636068	nuclear	-8434.224	-8435.636068	1.412027
LOC100266606_1.fasta.mafft.trimal-103	-17585.918	-17587.1925	nuclear	-17585.918	-17587.1925	1.274749
LOC100244161.fasta.mafft.trimal-103	-38807.017	-38808.04438	nuclear	-38807.017	-38808.04438	1.027878
LOC100260100_2.fasta.mafft.trimal-103	-29079.378	-29080.39476	nuclear	-29079.378	-29080.39476	1.016563
LOC100248856.fasta.mafft.trimal-103	-14644.362	-14645.2532	nuclear	-14644.362	-14645.2532	0.89131
LOC100252369_2.fasta.mafft.trimal-103	-18157.171	-18158.05841	nuclear	-18157.171	-18158.05841	0.887299
LOC100244834.fasta.mafft.trimal-103	-4674.5354	-4675.356788	nuclear	-4674.5354	-4675.356788	0.821358
LOC100245590.fasta.mafft.trimal-103	-20811.146	-20811.96663	nuclear	-20811.146	-20811.96663	0.820815
LOC100249350_1.fasta.mafft.trimal-103	-14825.078	-14825.85134	nuclear	-14825.078	-14825.85134	0.773803
LOC100267465_2.fasta.mafft.trimal-103	-9473.8178	-9474.453226	nuclear	-9473.8178	-9474.453226	0.635467

LOC100256237.fasta.mafft.trimal-103	-14756.116	-14756.7197	nuclear	-14756.116	-14756.7197	0.603841
LOC100257916_3.fasta.mafft.trimal-103	-18903.421	-18904.02045	nuclear	-18903.421	-18904.02045	0.599928
LOC100254722_2.fasta.mafft.trimal-103	-3132.2909	-3132.673796	nuclear	-3132.2909	-3132.673796	0.38293
LOC100241550_2.fasta.mafft.trimal-103	-44094.07	-44094.40277	nuclear	-44094.07	-44094.40277	0.332691
LOC100854910.fasta.mafft.trimal-103	-13263.674	-13263.95101	nuclear	-13263.674	-13263.95101	0.277093
LOC100241185.fasta.mafft.trimal-103	-33541.581	-33541.8556	nuclear	-33541.581	-33541.8556	0.274819
LOC100259903_2.fasta.mafft.trimal-103	-24174.691	-24174.94266	nuclear	-24174.691	-24174.94266	0.251743
LOC100267105_1.fasta.mafft.trimal-103	-6360.7825	-6360.963678	nuclear	-6360.7825	-6360.963678	0.181213
LOC100261914_2.fasta.mafft.trimal-103	-15435.381	-15435.44784	nuclear	-15435.381	-15435.44784	0.066778
LOC100255901.fasta.mafft.trimal-103	-13514.861	-13514.91865	nuclear	-13514.861	-13514.91865	0.05781
LOC100257691_1.fasta.mafft.trimal-103	-15077.644	-15077.70121	nuclear	-15077.644	-15077.70121	0.056749
LOC100244234_3.fasta.mafft.trimal-103	-5007.8322	-5007.887114	nuclear	-5007.8322	-5007.887114	0.054953
LOC100250416_2.fasta.mafft.trimal-103	-6822.4702	-6822.509952	nuclear	-6822.4702	-6822.509952	0.039746
LOC100254750_3.fasta.mafft.trimal-103	-16943.451	-16943.47753	nuclear	-16943.451	-16943.47753	0.026725
LOC100854105.fasta.mafft.trimal-103	-10152.966	-10152.96927	nuclear	-10152.966	-10152.96927	0.003075
LOC100250064_1.fasta.mafft.trimal-103	-13169.205	-13169.20564	nuclear	-13169.205	-13169.20564	0.000454
LOC100254115_3.fasta.mafft.trimal-103	-30418.418	-30369.30414	chloroplast	-30369.304	-30418.41774	49.113599
LOC100249999_2.fasta.mafft.trimal-103	-32431.316	-32386.99903	chloroplast	-32386.999	-32431.31619	44.317164
LOC100249999_1.fasta.mafft.trimal-103	-22419.196	-22376.02643	chloroplast	-22376.026	-22419.19561	43.169176
LOC100265538_2.fasta.mafft.trimal-103	-14469.248	-14426.96773	chloroplast	-14426.968	-14469.24808	42.280352
LOC100251498.fasta.mafft.trimal-103	-41272.016	-41230.93202	chloroplast	-41230.932	-41272.01555	41.083526
LOC100240980.fasta.mafft.trimal-103	-22443.045	-22402.5298	chloroplast	-22402.53	-22443.04498	40.515183
LOC100266016.fasta.mafft.trimal-103	-40202.43	-40164.65106	chloroplast	-40164.651	-40202.42998	37.778919
LOC100249177.fasta.mafft.trimal-103	-19865.049	-19831.61052	chloroplast	-19831.611	-19865.04875	33.438227
LOC100259771.fasta.mafft.trimal-103	-62560.663	-62532.44768	chloroplast	-62532.448	-62560.66322	28.215535
LOC100245064_2.fasta.mafft.trimal-103	-47035.577	-47008.62313	chloroplast	-47008.623	-47035.57734	26.954215
LOC100265798_1.fasta.mafft.trimal-103	-42320.952	-42295.60748	chloroplast	-42295.607	-42320.95225	25.344779
LOC100262865_1.fasta.mafft.trimal-103	-18325.604	-18300.64151	chloroplast	-18300.642	-18325.60358	24.962068
LOC100263684_2.fasta.mafft.trimal-103	-55631.613	-55608.32611	chloroplast	-55608.326	-55631.61318	23.287068
LOC100254023_2.fasta.mafft.trimal-103	-102908.2	-102887.2373	chloroplast	-102887.24	-102908.1953	20.958046
LOC100247612.fasta.mafft.trimal-103	-20929.905	-20909.38794	chloroplast	-20909.388	-20929.9054	20.517465
LOC100241276_5.fasta.mafft.trimal-103	-11689.728	-11670.09203	chloroplast	-11670.092	-11689.72802	19.635988
LOC100266959_2.fasta.mafft.trimal-103	-24710.261	-24690.76252	chloroplast	-24690.763	-24710.26051	19.497982
LOC100267269_2.fasta.mafft.trimal-103	-8298.9806	-8280.880124	chloroplast	-8280.8801	-8298.980624	18.1005
LOC100267182.fasta.mafft.trimal-103	-30360.834	-30342.87495	chloroplast	-30342.875	-30360.83447	17.959514
LOC100254023_1.fasta.mafft.trimal-103	-14351.578	-14334.69853	chloroplast	-14334.699	-14351.5781	16.879577
LOC100265138_1.fasta.mafft.trimal-103	-31110.713	-31093.87586	chloroplast	-31093.876	-31110.71299	16.837121
LOC100244472_2.fasta.mafft.trimal-103	-17094.437	-17078.04126	chloroplast	-17078.041	-17094.43694	16.395678
LOC100249911.fasta.mafft.trimal-103	-13332.123	-13316.10543	chloroplast	-13316.105	-13332.1233	16.01787
LOC100255113_1.fasta.mafft.trimal-103	-19425.196	-19409.39841	chloroplast	-19409.398	-19425.19582	15.797413
LOC100255113_2.fasta.mafft.trimal-103	-16108.322	-16092.84108	chloroplast	-16092.841	-16108.32203	15.48095
LOC100247921.fasta.mafft.trimal-103	-13272.532	-13257.12657	chloroplast	-13257.127	-13272.53223	15.405665
LOC100262865_2.fasta.mafft.trimal-103	-38141.721	-38126.50996	chloroplast	-38126.51	-38141.72104	15.211082
LOC100242749_1.fasta.mafft.trimal-103	-17603.563	-17588.48012	chloroplast	-17588.48	-17603.56316	15.083034
LOC100267105_2.fasta.mafft.trimal-103	-12503.781	-12489.03209	chloroplast	-12489.032	-12503.7806	14.748515
LOC100261604_1.fasta.mafft.trimal-103	-9464.26	-9449.569089	chloroplast	-9449.5691	-9464.259996	14.690907
LOC100854269.fasta.mafft.trimal-103	-51657.412	-51642.98042	chloroplast	-51642.98	-51657.41215	14.431736
LOC100255551_2.fasta.mafft.trimal-103	-17305.706	-17291.43021	chloroplast	-17291.43	-17305.70567	14.275462
LOC100243431_1.fasta.mafft.trimal-103	-26577.215	-26563.26054	chloroplast	-26563.261	-26577.21473	13.954189
LOC100254722_1.fasta.mafft.trimal-103	-46405.29	-46391.35175	chloroplast	-46391.352	-46405.29024	13.938491
LOC100258083_2.fasta.mafft.trimal-103	-24899.583	-24885.81993	chloroplast	-24885.82	-24899.58323	13.763304
LOC100250036_4.fasta.mafft.trimal-103	-30411.086	-30397.90927	chloroplast	-30397.909	-30411.08569	13.176425
LOC100240790.fasta.mafft.trimal-103	-34585.124	-34571.97658	chloroplast	-34571.977	-34585.12352	13.14694
LOC100262146_1.fasta.mafft.trimal-103	-24225.361	-24212.81166	chloroplast	-24212.812	-24225.36106	12.549404
LOC100251495_2.fasta.mafft.trimal-103	-25101.146	-25088.7291	chloroplast	-25088.729	-25101.14581	12.416706
LOC100260183.fasta.mafft.trimal-103	-14660.057	-14647.72265	chloroplast	-14647.723	-14660.05741	12.334763
LOC100255394_2.fasta.mafft.trimal-103	-15935.523	-15923.35536	chloroplast	-15923.355	-15935.52295	12.167583
LOC100241550_1.fasta.mafft.trimal-103	-47831.841	-47820.03818	chloroplast	-47820.038	-47831.84142	11.803238
LOC100263800_3.fasta.mafft.trimal-103	-7473.0133	-7461.249213	chloroplast	-7461.2492	-7473.013268	11.764055
LOC100244686_2.fasta.mafft.trimal-103	-12098.087	-12086.35938	chloroplast	-12086.359	-12098.08704	11.727662
LOC100265798_2.fasta.mafft.trimal-103	-12012.348	-12000.7281	chloroplast	-12000.728	-12012.34762	11.619514
LOC100254451.fasta.mafft.trimal-103	-9857.2204	-9846.282044	chloroplast	-9846.282	-9857.220382	10.938338
LOC100267695.fasta.mafft.trimal-103	-6323.6797	-6313.006053	chloroplast	-6313.0061	-6323.679731	10.673678
LOC100263684_1.fasta.mafft.trimal-103	-8803.237	-8792.79813	chloroplast	-8792.7981	-8803.236969	10.438839
LOC100242749_3.fasta.mafft.trimal-103	-23772.029	-23761.7261	chloroplast	-23761.726	-23772.02934	10.303231
LOC100252266_2.fasta.mafft.trimal-103	-12108.799	-12098.81664	chloroplast	-12098.817	-12108.79905	9.982411

LOC100254609_1.fasta.mafft.trimal-103	-13706.935	-13697.08664	chloroplast	-13697.087	-13706.93493	9.848289
LOC100260782_1.fasta.mafft.trimal-103	-20022.995	-20013.65262	chloroplast	-20013.653	-20022.99531	9.34269
LOC100254115_5.fasta.mafft.trimal-103	-9702.5141	-9693.261292	chloroplast	-9693.2613	-9702.514092	9.2528
LOC100244686_1.fasta.mafft.trimal-103	-12007.693	-11998.54093	chloroplast	-11998.541	-12007.69325	9.152314
LOC100241276_3.fasta.mafft.trimal-103	-35660.121	-35651.07725	chloroplast	-35651.077	-35660.12069	9.043442
LOC100258986_1.fasta.mafft.trimal-103	-19623.795	-19614.81551	chloroplast	-19614.816	-19623.79488	8.979369
LOC100240818.fasta.mafft.trimal-103	-23573.995	-23565.20579	chloroplast	-23565.206	-23573.99456	8.788774
LOC100263283.fasta.mafft.trimal-103	-27798.265	-27789.98645	chloroplast	-27789.986	-27798.26467	8.278214
LOC100263800_4.fasta.mafft.trimal-103	-18614.055	-18605.78662	chloroplast	-18605.787	-18614.05507	8.268454
LOC100257691_3.fasta.mafft.trimal-103	-30638.185	-30630.05855	chloroplast	-30630.059	-30638.18498	8.12643
LOC100263800_1.fasta.mafft.trimal-103	-30095.99	-30088.04888	chloroplast	-30088.049	-30095.9904	7.941512
LOC100244170.fasta.mafft.trimal-103	-15529.884	-15521.94547	chloroplast	-15521.945	-15529.88358	7.93811
LOC100254646.fasta.mafft.trimal-103	-55700.491	-55692.77574	chloroplast	-55692.776	-55700.49123	7.715493
LOC100254356.fasta.mafft.trimal-103	-14444.322	-14436.71557	chloroplast	-14436.716	-14444.3222	7.606636
LOC100242420.fasta.mafft.trimal-103	-3714.8584	-3707.494942	chloroplast	-3707.4949	-3714.858434	7.363492
LOC100263800_2.fasta.mafft.trimal-103	-34927.058	-34919.80553	chloroplast	-34919.806	-34927.05836	7.252826
LOC100252259_1.fasta.mafft.trimal-103	-12435.576	-12428.50136	chloroplast	-12428.501	-12435.57607	7.07471
LOC100243908.fasta.mafft.trimal-103	-37620.587	-37613.58732	chloroplast	-37613.587	-37620.58728	6.999959
LOC100241562.fasta.mafft.trimal-103	-11936.857	-11930.13029	chloroplast	-11930.13	-11936.85673	6.726437
LOC100258667_1.fasta.mafft.trimal-103	-18645.043	-18638.35673	chloroplast	-18638.357	-18645.04294	6.686207
LOC100251495_1.fasta.mafft.trimal-103	-22798.248	-22791.62789	chloroplast	-22791.628	-22798.24806	6.620171
LOC100260472_1.fasta.mafft.trimal-103	-14459.676	-14453.17888	chloroplast	-14453.179	-14459.67595	6.497065
LOC100259510_1.fasta.mafft.trimal-103	-14764.267	-14758.04973	chloroplast	-14758.05	-14764.26661	6.21688
LOC100260972_2.fasta.mafft.trimal-103	-14479.178	-14473.07709	chloroplast	-14473.077	-14479.17808	6.100995
LOC100252411.fasta.mafft.trimal-103	-16093.631	-16087.76221	chloroplast	-16087.762	-16093.63071	5.868502
LOC100258308_2.fasta.mafft.trimal-103	-17372.003	-17366.1609	chloroplast	-17366.161	-17372.00306	5.842163
LOC100252114.fasta.mafft.trimal-103	-16664.306	-16658.47692	chloroplast	-16658.477	-16664.30642	5.829495
LOC100260849.fasta.mafft.trimal-103	-21525.672	-21519.94047	chloroplast	-21519.94	-21525.6716	5.731134
LOC100263424.fasta.mafft.trimal-103	-25810.193	-25804.46444	chloroplast	-25804.464	-25810.19325	5.72881
LOC100243431_2.fasta.mafft.trimal-103	-18216.474	-18210.753	chloroplast	-18210.753	-18216.47449	5.721496
LOC100264673.fasta.mafft.trimal-103	-39066.572	-39060.87561	chloroplast	-39060.876	-39066.57219	5.696576
LOC100254979.fasta.mafft.trimal-103	-19566.702	-19561.1001	chloroplast	-19561.1	-19566.70196	5.601858
LOC100259903_1.fasta.mafft.trimal-103	-35727.029	-35721.48687	chloroplast	-35721.487	-35727.02888	5.542013
LOC100266579_2.fasta.mafft.trimal-103	-21503.225	-21498.13068	chloroplast	-21498.131	-21503.22457	5.093889
LOC100265049_2.fasta.mafft.trimal-103	-14091.281	-14086.31295	chloroplast	-14086.313	-14091.28109	4.96814
LOC100247530.fasta.mafft.trimal-103	-7131.9362	-7126.983855	chloroplast	-7126.9839	-7131.936226	4.952371
LOC100256504.fasta.mafft.trimal-103	-9138.4487	-9133.732568	chloroplast	-9133.7326	-9138.448679	4.716111
LOC100254115_4.fasta.mafft.trimal-103	-17840.173	-17835.45984	chloroplast	-17835.46	-17840.17279	4.712958
LOC100255789.fasta.mafft.trimal-103	-7943.2982	-7938.661046	chloroplast	-7938.661	-7943.298223	4.637177
LOC100240863.fasta.mafft.trimal-103	-45147.172	-45142.60691	chloroplast	-45142.607	-45147.17155	4.564641
LOC100258100.fasta.mafft.trimal-103	-8107.095	-8102.62982	chloroplast	-8102.6298	-8107.095026	4.465206
LOC100250416_1.fasta.mafft.trimal-103	-8238.3355	-8233.921751	chloroplast	-8233.9218	-8238.335523	4.413772
LOC100247979_1.fasta.mafft.trimal-103	-11283.251	-11279.01432	chloroplast	-11279.014	-11283.25122	4.236903
LOC100263805.fasta.mafft.trimal-103	-11210.784	-11206.56864	chloroplast	-11206.569	-11210.7842	4.215563
LOC100260782_2.fasta.mafft.trimal-103	-12298.316	-12294.13391	chloroplast	-12294.134	-12298.31632	4.182411
LOC100245032_1.fasta.mafft.trimal-103	-9046.906	-9042.7398	chloroplast	-9042.7398	-9046.905976	4.166176
LOC100266959_1.fasta.mafft.trimal-103	-17970.905	-17966.89989	chloroplast	-17966.9	-17970.90453	4.004638
LOC100265882.fasta.mafft.trimal-103	-8604.1436	-8600.225544	chloroplast	-8600.2255	-8604.143603	3.918059
LOC100251847_2.fasta.mafft.trimal-103	-9423.1363	-9419.252449	chloroplast	-9419.2524	-9423.136303	3.883854
LOC100256414_1.fasta.mafft.trimal-103	-11860.447	-11856.57778	chloroplast	-11856.578	-11860.44695	3.869167
LOC100242495_1.fasta.mafft.trimal-103	-9741.8554	-9738.068061	chloroplast	-9738.0681	-9741.855369	3.787308
LOC100249281.fasta.mafft.trimal-103	-4475.5653	-4471.849905	chloroplast	-4471.8499	-4475.565294	3.715389
LOC100256941.fasta.mafft.trimal-103	-22912.754	-22909.06463	chloroplast	-22909.065	-22912.75363	3.688993
LOC100243186.fasta.mafft.trimal-103	-7213.4402	-7209.910272	chloroplast	-7209.9103	-7213.440243	3.529971
LOC100264126.fasta.mafft.trimal-103	-5649.4268	-5645.96371	chloroplast	-5645.9637	-5649.426767	3.463057
LOC100255916_3.fasta.mafft.trimal-103	-11005.968	-11002.54495	chloroplast	-11002.545	-11005.96797	3.423022
LOC100257450.fasta.mafft.trimal-103	-20323.655	-20320.24271	chloroplast	-20320.243	-20323.65542	3.412709
LOC100249277.fasta.mafft.trimal-103	-37577.47	-37574.29606	chloroplast	-37574.296	-37577.46964	3.173575
LOC100241894.fasta.mafft.trimal-103	-7043.9077	-7040.770633	chloroplast	-7040.7706	-7043.907673	3.13704
LOC100243305.fasta.mafft.trimal-103	-14448.788	-14445.66287	chloroplast	-14445.663	-14448.78757	3.124703
LOC100252279_2.fasta.mafft.trimal-103	-9331.0079	-9327.901662	chloroplast	-9327.9017	-9331.007913	3.106251
LOC100241808_1.fasta.mafft.trimal-103	-18324.219	-18321.27789	chloroplast	-18321.278	-18324.21917	2.941286
LOC100253805.fasta.mafft.trimal-103	-34645.287	-34642.4047	chloroplast	-34642.405	-34645.28715	2.882451
LOC100246733_2.fasta.mafft.trimal-103	-17206.574	-17203.70645	chloroplast	-17203.706	-17206.57377	2.867315
LOC100257043_1.fasta.mafft.trimal-103	-22365.641	-22362.77515	chloroplast	-22362.775	-22365.64117	2.866023
LOC104880490.fasta.mafft.trimal-103	-5831.7431	-5828.923271	chloroplast	-5828.9233	-5831.743127	2.819856

LOC100257410_1.fasta.mafft.tribal-103	-36444.137	-36441.34406	chloroplast	-36441.344	-36444.13746	2.793397
LOC100244227.fasta.mafft.tribal-103	-20824.719	-20822.12648	chloroplast	-20822.126	-20824.71915	2.592671
LOC100253258_2.fasta.mafft.tribal-103	-19138.46	-19135.87874	chloroplast	-19135.879	-19138.4603	2.58156
LOC100257916_1.fasta.mafft.tribal-103	-12852.196	-12849.63778	chloroplast	-12849.638	-12852.19616	2.558375
LOC100259875_2.fasta.mafft.tribal-103	-28533.904	-28531.41405	chloroplast	-28531.414	-28533.90425	2.490202
LOC100245056_1.fasta.mafft.tribal-103	-14388.856	-14386.38519	chloroplast	-14386.385	-14388.85567	2.470477
LOC100268104.fasta.mafft.tribal-103	-37710.447	-37708.06619	chloroplast	-37708.066	-37710.44662	2.380422
LOC100264831_1.fasta.mafft.tribal-103	-14900.097	-14897.79906	chloroplast	-14897.799	-14900.09674	2.297688
LOC100251847_1.fasta.mafft.tribal-103	-14404.556	-14402.25867	chloroplast	-14402.259	-14404.55617	2.297505
LOC100247288_2.fasta.mafft.tribal-103	-26478.001	-26475.92198	chloroplast	-26475.922	-26478.00077	2.07879
LOC100246888_1.fasta.mafft.tribal-103	-22434.557	-22432.52776	chloroplast	-22432.528	-22434.5568	2.029044
LOC100247999.fasta.mafft.tribal-103	-4315.0237	-4313.015152	chloroplast	-4313.0152	-4315.023739	2.008587
LOC100249021.fasta.mafft.tribal-103	-46592.557	-46590.55113	chloroplast	-46590.551	-46592.55708	2.005953
LOC100263244_1.fasta.mafft.tribal-103	-24499.571	-24497.74896	chloroplast	-24497.749	-24499.57064	1.821676
LOC100261218.fasta.mafft.tribal-103	-18861.727	-18859.94395	chloroplast	-18859.944	-18861.72668	1.782728
LOC100267269_1.fasta.mafft.tribal-103	-7733.7709	-7732.008239	chloroplast	-7732.0082	-7733.770945	1.762706
LOC100252279_1.fasta.mafft.tribal-103	-19340.127	-19338.67409	chloroplast	-19338.674	-19340.12676	1.452675
LOC100267465_1.fasta.mafft.tribal-103	-8654.5787	-8653.182238	chloroplast	-8653.1822	-8654.578665	1.396427
LOC100244234_2.fasta.mafft.tribal-103	-11177.801	-11176.59081	chloroplast	-11176.591	-11177.80079	1.209973
LOC100245641.fasta.mafft.tribal-103	-26427.822	-26426.68867	chloroplast	-26426.689	-26427.82157	1.132903
LOC100256054.fasta.mafft.tribal-103	-18890.215	-18889.13804	chloroplast	-18889.138	-18890.21491	1.076868
LOC100252369_1.fasta.mafft.tribal-103	-20037.99	-20036.93055	chloroplast	-20036.931	-20037.98969	1.059142
LOC100243428_3.fasta.mafft.tribal-103	-4272.9732	-4271.949415	chloroplast	-4271.9494	-4272.97322	1.023805
LOC100263241_1.fasta.mafft.tribal-103	-7716.7565	-7715.801842	chloroplast	-7715.8018	-7716.75647	0.954628
LOC100853292_1.fasta.mafft.tribal-103	-42426.756	-42425.85652	chloroplast	-42425.857	-42426.75574	0.899219
LOC100266806_2.fasta.mafft.tribal-103	-28566.137	-28565.41665	chloroplast	-28565.417	-28566.13672	0.720074
LOC100248740.fasta.mafft.tribal-103	-16881.944	-16881.3061	chloroplast	-16881.306	-16881.94437	0.638269
LOC100250446.fasta.mafft.tribal-103	-8173.1343	-8172.534107	chloroplast	-8172.5341	-8173.134316	0.600209
LOC100258667_2.fasta.mafft.tribal-103	-11607.357	-11606.7786	chloroplast	-11606.779	-11607.35686	0.578261
LOC100247534.fasta.mafft.tribal-103	-20331.65	-20331.08573	chloroplast	-20331.086	-20331.64963	0.563898
LOC100247908.fasta.mafft.tribal-103	-4949.1103	-4948.555031	chloroplast	-4948.555	-4949.110292	0.555261
LOC100241808_2.fasta.mafft.tribal-103	-8277.43	-8276.9229	chloroplast	-8276.9229	-8277.430011	0.507111
LOC100258986_2.fasta.mafft.tribal-103	-15952.974	-15952.47192	chloroplast	-15952.472	-15952.97372	0.501795
LOC100254115_1.fasta.mafft.tribal-103	-7990.7484	-7990.249017	chloroplast	-7990.249	-7990.748396	0.499379
LOC100262883_3.fasta.mafft.tribal-103	-16126.609	-16126.1406	chloroplast	-16126.141	-16126.60945	0.468848
LOC100254202_2.fasta.mafft.tribal-103	-8013.9699	-8013.510154	chloroplast	-8013.5102	-8013.969876	0.459722
LOC100257916_2.fasta.mafft.tribal-103	-17468.671	-17468.23868	chloroplast	-17468.239	-17468.67132	0.432644
LOC100252672.fasta.mafft.tribal-103	-15644.406	-15643.99045	chloroplast	-15643.99	-15644.40647	0.416024
LOC100267479.fasta.mafft.tribal-103	-24237.312	-24236.89929	chloroplast	-24236.899	-24237.31217	0.412885
LOC100262993_1.fasta.mafft.tribal-103	-17405.542	-17405.13057	chloroplast	-17405.131	-17405.54156	0.410988
LOC100265538_1.fasta.mafft.tribal-103	-4315.6447	-4315.236168	chloroplast	-4315.2362	-4315.644674	0.408506
LOC100250036_1.fasta.mafft.tribal-103	-10112.496	-10112.09688	chloroplast	-10112.097	-10112.49647	0.399594
LOC100257916_4.fasta.mafft.tribal-103	-29036.914	-29036.55356	chloroplast	-29036.554	-29036.91397	0.36041
LOC100257627.fasta.mafft.tribal-103	-7933.4037	-7933.069694	chloroplast	-7933.0697	-7933.403656	0.333962
LOC100262883_2.fasta.mafft.tribal-103	-17952.863	-17952.57474	chloroplast	-17952.575	-17952.86276	0.288028
LOC100263969_2.fasta.mafft.tribal-103	-15499.073	-15498.79546	chloroplast	-15498.795	-15499.0726	0.277138
LOC100245056_2.fasta.mafft.tribal-103	-8380.3033	-8380.103605	chloroplast	-8380.1036	-8380.303329	0.199724
LOC100252259_2.fasta.mafft.tribal-103	-7337.4524	-7337.264255	chloroplast	-7337.2643	-7337.452376	0.188121
LOC100263897_2.fasta.mafft.tribal-103	-7800.5785	-7800.484668	chloroplast	-7800.4847	-7800.578545	0.093877
LOC100254115_6.fasta.mafft.tribal-103	-4415.5317	-4415.443257	chloroplast	-4415.4433	-4415.531655	0.088398
LOC100247979_2.fasta.mafft.tribal-103	-23611.32	-23611.24197	chloroplast	-23611.242	-23611.32038	0.078412
LOC100245056_3.fasta.mafft.tribal-103	-12408.09	-12408.01286	chloroplast	-12408.013	-12408.08979	0.076926
LOC100853292_2.fasta.mafft.tribal-103	-13393.119	-13393.06524	chloroplast	-13393.065	-13393.11906	0.053816
LOC100254722_3.fasta.mafft.tribal-103	-9260.4503	-9260.405057	chloroplast	-9260.4051	-9260.450259	0.045202
LOC100243428_1.fasta.mafft.tribal-103	-14721.419	-14721.40281	chloroplast	-14721.403	-14721.41851	0.015704
LOC100250036_2.fasta.mafft.tribal-103	-19051.289	-19051.28672	chloroplast	-19051.287	-19051.28864	0.001925
LOC100257043_2.fasta.mafft.tribal-103	-39649.583	-39649.58264	chloroplast	-39649.583	-39649.58282	0.000183
LOC100255916_2.fasta.mafft.tribal-103	-25704.045	-25704.04475	chloroplast	-25704.045	-25704.04476	1.00E-06

Table S7. Network scores (-ploglik) estimated in the SNaQ analysis. The optimal network in each analysis is indicated in bold.

	hmax	-Ploglik score		hmax	-Ploglik score
A	0	18922	B	0	21917
	1	12721		1	18203
	2	11648		2	16326
	3	11626		3	16057
	4	11621		4	15950
	5	11620		5	15767
	6	11612		6	15548
C	0	8356	D	0	6493
	1	7466		1	5744
	2	6226		2	5173
	3	5973		3	5024
	4	5939		4	4990
	5	5852		5	4978
	6	5624		6	4974
E	0	5388			
	1	4499			
	2	4221			
	3	4098			
	4	4085			
	5	4076			
	6	4069			