Supplementary Material

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
RSA01/17	*R. bergii*	SA, WC, Table Mt., Cape Town, Valley of Isolation, ca. 800 m NW of Waterworks Museum, at S oriented rock wall at a tourist path	890	-33.970	18.402	3/11/2017	4×*	OL, NBG	Ulm1			dir. seq.	
RSA02/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Table Mt., Cape Town, Skeleton Gorge, 300 m SE of the beginning of Hely-Hutchinson dam	660	-33.980	18.417	3/11/2017	4×	OL, NBG	Pin1	B2		dir. seq.	
RSA04/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Table Mt., Cape Town, Woodhead Dam, 60 m W of Waterworks Museum	740	-33.975	18.407	3/12/2017	4×	OL	Pin1		1		
RSA05/17	*R. bergii* × *pinnatus*	SA, WC, Cape Town, Newlands, Riverside Road	38	-33.985	18.445	3/15/2017	4×	OL, NBG	Pin1		1		
RSA06/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Cape Town, Rondebosch, 300 m NW of the Rhodes Memorial, at the road	209	-33.951	18.456	3/16/2017		OL, NBG	Pin1	B2	1	dir. seq.	
RSA07/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Cape Town, Rondebosch, 750 m W of the Rhodes Memorial	351	-33.953	18.451	3/16/2017			Pin1				
RSA08/17	*R. bergii*	SA, WC, Cape Town, Rondebosch, 750 m W of the Rhodes Memorial	351	-33.953	18.451	3/16/2017		NBG	Ulm1		1	dir. seq.	
RSA09/17	*R. bergii* × *pinnatus*	SA, WC, Cape Town, Kirstenbosch arboretum, SW margin at the stream	94	-33.989	18.437	3/16/2017	4×	NBG	Pin1		1		
RSA10/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Cape Town, Kirstenbosch arboretum, S margin at the stream	84	-33.989	18.439	3/16/2017	4×*	OL	Pin1				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
RSA11/17	*R. bergii* × *pinnatus*	SA, WC, Cape Town, Kirstenbosch arboretum, central part	90	-33.988	18.440	3/16/2017		n/a			1		
RSA12/17	*R. titanus*	SA, WC, Cape Town, at the road Kirstenbosch - Hout Bay, behind the crossroads to Alphen	215	-34.008	18.413	3/18/2017	6×	OL, NBG	Urs1			dir. seq.	
RSA13/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Hout Bay, NE end of the town, at the road to Constantia	48	-34.015	18.384	3/18/2017		NBG	Pin1		1		
RSA14/17	*R. armeniacus*	SA, WC, Hout Bay, at the road Kirstenbosch - Hout Bay, 0.5 km W of Constantia Neck	176	-34.012	18.400	3/18/2017	4×	OL, NBG	Dol1				
RSA15/17	*R. bergii* × *pinnatus*	SA, WC, Cape Town, at the road Kirstenbosch - Hout Bay, at the crossroads to Alphen	182	-34.007	18.418	3/18/2017	4×	OL, NBG	Pin1		1		
RSA16/17	*R. bergii*	SA, WC, Stellenbosch, Devonvallei, at the main road to Cape Town	87	-33.948	18.819	3/21/2017		NBG	Ulm1		1	dir. seq.	
RSA17/17	*R. bergii*	SA, WC, Stellenbosch, base of Pappegaaiberg, S of the top	98	-33.940	18.845	3/21/2017	4×	OL, NBG	Ulm1		1	cloned	
RSA18/17	*R. bergii* × *rigidus*	SA, WC, Stellenbosch, Idasvallei, 0.6 km SW of Idasvallei Dam	186	-33.923	18.896	3/21/2017	5×	OL, NBG	Rig6		1		
RSA19/17	*R. bergii*	SA, WC, Kylemore, at the road Stellenbosch - Pniel	264	-33.912	18.944	3/21/2017	4×	NBG	Ulm1		1		
RSA20/17	*R. bergii* × *rigidus*	SA, WC, Kylemore, at the road Stellenbosch - Pniel	264	-33.912	18.944	3/21/2017	5×	OL, NBG	Rig2		1	dir. seq.	
RSA21/17	*R. bergii* × *rigidus*	SA, WC, at the road R45 between Simondium and Drakenstein	164	-33.858	18.972	3/21/2017		OL, NBG	Rig6		1	dir. seq.	
RSA22/17	*R. bergii*	SA, WC, at the road R45 between Simondium and Cillie	127	-33.816	18.951	3/21/2017		NBG	Ulm1		1		

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
RSA23/17	*R. bergii*	SA, WC, Paarlsberg, at the picnic place 0.9 km NE of the top	379	-33.735	18.947	3/21/2017	4×*	OL	Ulm1		1		
RSA24/17	*R. bergii*	SA, WC, Paarlsberg, 2 km S of the top, under Victoria Dam	241	-33.759	18.948	3/21/2017		NBG	Ulm1		1		
RSA25/17	*R.* sp. *(North American)*	SA, WC, Kogelberg Nature Reserve, 300 m W of Visitors Centre	41	-34.323	18.964	3/22/2017	7×	OL, NBG	Urs1			cloned	
RSA26/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Kogelberg Nature Reserve, 500 m NW of Visitors Centre	24	-34.319	18.964	3/22/2017	4×	OL, NBG	Pin1				
RSA27/17	*R. pinnatus* × *rigidus*	SA, WC, at the road R44 (Kleinmond - Bot River), N of Arabella Country Estate	31	-34.304	19.135	3/22/2017	5×	OL, NBG	Rig3	A+B2	1	cloned	
RSA28/17	*R. bergii* × *rigidus*	SA, WC, at the road R44 (Kleinmond - Bot River), N of Arabella Country Estate	31	-34.304	19.135	3/22/2017	5×	OL, NBG	Rig3	A	1	cloned	
RSA29/17	*R. bergii*	SA, WC, ca. 8.7 km NE of Kleinmond, Elgin Valley, among vineyards	411	-34.280	19.086	3/22/2017		OL	Ulm1		1	dir. seq.	
RSA30/17	*R. bergii* × *rigidus*	SA, WC, Elgin Valley,10 km NNE of Kleinmond, among orchards at the stream	138	-34.254	19.054	3/22/2017	5×	OL, NBG	Rig3		1	dir. seq.	
RSA31/17	*R. bergii* × *rigidus*	SA, WC, Grabouw, Highlands Road	235	-34.216	19.055	3/22/2017		n/a	Rig6		1		
RSA32/17	*R. bergii* × *pinnatus*	SA, WC, Kirstenbosch Botanical Garden, 200 m NW of the N entrance, in forest	170	-33.985	18.430	3/23/2017	4×	OL, NBG	Pin1		1	dir. seq.	
RSA33/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Constantia, between Spilhaus Ravine and Constantia Nek, at Contour Path	325	-34.002	18.416	3/26/2017		OL	Pin1	B2		dir. seq.	
RSA34/17	*R. armeniacus*	SA, WC, 450 m NNE of Constantia Nek	254	-34.008	18.408	3/26/2017	4×	OL, NBG	Dol1				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
RSA35/17	*R. bergii*	SA, WC, Table Mt., Disa Gorge	668	-33.978	18.399	3/26/2017		n/a	Ulm1		1		
RSA36/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Table Mt., Disa Gorge	668	-33.978	18.399	3/26/2017		n/a	Pin1	B2		dir. seq.	
RSA37/17	*R. pinnatus* subsp. *pinnatus*	SA, WC, Table Mt., Disa Gorge	690	-33.978	18.401	3/26/2017		n/a	Pin1				
RSA38/17	*R. bergii*	SA, WC, Table Mt., Cape Town, Woodhead Dam, 60 m W of Waterworks Museum	740	-33.975	18.407	3/26/2017	4×	NBG	Ulm1		1		
RSA39/17	*R. bergii* × *rigidus*	SA, WC, at the road N2 between Patryslaagte and Houwhoek (E of Grabouw)	237	-34.192	19.110	3/29/2017	5×	OL, NBG	Rig3	A	1	cloned	
RSA40/17	*R. rigidus*	SA, WC, at the road R43, 6.2 km NNE of Fisherhaven	11	-34.306	19.146	3/29/2017	6×	OL, NBG	Rig3	A	1	dir. seq.	
RSA41/17	*R. bergii* × *rigidus*	SA, WC, at the road between Sandbaai and Caledon, Creation	244	-34.333	19.331	3/29/2017	5×	OL, NBG	Rig3		1	dir. seq.	
RSA42/17	*R. bergii* × *rigidus*	SA, WC, Genadendal, crossroads on SW margin of the town	231	-34.049	19.553	3/29/2017		OL, NBG	Rig6		1		
RSA43/17	*R. bergii*	SA, WC, Genadendal, bushes 240 m SW of the Moravian Church	257	-34.036	19.556	3/29/2017		OL, NBG	Ulm1		1		
RSA44/17	*R. bergii* × *rigidus*	SA, WC, at the road between Genadendal and Helderstroom (at the river in the middle of the distance)	237	-34.062	19.438	3/29/2017	5×	OL, NBG	Rig6		1	dir. seq.	
RSA45/17	*R. bergii* × *rigidus*	SA, WC, Helderstroom	253	-34.066	19.370	3/29/2017		n/a			1		
RSA47/17	*R. pinnatus* subsp. *pinnatus*	SA, Betty's Bay Botanical Garden, 500 m NW of the entrance	66	-34.348	18.925	4/4/2017	4×	NBG	Pin1	B2		cloned	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
RSA48/17	*R. titanus*	SA, Betty's Bay Botanical Garden, 170 m NW of the entrance	34	-34.351	18.926	4/4/2017	6×	NBG	Urs1			cloned	
MS02/18	*R.* sp. *(North American)*	SA, KZN, Royal Natal, Tugela Valley, 0.4 km SSE of Thendele Upper Camp, secondary/disturbed woodland	1490	-28.713	28.935	2/20/2018	6×	OL	Fla1			cloned	
MS03/18	*R. ludwigii*	SA, KZN, Royal Natal, Tugela Valley, 0.4 km SSE of Thendele Upper Camp, secondary/disturbed woodland	1490	-28.713	28.935	2/20/2018	2×	OL	Lud1			dir. seq.	
MS04/18	*R. rigidus*	SA, KZN, Royal Natal, Tugela Valley, 0.5 km S of Thendele Upper Camp, primary montane grassland/woodland	1530	-28.715	28.935	2/20/2018	6×	OL	Rig4	A	1	dir. seq.	
MS05/18	*R.* sect. *Arguti*	SA, KZN, Howick, 1.5 km W of the city centre, ruderal shrubland at the river	1021	-29.486	30.218	2/22/2018	4×	OL	Arg1				*R. originalis* sensu Beek
MS06/18	*R.* sect. *Arguti*	SA, KZN, top of Beacon Hill, edge of Eucalyptus plantation	1175	-29.471	30.212	2/22/2018	4×	OL	Arg1			cloned	*R. originalis* sensu Beek
MS07/18	*R.* sect. *Cuneifolii*	SA, KZN, top of Beacon Hill, edge of Eucalyptus plantation	1168	-29.471	30.211	2/22/2018	4×	OL	Cun2				
MS08/18	*R. apetalus*	SA, KZN, Karkloof, 0.4 km N of Canopy Tours, primary forest	1224	-29.319	30.261	2/22/2018	4×	OL	Ape2	D		dir. seq.	
MS09/18	*R. pinnatus* subsp. *pappei*	SA, KZN, Karkloof, 0.2 km NW of Canopy Tours, primary forest	1197	-29.321	30.262	2/22/2018	4×	OL	Pin3	B3		cloned	
MS10/18	*R.* sect. *Cuneifolii*	SA, KZN, Karkloof, 0.2 km S of Canopy Tours, edge of dirt road	1155	-29.324	30.263	2/22/2018	4×	OL	Cun2				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS11/18	*R.* sect. *Cuneifolii*	SA, KZN, 1.25 km NNW of Karkloof Waterfall, edge of Eucalyptus plantation	1073	-29.390	30.273	2/22/2018	4×	OL	Cun2			cloned	
MS12/18	*R.* cf. sect. *Procumbentes* × *rigidus*	SA, KZN, Assagay, Assagay Crescent street, at a road	675	-29.784	30.740	2/23/2018	7×	OL	Rig1				
MS13/18	*R. rigidus*	SA, KZN, Assagay, Assagay Crescent street, at a road	675	-29.784	30.739	2/23/2018	6×	OL, PRE	Rig1	C3	1	cloned	
MS14/18	*R. ellipticus*	SA, KZN, Assagay, Assagay Crescent street, at a road	675	-29.785	30.738	2/23/2018	2×	OL	Eli1			dir. seq.	
MS15/18	*R. ellipticus*	SA, KZN, Assagay, N of Assagay Road, secondary shrubby vegetation near an ornamental garden	672	-29.769	30.750	2/23/2018	2×	OL	Eli1				
MS16/18	*R. rigidus*	SA, KZN, Waterfall town, Brackenhill Rd., roadside/ riverbank	544	-29.746	30.814	2/23/2018	6×	OL	Rig4	C3		dir. seq.	
MS17/18	*R. rigidus*	SA, KZN, N of Hillcrest, Ngwele Rd., roadside	643	-29.752	30.778	2/23/2018	6×	OL, PRE	Rig7	C3	1	dir. seq.	
MS18/18	*R. rigidus*	SA, KZN, E of Camperdown, side of highway	736	-29.731	30.540	2/23/2018	6×	OL, PRE	Rig5	C3		dir. seq.	
MS19/18	*R. ludwigii*	SA, KZN, at road R617, N of Ncwadi	1376	-29.717	29.957	2/24/2018	2×	OL, PRE	Lud1				
MS20/18	*R.* cf. sect. *Alleghenienses*	SA, KZN, at road R617, N of Ncwadi	1376	-29.717	29.957	2/24/2018	6×*	OL	Fla1			cloned	
MS21/18	*R. transvaalensis*	SA, KZN, at road R617, N of Ncwadi	1376	-29.717	29.957	2/24/2018	6×	OL, PRE	Rig5	C1		dir. seq.	
MS22/18	*R. apetalus*	SA, KZN, N part of Marutswa Nature Reserve E of Bulwer, at primary forest margin	1459	-29.808	29.787	2/24/2018	4×	OL	Ape2	D		cloned	
MS23/18	*R.* sect. *Cuneifolii*	SA, KZN, N part of Marutswa Nature Reserve E of Bulwer, at primary forest margin	1470	-29.808	29.786	2/24/2018		OL	Cun2				

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Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS24/18	*R.* aff. *bergii*	SA, KZN, Ingelabantwana Nature Reserve N of Bulwer, between forest and Eucalyptus plantation	1423	-29.725	29.744	2/24/2018	4×	OL	Ulm2		1		
MS25/18	*R. apetalus*	SA, KZN, Ingelabantwana Nature Reserve N of Bulwer, forest margin	1424	-29.726	29.745	2/24/2018	4×	OL, PRE	Ape2				
MS26/18	*R. rigidus* × sect. *Arguti*	SA, KZN, at the road NE of Ingelabantwana Nature Reserve, N of Bulwer	1409	-29.725	29.749	2/24/2018	5×	OL	Rig4				
MS27/18	*R. ludwigii* × *pinnatus*	SA, KZN, at the road E of Ingelabantwana Nature Reserve, N of Bulwer	1225	-29.734	29.760	2/24/2018	3×	OL	Lud1				
MS28/18	*R.* sect. *Arguti*	SA, KZN, Howick, below the waterfall, in forest gap	907	-29.485	30.239	2/25/2018	4×	OL	Arg1				*R. originalis* sensu Beek
MS29/18	*R. niveus*	SA, KZN, Howick West, junction of Main Rd. and Ogilvie Rd.	1046	-29.509	30.232	2/25/2018	2×	OL	Niv1				
MS30/18	*R. niveus*	SA, KZN, at former railway Merrivale - Howick	1043	-29.502	30.236	2/25/2018	2×	OL	Niv1				
MS31/18	*R.* sect. *Cuneifolii*	SA, KZN, Howick, pasture/meadow W of the town	1038	-29.485	30.204	2/26/2018		OL	Cun2				
MS32/18	*R.* sect. *Arguti*	SA, KZN, Howick, roadside/marsh W of the town	1024	-29.484	30.205	2/26/2018	4×	OL	Arg1				*R. originalis* sensu Beek
MS33/18	*R. trichogynus*	SA, KZN, Howick, N end of Park Rd., garden margin	1037	-29.483	30.226	2/26/2018	7×	OL	Urs1			cloned	
MS34/18	*R. ludwigii*	SA, KZN, Giant's Castle, Langalibalele Ridge, montane grassland	2162	-29.286	29.478	2/28/2018	2×	OL	Lud1				
MS35/18	*R.* sect. *Arguti*	SA, KZN, W of Estcourt, at White Mountain Resort, in secondary Acacia bushveld	1550	-29.107	29.614	3/1/2018	4×	OL	Arg1				*R. revealii* sensu Beek
MS36/18	*R.* sect. *Cuneifolii*	SA, KZN, W of Estcourt, at White Mountain Resort, in secondary Acacia bushveld	1550	-29.107	29.613	3/1/2018	4×	OL	Cun2				

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Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS37/18	*R. rigidus*	SA, KZN, Drakensberg, 0.5 km S of Injasuti Camp, roadside in montane grassland	1449	-29.123	29.440	3/4/2018	6×	OL	Rig8	A	1	dir. seq.	
MS38/18	*R. ulmifolius*	SA, KZN, in pass 5 km S of Charlestown (near Volksrust), in a small ravine at margin of pine plantation	1680	-27.461	29.873	3/4/2018	2×	OL, PRE	Ulm2			dir. seq.	
MS39/18	*R. ulmifolius*	SA, MP, Volksrust, behind houses in the 1st Ave, at a wall	1707	-27.373	29.867	3/4/2018	2×	OL	Ulm2				
MS40/18	*R. rigidus* × sect. *Arguti*	SA, MP, at road R37 near its junction with R539, pine plantation margin	1082	-25.288	30.766	3/5/2018	5×	OL, PRE	Rig5				
MS41/18	*R. rigidus* × sect. *Arguti*	SA, MP, forest fragment 2.5 km NNW of Hendriksdal	1448	-25.169	30.764	3/5/2018	5×	OL	Rig5				
MS42/18	*R. pinnatus* subsp. *pappei*	SA, MP, forest fragment 2.5 km NNW of Hendriksdal	1448	-25.169	30.764	3/5/2018	4×	OL	Rig6	B1		dir. seq.	
MS43/18	*R. rigidus* × sect. *Arguti*	SA, MP Graskop, forest margin S of Panorama Camp	1438	-24.949	30.846	3/6/2018	8×	OL, PRE	Rig5				
MS44/18	*R. niveus*	SA, MP, Graskop, forest margin S of Panorama Camp	1438	-24.949	30.846	3/6/2018	2×	OL	Niv1				
MS45/18	*R. apetalus* × *pinnatus*	SA, MP, Graskop, forest margin S of Panorama Camp	1435	-24.949	30.846	3/6/2018	4×	OL, PRE	Ape2	B3+D		dir. seq.	
MS45B/18	*R. pinnatus* subsp. *pappei*	SA, MP, Graskop, forest margin S of Panorama Camp	1435	-24.949	30.846	3/6/2018	4×	OL	Rig6	B1		dir. seq.	
MS46/18	*R. rigidus*	SA, MP, Graskop, forest margin on edge of the kloof W of the waterfall	1400	-24.944	30.841	3/6/2018	6×	OL, PRE	Rig5	B1+C2	1	cloned	
MS47/18	*R. rigidus*	SA, MP, Graskop, at road R533 in S part of the town	1421	-24.947	30.843	3/6/2018	6×	OL	Rig5	B1+C2		cloned	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS47B/18	*R. rigidus*	SA, MP, Graskop, at road R533 in S part of the town	1421	-24.947	30.843	3/6/2018	6×	OL	Rig5	B1+C2		dir. seq.	
MS48/18	*R.* sect. *Arguti* × *pinnatus*	SA, MP, Graskop, 300 m SE of Panorama Camp, overgrown pasture/ grassland	1428	-24.949	30.846	3/6/2018	4×	OL, PRE	Rig6	B1		cloned	
MS49/18	*R. rigidus* × sect. *Arguti*	SA, MP, Graskop, 250 m SSW of the waterfall, in secondary shruby vegetation	1414	-24.945	30.839	3/6/2018	5×	OL, PRE	Rig5				
MS50/18	*R. rigidus* × *ulmifolius*	SA, MP, Graskop, 250 m SSW of the waterfall, in secondary shruby vegetation	1414	-24.945	30.839	3/6/2018	4×	OL, PRE	Rig5				
MS51/18	*R. rigidus* × sect. *Arguti*	SA, MP, Graskop, edge of pine plantation at the Pinnacle rock	1443	-24.913	30.852	3/7/2018	5×	OL	Rig5				
MS52/18	*R. rigidus* × *ulmifolius*	SA, MP, Graskop, at the Pinnacle rock, grassland	1439	-24.912	30.853	3/7/2018	4×	OL	Rig5	B1		cloned	
MS53/18	*R. rigidus* × sect. *Arguti*	SA, MP, 7 km N of Graskop, junction of R532 and R534, roadside in pine plantations	1429	-24.868	30.847	3/7/2018	5×	OL	Rig5				
MS54/18	*R. pinnatus* subsp. *pappei*	SA, MP, 3.4 km W of Graskop, 0.9 km S of junction of R532 and R533, roadside in (secondary?) forest	1480	-24.939	30.811	3/7/2018	4×	OL	Rig6	B1		dir. seq.	
MS55/18	*R. rigidus* × sect. *Arguti*	SA, MP, 130 m NE of Mary Shire Falls SW of Graskop, roadside between forest and pine plantation	1261	-24.984	30.812	3/7/2018	5×	OL	Rig5				
MS58/18	*R. ulmifolius*	SA, MP, Graskop, pastures at electric transformer station	1431	-24.935	30.843	3/8/2018	2×	OL	Ulm1				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS59/18	*R. rigidus* × *ulmifolius*	SA, MP, Graskop, pastures at electric transformer station	1431	-24.935	30.843	3/8/2018	4×	OL	Rig5				
MS60/18	*R. rigidus*	SA, MP, view point 3.4 WNW of Pilgrimsrest, montane grassland	1508	-24.881	30.725	3/8/2018	6×	OL	Rig5	B1+C2		cloned	
MS61/18	*R. apetalus* × *ludwigii*	SA, MP, roadside 14 km SSE of Lydenburg	1740	-25.222	30.478	3/8/2018	3×	OL	Lud1	D		cloned	
MS62/18	*R. transvaalensis*	SA, MP, Buffelskloof Nature Reserve, secondary shrubland 1.6 km S of headquarters	1692	-25.303	30.522	3/8/2018	6×	OL	Rig5	C1		cloned	
MS63/18	*R. apetalus*	SA, MP, Buffelskloof Nature Reserve, secondary shrubland 1.6 km S of headquarters	1692	-25.303	30.522	3/8/2018	4×	OL	Ape2	D		dir. seq.	
MS64/18	*R. pinnatus* subsp. *pappei*	SA, MP, Buffelskloof Nature Reserve, 2.5 km NNW of headquarters, forest	1861	-25.267	30.518	3/9/2018	4×	OL	Rig6				
MS65/18	*R. pinnatus* subsp. *pappei*	SA, MP, Buffelskloof Nature Reserve, 2.5 km NNW of headquarters, forest	1861	-25.267	30.518	3/9/2018	4×	OL	Rig6	B1		cloned	
MS66/18	*R. niveus* × *transvaalensis*	SA, MP, Buffelskloof Nature Reserve, 300 m W of headquarters, riverside	1752	-25.289	30.521	3/9/2018	4×	OL	Niv1	C1		cloned	
MS67/18	*R. apetalus*	SA, MP, Buffelskloof Nature Reserve, N margin of headquarters, grassland	1768	-25.288	30.524	3/9/2018	4×	OL	Ape2				
MS68/18	*R.* sect. *Arguti*	SA, MP, Buffelskloof Nature Reserve, 0.5 km N of headquarters, roadside/ pine plantation margin	1782	-25.284	30.524	3/10/2018	4×	OL	Arg1				*R. originalis* sensu Beek
MS01/20	*R. rigidus*	SA, KZN, Vryheid Hill, 500 m S of North Gun Point, margin between grassland and woodland	1403	-27.743	30.790	3/6/2020	6×	NBG	Rig11	A		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS02/20	*R.* sect. *Cuneifolii*	SA, KZN, Vryheid Hill, 400 m S of North Gun Point, margin between grassland and woodland	1428	-27.742	30.789	3/6/2020		NBG	Cun2				
MS03/20	*R. pinnatus* subsp. *pappei*	SA, KZN, Vryheid Hill, 400 m S of transmitting tower, grassland/woodland	1443	-27.745	30.794	3/6/2020		OL	Pin3	B3		dir. seq.	
MS04/20	*R. rigidus*	SA, KZN, Vryheid Hill, 900 m SSE of transmitting tower, roadside in forest	1276	-27.749	30.796	3/6/2020	6×	OL	Rig9	A		dir. seq.	
MS05/20	*R. apetalus*	SA, KZN, Vryheid Hill, 900 m SSE of transmitting tower, roadside in forest	1366	-27.749	30.796	3/6/2020		NBG	Ape1	D		dir. seq.	
MS06/20	*R. rigidus* × sect. *Arguti*	SA, KZN, Vryheid, W end of Noord Street, abandoned garden/orchard	1215	-27.757	30.789	3/6/2020	5×	OL	Rig9				
MS07/20	*R. rigidus*	SA, KZN, 6 km N of Melmoth, roadside	743	-28.530	31.402	3/6/2020	6×	OL	Rig5	C3		dir. seq.	
MS09/20	*R.* sect. *Arguti*	SA, KZN, Eshowe, at Fort Nonquai, park margin, potentially originally planted	496	-28.904	31.446	3/7/2020		NBG	Arg1				*R. originalis* sensu Beek
MS100/20	*R. bergii* × *rigidus*	SA, WC, Heidelberg, VanRiebeeck Street, E margin og the town, roadside among pastures	77	-34.092	20.967	3/24/2020	5×	OL	Rig6				
MS101/20	*R. bergii* × *rigidus*	SA, WC, Suurbraak, Tradouw Pass road, bank of Gootvaderbosch River, roadside	129	-34.005	20.707	3/24/2020	5×	OL	Rig6				
MS102/20	*R. bergii* × *rigidus*	SA, WC, Swellendam, at R60, 3 km W of the city centre	119	-34.022	20.415	3/25/2020	5×	OL	Rig6				
MS103/20	*R. bergii* × *rigidus*	SA, WC, Worcester, N2 roadside 10 km NE of the city centre	318	33.567	19.511	3/25/2020	5×	OL	Rig6				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS104/20	*R. rigidus*	SA, WC, Paarl, at R101, 4.4 km SSE of Du Toitskloof Pass, roadside in fynbos	551	-33.729	19.100	3/25/2020	6×	OL	Rig6			dir. seq.	
MS106/20	*R. thaumasius*	SA, EC, at a road R345, 20 km NNE of Hogsback, roadside/Eucalyptus plantation	1390	-32.438	27.036	3/13/2020	4×	OL	Tha1			dir. seq.	
MS10A/20	*R. rigidus*	SA, KZN, 4 km SE of Eshowe, roadside in rural ladscape	339	-28.916	31.494	3/7/2020	6×	OL		C3		dir. seq.	
MS10B/20	*R. rigidus*	SA, KZN, 4 km SE of Eshowe, roadside in rural ladscape	339	-28.916	31.494	3/7/2020		OL	Rig5	C3		dir. seq.	
MS11/20	*R. rigidus*	SA, KZN, near R102, at a dirt (W) road to Obanjeni, woodland	54	-28.952	31.664	3/7/2020		NBG	Rig7	C3		dir. seq.	
MS12/20	*R. rigidus*	SA, KZN, Mtunzini, uMlalazi, T-junction N of camping place, roadside/ reed bed	4	-28.956	31.768	3/7/2020	6×	OL	Rig5	C3		dir. seq.	
MS13/20	*R. rigidus*	SA, KZN, Mtunzini, Valley Drive, 1.5 km SW of former railway station, roadside between railway and Eucalyptus plantations	17	-28.971	31.747	3/8/2020	6×	OL	Rig5	C3		dir. seq.	
MS14/20	*R. rigidus*	SA, KZN, Shaka's Rock, roadside 600 m SE of N2 e×it 212	78	-29.506	31.215	3/8/2020	6×	OL	Rig10	C3		dir. seq.	
MS15/20	*R. rigidus*	SA, KZN, Shaka's Rock, roadside 500 m SE of N2 e×it 212	81	-29.505	31.214	3/8/2020	6×	OL	Rig10	C3		dir. seq.	
MS16/20	*R. pinnatus* subsp. *pappei*	SA, KZN, 21 km NNW of Tongaat, R614 roadside among fields	632	-29.409	30.801	3/8/2020		OL	Pin3	B3		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS17/20	*R. rigidus*	SA, KZN, 21 km NNW of Tongaat, R614 roadside among fields	632	-29.395	31.018	3/8/2020	6×*	OL	Rig5	C3		dir. seq.	
MS18/20	*R. rigidus* × sect. *Arguti*	SA, KZN, 19 km ENE of Wartburg, R614 roadside among fields	1001	-29.371	30.757	3/8/2020		OL	Rig1				
MS19/20	*R. rigidus*	SA, KZN, 19 km ENE of Wartburg, R614 roadside among fields	1001	-29.371	30.759	3/8/2020	6×	NBG	Rig5	C3		dir. seq.	
MS20/20	*R. rigidus*	SA, KZN, 19 km ENE of Wartburg, R614 roadside among fields	1008	-29.371	30.756	3/8/2020	6×	OL	Rig5	C3		dir. seq.	
MS21/20	*R. rosifolius*	SA, KZN, Queen Elizabeth Park NW of Pietermaritzburg, N part of the reserve, bushes in abandoned plantations in a small valley	914	-29.562	30.317	3/9/2020	2×	OL	Ros1			dir. seq.	
MS23/20	*R.* aff. *bergii*	SA, KZN, Hilton, N end of Hayfields Road, heavily invaded anthropogenic habitats (R. aff. bergii, R. sect. Cuneifolii, R. sect. Arguti)	1119	-29.543	30.296	3/9/2020	4×*	NBG	Ulm2				
MS28/20	*R.* sect. *Arguti*	SA, KZN, 8 km WNW of Richmond, at a dirt road in Eucalyptus plantations	970	-29.854	30.198	3/10/2020		OL	Arg1				*R. originalis* sensu Beek
MS29/20	*R. rigidus*	SA, KZN, Mkomazi River Valley, 300 m N of Hela Hela camp	555	-29.906	30.098	3/10/2020	6×	OL	Rig9	B1+C3		dir. seq.	
MS30/20	*R. niveus*	SA, KZN, right bank of Mkomazi River, 400 m WNW of Hela Hela camp	553	-29.908	30.094	3/10/2020		NBG	Niv1			dir. seq.	
MS31/20	*R. ludwigii*	SA, KZN, E of Kokstad, at the road P570, 1 km from junction with N2, bushes among plantations	1286	-30.514	29.650	3/10/2020		OL	Lud1			dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS32/20	*R. rigidus*	SA, KZN, E of Kokstad, at the road P570, 1 km from junction with N2, bushes among plantations	1286	-30.514	29.650	3/10/2020	6×	NBG	Rig4	A		dir. seq.	
MS35/20	*R.* sect. *Cuneifolii*	SA, EC, Wild Coast, Mbizana, 1.2 km NNW of R394 and R61 junction	1008	-30.857	29.604	3/11/2020	4×*	OL	Cun2				
MS36/20	*R. pinnatus* subsp. *pappei*	SA, EC, Wild Coast, Lusikisiki area, 4.8 km NE of Magwa Falls, woodland	505	-31.416	29.676	3/11/2020		NBG	Rig6	B3		dir. seq.	
MS37/20	*R. rigidus*	SA, EC, Wild Coast, Lusikisiki area, 4.8 km NE of Magwa Falls, woodland	505	-31.416	29.676	3/11/2020	6×	NBG	Rig9	A		dir. seq.	
MS38/20	*R. pinnatus* subsp. *pappei*	SA, EC, Wild Coast, Port St John's area, right bank of the Bulolo River, 950 m N of its mouth	-10	-31.643	29.515	3/12/2020		NBG	Rig6	B3		dir. seq.	
MS39/20	*R. rigidus*	SA, EC, Wild Coast, Port St John's area, at a dirt road to Sileka Nature Reserve, 1 km NW of the Bulolo River Mouth	94	-31.648	29.508	3/12/2020	6×*	NBG	Rig4	A		dir. seq.	
MS40/20	*R. rigidus*	SA, EC, 3.5 km W of Komgha, R63 roadside	680	-32.587	27.856	3/13/2020	6×	OL	Rig9				
MS41/20	*R. rigidus*	SA, EC, Fort Cunynghame Forestry Station, 9 km N of Stutterheim, grasslands among tree plantations	973	-32.488	27.421	3/13/2020	6×	OL	Rig4	A		dir. seq.	
MS42/20	*R. pinnatus* subsp. *pappei*	SA, EC, Fort Cunynghame Forestry Station, 9 km N of Stutterheim, grasslands among tree plantations	971	-32.487	27.421	3/13/2020		NBG	Rig6	B3		dir. seq.	
MS43/20	*R. pinnatus* subsp. *pappei*	SA, EC, Fort Cunynghame, 10.5 km N of Stutterheim, roadside among tree plantations	1056	-32.475	27.413	3/13/2020		OL	Rig6	B3		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS44/20	*R. bergii*	SA, EC, at a road R345, 15 km N of Hogsback, roadside/small ravine	1374	-32.466	26.965	3/13/2020	4×*	OL	Ulm1				
MS45/20	*R. rigidus*	SA, EC, at a road R345, 15 km N of Hogsback, roadside/small ravine	1371	-32.465	26.965	3/13/2020	6×*	OL	Rig4	A		dir. seq.	
MS46/20	*R. apetalus*	SA, EC, 1 km SE of Hogsback, forest gap	973	-32.602	26.947	3/14/2020	4×*	NBG	Ape2				
MS47/20	*R.* sect. *Arguti*	SA, EC, 900 m E of Hogsback, in tree plantations	1144	-32.598	26.948	3/14/2020	4×	OL	Arg1				*R. revealii* sensu Beek
MS48/20	*R. armeniacus*	SA, EC, 900 m E of Hogsback, stream bank in tree plantations	1137	-32.597	26.948	3/14/2020		NBG	Dol1			cloned	
MS49/20	*R. bergii* × *rigidus*	SA, EC, 900 m E of Hogsback, stream bank in tree plantations	1144	-32.595	26.947	3/14/2020	5×	OL	Rig9				
MS50/20	*R. thaumasius*	SA, EC, Hogsback, arboretum, stream bank	1230	-32.591	26.936	3/14/2020	4×	OL	Tha1			dir. seq.	
MS51/20	*R. trichogynus*	SA, EC, Hogsback, NW margin of the town, park/ garden	1275	32.592	26.930	3/14/2020	7×	OL	Urs1				
MS52/20	*R. bergii* × *thaumasius*	SA, EC, Hogsback, Hydrangea Lane, roadside	1178	-32.598	26.940	3/14/2020	4×	OL	Tha1				
MS53/20	*R. bergii* × *thaumasius*	SA, EC, Hogsback, Hydrangea Lane, roadside	1201	-32.599	26.941	3/14/2020	4×	OL	Tha1			cloned	
MS55/20	*R. armeniacus*	SA, EC, Hogsback, S margin of the town, Away With The Fairies camp garden	1163	-32.602	26.939	3/15/2020	4×*	NBG	Dol1				
MS57/20	*R. thaumasius*	SA, EC, Hogsback, arboretum, among bushes in tree plantations	1232	-32.590	26.937	3/15/2020	4×*	OL	Tha1			cloned	
MS58/20	*R. pinnatus* × *thaumasius*	SA, EC, Hogsback, arboretum, among bushes in tree plantations	1232	-32.590	26.937	3/15/2020		OL	Tha1				

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS59/20	*R. bergii* × *thaumasius*	SA, EC, Hogsback, arboretum, among bushes in tree plantations	1200	-32.590	26.933	3/15/2020	4×	OL	Tha1			cloned	
MS60/20	*R. rigidus* × sect. *Arguti*	SA, EC, Hogsback, arboretum, among bushes in a park	1208	-32.590	26.935	3/15/2020		OL	Rig9				
MS61/20	*R. phoenicolasius*	SA, EC, Hogsback, 200 m NW of the entrance to arboretum, roadside/ margin of plantation	1221	-32.592	26.934	3/15/2020	2×	OL	Phe1			dir. seq.	
MS62/20	*R. bergii* × *rigidus*	SA, EC, Hogsback, 130 m SE of the entrance to arboretum, roadside/ margin of plantation	1213	-32.594	26.937	3/15/2020		OL	Rig4				
MS63/20	*R.* sect. *Arguti (different* sp.*!)*	SA, EC, Hogsback, 350 m SE of the entrance to arboretum, garden hedge	1229	-32.595	26.938	3/15/2020		OL	Arg1				
MS64/20	*R. thaumasius*	SA, EC, Hogsback, S margin of the town, Away With The Fairies camp garden	1200	-32.603	26.939	3/16/2020	4×	OL	Tha1				
MS65/20	*R. rigidus*	SA, EC, Makhanda (Grahamstown), 2.1 km WSW of Albany Museum, grassland	654	-33.318	26.500	3/16/2020	6×*	OL	Rig4	A		dir. seq.	
MS66/20	*R. pinnatus* subsp. *pappei*	SA, EC, Makhanda (Grahamstown), 2.1 km WSW of Albany Museum, grassland	644	-33.318	26.500	3/16/2020		OL	Rig6	B3		dir. seq.	
MS67/20	*R. rigidus*	SA, EC, Makhanda (Grahamstown), 5.3 km SE of Albany Museum, roadside in thickets	346	-33.350	26.560	3/17/2020		OL	Rig4	A		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS68/20	*R. pinnatus* subsp. *pappei*	SA, EC, Boesmanriviermond (Kenton on Sea area), 2.1 km WSW of the town cente, among bushes in pastures	27	-33.689	26.632	3/18/2020	4×	OL	Rig6	B3		dir. seq.	
MS69/20	*R. rigidus*	SA, EC, Cannon Rocks (Alexandria area), 15 km WSW of the Boknes River mouth, roadside in grassland/pastures	176	-33.754	26.428	3/18/2020	6×	NBG	Rig4				
MS70/20	*R. rigidus*	SA, EC, Alexandria, at the main facilities of Addo Woody Cape Section of Addo Elephant NP, grassland	176	-33.700	26.367	3/18/2020		OL	Rig6	A		dir. seq.	
MS71/20	*R. rigidus*	SA, EC, Groendal, Lower Blindekloof hiking trail, riverbank in forest	115	-33.704	25.302	3/19/2020	6×*	OL	Rig4	A		dir. seq.	
MS72/20	*R. pinnatus* subsp. *pappei*	SA, EC, Uitenhage area, 3.4 km NE of Witteklip Railway Station, R334 roadside	266	-33.892	25.292	3/20/2020		OL	Rig6	B3		dir. seq.	
MS73/20	*R. rigidus*	SA, EC, Uitenhage area, 3.4 km NE of Witteklip Railway Station, R334 roadside	266	-33.892	25.292	3/20/2020	6×*	OL	Rig4	A		dir. seq.	
MS74/20	*R. pinnatus* subsp. *pappei*	SA, EC, left bank of Van Stadens River at R102, park/forest	94	-33.912	25.196	3/20/2020		OL	Rig6	B3		dir. seq.	
MS75/20	*R. bergii* × *rigidus*	SA, EC, Humansdorp, Voortrekker Road, NE of hospital, roadside/park/pasture	127	-34.028	24.783	3/20/2020	5×	OL	Rig4				
MS76/20	*R. pinnatus* subsp. *pappei*	SA, EC, Humansdorp, at R102, 4 km WSW of the town centre	107	-34.034	24.728	3/20/2020		OL	Rig6	B3		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS77/20	*R. bergii* × *rigidus*	SA, EC, Humansdorp, at R102, 4 km WSW of the town centre	107	-34.034	24.728	3/20/2020		OL	Rig4				
MS78/20	*R. bergii*	SA, EC, left bank of Elands River, at R102, roadside	229	-33.982	24.051	3/20/2020		OL	Ulm1				
MS79/20	*R. bergii* × *rigidus*	SA, EC, left bank of Elands River, at R102, roadside	229	-33.982	24.051	3/20/2020		NBG	Rig4				
MS80/20	*R. pinnatus (transitional)*	SA, EC, right bank of Elands River, at R102, roadside/plantation	230	-33.981	24.050	3/20/2020	4×*	OL		B2		dir. seq.	
MS81/20	*R. pinnatus (transitional)*	SA, EC, right bank of Elands River, at R102, 150 S of entrance to Wolf Sanctuary, roadside/pasture	237	-33.982	24.048	3/20/2020	4×*	OL	Rig6	B1		dir. seq.	
MS82/20	*R. rigidus*	SA, EC, right bank of Elands River, at R102, 150 S of entrance to Wolf Sanctuary, roadside/pasture	237	-33.982	24.048	3/20/2020		NBG	Rig4	A		dir. seq.	
MS83/20	*R. pinnatus (transitional)*	SA, EC, Storms River Mouth, at the main gate, forest/park	201	-34.011	23.869	3/21/2020	4×*	OL	Pin1	B1		dir. seq.	
MS84/20	*R. pinnatus (transitional)*	SA, WC, Nature's Valley, left bank of Groot River, at R102, roadside among forests	17	-33.967	23.560	3/21/2020		OL	Pin4	B1		dir. seq.	
MS85/20	*R. trichogynus*	SA, WC, rest place at N2 in the middle between Plettenberg Bay and Knysna, forest margin	265	-34.038	23.215	3/21/2020	7×	OL	Urs1				
MS86/20	*R. bergii* × *pinnatus*	SA, WC, Knysna Forest, 400 m W of King Edward VII Big Tree, roadside in forest	403	-33.957	23.148	3/22/2020		NBG	Rig6				
MS87/20	*R. pinnatus (transitional)*	SA, WC, Knysna Forest, 1.2 km W of King Edward VII Big Tree, roadside in forest	446	-33.958	23.140	3/22/2020	4×*	OL	Pin1	B1		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS89/20	*R. bergii* × *pinnatus*	SA, WC, Knysna Forest, 800 m NNW of King Edward VII Big Tree, roadside in forest/old forest clearing	506	-33.950	23.148	3/22/2020		OL	Pin1				
MS90/20	*R. rigidus*	SA, WC, Knysna, S end of Gardiners Road, edge of plantation, stream bank	79	-34.031	23.047	3/22/2020	6×*	OL	Rig4	A		dir. seq.	
MS92/20	*R. bergii* × *rigidus*	SA, WC, Knysna, continuation of Lakeview Street, former plantation/ garden	50	-34.033	23.053	3/22/2020	5×	OL	Rig4				
MS93/20	*R. bergii* × *rigidus*	SA, WC, Knysna area, Rheenendal Road, 5 km NNE of junction with N2, roadside among plantations	186	-33.992	22.985	3/23/2020		OL	Rig4				
MS94/20	*R. rigidus*	SA, WC, Sedgefield area, Seven Passes Road, 4 km E of Karatara, roadside among pastures	235	-33.918	22.882	3/23/2020	6×*	OL	Rig4	A		dir. seq.	
MS95/20	*R. pinnatus* subsp. *pinnatus*	SA, WC, Sedgefield area, Seven Passes Road, T-junction 1.5 km SW of Karatara, roadside	213	-33.928	22.825	3/23/2020		OL	Pin1	B1		dir. seq.	
MS96/20	*R. bergii* × *rigidus*	SA, WC, Sedgefield area, Barrington Link Road, 500 m NNW of junction with N2	6	-34.020	22.852	3/23/2020		OL	Rig6				
MS97/20	*R. rigidus*	SA, WC, Mosselbay area, at R327, 7.7 km NW of its junction with N2, roadside among grasslands	224	-34.141	21.948	3/24/2020	6×	OL	Rig4	A		dir. seq.	
MS98/20	*R. pinnatus* subsp. *pinnatus*	SA, WC, Riversdale area, at R323, 11 km NWN of Riversdale, roadside among plantations	416	-33.995	21.225	3/24/2020	4×	OL	Pin1	B2		dir. seq.	
MS-Pin1	*R. pinnatus (transitional)*	SA, WC, E of Knysna, Bitou Municipality	264	-34.038	23.215	3/21/2020		n/a	Rig6	B1		dir. seq.	

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
MS-Pin2	*R. pinnatus (transitional)*	SA, WC, Storms River Mouth	106	-34.018	23.868	3/21/2020		n/a	Pin1	B1		dir. seq.	
MS-Pin3	*R. pinnatus (transitional)*	SA, WC, Knysna Forest	364	-33.947	23.142	3/22/2020		n/a	Pin1	B1		dir. seq.	
Young 2620	*R. rosifolius*	SA, KZN, road from Kranskop to Tugela River, 11.5 km from Kranskop				5/9/2017		NU	Ros1				
Beek2019.97	*R. rigidus*	SA, WC, Tulbagh, Winterhoek road	220	-33.241	19.144	11/21/2019	6×*	L		A		dir. seq.	*R. ecklonii* sensu Beek, epitype
Beek 2020.07	*R. rigidus*	SA, WC, along the R102 between Groot Brakrivier and George	160	-34.011	22.298	1/13/2020	6×*	L	Rig4	A		dir. seq.	*R. fertilis* A. Beek, holotype
Beek 2019.4	*R. rigidus*	SA, WC, Stellenbosch, Jonkershoek reserve, along the circular drive ± 1.5 or 2 km after the bridge at the right side	330	-33.987	18.964	1/23/2019	6×*	L	Rig6				*R.* cf. *chrysocarpus* "anthraco-carpus"
Beek 2019.39	*R. rigidus*	SA, WC, Stellenbosch, Jonkershoek Reserve, along the left turn off along the river from the circular drive, beginning short after the dam	290	-33.983	18.951	2/24/2019	6×*	L	Rig6	A		dir. seq.	*R. chrysocarpus* sensu Beek
Beek 2020.11	*R. pinnatus* subsp. *pappei*	SA, EC, Uitenhage, Van Stadenspas	275	-33.881	25.308	1/15/2020	4×*	L	Rig6				*R. anas* A.Beek, holotype
Beek 2019.100	*R. rigidus*	SA, WC, Grabouw, Vyeboom, along the R321	320	-34.036	19.174	11/28/2019	6×*	L	Rig3				*R. rigidus* sensu Beek, epitype
Beek 2019.94	*R. rigidus*	SA, WC, Citrusdal, south of Theerivier	240	-32.837	19.083	11/20/2019	6×*	L	Rig6	A		dir. seq.	*R. leptodytus* A.Beek
Beek 2020.05	*R. rigidus*	SA, WC, along the road from Swellendam	130	-34.012	20.620	1/13/2020	6×*	L	Rig4	A		dir. seq.	*R. mundtii* sensu Beek
Manning 3601	*R.* sect. *Arguti*	SA, KZN, Howick						NBG	Arg1				*R. originalis* sensu Beek

Supplementary Table S1. Details on the analysed material, including the assigned haplotypes and ribotypes (the latter for *R. rigidus* and *R. pinnatus* only) (continued)

Collection No.	Species	Locality	Elevation	GPS	GPS	Date	Ploidy	Voucher in	Haplotype	Ribotype (pinnatus–rigidus group)	Used for SSR	ITS analysis	Note
Manning 3602	*R. rigidus*	SA, KZN, Howick						NBG	Rig9	A+C3		dir. seq.	
Beek2018-15	*R. bergii* × *rigidus*	SA, WC, Stellenbosch, Helshoogte, entrance of Hillcrest	280	-33.912	18.942	2/24/2018		L	Rig2		1		
R151/11	*R. bergii*	Germany, Lower Sa×ony, Voltlage	50	52.430	7.753			OL	Ulm1		1		
VŽ-Vig1	*R. bergii*	Germany, Hessen, NE Jügesheim, Rodfeld umweit des Reitplatzes	135	50.035	8.903	8/27/2009		Žíla	Ulm1		1		
VŽ-Vig2	*R. bergii*	Germany, Hessen, SW Urberach, Thomashüttenschneise	195	49.956	8.773	8/26/2009		Žíla	Ulm1		1		
VŽ-Vig3	*R. bergii*	Germany, Hessen, S Mernes, grosses Feldkreuz und Scheune	290	50.225	9.488	10/1/2007		Žíla	Ulm1		1		
VŽ-Vig4	*R. bergii*	Germany, Hessen, Babenhausen, Staatstr.	125	49.980	8.929	9/3/2006		Žíla			1		
VŽ-Vig5	*R. bergii*	Germany, Lower Sa×ony, oppidum Recke, pagus Voltlage	40	52.430	7.753	8/16/2011		Žíla	Ulm1		1		

* analysed via FCSS from seed(s)

Supplementary Table S2. Primer sequences, PCR conditions and number of observed alleles for the used SSR loci

Working name	Original name	Sequence of F primer (5′-3′)	Sequence of R primer (5′-3′)	Ta [°C]	Cycles	Reference	No. of alleles
RUB4	Rubusr47a	(M13)-AAGCAGGACACCTCAGATGC	CAGCCAACCATCATCAGCTA	59	25+9	Graham et al. (2004)	12
RUB5	Rubusr76b	(M13)-CTCACCCGAAATGTTCAACC	GGCTAGGCCGAATGACTACA	63	24+9	Graham et al. (2004)	4
RUB6	Rubus105b	(M13)-GAAAATGCAAGGCGAATTGT	TCCATCACCAACACCACCTA	59	24+9	Graham et al. (2004)	16
SSR05	Rubus275a	(M13)-CACAACCAGTCCCGAGAAAT	CATTTCATCCAAATGCAACC	51	33	Graham et al. (2004)	18
SSR27	Rubus26a	(M13)-AACACCGGCTTCTAAGGTCT	GATCCTGGAAAGCGATGAAA	53	32	Graham et al. (2004)	11
SSR17	Rub236b	(M13)-TGTGCCAAGAACTCATCGTC	CCGAACGCCTCCCTACTT	62	25+9	Graham et al. (2006)	20
SSR13	ERubLR_SQ01_G16	(M13)-GCACCCTAATCTCCATGACC	CCGCTGTAGTTCCTGTAGGC	59	22+9	Woodhead et al. (2008)	6
SSR14	RubPara_SQ005_K23	(M13)-AGGTGAGGTGGGAGATGATG	ATCCTCGGTTCCTCCAAAAT	63	25+9	Woodhead et al. (2008)	3
SSR18	Rub238h	(M13)-GTGACCTCCGAGAGCTTGAG	CTTCACCGCCACTAGTACCC	63	25+9	Woodhead et al. (2008)	9
RUB7*	Rubus123a	(M13)-CAGCAGCTAGCATTTTACTGGA	GCACTCTCCACCCATTTCAT	62	26+10	Graham et al. (2004)	1

* Excluded from final analysis

Supplementary Table S3. Samples used for SSR analyses, allelic data and genotype assignment as determined by GENOTYPE

Taxon/hybrid	Collection code	Locality	Latitude	Longitude	Genotype assignment at different thresholds						Detected alleles		Detected alleles						
					Th=0	Th=1	Th=2	Th=3	Th=4	Th=5	Rub5 = Rubusr76b	Rub6 = Rubus105b	SSR5 = Rubus275a	SSR17 = Rub236b	SSR27 = Rubus26a	SSR18 = Rub238h	SSR14 = RubPa-ra_SQ005_K23	Rub4 = Rubusr47a	SSR13 = ERubLR_SQ01_G16
R. bergii × *pinnatus*	RSA05/17	SA, WC, Newlands, Riverside Road	-33.985	18.445	1	1	1	1	1	1	169+209+221	163+167+181+193	140+160+248	165+199	176	145+154+156+163	215+244	233+237+244+250	222
R. bergii × *pinnatus*	RSA09/17	SA, WC, Kirstenbosch arboretum, SW margin	-33.989	18.437	1	1	1	1	1	1	169+209+221	163+167+181+193	140+160+248	165+199	176	145+154+156+163	215+244	233+237+244+250	222
R. bergii × *pinnatus*	RSA11/17	SA, WC, Kirstenbosch arboretum, central part	-33.988	18.440	1	1	1	1	1	1	169+209+221	163+167+181+193	140+160+248	165+199	176	145+154+156+163	215+244	233+237+244+250	222
R. bergii × *pinnatus*	RSA15/17	SA, WC, at the road Kirstenbosch - Hout Bay	-34.007	18.418	2	2	2	2	2	2	209	163+169+181+193	144+160+178+248	161+180+197	162	145+154+156+163	215+244	223+233+244	222
R. bergii × *pinnatus*	RSA32/17	SA, WC, Kirstenbosch Bot. Garden, 200 m NW of the N entrance	-33.985	18.430	1	1	1	1	1	1	169+209+221	163+167+181+193	140+160+248	165+199	176	145+154+156+163	215+244	233+237+244+250	222
R. pinnatus	RSA04/17	SA, WC, Table Mt., Woodhead Dam	-33.975	18.407	3	3	3	3	3	3	209	163+181	140+164	161+199	160	145+154	215	244	222
R. pinnatus	RSA06/17	SA, WC, Rondebosch, 300 m NW of the Rhodes Memorial	-33.951	18.456	4	4	4	4	4	4	209	163+181	140+144+168	161+165+197+201	160+176	145+151+154	215	233+244	222
R. pinnatus	RSA13/17	SA, WC, Hout Bay, NE end of the town	-34.015	18.384	5	5	5	5	5	5	209	163+181	144+162+164	201	158	145+154	215	244	222
R. rigidus × *pinnatus*	RSA27/17	SA, WC, at the road R44 (Kleinmond - Bot River)	-34.304	19.135	6	6	6	6	6	6	209	163+173+181+200	134+152+162	167+188	158+182	145+151	215+242	233+244	222+231
R. rigidus	RSA40/17	SA, WC, at the road R43, 6.2 km NNE of Fisherhaven	-34.306	19.146	7	7	7	7	7	7	209	163+173+202	134+162	167	158	145	215+242	233+244	231
R. rigidus	MS04/18	SA, KZN, Royal Natal, Tugela Valley	-28.715	28.935	8	8	8	8	8	8	209	163+173+196	138+148+156	165+174	148	145+151+156	215+242	221+235+244	231
R. rigidus	MS37/18	SA, KZN, Drakensberg, 0.5 km S of Injasuti Camp	-29.123	29.440	9	9	9	9	9	9	209	163+173+198	134+148+158	167+178+180	148	145+151+156	215+242	221+235+244	231
R. rigidus	MS46/18	SA, M, Graskop, edge of the kloof	-24.944	30.841	10	10	10	10	10	10	209+215	163+177+198	146+152+158	163+184+188	156+178	145+149+156	244	235+241+246	233+235
R. rigidus	MS13/18	SA, KZN, Assagay	-29.784	30.739	11	11	11	11	11	11	209+215	163+177+200+204	128+238+144+152	187+189	158	145+156	215	233+235+244	233
R. rigidus	MS17/18	SA, KZN, N of Hillcrest, Ngwele Rd.	-29.752	30.778	12	12	12	12	12	12	209	163+171+177+179+193	128+140+152	165+191+203	154+158	145+148+156	215	235+239+244	233
R. bergii × *rigidus*	RSA20/17	SA, WC, Kylemore	-33.912	18.944	13	13	13	13	13	13	209+221	163+167+185+198	148+160	167+176+180	158	145+156+163	215+242+244	231+235+237+244	231
R. bergii × *rigidus*	RSA21/17	SA, WC, between Simondium and Drakenstein	-33.858	18.972	14	14	14	14	14	14	209	163+173+185+198	148+162+178+248	167+172+180	158	145+156	215+242+244	223+233+235+237+244	231
R. bergii × *rigidus*	RSA28/17	SA, WC, at the road R44 (Kleinmond - Bot River)	-34.304	19.135	15	15	15	15	15	15	209+221	163+167+173+181+185	134+160	167+180+186	158	145+163	215+242+244	231+233+244	231
R. bergii × *rigidus*	RSA30/17	SA, WC, Elgin Valley,10 km NNE of Kleinmond	-34.254	19.054	16	16	16	16	16	16	209+221	163+173+193	136+160+178	167+186	158	145+156	242+244	231+233+244	231

Supplementary Table S3. Samples used for SSR analyses, allelic data and genotype assignment as determined by GENOTYPE (continued)

Taxon/hybrid	Collection code	Locality	Latitude	Longitude	Genotype assignment at different thresholds						Detected alleles	
					Th=0	Th=1	Th=2	Th=3	Th=4	Th=5	Rub5 = Rubusr76b	Rub6 = Rubus105b
R. bergii × *rigidus*	RSA31/17	SA, WC, Grabouw, Highlands Road	-34.216	19.055	17	17	17	17	15	15	209+221	163+167+173+181+185
R. bergii × *rigidus*	RSA39/17	SA, WC, between Patryslaagte and Houhoek	-34.192	19.110	18	18	18	18	17	17	209	163+173+185+200
R. bergii × *rigidus*	RSA41/17	SA, WC, between Sandbaai and Caledon, Creation	-34.333	19.331	19	19	19	19	18	18	209+221	163+167+173+185+204
R. bergii × *rigidus*	RSA42/17	SA, WC, SW margin of Genadendal	-34.049	19.553	20	20	20	20	19	19	209+221	163+173+185+200
R. bergii × *rigidus*	RSA44/17	SA, WC, between Genadendal and Helderstroom	-34.062	19.438	21	21	21	21	20	20	209+221	163+167+171+193+200
R. bergii × *rigidus*	RSA45/17	SA, WC, Helderstroom	-34.066	19.370	22	22	22	22	21	21	209+221	163+173+193+200
R. bergii × *rigidus*	Beek2018.15	SA, WC, Stellenbosch	-33.912	18.942	23	23	23	23	22	22	209	163+167+173+185+198
R. bergii	RSA29/17	SA, WC, ca 8.7 km NE of Kleinmond, Elgin Valley	-34.280	19.086	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA35/17	SA, WC, Table Mt., Disa Gorge	-33.978	18.399	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA38/17	SA, WC, Table Mt., Woodhead Dam	-33.975	18.407	25	25	24	24	23	23	209+221	167+185+193
R. bergii	RSA43/17	SA, WC, Genadendal	-34.036	19.556	26	26	24	24	23	23	209+221	167+185+193
R. bergii	RSA08/17	SA, WC, Rondebosch, 750 m W of the Rhodes Memorial	-33.953	18.451	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA16/17	SA, WC, Stellenbosch, Devonvallei	-33.948	18.819	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA17/17	SA, WC, Stellenbosch, base of Pappegaaiberg	-33.940	18.845	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA19/17	SA, WC, Kylemore, at the road Stellenbosch - Pniel	-33.912	18.944	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA22/17	SA, WC, between Simondium and Cillie	-33.816	18.951	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA23/17	SA, WC, Paarlsberg	-33.735	18.947	24	24	24	24	23	23	209+221	167+185+193
R. bergii	RSA24/17	SA, WC, Paarlsberg, under Victoria Dam	-33.759	18.948	24	24	24	24	23	23	209+221	167+185+193
R. bergii	R151/11	Germany, Lower Saxony, Voltlage	52.430	7.753	24	24	24	24	23	23	209+221	167+185+193
R. bergii	VŽ-Vig1	Germany, Hessen, Rotgau	50.035	8.903	24	24	24	24	23	23	209+221	167+185+193
R. bergii	VŽ-Vig2	Germany, Hessen, Urberach	49.956	8.773	24	24	24	24	23	23	209+221	167+185+193

Detected alleles						
SSR5 = Rubus275a	SSR17 = Rub236b	SSR27 = Rubus26a	SSR18 = Rub238h	SSR14 = RubPara_SQ005_K23	Rub4 = Rubusr47a	SSR13 = ERubLR_SQ01_G16
134+160+178+248	167+186	158	145+156+163	215+242+244	231+233+244	231
134+162+178	167+184	158	145+163	215+242+244	233+237+244	231
134+162+248	167+188	158	145+156+163	215+242+244	231+233+235+237+244	231
134+160+178	167+174	158	145+156+163	215+242+244	233+237+244	231
148+160	167+174+180	162	135+145+156+163	215+242+244	223+231++233+244	225
152+160	167+174+180	138	135+145+156+163	215+242+244	231+235+237+244	231
158+162+178	165+176	158	145+156+163	215+242+244	233+235+237+244	231
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	182	null	156+163	244	223+233+237	null
162+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	0	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	180	null	156+163	244	223+233+237	null

Supplementary Table S3. Samples used for SSR analyses, allelic data and genotype assignment as determined by GENOTYPE (continued)

Taxon/hybrid	Collection code	Locality	Latitude	Longitude	Genotype assignment at different thresholds						Detected alleles	
					Th=0	Th=1	Th=2	Th=3	Th=4	Th=5	Rub5 = Rubusr76b	Rub6 = Rubus105b
R. bergii	VŽ-Vig4	Germany, Hessen, Babenhausen	49.980	8.929	24	24	24	24	23	23	209+221	167+185+193
R. bergii	VŽ-Vig5	Germany, Lower Saxony, Voltlage	52.430	7.753	27	27	24	24	23	23	209+221	167+185+193
R. aff. bergii	MS24/18	SA, KZN, Ingelabantwana Forest, N of Bulwer	-29.725	29.744	28	28	25	25	24	24	209	165+169+193

Detected alleles						
SSR5 = Rubus275a	SSR17 = Rub236b	SSR27 = Rubus26a	SSR18 = Rub238h	SSR14 = RubPara_SQ005_K23	Rub4 = Rubusr47a	SSR13 = ERubLR_SQ01_G16
160+178+248	180	null	156+163	244	223+233+237	null
160+178+248	176	null	156+163	244	223+233+237	null
138+148+160	165+172	null	156+163+165	244	215+233+244	null