

Supplementary material

Australasian orchid diversification in time and space: molecular phylogenetic insights from the beard orchids (*Calochilus*, Diurideae)

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Table S1. Plant material used in the study and GenBank accession numbers

Herbarium abbreviations according to Index Herbariorum. Superscript numbers denote GenBank numbers for sequences generated in other studies. 1, Clements *et al.* (2002); 2, Nauheimer *et al.* (2018); 3, Clements *et al.*, unpubl. data; 4, A. Perkins and P. Weston, unpubl. data

Species	Voucher details	DNA number	GenBank accession numbers								
			<i>accD</i>	<i>atpA</i>	<i>atpB</i>	<i>atpE</i>	<i>atpF</i> -p1	<i>atpF</i> -p2	<i>atpH</i>	<i>atpI</i>	<i>ccsA</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815014	MH661261	MH815015	MH815016	MH815017	MH815018	MH815019	MH815020	MH815021
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	–	MH661267	MH661276	MH685837	MH661290	MH661305	MH661320	MH661335	MH661350
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH685753	MH661268	MH661289	MH685851	MH661298	MH661308	MH661326	MH661336	MH661351
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	–	MH661262	MH661280	MH685838	MH661291	MH661310	MH661321	MH661337	MH661352
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH685754	MH661264	MH661279	MH685842	MH661295	MH661309	MH661328	MH661339	MH661354
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH685757	MH661263	MH661281	MH685839	MH661292	MH661311	MH661322	MH661338	MH661353
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH685755	MH661265	MH661277	MH685840	MH661296	MH661306	MH661323	MH661340	MH661355
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH685758	–	–	MH685847	MH661297	MH661314	MH661329	MH661342	MH661356
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH685756	MH661266	MH661278	MH685841	MH661293	MH661307	MH661324	MH661341	MH661357
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	–	MH661275	MH661286	MH685850	MH661304	MH661317	MH661332	MH661349	MH661362
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	–	MH661273	MH661287	MH685848	MH661301	MH661318	MH661333	MH661347	MH661363
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH685763	MH661274	MH661288	MH685849	MH661302	MH661319	MH661334	MH661348	MH661364
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH685762	MH661271	MH661284	MH685846	MH661300	MH661316	MH661330	MH661346	MH661361
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH685761	MH661272	MH661285	MH685845	MH661299	MH661315	MH661327	MH661345	MH661360
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH685759	MH661269	MH661282	MH685843	MH661294	MH661312	MH661325	MH661343	MH661358
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH685760	MH661270	MH661283	MH685844	MH661303	MH661313	MH661331	MH661344	MH661359

Species	Voucher details	DNA number	GenBank accession numbers								
			<i>cemA</i>	<i>clpP-p1</i>	<i>clpP-p2</i>	<i>clpP-p3</i>	<i>infA</i>	<i>lhbA</i>	<i>ndhA-p1</i>	<i>ndhA-p2</i>	<i>ndhB-p1</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815022	MH815023	MH815024	MH815025	MH815026	MH815028	MH815030	MH815031	MH815032
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661365	MH661380	MH661402	MH661410	MH661425	MH661440	MH661469	MH661478	MH685852
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH661366	MH661391	MH661403	MH661411	MH661428	–	–	–	–
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661367	MH661381	MH661401	MH661412	MH661426	MH661441	MH661474	MH661479	MH685856
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661369	MH661392	MH661406	MH661416	MH661436	MH661451	MH661470	MH661481	MH685860
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661368	MH661382	MH661400	MH661413	MH661427	MH661442	MH661475	MH661480	MH685857
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661370	MH661383	MH661399	MH661414	MH661429	MH661443	MH661472	MH661482	MH685853
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH661371	MH661394	MH661398	MH661417	MH661431	MH661445	MH661473	MH661484	MH685855
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661372	MH661384	MH661397	MH661415	MH661430	MH661446	MH661471	MH661483	MH685854
<i>Coilochilus</i> <i>neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH661377	MH661385	MH661405	MH661424	MH661437	MH661450	–	–	–
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH661378	MH661386	MH661409	MH661422	MH661434	MH661452	–	–	–
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH661379	MH661387	MH661408	MH661423	MH661435	MH661453	–	–	–
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH661375	MH661388	MH661404	MH661418	MH661439	MH661448	–	–	–
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH661376	MH661389	MH661407	MH661421	MH661438	MH661449	–	–	–
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661373	MH661390	MH661396	MH661419	MH661432	MH661444	MH661476	MH661485	MH685858
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661374	MH661393	MH661395	MH661420	MH661433	MH661447	MH661477	MH661486	MH685859
			<i>ndhB-p2</i>	<i>ndhC</i>	<i>ndhD</i>	<i>ndhE</i>	<i>ndhF</i>	<i>ndhG</i>	<i>ndhH</i>	<i>ndhI</i>	<i>ndhJ</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815033	MH815034	–	MH815035	MH815036	MH815037	MH815038	MH815039	MH815040
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661487	MH661497	–	MH661517	–	–	MH661543	MH661552	MH661562
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH661488	MH661502	MH661508	MH661518	–	–	–	MH661553	MH661563
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661489	MH661503	MH661509	MH661519	MH661527	MH661535	MH661544	MH661554	MH661565

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661493	MH661498	MH661511	MH661526	MH661529	MH661537	MH661546	MH661556	MH661567
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661490	MH661504	MH661510	MH661520	MH661528	MH661536	MH661545	MH661555	MH661566
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661491	MH661499	MH661513	MH661521	MH661530	MH661538	MH661547	MH661557	MH661569
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH661496	MH661500	MH661514	MH661523	MH661532	MH661540	MH661548	MH661559	MH661571
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661492	MH661501	MH661512	MH661522	MH661531	MH661539	MH661549	MH661558	MH661570
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	–	–	–	–	–	–	–	–	–
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	–	–	–	–	–	–	–	–	–
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	–	–	–	–	–	–	–	–	–
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	–	MH661507	–	–	–	–	–	–	MH661572
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	–	–	–	–	–	–	–	–	–
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661494	MH661505	MH661515	MH661524	MH661533	MH661541	MH661550	MH661560	MH661564
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661495	MH661506	MH661516	MH661525	MH661534	MH661542	MH661551	MH661561	MH661568
			<i>ndhK</i>	<i>petB-p2</i>	<i>petD-p2</i>	<i>petG</i>	<i>petL</i>	<i>petN</i>	<i>psaA</i>	<i>psaB</i>	<i>psaC</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815041	MH815043	MH815044	MH815045	MH815046	MH815047	MH815048	MH815049	MH815050
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661573	MH661581	MH661595	MH661610	MH661624	MH661639	MH661654	MH661669	MH661684
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	–	MH661582	MH661596	MH661616	MH661627	MH661640	MH661655	MH661670	MH661687
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661576	MH661584	MH661597	MH661611	MH661625	MH661642	MH661660	MH661671	MH661685
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661578	MH661587	MH661600	MH661619	MH661628	MH661646	MH661656	MH661673	MH661688
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661577	MH661585	MH661598	MH661612	MH661626	MH661643	MH661661	MH661672	MH661686
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661575	MH661583	MH661601	MH661620	MH661629	MH661641	MH661658	MH661674	MH661689
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	–	–	MH661602	–	MH661634	MH661647	MH661659	MH661675	MH661691
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661574	MH661586	MH661599	MH661621	MH661630	MH661644	MH661657	MH661676	MH661690

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	–	MH661592	MH661609	MH661623	MH661635	MH661650	MH661666	MH661681	MH661692
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	–	MH661593	MH661607	MH661617	MH661636	MH661651	MH661667	MH661682	MH661697
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	–	MH661594	MH661608	MH661618	MH661637	MH661652	MH661668	MH661683	MH661698
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	–	MH661590	MH661606	MH661613	MH661631	MH661645	MH661665	MH661679	MH661693
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	–	MH661591	MH661604	MH661614	MH661638	MH661653	MH661664	MH661680	MH661696
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661579	MH661588	MH661605	MH661615	MH661632	MH661648	MH661662	MH661677	MH661695
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661580	MH661589	MH661603	MH661622	MH661633	MH661649	MH661663	MH661678	MH661694
			<i>psaI</i>	<i>psaJ</i>	<i>psbA</i>	<i>psbB</i>	<i>psbC</i>	<i>psbD</i>	<i>psbE</i>	<i>psbF</i>	<i>psbG</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815051	MH815052	MH815053	MH815054	MH815055	MH815056	MH815057	MH815058	–
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661699	MH661714	MH661729	MH661744	MH661758	MH661771	MH661786	MH661801	MH661816
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH661700	MH661717	MH661730	MH661745	MH661759	MH661774	MH661791	MH661802	–
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661701	MH661718	MH661731	MH661746	–	MH661772	MH661787	MH661803	MH661817
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661706	MH661720	MH661733	MH661748	MH661760	MH661775	MH661793	MH661809	–
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661702	MH661719	MH661732	MH661747	MH661763	MH661773	MH661788	MH661804	MH661818
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661703	MH661715	MH661734	MH661749	MH661761	MH661776	MH661789	MH661805	MH661820
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH661707	MH661721	MH661736	–	–	MH661778	MH661794	MH661810	–
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661704	MH661716	MH661735	MH661750	MH661762	MH661777	MH661790	MH661806	MH661819
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH661709	MH661726	MH661743	MH661755	MH661768	MH661782	MH661798	MH661808	–
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH661710	MH661727	MH661741	MH661756	MH661769	MH661783	MH661799	MH661811	–
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH661708	MH661728	MH661742	MH661757	MH661770	MH661784	MH661800	MH661812	–
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH661711	MH661724	MH661740	MH661754	MH661767	MH661785	MH661795	MH661814	–
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH661713	MH661725	MH661739	MH661753	MH661766	MH661781	MH661797	MH661813	–

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661705	MH661722	MH661737	MH661751	MH661764	MH661779	MH661792	MH661807	–
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661712	MH661723	MH661738	MH661752	MH661765	MH661780	MH661796	MH661815	–
			<i>psbH</i>	<i>psbI</i>	<i>psbJ</i>	<i>psbK</i>	<i>psbL</i>	<i>psbM</i>	<i>psbN</i>	<i>psbT</i>	<i>psbZ</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815059	MH815060	MH815062	MH815063	MH815064	MH815065	MH815066	MH815067	–
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661821	MH661836	MH661851	MH661866	MH661881	MH661896	MH661911	MH661926	MH661941
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH661822	MH661839	MH661852	MH661871	MH661886	MH661902	MH661917	MH661927	–
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661826	MH661837	MH661853	MH661867	MH661882	MH661897	MH661912	MH661928	MH661942
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661823	MH661840	MH661860	MH661875	MH661888	MH661903	MH661918	MH661930	MH661946
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661827	MH661838	MH661854	MH661868	MH661883	MH661898	MH661913	MH661929	MH661943
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661824	MH661841	MH661855	MH661869	MH661884	MH661899	MH661914	MH661931	MH661944
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH661825	MH661844	MH661862	MH661874	MH661887	MH661906	MH661921	MH661932	MH661949
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661828	MH661842	MH661856	MH661870	MH661885	MH661900	MH661915	MH661933	MH661945
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH661829	MH661847	MH661861	MH661878	MH661893	MH661904	MH661922	MH661934	MH661948
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH661830	MH661848	MH661863	MH661879	MH661894	MH661908	MH661923	MH661935	–
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH661831	MH661849	MH661864	MH661880	MH661895	MH661909	MH661924	MH661936	–
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH661835	MH661850	MH661857	MH661877	MH661891	MH661907	MH661919	MH661937	MH661947
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH661832	MH661845	MH661858	MH661876	MH661892	MH661910	MH661920	MH661940	–
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661833	MH661843	MH661859	MH661872	MH661889	MH661901	MH661916	MH661938	
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661834	MH661846	MH661865	MH661873	MH661890	MH661905	MH661925	MH661939	–
			<i>rbcL</i>	<i>rpl2-p1</i>	<i>rpl2-p2</i>	<i>rpl14</i>	<i>rpl16-p2</i>	<i>rpl20</i>	<i>rpl23</i>	<i>rpl32</i>	<i>rpl33</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH661950	MH685764	MH661966	MH661982	MH661998	MH662014	MH662030	MH662046	MH662062
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH661951	MH685765	MH661967	MH661983	MH661999	MH662016	MH662031	MH662047	MH662063
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH661952	MH685773	MH661973	MH661984	MH662004	MH662017	MH662043	MH662048	MH662064

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH661953	MH685766	MH661968	MH661985	MH662000	MH662018	MH662032	MH662049	MH662065
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH661955	MH685772	MH661975	MH661987	MH662007	MH662020	MH662042	MH662051	MH662071
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH661954	MH685767	MH661969	MH661986	MH662001	MH662019	MH662033	MH662050	MH662066
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH661956	MH685768	MH661970	MH661988	MH662002	MH662021	MH662034	MH662052	MH662067
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH661958	MH685775	MH661978	MH661990	MH662010	MH662023	MH662045	MH662054	MH662070
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH661957	MH685769	MH661971	MH661989	MH662003	MH662022	MH662035	MH662053	MH662068
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH661962	MH685776	MH661979	MH661995	MH662011	MH662027	MH662041	MH662058	MH662076
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH661963	MH685777	MH661980	MH661996	MH662012	MH662028	MH662036	MH662059	MH662074
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH661964	MH685778	MH661981	MH661997	MH662013	MH662029	MH662037	MH662060	MH662075
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH661965	MH685779	MH661972	MH661991	MH662008	MH662025	MH662038	MH662057	MH662073
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH661961	MH685774	MH661976	MH661994	MH662009	MH662026	MH662039	MH662061	MH662077
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH661959	MH685770	MH661974	MH661992	MH662005	MH662015	MH662040	MH662055	MH662069
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH661960	MH685771	MH661977	MH661993	MH662006	MH662024	MH662044	MH662056	MH662072
			<i>rpl36</i>	<i>rpoA</i>	<i>rpoB</i>	<i>rpoC1-p1</i>	<i>rpoC1-p2</i>	<i>rpoC2</i>	<i>rps2</i>	<i>rps3</i>	<i>rps4</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH662078	MH662094	MH662110	MH662126	MH685780	MH685796	MH662142	MH662157	MH662173
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH662088	MH662100	MH662111	MH662127	MH685781	MH685797	MH662143	MH662158	MH662174
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH662089	MH662101	MH662118	MH662128	MH685795	MH685798	MH662144	MH662159	MH662175
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH662079	MH662095	MH662112	MH662129	MH685782	MH685799	MH662145	MH662160	MH662176
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH662082	MH662099	MH662119	MH662134	MH685784	MH685804	MH662147	MH662162	MH662178
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH662080	MH662096	MH662113	MH662130	MH685783	MH685800	MH662146	MH662161	MH662177
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH662081	MH662097	MH662115	MH662132	MH685785	MH685801	MH662148	MH662163	MH662179

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH662086	MH662104	MH662116	MH662133	MH685787	MH685803	–	MH662165	MH662183
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH662083	MH662098	MH662114	MH662131	MH685786	MH685802	MH662149	MH662164	MH662180
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH662091	MH662109	MH662123	MH662139	MH685792	MH685809	MH662154	MH662170	MH662186
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH662092	MH662107	MH662124	MH662140	MH685793	MH685810	MH662155	MH662171	MH662187
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH662093	MH662108	MH662125	MH662141	MH685794	MH685811	MH662156	MH662172	MH662188
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH662090	MH662105	MH662122	MH662138	MH685790	MH685807	MH662152	MH662169	MH662185
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH662087	MH662106	MH662121	MH662135	MH685791	MH685808	MH662153	MH662168	MH662184
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH662084	MH662102	MH662117	MH662136	MH685788	MH685805	MH662150	MH662166	MH662181
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH662085	MH662103	MH662120	MH662137	MH685789	MH685806	MH662151	MH662167	MH662182
			<i>rps7</i>	<i>rps8</i>	<i>rps11</i>	<i>rps12-p1</i>	<i>rps12-p2</i>	<i>rps12-p3</i>	<i>rps14</i>	<i>rps15</i>	<i>rps16-p1</i>
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH662189	MH662205	MH662221	MH662236	MH662260	MH662278	MH662293	MH662307	MH662322
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH662190	MH662206	MH662222	MH662237	MH662263	MH662281	MH662289	MH662303	MH662325
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH662204	MH662207	MH662223	MH662246	MH662254	MH662270	MH662286	MH662302	MH662317
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH662191	MH662208	MH662224	MH662238	MH662258	MH662276	MH662291	MH662309	MH662321
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH662202	MH662214	MH662226	MH662248	MH662261	MH662280	MH662290	MH662300	MH662326
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH662192	MH662209	MH662225	MH662245	MH662266	MH662279	–	MH662306	MH662324
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH662193	MH662210	MH662227	MH662239	MH662264	MH662282	MH662294	MH662308	MH662327
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH662196	MH662212	–	MH662247	MH662257	MH662275	MH662297	MH662312	MH662320
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH662194	MH662211	MH662228	MH662240	–	MH662267	MH662283	MH662298	MH662314
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH662198	MH662218	MH662233	MH662249	MH662259	MH662277	MH662292	MH662313	–
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	MH662199	MH662219	MH662234	MH662250	MH662265	MH662273	MH662295	MH662310	MH662319
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH662200	MH662220	MH662235	MH662251	MH662255	MH662272	MH662288	MH662305	MH662318

Species	Voucher details	DNA number	GenBank accession numbers								
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH662201	MH662217	MH662231	MH662241	MH662262	MH662271	MH662287	MH662304	MH662323
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	MH662203	MH662215	MH662232	MH662242	MH662252	MH662268	MH662284	MH662299	MH662315
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH662195	MH662213	MH662229	MH662243	MH662253	MH662269	MH662285	MH662301	MH662316
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH662197	MH662216	MH662230	MH662244	MH662256	MH662274	MH662296	MH662311	–
			<i>rps16-p2</i>	<i>rps18</i>	<i>rps19</i>	<i>ycf3-p1</i>	<i>ycf3-p2</i>	<i>ycf3-p3</i>			
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH685819	MH662334	MH662352	MH662365	MH662386	MH662396			
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH685821	MH662335	MH662356	MH662367	MH662383	MH662398			
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH685815	MH662333	MH662347	MH662363	MH662379	MH662395			
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH685822	MH662336	MH662350	MH662364	MH662391	MH662404			
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	–	MH662341	MH662351	MH662366	MH662382	MH662397			
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH685818	MH662340	MH662354	MH662370	MH662385	MH662401			
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH685820	MH662342	MH662353	MH662375	MH662387	MH662402			
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	MH685824	MH662339	MH662359	MH662374	MH662389	MH662407			
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH685812	MH662328	MH662344	MH662360	MH662376	MH662392			
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	–	MH662343	MH662355	MH662371	MH662384	MH662403			
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	MH685823	MH662337	MH662357	MH662372	MH662390	MH662405			
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH685816	MH662331	MH662349	MH662369	MH662381	MH662400			
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH685817	MH662330	MH662348	MH662368	MH662380	MH662399			
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH685813	MH662329	MH662345	MH662361	MH662377	MH662393			
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH685814	MH662332	MH662346	MH662362	MH662378	MH662394			
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	–	MH662338	MH662358	MH662373	MH662388	MH662406			

Species	Voucher details	DNA number	GenBank accession numbers			
			ITS	<i>matK</i>	<i>ycf1</i>	<i>trnL-trnF</i>
Thelymitrinae						
<i>Calochilus caeruleus</i> L.O.Williams	CANB: Roberts, L.J. ORG2081, CANB 638728	CANB_S0424	AF347997 ¹	MH542164	MH633789	MH662409
<i>Calochilus caeruleus</i> L.O.Williams	CNS: Gray, B. 38035	CNS_G02212	MH542196	MH542163	MH633788	MH662408
<i>Calochilus caesius</i> D.L.Jones	CANB: Orchid Research Group ORG5335	CNS_G02211	MH542197	–	MH633790	MH662420
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815027	MH815029	MH685825	–
<i>Calochilus campestris</i> R.Br.	CANB: Clements, M.A. 9933, CANB 651111	CNS_G02205	MG694942 ²	MG695054 ²	MG695276 ²	MH662411
<i>Calochilus campestris</i> R.Br.	CANB: Rouse, D.T. 208, CANB 656578	CNS_G02213	MH542199	MH542166	MH633792	MH662412
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH685745	MH661454	MH685826	MH685868
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH685744	MH661455	MH685833	–
<i>Calochilus gracillimus</i> Rupp	CANB: Carroll, M. ORG4400, CANB 650716	CNS_G02235	MH542207	MG695055 ²	MG695277 ²	MH662428
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH685743	MH661456	MH685827	MH685870
<i>Calochilus herbaceus</i> Lindl.	CANB: Jones, D.L. 16034, CANB 605667	CANB_S0287	MH542202	MH542167	MH633796	–
<i>Calochilus herbaceus</i> Lindl.	CHR: Molloy, B.P.J. 117/99	CNS_G02207	–	MH542170	MH633794	MH662413
<i>Calochilus herbaceus</i> Lindl.	CANB: Rouse, D.T. 216, CANB 656570	CNS_G02232	MH542203	MH542168	MH633793	MH662415
<i>Calochilus herbaceus</i> Lindl.	CHR: Molloy, B.P.J. 117/99	CANB_S0716	MH542201	MH542171	–	–
<i>Calochilus holtzei</i> F.Muell.	CANB: Roberts, L. ORG 2108	CANB_S0464	AF347999 ¹	–	–	–
<i>Calochilus imperiosus</i> D.L.Jones	CANB: Roberts, L.J. ORG2108, CANB 651117	CANB_S0464	MH542198	MH542165	MH633791	MH662410
<i>Calochilus kalaru</i> D.L.Jones	CANB: Jones, D.L. ORG7198, CANB 892482	CNS_G02471	MH542220	MH542175	MH685874	MH662429
<i>Calochilus montanus</i> D.L.Jones	CANB: Clements, M.A. 12057	CNS_G02260	MH542204	MH542169	MH633795	MH662414
<i>Calochilus paludosus</i> R.Br.	CANB: Jones, D.L. 15774, CANB 677239	CANB_S0126	AF348000 ¹	MH542192	MH633816	–

Species	Voucher details	DNA number	GenBank accession numbers			
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9732, CANB 732526	CANB_S0193	MH542222	MH542193	MH633815	–
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH685749	MH661458	MH685829	MH685869
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 11442, CANB 768464	CNS_G02209	MG694943 ²	MG695056 ²	MG695278 ²	MH662417
<i>Calochilus paludosus</i> R.Br.	CHR: Molloy, B.P.J. 110/99	CNS_G02210	MH542223	MH542194	MH685876	MH662418
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 9785, CANB 732552	CANB_S0094	KJ081797 ³	MH542181	MH633811	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11535, CANB 882104	CNS_G02223	MH542208	MH542178	MH633809	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11055, CANB 655158	CNS_G02224	MH542214	MH542179	MH633801	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11452, CANB 768474	CNS_G02225	MH542215	MH542180	MH633807	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11095, CANB 651126	CNS_G02226	MH542209	–	MH633802	MH662430
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 9785, CANB 732552	CANB_S0094	KJ081797 ³	MH542181	MH633811	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11086, CANB 651125	CNS_G02228	MH542210	MH542184	MH633810	–
<i>Calochilus psednus</i> D.L.Jones & Lavarack	–	–	AY029042 ⁴	–	–	–
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH685742	MH661457	MH685828	MH685871
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Orchid Research Group ORG4387	CNS_G02462	–	–	–	MH662416
<i>Calochilus richiae</i> Nicholls	CANB: Clements, M.A. 11174	CANB_S1962	KJ081796 ³	MH542185	MH633812	MH662431
<i>Calochilus robertsonii</i> Benth.	CANB: Jones, D.L. 15784, CANB 677240	CANB_S0127	KJ081798 ³	MH542187	MH633813	–
<i>Calochilus robertsonii</i> Benth.	CANB: Clements, M.A. 11175	CANB_S1961	MH542212	MH542183	MH633813	MH662434
<i>Calochilus robertsonii</i> Benth.	CHR: Molloy, B.P.J. 246/00	CNS_G02216	–	MH542186	MH633803	MH662432
<i>Calochilus robertsonii</i> Benth.	CANB: Clements, M.A. 12706	CNS_G02217	MH542211	MH542188	MH633808	MH662437

Species	Voucher details	DNA number	GenBank accession numbers				
<i>Calochilus robertsonii</i> Benth.	CANB: Copeland, L.M. 3967, CANB 673021	CNS_G02219	MH542213	MH542182	MH685875	MH662436	
<i>Calochilus robertsonii</i> Benth.	CANB: Dowling, W.M. 25	CNS_G02221	MH542216	MH542189	MH633804	MH662433	
<i>Calochilus robertsonii</i> Benth.	CANB: Rouse, D.T. 212, CANB 656574	CNS_G02230	MG694944 ²	MG695057 ²	MG695279 ²	MH662438	
			ITS	<i>matK</i>	<i>ycf1</i>	<i>petA-psbJ</i>	<i>trnL-trnF</i>
Thelymitrinae							
<i>Calochilus caeruleus</i> L.O.Williams	CANB: Roberts, L.J. ORG2081, CANB 638728	CANB_S0424	AF347997 ¹	MH542164	MH633789	MH633821	MH662409
<i>Calochilus caeruleus</i> L.O.Williams	CNS: Gray, B. 38035	CNS_G02212	MH542196	MH542163	MH633788	MH633820	MH662408
<i>Calochilus caesius</i> D.L.Jones	CANB: Orchid Research Group ORG5335	CNS_G02211	MH542197	–	MH633790	–	MH662420
<i>Calochilus caesius</i> D.L.Jones	PERTH: Barrett, R.L. 6273	CNS_G05068	MH815027	MH815029	MH685825	MH815061	–
<i>Calochilus campestris</i> R.Br.	CANB: Clements, M.A. 9933, CANB 651111	CNS_G02205	MG694942 ²	MG695054 ²	MG695276 ²	MG695161 ²	MH662411
<i>Calochilus campestris</i> R.Br.	CANB: Rouse, D.T. 208, CANB 656578	CNS_G02213	MH542199	MH542166	MH633792	MH633825	MH662412
<i>Calochilus campestris</i> R.Br.	CANB: Jones, D.L. 8586	CNS_G06021	MH685745	MH661454	MH685826	MH685861	MH685868
<i>Calochilus cupreus</i> R.S. Rogers	CANB: Murfet, D.E. 2570	CNS_G02467	MH685744	MH661455	MH685833	–	–
<i>Calochilus gracillimus</i> Rupp	CANB: Carroll, M. ORG4400, CANB 650716	CNS_G02235	MH542207	MG695055 ²	MG695277 ²	MG695162 ²	MH662428
<i>Calochilus grandiflorus</i> (Benth.) Domin	CANB: Orchid Research Group ORG6524	CNS_G06098	MH685743	MH661456	MH685827	MH685862	MH685870
<i>Calochilus herbaceus</i> Lindl.	CANB: Jones, D.L. 16034, CANB 605667	CANB_S0287	MH542202	MH542167	MH633796	MH633826	–
<i>Calochilus herbaceus</i> Lindl.	CHR: Molloy, B.P.J. 117/99	CNS_G02207	–	MH542170	MH633794	MH633823	MH662413
<i>Calochilus herbaceus</i> Lindl.	CANB: Rouse, D.T. 216, CANB 656570	CNS_G02232	MH542203	MH542168	MH633793	MH633829	MH662415
<i>Calochilus herbaceus</i> Lindl.	CHR: Molloy, B.P.J. 117/99	CANB_S0716	MH542201	MH542171	–	MH633824	–
<i>Calochilus holtzei</i> F.Muell.	CANB: Roberts, L. ORG 2108	CANB_S0464	AF347999 ¹	–	–	–	–
<i>Calochilus imperiosus</i> D.L.Jones	CANB: Roberts, L.J. ORG2108, CANB 651117	CANB_S0464	MH542198	MH542165	MH633791	MH633822	MH662410

Species	Voucher details	DNA number	GenBank accession numbers				
<i>Calochilus kalaru</i> D.L.Jones	CANB: Jones, D.L. ORG7198, CANB 892482	CNS_G02471	MH542220	MH542175	MH685874	MH633834	MH662429
<i>Calochilus montanus</i> D.L.Jones	CANB: Clements, M.A. 12057	CNS_G02260	MH542204	MH542169	MH633795	MH633830	MH662414
<i>Calochilus paludosus</i> R.Br.	CANB: Jones, D.L. 15774, CANB 677239	CANB_S0126	AF348000 ¹	MH542192	MH633816	MH633836	–
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9732, CANB 732526	CANB_S0193	MH542222	MH542193	MH633815	MH633837	–
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 9934, CANB 651121	CNS_G02208	MH685749	MH661458	MH685829	MH685865	MH685869
<i>Calochilus paludosus</i> R.Br.	CANB: Clements, M.A. 11442, CANB 768464	CNS_G02209	MG694943 ²	MG695056 ²	MG695278 ²	MG695163 ²	MH662417
<i>Calochilus paludosus</i> R.Br.	CHR: Molloy, B.P.J. 110/99	CNS_G02210	MH542223	MH542194	MH685876	MH633835	MH662418
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 9785, CANB 732552	CANB_S0094	KJ081797 ³	MH542181	MH633811	–	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11535, CANB 882104	CNS_G02223	MH542208	MH542178	MH633809	–	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11055, CANB 655158	CNS_G02224	MH542214	MH542179	MH633801	–	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11452, CANB 768474	CNS_G02225	MH542215	MH542180	MH633807	–	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11095, CANB 651126	CNS_G02226	MH542209	–	MH633802	–	MH662430
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 9785, CANB 732552	CANB_S0094	KJ081797 ³	MH542181	MH633811	–	–
<i>Calochilus platyichilus</i> D.L.Jones	CANB: Clements, M.A. 11086, CANB 651125	CNS_G02228	MH542210	MH542184	MH633810	–	–
<i>Calochilus pzednus</i> D.L.Jones & Lavarack	–	–	AY029042 ⁴	–	–	–	–
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Clements, M.A. 11304, CANB 681202	CNS_G02234	MH685742	MH661457	MH685828	MH685863	MH685871
<i>Calochilus pulchellus</i> D.L.Jones	CANB: Orchid Research Group ORG4387	CNS_G02462	–	–	–	–	MH662416
<i>Calochilus richiae</i> Nicholls	CANB: Clements, M.A. 11174	CANB_S1962	KJ081796 ³	MH542185	MH633812	–	MH662431

Species	Voucher details	DNA number	GenBank accession numbers				
<i>Calochilus robertsonii</i> Benth.	CANB: Jones, D.L. 15784, CANB 677240	CANB_S0127	KJ081798 ³	MH542187	MH633813	–	–
<i>Calochilus robertsonii</i> Benth.	CANB: Clements, M.A. 11175	CANB_S1961	MH542212	MH542183	MH633813	–	MH662434
<i>Calochilus robertsonii</i> Benth.	CHR: Molloy, B.P.J. 246/00	CNS_G02216	–	MH542186	MH633803	–	MH662432
<i>Calochilus robertsonii</i> Benth.	CANB: Clements, M.A. 12706	CNS_G02217	MH542211	MH542188	MH633808	–	MH662437
<i>Calochilus robertsonii</i> Benth.	CANB: Copeland, L.M. 3967, CANB 673021	CNS_G02219	MH542213	MH542182	MH685875	–	MH662436
<i>Calochilus robertsonii</i> Benth.	CANB: Dowling, W.M. 25	CNS_G02221	MH542216	MH542189	MH633804	–	MH662433
<i>Calochilus robertsonii</i> Benth.	CANB: Rouse, D.T. 212, CANB 656574	CNS_G02230	MG694944 ²	MG695057 ²	MG695279 ²	–	MH662438
<i>Calochilus robertsonii</i> Benth.	CANB: Clements, M.A. 10581	CANB_S1039	KJ081799 ³	–	–	–	–
<i>Calochilus robertsonii</i> Benth.	CANB: Crane, P. 1106	CNS_G06017	MH685748	MH661459	MH685830	MH685864	MH685872
<i>Calochilus sandrae</i> D.L. Jones	CANB: Jones, D.L. 14692	CNS_G02470	MH685747	MH661460	MH685831	–	–
<i>Calochilus saprophyticus</i> R.S.Rogers	CANB: Clements, M.A. 9725, CANB 732519	CANB_S0194	MH542200	MH542174	MH633799	MH633831	
<i>Calochilus saprophyticus</i> R.S.Rogers	CANB: Clements, M.A. 10595, CANB 666745	CANB_S1076	MH542206	MH542173	MH633798	MH633828	MH662419
<i>Calochilus saprophyticus</i> R.S.Rogers	CANB: Clements, M.A. 11090, CANB 651116	CNS_G02229	MH542205	MH542172	MH633797	MH633827	
<i>Calochilus stramenicola</i> D.L.Jones	–	–	AY029049 ⁴				
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274, CANB 658251	CNS_G02214	MH542219	MH542176	MH633806	MH633832	–
<i>Calochilus therophilus</i> D.L.Jones	CANB: Clements, M.A. 8155, CBG 9407961	CNS_G02227	MH542221	MH542177	MH633800	MH633833	–
<i>Calochilus therophilus</i> D.L.Jones	CANB: Branwhite, P. 274	CNS_G06016	MH685746	MH661461	MH685832	MH685866	MH685873
<i>Calochilus uliginosus</i> D.L.Jones	CANB: Clements, M.A. 10672, CANB 666812	CANB_S1416	MH542218	MH542191	MH633805	–	MH662435
<i>Calochilus uliginosus</i> D.L.Jones	CANB: Clements, M.A. 10672 B, CANB 666812	CNS_G02222	MH542217	MH542190	–	–	–
<i>Epiblema grandiflorum</i> R.Br.	CANB: French, C.J. 3283, CANB 648316	CANB_S1079	AF348029 ¹	MH542195	MH633819	MH633839	–
<i>Epiblema grandiflorum</i> R.Br.	CANB: Orchid Research Group ORG 4468	CNS_G02238	MG694941 ²	MG695062 ²	MG695284 ²	MG695169 ²	–

Species	Voucher details	DNA number	GenBank accession numbers				
<i>Epiblema grandiflorum</i> R.Br.	Clements, M.A. 10694, CANB: 666832	CNS_G02236	MH685752	MH661465	MH685836	–	–
<i>Thelymitra alpina</i> Jeanes	MEL: Jeanes, J.A. 808	CNS_G02195	MG694952 ²	MG695076 ²	MH633817	MG695181 ²	MH662421
<i>Thelymitra antennifera</i> (Lindl.) Hook.f.	CANB: Clements, M.A. 11967B	CNS_G01372	MH685750	MH661462	MH685834	MH685867	
<i>Thelymitra benthamiana</i> Rchb.f.	MEL: Jeanes, J.A. 1090	CNS_G02194	MG694958 ²	MG695079 ²	MG695306 ²	MG695186 ²	MH662424
<i>Thelymitra ixioides</i> Sw.	MEL: Jeanes, J.A. 893, MEL 2218610A	CNS_G02198	MG694992 ²	MG695107 ²	MG695340 ²	MH633838	MH662425
<i>Thelymitra juncifolia</i> Lindl.	MEL: Jeanes, J.A. 968, MEL 2218774A	CNS_G02204	MG694995 ²	MG695111 ²	MG695344 ²	MG695223 ²	MH662426
<i>Thelymitra longifolia</i> J.R.Forst. & G.Forst.	CHR: Molloy, B.P.J. 031/98b	CNS_G02914	MH685751	MH661463	–	–	–
<i>Thelymitra macrophylla</i> Lindl.	MEL: Jeanes, J.A. 862, MEL 2093600A	CNS_G02203	MG694998 ²	MG695114 ²	MH633818	MG695226 ²	MH662422
<i>Thelymitra petrophila</i> Jeanes	MEL: Jeanes, J.A. 1158, MEL 2218638A	CNS_G02202	MG695020 ²	MG695130	MG695366 ²	MG695243 ²	MH662423
<i>Thelymitra spiralis</i> (Lindl.) F.Muell. var. <i>spiralis</i>	MEL: Hort, F. 1354, MEL 2143962A	CNS_G02193	MG695036 ²	MG695148 ²	MG695385 ²	MG695259 ²	MH662427
Outgroups							
<i>Acianthus fornicatus</i> R.Br.	BRI: Jensen, R. 2019	CNS_D2030	MG694927 ²	MG695052 ²	MG695273 ²	MG695159 ²	–
<i>Caladenia arenicola</i> Hopper & A.P.Br.	CANB: Clements, M.A. 11942	CNS_G01337	MG694929 ²	–	MG695275 ²	MG695160 ²	–
<i>Caladenia denticulata</i> Lindl.	CANB: Clements, M.A. 11018	CNS_G04024	MG694934 ²	MG695064 ²	MG695286 ²	–	–
<i>Coilochilus neocaledonicus</i> Schltr.	CANB: Clements, M.A. 11248	CNS_G05305	–	MH661466	–	–	–
<i>Corybas unguiculatus</i> (R.Br.) Rchb.f.	CANB: Orchid Research Group ORG6831	CNS_G04119	MG694928 ²	MG695053 ²	MG695274 ²	n/a	–
<i>Cryptostylis erecta</i> R.Br.	CANB: Clements, M.A. 12415	CNS_G06535	–	MH661467	–	–	–
<i>Cryptostylis leptochila</i> F.Muell. ex Benth.	CANB: Clements, M.A. 12162	CNS_G04326	–	MH661468	–	–	–
<i>Diuris oporina</i> D.L.Jones	CANB: Gray, B. 8903, CANB 599549	CNS_G03311	MG694938 ²	MG695061 ²	MG695283 ²	MG695168 ²	–
<i>Genoplesium nudum</i> (Hook.f.) D.L.Jones & M.A.Clem.	CANB: Dowling, W.M. 390	CNS_G02557	MG694930 ²	MG695059 ²	MG695281 ²	MG695166 ²	–
<i>Glossodia major</i> R.Br.	CANB: Clements, M.A. 12129	CNS_G04332	MG694933 ²	MG695063 ²	MG695285 ²	MG695170 ²	–
<i>Leporella fimbriata</i> (Lindl.) A.S.George	CANB: Clements, M.A. 10452	CNS_G03289	MG694935 ²	MG695065 ²	MG695287 ²	MG695171 ²	–
<i>Megastylis gigas</i> (Rchb.f.) Schltr.	CANB: Clements, M.A. 11177b	CNS_G05299	–	MH661464	MH685835	–	–
<i>Microtis arenaria</i> Lindl.	CHR: Molloy, B.P.J. 211/00	CNS_G02548	MG694936 ²	MG695068 ²	MG695290 ²	MG695173 ²	–

Species	Voucher details	DNA number	GenBank accession numbers				
<i>Prasophyllum canaliculatum</i> D.L.Jones	CANB: Miles, J. 146983	CNS_G02561	MG694940 ²	MG695401 ²	MG695292 ²	MG695174 ²	–
<i>Prasophyllum striatum</i> R.Br.	CANB: Clements, M.A. 12009	CNS_G02559	MG694937 ²	MG695066 ²	MG695288 ²	MG695172 ²	–
<i>Pterostylis barbata</i> Lindl.	CANB: Clements, M.A. 11966A	CNS_G01354	MG694924 ²	MG695069 ²	MG695291 ²	–	–
<i>Pterostylis vittata</i> Lindl.	CANB: Clements, M.A. 11939A	CNS_G01116	MG694925 ²	–	MG695293 ²	–	–
<i>Vrydagzynea</i> sp.	CANB: Juswara, L. 15	CNS_G01271	MG694926 ²	–	MG695294 ²	–	–

Table S2. Morphological character matrix for *Calochilus*

Characters and character states: Character 1. Labellum basal part: shape of calli (0, two smooth plates; 1, one or two ridged plates; 2, two prominent tooth-like protrusions; 3, two short lateral wart-like protrusions, 4, warty to filiform throughout, 5, absent). Character 2. Labellum apex shape (0, blunt; 1, acute; 2, acuminate; 3, ensiform; 4, rostrate). Character 3. Labellum shape (0, rhomboid; 1, deltoid; 2, oblong–elliptical; 3, ovate; 4, broad–spathulate; 5, obovate). Character 4. Labellum curvature in side view (0, straight to slightly curved; 1, distinctly curved). Character 5. Column apex shape (0, erect, narrowing; 1, cucullate, bulbous). Character 6. Staminodia type (0, highly reduced; 1, visible as appendages). Character 7. Column: presence of sham eyes (0, absent; 1, present). Character 8. Labellum apex surface (0, glabrous; 1, glandular). Character 9. Dorsal sepal size relative to column (0, similar length; 1, longer than column). Character 10. Stem bracts: position in relation to ovary (0, partially or fully covering ovary; 1, not covering ovary). Character 11. Degree of leaf development at time of flowering (0, not developed; 1, partially developed; 2, fully developed). Character 12. Leaf reductions (0, leaf normally developed; 1, leaf reduced to sheathing bract; 2, leafless)

	Character number											
	1	2	3	4	5	6	7	8	9	10	11	12
sect. <i>Abrochilus</i>												
<i>Calochilus grandiflorus</i>	3	3	3	0	0	0	1	0	1	0	2	0
<i>Calochilus pulchellus</i>	3	3	3	0	0	0	1	0	1	0	2	0
sect. <i>Calochilus</i>												
<i>Calochilus gracillimus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus kalaru</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus platyichilus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus praeltus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus richiae</i>	4	4	0	0	0	0	1	0	1	0	2	0
<i>Calochilus robertsonii</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus russeus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus sandrae</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus stramenicola</i>	4	2	0	0	0	0	1	1	1	0	2	0

<i>Calochilus therophilus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus uliginosus</i>	4	2	0	0	0	0	1	1	1	0	2	0
<i>Calochilus paludosus</i>	3	3	3	0	0	0	0	0	1	0	2	0
sect. Placochilus												
<i>Calochilus campestris</i>	0	1	1	1	0	0	1	1	0	0	2	0
<i>Calochilus cupreus</i>	0	1	1	1	0	0	1	1	0	0	2	0
<i>Calochilus herbaceus</i>	0	1	1	1	0	0	1	1	0	0	2	1
<i>Calochilus montanus</i>	0	1	1	1	0	0	1	1	0	0	2	0
<i>Calochilus neocaledonicus</i>	0	1	1	1	0	0	1	1	0	0	2	0
<i>Calochilus pruinus</i>	0	1	1	1	0	0	1	1	0	0	2	1
<i>Calochilus saprophyticus</i>	0	1	1	1	0	0	1	1	0	0	2	1
subgen. Tropicchilus												
<i>Calochilus ammobius</i>	2	0	5	0	1	1	1	0	0	1	0	0
<i>Calochilus caeruleus</i>	1	0	2	0	1	1	0	0	0	1	1	0
<i>Calochilus caesius</i>	2	0	5	0	1	1	1	0	0	1	0	0
<i>Calochilus cleistanthus</i>	5	0	5	0	1	1	1	0	0	1	0	2
<i>Calochilus holtzei</i>	1	1	4	1	1	1	0	0	0	1	1	0
<i>Calochilus imperiosus</i>	1	1	4	1	1	1	0	0	0	1	1	0
<i>Calochilus metallicus</i>	2	0	5	0	1	1	1	0	0	1	1	0
<i>Calochilus psednus</i>	2	0	5	0	1	1	1	0	0	1	0	0

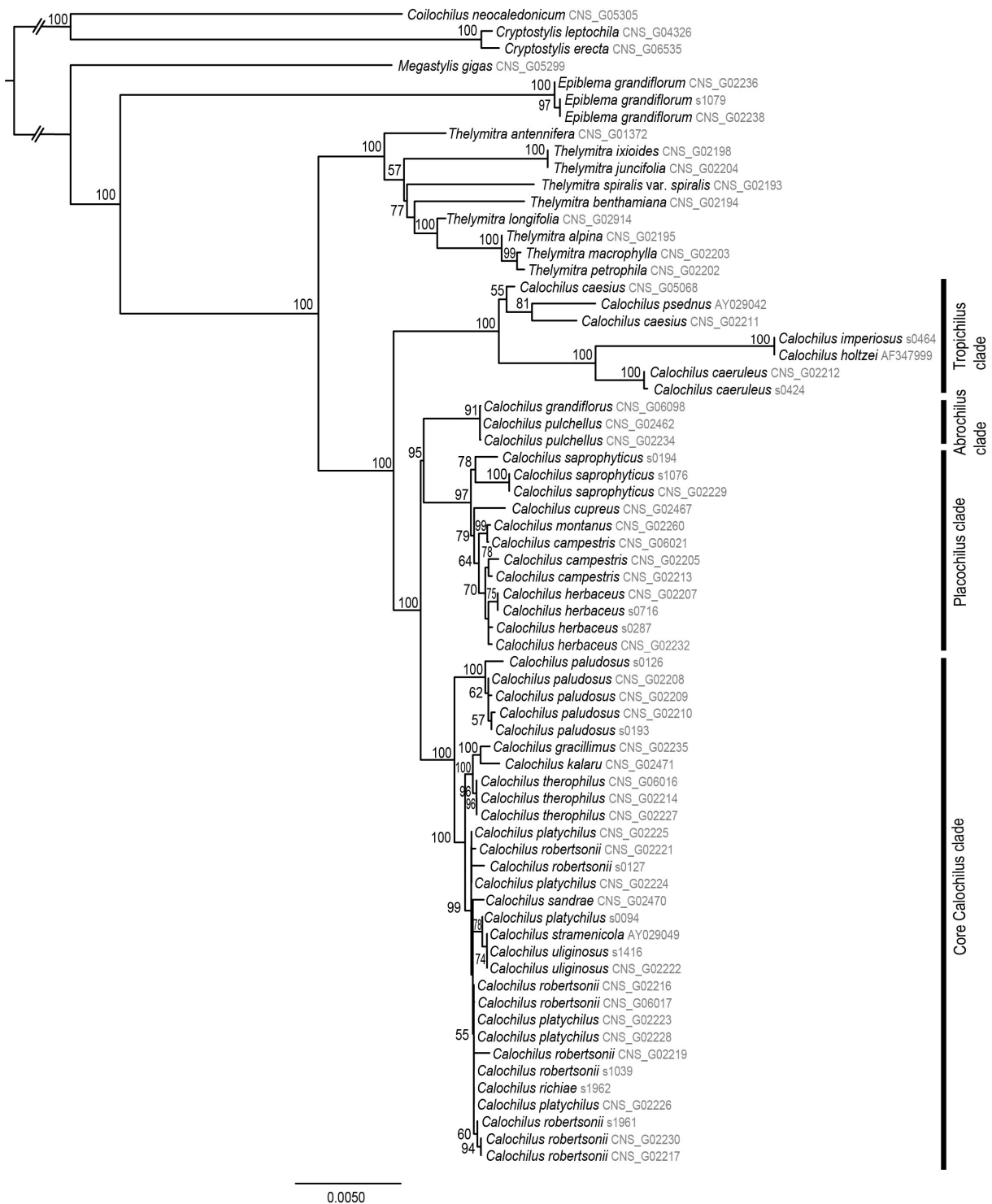


Fig. S1. Maximum likelihood tree of *Calochilus* based on 81 loci supermatrix. Bootstrap values are shown above branches. Scale bar represents branch length along which 0.005 per-site mutations are expected.

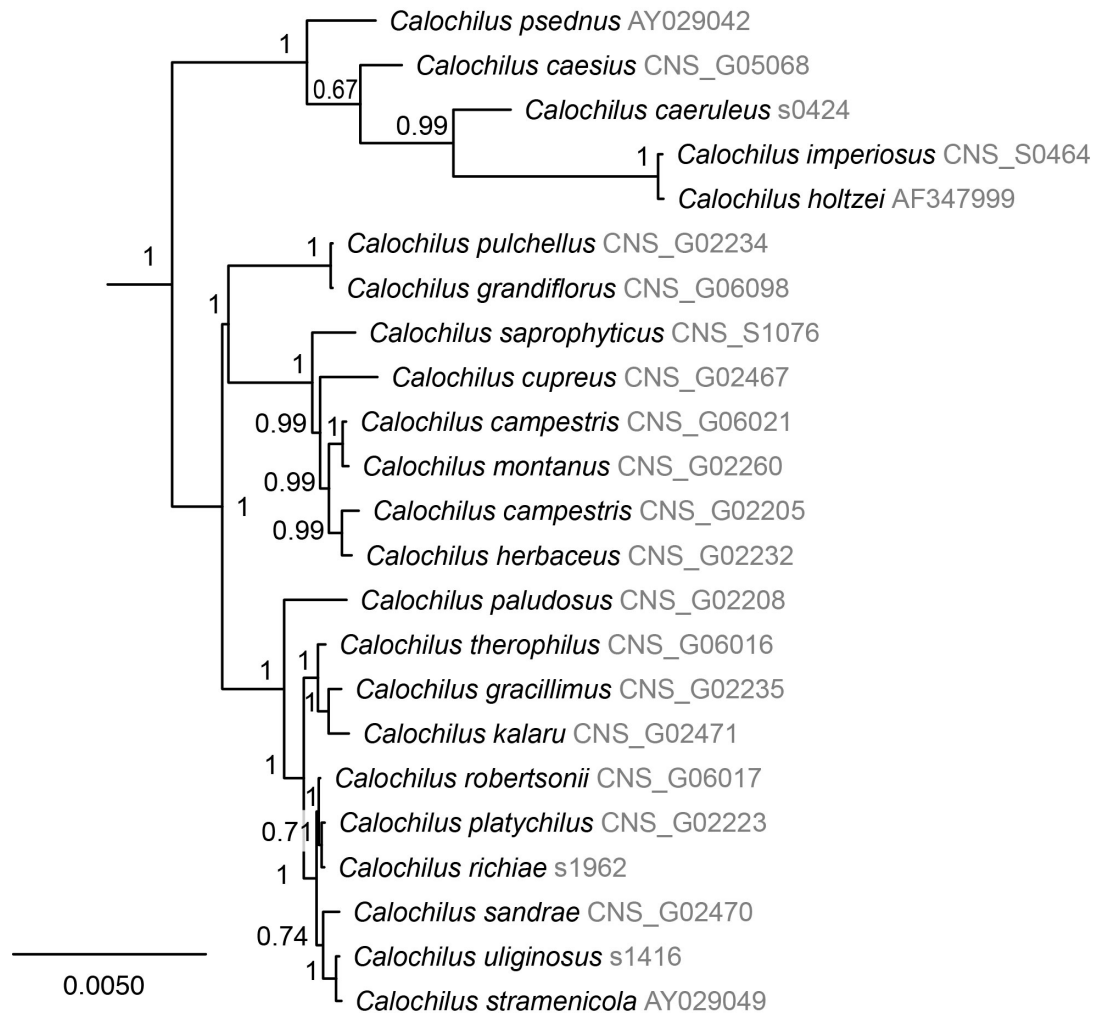


Fig. S2. Bayesian consensus tree of *Calochilus* based on 81 loci supermatrix used for ancestral character inference. Posterior probability values are shown above branches. Scale bar represents branch length along which 0.005 per-site substitutions are expected.

Table S3. Model comparison of four biogeographic models for ancestral range reconstructions in *Calochilus*

Based on maximum clade credibility tree from divergence dating analysis under the Yule tree prior and uncorrelated clock model based on five loci matrix (*matK*, *ycf1*, *trnL-trnF*, *petA-psbJ*, ITS). Log likelihoods (LnL), number of model parameters (n), Akaike Information Criterion values (AIC < Akaike 1973), and AIC weights (Akaike 1978) are given. The DEC+J model was determined as the best-fit model based on the lowest AIC score and thus was selected for ML ancestral range reconstruction in *Calochilus*

Model	LnL	n	AIC	AIC _{weighted}
DEC	-60.99	2	126	0.35
DEC+J	-59.42	3	124.8	0.62
DIVALIKE	-63.86	2	131.7	0.02
DIVALIKE+J	-63.29	3	132.6	0.013

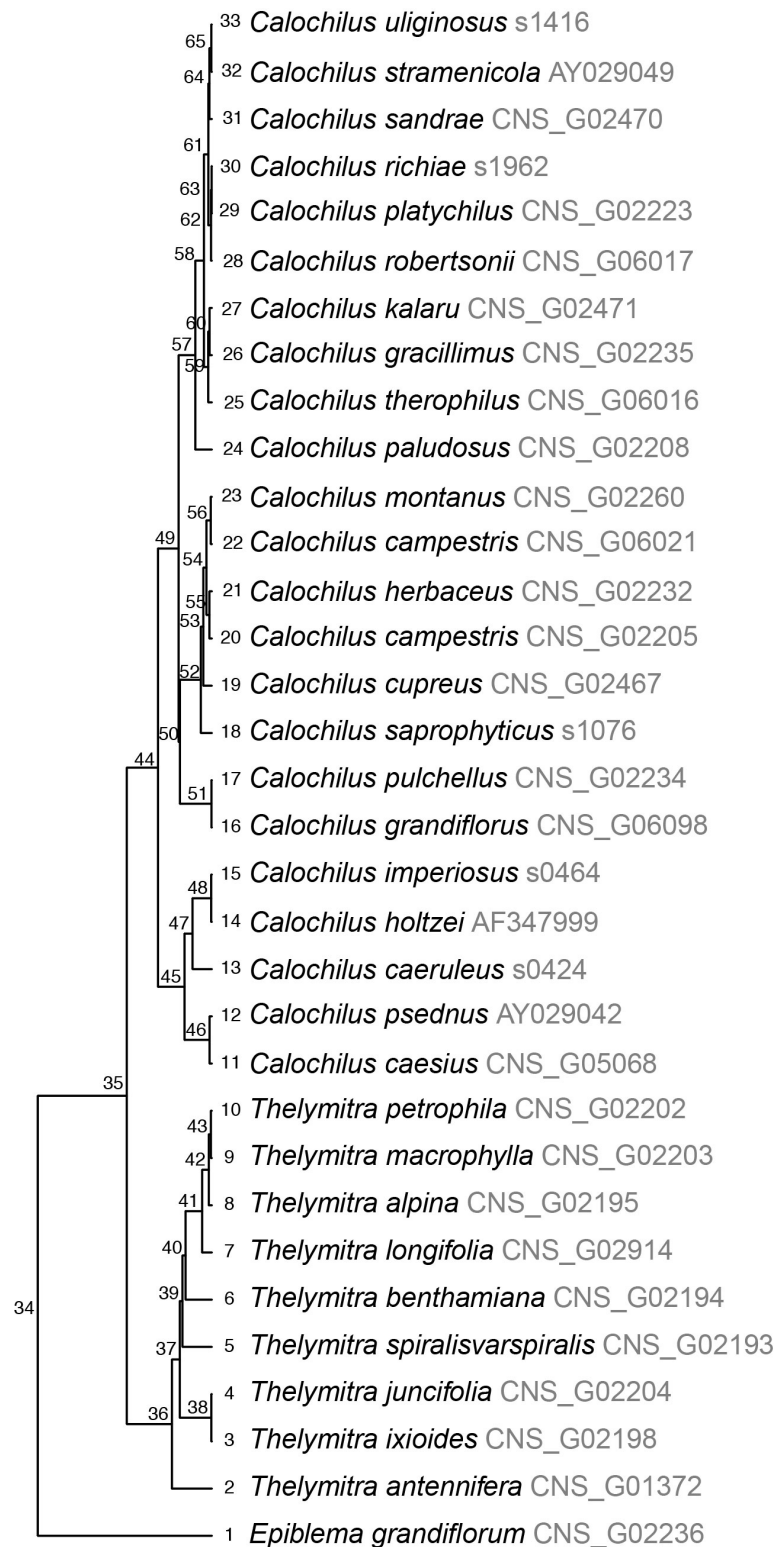


Fig. S3. Maximum clade credibility tree from Bayesian divergence time estimation based on 5-locus matrix (*matK*, *ycf1*, *trnL-trnF*, *petA-psbJ*, ITS) under the Yule tree prior and an uncorrelated clock model used for ancestral area reconstruction. Nodes and tips are numbered consecutively.

References

- Akaike, H (1973) Information theory and an extension of the maximum likelihood principle. In 'Proceedings of the Second International Symposium on Information Theory'. (Eds BN Petrov, F. Caski) pp. 267–281. (Akademiai Kiado: Budapest, Hungary)
- Akaike, H (1978) On the likelihood of a time series model. *The Statistician* **27**, 217.
- Clements MA, Jones DL, Sharma IK, Nightingale ME, Garratt MJ, Fitzgerald KJ, Mackenzie AM, Molloy BPJ (2002) Phylogenetics of Diurideae (Orchidaceae) based on the internal transcribed spacer (ITS) regions of nuclear ribosomal DNA. *Lindleyana* **17**, 135–171
- Nauheimer L, Schley R, Clements MA, Micheneau C, Nargar K (2018) Australasian orchid biogeography at continental scale: molecular phylogenetic insights from the sun orchids (Thelymitra, Orchidaceae). *Molecular Phylogenetics and Evolution* **127**, 304–319