

Supplementary table 1. New species accession numbers in BOLD, GenBank and station data. AMPIV001-17 - *Rhachotropis* cf. *proxima* used as an outgroup

Process ID	Sample ID	Expedition	Station	Position start		Position end		Depth [m]	Date	ZMK ID	BIN	GenBank	
				Latitude	Longitude	Latitude	Longitude					16S	COI
AJAKK454-16	3-9S_Eusi4_2012_1	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51051	BOLD:ADH6163	x	MH272122
AJAKK455-16	3-9S_Eusi4_2012_2	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51053	BOLD:ADH6163	x	MH272107
AJAKK457-16	3-9S_Eusi4_2012_4	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51054	BOLD:ADH6163	x	MH272111
AJAKK459-16	3-9S_Eusi4_2012_6	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51055	BOLD:ADH6163	x	MH272113
AJAKK462-16	3-9S_Eusi4_2012_9	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51056	BOLD:ADH6927	MH272097	MH272118
AJAKK463-16	3-9S_Eusi4_2012_10	KBI	3-9	47° 14.66' N	154° 42.88' E	47° 14.76' N	154° 43.03' E	4987-4991	2012-08-05	SMF 51052	BOLD:ADH6163	x	MH272119
AJAKK476-16	12-4S_Eusi4_2012_1	KBI	12-4	39° 42.78° N	147° 09.55' E	39° 42.49' N	147° 09.37' E	5224-5215	2012-09-01	SMF 51045	BOLD:ADH6927	x	MH272117
AJAKK988-17	17E_Rhac1_2016_1	KBII	17	45° 52.04' N	153° 51.39' E	45° 51.40' N	153° 50.41' E	8185.7-8183.7	2016-08-22	SMF 51045	BOLD:ADF5254	x	MH272109
AJAKK927-17	17S_Rhac_2016_1	KBII	17	45° 52.04' N	153° 51.39' E	45° 51.40' N	153° 50.41' E	8185.7-8183.7	2016-08-22	x	BOLD:ADF5254	x	MH272103
AJAKK938-17	19S_Rhac_2016_1	KBII	19	45° 52.02' N	153° 51.15' E	45° 51.41' N	153° 50.21' E	8192.7-8187	2016-08-23	x	BOLD:ADF5254	x	MH272112
AJAKK989-17	19S_Rhac1_2016_2	KBII	19	45° 52.02' N	153° 51.15' E	45° 51.41' N	153° 50.21' E	8192.7-8187	2016-08-23	SMF 51046	BOLD:ADF5254	x	MH272127
AJAKK990-17	28E_Rhac1_2016_1	KBII	28	45° 54.43' N	152° 47.02' E	45° 54.52' N	152° 47.20' E	6050.2-6047.1	2016-08-25	SMF 51047	BOLD:ADF5254	MH272096	MH272100
AJAKK991-17	28S_Rhac1_2016_1	KBII	28	45° 54.43' N	152° 47.02' E	45° 54.52' N	152° 47.20' E	6050.2-6047.1	2016-08-25	SMF 51048	BOLD:ADF5254	x	MH272121
AJAKK934-17	30S_Rhac_2016_1	KBII	30	45° 56.38' N	152° 56.70' E	45° 56.83' N	152° 50.93' E	6228.3-6163.7	2016-08-27	x	BOLD:ADF5254	x	MH272126
AJAKK992-17	30S_Rhac1_2016_2	KBII	30	45° 56.38' N	152° 56.70' E	45° 56.83' N	152° 50.93' E	6228.3-6163.7	2016-08-27	SMF 51049	BOLD:ADF5254	x	MH272106
AJAKK993-17	30S_Rhac1_2016_3	KBII	30	45° 56.38' N	152° 56.70' E	45° 56.83' N	152° 50.93' E	6228.3-6163.7	2016-08-27	SMF 51050	BOLD:ADF5254	x	MH272116
AJAKK945-17	40E_Rhac_2016_1	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	x	BOLD:ADF5254	x	MH272104
AJAKK996-17	40S_Rhac1_2016_2	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51057	BOLD:ADF5254	x	MH272120
AJAKK997-17	40S_Rhac1_2016_3	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51058	BOLD:ADF5254	x	MH272102
AJAKK998-17	40S_Rhac1_2016_4	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51059	BOLD:ADF5254	x	MH272101
AJAKK1000-17	40S_Rhac1_2016_6	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51060	BOLD:ADF5254	x	MH272105

AJAKK1001-17	40S_Rhac1_2016_7	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51061	BOLD:ADF5254	x	MH272114
AJAKK1002-17	40S_Rhac1_2016_8	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51062	BOLD:ADF5254	MH272098	MH272123
AJAKK1003-17	40S_Rhac1_2016_9	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51063	BOLD:ADF5254	x	MH272110
AJAKK995-17	40S_Rhac1_2016_10	KBII	40	45° 38.00' N	152° 55.95' E	45° 40.83' N	152° 57.68' E	7300.3-7055.2	2016-08-29	SMF 51064	BOLD:ADF5254	x	MH272125
AJAKK946-17	42S_Rhac_2016_1	KBII	42	45° 39.62' N	152° 56.39' E	45° 40.26' N	152° 57.63' E	7110.6-7119.6	2016-08-30	x	BOLD:ADF5254	x	MH272108
AJAKK1051-17	85S_Rhac1_2016_186U	KBII	85	45° 02.26' N	151° 02.14' E	45° 01.64' N	151° 03.68' E	4903.4-5265.6	2016-09-15	x	BOLD:ADH6163	x	MH272124
AJAKK1059-17	97S_Rhac1_2016_238U	KBII	97	44° 05.68' N	151° 24.88' E	44° 06.94' N	151° 24.88' E	6440.4-6560.7	2016-09-18	x	BOLD:ADF5254	MH272099	MH272115
AMPIV001-17	DZMB-HH 52103	IceAGE	1019/1	62° 56.34' N	20° 44.64' W	x	x	913.6	2011-09-03	x	BOLD:ADH1784	x	MG521128