

SI. List of the material examined in this study. For each specimen we list code, identification, molecular clade within the Lobophylliidae, sampling locality, collector, and COI, histone H3, and ITS region sequences used for the phylogenetic reconstructions.

Code	Species	Clade	Sampling locality	Collector	COI	H3	ITS region
WAM Z65785	<i>Australomussa rowleyensis</i>	I	Australia	Z. Richards	LK022344	LK022380	LK022359
WAM Z65786	<i>Australomussa rowleyensis</i>	I	Australia	Z. Richards	LK022345	LK022381	LK022360
WAM Z65787	<i>Australomussa rowleyensis</i>	I	Australia	Z. Richards	LK022346	LK022382	LK022361
WAM Z65788	<i>Australomussa rowleyensis</i>	I	Australia	Z. Richards	LK022347	LK022383	LK022362
WAM Z65789	<i>Australomussa rowleyensis</i>	I	Australia	Z. Richards	LK022348	LK022384	LK022363
6816	<i>Parascolymia vitiensis</i>	I	Australia	A. Baird		LK022385	LK022364
6830	<i>Parascolymia vitiensis</i>	I	Australia	A. Baird	LK022349	LK022386	LK022365
IRD HS2955	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	LK022350	LK022387	LK022366
IRD HS2964	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	LK022351		LK022367
IRD HS2984	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	LK022352	LK022388	LK022368
IRD HS2985	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	LK022353	LK022389	LK022369
IRD HS3139	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	LK022354	LK022390	LK022370
IRD HS3255	<i>Parascolymia vitiensis</i>	I	New Caledonia	F. Benzoni	HF954202	LK022391	HF954289
UNIMIB PFB031	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	HF954203	LK022392	HF954290
UNIMIB PFB032	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni		LK022393	LK022371
UNIMIB PFB033	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni			LK022372
UNIMIB PFB052	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	LK022355	LK022394	LK022373
UNIMIB PFB053	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni			LK022374
UNIMIB PFB054	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	LK022356	LK022395	LK022375
UNIMIB PFB055	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni		LK022396	LK022376
UNIMIB PFB056	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	LK022357		LK022377
UNIMIB PFB057	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	HF954204	LK022397	HF954291
UNIMIB PFB151	<i>Parascolymia vitiensis</i>	I	Papua New Guinea	F. Benzoni	LK022358	LK022398	LK022378

UNIMIB PFB152	<i>Parascalymia vitiensis</i>	I	Papua New Guinea	F. Benzoni		LK022399	LK022379
UNIMIB BA117	<i>Micromussa amakusensis</i>	A	Gulf of Aden	F. Benzoni		LK022400	
UNIMIB MU215	<i>Micromussa amakusensis</i>	A	Gulf of Aden	F. Benzoni		LK022401	
RMNH coel 40070	<i>Phymastrea multipunctata</i>	A	Sabah, Malaysia	B.W. Hoeksema		LK022402	
IRD HS3169	<i>Acanthastrea hillae</i>	B	New Caledonia	F. Benzoni		LK022403	
IRD HS3225	<i>Acanthastrea hillae</i>	B	New Caledonia	F. Benzoni		LK022404	
IRD HS3298	<i>Acanthastrea bowerbanki</i>	B	New Caledonia	F. Benzoni		LK022405	
UNIMIB BA136	<i>Acanthastrea maxima</i>	C	Gulf of Aden	F. Benzoni		LK022406	
UNIMIB MU161	<i>Acanthastrea maxima</i>	C	Gulf of Aden	F. Benzoni		LK022407	
UNIMIB DJ288	<i>Acanthastrea echinata</i>	E	Djibouti	F. Benzoni		LK022408	
IRD HS3228	<i>Acanthastrea subechinata</i>	E	New Caledonia	F. Benzoni		LK022409	
UNIMIB PFB259	<i>Acanthastrea rotundoflora</i>	E	Papua New Guinea	F. Benzoni		LK022410	
IRD HS3065	<i>Acanthastrea hemprichii</i>	E	New Caledonia	F. Benzoni		LK022411	
UNIMIB BA001	<i>Echinophyllia aspera</i>	F	Gulf of Aden	F. Benzoni		LK022412	
UNIMIB PFB189	<i>Echinophyllia echinoporoides</i>	F	Papua New Guinea	F. Benzoni		LK022413	
IRD HS3248	<i>Echinophyllia orpheensis</i>	F	New Caledonia	F. Benzoni		LK022414	
IRD HS3171	<i>Echinophyllia echinata</i>	G	New Caledonia	F. Benzoni		LK022415	
IRD HS3172	<i>Oxypora lacera</i>	G	New Caledonia	F. Benzoni		LK022416	
IRD HS3203	<i>Oxypora lacera</i>	G	New Caledonia	F. Benzoni		LK022417	
UNIMIB MY011	<i>Cynarina lacrymalis</i>	H	Mayotte	F. Benzoni		LK022418	
IRD HS1604	<i>Cynarina lacrymalis</i>	H	New Caledonia	F. Benzoni		LK022419	
UNIMIB AD003	<i>Lobophyllia corymbosa</i>	I	Gulf of Aden	F. Benzoni		LK022420	
UNIMIB GA024	<i>Lobophyllia costata</i>	I	Gambier	F. Benzoni		LK022421	
UNIMIB BA134	<i>Lobophyllia hemprichii</i>	I	Gulf of Aden	F. Benzoni		LK022422	
UNIMIB PFB183	<i>Lobophyllia robusta</i>	I	Papua New Guinea	F. Benzoni		LK022423	
UNIMIB	<i>Symphyllia</i>	I	Papua New	F. Benzoni		LK022424	

PFB104	<i>agaricia</i>		Guinea				
UNIMIB BA107	<i>Symphyllia radians</i>	I	Gulf of Aden	F. Benzoni		LK022425	
IRD HS3118	<i>Symphyllia recta</i>	I	New Caledonia	F. Benzoni		LK022426	
IRD HS3135	<i>Symphyllia valenciennesii</i>	I	New Caledonia	F. Benzoni		LK022427	