Supporting Information for

Deconstructing an infamous extinction crisis: survival of *Partula* species on Moorea and Tahiti

Amanda E. Haponski, Taehwan Lee, Diarmaid Ó Foighil

Evolutionary Applications

Table S1 Summary of *Partula* species and individuals used for ddRADseq data collection. Information for each individual includes island, valley, and site of origin, University of Michigan's Museum of Zoology (UMMZ) individual identification number, UMMZ shell voucher catalog number, and species complex designations for Moorean and Tahitian specimens. See Figures 3 and S1 for placement on the tree and Figures 5 and 6 for species complex assignments. Individuals from the "*P. otaheitana*" and "*P. clara/P. hyalina*" species complexes are labelled with their corresponding clade/population identifier (i.e., A, B, C). Black= 1970 lyophilized individuals collected by J.B. Burch, blue= remnant valley population samples, and red= captive population specimens.

Species	Island	Valley	Site	Individual	Voucher #	Species Complex
P. aurantia Crampton 1932	Moorea	Faamaariri (300m)	270	M1	300516	"*P. suturalis*"
P. exigua Crampton 1917	Moorea	Paparoa (300m)	268	132b1	300508	"*P. taeniata*"
		Faamaariri (150m)	269	51a1	300512	"*P. taeniata*"
P. mirabilis Crampton 1924	Moorea	Matapoopoo (150-250m)	273	M9	300531	"*P. taeniata*"
		Matapoopoo (150-250m)	273	130d1	300533	"*P. taeniata*"
		Mouaroa (200-300m)	275	PM67a1	300492	"*P. suturalis*"
		Fareaito	11	PMIZ1	301016	"*P. suturalis*"
P. m. propinqua Crampton 1932	Moorea	Matapoopoo (150-250m)	273	135a3		"*P. suturalis*"
P. mooreana Hartman 1830	Moorea	Atimaha Ridge	13	MOOM2	301018	"*P. suturalis*"
P. suturalis Pfeiffer 1855	Moorea	Faamaariri (300m)	270	116a1	300519	"*P. suturalis*"
		Hotutea (620-700m)	279	118b1	300557	"*P. suturalis*"
		Hotutea (620-700m)	279	118d1	300557	"*P. suturalis*"
P. s. suturalis (Pfeiffer 1855)	Moorea	Hotutea (400-480m)	276	121d1	300556	"*P. suturalis*"
		Hotutea (620-700m)	279	123b1	300558	"*P. suturalis*"
		Maatea	12	STRM1	301019	"*P. suturalis*"
P. s. vexillum (Pease 1866)	Moorea	Mt. Tautua (350m)	261	M7	300487	"*P. suturalis*"
		Paparoa (350m)	268	126c1	300505	"*P. suturalis*"
		Matapoopoo (400m)	274	50b1	300537	"*P. suturalis*"
		Mouaroa (200-300m)	275	127a1	300539	"*P. suturalis*"
		Fareaito	11	VEXM1	301021	"*P. suturalis*"
		Vaianai	14	VEXM2	301022	"*P. suturalis*"
P. taeniata (Mörch 1850)	Moorea	Faatoai	261	M10	300489	"*P. taeniata*"
		Paparoa (100m)	267	131b1	300496	"*P. taeniata*"
		Mt. Rotui (150-250m)	273	130a1	300527	"*P. taeniata*"
		Mt. Rotui (150-250m)	273	130c1	300532	"*P. taeniata*"
		Hotutea (400-480m)	276	PS136a1	300544	"*P. taeniata*"

		Faatoai	15	NUCM1	301023	"*P. taeniata*"
		Haumi	2	PHAU		"*P. taeniata*"
		Opunohu Bay	5	TAEH1		"*P. taeniata*"
		Mt. Tohiea (1150m)	6	MTOI2		"*P. suturalis*"
P. tohiveana Crampton 1924	Moorea	Hotutea (480m)	278	M5	300547	"*P. suturalis*"
		Fareaito	11	TOHM1	301026	"*P. suturalis*"
P. affinis Pease 1867	Tahiti	Afeu R.	107	73a1	300363	"*P. otaheitana*" A
		Tirahi	139	Y30	300409	"*P. affinis*"
		Vaitepiha	142	75a1	300411	"*P. affinis*"
		Vaitehoro R.	152	76a1	300417	"*P. affinis*"
		Ahaavini	161	79a1	300441	"*P. affinis*"
		Tiitauiri R.	174	80a1	300452	"*P. affinis*"
		Tereia R.	178	28a1	300464	"*P. otaheitana*" A
		Fareteuira R.	198	83a1	300476	"*P. affinis*"
		Tuaura R.	211	84a1	300482	"*P. affinis*"
		Te Pari District	3	PAZL1	300560	"*P. affinis*"
P. clara Pease 1864	Tahiti	Taharuu R.	125	26a1	300393	*"P. clara/P. hyalina"* C
		Tahiria R.	169	46a1	300453	*"P. clara/P. hyalina"* C
		Tahiria R.	169	46b1	300454	*"P. clara/P. hyalina"* C
		Paihau R.	224	48a2		*"P. clara/P. hyalina"* B
		Maruapo (120m)	14	PCTM		*"P. clara/P. hyalina"* B
P. c. incrassa Crampton 1916		Tiapa	37	PCTI		*"P. clara/P. hyalina"* B
P. diminuta Adams 1851	Tahiti	Pirae	200	54a4	300428, 429	"*P. otaheitana*" B
		Pirae	200	54d2	300479	"*P. otaheitana*" B
P. hyalina Broderip 1832	Tahiti	Tetiairiroa	192	60a1	300471	*"P. clara/P. hyalina"* A
		Haapupuni	4	PHTH2		*"P. clara/P. hyalina"* A
		Matatia (120m)	15	PHTM		*"P. clara/P. hyalina"* A
	Austral Is.	Falises de Matonaa		PHRM1	300610	*"P. clara/P. hyalina"* A
		Rimatara		PHRM314		*"P. clara/P. hyalina"* A
P. h. marmorata (Crampton 1916)		Toheimahu R.	135	41a1	300396, 398	*"P. clara/P. hyalina"* A
		Vaitepiha	142	43a1	300412	*"P. clara/P. hyalina"* A
P. nodosa composita Crampton 1917	Tahiti	Punaruu R.	91	Y28		"*P. otaheitana*" B
P. n. intermedia Crampton 1917	Tahiti	Papehue R.	44	PNZL1	300565	"*P. otaheitana*" A
P. otaheitana (Brugière 1789)	Tahiti	Punaruu R.	94	49a1	300359	"*P. otaheitana*" A
		Moaroa R.	120	39a11	300386	"*P. affinis*"
		Tirahi R.	138	72a1	300408	"*P. affinis*"
		Mt. Marau	5	POZL12	300567	"*P. otaheitana*" B
		Mt. Marau	5	POZL4	300570	"*P. otaheitana*" B
		Mt. Aorai Fare Mato (1400m)	1	POMA		"*P. otaheitana*" B
		Mt. Aorai Fare Mato (1400m)	1	POMA1		"*P. otaheitana*" B

P. o. crassa Pease 1884	Tahiti	Punaruu R.	90	Y2-2	300357	"*P. otaheitana*" B
		Orofero	99	Y35	300361	"*P. otaheitana*" A
P. o. otaheitana (Brugière 1789)	Tahiti	Fautaua R.	144	93a1	300414	"*P. otaheitana*" B
		Fautaua R.	144	Y37	300414	"*P. otaheitana*" B
		Tipaerui Valley	217	Y36	300431	"*P. otaheitana*" B
		Fautaua R.	221	101a1	300485	"*P. otaheitana*" B
P. o. rubescens Reeve 1850	Tahiti	Ahaavini	159	97b1	300419, 421-4	"*P. affinis*"
		Onoheha	186	98a1	300425	"*P. affinis*"
		Tetiairiroa	192	99b1	300468	"*P. affinis*"
		Tetiairiroa	192	99c1	300468	"*P. affinis*"
		Taravao Plateau	243	100a1	300434	"*P. affinis*"
		Mt. Atara (1050m)	10	PRIA		"*P. affinis*"
P. o. sinistrorsa Pease 1884	Tahiti	Afeu R.	107	109a1	300365, 366	"*P. otaheitana*" A
		Temarua	110	Y39	300372	"*P. otaheitana*" A
		Temarua	113	104b1	300376	"*P. otaheitana*" A
		Temarua	113	104c1	300377	"*P. otaheitana*" A
		Faurahi R.	117	110b1	300378	"*P. otaheitana*" A
		Moaroa R.	120	111c1	300385, 387	"*P. otaheitana*" A
		Papeiti R.	123	Y40	300389, 390	"*P. otaheitana*" A
		Taharuu R.	125	Y18	300391, 393	"*P. otaheitana*" A
		Tahiria R.	170	Y42	300455	"*P. otaheitana*" A
		Tereia R.	180	106a1	300465	"*P. otaheitana*" A
P. producta Pease 1865	Tahiti	Afeu R.	106	108b1	300362	"*P. affinis*"
		Faurahi R.	117	Y10	300379	"*P. otaheitana*" A
		Faurahi R.	117	Y44	300379	"*P. otaheitana*" A
		Toheimahu R.	135	71a1	300397	"*P. otaheitana*" A
P. sp.	Tahiti	Mt. Marau	16	PTMT4		"*P. otaheitana*" B
P. rosea Broderip 1832	Huahine	Mauhuti		ROSH1	304374	
P. varia Broderip 1832	Huahine			VARH1	304375	
P. clarkei (Pease 1865)	Raiatea			PTUG1	300630	
				PTUG2	300630	
				PTUG4	300630	
P. faba (Gmelin 1791)	Raiatea	Vaiaau		33a2	300633	
		Tupua Bay		35a1	300632	
		Hamoa		FABR3	300631	
P. garrettii Crampton and Cooke 1953	Raiatea	Tevaitoa		TRIR1	300629	
P. hebe (Pfeiffer 1846)	Raiatea	Vaiaau		31a2	300622	
P. h. bella Pease 1881	Raiatea	Hotopuu		HEBR1	300623	
P. meyeri Burch 2007	Raiatea	Mt. Tefatua (950m)		SRMT	300621	
P. navigatoria Pfeiffer 1854	Raiatea	Hamoa		DENR1	300624	
				DENR2	300624	

P. assimilis Pease 1868	Rarotonga, Cook Is.	Takuraine		PHRT1	304370
P. lutea Lesson 1831	Bora Bora	Mt. Pahia		65a1	304371
Outgroups					
P. auraniana Hartman 1888	Toga, Vanuatu			PVT27-1	
P. cramptoni	Bellona, Solomon Is.			B1	305032
	Bellona, Solomon Is.			B2	305032
P. lirata Mousson 1865	Thikombia-i-lau, Fiji			PLIR3	304368
	Thikombia-i-lau, Fiji			PLIR4	304368
P. pacifica Pfeiffer 1860	Erromango, Vanuatu			PTUN2	FMNH175385
				PTUN4	FMNH175385
	Tanna, Vanuatu			PTUR7	FLMNH58233
Samoana attenuata (Pease 1864)	Tahiti	Haapupuni (115m)		SATH	
S. burchi Kondo 1973	Tahiti	Taravao Plateau	243	SS23a1	300433
S. diaphana (Crampton and Cooke 1953)	Moorea	Hotutea	279	SD25a1	300548

Table S2 Summary of ddRADseq data for each partulid individual including the number of raw reads, number of loci passing the paralog filter with a sequencing depth >6, and mean depth of loci with sequencing depth >6 for 85, 90, and 95% similarity thresholds. Black= 1970 lyophilized individuals collected by J.B. Burch, blue= remnant valley population samples, and red= captive population specimens.

			85% similarity		90% similarity		95% similarity	
Species	Individual	Raw reads	Loci	Depth	Loci	Depth	Loci	Depth
P. aurantia	M1	1,603,738	26,353	42.9	28,131	42.3	29,586	40.5
P. exigua	132b1	1,029,088	26,068	26.1	27,609	25.7	28,489	24.7
	51a1	1,260,058	22,944	41.0	24,105	40.5	24,748	39.2
P. mirabilis	M9	876,599	20,906	21.5	22,232	21.2	23,072	20.6
	130d1	1,397,447	25,165	35.6	26,857	35.2	28,206	33.8
	PM67a1	2,261,899	28,957	62.4	30,921	61.2	32,790	58.0
	PMIZ1	1,717,056	24,736	51.9	25,975	51.3	26,713	49.8
P. m. propinqua	135a3	1,230,250	24,900	37.0	26,457	36.4	27,664	35.0
P. mooreana	MOOM2	3,181,640	31,431	80.8	34,389	79.1	37,156	76.3
P. suturalis	116a1	2,192,660	30,457	53.6	33,770	52.4	37,009	50.1
	118b1	2,521,705	30,471	60.8	33,719	59.3	37,130	56.5
	118d1	2,015,712	27,714	54.2	30,498	53.4	33,389	50.9
P. s. suturalis	121d1	2,406,404	30,590	58.3	33,569	57.2	36,818	54.7
	123b1	2,529,319	33,772	55.3	37,516	54.0	41,361	51.4
	STRM1	2,072,644	26,210	63.1	28,498	61.8	30,773	59.4
P. s. vexillum	M7	1,421,901	24,460	41.7	26,994	40.6	29,332	39.2
	126c1	2,777,238	31,515	70.8	33,718	69.2	36,122	65.6
	50b1	1,464,583	23,832	45.9	25,852	45.3	27,722	43.9
	127a1	2,208,049	29,393	56.3	32,419	55.0	35,543	52.5
	VEXM1	2,009,859	26,435	60.3	28,689	59.2	30,912	57.1
	VEXM2	2,195,398	26,889	65.2	29,250	64.0	31,601	61.7
P. taeniata	M10	1,201,048	28,012	27.8	29,546	27.4	30,500	26.4
	131b1	965,658	27,158	24.3	28,613	23.9	29,382	23.0

	130a1	1,686,229	33,518	37.6	35,614	36.9	37,206	35.2
	130c1	1,503,655	28,720	37.8	30,150	37.4	31,281	35.6
	PS136a1	1,047,840	26,202	25.9	27,597	25.6	28,351	24.7
	NUCM1	2,903,135	31,606	71.4	34,722	70.1	37,609	67.5
	PHAU	1,647,003	35,429	35.7	37,468	35.0	38,807	33.5
	TAEH1	1,433,170	30,508	34.4	32,026	33.9	33,015	32.6
	MTOI2	1,071,454	19,949	27.1	21,115	26.9	21,797	26.7
P. tohiveana	M5	1,150,028	22,959	32.2	24,416	31.9	25,378	30.8
	TOHM1	2,061,075	26,663	61.8	28,961	60.8	31,228	58.5
P. affinis	73a1	2,113,990	27,649	57.3	30,460	56.0	33,182	53.6
	Y30	2,416,205	30,613	60.4	33,476	59.1	36,411	56.7
	75a1	2,070,268	29,492	52.8	32,203	52.0	34,688	50.3
	76a1	1,674,304	25,873	48.7	28,325	47.5	30,791	45.4
	79a1	1,940,454	29,069	50.5	31,838	49.5	34,644	47.5
	80a1	2,271,322	29,632	56.9	32,653	55.4	35,521	53.3
	28a1	2,267,876	28,612	60.1	31,449	58.7	34,339	56.2
	83a1	2,027,464	28,746	52.1	31,650	51.0	34,573	48.9
	84a1	1,282,175	24,337	38.8	26,498	38.1	28,728	36.4
	PAZL1	2,470,161	29,780	66.3	32,478	64.9	35,154	62.8
P. clara	26a1	1,485,937	25,572	44.0	26,530	43.8	27,029	42.6
	46a1	1,092,449	25,884	28.2	27,099	27.8	27,691	26.9
	46b1	1,382,197	24,765	41.5	26,220	40.8	27,009	39.9
	48a2	1,399,520	25,698	41.1	26,703	40.7	27,120	39.3
	PCTM	1,469,706	31,231	36.1	32,612	35.8	33,179	34.6
P. c. incrassa	PCTI	1,417,747	35,101	27.9	38,558	27.8	41,240	27.0
P. diminuta	54a4	1,546,869	26,304	42.7	29,013	41.8	31,565	40.8
	54d2	1,647,106	28,150	41.9	31,049	41.4	33,619	40.7
P. hyalina	60a1	1,204,836	26,725	31.9	27,961	31.6	28,336	30.7
	PHTH2	4,850,061	35,995	113.8	38,257	112.0	40,090	108.1
	PHTM	2,035,731	35,567	45.7	37,455	44.7	38,050	43.0
	PHRM1	2,259,592	39,083	46.1	41,249	45.1	42,354	43.1

	PHRM314	282,185	13,802	12.0	14,309	11.7	14,265	11.3
P. h. marmorata	41a1	1,148,513	26,272	29.7	27,578	29.5	28,076	28.7
	43a1	1,111,388	26,473	27.5	27,674	27.1	28,078	26.2
P. nodosa composita	Y28	1,751,729	27,570	44.9	30,491	44.2	33,172	43.3
P. n. intermedia	PNZL1	1,619,568	32,603	36.1	34,944	35.6	36,996	34.9
P. otaheitana	49a1	2,218,454	30,518	52.8	33,721	52.0	36,830	50.8
	39a11	2,415,294	32,519	52.1	36,105	51.3	39,331	50.3
	72a1	2,045,871	28,955	51.9	32,044	51.3	34,740	50.3
	POZL12	976,584	26,930	24.8	29,078	24.5	30,947	24.0
	POZL4	2,177,854	32,890	49.9	36,106	49.6	38,774	48.6
	POMA	1,855,373	27,335	53.0	29,823	52.1	32,223	51.2
	POMA1	2,185,828	28,737	57.9	31,584	57.2	33,952	56.3
P. o. crassa	Y2-2	1,879,754	28,820	44.5	32,032	43.8	34,971	42.9
	Y35	1,536,598	26,213	41.5	28,999	40.8	31,522	40.0
P. o. otaheitana	93a1	1,689,707	27,275	44.4	30,222	43.6	32,889	42.6
	Y37	2,269,001	30,328	51.5	33,765	50.7	36,956	49.8
	Y36	1,968,658	29,682	47.4	32,931	46.7	35,977	45.6
	101a1	2,314,825	30,088	61.0	32,135	59.6	34,115	57.0
P. o. rubescens	97b1	1,230,760	26,194	32.2	28,983	31.6	31,432	30.9
	98a1	1,665,443	26,179	46.0	28,761	45.3	30,967	44.8
	99b1	2,056,240	29,291	52.2	32,504	51.2	35,447	49.9
	99c1	1,727,192	26,377	47.9	28,972	47.2	31,380	46.4
	100a1	2,338,609	31,886	58.1	34,097	56.7	36,168	54.2
	PRIA	2,281,567	28,926	59.8	31,572	59.2	33,931	58.3
P. o. sinistrorsa	109a1	1,877,837	27,340	51.7	28,939	50.9	30,530	48.7
	Y39	2,199,338	28,798	58.6	30,603	57.7	32,423	55.1
	104b1	1,678,464	26,658	49.2	28,269	48.5	29,828	46.5
	104c1	1,754,959	25,829	51.7	27,259	50.8	28,550	49.1
	110b1	1,812,334	27,744	51.9	29,541	51.1	31,165	49.2
	111c1	1,160,317	25,323	33.7	26,920	33.2	27,991	32.1
	Y40	1,815,907	26,089	51.0	27,663	50.2	29,052	48.4

	Y18	2,765,922	32,245	64.9	34,515	64.1	36,794	61.2
	Y42	1,982,348	27,425	52.6	29,191	51.8	30,715	49.8
	106a1	1,814,093	25,488	54.0	26,962	53.4	28,008	51.7
P. producta	108b1	2,296,056	29,406	61.4	31,291	60.4	33,087	57.8
	Y10	5,705,274	67,382	56.7	75,243	56.4	84,320	55.1
	Y44	1,626,373	26,801	45.6	28,542	44.9	29,832	43.4
	71a1	2,135,448	30,730	50.1	33,898	49.4	36,846	48.4
P. sp.	PTMT4	1,388,918	25,724	40.3	28,215	39.8	30,364	39.1
P. rosea	ROSH1	1,962,303	24,827	63.6	26,054	62.8	26,799	61.1
P. varia	VARH1	1,485,876	24,346	46.2	25,649	45.8	26,682	44.0
P. clarkei	PTUG1	502,806	19,321	16.2	20,206	16.0	20,734	15.7
	PTUG2	998,489	36,246	17.5	39,360	17.2	41,610	16.9
	PTUG4	2,651,654	50,726	35.5	55,875	35.0	60,359	33.8
P. faba	33a2	1,481,920	23,871	43.8	25,256	43.1	26,279	41.8
	35a1	1,138,968	23,186	35.8	24,532	35.2	25,651	33.8
	FABR3	1,201,712	24,299	35.6	25,509	35.3	26,372	34.1
P. garrettii	TRIR1	1,936,840	29,198	53.5	31,116	52.3	32,338	50.4
P. hebe	31a2	1,483,777	24,278	44.3	25,715	43.6	26,833	41.9
P. h. bella	HEBR1	1,632,905	24,614	52.9	25,937	52.2	26,828	50.5
P. meyeri	SRMT	2,007,575	25,812	59.4	27,115	58.6	28,149	56.4
P. navigatoria	DENR1	2,392,057	26,431	70.3	27,849	69.0	28,947	66.6
	DENR2	1,426,305	24,036	44.9	25,324	44.4	26,212	42.9
P. assimilis	PHRT1	2,933,054	29,828	78.0	31,341	77.3	32,119	75.3
P. lutea	65a1	2,235,354	28,396	62.0	30,227	60.9	31,965	57.7
Outgroups								
P. auraniana	PVT27-1	1,390,541	24,354	44.7	25,617	44.2	26,169	43.0
P. cramptoni	B1	2,744,600	26,546	79.8	28,009	79.0	28,758	77.1
	B2	2,925,185	28,931	85.3	30,789	84.2	32,208	81.1
P. lirata	PLIR3	804,236	22,555	25.9	23,798	25.7	24,455	25.3
	PLIR4	834,187	30,491	14.2	33,380	14.1	35,258	13.9

P. pacifica	PTUN2	274,845	7,753	10.6	8,377	10.5	8,492	10.3
	PTUN4	618,459	22,390	13.4	24,713	13.3	26,487	13.2
	PTUR7	165,507	5,385	9.0	5,544	9.1	5,514	8.8
Samoana attenuata	SATH	2,111,133	33,438	52.7	35,168	51.9	36,130	50.1
S. burchi	SS23a1	2,179,667	35,905	36.1	38,013	35.4	39,109	34.2
S. diaphana	SD25a1	2,342,640	37,554	47.9	39,941	46.9	41,107	44.9

Table S3 Summary of the final number of ddRADseq loci for each partulid individual for the 85, 90, and 95% similarity thresholds and 75, 50, and 25% taxon coverage datasets.

		85% Similarity			90% Similarity			95% Similarity		
Species	Individual	75%	50%	25%	75%	50%	25%	75%	50%	25%
P. aurantia	M1	1,496	6,888	8,745	2,035	9,175	11,716	2,320	9,433	13,661
P. exigua	132b1	1,343	6,764	9,113	1,817	8,986	12,064	2,097	9,187	14,085
	51a1	1,339	6,449	7,916	1,803	8,513	10,479	2,068	8,658	12,143
P. mirabilis	M9	1,212	6,238	7,368	1,619	8,259	9,847	1,881	8,410	11,366
	130d1	1,387	6,603	8,299	1,883	8,798	11,091	2,164	9,013	12,867
	PM67a1	1,482	6,900	9,184	2,002	9,168	12,207	2,278	9,417	14,129
	PMIZ1	1,489	6,810	8,581	1,984	9,002	11,389	2,251	9,202	13,126
P. m. propinqua	135a3	1,416	6,678	8,301	1,921	8,880	11,136	2,209	9,070	12,843
P. mooreana	MOOM2	1,566	4,031	9,648	2,097	5,359	12,123	2,363	6,294	15,234
P. suturalis	116a1	1,586	3,955	9,039	2,143	5,308	11,757	2,424	6,263	14,877
	118b1	1,591	4,026	9,185	2,150	5,373	11,752	2,420	6,328	14,821
	118d1	1,588	4,000	8,402	2,143	5,331	11,047	2,422	6,272	14,132
P. s. suturalis	121d1	1,587	3,971	9,219	2,144	5,320	11,792	2,418	6,232	14,850
	123b1	1,592	4,012	9,572	2,147	5,398	12,179	2,424	6,316	15,305
	STRM1	1,576	3,943	8,671	2,121	5,266	11,127	2,394	6,204	14,101
P. s. vexillum	M7	1,548	3,723	7,934	2,105	4,990	10,490	2,411	5,918	13,539
	126c1	1,549	7,267	9,923	2,095	9,699	13,215	2,374	9,890	15,230
	50b1	1,556	3,758	7,835	2,098	4,989	10,297	2,383	5,881	13,190
	127a1	1,586	3,955	8,661	2,149	5,326	11,297	2,418	6,254	14,330
	VEXM1	1,565	3,873	8,937	2,111	5,148	11,536	2,398	6,083	14,570
	VEXM2	1,570	3,873	8,972	2,114	5,163	11,525	2,380	6,100	14,531
P. taeniata	M10	1,435	6,974	9,643	1,943	9,210	12,713	2,217	9,450	14,854
	131b1	1,478	7,145	9,476	1,983	9,446	12,518	2,256	9,608	14,595

	130a1	1,559	7,559	11,290	2,098	9,955	14,731	2,361	10,226	17,198
	130c1	1,425	6,932	9,511	1,921	9,151	12,515	2,204	9,351	14,627
	PS136a1	1,354	6,720	8,943	1,821	8,849	11,750	2,074	9,052	13,788
	NUCM1	1,572	3,981	9,578	2,126	5,330	12,095	2,385	6,246	15,131
	PHAU	1,570	7,700	12,170	2,107	10,122	15,665	2,376	10,361	18,268
	TAEH1	1,526	7,377	10,696	2,046	9,682	13,926	2,329	9,970	16,366
	MTOI2	860	5,435	6,486	1,144	7,150	8,597	1,307	7,193	9,819
P. tohiveana	M5	1,306	6,452	7,931	1,770	8,567	10,592	2,034	8,755	12,277
	TOHM1	1,566	3,837	8,969	2,112	5,110	11,465	2,370	6,011	14,470
P. affinis	73a1	1,593	3,939	8,870	2,141	5,259	11,487	2,428	6,218	14,571
	Y30	1,578	3,902	9,401	2,125	5,229	12,059	2,402	6,167	15,175
	75a1	1,573	3,914	8,737	2,126	5,215	11,391	2,408	6,165	14,449
	76a1	1,561	3,829	8,113	2,117	5,132	10,643	2,397	6,034	13,578
	79a1	1,572	3,800	9,209	2,123	5,086	11,835	2,401	5,990	14,951
	80a1	1,593	3,962	9,088	2,143	5,294	11,717	2,423	6,210	14,804
	28a1	1,591	3,975	9,137	2,147	5,329	11,774	2,433	6,260	14,836
	83a1	1,581	3,840	8,916	2,139	5,155	11,598	2,409	6,097	14,754
	84a1	1,543	3,617	8,391	2,088	4,842	10,875	2,382	5,725	13,804
	PAZL1	1,567	3,928	9,855	2,107	5,228	12,328	2,373	6,140	15,372
P. clara	26a1	1,357	6,526	8,673	1,800	8,604	11,369	2,054	8,777	13,330
	46a1	1,455	7,002	9,234	1,938	9,220	12,147	2,198	9,411	14,229
	46b1	1,406	6,640	8,321	1,879	8,770	10,962	2,156	8,949	12,702
	48a2	1,451	6,925	8,933	1,958	9,160	11,835	2,229	9,374	13,857
	PCTM	1,516	7,321	10,629	2,047	9,625	13,750	2,301	9,819	15,992
P. c. incrassa	PCTI	1,522	7,059	9,512	2,057	9,390	12,480	2,316	9,708	14,712
P. diminuta	54a4	1,031	2,788	9,549	1,434	3,704	11,765	1,714	4,271	14,415
	54d2	985	2,745	9,639	1,375	3,645	11,827	1,637	4,206	14,505
P. hyalina	60a1	1,334	6,674	9,051	1,798	8,788	11,874	2,054	8,972	13,863
	PHTH2	1,573	7,991	12,614	2,105	10,450	16,145	2,358	10,627	18,738

	PHTM	1,559	7,630	11,886	2,084	10,018	15,275	2,335	10,234	17,713
	PHRM1	1,574	7,811	12,825	2,117	10,229	16,355	2,372	10,469	19,094
	PHRM314	912	4,216	4,585	1,221	5,630	6,160	1,408	5,847	7,294
P. h. marmorata	41a1	1,460	7,146	9,258	1,976	9,451	12,263	2,250	9,627	14,326
	43a1	1,394	6,763	9,073	1,877	8,940	11,855	2,133	9,153	13,935
P. nodosa composita	Y28	1,056	2,804	9,664	1,453	3,706	11,749	1,737	4,291	14,284
P. n. intermedia	PNZL1	820	2,513	9,248	1,124	3,300	11,255	1,318	3,733	13,560
P. otaheitana	49a1	1,085	2,861	9,926	1,516	3,815	12,172	1,845	4,484	15,010
	39a11	1,087	2,866	9,895	1,510	3,811	12,051	1,835	4,480	14,815
	72a1	1,068	2,827	9,853	1,467	3,736	12,036	1,755	4,350	14,754
	POZL12	674	2,355	9,019	913	3,072	10,944	997	3,330	13,084
	POZL4	1,017	2,743	9,740	1,409	3,642	11,820	1,684	4,223	14,437
	POMA	1,054	2,821	9,781	1,455	3,718	12,034	1,770	4,351	14,774
	POMA1	1,119	2,873	9,812	1,535	3,797	11,997	1,860	4,489	14,764
P. o. crassa	Y2-2	1,021	2,787	9,722	1,419	3,688	11,803	1,730	4,322	14,469
	Y35	1,000	2,747	9,532	1,382	3,656	11,667	1,661	4,221	14,315
P. o. otaheitana	93a1	1,043	2,814	9,813	1,440	3,729	12,029	1,737	4,343	14,751
	Y37	1,093	2,877	9,889	1,515	3,834	12,034	1,826	4,465	14,687
	Y36	1,046	2,811	9,825	1,458	3,756	11,941	1,751	4,362	14,577
	101a1	1,473	6,984	9,583	2,001	9,244	12,691	2,275	9,499	14,719
P. o. rubescens	97b1	865	2,602	9,526	1,203	3,440	11,594	1,407	3,886	14,043
	98a1	1,002	2,743	9,562	1,388	3,622	11,734	1,660	4,211	14,387
	99b1	1,098	2,866	9,924	1,526	3,822	12,130	1,827	4,448	14,903
	99c1	1,016	2,754	9,589	1,418	3,655	11,854	1,706	4,254	14,626
	100a1	1,566	7,336	10,084	2,100	9,738	13,271	2,368	9,955	15,287
	PRIA	1,097	2,827	9,738	1,523	3,762	11,788	1,826	4,406	14,370
P. o. sinistrorsa	109a1	1,418	6,761	8,876	1,918	8,983	11,782	2,209	9,200	13,590
	Y39	1,503	7,003	9,422	2,019	9,274	12,457	2,303	9,519	14,409
	104b1	1,412	6,744	8,781	1,909	8,916	11,622	2,193	9,101	13,364

	104c1	1,428	6,733	8,727	1,922	8,954	11,612	2,201	9,175	13,406
	110b1	1,450	6,849	9,070	1,953	9,086	12,051	2,228	9,317	13,846
	111c1	1,487	6,843	8,440	2,003	9,129	11,275	2,281	9,396	12,974
	Y40	1,399	6,612	8,593	1,881	8,754	11,398	2,184	9,007	13,139
	Y18	1,543	7,338	10,429	2,081	9,748	13,787	2,350	10,011	15,962
	Y42	1,440	6,815	9,030	1,947	9,042	11,950	2,243	9,266	13,848
	106a1	1,429	6,695	8,837	1,910	8,849	11,671	2,183	9,068	13,464
P. producta	108b1	1,539	7,182	9,546	2,069	9,530	12,700	2,347	9,774	14,705
	Y10	1,547	7,878	14,405	2,092	10,450	18,390	2,385	10,841	21,782
	Y44	1,521	6,982	8,909	2,044	9,279	11,876	2,336	9,478	13,646
	71a1	1,081	2,849	9,867	1,504	3,787	12,069	1,800	4,406	14,799
P. sp.	PTMT4	950	2,682	9,547	1,299	3,535	11,724	1,567	4,082	14,398
P. rosea	ROSH1	1,454	6,684	8,674	1,960	8,837	11,488	2,222	9,037	13,169
P. varia	VARH1	1,454	6,701	8,360	1,952	8,910	11,139	2,209	9,073	12,880
P. clarkei	PTUG1	1,371	5,447	5,959	1,858	7,247	7,989	2,082	7,555	9,363
	PTUG2	1,426	6,078	7,722	1,928	8,147	10,321	2,166	8,514	12,203
	PTUG4	1,506	7,461	11,659	2,030	9,825	15,034	2,283	10,110	17,679
P. faba	33a2	1,397	6,602	8,331	1,890	8,774	11,120	2,154	9,010	12,927
	35a1	1,261	6,300	7,954	1,692	8,330	10,535	1,930	8,452	12,123
	FABR3	1,442	6,656	8,122	1,926	8,800	10,767	2,178	8,969	12,364
P. garrettii	TRIR1	1,472	6,810	8,903	1,974	8,986	11,722	2,214	9,160	13,455
P. hebe	31a2	1,362	6,542	8,235	1,835	8,638	10,933	2,093	8,794	12,675
P. h. bella	HEBR1	1,476	6,840	8,624	1,990	9,044	11,441	2,236	9,228	13,149
P. meyeri	SRMT	1,444	6,693	8,477	1,937	8,862	11,307	2,215	9,087	13,090
P. navigatoria	DENR1	1,485	6,864	8,896	1,994	9,090	11,761	2,268	9,285	13,585
	DENR2	1,441	6,668	8,367	1,934	8,831	11,071	2,201	9,036	12,817
P. assimilis	PHRT1	1,520	7,220	10,080	2,051	9,592	13,312	2,292	9,800	15,370
P. lutea	65a1	1,462	6,808	8,967	1,967	9,036	11,935	2,225	9,240	13,730

Outgroups										
P. auraniana	PVT27-1	1,338	6,037	7,438	1,784	7,868	9,740	1,903	7,462	10,205
P. cramptoni	B1	1,333	6,216	8,194	1,784	8,167	10,747	1,933	7,926	11,658
	B2	1,419	6,655	8,768	1,903	8,752	11,532	2,076	8,701	12,871
P. lirata	PLIR3	1,289	5,624	6,486	1,705	7,385	8,522	1,797	7,164	9,281
	PLIR4	1,165	4,764	5,657	1,534	6,281	7,481	1,649	6,237	8,332
P. pacifica	PTUN2	463	1,116	1,718	619	1,465	2,251	687	1,651	2,768
	PTUN4	935	2,459	5,085	1,276	3,262	6,482	1,381	3,632	7,857
	PTUR7	535	1,289	1,371	700	1,725	1,854	746	1,900	2,228
Samoana attenuata	SATH	748	3,396	5,074	896	3,922	5,852	493	1,853	3,273
S. burchi	SS23a1	752	3,450	5,594	901	4,016	6,347	514	1,940	3,683
S. diaphana	SD25a1	737	3,365	5,011	885	3,901	5,770	504	1,877	3,221

Table S4 Population assignment values for Moorean and Tahitian *Partula* individuals from the Structure analyses for (a) all 93 Moorean and Tahitian individuals sampled, (b) Clade 1, (c) Clade 2, (d) Clade 2 – Tahiti, and (e) Clade 2 - Moorea. Information for each individual includes species designation, individual id code, and proportion of assignment. Individuals are ordered based on their position in the tree and in Structure bar graphs. Black= 1970 lyophilized individuals collected by J.B. Burch, blue= remnant valley population samples, and red= captive population specimens.

(a) all 93 Moorean and Tahitian individuals

Clade	Island	Species	Individual	K1 (green)	K2 (orange)	K3 (purple)
1	Tahiti	*P. producta*	71a1	0.999	0.001	0.001
		P. affinis	73a1	0.999	0.000	0.001
		P. o. sinistrorsa	Y42	0.993	0.006	0.001
		P. o. sinistrorsa	109a1	0.999	0.000	0.001
		P. o. sinistrorsa	111c1	0.998	0.001	0.001
		P. o. sinistrorsa	110b1	0.997	0.002	0.001
		P. producta	Y10	0.999	0.000	0.001
		P. producta	Y44	0.999	0.000	0.001
		P. o. sinistrorsa	Y18	0.999	0.000	0.001
		P. o. sinistrorsa	Y40	0.998	0.001	0.001
		P. o. sinistrorsa	104b1	0.998	0.001	0.001
		P. o. sinistrorsa	Y39	0.999	0.000	0.001
		P. otaheitana	49a1	0.996	0.001	0.003
		P. o. sinistrorsa	104c1	0.998	0.001	0.001
		P. o. sinistrorsa	106a1	0.999	0.000	0.001
		P. affinis	28a1	0.997	0.001	0.002
		P. o. crassa	Y35	0.997	0.001	0.002
		P. nodosa intermedia	PNZL1	0.998	0.001	0.001
		P. n. composita	Y28	0.999	0.000	0.001
		P. o. crassa	Y2-2	0.997	0.001	0.002
		P. otaheitana	POZL12	0.998	0.001	0.001

		P. otaheitana	POZL4	0.996	0.001	0.003
		P. sp.	PTMT4	0.997	0.001	0.002
		P. o. otaheitana	Y36	0.998	0.000	0.002
		P. o. otaheitana	Y37	0.999	0.000	0.001
		P. o. otaheitana	93a1	0.998	0.001	0.001
		P. o. otaheitana	101a1	0.998	0.001	0.001
		P. otaheitana	POMA	0.998	0.001	0.001
		P. otaheitana	POMA1	0.994	0.004	0.002
		P. diminuta	54a4	0.997	0.001	0.002
		P. diminuta	54d2	0.943	0.052	0.004
		P. affinis	79a1	0.996	0.001	0.003
		P. affinis	76a1	0.998	0.000	0.002
		P. affinis	Y30	0.997	0.001	0.002
		P. affinis	75a1	0.994	0.001	0.005
		P. affinis	80a1	0.999	0.000	0.001
		P. o. rubescens	97b1	0.998	0.001	0.001
		P. producta	108b1	0.997	0.001	0.002
		P. otaheitana	39a11	0.992	0.001	0.008
		P. o. rubescens	PRIA	0.998	0.001	0.001
		P. affinis	PAZL1	0.999	0.000	0.001
		P. o. rubescens	100a1	0.999	0.000	0.001
		P. otaheitana	72a1	0.999	0.000	0.001
		P. o. rubescens	99b1	0.999	0.000	0.001
		P. o. rubescens	99c1	0.999	0.000	0.001
		P. affinis	84a1	0.995	0.001	0.004
		P. o. rubescens	98a1	0.998	0.001	0.001
		P. affinis	83a1	0.995	0.000	0.005
2	Tahiti	*P. hyalina*	PHRM314	0.000	1.000	0.000
		P. h. marmorata	43a1	0.000	1.000	0.000
		P. h. marmorata	41a1	0.000	1.000	0.000
		P. hyalina	60a1	0.000	1.000	0.000

		P. hyalina	PHTH	0.000	1.000	0.000
		P. hyalina	PHTM	0.000	1.000	0.000
		P. hyalina	PHRM1	0.000	1.000	0.000
		P. clara	PCTM	0.000	1.000	0.000
		P. c. incrassa	PCTI	0.000	1.000	0.000
		P. clara	48a2	0.000	0.999	0.001
		P. clara	46b1	0.000	1.000	0.000
		P. clara	46a1	0.002	0.997	0.001
		P. clara	26a1	0.002	0.997	0.001
2	Moorea	*P. taeniata*	131b1	0.001	0.115	0.884
		P. exigua	132b1	0.001	0.065	0.934
		P. taeniata	PS136a1	0.001	0.137	0.862
		P. exigua	51a1	0.001	0.275	0.724
		P. taeniata	PHAU	0.002	0.259	0.739
		P. mirabilis	130d1	0.001	0.005	0.994
		P. taeniata	130c1	0.001	0.020	0.979
		P. taeniata	130a1	0.001	0.035	0.964
		P. taeniata	TAEH1	0.001	0.160	0.839
		P. taeniata	NUCM1	0.001	0.036	0.963
		P. taeniata	M10	0.004	0.143	0.853
		P. mirabilis	M9	0.002	0.002	0.996
		P. tohiveana	TOHM1	0.001	0.001	0.998
		P. tohiveana	M5	0.001	0.001	0.998
		P. mooreana	MOOM2	0.001	0.000	0.999
		P. taeniata	MTO12	0.001	0.001	0.998
		P. suturalis suturalis	123b1	0.001	0.001	0.998
		P. suturalis	118d1	0.001	0.002	0.997
		P. s. suturalis	121d1	0.001	0.000	1.000
		P. s. vexillum	50b1	0.002	0.001	0.997
		P. s. vexillum	VEXM1	0.001	0.001	0.998
		P. s. vexillum	127a1	0.001	0.000	0.999

P. m. propinqua	135a3	0.001	0.001	0.998
P. s. vexillum	126c1	0.006	0.000	0.994
P. suturalis	116a1	0.001	0.000	0.999
P. aurantia	M1	0.001	0.001	0.998
P. suturalis	118b1	0.001	0.000	0.999
P. s. vexillum	M7	0.002	0.001	0.997
P. s. vexillum	VEXM2	0.001	0.000	0.999
P. s. suturalis	STRM1	0.002	0.000	0.998
P. mirabilis	PM67a1	0.027	0.001	0.972
P. mirabilis	PMIZ1	0.001	0.000	0.999

(b) Clade 1

			Two populations		Three populations		
Complex	Species	Individual	K1 (lt. green)	K2 (dk. green)	K1 (lt. green)	K2 (blue)	K3 (dk. green)
"P. otaheitana" A	*P. producta*	71a1	0.569	0.431	0.882	0.004	0.113
"P. otaheitana" A	*P. affinis*	73a1	0.564	0.436	0.741	0.006	0.253
"P. otaheitana" A	*P. o. sinistrorsa*	Y42	0.963	0.037	0.987	0.005	0.007
"P. otaheitana" A	*P. o. sinistrorsa*	109a1	0.644	0.356	0.765	0.007	0.228
"P. otaheitana" A	*P. o. sinistrorsa*	111c1	0.992	0.008	0.992	0.004	0.004
"P. otaheitana" A	*P. o. sinistrorsa*	110b1	0.992	0.008	0.989	0.007	0.004
"P. otaheitana" A	*P. producta*	Y10	0.967	0.033	0.990	0.002	0.008
"P. otaheitana" A	*P. producta*	Y44	0.994	0.006	0.996	0.002	0.002
"P. otaheitana" A	*P. o. sinistrorsa*	Y18	0.989	0.011	0.972	0.017	0.011
"P. otaheitana" A	*P. o. sinistrorsa*	Y40	0.994	0.006	0.904	0.090	0.006
"P. otaheitana" A	*P. o. sinistrorsa*	104b1	0.995	0.005	0.890	0.107	0.003
"P. otaheitana" A	*P. o. sinistrorsa*	Y39	0.996	0.004	0.988	0.009	0.003
"P. otaheitana" A	*P. otaheitana*	49a1	0.993	0.008	0.992	0.004	0.004
"P. otaheitana" A	*P. o. sinistrorsa*	104c1	0.996	0.004	0.993	0.004	0.003

"P. otaheitana" A	*P. o. sinistrorsa*	106a1	0.997	0.003	0.595	0.402	0.003
"P. otaheitana" A	*P. affinis*	28a1	0.993	0.007	0.738	0.257	0.005
"P. otaheitana" A	*P. o. crassa*	Y35	0.988	0.013	0.811	0.181	0.008
"P. otaheitana" A	*P. nodosa intermedia*	PNZL1	0.995	0.005	0.738	0.258	0.004
"P. otaheitana" B	*P. n. composita*	Y28	0.996	0.004	0.459	0.538	0.003
"P. otaheitana" B	*P. o. crassa*	Y2-2	0.971	0.030	0.108	0.869	0.023
"P. otaheitana" B	*P. otaheitana*	POZL12	0.994	0.006	0.018	0.978	0.004
"P. otaheitana" B	*P. otaheitana*	POZL4	0.994	0.006	0.039	0.957	0.004
"P. otaheitana" B	*P. sp.*	PTMT4	0.992	0.008	0.015	0.979	0.006
"P. otaheitana" B	*P. o. otaheitana*	Y36	0.993	0.007	0.019	0.975	0.005
"P. otaheitana" B	*P. o. otaheitana*	Y37	0.987	0.013	0.018	0.975	0.007
"P. otaheitana" B	*P. o. otaheitana*	93a1	0.996	0.004	0.018	0.979	0.003
"P. otaheitana" B	*P. o. otaheitana*	101a1	0.944	0.056	0.030	0.957	0.014
"P. otaheitana" B	*P. otaheitana*	POMA	0.987	0.013	0.010	0.983	0.007
"P. otaheitana" B	*P. otaheitana*	POMA1	0.943	0.057	0.005	0.987	0.008
"P. otaheitana" B	*P. diminuta*	54a4	0.993	0.007	0.008	0.989	0.003
"P. otaheitana" B	*P. diminuta*	54d2	0.991	0.009	0.006	0.989	0.005
"P. affinis"	*P. affinis*	79a1	0.006	0.994	0.006	0.003	0.991
"P. affinis"	*P. affinis*	76a1	0.005	0.995	0.005	0.003	0.992
"P. affinis"	*P. affinis*	Y30	0.004	0.996	0.005	0.002	0.993
"P. affinis"	*P. affinis*	75a1	0.004	0.996	0.004	0.003	0.993
"P. affinis"	*P. affinis*	80a1	0.329	0.671	0.487	0.004	0.509
"P. affinis"	*P. o. rubescens*	97b1	0.140	0.861	0.488	0.004	0.508
"P. affinis"	*P. producta*	108b1	0.121	0.879	0.195	0.021	0.784
"P. affinis"	*P. otaheitana*	39a11	0.006	0.994	0.006	0.020	0.975
"P. affinis"	*P. o. rubescens*	PRIA	0.015	0.985	0.019	0.011	0.970
"P. affinis"	*P. affinis*	PAZL1	0.005	0.995	0.006	0.032	0.962
"P. affinis"	*P. o. rubescens*	100a1	0.040	0.960	0.060	0.054	0.886
"P. affinis"	*P. otaheitana*	72a1	0.015	0.985	0.167	0.008	0.826

"P. affinis"	*P. o. rubescens*	99b1	0.316	0.684	0.007	0.614	0.379
"P. affinis"	*P. o. rubescens*	99c1	0.010	0.990	0.004	0.297	0.699
"P. affinis"	*P. affinis*	84a1	0.524	0.476	0.007	0.813	0.180
"P. affinis"	*P. o. rubescens*	98a1	0.092	0.908	0.052	0.368	0.580
"P. affinis"	*P. affinis*	83a1	0.303	0.697	0.011	0.697	0.293

(c) Clade 2

				Two populations		Three populations		
Island	Complex	Species	Individual	K1 (orange)	K2 (purple)	K1 (orange)	K2 (pink)	K3 (purple)
Tahiti	*"P. clara/P. hyalina"*	*P. hyalina*	PHRM314	0.999	0.001	0.998	0.001	0.001
	"P. clara/P. hyalina"	*P. h. marmorata*	43a1	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. h. marmorata*	41a1	0.999	0.001	1.000	0.001	0.000
	"P. clara/P. hyalina"	*P. hyalina*	60a1	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. hyalina*	PHTH	1.000	0.000	1.000	0.000	0.000
	"P. clara/P. hyalina"	*P. hyalina*	PHTM	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. hyalina*	PHRM1	0.999	0.001	0.998	0.001	0.001
	"P. clara/P. hyalina"	*P. clara*	PCTM	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. c. incrassa*	PCTI	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. clara*	48a2	0.999	0.001	0.996	0.003	0.001
	"P. clara/P. hyalina"	*P. clara*	46b1	0.999	0.001	0.999	0.001	0.000
	"P. clara/P. hyalina"	*P. clara*	46a1	0.998	0.002	0.997	0.002	0.001
	"P. clara/P. hyalina"	*P. clara*	26a1	0.999	0.002	0.997	0.002	0.001
Moorea	*"P. taeniata"*	*P. taeniata*	131b1	0.099	0.901	0.003	0.884	0.113
	"P. taeniata"	*P. exigua*	132b1	0.047	0.953	0.001	0.872	0.127
	"P. taeniata"	*P. taeniata*	PS136a1	0.125	0.875	0.001	0.992	0.006
	"P. taeniata"	*P. exigua*	51a1	0.273	0.727	0.011	0.988	0.001
	"P. taeniata"	*P. taeniata*	PHAU	0.241	0.759	0.009	0.990	0.001
	"P. taeniata"	*P. mirabilis*	130d1	0.004	0.996	0.001	0.924	0.075

"P. taeniata"	*P. taeniata*	130c1	0.014	0.986	0.001	0.997	0.002
"P. taeniata"	*P. taeniata*	130a1	0.022	0.978	0.001	0.997	0.002
"P. taeniata"	*P. taeniata*	TAEH1	0.148	0.853	0.031	0.932	0.037
"P. taeniata"	*P. taeniata*	NUCM1	0.022	0.978	0.002	0.960	0.038
"P. taeniata"	*P. taeniata*	M10	0.133	0.867	0.074	0.425	0.501
"P. taeniata"	*P. mirabilis*	M9	0.003	0.997	0.002	0.549	0.449
"P. suturalis"	*P. tohiveana*	TOHM1	0.001	0.999	0.001	0.025	0.974
"P. suturalis"	*P. tohiveana*	M5	0.002	0.998	0.002	0.012	0.986
"P. suturalis"	*P. mooreana*	MOOM2	0.001	0.999	0.001	0.022	0.977
"P. suturalis"	*P. taeniata*	MTO12	0.002	0.998	0.001	0.024	0.975
"P. suturalis"	*P. suturalis suturalis*	123b1	0.001	0.999	0.001	0.004	0.995
"P. suturalis"	*P. suturalis*	118d1	0.002	0.998	0.001	0.001	0.998
"P. suturalis"	*P. s. suturalis*	121d1	0.001	0.999	0.001	0.003	0.996
"P. suturalis"	*P. s. vexillum*	50b1	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. s. vexillum*	VEXM1	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. s. vexillum*	127a1	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. m. propinqua*	135a3	0.002	0.998	0.002	0.009	0.989
"P. suturalis"	*P. s. vexillum*	126c1	0.001	0.999	0.001	0.002	0.997
"P. suturalis"	*P. suturalis*	116a1	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. aurantia*	M1	0.001	0.999	0.001	0.006	0.993
"P. suturalis"	*P. suturalis*	118b1	0.001	0.999	0.001	0.002	0.997
"P. suturalis"	*P. s. vexillum*	M7	0.001	0.999	0.001	0.003	0.996
"P. suturalis"	*P. s. vexillum*	VEXM2	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. s. suturalis*	STRM1	0.001	0.999	0.001	0.001	0.998
"P. suturalis"	*P. mirabilis*	PM67a1	0.001	0.999	0.001	0.002	0.997
"P. suturalis"	*P. mirabilis*	PMIZ1	0.001	0.999	0.001	0.001	0.998

(d) Clade 2 - Tahiti

Complex	Species	Individual	K1 (orange)	K2 (yellow)	K3 (red)
"P. clara/P. hyalina" A	*P. hyalina*	PHRM314	0.997	0.002	0.001
"P. clara/P. hyalina" A	*P. h. marmorata*	43a1	0.998	0.001	0.001
"P. clara/P. hyalina" A	*P. h. marmorata*	41a1	0.997	0.002	0.001
"P. clara/P. hyalina" A	*P. hyalina*	60a1	0.988	0.009	0.003
"P. clara/P. hyalina" A	*P. hyalina*	PHTH	0.998	0.001	0.001
"P. clara/P. hyalina" A	*P. hyalina*	PHTM	0.707	0.291	0.002
"P. clara/P. hyalina" A	*P. hyalina*	PHRM1	0.527	0.471	0.003
"P. clara/P. hyalina" B	*P. clara*	PCTM	0.001	0.998	0.001
"P. clara/P. hyalina" B	*P. c. incrassa*	PCTI	0.001	0.998	0.001
"P. clara/P. hyalina" B	*P. clara*	48a2	0.004	0.991	0.005
"P. clara/P. hyalina" C	*P. clara*	46b1	0.001	0.001	0.998
"P. clara/P. hyalina" C	*P. clara*	46a1	0.001	0.003	0.996
"P. clara/P. hyalina" C	*P. clara*	26a1	0.001	0.002	0.997

(e) Clade 2 - Moorea

Complex	Species	Individual	K1 (pink)	K2 (purple)	K3 (black)
"P. taeniata"	*P. taeniata*	131b1	0.718	0.206	0.076
"P. taeniata"	*P. exigua*	132b1	0.670	0.279	0.051
"P. taeniata"	*P. taeniata*	PS136a1	0.855	0.125	0.020
"P. taeniata"	*P. exigua*	51a1	0.960	0.025	0.015
"P. taeniata"	*P. taeniata*	PHAU	0.897	0.029	0.074
"P. taeniata"	*P. mirabilis*	130d1	0.559	0.361	0.079
"P. taeniata"	*P. taeniata*	130c1	0.780	0.170	0.050
"P. taeniata"	*P. taeniata*	130a1	0.824	0.134	0.042
"P. taeniata"	*P. taeniata*	TAEH1	0.628	0.291	0.081
"P. taeniata"	*P. taeniata*	NUCM1	0.527	0.340	0.133
"P. taeniata"	*P. taeniata*	M10	0.237	0.683	0.080
"P. taeniata"	*P. mirabilis*	M9	0.229	0.718	0.053
"P. suturalis"	*P. tohiveana*	TOHM1	0.091	0.802	0.107
"P. suturalis"	*P. tohiveana*	M5	0.051	0.879	0.071
"P. suturalis"	*P. mooreana*	MOOM2	0.071	0.783	0.146
"P. suturalis"	*P. taeniata*	MTO12	0.036	0.859	0.105
"P. suturalis"	*P. suturalis suturalis*	123b1	0.013	0.928	0.059
"P. suturalis"	*P. suturalis*	118d1	0.008	0.835	0.157
"P. suturalis"	*P. s. suturalis*	121d1	0.014	0.811	0.176
"P. suturalis"	*P. s. vexillum*	50b1	0.009	0.895	0.096

"P. suturalis"	*P. s. vexillum*	VEXM1	0.008	0.886	0.106
"P. suturalis"	*P. s. vexillum*	127a1	0.008	0.861	0.131
"P. suturalis"	*P. m. propinqua*	135a3	0.030	0.865	0.105
"P. suturalis"	*P. s. vexillum*	126c1	0.013	0.820	0.167
"P. suturalis"	*P. suturalis*	116a1	0.007	0.868	0.125
"P. suturalis"	*P. aurantia*	M1	0.016	0.927	0.057
"P. suturalis"	*P. suturalis*	118b1	0.012	0.822	0.166
"P. suturalis"	*P. s. vexillum*	M7	0.014	0.886	0.100
"P. suturalis"	*P. s. vexillum*	VEXM2	0.008	0.887	0.105
"P. suturalis"	*P. s. suturalis*	STRM1	0.010	0.886	0.104
"P. suturalis"	*P. mirabilis*	PM67a1	0.013	0.869	0.119
"P. suturalis"	*P. mirabilis*	PMIZ1	0.020	0.864	0.116

Table S5 Results of the f_3 admixture tests for the Moorean and Tahitian *Partula* species complexes. Species complex labels are same as Table S1 and Figure S1. The f_3 test is in the form (A;B,C) where A is the result of admixture between B and C (Pickrell & Pritchard, 2012; Reich, Thangaraj, Patterson, Price, & Singh, 2009).

Test	f_3 statistic ± s.e.	*Z*-score	*p*-value
"P. otaheitana"; *"P. affinis"*, *"P. clara/P. hyalina*" C	-0.0007 ± 0.0002	-3.9161	9.00E-05
"P. affinis"; *"P. otaheitana"*, *"P. suturalis"*	-0.0011 ± 0.0001	-11.1838	4.89E-29
"P. affinis"; *"P. clara/P. hyalina*" C, *"P. suturalis"*	-0.0005 ± 0.002	-2.3010	0.0214
"P. taeniata"; *"P. clara/P. hyalina*" C, *"P. suturalis"*	-0.0010 ± 0.0003	-3.7629	0.0002

Figure S1 (a) figure caption can be found on page 35.

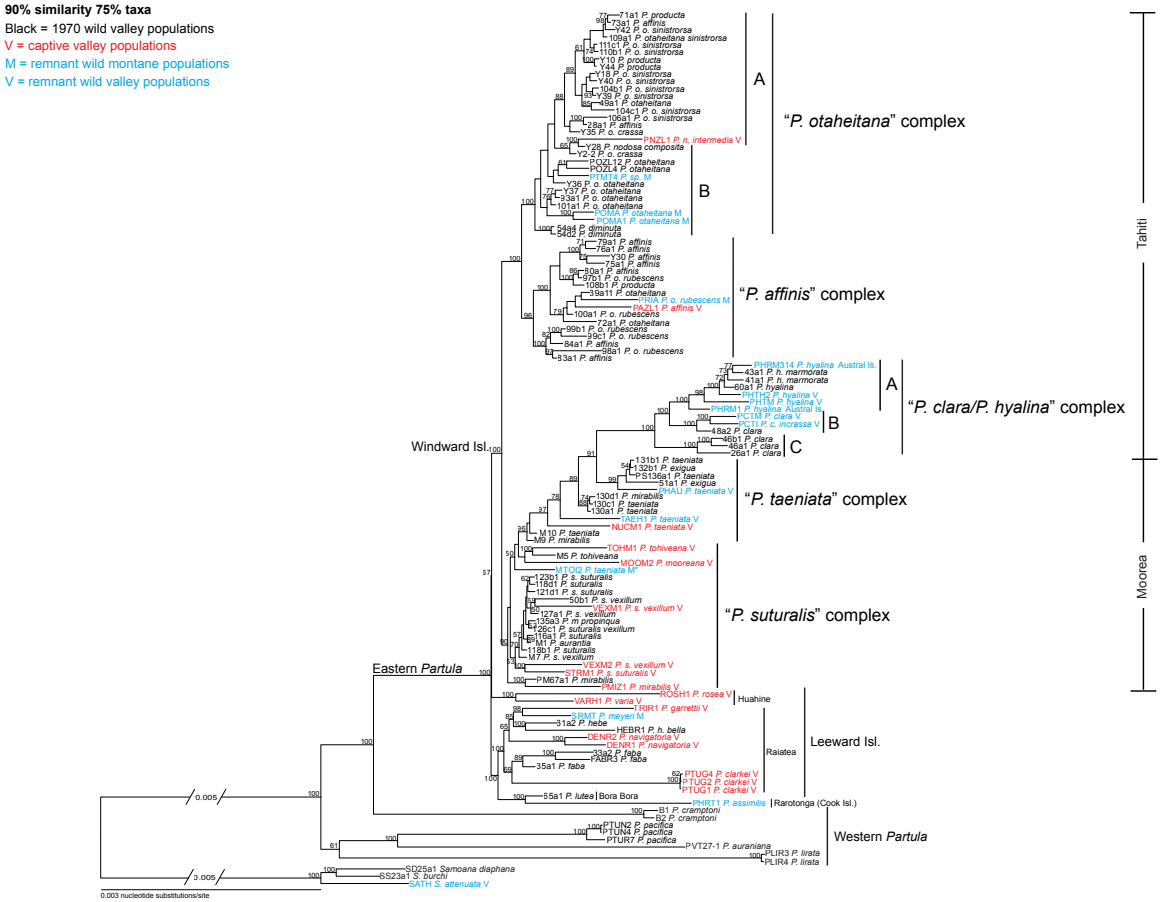


Figure S1 (b)

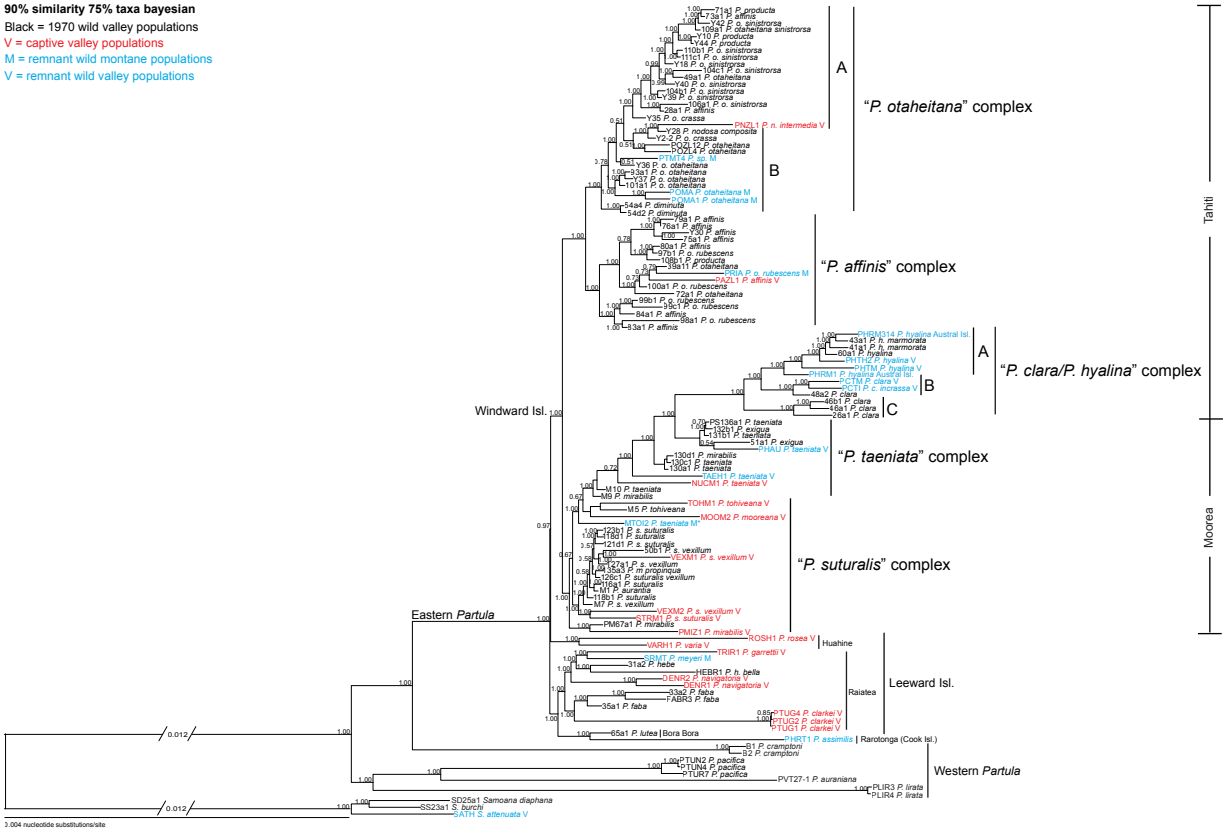

90% similarity 75% taxa bayesian
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
"P. otaheitana" complex
"P. affinis" complex
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Tahiti
Moorea
Windward Isl.
Eastern Partula
Western Partula
Huahine
Raiatea
Leeward Isl.
Bora Bora
Rarotonga (Cook Isl.)
0.012
0.012
3.004 nucleotide substitutions/site

Figure S1 (c)

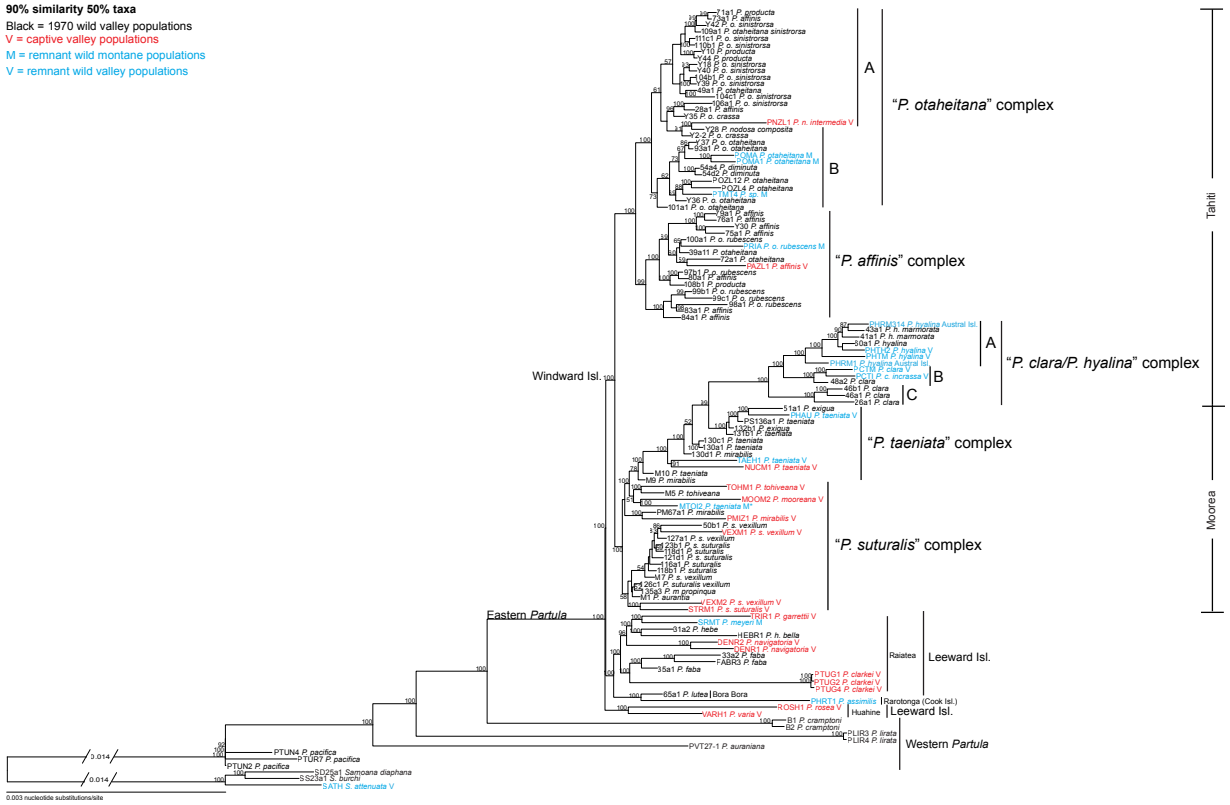

90% similarity 50% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
"P. otaheitana" complex
"P. affinis" complex
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Windward Isl.
Eastern Partula
Leeward Isl.
Western Partula
Raiatea
Huahine
Rarotonga (Cook Isl.)
Tahiti
Moorea
0.003 nucleotide substitutions/site

Figure S1 (d)

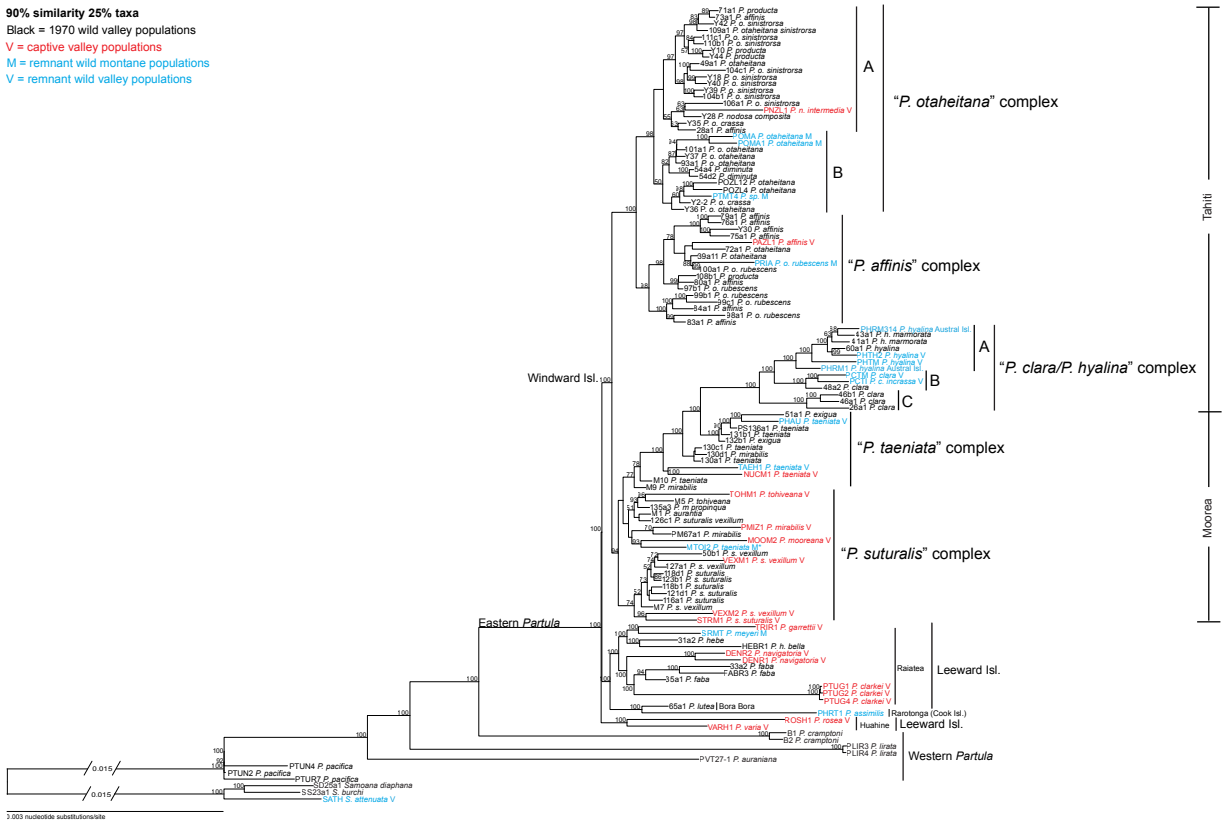

90% similarity 25% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
A
B
"P. otaheitana" complex
"P. affinis" complex
A
B
C
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Tahiti
Moorea
Windward Isl.
Eastern Partula
Raiatea
Leeward Isl.
Rarotonga (Cook Isl.)
Huahine
Leeward Isl.
Western Partula
PTUN4 P. pacifica
PTUN2 P. pacifica
PTUN7 P. pacifica
SD2SS1 S. samoana diaphana
SS23a1 S. burchi
SATH S. attenuata V
PVT27-1 P. auraniana
0.015
0.015
0.003 nucleotide substitutions/site

Figure S1 (e)

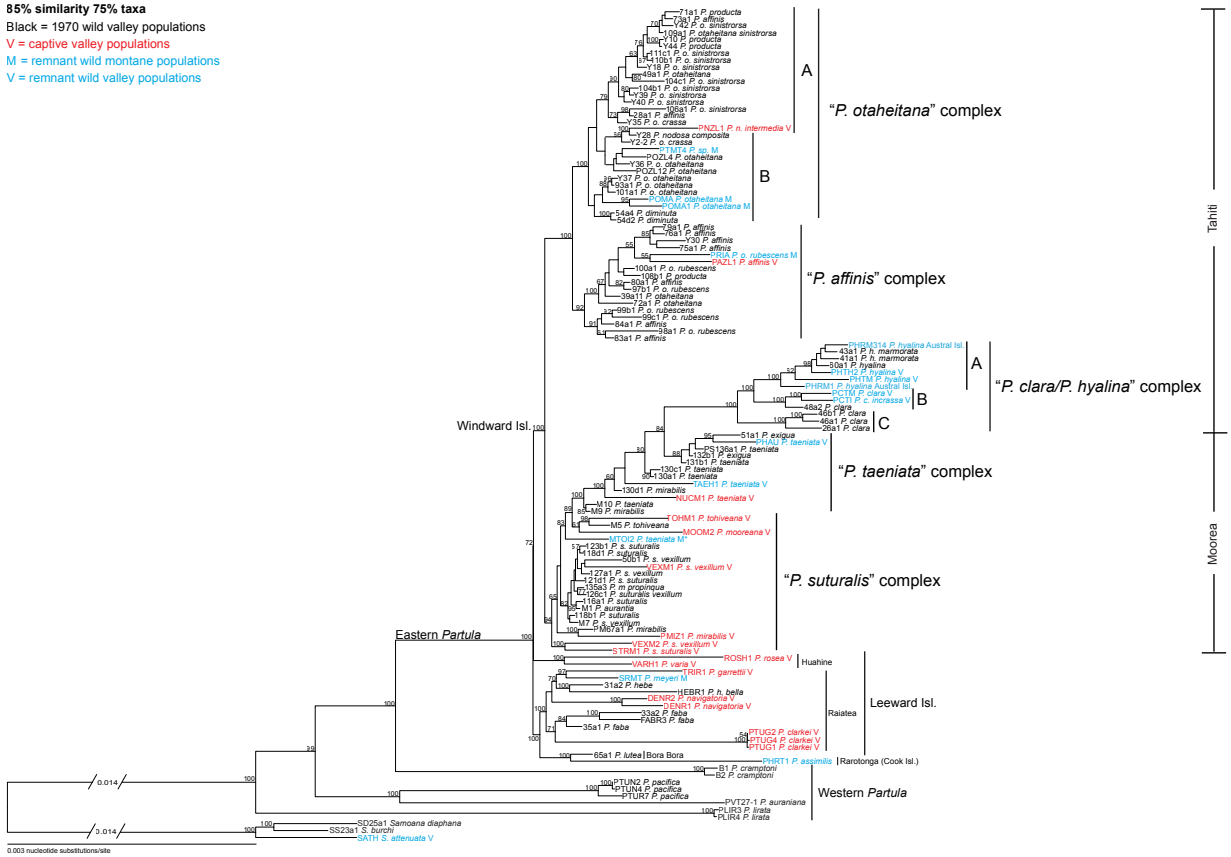

85% similarity 75% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
"P. otaheitana" complex
"P. affinis" complex
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Windward Isl.
Eastern Partula
Leeward Isl.
Western Partula
Huahine
Raiatea
Bora Bora
Rarotonga (Cook Isl.)
Tahiti
Moorea
0.014
0.014
0.003 nucleotide substitutions/site

Figure S1 (f)

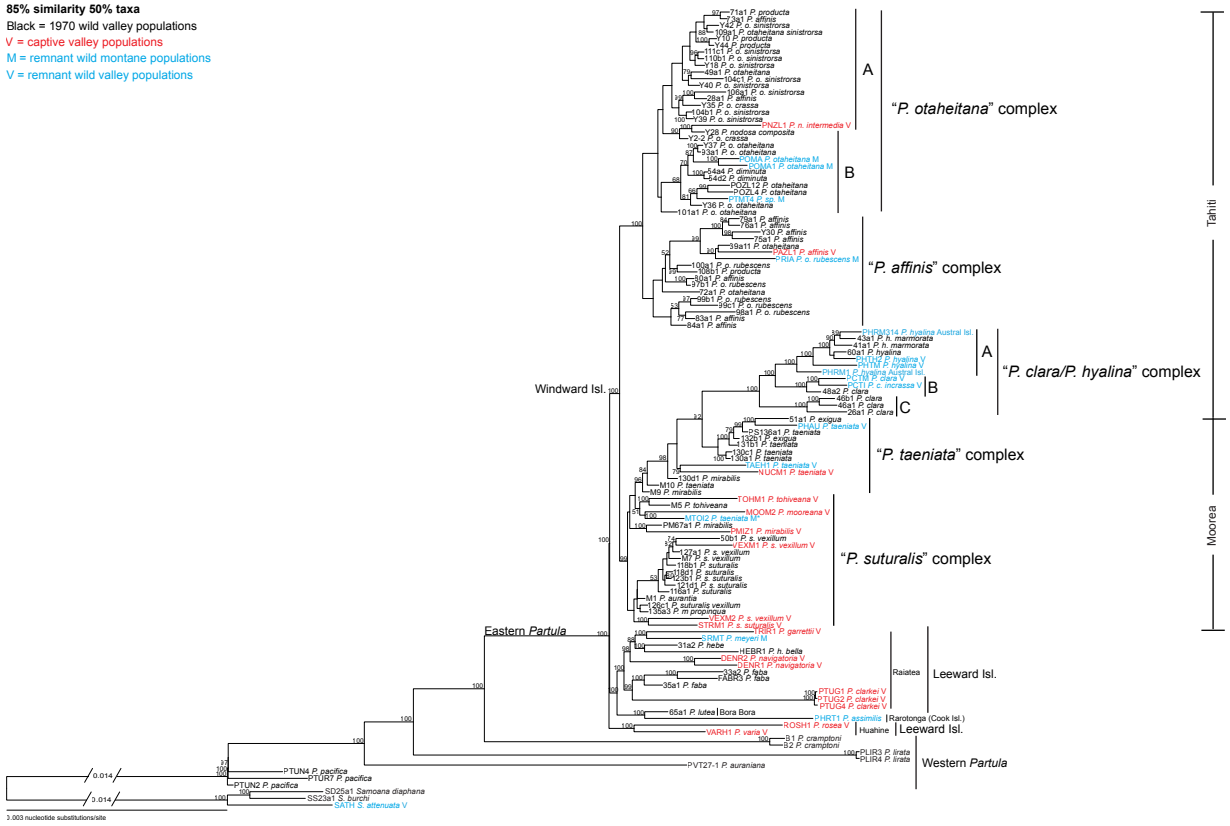

85% similarity 50% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
A
B
"P. otaheitana" complex
"P. affinis" complex
A
B
C
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Windward Isl.
Eastern Partula
Tahiti
Moorea
Raiatea
Leeward Isl.
Rarotonga (Cook Isl.)
Huahine
Leeward Isl.
Western Partula
0.014
0.014
0.003 nucleotide substitutions/site

Figure S1 (g)

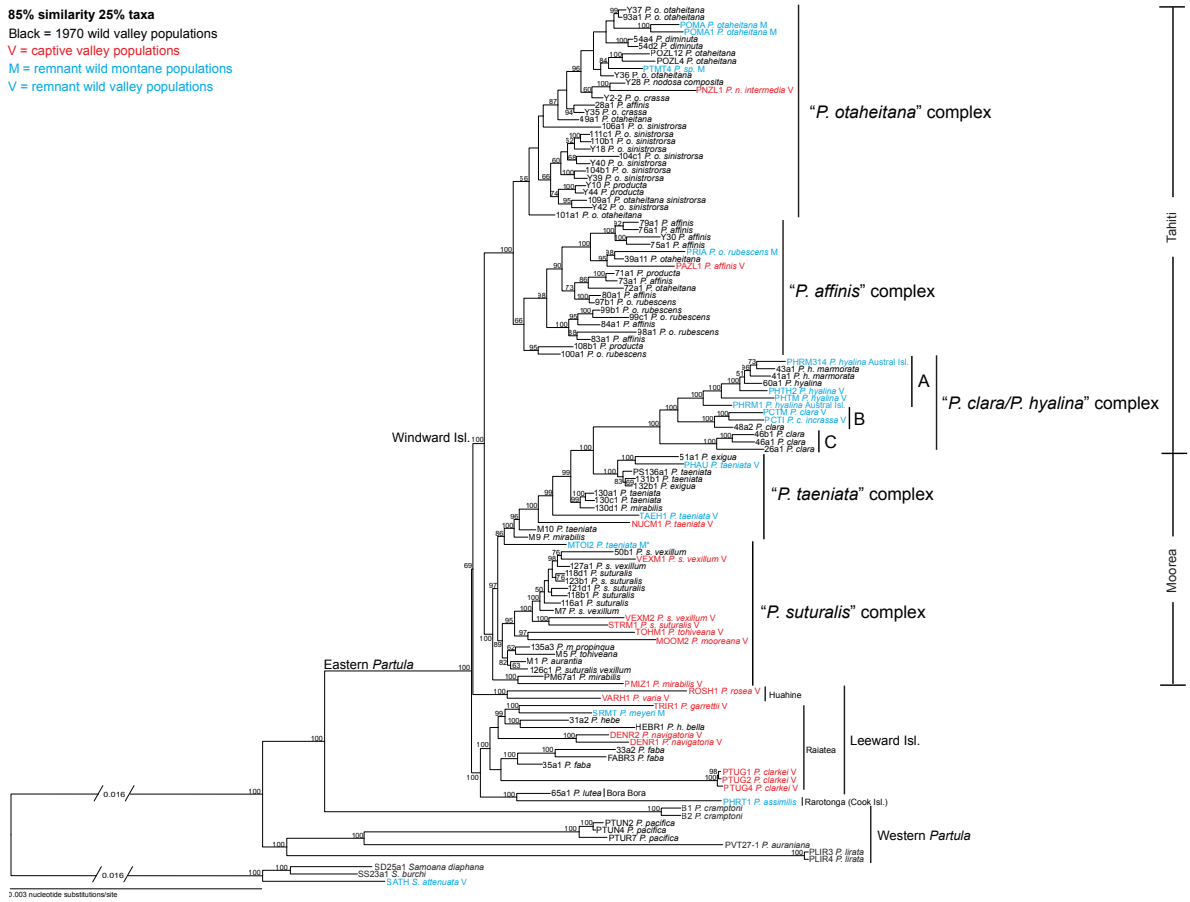

85% similarity 25% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
"P. otaheitana" complex
"P. affinis" complex
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
A
B
C
Tahiti
Moorea
Windward Isl.
Eastern Partula
Huahine
Raiatea
Leeward Isl.
Bora Bora
Rarotonga (Cook Isl.)
Western Partula
0.016
0.003 nucleotide substitutions/site

Figure S1 (h)

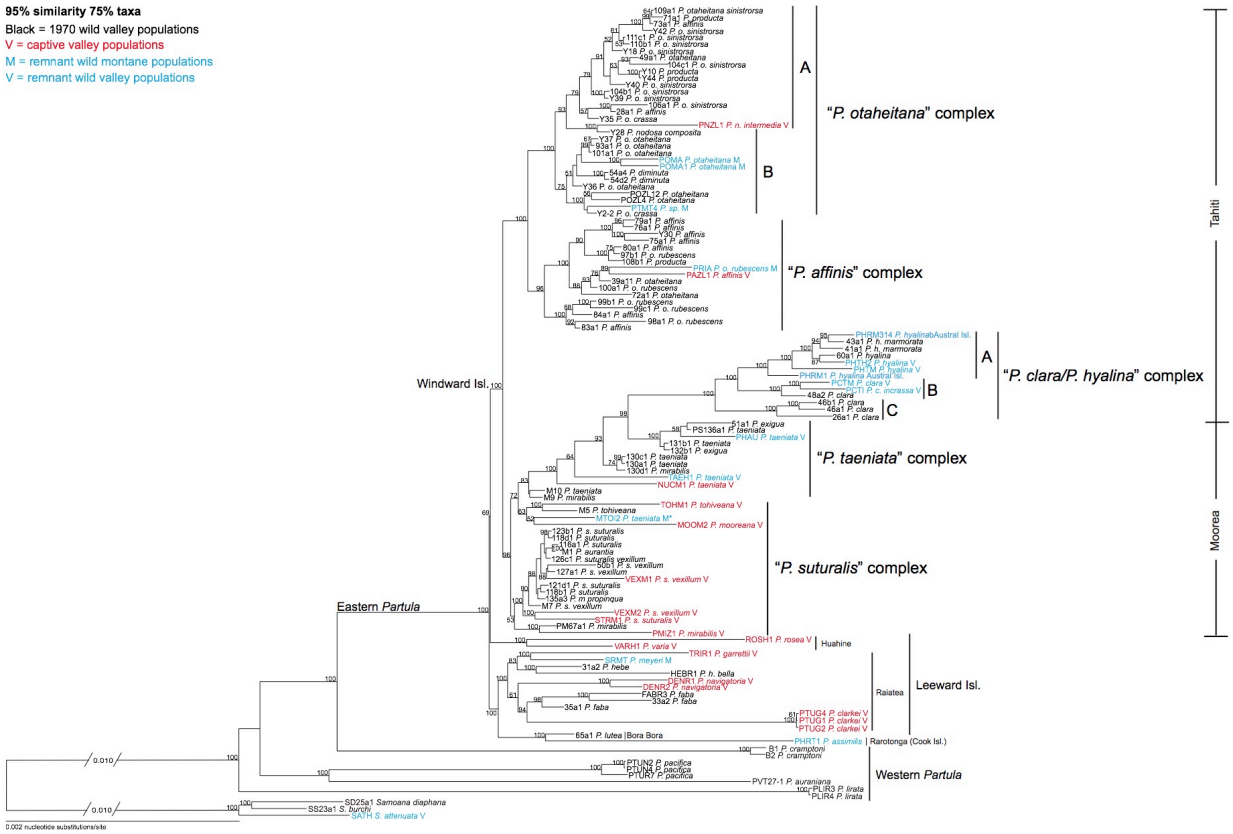

95% similarity 75% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
"P. otaheitana" complex
"P. affinis" complex
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Windward Isl.
Eastern Partula
Tahiti
Moorea
Huahine
Raiatea
Leeward Isl.
Rarotonga (Cook Isl.)
Western Partula
0.002 nucleotide substitutions/site

Figure S1 (i)

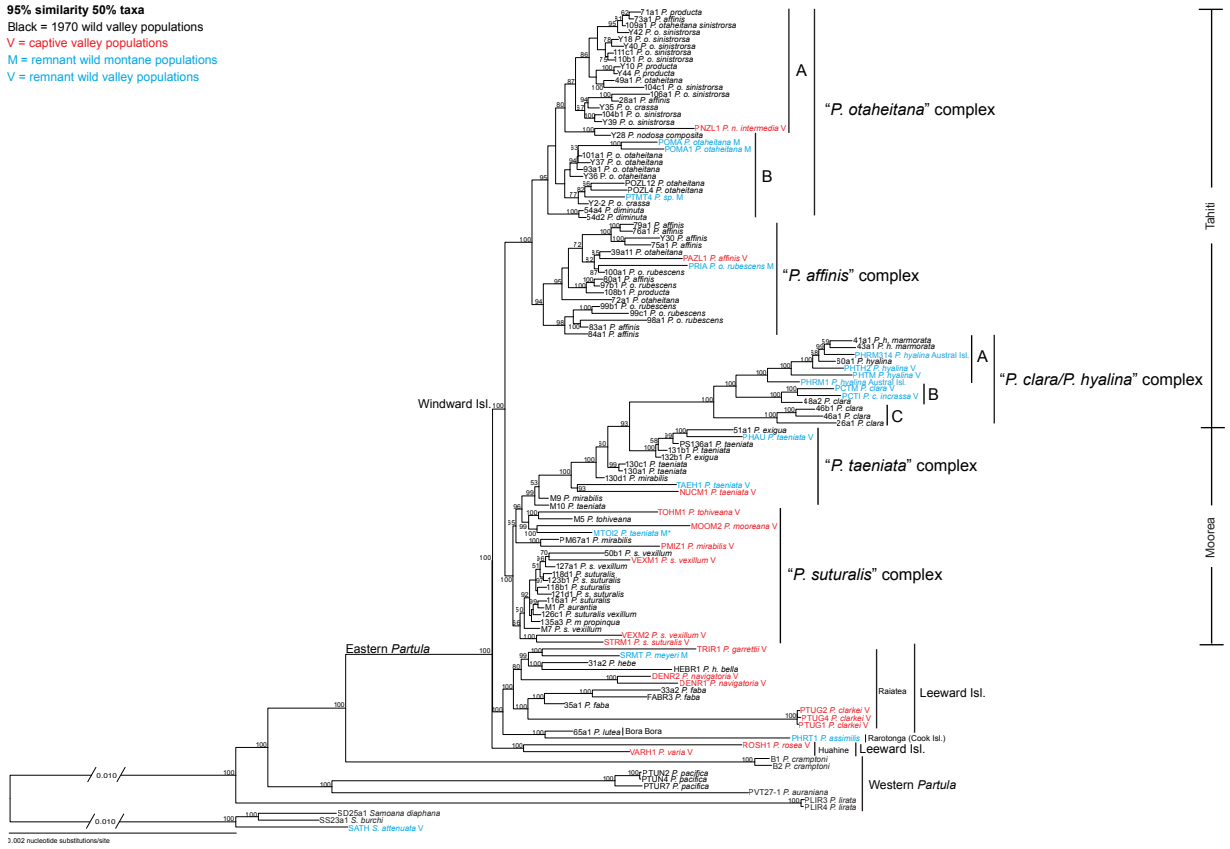

95% similarity 50% taxa
Black = 1970 wild valley populations
V = captive valley populations
M = remnant wild montane populations
V = remnant wild valley populations
A
B
"P. otaheitana" complex
"P. affinis" complex
A
B
C
"P. clara/P. hyalina" complex
"P. taeniata" complex
"P. suturalis" complex
Windward Isl.
Eastern Partula
Raiatea
Leeward Isl.
Bora Bora
Huahine
Rarotonga (Cook Isl.)
Leeward Isl.
Western Partula
Tahiti
Moorea
0.010
0.010
0.002 nucleotide substitutions/site

Figure S1 (j)

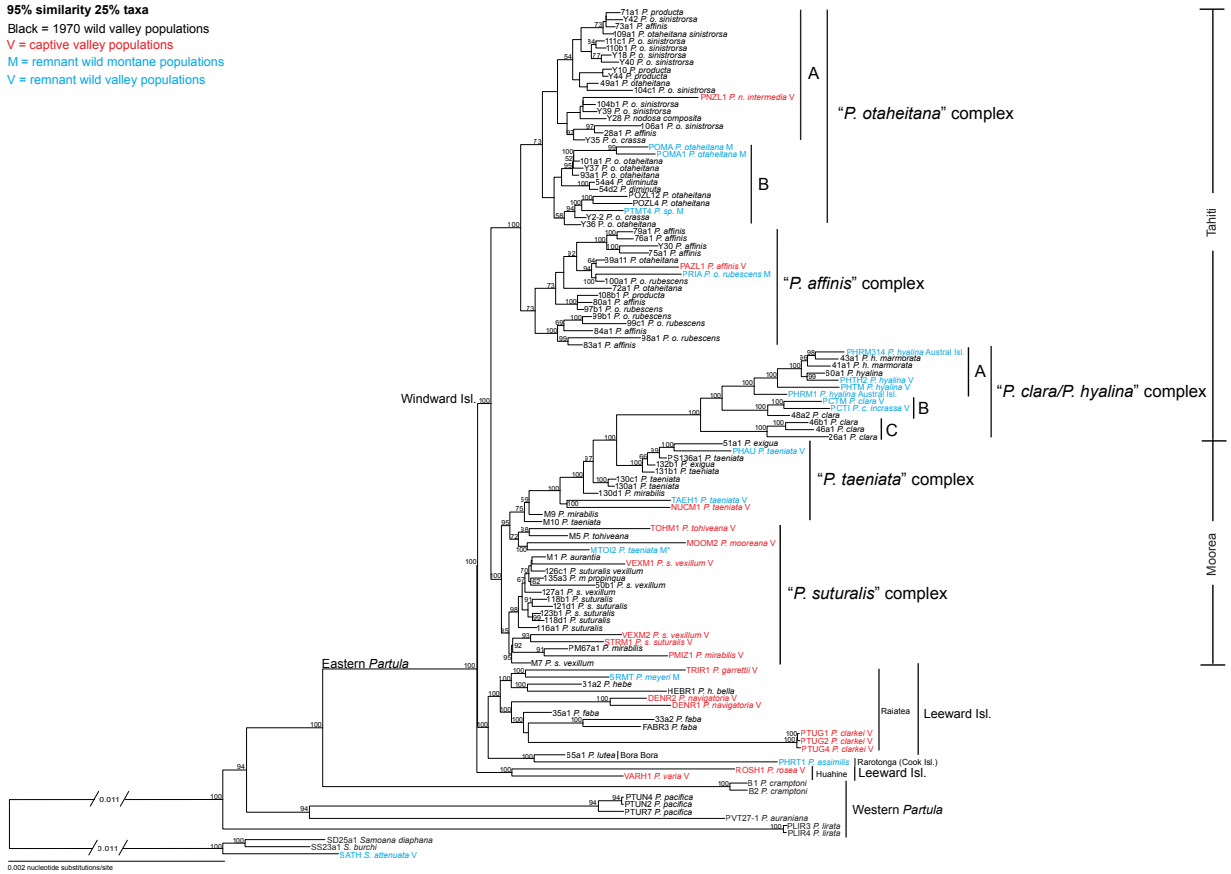
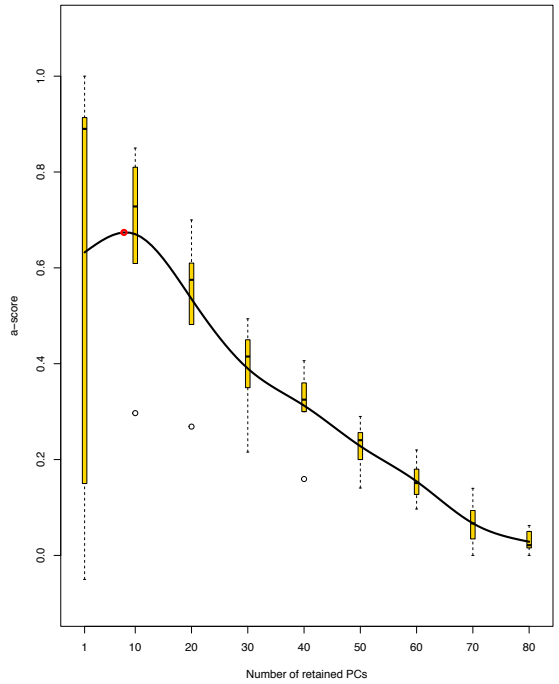
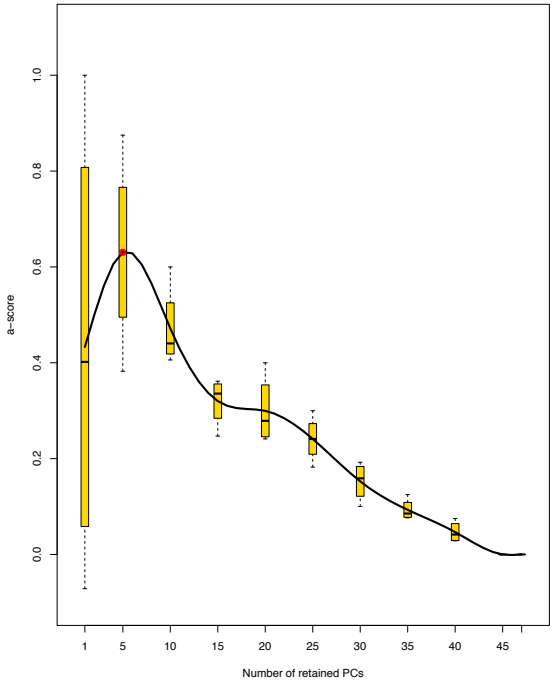


Figure S1 Bayesian and Maximum likelihood phylogenomic trees depicting relationships among Society Island partulid species. Individuals were clustered at three different similarity thresholds (85, 90, and 95%) and minimum taxon coverages (75, 50, and 25%) and include the 90% similarity threshold, 75% of taxa (a) maximum likelihood and (b) Bayesian trees, totaling 2,169 loci and the Maximum likelihood (c) 90%, 50%, 11,026 loci, (d) 90%, 25%, 23,195 loci, (e) 85%, 75%, 1,607 loci, (f) 85%, 50%, 8,381 loci, (g) 85%, 25%, 18,154 loci, (h) 95%, 75%, 2,455 loci, (i) 95%, 50%, 11,506 loci, and (j) 95%, 25%, 28,194 loci trees. Trees were rooted with three species of Society Islands *Samoana,* the sister genus of *Partula.* Values on tree nodes indicate Bayesian posterior probabilities or Maximum likelihood bootstrap supports. Individuals are identified as 1970 wild (black), remnant valley (V, blue) or montane (M, blue), or captive (C, red) populations. * denotes the remnant montane *P. taeniata* individual (MTOI2) from Lineage 3 (see Discussion).

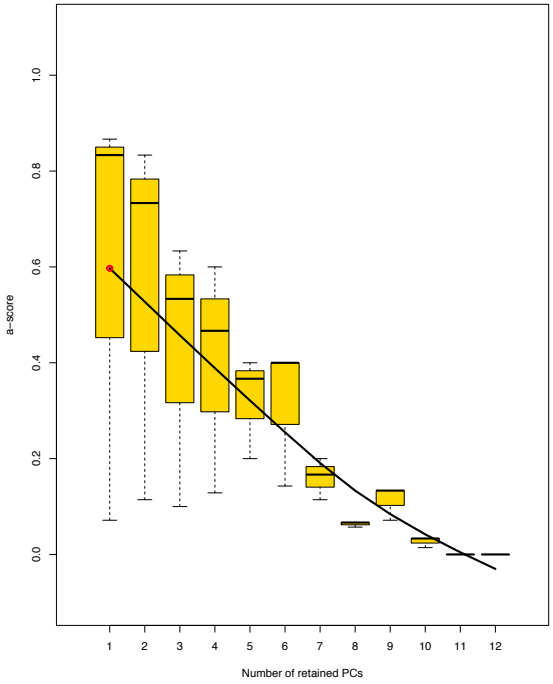
(a) Windward Is.



(b) Clade 1 - Tahiti



(c) Clade 2 - Tahiti



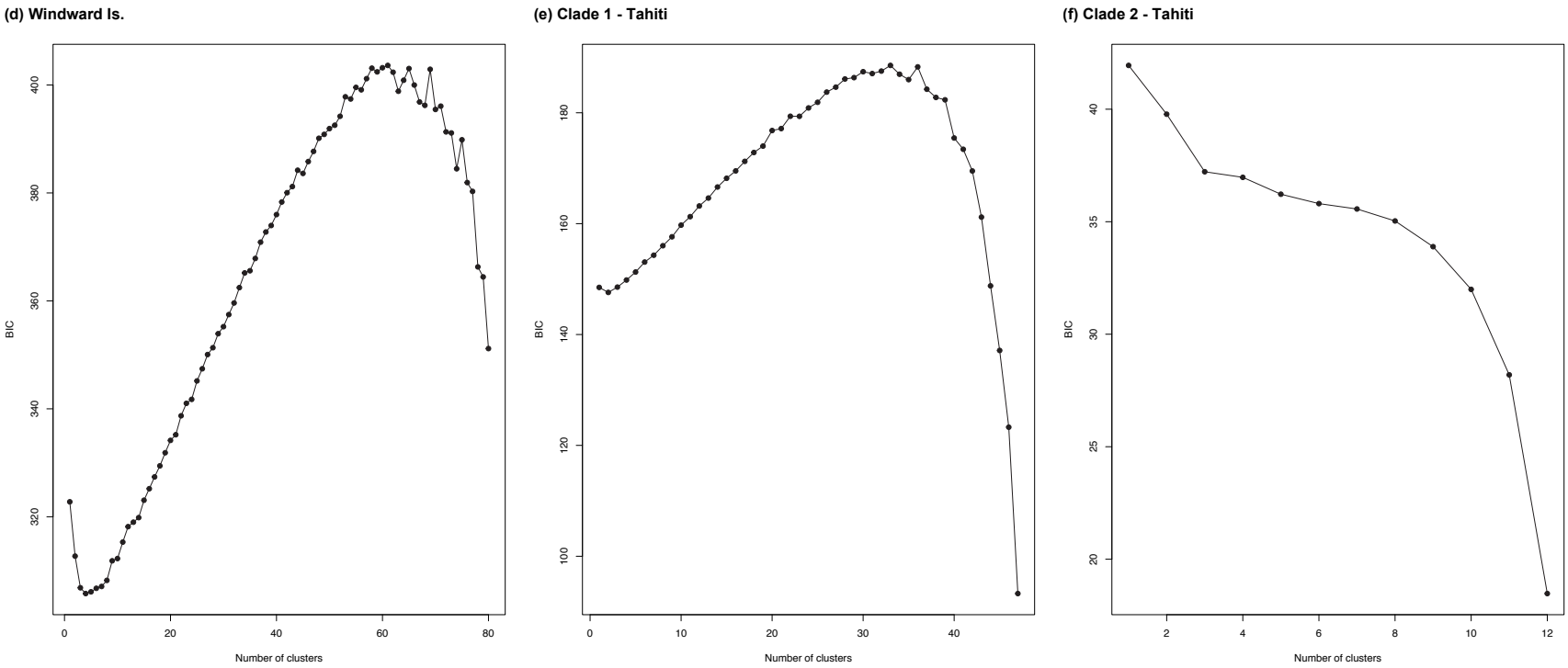


Figure S2 Scatter plots showing the optimal number of principal components (a-c) and Bayesian Information Criterion (BIC) plots (d-f) used to determine the most likely number of clusters in the dataset for the Discriminant Analysis of Principal Components (DAPC; Jombart, Devillard, & Balloux, 2010) for (a, d) all 93 Moorean and Tahitian individuals analyzed, (b, e) Tahitian Clade 1 ("*P. otaheitana"* and *"P. affinis"* species complexes), and (c, f) the Tahitian portion of Clade 2 ("*P. clara/P. hyalina*" species complex).

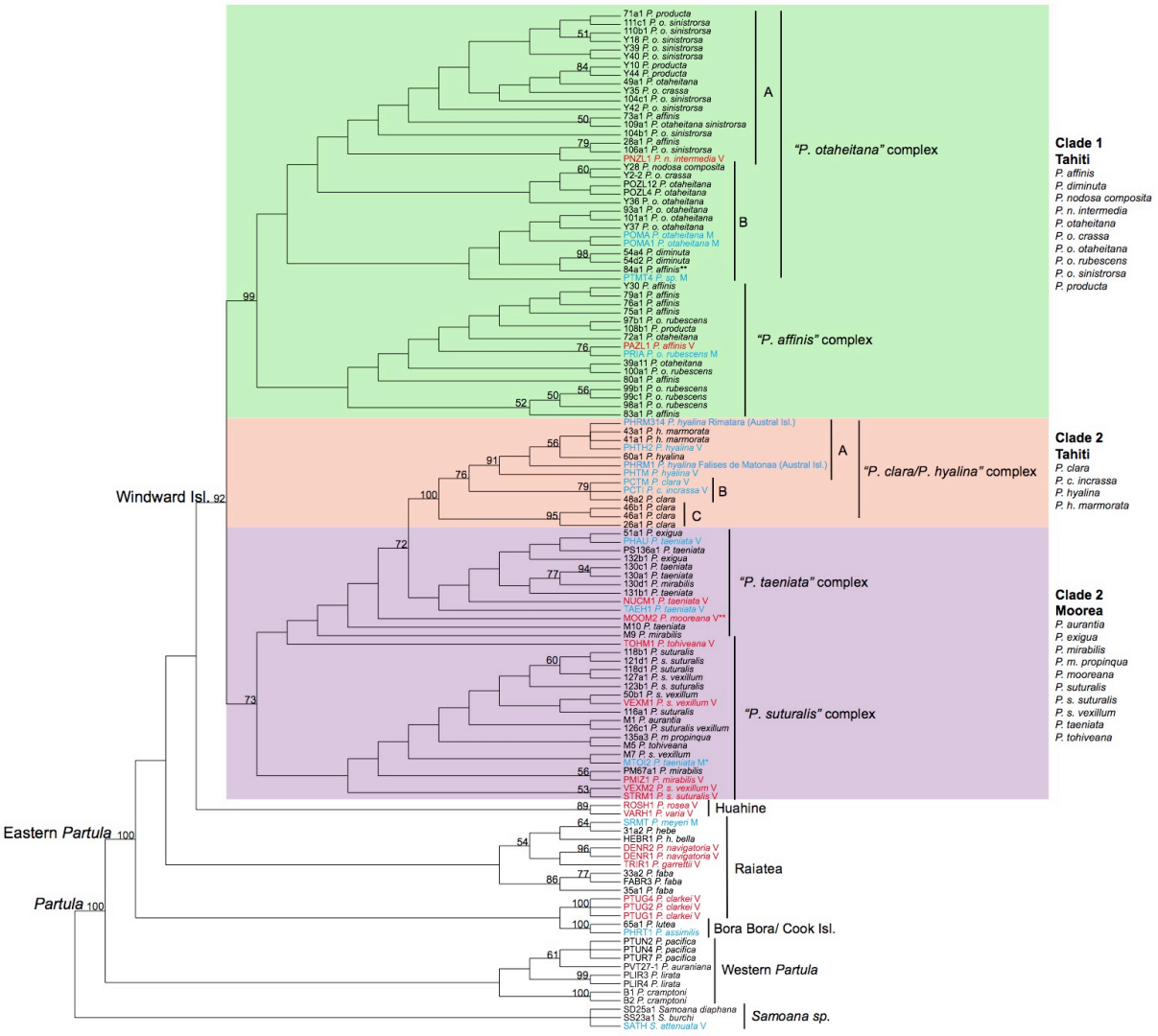
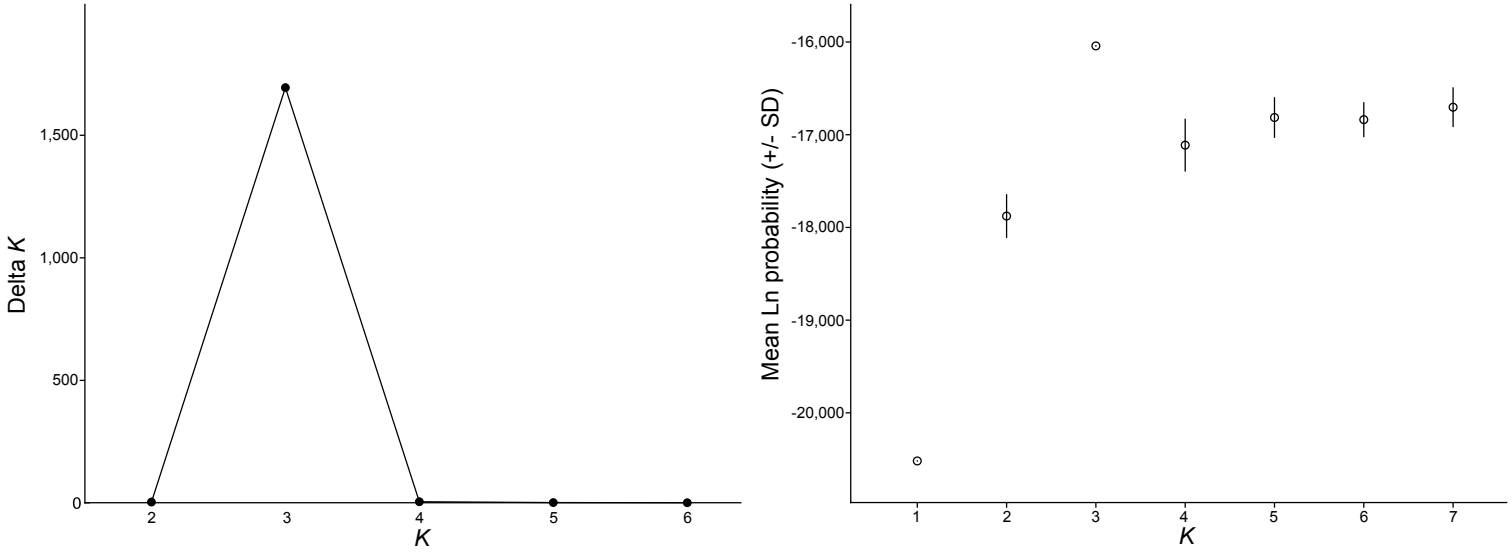


Figure S3 Species tree estimation of Moorean and Tahitian *Partula* clades for each individual (see Figure 4 for grouped analysis). The 2,169 locus 90% similarity threshold clustering across 75% of individuals dataset was analyzed with SVDquartets (Chifman & Kubatko, 2014) as implemented in PAUP* (Swofford, 2002). Bootstrap supports are indicated for nodes with values > 50%. Tree was rooted with three species of Society Islands *Samoana* (denoted *Samoana* sp.), the sister genus of *Partula.* All Society Islands *Partula* individuals were included in the analysis and are identified by their island of origin.

Figure S4 (a) All 93 Moorean and Tahitian *Partula* individuals. Figure caption can be found on page 41.



(b) Clade 1 – *"P. otaheitana"* and *"P. affinis"* species complexes

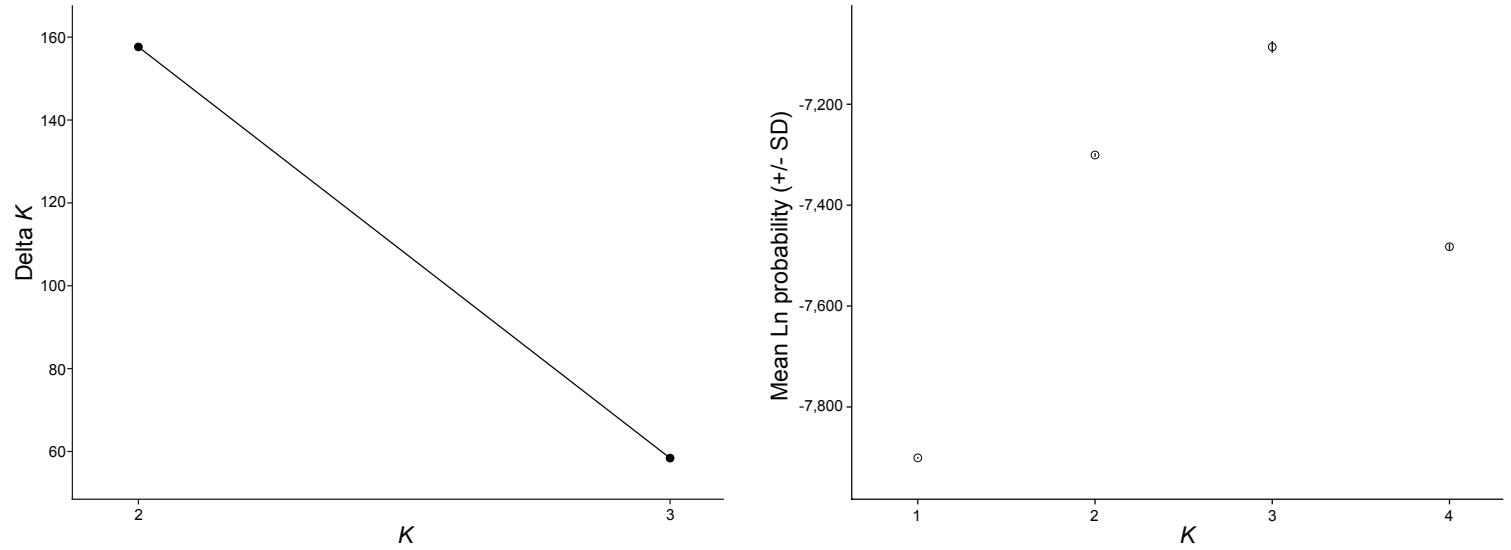
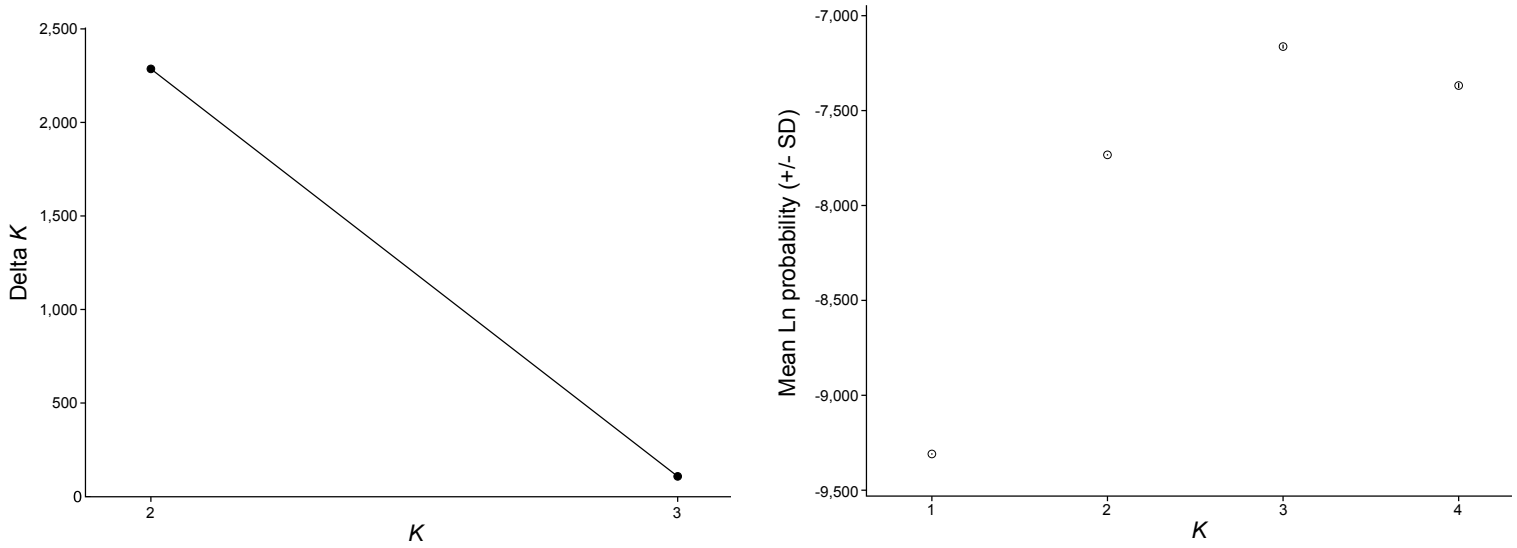
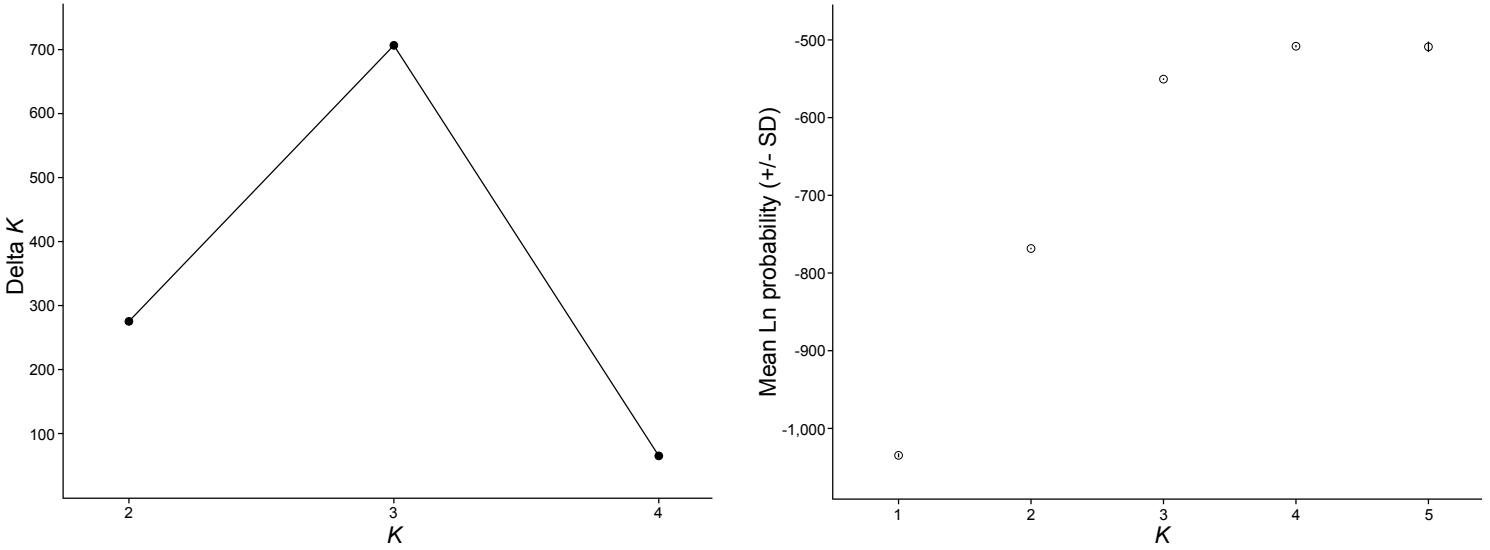


Figure S4 (c) Clade 2 – Moorea and Tahiti



(d) Clade 2 – Tahiti – "*P. clara/P. hyalina"* species complex



(e) Clade 2 – Moorea – *"P. taeniata*" and *"P. suturalis*" species complexes

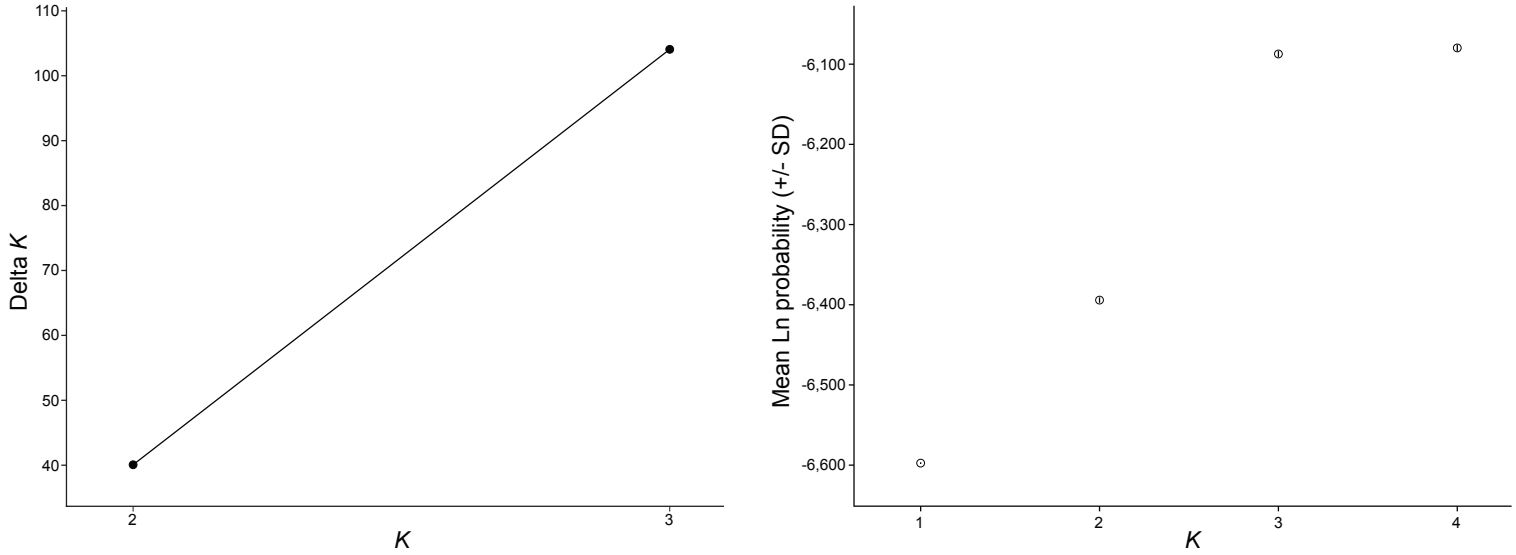


Figure S4. Scatter plots showing the most likely *K* for (a) all 93 Moorean and Tahitian individuals, (b) Clade 1 – Tahiti ("*P. otaheitana*" and "*P. affinis*" species complexes), (c) Clade 2 – Moorea and Tahiti, (d) Clade 2 – Tahiti (*"P. clara/P. hyalina*" species complex), and (e) Clade 2 – Moorea ("*P. taeniata*" and "*P. suturalis*" species complexes) using the Δ*K* method of Evanno, Regnaut, & Goudet (2005) and the mean natural log of the probability (+/- standard deviation (SD)) in Structure Harvester (Earl & vonHoldt, 2012). See Figure 5 for Structure bar graphs.

Supporting Information References

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