

## Supplementary Materials

**Table S1.** Species assignation, code number, geographic location, and GenBank Accession number of all samples used in this study. NADH=ND1+ND2+tRNAs (tRNA<sub>Ala</sub>, tRNA<sub>Gln</sub>, and tRNA<sub>Met</sub>).

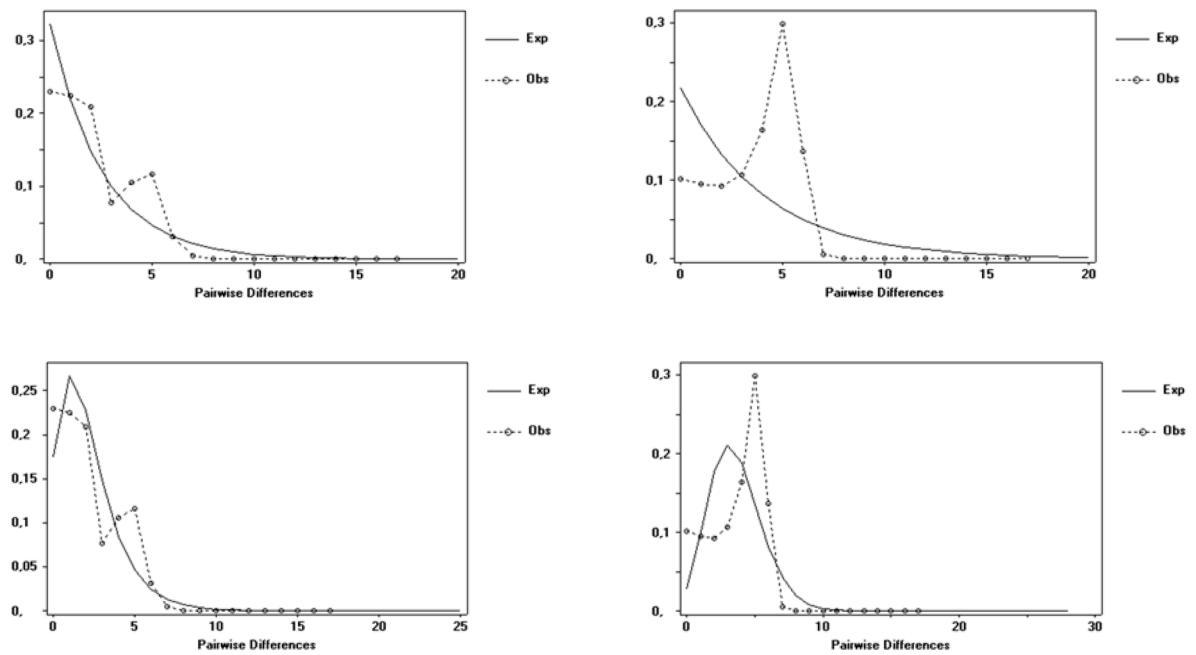
	Species	Code	Country	Locality	Lat	Long	12S	CR	CYTB	NADH	COI	RAG1	MC1R	KIAA2018	APOBE28
1	<i>P. liolepis</i>	AB0	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651630	MN651682	MW135433	MN651888	MN651765		
2	<i>P. liolepis</i>	AB1	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651631	MN651683		MN651889	MN651766	OM830888	OM830912
3	<i>P. liolepis</i>	AB2	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683		MN651890	MN651767		
4	<i>P. liolepis</i>	AB3	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683	MW135434	MN651891	MN651768	OM830889	OM830913
5	<i>P. liolepis</i>	AB4	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651684	MW135433	MN651892	MN651769	OM830890	OM830914
6	<i>P. liolepis</i>	AB5	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651685		MN651893	MN651770	OM830891	OM830915
7	<i>P. liolepis</i>	AB6	Spain	Grossa, Columbretes Islands	39.898	0.686							OM830937		
8	<i>P. liolepis</i>	AB7	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651633	MN651684	MW135433	MN651894	MN651771	OM830892	OM830916
9	<i>P. liolepis</i>	AB10	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683		MN651895	MN651772		
10	<i>P. liolepis</i>	AB11	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651631	MN651683		MN651896	MN651773		
11	<i>P. liolepis</i>	AB12	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651634			MN651897	MN651774		
12	<i>P. liolepis</i>	AB13	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683		MN651898	MN651775		OM830917
13	<i>P. liolepis</i>	AB14	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683			OM830942		
14	<i>P. liolepis</i>	AB22	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651630	MN651682		MN651899	MN651776		
15	<i>P. liolepis</i>	AB32	Spain	Grossa, Columbretes Islands	39.898	0.686							OM830943		
16	<i>P. liolepis</i>	AB33	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683		MN651900	MN651777	OM830893	OM830918
17	<i>P. liolepis</i>	AB44	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651631	MN651683		MN651901	MN651778	OM830894	OM830919
18	<i>P. liolepis</i>	AB52	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683		MN651902	MN651779		
19	<i>P. liolepis</i>	AB55	Spain	Grossa, Columbretes Islands	39.898	0.686		MN651585	MN651632	MN651683		MN651903	MN651780		
20	<i>P. liolepis</i>	AB62	Spain	Grossa, Columbretes Islands	39.898	0.686							OM830944		
21	<i>P. liolepis</i>	AB66	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683			OM830945		
22	<i>P. liolepis</i>	AB72	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683			OM830946		
23	<i>P. liolepis</i>	AB77	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1		MN651632			MN651904	MN651781		
24	<i>P. liolepis</i>	AB88	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651684		MN651905	MN651782		
25	<i>P. liolepis</i>	AB001	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683	MW135433	MN651906	MN651783		
26	<i>P. liolepis</i>	AB002	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683			OM830947		
27	<i>P. liolepis</i>	AB007	Spain	Grossa, Columbretes Islands	39.898	0.686						OM830951			
28	<i>P. liolepis</i>	AB008	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651631	MN651683			OM830948		
29	<i>P. liolepis</i>	AB009	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651633	MN651683		MN651907	MN651784		
30	<i>P. liolepis</i>	AB012	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683					
31	<i>P. liolepis</i>	AB017	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651635	MN651683	MW135433				
32	<i>P. liolepis</i>	AB022	Spain	Grossa, Columbretes Islands	39.898	0.686	KT030702.1	MN651585	MN651632	MN651683					

33	<i>P. liolepis</i>	AF1	Spain	Foradada, Columbretes Islands	39.875	0.671	KT030702.1	MN651585	MN651636				MN651908	MN651785		
34	<i>P. liolepis</i>	AF2	Spain	Foradada, Columbretes Islands	39.875	0.671	KT030702.1	MN651585	MN651636	MN651682	MW135433	MN651909	MN651786	OM830896		
35	<i>P. liolepis</i>	AF3	Spain	Foradada, Columbretes Islands	39.875	0.671					MW135433	OM830949				
36	<i>P. liolepis</i>	AF4	Spain	Foradada, Columbretes Islands	39.875	0.671						OM830950				
37	<i>P. liolepis</i>	AO2	Spain	Lobo, Columbretes Islands	39.875	0.672	KT030702.1	MN651585	MN651636				MN651910	MN651787		
38	<i>P. liolepis</i>	AO3	Spain	Lobo, Columbretes Islands	39.875	0.672	KT030702.1	MN651585	MN651636	MN651682	MW135433	MN651911	MN651788	OM830897	OM830920	
39	<i>P. liolepis</i>	AM1	Spain	Mancolibre, Columbretes Islands	39.895	0.690	KT030702.1	MN651585	MN651632				MN651912	MN651789		
40	<i>P. liolepis</i>	AM2	Spain	Mancolibre, Columbretes Islands	39.895	0.690	KT030702.1	MN651585	MN651632	MN651686	MW135433	MN651913	MN651790	OM830895	OM830921	
41	<i>P. liolepis</i>	HL1	Spain	Sajazarra, Rioja	42.588	-2.961	KT030703.1	KT030698.1	MN651637	KT030692.1	MW135441	MN651914	MN651791	OM830898	OM830922	
42	<i>P. liolepis</i>	PL3	France	Pêch de Foix	42.963	1.623	MN649229	MN651586	MN651638	MN651687	MW135443	MN651915	MN651792	OM830900	OM830930	
43	<i>P. liolepis</i>	PL36	France	Pêch de Foix	42.963	1.623					MW135443			OM830901	OM830931	
44	<i>P. liolepis</i>	PL60	France	Vaychis	42.748	1.840	KT030702.1	MN651587	MN651639	MN651682	MW135442	MN651916	MN651793	OM830902	OM830932	
45	<i>P. liolepis</i>	HF9	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	KT030697.1	KT030685.1	KT030691.1		MN651917	MN651794	OM830899	OM830923	
46	<i>P. liolepis</i>	HJ2	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	KT030684.1	KT030690.1	MW135435	MN651918	MN651795	OM830903	OM830924	
47	<i>P. liolepis</i>	HJ3	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651640	MN651688	MW135436	MN651919	MN651796	OM830904	OM830925	
48	<i>P. liolepis</i>	HJ4	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651641	MN651689		MN651920	MN651797	OM830905	OM830926	
49	<i>P. liolepis</i>	HPC8	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651640	MN651690	MW135439	MN651921	MN651798		OM830927	
50	<i>P. liolepis</i>	MPC5	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	KT030707.1	KT030709.1	MW135440	MN651922	MN651799	OM830906	OM830928	
51	<i>P. liolepis</i>	MPC6	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651588	MN651642	MN651690	MW135436	MN651923	MN651800	OM830907	OM830929	
52	<i>P. liolepis</i>	HP118	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651643	MN651691		MN651924	MN651801			
53	<i>P. liolepis</i>	HP218	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651640	MN651692	MW135436	MN651925	MN651802			
54	<i>P. liolepis</i>	HP3	Spain	Peñagolosa, Castellon	40.245	-0.376	MN649230	MN651587	MN651644	MN651693	MW135437	MN651926	MN651803			
55	<i>P. liolepis</i>	HP4	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651645	MN651694		MN651927	MN651804			
56	<i>P. liolepis</i>	HP5	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651589	MN651646	KT030690.1		MN651928	MN651805			
57	<i>P. liolepis</i>	HP8	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651585	MN651642	MN651690	MW135436	MN651929	MN651806			
58	<i>P. liolepis</i>	HP9	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651647	MN651690		MN651930	MN651807			
59	<i>P. liolepis</i>	HP10	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651587	MN651641	KT030709.1	MW135438	MN651931	MN651808			
60	<i>P. liolepis</i>	HP11	Spain	Peñagolosa, Castellon	40.245	-0.376	KT030702.1	MN651590	MN651648	KT030690.1	MW135436	MN651932	MN651809			
61	<i>P. muralis</i>	Mpfn7	Spain	Peñagolosa, Castellon	40.245	-0.376	MN649231	MN651591	MN651649	MN651695		MN651933	MN651810			
62	<i>P. muralis</i>	MLL1	Spain	Villaviciosa, Asturias	43.482	-5.433	MN649232	MN651592	MN651650	MN651697		MN651935	MN651812	OM830909	OM830933	
63	<i>P. muralis</i>	MPG2	Spain	Pto San Glorio, Cantabria	43.067	-4.766	MN649232	MN651593	MN651651	MN651699		MN651939	MN651816	OM830910	OM830934	
64	<i>P. muralis</i>	MSP1	Spain	Cervera, Castilla y León	42.867	-4.500	MN649232	MN651593	MN651651	MN651701		MN651944	MN651821	OM830911	OM830935	
65	<i>P. muralis</i>	MLP1	Spain	La Pinilla, Castilla y León	41.222	-3.479	KT030712.1	KT030710.1	KT030706.1	KT030708.1		MN651949	MN651826	OM830908	OM830936	
66	<i>P. muralis</i>	MP2	France	Moulis	42.960	1.092	MN649233	MN651594	MN651654							
67	<i>P. galera</i>	Gale1	Spain	Galera, Granada	37.739	-2.563	MN649225	MN651579	MN651613	MN651672		MN651869	MN651740			
68	<i>P. galera</i>	Gale3	Spain	Galera, Granada	37.739	-2.563	MN649225	MN651579	MN651613	MN651672		MN651870	MN651741			
69	<i>P. galera</i>	Gale5	Spain	Galera, Granada	37.739	-2.563	MN649225	MN651579	MN651613	MN651672		MN651871	MN651742			
70	<i>P. galera</i>	Df1	Spain	Puebla de Don Fadrique, Granada	37.911	-2.398	MN649225	MN651580	MN651613	MN651672		MN651872	MN651743			
71	<i>P. galera</i>	Df3	Spain	Puebla de Don Fadrique, Granada	37.911	-2.398	MN649225	MN651581	MN651613	MN651672			MN651744			
72	<i>P. galera</i>	Ph16	Spain	Orihuela, Alicante	38.085	-0.948	MN649225	MN651580	MN651614	MN651673		MN651873	MN651745			

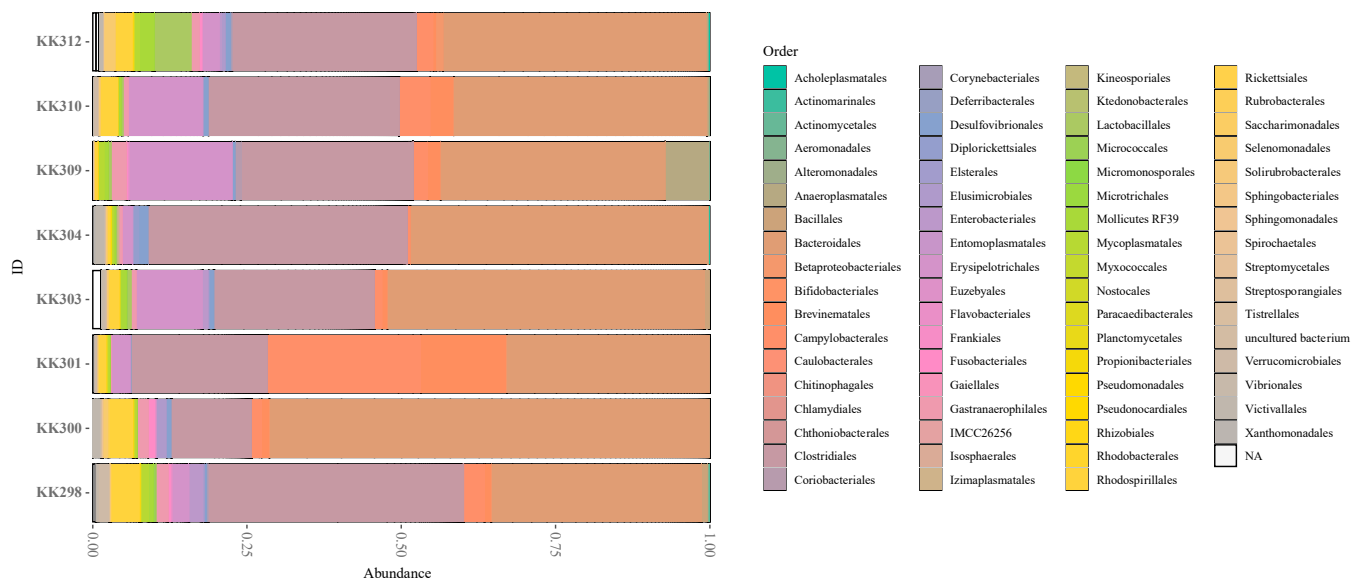
73	<i>P. galera</i>	Ph22	Spain	Embalse de la Pedrera, Orihuela	38.032	-0.870	MN649226	MN651580	MN651614	MN651673		MN651747
74	Valencia lineage*	HB2	Spain	Burjassot, Valencia	39.511	-0.414	KT030701.1	KT030695.1	MN651619	KT030689.1	MN651877	MN651752
75	Valencia lineage*	PHP3	Spain	Puebla Salvador, Cuenca	39.563	-1.675	MN649227	MN651582	MN651620	MN651677	MN651878	
76	Valencia lineage*	PHP4	Spain	Puebla Salvador, Cuenca	39.563	-1.675	MN649227	MN651582	MN651621	MN651678	MN651879	MN651753
77	Valencia lineage*	PHCE2	Spain	Ciudad Encantada, Cuenca	40.208	-2.011	KT030701.1	MN651582	MN651622	KT030689.1	MN651880	MN651754
78	Valencia lineage*	PHCE4	Spain	Ciudad Encantada, Cuenca	40.208	-2.011	KT030701.1	MN651582	MN651623	MN651679	MN651881	MN651755
79	<i>P. hispanicus</i> sensu stricto	Alb1	Spain	Sierra de la Oliva, Albacete	38.765	-0.971	MN649228	MN651583	MN651624	MN651680		MN651756
80	<i>P. hispanicus</i> sensu stricto	Alb2	Spain	Sierra de la Oliva, Albacete	38.765	-0.971	MN649228	MN651583	MN651624	MN651680		MN651757
81	<i>P. hispanicus</i> sensu stricto	Alb3	Spain	Montealegre del Castillo, Albacete	38.826	-1.341	MN649228	MN651583	MN651625	MN651680	MN651882	MN651758
82	<i>P. hispanicus</i> sensu stricto	Alb4	Spain	Montealegre del Castillo, Albacete	38.826	-1.341	MN649228	MN651584	MN651626	MN651680	MN651883	MN651759
83	<i>P. hispanicus</i> sensu stricto	Alb6	Spain	Cañada del Provencio, Albacete	38.518	-2.353	MN649228	MN651583	MN651627	MN651680	MN651884	MN651760
84	<i>P. hispanicus</i> sensu stricto	Seg2	Spain	Sierra Callosa del Segura, Alicante	38.123	-0.895	MN649228	MN651583	MN651628	MN651680	MN651885	MN651761
85	<i>P. hispanicus</i> sensu stricto	Cmp1	Spain	Laderas del Campillo, Murcia	38.060	-1.092	MN649228	MN651583	MN651629	MN651681	MN651886	MN651762
86	<i>P. hispanicus</i> sensu stricto	Cmp4	Spain	Laderas del Campillo, Murcia	38.060	-1.092	MN649228	MN651583	MN651629	MN651681		MN651764
<b>Outgroup**</b>												
	<i>P. lilfordi</i>	D22	Spain	Dragonera, Balearic Islands	39.584	2.320	EF694761.1	EF694773.1	KC623944.1	EU006730.1	MN651964	JX126631.1
	<i>P. lilfordi</i>	Cr1	Spain	Es Colomer, Balearic Islands	39.945	3.131	EF694760.1	EF694775.1	EF694801.1 / EF990524.1	EU006737.1		
	<i>P. lilfordi</i>	Cp1	Spain	Cabrera harbour, Balearic Islands	39.151	2.934	EF694764.1	EF694780.1	KF003361.1 / EF990531.1	EU006743.1	MN651963	JX126652.1
	<i>P. lilfordi</i>	AG1	Spain	Addaia Gran, Balearic Islands	40.016	4.210	EF694766.1	EF694786.1	EF694809.1 / EF694826.1	EU006756.1		
	<i>P. pityusensis</i>	Alg1	Spain	Alga, Balearic Islands	38.977	1.532	EF694768.1	EF694794.1	JX852075.1	JX852119.1		
	<i>P. pityusensis</i>	Eiv1	Spain	Ibiza, Balearic Islands	38.907	1.421	EF694768.1	EF694794.1	JX852050.1	JX852121.1	MN651965	JX126670.1
	<i>P. pityusensis</i>	Fort4	Spain	Formentera, Balearic Islands	38.753	1.436	EF694768.1	EF694794.1	JX852075.1	JX852121.1	MN651966	JX126678.1

\*Valencia lineage belong to *P. hispanicus* complex.

\*\* [48,49,53,70,106]



**Figure S1.** Pairwise mismatch distribution for Columbretes Islands samples based on mtDNA alignment (left) and MC1R nuclear loci (right). Expected frequencies (solid line), based on a constant size (above) and growth-decline model (below) are compared to observed frequencies (dotted line).



**Figure S2.** Faecal microbiota diversity in eight samples from Grossa island at the order level.