

**Morphological and molecular species boundaries in the
Hyalella species flock of Lake Titicaca (Crustacea:
Amphipoda)**

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Supplementary material

FIGURE S1 Summary of species delimitation results for mPTP, GMYC and ABGD algorithms shown on a *cox1* Maximum Likelihood phylogenetic tree. Green bars show consensus for MOTUs diagnoses. Symbols for morphospecies are shown for haplotypes deriving from our sampling.

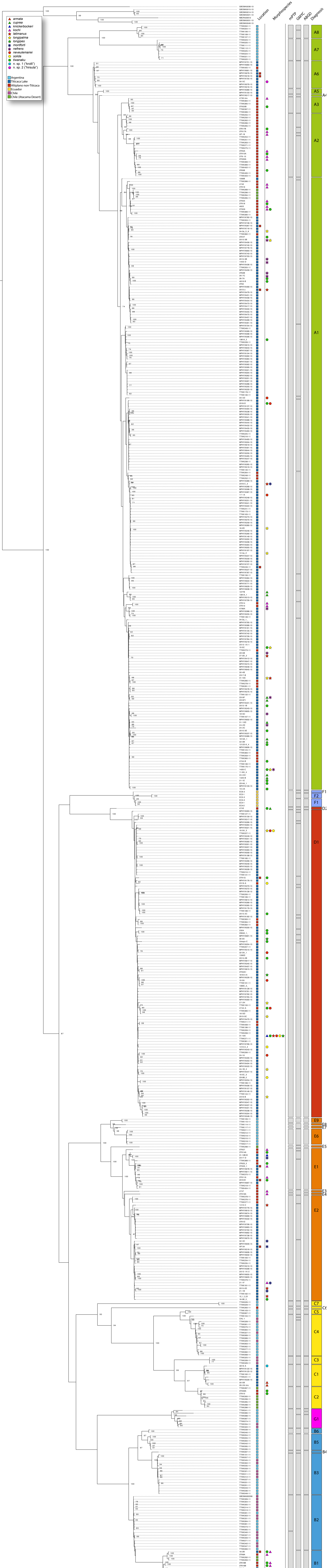


FIGURE S2 Bayesian ultrametric tree obtained in BEAST based on the *cox1* dataset and used as input in the GMYC and ABGD molecular species delimitations analyses. Node labels indicate posterior probability values higher than 0.9.

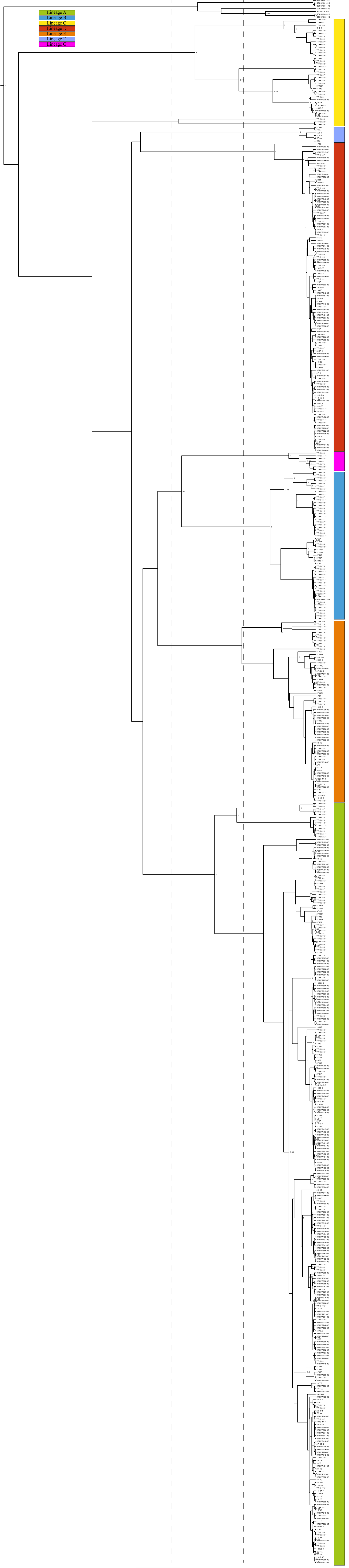


FIGURE S3 Maximum Likelihood tree based on the Histone 3 dataset. MOTU codes derived from the *cox1*-based molecular species delimitation analyses (see main text) have been added to the tip labels.

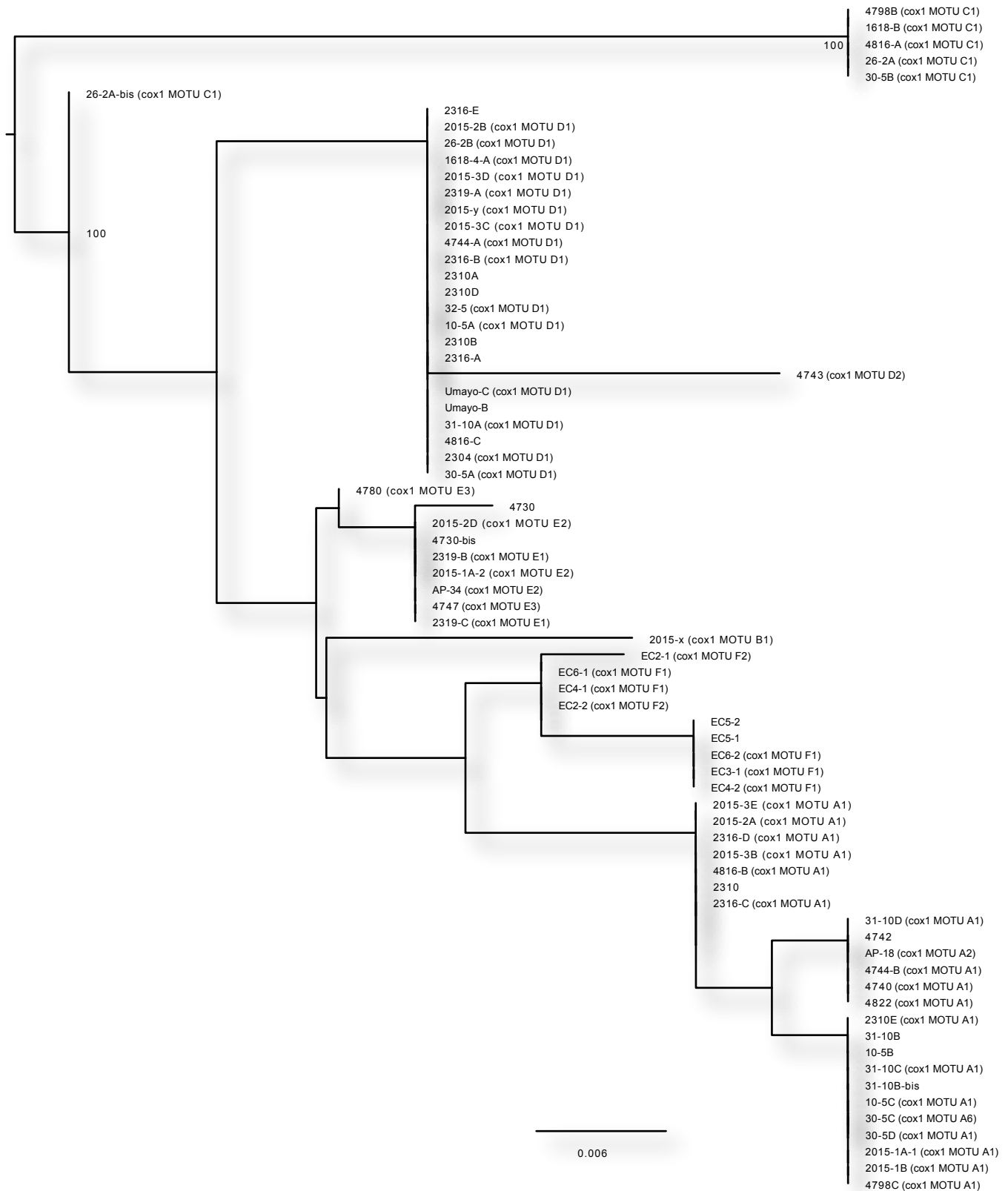


TABLE S1 Sampling stations at Lake Titicaca with the corresponding assemblage of *Hyaella* species recorded at each site (geographic coordinates in decimal degrees; Datum WGS84). Map code numbers as shown in fig. 1D

Locality		Coordinates		Depth (m)	Sample code	<i>armata</i>	<i>cuprea</i>	<i>knickerbockeri</i>	<i>kochi</i>	<i>latimamus</i>	<i>longipalma</i>	<i>longipes</i>	<i>monforti</i>	<i>nefrens</i>	<i>neveulemairei</i>	<i>solida</i>	<i>tiwanaku</i>	<i>Hyaella</i> n. sp. 1			
Map code	Name	Latitude	Longitude																		
1	Chua	-16.19953	-68.74745	1.5	11-6										x		x				
2	Small island SW to Pariti	-16.35600	-68.73900	2	20-1					x					x						
3		-16.37000	-68.77400	1.5	20-2					x				x	x		x				
4	Small island close to Isla Suana	16.33800	-68.85400	0.2	17-1					x					x						
5	Puerto Pérez	-16.31800	-68.62800	< 1.5	13.2					x			x		x						
				< 1.5	13.1														x		
6	Isla Suana	-16.33800	-68.85400	0.6	17-2			x							x		x				
				2.5	17-4					x				x	x		x		x		
7	Isla Pariti	-16.36200	-68.73700	2.5	12122				x	x			x					x			
8	Isla Pariti	-16.35600	-68.73900	2	21-1						x		x		x	x	x				
9				Isla Chipi	-16.29700	-68.80300	0.5-1	16-2				x	x	x						x	
10	Huatajata	-16.21282	-68.69392	< 0.7	10-5										x	x		x			
				1.5-2.5	1613												x	x		x	
11	Huarina	-16.21100	-68.62300	6	12-1					x					x	x	x	x			
12				-16.20700	-68.61700	< 1.5	12-4a					x								x	
13	Between Isla Suana and Isla Cachiaba	-16.35800	-68.81300	2.5	19-1						x				x	x	x				
14	Yunguyo (Bahía de Copacabana)	-16.23800	-69.09800	2	2304													x			
15				-16.23700	-69.09900	2.5	27-2			x	x	x					x				
16	Vilquechico	-15.23600	-69.69400	3.5	1420								x	x	x						
				< 0.2	1421															x	
17		-15.23700	-69.69500	27	1618	x						x									
18	University salmonid culture station	-15.87610	-69.89703	5	1340						x		x					x			
19				-15.88200	-69.89800	10-12	1345						x				x				
						2.7	1356							x	x		x	x			
20	Ajilata (Punta Khauani)	-16.01000	-68.81900	5	1410					x	x				x	x		x			
				< 0.5	34-2a											x		x			
				2	2310						x				x	x	x				
				4	2314									x			x				
21	Juli: Playa de San Juan	-16.201933	-69.460447	< 1	3TK1						x				x			x			
22				-16.202246	-69.461093	< 1	3TK2									x					
23	Isla Ticonata (Bahía de Capachica)	-15.64700	-69.79100	8	30-4					x	x			x							
24				-15.63700	-69.79200	26	30-5	x					x				x				
25	Isla Taquile	-	-	< 0.5	2015-3			x			x			x				x			
26	Isla Soto	-15.54300	-69.49700	12	2316					x	x		x		x		x				
				8	2317				x		x	x		x		x					
				2.5	31-4													x			
				18	31-9						x	x	x		x		x		x		
				23	31-10					x			x				x				
27		-15.54500	-69.49600	< 0.5	31-1													x			
28		-15.54100	-69.49800	< 1	31-3													x			
29	Isla Amantaní	-	-	< 0.5	2015-2					x								x			
30				-15.66700	-69.69800	< 1	29-7		x										x		
31				-	-	< 0.5	2015					x				x				x	
32	Isla Chakura o Uros (Puno)	-	-	< 0.5	2015-1													x			
33	Isla Esteves (Puno)	-15.82800	-69.98700	1.8	1406													x			
					1407															x	
34	Escoma	-15.73621	-69.08813	< 1	4798										x			x			
					4816															x	
35	Embarcadero de Pucará	-16.065720	-69.421925	< 1	3TK3													x			
36	Chocasuyu (Bahía de Copacabana)	-16.20300	-69.39100	23	26-2	x						x									
37				-16.20300	-69.39500	6.5	1732		x								x				
38				-16.20500	-69.39800	< 0.5	1738														x
39				-16.20500	-69.39700	1.5	26-7											x			x
40	Charcas	-15.913768	-69.726356	< 1	3TK4													x			
41	Bahía de Ramis	-15.32400	-69.83100	5	24-1		x				x			x	x						

42		-15.32100	-69.84600	4	24-2		x	x							x	x		x		
43	Bahía de Puno	-15.84000	-69.98600	3.5	1408														x	
44		-15.76547	-69.87792	9	1377		x			x	x									
45		-15.75333	-69.87167	1.5-2.5	1381		x			x	x							x	x	x
46		-15.75455	-69.87235	1.5-2.5	1390		x			x	x									x
47	Bahía de Coata	-15.60877	-69.89948	10	1395															x
48		-15.62553	-69.89970	2.5	1403					x									x	x
49	Isla del Sol	-16.04500	-69.14900	6	32-3		x	x							x				x	x
50		-16.04000	-69.15000	< 0.5	32-5															x
51		-16.04000	-69.15600	21	32-7			x			x				x					x

TABLE S2 Sampling stations at the Andean Altiplano and nearby areas, with the *Hyalella* species recorded at each site (geographic coordinates in decimal degrees; Datum WGS84). Map code numbers as shown in fig. 1C

Locality		Coordinates		Depth (m)	Sample code	<i>kochi</i>	<i>tiwanaku</i>
Map code	Name (+ height above sea level)	Latitude	Longitude				
52	Jatun Cocha (3838m)	-15.667415	-70.188402	< 0.5	3TK5	x	x
53	Lago Umayo (3858m)	-15.711682	-70.150641	< 0.5	3TK6		x
54		-15.725027	-70.155029	< 0.5	3TK22		x
55		-15.729659	-70.160353	15	3TK23	x	x
56		-15.739000	-70.171000	0-3	2319		x
					Umayo	x	x
57	Laguna Vila-Vila (4330m)	-15.185144	-70.645570	< 0.5	3TK7	x	x
58	Laguna Chacas (4016m)	-15.413600	-70.221154	< 0.5	3TK8	x	x
59		-15.412010	-70.200580	< 1	4780	x	
60	Floodplain between Ilave and Mazo Cruz (3963m)	-16.606869	-69.699808	< 0.5	3TK9	x	x
61	Laguna Súchez (Huaytire) (4462m)	-16.907580	-70.389366	< 0.5	3TK10		x
62	Huaytire (river close to town Huaytire) (4496m)	-16.883897	-70.372698	< 0.5	4740	x	
63	Lago Lagunillas (4551m)	-15.683661	-70.779523	< 0.5	3TK11	x	x
64		-15.705870	-70.806330	< 1	4730		
65	Laguna Saracocha (4224m)	-15.777368	-70.614570	< 0.5	3TK12	x	x
66	Laguna Lloketa (3980m)	-14.759041	-69.984284	< 0.5	3TK13	x	
67	Laguna Qlearia (4021m)	-14.780947	-69.992447	< 0.5	3TK14	x	x
68	Laguna Asillo (3890m)	-14.781170	-70.343075	< 0.5	3TK15	x	x
69	Laguna Orurillo (4020m)	-14.732417	-70.499878	< 0.5	3TK16	x	x
70	Laguna Ananta (4857m)	-15.372452	-70.866781	< 0.5	3TK17	x	x
71	Laguna Japutiana (4649m)	-15.292721	-70.880681	< 0.5	3TK18		x
72	Presa Saguani (4631m)	-15.243481	-70.916739	< 0.5	3TK19	x	
73	Laguna Quequerana (4010m)	-14.911128	-70.248587	< 0.5	3TK20		x
74	Laguna Jallapicsé (3884m)	-14.816826	-70.250703	< 0.5	3TK21	x	
75	Laguna Sakakani (4387m)	-15.718323	-70.835577	< 0.5	3TK24		x
76	Floodplain at Hacienda Colca (4420m)	-15.678852	-71.052006	< 0.5	3TK25	x	
77	Río Hunacane (3826m)	-15.215820	-69.792370	< 0.5	4744		x
78	Small laguna beside Laguna Pañe (4609m)	-15.400250	-71.075590	< 0.7	4822	x	
79	Lago Langui Layo (3999m)	-14.452310	-71.279540	< 2	4743		x
80	Río Súchez (4320m)	-14.982980	-69.370530	< 0.5	AP-18	x	
81	Laguna Súchez (4611m)	-14.793790	-69.338910	< 1	4747	x	
82	Río Laca Jahuira (Pampa Aullagas) (3704m)	-19.184640	-67.050220	< 0.5	AP-34	x	x
83	Outflow of Lago Ucumarini (4297m)	-16.626600	-70.406600	< 0.5	4742	x	
84	Lago Khotia (4463m)	-16.127260	-68.350640	< 3	4781		
85	Laguna Jayuchaca (4452m)	-15.756249	-71.051345	< 0.5	3TK26	x	x
86	Lago Huacarpay (3088m)	-13.623814	-71.740546	< 0.5	3TK27	x	

TABLE S3 List of *coxI* haplotypes recorded in more than two specimens. The code for the first specimen on the list was the only one used in phylogenetic and molecular delimitation analyses

31-10A = MPHYA403-15 = 26-2B = 2015-y = 2015-3D = 1410-B = 34-2a_2 = 1403-B = 4798C_3 = 11-6A_3 = 1381B_3 = MPHYA763-15 = MPHYA158-15 = MPHYA694-15 = MPHYA536-15 = MPHYA705-15 = MPHYA466-15 = MPHYA544-15 = MPHYA379-15 = MPHYA816-15 = MPHYA336-15 = MPHYA342-15 = MPHYA350-15 = MPHYA450-15 = MPHYA595-15 = MPHYA096-15 = MPHYA717-15 = MPHYA365-15 = MPHYA719-15 = MPHYA767-15 = MPHYA620-15 = MPHYA405-15 = MPHYA349-15 = MPHYA378-15 = MPHYA752-15 = MPHYA343-15 = MPHYA351-15 = MPHYA823-15 = MPHYA534-15 = MPHYA708-15 = MPHYA141-15 = MPHYA344-15 = MPHYA699-15 = MPHYA570-15 = MPHYA409-15 = MPHYA402-15 = MPHYA785-15 = TTKK16411 = TTKK14111 = TTKK19811 = TTKK14211 = TTKK37211 = TTKK19511 = TTKK35811 = TTKK13811 = TTKK18511 = TTKK15811 = TTKK21511 = MPHYA82415
31-10C = MPHYA81815 = 2316-C = 12-1 = 2317-I = 2317-C = 2317-H = MPHYA27515
31-10D = 24-2A2
30-5B = 1618-B
4816-A = 4798B
4816-B = 3TK1A = 3TK2A1 = 3TK4A
30-5A = MPHYA528-15 = MPHYA744-15 = MPHYA731-15
1618-4-A = MPHYA330-15 = MPHYA821-15
2319-B = MPHYA653-15 = 2319-C
10-5A = MPHYA525-15 = 21-1C_3 = 24-1B_1 = 1390C_2 = MPHYA154-15
10-5C = MPHYA448-15 = 16-5A_1 = MPHYA416-15 = MPHYA488-15 = MPHYA418-15 = MPHYA605-15 = MPHYA446-15 = MPHYA600-15 = MPHYA414-15 = MPHYA419-15 = MPHYA438-15 = MPHYA793-15 = MPHYA421-15 = MPHYA413-15 = MPHYA445-15 = MPHYA489-15 = MPHYA437-15 = MPHYA472-15 = MPHYA476-15 = MPHYA797-15 = MPHYA579-15 = MPHYA434-15 = MPHYA422-15 = MPHYA433-15 = MPHYA621-15 = MPHYA442-15 = MPHYA424-15 = MPHYA449-15 = MPHYA175-15 = TTKK19211
4730-bis = 3TK5_1 = TTKK38611
4747 = 4780
4744-A = 2319-A_1
AP-34 = MPHYA628-15 = 21-1D = MPHYA314-15 = MPHYA627-15 = MPHYA639-15 = MPHYA609-15 = TTKK23611
TTKK20611 = 32-5 = MPHYA410-15 = MPHYA368-15
2316-D = MPHYA130-15 = 4798C = 4798C_2 = MPHYA178-15 = MPHYA134-15 = TTKK15111 = TTKK14911
TTKK24911 = 2310E = 16-5C_1 = MPHYA015-15 = MPHYA566-15 = MPHYA026-15 = TTKK24611 = TTKK24711 = TTKK22611
EC2-2 = EC2-1
EC3-2 = EC3-0
EC6-2 = EC6-0 = EC6-1
2015-z = TTKK21411 = MPHYA511-15 = MPHYA467-15 = MPHYA420-15 = MPHYA747-15 = MPHYA734-15 = MPHYA723-15 = MPHYA721-15 = MPHYA798-15 = MPHYA786-15 = MPHYA791-15 = MPHYA327-15 = MPHYA111-15 = TTKK35711 = TTKK35411 = TTKK27611 = TTKK27411 = TTKK27711 = TTKK27911 = TTKK27211 = TTKK35211 = TTKK35611
2015-3E = 2015-2A
2015-2D = TTKK37411
2015-3C = MPHYA756-15 = MPHYA759-15 = MPHYA777-15 = MPHYA729-15 = MPHYA707-15 = MPHYA715-15 = MPHYA769-15 = MPHYA49615
31-10B-B = MPHYA315-15
24-1B_2 = TTKK21211 = 16-5A_2 = 3TK2D = MPHYA426-15 = MPHYA425-15 = MPHYA490-15 = MPHYA429-15
24-1A = TTKK18611
32-3A_1 = TTKK15411 = 1420-A = 21-1C_2 = MPHYA505-15 = MPHYA169-15 = MPHYA441-15 = MPHYA660-15 = MPHYA278-15 = MPHYA138-15 = MPHYA443-15 = MPHYA156-15 = MPHYA430-15 = MPHYA524-15
2015_3B = 1410-A_1 = 3TK2B = 3TK1E = 1390C_1
16-2B = TTKK41011 = 3TK8B = TTKK36311 = TTKK35011 = TTKK36511 = TTKK36211 = TTKK36411
1420-C = TTKK13911 = 24-1E = 2310F2 = 12-4a_1_1 = 11-6A_2 = 1613A_2 = 12_4a_1 = 24-2F = 2317-G = MPHYA804-15 = MPHYA160-15 = MPHYA011-15 = MPHYA257-15 = MPHYA800-15 = MPHYA803-15 = MPHYA211-15 = MPHYA040-15 = MPHYA172-15 = MPHYA801-15 = MPHYA799-15 = MPHYA163-15 = MPHYA212-15 =

MPHYA131-15 = MPHYA807-15 = MPHYA042-15 = MPHYA132-15 = MPHYA173-15 = MPHYA136-15 = MPHYA166-15 = TTKK14611 = TTKK37311 = TTKK15511 = TTKK16911 = TTKK16511 = TTKK16111
12-4a_2 = TTKK17411 = MPHYA281-15 = MPHYA061-15 = MPHYA113-15 = MPHYA285-15 = MPHYA013-15 = MPHYA039-15 = MPHYA218-15 = MPHYA253-15 = MPHYA003-15 = MPHYA045-15 = MPHYA192-15 = MPHYA226-15 = MPHYA277-15 = MPHYA307-15 = MPHYA214-15 = MPHYA224-15 = MPHYA228-15 = MPHYA014-15 = MPHYA033-15 = MPHYA222-15 = MPHYA189-15 = MPHYA108-15 = MPHYA284-15 = MPHYA244-15 = MPHYA561-15 = MPHYA328-15 = MPHYA329-15 = MPHYA193-15 = MPHYA203-15 = MPHYA230-15 = MPHYA032-15 = MPHYA206-15 = MPHYA037-15 = MPHYA324-15 = MPHYA325-15 = MPHYA439-15 = MPHYA034-15 = MPHYA302-15 = MPHYA196-15 = MPHYA603-15 = MPHYA209-15 = MPHYA323-15 = MPHYA038-15 = MPHYA065-15 = MPHYA237-15 = MPHYA245-15 = MPHYA073-15 = MPHYA195-15 = MPHYA069-15 = MPHYA235-15 = MPHYA236-15 = MPHYA043-15 = MPHYA215-15 = MPHYA261-15 = MPHYA267-15 = MPHYA071-15 = MPHYA247-15 = MPHYA279-15 = MPHYA291-15 = MPHYA012-15 = MPHYA200-15 = MPHYA114-15 = MPHYA221-15 = MPHYA210-15 = MPHYA241-15 = TTKK17511 = TTKK14711 = TTKK24211 = TTKK17111 = TTKK17611 = TTKK24011 = TTKK24411 = TTKK12311 = TTKK13411
16-5A_3 = TTKK19711 = 17-2B = 3TK1B = MPHYA027-15 = MPHYA095-15 = MPHYA098- 15 = MPHYA099-15 = MPHYA144-15 = MPHYA571-15 = MPHYA650-15 = MPHYA053-15 = MPHYA060-15 = MPHYA613-15 = MPHYA167-15 = MPHYA101-15 = MPHYA006-15 = MPHYA116-15 = MPHYA612-15 = MPHYA022-15 = MPHYA046-15 = MPHYA119-15 = MPHYA577-15 = MPHYA100-15 = MPHYA120-15 = MPHYA610-15 = MPHYA623-15 = MPHYA093-15 = MPHYA155-15 = MPHYA107-15 = MPHYA024-15 = MPHYA030-15 = MPHYA047-15 = MPHYA102-15 = MPHYA109-15 = MPHYA008-15 = MPHYA563-15 = MPHYA088-15 = MPHYA569-15 = MPHYA631-15 = MPHYA641-15 = MPHYA171-15 = MPHYA356-15 = MPHYA153-15 = MPHYA649-15 = MPHYA592-15 = MPHYA296-15 = MPHYA381-15 = TTKK21311 = TTKK12911 = TTKK20411 = TTKK13311 = TTKK23911
16-2D = MPHYA591-15
26-7A = MPHYA318-15
21-1F = TTKK23711 = 12122-A_1 = MPHYA312-15 = MPHYA078-15 = MPHYA637-15 = MPHYA270-15 = MPHYA617-15 = TTKK12811
3TK23_1 = MPHYA656-15 = MPHYA68415
TTKK14411 = 26-7D = 3TK2A2 = MPHYA180-15 = MPHYA380-15 = MPHYA147-15 = MPHYA145-15
3TK-15 = 3TK21
3TK26 = TTKK38711 = 3TK24 = 3TK25 = TTKK39111
3TK1G = TTKK14511 = 3TK11B
1613A_1 = TTKK21111 = 11-6A1-1 = MPHYA371-15 = MPHYA408-15
1381A_1 = MPHYA739-15 = 24_2C = MPHYA757-15 = MPHYA471-15 = MPHYA741-15 = MPHYA732-15
3TK16B = 3TK12A
3TK20B = TTKK39811 = TTKK39511
3TK1F = 3TK1C
MPHYA706-15 = 3TK2C = MPHYA774-15 = MPHYA671-15 = MPHYA675-15 = MPHYA746-15 = MPHYA686-15 = MPHYA664-15 = MPHYA688-15 = MPHYA681-15 = MPHYA783-15 = MPHYA657-15 = MPHYA780-15 = MPHYA685-15 = MPHYA722-15 = MPHYA728-15 = MPHYA758-15 = MPHYA68015
MPHYA010-15 = 12-1

TABLE S4 Clock, tree and substitution model comparison results based on Bayes Factors from marginal likelihood estimations through path sampling and stepping-stone in BEAST

Number of partitions	Substitution model	Tree model	Clock model	SteppingStone log marginal likelihood	BF (from SteppingStone)	PathSampling log marginal likelihood	BF (from PathSampling)
1	GTR+I+G	Coalescent constant size	UCLN relaxed	-18031,04101	840	-17965,88770	786
1	GTR+I+G	Yule process	UCLN relaxed	-18113,60758	1005	-18070,55591	995
2	Each with a GTR+I+G	Coalescent constant size	UCLN relaxed	-17717,80247	213	-17653,01758	160
2	Each with a GTR+I+G	Yule process	UCLN relaxed	-17887,00369	552	-17822,96421	500
3	Each with a GTR+I+G	Coalescent constant size	UCLN relaxed	-17611,17729	0	-17572,98632	0
3	Each with a GTR+I+G	Yule process	UCLN relaxed	-17806,74939	391	-17721,67803	297
Conclusion: Coalescence model is better than Yule for all schemes, and partitioning by three codons is best							
3	1st:TRN+I+G; 2nd:GTR+G; 3rd:GTR+I+G	Coalescent constant size	Strict	-17710,44597	163	-17611,01253	88
3	1st:TRN+I+G; 2nd:GTR+G; 3rd:GTR+I+G	Coalescent constant size	UCLN relaxed	-17628,86823	0	-17567,24197	0
Conclusion: UCLN relaxed clock model is better than a strict clock and best fitting nucleotide model estimated in PartitionFinder for each codon partition is better than default GTR+I+G							

TABLE S5 Rough geographic distribution of the studied *Hyalella* clades and corresponding MOTUs in South America, with particular locations in Chile (Atacama region) and Perú (Arequipa, Cuzco) adjacent to the Altiplano remarked by name

Clade	Titicaca (Perú/Bolivia)	Altiplano Perú/Bolivia)	Perú	Chile	Argentina	Ecuador
A1	+	+		Atacama		
A2		+				
A3		+				
A4	+					
A5	+					
A6	+	+				
A7					+	
A8					+	
B1	+	+		Atacama		
B2				+	+	
B3				+	+	
B4					+	
B5					+	
B6					+	
C1	+					
C2		+		Atacama		
C3				+		
C4				+	+	
C5					+	
C6			Arequipa			
C7					+	
D1	+	+				
D2		+				
E1	+	+	Cuzco			
E2	+	+				
E3		+				
E4		+				
E5				+		
E6					+	
E7					+	
E8					+	
E9					+	
F1						+
F2						+
G1					+	

TABLE S6 Mean K2P *coxI* genetic distances between (left) and within (right) *Hyalella* MOTUs

	F2	F1	D1	D2	A1	A3	A2	A6	A5	A4	A8	A7	E1	E2	E3	E4	E5	E6	E8	E7	E9	B1	B3	B4	B2	B5	B6	G1	C1	C2	C3	C4	C5	C7	C6		
F2																																					
F1	0.06																																				
D1	0.16	0.15																																			
D2	0.16	0.14	0.06																																		
A1	0.19	0.19	0.15	0.16																																	
A3	0.17	0.17	0.16	0.16	0.06																																
A2	0.16	0.16	0.15	0.16	0.07	0.04																															
A6	0.18	0.19	0.15	0.17	0.09	0.08	0.09																														
A5	0.18	0.18	0.14	0.15	0.07	0.08	0.09	0.04																													
A4	0.18	0.18	0.15	0.16	0.07	0.07	0.08	0.03	0.03																												
A8	0.15	0.15	0.16	0.14	0.15	0.16	0.14	0.14	0.13	0.14																											
A7	0.20	0.17	0.16	0.14	0.14	0.12	0.14	0.14	0.13	0.11	0.16																										
E1	0.20	0.16	0.18	0.16	0.22	0.23	0.22	0.21	0.23	0.21	0.19	0.17																									
E2	0.21	0.18	0.21	0.19	0.22	0.22	0.22	0.22	0.23	0.21	0.19	0.19	0.07																								
E3	0.23	0.19	0.19	0.18	0.20	0.21	0.21	0.20	0.21	0.20	0.20	0.18	0.07	0.07																							
E4	0.20	0.17	0.17	0.16	0.19	0.21	0.21	0.19	0.20	0.18	0.20	0.17	0.07	0.07	0.08																						
E5	0.22	0.17	0.17	0.17	0.23	0.21	0.22	0.22	0.22	0.21	0.21	0.15	0.09	0.12	0.12	0.12																					
E6	0.21	0.17	0.18	0.18	0.18	0.19	0.18	0.19	0.19	0.19	0.18	0.18	0.13	0.13	0.14	0.12	0.13																				
E8	0.18	0.15	0.16	0.15	0.19	0.19	0.18	0.17	0.18	0.17	0.20	0.17	0.13	0.14	0.14	0.11	0.10	0.07																			
E7	0.22	0.18	0.18	0.17	0.18	0.20	0.20	0.18	0.20	0.19	0.19	0.16	0.13	0.13	0.13	0.10	0.11	0.06	0.05																		
E9	0.19	0.18	0.20	0.18	0.17	0.19	0.18	0.17	0.18	0.18	0.19	0.17	0.15	0.17	0.16	0.13	0.13	0.09	0.08	0.08																	
B1	0.18	0.17	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.18	0.18	0.21	0.23	0.21	0.19	0.18	0.20	0.18	0.18	0.16																
B3	0.16	0.15	0.15	0.14	0.15	0.15	0.15	0.17	0.16	0.16	0.18	0.18	0.19	0.22	0.19	0.17	0.18	0.18	0.16	0.17	0.16	0.09															
B4	0.14	0.13	0.14	0.13	0.16	0.15	0.15	0.17	0.17	0.16	0.17	0.17	0.16	0.19	0.18	0.16	0.15	0.18	0.15	0.17	0.15	0.09	0.05														
B2	0.16	0.15	0.14	0.14	0.15	0.14	0.15	0.16	0.16	0.15	0.18	0.15	0.19	0.20	0.19	0.17	0.16	0.18	0.16	0.16	0.16	0.07	0.07	0.07													
B5	0.15	0.14	0.14	0.14	0.16	0.15	0.15	0.16	0.16	0.16	0.17	0.17	0.19	0.21	0.19	0.17	0.17	0.19	0.17	0.18	0.15	0.08	0.06	0.07	0.05												
B6	0.15	0.14	0.16	0.14	0.15	0.15	0.15	0.16	0.15	0.17	0.15	0.19	0.20	0.18	0.19	0.16	0.18	0.16	0.18	0.16	0.07	0.08	0.08	0.04	0.05												
G1	0.18	0.20	0.17	0.18	0.18	0.18	0.19	0.18	0.17	0.17	0.19	0.17	0.20	0.22	0.21	0.20	0.18	0.20	0.18	0.19	0.16	0.18	0.19	0.19	0.17	0.18	0.16										
C1	0.20	0.20	0.16	0.17	0.18	0.18	0.18	0.18	0.16	0.16	0.18	0.19	0.19	0.18	0.19	0.18	0.17	0.17	0.15	0.18	0.21	0.16	0.17	0.16	0.17	0.17	0.16	0.17									
C2	0.20	0.18	0.16	0.18	0.18	0.18	0.19	0.19	0.16	0.17	0.21	0.18	0.20	0.21	0.21	0.19	0.20	0.19	0.18	0.20	0.21	0.17	0.17	0.16	0.14	0.15	0.15	0.17	0.08								
C3	0.21	0.21	0.19	0.19	0.22	0.22	0.21	0.20	0.19	0.21	0.22	0.20	0.22	0.23	0.23	0.21	0.20	0.20	0.17	0.19	0.20	0.18	0.19	0.18	0.16	0.16	0.15	0.18	0.13	0.11							
C4	0.22	0.22	0.22	0.19	0.19	0.20	0.18	0.17	0.18	0.17	0.17	0.20	0.22	0.24	0.21	0.21	0.24	0.20	0.21	0.22	0.22	0.20	0.19	0.18	0.20	0.19	0.18	0.20	0.16	0.16	0.19						
C5	0.21	0.20	0.22	0.20	0.19	0.20	0.18	0.18	0.19	0.18	0.18	0.18	0.20	0.22	0.20	0.22	0.20	0.19	0.22	0.18	0.18	0.19	0.20	0.20	0.17	0.15	0.17	0.17	0.17	0.21	0.15	0.15	0.17	0.07			
C7	0.21	0.21	0.18	0.20	0.19	0.19	0.18	0.19	0.18	0.18	0.23	0.21	0.22	0.22	0.20	0.15	0.23	0.21	0.20	0.20	0.20	0.19	0.19	0.18	0.17	0.16	0.20	0.20	0.19	0.16	0.19	0.20	0.21				
C6	0.21	0.21	0.18	0.17	0.22	0.20	0.19	0.20	0.19	0.19	0.20	0.19	0.25	0.25	0.23	0.24	0.20	0.20	0.18	0.18	0.21	0.19	0.20	0.18	0.19	0.18	0.18	0.26	0.19	0.18	0.21	0.19	0.19	0.19	0.19		

F2	0.003
F1	0.009
D1	0.013
D2	n/c
A1	0.032
A3	0.002
A2	0.026
A6	0.006
A5	0.000
A4	n/c
A8	0.017
A7	0.007
E1	0.017
E2	0.016
E3	n/c
E4	n/c
E5	n/c
E6	0.004
E8	n/c
E7	n/c
E9	0.003
B1	0.014
B3	0.005
B4	n/c
B2	0.005
B5	0.007
B6	0.000
G1	0.048
C1	0.011
C2	0.012
C3	0.000
C4	0.020
C5	0.010
C7	0.003
C6	n/c