Table S1: *Palaemon* spp. specimens examined for this study with their GenBank accession numbers for the sequenced gene regions of cytochrome *c* oxidase subunit I (COI) and Histone H3 (H3), clade and shared haplotype assignments, species ID, rostral formula and collection information.

ID	COI acc. #	H3 acc.#	Clade	Shared Haplotype	Species ID	Rostral formula	Collection Date	Collecting Location	Lat/Long
02A	PP989500	PP990533	Clade 3	1	*pugio*	1)7/3	7/11/16	Cameron Parish, LA, West Cameron Ferry Landing	29°48.213', -93°20.907'
03K	PP989499	PP990530	Clade 3	4	*pugio*	1)6/3	2/2/16	Anahuac, TX, Trinity Bay, Fort Anahuac Park	29°45.399', -94°41.432'
04A	PP989494	N/A	Clade 3	1	*pugio*	1)7/3	?	Escambia Bay, FL	
04D	PP989508	PP990532	Clade 3	1	*pugio*	1)8/3	?	Escambia Bay, FL	
45L	PP989502	PP990531	Clade 3	1	*pugio*	1)7/3	6/12/21	Galveston, TX, boat basin, Texas A&M University at Galveston	29°18.800', -094°49.016'
46H	PP989501	PP990529	Clade 3	4	*pugio*	1)8/4	10/10/20	Galveston, TX, Shell Beach, Texas A&M University at Galveston	29°18.800', -094°49.266'
47A	PP989503	N/A	Clade 3	1	*pugio*	1)6/3	7/23/21	Galveston, TX, Payco Marina	29°17.183', -094°52.333'
47D	PP989498	PP990528	Clade 3	1	*pugio*	1)7/3	7/23/21	Galveston, TX, Payco Marina	29°17.183', -094°52.333'
49A	PP989504	N/A	Clade 3	1	*pugio*	1)7/3	5/1/21	Copano Village, TX, Copano Bay below HW 35	28°06.833', -097°01.483'
50A	PP989521	PP990527	Clade 1	N/A	*kadiakensis*	1)5/2	5/9/21	Bryan TX, Bryan Borrow Pit (behind Target)	30°39.833', -096°19.166'
50B	PP989520	N/A	Clade 1	N/A	*kadiakensis*	1)7/2	5/9/21	Bryan TX, Bryan Borrow Pit (behind Target)	30°39.833', -096°19.166'
52A	PP989496	N/A	Clade 3	2	*pugio*	1)7/3	?	Port Lavaca, TX, Port Lavaca Fishing Pier	28°37.166', -096°37.166'
52B	PP989511	N/A	Clade 3	4	*pugio*	1)8/3	?	Port Lavaca, TX, Port Lavaca Fishing Pier	28°37.166', -096°37.166'
53A	PP989519	PP990526	Clade 2	N/A	*texanus*	1)5/3	7/3/20	New Braunfels, TX, Comal River	
53B	PP989516	N/A	Clade 2	N/A	*texanus*	1)6/3	7/3/20	New Braunfels, TX, Comal River	
54A	PP989515	PP990525	Clade 2	N/A	*texanus*	1)6/3	8/12/21	San Marcos, TX, San Marcos Headwaters	
54B	PP989518	N/A	Clade 2	N/A	*texanus*	1)5/3	8/12/21	San Marcos, TX, San Marcos Headwaters	
54C	PP989517	N/A	Clade 2	N/A	*texanus*	1)5/3	8/12/21	San Marcos, TX, San Marcos Headwaters	
55B	PP989505	N/A	Clade 3	1	*mundusnovus*	1)7/5	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'

55C	PP989509	N/A	Clade 3	N/A	*mundusnovus*	1)7/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55D	PP989513	N/A	Clade 4	7	*mundusnovus*	2)8/4	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55E	PP989506	N/A	Clade 3	1	*mundusnovus*	1)5/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55F	PP989497	N/A	Clade 3	1	*pugio*	1)7/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55G	PP989512	N/A	Clade 3	2	*pugio*	1)6/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55H	PP989495	N/A	Clade 3	3	*mundusnovus*	1)7/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55I	PP989510	PP990524	Clade 3	3	*pugio*	1)9/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55J	PP989507	N/A	Clade 3	1	*pugio*	1)8/3	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
55K	PP989514	N/A	Clade 4	7	*mundusnovus*	2)7/4	8/25/21	Port Bolivar, TX, USACE North Jetty	29°22.033', -094°44.733'
58A	PP989525	N/A	Clade 4	8	*pugio*	2)6/3	3/24/22	Panacea, FL	
58B	PP989528	PP990523	Clade 4	8	*pugio*	2)7/4	3/24/22	Panacea, FL	
58C	PP989527	N/A	Clade 4	N/A	*pugio*	2)7/4	3/24/22	Panacea, FL	
58D	PP989536	N/A	Clade 4	8	*pugio*	2)8/4	3/24/22	Panacea, FL	
58E	PP989531	N/A	Clade 4	8	*pugio*	2)8/4	3/24/22	Panacea, FL	
59A	PP989538	N/A	Clade 3	N/A	*pugio*	1)6/3	11/19/21	Palacios, TX, Palacios marsh	
59B	PP989534	N/A	Clade 3	1	*pugio*	1)7/2	11/19/21	Palacios, TX, Palacios marsh	
63B	PP989529	PP990522	Clade 3	1	*pugio*	1)7/3	?	Escambia Bay, FL	
63C	PP989540	N/A	Clade 3	1	*pugio*	1)6/3	?	Escambia Bay, FL	
63D	PP989539	N/A	Clade 3	1	*pugio*	1)8/3	?	Escambia Bay, FL	
63E	PP989533	N/A	Clade 3	1	*pugio*	1)6/3	?	Escambia Bay, FL	
63F	PP989543	N/A	Clade 3	1	*pugio*	1)7/3	?	Escambia Bay, FL	
66A	PP989537	PP990521	Clade 3	1	*pugio*	1)8/4	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66B	PP989530	N/A	Clade 3	1	*pugio*	1)7/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66C	PP989524	N/A	Clade 4	8	*vulgaris*	2)7/4	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070

66D	PP989535	N/A	Clade 3	N/A	*mundusnovus*	1)7/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66E	PP989541	N/A	Clade 3	1	*schmitti*	2)2/2	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66F	PP989526	N/A	Clade 3	1	*schmitti*	2)6/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66G	PP989532	N/A	Clade 3	1	*pugio*	1)7/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66H	PP989522	N/A	Clade 3	N/A	*pugio*	1)7/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66I	PP989523	N/A	Clade 4	N/A	*schmitti*	2)8/4	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070
66J	PP989542	N/A	Clade 3	1	*mundusnovus*	1)6/3	7/16/22	Cocodrie, LA, LUMCON Bayou	29°15.247', -090°40.070