

Supplementary material

Phylogeography of two freshwater prawn species from far-northern Queensland

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Table S1. Coordinates of sites sampled and site codes of sites included into the dataset

All streams allocated a site code were included in statistical analysis

Catchment	River	Stream	Coordinates	Site code	<i>M. australiense</i> found	<i>M. koombooloomba</i> found
Herbert	Blunder Creek	Blunder Creek (Below Culvert)	17°47'39.00"S, 145°32'14.00"E	BBC	✓	
	Blunder Creek	Blunder Creek (Blunder Park)	17°43'56.61"S, 145°25'49.57"E	BPa	✓	
	Blunder Creek	Oaky Creek	17°43'23.00"S, 145°25'02.00"E	Oak	✓	
	Cameron Creek	Cameron Creek	17°59'09.00"S, 145°35'20.00"E	Cam	✓	
	The Millstream	South Cedar Creek	17°37'09.04"S, 145°29'11.66"E	SSC	✓	
	The Millstream	The Millstream	17°38'34.00"S, 145°28'05.00"E	Mil	✓	
	The Millstream	Vine Creek	17°39'29.20"S, 145°30'49.61"E	Vin	✓	
Johnstone	Beatrice River	Middle Brook (Pepina Falls)	17°34'10.96"S, 145°36'34.34"E	Mdl	✓	
	North Johnstone	Fur and Feathers	17°24'18.40"S, 145°36'34.06"E	Fur	✓	
	North Johnstone	at Malanda	17°21'12.00"S, 145°35'09.00"E	NJM	✓	
	North Johnstone	Winfield Park	17°20'20.49"S, 145°37'27.05"E	Win	✓	
	South Johnstone	Mallan River (farmlands)	17°35'53.23"S, 145°36'06.12"E		✓	
	South Johnstone	Mallan River	17°36'05.00"S, 145°37'05.20"E			
	South Johnstone	Lower South Johnstone	17°39'12.40"S, 145°54'26.95"E	LSJ	✓	
Tully	Tully River	Koolmoon Creek	17°44'55.00"S, 145°37'05.00"E	Klm	✓	
	Tully River	Unnamed 23	17°47'50.00"S, 145°40'45.00"E	W23	✓	
	Tully River	Unnamed 1	17°48'08.80"S, 145°40'99.80"E			
	Tully River	Davidson Creek	17°58'80.04"S, 145°44'47.08"E		✓	
	Tully River	Echo Creek	17°57'05.54"S, 145°44'00.20"E			
	Tully River	Barbwire Creek	17°53'16.90"S, 145°44'57.90"E			
	Tully River	Stoney Creek	17°52'01.30"S, 145°43'25.45"E			
	Tully River	Sylvania	17°54'05.00"S, 145°36'47.00"E	Syl		✓
	Tully River	Tully River Headwaters	17°59'45.00"S, 145°37'30.00"E	TRH		✓
	Tully River	Upper Tully River	17°55'29.13"S, 145°37'40.93"E	UpT		✓
	Tully River	Carpenter Creek	17°50'16.99"S, 145°35'21.99"E	Crp		✓
	Tully River	Caron Creek	17°59'09.00"S, 145°35'20.00"E	Car		✓
	Tully River	Koombooloomba Creek	17°51'24.00"S, 145°35'58.00"E	Koo		✓
	Tully River	Wall Creek	17°53'40.00"S, 145°33'60.00"E	Wal		✓
	Tully River	Luft Creek	17°58'34.12"S, 145°36'08.13"E	Luf		✓
Tully River	Nitchiga Creek	17°56'05.91"S, 145°33'35.05"E	Nit		✓	

Catchment	River	Stream	Coordinates	Site code	<i>M. australiense</i> found	<i>M. koombaloomba</i> found
	Tully River	Nitchiga Creek Tributry	17°51'23.20"S, 145°33'48.99"E	NCT		✓
	Tully River	Upper Nitchiga Creek	17°55'16.81"S, 145°33'50.38"E	UpN		✓
	Tully River	Tully Gorge Outstation	17°46'38.35"S, 145°33'36.33"E			✓
	Tully River	Costigan Creek	17°55'25.12"S, 145°37'43.82"E			✓
	Tully River	George Creek	17°49'31.44"S, 145°33'50.36"E			✓

Table S2. F_{ST} -values from haplotype frequencies of *Macrobrachium australiense* (lower diagonal; bold indicates a significant F_{ST}) and Φ_{ST} values from haplotype frequencies of *M. australiense* (upper diagonal; bold indicates a significant Φ_{ST})

	BBC	BPa	Oak	Cam	SCC	Vin	Mil	Fur	LSJ	Mdl	NJM	Win	W23	Klm
BBC		0.0004 ^{AB}	-0.0225 ^{AB}	0.4143^A	0.6155^A	0.4954^A	0.6010^A	0.6766	0.4740	0.5709	0.6606	0.6313	0.4763	0.6458
BPa	-0.0206 ^{A,B}		0.0111 ^{AB}	0.5580^A	0.8027^A	0.6558^A	0.8055^A	0.8467	0.7224	0.7736	0.8392	0.8160	0.7168	0.8385
Oak	-0.0194 ^{AB}	0.0096 ^{AB}		0.4068^A	0.6794^A	0.5549^A	0.6695^A	0.7196	0.5513	0.6413	0.7066	0.6809	0.5488	0.6952
Cam	0.3226^A	0.3554^A	0.3463^A		0.8540^A	0.7455^A	0.8581^A	0.8884	0.8220	0.8350	0.8841	0.8699	0.8169	0.8848
SCC	0.0805^A	0.0922^A	0.1036^A	0.3875^A		0.3776^{A,C}	-0.0307 ^{A,C}	0.9007	0.8283	0.2242	0.8960	0.8819	0.8215	0.8919
Vin	0.0710^A	0.0774^A	0.0977^A	0.3682^A	0.0832^{A,C}		0.3759^{A,C}	0.7782	0.6149	0.2718	0.7614	0.7340	0.6179	0.7622
Mil	0.1157^A	0.1364^A	0.1339^A	0.4414^A	-0.0378 ^{A,C}	0.1104^{A,C}		0.9162	0.8506	0.1820	0.9131	0.8998	0.8420	0.9079
Fur	0.3721	0.4119	0.4011	0.6756	0.4329	0.4121	0.4906		0.9643^E	0.8795^E	-0.0017 ^E	0.0044	0.9569	0.9682
LSJ	0.2577	0.2690	0.2992	0.6776	0.3123	0.2905	0.3795	0.7581^E		0.7764^E	0.9706^E	0.9614	-0.2000	-0.3285
Mdl	0.2252	0.2719	0.2310	0.5551	0.1684	0.2057	0.1305	0.6031^E	0.5270 ^E		0.8733^E	0.8564	0.7689	0.8602
NJM	0.3243	0.3546	0.3549	0.6401	0.3800	0.3601	0.4364	-0.0362 ^E	0.7049^E	0.5593^E		-0.0507	0.9616	0.9718
Win	0.2588	0.2771	0.2918	0.5925	0.3083	0.2900	0.3631	-0.0211	0.6225	0.5002	-0.0756		0.9507^D	0.9682^D
W23	0.1460	0.1489	0.1871	0.5615	0.1939	0.1741	0.2547	0.6411	-0.2000	0.4053	0.5733	0.4735^D		0.1365 ^D
Klm	0.3721	0.4119	0.4011	0.6756	0.4329	0.4121	0.4906	0.7253	-0.2915	0.5750	0.6933	0.6509^D	0.0372 ^D	

^AHerbert River catchment.

^BBlunder Creek subcatchment.

^CMillstream subcatchment.

^DLower Tully catchment

^EJohnstone catchment.

Table S3. F_{ST} from haplotype frequencies of *Macrobrachium koombooloomba* (lower diagonal; bold indicates a significant F -statistic, $P < 0.05$) and Φ -statistic from haplotype frequencies of *M. koombooloomba* (upper diagonal; bold indicates a significant F -statistic, $P < 0.05$)

	Car	Crp	Koo	Luf	Syl	TRH	Upt	UpN	Wal	NCT	Nit
Car		-0.0085	0.3427	0.3007	0.2004	0.3170	0.3058	0.7632	0.7452	0.4537	0.6359
Crp	-0.0307		0.1755	0.1232	0.0058	0.1152	0.1065	0.6235	0.6203	0.3342	0.5327
Koo	0.2850	0.2179		0.0075	-0.1232	-0.0233	-0.0292	0.8636	0.8359	0.4937	0.7179
Luf	0.2551	0.1856	-0.0221		-0.1304	-0.0136	-0.0216	0.9153	0.8573	0.4362	0.6766
Syl	0.2004	0.1274	-0.1056	-0.1304		0.0000	0.0000	1.0000	0.8756	0.3185	0.5963
TRH	0.3170	0.2373	-0.0054	-0.0136	0.0000		0.0000	1.0000	0.9167	0.4635	0.7040
Upt	0.3058	0.2274	-0.0116	-0.0216	0.0000	0.0000		1.0000	0.9126	0.4488	0.6930
UpN	0.6711	0.5989	0.8536	0.9088	1.0000	1.0000	1.0000		-0.0196^A	0.2594^A	-0.0259^A
Wal	0.6198	0.5521	0.8076	0.8333	0.8647	0.9091	0.9047	-0.0196^A		0.2487^A	-0.0408^A
NCT	0.3197	0.2587	0.5071	0.4697	0.4068	0.5437	0.5297	0.2476^A	0.1710^A		0.0909^A
Nit	0.5112	0.4499	0.7162	0.7007	0.6721	0.7640	0.7546	0.0576^A	-0.0274^A	0.0591^A	

^ANitchaga Creek subcatchment.