

SUPPLEMENTARY MATERIAL

Conservation genetics of the water mouse, *Xeromys myoides* Thomas, 1889

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Table S1: Museum identification details, GenBank accession numbers and locality data for all samples analysed in the present study. If no accession number is given the sample was not included in the analyses for that particular gene. Asterisks (*) indicate a sample was included in the microsatellite analyses. Co-ordinates refer to the broader sampling locality in which an individual was captured.

			GenBank Accession Numbers					Locality Co-ordinates	
Sample ID	Species	Microsats	ZP3	CytB	D-loop	Source	Locality	Latitude	Longitude
A002847	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A002850	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A002854	<i>Xeromys myoides</i>	*		KM603491	KM82165	Queensland Museum	Coomera, QLD	-27.838	153.377
A008308	<i>Xeromys myoides</i>	*				Queensland Museum	Coomera, QLD	-27.838	153.377
A008312	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A008314	<i>Xeromys myoides</i>	*				Queensland Museum	Coomera, QLD	-27.838	153.377
A008319	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A008321	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A008327	<i>Xeromys myoides</i>	*		KM603491	KM82165	Queensland Museum	Coomera, QLD	-27.838	153.377
A008328	<i>Xeromys myoides</i>	*		KM603491	KM82165	Queensland Museum	Coomera, QLD	-27.838	153.377
A008329	<i>Xeromys myoides</i>	*			KM82165	Queensland Museum	McCoys Ck., Coomera, QLD	-27.832	153.373
A008330	<i>Xeromys myoides</i>	*			KM82165	Queensland Museum	McCoys Ck., Coomera, QLD	-27.832	153.373
A008331	<i>Xeromys myoides</i>	*			KM82165	Queensland Museum	Coomera, QLD	-27.838	153.377
A008334	<i>Xeromys myoides</i>	*	EF364510	KM603491		Queensland Museum	Coomera, QLD	-27.838	153.377
A008340	<i>Xeromys myoides</i>	*		KM603491	KM82165	Queensland Museum	Coomera, QLD	-27.838	153.377
A008343	<i>Xeromys myoides</i>	*				Queensland Museum	Coomera, QLD	-27.838	153.377

A008344	<i>Xeromys myoides</i>	*		KM603492	KM582164	Queensland Museum	Coomera, QLD	-27.838	153.377
A008346	<i>Xeromys myoides</i>	*				Queensland Museum	Coomera, QLD	-27.838	153.377
A008349	<i>Xeromys myoides</i>	*	EF364510		KM82165	Queensland Museum	Jacobs Well, QLD	-27.801	153.353
A008351	<i>Xeromys myoides</i>	*				Queensland Museum	McCoys Ck., Coomera, QLD	-27.832	153.373
A008354	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Freshwater Pt., Sarina QLD	-21.421	149.286
A008355	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Freshwater Pt., Sarina QLD	-21.421	149.286
A008356	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Hillsborough, QLD	-20.916	149.010
A008357	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Hillsborough, QLD	-20.916	149.010
A008358	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Hillsborough, QLD	-20.916	149.010
A008359	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Hillsborough, QLD	-20.916	149.010
A008360	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008361	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Hillsborough, QLD	-20.916	149.010
A008363	<i>Xeromys myoides</i>	*			KM582163	Queensland Museum	Bucasia, QLD	-21.035	149.160
A008364	<i>Xeromys myoides</i>	*				Queensland Museum	Bucasia, QLD	-21.035	149.160
A008365	<i>Xeromys myoides</i>	*				Queensland Museum	Freshwater Pt., Sarina, QLD	-21.421	149.286
A008367	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Cape Palmerston NP, Greenhill QLD	-21.551	149.409
A008369	<i>Xeromys myoides</i>	*		KM603491	KM582161	Queensland Museum	Round Hill Ck., Agnes Water, QLD	-24.200	151.860
A008371	<i>Xeromys myoides</i>	*				Queensland Museum	Gladstone, QLD	-23.823	155.212
A008372	<i>Xeromys myoides</i>	*		KM603491		Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008373	<i>Xeromys myoides</i>	*				Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008374	<i>Xeromys myoides</i>	*				Queensland Museum	Cape Palmerston, Greenhill, QLD	-21.551	149.409

A008483	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008484	<i>Xeromys myoides</i>	*	EF364510	KM603496	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008485	<i>Xeromys myoides</i>	*	EF364510	KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008486	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008487	<i>Xeromys myoides</i>	*				Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008488	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
A008489	<i>Xeromys myoides</i>	*		KM603491	KM82166	Queensland Museum	Dunnrock, QLD	-21.271	149.184
IG008	<i>Xeromys myoides</i>	*	EF364510	KM603495	KM582163	QPWS	Bullock Ck. CP, Donnybrook QLD	-27.010	153.071
IG016 [#]	<i>Xeromys myoides</i>	*		KM603495	KM582163	QPWS	Bullock Ck. CP, Donnybrook QLD	-27.010	153.071
IG018	<i>Xeromys myoides</i>	*	EF364510	KM603491	KM582163	QPWS	Bullock Ck. CP, Donnybrook QLD	-27.010	153.071
ABTC7458	<i>Xeromys myoides</i>	*	EF364510	KM603494	KM582162	SA Museum	Goyder River, Northern Territory	-12.514	134.920
ABTC30709	<i>Xeromys myoides</i>	*	EF364510	KM603493	KM582160	SA Museum	Arafura Swamp, Northern Territory	-12.121	134.591
N/A	<i>Hydromys chrysogaster</i>			AM408339		Michaux et al. 2007	Torrens, South Australia	-34.976	138.613
QMA002898	<i>Hydromys chrysogaster</i>				KM603489	Queensland Museum	Nuga Nuga NP, QLD	-24.997	148.684
QMA003163	<i>Hydromys chrysogaster</i>			KM603498	KM603490	Queensland Museum	Kedron Brook, Brisbane QLD	-27.409	152.952
QMA004909	<i>Hydromys chrysogaster</i>			KM603497		Queensland Museum	Noahs Flat, Daintree Coast QLD	-16.133	145.433
QMA005673	<i>Hydromys chrysogaster</i>			KM603499		Queensland Museum	Whites Plantation, via Tully QLD	-17.887	145.846
UKMNH16072 9	<i>Hydromys chrysogaster</i>			EU349749		Rowe et al. 2008	Eastern Highlands Province, PNG	-6.575	145.703
ABTC43920	<i>Pseudohydromys ellermani</i>			EU349763		Rowe et al. 2008	Mt Karimui, PNG	-6.509	144.764
ABTC45741	<i>Leptomys elegans</i>			EU349753		Rowe et al. 2008	Bobole, PNG	-6.152	142.756
ABTC45798	<i>Parahydromys asper</i>			EU349771		Rowe et al. 2008	Bobole, PNG	-6.152	142.756

ABTC13335	<i>Leporillus conditor</i>			EU349752		Rowe et al. 2008	Franklin Island West, South Australia	-32.455	133.630
UKMNH 160736	<i>Paramelomys levipes</i>			EU349772		Rowe et al. 2008	Tekadu Airstrip, Gulf Province; PNG	-7.681	146.550

#Next generation sequencing was conducted on this sample to aid in identifying candidate regions for microsatellite analysis.

Table S2: Matrices of uncorrected pairwise p-distances between all unique CytB haplotypes (a) and unique D-loop haplotypes (b). In both matrices, p-distances are shown on the bottom of the matrix and standard error above.

(a)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	<i>Xeromys Coomera</i>		0.001	0.001	0.003	0.001	0.001	0.012	0.013	0.012	0.012	0.012	0.012	0.012	0.012
2	<i>Xeromys Coomera2</i>	0.001		0.002	0.003	0.002	0.002	0.012	0.013	0.012	0.012	0.012	0.012	0.012	0.013
3	<i>Xeromys Arafura NT</i>	0.001	0.003		0.003	0.002	0.002	0.012	0.013	0.012	0.012	0.012	0.012	0.012	0.012
4	<i>Xeromys Goyder NT</i>	0.004	0.004	0.006		0.004	0.003	0.014	0.014	0.014	0.014	0.014	0.013	0.014	0.014
5	<i>Xeromys Donnybrook2</i>	0.001	0.003	0.003	0.006		0.002	0.013	0.013	0.012	0.013	0.013	0.012	0.012	0.013
6	<i>Xeromys Mackay2</i>	0.001	0.003	0.003	0.006	0.003		0.012	0.013	0.012	0.012	0.012	0.012	0.012	0.012
7	<i>Hydromys Torrens SA</i>	0.135	0.137	0.134	0.124	0.137	0.136		0.004	0.004	0.002	0.003	0.012	0.009	0.013
8	<i>Hydromys Daintree QLD</i>	0.138	0.139	0.137	0.124	0.139	0.138	0.016		0.004	0.005	0.004	0.013	0.009	0.013
9	<i>Hydromys EHP PNG</i>	0.127	0.129	0.126	0.118	0.129	0.128	0.013	0.016		0.004	0.004	0.012	0.009	0.012
10	<i>Hydromys Kedron Brook QLD</i>	0.137	0.138	0.135	0.126	0.138	0.137	0.004	0.017	0.014		0.003	0.012	0.009	0.013
11	<i>Hydromys Tully QLD</i>	0.135	0.137	0.134	0.120	0.137	0.136	0.005	0.013	0.010	0.007		0.012	0.009	0.012
12	<i>Leptomys elegans</i>	0.112	0.113	0.113	0.103	0.113	0.113	0.134	0.139	0.130	0.133	0.130		0.011	0.014
13	<i>Parahydromys asper</i>	0.127	0.129	0.129	0.114	0.129	0.129	0.065	0.064	0.064	0.066	0.065	0.114		0.013
14	<i>Pseudohydromys ellermani</i>	0.129	0.127	0.127	0.122	0.130	0.128	0.139	0.142	0.139	0.143	0.138	0.148	0.143	

(b)

	1	2	3	4	5	6	7	8	9
1. <i>Xeromys Gladstone</i>		0.004	0.003	0.004	0.005	0.005	0.004	0.014	0.014
2. <i>Xeromys Goyder NT</i>	0.008		0.005	0.005	0.006	0.006	0.004	0.014	0.014
3. <i>Xeromys Arafura NT</i>	0.003	0.011		0.003	0.004	0.004	0.004	0.014	0.014
4. <i>Xeromys Donnybrook</i>	0.006	0.011	0.003		0.003	0.003	0.003	0.014	0.014
5. <i>Xeromys Mackay QLD</i>	0.009	0.014	0.006	0.003		0.004	0.004	0.014	0.014
6. <i>Xeromys Coomera1</i>	0.008	0.014	0.006	0.003	0.006		0.004	0.014	0.014
7. <i>Xeromys Coomera2</i>	0.006	0.006	0.006	0.003	0.006	0.006		0.016	0.015
8. <i>Hydromys Nuga Nuga NP QLD</i>	0.091	0.090	0.088	0.086	0.087	0.088	0.093		0.004
9. <i>Hydromys Kedron Brook QLD</i>	0.088	0.087	0.084	0.081	0.084	0.085	0.088	0.008	

Table S3. Allele frequencies generated from the microsatellite data.

Locus	Allele Size	Allele Frequency:				
		NT (n=2)	Mackay (n=22)	Gladstone (n=2)	Donnybrook (n=3)	Coomera (n=20)
Xmyo1a	208				0.5	0.868
	212	0.5				
	216	0.5				
	218		0.167		0.167	
	222		0.786		0.333	
	226		0.048	1		0.132
Xmyo1b	230				0.167	
	232	1	1	1	0.833	0.421
	234					0.579
Xmyo2	202		0.295	0.5	0.5	1
	206		0.182			
	210	0.5	0.159		0.167	
	214		0.114	0.5	0.167	
	218	0.25	0.25		0.167	
	222	0.25				
Xmyo8	109		0.091			
	113	0.25	0.182			
	117	0.25	0.568	0.75	0.75	0.65
	121	0.5	0.136	0.25		0.35
	125		0.023		0.25	
Xmyo9	117		0.325	1		
	121	0.5	0.25		1	1
	125	0.25	0.275			
	129	0.25	0.075			
	133		0.075			
Xmyo10	118					0.05
	130	0.5	0.273			0.675
	134	0.25	0.159	1	1	0.275
	138	0.25	0.159			
	142		0.091			
	146		0.318			
Xmyo14	213	0.25			0.333	
	217	0.5	0.273	0.25		
	221	0.25	0.727	0.25	0.5	0.632
	225			0.5		0.368
	229				0.167	
Xmyo19	109		0.023			
	113	0.25				0.45
	117	0.75	0.932	0.5	0.333	
	121		0.045	0.5	0.667	0.55