

SI Appendix 1

Data Used

Tables SOM1.1-SOM1.12. Details of phylogenetically independent contrasts used in analyses. All triplets of species represent two ingroup taxa and one outgroup taxon. All pairs of ingroup taxa are monophyletic with respect to all other pairs, according to the phylogeny published on GenBank Taxonomy (<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Taxonomy>). **msBMR** represents the empirically determined mass-specific Basal Metabolic Rate in Watts/Gram, values represent averages of all measurements taken from the references noted in MR refs. **G** represents the mean estimated mass-specific metabolic rate calculated with the formula of Gillooly et al (1). It should be noted however that these calculations did not include the constant term used in their equation (and hence are very different from the empirically measured values reported here, and are reported here in arbitrary units). In our case, we did not need to use the constant, as this value cancels when contrasts are taken (see main text), thus, contrasts in GMR are measured in Watts/gram, although individual values are not. **BS** represents the mean body size in grams. GenBank accession numbers are given in the **Accession** column. **BL_{an}** represents the maximum likelihood non-synonymous (amino-acid changing) branch length of each ingroup species, **BL_{as}** represents the maximum likelihood synonymous (silent) branch length of each ingroup species. **BL_T** represents the total maximum likelihood branch lengths for RNA coding genes. **L.R.T** represents the result of a likelihood ratio test between a tree in which the molecular rates of the two ingroup species was allowed to vary, and one in which their rates of molecular evolution were constrained to be equal. **MR refs** indicates the sources of the Metabolic Rate, Temperature and Body Size measurements. References marked with a star (*) were taken from the database of Thomas Brey, which is available on request. **Conv. Fact. Refs.** Represents the references (where applicable) used to convert mass values into grams of wet mass, where the Brey Conversion Factors database (2) was used, the lowest applicable taxonomic average was used to convert units into grams of wet mass. In some cases, either temperature or body size data was not available, or mass-specific metabolic rate values were not used due to measurement issues (see main text), in that case values are recorded as having '**no data**'.

Where metabolic rate data were not reported in Watts per gram, standard conversion factors(2) were used to convert units.

Table SOM1.1 Cytochrome Oxidase I

Phylum	Species Name	nsBMR Wattsg	G Arbitrary units	BS grams	Accession	BI _{4N}	BI _{4S}	L.R.T.	MR refs	Conv. Fact. Refs
Spp1	<i>Laetodectus naectans</i>	3.8E-03	1.0E-10	1.1E-01	AY231046	0.0391	17.9074	3.638854	(3)	
Spp2	<i>Tidarren sisypoides</i>	6.9E-04	8.3E-11	1.1E-01	AY231067	0.0138	8.3845		(4)	
Outgroup	<i>Frontinella pyramitella</i>				AY078692					
Spp1	<i>Dermacenter variabilis</i>	2.4E-04	2.9E-10	3.6E-03	AF132831	0.0166	6.3788	0.01203	(5)	
Spp2	<i>Hyalomma dromedarii</i>	6.7E-06	no data	no data	AJ437071	0.0172	66.3819		(6)	
Outgroup	<i>Omlithodoros moubata</i>				NC_004357					
Spp1	<i>Callosobruchus subinnotatus</i>	9.4E-03	1.5E-10	1.2E-02	AY625419	54.1618	0.0322	3.732856	(7)	
Spp2	<i>Acrocinus longimanus</i>	2.3E-03	3.8E-11	5.4E+00	AY248731	0.0158	4.7858		(8)	
Outgroup	<i>Circellium bacchus</i>				AF499750					
Spp1	<i>Scarabaeus ruficornis</i>	7.4E-04	5.5E-11	5.6E-01	AF499767	0.0218	27.1271	0.599886	(9)	
Spp2	<i>Circellium bacchus</i>	2.6E-04	2.9E-11	7.3E+00	AF499750	0.0168	13.6164		(9)	
Outgroup	<i>Acrocinus longimanus</i>				AY248731					
Spp1	<i>Drosophila simulans</i>	2.0E-02	3.2E-10	9.3E-04	NC_005781	0.0073	61.5242	2.375746	(10)	
Spp2	<i>Phormia regina</i>	1.0E-02	1.6E-10	3.8E-02	AF295550	0.0145	126.0414		(11)	
Outgroup	<i>Aedes sp.</i>				AY072044					
Spp1	<i>Myzus persicae</i>	8.2E-03	no data	no data	DQ270002	0.000373	3.7333	-1.557266	(12)	
Spp2	<i>Acyrtosiphon pisum</i>	1.6E-03	2.3E-10	1.8E-03	AF077776	0	0.00001		(13)	
Outgroup	<i>Podisus maculiventris</i>				DQ125274					
Spp1	<i>Erythemis simplicicollis</i>	3.8E-03	1.5E-10	2.6E-01	AF195759	0.0041	28.7841	0.222535	(14)	
Spp2	<i>Pachydiplax longipennis</i>	1.9E-03	1.6E-10	1.9E-01	AF195761	0.0065	0.0002		(14)	
Outgroup	<i>Phormia regina</i>				AF295550					
Spp1	<i>Lasius alienus</i>	2.9E-02	3.8E-10	1.2E-03	AY225865	0.0279	25.9526	1.914226	(15)	(16)
Spp2	<i>Paraponera clavata</i>	1.9E-03	7.7E-10	1.9E-04	AY233687	0.0128	85.1183		(17)	
Outgroup	<i>Apis mellifera</i>				NC_001566					
Spp1	<i>Bombus mori</i>	4.3E-03	6.6E-11	7.2E-01	NC_002355	0.0137	3.4801	0.844	(18)	
Spp2	<i>Syssphinx molina</i>	1.9E-03	5.3E-11	1.8E+00	DQ291740	0.0067	2.0938		(19)	
Outgroup	<i>Leptostoma flavum</i>				AY396143					
Spp1	<i>Enyo ocyptete</i>	2.2E-02	7.5E-11	4.5E-01	DQ276101	0	0.000011	1.057556	(19)	
Spp2	<i>Pachylia ficus</i>	1.2E-03	4.5E-11	3.2E+00	DQ276451	0.001732	1.4088		(19)	
Outgroup	<i>Leptostoma flavum</i>				AY396143					
Spp1	<i>Reticulitermes flavipes</i>	2.4E-03	2.7E-10	3.0E-03	AY572864	0.0085	1.2095	0.968844	(20)	
Spp2	<i>Coptotermes formosus</i>	1.6E-03	2.7E-10	3.0E-03	AY553150	0.0037	1.1678		(20)	
Outgroup	<i>Periplaneta fuliginosa</i>				AB126004					
Spp1	<i>Penaeus stylirostris</i>	7.4E-03	2.7E-10	9.6E-03	S65261	0.0001	0.6132	3.995008	(21*)	(2)
Spp2	<i>Penaeus vannamei</i>	1.7E-03	4.8E-11	1.1E+01	X82503	0.0113	0.6424		(22*)	
Outgroup	<i>Marsupenaeus japonicus</i>				AF006346					
Spp1	<i>Pacificastacus tenuisculus</i>	2.4E-04	2.8E-11	2.4E+01	AF525227	0.006267	2.626222	0.003424	(23*)	
Spp2	<i>Austropotamobius pallipes</i>	7.6E-05	1.3E-11	4.0E+01	AF667120	0.008859	0.000009		(24)	
Outgroup	<i>Procambarus clarkii</i>				AY701195					
Spp1	<i>Procambarus clarkii</i>	2.1E-03	8.3E-11	5.7E-02	AY701195	0.002051	0.026477	1.25846	(25*)	(2)
Spp2	<i>Oreonectes virilis</i>	3.3E-05	1.3E-11	4.0E+01	AF474365	0.004264	1.658364		(26)	
Outgroup	<i>Pagurus longicarpus</i>				NC_003058					
Spp1	<i>Pachygrapsus crassipes</i>	9.0E-05	1.0E-11	1.0E+01	AF952137	0.0059	57.7478	0.935846	(27)	
Spp2	<i>Cancer pagurus</i>	8.0E-05	7.0E-12	4.1E+02	AF060771	0.0155	0.0001		(28)	

Table SOM1.1 Cytochrome Oxidase I

Phylum	Species Name	msBVR Watts/g	G Arbitrary units	BS grams	Accession	BL ₄₅ ⁿ	BL ₄₅ ^s	L.R.T.	MR refs	Conv. Fact. Refs
Outgroup	Marsupinaeus japonicus				AF006346					
Spp1	Chionocetes bairdi	1.9E-04	5.7E-12	1.6E+02	AB211157	0.000032	0.322855	1.77965	(29*)	(2)
Spp2	Chionocetes opilio	8.2E-05	2.5E-12	7.6E+02	AB211153	0.001968	0.000002		(30*)	
Outgroup	Hysa coarctatus				AB244632					
Spp1	Pagurus bernhardus	8.7E-04	3.2E-11	2.2E+00	AF425314	0.0078	0.1094	1.389222	(31*, 32*)	(2)
Spp2	Munida quadrispina	1.9E-04	1.6E-11	4.0E+00	AF436033	0.0215	6.6102		(33*)	
Outgroup	Marsupinaeus japonicus				AF006346					
Spp1	Carcinus maenas	6.8E-04	5.4E-11	5.7E+00	AY161644	0.009759	38.544377	2.656674	(34*, 35*, 36*, 37*, 38*)	(2)
Spp2	Callinectes sapidus	3.1E-04	1.8E-11	2.0E+02	NC_006281	0.002437	0.000023		(39*)	
Outgroup	Chionocetes opilio				AB211153					
Spp1	Euphausia superbia	1.3E-03	2.1E-11	3.2E+02	AF177182	0.0085	1.1123	1.068004	(40)	(2)
Spp2	Euphausia triacantha	6.6E-04	1.2E-11	3.0E-01	AF177187	0.0124	1.6457		(40)	(2)
Outgroup	Megaanyiphanes norvegica				AY1601091					
Spp1	Gammarus fossarum	3.4E-03	1.3E-10	2.2E+03	X97172	0.0083	0.000008	5.100866	(41*, 42*, 43*)	(2)
Spp2	Gammarus pulex	1.9E-03	6.6E-11	1.4E+02	X97183	0.0394	1.3681		(44*)	
Outgroup	Dikergammarus haemobaphes				A440921					
Spp1	Tenocalanus cifer	1.6E-03	1.1E-10	5.9E+05	AF332789	0.0004	4.2874	9.709092	(45)	(2)
Spp2	Calanus similimus	8.9E-04	5.2E-11	1.4E+03	AF332771	0.0149	15.4806		(45)	(2)
Outgroup	Clausocalanus laticeps				AF332777					
Spp1	Metridia lucens	9.2E-04	6.1E-11	7.5E+04	AF474106	0.0281	52.4804	-0.08864	(45)	(2)
Spp2	Paraechaeta antarctica	4.7E-04	2.6E-11	2.4E+02	AF531748	0.0226	66.629		(45)	(2)
Outgroup	Lepocopeptides hospitalis				AM235888					
Spp1	Phallusia mammillata	1.5E-04	1.5E-11	1.8E+01	AY160980	0.0543	15.1844	7.528146	(46*)	(2)
Spp2	Styela plicata	8.5E-05	2.0E-11	2.5E+01	AB104868	0.1406	76.7865		(47*)	
Outgroup	Doliolum nationalis				AB176541					
Spp1	Anthopleura elegantissima	1.1E-03	2.6E-11	2.7E+00	AF480931	0.018	0.1977	5.139954	(48*, 49*)	(2)
Spp2	Metridium simile	2.7E-04	2.9E-11	2.1E+00	NC_000933	0.0001	0.3564		(50*)	(2)
Outgroup	Montastraea cavernosa				AF108714					
Spp1	Parobolias cornutus	6.6E-05	6.5E-12	4.0E+00	A436939	0.0318	41.7134	0.019756	(51*)	(2)
Spp2	Nectonertes mirabilis	3.8E-05	1.5E-11	6.0E-01	A436925	0.0345	14.8983		(52)	
Outgroup	Lumbricus terrestris				NC_001673					
Spp1	Polycelis tenuis	1.7E-03	8.7E-11	2.2E+02	AF178312	0.0151	51.7132	-1.458816	(53*)	(53*)
Spp2	Dendrocoelum lacteum	3.4E-04	5.3E-11	9.1E+02	AF178321	0.0115	7.5419		(53*)	(53*)
Outgroup	Schistosomatium douthitti				AY157193					
Spp1	Crassostrea virginica	9.6E-05	3.5E-11	6.9E+00	AY905542	0.0146	32.3176	1.868934	(54, 55*, 56*)	(2)
Spp2	Crassostrea gigas	3.8E-04	6.7E-11	1.4E+01	NC_001276	0.0071	26.3798		(57*)	(2)
Outgroup	Saccostrea kegaki				AB076910					
Spp1	Spisula subtruncata	1.3E-03	5.4E-11	5.7E+02	AF207657	0.0927	7.5251	7.317374	(58*)	(2)
Spp2	Macoma balthica	2.1E-04	5.0E-11	2.5E+01	AF443219	0.2245	3.504		(59*)	(2)
Outgroup	Mya arenaria				AF120668					
Spp1	Mercenaria mercenaria	3.5E-04	1.7E-11	9.2E+01	DQ399403	0.0588	105.7493	0.675406	(54)	
Spp2	Meretrix meretrix	2.1E-03	7.6E-11	4.0E+00	DQ399402	0.0748	1.0874		(60*)	
Outgroup	Rangia cuneata				U47652					
Spp1	Perna canaliculus	3.1E-04	2.0E-11	1.2E+01	DQ343604	0.0043	10.4116	0.270954	(61*)	(2)

Table SOM1.1 Cytochrome Oxidase I

	Phylum	Species Name	msBVR Watt/g	G Arbitrary units	BS grams	Accession	BL ₄₅ ⁿ	L.R.T.	MR refs	Conv. Fact. Refs
Spp2	Mollusca	<i>Perna viridis</i>	9.9E-04	3.2E-11	6.0E+00	DQ343589	0.0067	7.1561	(62*)	(2)
Outgroup	Mollusca	<i>Mytilus edulis</i>	8.3E-04			AY823624				
Spp1	Mollusca	<i>Mytilus californianus</i>	3.3E-04	1.6E-11	1.2E+01	U68776	0.0052	0.0001	2.28913	(63*)
Spp2	Mollusca	<i>Mytilus edulis</i>	8.3E-04	5.8E-11	1.8E+00	AY823624	0.0147	2.984	(54, 64*, 65*, 66*, 67*, 68*, 69*)	(2)
Outgroup	Mollusca	<i>Perna viridis</i>				U56844				
Spp1	Mollusca	<i>Placopecten magellanicus</i>	8.4E-05	6.1E-12	3.4E+01	NC_007234	0.0296	83.2831	0.734088	(70*)
Spp2	Mollusca	<i>Patinopecten yessoensis</i>	2.3E-04	1.2E-11	5.5E+01	AB033666	0.04	55.4726	(71*)	(2)
Outgroup	Mollusca	<i>Spodilyus sinensis</i>				AB033683				
Spp1	Mollusca	<i>Ostrea edulis</i>	4.6E-05	2.0E-11	2.7E+01	AF120651	0.1754	0.6742	0.807002	(72*)
Spp2	Mollusca	<i>Bathymediolus thermophilus</i>	7.7E-05	4.9E-12	3.8E+01	AF456305	0.1403	15.2023	(73*)	(2)
Outgroup	Mollusca	<i>Spisula subtruncata</i>	1.3E-03			AF207657				
Spp1	Mollusca	<i>Pinctada margaritifera</i>	1.0E-03	5.6E-11	4.1E+01	AF374323	0.0075	0.0082	0.735774	(74*)
Spp2	Mollusca	<i>Pinctada mazatlanica</i>	6.0E-05	1.7E-11	1.7E+02	AF374307	0.0026	0.1302	(75)	(2)
Outgroup	Mollusca	<i>Pteria hirundo</i>				AF120647				
Spp1	Mollusca	<i>Bathyeuthis abyssicola</i>	7.7E-05	6.3E-12	2.0E+01	AF000030	0.0021	0.0018	0.427106	(76)
Spp2	Mollusca	<i>Ctenopteryx siculus</i>	5.8E-04	2.2E-11	2.5E+00	AY557526	0.0041	3.449	(76)	(2)
Outgroup	Mollusca	<i>Octopus vulgaris</i>				AB158363				
Spp1	Mollusca	<i>Ocydote tuberculata</i>	5.4E-04	1.3E-11	1.2E+00	AY557519	0.0347	60.203	13.19421	(76)
Spp2	Mollusca	<i>Joubiniteuthis portieri</i>	4.0E-05	5.2E-12	4.2E+01	AF000048	0.0059	0.2892	(76)	(2)
Outgroup	Mollusca	<i>Ctenopteryx siculus</i>				AY557526				
Spp1	Mollusca	<i>Cranchia scabra</i>	4.5E-05	6.9E-12	2.1E+01	AF000035	0.0002	1.9186	1.003744	(76)
Spp2	Mollusca	<i>Lioeranchia valdivia</i>	1.9E-04	1.8E-11	2.6E+00	AF000050	0.0041	1.255	(76)	(2)
Outgroup	Mollusca	<i>Histioteuthis boylei</i>				AF000045				
Spp1	Mollusca	<i>Gonatus pyros</i>	5.7E-04	7.8E-12	8.6E+00	AY681075	0.0001	0.7547	0.050108	(76)
Spp2	Mollusca	<i>Gonatus onyx</i>	1.1E-03	1.1E-11	2.3E+00	AF144718	0	0	(76)	(2)
Outgroup	Mollusca	<i>Histioteuthis boylei</i>	2.0E-04			AF000045				
Spp1	Mollusca	<i>Amphitretus pelagicus</i>	1.3E-05	5.7E-12	3.0E+01	AF377965	0.0219	1.4032	2.655218	(76)
Spp2	Mollusca	<i>Pareledone charcoti</i>	1.1E-04	no data	3.7E+01	AF377971	0.0068	1.9521	(77*)	(2)
Outgroup	Mollusca	<i>Histioteuthis boylei</i>				AF000045				
Spp1	Mollusca	<i>Japetella heathii</i>	2.7E-05	6.1E-12	3.3E+01	AF377966	0.0001	0.8433	43.899306	(76)
Spp2	Mollusca	<i>Japetella diaphana</i>	8.3E-05	8.9E-12	4.6E+01	AY557518	0	0.0345	(76)	(2)
Outgroup	Mollusca	<i>Eledoneella pygmaea</i>				AF000038				
Spp1	Mollusca	<i>Octopus californicus</i>	7.8E-05	3.8E-12	2.0E+02	AF377968	0.0018	9.2709	1.575546	(78)
Spp2	Mollusca	<i>Octopus vulgaris</i>	3.5E-04	9.9E-12	7.7E+02	AB158363	0.0076	5.6152	(78, 79*)	(2)
Outgroup	Mollusca	<i>Japetella diaphana</i>				AY557518				
Spp1	Mollusca	<i>Ancylus fluviatilis</i>	4.7E-03	8.4E-11	4.1E-03	AY282582	0.0766	2.7446	2.875022	(80*)
Spp2	Mollusca	<i>Patella vulgata</i>	1.3E-04	8.6E-12	6.9E+00	DQ089618	0.0454	98.6062	(81*)	(2)
Outgroup	Mollusca	<i>Vampyroteuthis infernalis</i>				AF000071				
Spp1	Mollusca	<i>Littorina litorea</i>	1.6E-04	2.4E-11	2.3E+00	AJ622946	0.0023	0.004	1.314288	(54, 82*)
Spp2	Mollusca	<i>Littorina obtusata</i>	1.7E-03	9.3E-11	2.3E-02	AJ622947	0.0001	0.7776	(83*)	(2)
Outgroup	Mollusca	<i>Crepidula fornicata</i>				AF353129				
Spp1	Mollusca	<i>Crepidula fornicata</i>	2.0E-04	4.1E-11	2.2E+00	AF353129	0.0065	10.5285	0.540338	(84*)
Spp2	Mollusca	<i>Corallophila abbreviata</i>	7.8E-04	1.1E-10	4.1E-01	U86331	0.0121	60.227	(85*)	(2)
Outgroup	Mollusca	<i>Vampyroteuthis infernalis</i>				AF000071				

Table SOM1.1 Cytochrome Oxidase I

Phylum	Species Name	msBVR Watts/g	G Arbitrary units	BS grams	Accession	BL ₄₅	L.R.T.	MR refs	Conv. Fact. Refs
Echinodermata	<i>Asterias rubens</i>	2.2E-03	1.8E-11	1.0E+01	AF240080	0.0005	4.6921	3.385314	(86)
	<i>Psycopodia helianthoides</i>	5.5E-05	1.2E-11	2.6E+01	DQ075581	0.0085	0.0038		(87*)
	<i>Myxoderma platyacanthum</i>				AF217391				
Echinodermata	<i>Dermasterias imbricata</i>	4.2E-05	1.2E-11	2.4E+01	AF217381	0.0378	2.1991	5.396484	(87*)
	<i>Mediaster acqualis</i>	8.5E-05	1.4E-11	1.5E+01	AF217385	0.0147	3.3699		(87*)
	<i>Luidia quimalla</i>				NC_006664				
Echinodermata	<i>Allocentrotus fragilis</i>	2.9E-05	6.5E-12	5.0E+01	AY220988	0	0.1316	0.001288	(87*)
	<i>Strongylocentrotus droebachiensis</i>	7.6E-05	9.1E-12	3.2E+01	AY220989	0	0.1463		(88*)
	<i>Pseudocentrotus depressus</i>				AY221002				
Echinodermata	<i>Tripeustes gratilla</i>	2.2E-05	1.7E-11	7.4E+02	AY205452	0.0006	5.9974	1.851902	(89*)
	<i>Lytelichinus anamesus</i>	8.3E-05	2.5E-11	3.7E+00	AY183285	0.0057	13.2955		(87*)
	<i>Helicodaris erythrogramma</i>				AF529580				
Echinodermata	<i>Echinometra mathaei</i>	2.6E-05	2.6E-11	2.8E+01	AY262915	0.0001	0.9457	0.849122	(87*)
	<i>Echinometra lucunter</i>	7.4E-05	6.8E-11	3.1E+00	AF255479	0	0.2803		(87*)
	<i>Helicodaris erythrogramma</i>				AF529580				
Echinodermata	<i>Diadema antillarum</i>	1.3E-04	4.6E-11	5.5E+00	AY012728	0.0003	3.1506	1.530568	(90*)
	<i>Sterechnis neumayeri</i>	3.0E-05	no data	4.8E+00	AY275548	0.0033	3.8671		(91*)
	<i>Eucidaris metularia</i>				AF107721				
Echinodermata	<i>Holothuria atra</i>	6.2E-05	2.3E-11	1.1E+02	AY700770	0.005	0.013	0.330612	(92*)
	<i>Parastichopus californicus</i>	1.1E-04	1.2E-11	2.7E+01	U32198	0.0027	8.5294		(87*)
	<i>Pentamera fissoplicata</i>				U32219				
Echinodermata	<i>Ophiopholis aculeata</i>	9.9E-05	1.9E-11	2.1E+00	AF314589	0.1181	59.2891	19.218022	(93*)
	<i>Eucidaris tribuloides</i>	7.6E-04	5.4E-11	4.8E+00	AF063360	0.0197	0.0002		(94*)
	<i>Notocritus virilis</i>				AY669365				

Table SOML2 Cytochrome Oxidase II

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _{6S}	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Arthropoda	Reticulitermes flavipes	2.4E-03	2.7E-10	3.0E-03	AY808086	0.0307	0.369174	(20)	
Spp2	Arthropoda	Coptotermes formosanus	1.6E-03	2.7E-10	3.0E-03	AF525317	0.0292	0.000029	(20)	
Outgroup	Arthropoda	Periplaneta fuliginosa				AB126004				
Spp1	Arthropoda	Hypotermes xenotermis	1.3E-03	4.0E-10	2.6E-03	AB011409	0.0241	4.2275	(95)	
Spp2	Arthropoda	Decapditermes nemorosus	4.6E-04	3.7E-10	3.5E-03	AY940136	0.0316	1.308	(95)	
Outgroup	Arthropoda	Reticulitermes flavipes	2.4E-03			AY808086				

Table 1.3 18S ribosomal RNA

Phylum	Species Name	msBMR Watts/g	C Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Arthropoda	<i>Laetocroceus mactans</i>	3.8E-03	1.0E-10	1.1E-01	AY230915	0.057409	0.003072	(3)	
Arthropoda	<i>Tidarren sisypthodes</i>	6.9E-04	8.3E-11	1.1E-01	AY230936	0.058269		(4)	
Arthropoda	<i>Frontinella pyramitella</i>				AY078672				
Arthropoda	<i>Myzus persicae</i>	8.2E-03	no data	no data	AF487712	0.002029	20.546598	(12)	
Arthropoda	<i>Acyrtosiphon pisum</i>	1.6E-03	2.3E-10	1.8E-03	X62623	0.029951		(13)	
Arthropoda	<i>Aonidiella aurantii</i>				AF124597				
Arthropoda	<i>Lasius alienus</i>	2.9E-02	3.8E-10	1.2E-03	DQ353484	0.01115	0.148384	(15)	(16)
Arthropoda	<i>Paraponera clavata</i>	1.9E-03	7.7E-10	1.9E-04	AY703489	0.008096		(17)	
Arthropoda	<i>Apis mellifera</i>	2.1E-03			AY703484				
Arthropoda	<i>Clausenia subulosa</i>	9.0E-04	3.3E-11	1.5E-01	AF311469	0.013489	0.229224	(96)	
Arthropoda	<i>Pteronarcys californica</i>	5.6E-04	2.8E-11	2.8E-01	AY521880	0.011016		(96)	(97)
Arthropoda	<i>Malenka californica</i>				AY338724				
Arthropoda	<i>Blattella germanica</i>	2.5E-03	1.4E-10	5.0E-02	AF005243	0.044455	28.843208	(98)	
Arthropoda	<i>Blattella orientalis</i>	2.1E-03	1.3E-10	3.8E-01	AY521830	0.008545		(98)	
Arthropoda	<i>Reticulitermes tibialis</i>				AF423782				
Arthropoda	<i>Porcellio scaber</i>	9.3E-04	9.4E-11	6.6E-02	AF287062	0.017258	11.593706	(99)	
Arthropoda	<i>Armadillidium nasatum</i>	5.8E-04	1.1E-10	3.0E-02	AY048175	0.042409		(100)	
Arthropoda	<i>Asellus aquaticus</i>	1.0E-03			AF235701				
Arthropoda	<i>Penaeus stylirostris</i>	7.4E-03	2.7E-10	9.6E-03	AF463508	0.000004	2.042532	(21*)	(2)
Arthropoda	<i>Penaeus vannamei</i>	1.7E-03	4.8E-11	1.1E+01	AF124597	0.103891		(22*)	
Arthropoda	<i>Marsupenaeus japonicus</i>				AF463512				
Arthropoda	<i>Procambarus clarkii</i>	2.1E-03	8.3E-11	5.7E-02	AF436001	0.000004	-0.028528	(23*)	(2)
Arthropoda	<i>Oreonecetes virilis</i>	3.3E-05	1.3E-11	4.0E+01	AF235965	0.000004		(26)	
Arthropoda	<i>Homarus americanus</i>				AF463512				
Arthropoda	<i>Callinassa subterranea</i>	2.9E-04	3.2E-11	3.9E-01	DQ079740	0.051093	12.918922	(101*)	(2)
Arthropoda	<i>Jasus edwardsii</i>	1.1E-04	7.0E-12	9.4E+02	AF235972	0.01695		(102*)	
Arthropoda	<i>Thysanoezza longipes</i>				AY141011				
Arthropoda	<i>Homarus americanus</i>	3.5E-03	1.5E-10	4.9E+01	AF235971	0.004775	2.784746	(103*, 104*)	(2)
Arthropoda	<i>Nephrops norvegicus</i>	2.3E-04	1.2E-11	5.6E+01	Y14812	0.001034		(31*, 105*)	
Arthropoda	<i>Oreonecetes virilis</i>				AF235965				
Arthropoda	<i>Palaeomonetes vulgaris</i>	1.3E-03	6.5E-11	3.0E-01	AY743941	0.008356	0.004732	(86)	
Arthropoda	<i>Macrobrachium olfersii</i>	2.7E-04	4.4E-11	1.3E+00	AY374176	0.00788		(106)	
Arthropoda	<i>Carcinus maenas</i>				AY583974				
Arthropoda	<i>Carcinus maenas</i>	6.8E-04	5.4E-11	5.7E+00	AY583974	0.010888	0.08248	(34*, 35*, 36*, 37*, 38*)	(2)
Arthropoda	<i>Callinectes sapidus</i>	3.1E-04	1.8E-11	2.0E+02	M34360	0.012709		(39*)	
Arthropoda	<i>Macrobrachium olfersii</i>				AY374176				
Arthropoda	<i>Idotea balthica</i>	9.5E-04	3.4E-11	4.6E-02	AJ011390	0.034074	11.127266	(107*, 108*)	
Arthropoda	<i>Glyptototus amantectus</i>	1.8E-04	4.9E-12	2.5E+01	AF256966	0.012572		(109*, 110*)	
Arthropoda	<i>Asellus aquaticus</i>	1.0E-03			AF255701				
Arthropoda	<i>Meiridia lucens</i>	9.2E-04	6.1E-11	7.5E-04	AY118072	0.062523	4.568046	(45)	(2)
Arthropoda	<i>Paracuchaeta antarctica</i>	4.7E-04	2.6E-11	2.4E-02	AY118064	0.032269		(45)	(2)
Arthropoda	<i>Lepceplithreus hospitalis</i>				DQ123832				
Arthropoda	<i>Balanus glandula</i>	2.6E-03	8.3E-11	3.0E-02	AY520625	0.007766	0.867694	(111*)	(2)
Arthropoda	<i>Megabalanus tintinnabulum</i>	1.5E-03	7.6E-11	2.9E+00	AY520631	0.011295		(112*)	

Table 1.3 18S ribosomal RNA

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Outgroup	Arthropoda				AY520648				
Spp1	<i>Catomerus polymertus</i>								
Spp2	<i>Eukrohnia hamata</i>	1.0E-04	3.5E-11	2.1E-02	DQ351887	0.017225	0.946984	(113)	
Outgroup	Arthropoda	3.4E-05	1.8E-11	3.0E-01	DQ351880	0.027486		(113)	
Spp1	<i>Pseudosquilla lyra</i>				AY428817				
Spp2	<i>Branchiostoma lanceolatum</i>								
Outgroup	Chordata	1.5E-04	1.5E-11	1.8E+01	AF236803	0.044474	11.7335	(46*)	(2)
Spp1	<i>Phallusia mammillata</i>	8.5E-05	2.0E-11	2.5E+01	L12444	0.093529		(47*)	
Spp2	<i>Styela plicata</i>				AB013012				
Outgroup	Chordata	9.5E-05	5.4E-11	2.1E-02	AY937337	0.020412	9.999752	(114)	
Spp1	<i>Muggiaea atlantica</i>	4.3E-05	3.5E-11	1.2E-01	AY920768	0.010054		(114)	
Spp2	<i>Proboscidea flavicirrata</i>				AF099103				
Outgroup	Cnidaria	2.8E-05	8.2E-12	6.8E+00	AF358095	0.017589	8.424192	(115)	
Spp1	<i>Nausithoe rubra</i>	2.2E-05	2.1E-11	8.7E-01	AF358096	0.038932		(114, 116)	
Spp2	<i>Placilophora caantschatica</i>				AF358092				
Outgroup	Cnidaria	4.2E-03	3.0E-10	2.3E-03	AF508118	0.031967	32.72633	(117*)	
Spp1	<i>Capitella capitata</i>	4.6E-04	4.4E-11	1.4E+00	AJ272183	0.10328		(86)	
Spp2	<i>Lumbricus terrestris</i>				AY210441				
Outgroup	Echinura	4.7E-04	1.5E-11	4.1E+00	U19519	0.033387	4.155434	(118*)	(2)
Spp1	<i>Glycera americana</i>	8.6E-05	1.0E-11	1.9E+01	Z83749	0.043917		(118*)	(2)
Spp2	<i>Aphrodita aculeata</i>				AY612621				
Outgroup	Annellida	7.7E-04	4.2E-11	5.2E+00	Z83754	0.03293	33.503946	(118*, 119*, 120*)	(2)
Spp1	<i>Nereis virens</i>	4.8E-04	8.9E-11	1.4E-01	AY210447	0.109001		(119*, 121*)	(2)
Spp2	<i>Nereis succinea</i>				AY527054				
Outgroup	Annellida	4.9E-03	1.9E-09	4.4E-07	AY854204	0.110966	9.731094	(122*)	a
Spp1	<i>Atrochordodora microlaima</i>	3.1E-03	1.0E-09	4.4E-06	AF047888	0.045934		(123*)	
Spp2	<i>Paracanthocheilus catus</i>				AY854217				
Outgroup	Nematoda	2.1E-02	2.2E-09	2.9E-07	U13929	0.267725	106.197866	(124*)	
Spp1	<i>Caenorhabditis briggsae</i>	2.1E-03	9.7E-10	5.9E-06	AY854217	0.049161		(123*, 125*)	
Spp2	<i>Spirinia parasitifera</i>				AY593955				
Outgroup	Nematoda	1.7E-03	8.7E-11	2.2E-02	Z99949	0.030269	0.41382	(53*)	(53*)
Spp1	<i>Polyscelis tenuis</i>	3.4E-04	5.3E-11	9.1E-02	AJ312271	0.023307		(53*)	(53*)
Spp2	<i>Dendrocoelum lacteum</i>				AY157221				
Outgroup	Platyhelminthes	1.3E-04	no data	1.1E+00	AF120563	0.063485	24.584264	(126*)	(2)
Spp1	<i>Hiatella arctica</i>	1.2E-03	6.7E-11	9.9E-01	AF117739	0.018969		(54, 59*, 127*, 128*)	(2)
Spp2	<i>Mya arenaria</i>				AF120558				
Outgroup	Mollusca	1.3E-03	5.4E-11	5.7E-02	L11271	0.024371	49.39809	(58*)	(2)
Spp1	<i>Spisula subtruncata</i>	2.1E-04	5.0E-11	2.5E-01	AY570554	0.086274		(59*)	(2)
Spp2	<i>Macoma balthica</i>				AF117739				
Outgroup	Mollusca	3.3E-04	1.6E-11	1.2E+01	L33449	0.002206	0.00073	(63*)	(2)
Spp1	<i>Mytilus californianus</i>	8.3E-04	5.8E-11	1.8E+00	L33448	0.002211		(54, 64*, 65*, 66*, 67*, 68*, 69*)	(2)
Spp2	<i>Mytilus edulis</i>				L33450				
Outgroup	Mollusca	7.7E-05	6.3E-12	2.0E+01	AY557483	0.001989	1.453178	(70)	
Spp1	<i>Bathyrhynchus abyssicola</i>	5.8E-04	2.2E-11	2.5E+00	AY557481	0.000004		(70)	
Spp2	<i>Ctenoperyx siculus</i>				AY557469				
Outgroup	Mollusca	5.4E-04	1.3E-11	1.2E+00	AY557464	0.156246	195.29325	(70)	
Spp1	<i>Ocythoe tuberculata</i>								

Table 1.3 18S ribosomal RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp2	Mollusca	Joubiniteuthis portieri	4.0E-05	5.2E-12	4.2E+01	AY557502	0.002214		(76)	
Outgroup	Mollusca	Bathyteuthis abyssicola				AY557483				
Spp1	Mollusca	Ancylus flaviatilis	4.7E-03	8.4E-11	4.1E-03	AY282593	0.062537	7.010376	(80*)	(2)
Spp2	Mollusca	Patella vulgata	1.3E-04	8.6E-12	6.9E+00	AF046046	0.167927		(81*)	
Outgroup	Mollusca	Vampyroteuthis infernalis				AY145387				
Spp1	Mollusca	Littorina littorea	1.6E-04	2.4E-11	2.3E+00	X91970	0.000362	1.378448	(54, 82*)	(2)
Spp2	Mollusca	Littorina obtusata	1.7E-03	9.3E-11	2.5E-02	X94274	0.002587		(83*)	(2)
Outgroup	Mollusca	Crepidula fornicata				AY377660				
Spp1	Mollusca	Crepidula fornicata	2.0E-04	4.1E-11	2.2E+00	AY377660	0.004704	1.906304	(84*)	
Spp2	Mollusca	Coralliophila abbreviata	7.8E-04	1.1E-10	4.1E-01	U86314	0.000004		(85*)	(2)
Outgroup	Mollusca	Pomacea bridgesi				DQ093436				
Spp1	Mollusca	Nerita versicolor	3.2E-04	1.0E-10	1.5E+00	L78882	0.00624	0.0002	(129*)	(129*)
Spp2	Mollusca	Theodoxus flaviatilis	6.0E-04	6.8E-11	2.9E-02	AF120515	0.006352		(130*)	(2)
Outgroup	Mollusca	Alcaldia dysonia				DQ093428				

* mass was reported in nanolitres of volume, density was assumed to be 1g/cm³ to convert volume to grams.

Table SOM1.4 28S ribosomal RNA

	Phylum	Species Name	msBMR Wattsg	G Arbitrary units	BS grams	Accession	BL _T	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Arthropoda	Metaphidippus vltis	2.0E-03	2.0E-10	5.7E-03	AF37955	0.377211	60.199644	(3)	
Spp2	Arthropoda	Plecteurys tristis	3.7E-04	8.9E-11	2.1E-01	AY560768	0.063223		(3)	
Outgroup	Arthropoda	Antrodiaetus unicolor				AY671966				
Spp1	Arthropoda	Frontinella pyramitella	2.9E-03	2.1E-10	5.7E-03	AY078679	0.049257	0.26256	(3)	
Spp2	Arthropoda	Argiope aurantia	9.1E-04	6.5E-11	6.6E-01	DQ018858	0.036712		(3)	
Outgroup	Arthropoda	Oribotocmus huwena				AY671966				
Spp1	Arthropoda	Lactrodectus mactans	3.8E-03	1.0E-10	1.1E-01	AY231100	0.009343	3.092472	(3)	
Spp2	Arthropoda	Tidarren sisypoides	6.9E-04	8.3E-11	1.1E-01	AY231115	0.097762		(4)	
Outgroup	Arthropoda	Frontinella pyramitella	2.9E-03			AY078679				
Spp1	Arthropoda	Dermacentor variabilis	2.4E-04	2.9E-10	3.6E-03	AF213367	0.000004	0.24641	(5)	
Spp2	Arthropoda	Hyalomma dromedarii	6.7E-06	no data	no data	AF120313	0.010509		(6)	
Outgroup	Arthropoda	Oligonychus coffeae				AY750699				
Spp1	Arthropoda	Drosophila simulans	2.0E-02	3.2E-10	9.3E-04	AF416877	0.03628	2.626858	(10)	
Spp2	Arthropoda	Phormia regina	1.0E-02	1.6E-10	3.8E-02	AF366686	0.104519		(11)	
Outgroup	Arthropoda	Belgica antarctica				X89641				
Spp1	Arthropoda	Lasius alienus	2.9E-02	3.8E-10	1.2E-03	DQ353683	0.060117	0.949952	(15)	(16)
Spp2	Arthropoda	Paraponera clavata	1.9E-03	7.7E-10	1.9E-04	AY703556	0.04518		(17)	
Outgroup	Arthropoda	Odontophotops sp	2.1E-03			AJ302936				
Spp1	Arthropoda	Blattella germanica	2.5E-03	1.4E-10	5.0E-02	AF005243	0.038542	25.321586	(98)	
Spp2	Arthropoda	Blattella orientalis	2.1E-03	1.3E-10	3.8E-01	AY521741	0.122517		(98)	
Outgroup	Arthropoda	Nasutitermes sp				AB073538				
Spp1	Arthropoda	Pocambanus clarkii	2.1E-03	8.3E-11	5.7E-02	AF435982	0.011552	3.993006	(25*)	(2)
Spp2	Arthropoda	Orconectes viridis	3.3E-05	1.3E-11	4.0E+01	DQ079804	0.000004		(26)	
Outgroup	Arthropoda	Nephrops norvegicus				AF340220				
Spp1	Arthropoda	Callinassa subterranea	2.9E-04	3.2E-11	3.9E-01	DQ079776	0.000004	-2.387142	(101*)	(2)
Spp2	Arthropoda	Jasus edwardsii	1.1E-04	7.0E-12	9.4E+02	DQ079791	0.235744		(102*)	
Outgroup	Arthropoda	Penaeus vannamei				AF340220				
Spp1	Arthropoda	Chionoecetes bairdi	1.9E-04	5.7E-12	1.6E+02	AB193471	0.000004	-0.003508	(29*)	(2)
Spp2	Arthropoda	Chionoecetes opilio	8.2E-05	2.5E-12	7.6E+02	AB193470	0.000004		(104*)	
Outgroup	Arthropoda	Carcinus maenas	1.7E-03			AF124597				
Spp1	Arthropoda	Homonus americanus	3.5E-03	1.5E-10	4.9E+01	DQ079788	0.050381	3.901608	(103* 104*)	(2)
Spp2	Arthropoda	Nephrops norvegicus	2.3E-04	1.2E-11	5.6E+01	DQ079803	0.009287		(31* 105*)	
Outgroup	Arthropoda	Orconectes viridis				DQ079776				
Spp1	Arthropoda	Pagurus bernhardus	8.7E-04	3.2E-11	2.2E+00	AF425354	0.128893	0.057582	(31* 32*)	(2)
Spp2	Arthropoda	Munida quadrispina	1.9E-04	1.6E-11	4.0E+00	AF435990	0.144706		(33*)	
Outgroup	Arthropoda	Penaeus vannamei				AF340220				
Spp1	Arthropoda	Carcinus maenas	6.8E-04	5.4E-11	5.7E+00	DQ079782	0.198278	16.453754	(34* 35* 36* 37* 38*)	(2)
Spp2	Arthropoda	Callinectes sapidus	3.1E-04	1.8E-11	2.0E+02	AY739194	0.064937		(39*)	
Outgroup	Arthropoda	Cancer pagurus				AF340220				
Spp1	Arthropoda	Balanus glandula	2.6E-03	8.3E-11	3.0E-02	AY520591	0.044272	0.44045	(111*)	(2)
Spp2	Arthropoda	Megabalanus tintinnabulum	1.5E-03	7.6E-11	2.9E+00	AY520597	0.039212		(112*)	
Outgroup	Arthropoda	Catomerus polymerus				AY520614				
Spp1	Cnidaria	Nausithoe rubra	2.8E-05	8.2E-12	6.8E+00	AY920776	0.047375	10.235098	(115)	

Table SOMI.4 28S ribosomal RNA

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp2 Outgroup	Phaeellophora carmschatica Podocoryne carnea	2.2E-05	2.1E-11	8.7E-01	AY920778 AY920802	0.080107		(114, 116)	
Spp1	Amelida	1.1E-03	3.6E-11	2.1E+00	S53425	0.102483	1.914758	(131*)	(2)
Spp2	Amelida	5.1E-04	4.8E-11	4.2E-01	AY340403	0.056039		(132*)	(2)
Outgroup	Amelida				AY612636				
Spp1	Nemertea	6.6E-05	6.5E-12	4.0E+00	AJ436884	0.212399	0.471128	(51*)	(2)
Spp2	Nemertea	3.8E-05	1.5E-11	6.0E-01	AJ436870	0.244259		(52)	
Outgroup	Echiura				AY210455				
Spp1	Porifera	7.2E-04	3.3E-11	2.0E-01	AY563532	0.082022	0.702732	(133*)	(2)
Spp2	Porifera	1.6E-04	2.2E-11	3.4E+00	AY319315	0.10924		(134*)	(2)
Outgroup	Rhabdocalyptus dawsoni				AY026379				
Spp1	Mollusca	1.3E-04	no data	1.1E+00	AF120624	0.076055	6.629042	(126*)	(2)
Spp2	Mollusca	1.2E-03	6.7E-11	9.9E-01	AB126332	0.024975		(54, 59*, 127*, 128*)	(2)
Outgroup	Venerupis philippinarum				AB126333				
Spp1	Mollusca	8.4E-05	6.1E-12	3.4E+01	AF342798	0.005587	0.88266	(70*)	(2)
Spp2	Mollusca	2.5E-04	1.2E-11	5.5E+01	AB102748	0.008321		(71*)	(2)
Outgroup	Spondylus sinensis				AB102750				

Table SOM1.5 16S RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _T	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Arthropoda	Metaphidippus vitis	2.0E-03	2.0E-10	5.7E-03	AF327984	0.086332	0.480502	(3)	
Spp2	Arthropoda	Plectureys tristis	3.7E-04	8.9E-11	2.1E-01	AY560683	0.113588		(3)	
Outgroup	Arthropoda	Omithoctonus lauwena				AY241258				
Spp1	Arthropoda	Lacrodectus mactans	3.8E-03	1.0E-10	1.1E-01	AY230966	0.172048	5.03499	(3)	
Spp2	Arthropoda	Tidarren sisypoides	6.9E-04	8.3E-11	1.1E-01	AY230979	0.089474		(4)	
Outgroup	Arthropoda	Frontinella pyramitella	2.9E-03			AY078661				
Spp1	Arthropoda	Paruroctonus luteolus	2.2E-04	1.1E-10	1.6E-01	AY368245	0.062658	2.245674	(135)	
Spp2	Arthropoda	Hadrurus arizonensis	1.3E-04	4.1E-11	9.0E+00	AF325517	0.237975		(135)	
Outgroup	Arthropoda	Opilio parietinus				AF370858				
Spp1	Arthropoda	Dermaceator variabilis	2.4E-04	2.9E-10	3.6E-03	AY375441	0.047184	2.071648	(5)	
Spp2	Arthropoda	Hyalomma dromedarii	6.7E-06	no data	no data	L34306	0.126045		(6)	
Outgroup	Arthropoda	Omithodoros moubata				NC_004357				
Spp1	Arthropoda	Scarabeus nasicus	7.4E-04	5.5E-11	5.6E-01	AF499707	0.03212	2.851566	(9)	
Spp2	Arthropoda	Cireellium bacchus	2.6E-04	2.9E-11	7.3E+00	AF499690	0.070099		(9)	
Outgroup	Arthropoda	Pachysoma bennigseni				AF499698				
Spp1	Arthropoda	Erythemis simplicicollis	3.8E-03	1.5E-10	2.6E-01	AF037191	0.000004	2.130448	(14)	
Spp2	Arthropoda	Pachydiplex longipennis	1.9E-03	1.6E-10	1.9E-01	AF037189	0.019236		(14)	
Outgroup	Arthropoda	Cuenis sp.				AY749763				
Spp1	Arthropoda	Eublaberus positus	1.5E-03	5.9E-11	2.2E+00	U17785	0.096744	0.137762	(136)	
Spp2	Arthropoda	Blaberus giganteus	7.2E-04	4.2E-11	4.3E+00	U17771	0.111787		(137)	
Outgroup	Arthropoda	Blatta orientalis	2.1E-03			U17774				
Spp1	Arthropoda	Reicaulitermes flavipes	2.4E-03	2.7E-10	3.0E-03	AY808121	0.096118	0.064336	(20)	
Spp2	Arthropoda	Coptotermes formosanus	1.6E-03	2.7E-10	3.0E-03	AY558910	0.0755		(20)	
Outgroup	Arthropoda	Periplaneta fuliginosa				U17812				
Spp1	Arthropoda	Porcellio scaber	9.3E-04	9.4E-11	6.6E-02	AF388102	0.239726	0.881162	(99)	
Spp2	Arthropoda	Armadillidium nasutum	5.8E-04	1.1E-10	3.0E-02	AF388098	0.150791		(100)	
Outgroup	Arthropoda	Asellus aquaticus	1.0E-03			AF532161				
Spp1	Arthropoda	Penaeus stylirostris	7.4E-03	2.7E-10	9.6E-03	AF297970	0.057782	-2.904674	(21*)	(2)
Spp2	Arthropoda	Penaeus vannamei	1.7E-03	4.8E-11	1.1E+01	AF132780	0.068291		(22*)	
Outgroup	Arthropoda	Farfantepenaeus californiensis				AY046912				
Spp1	Arthropoda	Pacifastacus leptusculus	2.4E-04	2.8E-11	2.4E+01	AF235985	0.060071	4.364404	(23*)	
Spp2	Arthropoda	Austropotamobius pallipes	7.6E-05	1.3E-11	4.0E+01	AY611199	0.134417		(24)	
Outgroup	Arthropoda	Procambarus clarkii	1.7E-03			AF436040				
Spp1	Arthropoda	Procambarus clarkii	2.1E-03	8.3E-11	5.7E-02	AF436040	0.000004	2.06879	(25*)	(2)
Spp2	Arthropoda	Orconectes virilis	3.3E-05	1.3E-11	4.0E+01	AY485436	0.132969		(26)	
Outgroup	Arthropoda	Callinectes sapidus				AF298190				
Spp1	Arthropoda	Callinassa subterranea	2.9E-04	3.2E-11	3.9E-01	DQ079706	0.131989	4.225902	(101*)	(2)
Spp2	Arthropoda	Isas edwardsii	1.1E-04	7.0E-12	9.4E+02	AF502956	0.214759		(102*)	
Outgroup	Arthropoda	Penaeus vannamei				AF279818				
Spp1	Arthropoda	Chionoecetes bairdi	1.9E-04	5.7E-12	1.6E+02	AY227446	0.007689	0.736912	(29*)	(2)
Spp2	Arthropoda	Chionoecetes opilio	8.2E-05	2.5E-12	7.6E+02	AB188684	0.000004		(104*)	
Outgroup	Arthropoda	Maja squinado	1.7E-03			DQ079723				
Spp1	Arthropoda	Homarus americanus	3.5E-03	1.5E-10	4.9E+01	AF370876	0.043135	-0.462384	(103* - 104*)	(2)

Table SOMI.5 16S RNA

	Phylum	Species Name	msBMR Watts/g	C Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp2 Outgroup	Artiropoda	Nephtrops norvegicus	2.3E-04	1.2E-11	3.6E+01	U96083	0.000004		(31*, 105*)	
	Artiropoda	Callinectes sapidus				DQ079706				
Spp1 Outgroup	Artiropoda	Pagurus bernhardus	8.7E-04	3.2E-11	2.2E+00	AF425335	0.156882	0.031086	(31*, 32*)	(2)
Spp2 Outgroup	Artiropoda	Munda quadrispina	1.9E-04	1.6E-11	4.0E+00	AF436050	0.150775		(33*)	
	Artiropoda	Marsupenaeus japonicus				AF006346				
Spp1 Outgroup	Artiropoda	Carcinus maenas	6.8E-04	5.4E-11	5.7E+00	AY583901	0.172374	4.864334	(34*, 35*, 36*, 37*, 38*)	(2)
Spp2 Outgroup	Artiropoda	Callinectes sapidus	3.1E-04	1.8E-11	2.0E+02	AF298190	0.41058		(39*)	
	Artiropoda	Chionoecetes opilio				AF006346				
Spp1 Outgroup	Artiropoda	Euphausia superba	1.3E-03	2.1E-11	3.2E-02	M98483	0.061858	1.265108	(40)	
Spp2 Outgroup	Artiropoda	Euphausia triacantha	6.6E-04	1.2E-11	3.0E-01	AF171719	0.02224		(40)	
	Artiropoda	Meganocyplipes norvegica				AY744910				
Spp1 Outgroup	Artiropoda	Gammarus fossarum	3.4E-03	1.3E-10	2.2E-03	AJ269616	0.289971	4.636448	(41*, 42*, 43*)	(2)
Spp2 Outgroup	Artiropoda	Gammarus pulex	1.9E-03	6.6E-11	1.4E-02	AJ269626	0.065694		(44*)	
	Artiropoda	Dikroginannarus haemobaphes				AJ440888				
Spp1 Outgroup	Artiropoda	Balanus glandula	2.6E-03	8.3E-11	3.0E-02	AY520727	0.080786	0.706396	(111*)	(2)
Spp2 Outgroup	Artiropoda	Megabalanus tintinnabulum	1.5E-03	7.6E-11	2.9E+00	AY520733	0.031091		(112*)	
	Artiropoda	Catomerus polymerus				AY520749				
Spp1 Outgroup	Cnidaria	Anthopleura elegantissima	1.1E-03	2.6E-11	2.7E+00	U40292	0.004396	38.814768	(48*, 49*)	(2)
Spp2 Outgroup	Cnidaria	Metridium senile	2.7E-04	2.9E-11	2.1E+00	AY345876	0.055787		(50*)	(2)
	Cnidaria	Aiptasia pulchella				AY580333				
Spp1 Outgroup	Cnidaria	Muggiaea atlantica	9.5E-05	5.4E-11	2.1E-02	AY935295	0.501371	16.316374	(114)	
Spp2 Outgroup	Cnidaria	Proboscoidactyla flavicirrata	4.3E-05	3.5E-11	1.2E-01	AMI83137	0.170018		(114)	
	Cnidaria	Halcylostus sp.				DQ465035				
Spp1 Outgroup	Nemertea	Parborlasia corrugatus	6.6E-05	6.5E-12	4.0E+00	AJ436829	0.15486	1.05593	(57*)	(2)
Spp2 Outgroup	Nemertea	Nectonemertes mirabilis	3.8E-05	1.5E-11	6.0E-01	AJ436815	0.212343		(52)	
	Echiura	Urechis sp.				AF315059				
Spp1 Outgroup	Mollusca	Crassostrea virginica	9.6E-05	3.5E-11	6.9E+00	AF092285	0.172897	2.29177	(54, 55*, 56*)	(2)
Spp2 Outgroup	Mollusca	Crassostrea gigas	3.8E-04	6.7E-11	1.4E+01	S66183	0.054359		(57*)	(2)
	Mollusca	Hyotissa hyotis				AY376599				
Spp1 Outgroup	Mollusca	Corbicula africana	1.2E-03	7.0E-11	1.1E+00	AF152022	0.014591	51.717598	(138*)	(2)
Spp2 Outgroup	Mollusca	Musculium partumelium	7.4E-04	1.3E-10	4.0E-03	AF152036	0.251116		(139*)	(2)
	Mollusca	Asiatere borealis				AJ586486				
Spp1 Outgroup	Mollusca	Perna canaliculus	3.1E-04	2.0E-11	1.2E+01	U22886	0.038644	4.500994	(61*)	(2)
Spp2 Outgroup	Mollusca	Perna viridis	9.9E-04	3.2E-11	6.0E+00	AY262338	0.110151		(62*)	(2)
	Mollusca	Mytilus edulis	8.3E-04			AY350791				
Spp1 Outgroup	Mollusca	Mytilus californianus	3.3E-04	1.6E-11	1.2E+01	AF317057	0.046974	0.025562	(63*)	(2)
Spp2 Outgroup	Mollusca	Mytilus edulis	8.3E-04	5.8E-11	1.8E+00	AY350791	0.051079		(54, 64*, 65*, 66*, 67*, 68*, 69*)	(2)
	Mollusca	Perna viridis				AY262338				
Spp1 Outgroup	Mollusca	Placopecten magellanicus	8.4E-05	6.1E-12	3.4E+01	AJ972443	0.026002	2.662746	(70*)	(2)
Spp2 Outgroup	Mollusca	Patinopecten yessoensis	2.5E-04	1.2E-11	5.5E+01	AF103594	0.068986		(71*)	(2)
	Mollusca	Spondylus gaederopus				AJ571621				
Spp1 Outgroup	Mollusca	Bathyaethis abyssicola	7.7E-05	6.3E-12	2.0E+01	AJ000104	0.028393	3.89244	(76)	
Spp2 Outgroup	Mollusca	Ctenoperyx sticus	5.8E-04	2.2E-11	2.5E+00	AY293660	0.018429		(76)	
	Mollusca	Octopus vulgaris				AJ252772				

Table SOMI.5 16S RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Mollusca	<i>Erythrotenthis bigginsi</i>	7.3E-04	8.3E-12	6.5E+00	AJ234485	0.057154	0.681504	(76)	
Spp2	Mollusca	<i>Prerythrotenthis microlampus</i>	8.4E-04	2.2E-11	1.3E-01	X79588	0.085093		(76)	
Outgroup	Mollusca	<i>Helicocranchia pfeifferi</i>				AF110099				
Spp1	Mollusca	<i>Octopus californicus</i>	7.8E-05	3.8E-12	2.0E+02	AJ590322	0.679732	0.007492	(78)	
Spp2	Mollusca	<i>Octopus vulgaris</i>	3.5E-04	9.9E-12	7.7E+02	AJ252772	0.706466		(78, 79*)	
Outgroup	Mollusca	<i>Japetella diaphana</i>				AJ252766				
Spp1	Mollusca	<i>Arcylius fluviatilis</i>	4.7E-03	8.4E-11	4.1E-03	AY577466	0.334104	6.167566	(80*)	(2)
Spp2	Mollusca	<i>Patella vulgata</i>	1.3E-04	8.6E-12	6.9E+00	DQ089559	0.158343		(87*)	
Outgroup	Mollusca	<i>Vampyrotenthis infernalis</i>				AY686586				
Spp1	Mollusca	<i>Littorina littorea</i>	1.6E-04	2.4E-11	2.3E+00	AF550471	0.0249	-0.309746	(54, 82*)	(2)
Spp2	Mollusca	<i>Littorina obtusata</i>	1.7E-03	9.3E-11	2.5E-02	U46812	0.02083		(83*)	(2)
Outgroup	Mollusca	<i>Nodilittorina trochoides</i>				U46834				
Spp1	Echinodermata	<i>Pisaster brevispinus</i>	6.9E-05	1.3E-11	2.0E+01	AY548875	0.000004	0.47773	(87*)	
Spp2	Echinodermata	<i>Pisaster giganteus</i>	1.4E-04	2.5E-11	1.3E+00	AY548876	0.068867		(87*)	
Outgroup	Echinodermata	<i>Myxoderma platyacanthum</i>				AY225794				
Spp1	Echinodermata	<i>Asterias rubens</i>	2.2E-03	1.8E-11	1.0E+01	AY548860	0.101464	-0.81282	(86)	
Spp2	Echinodermata	<i>Pyrenopodia helianthoides</i>	5.5E-05	1.2E-11	2.6E+01	AY548877	0.015367		(87*)	
Outgroup	Echinodermata	<i>Myxoderma platyacanthum</i>				AY225794				
Spp1	Echinodermata	<i>Cucumaria frondosa</i>	1.4E-04	1.3E-11	2.1E+01	U15598	0.03225	4.478912	(140*)	(2)
Spp2	Echinodermata	<i>Psolus fabricii</i>	4.4E-05	7.8E-12	6.6E+01	U15597	0.100384		(141*)	
Outgroup	Echinodermata	<i>Stichopus chloronotus</i>				AY338422				

Table SOM1.6 12S RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS groups	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Arthropoda	Dermacentor variabilis	2.4E-04	2.9E-10	3.6E-03	AY520138	0.079932	0.008054	(5)	
Spp2	Arthropoda	Hyalomma dromedarii	6.7E-06	no data	no data	AF150036	0.077245		(6)	
Outgroup	Arthropoda	Ornithodoros moubata				NC_004357				
Spp1	Arthropoda	Erythrina simpliciicollis	3.8E-03	1.5E-10	2.6E-01	AY282566	0.115028	5.766974	(14)	
Spp2	Arthropoda	Pachydiplax longipennis	1.9E-03	1.6E-10	1.9E-01	AY282564	0.031549		(14)	
Outgroup	Arthropoda	Cuena sp.				AY749641				
Spp1	Arthropoda	Eublabennus posticus	1.5E-03	5.9E-11	2.2E+00	U17786	0.068125	0.032286	(136)	
Spp2	Arthropoda	Blattella germanica	7.2E-04	4.2E-11	4.3E+00	U17772	0.072235		(137)	
Outgroup	Arthropoda	Blatta orientalis	2.1E-03			U17773				
Spp1	Arthropoda	Blattella germanica	2.5E-03	1.4E-10	5.0E-02	AY536379	0.104522	0.411544	(98)	
Spp2	Arthropoda	Blatta orientalis	2.1E-03	1.3E-10	3.8E-01	U17773	0.130216		(98)	
Outgroup	Arthropoda	Reticulitermes tibialis				AY808154				
Spp1	Arthropoda	Reticulitermes flavipes	2.4E-03	2.7E-10	3.0E-03	AY808154	0.067133	1.739784	(20)	
Spp2	Arthropoda	Coptotermes formosanus	1.6E-03	2.7E-10	3.0E-03	AY536387	0.034835		(20)	
Outgroup	Arthropoda	Periplaneta fuliginosa				U17811				
Spp1	Arthropoda	Balanus glandula	2.6E-03	8.3E-11	3.0E-02	AY520659	0.166676	1.345434	(111*)	(2)
Spp2	Arthropoda	Megabalanus tintinnabulum	1.5E-03	7.6E-11	2.9E+00	AY520665	0.073947		(112*)	
Outgroup	Arthropoda	Catometus polymerus				AY520682				
Spp1	Chordata	Antechinus stuartii	6.7E-03	6.7E-11	2.8E+01	U87399	0.073223	3.636554	(142)	
Spp2	Chordata	Dasyurus viverrinus	2.3E-03	2.9E-11	9.8E+02	U87401	0.023119		(142)	
Outgroup	Chordata	Myrmecobius fasciatus	2.0E-03			U87404				
Spp1	Chordata	Planigale gilesi	4.3E-03	8.8E-11	9.1E+00	AF001943	0.018686	4.234968	(142)	
Spp2	Chordata	Planigale tenuirostris	8.9E-03	9.0E-11	7.1E+00	AF271683	0.031667		(142)	
Outgroup	Chordata	Ningauti yvonnatae	7.6E-03			AF001938				
Spp1	Chordata	Sminthopsis crassicaudata	8.6E-03	7.7E-11	1.6E+01	L28087	0.040611	0.050528	(142)	
Spp2	Chordata	Sminthopsis murina	6.3E-03	7.3E-11	1.9E+01	AF001934	0.041137		(142)	
Outgroup	Chordata	Ningauti yvonnatae	7.6E-03			AF001938				
Spp1	Chordata	Didelphis virginiana	1.9E-03	2.2E-11	2.5E+03	Z29573	0.062692	2.53561	(142)	
Spp2	Chordata	Monodelphis domestica	3.2E-03	4.0E-11	1.0E+02	AF166346	0.12618		(142)	
Outgroup	Chordata	Dasyurus novemcinctus	1.4E-03			Y11832				
Spp1	Chordata	Betongia penicillata	3.1E-03	3.2E-11	1.0E+03	AY245612	0.045816	0.018128	(142)	
Spp2	Chordata	Potorous tridactylus	2.4E-03	2.9E-11	9.8E+02	AY245617	0.047701		(142)	
Outgroup	Chordata	Phascogale cinereus	1.2E-03			U61076				
Spp1	Chordata	Ornithorhynchus anatinus	1.6E-03	2.8E-11	6.9E+02	U33498	0.002558	4.703494	(142)	
Spp2	Chordata	Zaglossus bruijni	6.6E-04	1.1E-11	1.0E+04	AJ639865	0.119979		(142)	
Outgroup	Chordata	Trichosurus vulpecula	2.0E-03			AY245622				
Spp1	Chordata	Dasyurus novemcinctus	1.4E-03	1.9E-11	3.5E+03	Y11832	0.206845	0.15829	(142)	
Spp2	Chordata	Priodontes maximus	3.7E-04	9.4E-12	4.5E+04	AJ505829	0.140257		(142)	
Outgroup	Chordata	Cyclops didactylus	2.7E-03			AJ278155				
Spp1	Chordata	Myrmecophaga tridactyla	4.8E-04	9.6E-12	3.1E+04	AJ278153	0.021588	1.416602	(142)	
Spp2	Chordata	Tamandua tetradactyla	1.4E-03	1.8E-11	3.5E+03	AJ278154	0.064651		(142)	
Outgroup	Chordata	Euphractus sexcinctus	8.4E-04			AJ505826				
Spp1	Chordata	Isodon auratus	2.0E-03	3.1E-11	4.3E+02	AF250007	0.015921	0.02117	(142)	
Spp2	Chordata	Perameles nasuta	2.7E-03	3.3E-11	6.5E+02	AF131245	0.018421		(142)	
Outgroup	Chordata	Trichosurus vulpecula	2.0E-03			AY245622				

Table SOM1.6 12S RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Chordata	Amblysomus hottentotus	6.8E-03	no data	7.0E+01	M95108	0.072172	1.019378	(142)	
Spp2	Chordata	Chryschloris asiatica	6.5E-03	5.5E-11	4.4E+01	AB096866	0.000004		(142)	
Outgroup	Chordata	Elephantulus rufescens	6.0E-03			U97339				
Spp1	Chordata	Elephantulus brachyrhynchus	5.4E-03	7.0E-11	4.5E+01	AY310879	0.098351	0.054028	(142)	
Spp2	Chordata	Elephantulus intufi	6.2E-03	6.8E-11	4.6E+01	AY310884	0.109615		(142)	
Outgroup	Chordata	Macroscelides proboscideus	7.5E-03			AY310886				
Spp1	Chordata	Macroscelides proboscideus	7.5E-03	6.6E-11	3.9E+01	AY310886	0.277561	8.65567	(142)	
Spp2	Chordata	Petrodromus tetradactylus	4.9E-03	4.8E-11	2.1E+02	AY310883	0.133204		(142)	
Outgroup	Chordata	Elephantulus rozeti	5.9E-03			AY310881				
Spp1	Chordata	Lepus americanus	no data	3.4E-11	1.6E+03	AY292707	0.01204	0.461002	(142)	
Spp2	Chordata	Lepus to wnsendii	no data	2.7E-11	2.4E+03	AY292703	0.020328		(142)	
Outgroup	Chordata	Sylvilagus aquaticus	3.6E-03			AY292700				
Spp1	Chordata	Alouatta palliata	2.5E-03	no data	4.7E+03	AF069964	0.038652	0.633268	(142)	
Spp2	Chordata	Saguinus Geoffroyi	5.8E-03	no data	2.3E+02	AF069972	0.091395		(142)	
Outgroup	Chordata	Nycticebus coucang	1.3E-03			DC073504				
Spp1	Chordata	Bathyergus suillus	2.7E-03	3.1E-11	6.2E+02	AY427019	0.112767	0.030182	(142)	
Spp2	Chordata	Cryptomys hottentotus	5.0E-03	4.9E-11	7.5E+01	AY427054	0.103277		(142)	
Outgroup	Chordata	Dasyprocta leporina	3.2E-03			AY093661				
Spp1	Chordata	Cavia porcellus	3.1E-03	4.1E-11	6.3E+02	AJ222767	0.096724	0.04838	(142)	
Spp2	Chordata	Hydrochaeris hydrochaeris	1.4E-03	1.4E-11	2.6E+04	U61081	0.105961		(142)	
Outgroup	Chordata	Aplodontia rufa	2.5E-03			AJ389541				
Spp1	Chordata	Spalacopus cyanus	4.4E-03	5.0E-11	1.4E+02	AF520689	0.041815	0.005438	(142)	
Spp2	Chordata	Tympanoctomys barrerae	6.0E-03	5.5E-11	7.1E+01	AF520692	0.04366		(142)	
Outgroup	Chordata	Dasyprocta leporina	3.2E-03			AY093661				
Spp1	Chordata	Jaculus jaculus	6.9E-03	6.2E-11	7.5E+01	AJ416890	0.133827	0.041932	(142)	
Spp2	Chordata	Pedetes capensis	1.9E-03	2.3E-11	2.3E+03	AJ389540	0.127401		(142)	
Outgroup	Chordata	Heterocephalus glaber	3.6E-03			AY012120				
Spp1	Chordata	Dipodomys ordii	7.7E-03	5.6E-11	4.7E+01	U59173	0.166828	1.571332	(142)	
Spp2	Chordata	Perognathus flavus	1.2E-02	8.7E-11	8.3E+00	U67298	0.262201		(142)	
Outgroup	Chordata	Apodemus sylvaticus	1.0E-02			AJ311126				
Spp1	Chordata	Graphiurus ocellaris	5.5E-03	no data	6.8E+01	AJ536355	0.092466	1.517628	(142)	
Spp2	Chordata	Myoxus glis	4.4E-03	4.9E-11	2.0E+02	AJ001562	0.045782		(142)	
Outgroup	Chordata	Epixerus wilsoni	2.9E-03			AY227560				
Spp1	Chordata	Cricetomys gambianus	3.4E-03	2.4E-11	1.9E+03	X09461	0.077184	0.36127	(142)	
Spp2	Chordata	Mystromys albicaudatus	7.6E-03	4.2E-11	9.4E+01	AJ250354	0.105586		(142)	
Outgroup	Chordata	Myoxus glis	4.4E-03			AJ001562				
Spp1	Chordata	Glaucomys volans	5.9E-03	7.2E-11	6.4E+01	AF038020	0.061767	2.911026	(142)	
Spp2	Chordata	Marmota monax	1.4E-03	2.5E-11	2.7E+03	AY227529	0.111114		(142)	
Outgroup	Chordata	Pedetes capensis	1.9E-03			AJ389540				
Spp1	Chordata	Alees aleei	no data	8.3E-12	3.3E+05	AY184437	0.064055	0.01878	(142)	
Spp2	Chordata	Odocoileus virginianus	no data	1.3E-11	5.9E+04	M55874	0.06102		(142)	
Outgroup	Chordata	Antilocapra americana	1.4E-03			M55540				
Spp1	Chordata	Allurus fulgens	8.5E-04	2.1E-11	5.7E+03	Y08511	0.109936	0.260816	(142)	
Spp2	Chordata	Vulpes vulpes	3.1E-03	2.4E-11	4.4E+03	Y08508	0.093684		(142)	

Table SOM1.6 12S RNA

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _r	L.R.T.	MR refs	Conv. Fact Refs
Outgroup	Chordata	<i>Acinonyx jubatus</i>	1.3E-03			AF344830				
Spp1	Chordata	<i>Panthera leo</i>	9.7E-04	1.1E-11	9.8E+04	Y08505	0.052488	0.037662	(142)	
Spp2	Chordata	<i>Herpeses javanicus</i>	3.7E-03	4.3E-11	6.1E+02	Y08506	0.049087		(142)	
Outgroup	Chordata	<i>Melospiza melodia</i>	1.5E-03			Y08513				
Spp1	Chordata	<i>Peroteryx macrotis</i>	8.5E-01	9.7E-11	5.0E+00	AY395850	0.102965	2.041556	(142)	
Spp2	Chordata	<i>Saccoteryx bilineata</i>	8.3E-03	9.4E-11	7.8E+00	AF263213	0.06608		(142)	
Outgroup	Chordata	<i>Molossus molossus</i>	1.4E-02			AY495455				
Spp1	Chordata	<i>Macrodermis gigas</i>	6.1E-04	5.0E-11	1.5E+02	AY395854	0.211996	6.829232	(142)	
Spp2	Chordata	<i>Tadarida brasiliensis</i>	7.4E-03	8.1E-11	1.7E+01	AF203774	0.109401		(142)	
Outgroup	Chordata	<i>Pteropus giganteus</i>	2.4E-04			AY012138				
Spp1	Chordata	<i>Mormoops megalophylla</i>	2.7E-03	8.7E-11	1.7E+01	AF263220	0.130775	1.399848	(142)	
Spp2	Chordata	<i>Pteronotus quadridens</i>	2.6E-02	7.6E-11	4.9E+00	AF407179	0.02314		(142)	
Outgroup	Chordata	<i>Molossus molossus</i>	1.4E-02			AY495455				
Spp1	Chordata	<i>Noctilio albigentris</i>	1.7E-03	5.3E-11	2.7E+01	AF263223	0.011943	0.00063	(142)	
Spp2	Chordata	<i>Noctilio leporinus</i>	2.9E-03	5.0E-11	6.1E+01	AF263224	0.012711		(142)	
Outgroup	Chordata	<i>Carollia perspicillata</i>	4.1E-02			AY395836				
Spp1	Chordata	<i>Ariteus jamaicensis</i>	9.6E-03	6.5E-11	4.5E+01	AF263225	0.072022	9.83596	(142)	
Spp2	Chordata	<i>Desmodus rotundus</i>	2.7E-02	6.5E-11	2.9E+01	AF263228	0.146358		(142)	
Outgroup	Chordata	<i>Pteronotus parnellii</i>	4.5E-03			AF263221				
Spp1	Chordata	<i>Chalinolobus gouldii</i>	6.0E-03	5.6E-11	1.8E+01	AY495461	0.204159	9.742724	(142)	
Spp2	Chordata	<i>Miniopterus schreibersi</i>	4.8E-02	1.0E-10	1.1E+01	AY395865	0.094257		(142)	
Outgroup	Chordata	<i>Hipposideros galertius</i>	9.5E-03			U93054				
Spp1	Chordata	<i>Erinaceus europaeus</i>	2.5E-03	2.7E-11	7.5E+02	X88898	0.138737	0.885952	(142)	
Spp2	Chordata	<i>Hylomys suillus</i>	5.8E-03	6.5E-11	5.8E+01	AY121770	0.162666		(142)	
Outgroup	Chordata	<i>Scalopus aquaticus</i>	7.9E-03			AF069539				

Table SOM1.7 Histone 3 Alpha

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _{av}	BL _{as}	L.R.T.	MR refs	Conv. Fact Refs
Spp1	<i>Laetodectus tructans</i>	3.8E-03	1.0E-10	1.1E-01	AY231004	0.000431	4.309932	0.241084	(3)	
Spp2	<i>Tidarren sisypheoides</i>	6.9E-04	8.3E-11	1.1E-01	AY231020	0.012917	0.688093		(4)	
Outgroup	<i>Frontinella pyramitella</i>	2.9E-03			AY078703					
Spp1	<i>Homonarus americanus</i>	3.5E-03	1.5E-10	4.9E+01	DQ079675	0	0.000005	2.286082	(103*, 104*)	(2)
Spp2	<i>Nephrops norvegicus</i>	2.3E-04	1.2E-11	5.6E+01	DQ079692	0.000014	0.143569		(31*, 105*)	
Outgroup	<i>Callinassa suberranea</i>				DQ079663					
Spp1	<i>Balanus glandula</i>	2.6E-03	8.3E-11	3.0E-02	AY520693	0.000171	1.705523	0.159714	(111*)	(2)
Spp2	<i>Megabalanus tintinnabulum</i>	1.5E-03	7.6E-11	2.9E+00	AY520699	0	0.000006		(112*)	
Outgroup	<i>Catomerus polymerus</i>				AY520716					
Spp1	<i>Parborlasia corrugatus</i>	6.6E-05	6.5E-12	4.0E+00	AJ436983	0.0003	3.1038	1.44406	(57*)	(2)
Spp2	<i>Nectonemertes mirabilis</i>	3.8E-05	1.5E-11	6.0E-01	AJ436973	0.0018	17.9404		(52)	
Outgroup	<i>Owenia fusiformis</i>				AY428832					

Table SOM1.8 Cytochrome B

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BI ₄₈	BI ₄₈	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Myzus persicae	8.2E-03	no data	no data	A1356586	0.0082	1.4131	0.006174	(12)	
Spp2	Acyrtosiphon pisum	1.6E-03	2.3E-10	1.8E-03	A1356394	0.014	0.000014		(13)	
Outgroup	Philaenus spumarius				A1630340					
Spp1	Aphis pseudonictana	2.7E-03	1.2E-10	3.3E-01	U17983	0.0307	84.2854	0.026154	(143)	
Spp2	Romalca guttata	7.0E-04	5.5E-11	2.9E+00	AF138855	0.0271	74.4999		(144)	
Outgroup	Acheta domestica	9.0E-04			AF248682					
Spp1	Chordeiles minor	6.1E-03	no data	7.2E+01	AF168107	0.0225	1.196	2.209344	(145)	
Spp2	Podargus papuensis	3.4E-03	no data	3.1E+02	X95772	0.052	0.8418		(145)	
Outgroup	Rynchops niger				DQ385230				(145)	
Spp1	Haematopus ostralegus	6.5E-03	no data	4.5E+02	AF440782	0.025	0.1853	5.737854	(145)	
Spp2	Ciconantis variolosus	5.1E-03	no data	2.4E+01	AF204976	0.003	1.1967		(145)	
Outgroup	Struthio camelus				L77906					
Spp1	Limosa lapponica	6.3E-03	no data	2.4E+02	AF285814	0.0038	0.2655	5.381558	(145)	
Spp2	Arenaria interpres	1.0E-02	no data	9.0E+01	NC_003712	0.0084	1.2116		(145)	
Outgroup	Larus michahellis				AJ508144					
Spp1	Colinus striatus	4.6E-03	no data	5.1E+01	A1274032	0.0071	0.2617	0.16738	(145)	
Spp2	Colinus colinus	5.0E-03	no data	3.5E+01	U89174	0.0093	0.2782		(145)	
Outgroup	Urocolinus macrourus				A1274033					
Spp1	Sturnopelia decaocto	5.6E-03	no data	1.7E+02	AF353398	0.0078	1.5173	3.207564	(145)	
Spp2	Leptotila verreauxi	6.8E-03	no data	1.3E+02	A143662	0.0025	0.2895		(145)	
Outgroup	Urocolinus macrourus				A1274033					
Spp1	Spermestes cucullatus	7.3E-03	no data	1.1E+01	L76611	0.0102	1.013	4.37718	(145)	
Spp2	Poephila guttata	1.5E-02	no data	1.1E+01	DQ453515	0.0043	0.000016		(145)	
Outgroup	Mniotilta varia				AF383006					
Spp1	Psaltriparus minimus	2.2E-02	no data	5.5E+00	AF074597	0.0216	1.7076	0.732508	(145)	
Spp2	Icterus galbula	1.3E-02	no data	3.8E+01	A1607641	0.0147	1.4497		(145)	
Outgroup	Larus michahellis				AJ508144					
Spp1	Philidonyris melanops	1.6E-02	no data	1.9E+01	A1488375	0.005	0.993	2.281914	(145)	
Spp2	Philidonyris novaehollandiae	1.8E-02	no data	1.7E+01	A1488377	0.0157	1.1622		(145)	
Outgroup	Philemon corniculatus				A1488372					
Spp1	Melithreptus lunatus	1.7E-02	no data	1.4E+01	AF197853	0.0065	1.3752	0.518348	(145)	
Spp2	Asanorhynchus tenuirostris	2.6E-02	no data	9.7E+00	A1488332	0.0173	0.5211		(145)	
Outgroup	Mniotilta varia				AF383006					
Spp1	Parus major	1.9E-02	no data	1.6E+01	A1495412	0.0052	1.0245	0.33488	(145)	
Spp2	Parus atricapillus	2.4E-02	no data	1.0E+01	AF347937	0.0061	1.2912		(145)	
Outgroup	Baeolophus bicolor				AF347957					
Spp1	Turdus merula	1.1E-02	no data	6.7E+01	A1286396	0.0324	1.1971	7.407754	(145)	
Spp2	Eriothacus rubecula	1.8E-02	no data	1.6E+01	A1491533	0.0158	0.6494		(145)	
Outgroup	Mniotilta varia				AF383006					
Spp1	Empidonax virescens	1.5E-02	no data	1.2E+01	A143204	0.0023	0.1047	1.172124	(145)	
Spp2	Contopus virens	1.8E-02	no data	1.4E+01	AF447610	0.006	0.32		(145)	
Outgroup	Mniotilta varia				AF383006					
Spp1	Corvus corone	5.7E-03	no data	5.2E+02	U86032	0.0134	0.7029	0.95536	(145)	
Spp2	Corvus montedula	9.1E-03	no data	1.9E+02	U86033	0.0092	0.2502		(145)	
Outgroup	Coracina fimbriata				AF197839					

Table SOM1.8 Cytochrome B

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BI ₄₈ ⁿ	BI ₄₈	L.R.T.	MR refs	Conv. Fact Refs
Chordata	<i>Pica pica</i>	7.5E-03	no data	1.6E+02	AY701185	0.0194	0.6056	0.33305	(145)	
Chordata	<i>Cyanocitta cristata</i>	1.0E-02	no data	8.1E+01	X74258	0.0117	0.7921		(145)	
Chordata	<i>Lanius borealis</i>				AB159157					
Chordata	<i>Eremophila alpestris</i>	1.2E-02	no data	2.6E+01	AF290137	0.0036	0.8899	0.151642	(145)	
Chordata	<i>Alauda arvensis</i>	2.3E-02	no data	3.2E+01	AF074595	0.0083	0.3061		(145)	
Chordata	<i>Mniotilta varia</i>				AF383006					
Chordata	<i>Cardinalis cardinalis</i>	1.2E-02	no data	4.1E+01	AF447363	0.009	0.7345	0.993718	(145)	
Chordata	<i>Hirundo sanguinea</i>	2.2E-02	no data	1.4E+01	AF015754	0.0096	1.63		(145)	
Chordata	<i>Mirafra sabota</i>				AY165172					
Chordata	<i>Sciurus hudsonicus</i>	1.3E-02	no data	1.9E+01	AY819739	0.003575	1.3889	0.491334	(145)	
Chordata	<i>Sciurus noveboracensis</i>	1.5E-02	no data	1.9E+01	AF383001	0.003558	0.3706		(145)	
Chordata	<i>Tangara xanthogastra</i>				AY383162					
Chordata	<i>Zonotrichia leucophrys</i>	1.3E-02	no data	2.6E+01	AF05746	0.000018	0.179843	0.01696	(145)	
Chordata	<i>Zonotrichia albicollis</i>	1.4E-02	no data	2.0E+01	AF284076	0	0.000006		(145)	
Chordata	<i>Tangara xanthogastra</i>				AY383162					
Chordata	<i>Dendroica pinus</i>	1.5E-02	no data	1.2E+01	AF383027	0.0031	0.1819	1.147216	(145)	
Chordata	<i>Dendroica coronata</i>	1.6E-02	no data	1.2E+01	AY030120	0.0052	0.3055		(145)	
Chordata	<i>Tangara xanthogastra</i>				AY383162					
Chordata	<i>Melospiza melodia</i>	1.3E-02	no data	1.9E+01	AY156425	0.002179	0.2245	0.362498	(145)	
Chordata	<i>Melospiza georgiana</i>	1.4E-02	no data	1.5E+01	AY156182	0.002189	0.0954		(145)	
Chordata	<i>Tangara xanthogastra</i>				AY383162					
Chordata	<i>Spizella passerina</i>	1.6E-02	no data	1.2E+01	AF255710	0.0153	0.22	0.102596	(145)	
Chordata	<i>Spizella arborea</i>	2.3E-02	no data	1.9E+01	U26190	0.012	0.423		(145)	
Chordata	<i>Tangara xanthogastra</i>				AY383162					
Chordata	<i>Nyctea scandiaca</i>	2.1E-03	no data	2.0E+03	AJ004011	0.0282	0.7285	2.825888	(145)	
Chordata	<i>Glaucoedon gnoma</i>	8.2E-03	no data	5.4E+01	AJ003994	0.0368	1.6653		(145)	
Chordata	<i>Phodilus badius</i>				AJ004042					
Chordata	<i>Antechinus stuartii</i>	6.7E-03	6.7E-11	2.8E+01	AF038285	0.014	0.000014	0.244296	(142)	
Chordata	<i>Dasyurus viverrinus</i>	2.3E-03	2.9E-11	9.8E+02	U07582	0.0088	4.4495		(142)	
Chordata	<i>Myrmecobius fasciatus</i>				U82329					
Chordata	<i>Planigale gifesi</i>	4.3E-03	8.8E-11	9.1E+00	U07589	0.0093	0.8046	1.359224	(142)	
Chordata	<i>Planigale tenuirostris</i>	8.9E-03	9.0E-11	7.1E+00	U07591	0.0078	0.2892		(142)	
Chordata	<i>Ningaut yvonnae</i>				U07587					
Chordata	<i>Sminthopsis crassicaudata</i>	8.6E-03	7.7E-11	1.6E+01	M99463	0.0208	0.6283	1.552748	(142)	
Chordata	<i>Sminthopsis murina</i>	6.3E-03	7.3E-11	1.9E+01	U07594	0.0112	0.557		(142)	
Chordata	<i>Ningaut yvonnae</i>				U07587					
Chordata	<i>Didelphis virginiana</i>	1.9E-03	2.2E-11	2.5E+03	Z29573	0.0311	75.9164	0.422696	(142)	
Chordata	<i>Monodelphis domestica</i>	3.2E-03	4.0E-11	1.0E+02	AJ508398	0.0273	0.3786		(142)	
Chordata	<i>Dasyurus novemcinctus</i>				Y11832					
Chordata	<i>Ornithorhynchus anatinus</i>	1.6E-03	2.8E-11	6.9E+02	X83427	0.0242	1.3455	0.194244	(142)	
Chordata	<i>Zaglossus bruijni</i>	6.6E-04	1.1E-11	1.0E+04	AJ639865	0.0241	0.0001		(142)	
Chordata	<i>Trichosurus vulpecula</i>				AF152857					
Chordata	<i>Pseudocheirus peregrinus</i>	2.6E-03	3.3E-11	9.2E+02	AJ639870	0.0258	41.4302	0.12844	(142)	
Chordata	<i>Tarsipes rostratus</i>	1.6E-02	9.6E-11	1.0E+01	AJ639868	0.023	1.8144		(142)	

Table SOM1.8 Cytochrome B

Outgroup	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BI ₄₈	L.R.T.	MR refs	Conv. Fact Refs
	Chordata	<i>Isoodon macrourus</i>				AF588864				
Spp1	Chordata	<i>Lepus americanus</i>	no data	3.4E-11	1.6E+03	AY292733	0.0077	0.1313	(142)	
Spp2	Chordata	<i>Lepus townsendii</i>	no data	2.7E-11	2.4E+03	AY292729	0.0039	0.3555	(142)	
Outgroup	Chordata	<i>Sylvilagus audubonii</i>	3.6E-03			AY292722				
Spp1	Chordata	<i>Oryctolagus cuniculus</i>	no data	3.0E-11	2.0E+03	NC 001913	0.0359	0.8595	0.036412	(142)
Spp2	Chordata	<i>Ochotona princeps</i>	no data	6.8E-11	1.1E+02	AY292716	0.035	2.3269	(142)	
Outgroup	Chordata	<i>Callithrix jacchus</i>	4.5E-03			AY434079				
Spp1	Chordata	<i>Galagoides demidoff</i>	5.2E-03	no data	6.4E+01	AF271411	0.0338	0.7248	3.060716	(142)
Spp2	Chordata	<i>Otolemur garnettii</i>	3.0E-03	no data	1.3E+03	AF271412	0.0189	1.1232	(142)	
Outgroup	Chordata	<i>Propithecus verreauxi</i>	1.1E-03			AF285528				
Spp1	Chordata	<i>Loris tardigradus</i>	2.5E-03	3.8E-11	2.8E+02	U53381	0.0405	0.9255	0.033222	(142)
Spp2	Chordata	<i>Nycticebus coucang</i>	1.3E-03	2.7E-11	1.2E+03	U53580	0.0403	0.842	(142)	
Outgroup	Chordata	<i>Propithecus verreauxi</i>				AF285528				
Spp1	Chordata	<i>Bathyergus suillus</i>	2.7E-03	3.1E-11	6.2E+02	AY425913	0.0225	0.9528	0.020666	(142)
Spp2	Chordata	<i>Cryptomys hottentotus</i>	5.0E-03	4.9E-11	7.5E+01	AY425880	0.0245	0.6099	(142)	
Outgroup	Chordata	<i>Dasyprocta leporina</i>				AF437791				
Spp1	Chordata	<i>Ctenomys australis</i>	1.9E-03	4.2E-11	3.4E+02	AF370697	0.0034	0.1476	0.283664	(142)
Spp2	Chordata	<i>Ctenomys maulinus</i>	4.9E-03	4.3E-11	2.2E+02	AF370703	0.0064	0.0843	(142)	
Outgroup	Chordata	<i>Octodontomys gliroides</i>				AF370706				
Spp1	Chordata	<i>Spalacopus cyanus</i>	4.4E-03	5.0E-11	1.4E+02	AF007061	0.0225	0.6145	0.372428	(142)
Spp2	Chordata	<i>Tympanoctomys barrerae</i>	6.0E-03	5.5E-11	7.1E+01	AF007060	0.0158	0.8222	(142)	
Outgroup	Chordata	<i>Dasyprocta leporina</i>				AF437791				
Spp1	Chordata	<i>Clethrionomys californicus</i>	1.9E-02	8.8E-11	1.8E+01	AY309423	0.0069	0.2915	0.013698	(142)
Spp2	Chordata	<i>Clethrionomys gapperi</i>	1.2E-02	8.6E-11	2.2E+01	AF272637	0.0068	0.213	(142)	
Outgroup	Chordata	<i>Chionomys nivalis</i>				AY513848				
Spp1	Chordata	<i>Cricetulus migratorius</i>	8.0E-03	8.1E-11	3.1E+01	AY288508	0.0455	1.9695	0.311726	(142)
Spp2	Chordata	<i>Neotoma fuscipes</i>	4.4E-03	4.6E-11	1.9E+02	AF376475	0.0359	20.6236	(142)	
Outgroup	Chordata	<i>Aplodontia rufa</i>				AJ389528				
Spp1	Chordata	<i>Microtus arvalis</i>	1.7E-02	8.3E-11	2.0E+01	AY220765	0.0141	1.2946	2.282536	(142)
Spp2	Chordata	<i>Microtus californicus</i>	8.7E-03	7.8E-11	4.4E+01	AF163891	0.0093	0.505	(142)	
Outgroup	Chordata	<i>Myopus schisticolor</i>				AF119263				
Spp1	Chordata	<i>Peromyscus boylii</i>	1.3E-02	no data	2.3E+01	AF131925	0.0066	0.302	2.517268	(142)
Spp2	Chordata	<i>Peromyscus californicus</i>	6.2E-03	6.4E-11	4.8E+01	AF155393	0.0145	0.6021	(142)	
Outgroup	Chordata	<i>Peromyscus intermedius</i>				AF119260				
Spp1	Chordata	<i>Scotinomys teguina</i>	1.5E-02	9.9E-11	1.2E+01	AF108705	0.006	0.5844	2.135234	(142)
Spp2	Chordata	<i>Scotinomys xerampelinus</i>	1.2E-02	8.4E-11	1.5E+01	AF108706	0.0029	0.000003	(142)	
Outgroup	Chordata	<i>Reithrodontomys megalotis</i>				AF108707				
Spp1	Chordata	<i>Sigmodon hispidus</i>	9.2E-03	5.5E-11	1.4E+02	AF425225	0.0017	0.0742	2.960354	(142)
Spp2	Chordata	<i>Sigmodon ochrogathus</i>	7.5E-03	no data	1.2E+02	AF155422	0.0093	0.6072	(142)	
Outgroup	Chordata	<i>Peromyscus leucopus</i>				AF131926				
Spp1	Chordata	<i>Jaculus jaculus</i>	6.9E-03	6.2E-11	7.5E+01	AJ416890	0.0516	0.7182	6.497046	(142)
Spp2	Chordata	<i>Pedetes capensis</i>	1.9E-03	2.3E-11	2.3E+03	AJ389527	0.0855	23.9566	(142)	
Outgroup	Chordata	<i>Hetercephalus glaber</i>				AF155870				
Spp1	Chordata	<i>Micromys minutus</i>	1.6E-02	1.1E-10	7.4E+00	AF159399	0.0131	1.0186	3.115036	(142)

Table SOM1.8 Cytochrome B

Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BI _{48h}	BI _{48s}	L.R.T.	MR refs	Conv. Fact Refs
Spp2	<i>Onomys irroratus</i>	4.7E-03	5.8E-11	1.0E+02	AJ224677	0.0316	1.2027		(142)	
Outgroup	Chordata				AF172833					
Spp1	<i>Cricetomys gambianus</i>	3.4E-03	2.4E-11	1.9E+03	AF160614	0.0424	8.8357	1.46519	(142)	
Spp2	<i>Mystromys albicaudatus</i>	7.6E-03	4.2E-11	9.4E+01	AF160606	0.0351	0.9283		(142)	
Outgroup	Chordata				AJ225031					
Spp1	<i>Glaucocys volans</i>	5.9E-03	7.2E-11	6.4E+01	AJ389531	0.0296	16.5689	1.394834	(142)	
Spp2	<i>Marmota monax</i>	1.4E-03	2.5E-11	2.7E+03	AF143934	0.0189	27.3863		(142)	
Outgroup	Chordata				AJ389527					
Spp1	<i>Spermophilus beedingi</i>	2.3E-03	3.8E-11	3.0E+02	AF157881	0.0109	0.0001	0.02774	(142)	
Spp2	<i>Spermophilus undulatus</i>	5.5E-03	3.7E-11	6.8E+02	AF157912	0.0103	0.4604		(142)	
Outgroup	Chordata				U10183					
Spp1	<i>Tamias amoenus</i>	9.4E-03	6.4E-11	5.7E+01	AF147632	0.0037	0.000031	1.912606	(142)	
Spp2	<i>Tamias striatus</i>	5.8E-03	6.3E-11	8.7E+01	AY292715	0.000038	0.381387		(142)	
Outgroup	Chordata				AY452689					
Spp1	<i>Mustela erminea</i>	1.2E-02	7.2E-11	7.5E+01	AF457442	0.0129	0.000013	5.622878	(142)	
Spp2	<i>Taxidea taxus</i>	1.7E-03	1.9E-11	9.0E+03	AF057132	0.0208	1.281568		(142)	
Outgroup	Chordata				X94928					
Spp1	<i>Panthera leo</i>	9.7E-04	1.1E-11	9.8E+04	X82300	0.0287	1.2632	0.65568	(142)	
Spp2	<i>Herpestes javanicus</i>	3.7E-03	4.3E-11	6.1E+02	X94926	0.0217	1.0897		(142)	
Outgroup	Chordata				X94922					
Spp1	<i>Hyaena hyaena</i>	9.3E-04	no data	3.4E+04	AF511063	0.0119	0.4577	1.6019	(142)	
Spp2	<i>Proteles cristatus</i>	1.5E-03	1.8E-11	8.1E+03	AY048792	0.02	0.9787		(142)	
Outgroup	Chordata				AY170111					
Spp1	<i>Nandinia binotata</i>	1.1E-03	2.2E-11	4.3E+03	AY170110	0.0113	1.49	9.076576	(142)	
Spp2	<i>Paradoxurus hermaphroditus</i>	2.4E-03	2.3E-11	3.2E+03	AB075975	0.043	1.1478		(142)	
Outgroup	Chordata				X94923					
Spp1	<i>Pteropus scapulatus</i>	2.1E-03	4.0E-11	3.6E+02	AF321050	0.0206	0.9545	0.192698	(142)	
Spp2	<i>Rousettus amplexicaudatus</i>	7.5E-03	5.5E-11	9.2E+01	AB046328	0.0177	0.6406		(142)	
Outgroup	Chordata				AY572341					
Spp1	<i>Noctilio albigentris</i>	1.7E-03	5.3E-11	2.7E+01	AF330806	0.000017	0.1743	0.90902	(142)	
Spp2	<i>Noctilio leporinus</i>	2.9E-03	5.0E-11	6.1E+01	AF330798	0.0012	0.000001		(142)	
Outgroup	Chordata				AF511977					
Spp1	<i>Cypripis parva</i>	no data	1.1E-10	6.2E+00	AF395484	0.0146	1.1853	0.462808	(142)	
Spp2	<i>Soeex cinereus</i>	no data	1.4E-10	3.5E+00	AY014950	0.0098	1.5049		(142)	
Outgroup	Chordata				AB076811					
Spp1	<i>Neotrichilus gibbsii</i>	2.2E-02	1.1E-10	1.2E+01	AB076826	0.0192	1.2208	1.282258	(142)	
Spp2	<i>Scalopus aquaticus</i>	7.9E-03	6.2E-11	4.8E+01	AB076809	0.0106	32.2953		(142)	
Outgroup	Chordata				NC 004027					

Table SOMI.9 NADH dehydrogenase 5

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL ₄₅	BL ₄₅	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Chordata	Didelphis virginiana	1.9E-03	2.2E-11	2.5E+03	ZZ9573	0.0485	0.6401	0.062994	(142)	
Spp2	Chordata	Monodelphis domestica	3.2E-03	4.0E-11	1.0E+02	AJ508398	0.0462	15.0178		(142)	
Outgroup	Chordata	Dasypus novemcinctus				Y11832					
Spp1	Chordata	Didelphis virginiana	1.9E-03	2.2E-11	2.5E+03	X83427	0.0406	1.3609	0.170762	(142)	
Spp2	Chordata	Monodelphis domestica	3.2E-03	4.0E-11	1.0E+02	AJ659865	0.0369	0.6957		(142)	
Outgroup	Chordata	Dasypus novemcinctus				AF152852					
Spp1	Chordata	Pseudocheirus peregrinus	2.6E-03	3.3E-11	9.2E+02	AJ639870	0.0496	32.4943	2.019252	(142)	
Spp2	Chordata	Tarsipes rostratus	1.6E-02	9.6E-11	1.0E+01	AJ659868	0.0646	8.0016		(142)	
Outgroup	Chordata	Isoodon macrourus				AF358864					
Spp1	Chordata	Oryzotylagus cuniculus	no data	3.0E-11	2.0E+03	AJ001588	0.0465	1.7414	9.784824	(142)	
Spp2	Chordata	Ochrotoma princeps	no data	6.8E-11	1.1E+02	AJ557415	0.0875	3.1853		(142)	
Outgroup	Chordata	Colobus guereza				AY863427					
Spp1	Chordata	Panthera leo	9.7E-04	1.1E-11	9.8E+04	AF385613	0.0328	0.8458	3.03357	(142)	
Spp2	Chordata	Herpestes javanicus	3.7E-03	4.3E-11	6.1E+02	AY873843	0.0468	1.2484		(142)	
Outgroup	Chordata	Gulo gulo				AY377382					
Spp1	Chordata	Pteropus scapulatus	2.1E-03	4.0E-11	3.6E+02	AF321050	0.0355	1.2753	0.55361	(142)	
Spp2	Chordata	Rousettus amplexicaudatus	7.5E-03	5.5E-11	9.2E+01	AB075978	0.0332	0.4527		(142)	
Outgroup	Chordata	Artibeus jamaicensis				AF061340					

Table SOM1.10 NADH dehydrogenase 2

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _{4N}	BL _{4S}	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Chordata	<i>Colius striatus</i>	4.6E-03	no data	5.1E+01	AY274058	0.0106	0.4129	2.846614	(145)	
Spp2	Chordata	<i>Colius colius</i>	5.0E-03	no data	3.5E+01	AY625194	0.0265	0.4892		(145)	
Outgroup	Chordata	<i>Urocolius macrourus</i>				AY274059					
Spp1	Chordata	<i>Coturnix coturnix</i>	9.2E-03	no data	9.0E+01	X57246	0.0282	65.654	1.340686	(145)	
Spp2	Chordata	<i>Dendragapus obscurus</i>	4.4E-03	no data	1.1E+03	AF394611	0.0428	1.5991		(145)	
Outgroup	Chordata	<i>Urocolius macrourus</i>				AY274059					
Spp1	Chordata	<i>Spermestes cucullatus</i>	7.3E-03	no data	1.1E+01	AF407026	0.0221	0.8616		(145)	
Spp2	Chordata	<i>Poephila guttata</i>	1.5E-02	no data	1.1E+01	DQ453515	0.0191	0.4601	0.55984	(145)	
Outgroup	Chordata	<i>Mniotilta varia</i>				AY650184					
Spp1	Chordata	<i>Psaitiraps minimus</i>	2.2E-02	no data	5.5E+00	AY847060	0.0406	6.5664	1.129796	(145)	
Spp2	Chordata	<i>Icterus galbula</i>	1.3E-02	no data	3.8E+01	AF999328	0.0568	11.1618		(145)	
Outgroup	Chordata	<i>Urocolius macrourus</i>				AY274059					
Spp1	Chordata	<i>Phylidomyris melanops</i>	1.6E-02	no data	1.9E+01	AY488407	0.0571	1.2496	4.34603	(145)	
Spp2	Chordata	<i>Phylidomyris novaezelandiae</i>	1.8E-02	no data	1.7E+01	AY488303	0.0375	0.6152		(145)	
Outgroup	Chordata	<i>Philemon comiculatus</i>				AY488299					
Spp1	Chordata	<i>Empidonax virens</i>	1.5E-02	no data	1.2E+01	AY143231	0.0176	0.2573	1.554054	(145)	
Spp2	Chordata	<i>Contopus virens</i>	1.8E-02	no data	1.4E+01	AF447637	0.0084	0.1763		(145)	
Outgroup	Chordata	<i>Mniotilta varia</i>				AY650184					
Spp1	Chordata	<i>Eremophila alpestris</i>	1.2E-02	no data	2.6E+01	AF407049	0.0201	0.4714	0.5397	(145)	
Spp2	Chordata	<i>Alauda arvensis</i>	2.3E-02	no data	3.2E+01	AY847059	0.0126	0.5235		(145)	
Outgroup	Chordata	<i>Mniotilta varia</i>				AY650184					
Spp1	Chordata	<i>Seiurus auropellilus</i>	1.3E-02	no data	1.9E+01	AY650211	0.0103	0.7719	2.357868	(145)	
Spp2	Chordata	<i>Seiurus noveboracensis</i>	1.5E-02	no data	1.9E+01	AY650209	0.0031	0.4826		(145)	
Outgroup	Chordata	<i>Cardinalis cardinalis</i>				AF447265					
Spp1	Chordata	<i>Dendroica pinus</i>	1.5E-02	no data	1.2E+01	AY650213	0.0014	0.0902	4.355652	(145)	
Spp2	Chordata	<i>Dendroica coronata</i>	1.6E-02	no data	1.2E+01	AY650223	0.0087	0.2478		(145)	
Outgroup	Chordata	<i>Cardinalis cardinalis</i>				AF447265					
Spp1	Chordata	<i>Melospiza melodia</i>	1.3E-02	no data	1.9E+01	AF290122	0.0033	0.0247	0.334456	(145)	
Spp2	Chordata	<i>Melospiza georgiana</i>	1.4E-02	no data	1.5E+01	AF061652	0.00002	0.1975		(145)	
Outgroup	Chordata	<i>Cardinalis cardinalis</i>				AF447265					
Spp1	Chordata	<i>Nectarinia venusta</i>	2.0E-02	no data	7.1E+00	AY136608	0.0418	17.4148	0.615376	(145)	
Spp2	Chordata	<i>Amadina erythrocephala</i>	9.5E-03	no data	2.2E+01	AY323387	0.0656	30.5887		(145)	
Outgroup	Chordata	<i>Mniotilta varia</i>				AY650184					

Table SOM1.11 von Willebrand Factor

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL ₄₈	BL ₄₅	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Chordata	<i>Didelphis virginiana</i>	1.9E-03	2.2E-11	2.5E+03	AF226848	0.0426	0.0889	0.93107	(142)	
Spp2	Chordata	<i>Monodelphis domestica</i>	3.2E-03	4.0E-11	1.0E+02	AY243415	0.0305	0.0508		(142)	
Outgroup	Chordata	<i>Dasylops novemcinctus</i>				AJ278158					
Spp1	Chordata	<i>Dasylops novemcinctus</i>	1.4E-03	1.9E-11	3.5E+03	AJ278158	0.0203	0.4445	7.63702	(142)	
Spp2	Chordata	<i>Prodonnes maximus</i>	3.7E-04	9.4E-12	4.5E+04	AJ27363	0.0096	0.1815		(142)	
Outgroup	Chordata	<i>Cyclopes didactylus</i>				AJ278156					
Spp1	Chordata	<i>Myrmecophaga tridactyla</i>	4.8E-04	9.6E-12	3.1E+04	AJ278157	0.0116	0.1687	0.364034	(142)	
Spp2	Chordata	<i>Tamandua tetradactyla</i>	1.4E-03	1.8E-11	3.5E+03	AJ278161	0.0092	0.1272		(142)	
Outgroup	Chordata	<i>Euphractus sexcinctus</i>				AJ427364					
Spp1	Chordata	<i>Linnagale nervalis</i>	4.0E-03	no data	7.8E+01	AJ891096	0.0517	0.4362	13.888828	(142)	
Spp2	Chordata	<i>Tenrec ecaudatus</i>	1.1E-03	2.6E-11	6.5E+02	AF390536	0.019	0.1808		(142)	
Outgroup	Chordata	<i>Procavia capensis</i>				U31619					
Spp1	Chordata	<i>Macrosclides proboscideus</i>	7.5E-03	6.6E-11	3.9E+01	AY310893	0.0272	0.1067	6.467962	(142)	
Spp2	Chordata	<i>Petrodonnus tetradactylus</i>	4.9E-03	4.8E-11	2.1E+02	AY310890	0.0218	0.0362		(142)	
Outgroup	Chordata	<i>Elephantulus rozeti</i>				AY310888					
Spp1	Chordata	<i>Oryzologus cucullatus</i>	no data	3.0E-11	2.0E+03	U31618	0.0432	0.3066	0.042854	(142)	
Spp2	Chordata	<i>Ochotona princeps</i>	no data	6.8E-11	1.1E+02	AJ224672	0.0302	0.5129		(142)	
Outgroup	Chordata	<i>Callithrix jacchus</i>				AJ410299					
Spp1	Chordata	<i>Bathyergus suillus</i>	2.7E-03	3.1E-11	6.2E+02	AJ238384	0.01	0.0792	0.006238	(142)	
Spp2	Chordata	<i>Cryptomys hottentotus</i>	5.0E-03	4.9E-11	7.5E+01	AJ251132	0.0101	0.0841		(142)	
Outgroup	Chordata	<i>Dasyprocta leporina</i>				U31607					
Spp1	Chordata	<i>Cavia porcellus</i>	3.1E-03	4.1E-11	6.3E+02	AJ224663	0.0199	0.1618	1.97052	(142)	
Spp2	Chordata	<i>Hydrochaeris hydrochaeris</i>	1.4E-03	1.4E-11	2.6E+04	AJ251137	0.0162	0.0513		(142)	
Outgroup	Chordata	<i>Aplobontia rufa</i>				AJ224662					
Spp1	Chordata	<i>Cricetulus migratorius</i>	8.0E-03	8.1E-11	3.1E+01	AJ402710	0.033	0.1365	4.424854	(142)	
Spp2	Chordata	<i>Neomoma fuscipes</i>	4.4E-03	4.6E-11	1.9E+02	AJ402703	0.0163	0.0845		(142)	
Outgroup	Chordata	<i>Aplobontia rufa</i>				AJ224662					
Spp1	Chordata	<i>Jaeculus jaculus</i>	6.9E-03	6.2E-11	7.5E+01	AJ297765	0.0573	0.8436	3.24904	(142)	
Spp2	Chordata	<i>Pedetes capensis</i>	1.9E-03	2.3E-11	2.3E+03	AJ238389	0.06	0.299		(142)	
Outgroup	Chordata	<i>Heterocephalus glaber</i>				AJ251134					
Spp1	Chordata	<i>Cricetomys gambianus</i>	3.4E-03	2.4E-11	1.9E+03	AJ402696	0.03	0.1519	0.255692	(142)	
Spp2	Chordata	<i>Mystromys albicaudatus</i>	7.6E-03	4.2E-11	9.4E+01	AJ402695	0.0379	0.1398		(142)	
Outgroup	Chordata	<i>Myoxus glis</i>				AJ224668					
Spp1	Chordata	<i>Glaucomys volans</i>	5.9E-03	7.2E-11	6.4E+01	AJ224667	0.016	0.0692	3.259842	(142)	
Spp2	Chordata	<i>Marmota monax</i>	1.4E-03	2.5E-11	2.7E+03	AJ224671	0.0207	0.2569		(142)	
Outgroup	Chordata	<i>Pedetes capensis</i>				AJ238389					
Spp1	Chordata	<i>Macroderma gigas</i>	6.1E-04	5.0E-11	1.5E+02	AY834736	0.0343	0.3059	0.022088	(142)	
Spp2	Chordata	<i>Tadarida brasiliensis</i>	7.4E-03	8.1E-11	1.7E+01	U31623	0.0431	0.2416		(142)	
Outgroup	Chordata	<i>Pteropus hypomelanus</i>				AF203777					
Spp1	Chordata	<i>Arithus jamaicensis</i>	9.6E-03	6.5E-11	4.5E+01	AY834737	0.0223	0.2727	6.759468	(142)	
Spp2	Chordata	<i>Desmodus rotundus</i>	2.7E-02	6.5E-11	2.9E+01	AF447550	0.0133	0.0882		(142)	
Outgroup	Chordata	<i>Pteronotus parnellii</i>				AY245420					
Spp1	Chordata	<i>Erinaceus europaeus</i>	2.5E-03	2.7E-11	7.5E+02	U97536	0.0831	1.1114	8.34867	(142)	
Spp2	Chordata	<i>Hylomys suillus</i>	5.8E-03	6.5E-11	5.8E+01	AY121760	0.1627	3.2526		(142)	
Outgroup	Chordata	<i>Scalopus aquaticus</i>				AH076479					

Table SOM1.12 ATPase 7 alpha

	Phylum	Species Name	msBMR Watts/g	G Arbitrary units	BS grams	Accession	BL _{av}	BL _{qs}	L.R.T.	MR refs	Conv. Fact Refs
Spp1	Chordata	Myrmecophaga tridactyla	4.8E-04	9.6E-12	3.1E+04	AY011382	0.0041	0.0028	1.684716	(142)	
Spp2	Chordata	Tamandua tetradactyla	1.4E-03	1.8E-11	3.5E+03	AY011381	0.0039	0.0339		(142)	
Outgroup	Chordata	Euphraetus sexinctus				AY011379					
Spp1	Chordata	Macrodermus gigas	6.1E-04	5.0E-11	1.5E+02	AY834488	0.0343	0.3039	1.192228	(142)	
Spp2	Chordata	Tadarida brasiliensis	7.4E-03	8.1E-11	1.7E+01	AY059683	0.0431	0.2416		(142)	
Outgroup	Chordata	Pteropus giganteus				AY011420					
Spp1	Chordata	Ariteus jamaicensis	9.6E-03	6.5E-11	4.5E+01	AY011419	0.023	0.0985	5.445072	(142)	
Spp2	Chordata	Desmodus rotundus	2.7E-02	6.5E-11	2.9E+01	AY834494	0.0145	0.0193		(142)	
Outgroup	Chordata	Pteronotus parnellii				AY834501					

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