

Table S1. Wear stages, correlation coefficients (r), voxel sizes, and MorphoSource codes for the specimens included in the study

Specimen Number	Species	Wear	r ^{DNE}	r ^{OPCR}	r ^{RFI}	Voxel Size	MorphoSource Code (If Applicable)
EA 127	<i>Galeopterus variegatus</i>	Moderately Worn	0.719658361	0.986175115	0.975601065	0.0358851	M9544-13209
USNM 481103	<i>Ptilocercus lowii</i>	Slightly Worn	0.787302019	0.968	0.967390006	0.0211156	M6509-6388
USNM 481107	<i>Ptilocercus lowii</i>	Not Worn	0.678460477	0.927299703	0.944366461	0.020191	M6512-6391
USNM 481108	<i>Ptilocercus lowii</i>	Not Worn	0.639041894	0.981530343	0.939864979	0.0215241	M6519-6408
USNM 488052	<i>Ptilocercus lowii</i>	Slightly Worn	0.745636165	0.977382876	0.936786255	0.0204943	M6525-6415
USNM 488055	<i>Ptilocercus lowii</i>	Not Worn	0.705199468	0.965354331	0.935297022	0.0208989	M6528-6418
FMNH 46630	<i>Dendrogale murina</i>	Slightly Worn	0.710169808	0.904347826	0.974902589	0.0200655	N/A
FMNH 46629	<i>Dendrogale murina*</i>	Not worn	0.711888494	0.833333333	0.980983207	0.0109702	N/A
FMNH 49262	<i>Dendrogale melanura</i>	Moderately Worn	0.634518436	0.933060109	0.959411286	0.0185598	N/A
MCZ 36390	<i>Dendrogale melanura</i>	slightly worn	0.65564613	0.96042618	0.950920648	0.0158051	N/A
FMNH 108854	<i>Dendrogale melanura</i>	Highly worn	0.652612687	0.939233818	0.945749311	0.0208742	N/A
FMNH 61419	<i>Tupaia everetti</i>	Highly Worn	0.62733769	0.942513369	0.976589848	0.0331459	N/A
USNM 311305	<i>Tupaia glis</i>	Moderately Worn	0.550861847	0.957968476	0.962960001	0.0172208	M6502-6381
USNM 311311	<i>Tupaia glis</i>	Not Worn	0.619756712	0.944630872	0.940043331	0.0275976	M6702-6698
USNM 487950	<i>Tupaia glis</i>	Moderately Worn	0.699049611	0.983471074	0.942032344	0.0291413	M6522-6411
USNM 112662	<i>Tupaia glis</i>	Slightly Worn	0.670602146	1	0.914767806	0.0263906	M6559-6463
MPFIN 734 BABA	<i>Tupaia belangeri</i>	Not worn	0.544011243	0.898021309	0.988982422	0.0262609	M6514-6393
USNM 320655	<i>Tupaia belangeri</i>	Not Worn	0.601896792	0.998381877	0.985043815	0.0287971	M6680-6584
USNM 320666	<i>Tupaia belangeri</i>	Slightly Worn	0.627523405	0.968333333	0.969208354	0.0270084	M6705-6605
USNM 320680	<i>Tupaia belangeri</i>	Slightly Worn	0.527957616	0.977917981	0.945454652	0.0282842	M6707-6607
USNM 320689	<i>Tupaia belangeri</i>	Slightly Worn	0.56162461	0.954391892	0.943584656	0.0291716	M6505-6384
USNM 320690	<i>Tupaia belangeri</i>	Slightly Worn	0.543521251	0.925445705	0.939453903	0.0283358	M6709-6609
FMNH 62948	<i>Tupaia palawanensis</i>	Slightly Worn	0.493987139	0.869210698	0.955059618	0.0233518	N/A
FMNH 141464	<i>Tupaia minor</i>	Slightly Worn	0.600377424	0.998287671	0.953994785	0.0223038	N/A
FMNH 68793	<i>Tupaia tana</i>	Moderately Worn	0.700870904	0.907303371	0.971737032	0.0272784	N/A
FMNH 108831	<i>Tupaia montana</i>	Highly Worn	0.648820927	0.918719212	0.943413288	0.0223038	N/A
AMNH M 216241	<i>Otolemur crassicaudatus</i>	Slightly Worn	0.560808924	0.94	0.947969532	0.0386383	M10812-16240
AMNH M 216239	<i>Otolemur crassicaudatus*</i>	Moderately Worn	0.861895904	1	0.928520199	0.0167609	M10793-16222
AMNH M 88061	<i>Otolemur crassicaudatus</i> [†]	Slightly Worn	0.38252307	0.751861042	0.957013081	0.0208751	M6486-6365
MCZ 17593	<i>Euoticus elegantulus</i>	Moderately Worn	0.652504337	0.92038835	0.979356615	0.026906	M3104-2828
MCZ 46143	<i>Euoticus elegantulus</i>	Slightly Worn	0.769997121	0.987854251	0.906062953	0.026906	M3107-2830
MCZ 44918	<i>Hapalemur griseus</i>	Slightly Worn	0.520594363	0.942664418	0.91954772	0.038685	M2977-2709
MCZ 16354	<i>Eulemur fulvus</i>	Slightly Worn	0.623662407	0.888268156	0.965369319	0.047648	M2913-2648
MCZ 8044	<i>Eulemur fulvus</i>	Slightly Worn	0.621872533	0.971326165	0.947333912	0.045991	M3098-2822

*Indicates right tooth was used. All others were left.

[†]This specimen is identified as *Otolemur monteiri monteiri* in the AMNH database. However, further research is needed to determine the validity of separating *O. monteiri* from *O. crassicaudatus* per Grubb et al. (2003).

Table S2. Reconstructed correlation coefficients (r) and topographic values for euarchontans including Sundatheria

	Nodes										
	2	3	4	5	6	7	9	10	16	18	20
DNE ^{OES}	303.1324	259.6837	339.5843	245.3946	195.591	232.3732	354.9149	329.1127	349.7813	337.3889	340.2051
3D-OPCR ^{OES}	73.70718	69.57664	77.37958	69.80999	63.99069	65.72833	78.43099	73.76909	76.59543	80.7	84.27242
RFI ^{OES}	0.517612	0.492914	0.612757	0.473701	0.47856	0.477905	0.571303	0.637383	0.643329	0.611089	0.623594
DNE ^{EDJ}	464.0993	421.9889	562.9347	424.7567	357.8204	383.3422	524.1446	529.5803	585.4453	554.3123	522.3622
3D-OPCR ^{EDJ}	75.33326	71.74623	82.33644	70.21734	72.29702	69.03078	81.17761	74.66129	78.68146	84.8393	86.23056
RFI ^{EDJ}	0.506114	0.47474	0.599202	0.45411	0.45293	0.473532	0.554883	0.636171	0.634969	0.608396	0.596963
DNE ^r	0.658243	0.629571	0.61451	0.587004	0.612174	0.610846	0.682842	0.62929	0.606182	0.61601	0.652754
OPCR ^r	0.952359	0.940654	0.930954	0.938694	0.905693	0.932763	0.953656	0.968211	0.954984	0.942817	0.938053
RFI ^r	0.953616	0.945508	0.960371	0.938484	0.944482	0.950396	0.955958	0.943211	0.956252	0.964404	0.954591

Table S2. Continued

	Nodes										
	22	24	26	29	30	34	37	38	40	41	42
DNE ^{OES}	230.524	346.5811	236.2973	333.8012	375.5476	332.8825	382.8423	338.7483	317.2241	333.3483	342.6158
3D-OPCR ^{OES}	65.21275	77.83773	62.07092	83.55379	79.57183	76.66137	75.3172	73.55532	71.36323	77.83969	77.88342
RFI ^{OES}	0.48743	0.542309	0.490817	0.586348	0.567964	0.608189	0.681516	0.623544	0.653319	0.62685	0.603637
DNE ^{EDJ}	377.1108	506.2096	351.5229	514.9377	536.0664	554.1422	672.4433	604.334	457.6616	503.3938	530.1577
3D-OPCR ^{EDJ}	69.6881	78.92029	65.02103	90.57078	82.50877	81.21235	76.54378	80.06626	80.05742	82.79725	82.10377
RFI ^{EDJ}	0.463996	0.537488	0.464318	0.562515	0.538949	0.583303	0.66034	0.600998	0.646475	0.61055	0.588212
DNE ^r	0.643467	0.686914	0.688656	0.652722	0.706414	0.608475	0.573245	0.572324	0.696766	0.668239	0.655197
OPCR ^r	0.930911	0.964063	0.946384	0.923962	0.962204	0.945864	0.953925	0.915343	0.885725	0.919493	0.934701
RFI ^r	0.944424	0.961725	0.943281	0.957077	0.94661	0.956081	0.96114	0.95717	0.972723	0.962284	0.959537

Table S3. Reconstructed correlation coefficients (r) and topographic values for euarchontans including Primatomorpha

	Nodes										
	2	3	4	5	9	10	13	17	20	26	27
DNE ^{OES}	342.9699	272.9881	250.3838	234.0362	236.0293	238.1324	196.9673	353.3885	375.2932	341.9023	333.0531
3D-OPCR ^{OES}	77.39239	70.85867	70.29075	65.88858	65.74324	62.24774	64.12331	78.24276	79.54046	77.79543	77.80328
RFI ^{OES}	0.552693	0.498378	0.475750	0.478587	0.489691	0.491570	0.479125	0.575692	0.568695	0.605688	0.627698
DNE ^{EDJ}	507.7641	434.0309	429.2724	384.8474	382.0936	353.1838	359.0661	524.8016	536.1759	530.4648	503.5209
3D-OPCR ^{EDJ}	79.42679	72.70888	70.57833	69.15111	70.08643	65.15381	72.39660	81.39169	82.54444	82.20383	82.83865
RFI ^{EDJ}	0.540714	0.483363	0.457343	0.474610	0.467564	0.465507	0.453822	0.556246	0.539176	0.588848	0.610813
DNE ^r	0.679623	0.639178	0.590606	0.612047	0.647442	0.689981	0.613167	0.679759	0.7059	0.653756	0.667642
OPCR ^r	0.956603	0.945332	0.940448	0.933347	0.932846	0.947029	0.906176	0.950502	0.961678	0.933227	0.918883
RFI ^r	0.957296	0.948624	0.939652	0.950785	0.945713	0.943710	0.944803	0.954085	0.946298	0.958662	0.961921

Table S3. Continued

	Nodes										
	28	31	35	36	37	38	45	51	52	53	58
DNE ^{OES}	317.1257	340.1312	339.2655	337.2673	349.7355	382.8357	329.1035	338.6268	332.8369	333.7859	332.5513
3D-OPCR ^{OES}	71.35109	84.26332	77.34026	80.68501	76.58979	75.31639	73.76795	73.54033	76.65575	83.55191	76.54202
RFI ^{OES}	0.653601	0.623806	0.613673	0.611438	0.643460	0.681534	0.637409	0.623893	0.608319	0.586392	0.529695
DNE ^{EDJ}	457.7039	522.3939	563.0719	554.3646	585.4649	672.4461	529.5841	604.3862	554.1618	514.9442	490.7267
3D-OPCR ^{EDJ}	80.07121	86.24091	82.38115	84.85634	78.68787	76.54469	74.66257	80.08329	81.21873	90.57291	77.46189
RFI ^{EDJ}	0.646562	0.597029	0.599486	0.608504	0.635009	0.660345	0.636179	0.601106	0.583343	0.562528	0.525181
DNE ^r	0.696567	0.652605	0.613866	0.615764	0.606089	0.573232	0.629271	0.572078	0.608382	0.652691	0.679486
OPCR ^r	0.885521	0.937900	0.930295	0.942566	0.954889	0.953911	0.968192	0.915091	0.945770	0.923930	0.962703
RFI ^r	0.97260	0.95450	0.959979	0.964255	0.956195	0.961131	0.943199	0.957021	0.956024	0.957058	0.960507

Table S4. Reconstructed correlation coefficients (r) for Sundatheria and Primatomorpha showing the effect of removing the highly worn specimens from the ancestral state reconstruction analysis. Note that the differences are very minor.

Tree supporting Sundatheria:	Including Worn Teeth			Excluding Worn Teeth		
	DNE	3D-OPCR	RFI	DNE	3D-OPCR	RFI
Tupaïid ancestor	0.65519692	0.93470087	0.95953739	0.65558253	0.93657794	0.95709855
Scandentian ancestor	0.68284158	0.95365603	0.95595761	0.68300169	0.95443538	0.95494502
Sundatherian ancestor	0.68691423	0.96406335	0.96172505	0.68698225	0.96439444	0.96129488
Euarchontan ancestor	0.65824274	0.9523589	0.95361649	0.65828669	0.95257281	0.95333855
Lemurid ancestor	0.58700398	0.93869387	0.93848377	0.58701143	0.93873014	0.93843663
Galagid ancestor	0.64346706	0.93091058	0.94442351	0.64347528	0.93095061	0.9443715
Strepsirrhine ancestor	0.62957126	0.94065445	0.94550792	0.62959113	0.94075119	0.94538223
Tree supporting Primatomorpha:						
	DNE	3D-OPCR	RFI	DNE	3D-OPCR	RFI
Tupaïid ancestor	0.65375648	0.933227	0.95866245	0.65413974	0.93513446	0.95616306
Scandentian ancestor	0.67975995	0.95050289	0.9540858	0.67993328	0.95136551	0.9529555
Euarchontan ancestor	0.67962339	0.95660332	0.95729654	0.67973121	0.95713995	0.95659339
Lemurid ancestor	0.59060677	0.94044826	0.93965238	0.59061395	0.94048398	0.93960558
Galagid ancestor	0.64744256	0.93284646	0.94571301	0.64745048	0.93288588	0.94566137
Strepsirrhine ancestor	0.63917872	0.94533282	0.94862422	0.63919786	0.94542808	0.94849941
Primatomorphan ancestor	0.67948682	0.96270375	0.96050728	0.67952914	0.96291438	0.96023129

Fig. S1 Phylogenetic relationships among selected euarchontans including Sundatheria. Refer to Table S1 for reconstructed correlation coefficient (r) at each node.

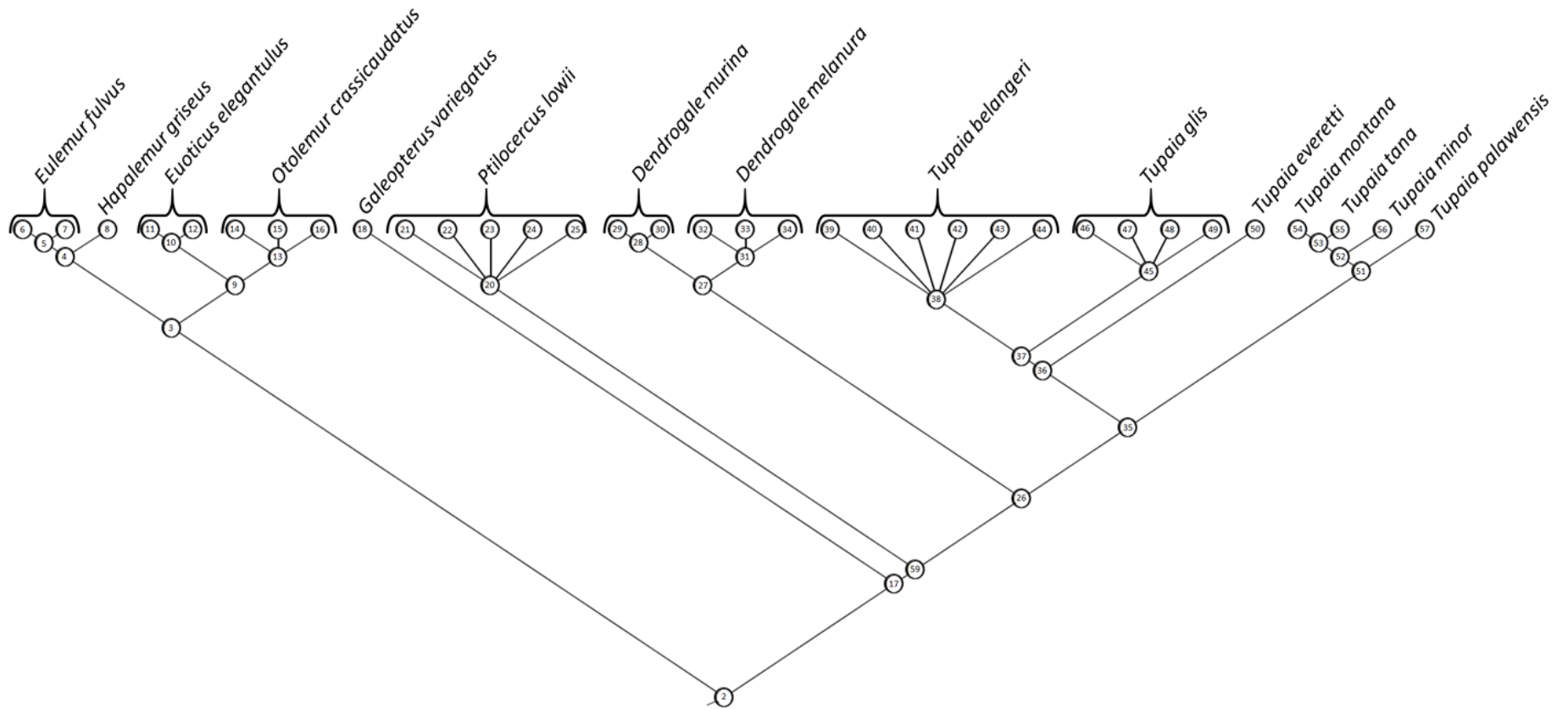
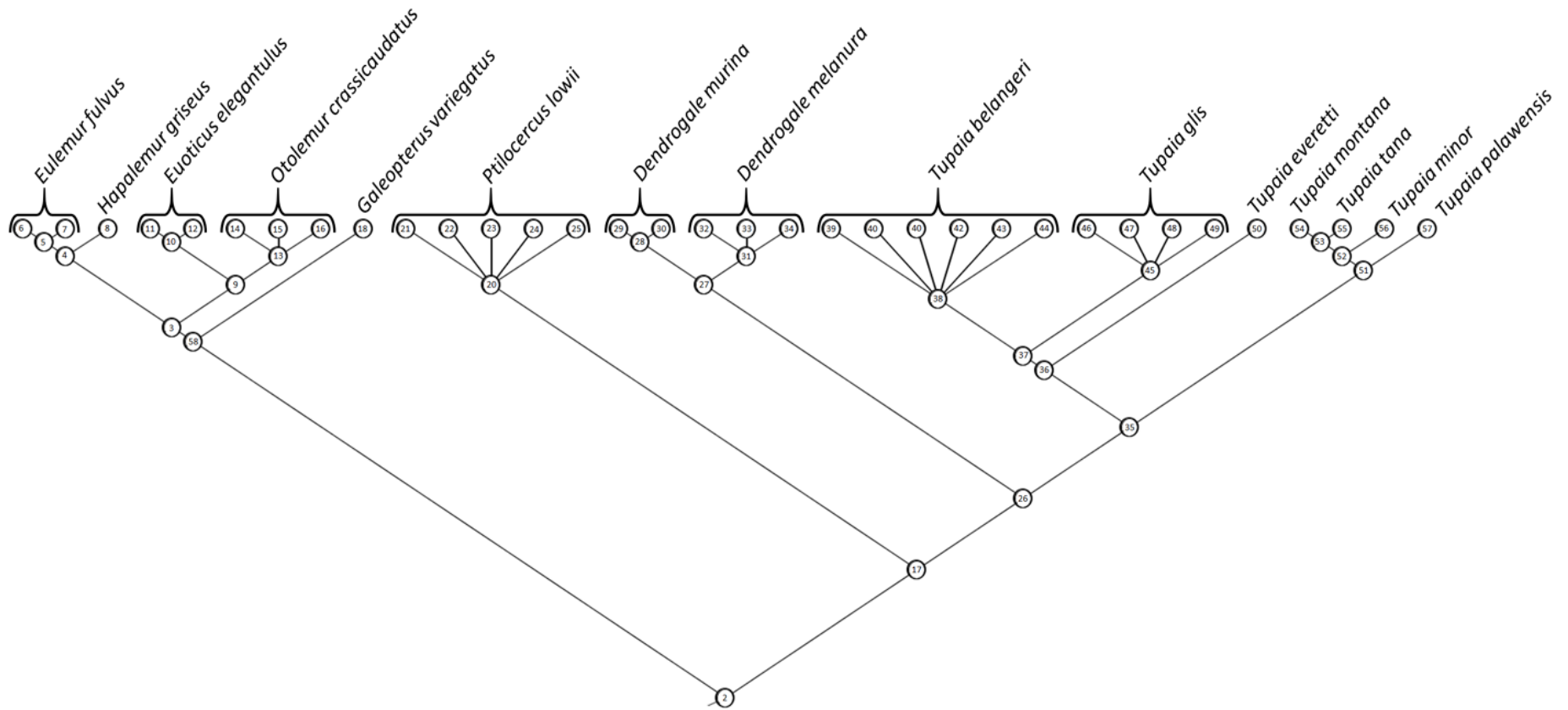


Fig. S2 Phylogenetic relationships among selected euarchontans including Primatomorpha. Refer to Table S2 for reconstructed correlation coefficient (r) at each node.



References Cited

Grubb P, Butynski TM, Oates JF, Bearder SK, Disotell TR, Groves CP, Struhsaker TT, (2003) Assessment of the Diversity of African Primates. *Int. J. Primatol.* 24:1301–1357.