

Appendix 1. Raw data

Specimen	Species	Location	Relief Index ^a	OPCR	DNE
AM Display	<i>Archaeoindris fontoynontii</i>	Ampasambazimba	--	43.13	401.95
DPC 9896C	<i>Archaeolemur</i> sp. cf. <i>A. edwardsi</i>	Ankarana	--	66.13	182.45
MNH 1935-419	<i>Archaeolemur majori</i>	Anavoha	--	46.00	151.30
USNM 83650	<i>Avahi laniger</i>	Vodivato Forest	0.613	60.00	383.54
USNM 83652	<i>Avahi laniger</i>	Vodivato Forest	0.592	55.25	349.73
AMNH 170501	<i>Avahi laniger</i>	Eminiminy	0.519	54.50	309.40
AMNH 41267	<i>Avahi laniger</i>	--	0.562	55.63	367.27
AMNH 170461(L)	<i>Avahi laniger</i>	Eminiminy	0.528	51.88	301.14
AMNH 170461(R)	<i>Avahi laniger</i>	Eminiminy	0.544	56.50	314.67
AMNH 100635	<i>Avahi laniger</i>	Fanovana	0.620	53.88	410.82
DPC 10970	<i>Babakotia radofilai</i>	Ankarana	--	66.13	200.06
DPC 10982	<i>Babakotia radofilai</i>	Ankarana	--	77.00	252.79
DPC 10971	<i>Babakotia radofilai</i>	Ankarana	--	65.00	193.65
AMNH 100640 (L)	<i>Cheirogaleus major</i>	Sianaka Forest	0.350	34.75	282.07
AMNH 100640 (R)	<i>Cheirogaleus major</i>	Sianaka Forest	0.337	34.63	144.39
AMNH 100830	<i>Cheirogaleus major</i>	Tabiky (near Ankazoabo)	0.370	47.50	225.95
AMNH 80072 (R)	<i>Cheirogaleus major</i>	--	0.328	42.75	132.10
AMNH 80072 (L)	<i>Cheirogaleus major</i>	--	0.342	44.75	130.65
AMNH 100654 (L)	<i>Cheirogaleus medius</i>	Anivorano	0.359	37.63	205.87
AMNH 196618 (L)	<i>Cheirogaleus medius</i>	--	0.352	50.38	151.07
AMNH 196618 (R)	<i>Cheirogaleus medius</i>	--	0.325	37.25	132.87
AMNH 100632 (L)	<i>Daubentonia madagascarensis</i>	Ampasimena (near Nosy Be)	0.352	45.75	89.64
AMNH 100632 (R)	<i>Daubentonia madagascarensis</i>	Ampasimena (near Nosy Be)	0.367	56.38	112.30
AMNH 41334 (L)	<i>Daubentonia madagascarensis</i>	--	0.382	49.88	106.22
AMNH 41334 (R)	<i>Daubentonia madagascarensis</i>	--	0.360	53.38	103.66
AMNH 185643	<i>Daubentonia madagascarensis</i>	Tampina	0.364	39.75	107.50

SBU MadDb	<i>Daubentonia madagascarensis</i>	--	0.358	35.38	111.03
AMNH 19159	<i>Eulemur fulvus</i>	--	0.504	41.13	273.38
AMNH 18696	<i>Eulemur fulvus</i>	--	0.520	34.25	219.69
USNM 63338	<i>Eulemur rufus</i>	Ambodiasy	0.503	43.30	296.01
USNM 83961	<i>Eulemur rufus</i>	--	0.455	41.88	205.08
AMNH 100569	<i>Eulemur rufus</i>	Tsitanyiky	0.474	44.25	223.90
AMNH 41264	<i>Eulemur rufus</i>	--	0.515	38.75	233.23
AMNH 100517	<i>Eulemur rufus</i>	Soalala	0.505	38.00	216.56
AMNH 41268	<i>Eulemur rufus</i>	--	0.539	39.38	313.64
NHMW 1934.IV.4a	<i>Hadropithecus stenognathus</i>	Andrahomana	--	63.00	334.78
USNM 63355	<i>Hapalemur griseus</i>	Mahanoro (50 mi NW)	0.497	60.38	269.74
USNM 63356	<i>Hapalemur griseus</i>	Imahatsara, Mangoro River	0.479	52.88	282.61
USNM 84386	<i>Hapalemur griseus</i>	Toamasina	0.461	47.75	263.91
USNM 317966	<i>Hapalemur griseus</i>	Bemangidy, Poste Mananteina	0.499	52.25	292.26
USNM 83668	<i>Hapalemur griseus</i>	Vodivato Forest	0.504	43.38	231.63
AMNH 100503 (L)	<i>Indri indri</i>	Near Andapa (1 day west)	0.547	52.63	229.99
AMNH 100503 (R)	<i>Indri indri</i>	Near Andapa (1 day west)	0.539	51.63	219.45
AMNH 100505	<i>Indri indri</i>	Maroantsetra (40 km NW)	0.420	60.50	199.32
AMNH 100506	<i>Indri indri</i>	Near Andapa (1 day west)	0.420	66.13	219.15
AMNH 185638	<i>Indri indri</i>	Eastern Madagascar	0.496	53.50	213.98
AMNH 100508	<i>Indri indri</i>	Eastern Madagascar	0.470	58.38	248.72
AMNH 100507	<i>Indri indri</i>	Maroantsetra (40 km NW)	0.460	56.50	200.70
AMNH 100816	<i>Indri indri</i>	Near Andapa (1 day west)	0.400	52.50	211.23
AMNH 100504	<i>Indri indri</i>	Near Andapa (1 day west)	0.526	47.00	239.95
AMNH 170737	<i>Lemur catta</i>	Amboasary	0.452	43.88	193.79
AMNH 100598	<i>Lemur catta</i>	Tabiky (near Ankazoabo)	0.516	37.88	254.50
AMNH 100821	<i>Lemur catta</i>	Tabiky (near Ankazoabo)	0.482	38.25	218.71
AMNH 170743	<i>Lemur catta</i>	Amboasary	0.501	42.13	247.85
AMNH 170740	<i>Lemur catta</i>	Amboasary	0.463	39.25	218.75
AMNH 170741	<i>Lemur catta</i>	Amboasary	0.464	37.75	216.17
AMNH 100642	<i>Lepilemur edwardsi</i>	Tsiandro	0.508	33.38	318.38
AMNH 170576	<i>Lepilemur leucopus</i>	Amboasary	0.513	36.40	270.35
AMNH 170578	<i>Lepilemur leucopus</i>	Amboasary	0.509	32.80	256.20

AMNH 170569	<i>Lepilemur leucopus</i>	Amboasary	0.528	33.80	238.93
AMNH 100612	<i>Lepilemur ruficaudatus</i>	Tabiky (near Ankazoabo)	0.545	36.88	331.31
AM 6025 UA 4621	<i>Megaladapis edwardsi</i>	Anavoaha	--	35.75	546.20
UA-Uncatalogued	<i>Mesopropithecus dolichobrachion</i>	Ankarana	--	59.13	181.96
DPC 9903	<i>Mesopropithecus dolichobrachion</i>	Ankarana	--	60.75	209.24
AM 6531 UA 4853	<i>Mesopropithecus globiceps</i>	Ankazoabo Grotte	--	68.50	139.82
AM 6471	<i>Mesopropithecus globiceps</i>	Manombo Toliara	--	66.63	260.55
AM 6469	<i>Mesopropithecus globiceps</i>	Tsirave	--	64.38	203.27
UA 4854	<i>Mesopropithecus globiceps</i>	Anavoaha	--	63.50	315.77
UA 4850	<i>Mesopropithecus pithecooides</i>	Ampasambazimba	--	68.13	244.20
UA 4848	<i>Mesopropithecus pithecooides</i>	Ampasambazimba	--	58.13	244.38
AMNH 174530	<i>Microcebus griseorufus</i>	Amboasary	0.495	42.13	249.60
AMNH 174533	<i>Microcebus griseorufus</i>	Amboasary	0.472	48.88	256.48
AMNH 174534	<i>Microcebus griseorufus</i>	Amboasary	0.501	47.50	285.59
AMNH 174498	<i>Microcebus griseorufus</i>	Amboasary	0.438	44.75	278.61
AMNH 174483	<i>Microcebus griseorufus</i>	Amboasary	0.477	48.00	301.99
AMNH 174531	<i>Microcebus griseorufus</i>	Amboasary	0.471	42.75	287.90
AMNH 174489	<i>Microcebus griseorufus</i>	Amboasary	0.489	47.38	263.01
AMNH 100832 (R)	<i>Mirza coquereli</i>	Tabiky (near Ankazoabo)	0.489	42.75	259.48
AMNH 100832 (L)	<i>Mirza coquereli</i>	Tabiky (near Ankazoabo)	0.482	42.63	253.25
MCZ 45126	<i>Mirza coquereli</i>	Ivondro River	0.443	44.50	227.79
USNM 171174	<i>Pachylemur insignis</i>	Taolambiby	--	42.13	149.09
AM 6391 UA 5212	<i>Pachylemur insignis</i>	Tsirave	--	41.63	131.99
AM 6393 UA 5317	<i>Pachylemur insignis</i>	Tsirave	--	36.75	134.59
AM 6418 UA 5327	<i>Pachylemur insignis</i>	Tsirave	--	37.38	200.23
AM 6394 UA 5315	<i>Pachylemur insignis</i>	Tsirave	--	34.38	126.37
AM 6407 UA 5324	<i>Pachylemur insignis</i>	Tsirave	--	35.25	148.67
UA 5201	<i>Pachylemur jullyi</i>	Ampasambazimba	--	46.75	213.05
AM 6411 UA 5281	<i>Pachylemur jullyi</i>	Ampasambazimba	--	43.00	184.14
AM 6185 UA 4477	<i>Palaeopropithecus ingens</i>	Bevoaha	--	50.13	341.33
AM 6183	<i>Palaeopropithecus ingens</i>	Ankazoabo	--	52.88	328.39
AM 6192 UA 4453	<i>Palaeopropithecus maximus</i>	Ampasambazimba	--	46.88	242.48
OXUM 5100	<i>Palaeopropithecus maximus</i>	Ampasambazimba	--	49.13	198.26

AM 6191	<i>Palaeopropithecus kelyus</i>	Anjohibe		47.50	276.64
AMNH 100829 (R)	<i>Phaner furcifer</i>	Tabiky (near Ankazoabo)	0.456	47.13	170.96
AMNH 100829 (L)	<i>Phaner furcifer</i>	Tabiky (near Ankazoabo)	0.465	45.13	203.19
MCZ 44953	<i>Phaner furcifer</i>	Fiheranana (NE of Toliara)	0.485	45.88	192.11
BMNH 84.10.20.4	<i>Prolemur simus</i>	--	0.502	84.88	329.57
Helsinki uncatalogued	<i>Prolemur simus</i>	Ranomafana	0.494	63.13	343.54
AMNH 17356	<i>Propithecus diadema</i>	--	0.511	49.13	237.84
USNM 63349	<i>Propithecus diadema</i>	Mahanoro	0.591	49.63	280.61
AMNH 100633	<i>Propithecus edwardsi</i>	Fito	0.529	54.00	202.17
USNM 63351	<i>Propithecus edwardsi</i>	Ambodiasy	0.566	50.75	297.44
USNM 257397	<i>Propithecus verreauxi</i>	Ambararatabe	0.555	47.50	264.61
AMNH 16699	<i>Propithecus verreauxi</i>	--	0.565	48.63	266.70
AMNH 100827	<i>Propithecus verreauxi</i>	Tabiky (near Ankazoabo)	0.536	42.75	218.97
AMNH 100514	<i>Varecia rubra</i>	Maroantsetra (2 days northeast)	0.420	31.00	182.19
AMNH 100513	<i>Varecia rubra</i>	Maroantsetra (2 days northeast)	0.411	39.00	179.46
AMNH 245092	<i>Varecia variegata</i>	--	0.458	39.63	243.17
AMNH 18041	<i>Varecia variegata</i>	--	0.458	36.75	245.69
AMNH 17338	<i>Varecia variegata</i>	--	0.445	30.13	168.53
AMNH 100512	<i>Varecia variegata</i>	--	0.436	36.63	187.06
USNM 84382	<i>Varecia variegata</i>	Toamasina	0.448	36.38	201.37
USNM 84383	<i>Varecia variegata</i>	Toamasina	0.463	37.75	213.09

^a Relief index [= natural log { $\sqrt{(3d \text{ area})} / \sqrt{2d \text{ area}}$ }] of second mandibular molars. This was devised by Boyer (2008), modified from M'Kirera and Ungar (2003). This is a dimensionless shape ratio for which higher values reflect increased deviation of the shape of the occlusal surface from a flat plane.