Supplementary Online Material (SOM):

New macaque fossil remains from Morocco

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SOM S1

Scanning methods

To derive 3D virtual models of the studied teeth from Guefaït-4.2, the teeth were scanned at the Laboratory of Microscopy of the Centro Nacional de Investigación sobre la Evolución Humana–Unique Scientific & Technical Infrastuctures (Burgos, Spain) with a high-resolution X-ray µCT scanner phoenix v|tome|x s 240 (GE Sensing & Inspections Technologies) with the following parameters: voltage = 120 kV, current = 130 µA, filter = 0.2 mm Cu, resulting in an isometric voxel size of 16.30027 µm. Segmentation was performed with Avizo 7.0 (Visualization Sciences Group, Mérignac) using a combination of automatic and manual segmentation by a technican at the Institut Català de Paleontologia Miquel Crusafont.

SOM S2

Body mass estimation

Body mass (BM, in g) was estimated using Delson et al.'s (2000: Table 7) allometric regression for M_2 mesial buccolingual width (BLm, in mm) for all cercopithecids:

$$\ln BM = 1.839 \ln (M_2 BLm) + 5.694, n = 68, SEE = 0.383, QMLE = 1.076$$

where SEE is the standard error of estimate and QMLE is the quasi-maximum likelihood estimator to correct for logarithmic transformation bias. Following Ruff (2003), 50% and 95% confidence intervals (CI) were computed as $\pm SEE \times t_{(100-CI)(2),df} \times QMLE$, where df = n - 2. For df = 66, t = 0.68 for 50% CI and 2.00 for 95% CI, resulting in CIs being calculated as ±0.280 and ±0.824 for 50% and 95% confidence levels, respectively.

The resulting estimate is 11,753 g, with 50% CI = (11,473, 12,033) and 95% CI = (10,929, 12.577).

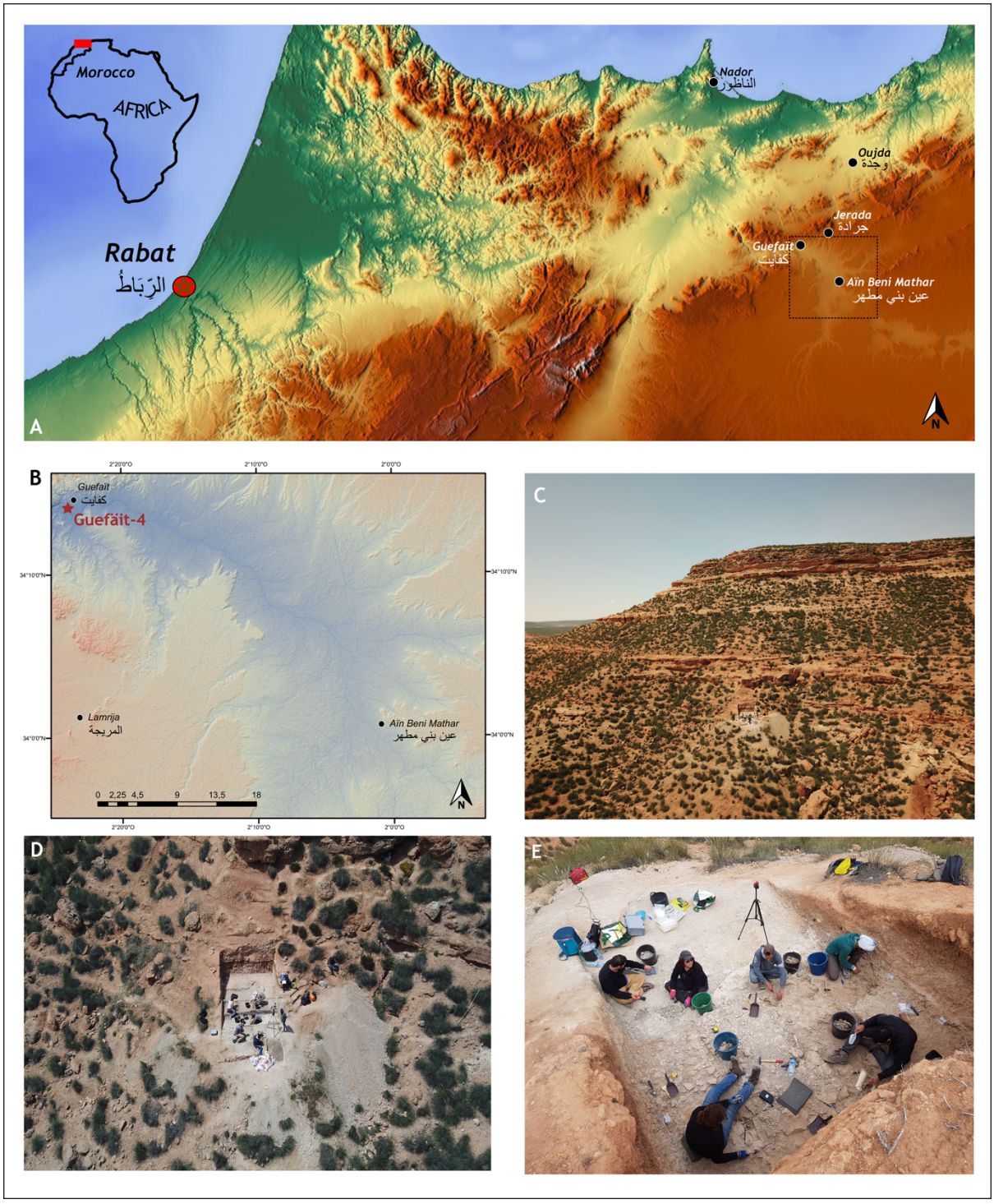
SOM S3

Statistical comparisons

ANOVA results indicate significant differences among the comparative sample for all variables except I^1 H (SOM Table S3), but Tukey's post hoc tests (SOM Table S4) indicate few significant pairwise differences for incisor dimensions (probably due to low statistical power associated with the small fossil samples). Therefore, below we focus on the greater number

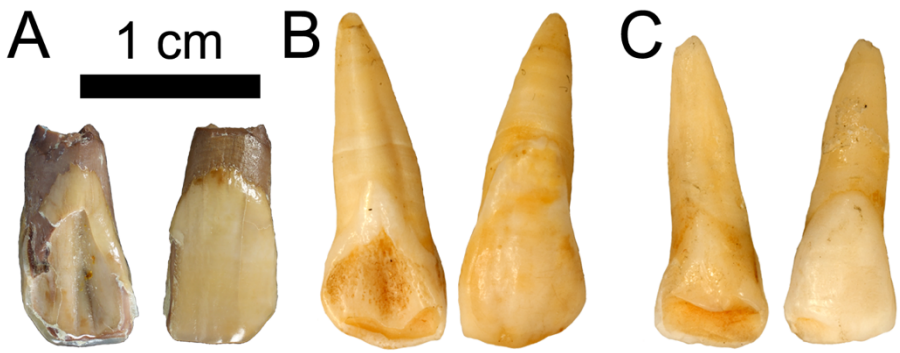
of significant differences for the lower molars (see SOM Table S4), despite considerable overlap.

Parapapio (cf.) *ado* displays on average significantly larger molars than '*Parapapio*' *lothagamensis*, *Pliopapio alemui*, and macaques—except for *Macaca libyca* in most instances and also sometimes *Macaca sylvanus pliocena* and *M. sylvanus florentina*. '*Parapapio*' *lothagamensis* and *Pl. alemui* are more similar to macaques in molar dimensions. However, the molars of '*P.*' *lothagamensis* are significantly shorter than in *M. s.* (cf.) *pliocena*. In turn, *Pl. alemui* displays a narrower M_2 than *Macaca libyca*, as well as an M_3 intermediate in length between *Macaca majori* and fossil *M. sylvanus* from Europe; the M_3 of *Pl. alemui* is also narrower than in extant *M. sylvanus* and *M. majori*. Among macaques, *M. libyca* does not display significant differences in molar dimensions compared to *M. sylvanus* sspp., but shows larger M_2 and broader M_3 than *M. majori*. The latter further differs in some molar dimensions from extant and fossil *M. sylvanus*. *Macaca s.*(cf.) *pliocena* and *M. s. florentina* do not significantly differ from one another in molar size or proportions, but they both differ from extant *M. s. sylvanus* by displaying on average a relatively narrower M_3, which is also significantly longer in *M. s.* (cf.) *pliocena*.

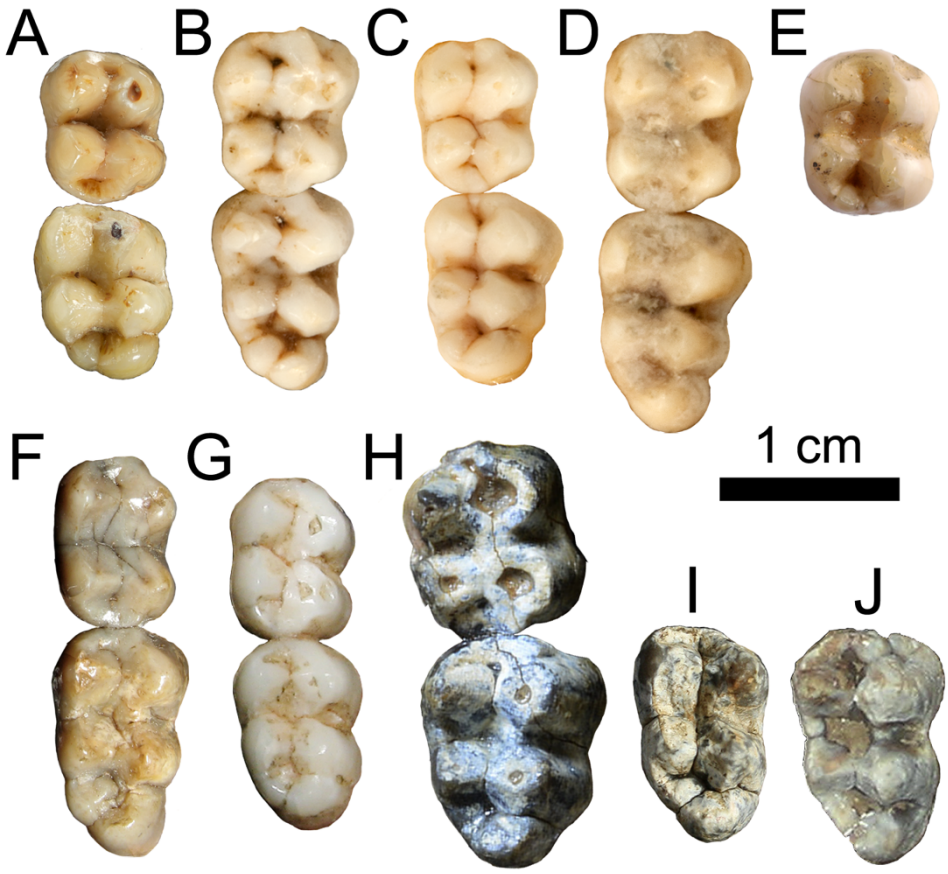


SOM Figure S1. Location maps and pictures showing Guefaït-4 site and Guefaït-4.2 locality. A) Partial map of the Kingdom of Morocco (corresponding to the red rectangle overlapping the inset with the African continent); the area of interest (dotted box) is enlarged in panel B; data extracted from Map Tile 7_61/62/63-50 & 7_61/62/63-510 (CC BY-SA). OpenStreetMap© licensed under ODdL 1.0 (https://www.openstreetmap.org/copyright) by the OpenStreetMap Foundation (OSMF). ©OpenStreetMap contributors

(https://www.openstreetmap.org/). B) Location map of the Guefaït-4 site (base map taken from ASTER GDEM v. 3, https://ssl.jspacesystems.or.jp/ersdac/GDEM/E/). C–E) Different views of the Guefaït-4 site and Guefaït-4.2 locality (pictures by Alfonso Benito-Calvo and A.R.H).



SOM Figure S2. Left I^1 crown (GFT4.2'18-1-Q14-70) of *Macaca* cf. *sylvanus* from Guefaït-4.2 (A) compared with two I^1 of extant *M. sylvanus* (right specimens, mirrored for comparison): AMNH-M 70269 (B) and AMNH-M 185277 (C). All specimens are shown in lingual (left) and labial (right) views.



SOM Figure S3. Right M_2 (GFT4.2'19-1-S15-65) and left M_3 (GFT4.2'19-1-R13-63, mirrored for comparison) of *Macaca* cf. *sylvanus* from Guefaït-4.2 (A) compared with the M_2–M_3 of three extant *M. s. sylvanus* individuals (B–D), fossil *M.* aff. *sylvanus* from Aïn Brimba (E, only M_2), *M. s. florentina* (F) and *Macaca majori* (G) from Italy, *Parapapio* cf. *ado* from Kanapoi (H), and *Pliopapio alemui* (only M_3) from Gona (I) and Aramis (J): B) AMNH-M 19014 (M_3 mirrored); C) AMNH-M 185277; D) AMNH-M 2060/5484; E) MNHN-F 1958-14-237; F) IGF 13084 (mirrored); G) IGF 2035 (mirrored); H) KNM-KP 286 (reproduced from Frost et al., 2020a: Fig. 1); I) GWM-9m/P256 (mirrored; reproduced from Frost et al., 2020b: Fig. 4); J) ARA-VP-1/2553 (mirrored; reproduced from Frost et al., 2020b: Fig. 4). All specimens are shown in occlusal view.

SOM Table S1

Dental measurements of *Macaca* cf. *sylvanus* from Guefaït-4.2 and the comparative sample, including: maximum recorded crown height (H, in mm; only for incisors), mesiodistal length (MD, in mm), buccolingual (or labiolingual) breadth (BL, in mm; both at the mesial [BLm] and distal [BLd] lophids for the molars), and breadth/length index (BLI, in %; computed based on BLm for molars). Values within parentheses are estimates.

Catalog No.	Species	Site	Tooth	Sex	MD	BL or BLm	BLd or H	BLI	Source
GFT4.2'18-1-Q14-70	*Macaca* cf. *sylvanus*	Guefaït-4.2	I^1	?	(6.8)	6.2	10.0	91.2	This study
AMNH-M 202286	*Macaca sylvanus*	extant	I^1	M	7.3	6.5	12.8	89.0	PRIMO
AMNH-M 185277	*Macaca sylvanus*	extant	I^1	F	5.72	5.17	7.35	90.4	PRIMO
AMNH-M 19014	*Macaca sylvanus*	extant	I^1	F	5.98	4.73	9.39	79.1	PRIMO
AMNH-M 2060/5484	*Macaca sylvanus*	extant	I^1	F	6.95	6.4	—	92.1	D.M.A.
AMNH-M 19178	*Macaca sylvanus*	extant	I^1	F	6.1	5.7	—	93.4	D.M.A.
AMNH-M 70269	*Macaca sylvanus*	extant	I^1	?	6.9	5.25	—	76.1	D.M.A.
MNHN-ZM-AC 1910.166	*Macaca sylvanus*	extant	I^1	M	6.9	5.9	11.7	85.5	PRIMO
MNHN-ZM-AC 1874.343	*Macaca sylvanus*	extant	I^1	M	6.6	6.1	12.1	92.4	PRIMO
NHMUK-Z ZD.1843.5.27.1	*Macaca sylvanus*	extant	I^1	M	6.9	5.8	8.6	84.1	PRIMO
NHMUK-Z ZD.1858.4.5.1	*Macaca sylvanus*	extant	I^1	M	7.0	5.8	11.0	82.9	PRIMO
NHMUK-Z ZD.1911.11.4.1	*Macaca sylvanus*	extant	I^1	F	6.2	5.3	8.1	85.5	PRIMO
NHMUK-Z ZD.1919.8.19.1	*Macaca sylvanus*	extant	I^1	M	6.1	4.9	7.2	80.3	PRIMO
NHMUK-Z ZD.1939.1048	*Macaca sylvanus*	extant	I^1	M	6.8	5.5	10.6	80.9	PRIMO
NMNH 196984	*Macaca sylvanus*	extant	I^1	F	6.35	5.71	9.4	89.9	PRIMO
NMNH 476782	*Macaca sylvanus*	extant	I^1	F	6.18	4.89	8.5	79.1	PRIMO
NMNH 476786	*Macaca sylvanus*	extant	I^1	F	5.24	4.98	5.3	95.0	PRIMO
NMNH 476787	*Macaca sylvanus*	extant	I^1	F	4.95	5.24	4.6	105.9	PRIMO
NMNH 341870	*Macaca sylvanus*	extant	I^1	F	5.44	5.61	9.03	103.1	PRIMO
NMNH 476783	*Macaca sylvanus*	extant	I^1	F	5.59	4.88	5.84	87.3	PRIMO

NMNH 476784	*Macaca sylvanus*	extant	I^1	M	6.17	5.42	8.91	87.8	PRIMO
NMNH 255979	*Macaca sylvanus*	extant	I^1	M	6.9	5.36	9.74	77.7	PRIMO
MCZ 5964	*Macaca sylvanus*	extant	I^1	F	7.15	5.65	—	79.0	D.M.A.
MCZ 5084	*Macaca sylvanus*	extant	I^1	F	7.0	5.75	—	82.1	D.M.A.
IPH UNCAT	*Macaca sylvanus pliocena*	Vallonnet	I^1	?	6.8	5.2	10.1	76.5	PRIMO
HUJ-ESE UB 323	*Macaca sylvanus florentina*	'Ubeidiya	I^1	?	7.06	5.16	9.23	73.1	PRIMO
MHNL 164295	*Macaca sylvanus florentina*	Saint-Vallier	I^1	?	7.2	5.4	11.1	75.0	PRIMO
NMB TY 5203	*Macaca majori*	Capo Figari	I^1	F	6.0	4.6	9.0	76.7	PRIMO
NMB TY 5273	*Macaca majori*	Capo Figari	I^1	?	5.9	6.1	9.7	103.4	PRIMO
NMB TY 5274	*Macaca majori*	Capo Figari	I^1	?	6.2	4.4	8.5	71.0	PRIMO
NMB TY 5275	*Macaca majori*	Capo Figari	I^1	?	6.0	4.9	8.1	81.7	PRIMO
NMB TY 5279	*Macaca majori*	Capo Figari	I^1	?	5.7	4.2	6.6	73.7	PRIMO
NMB TY 5316	*Macaca majori*	Capo Figari	I^1	?	6.2	4.2	8.6	67.7	PRIMO
NMT LAET 77-4595	*Parapapio ado*	Laetoli	I^1	F	6.4	5.3	12.2	82.8	PRIMO
KNM-KP 30149	*Parapapio* cf. *ado*	Kanapoi	I^1	?	7.5	5.8	11.3	77.3	Frost et al. (2020)
KNM-LT 23163	*Parapapio lothagamensis*	Lothagam	I^1	?	7.5	6.3	—	84.0	Leakey et al. (2003)
KNM-LT 24096	*Parapapio lothagamensis*	Lothagam	I^1	?	7.9	6.1	—	77.2	Leakey et al. (2003)
KNM-LT 24100	*Parapapio lothagamensis*	Lothagam	I^1	?	7.3	6.4	—	87.7	Leakey et al. (2003)
KNM-LT 26406	*Parapapio lothagamensis*	Lothagam	I^1	?	6.8	6.1	11.5	89.7	Leakey et al. (2003)
KNM-LT 28792	*Parapapio lothagamensis*	Lothagam	I^1	F	7.3	6.4	11.7	87.7	Leakey et al. (2003)
NME GWM-3/P26	*Pliopapio alemui*	Gona	I^1	?	6.4	6.3	10.4	98.4	Frost et al. (2020b)
NME GWM-9m/P264	*Pliopapio alemui*	Gona	I^1	?	5.8	—	8.5	—	Frost et al. (2020b)
NME GWM-9s/P414	*Pliopapio alemui*	Gona	I^1	?	5.1	5.7	6.4	111.8	Frost et al. (2020b)
NME GWM-44/P1	*Pliopapio alemui*	Gona	I^1	?	—	5.8	9.3	—	Frost et al. (2020b)
NME GWM-67/P55	*Pliopapio alemui*	Gona	I^1	?	6.3	6.3	8.0	100.0	Frost et al. (2020b)
NME ARA-VP 1/816	*Pliopapio alemui*	Aramis	I^1	F	5.81	5	6.54	86.1	PRIMO
GFT4.2'19-1-S15-65	*Macaca* cf. *sylvanus*	Guefaït-4.2	M_2	?	8.6	7.1	6.8	82.6	This study
MNHN-F 1958-14-237	*Macaca* aff. *sylvanus*	Aïn Brimba	M_2	?	9.3	7.8	7.0	83.9	PRIMO

AMNH-M 202286	*Macaca sylvanus sylvanus*	extant	M_2	M	9.1	7.6	7.5	83.5	PRIMO
MNHN-ZM-AC 1910.166	*Macaca sylvanus sylvanus*	extant	M_2	M	10.1	8.3	7.3	82.2	PRIMO
MNHN-ZM-AC 1900.244	*Macaca sylvanus sylvanus*	extant	M_2	F	10.2	8.0	6.8	78.4	PRIMO
MNHN-ZM-AC 1874.343	*Macaca sylvanus sylvanus*	extant	M_2	M	9.5	7.9	6.6	83.2	PRIMO
MNHN-ZM-AC A-1376	*Macaca sylvanus sylvanus*	extant	M_2	F	9.1	6.9	6.1	75.8	PRIMO
NHMUK-Z ZD.1843.5.27.1	*Macaca sylvanus sylvanus*	extant	M_2	M	9.3	7.1	6.1	76.3	PRIMO
NHMUK-Z ZD.1911.11.4.1	*Macaca sylvanus sylvanus*	extant	M_2	F	10.0	8.3	6.7	83.0	PRIMO
NHMUK-Z ZD.1919.8.19.1	*Macaca sylvanus sylvanus*	extant	M_2	M	9.2	6.8	6.2	73.9	PRIMO
NHMUK-Z ZD.1939.1048	*Macaca sylvanus sylvanus*	extant	M_2	M	10.3	8.5	7.5	82.5	PRIMO
AMNH-M 185277	*Macaca sylvanus sylvanus*	extant	M_2	F	8.65	7.6	6.27	87.9	PRIMO
AMNH-M 19014	*Macaca sylvanus sylvanus*	extant	M_2	F	8.08	6.96	6.33	86.1	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_2	?	8.8	8.4	7.3	95.5	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_2	M	9.0	7.4	6.7	82.2	PRIMO
NMNH 196984	*Macaca sylvanus sylvanus*	extant	M_2	F	8.79	6.88	6.16	78.3	PRIMO
NMNH 476782	*Macaca sylvanus sylvanus*	extant	M_2	F	8.68	6.98	6.62	80.4	PRIMO
NMNH 341870	*Macaca sylvanus sylvanus*	extant	M_2	F	7.24	6.57	6.2	90.7	PRIMO
NMNH 341872	*Macaca sylvanus sylvanus*	extant	M_2	F	7.05	6.65	6.3	94.3	PRIMO
NMNH 476783	*Macaca sylvanus sylvanus*	extant	M_2	F	8.01	6.77	6.47	84.5	PRIMO
NMNH 476784	*Macaca sylvanus sylvanus*	extant	M_2	M	9.12	6.72	6.45	73.7	PRIMO
NMNH 255979	*Macaca sylvanus sylvanus*	extant	M_2	M	9.76	8.91	8.1	91.3	PRIMO
AMNH-M 2060/5484	*Macaca sylvanus sylvanus*	extant	M_2	F	10.2	8.2	7.4	80.4	D.M.A.
AMNH-M 19178	*Macaca sylvanus sylvanus*	extant	M_2	F	11.1	8.3	7.3	74.8	D.M.A.
AMNH-M 70269	*Macaca sylvanus sylvanus*	extant	M_2	?	9.65	6.85	6.15	71.0	D.M.A.
MCZ 5964	*Macaca sylvanus sylvanus*	extant	M_2	F	10.0	8.3	6.6	83.0	D.M.A.
MCZ 7098	*Macaca sylvanus sylvanus*	extant	M_2	M	8.6	(8.2)	(7.3)	(95.3)	D.M.A.
MCZ 5084	*Macaca sylvanus sylvanus*	extant	M_2	F	9.4	7.75	6.8	82.4	D.M.A.
MNHN-ZM-MO 1939.1118	*Macaca sylvanus sylvanus*	extant	M_2	M	9.35	8.15	6.85	87.2	PRIMO
MNHN-ZM-MO 1945.173	*Macaca sylvanus sylvanus*	extant	M_2	F	10.0	7.7	7.1	77.0	PRIMO

MNHN-ZM-MO 1962.1473	*Macaca sylvanus sylvanus*	extant	M_2	M	8.9	7.6	6.6	85.4	PRIMO
MNHN-ZM-MO 1962.1470	*Macaca sylvanus sylvanus*	extant	M_2	F	9.85	8.7	7.0	88.3	PRIMO
MNHN-ZM-MO 1931.835	*Macaca sylvanus sylvanus*	extant	M_2	M	9.5	7.85	6.6	82.6	PRIMO
MNHN-ZM-MO 1940.1201	*Macaca sylvanus sylvanus*	extant	M_2	M	9.4	7.95	6.7	84.6	PRIMO
MNHN-ZM-MO 1962.1469	*Macaca sylvanus sylvanus*	extant	M_2	M	10.0	7.9	6.9	79.0	PRIMO
MNHN-ZM-MO 1926.299	*Macaca sylvanus sylvanus*	extant	M_2	M	10.0	7.7	7.2	77.0	PRIMO
MNHN-ZM-MO 1942.180	*Macaca sylvanus sylvanus*	extant	M_2	F	8.5	7.5	6.7	88.2	PRIMO
MNHN-ZM-AC 1907.59	*Macaca sylvanus sylvanus*	extant	M_2	M	10.5	8.45	7.35	80.5	PRIMO
MNHN-ZM-AC A1415	*Macaca sylvanus sylvanus*	extant	M_2	M	9.0	7.3	6.25	81.1	PRIMO
MNHN-ZM-AC 1892.78	*Macaca sylvanus sylvanus*	extant	M_2	F	9.0	9.1	7.15	101.1	PRIMO
MNHN-ZM-AC 1876.286	*Macaca sylvanus sylvanus*	extant	M_2	M	9.8	7.5	7.0	76.5	PRIMO
MNHN-ZM-AC 1879.133	*Macaca sylvanus sylvanus*	extant	M_2	M	9.5	7.9	6.85	83.2	PRIMO
MNHG 446.36	*Macaca sylvanus sylvanus*	extant	M_2	F	9.2	7.9	7.0	85.9	PRIMO
MAC 283/4	*Macaca sylvanus sylvanus*	extant	M_2	M	11.1	9.3	7.7	83.8	PRIMO
NHMW 32990	*Macaca sylvanus sylvanus*	extant	M_2	M	8.9	6.95	6.15	78.1	PRIMO
NHMW 2614/B3976	*Macaca sylvanus sylvanus*	extant	M_2	M	10.2	8.2	7.4	80.4	PRIMO
NHMW B 3849	*Macaca sylvanus sylvanus*	extant	M_2	F	9.5	7.4	6.6	77.9	PRIMO
NHMW 4408	*Macaca sylvanus sylvanus*	extant	M_2	M	10.3	8.5	7.3	82.5	PRIMO
NHMW 2616	*Macaca sylvanus sylvanus*	extant	M_2	F	9.2	7.7	6.9	83.7	PRIMO
NHMW 2615	*Macaca sylvanus sylvanus*	extant	M_2	F	9.1	7.6	6.4	83.5	PRIMO
NHMW 4407	*Macaca sylvanus sylvanus*	extant	M_2	F	9.2	7.8	6.6	84.8	PRIMO
NHMW 34222	*Macaca sylvanus sylvanus*	extant	M_2	F	8.7	7.4	6.6	85.1	PRIMO
MAU-T no number	*Macaca sylvanus sylvanus*	extant	M_2	F	8.4	7.35	7.45	87.5	PRIMO
NHMUK-Z ZD.1984.1734	*Macaca sylvanus sylvanus*	extant	M_2	M	8.7	6.3	6.1	72.4	PRIMO
NHMUK-Z ZD.1858.5.4.247	*Macaca sylvanus sylvanus*	extant	M_2	M	9.8	7.7	6.7	78.6	PRIMO
NHMUK-Z ZD.1975.569	*Macaca sylvanus sylvanus*	extant	M_2	M	9.9	7.4	6.5	74.7	PRIMO
NHMUK-Z ZD.1977.3119	*Macaca sylvanus sylvanus*	extant	M_2	M	9.9	7.8	7.0	78.8	PRIMO
Bonifay UNCAT	*Macaca sylvanus pliocena*	St. Estève Janson	M_2	M	10.5	8.5	8.2	81.0	PRIMO

NMP UNCAT	*Macaca sylvanus pliocena*	Zlaty Kun C718	M_2	?	9.5	7.6	7.3	80.0	PRIMO
NMP UNCAT	*Macaca sylvanus pliocena*	Zlaty Kun C718	M_2	M	10.2	7.8	7.3	76.5	PRIMO
ORGNAC 353	*Macaca sylvanus pliocena*	Orgnac-3	M_2	?	8.8	7.9	7.6	89.8	PRIMO
NMP UNCAT	*Macaca sylvanus pliocena*	Gombasek	M_2	M	10.4	8.5	8.0	81.7	PRIMO
IG-R UNCAT	*Macaca sylvanus pliocena*	Monte Sacro, Rome	M_2	M	9.7	7.7	6.9	79.4	PRIMO
Harlé UNCAT	*Macaca sylvanus pliocena*	Montsaunès	M_2	?	9.7	7.2	6.9	74.2	PRIMO
IPH UNCAT	*Macaca sylvanus pliocena*	Vallonnet	M_2	?	10.2	7.9	6.9	77.5	PRIMO
IAPU-P UNCAT	*Macaca sylvanus pliocena*	Valdemino	M_2	M?	9.4	7.4	6.9	78.7	PRIMO
LPHP-S 777/G1 & 771	*Macaca sylvanus pliocena*	Gajtan	M_2	F?	8.9	7.3	7.3	82.0	PRIMO
LPHP-S 775	*Macaca sylvanus pliocena*	Gajtan	M_2	?	10.6	7.5	7.2	70.8	PRIMO
SIP-V unknown	*Macaca sylvanus pliocena*	Cova Negra	M_2	?	10.8	8.5	—	(78.7)	PRIMO
BGDG LzII.M15.-271.300	*Macaca sylvanus* cf. *pliocena*	Lezetxiki II	M_2	F	9.6	8.0	7.8	83.3	Castaños et al. (2011)
MCSNBS PA11136	*Macaca sylvanus* cf. *pliocena*	Quecchia Quarry	M_2	?	9.5	7.8	7.0	82.1	Bona et al. (2016)
UNIARQ ARO17-J8-Xa-934	*Macaca sylvanus* cf. *pliocena*	Gruta da Aroeira	M_2	?	9.45	6.55	6.5	69.3	Alba et al. (2019)
HUJ-ESE UB 314	*Macaca sylvanus florentina*	'Ubeidiya	M_2	F	9.41	6.82	6.34	72.5	PRIMO
HUJ-ESE UB 331	*Macaca sylvanus florentina*	'Ubeidiya	M_2	F?	9.36	7.01	6.85	74.9	PRIMO
HUJ-ESE UB 334	*Macaca sylvanus florentina*	'Ubeidiya	M_2	?	9.35	7.28	6.82	77.9	PRIMO
HUJ-ESE UB 347	*Macaca sylvanus florentina*	'Ubeidiya	M_2	?	9.49	7.57	6.79	79.8	PRIMO
HUJ-ESE UB 346	*Macaca sylvanus florentina*	'Ubeidiya	M_2	?	8.9	6.7	6.54	75.3	PRIMO
IGF 10034	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M	9.8	8.0	7.3	81.6	PRIMO
IGF 10035	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M	10.2	8.0	7.5	78.4	PRIMO
IGF 12868	*Macaca sylvanus florentina*	Upper Valdarno	M_2	F	9.6	8.3	7.5	86.5	PRIMO
IGF 13084	*Macaca sylvanus florentina*	Upper Valdarno	M_2	?	9.7	7.7	6.7	79.4	PRIMO
IGF 13087	*Macaca sylvanus florentina*	Upper Valdarno	M_2	?	9.0	6.8	6.6	75.6	PRIMO
NMB VA 352	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M	9.0	7.5	7.1	83.3	PRIMO
NMB VA 1088	*Macaca sylvanus florentina*	Upper Valdarno	M_2	?	9.4	7.3	7.4	77.7	PRIMO
NMB VA 1415	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M?	9.7	7.4	7.2	76.3	PRIMO
NMB VA 2058	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M	9.5	7.2	6.7	75.8	PRIMO

MAP 10	*Macaca sylvanus florentina*	Upper Valdarno	M_2	M	9.9	7.9	7.4	79.8	PRIMO
RGM-L 47424	*Macaca sylvanus florentina*	Tegelen	M_2	M	11.0	8.3	7.9	75.5	PRIMO
RGM-L 53158	*Macaca sylvanus florentina*	Tegelen	M_2	?	9.5	8.3	7.8	87.4	PRIMO
ZMA 12717	*Macaca sylvanus florentina*	Tegelen	M_2	?	9.8	7.5	7	76.5	PRIMO
MUPE GCP-CV4062	*Macaca sylvanus florentina*	Quibas	M_2	?	10.2	8.5	7.6	83.3	Alba et al. (2011)
MUPE GCP-CV4060	*Macaca sylvanus florentina*	Quibas	M_2	?	9.4	(7.6)	7.2	(80.9)	Alba et al. (2011)
UM Q03-E-4a	*Macaca sylvanus florentina*	Quibas	M_2	?	10.0	8.2	6.8	82.0	Alba et al. (2011)
MSNC Mugello B	*Macaca sylvanus florentina*	Mugello	M_2	?	9.3	6.85	6.7	73.7	Zanaga (1998)
MNHN-F UNCAT	*Macaca sylvanus prisca*	Montpellier	M_2	M	8.8	6.8	6.8	77.3	PRIMO
FSL 40191	*Macaca sylvanus prisca*	Montpellier	M_2	?	8.0	6.8	6.0	85.0	PRIMO
MPC 8116	*Macaca majori*	Is Oreris	M_2	?	8.47	6.93	5.96	81.8	Zoboli et al. (2016)
IGF 2035	*Macaca majori*	Capo Figari	M_2	M	8.9	7.0	6.9	78.7	PRIMO
IGF 2036	*Macaca majori*	Capo Figari	M_2	M	8.7	6.8	6.5	78.2	PRIMO
NMB TY 5202	*Macaca majori*	Capo Figari	M_2	F	7.6	6.4	6.5	84.2	PRIMO
NMB TY 5209	*Macaca majori*	Capo Figari	M_2	?	8.8	7.2	7.0	81.8	PRIMO
NMB TY 5210	*Macaca majori*	Capo Figari	M_2	?	8.7	7.0	6.8	80.5	PRIMO
NMB TY 12454	*Macaca majori*	Capo Figari	M_2	?	8.6	7.0	6.6	81.4	PRIMO
NMB TY 12460	*Macaca majori*	Capo Figari	M_2	M	8.6	7.1	6.9	82.6	PRIMO
NMB TY 12475	*Macaca majori*	Capo Figari	M_2	?	8.8	6.9	6.3	78.4	PRIMO
GPI-F 1652	*Macaca libyca*	Wadi Natrun	M_2	?	9.6	8.5	8.6	88.5	PRIMO
YPM 21551	*Macaca libyca*	Wadi Natrun	M_2	F	9.4	8.1	7.8	86.2	PRIMO
YPM 21552	*Macaca libyca*	Wadi Natrun	M_2	?	9.8	9.4	—	(95.9)	PRIMO
BSPG 1920 I 505	*Macaca libyca*	Wadi Natrun	M_2	?	10.9	7.9	7.3	72.5	PRIMO
MB Ma 42444	*Parapapio ado*	Laetoli	M_2	M	11.4	9.0	8.0	78.9	PRIMO
MB Ma 42445	*Parapapio ado*	Laetoli	M_2	?	11.3	8.6	8.1	76.1	PRIMO
MB Ma 42451	*Parapapio ado*	Laetoli	M_2	?	10.0	7.9	7.1	79.0	PRIMO
MB Ma 42452	*Parapapio ado*	Laetoli	M_2	?	9.6	7.3	7.5	76.0	PRIMO
MB Ma 42453	*Parapapio ado*	Laetoli	M_2	?	10.8	8.6	8.0	79.6	PRIMO

MB Ma 42442 (& 42446)	*Parapapio ado*	Laetoli	M_2	M	11.0	9.8	9.2	89.1	PRIMO
NMT LAET 74-223	*Parapapio ado*	Laetoli	M_2	F	10.8	8.7	8.8	80.6	PRIMO
NMT LAET 74-243-4	*Parapapio ado*	Laetoli	M_2	F	10.6	8.3	7.8	78.3	PRIMO
NMT LAET 75-483	*Parapapio ado*	Laetoli	M_2	?	11.3	8.8	7.9	77.9	PRIMO
NMT LAET 75-812	*Parapapio ado*	Laetoli	M_2	?	12.5	9.8	8.8	78.4	PRIMO
NMT LAET 75-3035	*Parapapio ado*	Laetoli	M_2	F	10.6	8.2	8.9	77.4	PRIMO
NMT LAET 77-4595	*Parapapio ado*	Laetoli	M_2	F	11.3	9.1	9.4	80.5	PRIMO
KNM-KP 26942	*Parapapio* cf. *ado*	Kanapoi	M_2	?	11.1	9.8	8.7	88.3	Frost et al. (2020a)
KNM-KP 29306	*Parapapio* cf. *ado*	Kanapoi	M_2	M	9.3	8.3	7.9	89.2	Frost et al. (2020a)
KNM-KP 29312	*Parapapio* cf. *ado*	Kanapoi	M_2	?	10.8	9.5	8.7	88.0	Frost et al. (2020a)
KNM-KP 30538	*Parapapio* cf. *ado*	Kanapoi	M_2	F	9.5	7.9	7.2	83.2	Frost et al. (2020a)
KNM-KP 53085	*Parapapio* cf. *ado*	Kanapoi	M_2	M	10.7	8.9	8.6	83.2	Frost et al. (2020a)
KNM-ER 3122	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	8.8	7.4	6.7	84.1	Jablonski et al. (2008)
KNM-ER 17587	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	8.9	8.9	7.9	100.0	Jablonski et al. (2008)
KNM-ER 18881	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	9.4	8.3	8.1	88.3	Jablonski et al. (2008)
KNM-ER 36983	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	11.0	8.2	8	74.5	Jablonski et al. (2008)
KNM-ER 36998	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	11.1	8.4	7.9	75.7	Jablonski et al. (2008)
KNM-ER 37093	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	9.6	8.1	7.9	84.4	Jablonski et al. (2008)
KNM-ER 37128	*Parapapio* cf. *ado*	Koobi Fora	M_2	?	9.9	7.0	7.1	70.7	Jablonski et al. (2008)
KNM-LT 415	*Parapapio lothagamensis*	Lothagam	M_2	?	8.2	7.4	6.9	90.2	Leakey et al. (2003)
KNM-LT 22971	*Parapapio lothagamensis*	Lothagam	M_2	?	8.8	8.4	7.8	95.5	Leakey et al. (2003)
KNM-LT 23091	*Parapapio lothagamensis*	Lothagam	M_2	M	9.1	7.9	7.8	86.8	Leakey et al. (2003)
KNM-LT 24094	*Parapapio lothagamensis*	Lothagam	M_2	?	8.1	6.5	5.9	80.2	Leakey et al. (2003)
KNM-LT 24095	*Parapapio lothagamensis*	Lothagam	M_2	?	9.1	7.4	7.7	81.3	Leakey et al. (2003)
KNM-LT 24122	*Parapapio lothagamensis*	Lothagam	M_2	?	9.5	7.4	6.6	77.9	Leakey et al. (2003)
KNM-LT 24135	*Parapapio lothagamensis*	Lothagam	M_2	?	8.3	7.4	7.2	89.2	Leakey et al. (2003)
KNM-LT 24140	*Parapapio lothagamensis*	Lothagam	M_2	?	(8.6)	(7.0)	(7.2)	(81.4)	Leakey et al. (2003)
KNM-LT 26395	*Parapapio lothagamensis*	Lothagam	M_2	?	8.5	7.1	6.9	83.5	Leakey et al. (2003)

KNM-LT 28728	*Parapapio lothagamensis*	Lothagam	M_2	?	10.3	9.0	8.4	87.4	Leakey et al. (2003)
NME GWM-3/P84	*Pliopapio alemui*	Gona	M_2	F	9.0	7.0	7.4	77.8	Frost et al. (2020b)
NME GWMS-11/P65	cf. *Pliopapio alemui*	Gona	M_2	?	9.1	7.4	7.0	81.3	Frost et al. (2020b)
NME ARA-VP 1/816	*Pliopapio alemui*	Aramis	M_2	F	9.47	7.58	7.6	80.1	PRIMO
NME ARA-VP 1/1006	*Pliopapio alemui*	Aramis	M_2	F	9.22	6.88	7.05	74.7	PRIMO
NME ARA-VP 1/1349	*Pliopapio alemui*	Aramis	M_2	F	8.74	6.49	6.67	74.2	PRIMO
NME ARA-VP 6/8	*Pliopapio alemui*	Aramis	M_2	?	8.76	6.38	6.82	72.8	PRIMO
GFT4.2'19-1-R13-63	*Macaca* cf. *sylvanus*	Guefaït-4.2	M_3	?	10.0	7.6	7.5	76.0	This study
AMNH-M 202286	*Macaca sylvanus sylvanus*	extant	M_3	M	12.2	8.2	7.6	67.2	PRIMO
MNHN-ZM-AC 1910.166	*Macaca sylvanus sylvanus*	extant	M_3	M	12.5	9.3	7.5	74.4	PRIMO
MNHN-ZM-AC 1900.244	*Macaca sylvanus sylvanus*	extant	M_3	F	11.1	8.0	6.7	72.1	PRIMO
MNHN-ZM-AC 1874.343	*Macaca sylvanus sylvanus*	extant	M_3	M	12.2	8.4	6.3	68.9	PRIMO
MNHN-ZM-AC A-1376	*Macaca sylvanus sylvanus*	extant	M_3	F	11.6	8.3	6.4	71.6	PRIMO
NHMUK-Z ZD.1843.5.27.1	*Macaca sylvanus sylvanus*	extant	M_3	M	11.5	7.7	6.6	67.0	PRIMO
NHMUK-Z ZD.1911.11.4.1	*Macaca sylvanus sylvanus*	extant	M_3	F	11.5	8.6	6.9	74.8	PRIMO
NHMUK-Z ZD.1919.8.19.1	*Macaca sylvanus sylvanus*	extant	M_3	M	10.6	6.8	6.0	64.2	PRIMO
AMNH-M 185277	*Macaca sylvanus sylvanus*	extant	M_3	F	10.7	7.89	6.44	73.7	PRIMO
AMNH-M 19014	*Macaca sylvanus sylvanus*	extant	M_3	F	10.51	7.67	6.19	73.0	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_3	?	12.6	9.4	7.6	74.6	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_3	?	11.4	8.0	6.5	70.2	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_3	?	13.2	7.4	6.8	56.1	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_3	?	12.4	8.3	7.2	66.9	PRIMO
MNHN-F UNCAT	*Macaca sylvanus sylvanus*	extant	M_3	M	11.8	7.9	6.4	66.9	PRIMO
NMNH 196984	*Macaca sylvanus sylvanus*	extant	M_3	F	11.09	7.59	6.44	68.4	PRIMO
NMNH 476782	*Macaca sylvanus sylvanus*	extant	M_3	F	10.7	7.31	6.79	68.3	PRIMO
NMNH 476786	*Macaca sylvanus sylvanus*	extant	M_3	F	11.73	8.24	7.16	70.2	PRIMO
NMNH 341870	*Macaca sylvanus sylvanus*	extant	M_3	F	9.34	6.56	5.67	70.2	PRIMO
NMNH 341872	*Macaca sylvanus sylvanus*	extant	M_3	F	9.49	6.41	5.9	67.5	PRIMO

NMNH 476783	*Macaca sylvanus sylvanus*	extant	M_3	F	9.81	6.79	6.67	69.2	PRIMO
NMNH 476784	*Macaca sylvanus sylvanus*	extant	M_3	M	10.95	7.61	6.77	69.5	PRIMO
NMNH 255979	*Macaca sylvanus sylvanus*	extant	M_3	M	11.77	9.26	7.92	78.7	PRIMO
AMNH-M 2060/5484	*Macaca sylvanus sylvanus*	extant	M_3	F	12.1	8.55	7.05	70.7	D.M.A.
AMNH-M 19178	*Macaca sylvanus sylvanus*	extant	M_3	F	13.05	8.95	7.55	68.6	D.M.A.
MCZ 7098	*Macaca sylvanus sylvanus*	extant	M_3	M	10.3	(7.6)	>6.5	(73.8)	D.M.A.
MNHN-ZM-MO 1939.1118	*Macaca sylvanus sylvanus*	extant	M_3	M	12.2	9.5	7.45	77.9	PRIMO
MNHN-ZM-MO 1945.173	*Macaca sylvanus sylvanus*	extant	M_3	F	12.4	8.0	6.75	64.5	PRIMO
MNHN-ZM-MO 1962.1473	*Macaca sylvanus sylvanus*	extant	M_3	M	11.85	8.4	6.9	70.9	PRIMO
MNHN-ZM-MO 1931.835	*Macaca sylvanus sylvanus*	extant	M_3	M	12.3	9.0	7.0	73.2	PRIMO
MNHN-ZM-MO 1940.1201	*Macaca sylvanus sylvanus*	extant	M_3	M	12.7	8.5	6.7	66.9	PRIMO
MNHN-ZM-MO 1926.299	*Macaca sylvanus sylvanus*	extant	M_3	M	11.3	11.4	7.9	100.9	PRIMO
MNHN-ZM-MO 1942.180	*Macaca sylvanus sylvanus*	extant	M_3	F	9.6	7.65	6.4	79.7	PRIMO
MNHN-ZM-AC 1907.59	*Macaca sylvanus sylvanus*	extant	M_3	M	14.6	9.1	7.8	62.3	PRIMO
MNHN-ZM-AC A1415	*Macaca sylvanus sylvanus*	extant	M_3	M	11.4	8.2	6.2	71.9	PRIMO
MNHN-ZM-AC 1879.133	*Macaca sylvanus sylvanus*	extant	M_3	M	12.6	8.6	6.7	68.3	PRIMO
MNHG 446.36	*Macaca sylvanus sylvanus*	extant	M_3	F	11.5	8.8	6.7	76.5	PRIMO
NHMW 32990	*Macaca sylvanus sylvanus*	extant	M_3	M	11.55	7.55	6.45	65.4	PRIMO
NHMW 2614/B3976	*Macaca sylvanus sylvanus*	extant	M_3	M	13.6	8.6	7.6	63.2	PRIMO
NHMW B 3849	*Macaca sylvanus sylvanus*	extant	M_3	F	11.8	7.8	6.6	66.1	PRIMO
NHMW 4408	*Macaca sylvanus sylvanus*	extant	M_3	M	13.0	8.8	7.4	67.7	PRIMO
NHMW 2616	*Macaca sylvanus sylvanus*	extant	M_3	F	11.2	8.0	6.7	71.4	PRIMO
NHMW 2615	*Macaca sylvanus sylvanus*	extant	M_3	F	12.1	8.1	6.6	66.9	PRIMO
NHMW 4407	*Macaca sylvanus sylvanus*	extant	M_3	F	11.5	8.4	6.8	73.0	PRIMO
NHMW 34222	*Macaca sylvanus sylvanus*	extant	M_3	F	10.8	7.8	7.0	72.2	PRIMO
MAU-T no number	*Macaca sylvanus sylvanus*	extant	M_3	F	9.75	6.85	6.85	70.3	PRIMO
NHMUK-Z ZD.1939.3470	*Macaca sylvanus sylvanus*	extant	M_3	F	10.4	7.3	6.1	70.2	PRIMO
NHMUK-Z ZD.1984.1734	*Macaca sylvanus sylvanus*	extant	M_3	M	11.7	6.9	6.2	59.0	PRIMO

NHMUK-Z ZD.1858.5.4.247	*Macaca sylvanus sylvanus*	extant	M_3	M	11.4	8.2	7.1	71.9	PRIMO
NHMUK-Z ZD.1975.569	*Macaca sylvanus sylvanus*	extant	M_3	M	12.3	7.8	6.8	63.4	PRIMO
NHMUK-Z ZD.1977.3119	*Macaca sylvanus sylvanus*	extant	M_3	M	12.5	8.1	7.3	64.8	PRIMO
SMF 71-1301	*Macaca sylvanus pliocena*	Hohensülzen	M_3	?	12.1	7.3	6.7	60.3	PRIMO
Bonifay UNCAT	*Macaca sylvanus pliocena*	St. Estève Janson	M_3	M	14.4	9.4	8.4	65.3	PRIMO
NMP UNCAT	*Macaca sylvanus pliocena*	Zlaty Kun C718	M_3	?	11.7	8.0	7.5	68.4	PRIMO
NMP UNCAT	*Macaca sylvanus pliocena*	Zlaty Kun C718	M_3	M	13.0	8.0	7.9	61.5	PRIMO
ORGNAC 723	*Macaca sylvanus pliocena*	Orgnac-3	M_3	?	13.0	8.2	8.0	63.1	PRIMO
NMP UNCAT	*Macaca sylvanus pliocena*	Gombasek	M_3	M	13.5	8.6	7.7	63.7	PRIMO
IG-R UNCAT	*Macaca sylvanus pliocena*	Monte Sacro, Rome	M_3	M	13.0	8.2	7.2	63.1	PRIMO
LPHP-S 777/G1 & 771	*Macaca sylvanus pliocena*	Gajtan	M_3	F?	12.2	7.6	7.1	62.3	PRIMO
SIP-V unknown	*Macaca sylvanus pliocena*	Cova Negra	M_3	?	13.9	9.2	—	66.2	PRIMO
UG unknown	*Macaca sylvanus pliocena*	Solana de Zamborino	M_3	?	12.1	7.5	7.1	62.0	PRIMO
BGDG LzII.M15.-271.300	*Macaca sylvanus* cf. *pliocena*	Lezetxiki II	M_3	F	13.0	8.6	7.4	66.2	Castaños et al. (2011)
NMR 999100010537	*Macaca sylvanus* cf. *pliocena*	North Sea	M_3	?	12.1	7.8	7.5	64.5	Reumer et al. (2018)
MCSNBS PA11136	*Macaca sylvanus* cf. *pliocena*	Quecchia Quarry	M_3	?	12.1	8.2	—	67.8	Bona et al. (2016)
HUJ-ESE UB 314	*Macaca sylvanus florentina*	'Ubeidiya	M_3	F	12.03	7.07	6.73	58.8	PRIMO
HUJ-ESE UB 329	*Macaca sylvanus florentina*	'Ubeidiya	M_3	?	10.2	7.15	6.0	70.1	PRIMO
IGF 10034	*Macaca sylvanus florentina*	Upper Valdarno	M_3	M	12.3	8.3	7.4	67.5	PRIMO
IGF 10035	*Macaca sylvanus florentina*	Upper Valdarno	M_3	M	12.8	8.2	7.9	64.1	PRIMO
IGF 12868	*Macaca sylvanus florentina*	Upper Valdarno	M_3	F	13.5	8.4	7.8	62.2	PRIMO
IGF 13084	*Macaca sylvanus florentina*	Upper Valdarno	M_3	?	12.8	7.6	7.1	59.4	PRIMO
IGF 13087	*Macaca sylvanus florentina*	Upper Valdarno	M_3	?	11.5	6.8	6.4	59.1	PRIMO
NMB VA 352	*Macaca sylvanus florentina*	Upper Valdarno	M_3	M	12.3	8.0	7.2	65.0	PRIMO
NMB VA 2058	*Macaca sylvanus florentina*	Upper Valdarno	M_3	M	12.1	7.5	6.8	62.0	PRIMO
MAP 10	*Macaca sylvanus florentina*	Upper Valdarno	M_3	M	14.5	7.8	7.2	53.8	PRIMO
IQW 1980/16566 (Mei. 16087)	*Macaca sylvanus florentina*	Untermassfeld	M_3	F	11.0	7.4	7.0	67.3	Zapfe (2001)
IQW 1984/20021 (Mei. 16541)	*Macaca sylvanus florentina*	Untermassfeld	M_3	M	13.4	8.4	7.4	62.7	Zapfe (2001)

MUPE GCP-CV4063	*Macaca sylvanus florentina*	Quibas	M_3	?	12.1	8.8	7.6	72.7	Alba et al. (2011)
UM Q03-Ec-1	*Macaca sylvanus florentina*	Quibas	M_3	?	12.0	7.5	6.6	62.5	Alba et al. (2011)
MUPE GCP-CV4060	*Macaca sylvanus florentina*	Quibas	M_3	?	(12.5)	7.8	6.7	62.4	Alba et al. (2011)
MSNC Mugello A	*Macaca sylvanus florentina*	Mugello	M_3	?	12.8	7.3	6.7	57.0	Zanaga (1998)
FSL 40137	*Macaca sylvanus prisca*	Montpellier	M_3	?	10.8	6.9	6.1	63.9	PRIMO
NHMUK-P M11713	*Macaca majori*	Capo Figari	M_3	?	10.6	6.5	6.2	61.3	PRIMO
IGF 2035	*Macaca majori*	Capo Figari	M_3	M	10.6	7.0	6.5	66.0	PRIMO
NMB TY 5209	*Macaca majori*	Capo Figari	M_3	?	9.4	7.1	6.5	75.5	PRIMO
NMB TY 5210	*Macaca majori*	Capo Figari	M_3	?	10.5	7.0	6.2	66.7	PRIMO
NMB TY 5211	*Macaca majori*	Capo Figari	M_3	?	11.6	7.0	6.4	60.3	PRIMO
NMB TY 5214	*Macaca majori*	Capo Figari	M_3	?	9.9	7.3	6.0	73.7	PRIMO
NMB TY 5304	*Macaca majori*	Capo Figari	M_3	?	9.4	7.4	6.5	78.7	PRIMO
NMB TY 12454	*Macaca majori*	Capo Figari	M_3	?	10.1	7.4	6.6	73.3	PRIMO
NMB TY 12460	*Macaca majori*	Capo Figari	M_3	M	10.1	7.1	6.7	70.3	PRIMO
NMB TY 12469	*Macaca majori*	Capo Figari	M_3	?	10.7	7.0	6.7	65.4	PRIMO
NMB TY 12470	*Macaca majori*	Capo Figari	M_3	?	9.0	7.3	6.2	81.1	PRIMO
NMB TY 12514	*Macaca majori*	Capo Figari	M_3	?	10.5	7.3	—	69.5	PRIMO
GPI-F 1652	*Macaca libyca*	Wadi Natrun	M_3	?	11.7	8.3	7.6	70.9	PRIMO
YPM 21552	*Macaca libyca*	Wadi Natrun	M_3	?	13.2	9.2	8.1	69.7	PRIMO
MB Ma 42445	*Parapapio ado*	Laetoli	M_3	?	14.9	9.1	8.1	61.1	PRIMO
MB Ma 42441	*Parapapio ado*	Laetoli	M_3	F	14.3	8.7	8.2	60.8	PRIMO
MB Ma 42442 (& 42446)	*Parapapio ado*	Laetoli	M_3	M	15.0	10.8	8.9	72.0	PRIMO
NHMUK-P M14940	*Parapapio ado*	Laetoli	M_3	F	12.9	8.1	7.7	62.8	PRIMO
NMT LAET 64	*Parapapio ado*	Laetoli	M_3	?	13.6	8.4	7.2	61.8	PRIMO
NMT LAET 74-223	*Parapapio ado*	Laetoli	M_3	F	12.9	9.1	8.6	70.5	PRIMO
NMT LAET 74-243-4	*Parapapio ado*	Laetoli	M_3	F	13.9	8.7	8.1	62.6	PRIMO
NMT LAET 75-483	*Parapapio ado*	Laetoli	M_3	?	14.5	9.1	8.1	62.8	PRIMO
NMT LAET 75-1209	*Parapapio ado*	Laetoli	M_3	F	12.5	7.8	6.5	62.4	PRIMO

NMT LAET 75-1390	*Parapapio ado*	Laetoli	M_3	?	14.4	9.6	8.2	66.7	PRIMO
NMT LAET 75-3035	*Parapapio ado*	Laetoli	M_3	F	12.9	8.3	8.0	64.3	PRIMO
NMT LAET 77-4568	*Parapapio ado*	Laetoli	M_3	?	12.6	8.8	8.5	69.8	PRIMO
NMT LAET 77-4595	*Parapapio ado*	Laetoli	M_3	F	14.2	9.5	8.7	66.9	PRIMO
KNM-KP 286	*Parapapio* cf. *ado*	Kanapoi	M_3	M	12.6	10.1	8.6	80.2	Frost et al. (2020a)
KNM-KP 26942	*Parapapio* cf. *ado*	Kanapoi	M_3	?	14.3	9.7	8.1	67.8	Frost et al. (2020a)
KNM-KP 29305	*Parapapio* cf. *ado*	Kanapoi	M_3	?	11.0	8.4	7.1	76.4	Frost et al. (2020a)
KNM-KP 29306	*Parapapio* cf. *ado*	Kanapoi	M_3	?	12.3	8.6	8.2	69.9	Frost et al. (2020a)
KNM-KP 29312	*Parapapio* cf. *ado*	Kanapoi	M_3	?	12.2	9.1	8.5	74.6	Frost et al. (2020a)
KNM-KP 30230	*Parapapio* cf. *ado*	Kanapoi	M_3	F	12.3	8.3	7.3	67.5	Frost et al. (2020a)
KNM-KP 30233	*Parapapio* cf. *ado*	Kanapoi	M_3	M	13.0	8.9	8.1	68.5	Frost et al. (2020a)
KNM-KP 30399	*Parapapio* cf. *ado*	Kanapoi	M_3	?	13.4	9.5	8.5	70.9	Frost et al. (2020a)
KNM-KP 30483	*Parapapio* cf. *ado*	Kanapoi	M_3	?	13.1	9.5	8.4	72.5	Frost et al. (2020a)
KNM-KP 30535	*Parapapio* cf. *ado*	Kanapoi	M_3	?	13.4	10.0	8.2	74.6	Frost et al. (2020a)
KNM-KP 30538	*Parapapio* cf. *ado*	Kanapoi	M_3	F	11.7	9.3	8.4	79.5	Frost et al. (2020a)
KNM-KP 32806	*Parapapio* cf. *ado*	Kanapoi	M_3	?	10.9	7.8	7.1	71.6	Frost et al. (2020a)
KNM-KP 32817	*Parapapio* cf. *ado*	Kanapoi	M_3	?	11.1	8.1	6.9	73.0	Frost et al. (2020a)
KNM-KP 32869	*Parapapio* cf. *ado*	Kanapoi	M_3	M	(12.19)	(8.75)	8.1	(71.8)	Frost et al. (2020a)
KNM-KP 59889	*Parapapio* cf. *ado*	Kanapoi	M_3	?	12.9	8.5	7.8	65.9	Frost et al. (2020a)
KNM-KP 59899	*Parapapio* cf. *ado*	Kanapoi	M_3	?	11.4	8.1	6.7	71.1	Frost et al. (2020a)
KNM-ER 3122	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	12.3	7.7	6.9	62.6	Jablonski et al. (2008)
KNM-ER 19539	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	11.6	8.1	6.6	69.8	Jablonski et al. (2008)
KNM-ER 20437	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	13.3	8.0	7.2	60.2	Jablonski et al. (2008)
KNM-ER 36915	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	12.7	8.3	7.6	65.4	Jablonski et al. (2008)
KNM-ER 36921	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	12.5	8.0	7.3	64.0	Jablonski et al. (2008)
KNM-ER 36970	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	13.2	8.4	7.2	63.6	Jablonski et al. (2008)
KNM-ER 36972	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	14.8	9.4	8.4	63.5	Jablonski et al. (2008)
KNM-ER 36973	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	13.8	8.0	7.2	58.0	Jablonski et al. (2008)

KNM-ER 36987	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	13.2	8.8	7.6	66.7	Jablonski et al. (2008)
KNM-ER 37013	*Parapapio* cf. *ado*	Koobi Fora	M_3	?	13.0	8.6	7.6	66.2	Jablonski et al. (2008)
KNM-ER 39518	*Parapapio* cf. ado	Koobi Fora	M_3	?	11.9	7.6	7.3	63.9	Jablonski et al. (2008)
KNM-LT 415	*Parapapio lothagamensis*	Lothagam	M_3	?	11.0	7.8	7.0	70.9	Leakey et al. (2003)
KNM-LT 23066	*Parapapio lothagamensis*	Lothagam	M_3	?	12.5	7.9	7.7	63.2	Leakey et al. (2003)
KNM-LT 23090	*Parapapio lothagamensis*	Lothagam	M_3	F	10.5	7.5	6.6	71.4	Leakey et al. (2003)
KNM-LT 23091	*Parapapio lothagamensis*	Lothagam	M_3	M	11.5	8.0	7.4	69.0	Leakey et al. (2003)
KNM-LT 24094	*Parapapio lothagamensis*	Lothagam	M_3	?	10.4	6.7	5.9	64.4	Leakey et al. (2003)
KNM-LT 24105	*Parapapio lothagamensis*	Lothagam	M_3	?	12.5	9.2	7.6	73.6	Leakey et al. (2003)
KNM-LT 24117	*Parapapio lothagamensis*	Lothagam	M_3	?	13.5	8.4	7.9	62.2	Leakey et al. (2003)
KNM-LT 24122	*Parapapio lothagamensis*	Lothagam	M_3	?	11.0	7.0	6.0	63.6	Leakey et al. (2003)
KNM-LT 24133	*Parapapio lothagamensis*	Lothagam	M_3	?	11.9	8.9	7.6	74.8	Leakey et al. (2003)
KNM-LT 24135	*Parapapio lothagamensis*	Lothagam	M_3	?	10.4	7.4	—	71.2	Leakey et al. (2003)
KNM-LT 24136	*Parapapio lothagamensis*	Lothagam	M_3	M	12.4	7.8	6.8	62.9	Leakey et al. (2003)
KNM-LT 24139	*Parapapio lothagamensis*	Lothagam	M_3	?	11.1	8.1	7.1	73.0	Leakey et al. (2003)
KNM-LT 26391	*Parapapio lothagamensis*	Lothagam	M_3	?	10.7	7.2	6.4	67.3	Leakey et al. (2003)
KNM-LT 26409	*Parapapio lothagamensis*	Lothagam	M_3	?	11.2	7.3	6.4	65.2	Leakey et al. (2003)
KNM-LT 28755	*Parapapio lothagamensis*	Lothagam	M_3	?	9.7	7.3	6.3	75.3	Leakey et al. (2003)
NME GWM-3/P84	*Pliopapio alemui*	Gona	M_3	F	11.5	7.1	—	61.7	Frost et al. (2020b)
NME GWM-3/P164	*Pliopapio alemui*	Gona	M_3	?	10.9	7.6	6.0	69.7	Frost et al. (2020b)
NME GWM-3w/P183	*Pliopapio alemui*	Gona	M_3	?	10.6	7.0	5,9	66.0	Frost et al. (2020b)
NME GWM-5m/P125	*Pliopapio alemui*	Gona	M_3	?	10.5	6.9	6.2	65.7	Frost et al. (2020b)
NME GWM-5sw/P153	*Pliopapio alemui*	Gona	M_3	?	11.7	7.6	7.5	65.0	Frost et al. (2020b)
NME GWM-5m/P281	*Pliopapio alemui*	Gona	M_3	?	10.1	7.4	6.8	73.3	Frost et al. (2020b)
NME GWM-5sw/P296	*Pliopapio alemui*	Gona	M_3	?	9.5	7.0	6.7	73.7	Frost et al. (2020b)
NME GWM-5m/P514	*Pliopapio alemui*	Gona	M_3	?	11.9	7.7	6.8	64.7	Frost et al. (2020b)
NME GWM-9n/P89	*Pliopapio alemui*	Gona	M_3	?	11.5	7.2	6.5	62.6	Frost et al. (2020b)
NME GWM-9m/P256	*Pliopapio alemui*	Gona	M_3	?	12.1	8.4	7.9	69.4	Frost et al. (2020b)

NME GWM-25/27/P100	*Pliopapio alemui*	Gona	M_3	?	12.3	7.7	7.0	62.6	Frost et al. (2020b)
NME GWM-45/P46	*Pliopapio alemui*	Gona	M_3	?	11.6	7.5	6.8	64.7	Frost et al. (2020b)
NME GWMS-11/P65	cf. *Pliopapio alemui*	Gona	M_3	?	11.4	7.2	7.2	63.2	Frost et al. (2020b)
NME ARA-VP 1/816	*Pliopapio alemui*	Aramis	M_3	F	11.92	7.70	7.00	64.6	PRIMO
NME ARA-VP 1/1006	*Pliopapio alemui*	Aramis	M_3	F	10.47	7.44	6.42	71.0	PRIMO
NME ARA-VP 1/1349	*Pliopapio alemui*	Aramis	M_3	F	9.70	6.79	6.36	70.0	PRIMO
NME ARA-VP 1/744	*Pliopapio alemui*	Aramis	M_3	M	10.75	6.70	6.14	62.3	PRIMO
NME ARA-VP 1/1571	*Pliopapio alemui*	Aramis	M_3	?	11.20	6.65	6.18	59.3	PRIMO
NME ARA-VP 1/1859	*Pliopapio alemui*	Aramis	M_3	?	13.14	7.80	7.43	59.4	PRIMO
NME ARA-VP 1/190	*Pliopapio alemui*	Aramis	M_3	?	11.12	6.94	6.65	62.4	PRIMO
NME ARA-VP 1/8	*Pliopapio alemui*	Aramis	M_3	?	10.57	6.70	5.88	63.4	PRIMO
NME ARA-VP 1/1377	*Pliopapio alemui*	Aramis	M_3	?	11.86	7.42	6.76	62.6	PRIMO
NME ARA-VP 1/1574	*Pliopapio alemui*	Aramis	M_3	?	11.16	6.68	6.75	59.9	PRIMO
NME ARA-VP 1/289	*Pliopapio alemui*	Aramis	M_3	?	11.73	7.56	7.59	64.5	PRIMO
NME ARA-VP 1/1615	*Pliopapio alemui*	Aramis	M_3	?	11.68	7.49	6.80	64.1	PRIMO
NME ARA-VP 1/9	*Pliopapio alemui*	Aramis	M_3	?	11.85	7.17	6.71	60.5	PRIMO
NME ARA-VP 1/492	*Pliopapio alemui*	Aramis	M_3	?	12.57	7.35	6.92	58.5	PRIMO
NME ARA-VP 1/1573	*Pliopapio alemui*	Aramis	M_3	?	12.42	7.36	6.68	59.3	PRIMO
NME ARA-VP 1/12	*Pliopapio alemui*	Aramis	M_3	?	10.49	7.08	6.43	67.5	PRIMO
NME ARA-VP 6/8	*Pliopapio alemui*	Aramis	M_3	?	10.62	6.48	6.84	61.0	PRIMO
NME ARA-VP 6/659	cf. *Pliopapio alemui*	Aramis	M_3	?	11.64	7.42	6.12	63.7	PRIMO

Abbreviations: F = female; M = male; ? = unknown sex.

Institutional acronyms: AMNH-M = American Museum of Natural History (Mammalogy), New York, USA; BGDG = Basque Government official repository institution for the District of Guipúzcoa, San Sebastián, Spain; UNIARQ = Centro de Arqueologia da Universidade de Lisboa, Lisbon, Portugal; Bonifay = Research collection of Dr. Marie-Francoise Bonifay, Marseille, France; BSPG = Bayerische Staatssammlung für Paläontologie und Geologie, Munich, Germany; FSL = Dept. Sciences de la Terre, Faculté des Sciences, Université Claude-Bernard Lyon I, Lyon, France; GOV =

Soprintendenza dell'Abruzzo, Chieti, Italy; GPI = Geologisches-Paläontologisches Institut, Universität Freiburg im Breisgau, Freiburg, Germany; Harlé = Collection of M. Édouard Harlé (not located), Toulouse, France; HUJ-ESE = Hebrew University (Ecology, Systematics & Evolution), Jerusalem, Israel; IAPU-P = Istituto di Antropologia e Paleontologia Umana, Università di Pisa, Italy; IG-R = Istututo di Geologia, Universita di Roma, Italy; IGF = Museo di Storia Naturale (Sezione di Paleontologia e Geologia), Florence, Italy—formerly Istituto di Geologia e Paleontologia, Università di Firenze); IPH = Institut de Paléontologie Humaine, Paris, France; IQW = Senckenberg Research Station of Quaternary Paleontology, Weimar, Germany; KNM = National Museums of Kenya, Kenya; LPHP-S = Laboratori i Paleontologjise Humane Prehistorise, ILP "Luigi Gurakuqi", Shkoder, Albania; MAP = Museo dell'Accademia del Poggio, Montevarchi, Italy; MB = Paläontologisches Museum der Humboldt-Universität, Berlin, Germany; MAC = Museo Anatomia Comparata, Modena, Italy; MAU-T = Museo di Anatomia Umana "Luigi Rolando", Università di Torino, Turin, Italy; MCSNBS = Museo Civico di Scienze Naturali di Brescia, Italy; MCZ = Museum of Comparative Zoology, Harvard, USA; MHNL = Musée des Confluences (formerly Musée d'Histoire Naturelle de Lyon), Lyon, France; MNHN-F = Muséum National d'Histoire Naturelle (Paleontology), Paris, France; MNHN-ZM-AC = Muséum National d'Histoire Naturelle (Zoologie Mammifères – Anatomie Comparée), Paris, France; MNHN-ZM-MO = Muséum National d'Histoire Naturelle (Zoologie Mammifères – Mammifères et Oiseaux), Paris, France; MPC = Museo dei Paleoambienti Sulcitani – E.A. Martel, Carbonia, Sardinia, Italy; MSNC = Museo di Storia naturale e del Calci, Pisa, Italy; MUPE = Museu Paleontològic d'Elx, Elche, Spain; NHMUK-Z = Natural History Museum (Zoology), London, United Kingdom—formerly British Museum (Natural History) [BM(NH)-Z]; NHMUK-P = Natural History Museum (Paleontology), London, United Kingdom—formerly British Museum (Natural History) [BM(NH)-P]; NMB = Naturhistorisches Museum Basel, Switzerland; NME = National Museum of Ethiopia, Addis Ababa, Ethiopia; NMNH = National Museum of Natural History, Smithsonian Institution, Washington D.C., USA; NMP = Národní Muzeum, Prague, Czech Republic; NMR = Natural History Museum Rotterdam, The Netherlands; NMT = National Museum of Tanzania, Dar es Salaam, Tanzania; ORGNAC = Orgnac faunal collection, details uncertain; RGM-L = Rijksmuseum van Geologie en Mineralogie, Leiden, The Netherlands; SIP-V = Servicio de Investigaciones Prehistorica, Diputación Provincial de Valencia, Spain; SMF = Senckenberg

Forschungsinstitut und Naturmuseum (Terrestrische Zoologie), Frankfurt am Mein, Germany (formerly Senckenberg Museum Forschungstinstitut); UG = Universidad de Granada, Granada, Spain; UM = Universidad de Murcia, Spain; ZMA = Zoologisch Museum, Universiteit van Amsterdam, The Netherlands.

[a] Data taken from the PRIMO (PRImate Morphometrics Online) database (http://primo.nycep.org), measured by one of the authors (D.M.A.), or available from the literature.

SOM Table S2

Descriptive statistics for the various measurements investigated in the tooth loci preserved at Guefaït-4.2, and the z-scores computed for the latter (bolded when significant at $p < 0.05$, i.e., $z > |1.96|$) based on the mean and SD of each sample.[a]

I^1 H	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	10.00	—	—	—	—
Macaca s. sylvanus	18	8.90	2.29	4.60	12.80	0.48
Macaca s. pliocena	1	10.10	—	—	—	—
Macaca s. florentina	2	10.17	1.32	9.23	11.10	—
Macaca majori	6	8.42	1.04	6.60	9.70	—
Parapapio (cf.) *ado*	2	11.75	0.64	11.30	12.20	—
Pliopapio alemui	6	8.19	1.56	6.40	10.40	—
I^1 MD	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	6.80	—	—	—	—
Macaca s. sylvanus	23	6.37	0.66	4.95	7.30	0.66
Macaca s. pliocena	1	6.08	—	—	—	—
Macaca s. florentina	2	7.13	0.10	7.06	7.20	—
Macaca majori	6	6.00	0.19	5.70	6.20	—
Parapapio (cf.) *ado*	2	6.95	0.78	6.40	7.50	—
‘*Parapapio' lothagamensis*	5	7.36	0.40	6.80	7.90	—
Pliopapio alemui	5	5.88	0.52	5.10	6.40	—
I^1 BL	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	6.20	—	—	—	—
Macaca s. sylvanus	23	5.50	0.48	4.73	6.50	1.47
Macaca s. pliocena	1	5.20	—	—	—	—
Macaca s. florentina	2	5.28	0.17	5.16	5.40	—
Macaca majori	6	4.73	0.72	4.20	6.10	—
Parapapio (cf.) *ado*	2	5.55	0.35	5.30	5.80	—
‘*Parapapio' lothagamensis*	5	6.26	0.15	6.10	6.40	—
Pliopapio alemui	5	5.82	0.54	5.00	6.30	—
I^1 BLI	*n*	Mean	SD	Minimum	Maximum	z-score

Guefaït	1	91.18	—	—	—	—
Macaca s. sylvanus	23	86.90	7.78	76.09	105.86	0.55
Macaca s. pliocena	1	76.47	—	—	—	—
Macaca s. florentina	2	74.05	1.35	73.09	75.00	—
Macaca majori	6	79.02	12.86	67.74	103.39	—
Parapapio (cf.) *ado*	2	80.07	3.87	77.33	82.81	—
‘*Parapapio' lothagamensis*	5	85.25	4.94	77.22	89.71	—
Pliopapio alemui	4	99.07	10.51	86.06	111.76	—
M_2 MD	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	8.60	—	—	—	—
Macaca s. sylvanus	55	9.35	0.80	7.05	11.10	-0.94
Macaca s. (cf.) *pliocena*	15	9.82	0.61	8.80	10.80	**-2.01**
Macaca s. florentina	22	9.61	0.47	8.90	11.00	**-2.17**
Macaca s. prisca	2	8.4	0.57	8.00	8.80	—
Macaca majori	9	8.57	0.39	7.60	8.90	0.07
Macaca libyca	4	9.93	0.67	9.40	10.90	—
Parapapio (cf.) *ado*	24	10.47	0.92	8.80	12.50	**-2.03**
‘*Parapapio' lothagamensis*	10	8.85	0.68	8.10	10.30	-0.37
Pliopapio alemui	6	9.05	0.28	8.74	9.47	—
M_2 BLm	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	7.10	—	—	—	—
Macaca s. sylvanus	55	7.69	0.66	6.30	9.30	-0.90
Macaca s. (cf.) *pliocena*	15	7.74	0.53	6.55	8.50	-1.21
Macaca s. florentina	22	7.58	0.55	6.70	8.50	-0.86
Macaca s. prisca	2	6.80	0	6.80	6.80	—
Macaca majori	9	6.93	0.23	6.40	7.20	0.77
Macaca libyca	4	8.48	0.67	7.90	9.40	—
Parapapio (cf.) *ado*	24	8.53	0.76	7.00	9.80	-1.89
‘*Parapapio' lothagamensis*	10	7.55	0.72	6.50	9.00	-0.63
Pliopapio alemui	6	6.96	0.48	6.38	7.58	—
M_2 BLl	*n*	Mean	SD	Minimum	Maximum	z-score

Guefaït	1	82.56	—	—	—	—
Macaca s. sylvanus	55	82.55	6.07	70.98	101.11	<0.01
Macaca s. (cf.) *pliocena*	15	78.99	5.07	69.31	89.77	0.70
Macaca s. florentina	22	78.81	4.00	72.48	87.37	0.94
Macaca s. prisca	2	81.14	5.47	77.27	85.00	—
Macaca majori	9	80.83	2.08	78.16	84.21	0.84
Macaca libyca	4	85.78	9.79	72.48	95.92	—
Parapapio (cf.) *ado*	24	81.73	6.39	70.71	100.00	0.13
‘*Parapapio' lothagamensis*	10	85.34	5.41	77.89	95.45	-0.51
Pliopapio alemui	6	76.80	3.45	72.77	81.30	—
M_3 MD	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	10.00	—	—	—	—
Macaca s. sylvanus	51	11.61	1.07	9.34	14.60	-1.50
Macaca s. (cf.) *pliocena*	13	12.78	0.81	11.70	14.40	**-3.41**
Macaca s. florentina	16	12.36	1.01	10.20	14.50	**-2.35**
Macaca s. prisca	1	10.80	—	—	—	—
Macaca majori	12	10.20	0.71	9.00	11.60	-0.28
Macaca libyca	2	12.45	1.06	11.70	13.20	—
Parapapio (cf.) *ado*	40	12.97	1.08	10.90	15.00	**-2.75**
‘*Parapapio’ lothagamensis*	15	11.36	1.03	9.70	13.50	-1.33
Pliopapio aleumi	31	11.31	0.84	9.50	13.14	-1.56
M_3 BLm	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	7.60	—	—	—	—
Macaca s. sylvanus	51	8.12	0.87	6.41	11.40	-0.60
Macaca s. (cf.) *pliocena*	13	8.20	0.62	7.30	9.40	-0.96
Macaca s. florentina	16	7.75	0.56	6.80	8.80	-0.27
Macaca s. prisca	1	6.90	—	—	—	—
Macaca majori	12	7.12	0.25	6.50	7.40	1.92
Macaca libyca	2	8.75	0.64	8.30	9.20	—
Parapapio (cf.) *ado*	40	8.74	0.73	7.60	10.80	-1.56
‘*Parapapio’ lothagamensis*	15	7.77	0.69	6.70	9.20	-0.24

Pliopapio alemui	31	7.26	0.42	6.48	8.40	0.81
M_3 BLI	*n*	Mean	SD	Minimum	Maximum	z-score
Guefaït	1	76.00	—	—	—	—
Macaca s. sylvanus	51	70.11	6.39	56.06	100.88	0.92
Macaca s. (cf.) *pliocena*	13	64.17	2.46	60.33	68.38	**4.81**
Macaca s. florentina	16	62.91	4.88	53.79	72.73	**2.68**
Macaca s. prisca	1	63.89	—	—	—	—
Macaca majori	12	70.17	6.54	60.34	81.11	0.89
Macaca libyca	2	70.32	0.88	69.70	70.94	—
Parapapio (cf.) *ado*	40	67.60	5.32	57.97	80.16	1.58
'*Parapapio' lothagamensis*	15	68.53	4.66	62.22	75.26	1.60
Pliopapio alemui	31	64.40	4.06	58.50	73.68	**2.86**

Abbreviations: H = maximum recorded crown height (mm); BL = buccolingual (or labiolingual) breadth (mm); BLm = buccolingual breadth across the mesial lophid (mm); BLI = breadth/length index (%; using BLm for molars); MD = mesiodistal length (mm).

[a] z-scores for I^1 measurements are only provided based on *M. s. sylvanus*, as the small samples available for the remaining taxa would make render them unreliable. For the same reason, z-scores for the molars are not provided based on *M. libyca*, *M. s. prisca*, or *Pl. alemui* M_2, while those for *M. majori* and '*P.' lothagamensis* should be interpreted with care.

SOM Table S3

ANOVA results for the metrical comparisons of taxa included in the comparative sample (see SOM Tables S1 and S2)[a]. Significant results at $p < 0.05$ are bolded. See SOM Table S4 for the results of pairwise comparisons.

Variable	F	*p*
I^1 H	1.59	0.203
I^1 MD	5.25	**0.001**
I^1 BL	5.80	**<0.001**
I^1 BLI	3.74	**0.008**
M_2 MD	10.82	**<0.001**
M_2 BL	9.94	**<0.001**
M_2 BLI	3.08	**0.005**
M_3 MD	16.58	**<0.001**
M_3 BL	15.90	**<0.001**
M_3 BLI	6.20	**<0.001**

Abbreviations: H = maximum recorded crown height (mm); BL = buccolingual (or labiolingual) breadth (mm); BLI = breadth/length index (%); MD = mesiodistal length (mm).

[a] *Macaca s. prisca* was excluded due to insufficient sample size.

SOM Table S4

Tukey's pairwise post hoc tests among the comparative sample (see SOM Tables S1 and S2)[a]. The Studentized range statistic Q is given below the diagonal, whereas *p*-values are given above. Significant differences at $p < 0.05$ are bolded.

I^1 H	*M. s. sylvanus*	*M. s. florentina*	*M. majori*	*P.* (cf.) *ado*	*Pl. alemui*	
M. s. sylvanus	—	0.902	0.984	0.302	0.936	
M. s. florentina	1.243	—	0.802	0.923	0.723	
M. majori	0.746	1.565	—	0.243	1.000	
P. (cf.) *ado*	2.797	1.159	2.984	—	0.189	
Pl. alemui	1.097	1.768	0.287		—	
I^1 MD	*M. s. sylvanus*	*M. s. florentina*	*M. majori*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	0.469	0.721	0.734	**0.013**	0.528
M. s. florentina	2.568	—	0.174	1.000	0.997	0.119
M. majori	1.979	3.430	—	0.341	**0.004**	0.999
P. (cf.) *ado*	1.963	0.446	2.883	—	0.954	0.246
'P.' lothagamensis	4.992	0.681	5.566	1.214	—	**0.003**
Pl. alemui	2.431	3.696	0.483	3.163	5.791	—
I^1 BL	*M. s. sylvanus*	*M. s. florentina*	*M. majori*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	0.990	**0.018**	1.000	**0.038**	0.774
M. s. florentina	0.864	—	0.750	0.994	0.190	0.777
M. majori	4.816	1.924	—	0.344	**0.001**	**0.010**
P. (cf.) *ado*	0.188	0.776	2.874	—	0.525	0.986

'P.' lothagamensis	4.415	3.366	7.244	2.438		—	0.719
Pl. alemui	1.853	1.855	5.156	0.927		1.999	—

I^1 BLI	*M. s. sylvanus*	*M. s. florentina*	*M. majori*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	0.335	0.351	0.882	0.999	0.114
M. s. florentina	2.899	—	0.979	0.980	0.620	**0.019**
M. majori	2.859	1.013	—	1.000	0.830	**0.010**
P. (cf.) *ado*	1.541	1.002	0.214	—	0.977	0.129
'P.' lothagamensis	0.555	2.227	1.712	1.030	—	0.176
Pl. alemui	3.733	4.803	5.163	3.647	3.423	—

M_2 MD	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	0.346	0.834	0.061	0.785	**<0.001**	0.468	0.977
M. s. (cf.) *pliocena*	3.139	—	0.990	**0.002**	1.000	0.114	**0.027**	0.352
M. s. florentina	2.046	1.189	—	**0.009**	0.993	**0.002**	0.108	0.683
M. majori	4.247	5.790	5.164	—	**0.044**	**<0.001**	0.991	0.915
M. libyca	2.177	0.378	1.124	4.417	—	0.854	0.194	0.562
P. (cf.) *ado*	8.993	3.906	5.705	9.535	1.987	—	**<0.001**	**<0.001**
'P.' lothagamensis	2.867	4.654	3.937	1.179	3.571	8.463	—	1.000
Pl. alemui	1.386	3.126	2.414	1.767	2.669	6.125	0.755	—

M_2 BLm	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	1.000	0.995	**0.020**	0.267	**<0.001**	0.997	0.122
M. s. (cf.) *pliocena*	0.341	—	0.994	0.052	0.451	**0.005**	0.995	0.174
M. s. florentina	1.065	1.098	—	0.163	0.164	**<0.001**	1.000	0.396

M. majori	4.802	4.331	3.685	—	**0.002**	**<0.001**	0.391	1
M. libyca	3.346	2.903	3.682	5.757	—	1.000	0.218	**0.007**
P. (cf.) *ado*	7.616	5.359	7.222	9.185	0.241	—	**0.002**	**<0.001**
'*P.*' *lothagamensis*	0.967	1.057	0.168	3.035	3.491	5.833	—	0.608
Pl. alemui	3.863	3.644	3.023	0.125	5.258	7.721	2.573	—

M_2 BLI	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	'*P.*' *lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	0.367	0.146	0.989	0.952	0.999	0.828	0.253
M. s. (cf.) *pliocena*	3.090	—	1.000	0.994	0.383	0.814	0.107	0.992
M. s. florentina	3.754	0.140	—	0.984	0.303	0.641	0.051	0.994
M. majori	1.208	1.104	1.296	—	0.820	1.000	0.649	0.869
M. libyca	1.581	3.054	3.249	2.085	—	0.880	1.000	0.208
P. (cf.) *ado*	0.851	2.102	2.503	0.579	1.901	—	0.623	0.531
'*P.*' *lothagamensis*	2.061	3.940	4.341	2.488	0.186	2.436	—	0.068
Pl. alemui	3.386	1.150	1.104	1.938	3.524	2.733	4.191	—

M_3 MD	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	'*P.*' *lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	**0.005**	0.149	**<0.001**	0.938	**<0.001**	0.989	0.876
M. s. (cf.) *pliocena*	5.356	—	0.953	**<0.001**	1.000	0.999	**0.005**	**<0.001**
M. s. florentina	3.751	1.578	—	**<0.001**	1.000	0.447	0.096	**0.015**
M. majori	6.282	9.192	8.093	—	0.065	**<0.001**	0.057	**0.027**
M. libyca	1.661	0.615	0.163	4.207	—	0.996	0.826	0.760
P. (cf.) *ado*	9.166	0.851	2.910	12.010	1.019	—	**<0.001**	**<0.001**
'*P.*' *lothagamensis*	1.223	5.339	3.991	4.277	2.068	7.580	—	1.000

Pl. alemui	1.915	6.356	4.909	4.646	2.239	9.913	0.245	—

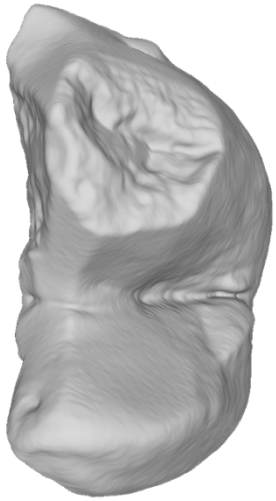
M_3 BLm	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	1.000	0.572	**0.001**	0.907	**0.001**	0.655	**<0.001**
M. s. (cf.) *pliocena*	0.536	—	0.653	**0.003**	0.965	0.220	0.709	**0.001**
M. s. florentina	2.647	2.477	—	0.238	0.525	**<0.001**	1.000	0.283
M. majori	6.441	5.578	3.425	—	**0.044**	**<0.001**	0.226	0.999
M. libyca	1.804	1.493	2.745	4.408	—	1.000	0.550	0.064
P. (cf.) *ado*	6.046	3.478	6.881	10.459	0.032	—	**<0.001**	**<0.001**
'P.' lothagamensis	2.474	2.357	0.088	3.459	2.692	6.618	—	0.272
Pl. alemui	7.785	5.870	3.296	0.863	4.212	12.750	3.327	—

M_3 BLI	*M. s. sylvanus*	*M. s.* (cf.) *pliocena*	*M. s. florentina*	*M. majori*	*M. libyca*	*P.* (cf.) *ado*	*'P.' lothagamensis*	*Pl. alemui*
M. s. sylvanus	—	**0.009**	**<0.001**	1.000	1.000	0.336	0.973	**<0.001**
M. s. (cf.) *pliocena*	5.085	—	0.998	0.097	0.793	0.471	0.378	1.000
M. s. florentina	6.687	0.900	—	**0.010**	0.579	0.063	0.070	0.985
M. majori	0.052	3.989	5.062	—	1.000	0.822	0.993	**0.035**
M. libyca	0.081	2.157	2.632	0.054	—	0.997	1.000	0.790
P. (cf.) *ado*	3.162	2.857	4.220	2.080	1.002	—	0.999	0.194
'P.' lothagamensis	1.427	3.063	4.165	1.126	0.634	0.821	—	0.213
Pl. alemui	6.676	0.180	1.286	4.522	2.164	3.563	3.501	—

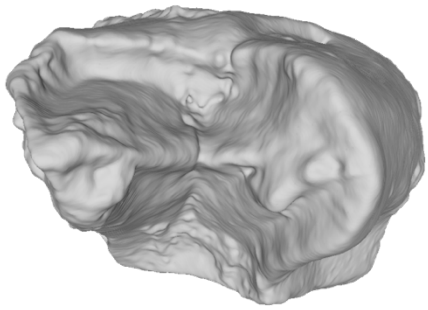
Abbreviations: BL = buccolingual (or labiolingual) breadth (mm); BLm = buccolingual breadth across the mesial lophid (mm); BLI = breadth/length index (%) (using BLm for molars); MD = mesiodistal length (mm).

[a] *Macaca s. prisca* was excluded due to insufficient sample size.

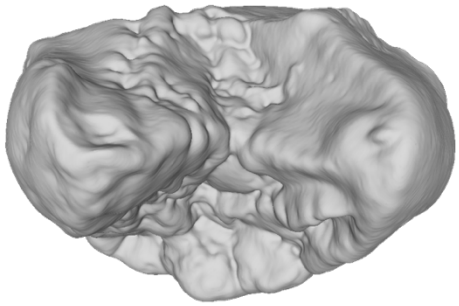
SOM File S1. Virtual model of GFT4.2'18-1-Q14-70, left I^1 crown of *Macaca* cf. *sylvanus* from Guefaït-4.2, available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158035 (unique identifier: ark:/87602/m4/M158035). A digital rendering in lingual view is depicted.



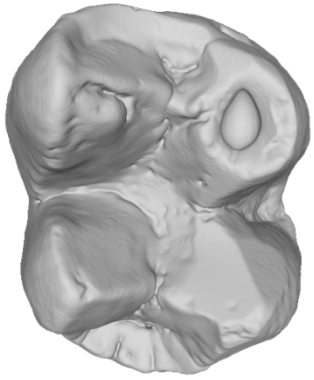
SOM File S2. Virtual model of GFT4.2'18-1-Q14-13, right M_1 lingual crown fragment of *Macaca* cf. *sylvanus* from Guefaït-4.2, available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158036 (unique identifier: ark:/87602/m4/M158036). A digital rendering in occlusal view is depicted.



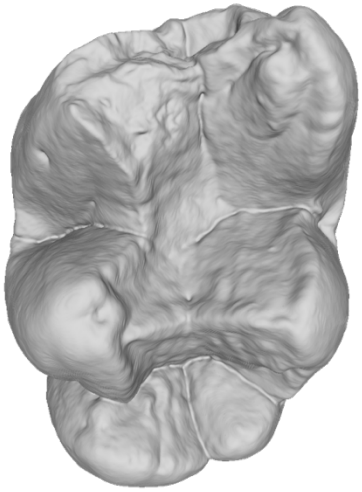
SOM File S3. Virtual model of GFT4.2'18-1-P13-191, right M_2 or M_3 mesial germ fragment of *Macaca* cf. *sylvanus* from Guefaït-4.2 available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158037 (unique identifier: ark:/87602/m4/M158037). A digital rendering in occlusal view is depicted.



SOM File S4. Virtual model of GFT4.2'19-1-R15-45, right M_2 distal germ fragment of *Macaca* cf. *sylvanus* from Guefaït-4.2 available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158038 (unique identifier: ark:/87602/m4/M158038). A digital rendering in occlusal view is depicted.



SOM File S5. Virtual model of GFT4.2'19-1-S15-65, right M_2 crown with distal root of *Macaca* cf. *sylvanus* from Guefaït-4.2 available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158291 (unique identifier: ark:/87602/m4/M158291). A digital rendering in occlusal view is depicted.



SOM File S6. Virtual model of GFT4.2'19-1-R13-63, left M_3 crown of *Macaca* cf. *sylvanus* from Guefaït-4.2 available in PLY format from MorphoSource at https://doi.org/10.17602/M2/M158292 (unique identifier: ark:/87602/m4/M158292). A digital rendering in occlusal view is depicted.

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