

Appendix I

A partial catalogue of fossil remains of *Theropithecus*

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This appendix has been included to provide readers with basic information on the collections of fossil specimens of *Theropithecus* that exist throughout the world. The lists of fossil specimens included here represent all the sites that have yielded *Theropithecus* fossils. The list of specimens from Ternifine represents the only published complete catalogue for *Theropithecus* at that site, while the remaining lists include only those fossils that could be confidently assigned to a species and that were reasonably complete. This meant the exclusion of small fragments of postcranial and mandibles from several East African sites and the exclusion of a very large collection of isolated teeth and tooth fragments from the Omo Basin. Details on specimens of *Theropithecus* from Kanjera and Olduvai that are

housed in the Division of Palaeontology, National Museums of Kenya are provided here, but readers should note that most of the fossils from Kanjera and some from Olduvai are housed in the British Museum (Natural History) and that details of this collection have already been published in Napier (1981).

The lists of fossil specimens are arranged firstly according to site and then by species. At the beginning of each site entry, a short description of the age of the fossiliferous sediments is provided. Information on specimens from the various localities was provided by direct contributions from Eric Delson (ED), Gerald Eck (GE), and Meave Leakey (ML). The specimen lists are arranged within this appendix in the following order:

Locality	Contributor
Ternifine, Algeria	ED
Ain Jourdel, Algeria	ED
Thomas Quarries, Morocco	ED
Melka-Kunturé, Ethiopia	ED
Hadar Formation, Afar Region, Ethiopia	GE
Shungura Formation, Omo Basin, Ethiopia	GE
Usno Formation, Omo Basin, Ethiopia	GE
Kanjera, Kenya	ML
Chemeron Formation, Kenya	ML
Lothagam Hill, Kenya	ML
Kanam East, Kenya	ML

Locality	Contributor
Ologesailie, Kenya	ML
Kapthurin Formation, Kenya	ML
Koobi Fora Formation, Turkana Basin, Kenya	ML
Nachukui Formation, Turkana Basin, Kenya	ML
Olduvai Gorge, Tanzania	ML
Senga 5A, Semliki, Zaire	ED
Makapansgat Limeworks, South Africa	ED
Hopefield, South Africa	ED
Swartkrans, South Africa	ED
Mirzapur, India	ED

For quick reference, a cross-tabulation showing the time-span of the fossil species of *Theropithecus* at the above sites is given in Table AI.1. Because many of the ages given are based on complex interpretations of stratigraphy and

biochronology, the reader is urged to consult the appropriate sections of this Appendix, relevant chapters of this book, and references cited therein for discussions of the ages of the fossiliferous sediments in question.

Table AI.1. *Time spans of Theropithecus species by locality.*

Locality	<i>T. darti</i>	<i>T. oswaldi</i>	<i>T. baringensis</i>	<i>T. quadratiostris</i>	<i>T. brumpti</i>	<i>Theropithecus</i> species indeterminate
Ain Jourdel	-	-	-	-	-	2.5-2.0
Chemeron	-	-	3.2	-	-	-
Hadar	3.4-3.0	-	-	-	-	-
Hopefield	-	0.7-0.4	-	-	-	-
Kanam East	-	-	-	-	-	Age uncertain
Kanjera	-	1.85-1.5	-	-	-	-
Kapthurin	-	0.8-0.6	-	-	-	-
Lothagam	-	-	-	-	-	4.5-4.0
Makapansgat	ca.3	-	-	-	-	-
Melka-Kunturé	-	-	-	-	-	1.4-1.0
Mirzapur	-	1.0-0.1	-	-	-	-
Olduvai	-	1.85-0.4	-	-	-	-
Ologesailie	-	0.99-0.74	-	-	-	-
Omo Basin (Shungura)	-	2.4-2.0	-	-	2.95-2.0	3.3
Omo Basin (Usno)	-	-	-	3.3	-	-
Senga 5A	-	-	-	-	-	2.4-2.0
Swartkrans	-	1.9-1.6	-	-	-	-
Ternifine	-	0.75-0.6	-	-	-	-
Thomas Quarries	-	0.4	-	-	-	-
Turkana Basin (Koobi Fora)	-	2.4-1.0	-	-	3.4-2.9	-
Turkana Basin (Nachukui)	-	2.4-1.0	-	-	3.3-2.5	-

Ternifine (= Palikao = Tighenif), Algeria

As summarized by Delson & Hoffstetter (chapter 6), faunal studies suggest an age near the Early to Middle Pleistocene boundary. Normal palaeomagnetism at the base of the section

implies an age of either c. 1 Ma or, as preferred, c. 0.75–0.6 Ma. The specimens are identified as *Theropithecus oswaldi leakeyi*. The specimens are housed in the Muséum national d'Histoire Naturelle, Institut de Paléontologie, Paris, France (MNIIN-P).

Specimen number (MNHN-P TER)	Description	Specimen number (MNIIN-P TER)	Description
1702	male mandibular symphysis with Rt & Lt I ₁ –P ₄	1730?	Lt P ₃
1703	L mandibular corpus (male?) with P ₄ –M ₃	1731?	Rt dP ₄
1704	juvenile Rt mandibular corpus fragt. with dP ₄ –M ₁	1732	Lt dP ₄
1706	Rt M ₃	1733	Rt dP ₄
1707	Rt M ₃	1734	Lt dP ₃ , broken fragment
1708	Rt M ₃	1755	Lt M _{2?}
1709	Rt M ₃	1756	Lt M _{2?}
1710	Rt M _{2?}	1757	Lt M _{2?}
1711	Rt M _{2?}	1758	Rt M ^{3?}
1712	Lt M ₃	1759	Rt M ^{3?}
1713	Lt M ₃	1760	Lt M ^{3?}
1714	Lt M ₃	1761	Rt M ^{3?}
1715	Rt M _{1?}	1762	Rt M ^{2?}
1716	Rt M _{1?}	1763	Lt M ^{2?}
1717	Rt M _{1?}	1764	Rt M ^{1?}
1718	Lt P ₄	1765	Lt P ⁴
1719	Lt P ₃	1767	Rt P ⁴
1720	Lt M _{1?}	1773	Rt M ^{1?} , associated? with P ^{3–4}
1721	Rt P ₄	1774	Rt P ⁴
1722	Rt P ₄	1775	Rt P ³
1723	Rt P ₄	1778	Lt C ¹ , male
1724	Rt P ₄	1779	Rt C ¹ male, broken
1725	Lt C ₁ , male	1780	Rt C ¹ , male
1726	Lt C ₁ , female	1781	Rt C ¹ , male
1728	Rt P ₃ fragmentary	1815	Rt ramus ascendens
1729	Lt P ₃		

Ain Jourdel, Oran, Algeria

As summarized by Delson (chapter 5), faunal studies suggest an age between 2.5–2.0 Ma, but this is not robust. Only one specimen is known, the holotype of '*Cynocephalus atlanticus*'

Thomas; it cannot be allocated definitely to a known species.

Specimen number	Description
MNHN-P (AJO 001)	Isolated unworn R M _{1?}

Thomas Quarries, Morocco

Geraads has suggested an age younger than

Ternifine on faunal grounds, and agreed with an estimate of c. 0.4 Ma.

Specimen designation	Description (all MNHN-P specimens?)
Thomas I	4 isolated lower teeth (left dP ₃ , dP ₄ , M ₂₋₃ , M ₃)
Thomas III	partial male mandibular corpus with right C ₁ -P ₄ , left C ₁ -P ₃ , M ₂₋₃

Melka-Kunturé, Ethiopia

Geraads (1979) has reviewed the fauna of the several fossiliferous sites at Melka, and Cressier (unpub. data) has documented the magnetostratigraphy of the region. Fragmentary *Theropithecus* fossils possibly referable to either

T. oswaldi or *T. brumpti* are known from two sites: Garba IV (placed later in the inter Olduvai-Jaramillo interval, thus probably 1.4–1.0 Ma) and Garba XII J (placed early in the Jaramillo, thus close to 1.0 Ma). The specimens are housed at the National Museum of Ethiopia (NME), Addis Ababa.

Specimen number	Description
Garba IV, NME 74–7596	distal 2/3 of right M ₃
Garba XII J, NME 78–1952	fragment of juvenile right maxilla with erupting P ³⁻⁴ and M ¹

Afar Region, Ethiopia – Hadar Formation

This has produced 73 cranial and 24 isolated postcranial specimens of *Theropithecus*. The cranial specimens are listed and described in Appendix 2.1 of Eck (chapter 2). The isolated postcranial specimens are listed below. All the specimens have been referred to *T. darti*.

Specimens of *Theropithecus* have been recovered from all members of the Hadar Formation except the Basal Member and range in

age from about 3.4 Ma to about 3.0 Ma (but see Eck, chapter 2, for a summary of the controversy surrounding these ages).

As an addition to the catalogue of the Hadar material, it may be of value to note that fragmentary dental remains of *Theropithecus* cf. *darti* are known from the 'localities' of Leadu (AL 2), Geraru (AL 74), and Ahmado (AL 100). The specimens are housed at the National Museum of Ethiopia (NME), Addis Ababa.

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
AL55-16	DD3-DD3-KH1s	Rt. distal humerus	AL177-1	DD2-DD3	Rt. distal tibia
AL55-17	DD3-DD3-KH1s	Rt. proximal humerus	AL185-18	DD3-DD3	Lt. distal femur
AL113-3	DD1	Rt. distal tibia	AL187-5	DD2-DD3	Lt. proximal ulna
AL120-5	DD3-DD3	Rt. distal tibia	AL206	DD2	Rt. femur
AL126-32	SH1-SH2	Lt. proximal ulna	AL208-1	SH2-SH3	Rt. distal tibia
AL133-1	DD2-DD3	Rt. proximal ulna	AL222-14	SH1-SH2-SH3	Lt. distal humerus
AL133-3	DD2-DD3	Rt. proximal radius	AL259-1	SH2-SH3	Lt. distal humerus
AL143-1	SH2-SH3	Lt. distal femur	AL288-9	KH1-KH1	Rt. proximal femur
AL145-16	SH1-SH2	Rt. distal humerus	AL322-10	DD1-DD2-DD3	Rt. distal humerus
AL145-30	SH1-SH2	Lt. distal femur	AL332-29	SH4-DD1-DD2	Lt. proximal ulna
AL163-10	DD2-DD3	Lt. distal humerus	AL362-3	DD3-DD3	Rt. distal femur
AL175-21	SH1-SH2	Rt. proximal femur	AL368-4	KH2 _g	Rt. distal tibia

Shungura Formation – Omo Basin, Ethiopia

The Shungura Formation has produced 2379 cranial and 184 postcranial specimens of *Theropithecus*. The majority of these consist of isolated teeth and tooth fragments, but hundreds are more complete specimens. The specimens listed below comprise a short list of the most interesting of these.

All members of the Shungura Formation except the Basal Member have produced specimens of the genus. The oldest of these date about 3.4 Ma and the youngest about 1.0 Ma. The majority of the specimens, however, derive from Member C (36 per cent) and the lower part of Member G (20 per cent); the former range in age between 2.9 Ma and 2.5 Ma, the latter between 2.3 Ma and about 2.1 Ma.

More specific information about the geological provenience of specimens of *Theropithecus brumpti* can be found in Eck & Jablonski (1987) and for *T. oswaldi* in Eck (1987). A brief summary of the geology and dating of the Shungura Formation can be found in Brown & Feibel (1988).

<i>Theropithecus brumpti</i>			Specimen number	Locality (member)	Description
L1-280	B-11	Lt maxilla fragment with teeth with C, dP4-M2	L17-72	C-8	Rt P3-M2, orbital and vault fragments Male Lt mandible fragment with teeth; body fragment with M1-M2, lacking the margin
L1-322	B-11	?Female Lt radius proximal fragment and 1/3 of the shaft	L17-93	C-8	Male Lt femur proximal fragment
L1-497	B-11	Male Lt ulna proximal fragment	L18-17	C-8	Female Rt femur proximal fragment
L1-1397	B-10	?Female Lt radius proximal fragment with the radial tuberosity	L18-20	C-8	Male Lt humerus distal fragment
L17-45a	C-8	Male cranium fragment; muzzle with Rt P4-M3, Lt M1-M3, and other cranial fragments	L18-24	C-8	Male Lt radius proximal fragment and the radial tuberosity
L17-67	C-8	Female cranium fragments with teeth; muzzle with Lt P4-M1,	L19-10	D-4	Rt mandible fragment with teeth; body with M1-M3, lacking the margin
			L23-62	C-6	Male Lt ulna proximal fragment and 1/2 of the shaft
			L23-66	C-6	Male Rt ulna proximal fragment and 2/3 of the shaft
			L32-154j	C-6	Male cranium fragment; muzzle with Rt P3-M1, LC-M3, zygomatic arch, glenoid region, Rt orbit
			L32-155a	C-6	Female cranium fragment; muzzle with M3s only, frontal and zygomatics well preserved
			L32-155g	C-6	Male Lt humerus distal fragment and proximal end with 1/4 of shaft
			L32-158a	C-6	Male Lt mandible fragment with teeth; hemimandible with symphysis, LM3
			L32-159j	C-6	?Female Lt humerus proximal fragment
			L32-159k	C-6	Male Lt humerus proximal fragment plus 1/2 of shaft

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L32-161	C-6	Female Lt cranium fragment with orbital rim, maxilla with M3, Lt temporal, fragments	L66-17	F-3	Rt mandible fragment with teeth; body fragment with M1-M3, lacking the margin
L32-201	C-6	Female Rt femur proximal fragment	L69-3	C-8	Male Rt humerus proximal fragment and 1/3 of shaft
L32-208	C-6	Male Rt femur complete	L70-4	C-6	Lt mandible fragment with teeth; body fragment with M1-M3
L32-226	C-6	Lt mandible fragment with teeth; body fragment with M2-M3, lacking the margin	L70-6	C-6	Male Rt radius proximal fragment and 1/4 of the shaft
L32-243	C-6	Male Rt femur distal fragment	L70-7	C-6	Male Lt humerus complete
L37-16	C-8	Rt mandible fragment with teeth; body fragment with M2-M3, lacking the margin	L78-95	C-8	Female Rt ulna proximal fragment
L42-40	C-5	Female Rt ulna proximal fragment and 1/3 of the shaft	L118-9b	D-5	Rt maxilla fragment with teeth with M2-M3
L45-1a	C-5	Male cranium fragment with teeth; muzzle Lt M1-M3, Rt P3-M3, frontal and right temporal	L119-6	D-3	Male cranium fragment; series of fragments
L47-41	C-8	Male Lt ulna proximal fragment eroded	L122-34	D-3	Female cranium nearly complete but anterior muzzle and vault are damaged
L47-44	C-8	Male Lt mandible fragment with teeth with M2, M3, and roots of C, P4, M1	L143-41	C-9	Female Rt femur proximal fragment
L49-1	E-2	Female mandible fragment with teeth with well preserved body, Lt M1-M3, Rt M1-M3, lacking rami	L143-43	C-9	Female Rt femur proximal fragment
L54-1	C-7	Female Rt mandible fragment body, edentulous	L143-45	C-9	Female Lt humerus distal fragment
L55-48	C-6	Male Lt humerus proximal fragment	L152-4b	C-8	Female cranium fragments; series of fragments including the Rt maxilla, left temporal, and Lt P3, Rt M2 and M3
L58-11	C-6	Male Lt femur proximal fragment	L161-24	D-3	Male Lt mandible fragment with teeth; body with M1-M3
L62-12	C-5	Male Rt ulna distal fragment and 1/3 of the shaft	L161-25a	D-3	Male Lt maxilla fragment with teeth with C fragment and M3
			L161-25b	D-3	Male Rt maxilla fragment with teeth; anterior fragment with C fragment

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L161-25c	D-3	Male Rt maxilla fragment with teeth; posterior fragment with M3 fragment			fragments, including parts of the Rt maxilla and zygomatic, Rt P4, M2 and M3
L161-43	D-3	Female Lt humerus distal fragment and 1/3 of the shaft	L227-6	D-2	Male Rt mandible fragment with teeth; hemimandible with M1-M3
L169-8a	D-4	Male Lt femur distal fragment	L227-7	D-2	Male Lt ulna proximal fragment and 1/3 of the shaft
L183-32	C-5	Female Lt femur distal fragment	L236-1b	E-4	Female Rt radius proximal fragment with radial tuberosity
L193-17	C-8	Male Lt maxilla fragment with teeth with M2-M3	L238-46	F-3	?Male Rt humerus distal fragment and 1/3 of the shaft
L193-28	C-8	Male Rt femur distal fragment	L238-50	F-3	Female Lt radius proximal fragment lacking the head but with 2/3 of the shaft
L193-32	C-8	Female Rt mandible fragment with teeth; posterior body with M1-M2	L238-51	F-3	Male Lt radius proximal fragment with radial tuberosity
L193-42	C-8	Male Rt ulna proximal fragment and 1/2 of the shaft	L238-53	F-3	Female cranium
L193-43	C-8	Male Lt ulna proximal fragment	L238-168a	F-3	Male Rt femur distal fragment
L199-2	C-7	Female cranium fragment; small series of fragments including Lt and Rt maxillae and Lt glenoid, Lt P4 and Rt M3	L238-186	F-3	Male Lt femur proximal fragment
L199-3	C-7	Female mandible fragment with teeth; body with Lt and Rt M2-M3, lacking rami	L238-244	F-3	Male Lt ulna proximal fragment
L199-4	C-7	Female cranium; series of fragments, including right zygomatic and left zygomatic arch	L292-8	C-7	Male Lt humerus distal fragment with distal shaft
L199-5	C-7	Male mandible fragment with teeth; body with Lt P3-P4, Rt P3-M3, lacking left ramus	L292-9	C-7	Male Rt mandible; body, edentulous
L199-6	C-7	Male Lt ulna proximal fragment	L292-28	C-7	Female Lt radius proximal fragment with radial tuberosity
L227-5	D-2	Male cranium; series of	L293-1a	C-4	Male cranium; series of fragments, including the muzzle dorsum, Rt temporal and posterior vault
			L300-1	D-1	Male maxilla fragment with teeth; muzzle with Rt P3-M3, Lt M2

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L303-3	C-7	Lt maxilla fragment with teeth with M1-M3	L345-8	C-9	Male Lt ulna proximal fragment and 1/4 of the shaft
L303-4	C-7	Male Rt radius proximal fragment with radial tuberosity	L345-18	C-9	?Male Rt radius proximal fragment and 2/3 of the shaft
L304-9	C-7	?Female Rt humerus proximal fragment	L345-19	C-9	?Male Lt ulna proximal fragment and 1/2 of the shaft
L305-3	C-6	Male Lt mandible fragment with teeth	L345-21	C-9	Male Rt femur proximal fragment
L305-6	C-6	Female Lt mandible fragment with teeth; body with Lt P3-M3, Rt C	L345-25	C-9	Male Rt mandible fragment with teeth; posterior body and ramus with M2-M3
L312-4	C-8	Male Lt radius proximal fragment and 2/3 of the shaft	L345-26	C-9	Male Lt mandible fragment with teeth with C-P4
L317-4	C-8	Female Lt mandible fragment with teeth; body with M1-M3	L345-50	C-9	Female Lt femur distal fragment
L327-13	C-6	Female Rt mandible fragment with teeth; symphysis and anterior Rt body with P3-M2, Lt P3	L345-105	C-9	Rt mandible; posterior body and ramus, edentulous
L331-4	C-6	Female Rt mandible fragment with teeth; body with M2-M3	L345-236	C-9	Male Lt radius proximal fragment and 2/3 of the shaft
L331-9	C-6	Female Lt femur complete	L345-287	C-9	Male cranium; nearly complete with Lt C-M3, Rt P3-M3
L335-53	C-5	Male Lt femur distal fragment	L351-4	C-7	Male Lt femur proximal fragment
L338Y-2257	E-3	Male cranium fragment with Lt and Rt C-M3, muzzle well preserved, neurocranium badly damaged	L362-11	C-5	Rt mandible fragment with teeth; body fragment with M2-M3, lacking the margin
L345-3	C-9	Male cranium fragment; partial muzzle and orbital region with Lt M2-M3, Rt M1-M3	L434-8	G-7	Female Lt humerus proximal fragment and 1/4 of the shaft
L345-4	C-9	Male Lt mandible fragment with teeth; body with P3-M3, lacking ramus	L440-2	C-8	Male Rt mandible fragment with teeth; body fragment with M1, lacking the margin
			L463-7	F-5	Male Lt ulna proximal fragment and 1/2 of the shaft
			L467-62	F-1	Rt maxilla fragment with teeth with M1-M2

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L477-11	G-1	Female Lt femur distal fragment	L886-14	C-8	Male Rt radius proximal fragment with radial tuberosity
L489-16	G-4	Female Rt femur proximal fragment	L886-15	C-8	Female Lt humerus distal fragment and 1/3 of the shaft
L546-7	C-8	Male Rt ulna proximal fragment	L899-1	C-8	Male Lt humerus proximal fragment and 1/2 of the shaft
L576-8	C-9	Male mandible fragment with teeth with Lt and Rt M1-M3, lacking Rt ramus	F257-3	G-13	Male Lt maxilla fragment; edentulous
L576-20	C-9	Male Lt femur proximal fragment	P791-5	C-8	Lt maxilla fragment with teeth with M1-M3
L743-3	C-7	Female Rt mandible fragment with teeth; body fragment with P3-M1	OMO 1C-72-2	F	Female eranium fragment - posterior muzzle and anterior neurocranium, edentulous
L764-1	C-8	Male Rt mandible fragment with teeth; body fragment with M2-M3, lacking the margin	OMO 4-72-2	E-3	Male Rt maxilla fragment with teeth - with P3-M2
L775-5	C-8	Female Rt radius proximal fragment and 1/3 of the shaft	OMO 10B-67-2	E-3	Male Rt mandible fragment with teeth - with M1-M3
L790-1b	F-1	Male mandible fragment with teeth; series of fragments with most teeth	OMO 18-67-28	C-6	Male Lt humerus proximal fragment - and 1/2 of the shaft
L824-4	D-1	Male Rt femur proximal fragment	OMO 18-67-40	C-6	Male Lt humerus proximal fragment - and 1/3 of the shaft
L830-1	G-13	Male Lt maxilla fragment with teeth with P3-M2	OMO 18-68-368	C-6	Male Rt maxilla fragment with teeth - with P3-M2
L858-1	C-7	Male Rt ulna proximal fragment	OMO 18-68-369	C-6	Male Lt mandible fragment with teeth - with fragmentary M2
L864-1	G-13	Female Lt mandible fragment with teeth; body with P3-M3	OMO 18-68-371	C-6	Lt mandible fragment with teeth - with M2-M3
L865-1	E-4	Male partial skeleton			
L869-6	C-6	?Male Rt ulna distal fragment and 2/3 of the shaft			
L885-1	C-4	Male Rt ulna proximal fragment and 1/4 of the shaft			
L885-2	C-4	Female Lt femur proximal fragment			

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
OMO 18-68-2231	C-6	Male Rt mandible fragment with teeth - with M2-M3, eroded	OMO 47-70-1730	G-8	fragment with teeth - with M2-M3 Male Rt mandible fragment with teeth - with M1-M3
OMO 18-68-2281	C-6	Male Lt humerus proximal fragment - and 2/3 of the shaft	OMO 50-73-4449	G-8	Female Lt radius proximal fragment - and 1/2 of the shaft
OMO 18-69-495	C-6	Male Rt mandible fragment with teeth - body with fragmentary M3	OMO 52-68-2279	C-7	Male Rt femur complete
OMO 18-69-522	C-6	Male Lt femur proximal fragment	OMO 53-68-2282	C-9	Female Rt femur complete
OMO 18-70-C1	C-6	Female Lt mandible fragment with teeth - with P4-M1	OMO 56-73-5126	C-5	Maxilla fragment with teeth - with Lt I1, dC, dP3-M1; Rt I1, dP3-M1
OMO 18-72-2	C-6	Male Rt radius proximal fragment - with radial tuberosity	OMO 57.5-72-121	E-5	Female Rt radius proximal fragment - with the radial tuberosity
OMO 28-67-557	B-10	Rt mandible fragment with teeth - with M2-M3	OMO 58-68-2225	F	Female Rt humerus distal fragment - and 1/2 of the shaft
OMO 28-68-2196	B-10	Male Rt mandible fragment with teeth - with M1-M2	OMO 72-69-1899	D	Male Lt mandible fragment with teeth - M2-M3
OMO 28-68-2280	B-10	Male Rt femur distal fragment	OMO 75 N-7-C205	G-12	Female Lt humerus proximal fragment
OMO 33-70-2532	F	Male Rt mandible fragment with teeth - with C-M1	OMO 75-70-C40	G-8	Female mandible fragment with teeth - with Lt & Rt I1-M2
OMO 40-68-1395	C-6	Lt mandible fragment with teeth - with P4-M3	OMO 75-70-888	G-8	Male Rt maxilla fragment with teeth - with C-M2
OMO 40-68-1400	C-6	Female Lt maxilla fragment with teeth - with P3-M3	OMO 75 N-71-C1	G-12	Lt mandible fragment with teeth - body and symphysis with Lt C-M3; Rt P4
OMO 40-68-1405	C-6	Female Rt mandible fragment with teeth - body with P3 fragment - M1, M3	OMO 76-72-24	F-2	Male Lt mandible fragment with teeth - with M2-M3
OMO 40-68-1411	C-6	Male Rt femur distal fragment	OMO 83-70-C102	E	Female Lt maxilla fragment with teeth - with P3, P4, M2
OMO 40-69-436	C-6	Male Rt mandible			

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
OMO 92-70-236	E-2	Male Rt mandible fragment with teeth - body with M2-M3	OMO 175.2-73-1573	D-3	Male Rt femur complete
OMO 111-72-11	E-4	Lt maxilla fragment with teeth - with P4-M2	OMO 207-73-1776	E-3	Male Rt femur distal fragment
OMO 113-72-41	G-11	Female Lt femur proximal fragment	OMO 207-73-1781	E-3	Lt mandible fragment with teeth - with M1-M3
OMO 130-73-1894	F-3	Male Lt humerus proximal fragment - and 1/3 of the shaft, distal fragment and 1/2 of the shaft	OMO 217-73-4390	C-8	Female Rt maxilla fragment with teeth - with M2-M3
OMO 132-72-5	C-6	Male Rt femur distal fragment	OMO 223-73-2864	G-5	Female Lt maxilla fragment with teeth - with M1
OMO 132-72-103	C-6	Rt maxilla fragment with teeth - with M2-M3	OMO 246-73-4748	G-11	Female Rt femur distal fragment
OMO 132-72-145	C-6	Male Lt femur complete	OMO 249-73-4987	G-13	Female Lt radius proximal fragment - with the radial tuberosity
OMO 132-73-724	C-6	Female Lt radius proximal fragment - with the radial tuberosity	OMO P703-72-2501	C-5	Male Rt mandible fragment with teeth - with P4-M2
OMO 145-72-7	E-1	Female Lt humerus distal fragment	OMO P752-70-2495	C-8	Female Rt maxilla fragment with teeth - with P3-M1
OMO 153-72-1	D-3	Male Lt mandible fragment with teeth - body and symphysis with eroded M2-M3	OMO SH1-70-C124	G-8	Lt maxilla fragment with teeth - with C, P3, dP4-M2
OMO 154-73-271	C-5	Maxilla fragment with teeth - series of cranial fragments with Lt M1-M2	OMO SH1-70-C125	G-8	Male Rt mandible fragment with teeth - with M2-M3
<i>Theropithecus oswaldi</i>					
Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
OMO 158-73-343	C-8	Male Rt mandible fragment with teeth - body with C-M2	L28-130	F-1	Female Lt humerus distal fragment and 2/3 of the shaft
OMO 158-73-410	C-8	Male Lt humerus complete	L28-153	F-1	Female Lt ulna proximal fragment and 1/4 of the shaft
OMO 165-73-608	C-6	Female Lt humerus distal fragment	L40-15a	E-5	Male Rt mandible fragment with teeth (body with C-M1, M3)
OMO 169-73-845	E-1	Female Rt mandible fragment			

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L40-15b	E-5	Male Lt mandible fragment with teeth (body fragment with M2-M3)	L867-13	F-2	Male Rt humerus shaft
L67-156	G-8	Male Lt ulna proximal fragment and 1/4 of the shaft	L867-15	F-2	Male Rt radius proximal fragment (with radial tuberosity)
L74-31b	G-4	Female Rt ulna proximal fragment	L884-3	G-15	Male Lt femur distal fragment
L74-32a	G-4	Female Rt humerus distal fragment and 2/3 of the shaft	F??-1a	G-13 (Locality Number = GS)	Female Rt mandible Symphysis and body with M3
L74-32b	G-4	Female Rt humerus proximal fragment and 1/3 of the shaft	F??-1b	G-13 (Locality Number = GS)	Female Lt mandible fragment with teeth Body fragment with M2
L80-85	G-4	Female Lt mandible fragment with teeth (body with P3-M3)	F413-1	L-8	Female Rt femur proximal fragment
L178-6	E-5	Male Rt humerus proximal fragment and 1/3 of the shaft	F513-1	G-27	Male Lt ulna proximal fragment
L238-29a	F-3	Female cranium fragment (neurocranium with a damaged Rt side)	OMO-68-1412		Female Rt femur distal fragment
L238-29b	F-3	Female Lt maxilla (edentulous)	OMO SH1-70-C123	G-8	Lt mandible fragment with teeth - with M2-M3
L238-257	F-3	Female Lt humerus proximal fragment and 1/3 of the shaft	OMO 1E-67-704	F-2	Male Lt femur distal fragment
L406-3	G-8	Female Rt femur proximal fragment	OMO 25-67-5	G-4	Rt mandible fragment with teeth - fragment with M2-M3
L465-82a	F-1	Lt mandible fragment with teeth (body with P4-M3)	OMO 33-69-404	F	Female Lt humerus proximal fragment - and 1/4 of the shaft
L465-82b	F-1	Rt mandible fragment with teeth (body fragment with M1-M2, lacking the margin)	OMO 33-70-2534	F	Rt mandible fragment with teeth - fragment with M1-M3
L607-22	G-5	Rt mandible fragment with teeth (body with M1-M3 fragments)	OMO 33-73-3092	F	Lt mandible fragment with teeth - fragment with M2-M3
L626-71	G-121	Male Rt ulna proximal fragment	OMO 47-73-1474	G-8	Female Lt humerus distal fragment - and 1/3 of the shaft
L627-237	G-12	Female Lt ulna proximal fragment	OMO 48-73-4729	G-12	Cranium - Series of cranial fragments with M3
L862-2	F-1	Male Rt femur complete			

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
OMO 57-68-2216	E-5	Female Lt mandible fragment with teeth - body with P3, M2-M3	OMO 75 N-71-688	G-12	Male Rt humerus proximal fragment - and 1/3 of the shaft
OMO 75-70-814	G-8	Male Lt radius proximal fragment - and 2/3 of the shaft	OMO 75 N-71-689	G-12	Male Rt radius proximal fragment - and 1/2 of the shaft
OMO 75-70-C50	G-8	Female Lt mandible fragment with teeth - body with P3-M3	OMO 75 N-71-690	G-12	Female Lt femur distal fragment
OMO 75-70-C51	G-8	Female Lt mandible fragment with teeth - with P3-M3 fragment	OMO 75 N-71-692	G-12	Male Lt humerus distal fragment - and 1/3 of the shaft
OMO 75 I-70-1000	G-5	Female Rt maxilla fragment with teeth - with P3-M3	OMO 75 N-71-693	G-12	Male Lt humerus proximal fragment - and 1/2 of the shaft
OMO 75 I-70-1001	G-5	Female Lt mandible fragment with teeth - with M2-M3	OMO 75 N-71-C24	G-12	Male cranium - nearly complete, in 3 parts, edentulous
OMO 75 I-70-1002	G-5	Female Rt mandible fragment with teeth - with P3-M2	OMO 75 S-69-461	G-7	Male Rt humerus proximal fragment - and 1/3 of the shaft
OMO 75 I-70-1003	G-5	Female mandible fragment with teeth (anterior body with Rt I1-C; Lt I1-M1)	OMO 92-73-984	E-2	Female Lt humerus distal fragment - and 1/3 of the shaft
OMO 75 I-70-1004	G-5	Female Lt maxilla fragment with teeth - P3-M3	OMO 93-70-576	G-7	Male Lt radius proximal fragment - and 2/3 of the shaft
OMO 75 M-71-613	G-12	Female Rt mandible fragment with teeth - with M2	OMO 103-72-5	G-4	Lt mandible fragment with teeth - with dp4-M1
OMO 75 M-71-614	G-12	Female Lt mandible fragment with teeth - body with fragmentary M1 - fragmentary M3	OMO 103-73-4401	G-4	Lt mandible fragment with teeth - with P4-M2
OMO 75 N-7-C201	G-12	Male Rt humerus distal fragment - and 1/2 of the shaft	OMO 118-72-19	F-1	Male Lt ulna proximal fragment
OMO 75 N-7-C203	G-12	Female Lt humerus distal fragment	OMO 135-72-2	E	Male Lt femur proximal fragment
OMO 75 N-71-679	G-12	Male Lt femur proximal fragment	OMO 136-72-5	G-1	Female Rt mandible fragment with teeth - body with P3, P4, M2, M3
OMO 75 N-71-680	G-12	Male Rt femur proximal fragment	OMO 148-72-5	D-1	Female Rt femur proximal fragment
			OMO 170-73-834	E-3	Male Rt maxilla fragment with teeth - with P3-M1
			OMO 195-73-1355	G-7	Male Rt femur distal fragment

Table (cont.)

Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
OMO 223-73-2870	G-5	Male Rt maxilla fragment with teeth - with C-M2	L373-1	C-1	Female mandible fragment with teeth
OMO 233-73-4554	G-1	Female Lt humerus distal fragment - and 1/3 of the shaft	L420-13	F-3	Male Lt mandible fragment with teeth
<i>Theropithecus</i> species indeterminate					
Specimen number	Locality (member)	Description	Specimen number	Locality (member)	Description
L16-59i	G-4	Male Rt mandible fragment with teeth with M1	F24-3	G-2	Male mandible
L16-105	G-4	Female Rt mandible fragment with teeth with LC, P3, dP4, M1, M2	OMO 1B-69-479	G-4	Rt mandible fragment with teeth - with M2-M3
L16-106a	G-4	Female Lt mandible fragment with teeth with P4-M3	OMO 5.3-67-4	C-9	Male Lt mandible fragment with teeth - with P3-P4, M2
L17-41b	C-8	Female mandible fragment with teeth with LdP4, LM1, RM1, RM2; juvenile	OMO 9-67-601	G-4	Rt mandible fragment with teeth - with M2-M3
L32-157c	C-6	Male Lt mandible fragment with teeth with P3 fragment, P4, M2	OMO 15-67-5	C-5	Rt mandible fragment with teeth - with M2-M3
L32-283	C-6	?Female Rt radius proximal fragment with radial tuberosity	OMO 29-68-1401	G-3	Lt mandible fragment with teeth - body with M1-M3
L55-52	C-6	?Female Rt radius proximal fragment with radial tuberosity	OMO 29-69-426	G-3	Lt mandible fragment with teeth - with M2-M3
L65-1	G-1	Female Lt mandible fragment with teeth with eroded and worn M1-M3	OMO 29-70-851	G-3	Rt mandible fragment with teeth - with dP4, M1
L67-121a	G-8	Male Lt mandible fragment with teeth	OMO 29-70-1377	G-3	Rt mandible fragment with teeth - with M2-M3
L193-82	C-8	Rt humerus proximal fragment	OMO 33-70-2931	F	Rt mandible fragment with teeth - with P4-M3
L238-38	F-3	Female Rt mandible fragment with teeth	OMO 75-70-837	G-8	Rt mandible fragment with teeth - body with M2-M3
L238-261	F-3	Female mandible symphysis	OMO 75 N-7-202	G-12	Lt humerus proximal fragment
L304-10	C-7	Lt humerus proximal fragment	OMO 153-73-277	D-3	Rt radius proximal fragment
			OMO 199-73-1273	F-2	Rt humerus proximal fragment

Table (cont.)

Specimen number	Locality (member)	Description
OMO 199-73-1421	F-2	Lt humerus distal fragment
OMO 233-73-4553	G-1	Lt mandible fragment with teeth - body with P4-M3

Usno Formation – Omo Basin, Ethiopia

The Usno Formation has produced 203 cranial specimens of *Theropithecus*, all but one of which are isolated teeth or tooth fragments. The exception is the cranium of *T. quadratiostris* (but see Delson & Dean, chapter 4).

All of these fragments derive from Unit U-12 of the formation and are equivalent in age to those of lower Member B of the Shungura Formation (about 3.3 Ma). The cranium derives from sediments that are also of about this age. Details of geological correlations can be found in de Heinzelin (1983); geological ages in Brown & Feibel (1987).

Chemeron Formation, Kenya

Recent dating of the Chemeron Formation has shown that the site JM90/91 is almost certainly 3.2 Ma (Deino pers. comm.). Many rocks and fossils in the Chemeron Formation are around 5 Ma and others around 2 Ma with apparently no stratigraphic continuity between the two (Hill & Ward, 1988). This has led to problems in dating some sites particularly JM90/91. The specimens *Theropithecus* from Chemeron are housed in the Palaeontology Division of the National Museums of Kenya, Nairobi. Most students would now classify the specimens from Chemeron as *Theropithecus baringensis*, but the reader is referred to Chapters 3, 4, and 7 of the present volume for details of the controversy concerning their classification.

Specimen number (KNM-BC)	Description
3	Skull and mandible
1647	Lt mand (M3) Rt mand (P4-M3) and fragment of femur

Lothagam Hill, Kenya

The single *Theropithecus* molar from Lothagam Hill was recovered from Lothagam-3, a unit of more than 100 m of coarse sandstones, silts, and clays. The Lothagam sill which underlies Lothagam-2 and Lothagam-3 has been dated radiometrically at 3.8 Ma and it shows reversed polarity suggesting a correlation with the terminal third of the Gilbert Reversed Epoch. Faunal correlation suggests a date between 4.0 and 4.5 Ma for Lothagam-3 (Hill & Ward, 1988).

The specimen is housed in the Palaeontology division of the National Museums of Kenya, Nairobi.

Specimen number (KNM-LT)	Description
417	Rt lower M ₂

Kanam East, Kenya

The Kanam East sediments have not been accurately dated. The Kanam East specimen is housed in the Palaeontology Division of the National Museums of Kenya, Nairobi.

Specimen number (KNM-KE)	Description
241	M ₃ and M ^{1?}

Olorgesailie, Kenya

The Olorgesailie Formation is divided into 14 members which range in age from 0.99 Ma (Member 1) to 0.49 Ma (Member 14). The upper

part of the Formation, Members 10–14, ranges between 0.74 Ma and 0.49 Ma (Bye *et al.*, 1987). The *Theropithecus* fossils, which were all recovered from one site, DE/89B in Member 7 are therefore older than 0.74 Ma (Potts, 1989).

The Olororgesailie *Theropithecus* fossils are classified as *T. oswaldi* and are housed in the Palaeontology Division of the National Museums of Kenya, Nairobi. The most complete specimens are listed below.

Specimen number (KNM-OG)	Description
1	Male Rt maxilla (P3-M2)
2	Female Rt mandible (P3-M3)
4	Rt mandible (P4-M2)
5	Lt mandible (P3-M1)
157	Lt maxilla (P4)
442	Rt distal humerus
454	Rt proximal ulna
542	Rt maxilla (dM1-M1)
565	Lt maxilla (P3-4)
567	Lt maxilla (P3-4)
598	Rt maxilla (P3)
781	Mandible (dM2, M1, erupting C, P3.)
1056	Lt humerus lacking head
1064	Rt distal humerus
1069	Proximal ulna and part shaft
1074	Proximal radius
1076	Lt proximal femur and part shaft
1077	Lt proximal femur and part shaft
1078	Lt proximal femur and part shaft
1088	Rt proximal femur and part shaft
1090	Rt femur lacking distal epiphysis
1109	Distal tibia
1115	Juvenile tibia
1288	Mandible (dM2-M1)
1310	Lt proximal ulna and part shaft
1311	Rt proximal ulna and part shaft

Specimen number (KNM-OG)	Description
1419	Proximal Rt ulna
1420	Rt temporal fragment
1421	Rt temporal fragment
1450	Frontal fragment
1451	Lt frontal fragment
1452	Rt frontal fragment
1454	Scapular glenoid
1455	Lt distal humerus
1459	Rt distal humerus
1460	Rt distal humerus
1461	Rt distal humerus and part shaft
1462	Distal radius
1463	Proximal radius
1467	Proximal Lt ulna
1529	Lt temporal fragment
1536	Occipital fragment
1538	distal ulna
1612	Rt temporal
1662	Rt distal humerus and part shaft

Kapthurin, Kenya

Wood & Van Noten (1986) discuss several dates reported for the Kapthurin Formation and conclude that fauna collected from below the grey tuff appears to be equivalent to post-Bed IV at Olduvai. The single *Theropithecus* specimen from Kapthurin is a mandible, KNM-BK 22638, that preserves a complete dentition.

Kanjera, Kenya

Kanjera is the type locality of *Theropithecus* (= '*Simopithecus*') *oswaldi* Andrews, 1916. The Kanjera deposits are not well dated. Plummer & Potts (1989) suggested an age between 1.85 Ma and 1.5 Ma for the *Theropithecus* collection (which is all from one locality), based on similarities with specimens from Bed I, Olduvai Gorge.

Turkana Basin, Kenya

Specimen number (KNM-KJ)	Description	
18571	Rt innominate	The geology and dating of the Omo Group deposits is given by Feibel, Brown & McDougall (1989), and Leakey (chapter 3) discusses the stratigraphic distribution and age of the <i>Theropithecus</i> specimens from the Turkana basin. East of Lake Turkana, <i>T. brumpti</i> occurs from the Lokochot to the Tulu Bor Members of the Koobi Fora Formation (about 3.4 Ma to 2.9 Ma), and <i>T. oswaldi</i> occurs in the Upper Burgi, KBS and Okote Members (about 2.4 Ma to 1.0 Ma). West of Lake Turkana, <i>T. brumpti</i> has been recovered from the Lomekwi Member of the Nachukui Formation (between 3.3 Ma and 2.5 Ma) and <i>T. oswaldi</i> between the Kalachoro and Nariokotome Members (about 2.4 Ma to 1.0 Ma). The <i>Theropithecus</i> specimens from the Turkana Basin are housed in the Palaeontology Division of the National Museums of Kenya, Nairobi.
18575	Rt mandible (M2-3)	
18576	Rt. maxilla (P3-4)	
18579	Parietal	
18580	Fragment mandible ramus (M3)	
20517	Prox. Rt radius	
20522	Distal Lt humerus	
20535	Lt innominate	
20598	Partial calvaria	

East Turkana, Koobi Fora Formation
Theropithecus brumpti

Specimen number (KNM-ER)	Locality (Member)	Description
124	TB	Rt mandible frag; M2-3
127	TB	Male, isolated teeth; Lt C, P3, M2, M3, Rt M3
1563	TB	Lt mandible; M1-2
1564	TB	Calvaria and Rt & Lt maxilla frags; M2-3
1565	TB	Female Lt maxilla; P3-M1
1566	TB	Male Lt maxilla; broken C-M3
2015	TB	Male mandible; Rt P3-M3, roots Lt C-P4
2017	TB	Rt mandible frag; M3
2018	TB	Rt maxilla; broken M3
2019	TB	Rt temporal
2022	TB	Prox Lt femur, dist Lt femur, prox Lt tibia
2023	TB	Dist Rt radius
2024	TB	Innominate frags
2029	TB	Rt & Lt mandible frags; Rt M2 erupting
3005	TB	Female Rt mandible; M1-3. Lt & Rt maxilla P4-M3
3013	TB	Lt mandible; frag M3, edentulous maxilla frags Postcranial frags including; Rt & Lt prox femora Dist humeri, prox Lt ulna, vertebra and Innominate frags
3018	TB	Male mandible with tooth roots and erupting M3s
3023	TB	Female Lt edentulous mandible
3025	TB	Skull frags including maxilla; Lt & Rt M1-3 Rt mandible; M2-3, supraorbital torus, temporal

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
3026	TB	Lt mandible; M1-2
3028	TB	Cranial frags and Lt lower M3
3030	LOK	Male mandible, Lt & Rt P4, alveoli Ii-C, roots P4-M2
3035	TB	Rt mandible frag, erupting M
3038	LOK	Mandible; Rt Ii, P3-M3, Lt P4-M3
3045	LOK	Isolated teeth, upper dM2, lower M1
3053	TB	Male isolated upper teeth; Rt I2, C, P3, Lt I1, P3-4
3084	TB	Male mandibular frags; edentulous, Rt condyle Prox Rt humerus & ulna, glenoid Lt scapula Frags dist Rt humerus & prox Rt femur
3118	?TB	Male mandibular frags; Rt & Lt P3, Lt condyle
3119	TB	Male Lt & Rt mandible; Lt P4, Rt M1-3, Rt femur Shaft Rt humerus
3775	LOK	Rt maxilla; M2-3
3780	TB	Male mandible; Lt P3-M3, Rt P4-M3
3783	LOK	Rt mandible; dM2, germ P4
3792	TB	Lt mandible frag; worn P4
3855	TB	Lt mandible frag; broken P4-M1, root P3
3857	TB	Female Lt mandible frag; I2, P3-M1
4704	TB	Female cranial and postcranial frags
4940	TB	Lt mandible frag; M3
4985	TB	Rt mandible; M2-3
5320	TB	Isolated lower I1-2, upper Lt & I2

TB = Tulu Bor Member

LOK = Lokocho Member

East Turkana, Koobi Fora Formation

Theropithecus oswaldi

Specimen number (KNM-ER)	Locality (Member)	Description
13	U. Burgi	Frag Rt mandible and postcranial elements
28	?U. Burgi	Cranial and postcranial elements
46	?U. Burgi	Cranial and postcranial elements
113	?U. Burgi	Rt mandible; M3
119	?U. Burgi	Female Rt mandible; M2, M3, Lt mandible; P4-M3
122	U. Burgi	Rt mandible, M2-3, Lt mandible M3
123	?U. Burgi	Lt mandible; M3
131	U. Burgi	Male maxilla; Rt C, P3-M2, Lt M1-2
135	?U. Burgi	Juvenile Lt mandible; dM1-2 ^a

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
136	Okote	Cranial fragments; Lt C-P3, Lt & Rt P4-M3
137	?U. Burgi	Lt mandible; M2-3
138	?U. Burgi	Rt mandible; M3
139	?U. Burgi	Lt mandible; M3
147	U. Burgi	Rt mandible; P3-M2, Lt mandible; P4-M1
151	U. Burgi	Broken cranium and mandible
153	U. Burgi	Cranium; Lt & Rt M2 & erupting M3
154	?U. Burgi	Squashed juvenile cranium; Rt I1-M2; Lt I1-2, dm
180	KBS	Female partial cranium; won Lt P4-M3, Rt P3-M3
418	U. Burgi	Female skull; Rt M2, Rt & Lt M3 erupting
547	U. Burgi	Female cranial frags; I1-M2
548	U. Burgi	Juvenile mandible; Lt M1, Rt dm1-M1
550	U. Burgi	Cranial frags
557	KBS	Female mandible; Lt & Rt I-M1, M2-3
558	U. Burgi	Lt mandible; M1-3
560	Okote	Male mandible; Lt C; Lt & Rt P3-M2
566	Okote	Male Skull and mandibular frag
567	Okote	Female cranial and postcranial elements
569	Okote	Cranial and postcranial frags
573	?U. Burgi	Lt mandible; P4-M3
577	KBS	Male mandible; Lt I1-M3, Rt I1-I2, P3-M3
579	Okote	Female Lt mandible and symphysis; P4-M2
581	Okote	Partial calvaria
582	?Okote	Lt maxilla; M1-M3
585	Okote	Lt mandible; M1-3
587	Okote	Juvenile Lt mandible; dC-dM2
591	Okote	Lower Rt M3, upper P3, P4, female C
597	Okote	Cranial and postcranial frags
601	KBS	Cranial and postcranial frags
602	Okote	Isolated teeth; male upper Rt C, P3, M3
603	Okote	Cranial and postcranial frags
605	KBS	Lt mandible; M3
608	KBS	Mandible; Lt P3-M1
609	Okote	Male cranial and mandibular frags
611	Okote	Rt mandible; M2-3
612	KBS	Juvenile cranium; Lt & Rt M2 and erupting M3
613	U. Burgi	Female Rt mandible; M1-3, Lt mandible; P4-M3
618	Okote	Lt mandible; M3
619	Okote	Male lower Lt C, Rt C, M
620	Okote	Isolated worn upper teeth
621	Okote	Female Lt C, dental frags
622	Okote	Mandibular and dental frags
627	Okote	Female upper Lt C, M, Rt M
632	Okote	Female cranial & mandibular frags
634	KBS	Mandible; Lt P4-M3; Rt M2-3
744	Okote	Rt mandible; M1, dm2, Lt maxilla; M1, dm2

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
745	Okote	Isolated upper teeth; Lt & Rt C, P4, Lt M, P3, I1 Patella and Rt talus
809	KBS	Lt & Rt unerupted upper P4
828	KBS	Rt upper M3, tooth frags
830	Okote	Male isolated teeth; upper Rt M3, P4, C, Lt C and lower L
832	Okote	Male isolated upper teeth; Lt I1, C, P3, Rt P3, P4
833	Okote	Isolated teeth, Lt & Rt upper M3; lower C, M1, M3
834	Okote	Isolated lower teeth; Rt M2, M3, broken Lt M3
835	KBS	Female isolated lower teeth; Rt C, Lt P3, P4, M1
836	KBS	Isolated teeth; Lt lower I2, Rt upper M
839	Okote	Female isolated lower teeth, Lt P3, P4, M2
840	Okote	Female isolated teeth and bone frags
842	KBS	Lt mandible; M1, M3
849	KBS	Weathered juvenile mandible
850	Okote	Rt mandible; M1-3
851	Okote	Mandibular frags; Rt M3
856	Okote	Female Rt maxilla; C-M1, M3
860	Okote	Cranial and postcranial frags
862	Okote	Rt maxilla; P4-M3
863	Okote	Mandibular symphysis; Rt P3, P4
864	Okote	Male mandible; Lt & Rt P3-M3
865	KBS	Male mandible Lt & Rt C-M3
866	Okote	Postcranial elements
880	KBS	Lt mandible; M1-3
883	KBS	Rt maxilla; M2-3
886	KBS	Lt mandible; M1-2
891	?U. Burgi	Lt mandible frag, distal scapula
967	?U. Burgi	Skull frags
969	Okote	Calvaria
971	U. Burgi	Female cranium
978	U. Burgi	Cranial and postcranial elements
985	KBS	Male isolated teeth; upper Rt C, lower Lt C, M3, M
1194	Okote	Lt mandible; dM2-M1
1522	U. Burgi	Male squashed juvenile cranium; Rt C-M2; Lt C-M1
1525	U. Burgi	Mandible; Rt M1-2, Lt P3-M2
1526	U. Burgi	Cranial and postcranial elements
1527	U. Burgi	Male juvenile cranium
1528	U. Burgi	Female Lt mandible; C-M3
1530	U. Burgi	Lt mandible; M2-3
1531	U. Burgi	Male cranium
1532	U. Burgi	Cranial and mandible frags
1533	U. Burgi	Rt mandible M1-3
1535	U. Burgi	Maxilla; Rt C-M3, Lt M3
1536	U. Burgi	Mandibular symphysis
1537	U. Burgi	Lt mandible; M2-3
1545	U. Burgi	Male mandible, Lt & Rt P4-M3, Rt P3

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
1547	U. Burgi	Male cranial frags, Lt & Rt M1-2, Lt P3, Cs in crypt
1550	U. Burgi	Rt mandible; M2
1552	U. Burgi	Rt mandible; M2-3
1562	Tulu Bor	Mandible; Rt P4-M3
1567	U. Burgi	Calvaria
1568	U. Burgi	Partial calvaria
1572	U. Burgi	Female cranial and mandibular fragments
1573	KBS	Male mandible and maxilla frags
1574	KBS	Mandible and maxilla frags
1575	KBS	Skull frags
1578	KBS	Cranial and postcranial frags
2001	U. Burgi	Female juvenile mandible; Lt I1-2, M1, Rt I1-2, dC, dM1, M1
2003	U. Burgi	Male mandible; Rt P3, M2-3
2004	U. Burgi	Rt mandible; P4-M1
2005	U. Burgi	Frag Rt mandible, Rt humerus
2006	U. Burgi	Lt mandible; M2-3
2027	KBS	Female mandible; Rt P3-M3
2093	U. Burgi	Rt mandible; M1-3
2112	U. Burgi	Rt maxilla; P3-M2
2116	KBS	Lt juvenile maxilla; dC-dM2
3007	U. Burgi	Female Lt maxilla; C-M3
3066	KS	Cranial frags
3070	U. Burgi	Rt maxilla; M3
3071	KBS	Cranial and postcranial frags
3074	U. Burgi	Lt mandible
3076	U. Burgi	Male mandibular symphysis; Rt & Lt P3-4
3077	Okote	Female Rt mandible; M1-3
3081	U. Burgi	Lt maxilla; M2-3
3082	U. Burgi	Juvenile Lt mandible; dM1-2
3088	U. Burgi	Lt mandible; M2-3
3091	Okote	Male cranial, mandibular and tooth frags
3092	KBS	Lt mandible; P4-M1
3769	U. Burgi	Lt mandible M2-3
3779	Okote	Female mandible; Lt M1, M3, Rt P3-M2
3785	U. Burgi	Juvenile Rt mandible; M1
3807	U. Burgi	Juvenile Rt mandible; M1
3814	U. Burgi	Lt mandible; M3
3819	KBS	Juvenile Rt mandible; dM2, M1 and postcranial frags
3820	U. Burgi	Female Lt mandible; P4-M3
3823	U. Burgi	Male edentulous cranium, erupting M3s, Lt & Rt tibia
3830	U. Burgi	Lt mandible; M in crypt
3837	U. Burgi	Cranial and mandible frags
3839	U. Burgi	Upper Lt M3, frag Rt M3
3840	U. Burgi	Cranial and postcranial frags
3844	KBS	Rt mandible; P4-M3
3845	U. Burgi	Rt mandible; M1-M3

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
3847	U. Burgi	Male mandible; Lt M2-3
3859	U. Burgi	Isolated teeth (2+ indivs)
3872	U. Burgi	Lt mandible; P4-M3
3874	U. Burgi	Female Lt maxilla; C-M1, M3, Rt M3, Lt mandible; P3-M3
3875	U. Burgi	Juvenile maxilla; Lt dM1-2, M1, Rt M1-2
3876	U. Burgi	Posterior elements
3877	KBS	Dental & posterior elements
4412	U. Burgi	Cranial frags; Rt & Lt M1-M3
4415	U. Burgi	Rt edentulous mandible, Lt mandible; M1-3
4416	U. Burgi	Female Rt & Lt edentulous mandible
4417	U. Burgi	Female mandible; Lt M3, Rt P3-4
4418	U. Burgi	Mandibular frags
4425	Okote	Lower molars
4426	Okote	Upper P, lower P4
4444	U. Burgi	Isolated lower teeth; Lt C, Rt M3
4566	KBS	Lt mandible; M2-3
4964	?KBS	Rt mandible; M1-3, Lt mandible; M3
4968	?KBS	Rt mandible, P4-M3
4977	KBS	Rt mandible; M2-3
5308	Okote	Female lower Lt P3, M3, Rt M3, upper Rt C
5402	KBS	Lt & Rt mandible frags
5403	KBS	Lt mandible; M2-3
5404	Okote	Calvaria
5405	Okote	Juvenile mandibular and dental frags
5410	KBS	Lt mandible; M2, Rt C
5419	KBS	Rt juvenile mandible; erupting P3, M2
5479	?U. Burgi	Lt mandible; P3, M2
5483	U. Burgi	Lt mandible; M3
5490	U. Burgi	Cranial frags
5491	Okote	Cranial and posterior elements
5564	Okote	Male upper Lt M, male C, Rt I
6001	U. Burgi	Female cranium
6007	Okote	Rt mandible frags; M3
6010	U. Burgi	Mandibular frags
6013	Okote	Rt mandible; M3
6067	U. Burgi	Rt mandible; M1-3
6073	KBS	Unerupted Lt lower M3
7331	KBS	Cranial and posterior frags
18913	Okote	Male lower Lt male C, P3, M
18917	Okote	Posterior elements
18918	Okote	Female lower isolated teeth; Lt C, M3, Rt M1
18919	Okote	Female Rt mandible; C-M3
18924	Okote	Female isolated teeth; lower Lt P3, M3, Rt M1, M3, Upper Rt P3, P4, Lt M1, I
18925	U. Burgi	Male cranium and mandible

West Turkana, Nachukui Formation
Theropithecus oswardi

Specimen number (KNM-WT)	Locality (Member)	Description
14650	KAL	Lt mandible; M3
14659	KAL	Female mandible; Lt & Rt P4, roots Lt & Rt P3, M1
14658		Female mandible; Lt & Rt M2-3
14663	Kaitio	Rt & Lt tibiae frags, prox Lt femur, dist Rt femur
14666	Natoo	Female assoc lower teeth, Lt C, P3, M1, M3, Rt P3
14660	NAR	Rt mandible; M2-3
17435	Kaitio	partial cranium

KAL = Kalochoho
NAR = Narikotome

West Turkana, Nachukui Formation
Theropithecus brumpti

Specimen number (KNM-WT)	Locality (Member)	Description
16746	Lwr LOM	Lt mandible frag; M1-3
16747	Lwr LOM	Female edentulous mandibular symphysis
16749	Lwr LOM	Male mandible with symphysis; Lt P3-M2
16750	Lwr LOM	Lt and Rt mandible frags; Lt M2-3, roots Rt M2
16887	Lwr LOM	Male Rt maxilla; broken P3-M3, root C. Lt mandible; roots I1-M3, Rt mandible; I1, M2-3
16888	Lwr LOM	Female maxilla; Lt P3-M3, Rt P4-M1
16894	Lwr LOM	Rt maxilla; M2-3
16895	Lwr LOM	Rt mandible; P3
17553	Lwr LOM	Male mandible frags with symphysis; Lt broken M3, roots M2-3
17554	Lwr LOM	Female mandible; M3s erupting, roots Lt I1-M2, Lt condyle, Rt talus, prox Lt radius
17555	Lwr LOM	Male mandible; roots Lt I1-M3, Lt & Rt broken M2-3, broken Lt M1, prox Rt ulna
16864	Mid LOM	Female mandible frag, M3
17560	Mid LOM	Male mandible; Lt & Rt C, roots I1-2, Lt P3-4 Prox. Rt ulna
16862	Mid LOM	Maxilla frags; Lt P3, M1-2, Rt P3-4, M2-3
16863	Mid LOM	Mandible frags; Rt P3-4, M3 frag, Lt P4, M1, M3
16753	Upp LOM	Female mandible; Lt I1-P3, Rt P3-4, M2
16801	Upp LOM	Rt mandible frag; M1
16803	Upp LOM	Rt mandible frag; M2-3
16805	Upp LOM	Cranial frags, Lt maxilla; M3, Rt maxilla; M1-3 Temporal frag
16806	Upp LOM	Female mandible; Lt & Rt P3-M3

Table continued

Specimen number (KNM-ER)	Locality (Member)	Description
16808	Upp LOM	Male mandible; Lt I2, C, P4, M1, M3, Rt P3-4, M1, Upper Lt C, prox Rt ulna and shaft, radius shaft,
17571	Upp LOM	Female mandible; Lt P3, Rt C, P4-M2
17569	Upp LOM	Mandible, Lt & Rt M1-3
16828	Upp LOM	Male cranium and posterianal frags; dist Rt & Lt tibia Dist Rt fibula, dist femur frag, prox Lt Mt/II Innominate and vertebral frags
16870	Upp LOM	Mandible frag; erupting M2 or 3, prox humerus
16871	Upp LOM	Rt maxilla; M2

upp LOM = upper Lomekwi

mid LOM = middle Lomekwi

lwr LOM = lower Lomekwi

Olduvai Gorge, Tanzania

Ma. Bed III; 1.15 Ma to 0.8 Ma. Masek Beds; 0.6 Ma to 0.4 Ma.

The geology of Olduvai gorge is described in detail by Hay (1976) who gives radiometric dates for the Olduvai Beds from which *Theropithecus oswardi* has been recovered as follows:

Bed I; 1.85 Ma to 1.7 Ma. Bed II; 1.7 Ma to 1.15

The specimens listed below are the property of the Tanzania Government and are only housed in the Kenya National Museum until such time as the Tanzanians request their return. Some specimens are housed in the British Museum (Natural History) and one of these is listed below.

Specimen number	Locality (bed)	Description
Bed I		
068/6640		Lower Lt I1, female C, P4, M2, M3, and upper M1
OLD 63/3050		Male Rt mand (P3-M3) Lt mand (P3-M1), Rt max (P3-4), Rt upper C, Lt Max (M2)
OLD 53/117		Lt mand (M1), frag Lt mand (P4-M2)
OLD 61/5170		Max frag (P4-M3)
Upper Bed II		
OLD 68/ S.9		Male maxilla (Rt P3-M3, broken Lt C-M2)
068/6511		Calvarium
OLD 69/ S.133		Male maxilla (Lt I2, C-M3, Rt I1-2)
OLD 69/ S. 89		Partial calvarium and tooth frags
BK II		Female mandible (Lt & Rt I1-M2)
OLD 77/ S.341		Juvenile skull with damaged teeth
067/5608		Lt max (P4-M3)
SLK II 580		Lt mand (M3)
OLD 60/ S.42		Female Lt mand P3-M1
067/2771		Female Lt mand (M1-3)
OLD 63/3366		Male Rt mand (P3-M3)
OLD 52/ S.694		Lt mand (M2-3)
BM(NII)M/14937		Lt mand (P4-M3)

Table continued

Specimen number	Locality (bed)	Description
067/5603	Bed III	Male complete lower jaw, upper Bed II
S.194		Rt max (M1-3), Lt mand (M2-3), Rt mand (M1-3)
S.116, 123, 132		Partial skull, (Lt C-M3, Rt M1, M3)
	Masek Beds	
068/6516		Male complete lower jaw

Senga 5A, Semliki, Zaire

As discussed by Delson (this volume, chapter 5), an estimated faunal age for this site is between 2.4–2.0 Ma, which is confirmed by the size of the two *Theropithecus* teeth recovered, although they cannot be readily allocated to either *T. oswaldi* or *T. brumpti*. The specimens are housed in the Institut des musées nationales de Zaire, Kinshasa.

Specimen number	Description
IMNZ Sn 5A 405	Unworn crown L M ₂
IMNZ Sn 5A 520	Damaged crown R M ₁

Makapansgat Limeworks, Transvaal, South Africa

As reviewed by Delson (1984), there are five

Members of the Makapan Formation, numbered upwards from 1 to 5. Fossil mammals occur in Members 2 (uppermost, = Basal Red Muds of earlier authors), 3 (Grey Breccia) and 4 (Pink Breccia), although no *Theropithecus* is known from Member 2. Faunal evidence suggests an age in the mid-Pliocene, and paleomagnetic results (which have been interpreted differently by several workers) were evaluated by Delson to indicate an age of just over 3 Ma for Member 3, with the fossiliferous lower part of Member 4 only slightly younger. The holotype of *T. darti* is from Member 4, which also yielded 14 other specimens, while 20 are known from Member 3. The most complete of these are listed below. The specimens are housed in the University of the Witwatersrand Medical School, Department of Anatomy, Johannesburg (UWMA) and in the Bernard Price Institute for Palaeontological Research, University of the Witwatersrand, Johannesburg (BPI).

Specimen number	Locality (Member)	Description
UWMA MP 1	4	Damaged male mandible with P ₃ –M ₃
UWMA MP 44	3	Male mandibular corpus, Rt P ₃ –M ₃ & Lt P ₃₋₄ , anterior alveoli
UWMA MP 56	3	Female partial Lt mandibular corpus, P ₄ –M ₃
UWMA MP 222	3	Female cranium, well preserved, Rt & Lt P ³ –M ³
BPI M 3071	4	Male juvenile mandible, corpora well preserved, Rt & Lt C ₁ (erupting) –M ₂
BPI M 3073	4	Female subadult cranium with attached mandible, M3s unerupted, most teeth not visible

Hopefield (Saldanha, Elandsfontein), Cape Province, South Africa

The Hopefield deposits represent a long span of

time, with elements of several ages represented in the large collection. Klein & Cruz-Urbe (1991) recently suggested that the main fauna was between 0.7–0.4 Myr old, perhaps at the older end

of this range. Specimens of *Theropithecus* have been referred to *T. oswaldi leakeyi* by Delson (chapter 5). Among the better-preserved ele-

ments are the following, which are all housed in the South African Museum, Capetown (SAM).

Specimen number	Description
S400	Partial calvaria, reconstructed
16647	Subadult female mandible lacking rami, M ₃ s erupting
16648	Male mandible lacking rami, Lt C ₁ , Rt & Lt P ₃ (damaged) -M ₃
16649	Female Lt mandibular corpus, damaged P ₃ -M ₃
16680	Fragments of male mandibular corpus, Rt M ₃ , Lt P ₄ -M ₃ and loose P ₃ and I ²

Swartkrans, Transvaal, South Africa

As reviewed by Delson (1984; and see chapter 5), the fossils from the Swartkrans Formations derive from five Members, numbered from 1 to 5 upwards. The faunally estimated age of Member 1 is 1.9-1.6 Ma, and the great similarity between that large assemblage and the material from Members 2 and 3 suggests that the total time span represented by these three units is less than 0.25 Ma. *Theropithecus* fossils are known from all

three units, and the holotype of '*Simopithecus damieli*' (TMP 563) derives from Member 1 (the 'Hanging Remnant'); all specimens are referred by Delson to *T. oswaldi oswaldi*. Twenty-five specimens derive from the 'Hanging Remnant' and two from the 'Lower Bank' or Orange Breccia (all Member 1); one has been identified from Member 2 and five from Member 3. Only the most complete ones are listed here. The specimens are housed in the Department of Palaeontology, Transvaal Museum, Pretoria (TMP).

Specimen number	Locality (Member)	Description
TMP SK 402/405/563	'Hanging Remnant'	Female partial maxilla, Rt P ⁴ -M ³ , and probably associated mandibular corpora and part ramus, C ₁ -M ₃
TMP SK 403/426/567		Juvenile male R mandibular corpus, C ₁ (erupting) -M ₂ , Lt corpus M ₁₋₃ , crushed palate R & L P ³ -M ²
TMP SK 411		Female mandibular corpora, all teeth represented
TMP SK 561		Female reconstructed skull, all teeth present
TMP SK 564		Female crushed maxilla, Rt C ¹ -M ² , Lt P ⁴ -M ¹
TMP SK 575		Associated crushed mandibular corpora, Rt & Lt M ₁₋₃ , and maxillae, Rt P ⁴ -M ² , Lt P ³ -M ²
TMP Skx 9579	1	Partial Rt mandibular corpus, P ₄ -M ₃
TMP Skx 38376	1	Isolated Rt P ₄
TMP Skx 2996	2	Isolated M ₁ (or possibly M ₂) in corpus fragment
TMP Skx 27586/87	3	Lt M ₃ crown
TMP Skx 28490	3	Lt M ₃ crown
TMP Skx 37323	3	Rt M ₃
TMP Skx 28812	3	Rt M ₂ (or M ₁)
TMP Skx 32148	3	Rt M ²

Mirzapur, Punjab, India

As reviewed by Delson (chapter 5), the age would appear to lie in the later Early Pleistocene or Middle Pleistocene, between 1.0 and 0.1 Ma. A single specimen is known, identified as *Theropithecus oswaldi delsoni* Gupta & Sahni (holotype). The specimen is housed in the Geology Museum, Panjab University, Chandigarh (PUC-GM).

Specimen number	Description
PUC-GM A/643	Partial Rt maxilla with M ²⁻³

References

- BROWN, F., & FEIBEL, C. (1987). 'Robust' hominids and Plio-Pleistocene paleogeography of the Turkana Basin, Kenya and Ethiopia. In *Evolutionary History of the 'Robust' Australopithecines*, ed. F.E. Grine, pp. 325–41. New York: Aldine de Gruyter.
- BYE, B.A., BROWN, F., CERLING, T. & McDOUGALL, I. (1987). Increased age estimate for the Lower Palaeolithic hominid site at Olgésailie, Kenya. *Nature*, 329, 237–9.
- DELSON, E. (1984). Cercopithecoid biochronology of the African Plio-Pleistocene: correlation among eastern and southern hominid-bearing localities. *Courier Forschungs-Institut Senckenberg*, 69, 199–218.
- ECK, G.G. (1987). *Theropithecus oswaldi* from the Shungura Formation, Lower Omo Basin, southwestern Ethiopia. In *Les Faunes Plio-Pléistocènes de la Basse Vallée de l'Omo (Éthiopie)*. Tome 3. Cercopithecidae de la Formation de Shungura, ed. Y. Coppens & F.C. Howell, pp. 124–39. Cahiers de Paléontologie, Travaux de Paléontologie Est-Africaine. Paris: Editions du Centre National de la Recherche Scientifique.
- ECK, G.G. & JABLONSKI, N.G. (1987). The skull of *Theropithecus brumpti* compared with those of other species of the genus *Theropithecus*. In *Les Faunes Plio-Pléistocènes de la Basse Vallée de l'Omo (Éthiopie)*. Tome 3. Cercopithecidae de la Formation de Shungura, ed. Y. Coppens & F.C. Howell, pp. 11–122. Cahiers de Paléontologie, Travaux de Paléontologie Est-Africaine. Paris: Editions du Centre National de la Recherche Scientifique.
- FEIBEL, C.S., BROWN, F.H. & McDOUGALL, I. (1989). Stratigraphic context of fossil hominids from the Omo Group deposits: northern Turkana Basin, Kenya and Ethiopia. *American Journal of Physical Anthropology*, 78, 595–622.
- GERAADS, D. (1979). La faune des gisements de Melka-Kunturé (Ethiopie): Artiodactyles, Primates. *Abbay*, 10, 21–49.
- GERAADS, D. (1987). Dating the northern African cercopithecoid fossil record. *Human Evolution*, 2, 19–27.
- HAY, R. (1976). *Geology of the Olduvai Gorge: a study of sedimentation in a semiarid basin*. Berkeley: University of California Press.
- DE HEINZELIN, M. (1983). The Omo Group: Archives of the International Omo Research Expedition. *Annales, S.S. Sciences Géologiques*, (85), Musée Royal de l'Afrique Centrale, Tervuren.
- HILL, A. & WARD, S. (1988). Origin of the Hominidae: the record of African large hominoid evolution between 14 and 4 My. *Yearbook of Physical Anthropology*, 31, 49–83.
- KLEIN, R. & CRUZE-URIBE, K. (1991). The bovids from Elandsfontein, South Africa, and their implications for the age, paleoenvironment and origins of the site. *African Archaeological Review*, 9, 21–79.
- NAPIER, P.H. (1981). *Catalogue of Primates in the British Museum (Natural History) and elsewhere in the British Isles. Part II: Family Cercopithecidae, Subfamily Cercopithecinae*. London: British Museum (Natural History).
- PLUMMER, T.W. & POTTS, R. (1989). Excavations and new findings at Kanjera, Kenya. *Journal of Human Evolution*, 18, 269–76.
- POTTS, R. (1989). Olgésailie: new excavations and findings in Early and Middle Pleistocene contexts, southern Kenya rift valley. *Journal of Human Evolution*, 18, 477–84.
- WOOD, B.A. & VAN NOTEN, F.L. (1986). Preliminary observations on the BK 8518 mandible from Baringo, Kenya. *American Journal of Physical Anthropology*, 69, 117–27.

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