Tables

– online –

List of Tables (online)

Table 1.1.2 Overview of hominin genera and species (based on Wood and Boyle (2016) with adaptations from other sources)

Genus + species	Fossils/Evidence + Type specimen	Time –span (FAD-LAD)[1]	Main sites	Key publications[2]	Comments
Sahelanthropus					
Sahelanthropus tschadensis	Cranium, mandible, dentition Type specimen: TM-266-01-060-1	FAD: 7.2/7.43 Ma LAD: 6.8/6.38 Ma	**Chad:** Locality at Toros-Menalla	**Brunet et al. (2002);** Brunet et al. (2005); Lebatard et al. (2008); Macchiarelli et al. (2020)	*Sahelanthropus tschadensis*' allocation within the hominin clade is disputed (e.g. Boyle and Wood 2020; Guy et al. 2005; Shapiro 2009; Wood and Harrison 2011; Zollikofer et al. 2005).
Orrorin					
Orrorin tugensis	Mandible, dentition, femur, humerus, phalanx Type specimen: BAR-1000'00	FAD: 6.0/6.14 Ma LAD: 5.7/5.52 Ma	**Kenya:** Localities in the Lukeino Formation, Tugen Hills	**Senut et al. (2001);** Pickford and Senut (2001); Sawada et al. (2002); Senut (2020)	*Orrorin tugensis*' allocation within the hominin clade is disputed (e.g. Almécija et al. 2013; Boyle and Wood 2020; Shapiro 2009; Wood and Boyle 2016; Wood and Harrison 2011). White et al. (2009) suggest, as they see no justification to assign *Orrorin tugenensis* and *Sahelanthropus tschadensis* to their own genus, to transfer them to *Ardipithecus*, i.e. as *Ardipithecus tugenensis* and *Ardipithecus tschadensis* respectively.
Ardipithecus					
Ardipithecus kadabba	Mandible, isolated teeth, upper limb long bones, and phalanges, pedal phalanx	FAD: 6.3/6.7 Ma LAD: 5.2/5.11 Ma	**Ethiopia:** Localities along the western margin of the Middle Awash study area in the Afar depression and in the Central	Haile-Selassie (2001); **Haile-Selassie et al. (2004);** Simpson et al. (2007); Haile-Selassie and WoldeGabriel (2009)	Initially, the specimens were classified as a subspecies of *Ardipithecus ramidus*, i.e. *Ardipithecus ramidus kadabba* (Haile-Selassie 2001). They were elevated to their own species, i.e. *Ardipithecus kadabba*, after additional finds (Haile-Selassie et al. 2004). Their allocation

[1] FAD: first appearance date of a taxon in the fossil record; LAD: last appearance date of a taxon in the fossil record. The FADs and LADs shown in this table are inferred from Wood and Boyle (2016) if not indicated otherwise. The first date, for FAD and LAD alike, is a conservative estimate while the second date, if applicable, incorporates published dating errors. All dates are based on published research literature. Note that the shown dates for each species are likely to underestimate the length of the time span of its existence as the FAD of a taxon is most likely later than its actual origination or migration into the region of its discovery, while the LAD of a taxon is most likely earlier than its actual extinction or emigration out of its region of discovery (Wood and Boyle 2016, 55).

[2] Key publications are sorted by year of publication; those publications in which the genus and/or species was first designated are highlighted by bold lettering.

	Type specimen: ALA-VP-2/10		Awash Complex as well as in the Gona Paleoanthropological Research Project study area		within the hominin clade is disputed (see Boyle and Wood 2020).
Ardipithecus ramidus	Dentition and fragmented remains of the cranium, mandible, vertebrae, pelvis, upper and lower limb long bones, carpals and tarsals, metacarpals and metatarsals, hand and pedal phalanges Type specimen: ARA-VP-6/1	FAD: 4.51/4.6 Ma LAD: 4.3/4.262 Ma	**Ethiopia**: Localities in the Central Awash Complex in the Middle Awash study area in the Afar depression and in the Gona Western Margin **Kenya**: Tabarin	White et al. (1994); **White et al. (1995)**; Semaw et al. (2005); special section in *Science* comprising eleven research articles (see: Hanson 2009; White et al. 2009); White et al. (2015)	Initially, the specimens were included into *Australopithecus* (White et al. 1994) before being transferred to the new genus of *Ardipithecus* (White et al. 1995). In addition, a mandible discovered at Ma Tabarin in Kenya, KNM-TH 13150, is disputed to be assigned to *Ardipithecus ramidus* (e.g. Kissel and Hawks 2015; Wood and Boyle 2016). *Ardipithecus ramidus*' allocation in the hominin clade is debated (e.g. Boyle and Wood 2020; Mongle et al. 2019; Sarmiento 2010; Wood and Harrison 2011).
Australopithecus					
Australopithecus anamensis	Maxilla, mandible, dentition, humerus, femur Type specimen: KNM-KP-29281	FAD: 4.2/4.37 Ma LAD: 3.9/3.82 Ma	**Ethiopia**: Localities in the Omo-Turkana Basin and in the Middle Awash study area in the Afar depression as well as in the Woranso-Mille study area, located in the central Afar region **Kenya**: Localities in the Omo-Turkana Basin	Fleagle et al. (1991); Heinrich et al. (1993); Coffing et al. (1994); **Leakey et al. (1995)**; Ward et al. (1999); Ward et al. (2001); White et al. (2006); Haile-Selassie et al. (2019); Ward et al. (2020)	The specimens were initially attributed to *Australopithecus afarensis* (Coffing et al. 1994) before being transferred to a new species, i.e. *Australopithecus anamensis* (Leakey et al. 1995).
Australopithecus afarensis	Nearly the entire skeleton Type specimen: LH-4	FAD: 3.7/3.89 Ma LAD: 3.0/2.9 Ma	**Ethiopia**: Localities in the Middle Awash study area as well as in the Woronso-Mille study area	Leakey (1976); **Johanson et al. (1978)**; Johanson et al. (1982a); Johanson et al. (1982b); Rak (1983); Clark et al. (1984);	Over the past several decades, the assembly of fossil specimens categorised as *Australopithecus afarensis* has become exceptionally substantial, comprising more than 400 specimens (e.g.

			Kenya: Localities in Koobi Fora and Kantis **Tanzania**: Laetoli	Kimbel et al. (1984); Kimbel (1988); Suwa (1990); White et al. (1993); Kimbel et al. (1994); Brown et al. (2001); Kimbel et al. (2004); Alemseged et al. (2005); Drapeau et al. (2005); Alemseged et al. (2006); Kimbel and Delezene (2009); Haile-Selassie et al. (2010); Ward et al. (2012); Mbua et al. (2016)	Hammond and Ward 2013; Wood and Boyle 2016).
Australopithecus bahrelghazali	Mandible and teeth Type specimen: KT-12/H1	FAD: 3.58/3.85 Ma LAD: 3.58/3.31 Ma	**Chad**: Locality at Bahr el Ghazal, Koro Toro	Brunet et al. (1995); **Brunet et al. (1996)**; Guy et al. (2008); Lebatard et al. (2008)	The specimens were initially attributed to *Australopithecus* aff.[3] *Australopithecus afarensis* (Brunet et al. 1995) but were subsequently assigned to a new species, i.e. *Australopithecus bahrelghazali* (Brunet et al. 1996). Many researchers still hold the opinion that this sample should be included into *Australopithecus afarensis* (e.g. Alemseged et al. 2006; Hammond and Ward 2013; Kimbel and Delezene 2009).
Australopithecus deyiremeda	Maxilla, mandible, and dentition Type specimen: BRT-VP-3/1	FAD: 3.5/3.596 Ma LAD: 3.33/3.3 Ma	**Ethiopia**: The Burtele and Waytaleyta collection areas in the Woranso-Mille study area, central Afar region	**Haile-Selassie et al. (2015)**; Spoor et al. (2016)	The assignment of the specimens to a new species was immediately questioned (see Balter 2015).
Australopithecus africanus	Cranium, mandible, dentition and some postcranial evidence Type specimen: Taung-1	FAD: 3.0/4.02 Ma LAD: 2.4/1.9 Ma	**South Africa**: Several localities in Gauteng as well as the North West Province	**Dart (1925; 1948)**; White et al. (1981); Rak (1983); Berger (1992); Clarke and Tobias (1995); Lockwood and Tobias (1999; 2002); Partridge et al. (2003);	The assembly of specimens categorised as *Australopithecus africanus* is quite substantial. Cranium, mandible, and dentition are well sampled, and postcranial evidence encompasses at least one specimen of each long bone (Wood and Boyle 2016). Of course, debates about the

[3] aff. = *affinis*, i.e. closely related but not identical.

				Toussaint et al. (2003); Moggi-Cecchi et al. (2006); Grine (2013); Kuhn et al. (2016)	assignment to *Australopithecus africanus* continue in some cases (e.g. Clarke 1988; 1999; 2008).
Australopithecus garhi	Cranial fragments, maxilla, dentition Type specimen: BOU-VP-12/130	FAD: 2.5 Ma LAD: 2.49/2.45 Ma	**Ethiopia**: Locality in the Middle Awash study area	**Asfaw et al. (1999)**; Heinzelin et al. (1999); Strait and Grine (2001)	Other fossilised skeletal remains, i.e. a long femur and a long forearm, were found next to the cranial fragments but were not formally assigned to *Australopithecus garhi* (Wood and Boyle 2016).
Australopithecus sediba	Cranium, mandible, dentition, upper limb long bones, complete hand, pelvis fragments, lower limb long bones, partial foot Type specimen: MH-1	FAD: 1.98/2.05 Ma LAD: 1.98/1.91 Ma	**South Africa**: Malapa locality in Gauteng Province.	**Berger et al. (2010)**; Dirks et al. (2010); Pickering et al. (2011); Berger (2012); Ruiter et al. (2013); Williams and DeSilva (2018); Hawks and Berger (2022)	Two skeletons (MH 1, a sub-adult presumed male, and MH 2, an adult presumed female) were assigned to *Australopithecus sediba*. The specimens are remarkably well preserved (see Hammond and Ward 2013).
Kenyanthropus					
Kenyanthropus platyops	Cranium and dentition Type specimen: KNM-WT 40000	FAD: 3.54/3.65 Ma LAD: 3.35 Ma	**Kenya**: Lomekwi, West Turkana	**Leakey et al. (2001)**; White (2003); Spoor et al. (2010); Spoor et al. (2016)	As the discovered cranium is highly distorted, its assignment to a new genus and species is challenged (see White 2003).
Paranthropus		Some researchers do not recognize the separate genus of *Paranthropus* for hypodigms they assign to *Australopithecus* as robust australopiths (e.g. Coppens 1980; Rak et al. 2007; Washburn and Patterson 1951; see Wood and Schroer 2017).			
Paranthropus aethiopicus	Cranium, mandible, dentition Type specimen: Omo-18-1967-18	FAD: 2.66/2.73 Ma LAD: 2.3/2.23 Ma	**Ethiopia**: Omo **Kenya**: West Turkana **Tanzania**: Laetoli	Arambourg and Coppens (1968); Walker et al. (1986); **Chamberlain and Wood (1987)**; Wood and Chamberlain (1987); Rak and Kimbel (1991); Suwa et al. (1994); Suwa et al. (1996)	The specimens were initially labelled as *Paraustralopithecus aethiopicus* (Arambourg and Coppens 1968) but were later relabelled as *Paranthropus aethiopicus* (Chamberlain and Wood 1987). Debates about assignments to *Paranthropus aethiopicus* continue (e.g. Coppens 1980; Walker et al. 1993). Some researchers reject *Paranthropus aethiopicus* as a distinct genus and suggest including the

					specimens in *Paranthropus boisei* or, if they do not recognise Paranthropus as a separate genus, in *Australopithecus boisei* (e.g. Walker et al. 1986; see Constantino and Wood 2007).
Paranthropus boisei	Cranium, mandible, dentition, distal humerus, radius, femur, and tibia fragment Type specimen: OH-5	FAD: 2.3/2.5 Ma LAD: 1.3/1.15 Ma	**Ethiopia**: Localities in Konso and Omo. **Kenya**: Localities in Chesowanja, Koobi Fora, and West Turkana **Malawi**: Malema **Tanzania**: Localities in the Olduvai Gorge and at Peninj	Leakey (1959); **Robinson (1960)**; Leakey and Leakey (1964); Tobias (1967); Day (1969); Carney et al. (1971); Rak (1983); Leakey and Walker (1988); Suwa (1988); Brown et al. (1993); Suwa et al. (1997); Kullmer et al. (1999); Alemseged et al. (2002); Constantino and Wood (2007); Wood and Constantino (2007); Domínguez-Rodrigo et al. (2013); Green et al. (2018); Richmond et al. (2020)	The specimens were initially labelled as *Zinjanthropus boisei* (Leakey 1959) and only later as *Paranthropus boisei* (Robinson 1960).
Paranthropus robustus	Cranium, mandible, dentition, hand bones, vertebrae, femur, talus, and other fragmentary postcranial remains Type specimen: TM-1517	FAD: 2.0/2.27 Ma LAD: 1.0/0.87 Ma	**South Africa**: Localities in Gauteng Province as well as in North West Province.	**Broom (1938; 1949)**; Broom and Robinson (1950; 1952); Rak (1983); Grine (1989); Berger et al. (1995); Menter et al. (1999); Keyser (2000); Keyser et al. (2000); Steininger and Berger (2000); Thackeray et al. (2001); Steininger et al. (2008); Ruiter et al. (2009); Martin et al. (2021); Rak et al. (2021)	*Paranthropus robustus* was the first species assigned to the newly established genus of *Paranthropus* (Broom 1938), which started debates on weather this new genus was valid or specimens should be subsumed into *Australopithecus* (Washburn and Patterson 1951).

Homo					
Homo habilis sensu stricto	Cranium, mandible, dentition, hand phalanges, tarsals, metatarsals, and other fragmented postcranial remains including upper and lower long bone shafts Type specimen: OH-7	FAD: 2.35/2.6 Ma LAD: 1.65 Ma	**Ethiopia**: Localities in Hadar [tentative] and Omo-Shungura **Kenya**: Localities in Koobi Fora and West Turkana **South Africa**: Localities in Gauteng Province **Tanzania**: Localities at Olduvai Gorge	**Leakey et al. (1964)**; Robinson (1966); Tobias (1966); Leakey et al. (1971); Leakey (1974); Leakey and Walker (1985); Johanson et al. (1987); Leakey et al. (1989); Tobias (1991); Wood (1991); Grine et al. (1993); Kimbel et al. (1996); Grine (2001); Blumenschine et al. (2003); Spoor et al. (2015); La Torre et al. (2021)	*sensu stricto* = in the strict sense; researchers not recognising *Homo rudolfensis* as a distinct taxon subsume respective specimens under *Homo habilis*, commonly identified as *Homo habilis sensu lato* (= in the broad sense; see: *Homo rudolfensis*).
Homo rudolfensis	Cranium, dentition, mandibles Type specimen: KNM-ER-1470	FAD: 2.0/2.09 Ma LAD: 1.95/1.78 Ma	**Ethiopia**: Omo **Kenya**: Koobi Fora, West Turkana **Malawi**: Uraha	Leakey (1973a; 1973b); Alexeev (1986); **Groves (1989)**; Wood (1991); Wood (1992); Schrenk et al. (1993); Bromage et al. (1995); Suwa et al. (1996); Prat et al. (2005); Leakey et al. (2012); Spoor et al. (2015)	The specimens were initially labelled as *Pithecanthropus rudolfensis* (Alexeev 1986) and later transferred to *Homo* as *Homo rudolfensis* (Groves 1989). Some researchers do not recognise this taxon and subsume respective specimens under *Homo habilis sensu lato* (see: *Homo habilis sensu stricto*).
Homo gautengensis	Type specimen Stw-53		**South Africa**: Sterkfontein	**Curnoe (2010)**	The new species, *Homo gautengensis*, was proposed for finds from Sterkfontein, which had earlier been classified as *Homo habilis* (Curnoe and Tobias 2006) or *Australopithecus africanus* (Kuman and Clarke 2000). The validity of this new taxon is disputed (e.g. Berger 2012; Pickering et al. 2011).

Homo erectus	Nearly the entire skeleton except for most hand and foot bones Type specimen: Trinil-2	FAD: 1.81/1.85 Ma LAD: 27 ka	**China**: Zhoukoudian, Yuanmou, Lantian and others **Ethiopia**: Middle Awash study area **Indonesia**: Localities on Java **Tanzania**: Olduvai Gorge	Dubois (1893; 1894); Black (1927); Koenigswald (1936; 1968; 1975); **Weidenreich** (1936; 1937c; 1937b; 1940; 1944; 1951); Leakey (1961); Jacob (1973); Rightmire (1979); Santa Luca (1980); Widianto and Grimaud-Hervé (1993); Antón (1999); Kaifu et al. (2008); Zaim et al. (2011)	Initially, Dubois referred his finds to *Anthropopithecus erectus* (Dubois 1893). Later, after being convinced of having found hominin remains, he transferred the new species to a new genus, *Pithecantropus* (Dubois 1894). Weidenreich (1940) suggested to subsume *Pithecantropus erectus* finds from Trinil and Sangiran on Java, Indonesia, as well as *Sinanthropus pekinensis* finds from Zhoukoudian, China, into a single genus and species – *Homo erectus javanensis* and *Homo erectus pekinensis* respectively. Subsequently, other hypodigms such as *Atlanthropus* (Le Gros Clark 1964) and *Telanthropus* (Robinson 1961) were also transferred to *Homo erectus*. After the establishment of *Homo ergaster* (Groves and Mazák 1975) for specific specimens from East Turkana, it became rather common to subsume fossils discovered in Africa and assigned to *Homo erectus* under *Homo ergaster*, maintaining *Homo erectus* as a species designation for fossils discovered in Asia (see *Homo ergaster*).
Homo ergaster	Nearly the entire skeleton except for most hand and foot bones Type specimen: KNM-ER-992	FAD: 1.7/2.27 Ma LAD: 1.4/0.87 Ma	**Kenya**: Koobi Fora, East and West Turkana **South Africa**: perhaps Swartkrans, Gauteng Province	Leakey (1974); **Groves and Mazák (1975)**; Brown et al. (1985); Leakey and Walker (1985); Walker and Leakey (1993); Wood (1994)	With introducing *Homo ergaster* for African fossils, it became possible to identify *Homo erectus* as a terminal eastern Asian hominin species. However, the distinctiveness of *Homo ergaster* and *Homo erectus* is continuously disputed. Many researchers refer to *Homo ergaster* fossils as *African Homo erectus* (e.g. Lordkipanidze et al. 2013; Rightmire et al. 2006; see Tattersall 2015).
Homo antecessor	Cranium, mandible, dentition, upper limb long bones, clavicle, ribs, carpals,	FAD: 1.0/1.2 Ma LAD: 0.936 Ma	**Spain**: Gran Dolina, Sierra de Atapuerca	**Bermúdez de Castro et al.** (1997; 2008; 2017a; 2017b); Carbonell et al. (2005)	Most of the specimens identified as *Homo antecessor* belong to adolescent or even younger individuals so that their morphology is difficult to compare to other taxa represented by mostly adult remains (Wood and Boyle 2016). Also,

	metacarpals, hand phalanges, tarsals, metatarsals, foot phalanges Type specimen: ATD6-5				*Homo antecessor* is not recognised undisputedly (e.g. Hublin 2001; Sarmiento et al. 2007; Schwartz 2004).
Homo heidelbergensis	Cranium, mandible, dentition, and some isolated postcranial evidence Type specimen: Mauer-1	FAD: 700 ka LAD: 100 ka	**Algeria**: Tighenif **France**: Caune de l'Arago **Germany**: Mauer **Greece**: Petralona **South Africa**: Elandsfontein **Tanzania**: Ndutu, Laetoli	**Schoetensack (1908)**; Kokkoros and Kanellis (1960); Lumley and Lumley (1973); Rightmire (1995); Manzi et al. (2001); Mounier et al. (2009); Stringer (2012); Manzi (2016)	Differing interpretations of *Homo heidelbergensis*' role in human evolution exist: 1) *Homo heidelbergensis* giving rise to *Homo sapiens* in Africa and *Homo neanderthalensis* in Eurasia (e.g. Rightmire 1998; Stringer 1983); 2) *Homo heidelbergensis* being restricted to Europe and ancestral only to *Homo neanderthalensis* (e.g. Gibbons 1997; Hublin 2009); 3) *Homo heidelbergensis* to be included into *Homo neanderthalensis* (e.g. Roksandic et al. 2021).
Homo rhodesiensis	Cranium, mandible, dentition, pelvis, sacrum, humerus, femur, tibia Type specimen: Kabwe-1	FAD: 600 ka LAD: 300 ka	**Ethiopia**: Kabwe (Broken Hill), Zambia and Bodo **Tanzania**: Ndutu, Laetoli	**Woodward (1921)**; Conroy et al. (1978); Hublin (2009); Grün et al. (2020)	The validity of this taxon is debated; *Homo rhodesiensis* is primarily used as a taxon by researchers who interpret *Homo heidelbergensis* as an exclusively European species. Besides this, scientists commonly forgo the taxon and assign associated specimens to *Homo heidelbergensis*.
Homo bodoensis	Cranium, mandible, dentition, pelvis, sacrum, humerus, femur, tibia Type specimen: Bodo-1	FAD: 700 ka LAD: 100 ka[4]	**Ethiopia**: Kabwe (Broken Hill), Zambia and Bodo **Italy**: Ceprano[5] **Morocco**: Salé **Tanzania**: Ndutu, Laetoli	**Roksandic et al. (2021)**	*Homo bodoensis* was suggested as a collective name for all species of the same age in Africa, including *Homo rhodesiensis* and *Homo heidelbergensis*. The suggestion of *Homo bodoensis* was immediately met with criticism

[4] As *Homo bodoensis* is supposed to include specimens so far assigned to *Homo heidelbergensis* and/or *Homo rhodesiensis*, the time span has to be set accordingly. Roksandic et al. (2021) suggest a time span from approximately 850–400 ka.

[5] The specimens from Ceprano, Italy, were earlier suggested to represent a distinct hominin species, i.e. *Homo cepranensis* (Mallegni et al. 2003). However, this designation did not gain acceptance.

			South Africa: Elandsfontein		(Delson and Stringer 2022; Marshall 28.10.2021; Roksandic et al. 2022).
Homo naledi	Cranium, mandible, dentition, pelvis, hand phalanges, foot phalanges, humerus, femur, and other postcranial remains Type specimen: Dinaledi-1 (DH-1)	FAD: 335 ka LAD: 236 ka[6]	**South Africa**: Rising Star cave system	**Berger et al. (2015)**; Dirks et al. (2015); Dirks et al. (2017); Hawks et al. (2017)	The placement of *Homo naledi* with other *Homo* species remains unclear, as does their position in human evolution. They share morphological similarities not only with contemporary but also with early *Homo* and even with *Australopithecus* – most prominently their small cranial capacity (Berger et al. 2017; Schroeder et al. 2017).
Homo longi	Cranium Type specimen: HBSM2018-000018(A)	FAD: 309 ka LAD: 146 ka[7]	**China**: Harbin, Heilongjiang	**Ji et al. (2021)**; Ni et al. (2021); Shao et al. (2021)	*Homo longi* was suggested as a new species for a nearly complete cranium discovered in Harbin, Heilongjiang province, China, by a local worker in 1933. As it was only brought to the attention of palaeoanthropologists in 2018, its context (stratigraphy, natural deposits etc.) is unknown (Ji et al. 2021). The specimen is also discussed as a representative of the *Denisovans* who are not yet assigned to any species (see below) (Gibbons 2021).
Homo helmei	Cranium, mandible, dentition, fragmentary postcrania Type specimen: Florisbad-1	FAD: 260 ka LAD: 80 ka	**Ethiopia**: Omo-Kibish **Morocco**: Jebel Irhoud **South Africa**: Florisbad **Sudan**: Singa **Tanzania**: Ngaloba Beds, Laetoli	**Dreyer (1935)**; Ennouchi (1962); Leakey et al. (1969); Day et al. (1980)	*Homo helmei* was suggested as a distinct species with Florisbad-1 as its holotype. However, most researchers do not recognise this taxon but assign the specimens to *Homo sapiens* (e.g. Hublin et al. 2017; Mounier and Mirazón Lahr 2019; Stringer 2016).
Homo neanderthalensis	Entire skeleton, DNA Type specimen:	FAD: 130/197 ka LAD: 40/39 ka	Numerous sites in Europe, Asia and the Near East.	**King (1864)**; Schmitz et al. (2002); Harvati and Harrison (2006); White et al. (2014)	In addition to the *Denisovans*, who are not yet assigned to any species (see below), *Homo neanderthalensis* is the only extinct hominin

[6] Date approximations derived from Dirks et al. (2017).

[7] Date approximations derived from Shao et al. (2021).

	Neandertal-1				species with ancient DNA evidence (Green et al. 2010; Prüfer et al. 2014).
Homo floresiensis	Nearly the entire skeleton except for some axial skeleton, upper limb, hand, and tarsal bones Type specimen: LB-1	FAD: 100 ka LAD: 50 ka[8]	**Indonesia**: Liang Bua, Flores	**Brown et al. (2004)**; Morwood et al. (2005)	It was initially suggested to place the specimens within *Homo erectus*. However, subsequent analyses suggest that they may be more closely related to a more 'primitive' hominin, such as *Homo habilis* sensu stricto (e.g. Argue et al. 2009; Brown and Maeda 2009; Morwood and Jungers 2009). A small group of researchers claims that the *Homo floresiensis* hypodigm is nothing but a sample from a population of *Homo sapiens* – most likely related to the Rampasasa pygmies living on Flores today – afflicted by developmental abnormalities (e.g. Baab et al. 2013; Jacob et al. 2006; and for refutations of these hypotheses Groves 2007; Westaway et al. 2015). Part of this controversy was based on previous age determinations dating hominin-bearing deposits to as late as 12 ka thus suggesting a coexistence of *Homo floresiensis* and *Homo sapiens* on Flores (Morwood et al. 2004; Roberts et al. 2009).
Homo luzonensis	Dentition, metatarsals, hand phalanges, foot phalanges, a femoral shaft Type specimen: CCH-6	FAD: 67/70.9 ka LAD: 67/50 ka[9]	**Philippines**: Callao Cave, Luzon	**Détroit et al. (2019)**; Détroit et al. (2021); Détroit et al. (2022)	Hominin fossils were discovered at Callao Cave as early as 2007 but initially assigned to *Homo sapiens* (Mijares et al. 2010); additional finds led to the re-assignment to the newly established species of *Homo luzonensis*. The specimens are dated to a minimum age of 67-50 ka.
Homo sapiens	Entire skeleton, DNA	FAD: 200/195 ka LAD: present	Numerous sites across the world	**Linnaeus (1758/1759)**; Keith (1912); Day (1967); White et al. (2003);	The first fossilised specimens assignable to *Homo sapiens*, providing evidence that our species was ancient enough to have fossilised

[8] Date approximations derived from Sutikna et al. (2016).

[9] Date approximations derived from Grün et al. (2014), Ingicco et al. (2018) and Mijares et al. (2010).

	Type specimen: Linnaeus himself			Tattersall and Schwartz (2008); Schwartz and Tattersall (2010); Stringer and Buck (2014); Stringer (2016)	representatives, were skeletal remains discovered at the Cro-Magnon rock shelter in France in 1868. During the following decades, similar *Homo sapiens*-like fossils were discovered elsewhere in Europe, Asia, Eurasia, and Australia. In Africa, the first fossil evidence for *Homo sapiens* was discovered in 1924 in Sudan; comparable evidence has since come from sites in South Africa, Morocco, and Ethiopia (Wood and Boyle 2016).
Not assigned					
Burtele foot BRT-VP-2/73	Metatarsals and phalanges	FAD: 3.47/3.4 Ma LAD: 3.4/3.2 Ma	**Ethiopia**: Burtele collection area in the Woranso-Mille study area	Haile-Selassie et al. (2012); Lieberman (2012)	As the discovered specimens are described to be significantly different from *Australopithecus afarensis*, it was suggested that not yet identified contemporaries of *Australopithecus afarensis* lived in the Afar region of Ethiopia (Haile-Selassie et al. 2012).
LD-350-1	Mandible, dentition	FAD: 2.85/2.80 Ma LAD: 2.75/2.65 Ma	**Ethiopia**: Lee Adoyta region of the Ledi-Geraru study area	DiMaggio et al. (2015); Villmoare et al. (2015)	The specimen is currently unassigned to a species but suggested to be the earliest representative of the genus *Homo* (Villmoare et al. 2015).
Dmanisi hominins	Cranium, mandible, dentition, vertebrae, clavicle, scapular fragment, ribs, humerus, hand phalanges, femur, patella, tibia, some tarsals and metatarsals, foot phalanges	FAD: 1.85 Ma LAD: 1.77 Ma	**Georgia**: Dmanisi	Gabunia et al. (2000); Vekua et al. (2002); Lumley and Lordkipanidze (2006); Rightmire et al. (2006); Lordkipanidze et al. (2007a; 2007b; 2013); Rightmire et al. (2019)	The excavated fossils were initially linked to *Homo ergaster* (Gabunia et al. 2000) and later assigned to *Homo erectus*, with the potential exception of the large mandible D2600 (Rightmire et al. 2006). Additionally, the new species label *Homo georgicus* was suggested (Lumley and Lordkipanidze 2006), of which this large mandible D2600 is the designated holotype (Martín-Francés et al. 2014). Further finds then suggested the Dmanisi hominins to represent a single but highly polymorphic species, subsequently labelled *Homo erectus georgicus* (Lordkipanidze et al. 2013). In this last publication, it was even suggested to assign specific specimens from the Dmanisi material,

					i.e. the cranium D4500 as well as the aforementioned mandible D2600, their own sub-subspecies: *Homo erectus ergaster georgicus*. Discussions about the appropriate taxonomic labelling of the Dmanisi finds continue uninterrupted, and no unequivocal consensus has yet been reached (Henderson 2015; Rightmire et al. 2019; Schwartz and Tattersall 2005; Schwartz et al. 2014; Tattersall 2014; Zollikofer et al. 2014). The Dmanisi hominin fossils are of such interest as they provide a sense of the possible range of morphological variation within a relatively short time interval. Additionally, and due to their early date, they represent one of the very few examples of early hominins' presence outside Africa.
Sima de los Huesos	Nearly the entire skeleton except for some axial skeleton and upper limb bones, DNA	FAD: 780 ka LAD: 440/425 ka[10]	**Spain**: Sima de los Huesos, Sierra de Atapuerca	Arsuaga et al. (1993; 1997; 1999; 2015); Meyer et al. (2014; 2016)	The hominin fossils discovered at the Sima de los Huesos are not a formal species but usually assigned to *Homo heidelbergensis*. They are unusual with regard to their completeness – fossils belonging to 28 almost complete hominin skeletons were discovered – and their good preservation. DNA sequencing showed genetic proximity to *Homo neanderthalensis* (Meyer et al. 2016), which facilitated studies concerning the distinctions and relations between the Sima de los Huesos sample and the hypodigm of *Homo neanderthalensis* (e.g. Arsuaga et al. 2014; 2015; Quam et al. 2016).
Denisovans	Isolated teeth, hand phalanx, DNA, mandible	FAD: 50.63/48.65 ka	**China**: Xiahe, Tibet **Laos**: Tam Ngu Hao **Russia**: Denisova Cave, Siberia	**Krause et al. (2010)**; Reich et al. (2010); Chen et al. (2019); Jacobs et al. (2019)	Only very few hominin fossils were discovered at the Denisova Cave in Siberia, but DNA extracted from one of the fossils led to the result that Denisovans were a sister group of *Homo neanderthalensis* (Krause et al. 2010). This

[10] New LAD approximations derived from Demuro et al. (2019).

		LAD: 29.2/28.84 ka[11]			fuelled discussions about the time span of migrations out of Africa and interbreeding between differing hominin species (e.g. Browning et al. 2018; Pennisi 2013; Reich et al. 2011; Slon et al. 2017; Zhang et al. 2020). The Denisovans' genomic legacy is provenly present in several contemporary populations, suggesting that they were once widespread, but no other fossil evidence had been discovered until 2019, when a mandible discovered at the Xiahe site on the Tibetan Plateau in China was reported to have been identified as Denisovan (Chen et al. 2019). Subsequently, a lower molar discovered at Tam Ngu Hao 2 in Laos was suggested to represent a Denisovan due to its close morphological affinities to the Xiahe specimens (Demeter et al. 2022).

[11] Recently, new age determinations were published suggesting a much earlier date for Denisovan presence at the cave, i.e. an FAD of 189/217 ka or even earlier and an LAD of about 61/49 ka (Jacobs et al. 2019; also see Douka et al. 2019). The isolated tooth from Tam Ngu Hao, Laos, was dated even earlier, i.e. 164-131 ka; its association with the Denisovans, however, was only recently suggested and is likely going to be discussed in the future.

Table 1.3.1 Chinese legislations, regulations, and policies concerning museums, since 1978 (adapted and expanded from Chang et al. (2021), Supplement 1; those legislative documents being discussed in this study are shaded darkly)

Year	Policy or regulation	Comments and source
1978	Trial measures on the preservation of museum collections (博物馆藏品保管试行办法)	https://law.lawtime.cn/d646546651640.html
1979	Regulations on the work of museums of provinces, cities, and autonomous regions (省、市、自治区博物馆工作条例)	http://dnwh.njmuseum.com/pdf/1979/197925/19792502.pdf
1982	Constitution of the People's Republic of China (中华人民共和国宪法)	Article 22 mentions museums; the constitution was last revised in **2018**. 1982: https://upload.wikimedia.org/wikipedia/commons/3/30/中华人民共和国宪法（1982 年）.pdf 2018: http://www.gov.cn/guoqing/2018-03/22/content_5276318.htm
1982	Law of the People's Republic of China on the protection of cultural relics (中华人民共和国文物保护法)	The first law in China detailing the protection of cultural relics; last revised in **2017**. 1982: http://www.law-lib.com/law/law_view.asp?id=95139 2017: http://www.ncha.gov.cn/art/2017/11/28/art_2301_42898.html
1985	Regulations on Museum Security (博物馆安全保卫工作规定)	http://wwj.beijing.gov.cn/bjww/362760/362767/556574/556580/bwgaqgl/556852/index.html
1986	Measures for the management of museum collections (博物馆藏品管理办法)	http://www.ncha.gov.cn/art/2020/9/14/art_2406_24.html
1987	Grading standard for cultural relics collections (文物藏品定级标准)	The grading standards were revised in **2001**. 1987: http://www.law-lib.com/law/law_view.asp?id=4100 2001: http://www.gov.cn/banshi/2005-08/21/content_25093.htm
1987	Circular on cracking down on the activities of looting and smuggling cultural relics (关于打击盗掘和走私文物活动的通告)	https://www.chinacourt.org/law/detail/1987/05/id/87467.shtml
2005	Several decisions on the entry of non-public assets capital into the cultural industry (国务院关于非公有资本进入文化产业的若干决定)	Encourages and regulates the entry of non-public capital into the cultural sector. http://www.gov.cn/xxgk/pub/govpublic/mrlm/200803/t20080328_32685.html
2006	Museum Management Measures (博物馆管理办法)	http://www.gov.cn/gongbao/content/2006/content_457933.htm
2008	National museum evaluation method (for trial implementation), Interim standard for museum evaluations, Application for museum evaluation (全国博物馆评估办法(试行), 博物馆评估暂行标准, 博物馆评估申请书)	Evaluation of museums by SACH / Chinese Museums Association; last revised in **2019**, then also including the 'Standard for museum evaluations (博物馆定级评估标准)' 2008: https://www.pkulaw.com/chl/415eb99255cae6babdfb.html 2019: http://www.gov.cn/zhengce/zhengceku/2020-03/26/content_5495770.htm

2008	Notice on the free opening of national museums and memorials (关于全国博物馆、纪念馆免费开放的通知)	Majority of state-owned museums were obliged to open to the public free of charge. http://www.gov.cn/gzdt/2008-02/01/content_877540.htm
2010	Opinions on promoting the development of private museums (关于促进民办博物馆发展的意见)	Encourages and regulates the development of private museums. http://www.chinatax.gov.cn/chinatax/n810341/n810765/n812161/201003/c1085827/content.html
2010	Regulations on the protection of palaeontological fossils (古生物化石保护条例)	http://www.gov.cn/zwgk/2010-09/10/content_1699800.htm
2012	Ministry of Culture's plan on cultural reform and development within the '12th Five-Year Plan' period (文化部"十二五"时期文化改革发展规划)	http://www.gov.cn/gongbao/content/2012/content_2218051.htm
2012	Opinions on strengthening museum displays and exhibitions (关于加强博物馆陈列展览工作的意见)	Encouragement to improve museum exhibitions in accordance with scientific findings and based on their target groups of adolescents and minors. http://www.ncha.gov.cn/art/2012/12/14/art_2318_25541.html
2013	Interim Measures for the administration of special funds for the free opening of local museums and memorial halls subsidised by the central government (中央补助地方博物馆 纪念馆免费开放专项资金管理暂行办法)	Standardisation and improvement of efficiency of the management of governmental funds for the free opening of museums and memorials. http://www.gov.cn/gongbao/content/2013/content_2473889.htm
2015	Museums regulations (博物馆条例)	The first comprehensive national regulatory document of China's Museum sector. http://www.gov.cn/zhengce/2015-03/02/content_2823823.htm
2016	Guiding opinions of the State Council on Further Strengthening the work of cultural relics (国务院关于进一步加强文物工作的指导意见)	http://www.gov.cn/zhengce/content/2016-03/08/content_5050721.htm
2016	Notice on several opinions on promoting the development of cultural and creative products of cultural and cultural relics units (关于进一步推动文化文物单位文化创意产品开发的若干措施)	Encouragement to develop cultural and creative products and thus obtain economic benefits; last emphasised by a revised version in **2021**. 2016: https://www.fmprc.gov.cn/ce/cgny/chn/whsw/zgwhxx/dtxw/t1363757.htm 2021: http://www.gov.cn/zhengce/zhengceku/2021-08/31/content_5634552.htm
2016	Some opinions on promoting the rational utilization of cultural relics (关于促进文物合理利用的若干意见)	http://www.gov.cn/xinwen/2016-10/19/content_5121126.htm
2016	National 13th five-year plan for cultural heritage protection and scientific and technological innovation of public cultural services (国家"十三五"文化遗产保护与公共文化服务科技创新规划)	https://www.ndrc.gov.cn/fggz/fzzlgh/gjjzxgh/201706/t20170619_1196808.html?code=&state=123
2017	The 13th five-year plan for the development of national cultural relics (国家文物事业发展"十三五"规划)	http://www.scio.gov.cn/xwfbh/xwbfbh/wqfbh/44687/45588/xgzc45594/Document/1704207/1704207.htm

2017	Opinions on further promoting the development of private museums (关于进一步推动非国有博物馆发展的意见)	http://www.ncha.gov.cn/art/2017/7/25/art_2237_25058.html
2017	Implementation plan on further promoting the reform of corporate governance structure of public cultural institutions (关于深入推进公共文化机构法人治理结构改革的实施方案)	http://www.gov.cn/xinwen/2017-09/09/content_5223816.htm
2018	Guidance on promoting global tourism development (国务院办公厅关于促进全域旅游发展的指导意见)	Promotion of the cooperation between museums and the tourism sector. http://www.gov.cn/zhengce/content/2018-03/22/content_5276447.htm
2018	Interim Measures for the administration of withdrawal of cultural relics from state-owned collections (国有馆藏文物退出管理暂行办法)	http://www.ncha.gov.cn/art/2018/7/9/art_2237_28798.html
2018	Several opinions on strengthening the reform of the protection and utilization of cultural relics (关于加强文物保护利用改革的若干意见)	
2019	Operation guidelines for copyright, trademark right, and brand authorization of museum collection resources (for trial implementation) (博物馆馆藏资源著作权、商标权和品牌授权操作指引（试行）)	http://www.gov.cn/zhengce/zhengceku/2019-09/25/content_5432923.htm
2019	Opinions on further strengthening the personnel management of cultural and museum institutions (关于进一步加强文博事业单位人事管理工作的指导意见)	http://www.mohrss.gov.cn/wap/zc/zcwj/201911/t20191125_343418.html
2020	Opinions on using museum resources to carry out education and teaching in primary and secondary schools (关于利用博物馆资源开展中小学教育教学的意见)	Improvement of cooperations between museums and schools considering the integration of museum resources into the education system. http://www.gov.cn/zhengce/zhengceku/2020-10/20/content_5552654.htm
2020	Opinions on further standardising the filing and registration management of private museums (关于进一步规范非国有博物馆备案登记管理工作的意见)	http://www.gov.cn/zhengce/zhengceku/2020-11/06/content_5557842.htm
2021	Guiding opinions on promoting the reform and development of museums (关于推进博物馆改革发展的指导意见)	Addressing a necessary transformation of museum development cantered on quantity growth to quality improvement. http://www.ncha.gov.cn/art/2021/5/24/art_722_168090.html
2021	Collection regulations of state-owned museums (国有博物馆藏品征集规程)	http://www.ncha.gov.cn/art/2021/6/22/art_2318_44694.html
2021	Some measures on further promoting the development of cultural and creative products in cultural and cultural relics units (关于进一步推动文化文物单位文化创意产品开发的若干措施)	http://www.gov.cn/zhengce/zhengceku/2021-08/31/content_5634552.htm

Table 2.1 Museums visited during the field trip to China in September 2019, including reasons for visiting these museums and reasons why their exhibitions are included or excluded as case study exhibitions

	Museum	Reason to visit	Case study – yes or no
1	Beijing Wangfujing Early Humans Museum (北京王府井古人类文化遗址博物馆), Beijing	Small museum at Beijing Wangfujing subway station; convenient to visit.	Not selected as case study as the human fossils excavated at Wangfujing belong to *Homo sapiens*.
2	Zhoukoudian Site Museum (周口店遗址博物馆), Beijing	One of the most important archaeological sites providing *Homo erectus* fossils in China.	Selected as case study due to its importance as well as its location in the Beijing area.
3	Capital Museum (首都博物馆), Beijing	An important history museum located in Beijing; focuses on the history of the Beijing area.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
4	Nihewan Museum (泥河湾博物馆), Zhangjiakou	The Nihewan basin is a region extremely rich in Palaeolithic sites.	Not selected as case study as the museum is not open to the public; data collection was impeded.
5	Beijing Natural History Museum (北京自然博物馆), Beijing	One of the most important natural history museums in China due to its history and location.	Selected as case study due to its importance and its location in the Beijing area.
6	National Museum of China (中国国家博物馆), Beijing	Probably the most important museum in China; highest organisational level.	Selected as case study due to its prestige and location in the Beijing area; hypothesis: its exhibitions serve as templates for other museums.
7	Tianjin Natural History Museum (天津自然博物馆), Tianjin	One of the recently renovated natural history museums in China; it reopened in 2014 and is supposedly very popular.	Initially selected as case study due to its supposed popularity; eventually disregarded as a focus on Beijing area was chosen.
8	Tianjin Museum (天津博物院), Tianjin	Convenient to visit due to its location right next to Tianjin Natural History Museum.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
9	Shanghai Natural History Museum (上海自然博物馆), Shanghai	One of the recently renovated natural history museums in China, it reopened 2015 and is supposedly very popular.	Initially selected as case study due to its impressiveness; eventually disregarded as a focus on Beijing area was chosen.
10	Shanghai Museum (上海博物馆), Shanghai	One of the most famous museums in China.	Not selected as case study as information on human evolution and/or *Homo erectus* is non-existent.
11	Nanjing City Museum (南京市博物馆), Nanjing	Visited by mistake; it was confused with Nanjing Museum.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
12	Nanjing Museum (南京博物院), Nanjing	Museum was recommended by colleagues as one of the country's finest.	Initially selected as case study due to its closeness to Nanjing *Homo erectus* Fossil Site (13); eventually disregarded as a focus on Beijing area was chosen.

13	Nanjing *Homo erectus* Fossil Site (南京直立人化石遗址公园), Nanjing	One of the most important archaeological sites providing *Homo erectus* fossils in China.	Initially selected as case study due to its importance; eventually disregarded as a focus on Beijing area was chosen.
14	Anhui Museum (安徽博物馆), Hefei	Anhui province is rich in Palaeolithic sites.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
15	Anhui Museum of Palaeontology (安徽省古生物化石博物馆), Hefei	Convenient to visit due to its location right next to the Anhui Provincial Museum.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
16	Hubei Provincial Museum (湖北省博物馆), Wuhan	Hubei province is rich in Palaeolithic sites.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
17	Wuhan Natural History Museum • Behring River & Life Museum (武汉自然博物馆 • 贝林大河生命馆), Wuhan	Hubei province is rich in Palaeolithic sites.	Not selected as case study as information on human evolution and/or *Homo erectus* is non-existent.
18	Museum of Changjiang Civilisations (长江文明博物馆), Wuhan	Convenient to visit due to its location right next to Wuhan Natural History Museum • Behring River & Life Museum	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.
19	Guilin Zengpiyan Site Museum (桂林甑皮岩遗址博物馆), Guilin	One of the most important Chinese sites dating into the transition period from Palaeolithic to Neolithic.	Not selected as case study as it was decided to refrain from researching museum exhibitions dealing with Neolithisation processes.
20	Guilin Museum (桂林博物馆), Guilin	To see how the important site of Zengpiyan is represented in this municipal museum.	Not selected as case study as it was decided to refrain from researching museum exhibitions dealing with Neolithisation processes.
21	Dingsishan Site Museum (顶蜊山遗址博物馆), Nanning	One of the most important Chinese sites dating into the transition period from Palaeolithic to Neolithic.	Not selected as case study as it was decided to refrain from researching museum exhibitions dealing with Neolithisation processes.
22	Guangxi Museum of Natural History (广西自然博物馆), Nanning	Convenient to visit due to its location in Nanning and time to spare.	Not selected as case study as information on human evolution and/or *Homo erectus* is non-existent.
23	Yuanmou Ape-Man Museum (元谋猿人博物馆), Yuanmou	One of the most important archaeological sites providing *Homo erectus* fossils in China.	Initially selected as case study due to its importance; eventually disregarded as a focus on Beijing area was chosen.
24	Yunnan Provincial Museum (云南省博物馆), Kunming	To see how the *Homo erectus* finds from Younmou were presented within the Provincial Museum.	Initially selected as case study due to its closeness to Yuanmou Ape Man Museum (23); eventually disregarded as a focus on Beijing area was chosen.
25	Guizhou Provincial Museum (贵州省博物馆), Guiyang	Guizhou province is rich in Palaeolithic sites.	Not selected as case study as information on human evolution and/or *Homo erectus* is sparse.

Table 2.2 Question catalogue for museums visited during the field trip to China in September 2019

	Question	Comments
Concerning the specific museum		
1	Is it a national, provincial, municipal, or county-level museum?	The organisational and legislative background is important with regard to funding and thus with regard to the museum's financial background.
2	How much is the admission fee?	Some site museums charged a small fee, all the other museums visited were free-of-charge.
3	Where is the museum situated? Might the location of the museum be meaningful? Why?	Site museums were usually located close to the archaeological site, other museums at the cultural centres of the respective city. These cultural centres were usually planned and built quite recently.
4	When did the museum open for the first time? Was in renovated since? When?	Some of the visited museums are quite old, others were newly built or recently renovated. Usually, museums and their exhibitions were renovated/updated during the 2010s.
5	Which firm/enterprise was commissioned to build/renovate the museum?	This information was not possible to obtain from just visiting the museums. At least in some cases, information is accessible on the internet.
6	Who financed the renovation of the museum? How is the museum financed in general?	This information was not possible to obtain from just visiting the museums.
7	Who is the director of the museum? Who are other decision makers inside the museum? Who is mentioned (as being influential) from outside the museum?	Most of this information was not possible to obtain from just visiting the museums. Some information is accessible on the internet.
8	How many permanent exhibitions does the museum have? What are their topics?	Site museums rarely have additional permanent exhibitions on other topics; permanent exhibitions in museums on the national and provincial level are very diverse and generally include a comprehensive history exhibition.
9	Does the museum have temporary exhibitions? How many? What are their topics?	Site museums rarely have temporary exhibitions; temporary exhibitions in museums on the national and provincial level are quite diverse. As the PRC celebrated its 60th anniversary in 2019, many temporary exhibitions were dedicated to this topic.
10	How is the museum addressing its visitors? Are the visitors directed in any way? How is the entrance situation designed?	This is important for the analysis of the museums' presentation of Palaeolithic archaeology: how do museum space and the existent or non-existent inclusion of visitors influence these presentations?
Concerning the specific exhibition		
1	Is it an exhibition on human evolution or Neolithisation processes?	As Neolithisation processes were very rarely dealt with in all the museums I visited, I decided to focus on the archaeological topic of human evolution.
2	How big is the exhibition?	Is it an important exhibition within the museum or does it seem to be only marginal?

3	How many objects are exhibited? How many (large) explanatory tables are part of the exhibition?	This is important for the analysis of the museums' presentation of Palaeolithic archaeology: is the exhibition based on objects or rather based on texts? Is the text used to explain the objects or are objects used to make the texts more interesting? Are texts and objects closely linked or do they lack connection?
4	Are all of the explanatory tables translated into English? How many Chinese explanatory tables do not have an English translation?	As English translations, if provided at all, were only translations of the Chinese originals, it was eventually decided against analysing differences in Chinese and English knowledge dissemination and internationalisation of museums in China. A comprehensive catering for international visitors could only be attested to very few of the visited museums.
5	Since when is the exhibition established within the museum? When was it last updated/changed? Who financed the exhibition?	This information was not possible to obtain from just visiting the museums.
6	How is "internationalisation" represented within the exhibition?	A research focus on internationalisation was decided against because a comprehensive catering for international visitors could only be attested to very few of the visited museums.
7	How does the exhibition address its visitors? Are the visitors directed in any way? How is the entrance situation designed?	This is important for the analysis of the museums' presentation of Palaeolithic archaeology: how do exhibition space and existent or non-existent inclusion of visitors influence these presentations?
8	Which objects, themes, explanatory tables etc. are highlighted? How?	This is important for the analysis of the museums' presentation of Palaeolithic archaeology: why are precisely these objects, themes, explanatory tables etc. highlighted? How does this highlighting support the presentation?
9	What else is offered within the exhibition? A cinema, other premises, an audio guide, tours in English etc.?	Some of these extras might also be important for the analysis of the museums' presentation of Palaeolithic archaeology: how does, for example, the cinema address the topic? How is it presented on the audio guide or during tours – either in English or in Chinese? These aspects, however, were not chosen as research focuses.
10	Who is visiting the exhibition? Age groups, gender, composition of groups? Any peculiarities?	This is interesting for understanding the specific museum's importance or acceptance by society and its target audience: who seems to be interested in what the museum is exhibiting?
Concerning the museum shop		
1	How big is the museum shop?	Museums shops were usually rather small (with few exceptions).
2	What is offered within the museum shop regarding the exhibitions? Object replications, books, other items etc.?	Within the museum shops, the topic of human evolution was rarely represented by objects, replicas, or books. Even the museum shops of site museums (as long as they had a shop) were rather gift shops and did not focus on scientific knowledge dissemination.

Table 3.1 Textual displays from the *Origin of Human Beings* exhibition at Beijing Natural History Museum

No.	Text (Chinese)	Corresponding picture
T1	性行为 与其它动物一样，人类的繁衍通过性行为产生新生命；与其它动物不同的是，人类的性行为包含做爱与性交，而前者几乎为人类所特有；此外，人类性行为还受社会习俗、道德约束。在现阶段，就多数民族而言，性行为以婚姻和组成家庭为前提。	
T2	人是动物 人首先是动物，他既有动物般的血肉之躯，又有动物的基本生理机能，而且，他的本性中还摆脱不了“兽性”的成分。如果说，人是动物，那么他是怎样一种动物呢？ 作为动物的人是动物界长期进化的产物，进化的动力是生物的遗传与适应的交互作用。	
T3	人是脊椎动物 动物可根据有无脊柱分为脊椎动物和无脊椎动物。脊柱是身体的支撑，保护着脊髓和内脏。脊椎动物最重要的特点是神经系统高度发达，有了脑和脊髓的分化，而脑是高级思维活动的物质基础。人属于脊椎动物，所有的脊椎动物有共同的祖先。	
T4	人是哺乳动物 哺乳动物的特点包括身披毛发、恒温、胎生、哺乳等。人具有这些特点，属于哺乳动物。所有哺乳动物有共同的起源。	
T5	人是灵长类动物 人是灵长类家族中一员 时间（千万年以前）原猴类 眼镜猴 /新大陆（阔鼻）猴类/旧大陆（狭鼻）猴类 疣猴/类人猿 长臂猿 现在 狐猴/叶猴/猩猩/大猩猩/黑猩猩/倭黑猩猩/现代人	
T6	石器时代 石器时代是最早阶段的人类文化期，当时原始人的生产工具主要以石制工具为主，约从距今 500 万年前人类出现时开始（另有一说，是以目前已知石器出现的 250 万年前为起始时间），约终止于距今 5000 年前金属的最初使用时。它划分为旧石器时代、中石器时代和新石器时代。	
T7	旧石器时代 旧石器时代又可分为早（250 ~ 25 万年）、中（25 ~ 3 万年）和晚三期。 在欧洲和北非，晚旧石器时代起于距今 45000 年前，止于 12000 年前。 欧洲早旧石器时代的阿舍利手斧（右 1、2）、早旧石器时代晚期的勒瓦娄哇石片技术（左 1）和中旧石器时代的莫斯特型石器（左 2） 埃塞俄比亚 Gona 遗址出土的“奥尔杜威石器”距今 260 ~ 250 万年，被认为是最早的石器。 奥尔杜威砍砸器（170 万年前） 阿舍利手斧 女巫施魔术——-发现于法国的手执“角杯”的洛塞尔维纳斯，距今 25000 年。欧洲旧石器时代晚期的洞穴岩壁画	
T8	中石器时代 中石器时代是新石器时代的先驱期，其间，人类充分利用更新世末期与全新世初期丰富的自然资源，更多地捕猎小型动物（包括水生生物），使用的工具更趋多样，原始农耕与驯养动物的活动产生，游猎生活方式渐弱而转向半定居。 广西柳州白莲洞遗址是我馆长期工作的遗址之一，它的发现证实了中国中石器时代在华南地区的存在。白莲洞遗址堆积物厚达 3 米，时间跨度自距今 3.6 万 ~ 6000 多年，达 3 万年之久，从中可以看出从旧石器时代，经中石器时代发展到新石器时代的文化轨迹。 白莲洞洞穴中东部的螺壳堆积物	

	出自地层中的重石残块 重石使用复原图 白莲洞洞穴东侧实测剖面图 出自东剖面的文化遗存 穿孔装饰品 磨光石器与角器 敲砸器 重石 白莲洞洞穴西侧实测剖面图 出自西剖面的文化遗存 细小石器 旧石器时代风貌石器 砍砸器 人牙化石	
T9	白莲洞文化系列框架 文化分期 白莲洞第一期文化 白莲洞第二期文化 白莲洞第三期文化 构成 第 5、4 文化层　第 3、2 文化层 第 1 文化层 层位 西 7、5、4 层　西 3、1 层，东 6、4 层 东 3、1 层 文化阶段 旧石器时代晚期 过渡期（中石器时代） 新石器代早期、中期 各期文化分段 B A B A B A 时间跨度 3 万 ~ 1.8 万年 1.8 万 ~ 1.2 万年 1.2 万 ~ 7000 年 典型器物 B.原始磨制品、细石器风貌燧石石器、箭镞 A.旧石器风貌打制石器、小型燧石石器 B.磨刃、磨端的制品、原始的制陶术 A.粗犷的砾石工具、原始的穿孔砾石 B.陶片 A.通体磨光石器，原始的制陶术	
T10	新石器时代 原始农耕与驯养动物成为了日常生活的常态，人类开始定居生活。各地新石器时代的起始时间不同，取决于原始农耕活动的开始时间。 浙江余姚河姆渡骨耜——用水牛肩胛骨制作的稻作工具 磨制石斧 河姆渡稻作物 陕西半坡窑址及窑址复原图 云南元谋大墩子新石器时代遗址，出土有陶、石、骨、角、牙蚌器和粳稻、动物骨骸，还发现火塘、房基、窑穴及墓葬。 人面鱼纹彩陶盆（半坡遗址） 大墩子遗址出土的鸡形壶、骨镯 螺壳项链和骨镯（东胡林人遗址出土）	
T11	前言 伟大的俄罗斯文学家高尔基曾赞叹道：“人啊，多么骄傲的字眼！” 人，人是什么？人是一种动物！然而，他不是一般的动物。人是一种特殊的动物，是具有自觉能动性和高度社会化的动物。 人是动物，他必定是生物进化的产物。人是特殊的动物，他就必定有其独特的进化方式。 作为个体的人如何诞生？人类怎样起源？原始人如何进化？我们中国人又从何而来？这就是本陈列所要展现的。	

T12	结束语 人类的由来根植于动物界，但人类是高度社会化的动物，由之产生了相对于动物性即兽性的人的本性——人性。人性也是根植于动物界的，人性既有光明的一面，也有阴暗的一面，正如我国古人哲人所言：“人之初性本善”或“人之初性本恶”，故人类是高度社会性与自然属性统一于一体的特殊生物，是人性与兽性因素并存而又互相作用的生物。人类演化过程中，人类的文明程度亦即人类远离动物界的程度，取决于人性与兽性的比例，这一点也曾为马克思主义创始人以人性与兽性的关系来加以阐述，当然，此处的人性当为光明一面的人性，这是不言而喻的。 通过人之由来展，我们了解了我们是谁，也获知我们从何而来。那么，我们将走向何方，我们的未来何在？这是留给我们观众的一个严肃问题！	
T13	人对自身起源的探索 人从哪里来？自古许多民族流传着自己的创世神话来解释；随着科学的兴起，许多科学家利用科学方法来探索这一问题。	
T14	神创论 也称作“特创论”，认为人类由神创造，其代表包括“上帝造人说”和“女娲抟土造人说”等。此外，许多民族用“自然发生论”来解释人类的起源，比如纳西族用东巴文写成的《创世经》认为“人类是从天孵抱的蛋里生出来的”。 东巴文 上帝创造女人	
T15	科学探索历程 1859 年，达尔文发表了《物种起源》，揭示了物种演化和发展的规律，解释了不同物种的起源。1871 年，达尔文又发表了《人类的由来与性的选择》，证明人类起源于动物，用“自然选择”理论来解释从动物到人的全过程。自此，对“人类由来”的科学探索历程开始。科学探索历程经历了“古典期”、“古人类化石期”和“分子生物学或分子人类学”研究的新时期。 物种起源 人类的由来与性的选择 青年时期的达尔文 进化论者赫胥黎为捍卫达尔文理论，在 1860 年 6 月 30 日与牛津大主教进行了一场论战，宣布他不以无尾猴为其祖先而羞耻。 “古典期”，即达尔文及其战友与宗教特创论的激辩时期。“古人类化石期”，为以人类化石及文化遗存为主要研究对象的时期。“分子生物学或分子人类学”以研究遗传因子基因来探究“人之由来”。 人类化石与石器现在仍然是人类起源学研究的主要对象 分子人类学从生物遗传物质来探索人与猿的血缘关系，研究人类的起源和演化过程。生物遗传物质主要是核酸，生物体的遗传特性主要由它决定，其中遗传信息的携带者为脱氧核糖核酸（DNA），它大部分存在于细胞核里一种叫“染色体”的丝状体内，小部分存在于“线粒体”等细胞器内。	Figure 3.1.3
T16	作为个体的人之由来 世界上再没有比“人”更奇妙的生物了。他不仅能认识错综复杂的客观世界，还会表达丰富多彩的内心感受，只有人才能最大限度地发挥自己的潜能。他既从属于自然界，又总是力图去驾驭自然界。不论是男人和女人，还是老人和婴儿，都是一个个具体的人。要谈人从哪里来，首先就要探索人本身，也就是作为“个体”的人之由来。	
T17	人是灵长动物 灵长类动物特征包括指（趾）端有扁甲、大指能触及其他四指、上下颌各有两对门齿、有立体视觉等，人具有这些特点，属灵长类动物。灵长类包括猴类和猿类，灵长类动物具有共同的祖先。 人的手 大猿的手 猫爪 人与大猿指（趾）端为扁平的“甲”，而不是尖利的“爪”。 人与猿的门齿相同 灵长类动物双眼观察同一目标，大脑处理接收到双眼影像，产生包括深度、体积和距离的立体视觉。 梅花鹿两眼朝向两侧	

	松鼠猴两眼同朝向前方 左眼 右眼 远处景物 近处景物	
T18	人与哪种猿关系最近? 与人类关系越近，表明与人类分化时间越晚。科学家曾认为人与黑猿和大猿的关系较近。现通过基因测序发现，人类与黑猿的 DNA“蓝图”相似度竟达 99%，进一步证明了两者之间的亲缘关系。 人类与不同猿类的 DNA 差异 现代人 大猿 1,4% 现代人 褐猿 2,4% 现代人 黑猿 1,2%	
T19	从古猿到人的转变 从古猿到人的转变过程是一个十分复杂的过程，是两种质态，即纯生物学联合的古猿群向人类社会的漫长转化。 古猿如何转变成人 从古猿到人的转变过程在特定的环境里进行。大约在距今 1000 ~ 2000 万年前，地壳活动频繁、环境巨变、森林慢慢稀疏、林中空地不断扩大、这使树栖的古猿开始向地栖生活转化。下地的古猿为了取食、御敌，从开始使用天然工具、渐渐的开始制作工具，实现了双手和双脚的独立进化，在协作中促成语言产生和大脑发展，人类社会逐渐形成。	Figure 3.1.6
T20	作为特殊动物的人之由来 作为特殊动物的人是生物进化规律特异性的产物。特异性就在于遗传与适应相互作用中，产生了人类祖先特殊的适应方式，即利用工具为自己创造新的生存条件，这对自然界有着积极的反作用，同时也改造了人本身。	
T21	人所特有的体质形态 习惯性的直立姿势和双脚直立行走的能力 适应双手操作工具，直立行走形成。且由于直立，引起人体许多部分，如头骨、脊柱、上下肢和骨盆等形态特征和机能的相应变化。 黑猿的手 人的手 大猿的脚 人的脚 由于直立行走，人类手和脚功能分化。脚不再用于抓握，而是奔跑。 猿 人 猿 人 适应直立行走，人类骨骼和肌肉的结构与形态发生变化。 吻部短缩 人类的牙齿较小，吻部短缩。有的科学家认为这是由于工具的使用，使人类在取食和御敌时，较少依赖于前列牙齿所致。	
T22	齿列 由于工具的使用，致使犬齿功能消退，引起一系列技能和形态的变化。 大的脑量 在人类起源和演化过程中，人的智力随着改造自然本领的增强而提高，智力和思维活动的物质基础———大脑也逐渐增大。	
T23	人与猿的本质区别 人类社会与猿群的本质区别 人类社会 (主要讨论原始社会) 本质特性是人的社会性，人类具有自觉能动性，有自我意识。	

	从属于社会发展的基本规律——生产力与生产关系的矛盾运动，推动新旧社会的更替。 与自然界的关系： 能支配自然界，利用工具进行劳动生产，为自己创造新的生存条件。 猿群 （作为自然界的一般成员） 本质特性是动物的生物性，猿类不具有自觉能动性，缺乏自我意识。 中属于生物演化的基本规律——遗传与适应的交互作用，促使物种变化，推动生物界的进化。 与自然界的关系： 仅仅利用自然界，通过躯本本身的变化适应环境条件。	
T24	制造工具是人的专有活动 与动物通过自身躯体的变化、适应变化的环境条件以求生存不同，人类能制造工具以延长自己的肢体、创造自然界中本不存在的新的生存手段，以获取更大发展。与动物利用本身器官对“工具”“加工”不同，人类利用“中介体”制作工具，而且针对不同原料和不同用途，制作方法和器形多样；另外，“符号”——语言和文字这一特殊工具为后期人类所特有。 黑猿利用树枝钓白蚁吃 人制作工具 根据原材料和拟加工工具不同，人类采用不同技术。打制和磨制（盛行于新石器时代）是两种不同的制作工艺。打制技术可分为直接打击、间接打击和压制剥片三种，直接打击又可分为锤击、碰砧和砸击三种方法。	
T25	人是特殊的动物 人并非一般的动物，他具有高度的自觉能动性，是最社会化的动物。他能从事社会性生产劳动，为自己创造自然界本不存在的新的生存条件。	
T26	人类的远祖推测 我们的远祖大概有如下特点：他们有时四足行走，有时半直立，偶尔也能直立起来，用上肢灵活的操作其他物体。他们的食性为杂食，有食物共享的习惯，有稳定的群体，能不时地使用工具来取食和防身。我们的远祖可以说是“使用工具的猿”。	Figure 3.1.7
T27	现代人之由来 从最原始的人演化为现代类型的人，大致经历了地（栖）猿群、南猿（南方古猿）群、能人群、直立人群、化石智人群五个阶段。 地猿群 南猿群 能人群 直立人群 化石智人群	
T28	地猿群 地猿群生存于距今 700～400 万年间，只在非洲发现，其体质特征显示出直立行走的特点，但下肢还明显保留了适应攀援的特征、是人类最早阶段的代表。	
T29	萨赫尔人乍得种生存于距今约 700 万年前，是目前发现的最早的人科成员。 地猿始祖种最早发现于 1994 年，现已发现至少 36 个个体的化石，其中包括一幅女性残破骨架，昵称为“阿迪（Ardi）”。 “阿迪”的生存年代约为距今 440 万年前，其大脚趾朝外叉，显示出与其它四趾对握的形态，表明其脚部仍具有抓握的功能。阿迪行为方式可能与现代的黑猩猩类似。 乍得萨赫尔人头骨 (Toumai) 地猿始祖种头骨 (Ardi)	
T30	南猿群 生活在距今约 450～100 万年间，发现于非洲。群内种类繁多，体质结构以适应直立行走为特点，但行走时身体前倾，早期代表下肢还保留有攀援的功能。南猿群与地猿群构成了”人类近祖“，即”前人“阶段。	

T31	南猿群内的谱系关系 南猿群是一个复杂群体，种类繁多，基本上可分为粗壮型和纤细型两大类。这些种类之间、以及与后期代表的谱系关系存在种种推测，下面是较普遍被接受的一种模式。 扁脸肯尼亚人 卢道夫人 萨赫尔人 地猿始祖种 吐根奥罗宁人 南猿湖畔种 南猿阿法种 南猿非洲种 埃塞俄比亚南猿 鲍氏傍人 南猿羚羊河种 惊奇南猿 能人 匠人 南猿的体质形态 南猿已能直立行走，身体结构因适应直立行走发生一系列变化，在行走时身体稍向前倾，大踏步时的步态也不那么稳当，上、下肢骨仍保留攀援的特点。南猿群代表习惯性的使用天然物体作为御敌和取食手段，不排除个别类群具有制作原始工具的能力。 南猿手骨化石 据研究，手骨结构已具备使用和初步制作工具的能力。 大猿 南猿 现代人 露西（上），黑猿（中）及现代人（下）骨盆 南猿骨骼形态特点接近于人远大于猿	Figure 3.1.8
T32	南猿的生活方式 南猿过着原始采集和狩猎的集群生活，生活相当艰辛。他们形成不大的群体在一起生活，内部婚姻关系可能已有初步的限制，也可能已出现简单的语言。 被豹子袭击的南猿 第一个家庭遗址 在阿法地区发现一处古人类遗址，埋葬的骨骼化石属于 13 个阿法南猿个体，它提供了早期人类群居的证据，被称为第一家庭。	
T33	能人群 生活在距今 250 万年前，为人属早期代表，以制作和使用工具而进入“真人类”阶段，主要代表为能人和卢道夫人（原 1470 号人）。	
T34	能人群的文化 能人已能制作工具。他们之所以称为“能人”，即表示他们是有熟练技能的人。能人可能为最早的工具制作者，为“奥尔杜威石器”的主人。	Figure 3.1.10
T35	能人群的体质形态 能人身体某些部位，如颌骨和臼齿结构，比较接近于下一阶段的直立人，脑量较大，可达 670 立方厘米；但某些身体部位，如肢骨和前部牙齿也保留有较多原始性状，以至于有些学者将其归入纤细南猿之列。 生活于距今 190 万年前的“1470 号人”，最初被认为是最完整的人类头骨。后来，因其进步的体质形态，进一步被命名为卢道夫人。卢道夫人拥有较大的脑量（达到 775 立方厘米），且在脑颅内膜上控制语言的部位已有隆凸现象。据此，有专家推论他可能已有原始的语言。可能是由卢道夫人而不是能人演化为以后的匠人。 1470 号人头骨由数以百计的碎片拼凑而成，后来被命名为卢道夫人。 卢道夫人脑容量大 能人脑容量小 卢道夫人复原像 能人头骨 卢道夫人头骨 能人足骨 能人头骨 卢道夫人下颌骨	

T36	直立人群 直立人主要生活在距今 200 ~ 15 万年前，为“人属中期代表”，过着采集、狩猎的生活，已有比较复杂的社会，在狩猎大型动物时可能已有协作。直立人以分布区分为三个地方型，在非洲称为匠人 (Homo ergaster)，亚洲为直立人 (Homo erectus)，欧洲为海德堡人 (Homo heidelbergensis)。	
T37	走出非洲 直立人最早于 1891 年在印尼中爪哇岛发现，现在旧大陆已有广泛发现。能人可能是直立人的直系祖先，他们在距今约 200 万年前走出非洲，扩散到世界。 直立人群重要化石地点 德玛尼斯 西布兰诺 纳里奥托姆 奥杜威峡谷 斯瓦特克朗 达卡 库彼 福勒 莱托里 桑吉兰 垂尼尔 昂栋 周口店 和县 蓝田 元谋 莫佐托克	Figure 3.1.15
T38	直立人的体质形态 脑量急剧增大是本阶段人类的最大体质特点。直立人直立姿势已经很完善，其下肢骨的结构与现代人十分相似，但仍保留有许多原始特点。 直立人 (Java) 匠人 (H. ergaster) 海德堡人 (H. heidelbergensis) 印度尼西亚 在印度尼西亚发现了很多直立人化石，且时间从距今 160 多万年前一直延续到距今 1.8 万年前。 桑吉兰 (Sangiran) 垂尼尔 (Trinil) 昂栋人 (Ngandong) 莫佐托克猿人 (Modjkerto) 爪哇 (Java) 弗罗雷斯 (Flores) 梁布 (Liang Bua) 弗罗雷斯人 (Homo florensis) 9.5K~1.7K	
T39	直立人的文化 制作工具 直立人制作工具的技术有很大发展，他们对不同原料施以不同加工方法。工具类型有了明显分化，地区性差别出现。 用火 直立人已实现人类对火的征服。用火使得某些自然力可以为人类服务；熟食增加了食物的可食部分和营养，因而大大增强了人的体力，促使人类摆脱茹毛饮血的原始状态，这对于解放人类的意义无法估量。 生活状况 直立人过着采集、狩猎的生活，已有比较复杂的社会，在狩猎大型动物时各组群间可能已有协作。	Figure 3.1.11
T40	中国的化石智人 与直立人阶段相比，化石智人在我国有更为广泛的分布，早期代表包括马坝人、大荔人、长阳人、许家窑人、郧西人等。 后期代表包括河套人、山顶洞人、资阳人、丁村人、丽江人、柳江人、许昌人等。在后期人类化石上已反映出南北分型的趋势。 山顶洞发现基本完整头骨 3 件，并发现有丰富的装饰品。山顶洞人人骨周围撒有赤铁矿粉，已存在埋葬习俗。 山顶洞人 101 号头骨 山顶洞人 102 号头骨 山顶洞人 103 号头骨 山顶洞人装饰品	

	田园洞人发现于 2001 年，生存年代为距今 4.2 ~ 3.05 万年前。发现的全部化石属同一个体。 柳江人头骨 柳江人部分体骨马坝人头骨 …	
T41	化石智人 化石智人出现在 10 万多年前，距今 7 ~ 2 万年是其鼎盛期，为人属后期代表，可分为“尼安德特（古）人”和“克罗马农（新）人”两个阶段。这一阶段人类已达到现代人类型，为了与现代人相区别，称之为“化石智人”。化石智人处在氏族形成和确立的阶段，实现了由族内婚向族外婚的转变。他们学会了人工取火，制作了大量的复合工具。	
T42	克罗马农人 Cro-Magnon 最早在 1868 年发现于法国多尔道尼洲克罗马农村的一个岩厦遗址，是化石智人晚期成员。他们生存于距今约 3 万年前，是旧石器晚期文化的创造者，已出现辉煌的原始艺术。克罗马农人足迹遍布于五大洲，因适应不同环境条件，人种明显分化。 左下角箭头所指，就是克罗马农人出土地点 克罗马农人用驯鹿角做的投矛器 克罗马农人的雕刻艺术 昂栋人头骨 麒麟山人头骨残片 克罗马农人头骨 从这个骨片可以看到成排的小洞，还有一个缺口。有些学者认为这是古代的日历，记录着日、月以及季节的变迁。 克罗马农人复原像	
T43	化石智人的文化 化石智人已经掌握了人工取火技术、磨制和钻孔技术；打制技术高度发达，器型精致、大量复合工具出现，石器文化呈现多样化；化石智人已能构筑简单住房以避风雨、缝制衣服御寒护身。 “符号——语言与文字”这一工具也有很大发展。人们已能有意识埋葬死者，原始宗教出现；大量的壁画、泥塑、雕刻品和装饰品被创造。这说明社会生活已发展到一定的程度。 野牛塑像：发现于图·特·奥德伯特洞穴 岩画：发现于西班牙阿尔塔米拉 发现于乌克兰 Mezhirich 遗址的史前居住遗址及复原图。此遗址有五处“房子”，房子用猛犸象的骨头建成，已有 15000 年历史。	
T44	两种可能的演化谱系 人们根据化石材料和古生物地层推测，人类从灵长类谱系上分离出来的时间大概在 1,000 ~ 2,000 万年前的中新世。而现代分子生物学的研究表明，人类从古猿群中分化出的时间只在距今约 400 ~ 500 万年前。现多数学者接受后一概念。 两种可能的演化谱系 埃及猿 2500 年 埃及猿 原康修尔猿（非洲种）2000 万年 原康修尔猿（非洲种） 原上新猿 （大型种） （尼撒种） 1500 万年 原康修尔猿（大型种/尼撒种） 西瓦猿 拉玛猿 1000 万年 早期西瓦猿 南猿 500 万年 后期西瓦猿 化石褐猿 / 南猿 长臂猿 褐猿 大猿 黑猿 人 / 长臂猿 褐猿 大猿 黑猿人	

T45	地猿群的分布 地猿群分布图：乍得萨赫尔人 地猿始祖种 奥罗宁人吐跟种	
T46	人类的远祖 人类的远祖包括人与类人猿共同祖先在内的、并往前追溯到古猿猴代表的人形超科的古老成员。 古猿化石分布广泛、数量大，占据了中新世（距今 2,300～600 万年）大部分时间，大致可分为非洲类型、欧洲类型和亚洲类型。 科学家曾认为埃及猿是人和猿的共同祖先，但后来发现的尾骨和肢骨表明，它只是一只“带着猿牙的猴子”。 埃及猿复原图 埃及猿化石 原康修尔猿可能是非洲现代黑猿和大猿的祖先。 原康修尔猿复原图 原康修尔猿化石 西瓦古猿可能是现代褐猿的祖先。 西瓦古猿复原图 西瓦古猿头骨 现代褐猿头骨 腊玛古猿曾被认为是人类的祖先，现一般认为是西瓦古猿的雌性个体。 腊玛古猿下颌骨（发现于云南省禄丰盆地）	
T47	中国的古猿 在我国，低等和高等灵长类动物化石均有较多发现，比较著名的古猿化石包括巨猿和云南古猿等。 在云南开远小龙潭、元谋、保山、昭通等地均发现有古猿化石，这些古猿化石在形态上具有一脉相承的特征，通属于西瓦古猿属云南种。他们可能与褐猿有较密切亲缘关系。 禄丰古猿 雌性下颌骨 雌性头骨雄性下颌骨 雄性头骨 元谋古猿（幼体）元谋古猿出土地点 昭通古猿头骨出土状	
T48	巨猿洞———1956 年发现于广西柳城楞寨山山腰 巨猿下颌骨化石 巨猿下颌骨化石 美国著名的灵长类学专家温德勒教授与巨猿复原头骨与头像 巨猿的生存时代为早更新世至中更新世，在广西、湖北、四川等地都有发现。化石材料仅限于牙齿和下颌，没有找到体骨，不能确定是否能直立行走。巨猿曾被认为是人类的祖先，现已被否定。	
T49	北京人 Homo erectus pekinensis 北京人发现于北京房山区周口店，北京人及其文化遗存的发现，致使直立人阶段最终确立。科学上最初对直立人的全面认识主要来自于对北京人化石及其文化遗存的详尽研究。北京人的发现与研究是人类起源研究史上划时代的大事。 北京人遗址自 1927 年开始系统发掘，截至日本侵华战争爆发之前，共发掘出属于四十多个个体的北京人骨骼化石，其中包括五枚较完整的头盖骨。可惜的是，二战期间，化石在日本人手中弄得下落不明。	
T50	元谋人 Homo erectus yuanmouensis 1965 年发现两枚原始人牙齿化石，古地磁年代测定其生存年代为距今 170 ±10 万年前。元谋人牙齿齿冠舌面具铲形结构，表明元谋人是黄色人种（包括中国人）祖先的最早代表。这一特征又源于非洲的南猿和能人，为人类走出非洲提供了佐证。到目前为止，元谋人确是中国历史上已知最早的原始人。	Figure 3.1.16

	元谋人牙齿化石 匠人（WT15000）、纤细南猿（STS52）中门齿的舌面形态与元谋人颇为相似 WT15000 左上中门齿唇面形态与元谋人（上）很相似 元谋人胫骨化石： 1984 年 12 月，北京自然博物馆野外考察队在元谋人牙齿化石产地以南 250 米，发现了一段元谋人女性胫骨化石。次年对该地点进行大规模发掘，获得了文化遗存及大量的动物化石。据最新的古地磁年代测定结果，该胫骨化石年代为距今 170～140 万年前。该胫骨化石具有许多接近非洲能人的原始特点。 元谋人胫骨化石发现地点 元谋人胫骨化石出土层位 元谋人胫骨 元谋人牙齿 元谋人遗址动物化石堆积	
T51	人也算是一种猿 与猴不同，猿没有外尾，肩胛骨位于背侧，下臼齿上沟纹呈“Y”字形。人具有猿的特点，也算是一种猿。现代猿类包括长臂猿、褐猿（猩猩）、黑猿（黑猩猩）和大猿（大猩猩），其中长臂猿为小型猿，后三种为大型猿。大型猿由于与人相似又被称为“类人猿”，有的分类学者已把大型猿归入人科之列。 “Y”字形沟纹 猿类 长臂猿 (Gibbons)：最小的一种猿，纯树栖，分布于东南亚一带；我国云南西双版纳和海南岛有少量分布。 褐猿 (Orangutans)：主要在树上活动，毛色发红，地史上有段时期曾广泛分布于我国华南地区，现仅分布在印尼苏门答腊和加里曼丹地区。 大猿 (Gorillas)：身体最大的一种猿，由于身躯过重，主要在地面活动，分布在非洲赤道地区。 黑猿 (Chimpanzees)：毛色发黑，多树上生活，生性活泼，面部富于表情，智力较高，分布于赤道地区。	
T52	现代人种的起源 化石智人迁徙到不同地区，适应不同环境，经过漫长时期的演化，逐渐发展为现今黄、白、黑和棕肤色的四大人种。 尽管不同种族在外表如肤色、发型及人体内部的某些生理特征存在差异，所有人种在生物学上均属同一物种——“智人种”。 白色人种 黄色人种 黄色人种 棕色人种 发型 黄种人直发，发丝横截面呈圆形；白种人波状发，发丝横截面呈椭圆形。 眼色、蒙古褶皱 白色人种和黄色人种的内眼角处有不同的结构。黄色人种具有蒙古褶皱，白色人种没有。 鼻型 黑种人鼻梁低，白种人鼻梁高。 唇形 黑种人嘴唇厚，白种人嘴唇薄。	Figure 3.1.17
T53	遗传与性别决定 基因 在人的生殖细胞里存在能将亲代许多特征传递给后代的遗传因子——基因，它主要由脱氧核糖核酸（DNA）和蛋白质组成。不同的基因决定了不同的遗传性状。染色体是基因的载体，基因是染色体上具有遗传效应的 DNA 片段。 基因（外显子 内含子 外显子） DNA 核小体 染色体 细胞	

	基因决定了发型与发色的遗传性状。白色人种多为波状发，黄色人种多为直发。 白色人种（左图）和黄色人种（右图）的内眼角处有不同的结构。后者具有蒙古褶皱，这一结构早期形成于多风沙地区，以保护泪囊，而前者没有。	
T54	世界上的人同属一个物种 生活于世界不同地方的人，尽管其肤色、毛型和发色等不同，却可以婚配、产生有生育能力的下一代，属于同一个物种，与其他物种一样，人也有自己的种属名。人的拉丁名为：Homo sapiens。	
T55	直立人的演化 直立人演化涉及到现代人的起源，主要有两种观点：即现代人起源多中心论和单中心论，或“多地区起源说”和“非洲单一地区起源说”。 多中心论： 认为世界各地区的现代人都是独立起源的。该理论认为有四个或五个演化中心，基本上是独立演化，但不排除有基因交流。 直立人 H. erectus à 各大洲智人 Homo sapiens 单中心论（非洲起源说） 单中心论（非洲单一地区起源说）：该理论认为现代人种是在某一特定地区发展起来的，近年来这一地区被认为是非洲。 匠人 H. ergaster，直立人 H. erectus，海德堡人 H. heidelbergensis，尼安德特人 H. neanderthalensis，各大洲智人 H. sapiens	
T56	随着现代生物学和分子人类学的发展，“非洲单一地区起源说”获得了新的论证，其中 1987 年卡恩等人通过分析各大洲共 147 名妇女胎盘中的线粒体 DNA，推定现代人的祖先为生活在 20 万年非洲的一名妇女，这就是“夏娃假说”。夏娃假说是现代人起源的单中心论的最新版本。 现代人走出非洲迁徙扩散示意图 （单位：万年） 卡恩等人的研究结果认为现代人起源于非洲 非洲 亚洲 澳大利亚 新几内亚 欧洲 女祖先	

Table 3.2 Textual displays from Zhoukoudian Site Museum

(…) = text continues on following screens; unfortunately, no pictures were taken; X = Chinese characters are not recognisable on the picture.

No.	Text (Chinese)	Corresponding picture
T1	“北京人”遗失化石清单 丢失的化石分别装在两个白木箱中，一个长 48 英寸、高 11 英寸、宽 22 英寸；别一个长 45、高 22 英寸、宽 22 英寸；大箱标有 CAD1 字样，小箱标有 CAD2 字样。 一只白木箱子里，其藏有 7 盒标本: 第一大盒 - 北京人的牙齿（分装 74 小盒） - 北京人的牙齿（分装 5 小盒） - 北京人的残破股骨 9 件 - 北京人残破上肱骨 2 件 - 北京人的上颌骨 2 件 - 北京人的上颌骨 1 件（发现于山顶洞部） - 北京人的上锁骨 1 件 - 北京人的上腕骨 1 件 - 北京人的上鼻骨 1 件 - 北京人的上颚骨 1 件 - 北京人的第一颈椎骨（是否属于人的很可疑——贾兰坡注） - 北京人的头骨碎片 15 件 - 北京人的头骨碎片 1 盒 （属于“1 地”的头骨 I 及 II） - 是趾骨两盒（是否属于人的很可以——贾兰坡注） - 猩猩牙齿化石 3 小盒 - 北京人的残下颌骨 13 件（其中有一件最完整的尚未研究——贾兰坡注） 第二盒 - 北京人头盖骨 （No. II） 第三盒 - 北京人头盖骨 (No. III) 第四盒 - 北京人头盖骨 （No. IV） 第五盒 - 北京人头盖骨 (1929 年从“E 地”发现) 第六盒 - 山顶洞人女性头骨 第七盒 - 山顶洞人女性头骨	

	别一个白木箱子装有下列标本 - 北京人头骨，从“E 地”发现 - 山顶洞人头骨（男性老人） - 硕猕猴头骨化石 2 件（其中一件最完整，尚未研究——贾兰坡注） - 硕猕猴下颌骨化石 5 件 - 硕猕猴残上颌骨化石 3 件 - 硕猕猴头骨化石残片 1 小盒 - 山顶洞人下颌骨 4 件 - 山顶洞人脊椎骨 1 大盒 - 山顶洞人盆骨 7 件 - 山顶洞人肩胛骨 3 件 - 山顶洞人膝盖骨 3 件 - 山顶洞人头骨残片 3 件 - 山顶洞人跗骨 6 件 - 山顶洞人骶骨 2 件 - 山顶洞人牙齿 1 玻璃管 - 山顶洞人下颌骨残块 3 件	
T2	前 言 周口店遗址位于北京市房山区周口店镇，距市中心约 50 公里，地理坐标东经 115° 51' ,北纬 39°41'，是中国房山世界地质公园体现古人类文化和地质文化的重要园区 ， 面积 28,2 平方公里, 周口店遗址发现于 1918 年，1921 年试掘，1927 年正式发掘, 先后发现不同时期的各类化石和文化遗物地点 27 处 ， 其中第 1 地点 (猿人洞) 共发现属于 40 多个个体的 200 余件古人类化石，10 余万件石制品 ， 上百种动物化石, 大量的用火遗迹. 周口店遗址涵盖了直立人、早期智人和晚期智人三个古人类阶段 , 构成一个连续的古人类演化序列，堪称人类化石的宝库，在古人类遗址中绝无仅有，具有重要的科研价值 ； 是展现生物进化和人类演化的经典地区 ， 在古人类学 、旧石器时代考吉学、第四纪地质学和古生物学研究方面均享有重要地位 。	
T3	结束语 周口店遗址是“北京人”及其后代的摇篮，也是亚洲人类重要发祥地之一，是人类进化史上一个非常重要的里程碑。“北京人”化石的发现为科学地认识直立人演化阶段提供了重要的物证。 周口店遗址发掘、研究工作仍在继续，诸多科研领域仍有待探寻，“北京人”是我们的祖先吗？“北京人”从哪里来，又去向何方？“北京人”和世界其他地区的古人类有什么关系？对于“北京人”的深入研究，将为揭示人类进化的真相起到关键作用。人类寻找“自我”的永恒动力和周口店遗址蕴藏的宝藏，将不断续写“北京人”的奇迹。	
T4	发现 周口店遗址是人类的了解自身进化历史、追寻远古文化足迹的一个重要窗口，自 1918 年发现以来，曾有数十位中外科学家在周口店遗址进行长期的发掘、研究工作。最先打开周口店遗址大门的是来自瑞典的地质学家……安特生，是他唤醒了这里深理地下，沉睡了数十万年的人类历史。	
T5	周口店遗址的发现 1918 年,瑞典地质学家安特生首先前往周口店鸡骨山考察。 安徒生（1874-1960）	

	瑞典人，地质学家、考古学家、周口店遗址的发现者。1918 年，安特生首次[X]往北京西南郊周口店附近考察，1921 年在龙骨山发现肿骨鹿、犀牛、鬣狗、熊等动物化石和具有锋利刃口的石英石片。安特生意识到周口店可能有史前人类活动的遗存，断言: “我有一种预感，我们祖先的遗骸就 X 在这里。“ 1926 年，安特生向全世界宣布了周口店的伟大发现。 师丹斯基 （1894-1988） 奥地利人，古生物学家。1921 年，作为安特生的助手，XX 在周口点遗址进行试察。1923 年，他在采集的众多化石 X 本中发现了属于人类的牙齿化石，为 X 定“北京人“的存在 XX 了有力 XX，从而为周口店遗址大 XX 的发 XX 定了 XX。	
T6	1927 年，中国地质调查所与北京协和医学园签署协议，由美国洛克菲勒基金会资助对周口店遗址进行十年大规模的系统发掘和研究工作。此次发掘是周口店发掘史上特续时间最长的一次，奠定了周口店遗址在古人类学、旧石器时代考古学、第四纪地址学以及古生物学等领域的重要地位。	
T7	裴文中（1904-1982） 河北省丰南人，地质学家与考古学家，中国旧石器时代考古及四级哺乳动物学奠基人，中国科学院院士。1927 年毕业于北京大学地质系；1937 年在巴黎大学获博士学位。1929 年在主特周口店遗址发掘期间发现“北京人”第一颗头盖骨，其后发现石制品及用火遗迹。 卞美年（1908-2002） 天津人，地质学家。1931 年燕京大学地质系毕业，同年进新生代研究室参加周口店发掘。1935-1937 年与贾兰坡共同主特周口店发掘，是周口店 13、14 地点的发现者之一，主特了第 12 地点的发掘工作。 贾兰坡 (1908-2001) 河北省玉田人，旧石器考古学家、第四纪地质学家，中国科学院院士。1931 年考入中国地质调查所做练习生并被派往周口店负责事务工作，协助裴文中进行发掘。1936 年 11 月，在其主特下发现三颗“北京人”头盖骨。 魏敦瑞（1873-1948） 德国人，解剖学家、体质人类学家。1935 年开始被替步达生的工作，任地质调查所新生代研究室名誉主任，成为“北京人”化石的主要研究者。1936-1943 年在《中国古生物志》上发表了《中国猿人头骨》、《中国猿人下颌骨》等专著。 德日进（1881-1955） 法国人生，神父，古生物学家、哲学家。1929 年参加周口店遗址文化遗存研究，是最早系统记述第 1 地点地层和哺乳动物化石的学者之一。发表《周口店第 9 地点哺乳动物化石》、《中国早期人类》等多部研究周口店遗址的专著。	
T8	1931 年，法国旧石器考古学家步日耶来华访问，肯定了裴文中在周口店发现的石制品的人工属性，从而确定了“北京人”在人类历史上占有的重要地位。同年，猿人洞的用火遗迹也得到确认。（自左至右：裴文中，翁文灏，步日耶） 第 1 地点发掘现场，1935 年贾兰坡摄。 1936 年 11 号 26 日，在第 1 地点发现一颗完整的头盖骨。左上方第一人为王存义，右下方发掘者为贾兰坡。 1937 年 7 月 9 日，在第 1 地点进行该年度的最后一天发掘。	
T9	研究	

	中外科学家对周口店遗址出土的古人类体质特征，生产、生活情况做过比较深入的研究，同时在第四纪地层划分、时代对比、动物群演化和环境变迁等研究方面取得了重大进展。	
T10	第 1 地点 第 1 地点俗称猿人洞，是距今 70-30 万年前“北京人”曾经生活的洞穴。“北京人”在这里段段续续生活了 40 多万年，留下大量的遗物、遗迹和遗骸，为研究人类演化史以及“北京人”的生产、生活情况及环境变化提供了珍贵而生动的实物资料。 自 1921 年从来，共发现完整或比较完整的“北京人”头盖骨 6 个，头骨残片 12 件，下颌骨 15 件，牙齿 157 颗，锁骨 1 键，上臂骨 3 件，腕骨 1 件，残破股骨 7 件，残破胫骨 1 件。他们代表 40 余个男女老幼个体，分布在洞内的第 3-11 层堆积物中。“北京人”在生物分类上属“直立人”，学名为 Homo erectus pekinensis。	
T11	“北京人”的体质特征 “北京人”的头骨壁（sic）较厚，前额低平，有突出的眉脊和粗壮的枕脊，头顶正中有一条从前向后延伸的失状脊。下颌骨粗大，多颏孔，缺乏颏突。牙齿粗壮。	
T12	“北京人”的脑量约为 915-1225 毫升，成年人平均为 1088 毫升，较现代人的平均值（约为 1400 毫升）小，但远比猿类的（最大的猿脑量只有 600 毫升）大。 “北京人” 脑壳较扁，像基部比较大的馒头形，最宽处在外耳门附近；现代人的脑颅则变得近球形。	
T13	脑膜中动脉分支（右侧面）的比较 大猩猩 “北京人” 现代人	
T14	“北京人”在人类发展史上的地位 “北京人”的发现和研究圆满解决了 19 世纪爪哇猿人发现以来因扰科学界近半个世纪的直立人意是猿人还是人的争论，确立了直立人这一演化阶段，是认识人类起源和演化过程的一个突破性贡献，将当时的人类历史由天大约 10 万年延长到 50 万年。植物	
T15	第一展厅 展厅介绍 植物连连看	
T16	重点展项 “北京人”第 III 号头盖骨 这是 1929 年 12 月 2 号裴文中在周口店第 1 地点主特发掘出土的第一颗“北京人”头盖骨，1941 年原件失踪。此件模型是根据当时原件复原而成，为本馆二级标本。头盖骨属于一个八、九岁的儿童，(…) “北京人”第 V 号头盖骨 这件头盖骨由四部分组成，其中包括 1934 年发现的左侧颞骨及其相连部，1936 年认出的右侧颞骨破片，1960 年发现完整的额骨以及右半枕骨和部分顶骨。其中 1934 及 1936 年出土的部分原件失踪，(…) Provided translation: Focus exhibition items ‘Peking Man’ No. III skull It is December 2, 1929 Pei Wenzhong unearthed hosted the first one, “Peking Man” skull in Zhoukoudian first place, in 1941 the original missing. This piece (…)	

	‘Peking Man’ No. V of the skull this skull consists of four parts, including the left temporal bone is connected to the Ministry in 1934 and discovered in 1936 recognized the right temporal bone fragment, discovered in (…)	
T17	重点科技展项 "北京人"与现代人对比 “北京人”与现代人对比是一体感互动的方式向参与者展示“北京人”与现代人的区别，体感互动是依赖视频动作捕获技术，令人的身体动作能即时反映到互动系统中，通过感 (…)	
T18	猿人洞（第 1 地点）洞穴发育 (a)大约在 500 万年前，由于地下水的溶蚀，洞穴开始形成。（b）大约 300 万年前,龙骨山 东端被周口河切割而出现一个小洞口，此洞口逐渐变大。（c）大约在 58 万年前，“北京人”入住该洞穴。（d）洞穴的东入口和东部是“北京人”的主要生活区，直到 30 万年前左右洞顶完全坍塌，才向洞穴的西部移动。（e）大约在 23 万年前，“北京人”离开猿人洞，这时的洞穴已被各种堆积物填满。	
T19	北京人用火 用火是人类文化发展历程中的重要里程碑，它大大提高了人类征服自然的能力，对人类的体质进化也产生了巨大的影响。在猿人洞里共发现 4 层较厚的灰烬层（第 4、5、8-9、10 层），最厚的可达 6 米多。有的地方灰烬成堆分布，表明“北京人”已经具备管理火和保存火的能力。	
T20	“北京人”采集的朴树籽 采集是“北京人”重要的经济活动，野生植物的果实、嫩叶、块根及鸟类的卵等都是他们的采集对象。	
T21	锤击法 Hammer Percussion 碰砧法 Anvil or Block on Block technique 砸击法 Bipolar technique 在周口店遗址中发现了大量的石器、石核、石片和石料，总数近 10 万件。“北京人”以石器为主要工具，石器的类型有刮削器、砍砸器、尖状器、雕刻器和锥等。制造石器的原料有脉石英、砂岩、燧石等，大多采自附近的河床和山坡。 “北京人”已经能使用不同的技术制造多种类型的石器。砸击法、锤击法和碰砧法是最常用的三种技法。“北京人”文化有两个基本特征:一是以砸击法为主要打片方法，二是存在大量以向背面加工为主的小工具。	
T22	化石失踪 保护 周口店遗址在发掘和深入研究中，取得了丰项的研究成果，在科学界享有崇高的声誉。但是，“北京人”化石和山顶洞人化石的丢失，仍然是古人类学界的一大憾事。为了更好地保护和研究周口店遗址，在加大遗址保护力度的同时，从未中断寻找“北京人”头盖骨化石的进程，始终到力于将这一珍贵的历史遗存传承于世。	
T23	“北京人”话是运输路线图 北京 Beijing——从北京的美国大使馆出发——秦皇岛 Qinhuangdao——专列沿“京山铁路”运至秦皇岛——纽约 New York——经哈里逊总统号运往纽约美国自然历史博物馆。 经过几代中外科学家的不懈努力，从周口店遗址发掘出土的大量“北京人”化石和山顶洞人化石，为研究人类的起源和演化做出了重大贡献，但十分不幸的是 1941 年太平洋战争爆发，在日军侵华的战乱中，保存在美国人手里的人类化石和动物化石不幸丢失，至今成为世界奇案。	
T24	化石寻找历程	

	自“北京人”头盖骨化石丢失以后，中国政府和民间组织一直没有放弃寻找工作，1998 年贾兰坡和 14 位专家联名向社会各界呼吁，掀起了“世纪末的寻找”。2005 年，房山区人民政府成立“寻找“北京人“头盖骨化石工作委员会”。	
T25	周口店遗址保护工作 周口店遗址的保护和研究工作，一直倍受社会各界人士的关注，为了更好地保护周口店遗址，2002 年，北京市人民政府与中国科学院签署共建周口店遗址协议，为今后遗址的保护工作提供了强有力的保障。	
T26	第四展厅 展厅介绍 第四展厅介绍的是周口店遗址其他化石地点： 第 13 地点，位于第 1 地点南面约 1 公里，是一处东西纵长的裂隙或洞穴堆积，高出当地河床约 50 米。1933～1934 年发掘。该地点发现了一些石制品和丰富的用火遗迹——灰烬和少量烧骨，是周口店地区发现的最早人类遗迹。化石多半产自薄层的红色砂质土中，石化程度深，化石数量大，保存好，有肿骨大角鹿、更新獐、剑齿虎、大丁氏田鼠、三门马和双角犀等 36 种哺乳动物。地质年代大致为中更新世早期。 第 14 地点，位于第 1 地点南约 1.5 公里处，原先是个南北向的袋状石灰岩洞穴，高出现代河床 70 米。大概是河水上涨时鱼类游进洞里，当干旱、水源断了时，鱼类便成群死亡。在 1933 年，1951 年和 1953 年对这个地点的发掘中，共出土鱼化石 2000 多条，发现较完整的鱼化石 600 余条，均为淡水鱼，包括席褶刺鱼八 、短头鱼八 、四川鱼八 、云南鱼八 ，这个地点的发现不仅对鱼类和古气候的研究有价值，而且对研究北京西山的地质构造和地壳运动也有帮助。地质年代为上新世早期，距今约 500 万年。 周口店遗址第 2、3、7、8、9、12、18、20 地点及顶盖堆积都有多种哺乳动物化石发现，包括肿骨大角鹿、猞猁、直隶狼、三门马、鬣狗、裴氏大灵猫、安氏貂、似埃楚斯堪熊等。时代从上新世到晚更新世（距今约 500～10 万年）。	
T27	展厅介绍 展厅概况 第二展厅主要介绍的是“北京人”时期的生产、生活、环境：这里复原了“北京人”生活时期的场景，展示了距今 30-70 万年前周口店地区的自然环境和“北京人”用火、打制石器、采集、狩猎等生产生活活动。“北京人”生存的自然环境，早期偏冷，喜冷的动物如肿骨大角鹿、披毛犀和中国鬣狗等数量较多；中、晚期较湿暖，喜暖的动物如硕猕猴、水牛、无颈鬃豪猪、梅氏犀等占优势。发现河狸、水獭等喜水栖动物，说明周口店一带出现过大面积水域；而安氏鸵鸟和巨富驼等动物化石的发现证明这里有过干早时期，出现过草原和荒漠。场景的整体自然环境为远处崇山峻岭，森林茂密，水草丰富。植被包括紫荆属、朴属（榆科落叶乔木植物）、胡枝子属等（以及其他豆科植物）。动物群包括肿骨鹿、硕猕猴、梅氏犀等，出没于山野间。 重点展项 朴树籽 1935 年裴文中在周口店第 1 地点主特发掘出土，为本馆二级标本。共计 290 粒，单个标本真经在 2 毫米-3 毫米之间，总重量 26.7 克，中大部分被火烧过。原新鲜树籽的皮已不见硬壳和果肉被烧成白色，但仍然可以看出朴树籽为球形，经火的燃烧，多变成黑色，蓝色或灰色。 砍掉角的肿骨大角鹿头骨 砍掉角的肿骨大角鹿头骨：1958 年贾兰坡在周口店第 1 地点主特发掘出土，为本馆二级标本。此标本为残破头骨带额骨，顶骨及大部份枕骨角柄保存。残存少量右角，两个角柄之间的距离是 91 毫米，顶骨外的横向宽 115 毫米，残存标本最大长度 240 毫米，最大宽度 245 毫米，重 3145 克。	

	Provided translation: Focus exhibition items Hackberry seeds 1935 Pei Wenzong at Zhoukoudian site hosted unearthed for the museum 2 specimens. (…) Cut corners swollen moose skull bone 1958 Jia Lanpo hosted at Zhoukoudian unearthed the first place, as the museum two specimens. This specimen is broken skull with frontal, parietal, and occipital horn handle most preserved remnants of a small right-hand corner, the distance between the two corners handle is 91mm, the width of the lateral parietal at 115mm, (…)	
T28	周口店国家考古遗址公园全景导览图 周口店国家考古遗址公园 周口店遗址位于北京市房山区周口店镇，去市中心约 50 公里，自 1927 年大规模发掘以来，共发现不同时期的各类化石和文化遗物地点 27 处，是古人类学、考古学、古生物学、年代学、环境学及岩溶学等多学科综合研究基地。 周口店遗址 1961 年被国务院公布为全国重点文物保护单位；1987 年被联合国教科文组织列入世界遗产名录；1992 年被北京市政府授予“青少年科普教育基地”称号；1997 年被中宣部授予“全国爱国主义教育示范基地”称号；2005 年被国家旅游局评为国家 AAAA 级旅游景区；2008 年、2010 年先后被国家文物局评为国家一级博物馆、国家考古遗址公园；2011 年被联合国教科文组织亚太地区世界文化遗产培训于研究中心授予“世界遗产青少年教育基地”称号；2012 年被中国科学技术协会授予“全国科普教育基地”称号；是中国（房山）世界地质公园八大园区之一。	
T29	周口店第一地点，原是一个天然石灰岩溶洞。从大约五六十万年前起，北京猿人在这理断断续续的生活了大约 20 万年，北京猿人的遗骨、遗物、遗迹和洞顶塌落的石块、洞外流入的泥砂，在洞内一层又一层的填充起来，形成巨厚的堆积层（其范围东西长约 140 米，南北宽从 40 米到 2 米不等，厚 40 余米，共分 13 层)。 这个遗址发现于 1921 年，1927 年开始系统发掘，1937 年 “七七事变“后中断，解放后恢夏工作。几十年来，主要发掘了堆积的中段（约 27000 立方米），从中发现了近 200 件人类化石（代表 40 个猿人个体）、上万件石器、数层灰烬和近 200 种动物化石。这是迄今世界上同时期遗址中材料最丰富、最全面、最具代表性的古人类遗址，在科学研究、在人类远古文化史上占有重要而光辉的地位。 发掘前，该洞穴洞顶早已坍塌，成为堆积物上部的大角砾和岩块。发掘时，除东部鸽子堂处因胶结坚硬，未被挖去外，其他地方均无保存。	
T30	猿人洞（第 1 递点） 猿人洞，即周口店第 1 地点，原是一个天然石灰岩溶洞。从大约五六十万年前起，“北京人”在这里断断续续的生活了大约 20 万年，“北京人”的遗骨、遗物、遗迹和洞顶塌落的石块、洞外流入的泥沙，在洞内一层又一层填充起来，形成巨厚的堆积层（其范围东西长约 140 米，南北宽从 40 米到 2 米不等，厚 40 余米，共分 13 层）。 该遗址发现于 1921 年，1927 年开始系统发掘，1937 年“七七事变”后中断，解放唱后恢复工作。几十年来，主要发掘了堆积的中段（约 27000 立方米），从中发现了近 200 件人类化石（代表 40 个古人类个体）、上万件石器、数层灰烬和近 200 种动物化石。这是迄今世界上同时期遗址中材料最丰富、最全面、最具代表性的古人雷遗址，在科学研究及人类远古文化史上占有重要而光辉的地位。 发掘前，该洞穴洞顶早已坍塌，成为堆积物上部的大角砾和岩块。发掘时，除东部鸽子堂处因胶结坚硬，未被挖去外，其它地方均无保存。	
T31	“北京人”寿命统计图表 寿命 | 人数 | 百分比 可统计的大数 | 22 | 100%	

<14 岁	15	68.2%	
15-30 岁	3	13.6%	
40-50 岁	3	13.6%	
50-60 岁	1	4.6%	

T32	展厅介绍 展厅概况 第一展厅主要介绍周口店遗址的发现和发掘历史，通过大量的珍贵的发掘历史图片展示周口店遗址的重要意义；介绍“‘北京人’的体质特征及其在人类发展史上的地位”。同时利用多媒体手段再现了上世纪三十年代周口店遗址的发掘场景。互动项目有“北京人”头盖骨幻影成像、“北京人”与现代人体质特征对比。 重点展项 北京人肢骨 1936、1937 年裴文中在周口店第 1 地点主特发掘出土，1941 年原件失踪，此模型是根据当时原件复原而成，为本馆二级标本。这件股骨几乎保存了骨干的全部，上端股骨头及粗隆遗失，径的下缘仍然保留。标本石化程度很强。 李氏野猪头骨 此标本出土于周口店第 1 地点，为本馆一级标本。属于老年个体，整体形状扁平，颊齿基本保存，两个犬齿脱落，下齿左侧长 138 毫米，右侧长 138 毫米。牙齿磨耗严重。	
T33	1921 年，发掘第 1 地点（猿人洞）。最左边为师丹斯基，中间站立者为美国古生物学家葛兰阶。 1921 / 1923 1921 年，安特生与奥地利古生物学家师丹斯基在当地农民引导下，来到龙骨山进行试掘。1923 年，师丹斯基从龙骨山发掘出一枚似人似猿的牙齿以及大批脊椎动物化石，并将材料运往瑞典乌普萨拉修理和研究。 1926 1926 年，在瑞典的实验室内，从来自周口店的材料中有修理出一枚人牙。当年十月份，安特生在欢迎瑞典皇太子古斯塔未六世·阿尔道未的访华会上宣布了这项重要发现，立该引起了世界的关注。因为当时不仅在中国，既使在亚洲大陆上也没有发现如此古老的人类化石。	
T34	2006 年 11 月 15 日，寻找工作队到河北白洋淀寻找“北京人”化石 2005 年 9 月 21 日，寻找工作队到天津寻找“北京人”化石线索。 目前，通过社会各界的努力，已经收集了上百条线索，在寻找过程中始终坚特只要有百分之一的希望，就要付出百分之百的努力。希望社会各界为寻找“北京人”化石提供更多有价值的线索，让这批珍贵的“国宝”早日重归故里。	
T35	石器墙 石器墙：在展柜中单独展出的是石砧、实锤、砍砸器、刮削器、尖状器、雕刻器、石锥等石器。石砧和石锤是用来制造石器的。砸击石锤为卵圆形砾石，一面或两面有散漫的坑疤。锤击石锤大多是条形砾石。砍砸器是“北京人”常用的一种工具，属于大型工具，大多用砂岩和砾石制作。加工方法比价简单，一面打击的数量较多，和刃缘相的一边常保留一部分砾石面以使于手握。主要用于砍伐。刮削器是北京人使用最普遍的一种石器，数量最多，形体较小，大部分是将石片的边缘加以修整而成，少数刮削器侧面有修理过的把手，主要用来刮削木 X、剖兽皮，用途比较广泛。尖状器是“北京人”制用的一种比较精致的石器，大多由石片制作，器形较小，长度为 3-6 厘米；	

	少数形体较大，长度超过 10 厘米。尖状器有正尖、角尖和复尖三种。主要用于割剥兽皮。雕刻器的形体较小，多用断片制成，可分为笛端 型雕刻器、平刃雕刻器和角雕器。石锥器形较小，这类工具的修理都较精致，有长尖和短尖两种。	
T36	“北京人”的猎物，被砍掉角的肿骨大角鹿头骨 狩猎是“北京人”食物的另一重要来源。他们不仅捕捉小动物，如：昆虫、蛙、蛇和鸟等，也能捕捉大型动物如：鹿、野马、野猪、水牛等。	
T37	“北京人”狩猎归来场景	
T38	灰烬 “北京人”用火的证据	
T39	1959 年“北京人”下颌骨发现处 灰烬层 1929 年“北京人”第一颗头盖骨化石发现处	
T40	烧骨、烧石、灰烬 烧骨、烧石、灰烬：烧骨、烧石及灰烬都是“北京人”用火的证据，这些标本出土于周口店第 1 地点，均为本官二级标本。烧骨骨体表面布满细小裂纹，颜色很丰富，由蓝绿色、黄色及黑色组成，由于燃烧。骨头上有炸纹，不同颜色的烧骨主要反映出燃烧的程度不同，颜色深的燃烧程度也较深。 烧片均属于被烧卵石，表面烧后出现龟裂纹。灰烬呈灰黑色钙质，堆积致密胶结成块状，里面含有破碎的砾石斑块及多种动物化石，灰烬在第 1 地点的发现，可以证明人类在这里用火生活时间很长。	
T41	科学家纪念园 科学家纪念园是杨钟健、裴文中、贾兰坡、尹赞勋、周明镇、吴汝康等几位科学家长眼的地方。他们不仅在周口店遗址的发掘与研究上取得了卓越的成就，而且也为遗址博物馆的创建和发展做出了巨大贡献。科学家们在此挥洒过青春与汗水，如今更与这里的青山碧水永远融为一体。参观他们的陵园，不仅是对故人的纪念，更是对后人的鞭策。	Figure 3.2.1
T42	日本人给制的关于‘北京人’化石失踪的路线图	
T43	2005 年 7 月 2 日,“北京人”头盖骨寻找工作队正式宣布成立。 寻找“北京人”头盖骨化石工作委员会顾问，从左到右：古人类学家周国兴接受、中国科学院院士吴新智、前联合国副秘书长冀朝铸、贾兰坡长子贾彧彰。 2005 年 7 月 5 日，寻找工作队来访“北京人”头盖骨化石装箱的最后见证人胡承志先生。 2005 年 9 月 21 日，寻找工作队采访天津自然博物馆研究员黄为龙。	
T44	1907 年发现的海德堡人下颌骨（模型） 迄今为止欧洲发现的最早的直立人，发现于德国海德堡，飓金 50 万到 40 万年。	
T45	中国鬣狗完整骨架 此标本出土于周口店第 1 地点，为本馆一级标本。体长 1510 毫米,高 885 毫米。头骨较大，吻部宽，脑颅窄而深，属于成年个体。额骨和鼻骨向外凸出，上下门齿、犬齿均较大，非常尖锐，咬合力强。鬣狗属穴居、食腐肉类动物，一般以群体出现，现非洲、欧洲均有其现生种。鬣狗是很凶猛的野兽，它们的牙齿很粗大，咬死别的动物吃肉时把骨头也咬碎，连骨带肉一齐吞进肚内。肉被消化了，碎骨随着大便排出体外。绝大多数动物和人的大便因为太软，有机质太多，一般成不了化石，但鬣狗的粪便中有许多碎骨块，只要条件合适便容易成为化石保存下来。在周口店第一地点堆积层第 6 层中，鬣狗粪层很厚，密度很大，许多粪蛋重叠在一起，说明鬣狗在洞内住了很长的时间。在粪化石层中，从未发现过人类化石和较多的文化遗物。因此，在那段历史中，“北京人”和鬣狗曾轮流住在这个洞里。	

Table 3.3 Textual displays from the *Ancient China* exhibition at the National Museum of China

No.	Text (Chinese)	Corresponding picture
T1	中国旧石器时代早期人类及其生活 旧石器时代早期是指距今约 200 万年-20 余万年间这一历史阶段。生活在这一阶段的人类被称为直立人。中国是人类进化的重要地区之一，有丰富的古人类化石遗存。距今约 170 万年的元谋人是中国发现最早的直立人，稍晚的直立人有蓝田人、北京人、郧县人、和县人、汤山人等。直立人使用打制石器、木棒等工具，从事采集、狩猎活动，已经学会控制用火，逐渐改变了自然和人类本身。	
T2	中国旧石器时代中、晚期的人类及其文化 旧石器时代中、晚期是指距今约 20 余万年-1 万年间这一历史阶段。生活在这一阶段的人类被称为智人。在中国境内已发现金牛山人、大荔人、许家窑人、丁村人、马坝人、柳江人、许昌人、山顶洞人、左镇人等智人化石。这一阶段，石器技术不断进步，石球更多地被用于狩猎。旧石器时代晚期，标枪、鱼镖、弓箭等工具的发明和使用，促进了渔猎经济的发展，改善了人们的物质生活，同时还产生了原始信仰与原始艺术的萌芽。	
T3	前言 “古代中国陈列“是中国国家博物馆的基本陈列，它以王朝更替为主要脉络，分为远古时期、夏商西周时期、春秋战国时期、秦汉时期、三国两晋南北朝时期、隋唐五代时期、辽宋夏金元时期和明清时期八个部分。该陈列以古代珍贵文物为主要见证，较为全面地展示了古代中国不同历史时期在政治、经济、文化、社会生活以及中外交流等方面的发展状况，突出展现了中华文明延绵不绝的发展特点和各族人民共同缔造多民族国家的历史进程，展现了中华民族所取得的辉煌成就和对人类文明所做出的伟大贡献。	
T4	远古时期 约二百万年前至约公元前二十一世纪	
T5	直立人 直立人已能直立行走，会制造工具，具备了人的一些特征，但脑量较小，头部保留了较原始的特征。 元谋人上门齿（复制品）[QR Code] 旧石器时代早期（距今约 170 万年） 原物 1965 年云南元谋上那蚌出土 元谋人是迄今为止在我国境内发现的最早的直立人，这两枚牙齿为左右上内侧门齿，磨蚀程度较轻，可能属于同一个男青年个体。由此可知，元谋人牙齿粗大，门齿呈铲形，齿冠切缘扩展，唇面较平坦，齿冠下部的底结节发达，这些特征具有从纤细型南方古猿向直立人过渡的特点。 蓝田人头骨（复制品） 旧石器时代早期（距今约 115 年-110 万年） 原物 1964 年山西蓝田公王岭出土 郧县人头骨（复制品） 旧石器时代早期（距今约 100 万年-90 万年）	Figure 3.3.1

	原物 1990 年湖北郧县曲远河口学堂梁子出土 李天元先生捐赠	
T6	古老的石器 受地理环境的制约，中国旧石器时代的石器以秦岭为界，大致可分为南北两大系统，北方以小型石片石器为主，南方以大型块状毛坯或砾石制成的石器为主，在不同地区还存在多样性的特点。 石锤、石砧 [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土 古人类制作石器一般分为两个步骤，第一步是从石料上打下石片，第二步是利用石片或打下石片的石核做进一步的加工或修理。这里的石锤和石砧就是用来加工石器的工具。石砧是垫在石料下面的石块，石锤是直接用来敲砸石器的工具。人们往往选择圆而厚的砾石作为石砧，选择长圆的、便于手握的砾石作为石锤。 两端石片 [audio guide: 0002] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土 刮削器、尖状器（复制品） 旧石器时代早期（距今约 200 万余年-20 余万年） 1959 年北京房山周口店第一地点出土 石锥（复制品） 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一时间出土	
T7	用火 用火是人类适应自然与改善生存环境的关键一步。北京人已学会使用自然火，并能保存火种。他们用火烧烤食物、照明、取暖和驱赶野兽，促进了身体特别是大脑的发育，提高了适应和改变自然的能力。	
T8	采集与狩猎 在北京人遗址中，除发现采集食用的朴树籽外，还发现了大量的动物遗骸，其中肿骨鹿化石有 2000 多个个体，斑鹿化石有 1000 多个个体，说明肿骨鹿和斑鹿是北京人狩猎的主要对象。北京人在夏末秋初时狩猎斑鹿，在秋末冬初时狩猎肿骨鹿。	
T9	北京人遗址* 北京人人头骨（复制品）[QR Code]	Figure 3.3.1

* Photo caption hardly recognisable on picture. The photo pictures the stratigraphy of Zhoukoudian, Locality 1.

	旧石器时代早期（距今约 28 万年-23 万年） 原物根据 1934 年、1936 年和 1966 年北京房山周口店第一地点出土的北京人头骨碎片拼合而成。 北京人的科学定名是直立人北京种，周口店遗址的化石资料十分丰富，共代表了 40 多个不同年龄的个体。这个头盖骨属于一个青年男子，脑量为 1140 毫升。北京人的脑容量超过猿类，但依然保留有头骨低平，眉骨粗大等原始特征。北京人的肢骨较为进步，这反映出人类在进化过程中，身体各个部分发展的不平衡性。 北京人复原像 1959 年王存义在吴汝康、吴新智指导下制作	
T10	锤击法 • 碰砧法 • 砸击法 打制石器制作方法示意图 旧石器时代人们制作石器主要采用锤击法、碰砧法和砸击法三种方法。锤击法是用石锤将石片顶端打下，碰砧法是用石料前端猛碰石砧，将石片从石料前端碰下。砸击法是用石锤砸击放在石砧上的石块上端，将所需要石片砸下。 砍砸器 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一时间出土 端刃砍砸器 旧石器时代早期（距今约 200 万年-20 余万年） 广西新州长蛇峪采集 砍砸器 [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1964 年贵州黔西观音洞出土 刮削器、尖状器 旧石器时代早期（距今约 200 万年-20 余万年） 1964 年贵州黔西观音洞出土	Figure 3.3.8
T11	山顶洞人生活场景 1974 年锡长禧、刘士铭、刘小岑创作 山顶洞人大约生活在 3 万年前，除采集和狩猎外，山顶洞人已学会了人工取火，懂得用磨光和钻孔技术制作装饰品，用骨针缝制衣物……。这组群塑表现了山顶洞人制作装饰品、缝制皮衣和烧烤兽肉等多个生活场景。	Figure 3.3.4
T12	灰烬 [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土	

	北京人遗址发现了数层面积较大、堆积较厚的灰烬和其它用火的遗迹。灰烬成堆分布，灰烬中发现有烧过的木炭、石块、朴树籽、鹿角和各种动物骨骼。估计当时的北京人是从天然火中获取火种，带回洞内生起篝火，不断填放燃料，使之不熄。从各层位发现的用火遗迹来看，越到后来北京人保存火种的能力越强。在世界直立人的遗址中，北京人用火的证据最充分，遗迹最丰富。 烧骨 [audio guide: 0003] [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土	
T13	展览介绍 展览名称：古代中国 展期：基本陈列（常设）展厅：地下一层展厅 展品介绍 元谋人上门齿（复制品） 旧石器时代早期（距今约 170 万年）长 2.l 厘米，宽 1.14 厘米 长 2 厘米，宽 1.13 厘米 原物 1965 年云南元谋上那蚌出土 这两枚牙齿为元谋人同一个体的左右上内侧门齿，其磨蚀程度较轻，切缘刚刚露出齿质，可能是一男青年的个体。据此可知，元谋人的牙齿粗壮硕大，齿冠切缘的扩展指数较高，超过目前已知早期人类所有的同位牙齿；门齿齿冠下部的底结节发达，指状突粗壮；门齿的唇面较为平坦。元谋人上门齿与南方古猿非洲种的纤细型有一些相似之处，比如齿冠面隆突不很明显，齿根侧面没有显著的浅沟等；与北京人上门齿相比也有相近之处，如牙齿呈铲形，底结节发育，指状突明显，切缘较宽等，但还存在一些比北京人更加原始的特征，如齿冠末端扩展，基部比较收缩等。因此专家们一致认为：元谋人具有从纤细类型南方古猿向直立人过渡的特点。 关于元谋人的年代曾经有过分歧。1976 年李普等人对元谋人化石层位做古地磁测试，结果为 170±10 万年。1984 年刘东 生等从地质学角度，认为元谋人不应超过 73 万年，可能为距今 60-50 万年或更晚一些。1985 年钱方等再次对元谋组做古地磁采样，测试结果为 187—167 万年。目前学术界一般仍将元谋人的年代定在距今约 170 万年，元谋人是迄今为止在我国境内发现的最早的直立人。(to be found online: http://codecmw.chnmuseum.cn/M32gRHge00, 10.07.2022)	
T14	展览介绍 展览名称：古代中国 展期：基本陈列（常设）展厅：地下一层展厅 展品介绍 北京人头盖骨（复制品） 旧石器时代早期（距今约 28 万—23 万年）长 20 厘米，宽 14 厘米，高 12 厘米 原物根据 1934 年、1936 年和 1966 年北京房山周口店第一地点出土	

	这件头盖骨的原物是 1966 年发掘北京猿人洞上部堆积时发现的一块枕骨，该枕骨恰好可与 1934 年和 1936 年在这个地点附近发现的两块颅骨碎片模型相拼合，复原出一个完好的头盖骨。这是现在仅存的北京直立人头盖骨，为一青年男子，脑量为 1140 毫升。 北京人遗址的发掘开始于 1921 年。1929 年 12 月 2 日裴文中主持周口店发掘时发现了第一个北京人头盖骨，这个发现轰动了整个世界。自 1927 年至 1937 年，考古工作者在北京人遗址共发现了北京人头盖骨 5 个、面骨 6 件、颅骨碎片 15 块、下颌骨 14 块、牙齿 147 枚，股骨残段 7 段、肱骨残段 2 段、锁骨 1 根、月骨 1 件。这些化石资料共代表了 40 多个不同年龄的个体，但均在日本侵华战争中丢失。1949 年 9 月贾兰坡等主持了中断长达 12 年之久的北京人遗址的发掘工作。此后还多次对该遗址进行发掘，陆续有一些新的发现。 据从化石上得到的信息，可知道北京人的一些体质特征：与猿类相比，北京人的颅高、颅长和颅宽的指数都远远超过猿 类。与现代人相比，北京人的头盖骨低平，颅骨的最宽处靠近耳孔上方，具有原始性，肢骨则较具进步性。根据肢骨长 度，可推断出北京人的身高大约为 157 厘米。这种情况反映出人类在进化过程中，身体各个部分发展的不平衡性。直立人首先是直立行走，用手制造和使用工具从事劳动。手和脚首先得到发展，然后才是大脑的发展。 (to be found online: http://codecmw.chnmuseum.cn/M32vGrwd00, 10.07.2022)	
T15	采集与狩猎 在北京人遗址中，除发现采集食用的朴树籽外，还发现了大量的动物遗骸，其中肿骨鹿化石有 2000 多个个体，斑鹿化石有 1000 多个个体，说明肿骨鹿和斑鹿是北京人狩猎的主要对象。北京人在夏末秋初时狩猎斑鹿，在秋末冬初时狩猎肿骨鹿。	
T16	肿骨鹿生态复原图 肿骨鹿鹿角及下颌骨 [audio guide: 0004] [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土 在龙骨山堆积中，凡是北京人居住在洞穴的时期，这一层位肉食动物的化石就比较稀少，食草类动物的化石则占较大的比例，其中又以肿骨大角鹿和葛氏斑鹿的数量最多。这些化石很少是完整无损的，不少被烧过，已经变形变色，这表明狩猎是北京人经常从事的一项活动。肿骨鹿与葛氏斑鹿是华北中更新世特有的类型，也是确认北京人生存年代的重要标尺。 葛氏斑鹿鹿头、鹿角及下颌骨 [QR Code] 旧石器时代早期（距今约 200 万年-20 余万年） 1958 年北京房山周口店第一地点出土	
T17	智人 智人意为“智慧的人”，可分为早期智人和晚期智人。早期智人生活在距今 20 余万年-5 万年间，相当于旧石器时代中期，其身体特征介于直立人和晚期智人之间，石器加工技术有所进步。晚期智人生活在距今 5 万年-1 万年间，相当于旧石器时代晚期，其身体特征已接近现代人，石器加工技术更加进步，已学会人工取火。	
T18	多地区假说模式图 黑种人 白种人 黄种人 棕种人 单一地区假说模式图 黑种人 白种人 黄种人 棕种人 人类起源进化两种假说模式图	Figure 3.3.11

	人是由猿进化而来的，非洲是最早的人类起源地。但是关于现代人的起源，国际学术界一直存在多地区起源和单一地区起源两种假说。多地区起源假说认为：现代人由当地早期智人，甚至直立人演化而来，包括非洲、欧洲和亚洲在内的，凡有直立人化石或遗迹出土的地方都有可能是现代人类的起源地。单一地区起源假说认为：现代人起源于北非或中东，然后扩展到其他地方，取代当地已有的古人类群体，最后演变成现代人类。其主要根据是非洲现代人的基因变异比欧洲人和亚洲人的都多，基因变异最多意味着历史最长。因为在北非或中东发现了最早的人类化石，所以那里可能是现代人类的起源地。 柳江人头骨（复制品） 旧石器时代中期（距今约 7 万年） 原物 1958 年广西柳江通天岩洞出土 马坝人头骨（复制品） 旧石器时代中期（距今约 14 万年） 原物 1958 年广东曲江马坝出土	
T19	金牛山人头骨（复制品） [QR Code] 旧石器时代中期（距今约 28 万年） 原物 1984 年辽宁营口大石桥金牛山出土 金牛山人颅骨的形态整体上与北京猿人有明显区别，与较晚的和县人更为接近。因此，虽然金牛山人年代较早，多数学者仍主张将其归入早期智人范畴。	

References

Alemseged, Zeresenay/Coppens, Yves/Geraads, Denis (2002). Hominid cranium from Omo. Description and taxonomy of Omo-323-1976-896. American Journal of Physical Anthropology 117 (2), 103–112. https://doi.org/10.1002/ajpa.10032.

Alemseged, Zeresenay/Spoor, Fred/Kimbel, William H./Bobe, René/Geraads, Denis/Reed, Denné/Wynn, Jonathan G. (2006). A juvenile early hominin skeleton from Dikika, Ethiopia. Nature 443 (7109), 296–301. https://doi.org/10.1038/nature05047.

Alemseged, Zeresenay/Wynn, Jonathan G./Kimbel, William H./Reed, Denné/Geraads, Denis/Bobe, René (2005). A new hominin from the Basal Member of the Hadar Formation, Dikika, Ethiopia, and its geological context. Journal of Human Evolution 49 (4), 499–514. https://doi.org/10.1016/j.jhevol.2005.06.001.

Alexeev, Valerii P. (1986). The origin of the human race. Moscow, Progress.

Almécija, Sergio/Tallman, Melissa/Alba, David M./Pina, Marta/Moyà-Solà, Salvador/Jungers, William L. (2013). The femur of *Orrorin tugenensis* exhibits morphometric affinities with both Miocene apes and later hominins. Nature Communications 4, 2888. https://doi.org/10.1038/ncomms3888.

An, Zhisheng 安芷生/Gao, Wanyi 高万一/Zhu, Yizhi 祝一志 (1990). Magnetostratigraphic dates of Lantian *Homo erectus* (蓝田人的磁性地层年龄). Acta Anthropologica Sinica (人类学学报) (1), 1–7.

Antón, Susan C. (1999). Cranial growth in *Homo erectus*. How credible are the Ngandong juveniles? American Journal of Physical Anthropology 108 (2), 223–236. https://doi.org/10.1002/(SICI)1096-8644(199902)108:2<223::AID-AJPA7>3.0.CO;2-8.

Arambourg, Camille/Coppens, Yves (1968). Découverte d'un australopithecien nouveau dans les Gisements de L'Omo (Ethiopie). South African Journal of Science, 58–59. Available online at https://journals.co.za/doi/pdf/10.10520/aja00382353_4440.

Argue, Debbie/Morwood, Michael J./Sutikna, Thomas/Jatmiko/Saptomo, E. Wahyu (2009). *Homo floresiensis*. A cladistic analysis. Journal of Human Evolution 57 (5), 623–639. https://doi.org/10.1016/j.jhevol.2009.05.002.

Arsuaga, Juan-Luis/Carretero, José-Miguel/Lorenzo, Carlos/Gómez-Olivencia, Asier/Pablos, Adrián/Rodríguez, Laura/García-González, Rebeca/Bonmatí, Alejandro/Quam, Rolf M./Pantoja-Pérez, Ana/Martínez, Ignacio/Aranburu, Arantza/Gracia-Téllez, Ana/Poza-Rey, Eva María/Sala, Nohemi/García, Nuria/Alcázar de Velasco, Almudena/Cuenca-Bescós, Gloria/Bermúdez de Castro, José-María/Carbonell, Eudald (2015). Postcranial morphology of the Middle Pleistocene humans from Sima de los Huesos, Spain. Proceedings of the National Academy of Sciences of the United States of America 112 (37), 11524–11529. https://doi.org/10.1073/pnas.1514828112.

Arsuaga, Juan-Luis/Lorenzo, Carlos/Carretero, José-Miguel/Gracia, Ana/Martínez, Ignacio/García, Nuria/Bermúdez de Castro, José-María/Carbonell, Eudald (1999). A complete human pelvis from the Middle Pleistocene of Spain. Nature 399 (6733), 255–258. https://doi.org/10.1038/20430.

Arsuaga, Juan-Luis/Martínez, Ignacio/Arnold, Lee J./Aranburu, Arantza/Gracia-Téllez, Ana/Sharp, Warren D./Quam, Rolf M./Falguères, Christophe/Pantoja-Pérez, Ana/Bischoff, James L./Poza-Rey, Eva María/Parés, Joseph M./Carretero, José-Miguel/Demuro, Martina/Lorenzo, Carlos/Sala, Nohemi/Martinón-Torres, María/García, Nuria/Alcázar de Velasco, Almudena/Cuenca-Bescós, Gloria/Gómez-Olivencia, Asier/Moreno, Davinia/Pablos, Adrián/Shen, Chuanchou/Rodríguez, Laura/Ortega, Ana Isabel/García, Rebecca/Bonmatí, Alejandro/Bermúdez de Castro, José-María/Carbonell, Eduald (2014). Neandertal roots. Cranial and chronological evidence from Sima de los Huesos. Science 344 (6190), 1358–1363. https://doi.org/10.1126/science.1253958.

Arsuaga, Juan-Luis/Martínez, Ignacio/Gracia, Ana/Carretero, José-Miguel/Carbonell, Eudald (1993). Three new human skulls from the Sima de los Huesos Middle Pleistocene site in Sierra de Atapuerca, Spain. Nature 362 (6420), 534–537. https://doi.org/10.1038/362534a0.

Arsuaga, Juan-Luis/Martínez, Ignacio/Gracia, Ana/Lorenzo, Carlos (1997). The Sima de los Huesos crania (Sierra de Atapuerca, Spain). A comparative study. Journal of Human Evolution 33 (2-3), 219–281. https://doi.org/10.1006/jhev.1997.0133.

Asfaw, Berhane/White, Tim D./Lovejoy, C. Owen/Latimer, Bruce/Simpson, Scott W./Suwa, Gen (1999). *Australopithecus garhi.* A new species of early hominid from Ethiopia. Science 284 (5414), 629–635. https://doi.org/10.1126/science.284.5414.629.

Baab, Karen L./McNulty, Kieran P./Harvati, Katerina (2013). *Homo floresiensis* contextualized. A geometric morphometric comparative analysis of fossil and pathological human samples. PLoS ONE 8 (7), e69119.1-e69119.11. https://doi.org/10.1371/journal.pone.0069119.

Bahain, Jean-Jacques/Shao, Qingfeng/Han, Fei/Sun, Xuefeng/Voinchet, Pierre/Liu, Chunru/Yin, Gongming/Falguères, Christophe (2017). Contribution des méthodes ESR et ESR/U-Th à la datation de quelques gisements pléistocènes de Chine. L'Anthropologie 121 (3), 215–233. https://doi.org/10.1016/j.anthro.2017.06.001.

Balter, Michael (2015). New human ancestor was Lucy's cousin and neighbor. Science. https://doi.org/10.1126/science.aac4651.

Barras, Colin (2018). Tools from China are oldest hint of human lineage outside Africa. Nature. https://doi.org/10.1038/d41586-018-05696-8.

Berger, Lee R. (1992). Early hominid fossils discovered at Gladysvale Cave, South Africa. South African Journal of Science (88), 362. Available online at https://journals.co.za/doi/pdf/10.10520/aja00382353_9499.

Berger, Lee R. (2012). *Australopithecus sediba* and the earliest origins of the genus *Homo*. Journal of Anthropological Sciences 90, 117–131. https://doi.org/10.4436/jass.90009.

Berger, Lee R./Hawks, John/Dirks, Paul H.G.M./Elliott, Marina C./Roberts, Eric M. (2017). *Homo naledi* and Pleistocene hominin evolution in subequatorial Africa. eLife 6. https://doi.org/10.7554/eLife.24234.

Berger, Lee R./Hawks, John/Ruiter, Darryl J. de/Churchill, Steven E./Schmid, Peter/Delezene, Lucas K./Kivell, Tracy L./Garvin, Heather M./Williams, Scott A./DeSilva, Jeremy M./Skinner, Matthew M./Musiba, Charles M./Cameron, Noel/Holliday, Trenton W./Harcourt-Smith, William/Ackermann, Rebecca R./Bastir, Markus/Bogin, Barry/Bolter, Debra/Brophy, Juliet K./Cofran, Zachary D./Congdon, Kimberly A./Deane, Andrew S./Dembo, Mana/Drapeau, Michelle S. M./Elliott, Marina C./Feuerriegel, Elen M./Garcia-Martinez, Daniel/Green, David J./Gurtov, Alia/Irish, Joel D./Kruger, Ashley/Laird, Myra F./Marchi, Damiano/Meyer, Marc R./Nalla, Shahed/Negash, Enquye W./Orr, Caley M./Radovčić, Davorka/Schroeder, Lauren/Scott, Jill E./Throckmorton, Zachary/Tocheri, Matthew W./VanSickle, Caroline/Walker, Christopher S./Wei, Pianpian/Zipfel, Bernhard (2015). *Homo naledi*, a new species of the genus *Homo* from the Dinaledi Chamber, South Africa. eLife 4. https://doi.org/10.7554/eLife.09560.

Berger, Lee R./Pickford, Martin/Thackeray, Francis (1995). A Plio-Pleistocene hominid upper central incisor from the Cooper's site, South Africa. South African Journal of Science (91), 541–542.

Berger, Lee R./Ruiter, Darryl J. de/Churchill, Steven E./Schmid, Peter/Carlson, Kristian J./Dirks, Paul H.G.M./Kibii, Job M. (2010). *Australopithecus sediba*. A new species of *Homo*-like australopith from South Africa. Science 328 (5975), 195–204. https://doi.org/10.1126/science.1184944.

Bermúdez de Castro, José-María/Arsuaga, Juan-Luis/Carbonell, Eudald/Rosas, Antonio/Martínez, Ignacio/Mosquera, Marina (1997). A hominid from the Lower Pleistocene of Atapuerca, Spain. Possible ancestor to Neandertals and modern humans. Science 276 (5317), 1392–1395. https://doi.org/10.1126/science.276.5317.1392.

Bermúdez de Castro, José-María/Martinón-Torres, María/Arsuaga, Juan-Luis/Carbonell, Eudald (2017a). Twentieth anniversary of *Homo antecessor* (1997-2017). A review. Evolutionary Anthropology 26 (4), 157–171. https://doi.org/10.1002/evan.21540.

Bermúdez de Castro, José-María/Martinón-Torres, María/Martín-Francés, Laura/Modesto-Mata, Mario/Martínez de Pinillos, Marina/García, Cecilia/Carbonell, Eudald (2017b). *Homo antecessor*. The state of the art eighteen years later. Quaternary International 433, 22–31. https://doi.org/10.1016/j.quaint.2015.03.049.

Bermúdez de Castro, José-María/Pérez-González, Alfredo/Martinón-Torres, María/Gómez-Robles, Aida/Rosell, Jordi/Prado, Leyre/Sarmiento, Susana/Carbonell, Eudald (2008). A new Early Pleistocene hominin mandible from Atapuerca-TD6, Spain. Journal of Human Evolution 55 (4), 729–735. https://doi.org/10.1016/j.jhevol.2008.03.006.

Bian, Jing 边静 (2016). Opinions on the impact of mobile internet on public education in museums (移动互联网对博物馆公共教育的影响刍议). Chinese Museum (中国博物馆) (4), 109–112.

Binford, Lewis R./Stone, Nancy M./Aigner, Jean S./Behrensmeyer, Anna K./Haynes, Gary/Olsen, John W./Todd, Lawrence C./You, Yuzhu (1986). Zhoukoudian. A closer look. Current Anthropology 27 (5), 453–475. https://doi.org/10.1086/203469.

Black, Davidson (1927). On a lower molar hominid tooth from the Chou Kou Tien deposit. Palaeontologia Sinica, Series D 7, 1–26.

Blumenschine, Robert J./Peters, Charles R./Masao, Fidelis T./Clarke, Ronald J./Deino, Alan L./Hay, Richard L./Swisher, Carl C./Stanistreet, Ian G./Ashley, Gail M./McHenry, Lindsay J./Sikes, Nancy E./van der Merwe, Nikolaas J./Tactikos, Joanne C./Cushing, Amy E./Deocampo, Daniel M./Njau, Jackson K./Ebert, James I. (2003). Late Pliocene *Homo* and hominid land use from western Olduvai Gorge, Tanzania. Science 299 (5610), 1217–1221. https://doi.org/10.1126/science.1075374.

Boaz, Noel T./Ciochon, Russell L./Xu, Qinqi/Liu, Jinyi (2004). Mapping and taphonomic analysis of the *Homo erectus* loci at Locality 1 Zhoukoudian, China. Journal of Human Evolution 46 (5), 519–549. https://doi.org/10.1016/j.jhevol.2004.01.007.

Boëda, Éric/Griggo, Christophe/Hou, Yamei/Huang, Wanbo/Rasse, Michel (2011a). Données stratigraphiques, archéologiques et insertion chronologique de la séquence de Longgupo. L'Anthropologie 115 (1), 40–77. https://doi.org/10.1016/j.anthro.2010.12.003.

Boëda, Éric/Hou, Yamei/Huang, Wanbo (2011b). Introduction à l'étude du site de Longgupo. L'Anthropologie 115 (1), 8–22. https://doi.org/10.1016/j.anthro.2010.12.002.

Bollo, Sofia/Zhang, Yu (2017). Policy and impact of public museums in China. Exploring new trends and challenges. Museum International 69 (3–4), 26–37. (accessed 3/19/2020).

Boyle, Eve K./Wood, Bernard A. (2020). Human evolutionary history. In: Jon H. Kaas (Ed.). Evolutionary neuroscience. London/San Diego/Cambridge, MA/Oxford, Elsevier, 733–752.

Bromage, Timothy G./Schrenk, Friedemann/Zonneveld, Frans W. (1995). Paleoanthropology of the Malawi Rift. An early hominid mandible from the Chiwondo Beds, northern Malawi. Journal of Human Evolution 28 (1), 71–108. https://doi.org/10.1006/jhev.1995.1007.

Broom, Robert (1938). The Pleistocene anthropoid apes of South Africa. Nature 142, 377–379.

Broom, Robert (1949). Another new type of fossil ape-man. Nature 163, 57.

Broom, Robert/Robinson, John T. (1950). Man contemporaneous with the Swartkrans ape-man. American Journal of Physical Anthropology (8), 151–156.

Broom, Robert/Robinson, John T. (1952). Swartkrans ape-man. *Paranthropus crassidens*. Pretoria, Transvaal Museum.

Brown, Barbara/Brown, Francis H./Walker, Alan C. (2001). New hominids from the Lake Turkana basin, Kenya. Journal of Human Evolution 41 (1), 29–44. https://doi.org/10.1006/jhev.2001.0476.

Brown, Barbara/Walker, Alan C./Ward, Carol V./Leakey, Richard E. (1993). New *Australopithecus boisei* calvaria from East Lake Turkana, Kenya. American Journal of Physical Anthropology 91 (2), 137–159. https://doi.org/10.1002/ajpa.1330910202.

Brown, Francis H./Harris, John W. K./Leakey, Richard E./Walker, Alan C. (1985). Early *Homo erectus* skeleton from West Lake Turkana, Kenya. Nature 316 (6031), 788–792. https://doi.org/10.1038/316788a0.

Brown, Peter/Maeda, Tomoko (2009). Liang Bua *Homo floresiensis* mandibles and mandibular teeth. A contribution to the comparative morphology of a new hominin species. Journal of Human Evolution 57 (5), 571–596. https://doi.org/10.1016/j.jhevol.2009.06.002.

Brown, Peter/Sutikna, Thomas/Morwood, Michael J./Soejono, Raden Panji/Jatmiko/Saptomo, E. Wahyu/Due, Rokus Awe (2004). A new small-bodied hominin from the Late Pleistocene of Flores, Indonesia. Nature 431 (7012), 1055–1061. https://doi.org/10.1038/nature02999.

Browning, Sharon R./Browning, Brian L./Zhou, Ying/Tucci, Serena/Akey, Joshua M. (2018). Analysis of human sequence data reveals two pulses of archaic Denisovan admixture. Cell 173 (1), 53–61.e9. https://doi.org/10.1016/j.cell.2018.02.031.

Brunet, Michel/Beauvilain, Alain/Coppens, Yves/Heintz, Emile/Moutaye, Aladji H./Pilbeam, David R. (1995). The first Australopithecine 2,500 kilometres west of the Rift Valley (Chad). Nature 378 (6554), 273–275. https://doi.org/10.1038/378273a0.

Brunet, Michel/Beauvilain, Alain/Coppens, Yves/Heintz, Emile/Moutaye, Aladji H./Pilbeam, David R. (1996). *Australopithecus bahrelghazali*, une nouvelle espèce d'Hominidé ancien de la région de Koro Toro (Tchad). Comptes Rendus de l'Académie des Sciences - Series IIA - Earth and Planetary Science (322), 907–913.

Brunet, Michel/Guy, Franck/Pilbeam, David R./Lieberman, Daniel E./Likius, Andossa/Mackaye, Hassane-Taïsso/Ponce de León, Marcia S./Zollikofer, Christoph P. E./Vignaud, Patrick (2005). New material of the earliest hominid from the Upper Miocene of Chad. Nature 434 (7034), 752–755. https://doi.org/10.1038/nature03392.

Brunet, Michel/Guy, Franck/Pilbeam, David R./Mackaye, Hassane-Taïsso/Likius, Andossa/Ahounta, Djimdoumalbaye/Beauvilain, Alain/Blondel, Cécile/Bocherens, Hervé/Boisserie, Jean-Renaud/Bonis, Louis de/Coppens, Yves/Dejax, Jean/Denys, Christiane/Duringer, Philippe/Eisenmann, Véra/Fanone, Gongdibé/Fronty, Pierre/Geraads, Denis/Lehmann, Thomas/Lihoreau, Fabrice/Louchart, Antoine/Mahamat, Adoum/Merceron, Gildas/Mouchelin, Guy/Otero, Olga/Pelaez Campomanes, Pablo/Ponce de León, Marcia S./Rage, Jean-Claude/Sapanet, Michel/Schuster, Mathieu/Sudre, Jean/Tassy, Pascal/Valentin, Xavier/Vignaud, Patrick/Viriot, Laurent/Zazzo, Antoine/Zollikofer, Christoph P. E. (2002). A new hominid from the Upper Miocene of Chad, Central Africa. Nature 418 (6894), 145–151. https://doi.org/10.1038/nature00879.

Cao, Bingwu 曹兵武 (2016). Using objects as mediums (以物为媒). A constructivist theory of museology and museum education (建构性的博物馆学习与教育论). Chinese Museum (中国博物馆) (2), 46–54.

Carbonell, Eudald/Bermúdez de Castro, José-María/Arsuaga, Juan-Luis/Allué, Ethel/Bastir, Markus/Benito, Amparo/Cáceres, Isabel/Canals, T./Díez, J. C./van der Made, J./Mosquera, Marina/Ollé, Andreu/Pérez-González, Alfredo/Rodríguez, Jesús/Rodríguez, Xosé Pedro/Rosas, Antonio/Rosell, Jordi/Sala, Robert/Vallverdú, Josep/Vergés, Josep Maria (2005). An Early Pleistocene hominin mandible from Atapuerca-TD6, Spain. Proceedings of the National Academy of Sciences of the United States of America 102 (16), 5674–5678. https://doi.org/10.1073/pnas.0501841102.

Carney, James/Hill, Andrew/Miller, J. A./Walker, Alan C. (1971). Late Australopithecine from Baringo District, Kenya. Nature 230 (5295), 509–514. https://doi.org/10.1038/230509a0.

Chai, Qiuxia 柴秋霞/Liu, Yigang 刘毅刚 (2021). Research on the practice and exploration of staging digital game exhibitions in museums (数字游戏展走进博物馆的实践与探索研究). Chinese Museum (中国博物馆) (2), 20–25, 126.

Chamberlain, Andrew T./Wood, Bernard A. (1987). Early hominid phylogeny. Journal of Human Evolution 16 (1), 119–133. https://doi.org/10.1016/0047-2484(87)90063-7.

Chang, Danjing 常丹婧 (2019). On the characteristics and misunderstandings of 'museum entertainment' ('博物馆娱乐'的特性及误区谈). Chinese Museum (中国博物馆) (1), 62–66.

Chang, Xianyuan/Wu, Zhaoping/Chen, Yi/Du, Yuanyuan/Shang, Longfei/Ge, Ying/Chang, Jie/Yang, Guofu (2021). The booming number of museums and their inequality changes in China. Sustainability 13, 13860, 1–19. https://doi.org/10.3390/su132413860.

Chen, Fahu/Welker, Frido/Shen, Chuanchou/Bailey, Shara E./Bergmann, Inga/Davis, Simon/Xia, Huan/Wang, Hui/Fischer, Roman/Freidline, Sarah E./Yu, Tsai-Luen/Skinner, Matthew M./Stelzer, Stefanie/Dong, Guangrong/Fu, Qiaomei/Dong, Guanghui/Wang, Jian/Zhang, Dongju/Hublin, Jean-Jacques (2019). A late Middle Pleistocene Denisovan mandible from the Tibetan Plateau. Nature 569 (7756), 409–412. https://doi.org/10.1038/s41586-019-1139-x.

Chen, Guoning 陈国宁 (2018). Rethinking the definition of museums from a perspective on modernity and future (由现代性与未来性再思考博物馆的定义). Chinese Museum (中国博物馆) (4), 13–16.

Chen, Hui/Ryan, Chris (2020). Transforming the museum and meeting visitor requirements. The case of the Shaanxi History Museum. Journal of Destination Marketing & Management 18, 100483. https://doi.org/10.1016/j.jdmm.2020.100483.

Chen, Wei 陈慰 (2020). Theory and practice of curriculum design in museum education (博物馆教育课程设计的理论与实践). Chinese Museum (中国博物馆) (4), 18–21.

Chen, Zenglu 陈曾路 (2022). More flexible and smarter (更灵活和更智慧). Educational strategies for small and medium-sized museums (中小博物馆的教育策略). Chinese Museum (中国博物馆) (1), 10–14, 127.

Chen, Zhenyao 陈振耀 (2016). Cultural heritage protection and the reconfiguration of museum security systems (文化遗产保护与博物馆安全体系的重构). Chinese Museum (中国博物馆) (4), 39–42.

Cheng, Jianzheng 成建正/Dong, Li 董理 (2012). Conceptual innovation and practice of museum displays and promotion after free opening (免费开放后博物馆展示推广工作的理念创新与实践). Taking Shaanxi History Museum as an example (以陕西历史博物馆为例). Chinese Museum (中国博物馆) (4), 7–9.

Ciochon, Russell L. (2009). The mystery ape of Pleistocene Asia. Nature 459 (7249), 910–911. https://doi.org/10.1038/459910a.

Clark, J. Desmond/Asfaw, Berhane/Assefa, Getaneh/Harris, John W. K./Kurashina, Hiro/Walter, Robert C./White, Tim D./Williams, Martin A. J. (1984). Palaeoanthropological discoveries in the Middle Awash Valley, Ethiopia. Nature 307 (5950), 423–428. https://doi.org/10.1038/307423a0.

Clarke, Ronald J. (1988). A new *Australopithecus* cranium from Sterkfontein and its bearing on the ancestry of *Paranthropus*. In: Frederick E. Grine (Ed.). Evolutionary history of the 'robust' Australopithecines. New York, Aldine de Gruyter, 285–292.

Clarke, Ronald J. (1999). Discovery of complete arm and hand of the 3.3 million-year-old *Australopithecus* skeleton from Sterkfontein. South African Journal of Science 95, 477–480. Available online at https://ci.nii.ac.jp/naid/10010565549/.

Clarke, Ronald J. (2008). Latest information on Sterkfontein's *Australopithecus* skeleton and a new look at *Australopithecus*. South African Journal of Science (104), 443–449.

Clarke, Ronald J./Tobias, Phillip V. (1995). Sterkfontein member 2 foot bones of the oldest South African hominid. Science 269 (5223), 521–524. https://doi.org/10.1126/science.7624772.

Coffing, Katherine/Feibel, Craig S./Leakey, Meave G./Walker, Alan C. (1994). Four-million-year-old hominids from East Lake Turkana, Kenya. American Journal of Physical Anthropology 93 (1), 55–65. https://doi.org/10.1002/ajpa.1330930104.

Conroy, Glenn C./Cramer, Douglas/Jolly, Clifford J./Kalb, Jon E. (1978). Newly discovered fossil hominid skull from the Afar depression, Ethiopia. Nature 276 (5683), 67–70. https://doi.org/10.1038/276067a0.

Constantino, Paul/Wood, Bernard A. (2007). The evolution of *Zinjanthropus boisei*. Evolutionary Anthropology 16 (2), 49–62. https://doi.org/10.1002/evan.20130.

Coppens, Yves (1980). The differences between *Australopithecus* and *Homo*. Preliminary conclusion from the Omo Research Expedition's studies. In: Lars-König Königsson (Ed.). Current argument on early man. Report from a nobel symposium. Oxford, Pergamon Press, 207–225.

Curnoe, Darren (2010). A review of early *Homo* in Southern Africa focusing on cranial, mandibular and dental remains, with the description of a new species (*Homo gautengensis* sp. nov.). Homo: Journal of Comparative Human Biology 61 (3), 151–177. https://doi.org/10.1016/j.jchb.2010.04.002.

Curnoe, Darren/Tobias, Phillip V. (2006). Description, new reconstruction, comparative anatomy, and classification of the Sterkfontein Stw 53 cranium, with discussions about the taxonomy of other Southern African early *Homo* remains. Journal of Human Evolution 50 (1), 36–77. https://doi.org/10.1016/j.jhevol.2005.07.008.

Dart, Raymond A. (1925). *Australopithecus africanus*. The man-ape of South Africa. Nature 115 (2884), 195–199. https://doi.org/10.1038/115195a0.

Dart, Raymond A. (1948). The Makapansgat proto-human *Australopithecus prometheus*. American Journal of Physical Anthropology 6 (3), 259–283. https://doi.org/10.1002/ajpa.1330060304.

Day, Michael H. (1967). Who were the first hominids? Eugenics Review 59, 150–152.

Day, Michael H. (1969). Femoral fragment of a robust Australopithecine from Olduvai Gorge, Tanzania. Nature 221 (5177), 230–233. https://doi.org/10.1038/221230a0.

Day, Michael H./Leakey, Mary D./Magori, C. (1980). A new hominid fossil skull (L.H. 18) from the Ngaloba Beds, Laetoli, northern Tanzania. Nature 284 (5751), 55–56. https://doi.org/10.1038/284055a0.

Delson, Eric/Stringer, Chris B. (2022). The naming of *Homo bodoensis* by Roksandic and colleagues does not resolve issues surrounding Middle Pleistocene human evolution. Evolutionary Anthropology 31 (5), 233–236. https://doi.org/10.1002/evan.21950.

Demeter, Fabrice/Zanolli, Clément/Westaway, Kira E./Joannes-Boyau, Renaud/Duringer, Philippe/Morley, Mike W./Welker, Frido/Rüther, Patrick L./Skinner, Matthew M./McColl, Hugh/Gaunitz, Charleen/Vinner, Lasse/Dunn, Tyler E./Olsen, Jesper V./Sikora, Martin/Ponche, Jean-Luc/Suzzoni, Eric/Frangeul, Sébastien/Boesch, Quentin/Antoine, Pierre-Olivier/Pan, Lei/Xing, Song/Zhao, Jianxin/Bailey, Richard M./Boualaphane, Souliphane/Sichanthongtip,

Phonephanh/Sihanam, Daovee/Patole-Edoumba, Elise/Aubaile, Françoise/Crozier, Françoise/Bourgon, Nicolas/Zachwieja, Alexandra/Luangkhoth, Thonglith/Souksavatdy, Viengkeo/Sayavongkhamdy, Thongsa/Cappellini, Enrico/Bacon, Anne-Marie/Hublin, Jean-Jacques/Willerslev, Eske/Shackelford, Laura (2022). A Middle Pleistocene Denisovan molar from the Annamite Chain of northern Laos. Nature Communications 13 (1), 2557.1–17. https://doi.org/10.1038/s41467-022-29923-z.

Demuro, Martina/Arnold, Lee J./Aranburu, Arantza/Sala, Nohemi/Arsuaga, Juan-Luis (2019). New bracketing luminescence ages constrain the Sima de los Huesos hominin fossils (Atapuerca, Spain) to MIS 12. Journal of Human Evolution 131, 76–95. https://doi.org/10.1016/j.jhevol.2018.12.003.

Denton, Kirk A. (2005). Museums, memorial sites and exhibitionary culture in the People's Republic of China. The China Quarterly 183, 565–586. https://doi.org/10.1017/S0305741005000366.

Denton, Kirk A. (2014). Exhibiting the past. Historical memory and the politics of museums in postsocialist China. Honolulu, University of Hawaii Press.

Détroit, Florent/Gousset, Pierre/Rouget, Isabelle/Mijares, Armand Salvador (2022). Analyse phylogénétique d'*Homo luzonensis*. taxon, caractères, phylogénie et évolution insulaire. Bulletins et Mémoires de la Société d'Anthropologie de Paris (34 Supplément). Available online at https://journals.openedition.org/bmsap/8860.

Détroit, Florent/Mijares, Armand Salvador/Corny, Julien/Daver, Guillaume/Zanolli, Clément/Dizon, Eusebio/Robles, Emil/Grün, Rainer/Piper, Philip J. (2019). A new species of *Homo* from the Late Pleistocene of the Philippines. Nature 568 (7751), 181–186. https://doi.org/10.1038/s41586-019-1067-9.

Détroit, Florent/Mijares, Armand Salvador/Corny, Julien/Daver, Guillaume/Zanolli, Clément/Dizon, Eusebio/Robles, Emil/Grün, Rainer/Piper, Philip J. (2021). *Homo luzonensis*. principales caractéristiques et implications pour l'histoire évolutionnaire du genre *Homo*. Bulletins et Mémoires de la Société d'Anthropologie de Paris. Available online at https://hal.archives-ouvertes.fr/hal-03153977/.

DiMaggio, Erin N./Campisano, Christopher J./Rowan, John/Dupont-Nivet, Guillaume/Deino, Alan L./Bibi, Faysal/Lewis, Margaret E./Souron, Antoine/Garello, Dominique/Werdelin, Lars/Reed, Kaye E./Arrowsmith, J. Ramón (2015). Paleoanthropology. Late Pliocene fossiliferous sedimentary record and the environmental context of early *Homo* from Afar, Ethiopia. Science 347 (6228), 1355–1359. https://doi.org/10.1126/science.aaa1415.

Dirks, Paul H.G.M./Berger, Lee R./Roberts, Eric M./Kramers, Jan D./Hawks, John/Randolph-Quinney, Patrick S./Elliott, Marina C./Musiba, Charles M./Churchill, Steven E./Ruiter, Darryl J. de/Schmid, Peter/Backwell, Lucinda R./Belyanin, Georgy A./Boshoff, Pedro/Hunter, K. Lindsay/Feuerriegel, Elen M./Gurtov, Alia/Du Harrison, James G./Hunter, Rick/Kruger, Ashley/Morris, Hannah/Makhubela, Tebogo V./Peixotto, Becca/Tucker, Steven (2015). Geological and taphonomic context for the new hominin species *Homo naledi* from the Dinaledi Chamber, South Africa. eLife 4. https://doi.org/10.7554/eLife.09561.

Dirks, Paul H.G.M./Kibii, Job M./Kuhn, Brian F./Steininger, Christine M./Churchill, Steven E./Kramers, Jan D./Pickering, Robyn/Farber, Daniel L./Mériaux, Anne-Sophie/Herries, Andy I. R./King, Geoffrey C. P./Berger, Lee R. (2010). Geological setting and age of *Australopithecus sediba* from Southern Africa. Science 328 (5975), 205–208. https://doi.org/10.1126/science.1184950.

Dirks, Paul H.G.M./Roberts, Eric M./Hilbert-Wolf, Hannah/Kramers, Jan D./Hawks, John/Dosseto, Anthony/Duval, Mathieu/Elliott, Marina C./Evans, Mary/Grün, Rainer/Hellstrom, John C./Herries, Andy I. R./Joannes-Boyau, Renaud/Makhubela, Tebogo V./Placzek, Christa J./Robbins, Jessie/Spandler, Carl/Wiersma, Jelle/Woodhead, Jon D./Berger, Lee R. (2017). The age of *Homo naledi* and associated sediments in the Rising Star Cave, South Africa. eLife 6. https://doi.org/10.7554/eLife.24231.

Domínguez-Rodrigo, Manuel/Pickering, Travis Rayne/Baquedano, Enrique/Mabulla, Audax/Mark, Darren F./Musiba, Charles M./Bunn, Henry T./Uribelarrea, David/Smith, Victoria/Diez-Martin, Fernando/Pérez-González, Alfredo/Sánchez, Policarpo/Santonja, Manuel/Barboni, Doris/Gidna, Agness/Ashley, Gail M./Yravedra, José/Heaton, Jason L./Arriaza, Maria Carmen (2013). First partial skeleton of a 1.34-million-year-old *Paranthropus boisei* from Bed II, Olduvai Gorge, Tanzania. PLoS ONE 8 (12), e80347. https://doi.org/10.1371/journal.pone.0080347.

Dong, Wei (2016). Biochronological framework of *Homo erectus* horizons in China. Quaternary International 400, 47–57. https://doi.org/10.1016/j.quaint.2015.09.019.

Dong, Zhe 董哲/Pei, Shuwen 裴树文/Sheng, Jinchao 盛锦朝/Jin, Zetian 金泽田/Gong, Xicheng 宫希成/Wu, Xiujie 吴秀杰/Liu, Wu 刘武 (2017). Lithic artefacts excavated from Hualongdong human fossil site, Dongzhi, Anhui province, between 2014–2016 (安徽东至华龙洞古人类遗址 2014~2016 年出土的石制品). Quaternary Sciences (第四纪研究) 37 (4), 778–788.

Douka, Katerina/Slon, Viviane/Jacobs, Zenobia/Ramsey, Christopher B./Shunkov, Michael V./Derevianko, Anatoly P./Mafessoni, Fabrizio/Kozlikin, Maxim B./Li, Bo/Grün, Rainer/Comeskey, Daniel/Devièse, Thibaut/Brown, Samantha/Viola, Bence/Kinsley, Leslie/Buckley, Michael/Meyer, Matthias/Roberts, Richard G./Pääbo, Svante/Kelso, Janet/Higham, Tom (2019). Age estimates for hominin fossils and the onset of the Upper Palaeolithic at Denisova Cave. Nature 565 (7741), 640–644. https://doi.org/10.1038/s41586-018-0870-z.

Drapeau, Michelle S. M./Ward, Carol V./Kimbel, William H./Johanson, Donald C./Rak, Yoel (2005). Associated cranial and forelimb remains attributed to *Australopithecus afarensis* from Hadar, Ethiopia. Journal of Human Evolution 48 (6), 593–642. https://doi.org/10.1016/j.jhevol.2005.02.005.

Dreyer, Thomas F. (1935). A human skull from Florisbad, Orange Free State, with a note on the endocranial cast, by C.U. Ariens Kappers. Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen 38, 119–128.

Duan, Yong (2017). Contemporary Chinese museums (当代中国博物馆). Nanjing, Yilin chubanshe.

Dubois, Eugène (1893). Palaeontologische onderzoekingen op Java. Verslag van het Mijnwezen (10), 10–14.

Dubois, Eugène (1894). *Pithecanthropus erectus*. Eine menschenähnliche Übergangsform aus Java. Batavia, Landesdruckerei.

Ennouchi, Émile (1962). Un crâne d'homme ancien au Jebel Irhoud (Maroc). Comptes Rendus de l'Académie des Sciences 254, 4330–4332. Available online at https://pascal-francis.inist.fr/vibad/index.php?action=getrecorddetail&idt=19271636.

Etler, Dennis A. (2009). Mystery ape. Other fossils suggest that it's no mystery at all. Nature 460 (7256), 684. https://doi.org/10.1038/460684a.

Etler, Dennis A./Crummett, Tracey L./Wolpoff, Milford H. (2001). Longgupo. Early *Homo* colonizer or Late Pliocene *Lufengpithecus* survivor in South China? Human Evolution 16 (1), 1–12. https://doi.org/10.1007/BF02438918.

Evans, Harriet/Rowlands, Michael (2014). Reconceptualizing heritage in China. Museums, development and the shifting dynamics of power. In: Paul Basu/Wayne Modest (Eds.). Museums, heritage and international development. New York, Routledge.

Exell, Karen (2018). The global spectacular. Contemporary museum architecture in China and the Arabian peninsula. London, Lund Humphries Publishers.

Feng, Nan (2016). Overview of preventive conservation and the museum environment in China. Studies in Conservation 61 (sup1), S1.18–S1.22. https://doi.org/10.1080/00393630.2016.1191795.

Fleagle, John G./Rasmussen, D. Tab/Yirga, Solomon/Bown, Thomas M./Grine, Frederick E. (1991). New hominid fossils from Fejej, southern Ethiopia. Journal of Human Evolution 21 (2), 145–152. https://doi.org/10.1016/0047-2484(91)90005-G.

Fraser, Richard (2022). A museum in the taiga. Heritage, ethnic tourism and museum-building amongst the Orochen in northeast China. Journal of Heritage Tourism 17 (5), 493–515. https://doi.org/10.1080/1743873X.2022.2083513.

Gabunia, Leo/Vekua, Abesalom/Lordkipanidze, David/Swisher, Carl C./Ferring, Reid/Justus, Antje/Nioradze, Medea/Tvalchrelidze, Merab/Antón, Susan C./Bosinski, Gerhard/Jöris, Olaf/Lumley, Marie-Antoinette de/Majsuradze, Givi/Mouskhelishvili, Alexander (2000). Earliest Pleistocene hominid cranial remains from Dmanisi, Republic of Georgia. Taxonomy, geological setting, and age. Science 288 (5468), 1019–1025. https://doi.org/10.1126/science.288.5468.1019.

Gao, Jian 高建 (1975). Australopithecine teeth associated with *Gigantopithecus* (与鄂西 巨猿共生的南方古猿牙齿化石). Vertebrata PalAsiatica (古脊椎动物与古人类) (2), 81–88, 140–141.

Gao, Sheng 高升/Wang, Honggen 王洪根 (2016). Comparing and learning from the duty of cautiously collecting museum collections (博物馆藏品征集审慎义务比较与借鉴). Chinese Museum (中国博物馆) (1), 28–35.

Gao, Xing 高星 (2015). On the age of *Homo erectus yuanmounensis* and related issues ("元谋人"的年龄及相关的年代问题讨论). Acta Anthropologica Sinica (人类学学报) (4), 442–450.

Gao, Xing 高星/Zhang, Shuangquan 张双权/Zhang, Yue 张乐/Chen, Fuyou 陈福友 (2016). New evidences of in-situ fire-use by *Homo erectus pekinensis* at Zhoukoudian Locality 1 (关于北京猿人用火的证据). Research history, controversy, and new developments (研究历史争议与新进展). Acta Anthropologica Sinica (人类学学报) 35 (4), 481–492. (accessed 7/28/2022).

Ge, Tian 葛天/Li, Xiping 李喜萍 (2019). On concepts, types, and curatorial ideas of original exhibitions (论原创展览的概念、类型与策划思路). Chinese Museum (中国博物馆) (3), 63–66.

Gibbons, Ann (1997). A new face for human ancestors. Science 276 (5317), 1331–1333. https://doi.org/10.1126/science.276.5317.1331.

Gibbons, Ann (2018). Our ancestors may have left Africa hundreds of thousands of years earlier than thought. Science. https://doi.org/10.1126/science.aau7506.

Gibbons, Ann (2021). 'Dragon Man' may be an elusive Denisovan. Science 373 (6550), 11–12. https://doi.org/10.1126/science.373.6550.11.

Goldberg, Paul/Weiner, Steve/Bar-Yosef, Ofer/Xu, Qinqi/Liu, Jinyi (2001). Site formation processes at Zhoukoudian, China. Journal of Human Evolution 41 (5), 483–530. https://doi.org/10.1006/jhev.2001.0498.

Gong, Xicheng 宫希成/Zheng, Longting 郑龙亭/Xing, Song 邢松/Wu, Xiujie 吴秀杰/Tong, Haowen 同号文/Liu, Wu 刘武 (2014). Human fossils excavated from Hualong Cave, Dongzhi, Anhui province (安徽东至华龙洞出土的人类化石). Acta Anthropologica Sinica (人类学学报) 33 (4), 427–436.

Graburn, Nelson H./Jin, Lu (2017). Tourism and museums in China. Asian Journal of Tourism Research 2 (1), 1–34. https://doi.org/10.12982/AJTR.2017.0001.

Green, David J./Chirchir, Habiba/Mbua, Emma/Harris, John W. K./Braun, David R./Griffin, Nicole L./Richmond, Brian G. (2018). Scapular anatomy of *Paranthropus boisei* from Ileret, Kenya. Journal of Human Evolution 125, 181–192. https://doi.org/10.1016/j.jhevol.2017.06.013.

Green, Richard E./Krause, Johannes/Briggs, Adrian W./Maricic, Tomislav/Stenzel, Udo/Kircher, Martin/Patterson, Nick/Li, Heng/Zhai, Weiwei/Fritz, Markus Hsi-Yang/Hansen, Nancy F./Durand, Eric Y./Malaspinas, Anna-Sapfo/Jensen, Jeffrey D./Marques-Bonet, Tomas/Alkan, Can/Prüfer, Kay/Meyer, Matthias/Burbano, Hernán A./Good, Jeffrey M./Schultz, Rigo/Aximu-Petri, Ayinuer/Butthof, Anne/Höber, Barbara/Höffner, Barbara/Siegemund, Madlen/Weihmann,

Antje/Nusbaum, Chad/Lander, Eric S./Russ, Carsten/Novod, Nathaniel/Affourtit, Jason/Egholm, Michael/Verna, Christine/Rudan, Pavao/Brajkovic, Dejana/Kućan, Željko/Gušić, Ivan/Doronichev, Vladimir B./Golovanova, Liubov V./Lalueza-Fox, Carles/La Rasilla, Marco de/Fortea, Javier/Rosas, Antonio/Schmitz, Ralf W./Johnson, Philip L. F./Eichler, Evan E./Falush, Daniel/Birney, Ewan/Mullikin, James C./Slatkin, Montgomery/Nielsen, Rasmus/Kelso, Janet/Lachmann, Michael/Reich, David/Pääbo, Svante (2010). A draft sequence of the Neandertal genome. Science 328 (5979), 710–722. https://doi.org/10.1126/science.1188021.

Grine, Frederick E. (1989). New hominid fossils from the Swartkrans formation (1979–1986 excavations). Craniodental specimens. American Journal of Physical Anthropology 79 (4), 409–449. https://doi.org/10.1002/ajpa.1330790402.

Grine, Frederick E. (2001). Implications of morphological diversity in early *Homo* crania from Eastern and Southern Africa. In: Phillip V. Tobias/Michael A. Raath/Jacopo Moggi-Cecchi et al. (Eds.). Humanity from African naissance to coming millennia. Colloquia in human biology and palaeoanthropology. Florence, Florence University Press, 107–115.

Grine, Frederick E. (2013). The alpha taxonomy of *Australopithecus africanus*. In: Kaye E. Reed/John G. Fleagle/Richard E. Leakey (Eds.). The paleobiology of *Australopithecus*. Dordrecht, Springer, 73–104.

Grine, Frederick E./Demes, Brigitte/Jungers, William L./Cole, Theodore M. (1993). Taxonomic affinity of the early *Homo* cranium from Swartkrans, South Africa. American Journal of Physical Anthropology 92 (4), 411–426. https://doi.org/10.1002/ajpa.1330920402.

Groves, Colin (1989). A theory of human and primate evolution. Oxford, Clarendon Press.

Groves, Colin (2007). The *Homo floresiensis* controversy. HAYATI Journal of Biosciences 14 (4), 123–126. https://doi.org/10.4308/hjb.14.4.123.

Groves, Colin/Mazák, Vratislav (1975). An approach to the taxonomy of the Hominidae. Gracile Villafrancian hominids of Africa. Casopis pro Mineralogii Geologii (20), 225–247.

Grün, Rainer/Eggins, Stephen/Kinsley, Leslie/Moseley, Hannah/Sambridge, Malcolm (2014). Laser ablation U-series analysis of fossil bones and teeth. Palaeogeography, Palaeoclimatology, Palaeoecology 416, 150–167. https://doi.org/10.1016/j.palaeo.2014.07.023.

Grün, Rainer/Huang, Peihua/Huang, Wanbo/McDermott, Frank/Thorne, Alan G./Stringer, Chris B./Yan, Ge (1998). ESR and U-series analyses of teeth from the palaeoanthropological site of Hexian, Anhui province, China. Journal of Human Evolution 34 (6), 555–564. https://doi.org/10.1006/jhev.1997.0211.

Grün, Rainer/Pike, Alistair/McDermott, Frank/Eggins, Stephen/Mortimer, Graham/Aubert, Maxime/Kinsley, Lesley/Joannes-Boyau, Renaud/Rumsey, Michael/Denys, Christiane/Brink, James/Clark, Tara/Stringer, Chris B. (2020). Dating the skull from Broken Hill, Zambia, and its position in human evolution. Nature 580 (7803), 372–375. https://doi.org/10.1038/s41586-020-2165-4.

Guo, Yun/Sun, Chengkai/Luo, Lan/Yang, Linlin/Han, Fei/Tu, Hua/Lai, Zhongping/Jiang, Hongchen/Bae, Christopher J./Shen, Guanjun/Granger, Darryl E. (2019). 26Al/10Be burial dating of the Middle Pleistocene Yiyuan hominin fossil site, Shandong province, northern China. Scientific Reports 9 (1), 6961.1–8. https://doi.org/10.1038/s41598-019-43401-5.

Guy, Franck/Lieberman, Daniel E./Pilbeam, David R./León, Marcia Ponce de/Likius, Andossa/Mackaye, Hassane-Taïsso/Vignaud, Patrick/Zollikofer, Christoph P. E./Brunet, Michel (2005). Morphological affinities of the *Sahelanthropus tchadensis* (Late Miocene hominid from Chad) cranium. Proceedings of the National Academy of Sciences of the United States of America 102 (52), 18836–18841. https://doi.org/10.1073/pnas.0509564102.

Guy, Franck/Mackaye, Hassane-Taïsso/Likius, Andossa/Vignaud, Patrick/Schmittbuhl, Matthieu/Brunet, Michel (2008). Symphyseal shape variation in extant and fossil hominoids, and the symphysis of *Australopithecus bahrelghazali*. Journal of Human Evolution 55 (1), 37–47. https://doi.org/10.1016/j.jhevol.2007.12.003.

Haile-Selassie, Yohannes (2001). Late Miocene hominids from the Middle Awash, Ethiopia. Nature 412 (6843), 178–181. https://doi.org/10.1038/35084063.

Haile-Selassie, Yohannes/Gibert, Luis/Melillo, Stephanie M./Ryan, Timothy M./Alene, Mulugeta/Deino, Alan L./Levin, Naomi E./Scott, Gary R./Saylor, Beverly Z. (2015). New species from Ethiopia further expands Middle Pliocene hominin diversity. Nature 521 (7553), 483–488. https://doi.org/10.1038/nature14448.

Haile-Selassie, Yohannes/Latimer, Bruce M./Alene, Mulugeta/Deino, Alan L./Gibert, Luis/Melillo, Stephanie M./Saylor, Beverly Z./Scott, Gary R./Lovejoy, C. Owen (2010). An early *Australopithecus afarensis* postcranium from Woranso-Mille, Ethiopia. Proceedings of the National Academy of Sciences of the United States of America 107 (27), 12121–12126. https://doi.org/10.1073/pnas.1004527107.

Haile-Selassie, Yohannes/Melillo, Stephanie M./Vazzana, Antonino/Benazzi, Stefano/Ryan, Timothy M. (2019). A 3.8-million-year-old hominin cranium from Woranso-Mille, Ethiopia. Nature 573 (7773), 214–219. https://doi.org/10.1038/s41586-019-1513-8.

Haile-Selassie, Yohannes/Saylor, Beverly Z./Deino, Alan L./Levin, Naomi E./Alene, Mulugeta/Latimer, Bruce M. (2012). A new hominin foot from Ethiopia shows multiple Pliocene bipedal adaptations. Nature 483 (7391), 565–569. https://doi.org/10.1038/nature10922.

Haile-Selassie, Yohannes/Suwa, Gen/White, Tim D. (2004). Late Miocene teeth from Middle Awash, Ethiopia, and early hominid dental evolution. Science 303 (5663), 1503–1505. https://doi.org/10.1126/science.1092978.

Haile-Selassie, Yohannes/WoldeGabriel, Giday (2009). *Ardipithecus kadabba*. Late Miocene evidence from the Middle Awash, Ethiopia. Berkeley, University of California Press.

Hammond, Ashley S./Ward, Carol V. (2013). *Australopithecus* and *Kenyanthropus*. In: David R. Begun (Ed.). A companion to paleoanthropology. Oxford, Wiley-Blackwell, 434–456.

Han, Fei/Bahain, Jean-Jacques/Boëda, Éric/Hou, Yamei/Huang, Wanbo/Falguères, Christophe/Rasse, Michel/Wei, Guangbiao/Garcia, Tristan/Shao, Qingfeng/Yin, Gongming (2012). Preliminary results of combined ESR/U-series dating of fossil teeth from Longgupo Cave, China. Quaternary Geochronology 10, 436–442. https://doi.org/10.1016/j.quageo.2012.03.006.

Han, Fei/Bahain, Jean-Jacques/Deng, Chenglong/Boëda, Éric/Hou, Yamei/Wei, Guangbiao/Huang, Wanbo/Garcia, Tristan/Shao, Qingfeng/He, Cunding/Falguères, Christophe/Voinchet, Pierre/Yin, Gongming (2017). The earliest evidence of hominid settlement in China. Combined electron spin resonance and uranium series (ESR/U-series) dating of mammalian fossil teeth from Longgupo Cave. Quaternary International 434, 75–83. https://doi.org/10.1016/j.quaint.2015.02.025.

Han, Fei/Bahain, Jean-Jacques/Voinchet, Pierre/Jin, Mangu/Yin, Gongming (2022). Radiometric dating of Meipu hominin site in China by coupled ESR/U-series and cosmogenic 26Al/10Be burial dating methods. Quaternary Geochronology 70, 101295.1–8. https://doi.org/10.1016/j.quageo.2022.101295.

Han, Fei/Shao, Qingfeng/Bahain, Jean-Jacques/Sun, Xuefeng/Yin, Gongming (2019). Coupled ESR and U-series dating of Middle Pleistocene hominin site Bailongdong Cave, China. Quaternary Geochronology 49, 291–296. https://doi.org/10.1016/j.quageo.2018.02.004.

Hanson, Brooks (2009). Light on the origin of man. Science 326 (5949), 60–61. https://doi.org/10.1126/science.326.5949.60-a.

Harvati, Katerina/Harrison, Terry (Eds.) (2006). Neanderthals revisited. New approaches and perspectives. Dordrecht, Springer.

Hawks, John/Berger, Lee R. (2022). Mandibular ramus morphology and species identification in *Australopithecus sediba*. South African Journal of Science 118 (3/4). https://doi.org/10.17159/sajs.2022/12544.

Hawks, John/Elliott, Marina C./Schmid, Peter/Churchill, Steven E./Ruiter, Darryl J. de/Roberts, Eric M./Hilbert-Wolf, Hannah/Garvin, Heather M./Williams, Scott A./Delezene, Lucas K./Feuerriegel, Elen M./Randolph-Quinney, Patrick S./Kivell, Tracy L./Laird, Myra F./Tawane, Gaokgatlhe/DeSilva, Jeremy M./Bailey, Shara E./Brophy, Juliet K./Meyer, Marc R./Skinner, Matthew M./Tocheri, Matthew W./VanSickle, Caroline/Walker, Christopher S./Campbell, Timothy L./Kuhn, Brian F./Kruger, Ashley/Tucker, Steven/Gurtov, Alia/Hlophe, Nompumelelo/Hunter, Rick/Morris, Hannah/Peixotto, Becca/Ramalepa, Maropeng/van Rooyen, Dirk/Tsikoane, Mathabela/Boshoff, Pedro/Dirks, Paul H.G.M./Berger, Lee R. (2017). New fossil remains of *Homo naledi* from the Lesedi Chamber, South Africa. eLife 6, e24232. https://doi.org/10.7554/eLife.24232.

He, Hua 贺华 (2019). A brief analysis of contemporary museum education and public cultural life (浅析当代博物馆教育与公众文化生活). Chinese Museum (中国博物馆) (3), 100–104.

He, Qi 何琪/Sun, Zhihua 孙芝华/Chang, Yunru 畅韵茹/Chen, Juanjuan 陈娟娟 (2016). A preliminary study on the development of cultural leisure functions in the field of museums (文化休闲功能在博物馆场域的发展初探). Chinese Museum (中国博物馆) (4), 12–19.

Heinrich, R. E./Rose, Michael D./Leakey, Richard E./Walker, Alan C. (1993). Hominid radius from the Middle Pliocene of Lake Turkana, Kenya. American Journal of Physical Anthropology 92 (2), 139–148. https://doi.org/10.1002/ajpa.1330920203.

Heinzelin, Jean de/Clark, J. Desmond/White, Tim D./Hart, William K./Renne, Paul R./WoldeGabriel, Giday/Beyene, Yonas/Vrba, Elisabeth S. (1999). Environment and behavior of 2.5-million-year-old Bouri hominids. Science 284 (5414), 625–629. https://doi.org/10.1126/science.284.5414.625.

Henderson, Joshua L. (2015). Dmanisi. A taxonomic revolution. PURE Insights 4 (4). Available online at https://digitalcommons.wou.edu/pure/vol4/iss1/4 (accessed 6/23/2022).

Henke, Winfried (2015). Historical overview of paleoanthropological research. In: Winfried Henke/Ian Tattersall (Eds.). Handbook of paleoanthropology. 2nd ed. Heidelberg/New York, Springer, 3–95.

Ho, Selina Chui-Fun (2020). Museum processes in China. The institutional regulation, production and consumption of the art museums in the Greater Pearl River Delta region. Amsterdam, Amsterdam University Press.

Hu, Chengzhi 胡承志 (1973). Ape-man tooth fossils discovered in Yuanmou, Yunnan province (云南元谋发现的猿人牙齿化石). Acta Geologica Sinica (地质学报) 47 (1), 65–71.

Huang, Wanbo 黄万波 (1999). Lunggupo prehistoric culture (龙骨坡史前文化志). Volume 1 (一卷). Beijing, Zhonghua shuju.

Huang, Wanbo 黄万波 (2000). Lunggupo prehistoric culture (龙骨坡史前文化志). Volume 2 (二卷). Beijing, Zhonghua shuju.

Huang, Wanbo 黄万波/Fang, Dusheng 方笃生/Ye, Yongxiang 叶永相 (1982). Preliminary study of hominin fossils from Hexian, Anhui province, and related issues (安徽和县猿人化石及有关问题的初步研究). Vertebrata PalAsiatica (古脊椎动物与古人类) (3), 248–256, 284.

Huang, Wanbo 黄万波/Fang, Qiren 方其仁 (1991). Wushan hominid site (巫山猿人遗址). Beijing, Haiyang chubanshe.

Huang, Wanbo/Ciochon, Russell L./Gu, Yumin/Larick, Roy R./Fang, Qiren/Schwarcz, Henry/Yonge, Charles/Vos, John de/Rink, William J. (1995). Early *Homo* and associated artefacts from Asia. Nature 378 (6554), 275–278. https://doi.org/10.1038/378275a0.

Huang, Wanbo/Gu, Yumin/Ciochon, Russell L./Larick, Roy R./Fang, Qiren/Vos, John de/Schwarcz, Henry/Rink, William J./Yonge, Charles (1996). Reply to Schwartz and Tattersall. Nature 381 (6579), 202. Available online at https://scholar.google.com/citations?user=foonccoaaaaj&hl=de&oi=sra.

Hubei Ribao (湖北日报) (26.12.2022). The excavated skull No. 3 of 'Yuanxian Man' shocked China and foreign countries ('郧县人'3 号头骨出土震惊中外), 1. Available online at https://epaper.hubeidaily.net/pc/content/202212/26/content_205245.html (accessed 1/28/2023).

Hublin, Jean-Jacques (2001). Northwestern African Middle Pleistocene hominids and their bearing on the emergence of *Homo sapiens*. In: Lawrence Barham/Kate Robson-Brown (Eds.). Human roots. Africa and Asia in the Middle Pleistocene. Bristol, Centre for Human Evolutionary Research, 99–121.

Hublin, Jean-Jacques (2009). The origin of Neandertals. Proceedings of the National Academy of Sciences of the United States of America 106 (38), 16022–16027. https://doi.org/10.1073/pnas.0904119106.

Hublin, Jean-Jacques/Ben-Ncer, Abdelouahed/Bailey, Shara E./Freidline, Sarah E./Neubauer, Simon/Skinner, Matthew M./Bergmann, Inga/Le Cabec, Adeline/Benazzi, Stefano/Harvati, Katerina/Gunz, Philipp (2017). New fossils from Jebel Irhoud, Morocco and the pan-African origin of *Homo sapiens*. Nature 546 (7657), 289–292. https://doi.org/10.1038/nature22336.

Huo, Zhengxin 霍政欣 (2016). Recovering Chinese cultural relics illegally collected by overseas museums (追索海外博物馆非法收藏的中国文物). Difficulties and countermeasures (困难与对策). Chinese Museum (中国博物馆) (1), 41–51.

Hyodo, Masayuki/Nakaya, Hideo/Urabe, Atsushi/Saegusa, Haruo/Shunrong, Xue/Jiyun, Yin/Xuepin, Ji (2002). Paleomagnetic dates of hominid remains from Yuanmou, China, and other Asian sites. Journal of Human Evolution 43 (1), 27–41. https://doi.org/10.1006/jhev.2002.0555.

Ingicco, Thomas/van den Bergh, Gerrit D./Jago-On, Sheldon C./Bahain, Jean-Jacques/Chacón, María Gema/Amano, Noel/Forestier, Hubert/King, Catherine K/Manalo, K./Nomade, Sébastien/Pereira, A./Reyes, Marian C./Sémah, Anne-Marie/Shao, Qingfeng/Voinchet, Pierre/Falguères, Christophe/Albers, Paul C. H./Lising, M./Lyras, George/Yurnaldi, Dida/Rochette, P./Bautista, A./Vos, John de (2018). Earliest known hominin activity in the Philippines by 709 thousand years ago. Nature 557 (7704), 233–237. https://doi.org/10.1038/s41586-018-0072-8.

Institute of Vertebrate Palaeontology and Palaeoanthropology 古脊椎动物与古人类研究所 (2022). Release of Yunxian Man skull No. 3! (郧县人 3 号头骨面世！). Available online at http://www.ivpp.cas.cn/xwdt/kyjz/202209/t20220928_6518182.html (accessed 10/24/2022).

Jacob, Teuku (1973). Palaeoanthropological discoveries in Indonesia with special reference to the finds of the last two decades. Journal of Human Evolution 2 (6), 473–485. https://doi.org/10.1016/0047-2484(73)90125-5.

Jacob, Teuku/Indriati, Etty/Soejono, Raden Panji/Hsü, Kenneth/Frayer, David W./Eckhardt, Robert B./Kuperavage, Adam J./Thorne, Alan G./Henneberg, Maciej (2006). Pygmoid Australomelanesian *Homo sapiens* skeletal remains from Liang Bua, Flores. Population affinities and pathological abnormalities. Proceedings of the National Academy of Sciences of the United States of America 103 (36), 13421–13426. https://doi.org/10.1073/pnas.0605563103.

Jacobs, Zenobia/Li, Bo/Shunkov, Michael V./Kozlikin, Maxim B./Bolikhovskaya, Nataliya S./Agadjanian, Alexander K./Uliyanov, Vladimir A./Vasiliev, Sergei K./O'Gorman, Kieran/Derevianko, Anatoly P./Roberts, Richard G. (2019). Timing of archaic hominin occupation of Denisova Cave in southern Siberia. Nature 565 (7741), 594–599. https://doi.org/10.1038/s41586-018-0843-2.

Ji, Qiang/Wu, Wensheng/Ji, Yannan/Li, Qiang/Ni, Xijun (2021). Late Middle Pleistocene Harbin cranium represents a new *Homo* species. Innovation 2 (3), 100132. https://doi.org/10.1016/j.xinn.2021.100132.

Jiao, Jinlin 焦晋林 (2016). An analysis of museums as legal persons (博物馆法人制度浅析). From the 'Museum regulations' (从《博物馆条例》谈起). Chinese Museum (中国博物馆) (1), 13–20.

Jiao, Lidan 焦丽丹 (2015). How to make a collection of cultural relics 'come alive' (如何让馆藏文物'活起来'). Chinese Museum (中国博物馆) (3), 30–34.

Jiao, Lidan 焦丽丹 (2018). Research on the contribution possibilities of museums (博物馆贡献力研究). Chinese Museum (中国博物馆) (4), 74–80.

Jin, Li/Su, Bing (2000). Natives or immigrants. Modern human origin in East Asia. Nature Reviews Genetics 1 (2), 126–133. https://doi.org/10.1038/35038565.

Johanson, Donald C./Masao, Fidelis T./Eck, Gerald G./White, Tim D./Walter, Robert C./Kimbel, William H./Asfaw, Berhane/Manega, Paul/Ndessokia, Prosper/Suwa, Gen (1987). New partial skeleton of *Homo habilis* from Olduvai Gorge, Tanzania. Nature 327 (6119), 205–209. https://doi.org/10.1038/327205a0.

Johanson, Donald C./Taieb, Maurice/Coppens, Yves (1982a). Pliocene hominid fossils from Hadar, Ethiopia. American Journal of Physical Anthropology 57 (4), 373–719. https://doi.org/10.1002/ajpa.1330570402.

Johanson, Donald C./White, Tim D./Coppens, Yves (1978). A new species of the genus *Australopithecus* (Primates: Hominidae) from the Pliocene of eastern Africa. Kirtlandia (28), 2–14. (accessed 8/2/2021).

Johanson, Donald C./White, Tim D./Coppens, Yves (1982b). Dental remains from the Hadar formation, Ethiopia. 1974–1977 collections. American Journal of Physical Anthropology (57), 545–603.

Kaifu, Yousuke/Aziz, Fachroel/Indriati, Etty/Jacob, Teuku/Kurniawan, Iwan/Baba, Hisao (2008). Cranial morphology of Javanese *Homo erectus*. New evidence for continuous evolution, specialization, and terminal extinction. Journal of Human Evolution 55 (4), 551–580. https://doi.org/10.1016/j.jhevol.2008.05.002.

Keith, Arthur (1912). Ancient types of man. London, Harper & Brothers.

Keyser, André W. (2000). The Drimolen skull. The most complete australopithecine cranium and mandible to date. South African Journal of Science (96), 189–193. Available online at https://journals.co.za/doi/pdf/10.10520/aja00382353_8902.

Keyser, André W./Menter, Colin G./Moggi-Cecchi, Jacopo/Pickering, Travis Rayne/Berger, Lee R. (2000). Drimolen. A new hominid-bearing site in Gauteng, South Africa. South African Journal of Science (96), 193–197. Available online at https://journals.co.za/doi/pdf/10.10520/aja00382353_8903.

Kimbel, William H. (1988). Identification of a partial cranium of *Australopithecus afarensis* from the Koobi Fora Formation, Kenya. Journal of Human Evolution 17 (7), 647–656. https://doi.org/10.1016/0047-2484(88)90022-X.

Kimbel, William H./Delezene, Lucas K. (2009). 'Lucy' redux. A review of research on *Australopithecus afarensis*. American Journal of Physical Anthropology 140 Suppl 49, 2–48. https://doi.org/10.1002/ajpa.21183.

Kimbel, William H./Johanson, Donald C./Rak, Yoel (1994). The first skull and other new discoveries of *Australopithecus afarensis* at Hadar, Ethiopia. Nature 368 (6470), 449–451. https://doi.org/10.1038/368449a0.

Kimbel, William H./Johanson, Donald C./Rak, Yoel (2004). The skull of *Australopithecus afarensis*. Oxford/New York, Oxford University Press.

Kimbel, William H./Walter, Robert C./Johanson, Donald C./Reed, Kaye E./Aronson, James L./Assefa, Zelalem/Marean, Curtis W./Eck, Gerald G./Bobe, René/Hovers, Erella/Rak, Yoel/Vondra, Carl F./Yemane, Tefaye/York, Derek/Chen, Yanshao/Evensen, Norman M./Smith, Patrick E. (1996). Late Pliocene *Homo* and

Oldowan tools from the Hadar Formation (Kada Hadar Member), Ethiopia. Journal of Human Evolution 31 (6), 549–561. https://doi.org/10.1006/jhev.1996.0079.

Kimbel, William H./White, Tim D./Johanson, Donald C. (1984). Cranial morphology of *Australopithecus afarensis*. A comparative study based on a composite reconstruction of the adult skull. American Journal of Physical Anthropology 64 (4), 337–388. https://doi.org/10.1002/ajpa.1330640403.

King, William (1864). The reputed fossil man of the Neanderthal. The Quarterly Journal of Science (1), 88–97.

Kissel, Marc/Hawks, John (2015). What are the Lothagam and Tabarin Mandibles? PaleoAnthropology, 37–43. Available online at https://www.paleoanthro.org/media/journal/content/pa20150037.pdf.

Koenigswald, Gustav Heinrich Ralph von (1936). Erste Mitteilung über einen fossilien Hominiden aus dem Altpleistocän Ostjavas. Amsterdam, N. V. Noord-Hollandsche Uitgevers Maatschappij.

Koenigswald, Gustav Heinrich Ralph von (1968). Observation upon two *Pithecanthropus* mandibles from Sangiran, Central Java. Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen (71), 99–107.

Koenigswald, Gustav Heinrich Ralph von (1975). Early man in Java. Catalogue and problems. In: Russell H. Tuttle (Ed.). Paleoanthropology. Morphology and paleoecology. Den Haag, Mouton Publishers, 303–309.

Kokkoros, P./Kanellis, Antonios (1960). Découverte d'un crâne d'homme paléolithique dans la péninsule Chalcidique. L'Anthropologie 64 (5–6), 438–446.

Kong, Da (2015). Imaging China. China's cultural diplomacy through loan exhibitions to British museums. Leicester, University of Leicester.

Krause, Johannes/Fu, Qiaomei/Good, Jeffrey M./Viola, Bence/Shunkov, Michael V./Derevianko, Anatoly P./Pääbo, Svante (2010). The complete mitochondrial DNA genome of an unknown hominin from southern Siberia. Nature 464 (7290), 894–897. https://doi.org/10.1038/nature08976.

Kuhn, Brian F./Herries, Andy I. R./Pickering, Robyn/Price, Gilbert J./Baker, Stephanie E./Hopley, Philip J./Menter, Colin G./Caruana, Matthew V. (2016). Renewed investigations at Taung. 90 years after *Australopithecus africanus* . Palaeontologia Africana 51, 10–26. (accessed 6/25/2022).

Kullmer, Ottmar/Sandrock, Oliver/Abel, Rainer/Schrenk, Friedemann/Bromage, Timothy G./Juwayeyi, Yusuf M. (1999). The first *Paranthropus* from the Malawi Rift. Journal of Human Evolution 37 (1), 121–127. https://doi.org/10.1006/jhev.1999.0308.

Kuman, Kathleen/Clarke, Ronald J. (2000). Stratigraphy, artefact industries and hominid associations for Sterkfontein, member 5. Journal of Human Evolution 38 (6), 827–847. https://doi.org/10.1006/jhev.1999.0392.

La Torre, Ignacio de/Benito-Calvo, Alfonso/Martín-Ramos, Carmen/McHenry, Lindsay J./Mora, Rafael/Njau, Jackson K./Pante, Michael C./Stanistreet, Ian G./Stollhofen, Harald (2021). New excavations in the MNK skull site, and the last appearance of the Oldowan and *Homo habilis* at Olduvai Gorge, Tanzania. Journal of Anthropological Archaeology 61, 101255. https://doi.org/10.1016/j.jaa.2020.101255.

Lai, Xiaopeng 来小鹏 (2016). Web technology development and intellectual property protection with regard to cultural heritage (网络技术发展与文物知识产权保护). Chinese Museum (中国博物馆) (1), 36–40.

Le Gros Clark, Wilfrid E. (1964). The fossil evidence for human evolution. An introduction to the study of palaeoanthropology. 2nd ed. Chicago, University of Chicago Press.

Leakey, Louis S. B. (1959). A New Fossil Skull From Olduvai. Nature 184 (4685), 491–493. https://doi.org/10.1038/184491a0.

Leakey, Louis S. B. (1961). The progress of man in Africa. London, Oxford University Press.

Leakey, Louis S. B./Leakey, Mary D. (1964). Recent discoveries of fossil hominids in Tanganyika. At Olduvai and near Lake Natron. Nature 202 (4927), 5–7. https://doi.org/10.1038/202005a0.

Leakey, Louis S. B./Tobias, Phillip V./Napier, John R. (1964). A new species of the genus *Homo* from Olduvai Gorge. Nature 202, 7–9. https://doi.org/10.1038/202007a0.

Leakey, Mary D./Clarke, Ronald J./Leakey, Louis S. B. (1971). New hominid skull from Bed I, Olduvai Gorge, Tanzania. Nature 232 (5309), 308–312. https://doi.org/10.1038/232308a0.

Leakey, Meave G./Feibel, Craig S./McDougall, Ian/Walker, Alan C. (1995). New four-million-year-old hominid species from Kanapoi and Allia Bay, Kenya. Nature 376 (6541), 565–571. https://doi.org/10.1038/376565a0.

Leakey, Meave G./Spoor, Fred/Brown, Francis H./Gathogo, Patrick N./Kiarie, Christopher/Leakey, Louise N./McDougall, Ian (2001). New hominin genus from eastern Africa shows diverse Middle Pliocene lineages. Nature 410 (6827), 433–440. https://doi.org/10.1038/35068500.

Leakey, Meave G./Spoor, Fred/Dean, M. Christopher/Feibel, Craig S./Antón, Susan C./Kiarie, Christopher/Leakey, Louise N. (2012). New fossils from Koobi Fora in northern Kenya confirm taxonomic diversity in early *Homo*. Nature 488 (7410), 201–204. https://doi.org/10.1038/nature11322.

Leakey, Richard E. (1973a). Evidence for an advanced Plio-Pleistocene hominid from East Rudolf, Kenya. Nature 242 (5398), 447–450. https://doi.org/10.1038/242447a0.

Leakey, Richard E. (1973b). Further evidence of Lower Pleistocene hominids from East Rudolf, North Kenya, 1972. Nature 242 (5394), 170–173. https://doi.org/10.1038/242170a0.

Leakey, Richard E. (1974). Further evidence of Lower Pleistocene hominids from East Rudolf, North Kenya, 1973. Nature 248 (5450), 653–656. https://doi.org/10.1038/248653a0.

Leakey, Richard E. (1976). New hominid fossils from the Koobi Fora formation in northern Kenya. Nature 261 (5561), 574–576. https://doi.org/10.1038/261574a0.

Leakey, Richard E./Butzer, Karl W./Day, Michael H. (1969). Early *Homo sapiens* remains from the Omo River region of southwest Ethiopia. Nature 222, 1132–1138.

Leakey, Richard E./Walker, Alan C. (1985). Further hominids from the Plio-Pleistocene of Koobi Fora, Kenya. American Journal of Physical Anthropology 67 (2), 135–163. https://doi.org/10.1002/ajpa.1330670209.

Leakey, Richard E./Walker, Alan C. (1988). New *Australopithecus boisei* specimens from East and West Lake Turkana, Kenya. American Journal of Physical Anthropology 76 (1), 1–24. https://doi.org/10.1002/ajpa.1330760102.

Leakey, Richard E./Walker, Alan C./Ward, Carol V./Grausz, Hannah M. (1989). A partial skeleton of a gracile hominid from the Upper Burgi Member of the Koobi Fora Formation, East Lake Turkana, Kenya. In: Giacomo Giacobini (Ed.). Hominidae. Proceedings of the 2nd International Congress of Human Paleontology, Turin, September 28–October 3, 1987. Milano, Jaca Book.

Lebatard, Anne-Elisabeth/Bourlès, Didier L./Duringer, Philippe/Jolivet, Marc/Braucher, Régis/Carcaillet, Julien/Schuster, Mathieu/Arnaud, Nicolas/Monié, Patrick/Lihoreau, Fabrice/Likius, Andossa/Mackaye, Hassane-Taïsso/Vignaud, Patrick/Brunet, Michel (2008). Cosmogenic nuclide dating of *Sahelanthropus*

tchadensis and *Australopithecus bahrelghazali*. Mio-Pliocene hominids from Chad. Proceedings of the National Academy of Sciences of the United States of America 105 (9), 3226–3231. https://doi.org/10.1073/pnas.0708015105.

Lee, Aleksandra Maria (2016). Modeling China. Business, politics, and material in China's museum industry. Dissertation. Irvine, University of California.

Lei, Mingxia 雷鸣霞 (2015). The role of museum education in adolescents' perceptions of social roles (博物馆教育在青少年社会角色认知中的作用). Chinese Museum (中国博物馆) (1), 77–81.

Li, Chen 李晨 (2016a). On the construction and perfection of the museum regulation system in the times of 'Museum regulations' (论'《博物馆条例》时代'博物馆法规体系的构建与完善). Chinese Museum (中国博物馆) (1), 1–12.

Li, Dawei 李大伟/Wang, Wei 王伟/Liao, Wei 廖卫 (2022). C and O stable isotope analysis of animal tooth enamel from the Early Pleistocene Mohui site, Guangxi province (广西更新世早期么会洞遗址动物牙釉质的 C、O 稳定同位素分析). An analysis of the living environment of *Homo erectus* in South China (试析华南地区直立人的生存环境). Quaternary Sciences (第四纪研究) (4), 958–966.

Li, Dongmei 李冬梅 (2020a). Reflections on the management of cultural relics assets in state-owned museums (关于国有博物馆文物资产管理的几点思考). Chinese Museum (中国博物馆) (4), 119–122.

Li, Hao/Li, Chaorong/Kuman, Kathleen (2017). Longgudong, an Early Pleistocene site in Jianshi, South China, with stratigraphic association of human teeth and lithics. Science China Earth Sciences 60 (3), 452–462. https://doi.org/10.1007/s11430-016-0181-1.

Li, Huabiao 李华飙/Li, Yang 李洋/Wang, Ruohui 王若慧 (2021). Preliminary study on construction standards and evaluation methods of smart museums (智慧博物馆建设标准及评价方法的初步研究). Chinese Museum (中国博物馆) (1), 87–93, 128.

Li, Jinsha 李尽沙 (2021). The transformation of the soial role of museums under the influence of digital technologies (数字技术影响下博物馆社会角色转型). Cultural sharing and cross-border presentations (文化共享与跨界呈现). Chinese Museum (中国博物馆) (2), 14–19, 125–126.

Li, Na (2020b). Museums and the public. Visions for museums in China. The Public Historian 42 (1), 29–53. https://doi.org/10.1525/tph.2020.42.1.29.

Li, Pu 李普/Qian, Fang 钱方/Ma, Xinghua 马醒华/Pu, Qingyu 浦庆余/Xing, Lisheng 邢历生/Ju, Shiqiang 鞠石强 (1976). A preliminary study on the fossil age of Yuanmou Man using paleomagnetic methods (用古地磁方法对元谋人化石年代的初步研究). Science in China, Series A (6), 579–591.

Li, Qun 李群 (2022). Gathering the power of museums for the journey of rejuvenation (在复兴征程中汇聚博物馆的力量). Chinese Museum (中国博物馆) (3), 3–6.

Li, Tianyuan 李天元/Feng, Xiaobo 冯小波 (Eds.) (2001). Yunxian Man (郧县人). Wuhan, Hubei kexue jishu chubanshe.

Li, Tianyuan 李天元/Wang, Zhenghua 王正华/Li, Wensen 李文森/Feng, Xiaobo 冯小波/Wu, Xianzhu 武仙竹 (1994). Morphological features of human skulls from Quyuan river mouth, Yunxian, Hubei province, and their place in human evolution (湖北郧县曲远河口人类颅骨的形态特征及其在人类演化中的位置). Acta Anthropologica Sinica (人类学学报) (2), 104–192.

Li, Tianyuan/Etler, Dennis A. (1992). New Middle Pleistocene hominid crania from Yunxian in China. Nature 357 (6377), 404–407. https://doi.org/10.1038/357404a0.

Li, Xiuna 李秀娜 (2016b). Museum communication and its agenda-setting capability (博物馆传播及其议程设置功能). Chinese Museum (中国博物馆) (3), 63–66.

Li, Yanxian 李炎贤/Ji, Hongxiang 计宏祥/Li, Tianyuan 李天元/Feng, Xiaobo 冯小波/Li, Wensen 李文森 (1998). Stone artefacts discovered at the Yunxian Man site (郧县人遗址发现的石制品). Acta Anthropologica Sinica (人类学学报) (2), 94–113.

Li, Yaoshen 李耀申/Li, Chen 李晨 (2018). Museums (博物馆). 'Cultural swamps' and 'kidneys of the city' ('文化湿地'与'城市之肾'). Chinese Museum (中国博物馆) (3), 44–47.

Li, Yongxiang 李永项/Teng, Zhihong 滕志宏 (2020). Stratigraphic and taphonomic discussion of the new dating of the *Homo erectus* cranium from Lantian (Gongwangling), China (蓝田公王岭猿人年代最新成果的地层学和埋藏学再讨论). Journal of Stratigraphy (地层学杂志) (2), 220–225. https://doi.org/10.19839/j.cnki.dcxzz.2020.0015.

Lieberman, Daniel E. (2012). Human evolution. Those feet in ancient times. Nature 483 (7391), 550–551. https://doi.org/10.1038/483550a.

Lin, Yipu 林一璞/Zhang, Zhenhong 张镇洪/Liu, Xinglin 刘兴林/Wang, Shangzun 王尚尊/Guo, Zhihui 郭志慧/Zhang, Lidai 张丽黛 (1987). A newly discovered molar of Miaohoushan Man (新发现的一颗庙后山人的臼齿). Acta Anthropologica Sinica (人类学学报) (1), 76–77.

Linnaeus, Carl (1758/1759). Systema naturae. Per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. 10th ed. Stockholm, Salvi.

Liu, Dong 刘栋 (2020). Research on the development and management systems of cultural and creative products in museums (博物馆文创产品开发经营体制机制问题研究). Chinese Museum (中国博物馆) (3), 57–62.

Liu, Hongyu (2012). Strukturelle Merkmale der Geschichtsdarstellungen in aktuellen chinesischen Museen. Dissertation. Bonn, Rheinischen Friedrich-Wilhelms-Universität.

Liu, Xuebin/Shen, Guanjun/Tu, Hua/Lu, Chengqiu/Granger, Darryl E. (2015). Initial 26 Al/10 Be burial dating of the hominin site Bailong Cave in Hubei province, central China. Quaternary International 389, 235–240. https://doi.org/10.1016/j.quaint.2014.10.028.

Liu, Yong 刘勇 (2019). Legal protection of non-state-owned museums (非国有博物馆的法律保护). Current situation, predicament and way out (现状、困境与出路). Chinese Museum (中国博物馆) (3), 119–124.

Liu, Yuzhu 刘玉珠 (2018). Innovation is the golden key to start a new journey of museum development (创新是开启博物馆事业发展新征程的金钥匙). Chinese Museum (中国博物馆) (2), 42.

Lockwood, Charles A./Tobias, Phillip V. (1999). A large male hominin cranium from Sterkfontein, South Africa, and the status of *Australopithecus africanus*. Journal of Human Evolution 36 (6), 637–685. https://doi.org/10.1006/jhev.1999.0299.

Lockwood, Charles A./Tobias, Phillip V. (2002). Morphology and affinities of new hominin cranial remains from Member 4 of the Sterkfontein Formation, Gauteng province, South Africa. Journal of Human Evolution 42 (4), 389–450. https://doi.org/10.1006/jhev.2001.0532.

Lord, Gail Dexter/Qiang, Guan/An, Laishun/Jimenez, Javier (Eds.) (2019). Museum development in China. Understanding the building boom. Lanham, Rowman & Littlefield.

Lordkipanidze, David/Jashashvili, Tea/Vekua, Abesalom/Ponce de León, Marcia S./Zollikofer, Christoph P. E./Rightmire, Philip G./Pontzer, Herman/Ferring, Reid/Oms, Oriol/Tappen, Martha/Bukhsianidze, Maia/Agusti, Jordi/Kahlke, Ralf/Kiladze, Gocha/Martinez-Navarro, Bienvenido/Mouskhelishvili, Alexander/Nioradze, Medea/Rook, Lorenzo (2007a). Postcranial evidence from early *Homo* from Dmanisi, Georgia. Nature 449 (7160), 305–310. https://doi.org/10.1038/nature06134.

Lordkipanidze, David/Ponce de León, Marcia S./Margvelashvili, Ann/Rak, Yoel/Rightmire, Philip G./Vekua, Abesalom/Zollikofer, Christoph P. E. (2013). A complete skull from Dmanisi, Georgia, and the evolutionary biology of early *Homo*. Science 342 (6156), 326–331. https://doi.org/10.1126/science.1238484.

Lordkipanidze, David/Vekua, Abesalom/Rightmire, Philip G. (2007b). Hominid fossils from Dmanisi and their place among the early hominids. Bulletin of the Georgian Academy of Sciences 175 (1), 104–111. Available online at http://science.org.ge/old/moambe/2007-vol1/104-110.pdf.

Lou, Bing 娄冰 (2020). Research on the theoretical basis of cultural creative product development in museums (博物馆文化创意产品开发的理论依据研究). Chinese Museum (中国博物馆) (1), 8–12.

Lu, Jiansong (2016). Museum exhibition planning (博物馆展览策划). Ideas and practice (理念与实务). Shanghai, Fudan daxue chubanshe.

Lü, Jimin (2009). Museum activities in contemporary China (当代中国的博物馆事业). Beijing, Dangdai Zhongguo chubanshe.

Lu, Jun 吕军 (2019). A study of the history of institutional reforms in museum collection management (博物馆藏品管理机构设置改革历程研究). From the perspective of 40 years of Reform and Opening-Up (以改革开放 40 年为视角). Chinese Museum (中国博物馆) (1), 50–56.

Lü, Rui 吕睿 (2022). Reordering the discourse (重构话语秩序). Innovative mechanisms for online museum exhibitions (博物馆线上展览的创新机制). Chinese Museum (中国博物馆) (2), 116–120.

Lu, Tracey Lie Dan (2014). Museums in China. Power, politics and identities. London, Routledge.

Lu, Yabei 路亚北/Shi, Susu 施苏苏 (2021). A community of social governance (社会治理共同体). Study on the practices of adult education in museums (博物馆成人教育的实践路径研究). Chinese Museum (中国博物馆) (1), 64–69, 127.

Lü, Zun'e 吕遵谬/Huang, Yunping 黄蕴平/Li, Pingsheng 李平生/Meng, Zhenya 孟振亚 (1989). Ape man fossils from Yiyuan, Shandong (山东沂源猿人化石). Acta Anthropologica Sinica (人类学学报) (4), 301–313, 390–392.

Lumley, Henry de/Li, Tianyuan (2008). Le site de l'homme de Yunxian. Quyuanhekou, Quingqu, Yunxian, province du Hubei. Paris, CNRS.

Lumley, Marie-Antoinette de/Lordkipanidze, David (2006). L'Homme de Dmanissi (*Homo georgicus*), il y a 1 810 000 ans. Comptes Rendus Palevol 5 (1-2), 273–281. https://doi.org/10.1016/j.crpv.2005.11.013.

Lumley, Marie-Antoinette de/Lumley, Henry de (1973). Pre-Neanderthal human remains from Arago Cave in southeastern France. Yearbook of Physical Anthropology 17, 162–168.

Luo, Shugang 雒树刚 (2018). Four aspects which should be done well in the development of museums in the new era (新时代博物馆事业发展要做好四方面工作). Chinese Museum (中国博物馆) (2), 41.

Ma, Wendou 马文斗 (2018). Innovation and development of regional museums in the new era (新时期区域博物馆的创新与发展). Chinese Museum (中国博物馆) (2), 46–47.

Ma, Yupeng 马玉鹏 (2020). Discussion on the exhibition management of small and medium-sized museums (浅议中小型博物馆的陈展运营). Chinese Museum (中国博物馆) (3), 90–93.

Macchiarelli, Roberto/Bergeret-Medina, Aude/Marchi, Damiano/Wood, Bernard A. (2020). Nature and relationships of *Sahelanthropus tchadensis*. Journal of Human Evolution 149, 102898. https://doi.org/10.1016/j.jhevol.2020.102898.

Mallegni, Francesco/Carnieri, Emiliano/Bisconti, Michelangelo/Tartarelli, Giandonato/Ricci, Stefano/Biddittu, Italo/Segre, Aldo (2003). *Homo cepranensis* sp. nov. and the evolution of African-European Middle Pleistocene hominids. Comptes Rendus Palevol 2 (2), 153–159. https://doi.org/10.1016/S1631-0683(03)00015-0.

Manzi, Giorgio (2016). Humans of the Middle Pleistocene. The controversial calvarium from Ceprano (Italy) and its significance for the origin and variability of *Homo heidelbergensis*. Quaternary International 411, 254–261. https://doi.org/10.1016/j.quaint.2015.12.047.

Manzi, Giorgio/Mallegni, Francesco/Ascenzi, A. (2001). A cranium for the earliest Europeans. Phylogenetic position of the hominid from Ceprano, Italy. Proceedings of the National Academy of Sciences of the United States of America 98 (17), 10011–10016. https://doi.org/10.1073/pnas.151259998.

Mao, Ruohan 毛若寒/Zheng, Kuan 郑宽 (2022). On the current situation and direction of the application of digital imaging technology in museums (试论博物馆数字影像技术应用的现状与转向). Chinese Museum (中国博物馆) (3), 55–60, 140.

Marshall, Michael (2021). New human species has been named *Homo bodoensis* - but it may not stick. New Scientist of 10/28/2021. Available online at https://www.newscientist.com/article/2295406-new-human-species-has-been-named-homo-bodoensis-but-it-may-not-stick/ (accessed 6/23/2022).

Martin, Jesse M./Leece, A. B./Neubauer, Simon/Baker, Stephanie E./Mongle, Carrie S./Boschian, Giovanni/Schwartz, Gary T./Smith, Amanda L./Ledogar, Justin A./Strait, David S./Herries, Andy I. R. (2021). Drimolen cranium DNH 155 documents microevolution in an early hominin species. Nature Ecology & Evolution 5 (1), 38–45. https://doi.org/10.1038/s41559-020-01319-6.

Martín-Francés, Laura/Martinón-Torres, María/Lacasa-Marquina, Elena/Fernández-Colón, Pilar/Gracia-Téllez, Ana/Bermúdez de Castro, José-María (2014). Palaeopathology of the Pleistocene specimen D2600 from Dmanisi (Republic of Georgia). Comptes Rendus Palevol 13 (3), 189–203. https://doi.org/10.1016/j.crpv.2013.10.007.

Mbua, Emma/Kusaka, Soichiro/Kunimatsu, Yutaka/Geraads, Denis/Sawada, Yoshihiro/Brown, Francis H./Sakai, Tetsuya/Boisserie, Jean-Renaud/Saneyoshi, Mototaka/Omuombo, Christine/Muteti, Samuel/Hirata, Takafumi/Hayashida, Akira/Iwano, Hideki/Danhara, Tohru/Bobe, René/Jicha, Brian/Nakatsukasa, Masato (2016). Kantis. A new *Australopithecus* site on the shoulders of the Rift Valley near Nairobi, Kenya. Journal of Human Evolution 94, 28–44. https://doi.org/10.1016/j.jhevol.2016.01.006.

Menter, Colin G./Kuykendall, K. L./Keyser, André W./Conroy, Glenn C. (1999). First record of hominid teeth from the Plio-Pleistocene site of Gondolin, South Africa. Journal of Human Evolution 37 (2), 299–307. https://doi.org/10.1006/jhev.1999.0329.

Meyer, Matthias/Arsuaga, Juan-Luis/Filippo, Cesare de/Nagel, Sarah/Aximu-Petri, Ayinuer/Nickel, Birgit/Martínez, Ignacio/Gracia, Ana/Bermúdez de Castro, José-María/Carbonell, Eudald/Viola, Bence/Kelso, Janet/Prüfer, Kay/Pääbo, Svante (2016). Nuclear DNA sequences from the Middle Pleistocene Sima de los Huesos hominins. Nature 531 (7595), 504–507. https://doi.org/10.1038/nature17405.

Meyer, Matthias/Fu, Qiaomei/Aximu-Petri, Ayinuer/Glocke, Isabelle/Nickel, Birgit/Arsuaga, Juan-Luis/Martínez, Ignacio/Gracia, Ana/Castro, José María Bermúdez de/Carbonell, Eudald/Pääbo, Svante (2014). A mitochondrial genome sequence of a hominin from Sima de los Huesos. Nature 505 (7483), 403–406. https://doi.org/10.1038/nature12788.

Mijares, Armand Salvador/Détroit, Florent/Piper, Philip J./Grün, Rainer/Bellwood, Peter/Aubert, Maxime/Champion, Guillaume/Cuevas, Nida/Leon, Alexandra de/Dizon, Eusebio (2010). New evidence for a 67,000-year-old human presence at Callao Cave, Luzon, Philippines. Journal of Human Evolution 59 (1), 123–132. https://doi.org/10.1016/j.jhevol.2010.04.008.

Moggi-Cecchi, Jacopo/Grine, Frederick E./Tobias, Phillip V. (2006). Early hominid dental remains from Members 4 and 5 of the Sterkfontein Formation (1966–1996 excavations). Catalogue, individual associations, morphological descriptions and initial metrical analysis. Journal of Human Evolution 50 (3), 239–328. https://doi.org/10.1016/j.jhevol.2005.08.012.

Mongle, Carrie S./Strait, David S./Grine, Frederick E. (2019). Expanded character sampling underscores phylogenetic stability of *Ardipithecus ramidus* as a basal hominin. Journal of Human Evolution 131, 28–39. https://doi.org/10.1016/j.jhevol.2019.03.006.

Morwood, Michael J./Brown, Peter/Jatmiko/Sutikna, Thomas/Saptomo, E. Wahyu/Westaway, Kira E./Due, Rokus Awe/Roberts, Richard G./Maeda, Tomoko/Wasisto, Sri/Djubiantono, Tony (2005). Further evidence for small-bodied hominins from the Late Pleistocene of Flores, Indonesia. Nature 437 (7061), 1012–1017. https://doi.org/10.1038/nature04022.

Morwood, Michael J./Jungers, William L. (2009). Conclusions: implications of the Liang Bua excavations for hominin evolution and biogeography. Journal of Human Evolution 57 (5), 640–648. https://doi.org/10.1016/j.jhevol.2009.08.003.

Morwood, Michael J./Soejono, Raden Panji/Roberts, Richard G./Sutikna, Thomas/Turney, Chris S. M./Westaway, Kira E./Rink, William J./Zhao, Jianxin/van den Bergh, Gerrit D./Due, Rokus Awe/Hobbs, D. R./Moore, Mark W./Bird, Michael I./Fifield, L. K. (2004). Archaeology and age of a new hominin from Flores in eastern Indonesia. Nature 431 (7012), 1087–1091. https://doi.org/10.1038/nature02956.

Mounier, Aurélien/Marchal, François/Condemi, Silvana (2009). Is *Homo heidelbergensis* a distinct species? New insight on the Mauer mandible. Journal of Human Evolution 56 (3), 219–246. https://doi.org/10.1016/j.jhevol.2008.12.006.

Mounier, Aurélien/Mirazón Lahr, Marta (2019). Deciphering African late Middle Pleistocene hominin diversity and the origin of our species. Nature Communications 10 (1), 3406. https://doi.org/10.1038/s41467-019-11213-w.

Mu, Xinan 穆西南/Xu, Hankui 许汉奎/Mu, Daocheng 穆道成/Zhong, Shilan 钟石兰/Xu, Qinqi 徐钦琦/Zhang, Hong 张宏/Zhang, Yinyun 张银运 (1993). The discovery of ancient human fossils at Tangshan, Nanjing, and their significance (南京汤山古人类化石的发现及其意义). Acta Palaeontologica Sinica (古生物学报) (4), 393–399, 537–538.

Nanjing Museum 南京市博物館/Peking University Archaeology Department 北京大学考古系/Tangshan Archaeological Excavation Team 汤山考古发掘队 (1996). The locality of the Nanjing Man fossils (南京人化石地點). Beijing, Wenwu chubanshe.

National Bureau of Statistics of China 国家统计局 (2020). China statistical yearbook (中国统计年鉴). Available online at http://www.stats.gov.cn/tjsj/ndsj/2020/indexeh.htm (accessed 2/26/2023).

National Bureau of Statistics of China 国家统计局 (2022). China statistical yearbook (中国统计年鉴). Available online at http://www.stats.gov.cn/tjsj/ndsj/ (accessed 9/17/2022).

Ni, Xijun 倪喜军 (2022). Modeling the origin of modern humans in light of new evidence (新证据下的现代人起源模型). Acta Anthropologica Sinica (人类学学报) 41 (4), 576–592.

Ni, Xijun/Ji, Qiang/Wu, Wensheng/Shao, Qingfeng/Ji, Yannan/Zhang, Chi/Liang, Lei/Ge, Junyi/Guo, Zhen/Li, Jinhua/Li, Qiang/Grün, Rainer/Stringer, Chris B. (2021). Massive cranium from Harbin in northeastern China establishes a new Middle Pleistocene human lineage. Innovation 2 (3), 100130. https://doi.org/10.1016/j.xinn.2021.100130.

Ou, Yan 欧艳 (2018). Creating a borderless platform for sharing (打造无边界共享平台). An introduction to the planning of educational and cultural programmes in museums (浅谈博物馆教育文化项目的策划). Chinese Museum (中国博物馆) (2), 117–121.

Partridge, Timothy C./Granger, Darryl E./Caffee, Marc W./Clarke, Ronald J. (2003). Lower Pliocene hominid remains from Sterkfontein. Science 300 (5619), 607–612. https://doi.org/10.1126/science.1081651.

Pei, Wenzhong 裴文中/Zhang, Senshui 张森水 (1985). Study on the lithic artefacts of *Sinanthropus* (中国猿人石器研究). Palaeontologia Sinica, Series D 12, 1–277.

Pennisi, Elizabeth (2013). Human evolution. More genomes from Denisova Cave show mixing of early human groups. Science 340 (6134), 799. https://doi.org/10.1126/science.340.6134.799.

Pickering, Robyn/Dirks, Paul H.G.M./Jinnah, Zubair/Ruiter, Darryl J. de/Churchill, Steven E./Herries, Andy I. R./Woodhead, Jon D./Hellstrom, John C./Berger, Lee R. (2011). *Australopithecus sediba* at 1.977 Ma and implications for the origins of the genus *Homo*. Science 333 (6048), 1421–1423. https://doi.org/10.1126/science.1203697.

Pickford, Martin/Senut, Brigitte (2001). The geological and faunal context of Late Miocene hominid remains from Lukeino, Kenya. Comptes Rendus de l'Académie des Sciences - Series IIA - Earth and Planetary Science 332 (2), 145–152. https://doi.org/10.1016/S1251-8050(01)01528-2.

Prat, Sandrine/Brugal, Jean-Philip/Tiercelin, Jean-Jacques/Barrat, Jean-Alix/Bohn, Marcel/Delagnes, Anne/Harmand, Sonia/Kimeu, Kamoya/Kibunjia, Mzalendo/Texier, Pierre-Jean/Roche, Hélène (2005). First occurrence of early *Homo* in the Nachukui Formation (West Turkana, Kenya) at 2.3–2.4 Myr. Journal of Human Evolution 49 (2), 230–240. https://doi.org/10.1016/j.jhevol.2005.03.009.

Prüfer, Kay/Racimo, Fernando/Patterson, Nick/Jay, Flora/Sankararaman, Sriram/Sawyer, Susanna/Heinze, Anja/Renaud, Gabriel/Sudmant, Peter H./Filippo, Cesare de/Li, Heng/Mallick, Swapan/Dannemann, Michael/Fu, Qiaomei/Kircher, Martin/Kuhlwilm, Martin/Lachmann, Michael/Meyer, Matthias/Ongyerth, Matthias/Siebauer, Michael/Theunert, Christoph/Tandon, Arti/Moorjani, Priya/Pickrell, Joseph/Mullikin, James C./Vohr, Samuel H./Green, Richard E./Hellmann, Ines/Johnson, Philip L. F./Blanche, Hélène/Cann, Howard/Kitzman, Jacob O./Shendure, Jay/Eichler, Evan E./Lein, Ed S./Bakken, Trygve E./Golovanova, Liubov V./Doronichev, Vladimir B./Shunkov, Michael V./Derevianko, Anatoly P./Viola, Bence/Slatkin, Montgomery/Reich, David/Kelso, Janet/Pääbo, Svante (2014). The complete genome sequence of a Neanderthal from the Altai Mountains. Nature 505 (7481), 43–49. https://doi.org/10.1038/nature12886.

Qian, Qian 钱倩 (2020). Exploration of development approaches for museums' cultural creation based on the market environment (基于市场环境下的博物馆文创发展途径探索). Chinese Museum (中国博物馆) (1), 3–7.

Qiu, Zhonglang 邱中郎/Gu, Yumin 顾玉珉/Zhang, Yinyun 张银运/Zhang, Senshui 张森水 (1973). Newly discovered *Sinanthropus pekinensis* fossils and cultural relics from Zhoukoudian (周口店新发现的北京猿人化石及文化遗物). Vertebrata PalAsiatica (古脊椎动物与古人类) 11 (2), 109–131.

Qiu, Zhonglang 邱中郎/Xu, Chunhua 许春华/Zhang, Weihua 张维华/Wang, Eulin 王汝林/Wang, Jianzhong 王建中/Zhao, Chengfu 赵成甫 (1982). Human and mammalian fossils discovered at Nanzhao (南召发现的人类和哺乳类化石). Acta Anthropologica Sinica (人类学学报) (2), 109–117, 209.

Quam, Rolf M./Lorenzo, Carlos/Martínez, Ignacio/Gracia-Téllez, Ana/Arsuaga, Juan-Luis (2016). The bony labyrinth of the Middle Pleistocene Sima de los Huesos hominins (Sierra de Atapuerca, Spain). Journal of Human Evolution 90, 1–15. https://doi.org/10.1016/j.jhevol.2015.09.007.

Qun, Li 群力 (1983). More ape-man tooth fossils found in Bailong Cave, Yunxi county, Hubei province (湖北郧西县白龙洞又发现猿人牙齿化石). Acta Anthropologica Sinica (人类学学报) (2), 203.

Rak, Yoel (1983). The Australopithecine face. New York, Academic Press.

Rak, Yoel/Ginzburg, Avishag/Geffen, Eli (2007). Gorilla-like anatomy on *Australopithecus afarensis* mandibles suggests *Au. afarensis* link to robust australopiths. Proceedings of the National Academy of Sciences of the United States of America 104 (16), 6568–6572. https://doi.org/10.1073/pnas.0606454104.

Rak, Yoel/Kimbel, William H. (1991). On the squamosal suture of KNM-WT 17000. American Journal of Physical Anthropology 85 (1), 1–6. https://doi.org/10.1002/ajpa.1330850102.

Rak, Yoel/Kimbel, William H./Moggi-Cecchi, Jacopo/Lockwood, Charles A./Menter, Colin G. (2021). The DNH 7 skull of *Australopithecus robustus* from Drimolen (Main Quarry), South Africa. Journal of Human Evolution 151, 102913. https://doi.org/10.1016/j.jhevol.2020.102913.

Reich, David/Green, Richard E./Kircher, Martin/Krause, Johannes/Patterson, Nick/Durand, Eric Y./Viola, Bence/Briggs, Adrian W./Stenzel, Udo/Johnson, Philip L. F./Maricic, Tomislav/Good, Jeffrey M./Marques-Bonet, Tomas/Alkan, Can/Fu, Qiaomei/Mallick, Swapan/Li, Heng/Meyer, Matthias/Eichler, Evan E./Stoneking, Mark/Richards, Michael/Talamo, Sahra/Shunkov, Michael V./Derevianko, Anatoly P./Hublin, Jean-Jacques/Kelso, Janet/Slatkin, Montgomery/Pääbo, Svante (2010). Genetic history of an archaic hominin group from Denisova Cave in Siberia. Nature 468 (7327), 1053–1060. https://doi.org/10.1038/nature09710.

Reich, David/Patterson, Nick/Kircher, Martin/Delfin, Frederick/Nandineni, Madhusudan R./Pugach, Irina/Ko, Albert Min-Shan/Ko, Ying-Chin/Jinam, Timothy A./Phipps, Maude E./Saitou, Naruya/Wollstein, Andreas/Kayser, Manfred/Pääbo, Svante/Stoneking, Mark (2011). Denisova admixture and the first modern human dispersals into Southeast Asia and Oceania. American Journal of Human Genetics 89 (4), 516–528. https://doi.org/10.1016/j.ajhg.2011.09.005.

Richmond, Brian G./Green, David J./Lague, Michael R./Chirchir, Habiba/Behrensmeyer, Anna K./Bobe, René/Bamford, Marion K./Griffin, Nicole L./Gunz, Philipp/Mbua, Emma/Merritt, Stephen R./Pobiner, Briana/Kiura, Purity/Kibunjia, Mzalendo/Harris, John W. K./Braun, David R. (2020). The upper limb of *Paranthropus boisei* from Ileret, Kenya. Journal of Human Evolution 141, 102727. https://doi.org/10.1016/j.jhevol.2019.102727.

Rightmire, Philip G. (1979). Cranial remains of *Homo erectus* from Beds II and IV, Olduvai Gorge, Tanzania. American Journal of Physical Anthropology 51 (1), 99–115. https://doi.org/10.1002/ajpa.1330510113.

Rightmire, Philip G. (1995). Geography, time and speciation in Pleistocene *Homo*. South African Journal of Science 91, 450-454. Available online at https://journals.co.za/doi/pdf/10.10520/aja00382353_9084.

Rightmire, Philip G. (1998). Human evolution in the Middle Pleistocene. The role of *Homo heidelbergensis*. Evolutionary Anthropology 6 (6), 218–227. https://doi.org/10.1002/(SICI)1520-6505(1998)6:6<218::AID-EVAN4>3.0.CO;2-6.

Rightmire, Philip G./Lordkipanidze, David/Vekua, Abesalom (2006). Anatomical descriptions, comparative studies and evolutionary significance of the hominin skulls from Dmanisi, Republic of Georgia. Journal of Human Evolution 50 (2), 115–141. https://doi.org/10.1016/j.jhevol.2005.07.009.

Rightmire, Philip G./Margvelashvili, Ann/Lordkipanidze, David (2019). Variation among the Dmanisi hominins. Multiple taxa or one species? American Journal of Physical Anthropology 168 (3), 481–495. https://doi.org/10.1002/ajpa.23759.

Roberts, Richard G./Westaway, Kira E./Zhao, Jianxin/Turney, Chris S. M./Bird, Michael I./Rink, William J./Fifield, L. K. (2009). Geochronology of cave deposits at Liang Bua and of adjacent river terraces in the Wae Racang valley, western Flores, Indonesia. A synthesis of age estimates for the type locality of *Homo floresiensis*. Journal of Human Evolution 57 (5), 484–502. https://doi.org/10.1016/j.jhevol.2009.01.003.

Robinson, John T. (1960). The affinities of the new Olduvai Australopithecine. Nature 186 (4723), 456–458. https://doi.org/10.1038/186456a0.

Robinson, John T. (1961). The Australopithecines and their bearing on the origin of man and of stone tool-making. South African Journal of Science 57, 3–13. https://doi.org/10.4159/harvard.9780674592971.c14.

Robinson, John T. (1966). The distinctiveness of *Homo habilis*. Nature 209 (5027), 957–960. https://doi.org/10.1038/209957a0.

Roksandic, Mirjana/Radović, Predrag/Wu, Xiujie/Bae, Christopher J. (2021). Resolving the 'muddle in the middle'. The case for *Homo bodoensis* sp. nov. Evolutionary Anthropology. https://doi.org/10.1002/evan.21929.

Roksandic, Mirjana/Radović, Predrag/Wu, Xiujie/Bae, Christopher J. (2022). *Homo bodoensis* and why it matters. Evolutionary Anthropology 31 (5), 240–244. https://doi.org/10.1002/evan.21954.

Ruiter, Darryl J. de/DeWitt, Thomas J./Carlson, Keely B./Brophy, Juliet K./Schroeder, Lauren/Ackermann, Rebecca R./Churchill, Steven E./Berger, Lee R. (2013). Mandibular remains support taxonomic validity of *Australopithecus sediba*. Science 340 (6129), 1232997. https://doi.org/10.1126/science.1232997.

Ruiter, Darryl J. de/Pickering, Robyn/Steininger, Christine M./Kramers, Jan D./Hancox, Phillip J./Churchill, Steven E./Berger, Lee R./Backwell, Lucinda R. (2009). New *Australopithecus robustus* fossils and associated U-Pb dates from Cooper's Cave (Gauteng, South Africa). Journal of Human Evolution 56 (5), 497–513. https://doi.org/10.1016/j.jhevol.2009.01.009.

Rull, Valentí (2020). Quaternary ecology, evolution, and biogeography. London/San Diego/Cambridge, Academic Press.

Santa Luca, Albert P. (1980). The Ngandong fossil hominids. A comparative study of a Far Eastern *Homo erectus* group. Yale University Publications in Anthropology 78, 1–175.

Sarmiento, Esteban E. (2010). Comment on the paleobiology and classification of *Ardipithecus ramidus*. Science 328 (5982), 1105b. https://doi.org/10.1126/science.1184148.

Sarmiento, Esteban E./Mowbray, Kenneth/Sawyer, Gary J./Milner, Richard/Deak, Viktor/Tattersall, Ian (2007). The ultimate competitor. *Homo antecessor*. In: Gary J. Sawyer/Viktor Deak (Eds.). The last human. A guide to twenty-two species of extinct humans. New Haven/London, Yale University Press, 185–193.

Sawada, Yoshihiro/Pickford, Martin/Senut, Brigitte/Itaya, Tetsumaru/Hyodo, Masayuki/Miura, Tamaki/Kashine, Chikako/Chujo, Tadahiro/Fujii, Hirokazu (2002). The age of *Orrorin tugenensis*, an early hominid from the Tugen Hills, Kenya. Comptes Rendus Palevol 1 (5), 293–303. https://doi.org/10.1016/S1631-0683(02)00036-2.

Scardia, Giancarlo/Neves, Walter A./Tattersall, Ian/Blumrich, Lukas (2021). What kind of hominin first left Africa? Evolutionary Anthropology 30 (2), 122–127. https://doi.org/10.1002/evan.21863.

Schick, Kathy D./Dong, Zhuan (1993). Early Paleolithic of China and Eastern Asia. Evolutionary Anthropology 2 (1), 22–35. https://doi.org/10.1002/evan.1360020105.

Schmitz, Ralf W./Serre, David/Bonani, Georges/Feine, Susanne/Hillgruber, Felix/Krainitzki, Heike/Pääbo, Svante/Smith, Fred H. (2002). The Neandertal type site revisited. Interdisciplinary investigations of skeletal remains from the Neander Valley, Germany. Proceedings of the National Academy of Sciences of the United States of America 99 (20), 13342–13347. https://doi.org/10.1073/pnas.192464099.

Schoetensack, Otto (1908). Der Unterkiefer des *Homo heidelbergensis* aus den Sanden von Mauer bei Heidelberg. Ein Beitrag zur Paläontologie des Menschen. Leipzig, Engelmann.

Schrenk, Friedemann/Bromage, Timothy G./Betzler, Christian G./Ring, Uwe/Juwayeyi, Yusuf M. (1993). Oldest *Homo* and Pliocene biogeography of the Malawi Rift. Nature 365 (6449), 833–836. https://doi.org/10.1038/365833a0.

Schroeder, Lauren/Scott, Jill E./Garvin, Heather M./Laird, Myra F./Dembo, Mana/Radovčić, Davorka/Berger, Lee R./Ruiter, Darryl J. de/Ackermann, Rebecca R. (2017). Skull diversity in the *Homo* lineage and the relative position of *Homo naledi*. Journal of Human Evolution 104, 124–135. https://doi.org/10.1016/j.jhevol.2016.09.014.

Schwartz, Jeffrey H. (2004). Anthropology. Getting to know *Homo erectus*. Science 305 (5680), 53–54. https://doi.org/10.1126/science.1099989.

Schwartz, Jeffrey H./Tattersall, Ian (1996). Whose teeth? Nature 381 (6579), 201–202. https://doi.org/10.1038/381201a0.

Schwartz, Jeffrey H./Tattersall, Ian (2005). The human fossil record. Craniodental morphology of early hominids (genera *Australopithecus*, *Paranthropus*, *Orrorin*) and overview. New York, NY, Wiley-Liss.

Schwartz, Jeffrey H./Tattersall, Ian (2010). Fossil evidence for the origin of *Homo sapiens*. American Journal of Physical Anthropology 143 Suppl 51, 94–121. https://doi.org/10.1002/ajpa.21443.

Schwartz, Jeffrey H./Tattersall, Ian/Chi, Zhang (2014). Comment on "A complete skull from Dmanisi, Georgia, and the evolutionary biology of early *Homo*". Science 344 (6182), 360. https://doi.org/10.1126/science.1250056.

Semaw, Sileshi/Simpson, Scott W./Quade, Jay/Renne, Paul R./Butler, Robert F./McIntosh, William C./Levin, Naomi E./Domínguez-Rodrigo, Manuel/Rogers, Michael J. (2005). Early Pliocene hominids from Gona, Ethiopia. Nature 433 (7023), 301–305. https://doi.org/10.1038/nature03177.

Senut, Brigitte (2020). *Orrorin tugenensis* et les origines de l'homme. Une synthèse. Bulletin de l'Académie Nationale de Médecine 204 (3), 258–267. https://doi.org/10.1016/j.banm.2019.12.018.

Senut, Brigitte/Pickford, Martin/Gommery, Dominique/Mein, Pierre/Cheboi, Kiptalam/Coppens, Yves (2001). First hominid from the Miocene (Lukeino Formation, Kenya). Comptes Rendus de l'Académie des Sciences - Series IIA - Earth and Planetary Science 332 (2), 137–144. https://doi.org/10.1016/S1251-8050(01)01529-4.

Shan, Jixiang 单霁翔 (2011). From storehouses to a marvellously diverse world (从'馆舍天地'走向'大千世界'). Reflections on museums in the boadest sense (关于广义博物馆的思考). Tianjin, Tianjin daxue chubanshe.

Shao, Qingfeng/Bahain, Jean-Jacques/Wang, Wei/Zhu, Min/Voinchet, Pierre/Lin, Min/Douville, Eric (2015). Coupled ESR and U-series dating of Early Pleistocene *Gigantopithecus* faunas at Mohui and Sanhe Caves, Guangxi, southern China. Quaternary Geochronology 30, 524–528. https://doi.org/10.1016/j.quageo.2015.04.008.

Shao, Qingfeng/Ge, Junyi/Ji, Qiang/Li, Jinhua/Wu, Wensheng/Ji, Yannan/Zhan, Tao/Zhang, Chi/Li, Qiang/Grün, Rainer/Stringer, Chris B./Ni, Xijun (2021). Geochemical provenancing and direct dating of the Harbin archaic human cranium. Innovation 2 (3), 100131. https://doi.org/10.1016/j.xinn.2021.100131.

Shapiro, Darshana (2009). The hominid status of *Sahelanthropus tchadensis* and *Orrorin tugenensis*.

Shelach-Lavi, Gideon (2019). Archaeology and politics in China. Historical paradigm and identity construction in museum exhibitions. China Information 33 (1), 23–45. https://doi.org/10.1177/0920203X18774029.

Shen, Guanjun/Gao, Xing/Gao, Bin/Granger, Darryl E. (2009). Age of Zhoukoudian *Homo erectus* determined with $^{26}Al/^{10}Be$ burial dating. Nature 458 (7235), 198–200. https://doi.org/10.1038/nature07741.

Shi, Linfeng 施林峰/Wang, Xisheng 王喜生/Yabg, Zhenyu 杨振宇 (2007). Magnetostratigraphic restudy of the Longgudong hominin fossils at Jianshi county, western Hubei province (鄂西建始龙骨洞含古人类化石沉积层磁性年代学再研究). Journal of Stratigraphy (地层学杂志) (4), 400–406.

Simpson, Scott W./Quade, Jay/Kleinsasser, Lynnette/Levin, Naomi E./MacIntosh, William C./Dunbar, Nelia W./Semaw, Sileshi (2007). Late Miocene hominid teeth from Gona project area, Ethiopia. American Journal of Physical Anthropology (S44), 219. Available online at https://scholar.google.de/citations?user=ghhcylwaaaaj&hl=de&oi=sra.

Slon, Viviane/Hopfe, Charlotte/Weiß, Clemens L./Mafessoni, Fabrizio/La Rasilla, Marco de/Lalueza-Fox, Carles/Rosas, Antonio/Soressi, Marie/Knul, Monika V./Miller, Rebecca/Stewart, John R./Derevianko, Anatoly P./Jacobs, Zenobia/Li, Bo/Roberts, Richard G./Shunkov, Michael V./Lumley, Henry de/Perrenoud, Christian/Gušić, Ivan/Kućan, Željko/Rudan, Pavao/Aximu-Petri, Ayinuer/Essel, Elena/Nagel, Sarah/Nickel, Birgit/Schmidt, Anna/Prüfer, Kay/Kelso, Janet/Burbano, Hernán A./Pääbo, Svante/Meyer, Matthias (2017). Neandertal and Denisovan DNA from Pleistocene sediments. Science 356 (6338), 605–608. https://doi.org/10.1126/science.aam9695.

Song, Xiangguang (2008). The development of private museums in China. Museum International 60 (1-2), 40–48. https://doi.org/10.1111/j.1468-0033.2008.00635.x.

Spoor, Fred/Gunz, Philipp/Neubauer, Simon/Stelzer, Stefanie/Scott, Nadia/Kwekason, Amandus/Dean, M. Christopher (2015). Reconstructed *Homo habilis* type OH 7 suggests deep-rooted species diversity in early *Homo*. Nature 519 (7541), 83–86. https://doi.org/10.1038/nature14224.

Spoor, Fred/Leakey, Meave G./Leakey, Louise N. (2010). Hominin diversity in the Middle Pliocene of eastern Africa. The maxilla of KNM-WT 40000. Philosophical Transactions of the Royal Society B: Biological Sciences 365 (1556), 3377–3388. https://doi.org/10.1098/rstb.2010.0042.

Spoor, Fred/Leakey, Meave G./O'Higgins, Paul (2016). Middle Pliocene hominin diversity. *Australopithecus deyiremeda* and *Kenyanthropus platyops*. Philosophical Transactions of the Royal Society B: Biological Sciences 371 (1698). https://doi.org/10.1098/rstb.2015.0231.

State Administration of Cultural Heritage 国家文物局 (2022). Internal organisation (内设机构). Available online at http://www.ncha.gov.cn/col/col1021/index.html (accessed 9/12/2022).

State Administration of Cultural Heritage 国家文物局 (Ed.) (2015). Interpretation of the Museum regulations (博物馆条例释义). Beijing, Zhongguo fazhi chubanshe.

Steininger, Christine M./Berger, Lee R. (2000). Taxonomic affinity of a new specimen from Cooper's Cave, South Africa. American Journal of Physical Anthropology (1), 291. Available online at https://scholar.google.co.za/citations?user=dlqpjvcaaaaj&hl=en&oi=sra.

Steininger, Christine M./Berger, Lee R./Kuhn, Brian F. (2008). A partial skull of *Paranthropus robustus* from Cooper's Cave, South Africa. South African Journal of Science (104), 143–146.

Strait, David S./Grine, Frederick E. (2001). The systematics of *Australopithecus garhi*. Ludus Vitalis 9 (15), 109–135.

Stringer, Chris B. (1983). Some further notes on the morphology and dating of the Petralona hominid. Journal of Human Evolution 12 (8), 731–742. https://doi.org/10.1016/S0047-2484(83)80128-6.

Stringer, Chris B. (2012). The status of *Homo heidelbergensis* (Schoetensack 1908). Evolutionary Anthropology 21 (3), 101–107. https://doi.org/10.1002/evan.21311.

Stringer, Chris B. (2016). The origin and evolution of *Homo sapiens*. Philosophical Transactions of the Royal Society B: Biological Sciences 371 (1698). https://doi.org/10.1098/rstb.2015.0237.

Stringer, Chris B./Buck, Laura Tabitha (2014). Diagnosing *Homo sapiens* in the fossil record. Annals of Human Biology 41 (4), 312–322. https://doi.org/10.3109/03014460.2014.922616.

Sun, Chengkai 孙承凯/Zhou, Mi 周蜜/Xing, Song 邢松 (2011). Geometric and morphometric analysis of Middle Pleistocene hominin teeth from Yiyuan, Shandong province (沂源人牙冠的几何形态学研究). Acta Anthropologica Sinica (人类学学报) (1), 32–44.

Sun, Lu/Deng, Chenglong/Liu, Caicai/Ge, Junyi/Yang, Shixia/Zhang, Shuai/Han, Fei/Bahain, Jean-Jacques/Rasse, Michel/Boëda, Éric/Hou, Yamei/Wei, Guangbiao/Huang, Wanbo (2022). Reassessing the age of the Early Pleistocene Longgupo fauna, southern China. An updated magnetostratigraphic perspective. Journal of Quaternary Science, 1–14. https://doi.org/10.1002/jqs.3483.

Sun, Xuefeng/Lu, Huayu/Wang, Shejiang/Yi, Shuangwen/Shen, Chen/Zhang, Wenchao (2013). TT-OSL dating of Longyadong Middle Paleolithic site and paleoenvironmental implications for hominin occupation in Luonan basin (central China). Quaternary Research 79 (2), 168–174. https://doi.org/10.1016/j.yqres.2012.10.003.

Sutikna, Thomas/Tocheri, Matthew W./Morwood, Michael J./Saptomo, E. Wahyu/Jatmiko/Awe, Rokus Due/Wasisto, Sri/Westaway, Kira E./Aubert, Maxime/Li, Bo/Zhao, Jianxin/Storey, Michael/Alloway, Brent V./Morley, Mike W./Meijer, Hanneke J. M./van den Bergh, Gerrit D./Grün, Rainer/Dosseto, Anthony/Brumm, Adam/Jungers, William L./Roberts, Richard G. (2016). Revised stratigraphy and chronology for *Homo floresiensis* at Liang Bua in Indonesia. Nature 532 (7599), 366–369. https://doi.org/10.1038/nature17179.

Suwa, Gen (1988). Evolution of the “robust” Australopithecines in the Omo succession. Evidence from mandibular premolar morphology. In: Frederick E. Grine (Ed.). Evolutionary history of the 'robust' Australopithecines. New York, Aldine de Gruyter, 199–222.

Suwa, Gen (1990). A comparative analysis of hominid dental remains from the Shungura and Usno Formations, Omo Valley, Ethiopia. Berkeley, University of California.

Suwa, Gen/Asfaw, Berhane/Beyene, Yonas/White, Tim D./Katoh, Shigehiro/Nagaoka, Shinji/Nakaya, Hideo/Uzawa, Kazuhiro/Renne, Paul R./WoldeGabriel, Giday (1997). The first skull of *Australopithecus boisei*. Nature 389 (6650), 489–492. https://doi.org/10.1038/39037.

Suwa, Gen/White, Tim D./Howell, F. Clark (1996). Mandibular postcanine dentition from the Shungura Formation, Ethiopia. Crown morphology, taxonomic allocations, and Plio-Pleistocene hominid evolution. American Journal of Physical Anthropology 101 (2), 247–282. https://doi.org/10.1002/(SICI)1096-8644(199610)101:2<247::AID-AJPA9>3.0.CO;2-Z.

Suwa, Gen/Wood, Bernard A./White, Tim D. (1994). Further analysis of mandibular molar crown and cusp areas in Pliocene and Early Pleistocene hominids. American Journal of Physical Anthropology 93 (4), 407–426. https://doi.org/10.1002/ajpa.1330930402.

Tattersall, Ian (2014). Defining and recognizing the genus *Homo* . Grotania (36), 5–22.

Tattersall, Ian (2015). *Homo ergaster* and its contemporaries. In: Winfried Henke/Ian Tattersall (Eds.). Handbook of paleoanthropology. 2nd ed. Heidelberg/New York, Springer, 2167–2188.

Tattersall, Ian/Schwartz, Jeffrey H. (2008). The morphological distinctiveness of *Homo sapiens* and its recognition in the fossil record. Clarifying the problem. Evolutionary Anthropology 17 (1), 49–54. https://doi.org/10.1002/evan.20153.

Thackeray, Francis/Ruiter, Darryl J. de/Berger, Lee R./van der Merwe, Nikolaas J. (2001). Hominid fossils from Kromdraai. A revised list of specimens discovered since 1938. Annals of the Transvaal Museum (38), 43–56. Available online at https://scholar.google.de/citations?user=winlf44aaaaj&hl=de&oi=sra.

Tobias, Phillip V. (1966). The distinctiveness of *Homo habilis*. Nature 209 (5027), 953–957. https://doi.org/10.1038/209953a0.

Tobias, Phillip V. (1967). The cranium and maxillary dentition of *Australopithecus (Zinjanthropus) boisei*. Cambridge, Cambridge University Press.

Tobias, Phillip V. (1991). Olduvai Gorge. The skulls, endocasts and teeth of *Homo habilis*. Cambridge, Cambridge University Press.

Toussaint, Michel/Macho, Gabriele A./Tobias, Phillip V./Partridge, Timothy C./Hughes, Alun R. (2003). The third partial skeleton of a Late Pliocene hominin (Stw 431) from Sterkfontein, South Africa. South African Journal of Science (99), 215–223.

Tu, Hua/Shen, Guanjun/Granger, Darryl E./Yang, Xiaoyun/Lai, Zhongping (2017). Isochron $^{26}Al/^{10}Be$ burial dating of the Lantian hominin site at Gongwangling in northwestern China. Quaternary Geochronology 41, 174–179. https://doi.org/10.1016/j.quageo.2017.04.004.

Varutti, Marzia (2010). Using different pasts in a similar way. Museum representations of national history in Norway and China. Culture Unbound: Journal of Current Cultural Research 9 (5), 745–768. https://doi.org/10.3384/cu.2000.1525.10240745.

Varutti, Marzia (2011). The aesthetics and narratives of national museums in China. In: Simon J. Knell/Peter Aronsson/Arne Bugge Amundsen (Eds.). National museums. New studies from around the world. London, Routledge, 302–312.

Varutti, Marzia (2014). Museums in China. The politics of representation after Mao. Suffolk, Boydell & Brewer.

Vekua, Abesalom/Lordkipanidze, David/Rightmire, Philip G./Agusti, Jordi/Ferring, Reid/Majsuradze, Givi/Mouskhelishvili, Alexander/Nioradze, Medea/León, Marcia Ponce de/Tappen, Martha/Tvalchrelidze, Merab/Zollikofer, Christoph P. E. (2002). A new skull of early *Homo* from Dmanisi, Georgia. Science 297 (5578), 85–89. https://doi.org/10.1126/science.1072953.

Vickers, Edward (2007). Museums and nationalism in contemporary China. Compare: A Journal of Comparative and International Education 37 (3), 365–382. https://doi.org/10.1080/03057920701330255.

Villmoare, Brian/Kimbel, William H./Seyoum, Chalachew/Campisano, Christopher J./DiMaggio, Erin N./Rowan, John/Braun, David R./Arrowsmith, J. Ramón/Reed, Kaye E. (2015). Paleoanthropology. Early *Homo* at 2.8 Ma from Ledi-Geraru, Afar, Ethiopia. Science 347 (6228), 1352–1355. https://doi.org/10.1126/science.aaa1343.

Walker, Alan C./Brown, Barbara/Ward, Steven C. (1993). Squamosal suture of cranium KNM-WT 17000. American Journal of Physical Anthropology 90 (4), 501–507. https://doi.org/10.1002/ajpa.1330900410.

Walker, Alan C./Leakey, Richard E. (Eds.) (1993). The Nariokotome *Homo erectus* skeleton. Cambridge, MA, Harvard University Press.

Walker, Alan C./Leakey, Richard E./Harris, J. M./Brown, Francis H. (1986). 2.5-Myr *Australopithecus boisei* from west of Lake Turkana, Kenya. Nature 322 (6079), 517–522. https://doi.org/10.1038/322517a0.

Wang, Huanwen 王焕文/Zhao, Ran 赵冉 (2022). Research on the development path of non-state-owned museums (非国有博物馆发展路径研究). China National Conditions and Strength (中国国情国力) (4), 37–40.

Wang, Shejiang 王社江/Zhang, Xiaobing 张小兵/Shen, Chen 沈辰/Hu, Songmei 胡松梅/Zhang, Xuefeng 张学峰 (2004). A study of lithic assemblages from the 1995 excavation at Longyadong Cave, Luonan basin, China (洛南花石浪龙牙洞 1995 年出土石制品研究). Acta Anthropologica Sinica (人类学学报) (2), 93–110.

Wang, Wei 王伟 (Ed.) (2013). The Early Pleistocene site of Mohui, Tiandong, Guangxi province (广西田东么会洞早更新世遗址). Beijing, Kexue chubanshe.

Wang, Wei 王伟/Tian, Feng 田丰/Mo, Jinyou 莫进尤 (2007). Recovery of *Gigantopithecus blacki* fossils from Mohui Cave in the Bubing basin, Guangxi province (广西布兵盆地么会洞发现的巨猿牙齿化石). Acta Anthropologica Sinica (人类学学报) (4), 329–343.

Wang, Wei/Potts, Richard/Hou, Yamei/Chen, Yunfa/Wu, Huaying/Yuan, Baoyin/Huang, Weiwen (2005). Early Pleistocene hominid teeth recovered in Mohui Cave in Bubing basin, Guangxi, South China. Chinese Science Bulletin (科学通报) 50 (23), 2777–2782. https://doi.org/10.1007/BF02899650.

Wang, Yahao (2021). Representing ethnic minority cultures in China. Museums, heritage, and ethnic minority groups. Thesis. Leicester, University of Leicester.

Wang, Zhixian 王志贤 (2016). Museum culture is a space-time-tunnel connecting traditional and contemporary culture (博物馆文化是串接传统文化与现代文化的时空隧道). Chinese Museum (中国博物馆) (4), 53–56.

Ward, Carol V./Kimbel, William H./Harmon, Elizabeth H./Johanson, Donald C. (2012). New postcranial fossils of *Australopithecus afarensis* from Hadar, Ethiopia (1990–2007). Journal of Human Evolution 63 (1), 1–51. https://doi.org/10.1016/j.jhevol.2011.11.012.

Ward, Carol V./Leakey, Meave G./Walker, Alan C. (1999). The new hominid species *Australopithecus anamensis*. Evolutionary Anthropology 7 (6), 197–205. https://doi.org/10.1002/(SICI)1520-6505(1999)7:6<197::AID-EVAN4>3.0.CO;2-T.

Ward, Carol V./Leakey, Meave G./Walker, Alan C. (2001). Morphology of *Australopithecus anamensis* from Kanapoi and Allia Bay, Kenya. Journal of Human Evolution 41 (4), 255–368. https://doi.org/10.1006/jhev.2001.0507.

Ward, Carol V./Plavcan, J. Michael/Manthi, F. K. (2020). New fossils of *Australopithecus anamensis* from Kanapoi, West Turkana, Kenya (2012–2015). Journal of Human Evolution 140, 102368. https://doi.org/10.1016/j.jhevol.2017.07.008.

Washburn, Sherwood L./Patterson, B. (1951). Evolutionary importance of the South African 'man-apes'. Nature 167 (4251), 650–651. https://doi.org/10.1038/167650a0.

Wei, Guangbiao/Huang, Wanbo/Chen, Shaokun/He, Cunding/Pang, Libo/Wu, Yan (2014). Paleolithic culture of Longgupo and its creators. Quaternary International 354, 154–161. https://doi.org/10.1016/j.quaint.2014.04.003.

Wei, Haibo 魏海波 (2009). New progress in the study of the Miaohoushan site in Liaoning province (辽宁庙后山遗址研究的新进展). Acta Anthropologica Sinica (人类学学报) 28 (2), 154–161.

Wei, Qiaowei/Shi, Feng (2016). State archaeology and the private museum. An integrated approach to archaeological site management for local people in China. Conservation and Management of Archaeological Sites 18 (4), 464–476. https://doi.org/10.1080/13505033.2016.1290471.

Weidenreich, Franz (1935). The *Sinanthropus* population of Choukoutien (Locality 1) with a preliminary report on new discoveries. Bulletin of the Geological Society of China 14 (4), 427–468. https://doi.org/10.1111/j.1755-6724.1935.mp14004001.x.

Weidenreich, Franz (1936). The mandibles of *Sinanthropus pekinensis*. A comparative study. Palaeontologia Sinica, Series D 7, 1–162.

Weidenreich, Franz (1937a). Reconstruction of the entire skull of an adult female individual of *Sinanthropus pekinensis*. Nature 140 (3554), 1010–1011. https://doi.org/10.1038/1401010a0.

Weidenreich, Franz (1937b). The dentition of *Sinanthoropus pekinensis*. A comparative odontography of the hominids. Palaeontologia Sinica, Series D 1, 1–180.

Weidenreich, Franz (1937c). The new discoveries of *Sinanthropus pekinensis* and their bearing on the *Sinanthropus* and *Pithecanthropus* problems. Bulletin of the Geological Society of China 16 (1), 439–470. https://doi.org/10.1111/j.1755-6724.1937.mp16001020.x.

Weidenreich, Franz (1940). Some problems dealing with ancient man. American Anthropologist 42 (3), 375–383. https://doi.org/10.1525/aa.1940.42.3.02a00010.

Weidenreich, Franz (1941). The extremity bones of *Sinanthropus pekinensis*. Palaeontologia Sinica, Series D 5, 1–150.

Weidenreich, Franz (1943). The skull of *Sinanthropus pekinensis*. A comparative study on a primitive hominid skull. Palaeontologia Sinica, Series D 10, 1–485.

Weidenreich, Franz (1944). Giant early man from Java and South China. Science 99 (2581), 479–482. https://doi.org/10.1126/science.99.2581.479.

Weidenreich, Franz (1946). Apes, giants and man. Chicago, University of Chicago Press.

Weidenreich, Franz (1951). Morphology of Solo Man. Anthropological Paper of the American Museum of Natural History 43 (3), 205–290. Available online at https://ci.nii.ac.jp/naid/10017171841/.

Weiner, Steve/Xu, Qinqi/Goldberg, Paul/Liu, Jinyi/Bar-Yosef, Ofer (1998). Evidence for the use of fire at Zhoukoudian, China. Science 281 (5374), 251–253. https://doi.org/10.1126/science.281.5374.251.

Westaway, Michael C./Durband, Arthur C./Groves, Colin/Collard, Mark (2015). Mandibular evidence supports *Homo floresiensis* as a distinct species. Proceedings of the National Academy of Sciences of the United States of America 112 (7), E604–5. https://doi.org/10.1073/pnas.1418997112.

White, Suzanna/Gowlett, John A. J./Grove, Matt (2014). The place of the Neanderthals in hominin phylogeny. Journal of Anthropological Archaeology 35, 32–50. https://doi.org/10.1016/j.jaa.2014.04.004.

White, Tim D. (2003). Paleoanthropology. Early hominids – diversity or distortion? Science 299 (5615), 1994–1997. https://doi.org/10.1126/science.1078294.

White, Tim D./Asfaw, Berhane/Beyene, Yonas/Haile-Selassie, Yohannes/Lovejoy, C. Owen/Suwa, Gen/WoldeGabriel, Giday (2009). *Ardipithecus ramidus* and the paleobiology of early hominids. Science 326 (5949), 64, 75–86. https://doi.org/10.1126/science.1175802.

White, Tim D./Asfaw, Berhane/DeGusta, David/Gilbert, Henry/Richards, Gary D./Suwa, Gen/Howell, F. Clark (2003). Pleistocene *Homo sapiens* from Middle Awash, Ethiopia. Nature 423 (6941), 742–747. https://doi.org/10.1038/nature01669.

White, Tim D./Johanson, Donald C./Kimbel, William H. (1981). *Australopithecus africanus*. Its phyletic position reconsidered. South African Journal of Science (77), 445–470. https://doi.org/10.1007/978-1-4684-8854-8_29.

White, Tim D./Lovejoy, C. Owen/Asfaw, Berhane/Carlson, Joshua P./Suwa, Gen (2015). Neither chimpanzee nor human, *Ardipithecus* reveals the surprising ancestry of both. Proceedings of the National Academy of Sciences of the United States of America 112 (16), 4877–4884. https://doi.org/10.1073/pnas.1403659111.

White, Tim D./Suwa, Gen/Asfaw, Berhane (1994). *Australopithecus ramidus*, a new species of early hominid from Aramis, Ethiopia. Nature 371 (6495), 306–312. https://doi.org/10.1038/371306a0.

White, Tim D./Suwa, Gen/Asfaw, Berhane (1995). *Australopithecus ramidus*, a new species of early hominid from Aramis, Ethiopia. Nature 375 (6526), 88. https://doi.org/10.1038/375088a0.

White, Tim D./Suwa, Gen/Hart, William K./Walter, Robert C./WoldeGabriel, Giday/Heinzelin, Jean de/Clark, J. Desmond/Asfaw, Berhane/Vrba, Elisabeth S. (1993). New discoveries of *Australopithecus* at Maka in Ethiopia. Nature 366 (6452), 261–265. https://doi.org/10.1038/366261a0.

White, Tim D./WoldeGabriel, Giday/Asfaw, Berhane/Ambrose, Stan/Beyene, Yonas/Bernor, Raymond L./Boisserie, Jean-Renaud/Currie, Brian/Gilbert, Henry/Haile-Selassie, Yohannes/Hart, William K./Hlusko, Leslea J./Howell, F. Clark/Kono, Reiko T./Lehmann, Thomas/Louchart, Antoine/Lovejoy, C. Owen/Renne, Paul R./Saegusa, Haruo/Vrba, Elisabeth S./Wesselman, Hank/Suwa, Gen (2006). Asa Issie, Aramis and the origin of *Australopithecus*. Nature 440 (7086), 883–889. https://doi.org/10.1038/nature04629.

Widianto, Harry/Grimaud-Hervé, Dominique (1993). Le crâne de Ngawi. Les Dossiers d'Archéologie 184, 36.

Williams, Scott A./DeSilva, Jeremy M. (2018). Special issue. *Australopithecus sediba* . PaleoAnthropology, 49-432. Available online at https://paleoanthro.net/journal/volumes/2018/.

Wood, Bernard A. (1991). Hominid cranial remains. Oxford, Clarendon Press.

Wood, Bernard A. (1992). Origin and evolution of the genus *Homo*. Nature 355 (6363), 783–790. https://doi.org/10.1038/355783a0.

Wood, Bernard A. (1994). Taxonomy and evolutionary relationships of *Homo erectus*. Courier Forschungsinstitut Senckenberg 171, 159–165. Available online at https://ci.nii.ac.jp/naid/10029567809/.

Wood, Bernard A./Boyle, Eve K. (2016). Hominin taxic diversity. Fact or fantasy? American Journal of Physical Anthropology 159 (Suppl 61), S37–78. https://doi.org/10.1002/ajpa.22902.

Wood, Bernard A./Chamberlain, Andrew T. (1987). The nature and affinities of the 'robust' Australopithecines. A review. Journal of Human Evolution 16 (7-8), 625–641. https://doi.org/10.1016/0047-2484(87)90017-0.

Wood, Bernard A./Constantino, Paul (2007). *Paranthropus boisei*. Fifty years of evidence and analysis. Yearbook of Physical Anthropology (50), 106–132. https://doi.org/10.1002/ajpa.20732.

Wood, Bernard A./Harrison, Terry (2011). The evolutionary context of the first hominins. Nature 470 (7334), 347–352. https://doi.org/10.1038/nature09709.

Wood, Bernard A./Schroer, Kes (2017). *Paranthropus*. Where do things stand? In: Assaf Marom/Erella Hovers (Eds.). Human paleontology and prehistory. Contributions in honor of Yoel Rak. Cham, Springer, 95–107.

Wood, Bernard A./Turner, Alan (1995). Out of Africa and into Asia. Nature 378 (6554), 239–240. https://doi.org/10.1038/378239a0.

Woodward, Arthur Smith (1921). A new cave man from Rhodesia, South Africa. Nature 108 (2716), 371–372. https://doi.org/10.1038/108371a0.

Wu, Maolin 吴茂霖 (1983). *Homo erectus* fossils found in 1981 at Hexian, Anhui province (1981 年发现的安徽和县猿人化石). Acta Anthropologica Sinica (人类学学报) (2), 109–115, 205.

Wu, Rukang 吴汝康 (1964). Mandible of ape-man discovered at Lantian, Shaanxi province (陕西蓝田发现的猿人下镇骨化石). Vertebrata PalAsiatica (古脊椎动物与古人类) (1), 1–17.

Wu, Rukang 吴汝康 (1965). Skull cap of ape-man found at Gongwangling, Lantian, Shaanxi province (陕西蓝田公王岭发现猿人头盖骨). Vertebrata PalAsiatica (古脊椎动物与古人类) (1), 123/124.

Wu, Rukang 吴汝康/Chao, Yukui 超育奎 (1959). Newly discovered *Sinanthropus pekinensis* mandible from Zhoukoudian (周口店新发现的中国猿人下镇骨). Vertebrata PalAsiatica (古脊椎动物与古人类) 1 (4), 155–158.

Wu, Rukang 吴汝康/Dong, Xingren 董兴仁 (1980). Fossil ape-man teeth from Yunxian, Hubei province (湖北郧县猿人牙一齿化石). Vertebrata PalAsiatica (古脊椎动物与古人类) (2), 142–149, 187.

Wu, Rukang 吴汝康/Dong, Xingren 董兴仁 (1982). A preliminary study on *Homo erectus* remains from Hexian, Anhui province (安徽和县猿人化石的初步研究). Acta Anthropologica Sinica (人类学学报) (1), 2–13, 101–102.

Wu, Rukang 吴汝康/Jia, Lanpo 贾兰坡 (1954). New discoveries of *Sinanthropus pekinensis* at Zhoukoudian (周口店新发现的中国猿人化石). Acta Palaeontologica Sinica (古生物学报) 2 (3), 267–288, 348–354.

Wu, Rukang 吴汝康/Ren, Mei'e 任美鄂/Zhu, Xianmo 朱显谟/Yang, Zigeng 楊,子賡/Hu, Changkang 胡长康/Kong, Zhaochen 孔昭宸/Zhao, Shusen 赵树森 (1985). Multidisciplinary research at the Peking Man site (北京猿人遗址综合研究). Beijing, Kexue chubanshe.

Wu, Xianzhu 武仙竹/Pei, Shuwen 裴树文/Wu, Xiujie 吴秀杰/Qu, Shengming 屈胜明/Chen, Minghui 陈明惠/Hu, Qin 胡勤/Liu, Wu 刘武 (2009). A preliminary study of the Bailong Cave paleoanthropological site in Yunxi county, Hubei province (湖北郧西白龙洞古人类遗址初步研究). Acta Anthropologica Sinica (人类学学报) (1), 1–15.

Wu, Xinzhi 吴新智 (2000). Lunggupo hominoid manible belongs to ape (巫山龙骨坡似人下颌属于猿类). Acta Anthropologica Sinica (人类学学报) (1), 1–10.

Wu, Xinzhi 吴新智/Yuan, Zhenxin 袁振新/Han, Defen 葬德芬/Qi, Tao 齐陶/Lu, Qingwu 陆庆五 (1966). Annual excavation report of Gongwangling ape-man site in Lantian, Shaanxi province (陕西蓝田 公王岭猿人地点 年发掘报告). Vertebrata PalAsiatica (古脊椎动物与古人类) 10 (1).

Wu, Xiujie/Holloway, Ralph L./Schepartz, Lynne A./Xing, Song (2011). A new brain endocast of *Homo erectus* from Hulu Cave, Nanjing, China. American Journal of Physical Anthropology 145 (3), 452–460. https://doi.org/10.1002/ajpa.21527.

Wu, Xiujie/Pei, Shuwen/Cai, Yanjun/Tong, Haowen/Li, Qiang/Dong, Zhe/Sheng, Jinchao/Jin, Zetian/Ma, Dongdong/Xing, Song/Li, Xiaoli/Cheng, Xing/Cheng, Hai/La Torre, Ignacio de/Edwards, R. Lawrence/Gong, Xicheng/An, Zhisheng/Trinkaus, Erik/Liu, Wu (2019). Archaic human remains from Hualongdong, China, and Middle Pleistocene human continuity and variation. Proceedings of the National Academy of Sciences of the United States of America 116 (20), 9820–9824. https://doi.org/10.1073/pnas.1902396116.

Xiang, Jiang 湘江 (1977). Fossil ape-man teeth discovered in Yunxi, Hubei province (湖北郧西发现猿人牙齿化石). Vertebrata PalAsiatica (古脊椎动物与古人类) (2), 173.

Xiang, Longyuan 项隆元/Wang, Rong 汪溶 (2017). Discussing scientific research in museums (论博物馆的科学研究). Chinese Museum (中国博物馆) (4), 44–50.

Xie, Xiaoting 谢晓婷 (2022). Contribution of and reflection on museum education in a learning society (学习型社会中博物馆教育的贡献与思考). Taking the 'Museum School' of Suzhou Museum as an example (以苏州博物馆'博物馆学校'为例). Chinese Museum (中国博物馆) (3), 93–96.

Xing, Song/Martinón-Torres, María/Deng, Chenglong/Shao, Qingfeng/Wang, Yuan/Luo, Yunbing/Zhou, Xingming/Pan, Lei/Ge, Junyi/Bermúdez de Castro, José-María/Liu, Wu (2021a). Early Pleistocene hominin teeth from Meipu, southern China. Journal of Human Evolution 151, 102924. https://doi.org/10.1016/j.jhevol.2020.102924.

Xing, Song/O'Hara, Mackie C./Guatelli-Steinberg, Debbie/Ge, Junyi/Liu, Wu (2017). Dental scratches and handedness in East Asian Early Pleistocene hominins. International Journal of Osteoarchaeology 27 (6), 937–946. https://doi.org/10.1002/oa.2601.

Xing, Song/Sun, Chengkai/Martinón-Torres, María/Bermúdez de Castro, José-María/Han, Fei/Zhang, Yingqi/Liu, Wu (2016). Hominin teeth from the Middle Pleistocene site of Yiyuan, Eastern China. Journal of Human Evolution 95, 33–54. https://doi.org/10.1016/j.jhevol.2016.03.004.

Xing, Song/Wu, Xiujie/Liu, Wu/Pei, Shuwen/Cai, Yanjun/Tong, Haowen/Trinkaus, Erik (2021b). Middle Pleistocene human femoral diaphyses from Hualongdong, Anhui province, China. American Journal of Physical Anthropology 174 (2), 285–298. https://doi.org/10.1002/ajpa.24121.

Xu, Chunhua 许春华 (1978). The excavation of the *Homo erectus* site at Meipu, Yunxian, Hubei province (湖北郧县猿人化石地点的发掘). In: Institute of Vertebrate Palaeontology and Palaeoanthropology 古脊椎动物与古人类研究所 (Ed.). Proceedings of palaeoanthropology, Institute of Vertebrate Palaeontology and Palaeoanthropology, Chinese Academy of Sciences (中国科学院古脊 椎动物与古人类研究所古人类论文集). Beijing, Kexue chubanshe, 175–179.

Xu, Wei 徐伟/Yang, Qianmin 杨千民/Zuo, Cailong 左彩龙 (2017). On the acquisition and protection of collections in county-level museums (浅谈县级博物馆的藏品征集与保护). Chinese Museum (中国博物馆) (4), 55–59.

Xu, Xiaoxiao 许潇笑 (2018). From 'knowledge authority' to 'producer of public knowledge' (从'知识权威'到'公共知识生产体'). Reflections on the 'Museum Definition' (关于'博物馆定义'的思考). Chinese Museum (中国博物馆) (4), 17–22.

Xue, Xiangxu 薛祥煦 (1987). Human fossil tooth from Luonan, Shaanxi province, and its geological age (陕西洛南人牙化石及其地质时代). Acta Anthropologica Sinica (人类学学报) (4), 284–288.

Xue, Xiangxu 薛祥煦/Li, Chuanling 李传令/Deng, Tao 邓涛/Chen, Minquan 陈民权/Zhang, Xuefeng 张学峰 (1999). The characters, geological age, and the ecological environment of Longyadong fauna, Luonan, Shaanxi province (陕西洛南龙牙洞动物群的特点、时代及环境). Vertebrata PalAsiatica (古脊椎动物与古人类) (2), 309–325.

Yang, Bin 杨斌 (2020a). Discussion on and practice of the museum opening security service concept in the new era (新时期博物馆开放安全服务理念探讨与实践). Taking Nanjing Museum as an example (以南京博物院为例). Chinese Museum (中国博物馆) (1), 106–110.

Yang, Jin 杨瑾 (2019). Some insights into globalisation and the redefinition of museums (关于全球化与博物馆再定义的几点认识). Chinese Museum (中国博物馆) (2), 34–39.

Yang, Qi 杨畦 (2021). Internal and external training (内外兼修). Breaking through the educational predicament of small and medium-sized museums (突破中小型博物馆教育工作困境). Chinese Museum (中国博物馆) (2), 81–85.

Yang, Qiu 杨秋 (2015). A new interpretation of 'presence' (新的'在场'阐释). Building the relationship between museums and society (构建博物馆与社会的关联). Chinese Museum (中国博物馆) (3), 6–11.

Yang, Xiaolin 杨晓琳 (2020b). The stage of development, problems, and countermeasures of non-state-owned museums (非国有博物馆发展现状、问题与对策). China Economist (经济师) (3), 33–35.

Yin, Kai 尹凯 (2015). Reflections on museum education (博物馆教育的反思). Origin, development, evolution and prospects (诞生、发展、演变及前景). Chinese Museum (中国博物馆) (2), 1–11.

Yin, Robert K. (2018). Case study research and applications. Design and methods. Los Angeles/London/New Dehli/Singapore/Washington DC/Melbourne, Sage Publications.

Yu, Jihe 于奇赫 (2018). Research on the dissemination of digital resources and the protection of intellectual property rights in Chinese museums (中国博物馆数字资源传播与知识产权保护研究). Chinese Museum (中国博物馆) (1), 29–37.

Zaim, Yahdi/Ciochon, Russell L./Polanski, Joshua M./Grine, Frederick E./Bettis, E. Arthur/Rizal, Yan/Franciscus, Robert G./Larick, Roy R./Heizler, Matthew/Aswan/Eaves, K. Lindsay/Marsh, Hannah E. (2011). New 1.5 million-year-old *Homo erectus* maxilla from Sangiran (central Java, Indonesia). Journal of Human Evolution 61 (4), 363–376. https://doi.org/10.1016/j.jhevol.2011.04.009.

Zhang, Dongju/Xia, Huan/Cheng, Ting/Chen, Fahu (2020). New portraits of the Denisovans. Science Bulletin 65 (1), 1–3. https://doi.org/10.1016/j.scib.2019.10.013.

Zhang, Fenghua/Courty, Pascal (2020). The China museum boom. Soft power and cultural nationalism. International Journal of Cultural Policy 1 (5), 1–20. https://doi.org/10.1080/10286632.2019.1709058.

Zhang, Fenghua/Courty, Pascal (2022). The China museum visit boom. Government or demand driven? Journal of Cultural Economics 46 (1), 135–163. https://doi.org/10.1007/s10824-021-09410-x.

Zhang, Jianglong 张江龙 (2017a). Research on digital display technologies in museums and virtual exhibitions (博物馆数字化展示技术及虚拟展览研究). Chinese Museum (中国博物馆) (4), 88–92.

Zhang, Li 张丽 (2015). Exploring the moral education function of museums (博物馆的道德教育功能探析). Chinese Museum (中国博物馆) (2), 70–79.

Zhang, Li 张丽/Shen, Guanjun 沈冠军/Fu, Renyi 傅仁义/Zhao, Jianxin (2007). Preliminary results of uranium-series dating at the Miaohoushan site in Benxi, Liaoning province (辽宁本溪庙后山遗址铀系测年初步结果). Southeastern Culture (东南文化) (3), 54257.

Zhang, Shunxi 张舜玺 (2019a). Research on the mechanism reform of the management system of state-owned museums (国有博物馆经营体制机制改革研究). Chinese Museum (中国博物馆) (4), 16–20.

Zhang, Sitong 张思桐 (2017b). Exploring ways to enhance the communication benefits of information-oriented exhibitions (信息定位型展览传播效益强化途径探索). Chinese Museum (中国博物馆) (4), 16–21.

Zhang, Xuan 张玄 (2019b). Hualongdong site (华龙洞遗址). New evidence for human evolution in the Middle Pleistocene in China (中国中更新世人类演化新证据). Science (科学) 71 (5), 20–23.

Zhang, Yan/Guo, Zhengtang/Deng, Chenglong/Zhang, Shuangquan/Wu, Haibin/Zhang, Chunxia/Ge, Junyi/Zhao, De'ai/Li, Qin/Song, Yang/Zhu, Rixiang (2014). The use of fire at Zhoukoudian. Evidence from magnetic susceptibility and color measurements. Chinese Science Bulletin (科学通报) 59 (10), 1013–1020. https://doi.org/10.1007/s11434-013-0111-7.

Zhang, Yinyun 张银运 (1984). The 'Australopithecus' of western Hubei province and some Early Pleistocene hominids of Indonesia (娜西'南方古猿'和印尼早更新世若干人类化石). Acta Anthropologica Sinica (人类学学报) (2), 85–92.

Zhang, Yinyun 张银运 (1998). Fossil human crania from Yunxian, China. Morphological comparison with *Homo erectus* crania from Zhoukoudian. Human Evolution 13 (1), 45–48. https://doi.org/10.1007/BF02439367.

Zhao, Huijun 赵慧君 (2016). Acquisition, disposal, and return (取得、处置与返还). Exploring the ethics of contemporary museum collections (当代博物馆收藏伦理的探讨). Chinese Museum (中国博物馆) (4), 98–104.

Zhao, Jianxin/Hu, Kai/Collerson, Kenneth D./Xu, Hankui (2001). Thermal ionization mass spectrometry U-series dating of a hominid site near Nanjing, China. Geology 29 (1), 27–30. https://doi.org/10.1130/0091-7613(2001)029<0027:TIMSUS>2.0.CO;2.

Zheng, Longting 郑龙亭/Huang, Wanbo 黄万波 (Eds.) (2001). Hexian hominin site (和县人遗址). Beijing, Zhonghua shuju.

Zheng, Shaohua 郑绍华 (Ed.) (2004). Jianshi hominin site (建始人遗址). Beijing, Kexue chubanshe.

Zheng, Yi 郑奕 (2015). Research on educational activities in museums (博物馆教育活动研究). Shanghai, Fudan daxue chubanshe.

Zheng, Yi 郑奕 (2016). The past, present, and future of museum education development (中国博物馆教育发展的昨天、今天与明天). Chinese Museum (中国博物馆) (1), 99–106.

Zheng, Yi 郑奕 (2017). The starting point of museum education (博物馆教育的出发点). Creating a 'joyful' experience (创设让人'快乐'的体验). Chinese Museum (中国博物馆) (4), 1–6.

Zhong, Maohua/Shi, Congling/Gao, Xing/Wu, Xinzhi/Chen, Fuyou/Zhang, Shuangquan/Zhang, Xingkai/Olsen, John W. (2014). On the possible use of fire by *Homo erectus* at Zhoukoudian, China. Chinese Science Bulletin (科学通报) 59 (3), 335–343. https://doi.org/10.1007/s11434-013-0061-0.

Zhou, Guoxing 周国兴 (1998). A study of fossil hominid and cultural remains in the Yuanmou basin (元谋盆地人类化石及文化遗存的研究). In: Editorial Committee 文编委员会 (Ed.). Collected works for the 30th anniversary of the 'Yuanmou Man' discovery and the International Conference on Palaeoanthropological Studies ('元谋人'发现三十周年纪念暨古人类国际学术研讨会文集). Kunming, Yunnan keji chubanshe, 27–29.

Zhou, Molan 周墨兰 (2018). Research on the construction of museum displays and exhibition regulations (博物馆陈列展览法规建设研究). Museum Research (博物馆研究) (3), 3–8.

Zhou, Rui 周睿/Yuan, Huaijun 袁怀宇/Huang, Hua 黄华 (2021). Research on the design and development of cultural and creative food products in museums (博物馆的美食文创设计开发研究). Chinese Museum (中国博物馆) (2), 40–45.

Zhou, Yao 周瑶 (2020). The effective combination of museum education and school education from the perspective of learning theory (学习理论视角下看博物馆教育与学校教育的有效结合). Chinese Museum (中国博物馆) (4), 22–26.

Zhu, Cheng/Zhang, Yun (2000). Paleo-environmental reconstruction during the period of Nanjing *Homo erectus*. Chinese Geographical Science 10 (3), 209–217. https://doi.org/10.1007/s11769-000-0003-z.

Zhu, Rixiang/Potts, Richard/Pan, Yongxin/Yao, Haitao/Lü, Lianqing/Zhao, Xiang/Gao, Xing/Chen, L. W./Gao, Feng/Deng, Changzhou (2008). Early evidence of the genus *Homo* in East Asia. Journal of Human Evolution 55 (6), 1075–1085. https://doi.org/10.1016/j.jhevol.2008.08.005.

Zhu, Zhaoyu/Dennell, Robin W./Huang, Weiwen/Wu, Yi/Qiu, Shifan/Yang, Shixia/Rao, Zhiguo/Hou, Yamei/Xie, Jiubing/Han, Jiangwei/Ouyang, Tingping (2018). Hominin occupation of the Chinese Loess Plateau since about 2.1 million years ago. Nature 559 (7715), 608–612. https://doi.org/10.1038/s41586-018-0299-4.

Zhu, Zhaoyu/Dennell, Robin W./Huang, Weiwen/Wu, Yi/Rao, Zhiguo/Qiu, Shifan/Xie, Jiubing/Liu, Wu/Fu, Shu-Qing/Han, Jiangwei/Zhou, Hou-Yun/Ou Yang, Ting-Ping/Li, Hua-Mei (2015). New dating of the *Homo erectus* cranium from Lantian (Gongwangling), China. Journal of Human Evolution 78, 144–157. https://doi.org/10.1016/j.jhevol.2014.10.001.

Zollikofer, Christoph P. E./Ponce de León, Marcia S./Lieberman, Daniel E./Guy, Franck/Pilbeam, David R./Likius, Andossa/Mackaye, Hassane-Taïsso/Vignaud, Patrick/Brunet, Michel (2005). Virtual cranial reconstruction of *Sahelanthropus tchadensis*. Nature 434 (7034), 755–759. https://doi.org/10.1038/nature03397.

Zollikofer, Christoph P. E./Ponce de León, Marcia S./Margvelashvili, Ann/Rightmire, Philip G./Lordkipanidze, David (2014). Response to comment on "A complete skull from Dmanisi, Georgia, and the evolutionary biology of early *Homo*". Science 344 (6182), 360. https://doi.org/10.1126/science.1250081.