

# Index

Index: references to figures are in **bold**; to tables in *italics*

- A Man without Words* (Schaller) 142  
adaptations  
bipedality 81  
common misunderstandings 152  
facilitating language 139–143  
Lamarckist interpretation 1  
natural selection 3  
to savanna/open grasslands 100–105  
Afar region, Ethiopia 57, 103  
African exodus 64–67, 73, 105–107, 137,  
    143–147  
*African Genesis* (Ardrey) 46  
age of fossils *see* dating fossils  
alleles 4–5  
Americas, early humans 146–147  
anatomists, paleoanthropologists as 46–47  
Anthropocene 16–17  
apes, cognition/brain development 93  
'archaic' *Homo sapiens* 130–132, 132  
*Ardipithecus kadabba* 61, **79**, 84  
*Ardipithecus ramidus*  
    development of bipedality 84  
    fossils 57–62, **58**, **79**  
    reconstructed skeleton 85  
Ardrey, Robert 46  
argon dating, fossils 22, **24**  
art, representational *see* cave art  
artificial shelters, *Homo heidelbergensis*  
    109, 110  
Asia, early humans 145–146  
Aurignacian period, Palaeolithic 49  
*Australopithecus aethiopicus* 57  
*Australopithecus afarensis*  
    development of bipedality 86, 87–89  
    fossils 57–62, **58**, **79**  
    Lucy 57, **58**, 87–89  
    sexual dimorphism 90  
*Australopithecus africanus* 41–46, 42,  
    45, **50**  
*Australopithecus anamensis*  
    development of bipedality 85–86, 87  
    fossils 62, 63, **79**  
*Australopithecus bahrelghazali* 64, **79**  
*Australopithecus deyiremeda* 62, **79**  
*Australopithecus garhi* 61, **79**, 91  
*Australopithecus prometheus* 46, **50**  
*Australopithecus ramidus* *see*  
    *Ardipithecus ramidus*  
*Australopithecus sediba* 69, **79**, 95  
australopiths 47  
    behavior 89–92  
    bipedality 87–89

Cambridge University Press &amp; Assessment

978-1-009-09875-5 — Understanding Human Evolution

Ian Tattersall

Index

[More Information](#)

- cognition/brain development 93  
*see also individual species and see*  
*Paranthropus*  
Awash *see Middle Awash area*
- baboons 89  
behavior  
    australopiths 89–92  
    Neanderthals 117–123, 124  
biological definition of species 5–7, 8  
bipedality xxi, 80–83  
    australopiths 87–92  
    cognition/brain development 91–93  
    common misunderstandings 153  
    dating 60, 64  
    early hominins displaying 83–87, 85  
    fossil discoveries 60, 64  
    Nariokotome Boy 100  
    predation pressures 89–91, 90  
birth, large-headed babies 98–99  
Black, Davidson 43  
Blombos Cave, South Africa 135, 136  
bonobos 89  
Border Cave, South Africa 133  
Boskop, South Africa 133  
Boule, Marcellin 39–41, 49  
Bouri Peninsula, Ethiopia 61  
Brace, Loring 73  
brain size, and intelligence 105,  
    111–112, 154; *see also cognition*  
Brocchi, Giambattista 1, 8  
Broom, Robert 44–46  
burial practices  
    early humans 135–136  
    Neanderthals 119  
Busk, George 36  
butchery, fossil evidence 46, 61, 91–92,  
    100–102
- calculus, dental 28  
Cann, Rebecca 73
- cannibalism  
*Homo antecessor* 71  
Neanderthals 118
- carbon isotopes, dietary assessment  
    27–28
- Carboniferous period 14  
caring behavior, Neanderthals 118–119  
carnivory, hominins 28–29, 92, 102  
cave art  
    early humans 135–139, 136, 138  
    Neanderthals 124–125, 126, 127  
Cenozoic era 14, 20–21  
Chad, West Africa 63, 64, 79, 83  
chance, role in evolution 4–5, 8, 9, 10  
chimpanzees 9  
    behavior 89  
    genomics 73, 76  
    hunting 92  
cladistics 10–11; *see also phylogenetic*  
    *systematics*  
Clark, Desmond 60  
classification 5; *see also phylogenetic*  
    *systematics*  
climate change  
    as driver of evolution 8, 10, 24–27, 149  
    history of life on Earth 16  
    human responses 134  
    Neanderthal responses 122–123  
Cloninger, Robert 76  
clothing, Neanderthals 122  
cognition  
    common misunderstandings 154  
    development of bipedality 91–93  
    early hominins 91–93, 98–99,  
        102, 105  
    early humans 143  
    *Homo heidelbergensis* 111–112  
    Neanderthals 123–128  
    *see also symbolic thinking skills*  
cognitive dissonance 148–149  
Collard, Mark 66–67, 94

## 176 INDEX

- common ancestry, species 2, 11, 71, 116  
competitive success, humans 116–117, 137, 143–147  
computerized axial tomography (CT) scanning 29  
Contrebardiers Cave, Morocco 130  
cooking/fire use  
  early hominins 103–105  
  *Homo heidelbergensis* 109, 110  
  Neanderthals 122  
  Peking Man 43  
cosmogenic nuclide dating, fossils 23, 24  
Cretaceous period 15  
Cro-Magnon Man 39, 41  
cyanobacteria 13
- Danuvius*, development of bipedality 80–81, 83  
Dart, Raymond 41–43, 45, 46  
Darwin, Charles and Darwinism 1–3, 34–36  
  on bipedality 81–82  
  *Descent of Man* 36, 81–82  
  *Origin of Species by Means of Natural Selection* 34  
dating fossils 52–53  
  development of bipedality 60, 64  
  technological developments 20–24, 24  
Dawson, Charles 40–41  
de Lumley, Marie-Antoinette 65  
Denisovans/Denisova hominins 74–75, 77, 113  
  interbreeding with *Homo sapiens* 116, 144  
dental calculus, phytoliths in 28  
*Descent of Man* (Darwin) 36, 81–82  
descent with modification concept xx, 2, 151
- development/growth trajectory, Neanderthals 115  
Devonian period 13–14  
diet  
  carnivory 28–29, 92, 102  
  Neanderthals 120–122  
  technological assessment 27–29  
Dikika, Ethiopia 61, 88, 91  
dinosaurs, history of life on Earth 15  
Dmanisi, Republic of Georgia 64–67, 105–106  
Dmanisi Man (*Homo erectus georgicus*) 66  
DNA analysis  
  classification/taxonomy 12  
  exodus from Africa 143–147  
  rapid DNA sequencing 32–33  
Dobzhansky, Theodosius 5, 47  
dogma  
  Modern Evolutionary Synthesis 6, 7–8  
  systematics 10  
Dragon Man 108  
drift, genetic 4  
Dubois, Eugene 37–39
- Earth, history of life on 12–17, 14  
East Africa, fossil discoveries 51–57, 52, 54  
El Sidrón, Spain 117–118, 120–122, 127  
Eldredge, Niles 7–8  
electron spin resonance (ESR) fossil dating 22, 24  
Eliye Springs, Tanzania 130  
endurance hunting, hominins 103  
environmental factors, in evolution 4, 10  
*Eoanthropus dawsoni* 40–41, 50  
Eocene epoch 15  
episodic model of evolution see punctuated equilibria  
erect posture, hominins see bipedality  
Ethiopia

- early humans 133  
development of bipedality 86  
fossil discoveries 57–64  
eukaryotic cells 13  
Europe, early humans 144–145  
evolution xx  
    biological definition of species 5–7, 8  
    common misunderstandings 151–153  
    genetics and heredity of  
        characteristics 3–7  
    history of life on Earth 12–17, 14  
    phylogenetic systematics 10–12  
    rise of Darwinism 1–3  
    see also gradualist model; Modern  
        Evolutionary Synthesis; punctuated  
        equilibria  
exodus from Africa see African exodus
- Falconer, Hugh 7, 36  
families, taxonomic 5  
fats, dietary 92  
finches, Galapagos archipelago 6  
fire see cooking/fire use  
First Family, fossil discoveries 57  
Fish Hoek, South Africa 133  
Fisher, R. A. 4, 5  
Florisbad, South Africa 130  
forward planning 91–92; see also  
    cognition  
fossil record, discoveries and  
    interpretations 6, 8  
*Ardipithecus ramidus* 57–62, 58  
*Australopithecus africanus* 41–46,  
    42, 45  
*Australopithecus afarensis* 57–62, 58  
*Australopithecus prometheus* 46  
common misunderstandings 151  
early discoveries/interpretations  
    xx–xxi, 50  
early twentieth century 39–41  
*Eoanthropus dawsoni* 40–41  
exodus from Africa 64–67, 66  
*Homo antecessor* 71, 112  
*Homo erectus* 38  
*Homo ergaster* 55  
*Homo georgicus* 64–67  
*Homo floresiensis* 67–71, 68  
*Homo habilis* 51–57, 52, 54  
*Homo heidelbergensis* 71–72  
*Homo luzonensis* 69  
*Homo naledi* 68, 69–71  
*Homo neanderthalis* 34–37, 35, 39,  
    39–40, 48–49, 73–77, 132–133  
*Homo rhodesiensis* 59  
*Homo rudolfensis* 62–63, 67  
*Kenyanthropus platyops* 63  
later discoveries/interpretations  
    xx–xxi, 79  
Modern Evolutionary Synthesis  
    47–48  
*Orrorin tugenensis* 62–64, 63  
phylogenetic systematics 11, 46–49  
*Pithecanthropus erectus* 37–39  
*Plesianthropus transvaalensis* 44–46  
*Sahelanthropus tchadensis* 62–64, 63  
*Sinanthropus pekinensis* 43  
stromatolites 13  
technological developments 18–20  
*Telanthropus capensis* 46  
virtual reconstructions of fossils 29–30  
*Zinjanthropus boisei* 51–57, 52, 54  
see also dating fossils
- Galapagos archipelago, finches 6  
gene activity/regulation  
    early humans 134  
human–chimpanzee differences 73  
human–Neanderthal differences 74  
genera, taxonomy of living things 5  
genes 4, 31  
genetic bottlenecks, early humans 134  
genetic drift 4

## 178 INDEX

- genetics and heredity of characteristics  
acquired characteristics  
(Lamarckism) 1  
chimpanzee 73  
Mendelian inheritance 3–4  
Modern Evolutionary Synthesis 3–7  
genomics  
exodus from Africa 143–147  
*Neanderthals* 73–77  
technological developments 30–33  
geological eras 12–17, 14  
glaciation see Pleistocene epoch  
gorilla 9  
gradualist model, evolution 4, 5, 8, 39  
common misunderstandings 152–153  
fossil discoveries 62  
hominins 47–48  
see also Modern Evolutionary Synthesis  
Gravettian culture 37, 49, 145  
Gregory, William King 45  
growth trajectory, Neanderthals 115  
  
Hadar, Ethiopia 57, 58, 60, 61, 62  
Haile-Selassie, Yohannes 62  
Hart, Donna 89  
Hellman, Milo 45  
Hennig, Willi 10–11  
heredity see genetics and heredity of  
characteristics  
Herto, Ethiopia 61, 132  
hobbit (*Homo floresiensis*) 67–71, 68, **79**  
Holocene epoch 16–17  
Homininae xxi  
adaptations to savanna/open  
grasslands 100–105  
behaviors 89–92  
bipedality 81, 83–87, 85  
climate change assessment 25–27  
cognition 91–93, 98–99, 102, 105  
cooking/fire use 103–105  
  
distribution of species through time  
through time x  
earliest hominin 83–87, 85, 94–96  
emergence of 20–21  
evolution in parallel 73  
exodus from Africa 64–67, 105–107,  
137, 143–147  
history of life on Earth 16  
hunting 102–103  
overheating issues 99–100  
predation of 89–91, 90  
scavenging 102  
as single species theory 44  
toolmaking/tool-use 91–92, 100–102,  
101  
see also individual species by name  
*Homo antecessor* 71, **79**, 112  
*Homo erectus*  
confusion with similar species 47, 55,  
56, 61, 65  
descendants 68–69  
exodus from Africa 105–107  
fossil discoveries 38, **50**  
search for the earliest *Homo* 95–96  
see also *Pithecanthropus erectus*  
*Homo erectus ergaster georgicus*  
(Dmanisi Man) 66  
*Homo ergaster*  
adaptations to savanna/open  
grasslands 100–105  
as contender for earliest hominid  
96, 98  
cooking/fire use 103–105  
exodus from Africa 105–107  
fossil discoveries 55, **79**  
hunting 102–103  
Nariokotome Boy 96, 97, 98–100  
toolmaking/tool-use 100–102, **101**  
*Homo floresiensis* (hobbit) 67–71, 68,  
**79**

- Homo* genus 16, 17, 95; *see also individual species*
- Homo georgicus* 64–67, **79**
- Homo habilis*  
confusion with similar species 62, 67  
fossil discoveries 51–57, 52, 54, **79**  
search for the earliest *Homo* 94
- Homo heidelbergensis* xxi, 41, 108–112, 109  
artificial shelters/hut-making 109, 110  
cognition 111–112  
fossil discoveries 72, **79**  
relationship to modern humans 129  
toolmaking/tool-use 109, 110–111, 111
- Homo luzonensis* 69, **79**
- Homo naledi* 68, 69–71, **79**
- Homo neanderthalensis* xxi, 112–117  
behavior 117–123, 124  
burial practices 119  
clothing 122  
cognition 123–128, 154  
common misunderstandings 154  
comparison with humans 129, 131  
competition with humans 116–117, 137, 143  
cooking/fire use 122  
development/growth trajectory 115  
diet 28–29, 120–122  
DNA sequencing 32  
fossils 34–37, 35, 39, 39–40, 48–49, **50**, 73–77, 132–133  
genomics 73–77  
hunting 120–121  
interbreeding with humans 115–116, 144  
language 126–127  
lifestyle and social groups 117–123  
Mousterian culture 49
- phylogenetic relationship to humans 73–77
- Sima* people 113, 113–114  
skull/facial features 113, 114–115, **115**  
toolmaking/tool-use 114, 119–120
- Homo rhodesiensis* 59, **79**
- Homo rudolfensis* 62–63, 67
- Homo sapiens* xxi, 17, 148–150  
African exodus 64–67, 73, 105–107, 137, 143–147  
archaic specimens 130–132, 132  
cave art 135–139, 136, 138  
comparison with Neanderthals 129, 131  
competitive success 116–117, 137, 143–147  
DNA sequencing 32  
evolution 10  
future of 149–150  
interbreeding with Neanderthals 115–116, 144  
language 139–143  
modern skeleton/anatomy 13, 129, 130  
origins and fossil discoveries xix, 129–134  
phylogenetic relationship to Neanderthals 73–77  
symbolic thought 111–112, 123, 135–139
- Homo sapiens idaltu* 61
- Homo steinheimensis* 72, **79**, 113, 114
- Homo transvaalensis* 47; *see also australopiths*
- Howell, F. Clark 48–49, 55
- Hrdlička, Aleš 41
- human condition 148–149; *see also Homo sapiens*
- human exceptionalism idea 35
- hunting  
chimpanzees 92

## 180 INDEX

- hunting (cont.)  
    *Homo ergaster* 102–103  
    *Homo heidelbergensis* 110–111  
    Neanderthals 120–121  
        see also carnivory  
hut-making, *Homo heidelbergensis* 109, 110  
Huxley, Thomas 3, 34
- ice ages see Pleistocene epoch
- individual organism level, natural selection at 8–9
- infinitesimal model 4; see also gradualist model of evolution
- inheritance, acquired characteristics (Lamarckism) 1
- intelligence, and brain size 105, 111–112, 154; see also cognition
- intuitive intelligence 123, 125, 127, 154
- Isaac, Glynn 95
- isotope analysis see carbon; nitrogen; oxygen isotopes
- Java Man 47
- javelins/spears 110–111
- Jebel Irhoud, Morocco 130
- jewelry  
    early humans 135  
    Neanderthals 125
- Johannesburg mines fossils 44–46
- Johanson, Don 57, 60
- Jurassic period 15
- Kalb, Jon 57, 59
- Kenya 62–64, 79, 83–84, 85–86; see also Turkana sediments
- Kenyanthropus platyops* 63, 79
- King, Mary-Claire 73, 74
- King, William 36
- knuckle-walking, common misunderstandings 153
- Krapina, Croatia 39, 125
- La Chapelle-aux-Saints, France 39, 40, 49
- Laetoli, Tanzania 59, 130, 132
- Lake Ndutu, early humans 130, 132
- Lake Turkana see Turkana sediments
- Lamarck, Jean-Baptiste 1
- language  
    early humans 139–143  
    and Neanderthal cognition 126–127
- Leakey, Louis 51–57, 94
- Leakey, Mary 51–57, 59, 60
- Leakey, Meave 62, 63
- Leakey, Richard 53–55, 57
- LeGros Clark, Wilfrid 46
- Levant, Middle East 130–133  
    Liang Bua cave, Indonesia 67–71, 68
- life on Earth, history 12–17
- Little Foot skeleton 29
- Lordkipanidze, David 65
- Lucy (National Museum of Ethiopia AL 288–1) 57, 58, 87–89
- macaques 89, 141
- Magdalenian culture 37, 49, 76, 145
- magnetic field reversals, Earth 23
- mammals, history of life on Earth 15–16
- Man the Toolmaker concept 51, 52, 67;  
    see also *Homo sapiens*; toolmaking/tool-use
- Man's Place in Nature* (Huxley) 35
- A Man without Words* (Schaller) 142
- marine isotope stages (MIS), Pleistocene epoch 26–27
- mass extinctions 14–15
- Mauer, Germany 41
- Mayr, Ernst 5–7, 10–11, 47–48, 96
- medication use, Neanderthals 120

- melanin, pigmented skin 100  
Mendel, Gregor and Mendelian inheritance 3–4  
Mesozoic era 20–21  
Messianian salinity crisis, Pliocene epoch 16  
Middle Awash area, Ethiopia  
    development of bipedality 84  
    early humans 133  
    fossil discoveries 59, 61, 62  
Miocene epoch  
    development of bipedality 80–83  
    emergence of Homininae 20–21  
    history of life on Earth 15–16  
MIS *see* marine isotope stages  
mitochondrial analysis 32–33  
    Mode 3 tools 111, 111, 114, 120  
Modern Evolutionary Synthesis 5–7  
    dogma of 6, 7–8  
    fossil discoveries 47–48, 53, 77  
Mont Carmel, Israel 49  
Mortillet, Gabriel de 37, 49  
Mousterian culture 39–41  
    fossil discoveries 37  
    Neanderthals 49, 114, 120  
    tools 111, 111, 114, 120  
Movius, Hallam 49  
'Muddle in the Middle' 95  
multicellular organisms, history of life on Earth 13  
multiregional evolution hypothesis 73  
mutations 4–5, 31  
  
Napier, John 53  
Nariokotome Boy 96, 97, 98–100  
natural selection 2, 5, 8–10  
Neanderthals *see* *Homo neanderthalensis*  
neo-Darwinian perspectives, evolution 5  
new physical anthropology 48  
New Synthesis *see* Modern Evolutionary Synthesis  
    New World, early humans 146–147  
    Ngaloba, Tanzania 130, 132  
    nitrogen isotopes 28, 121  
    NME (National Museum of Ethiopia) AL 288–1 (Lucy) 57, 58, 87–89  
    nucleotides, genomics 31  
  
ochre-processing, early humans 135  
Oldowan culture, fossil discoveries 51  
Olduvai Gorge, East Africa 51–57  
    fossil discoveries 57, 63  
    search for the earliest *Homo* 96  
Oligocene epoch 15  
Omo Basin, Ethiopia 53–55, 133  
*On the Origin of Species by Means of Natural Selection* (Darwin) 1–3, 34  
optically stimulated luminescence dating (OSL) 22, 24  
orangutan 83  
orders, classification of living things 5  
*Oreopithecus bambolii* (swamp ape) 81  
*Origin of Species by Means of Natural Selection* (Darwin) 1–3, 34  
*Ororin tugenensis* 64, 79, 83–84  
orthograde posture *see* bipedality  
OSL *see* optically stimulated luminescence dating  
'Out of Africa' *see* African exodus  
overheating issues, early hominins 82, 99–100  
oxygen isotopes 19, 26, 27  
  
paleoanthropology xix  
Paleolithic, radiocarbon dating 49  
Paleozoic era 20–21  
*Paranthropus* spp. 48; *see also* australopiths  
*Paranthropus aethiopicus* 57  
*Paranthropus boisei* 51–57, 52, 54, 79

## 182 INDEX

- Paranthropus robustus* 45, 48, **50**, 90  
*Paranthropus crassidens* 45  
Peking Man (*Sinanthropus pekinensis*)  
    43, **50**  
Permian period, mass extinction 14–15  
phylogenetic systematics 10–12,  
    46–49, 55  
*Phylogenetic Systematics* (Hennig) 10–11  
phytoliths, in dental calculus 28  
Pickford, Martin 64  
*Pierolapithecus* 81  
pigmented skin 100  
Piltdown Man hoax 40–41, 43, 48,  
    **50**, 154  
Pinnacle Point, South Africa 136  
*Pithecanthropus erectus* 37–39, **50**; see  
    also *Homo erectus*  
*Pithecanthropus rudolfensis* **79**  
planning ahead 91–92; see also cognition  
Pleistocene epoch 10, 16, 26–27  
    climate change assessment 25–27  
    Magdalenian culture 76  
*Plesianthropus transvaalensis* 44–46, **50**  
Pliocene epoch 16  
population genetics 4  
potassium–argon dating method 21, **24**  
predation of hominids 89–91, 90  
prepared-core tools 111, 111  
primate evolution 9, 15–16  
protein, dietary 92  
punctuated equilibria 7–10, 152–153  
  
radiocarbon dating 21, **24**, 49  
religion, and evolutionary thinking 2  
representational art see cave art  
Robinson, John 45–46, 48  
  
*Sahelanthropus tchadensis* 64, **79**, 83  
SARS-CoV-2 virus, evolution of variants 9  
scavenging lifestyle, hominins 92,  
    102, 121  
Schoetensack, Otto 41  
Schwalbe, Gustav 38–39  
science  
    common misunderstandings 151–154  
    nature of xix–xx  
Senut, Brigitte 64  
sexual dimorphism, *Australopithecus*  
     90  
shelter-building, *Homo heidelbergensis*  
    109, 110  
Sibudu Cave, South Africa 137  
sign languages 141, 142–143  
Sima de los Huesos (Pit of the Bones),  
    Spain 71–72  
Sima del Elefante, Spain 71  
Sima people 113, 113–114  
*Sinanthropus pekinensis* (Peking Man)  
    43, **50**  
single nucleotide polymorphisms (SNPs),  
    genomics 31  
    skin, pigmented 100  
South Africa 44–46, **50**, **79**  
    Ape-Man of 41–46  
    cooking/use of fire 104  
    early humans 133  
    *Homo naledi* 68, 69–71  
    Little Foot skeleton 29  
    see also Blombos Cave; Taung  
spears 110–111  
species evolution/speciation  
    biological definition 5–7, 8  
    hominins 46–49  
    episodic nature 7–10; see also  
        punctuated equilibria  
    natural selection 3  
Spy cave, Belgium 36–37  
stabilizing selection 10  
Stoneking, Mark 73  
stratigraphic chart, history of life on  
    Earth 14  
stromatolites 13

Cambridge University Press &amp; Assessment

978-1-009-09875-5 — Understanding Human Evolution

Ian Tattersall

Index

[More Information](#)

- Sussman, Bob 89  
swamp ape (*Oreopithecus bamboli*) 81  
symbolic thinking skills 111–112,  
135–139  
and Neanderthal cognition 124–125,  
126, 128  
systematics, phylogenetic 10–12,  
46–49, 55
- Taieb, Maurice 57  
Tanzania 51, 57–62  
Taung, South Africa 41–43, 42  
taxonomy of life 5; *see also* phylogenetic  
systematics  
technology, role in scientific  
understanding xx, 18–20  
climate change assessment 24–27  
dating/age of fossils 20–24, **24**  
dietary assessment 27–29  
genomics 30–33  
oxygen isotopes 19, 26, 27  
virtual reconstructions of fossils 29–30
- Telanthropus capensis* 46, **50**
- tetrapods 13–14  
*The Descent of Man* (Darwin) 36, 81–82
- thermoluminescence (TL), dating fossils  
22, **24**
- Tobias, Phillip 53
- toolmaking/tool-use  
*Australopithecus prometheus* 46  
for butchery 46, 61, 91–92, 100–102  
development of bipedality 81–82  
early hominins 100–102  
early humans 136  
for hunting 102–103, 110–111,  
120–121  
*Homo heidelbergensis* 109,  
110–111, **111**  
javelins/spears 110–111  
Man the Toolmaker concept 51, 52, 67
- Mousterian/Mode 3 111, 111,  
114, 120  
Neanderthals 114, 119–120
- tooth assessment 28, 30  
trapped-charge dating 22  
Triassic period 15  
trilobites, evolution 7–8
- Tugen Hills, Kenya 83–84  
Turkana sediments, Kenya 91  
early humans 130  
fossil discoveries 54, 57  
Nariokotome Boy 97, 98–100  
search for the earliest *Homo* 95–96
- 2001: A Space Odyssey movie 46
- Understanding Evolution*  
(Kampourakis) xx
- Understanding Race* (DeSalle and  
Tattersall) xxi
- upright posture *see* bipedality
- uranium–thorium (U-series) dating  
22–23, **24**
- variation, and natural selection 3
- vertebrates, history of life on Earth 13–16
- virtual reconstructions of fossils 29–30
- von Koenigswald, Ralph 44, 53
- Weidenreich, Franz 43–44, 47, 73
- White, Tim 60
- Wilson, Allan 73, 74
- Wolpoff, Milford 73
- Wood, Bernard 66–67, 94
- Woodward, Arthur Smith 41
- Woranso-Mille, Ethiopia 86
- Wrangham, Richard 104
- Zhoukoudian, China 43
- Zinjanthropus (Paranthropus) boisei*  
51–57, 52, 54, **79**