

Index

- Abbasid House 28
 Abu Qir Bay 84
Acacia 20
 Acadian Empire 19, 20, 21, 83
 Adriatic coast 31–2
 Aegean 23, 32
 Afek 18, 23
 Africa 10, 11, 15, 34, 47, 81–95
 east 3, 5, 6, 11, 81, 89, 91
 tropical 89–91
 see also South Africa
 Agulhas current 91, 95
 Ai 19
 Alalach 23
 Alaska 56, 102
 Aleutian low 75
 Alexander the Great 24, 25
 Alexandria 84
 Algiers 84
 Allerød period 40, 55
 Allerød phase 31
 Alps (Europe) 31, 45, 46
 America, North 74
 see also Canada; Mexico; USA
 Ammon 25
 Ammonites 24
 Amorites 19, 21
 Amu 21
 Anasazi-Pueblo 100
 Anatolia 13, 23, 28
 eastern 8, 16
 southern 29
 southwestern 14
 see also Asia Minor; Turkey
 Aenkylos Sea 54
 Antarctic 72
 Anti-Lebanon 8
 Apiru 23, 34
 Arab period 11, 27–9, 44, 101
 see also Moslem–Arab period
 Arab tribes 25
 Arabia 26, 27
 Arabian Desert 1, 26
 Arabian Peninsula 6, 90
 Arabian Sea 88
 Arad 16, 18–19, 36
 Tel Arad 25
 Aragonean Pyrenees 37
 Arava Valley 16
 Arctic 99
 Arctic Ocean 3, 57–9
 Arizona 97, 98, 100, 101
 Armenia 16
- Asia
 Central 11, 16, 19
 East 61–80
 Asia Minor 25
 see also Anatolia; Turkey
 Assyria 23, 24
 Ateria 86
 Athens 31–2
 Atlantic Ocean 3, 10, 31, 43, 53–9, 84, 87, 88, 89, 91–2, 107
 Atlantic period 47, 54, 55, 65
 see also North Atlantic oscillation; Sub-Atlantic period
 Atlas Mountains 84, 87
 Avdat 27
 Azores High 15, 44, 53, 84, 102
 Aztecs 103
 Babylon 22, 23, 24–5
 Baiu season 75
 Balearic Islands 36, 39, 42, 43
 Balkan peninsula 31–4
 Baltic Sea 53–4, 56
 Banias 8
 Beef Pastures 100
 Beer-Sheva 16, 17, 18, 24, 25, 28
 Nahal (river) Beer-Sheva 16, 17
 Beit Shean 19, 23, 24
 Beit Shemesh 23
 Beit Yerach 18, 19
 Belgium 50
 Benguela current 91, 95
 Benjamin, tribes of 25
 Bermuda Rise 89
 Bermuda–Azores high 102
 beryllium (^{10}B) 107
 Biblical Flood 11
 Birch–pine period 55
 see also Pre-Boreal period
 Birket Ram 5
 see also Golan
 Black Sea 5, 10–11
 Bölling interstadial 31, 40
 Bölling Lake 55, 56
 Bora wind 31
 Boreal period 47, 54, 55, 65
 see also Sub-Boreal period
 Bosphorus 5, 10
 Botswana 95
 British Isles 31, 47, 53
 see also England
 Bronze Age 11, 17–23, 55
 Early (EB) 16, 17–21, 26, 28, 32, 35, 42, 44, 53, 58, 80, 83, 90, 106
- Intermediary 106
 Middle (MB) 11, 21–2, 32, 33, 44, 53, 55, 57, 58, 80, 83, 106
 Late 11, 22–3, 53, 55, 80, 95, 106
 Brooks Range 102
 broom corn millet 66
 Bruckner cycle 65, 72
 Burundi 91
 Byzantine period 25–7, 55, 80, 84, 101, 106
 post Byzantine 27–8
- C3 type vegetation 8, 91, 93–4
 C4 type vegetation 4, 91, 94
 Calais transgressions 49, 50
 California 3, 97, 98, 99, 100, 101, 102
 California current 97, 100
 Camp Century 58, 87
 Canaan 18–19, 23, 34
 Canaanites 21–2, 24
 language 21
 Canada 102
 Canaries current 90
 Canopus 84
 Cape Province 91–4, 95
 carbon
 ^{12}C carbon 6, 8, 25, 42–3
 ^{13}C carbon 6, 8, 15, 25–6, 42, 93, 94
 ^{14}C carbon dating 3–4, 8, 12, 37, 40, 41, 42, 43, 49, 51, 53, 56, 62, 64, 65, 68, 76, 80, 82, 83, 87
 carbon dioxide 11, 108
 Caribbean Sea 102
 Carpathian region 59
 Caspian Sea 59–60, 105, 106
 Caucasian mountains 19
 caves 16, 25, 27, 28, 41
 Boomples 94
 Cango 92, 94
 Cold Air 94
 Drotsky's 95
 Equus 91
 Mount Sodom 12, 16, 19, 26
 Nahal Qanah 12
 Rattlesnake 98
 Soreq 4, 6, 7, 9, 10, 17, 19, 22, 23, 24, 26, 27, 28, 106
 Chad basin 86
 Chalcolithic period 15, 16–17, 28, 32, 43, 44, 53, 55, 57, 80, 83, 90, 106
 Chemchane sabkha 87
 China 61–74, 79–80, 87, 107
 Beijing 73
 Beijing rainy season 66
 Damagou 68

- China (*cont.*)
 Gansu province 69, 73–4
 Guangzhou plain 68
 Hangzhou 72, 73
 Hankou 72
 Hengduan Mountains 73
 Hunan province 70
 Jiangsu province 65, 67
 Jilin province 72
 Kunlun Mountains 65
 Lanzhou (Institute for Desert Research) 73
 Mosuowan 68
 Mount Changbaishan 67
 Mount Loujishan 67
 Nan Jing 73
 Pamir basin 65
 Qilian Mountains 64
 Qingfeng 65
 Qinghai-Xizhang plateau 64, 65, 66
 Sangjiang plain 67
 Suzhou 73
 Tianshan plateau 65, 68, 72, 74
 Xingjiang province 61, 63, 65, 67
 Xizhang plateau 64, 65, 66, 73
 Yuetegan 68
 Yulin area 61
 Yunnan plateau 65
 Zhejing 67
 Zhuziang 68
see also loess plateau; Tibetan plateau
 Chott-Raharsa basin 85
 Chou (Zhou) Dynasty 69
 Cirque Peak 100
 Coleoptera 31, 47
 Colorado 97, 101
 conifers 61, 62, 91
see also trees
 corals 5, 82, 100
 Corsica 31
 cotton 67
 Crusader period 11, 28, 55, 57, 95, 106
 Cyprus 23, 24, 25
 Cyprus low 3
 Cyrenaica 23
 Cyrus 25
 Dakota 99
 Damascus 27, 29
 Dan 8
 Dark Ages (Ancient) 23
 Dawelong interval 65
 Dead Sea 2, 4, 8, 9, 11–12, 14, 15, 16, 17, 19, 21, 22, 25, 26, 27, 28, 29, 89
see also lakes, Lisan
 dendrochronological investigations 28–9, 34, 44, 51, 53, 56, 68, 70, 73, 76, 98, 100, 101, 102
 Denmark 31, 54–7
 Denmark Strait 57
 Djebel Maghra 4
 Dryas, *see* Older Dryas; Oldest Dryas; Younger Dryas
Dryas aven 55
 dunes 4, 6, 17, 27–8
see also Old Dunes; Younger Dunes
 Dunkirk deposits 49, 50
 East Greenland current 57
 easterlies 11, 37
see also trade winds
 Ebro Valley 37
see also Spain
 Edom 25, 26
 Edomites 24, 25
 Eemian interglacial 47
 Efrayim 24
 Egypt 1, 3, 11, 13, 19–20, 21–2, 23, 25, 26, 27, 34, 81–4, 85
 First Egyptian Kingdom 17
 New Egyptian Kingdom 23, 24
see also Nile
 Eilat 16, 24, 25
 Ein Gedi 28
 Ein Yahav 16
 El Niño events 74, 101, 103, 107
 El Niño southern oscillation (ENSO) 3, 36, 91, 97
 England 52, 83, 107
see also British Isles
 Enkomi 24
 Epi-Paleolithic 4, 5
 Estonia 45, 57
 Ethiopia 81, 89
 highlands 20, 83, 8
 Europe 3, 11, 15, 31–60
 Exchequer Meadows 97
 Execution texts 21
 Ezion Gever 25
 Faeroe Islands 57
 Fazael 5
 Feiran 4, 16
 Fennoscandia 56, 57
 Fezzan 86
 Finland 57
 Finnish Lapland 57
 Flandrian transgression 14
 foraminifera 21
 benthic 11, 21, 58
 pelagic 10, 11, 21
 planktonic 7, 10, 11, 16, 22, 25
see also Globigerina; Globigerinoides; Uvigerina
 France 31, 50, 57
 Alps 45, 46
 Haute-Provence 35
 Mediterranean coast 34–5
 Friesland oscillation 55
 Funnel Beaker 51
 Galilee 6, 8–10, 24, 27, 28
 upper 6, 7
see also Sea of Galilee
 Gaza 25, 27
 GCMs (general circulation models) 10, 53, 95, 105
 Geometric Kebaran 5
 Germany 50
 Gezer 18, 23
 Ghab Valley 15
 Ghana 91
 Ghasulian 16
 Gibraltar Straits 43
 Gilead 24, 25
Globigerina spp. 57
G. ruber 7, 11
Globigerinoides rubes 10
 Gobi Desert 107
 Golan 5
 Golan Heights 8
 Gotland 56
 Great Basin 98, 99, 100, 101
 Great Salt Lake 100, 101, 106
 Greece/Greeks 15, 24, 25, 28, 32–4, 36, 57
 Greenland 57–9, 87, 107
 ice cores 56, 58–9, 100, 107
 Groningen coastal area 50
 Guatemala 103
 Gulf of Guinea 90
 Gulf of Mexico 97, 102
 Gulf Stream 31, 53, 57
 gyttja 55
 Hadley circulation 3, 72
 Haifa Bay 20
 Halutza 27
 Hammar Formation 5
 Han Dynasty 65, 74
 Hasmonean-Jewish kingdom 27
 Hazor 19, 23
 Hebrews 11, 23
 Hebron 25
 Helladic period 32
 Hellenistic period 25, 26, 84
 hemp 67
 Hemudu culture 66
 Herakleion 84
 Hittites 23, 24
 Hoggar Mountains 85
 Holland (Netherlands) 47–53
 Holland peat 50
 Hurrians 21, 23
 Hyskos 21–2, 23
 Iberian Neolithic 41, 43
 Iberian Peninsula 3, 35–45
see also Spain
 Iberian period 37
 Ice Ages (China) 64
see also Last Ice Age; Little Ice Age
 Iceland 55, 59
 Idaho 98
 Imringer current 57
 India 25, 27, 88, 90
 Indian low 70
 Indian Ocean 4, 74, 88, 90, 91, 95
 Indo-Aryan tribes 33
 Indo-Europeans 21
 intertropical convergence zone (ITCZ) 1, 4, 85, 90, 91, 102, 103
 Ionian Sea 32
 Iran 2, 15, 16, 25
 Irano-Turanian 5
 Iraq 2
 Ireland 31
 Iron Age 22–5, 32–3, 34, 43, 44, 55, 80, 95, 101, 106
 isotopic stages 6, 10, 75
 Israel 3, 4, 6, 8–10, 11, 13–14, 15, 16, 17, 18, 24, 25, 26, 29, 35
 coastal plain 11, 14, 15, 16, 25, 26, 27, 34
 Israelites 23, 24, 25
 Italy 15, 24, 33, 36, 45
 Apennine Mountains 34
 Calabria 34
 Florence 34
 Italian peninsula 34–5
 Jaffa 25
 Japan 70, 75–80, 101, 106
 Alps 80
 Chugoku Mountains 78–9
 Fukuyama 79
 Hokkaido 75, 76, 80
 Honshu 79, 80

INDEX

125

- Kanto region 79
 Kume 79
 Kyushu 76, 80
 Nobi plain 79
 Oshima peninsula 76
 Ozheghara moor 76
 Tokyo 76
 Tsugaru plain 76
see also lakes, Ogawara; river, Tadami; Sea of Japan
 Jericho 12–14, 15, 18, 19, 28
 Jerusalem 3, 10, 19, 22, 24, 29
 jet stream 3, 53, 75, 88
 Jezreel 18
 Jomon stage 76, 79, 80, 101
 Jordan Valley 4, 12–14, 15, 16, 19, 24
see also rivers, Jordan; Trans-Jordan
 Judea 24–5, 27
 Judean mountains 6, 25, 26, 27, 28
 junipers 28, 29, 40, 42, 51, 55
 Jura mountains 45, 46
 Jutland 55
 Kadesh Barnea 25
 Kalahari 91, 95
 Karroo 91
 Karsanti 29
 Kategat 56
 Kebaran 5
 Kenya 89
khamsin 2, 84–5
 King Solomon's kingdom 24
 Kofun stage 76, 78, 80, 101
 Korea 74
 Kurdistan 4
 Lachish 18, 19, 23
Nahal (river) Lachish 17, 22
 lakes 5, 17, 20, 29, 33, 34–5, 44, 45–7, 57, 61, 65, 67–8, 69, 74, 85, 86, 89, 90
 Aibi 68
 Ancylos Sea 54
 Ann 102
 Baikal 70
 Banyoles 40
 Barkol 63, 64–5
 Bölling 55, 56
 Bosumtwi 91
 Bysjö 57
 Chad 87
 Chaiwopu 61
 Chichananab 103
 Coba 103
 Daihai 61, 65
 Elk 102
 Fucino 33, 34
 Great Salt 100, 101, 108
 Hula (Huleh) 4, 14
 Lisan 4, 14
see also Dead Sea
 Malawi 91
 Medina 42
 Mekelermeer 51
 Mirabad 4
 Mono 99, 101
 Ogawara 76, 79
 Pergusa 35
 Peten-Itza 103
 Poyang 65
 Qaidan 61
 Qinghai 61, 65, 74
 Saint-Léger 35
 of San Benito 41
 San Jose Chulcaha 103
 Sayaucil 103
 Silvaplane 45
 Taihu 65, 72
 Texcoco 103
 Turkana 89
 Van 6, 7, 8, 9, 13, 14, 16, 17, 22–3, 24, 25, 28
 Victoria 81
 Wildcat 100
 Wright 101
 Zacapu 102–3
 Zeribar 4, 15, 20
 Land of Hur 21
 Last Glacial Period 3, 4, 47, 50, 55, 75, 83–4, 89, 90, 91, 93, 94, 105, 107
 Last Ice Age 8, 42, 53, 61
 Lebanon 23
 Levant 1–29, 32, 33, 34, 44, 45, 46, 47, 52–3, 57, 58, 60, 63, 80, 83, 89, 90, 95, 101, 105
 Libyan desert 3, 85
 Libyans 23
 Lime period 55
limes system 27
 Little Ice Age 10, 11, 37, 41, 43, 44, 45, 49, 53, 57, 58, 59, 64, 65, 67, 70, 74, 76, 79, 94, 95, 99, 100, 103, 106
 Little Optimum 70
 loess 3–4, 5, 11, 17
 loess plateau 61–3, 64, 68
see also China
 Luxembourg 31
 Macedonia 15, 23
 magnetic susceptibility (MS) 11, 62–3, 64
 Majorca 43
 Malaha 5
 Mali 86
 Malta 35
 Temple period 35
 Mamluk–Ottoman warm phase 11
 Mamshit 27
 Mangyshlak regression 59
 Marathon Plain 32
 Massada 25–6
 Maunder Minimum 107
 Late Maunder Minimum 44
 Mauritania 85, 87, 88
 Maya 103
 Medieval Climatic Anomaly 101
 Medieval Maximum 107
 Medieval Optimum 59
 Medieval Warm Period 11, 58, 99, 101
 Mediterranean region 1–3, 37
 eastern 5, 8, 16, 25
see also Levant
 Mediterranean Sea 3, 5, 6–12, 15, 17, 21, 22, 27, 28, 43, 84, 89, 91
 Megiddo 18, 19, 23, 24
 Mekelermeer 51
 Menashe 24
 Mesopotamia 11, 13, 15, 16, 19, 20, 21
 Mexico 97, 100, 102–3, 107
 Basin of Mexico 102–3
 Mexico City 102, 103
see also Gulf of Mexico
 Middle East 3, 12, 16, 19, 20, 27
 Milankovich effect 107
 Milankovich forcing mechanism 105
 millet 66
 Ming Dynasty 67, 70
 Minnesota 102
 Minorca 39, 42, 43
 Mississippi valley 102
 Mittani 23
 Moab 25
 Moabites 24
 Mongolia, Inner 66, 69
 Mongols 69
 monsoons 5, 6, 14, 15, 61–2, 69, 70, 72, 74, 75, 80, 83, 85, 86, 87, 88, 89, 90, 97, 100, 101, 105
 Montezuma Well 97, 98, 101
 Morocco 85
 Moslem–Arab period 27–8, 32, 53, 80, 84, 106
 Moslem–Ottoman period 28–9, 57, 106
 Mount Carmel 11, 14
 Mount Hermon 8
 Mount St. Helens 100
 Mount Sodom 12, 16, 19, 26
 Mycenae 22
 Mycenaean civilization 33
 Naarmer 17
 Nabateans (Nabatians) 25, 26–7
 Nahal, *see* rivers
 Namibia 91, 95
 Nara–Heian–Kamakura stage 76, 78, 79, 80, 101
 Natufian 5
 Nebuchadnezzar 24, 25
 Negev 1, 3, 4, 6, 11, 13, 14, 15, 16, 18, 19, 22, 23, 24, 25, 26, 27, 35
 Neolithic 5, 11, 12–16, 32, 44, 49, 53, 66, 80, 85, 89, 95, 106
 Pre-pottery Neolithic (PPN) 13–14, 106
 Pre-pottery Neolithic A (PPNA) 5, 13–14, 90
 Pre-pottery Neolithic B (PPNB) 14, 90
 Pottery Neolithic A (PNA) 14–16, 41, 106
 Pottery Neolithic B (PNB) 14–16
 Middle Neolithic 80, 83, 89, 90
 Upper Neolithic 32, 83, 90
 Nessana 27
 papyri 27, 28
 Netherlands (Holland) 47–53
 Newfoundland 53
 Nile 1, 5, 6, 10, 11, 20, 21, 27–8, 81–4, 107
 Blue Nile 81, 83
 Nile delta 3, 6, 20, 81, 83
 Pelusian channel 83
 Sudd swamps 81, 83
 White Nile 81, 83
 “Wild Nile” 81
Noah’s Flood 10–11
 North Atlantic oscillation (NAO) 36, 97
 North Pacific subtropical high (NPSA) 74, 75, 79–80
 North Sea 47, 48–50
 Norway 56
 oak *see* trees
 Ogasawara air mass 75
 Okhotsk High 70, 74, 75
 Okhotsk Sea 75
 Old Dunes 49
 Older Dryas Period 31, 40, 55
 Older Lime Period 55
see also Atlantic Period; Boreal Period
 Oldest Dryas Period 55
 Omon transgression 79
 oracle bones 66
 Ottoman period 28–9, 57, 106

- oxygen isotopes (^{16}O , ^{18}O) 3, 4, 6–12, 13, 14, 15, 16, 17, 21, 22, 15–16, 43, 56, 63, 64, 79, 86, 88, 89, 92–3, 94, 95, 100, 101, 103, 107
- Oyo Suan 91
- Pacific Ocean 63, 70, 74, 79, 97, 107
see also North Pacific subtropical high (NPSA); Western Pacific high
- Palmyra 5, 14
- pastoral nomadism 19
- Peloponnese 34
- Pelusian channel 83
- Persia 24
- Persian Gulf 2, 14, 17, 20, 22, 26, 27
- Persian period 24, 25, 26
- Petra 27
- Philistines 23, 24, 25
- Phoenicians 24, 25
see also Canaanites
- Pleistocene 10, 31, 63, 64
 Late 3–6, 29, 34
 Upper (most) 41, 60, 61, 62, 75, 91
see also Quaternary, Late
- Pleniglacial 40
- plum rains (*Meiyu*) 72, 73
- Poland 59
- polar continental air mass (PCAM) 61, 62
- Polessia 59
- pollen investigations 4–5, 8, 14, 15, 20, 22, 22, 26, 31, 35, 37–45, 49, 50–51, 53, 55, 59, 61, 62, 63, 67–8, 69, 76–9, 83, 86, 87, 88–9, 90–91, 93–4, 97, 100, 102–3
- Porites* 5
see also corals
- Port Said 84
- Portugal 43
see also Iberian Peninsula
- Post Glacial Period 15, 57, 75, 107
- Pre-Boreal Period 55, 65
- Pretoria salt pan 94–5
- Procopius 27
- Proto-Urban people 18
- Protruding Foot Beaker 51
- Provincia Arabia 27
- proxy-data 6–12, 20, 21, 22, 25, 27, 28, 32, 52, 62, 73, 74, 91, 100, 102
- Ptolomeans 24
- Pyrenees 37
- Qilongduo interval 64
- Qing imperial archives 73
- Qingdun culture 66
- Quaternary 4, 32, 47
 Late 1–29, 47
- “red rains” 107–8
- Red Sea 2, 5, 27, 88
- Rehovot 27
- Retema 25
- rice 66, 67, 76
- rivers
 Adorayim (Nahal Adorayim) 17
 Atbara 81, 83
see also Nile
 Beer-Sheva (Nahal Beer-Sheva) 16, 17
 Besor (Nahal Besor) 16
 Candelaria 103
 Chan Jiang 65, 67, 70
 Ebro 37, 44, *see also* Spain
 Euphrates 20, 22, 23, *see also* Mesopotamia
 Guadiana 41
- Ijssel 52
- Jarama 36
- Jordan 8, 11
- Jucar 37
- Lachish (Nahal Lachish) 17, 22
- Linge 52
- Meuse 52
- Mississippi 102
- Niger 86
- Nile *see* Nile
- Oren (Nahal Oren) 13, 14
- Rhine 50, 52
 Kromme Rhine 52
 Old Rhine 52
- Tadami 76
see also Japan
- Tajo 36
- Tigris 20, 22, *see also* Mesopotamia
- Vistula 59, 60, 106, 59, 60, 106
- Yangtze 66, 68, 69, 72, 73
see also China
- Yellow 66, 68, 69, 70, 73
see also China
- Rocky Mountains 100, 101
- Roman period 11, 19, 20, 25–7, 33, 34, 41, 49, 53, 55, 57, 58, 80, 82, 101, 106
- Rome 34
- Russia 3
- Rwanda 81
- sabkha 5, 83, 86, 87
- Sahara 1, 11, 81, 82, 84–9, 107
 anticyclonic zone 34, 84
- Sahel 84–9, 91, 107
- saladas (saline marshes) 37, 83
- Samaria 24, 84
- San Joaquin marsh 98
- sapropel 83, 91
- Scandinavia 31, 47, 53–7, 106
- Scotland 53
- Sea of Galilee 6, 7, 8, 10, 17, 19, 20, 21, 26, 27, 28
- Sea of Japan 75, 76
- Sea of Marmara 10
- Sea People (tribes of the sea) 23, 24, 34
- Sede Divshon 14
- Seleucids 24
- Semites 21, 34
- Shabeita 27
- Shang Dynasty 66, 69
- Sharon 14
- Shat-el-Arab 5
- Shati area 86
- Shuin rainy season 75
- Shun Dynasty 68
- Siberia 3
- Siberian high 69, 75, 80
- Sicily 34, 35
- Sierra Nevada 98–9, 100
- Sinai 1, 3–4, 5, 6, 11, 14, 15, 17, 19, 107
- sirocco 34
- Slavs/Slavic tribes 34
- SMOW *see* standard mean ocean water
- solar activity 52, 56, 74, 82, 90, 100, 102, 105, 107
 sunspots 64, 107
- Song Dynasty 66
- Songze culture 66
- South Africa 91–5
- Spain 31
 Almeria 39, 41–2, 43
 Andalusia 35, 42–3
 Barcelona 40
- Basque country 44
- Cadiz 42
- Cantabria 37, 38, 43, 44
- Castillo de Calarava 38, 41, 43–4
- Catalonia 42–3
- Galicia 44
- Granada 41
- Madrid 36
- Navarrés 37–40
- Padul 40–1, 43
- San Rafael 41–2, 43
- Spanish Meseta 35
- Valencia 37
see also Balearic Islands; Iberian Peninsula
- speleothemes 6–10, 12, 17, 19, 26, 27, 28, 92–3
see also caves
- sphagnum 51, 55–6
- stable isotopes 6
- standard mean ocean water (SMOW) 6
- storm trajectories 1–2, 3, 6, 14, 75, 80
- Sub-Atlantic period 54, 55, 56
- Sub-Boreal period 53, 54, 55, 56, 57, 65–6
- Sudan 86, 87, 88
- Sumer 21
- Sumerian archives 19, 20
- summer rains 59, 81, 94, 97, 99, 100, 101, 105
- sunspot activity 64, 107
see also solar activity
- Sweden 35, 45, 56–7
- Switzerland 45, 46
see also Alps
- Syria 2, 5, 13, 21, 22, 23, 27, 34
- Syrian–Arabian desert 3
- Tang Dynasty 66
- Tauodenni basin 86
- Taurus mountains 29, 34
- Tel
 Arad 25
see also Arad
 Aswad 29
 Beit Mirsim 19, 23
 el Ghasul 16
 el-Halifa 25
 el-Hasi 25
 Jemmeh 25
 Lailan 20
 Tel Aviv 20
- Tibesti mountains 85, 87, 88
- Tibetan plateau 63, 64–5, 67, 69, 73, 75
 Lhasa 64
- Tienshan Mountains, *see* China
- Timbuktu 86
- Timna 16
- titanium/aluminium ratio (Ti/Al) 11
- Tjeri 87
- trade winds 15, 87, 90, 102, *see also* easterlies
- Trans-Jordan 19, 23, 25, 26, 27
- Transvaal 93, 94, 95
- trees 19, 25–6, 38–44, 50–51, 55, 62, 63, 65–6, 76–9, 94
- Alnus* (alder) 36, 42, 51, 55, 76
- Artemisia* 37, 39, 40, 42, 43, 44, 55, 61
- aspen 55
- beech 55
- Betula* (birch) 41, 43, 51, 55, 76, 78
- Buxus* 42
- cedar 43
- Cedar of Lebanon 28
- citrus 67, 72
- Corylus* (hazel) 42, 51, 53, 55

INDEX

127

- date palm 28
- Ephedra* 40, 51, 43, 61
- lychee 66, 72
- mei* (plum tree) 66
- Olea* (olive) 20, 26, 39, 41, 42, 43
Olea hochstetteri 91
- Pinus* (pine) 20, 37, 38, 39, 40, 41, 42, 43, 44, 51, 53, 55, 56, 61, 65, 78, 100, 101
 Jerusalem pine 29
- Pinus aristata* (bristle cone pine) 76, 101
- Pinus balfuriana* 100
- Pinus nigra* 29
- Pistachia* 4, 15, 20, 26, 38, 40, 41, 42, 44
 Persian pistachia 28
- Quercus* (oak) 15, 20, 26, 38, 39, 40, 41, 42, 43, 44, 51, 55, 76, 78, 79
Q. aegitops 4, 5
Q. faginea 4
Q. ilex 40, 41
Q. suber 40
- Salix* (willow) 51
 dwarf willow 55
- spruces 40, 62, 100, 101
- tamarisk 19, 20, 25–6
- Tilia* (lime) 55
- Ulmus* (elm) 36, 51, 55
see also acacia; conifers; dendrochronological investigations; junipers; pollen
- tribes of the sea 23, 24, 34
- Tropic of Cancer 86
- tropical-subtropical oceanic air mass (TOAM) 61, 62
- Tunisia 85
- Turkey 6, 8
see also Anatolia
- Twin Lakes 100
- Typha* 42
- Uganda 81
- Ugarit 23, 24
- Uitenhage artesian aquifer 92, 94
- Ukraine 59
- Umayad caliphs 28
- Umayad coins 28
- United Arab Emirates 26
- Urals 3
- uranium/thorium ($^{234}\text{U}/^{230}\text{Th}$) 10, 40, 95
- urbanization 17, 18–19, 21, 22, 27
- USA 74, 97–102, 107
- Utah 100, 101
- Uvda valley 13, 18
- Uverigina mediterranea* 11, *see also* foraminifers
- Vistula valley 59, 60
- volcanic activity 74, 79, 100, 101, 107, 108
- Volga 3, 59
- Wadi Feiran 4
- Wadi Halfa 81, 82
- Wales 31
- Walker circulation 72
- Warring States period 66
- Washington 100
- water harvesting 26–7
- Weichselian Glacial Period 47, 49, 50, 51, 56
- westerlies 6, 31, 35, 37, 47, 61, 65, 67, 81, 85, 87, 91, 97, 101, 102, 105
- Western Pacific high 70
- wheat 14, 20, 27, 67
- White Mountains 101, 102
- Windermere interstadial 31, *see also* Bölling interstadial
- Wonderkrater 93, 94
- Wumandung interval 64
- Würm 4, 42
- Xia Dynasty 68
- Yangshao culture 66
- Yao Dynasty 68
- Yarmut 18
- Yayoi stage 76, 79
- Yin people 66
- Yoldia Sea 53–4
- Yoli period 64
- Younger Dryas Period 6, 12, 31, 37, 40, 47, 55, 59, 75, 84, 90, 95
- Younger Dunes 49, 52
- Younger Lime Period 55
- Yucatan 102, 103
- Zagros Mountains 4, 20
- Zealand 55
- Zhou (Chou) Dynasty 69
- Zimbabwe 95