

INDEX

Notes: Page numbers in *italics* denotes figures and **bold** denotes tables.

- Aa rock, Kharga Basin, *3of2.13*
 Abbas I, 140
 Abu Rawash, 63
 Abusir, 60, *61f4.2*, 62, 65, 79
 Abydos, 45–6, *47f3.3*, 85, *86f6.5*, 109
 Acheulean sites, 19
 Acolat, D  lphine, *94f7.1*
 aeolian sands, 26, 27, 33
 AERA, 109, 110
 aestivating snails (*Zootecus insularis*), 15,
17f2.2, 53–5
 African Humid Period, 25, 27
 agriculture, 3, 41, 43–4, 63, 99, 137, 138, 140, 153
 conservatism, 85
 developments in, 42
 and floodplain, 40, 49
 gezirehs, 4
 on islands, 107
 minimalism, 43
 and sediments, 134, 149
 water management. *See* water management
 Wilbour Papyrus, 67, 82
 Ahmose I, 102
 ‘Ain Amur, 21, *24f2.7*, 36, 124, 128
 ‘Ain Lebakh, 35, *35f2.18*, *125f9.5*, 128
 Ain Manawir, 124
 Akhenaten, 88, 121
 Akhet, 41, 82, 137–8
 Akhmin, 134
 Alexandria, 98, 122
 Al-Farama, 98
 Al-Fustat, 131, 135
 Ali, Muhammad, 40, 130, 133, 139, 140, 142
 Al-Zaniyah Island, 78, 106, 153, *154f. A.4*
 Amarna, 35
 Amarna Letters, 104, 117
 Amenemhat I, 70, 76
 Amenhotep III, 8, 104, 113, 120
 Amenhotep IV. *See* Akhenaten
 Amnemhat III, 118
 Amun, 122, 137
 Ancient Egyptian timeline, *9f1.1*, 9t1.1
 Ankhtifi, 82
 Antinoupolis, 87
 aquifers, 28, 58
 Nubian, 3, 34, 142
 Arab and Ottoman period, **9t1.1**
 Armant, 82, 105
 Asiatics, 99
 Aswan, 4, 82
 Aswan High Dam, 3, 6, 40, 82, 85, 140, 147,
 153, 156
 Asyut, 26, 82, 134
 Attia, 6
 auger/augering, 6, 33, 48–9, *49f3.5*, 74, 85, 90,
 106, 134, 148–51
 Avaris, 99
 Babylon, 74, 111
 backwaters, 107, *107f8.4*
 Badarian, 51
 Badrasheen, 77
 Bagnold, 15, 20, 36
 Bahariya Oasis, 34
 Bahr Libeini, 74
 Bahr Yusuf, 73, 118, 123–4
 Baines, J., 5
 Balat, 76

- Balinese water temples (Pura Tirta), 85, 127
 Ball, J., 15
barari, 97
 Barich, B. E., 27, 29
 basin divides (*gisr*), 82, 83
 Bayuda Desert, 14
 Beadnell, H. G. L., 15
 Bedouin, 33, 43
 Bedouin raids, 136
 Beleda, 20
 Ben Ezra Synagogue, 135
 Bietak, Manfred, 6, 100
 Bir umm-Fawakir, 122
 Birket Habu, 102, 120, 121
 Bitter Lakes, 122, 135, 136*f*10.3
 Blackman, A. M., 128
 Blue Nile, 20, 39, 41
 Boatwright, Dan, 120
 Boraik, Mansour, xvi, 90*f*6.9
 borehole analysis, 6–7, 70
 Borollos Lake, 98
 Borsch, Stuart, 99
 boulder clay, 19
 bowls and jars, 10*f*2.1, 55, 64, 157
 Branton, T., 52
 Bridgewater, Emma, 7
 Bristow, C.S., 36
 Brook, G., 26
 Brunton, G., 119*f*9.2, 120
 Bunbury, J. M., 147, 151
 Buto, 97
 Butzer, K.W., 6, 14
 Byzantine period, 9*tt*.1, 130
- Cairo, 51, 63, 70, 93, 95, 131, 134
 Al-Fustat, 131, 135
 Babylon, 111, 134, 135
 as a capital zone, 132
 Genizah, 135
 Island of Roda, 131, 133*f*10.2
 modern city, 134, 135
 nilometer, 3, 131, 133*f*10.2
 St Barbara's Church, 131, 132*f*10.1, 135
 Californian stream, 104, 105*f*8.2
 canyons, 2, 3–4, 38, 40, 63, 80, 83*f*6.3,
 85, 105
 capital zone, 65, 71, 73*f*5.6, 99
 carbon dating, 8, 158
 Caton-Thompson, G., 5, 14, 20
 Çelebi, Evliyya, 137
 Cephren diorite quarries, 15, 52–4, 54*f*3.10
 ceremonies, 3
- Chad, 62, 65, 74
 Champollion, 5
 channel migration, 78, 81, 87
 lateral migration, 78, 81
 climate
 climatology, 15
 Hadley Cells, 18, 18*f*2.4, 19
 Polar Cell, 19
 climate belts, 18, 19
 climate change, 1, 3, 7, 34–5, 41, 76
 human adaption, 43–55
 climate cycles, 57–62
 climate warming, 36
 climate zones, 19
 Cooper, John, 100, 134, 135
 Coptic calendar, 137
 Coptic to Islamic times, 131–9
 Cretaceous, 3
 cross-desert routes, 122
- Dabadeb, 128, 129
 Dakhla Oasis, 34, 76, 102
 Dash, Glen, 74
 Dashur, 34, 41, 62, 64, 65, 65*f*5.1
 dating, 7–9
 Deir el-Bahri, 103, 103*f*8.1
 Deir el-Medina, 113
 delta, 1, 2, 3, 7, 12, 14, 31, 32, 38, 39, 40, 42, 44,
 55, 60, 62, 63, 67, 76, 93–101, 124, 127
 Alexandria, 98, 122
 architecture exploration, 6
 distributary channels, 63, 95, 99
 distributary system, 4, 97*f*7.4, 99, 125
 early farming, 43
 floods in, 2
 Holocene, 94
 impact of climate change, 143
 Manzala Lake, 98, 99, 101
 Mississippi, 79, 84, 93
 movement, 43, 51*f*3.7, 67
 and Nile Valley, cultural links between, 61
 Rhine, 93, 94, 99
 seasons. *See* seasons
 sediments, 3–4, *see also* sediments
 Tinnis, 98, 134
 trading, 134
 delta-head, 67, 73, 77, 80, 95, 132
 location of, 77
 desert toads, 70
 desertification, 1, 12, 34, 74
 deserts, 1, 6, 7, 12, 14, 15, 18, 43, 44, 47, 56, 58, 62,
 70, 75, 118

- mining activity in, 122
 Sahara. *See* Sahara
 slow retreat of, 74–6
 vegetation in, 76
 White Desert, 26, 31
 digital elevation models (DEM), 78
 distributary channels, 63, 95, 99
 Djara Cave, 26
 Djoser, 60
 Dofin Playa, 26, 27, 28, 28*f*2.11, 29*f*2.12
 Drake, N., 36
 dry season, 82, 84, 109, 124
 Duckworth, Taryn, 106, 107, 108*f*8.5, 152
 Dufton, David, 45, 46, 47*f*3.3, 80, 109

 Earl, Erin, 61*f*4.2
 Early Dynastic period (ED), 9*tt*.1, 44, 45, 46, 48, 51, 59, 60, 76, 94, 137
 Early Middle Kingdom, 67, 68, 70, 71, 110
 Eastern Delta, 99
 map of transport connections, 136*f*10.3
 Eastern Desert, 4, 43, 117, 122, 128, 130
 Edfu, 44, 49, 51*f*3.7, 60, 65, 82, 109, 127–8, 137, 141, 156
 Egyptian landscape, 12–13
 and early Egyptology, 4–7
 geological origins, 3–4
 habitation changes, with time, 10*f*1.2, 12–13
 Egyptian Nile Land and Waterscape Survey, 74
 Egyptian Sahara, 15, 31
 Egyptology, 4–7
 18th Dynasty, 88, 89, 113, 116, 121, 133
 Eijkelkamp hand auger, 149*f*. A.1
 El-Kab, 141, 142
 El-Masekh, Salah, 91*f*6.10
 El-Sanussi, A., 51, 52
 Engelbach, R.E., 15, 120
 Eonile, 40
 Epi-Palaeolithic technologies, 20
 erosion, 51
 erosions, 19, 35, 36, 61, 66, 70, 120
 and rainfall, 50, 52*f*3.8
 of Roman wall, 36, 37*f*2.19
 Ethiopian Monsoon, 2, 20, 38, 41, 42, 57

 Fairman, H.W., 128
 Faiyum Oasis, 2, 20, 21, 25, 31, 38, 43, 66, 68, 73, 87, 102, 118, 119*f*9.1, 143
 Farafra Oasis, 26, 27, 29, 31, 31*f*2.15, 34, 57
 farming. *See* agriculture
 fertility, 21, 43, 57, 107, 141, 142, 143
 15th Dynasty, 133

 Firiniya Canal, 125
 First Intermediate Period (FIP), 9*tt*.1, 12, 52, 64, 66, 67, 74, 76, 82, 88
 fishing, 39, 44, 109
 flashfloods, 4, 12
 Fleming, K., 95*f*7.2
 flood, 2, 14, 40, 41, 49, 55, 56, 57, 68, 93–101, 108, 135
 management and control, development of, 3, *see also* agriculture; Aswan High Dam; Cairo
 season, 55, 78, 82, 98, 122, 138, 140
 flood cycle, 41
 floodplain, 2, 3, 4, 7, 25, 39, 41, 42, 43, 44, 49, 55, 56, 57, 62, 63, 67, 82, 95, 96, 105, 106*f*8.3, 109, 113, 118, 131, 152
 aggradation rate, 78, 81, 148
 and agriculture, 40, 49
 fertility, 57
 narrow floodplain, 63
 fossil fuel consumption, and global temperature, 18
 fossilised tree stumps, 28, 30*f*2.14
 fowling, 44

 Gasperini, V., 119*f*9.2
 Gebel al-Asr, 12, 14, 15, 16*f*2.1, 52, 54*f*3.10, 55, 74, 104
 Gebel Silsila, 82, 150
 Gebel Uweinat, 36
 Gebel Zubara, 130
 gerbils, 70
 gezireh (turtle-backs), 4, 40, 96, 97, 133, 147
 gharaghets, 99
 Gilf Kebir, 26, 36
 gisr. *See* basin divides (gisr)
 Giza, 41, 51, 53*f*3.9, 55, 62, 63, 74, 75*f*5.7, 80, 81*f*6.2, 104, 132
 glacial sediments, 19
 glaciations, 32
 global temperatures, 15–18
 and fossil fuel consumption, 18
 global warming, 20
 gold, 104, 117, 122
 mining, 102, 122
 Goncalves, Pedro, 59, 72, 77, 109, 110
 GoogleEarth assessment, 140, 144*f*11.3, 147–8
 Graeco-Roman period, 71, 83, 138*f*10.4
 Graham, Angus, 75*f*5.7, 107
 grain production, 28, 29, 35, 122, 130, 138
 The Great Pit, 113
 Green, 48

- Green Deserts, 14–38
 Greenland Ice Core (GISP2), 15, 17f2.3
 grindstones, 28, 28f2.11, 29, 117
 Gurob, 73, 119f9.2
 Gurob Harem Palace Project, 118, 120
- habitat hysteresis, 57–62
 Hadley Cells, 18, 18f2.4, 19
 Hadrian, 87
 Hagr Edfu, 49
 Hamdan, M., 29
 Hammamat mines, 117
 ‘Hanging Church’ of St George,
 131, 134
 Hassan, Fekri, 64, 65
 Hatshepsut, 89
 Hawara, 63, 118
 Haynes, C.V., 25, 26
 Hekekyan, 5, 78
 Helwan Palaeofan, 59
 Hendrickx, Stan, 142
 herding, 43
 Hermopolis, 85, 87, 88, 109
 Hermopolis–Antinopolis region, 87f6.7
 Herodotus, 68, 72, 93, 99
 Heyerdahl, 88
 Hierakonpolis, 44, 45, 48f3.4, 49, 49f3.5, 50,
 50f3.6, 51, 137
 habitation, 47
 Khasekhemwy Enclosure, 48
 movement, 64
 rhizocretions, 47
 wadis around, 45f3.1
 hieroglyphs, 4
 Hillier, J. K., 90
 Hobbs, Joseph, 43
 Hod el-Gezireh, 153
 Hodgkinson, Anna Kathrin, 120, 121f9.3
 hods, 85
 Holocene, 3, 13, 18, 19, 21, 26, 27, 29, 39, 41,
 43, 59, 96
 delta, 94
 ephemeral lakes, 14, 26
 global temperature change during, 15, 17f2.3
 herding, 29
 hunter/gatherers in, 26
 lake formation, 26
 rainfall, 14, 32, 48
 Sahara during, 14, 38, *see also* Sahara
 sediments, 25, *see also* sediments
 wet phases, 14–38, 39
 Hughes, Ellie, 120
 human adaption, to climate change, 43–55
 hunters/gatherers, 39, 57
 in Holocene, 26
 Palaeolithic hunters, 19
 Hyksos, 60, 102, 133
- Ibrahim, Suleyman, xvi
 ice age, 19, 36, 96
 effects on sea level, 3, 40
 end of, 2, 13, 19, 36, 93, 161
 extent of glaciation, 2, 19
 Idku Lake, 98
 Il-Lahun, 20
 inhabitants, 3, 4, 27, 38, 55, 67, 80, 106, 117, 120,
 137, 146
 ‘Instructions of Amenemhat’, 68
 irrigation, 3, 42, 57, 59, 63, 67, 82, 85, 101, 127,
 130, 134, 135, 136, 137, 138, 140, 141, 142,
 147, 148
 island
 lifespan, 78
 islands, 56, 59, 62, 67, 77–92, 95, 104, 106, 107,
 109, 110
 Badrasheen, 77, 80, 92
 chains of, 104
 flanks, 48, 153
 formation and capture, 78, 79f6.1, 80, 81, 88,
 105, 152, 154
 lifespan of, 106
 Luxot. *See* Luxor
 Itj-Tawi, 70
- Jacquet, Jean, 89
 Jacquet-Gordon, Helen, 89
 jars. *See* bowls and jars
 jar-wells, 124–5, 125f9.6
 Jeffreys, David, 6, 60, 72, 74, 80, 151
 Jones, M., 51, 53f3.9
 Junker, H., 32
- Kadesh Thebes, 102
 Karnak, 74, 76, 78, 82, 85, 88, 89f6.8, 90f6.9,
 91, 92f6.11, 102–17, 106f8.3, 123, 152,
 157f. A.7
 Kerma period, 14, 43, 104
 Khafra, 15, 52, 55, 74
 pyramid at Giza, 54f3.10
 Kharga Basin, 20, 21, 25f2.9, 26, 35f2.18, 55, 57,
 124, 128, 128f9.8, 129
 Aa rock in, 30f2.13
 Dabadeb, 128, 129
 depression, 35, 36, 129f9.9
 Kharga Oasis, 2, 14, 15, 20, 21, 27, 28, 31, 34, 36,
 45, 57, 102

- Khasekhemwy Enclosure, 48
 Khedivate period, **9t1.1**
 Khentkawes town, 51
 Khufu, 15, 52
 king lists, 7–8
 Kom el-Farahy, 142
 Kom el-Hisn, 99
 Kom el-Khilgan, 97
 Kom Fakhry, 110
 Kom Firin, 124, 125, 126, *126f9.7*, 133, 142
 Kom Rabi, 110
 Kom Tuman, 110
 koms, 78, 85, 109, 110, 141, 142
 Krom, M. D., 98
 Kröpelin, S., 15, 26, 44, 62
 Kuper, R., 15, 44
 Kush, Kingdom of, 36, 67
- Lahun, 120
 Lament, 122
 Landrock, E., 41
 large-scale crevassing stage (LSC), 94, 95,
96f7.3, 97f7.4
 Late Period, **9t1.1**
 lateral migration, 78, 81
 and floodplain, 131
Le Description de L'Égypte, 5
 Lehner, Mark, 131
 Lehnert, 41
 levees, 21, 42, 55, 56, 59, 60, 70, 72, 78, 79, 80,
 85, 124, 153
 Libyans, 99
 Lindstadter, J., 26
 Lisht, 68, 69, 70, 71, 72, *72f5.5*, 85
 Litherland, Piers, 113
 Lucarini, G., 29
 Lutley, Katy, 69, 80, 140, 154
 Luxor, 7, 12, 59, 78, 88, 107, 108, 112, 116, 137, 143
 Karnak. *See* Karnak
 revetment and erosion management
 around, 91
 sediments around, 59
 Luxor Old Garden Site, 106, 109
 Luxor Temple, 78
- Macklin, M.G., 41, 43
 Maidum, 63, 77
 Malek, J., 5
 Malkata Palace, 8
 Malqata, 113
manawir (qanat), 124, *123f9.5*
 Manetho, 7, 110
 Manzala Lake, 98, 99, 101
 marshes, 2, 39, 41, 55, 58, 60, 62, 93, 99, 101, 138
 Maryut Lake, 98
 massifs, 59, 112, 116
 mastaba tombs, 59
 meandering, 3, 40, 59, 79, 94, 95, *96f7.3*, 104
 Medamud, 121
 medieval period, 98, 135
 Mediterranean coast, 1, 2, 3, 19, 38, 39, 40, 62,
 67, 98, 100, 130, 133, 143
 Megachad Lake, 19
 Meidum bowls, 157
Melanoides tuberculata, 14
 Memphis, 12, 59, 60, 62, 63, 64, 66, *66f5.2*, 67,
69f5.3, 72, 73, 74, 76, 77, 78, 82, 96, 100,
100f7.5, 102, 106, 109, 110, 111, 123, 134
 floodplain, 80
 Ptah Temple. *See* Ptah Temple
 ruins of, 74, 80, 109, 110, *111f8.6*
 siege of, 73
 Menes, 110
 Merimde, 34, *34f2.17*, 62
 Neolithic community, 31, 32
 Merimde Abu Ghalib, 32–4
 Merimde Beni Salama, 32–4, *33f2.16*, 97, 98
 Middle Kingdom (MK), **9t1.1**, 12, 25, 50, 55, 56,
 60, 66, 68, 69, 70, 72, 74, 75, 76, 85, 88, 102,
 104, 110, 118, 126, 133
 excavation, *16f2.1*
 limestone temple, 88
 owl diets, 70
 mid-Holocene period, 25, 40, 42, 48, 56
 millet seed grains, 35
 mining, 56, 104, *114f8.9*, 117, 122, 130
 Mississippi River, 79, 84, 93
 Mit Rahina, 72, 110
 Mitanni, 104
 Moeller, Nadine, 60, 65
 Moeris, King, 68
 Moreno, Juan Carlos Garcea, 138
 Moulid Abu al-Haggag, 137
 mud-brick tunnel, 64, *65f5.1*
 Murray, G.W., 15
 Muslim Dynastic period, **9t1.1**
 Mut Island, 88
 myrrh roots, *103f8.1*
 myths, 3
- Nabta Playa, 5, 26, 27, 31, *31f2.15*, 57
 Napoleon, 4
 Narmer, 48
 Naslet es-Saman, 109
 Nasser Lake, 5, 41, 55, 101, 133, 142, 143
 Naukratis, 97

- Nekhen. *See* Hierakonpolis
- Neolithic period, 21, 26, 28, 29, 31, 32, 33, 33*f2*.16, 34*f2*.17, 35, 43, 47, 98, 118
- New Kingdom (NK), **9t1.1**, 12, 28, 34, 35, 36, 46, 49, 50, 57, 60, 64, 65, 67, 72, 73, 76, 82, 88, 90, 93, 99, 102, 104, 109, 110, 113, 116, 117, 118, 120, 122, 123, 126, 128, 130, 133, 137
 climate amelioration during, 102, 122
 grain production, 122
 papyrus, 122
 pottery, 116
 sediments, 110
- New Valley Project, 142
- Nicholson, Paul, 60
- Nile Valley, 12, 14, 31, 34, 38, 39, 64
 early farming, 43
- nilometer, 3, 131, 133*f10.2*, 137
- nomarchs, 67
- North Africa, vegetation distribution, 19, 20*f2.5*
- North Kharga Oasis Survey, 20
- Northern Delta, 1
- Nubia, 5, 67, 104
 aquifers, 3, 34, 142
 pottery, 33
- oases, 3, 12, 20, 22*f2.6*, 34, 44, 118, 120
 Bahariya, 34
 Dakhla, 34, 76, 102
 Faiyum, 2, 20, 21, 25, 31, 38, 43, 66, 68, 73, 87, 102, 118, 119*f9.1*, 143
 Farafra, 26, 27, 29, 31, 31*f2.15*, 34, 57
 Kharga, 2, 14, 15, 20, 21, 27, 28, 31, 34, 36, 45, 57, 102
 Siwa, 34
- Old Kingdom (OK), **9t1.1**, 15, 49, 52, 53, 56, 59, 60, 62, 63, 64, 66, 67, 74, 76, 85, 93, 99, 109, 110, 118, 132, 138, 157
 drying of lakes during, 25
 quarries, 52
- Opet, 88
- Ottoman Empire, 136, 140
- owl diets, 70
- oxbow lakes, 80, 85, 105
- Oxyrhynchus documents, 84, 87, 123, 123*f9.4*, 137
- Palaeolithic period, **9t1.1**, 19, 33
- Palaeonile, 40
- Palestrina Mosaic, 94*f7.1*
- Parcak, Sarah, 70, 120
- Parsons, P., 84
- Pennington, Ben, 94, 134
- Pepi II, 76
- Peret season, 41, 82, 127, 137
- Persian Empire, **9t1.1**
- Persians, 124
- Peruvian wadis, 45*f3.1*
- Petrie, Flinders, 5, 7, 120, 157
- Phillips, R., 31, 44
- Picton, Jan, 120
- Piramesse, 6
- playa basins, 124
- playa lakes, 20, 27, 36, 47, 58
 ancient lake beds, 27*f2.10*
- Pleistocene period, 13, 19, 21, 26, 32, 38, 40, 57, 94, 96, 126
- Polar Cell, 19
- pottery, 7–8, 26, 28, 32, 33, 70, 116, 127, 142, 150, 153, 157
 from Middle Kingdom, 70
 from Pre-Dynastic cemetery, 7
- Pre-Dynastic king, 84*f6.4*
- Pre-Dynastic period, 7, **9t1.1**, 32–4, 48, 50, 59, 65, 67, 82, 97
 habitation, 47
 Saharan playas, 12
 sites, 97, 98
 wadi catchments, 46*f3.2*
- ‘Prophecy of Neferti’, 68, 76
- Pryer, Laurence, 67, 77, 132
- Psamtek I, 126
- Ptah Temple, 72
- Ptolemaic period, **9t1.1**, 73, 120, 122, 123, 127, 130
 baths, 90
 Edfu temple, 70, 71*f5.4*, 127, 137
 rock-cut temples, 130
- Pura Tirta. *See* Balinese water temples (Pura Tirta)
- pyramids, 12, 41, 60, 63, 64, 74, 76, 77
 Bent Pyramid, 62, 65*f5.1*
 at Giza, 6, 52
 Step Pyramid of Djoser, 60
- qanats, 34, 129
- Qarun Lake, 66, 118, 142
- Qin, Ying, 66, 73
- Quibell, J. E., 48
- Radar Valleys, 40
- rainstorms, 70
- rainy seasons, 27, 58, 58*f4.1*
- Rameside period, **9t1.1**, 121
- Ramses II, 100, 116
- Redford’s Temple C, 89
- Republican period, **9t1.1**

- Rhine delta, 93, 94, 99
 rhizocretions, 21, 25f2.9, 36, 47, 48, 48f3.4, 149
 Rift Valley, 2
 river migration, 12, 46, 49, 80, 81f6.2, 82, 140
 and island formation, 80, 85, 88, 105
 Roberts, David, 78
 rock arts, 20, 28, 59
 Rodrigues, D., 104
 Rohde, R., 95f7.2
 Roman bastions, 131
 Roman period, 911.1, 28, 34, 36, 62, 73, 90, 98,
 118, 122, 127, 129, 130
 oasis pottery, 35
 techniques, 130, 131
 Romans, 124
 Rosetta Stone, 5
- Sa El-Hagar, 97
 Sahara, 1, 2, 3, 14, 18, 19, 25, 26, 27f2.10, 36, 39,
 44, 46, 55, 56, 58, 62, 63, 66, 78, 93, 144f11.3
 aridification of, 55
 death of, 63
 desertification of, 12
 dried-up lake bed in, 37f2.20
 drying of, 61
 groundwater level, 142
 Neolithic period, 911.1, 34
 oases. *See* oases
 playas, 26, *see also* playas
 wet phases, 14–38
- Said, R., 3–4
 sailing season, 98, 134
 Sais, 44, 97, 126
 Saite pharaohs, 111
 Saite scheme, 110
 Sampsell, B.M., 3–4
 sand dunes, 15, 26, 62, 156
 sand entrainment and re-deposition, 74
 sand islands (gezireh), 55
 sandbanks, 77, 108f8.5
 sandbars, 79, 95, 98, 104, 106, 107, 108, 153
 Saqqara, 59–61, 61f4.2, 62, 63, 69, 100f7.5, 132
 satellite imaging studies, 147
 savants, 4–5
 Schild, R., 5–6
 Scorpion II, 82, 137
 sea level, impact of rising of, 2, 4, 93, 95f7.2
 seasons, 41
 agricultural, 57, 82, 127
 Akhet, 41, 82, 137–8
 dry, 82, 84, 109, 124
 Peret, 41, 82, 127, 137
 rainy, 27, 58, 58f4.1
 sailing, 98, 134
 Shemu, 41, 137–8
 wet, 58
- sebakh, 127, 141, 142, 156–7
 Second Intermediate Period (SIP), 911.1,
 126, 128
 sedimentation, 43, 58, 98, 99, 106, 135
 sediments, 3, 5–6, 20, 21, 24f2.8, 26, 27f2.10, 33,
 34, 36, 40, 43, 44, 50, 51, 57, 58, 60, 63, 66,
 67, 70, 76, 78, 90, 97, 106, 108, 118, 134,
 142, 147, 148–50
 glacial sediments, 19
 around Luxor, 59
 types of, 151–5
- Senusret I, 70
 Sesebi, 104, 113f8.8, 114f8.9, 116, 117, 122
 Seti I, 109, 116
 Shaw, Ian, 8, 911.1, 120
 Sheikh Labeib shrine, 88
 Shemu season, 41, 137–8
 Shutb, 134
 silts, 56, 59, 77, 108, 124, 154
 Siwa, 34
 Sneferu, 64, 76
 Spencer, N., 127
 spillways, 20, 21, 22f2.6, 79, 118
 St Barbara's Church, Cairo, 131, 132f10.1, 135
 stalactites, 26
 Stanley, D. J., 6, 42, 98, 99
 Stele of Piye, 73
 Step Pyramid of Djoser, 60
 Stephenson, Robert Louis, 140
 Strabo, 99
 street plans, 85, 86f6.6
 Subias, Eva, 84
 Sudan, 52
 Survey of Memphis, 6, 60, 72, 74, 80,
 110, 151
- tafla, 64
 Tale of Sinuhe, 68–9, 69f5.3, 70
 Tavares, Ana, 72
 Tell El-Dab'a, 6
 Tell Karnak, 88, 108
 Tempest Stele of Ahmose I, 57
 temples
 Akhenaten, 88
 Medamud, 121
 Ptah Temple, 72, 100, 110
 Sesebi, 104, 113f8.8, 114f8.9
 Tod, 121
 Theban Mountain, 59, 61, 112, 112f8.7, 116, 124
 Thebes, 67, 102–17, 120, 133

- Third Intermediate Period (TIP), **9t1.1**, 116
 13th Dynasty, 133
 Thutmose III, 118
 Ti, tomb of, 99, *10of7.5*
 Tinnis, 98, 134
 Tod, 121
 Toshka spillway, 20, 142
 trade winds, 35, 36, 61, 62
 tributaries, 4, 39, 40, 62, 130
 Tristant, 97
 Tutankhamun, 88
 tomb of, 116
 Tutmosis III, 88, 89
 Twain, Mark, 84
- Umm el-Dabadeb, 124, *128f9.8*
 Usai, D., 47f3.3
- Valley of the Kings, 113, 116
 Vesuvius, 43
 votive jars, 64
- Wadi Bairiya, 113
 Wadi Bakht, 7, 26
 Wadi Bershama, *24f2.8*, *25f2.9*, *37f2.19*
 Wadi Gamal, *33f2.16*, 34, *34f2.17*, 98
 Wadi Gimal, 130
 Wadi Hammamat, 122
- Wadi Howar, 104
 Wadi Nuqrus, 130
 Wadi Sikait, 130
 Wadi Toshka, 55
 wadis, 1, 4, 39, 40, 42, 44, *45f3.1*, 50, 51, *53f3.9*,
 55, 56, 57, 59, 60, 63, 104, 116, 118, 120
 vegetation in, 45, 76
 Warne, N., 6, 42, 98, 99
 water level, 32
 during ice age, 3
 water management, 82, 84, 118–30, 140–6
 Mississippi River. *See* Mississippi River
 Oxyrhynchus documents, 84, 123, *123f9.4*, 137
 pilot channels, 84
 second period of, 133
 waterborne disease, 58
 Wendorf, F., 5–6, 7
 Wenke, R. J., 99
 wet season, 58
 White Desert, 26, 31
 White Nile, 39, 41, 42
 Wilbour Papyrus, 67, 82
 Wilson, Penny, 97
 windblown sand, 154–6
- Yoa Lake, 62, 74
- Zinnar Basin, 134