

INDEX

abundance, of species, 38-39 accelerator mass spectrometry (AMS) radiocarbon dating, 332, 339-340 Acheulean stone tool industry, 30 African carnivore guild, 45–47 H. erectus and, 46 development of, 104 for early hominins, 94-95 Acila site, 225 Acinonyx jubatus (cheetah), 132 aDNA studies. See ancient DNA studies Africa. See also malarial infections; Out of Africa 1; Out of Africa 2 carnivore guilds in, 45-47 domesticated animals and plants in, dispersal of, 282-286 in central regions, 285 in South Africa, 285-286 in sub-Saharan region, 284-285 in western regions, 285 global diseases and leprosy, 502-505 malaria, 498-499 origins of, 498-505 TB, 499-502 hominin dispersal from, 47-50, 53 Neolithic sites in, 282-284 pre-Oldowan carnivore guilds, 34-40 ecological guilds in, 35 ecological measures in, 38-39 genera present in, between 7 and 5 Ma, 36 during key time periods, 37 by region, 35–40 agriculture, development of. See also domesticated animals; domesticated plants

of barley, 317 data accumulation for, 312 in Australia, 166-168, 169-173 in British Isles, 317–318 of cereals, 310, 322-323 in China, 319 climatic conditions as influence on, 319-322 comparative approach to, 305-306 crop package persistence and, 316 culinary influences on, 322-324 cultivation in defined, 306 of niches, 307-309 of rice, 308-309 trophic levels, 307-308 domestication of, 306-309 Broad Spectrum Revolution in, 307 defined, 306 in East Asia of millet, 311 of rice, 310-311 through human-mediated species introductions, 311-313 introduction of new crops, 321-322 long-term effects of, 304-305, 324-325 in Mediterranean basin, 310 of millet, 310, 311 abandonment of, 318-319 in Neolithic landscapes, 317-319 in New Guinea, 173-176 niches in construction of, 307 cultivation of, 307-309 Eurasian, 310-311 evolution of, 306-309

archaeobotany



agriculture, development of. (cont.)	of wild boar, 239–243
types of, 310	of smallpox, 508-509
non-ecological adaptations in, 322-324	of TB, 499–500
in Norway, 317	Anderson, Edgar, 441
of oats, 321–322	animal distribution maps, of green
post-domestication enhancements in,	Sahara, 125
319-322	animal translocations
of rice, 310	in Australia, 179–180
cultivation of, 308–309	through biological exchange
in East Asia, 310–311	from 500 BC to 500 AD, 369–370,
japonica varieties, 319–320	374-375, 376-377
types of preparations, 322–323	during Medieval period, 384–385
of rye, 321–322	during Bronze Age, 355–363
secondary crops, 319–322	from green Sahara, 128, 137–138
weeds and, 312–313	in ISEA, 179–180
of wheat and barley, 313, 316,	in New Guinea, 179–180
320–321	Anthropocene
archaeobotany of, 317	cultural niche construction in, 17–20
Alcelaphus buselaphus (hartebeest), 129–132	dating of, 19, 92
AMS radiocarbon dating. See accelerator	fire use during, 102–103
	anthropochore species, 441
mass spectrometry radiocarbon	anthropoenic species dispersal, 14–17
dating	
Anatolia region	for dogs, 14 failed, 17
domesticated animals and plants in,	
dispersal of, 268–272	of rats, 14
Konya Basin, 270	successful, 16–17
Mesolithic sites in, 271–272	transported landscapes, 15
migration trajectories across, 243–244	anthropophyte species, 441, 446
Neolithic sites in, 271–272	antibiotic-resistant bacterial pathogens,
ancient DNA (aDNA) studies	465–467
during Bronze Age, 244	ants
defined, 237–238	dispersal strategies of, 414–417
degradation issues, 241	claustral foundation strategy, 415–41
development of, 5–6	unicoloniality, 417
of eliminated species, 6	invasions by, 417–423
on maize, 336, 344	Argentine ant, 421–422
of Mesolithic sites, 254–255	distinguishing foes from friends,
migration trajectories, 253–255	419–420
across Anatolia region, 243–244	facilitating factors for, 417–420
for Arctic fox, into Iceland, 248–252	invasive garden ant, 422–423
during Bronze Age, 244	monocoloniality and, 421–422
development of, 237–238	multicoloniality and, 421
of domesticated pigs, 241–244	population of colony as factor in,
for Falkland Islands wolf, 252–253	418–419
of farmers, into Europe, 239–243	pre-adaptation behaviors, 421–423
through genetic typing, 246–247	by species, 417–418
for humans, into Pacific, 244–248	unicoloniality and, 421–422
in ISEA, 245–248	Aonyx capensis (clawless otter), 52
during Little Ice Age, 251–252	apophyte species, 441, 446
Neolithic sites, 241	Arabian Peninsula
Pacific Clade and, 245–248	archaeological sites in, 223–224
phylogeographic patterns, 239	Acila site, 225
to Polynesia. 244–245	Iebel Fava site, 221, 228



More Information

Jebel Qara site, 223–224 Jebel Qattar site, 225, 228–229 Manayzah site, 224	plant domestication, 171, 177 through plant translocations, 181–183 during Pleistocene period, 165–166
Neolithic, 222–223, 224, 225–227 obsidian at, 226	regional approach to, alternatives to, 183–185
al-Rabyah site, 223–224, 228	Australopithecus afarensis, 31–32
Ubaid pottery evidence, 226	Austronesian languages, 167
Wadi Surdud site, 227–228	in New Guinea, 173
colonisation in, 227-230	Austronesian expansion, 151
in Fertile Crescent, 222–223	
during Holocene period, 222–227,	bacterial pathogens
228–229	air travel and, reverse trajectories of,
of hominins, 220–221	523-527
increase of cultural interactions,	antibiotic-resistant, 465-467
226–227	dispersals of, 470–471
in Levant, 222	geological time scales for, 455
during Middle Palaeolithic period,	human migration patterns
220-222, 227-228	H. pylori influenced by, 456-459
during Palaeolithic period, 220–222	mobility and, modern trends for,
societal transformations as result	521-523
of, 227	S. enterica serovar Agona influenced
domesticated animals in, dispersal	by, 465–470
of, 224, 229	Y. pestis influenced by, 459-465
geographic diversity in, 219–220	Y. pseudotuberculosis influenced
stone tool industry in, 221–222	by, 462
Arctic fox. See Vulpes lagopus	molecular clock rates for, 454-455
Argentine ant, invasions by, 421–422	Balkan Peninsula, domesticated animals in,
Aterian site, 130	275
Australia	barley. See wheat and barley, agricultural
agricultural development in, 166–168,	development of
169-173	bioarchaeology, 497, 499, 503, 513
early fire use in, 103	biogeographers, 4
human colonisation of	biogeographical approach, to hominin
agricultural development, 166–168,	dispersal, 64–66
169-173	biological exchange. See also animal
dating of, 168	translocations; globalisation; plant
fire use and, 165	translocations; proto-globalisation;
during Holocene period, 166–179	translocated species
hunter-gatherer communities,	from 500 BC to 500 AD, 364-378
166–168, 176–177	through animal translocations,
through inter-island movement,	369-370, 374-375, 376-377
179-183	of diseases, 378
during Pleistocene period, 165–166	through plant translocations, 365-369
stone tools and, 165–166	mechanisms of, 351-353, 386-390
species dispersal throughout	during Medieval period, 379-386
through animal translocations,	through animal translocations,
179–180	384-385
archaeobotany of wet tropics, 171	with China, 379–380
through domestication of animals,	during Columbian Exchange, 385–386
180-181	of diseases, 385
through inter-island movement,	Islamic Green Revolution, 380
179–183	through plant translocations, 380-384
isolationist approach to, 164	by Sasanians, 379



More Information

538 Index

biological exchange. (cont.) kleptoparasitism and, 41 throughout Continental Europe, mesocarnivores, 31-32 Oldowan stone tool industry and, 43-45 374-375, 376-377 translocated species and, 352-353 taxonomy of, 33-34 Bismarck Archipelago, 168, 197 cattle, domestication of farming in, 172-173 in Africa, 282-286 Blackwell Companion to Globalization, 351 in central regions, 285 boats, origin and evolution of, 153-154 in South Africa, 285-286 Borneo, 195 in sub-Sahara region, 284-285 bottle gourds, cultivation of, 340 in western regions, 285 breads, production of, 322 in Anatolia region, 268-272 British Isles in Arabian Peninsula, 224, 229 agricultural development in, 317-318 in Balkan Peninsula, 275 domesticated animals in, dispersal of, 281 in British Isles, 281 plant translocations to, 5, 377-378 in Continental Europe, dispersal of, domesticated plants, dispersal of, 281 277-281 Broad Spectrum Revolution, 307 in Fertile Crescent, 286-290 Bronze Age on Iberian Peninsula, 276-277 aDNA studies during, 244 in Mediterranean Basin, 272-277 proto-globalisation during, 354-363 cereals, production of, 310, 322-323 animal translocations as result of, Channel Islands, ecosystems on, 155 355-363 Chasmoaporthetes, 47 Gulf-South Asian trade routes, cheetah. See Acinonyx jubatus 363-364 chenopods, cultivation of, 340 chickens. See Gallus gallus plant translocations as result of, 355-363 Buddhism, globalisation of, 365 chimpanzees as carnivores, 40-41 cane rat. See Thryonomys swinderianus grouping behaviours of, 41-42 Canis aureus (golden jackals), 52 China. See also East Asia; Eurasia carnivore guilds agricultural development in, 319 Acheulean stone tool industry and, 45-47 biological exchange during Medieval H. erectus, 46 period, 379-380 in Eurasia, 50 chronology, prehistoric hominins and, 51-52 chronometric hygiene, 204 pre-Oldowan Africa, 34-40 of East Polynesia, 207–210 ecological guilds in, 35 for human settlement, 205-206 ecological measures in, 38-39 long chronology, 203-204, 206 of New Zealand, 202-207, 208 genera present in, between 7 and 5 Ma, 36 orthodox chronology, 203 during key time periods, 37 of Polynesia, 207-210 by region, 35-40 short chronology, 203, 206 sympatric species, 50-51 chronometric hygiene, 204 carnivores claustral foundation strategy, 415-416 chimpanzees, 40-41 clawless otter. See Aonyx capensis extinction factors, 52-53 climate change grouping behaviours of, 41-42 expansion of species due to, for hominins as, 40-43, 52 humans, 10 expensive tissue hypothesis and, 42 in green Sahara, anthropic animal grouping behaviours of, 41-42 dispersal as result of, 138-139 humans and, historical relationship green Sahara from, 10 between, 29-34 human-influenced, 90-91 hypercarnivores, 30-31 coastal ecosystems. See also maritime hypocarnivores, 30-31 technology



ecology of, 151–153	crops, dispersal of. See agriculture,
during Holocene period, 155–156	development of
human impact on, 154–158	crowd diseases, 505-512. See also plague;
on Channel Islands, 155	smallpox
for shellfish populations, 155, 156	cuisine, agricultural development
Kelp Highway, 152	influenced by, 322-324
Mangrove Highway, 153	cultivation, in agricultural development
maritime dispersals, 151–153	defined, 306
after Pleistocene period, 147–149	of niches, 307–309
during Pleistocene period, 155–156	of rice, 308–309
sea levels, 148–149	trophic levels, 307–308
shorelines, 148–149	cultural niche construction
in South Africa, 154	in agricultural development, 307–309
coastlines	during Anthropocene period, 17–20
aquatic habitats, 149–151	cursorial animals, 30
Austronesian expansion and, 151	cursoriar ammais, 30
ecology of, 151–153	Delivering Alien Invasive Species
hominin encephalization on, 149–151	Inventories for Europe (DAISIE)
of <i>H. erectus</i> , 150	project, 432–435
	Denisovans, 6
of H. habilis, 149–150	•
of H. sapiens, 150–151	dispersal during Pleistocene period, 63
of Neandertals, 150	Desmoulins, Charles, 437
maritime dispersals along, 151–153	diet, for early hominins, 94–95
sea levels of, 148–149	of aquatic plants and animals, 149
shorelines and, 148–149	diseases. See also bacterial pathogens;
co-distribution, of anthropic animal	malarial infections
dispersal, 128, 135–137	biological exchange of
colonisation. See also Australia; Island	from 500 BC to 500 AD, 378
Southeast Asia; New Guinea	during Medieval period, 385
in Fertile Crescent, 222–223	globalisation of, 494-498. See also Africa;
through maritime technology, 12	malarial infections; smallpox
of Near Oceania, 195–197	African origins in, 498–505
of New Zealand, 209–210	through air travel, reverse trajectories
during Out of Africa 1, 76–78	for, 523–527
of Pacific Islands, 195, 210–212	bioarchaeology for, 497, 499, 503, 513
of Polynesia, 197	chronology of, 498–505
chronology of, 207–210	through continental connectivity,
downwind sailing and, 209	527-529
Columbian Exchange, 12–13, 385–386	contingency factors, 497
Commander Islands, 249	crowd diseases, 505–512
commensalism, 128	through dispersal of pathogens,
common genet. See Genetta genetta	521-522, 532
competitive exclusion, 35	through domestic mobility, 529-530
confrontational scavenging, 41	through global shipping, reverse
Continental Europe. See Europe	trajectories for, 523-527
Cook Islands, 208–209	historical method for, 501, 507, 509,
cooperation. See within-group	512-513
cooperation	HIV/AIDS, 495, 527–529
corn. See maize	migration flows for, 527-529
Corsica, 276	narratives for, 497-498, 512-513
Cosmographiae Introductio	phylogenetics and, 497, 501, 511
(Wealdseemueller), 439	plague, 511–512
crop package persistence, 316	population increases and, 531



More Information

540 Index

diseases. (cont.) human-mediated species dispersal of, through trade, 505-512 13-14 through urbanization, 505-512 human-mitigated factors for, 267-268 human-mediated species dispersal of, isotopic analysis, 264 location of, 266-267 13-14 diversity, of species, 38 during Medieval period, 380-384 in Mediterranean Basin, dispersal of, dogs, anthropogenic species dispersal for, 14 272-277 domesticated animals, dispersal of. See also morphological markers for, 263-264 cattle; Fertile Crescent; goats; sheep; origins of, 265-267 Sus scrofa of rice, 168-169 in Africa, 282-286 agricultural development of, 308-309, in central regions, 285 310-311, 319-320, 322-323 in South Africa, 285-286 cultivation of, 308-309 in sub-Sahara region, 284-285 timing of, 266-267 domesticated rice. See Oryza sativa in western regions, 285 in Anatolia region, 268-272 downwind sailing, 209 in Arabian Peninsula, 224, 229 dry environments, human expansion in, 12 in Balkan Peninsula, 275 Dusicyon australis (Falkland Islands wolf), in British Isles, 281 252-253 in Continental Europe, dispersal of, E. coli. See S. enterica serovar Agona 277-281 through controlled hunting, 268 East Asia, agricultural development in development of, 261-263 of millet, 311 documentation of, 263-265 of rice, 310-311 during early Holocene period, 263 East Polynesia, chronology of, 207-210 in Fertile Crescent, 286-290 Easter Island, 208-209 human-mediated, 13-14 ecological guilds, 35 human-mitigated factors for, 267-268 competitive exclusion and, 35 on Iberian Peninsula, 276–277 ecological measures isotopic analysis, 264 carnivore guilds and, 38-39 location of, 266-267 for paleontologists, 38-39 ecosystems. See also coastal ecosystems; in Mediterranean Basin, 272-277 morphological markers for, 263-264 landscape and habitats origins of, 265-267 island timing of, 266-267 on Channel Islands, 155 wild boar, 239-243 during Holocene period, 155-156 human impact on, 154-158 domesticated plants, dispersal of. See also during Pleistocene period, 155-156 agriculture, development of; maize; plant translocations modern humans' influence on, 90-91, in Africa, 282-286 in central regions, 285 in Europe, 99-102 in South Africa, 285-286 in Iberia, 100-101 in sub-Sahara region, 284-285 through mammoth hunting, 100 in western regions, 285 through subsistence practices, 100-101 in Anatolia region, 268-272 during Upper Palaeolithic period, in British Isles, 281 in Continental Europe, dispersal of, elephants early hominins, hunting of, 95-96 277-281 development of, 261-263 threat evaluations by, 139 documentation of, 263-265 Elton, Charles, 444-445 during early Holocene period, 263 Emory, Kenneth, 200-201 in Fertile Crescent, dispersal of, 261-263 epidemics. See smallpox



Index

Cambridge University Press 978-1-107-16414-7 — Human Dispersal and Species Movement Edited by Nicole Boivin , Rémy Crassard , Michael Petraglia Index

More Information

epidemiological transition, of malarial location of, 266-267 infections, 488-490 morphological markers for, 263-264 Eren, Metin, 431 origins of, 265-267 timing of, 266-267 Eurasia carnivore guilds in, 50 domesticated plants in, dispersal of, fauna in, 71-72 286-290. See also domesticated H. erectus and, 71-72, 75-76 plants hominin dispersal and, 71-72, 75-76 development of, 261-263 naïve, 72-76, 80-81 documentation of, 263-265 Out of Africa 1, 75-76 during early Holocene period, 263 predator-savvy, 72-76 human-mitigated factors for, 267-268 hominins in, 49. See also Out of Africa 1 isotopic analysis, 264 early subsistence for, 67-69 location of, 266-267 founding population of, 69-70 morphological markers for, 263-264 hunting by, 68-69 origins of, 265-267 Europe, Continental timing of, 266-267 biological exchange throughout, Fiji, 197 fire, use of, 102-103 374-375, 376-377 domesticated animals in, dispersal of, in Australia, 103 food theft. See kleptoparasitism 277-281 domesticated plants in, dispersal of, functional richness, of species, 38-39 Funnel Beaker (TRB) culture, 280-281 277-281 LBK culture, 279-280 Neolithic sites, 279-281 Gallus gallus (chickens), 169-170 garden ant. See Lasius neglectus TRB culture in, 280-281 GBY site. See Gesher Benot Ya'aqov site eusocial insects. See ants; insect societies evenness, of species, 38-39 Genetta genetta (common genet), 135 geological time scales, 455 exotic species, 438-441 expensive tissue hypothesis, 42 Gesher Benot Ya'aqov (GBY) site, 67-68, 95-96 Fairchild, David, 440-441 global health, 499 Falkland Islands wolf. See Dusicyon australis globalisation, 349-350. See also diseases, globalisation of; proto-globalisation ecological consequences of predator ; trade routes removal, 72-73, 75 of Buddhism, 365 definitions of, 351 in Eurasia H. erectus and, 71-72, 75-76 early types of, 350 hominin dispersal and, 71-72, 75-76 of Hinduism, 365 goats, domestication of naïve, 72-76, 80-81 Out of Africa 1, 75-76 in Africa, 282-286 in central regions, 285 predator-savvy, 72-76 loss of vigilance of, 76-78 in South Africa, 285-286 Fertile Crescent in sub-Sahara region, 284-285 colonisation in, 222-223 in western regions, 285 domesticated animals in, dispersal of, in Anatolia region, 268-272 286-290. See also domesticated in Arabian Peninsula, 224, 229 animals in Balkan Peninsula, 275 through controlled hunting, 268 in British Isles, 281 in Continental Europe, dispersal of, development of, 261-263 documentation of, 263-265 277-281 during early Holocene period, 263 in Fertile Crescent, 286-290 human-mitigated factors for, 267-268 on Iberian Peninsula, 276-277 isotopic analysis, 264 in Mediterranean Basin, 272-277

541



More Information

golden jackals. See Canis aureus	Acheulean stone tool industry for,
Great Britain. See British Isles	94-95
greater mouse-tailed bat. See Rhinopoma	dietary changes for, 94–95
microphyllum	at GBY site, 95–96
green Sahara, 10	geographic distribution of, 93–94
human dispersal out of, 120–121	hunting of elephants by, 95–96
co-distribution of, 128	in Levant, 95–96
through commensalism, 128	Oldowan stone tool industry for, 94
facilitation of, 127–128	in Eurasia, 49. See also Out of Africa 1
through mutualism, 128	early subsistence for, 67–69
palaeogeography of, 119–121	founding population of, 69–70
animal distribution maps, 125	hunting by, 68–69
archaeological studies, 119–120	Lomekwian stone tool industry and,
fossil studies, 120–121	31-32
genetic studies, 119–120	Neandertals, 96–99
through molecular phylogeny of	diet of, 96–97
species, 121	encephalization on coastlines, 150
multidisciplinary approach to,	hunting by, 96
124-127	megafaunal extinctions as result of,
grouping behaviours, of carnivores, 41-42	97–98
	Middle Stone Age toolkit for, 97
H. heidelbergensis, 65	Oldowan stone tool industry and, 43-45
H. pylori, 13	population expansion of, 108
human migration patterns and, 456–459	range expansion of, 109
phylogeographic analysis of, 457–459	species dispersal
origins of, 498	from Africa, 47–50, 53
hartebeest. See Alcelaphus buselaphus	into Eurasia, 49
Hawai'i, 208–210	from green Sahara, 120–121
Heyerdahl, Thor, 211	Homo erectus, 9
Hinduism, globalisation of, 365	Acheulean stone tool industry and, 46
HIV/AIDS, globalisation of, 495,	on coastlines, encephalization of, 150
527-529	Eurasian fauna and, 71–72, 75–76
Holocene period	expansion factors for, 10
anthropic animal dispersal during, from	during Pleistocene period, 64, 65
green Sahara, 133	species dispersal outside of Africa, 47-50
Arabian Peninsula during, 222–227,	network dispersals, 78-80
228-229	social complexity as influence on,
coastal ecosystems during, 155-156	78 - 80
human expansion during, 18	Homo habilis, 149–150
animal extinctions as result of, 92	Homo sapiens, 3. See also agriculture,
plant extinctions as result of, 92	development of; domesticated
island ecosystems during, 155-156	animals, dispersal of; domesticated
hominins	plants, dispersal of; hominins
in Arabian Peninsula, 220–221	boats and, origin and evolution of,
carnivore guilds and, 51-52	153-154
as carnivores, 40-43, 52	on coastlines, encephalization of,
expensive tissue hypothesis and, 42	150-151
grouping behaviours of, 41-42	expansion and dispersal of, 8-11
on coastlines, encephalization of,	climate change as factor in, 10
149–151	expanded range for, 78–80
diet for, 94–95	from green Sahara, 120–121
of aquatic plants and animals, 149	during Middle Palaeolithic period,
early, 93–96	50-51



More Information

Cambridge University Press 978-1-107-16414-7 — Human Dispersal and Species Movement Edited by Nicole Boivin , Rémy Crassard , Michael Petraglia Index

networked dispersals, 78-80	mobility for, modern trends in, 521-523
Out of Africa 2, 62–63	in New Zealand, 205–206
during Pleistocene period, 9	in Pacific Islands, 195
pull factors for, 9	during Ice Age, 195-197
social complexity as influence on,	hunting
78-80	in Fertile Crescent, 268
during Upper Palaeolithic period,	by hominins
50-51	of elephants, 95–96
as omnivores, 40	in Eurasia, 68–69
during Pleistocene period, 65	of Mammoths, 100
human-mediated species dispersal, 12-14	by modern human, 100
Columbian Exchange, 12–13	hypercarnivores, 30–31
of diseases, 13	hypocarnivores, 30–31
of domesticated animals, 13-14	71
of domesticated plants, 13–14	IAS. See invasive alien species
of wild plants, 13	Iberian Peninsula
humans, modern. See also Homo sapiens;	domesticated animals in, dispersal of,
mobility, of humans; societies	276–277
carnivores and, historical relationship	ecosystems in, 100–101
between, 29–34	Ice Age, Pacific Islands settlements during,
climate change influenced by, 90–91	195–197
coastal ecosystems impacted by, 154–158	Iceland
on Channel Islands, 155	Arctic fox migration into, 248–252
for shellfish populations, 155, 156	genetic isolation in, 249
ecosystems influenced by, 90–91	during Little Ice Age, 251–252
in Europe, 99–102	insect societies, 412, 413. See also ants
in Iberia, 100–101	human societies compared to, 424–425
through mammoth hunting, 100	invasive alien species (IAS), 448
through subsistence practices, 100–101	invasive species, 444–447
during Upper Palaeolithic period,	explosion ecology and, 445
99–100	management of, 447–449
evolution of, 110	Ireland. See British Isles
expansion of species. See also green Sahara	Irwin, Geoff, 201–202
animal extinctions as result of, 92	ISEA. See Island Southeast Asia
climate change as factor for, 10	Islamic Green Revolution, 380
in dry landscapes, 12	island ecosystems. See also Pacific Islands
from green Sahara, 120–121	on Channel Islands, 155
during Holocene period, 18, 92	during Holocene period, 155–156
long-term biological impact of, 19	human impact on, 154–158
through maritime technology, 11–12	for shellfish populations, 155, 156
during Palaeolithic period, 17–18	during Pleistocene period, 155–156
plant extinctions as result of, 92	Island Southeast Asia (ISEA)
during Pleistocene period, 9, 17–18	Bismarck Archipelago, 168, 172, 197
population pressures as factor in, 10	farming in, 172–173
social developments as influence on,	human colonisation of
11–12	dating of, 168
technological developments as	fire use and, 165
influence on, 11–12	during Holocene period, 166–179
topographical barriers as factor in,	through inter-island movement,
10–11	179–183
global environments shaped by, 90–91	during Pleistocene period, 165–166
migration trajectories of, through aDNA	stone tools and, 165–166
studies, 244–248	isolationist approach to, 164



More Information

544 Index

Island Southeast Asia (ISEA) (cont.) leprosy Lapita culture, 167, 168 African origins of, 502-505 migration trajectories in, aDNA studies genetic lineage of, 504-505 for, 245-248 Lucio's phenomenon, 503 Out-of-Taiwan hypothesis, 167 Levant through plant translocations, 181-183 colonisation in, 222 early hominins in, 95-96 species dispersal throughout Lever, Christopher, 442, 447-448 through animal translocations, 179-180 Linear Pottery Culture (LBK), 279-280 archaeobotany of wet tropics, 171 Linnaeus, Carl, 438-439 through domestication of animals, lions. See Panthera leo 180-181 Little Ice Age, 251–252 through inter-island movement, Lomekwian stone tool industry, 31-32 Loudon's Hortus Britannicus, A Catalogue of all 179-183 regional approach to, alternatives to, the plants indigenous, cultivated in, or introduced to Britain, 439-440 183-185 low ecological resistance, 9-10 Lucio's phenomenon, 503 japonica rice varieties, 319-320 Java, 195 Jebel Faya site, 221 M. leprae, 504-505. See also leprosy Jebel Qara site, 223-224 M. lepromatosis, 505. See also leprosy Jebel Qattar site, 225, 228-229 maize (wild teosinte grass), diffusion throughout North America Kelp Highway, 152 aDNA studies on, 336, 344 AMS radiocarbon dating of, 332, Kenyanthropus platyops, 31−32 kleptoparasitism 339-340 carcass processing efficiency and, 42 in farming economies, 343-344 carnivores and, 41 historical development of, 332-333, defined, 31 342-343 in Mexico grouping behaviours as strategy against, in Northeastern region, 335–336 41 - 42in Southern region, 333-335 Kon Tiki expedition, 211 in Tehuacán Valley, 334-335 Konya Basin, Anatolia region, 270 molecular clock approach to, 333-334 Kuwait, 226 through solitary travel, 343 landscape and habitats, modifications of in United States through fire use, 102-103 among ancient societies, 342 in culturally complex societies, 342 in Australia, 103 through stone tool procurement and in Eastern regions, 338-342 quarrying, 103-106 in Southwestern region, 337-338 during Middle Palaeolithic period, malarial infections 104-106 epidemiological transition of, 488-490 Lanyu Island, 248 map of, 478 origins of, 477, 498-499 Lapita culture, 167, 168 geographical range of, 199 P. falciparum infections and, 485-486 maritime technology, 198-199 through parasites, 477-482 pottery, 168, 197, 198-199 disease as result of, 478-482 radiocarbon dating of, 198 dispersal out of Africa, 486-487 Lasius neglectus (garden ant), dispersal within Africa, 487-488 genetic mutations, 478-482 422-423 Last Glacial Maximum, 148 global expansion of, 477-478 LBK. See Linear Pottery Culture vivax infections and, 480, 482-485

mammoths, hunting of, 100

Leerssen, Joep, 437



More Information

Manayzah site, 224	S. enterica serovar Agona influenced by,
Mangrove Highway, 153	465-470
maritime technology	Y. pestis influenced by, 459–465
boats, origin and evolution of,	Y. pseudotuberculosis influenced by, 462
153-154	millet, development of, 310, 311
colonisation through, 12	abandonment of, 318–319
development of, 151	mobility, of humans
downwind sailing, 209	domestic, 529-530
human expansion through, 11–12	modern trends for, 521–523
of Lapita culture, 198–199	modern humans. See humans, modern
in South Africa, 154	molecular clock
Marquesas, 200–201, 208–209	for bacterial pathogens, 454-455
Marsh, George Perkins, 438, 440, 443	of maize diffusion throughout North
marshelder, cultivation of, 340	America, 333–334
Medical Flora of the United States, 439–440	monocoloniality, 421–422
Medieval Climate Anomaly, 209	MTBC. See Mycobacterium tuberculosis
Mediterranean Basin	multicoloniality, 421
agricultural development in, 310	mutualism, 128
Balkan Peninsula, 275	Mycobacterium tuberculosis (MTBC), 499–502
Corsica, 276	1
domesticated animals in, dispersal of,	naïve fauna, 72–76, 80–81
272-277	native species, 438-441
Iberian Peninsula, 276–277	naturalized species, 442-443
Mesolithic sites in, 272–274	definitions of, 443
Neolithic sites in, 272, 274–277	Nazlet Khater site, 105–106
Sardinia, 276	Nazlet Safaha site, 105
Tyrrhenian Islands, 276	Neandertals, 96–99
Megantereon whitei, 48–49	on coastlines, encephalization of, 150
Melanesia, 197, 244–245	diet of, 96–97
mesocarnivores, 31–32	encephalization on coastlines, 150
Mesolithic sites	hunting by, 96
aDNA studies of, 254–255	megafaunal extinctions as result of, 97-98
in Anatolia region, 271–272	Middle Stone Age toolkit for, 97
in Mediterranean Basin, 272–274	Near Oceania, 195–197. See also New
mesopredators, 31-32	Guinea
Mexico, maize diffusion throughout	Neolithic sites
in Northeastern region, 335-336	in Africa, 282–284
in Southern region, 333-335	agricultural development, 317–319
in Tehuacán Valley, 334–335	agricultural development in, 317–319
Micronesia, 197, 244–245	in Anatolia region, 271–272
Middle Palaeolithic period	in Arabian Peninsula, 222–223, 224,
Arabian Peninsula during, colonisation	225-227
in, 220–222, 227–228	in Continental Europe, 279–281
landscape and habitat modification	in Mediterranean Basin, 272, 274–277
during, 104–106	migration trajectories and, 241
species dispersal during, 50-51	neophyte species, 442-444
Middle Stone Age tool industry, 97	New Caledonia, 197
migration patterns, for humans. See also	New Guinea
ancient DNA studies, migration	agricultural development in, 173-176
trajectories	Austronesian languages in, 173
H. pylori influenced by, 456-459	human colonisation of
mobility and, modern trends for,	agricultural development, 173-176
521-523	dating of, 168



More Information

New Guinea (cont.)	Old World. See Europe, Continental
fire use and, 165	Oldowan stone tool industry, 32
during Holocene period, 166–179	carnivores and, 43-45
through inter-island movement,	development of, 104
179–183	hominins and, 43–45
during Pleistocene period, 165–166	early, 94
stone tools and, 165–166	omnivores, Homo sapiens as, 40
species dispersal throughout	opportunistic scavenging, 41
through animal translocations,	origination, of species, 32
179–180	paleontologists' interest in, 39
archaeobotany of wet tropics, 171	Oryza sativa (domesticated rice), 168–169
through domestication of animals,	agricultural development of, 310
180–181	cultivation of, 308–309
through inter-island movement,	in East Asia, 310–311
179–183	japonica varieties, 319–320
isolationist approach to, 164	types of preparations, 322–323
	cultivation of, 308–309
plant domestication, 173–176	
through plant translocations, 181–183	Out of Africa 1, hominin dispersal
regional approach to, alternatives to,	climate-induced shifts, 76–78
183–185	early subsistence, 67–69
New Zealand	into Eurasia, 66–72
colonisation of, 209–210	Eurasian fauna and, 71–72, 75–76
prehistoric chronology, 202–207, 208	of H. sapiens, 78–80
chronometric hygiene, 204	loss of vigilance and, of fauna, 76–78
for human settlement, 205–206	low effective population size
long, 203–204, 206	implications, 70–71
orthodox, 203	naïve fauna and, 72–76, 80–81
short, 203, 206	networked, 78–81
Niah, Great Cave of, 98	during Pleistocene period, 62–63
niches, agricultural	population growth after, 67
construction of, 307	predator-savvy fauna and, 72–76
cultivation of, 307–309	recolonisation and, 76–78
Eurasian, 310–311	social complexity as influence on, 78-8
evolution of, 306–309	Out of Africa 2, hominin dispersal and,
types of, 310	62–63
nilotic species, 125	Out-of-Taiwan hypothesis, 167
noninvasive species, 444–447	Austronesian languages and, 167
North America. See also Mexico; United	Outram, Alan, 431
States	
maize diffusion throughout	P. falciparum infections, 485-486
aDNA studies on, 336, 344	Pachycrocuta, 47, 48–49
AMS radiocarbon dating of, 332,	Pacific Clade, 245–248
339-340	Pacific Islands. See also New Guinea;
in farming economies, 343-344	Polynesia; specific islands
historical development of, 332-333,	colonisation of, 195, 210–212
342-343	Lapita culture in
molecular clock approach to, 333-334	maritime technology, 198–199
through solitary travel, 343	pottery evidence, 197, 198–199
smallpox in, 509-510	radiocarbon dating of, 198
Norway, agricultural development in, 317	Near Oceania, 195–197
- · · · ·	radiocarbon dating in, 199–200
oats, 321–322	settlement of, 195
obsidian, in Arabian Peninsula, 226	during Ice Age. 195–197



More Information

Palaeoanthropocene, 109	ecosystems influenced during, by
palaeogeography, of green Sahara, 119-121	humans, 90–91, 107
animal distribution maps, 125	in Europe, 99–102
archaeological studies, 119–120	in Iberia, 100–101
fossil studies, 120–121	through Mammoth hunting, 100
genetic studies, 119–120	through subsistence practices, 100-101
through molecular phylogeny of species,	during Upper Palaeolithic period,
121	99–100
multidisciplinary approach to, 124-127	hominin dispersal during. See also Out of
Palaeolithic period	Africa 1; Out of Africa 2
Arabian Peninsula during, colonisation	biogeographical approach to, 64-66
of, 220–222, 227–228	of Denisovans, 63
Middle period	early population estimates, 70
Arabian Peninsula during, colonisation	of H. erectus, 64, 65
in, 220–222, 227–228	of H. heidelbergensis, 65
landscape and habitat modification	of H. sapiens, 65
during, 104–106	during regional events, 63
species dispersal during, 50-51	to Savannahstan, 64
Upper period	studies of, 63–66
modern humans during, ecosystems	human expansion during, 9, 17-18
influenced by, 99–100	island ecosystems during, 155-156
species dispersal during, 50–51	Neandertals, 96–99
paleontologists	on coastlines, encephalization of, 150
ecological measures used by, 38-39	diet of, 96–97
on origination patterns, 39	hunting by, 96
Panthera gombaszoegensis, 47	megafaunal extinctions as result of,
Panthera leo (lions), 132	97–98
parasites. See malarial infections	Middle Stone Age toolkit for, 97
the Philippines, 248	Pliocene period, ecosystems influenced
phylogenetics, of global diseases, 497,	during, by humans, 90–91
501, 511	in Europe, 99–102
pigs. See Sus scrofa	in Iberia, 100–101
plague, 510-512. See also Y. pestis	through Mammoth hunting, 100
aDNA studies for, 510–511	through subsistence practices, 100–101
globalisation of, 511–512	during Upper Palaeolithic period,
plant translocations	99–100
through biological exchange	Pliocrocuta, 47
from 500 BC to 500 AD,	Pollan, Michael, 445–446
365-369	Polynesia
during Medieval period, 380–384	colonisation of, 197
to British Isles, 5, 281, 377–378	chronology of, 207–210
during Bronze Age, 355–363	downwind sailing and, 209
dating problems with, 5	geographic size of, 199
in New Guinea, 181–183	homogeneity of, 197–198
to South America, 211	maritime technology in, 201–202
throughout Australia, 181–183	Medieval Climate Anomaly and, 209
throughout ISEA, 181–183	migration trajectories to, aDNA studies
throughout New Guinea, 181–183	for, 244–245
Plasmodium vivax, 13	Polynesian rat. See Rattus exulans
Pleistocene period	population, increases in
archaeology from, 5	of ant colonies, invasions and, 418–419
coastal ecosystems after, 147–149	globalisation of disease and, 531
coastal ecosystems during, 155-156	of hominins, 108



More Information

Cambridge University Press 978-1-107-16414-7 — Human Dispersal and Species Movement Edited by Nicole Boivin , Rémy Crassard , Michael Petraglia Index

548 Index

population, increases in (cont.) in Balkan Peninsula, 275 in British Isles, 281 human expansion influenced by, 10 for shellfish, human impact on, 155, 156 in Continental Europe, dispersal of, Possehl, Gregory, 354 277-281 predator-savvy fauna, 72-76 in Fertile Crescent, 286-290 Pribilof Islands, 249 on Iberian Peninsula, 276-277 proto-globalisation, 351, 353-364 in Mediterranean Basin, 272-277 shellfish populations, 155, 156 during Bronze Age, 354-363 animal translocation during, 355-363 Silk Road, 386 Gulf-South Asian trade routes, Sinoto, Yosihiko, 200-201 smallpox, 506-510 363-364 plant translocation during, 355-363 aDNA studies, 508-509 in North America, 509-510 Middle Asian Interaction Sphere, 354 origins of, 507-508 al-Rabyah site, 223-224, 228 societies radiocarbon dating in Arabian Peninsula, 227 AMS, 332, 339-340 ecological success of, 411-414 in Pacific Islands, 199-200 insect, 412, 413. See also ants target events and, 201 human societies compared to, 424-425 radiocarbon events, 201 maize diffusion by among ancient societies, 342 Rapa Nui, 208, 209-210 rats, anthropogenic species dispersal of, 14 in culturally complex societies, 342 Rattus exulans (Polynesian rat), 136-137 within-group cooperation in, 424 relative species abundance, 38-39 Society Islands, 208-210 Remote Oceania. See also Pacific Islands South Africa colonisation of, 197-199 coastal ecosystems in, 154 resource availability, species expansion due domesticated animals and plants in, dispersal of, 285-286 Rhinopoma microphyllum (greater mouse-South America, plant translocations to, 211 tailed bat), 125-127 species abundance of, 38-39 richness, of species, 38 Rikli, Martin, 441 anthropochore, 441 rivers, species dispersal influenced by, 10-11 anthropophyte, 441, 446 apophyte, 441, 446 rye, 321-322 archaeophyte, 442-444 S. enterica serovar Agona, 465-470 categorization of, 435-436 genome genealogy, 468-470 DAISIE, 432-435 Sahul, formation of, 195. See also Australia diversity of, 38 Samoa, 197, 209-210 evenness of, 38-39 Sardinia, 276 exaggeration of threat, 431 Sasanians, 379 exotic, 438-441 savannahstan, 9, 64 functional richness of, 38-39 Scotland. See British Isles invasive, 444-447 sea levels, changes in, 148-149 explosion ecology and, 445 secondary crops, 319-322 IAS, 448 sheep, domestication of management of, 447-449 in Africa, 282-286 native, 438-441 in central regions, 285 naturalized, 442-443 in South Africa, 285-286 definitions of, 443 neophyte, 442-444 in sub-Sahara region, 284-285 in western regions, 285 noninvasive, 444-447 in Anatolia region, 268-272 origination of, 32 in Arabian Peninsula, 224, 229 richness of, 38



sympatric	in Arabian Peninsula, 221–222
carnivore guilds, 50–51	in Australia, 165–166
defined, 32	in ISEA, 165–166
ecological guilds and, 35	landscape and habitat modification,
synanthrope, 446	103-106
tame, 437–438	during Middle Palaeolithic period,
turnover, 39	104–106
wild, 437–438	in New Guinea, 165–166
species abundance, 38–39	Suggs, Robert, 200–201
species dispersal. See also Homo sapiens	Sulawesi, 247
anthropogenic, 14–17	sunflowers, cultivation of, 340
of dogs, 14	Sus scrofa (pigs), 168–169
failed, 17	in Africa, 282–286
of rats, 14	in central regions, 285
successful, 16–17	in South Africa, 285–286
transported landscapes, 15	in sub-Sahara region, 284–285
challenges of, 4–6 from green Sahara, anthropic factors for,	in Western regions, 285
	in Anatolia region, 268–272 in Arabian Peninsula, 224, 229
122–124, 138–139	
from Aterian site, 130	in Balkan Peninsula, 275
climate change as factor for, 138–139	in British Isles, 281
co-distribution, 128, 135–137	in Continental Europe, dispersal of,
through commensalism, 128	277–281
demonstration of, 129–138	domestication of, 241–244
distinguishing patterns of, 127–128	in Fertile Crescent, 286–290
evaluation of, 139–140	on Iberian Peninsula, 276–277
facilitation of, 127–128, 129–134	in Mediterranean Basin, 272–277
during Holocene period, 133	sympatric species
through mutualism, 128	carnivore guilds, 50–51
through translocation, 128, 137–138	defined, 32
of hominins. See also Out of Africa 1; Out	ecological guilds and, 35
of Africa 2	synanthrope species, 446
from Africa, 47–50, 53	
into Eurasia, 49	Tahiti, 200–201
human-mediated, 12–14	tame species, 437–438
Columbian Exchange, 12–13	taphonomy, 32
of diseases, 13	Tasmania, 195
of domesticated animals, 13-14	TB. See tuberculosis
of domesticated plants, 13–14	Thryonomys swinderianus (cane rat),
of wild plants, 13	135–136
methods of, 4–6	Tonga, 197
during Middle Palaeolithic period, 50–51	trade routes
in rivers, 10–11	during Bronze Age, 363–364
social developments as factor in, 11-12	consolidation of global power as
technological developments as factor in,	influence on, 371
I I-I 2	expansion of, 370, 371-376
during Upper Palaeolithic period, 50–51	globalisation of diseases through,
Species Plantarum (Linnaeus), 438-439	505-512
squash, cultivation of, 340	Gulf-South Asian, 363-364, 365
stone tool industry. See also Acheulean stone	along Silk Road, 386
tool industry; Lomekwian stone	translocated species. See also animal
tool industry; Oldowan stone tool	translocations; plant translocation
industry	biological exchange and, 352-353



More Information

Cambridge University Press 978-1-107-16414-7 — Human Dispersal and Species Movement Edited by Nicole Boivin , Rémy Crassard , Michael Petraglia Index

550 Index

Vanuatu, 197

transported landscapes, 15
Trapelis mutabilis, 125–127
TRB culture. See Funnel Beaker culture tuberculosis (TB)
aDNA studies of, 499–500
African origins of, 499–502
MTBC, 499–502
pathogens for, evolution of, 502
Turner, Frederic Jackson, 436
turnover, of species, 39
Tyrrhenian Islands, 276

UAE. See United Arab Emirates
Ubaid pottery, 226
unicoloniality, 417, 421–422
United Arab Emirates (UAE), 226
United States, maize diffusion throughout among ancient societies, 342
in culturally complex societies, 342
in Eastern regions, 338–342
in Southwestern region, 337–338
Upper Palaeolithic period modern humans during, ecosystems influenced by, 99–100
species dispersal during, 50–51
Usher, James, 454

vivax infections, 480, 482-485 Vulpes lagopus (Arctic fox), 248-252 Wadi Surdud site, 227-228 Wallace, Alfred, 195 Wallacea, 195, 247 Wealdseemueller, Martin, 439 weeds, agricultural development and, 312-313 wheat and barley, agricultural development of, 313, 316, 320-321 archaeobotany of, 317 wild boar, migration trajectories of, 239–243. See also Sus scrofa wild plants. See also plant translocations human-mediated species dispersal of, 13-14 wild species, 437-438 wild teosinte grass. See maize within-group cooperation, in societies, 424 Y. pestis, 511-512 genealogy of, 462-465 human migration patterns and, 459-465

Zea mays. See maize