Chapter 17

How did animals get from the Ark to places such as Australia?

- How did the animals get from remote countries to the Ark?
- · After the Flood, did kangaroos hop all the way to Australia?
- Why are certain types of plants and animals found in particular places?

ET us begin by reaffirming that God's Word does indeed reveal, in the plainest possible terms, that the whole globe was inundated with a violent, watery cataclysm—Noah's Flood. All land-dwelling, air-breathing creatures not on the Ark perished and the world was repopulated by those surviving on the Ark (see Chapter 10, Was the Flood global?). Over time and many generations, animals that disembarked the Ark would have migrated to the places they now inhabit, and plants left floating on the waters would have regrown in the places where they finally settled.

How did the animals get to the Ark?

Skeptics paint a picture of Noah going to countries remote from the Middle East to gather animals such as kangaroos and koalas from Australia, and kiwis from New Zealand. However, the Bible states that the animals came to Noah; he did not have to round them up (Gen. 6:20). **God** apparently caused the animals to come to Noah.

But did two kangaroos have to hop all the way from Australia to the Ark? This is unlikely. The continents we now have, with their load of Flood-deposited sedimentary rock, are not the same as whatever continent or continents there were in the pre-Flood world. We also lack information as to how animals were distributed before the Flood. Kangaroos (as is true for any other creature) may not have been on an isolated landmass. Genesis 1:9 might suggest that there was one landmass ("Let the waters under the heavens be gathered together into one place, and let the dry land appear." See Chapter 11). For all we know, kangaroos might have been feeding within a stone's throw of Noah while he was building the Ark.

After the Flood, did a pair of kangaroos hop all the way to Australia?

How did animals make the long journey from the Ararat region? Even though there have been isolated reports of individual land animals making startling journeys of thousands of kilometres, such abilities are unnecessary. Early settlers released a very small number of rabbits in Australia. Wild rabbits are now found at the very opposite corner (in fact, every corner) of this vast island continent. Does that mean that an individual rabbit had to be capable of crossing the whole of Australia? Of course not. Creation speakers are sometimes asked mockingly, 'Did the kangaroo hop all the way to Australia?' We see by the rabbit example that this is a foolish question. Populations of animals would have had centuries to migrate, relatively slowly, over many generations.

It may be asked, if creatures were migrating to Australia over a long period (a journey that would have included such places as Indonesia,

presumably), then why do we not find their fossils *en route* in such countries? Fossilization is a rare event, requiring, as a rule, sudden burial in a lot of sediment (as in the Flood) to prevent decomposition. Lions lived in Israel until relatively recently. We don't find lion fossils in Israel, yet this doesn't prevent us believing the many historical reports of their former presence there. The millions of bison that once roamed the United States of America have left virtually no fossils. So why should it be a surprise that small populations, presumably tion pressure from competitors and/or predators.

under migration pressure from competitors and/or predators, and thus living in any one area for a few generations at most, should leave no fossils recording their migration?

Charcoal by Robert Smith

Understanding biogeography

Biogeography is the study of where on the earth we find the different types of plants and animals. Each of the continents has its own distinctive wildlife. In Africa we find rhinoceroses, hippopotamuses, lions, hyena, giraffes, zebra, chimpanzees, and gorillas. South America has none of these. Instead, it is home to pumas, jaguars, raccoons, opossums, and armadillos. Marsupials are found in Australia and South America, but not in Europe. The bird of paradise flower (*Strelitzia*) is found only in southern Africa; the sea-urchin cactus (*Echinopsis*) is found only in South America.

There are also many interesting patterns of distribution. For example, sometimes the same plants or animals can be found in widely separated areas, even either side of an ocean. These are known as 'disjunct distributions'.



Boine snakes have a disjunct distribution, being found in South and Central America, Madagascar, and Papua New Guinea.

Biogeography and evolution

Some evolutionists claim that biogeography provides strong evidence for evolution. For example, they point to the different varieties of finches found on the Galápagos Islands, the dozens of species of lemurs found on Madagascar, and the hundreds of different fruit flies on the Hawaiian Islands. Each of these groups is very probably descended from a common ancestor—an original finch species, an original lemur species, and an original fruit fly species.

These examples, however, demonstrate variation within a kind (see Chapter 13) rather than a process that can change one kind into another (e.g. a cat into a dog or an ape into a human). But does the global distribution of plants and animals generally provide evidence for

'microbe to man evolution'? Not according to Gareth Nelson and Norman Platnick of the American Museum of Natural History: "Biogeography (or geographical distribution of organisms) has not been shown to be evidence for or against [macro] evolution in any sense."

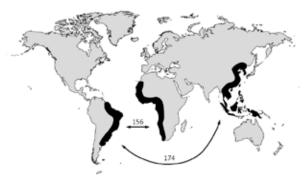
Evolutionists actually have great difficulties explaining the distribution of plants and animals and this is clear from the disagreements among them. Some favour continental drift as the primary explanation for why the same plants and animals are often found on different continents. For example, they say that the ancestors of plants and animals now living either side of the Atlantic Ocean once lived together on the supercontinent, Gondwana. Then, millions of years ago, as Africa split off from South America, they were separated.



The hypothetical supercontinent Gondwana (Note that north America and Europe/Asia supposedly formed a separate supercontinent to the north called Laurasia)

Other evolutionists point out that there are many distributions that cannot be explained in this way. For example, the same plants and animals can also be found either side of the Pacific Ocean. Yet, according to continental drift theory, these land areas were never adjacent to one another. Significantly, more seed plants are common to South America and eastern Asia than South America and Africa (see diagram).

Nelson, G.J. and Platnick, N.I., Systematics and Biogeography: Cladistics and Vicariance, Columbia University Press, US, p. 223, 1981.



Of around 200 seed plant families native to eastern South America, only around 156 are common to eastern South America and Western Africa, but around 174 are common to eastern South America and eastern Asia.²

Philip J. Darlington was Professor of Zoology at Harvard University and spent many years studying the biogeography of animals. He wrote, "I have tried ... to see if I can find any real signs of [continental] drift in the present distribution of animals. I can find none." Consequently, some evolutionists favour 'dispersal' as the primary explanation for disjunct distributions, arguing that plants and animals somehow migrated or were transported to different areas. Plants or small animals, for example, might occasionally have rafted across an ocean on a large vegetation mat. Other evolutionists reject this theory saying that there are just too many cases to be explicable by such an uncertain and random process. They point out that there are very strong patterns of distribution where, repeatedly, the same plants are found in the same places either side of an ocean.⁴

A biblical creationist view

There are severe limitations on our attempts to understand the hows and whys of something that happened once, was not recorded in detail, and cannot be repeated.

We cannot go back in a time machine to check what happened, and our reconstructions of what the world was like immediately after the Flood will inevitably be deficient. Despite these limitations, a biblical framework of thinking seems to make better sense of the evidence than an evolutionary model, which ignores the Bible's history.

Thorne, R.F., Floristic relationships between tropical Africa and tropical America, in *Tropical Forest Ecosystems in Africa and South America: A comparative review*, Smithsonian Press, US, 1973.

Darlington, P.J., Zoogeography: The Geographical Distribution of Animals, John Wiley & Sons, US, p. 606, 1957.

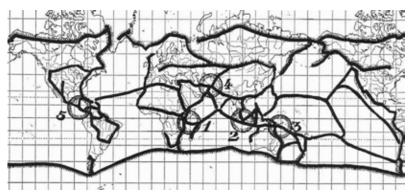
^{4.} Humphries, C.J. and Parenti, L.R., Cladistic Biogeography, 2nd ed., Oxford U. Press, 1999.

Clues from modern times

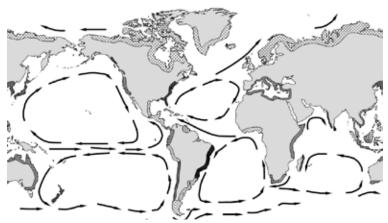
Krakatoa, in the Indonesian archipelago, erupted in 1883 rendering the island remnant apparently lifeless. However, people visiting the island soon noted that it was being recolonized by a 'surprising' variety of creatures, including not only insects and earthworms, but birds, lizards, snakes, and even a few mammals. One might not have expected such an array of creatures to have crossed the ocean, but they obviously did. Even though these were mostly smaller than some of the creatures we will discuss here, it illustrates the limits of our imaginings on such things.

Rafting

The Noahic Flood would have uprooted billions of trees, many of which would have been left floating upon the oceans. These massive islands of vegetation could have easily dispersed both plants and animals around and across oceans, especially given the likely high levels of rainfall arising from the warm post-Flood oceans (see Chapter 16). Moreover, their being propelled by ocean currents would explain the consistency of the many clear patterns of disjunction (see Croizat's tracks of plant dispersal below) and the general correspondence between areas of high biodiversity and the intersection of ocean currents with landmasses.



Léon Croizat's tracks of plant dispersal. Where, repeatedly, the same plants are found in the same areas, a thick black line is shown joining them.⁵



Areas of high biodiversity and ocean currents^{6,7}

In discussing the plausibility of reptiles and mammals traversing significant stretches of water, it should be remembered that the safe arrival of just one pregnant female would be sufficient to establish a new colony. Moreover, there are numerous examples of sizeable islands of vegetation being seen adrift at sea.^{8,9} Charles Lyell reported that rafts had been seen floating on the Amazon carrying snakes, alligators, monkeys and squirrels and that, on one occasion, four pumas had rafted down the Parana River to Montevideo where they were discovered prowling the streets!¹⁰ Alfred Wallace recorded that a large boa constrictor floated 320 km (200 miles) from the island of Trinidad to the island of St Vincent, wrapped around the trunk of a cedar tree. 11 One raft was spotted in the Atlantic, intact with trees 9 m (30 feet) high, despite having rafted along the coast of North America for over 1,600 km (1,000 miles). 12 Schuchert records how one such raft was seen carrying living lizards, snakes and small mammals as far as 1,600 km (1,000) miles out to sea. 13 Moreover, it should be remembered that rafts left over from the Noachic Flood would have dwarfed such as these.

^{6.} Humphries and Parenti, 1999.

^{7.} Myers, N. et al., Biodiversity hotspots, Nature 403:853–858, 2000.

^{8.} Metcalfe, I. et al., Faunal and Floral Migration and Evolution in SE Asia-Australasia, CRC Press, p. 409–414, 2001.

Van Duzer, C., Floating Islands: A Global Bibliography, Cantor Press, US, pp. 362–363, 2004

^{10.} Lyell, C., Principles of Geology, 6th ed., vol. III, John Murray, UK, pp. 125–128, 1840.

^{11.} Wallace, A.R., Island Life, Macmillan, 2nd and revised ed., p. 75, 1895.

^{12.} Powers, S., Floating Islands, *Popular Science*, September 1911, pp. 303–307; popsci.com.

Schuchert, C., Historical Geology of the Antillean-Caribbean Region, John Wiley & Sons, p. 80, 1935.

Woodmorappe¹⁴ has documented how rough waters tend to concentrate rather than disperse natural rafts, with vegetation debris tending to be rolled into tight clumps. He also discusses another major source of flotsam—pumice. This is known to cover large areas—with a thickness sufficient for a man to walk on¹⁵—and can float in the ocean for years. The considerable volcanic activity occurring during the Flood may have produced islands of pumice thousands of square meters in area.

There is much evidence that rafting can explain many animal distributions. For example, there is a clear correlation between raftability and frequency of transoceanic disjunction, with more raftable animals having a much higher incidence of disjunction. ¹⁶ Reptiles, for example, which can survive long periods without food and water, have many more transoceanic distributions than mammals.

Land bridges

Evolutionists acknowledge that people and animals could once freely cross the Bering Strait, which separates Asia and the Americas.¹⁷ Before the idea of continental drift became popular, evolutionists depended entirely upon a lowering of the sea level during an ice age (which locked up water in the ice) to create land bridges, enabling dry-land passage from Europe most of the way to Australasia, for example.

The existence of some relatively narrow deep-water stretches along the route to Australia is still consistent with this explanation. Evolutionist geologists themselves believe there have been major tectonic upheavals, accompanied by substantial rising and falling of sea-floors, in the time-period with which they associate an ice age. For instance, parts of California are believed to have been raised many thousands of feet from what was the sea floor during this ice age period, which they call 'Pleistocene' (one of the most recent of the supposed geological periods). Creationist geologists generally regard Pleistocene sediments as post-Flood, the period in which these major migrations took place.

In the same way, other dry-land areas, including parts of these land bridges, subsided to become submerged at around the same time.¹⁸

There is a widespread, but mistaken, belief that marsupials are found

Woodmorappe, J., Noah's Ark: A Feasibility Study, Institute for Creation Research, US, p. 155, 1996; creation.com/ark-feas.

^{15.} Van Duzer, pp. 59-60, 366, 2004.

Statham, D.R., Phytogeography and zoogeography—rafting vs continental drift, *Journal of Creation* 29(1):80–87, 2015; creation.com/rafting-vs-drift.

^{17.} Elias, S.A. et al., Life and times of the Bering land bridge, Nature 382:60-63, 1996.

^{18.} Note that the region around the north of Australia to Southeast Asia is a tectonically active part of the world.

only in Australia, thus supporting the idea that they 'must have evolved there'. However, living marsupials are found also in Indonesia (the cuscus in Sulawesi), and in North and South America (e.g. opossums), and fossil marsupials have been found on every continent. Likewise, monotremes were once thought to be unique to Australia, but the discovery in 1991 of a fossil platypus tooth in South America stunned the scientific community. ¹⁹ Therefore, since evolutionists believe all organisms came from a common ancestor, migration between Australia and other areas must be conceded as possible by all scientists, whether evolutionist or creationist.

Creationists generally believe there was only one Ice Age after, and as a consequence of, the Flood.²⁰ The lowered sea level at this time made it possible for animals to migrate over land bridges for centuries.

Unique organisms

Another issue is why certain animals (and plants) are found in only one place. Why is species x found only in Madagascar and species y only in the Seychelles? Many times, questions on this are phrased to indicate that the questioner believes that this means species y headed only in that one direction, and never migrated anywhere else. While that is possible, it is not necessarily the case at all. All that the present situation indicates is that these are now the only places where x or y *still survive*.

The ancestors of present-day kangaroos may have established daughter populations in several parts of the world, but most of these populations subsequently became extinct. Perhaps those marsupials only survived in Australia because they migrated there ahead of the placental mammals (we are not suggesting anything other than 'random' processes in choice of destination). Then after the sea level rose, the marsupials became isolated from the placentals and so were protected from competition and predation. The ability of marsupials to carry their young in pouches would facilitate faster migration than placentals that have their young at foot.

Evolutionists have admitted:

"Living marsupials are restricted to Australia and South America ... In contrast, metatherian fossils from the Late Cretaceous are exclusively from Eurasia and North America ... This geographical switch remains unexplained."²¹

Anon., Platypus tooth bites hard into long-held beliefs, Creation 14(1):13, 1992; creation. com/platypus-tooth, based on an article in New Scientist, 24 August 1991. A platypus is a monotreme (an egg-laying mammal).

^{20.} See Chapter 16, What about ice ages?

^{21.} Cifelli, R.L. and Davis, B.M., Marsupial origins, Science 302(5652):1899–1900, 2003.

The Flood and post-Flood migration, however, seem quite capable of explaining such a switch (the 'Cretaceous' fossils were buried during the Flood). Evolutionists clearly believe that marsupials once had a wide distribution and died out in areas other than where they are now found, so they have no grounds for opposing creationists' similar proposals.

Palm Valley in central Australia is host to a unique species of palm, *Livingstonia mariae*, found nowhere else in the world. Does this necessarily mean that the seeds for this species floated only to this one little spot? Not at all. Current models of post-Flood climate indicate that the world is much drier now than it



Livingstonia palms in Palm Valley, central Australia

was in the early post-Flood centuries. Evolutionists themselves agree that in recent times (by evolutionary standards) the Sahara was lush and green, and that central Australia had a moist climate. For all we know, the *Livingstonia mariae* palm may have been widespread across Australia, perhaps even in other places that are now dry, such as parts of Africa.

The palm has survived in Palm Valley because there it happens to be protected from the drying out which affected the rest of its vast central Australian surrounds. Everywhere else, it died out.

Incidentally, this concept of changing vegetation with changing climate should be kept in mind when considering post-Flood animal migration—especially because of the objections (and caricatures) which may be presented. For instance, how could creatures that today need a rainforest environment trudge across thousands of kilometres of parched desert on the way to where they now live? The answer is that it wasn't desert then!

The koala and other specialized types

Some problems might seem to be more challenging. For instance, there are creatures that require special conditions or a very specialized diet, such as the giant panda of China and Australia's koala. We don't know, of course, that bamboo shoots or blue gum leaves were not then flourishing all along their respective migratory paths. In fact, this could have influenced the direction they took.

Photo by Carol Drew

But, in any case, there is another possibility. A need for unique or special conditions to survive may be a result of specialization, a down-hill change in some populations. That is, it may result from a loss in genetic information, from thinning out of the gene pool or by degenerative mutation. A good example is the many modern breeds of dog, selected by man (although natural conditions can do likewise), which are much less hardy in the wild than their 'mongrel' ancestors. For example, the St Bernard carries a mutational defect, an overactive thyroid, which means it needs to live in a cold environment to avoid overheating.

This suggests that the ancestors of such creatures, when they came off the Ark, were not as specialized. Thus they were hardier than their descendants, which carry only a portion of that original gene pool of information (see how this applies to human variation in Chapter 18). In other words, the koala's ancestors may have been able to survive on a much greater range of vegetation. Such an explanation has been made possible only with modern biological insights. Indeed, research has shown that the koala's insistence on eucalypt is due to an addiction to certain chemicals in the leaf, which it first eats in the mother's milk. Bottle-raised koalas can survive on a non-eucalypt diet.²² Perhaps as knowledge increases other apparent difficulties will also be resolved.

Such changes do not require a long time for animals under migratory pressure. The first small population that formed would tend to break up rapidly into daughter populations, going in different directions, each carrying only a portion of the gene pool of the original pair that came off the Ark.

Sometimes a whole population will eventually become extinct; sometimes all but one specialized type. Where all the sub-types survive and proliferate, we find some of the tremendous diversity seen among some groups of creatures that are apparently derived from one created kind. This explains why some very obviously related species are found far apart from each other.

The sloth, a very slow-moving creature, may seem to require much more time than Scripture allows to make the journey from "the mountains of Ararat" to its present home. Perhaps its present condition is also explicable by a similar devolutionary process. However, to account for today's animal distribution, evolutionists themselves have had to propose that certain primates have travelled across hundreds or even thousands of miles of open ocean on huge rafts of matted vegetation

^{22.} Normal ('addicted') koalas can also eat various types of gum leaves. Australia has around 500 species of eucalypt (gum) trees. Koalas eat the leaves of about 20 species, with the blue gum a favourite (see *J. Creation* 8(2):126, 1994; creation.com/koala). Also, the giant panda, which normally only eats bamboo shoots, has been known to eat small animals.

torn off in storms.²³ Indeed, iguanas have recently been documented travelling hundreds of kilometres in this manner between islands in the Caribbean.²⁴ Evolutionists have even proposed that blind snakes, which they say evolved in Madagascar and India, crossed oceans by rafting to Australia, South America, and the Caribbean islands. They propose "several oceanic dispersal events, including a westward transatlantic one, unexpected for burrowing animals."²⁵

The Bible suggests a pattern of post-Flood dispersal of animals and humans that accounts for fossil distributions of apes and humans, for example. In post-Flood deposits in Africa, ape fossils tend to be found below human fossils. Evolutionists claim that this arose because humans evolved from the apes, but there is another explanation. Animals, including apes, would have begun spreading out over the earth straight after the Flood, whereas the Bible indicates that people refused to do this (Genesis 9:1, 11:1–9). Human dispersal did not start until after Babel, about a hundred years after the Flood. Such a delay would have meant that some ape fossils would be found consistently below human fossils, since people would have arrived in Africa after the apes.²⁶

We may never know the exact answer to all such questions, but certainly the problems are far less formidable than they may at first appear. Coupled with all the biblical, geological, and anthropological evidence for Noah's Flood, one is justified in regarding the Genesis account of the animals' dispersing from a central point as perfectly reasonable. Not only that, but the biblical model provides an excellent framework for the scientific study of these questions.

Anon., Hitch-hiking lemurs, Creation 15(4):11, 1993; creation.com/hitch-hiking-lemurs, commenting on Tattersall, J., Madagascar's Lemurs, Scientific American 268(1):90–97, 1993; Daley, J., 21 million years ago, monkeys may have floated to North America on rafts, Smartnews, 21 April 2016; smithsonianmag.com.

Anon., Surfing lizards wipe out objections, Creation 21(2):8, 1999; creation.com/surfinglizards, Statham, D., Natural rafts carried animals around the globe, Creation 33(2):54–55, 2011; creation.com/animals-on-rafts.

Vidal, N. et al., Blindsnake evolutionary tree reveals long history on Gondwana, Biology Letters 6:558–561, 2010.

^{26.} Dr Sigrid Hartwig-Scherer, paleoanthropologist, on the DVD, *The Image of God*, Keziah Videos, Creation Ministries International; creation.com/iog.

^{27.} In recent literature about some of the problems of animal distribution, even within an evolutionary framework, there has been an occasional suggestion that early man may have been a much better boat builder and navigator than previously thought. Various types of animals may thus have accompanied people on boats across the sea. This should be kept in mind as a possibility in some instances. Animals brought in this way to a new continent may have prospered, even though the accompanying people did not stay, or perished.

^{28.} Woodmorappe, J., Causes for the biogeographic distribution of land vertebrates after the Flood, *Proc.* 2nd *ICC*, pp. 361–367, 1990.