

Noah's Ark

An essay by Lynn Andrew

Nothing in ancient literature is more tantalizing than the biblical record of the Flood and Noah's Ark. If it weren't for the bristling details—especially the numbers—the Flood could be taken as a lesser event. It is a preposterous proposition that eight people could care for every kind of creature in the world every day for a year, distributing food and water and removing waste. But the data that appear in the text, particularly the chronology, demand that the story be respected as literal history. So we have a problem.

The problem has been studied intensely. Books and technical papers have been written, and detailed solutions have been worked out. The Ark has enough space for the animals, and weight is not a problem. The seaworthiness of God's design is excellent, and the strength is adequate if built of properly sized wooden frames and planks. Most investigators stop there, assuming that they have answered the essential questions. But when the volume of a year's supply of food is calculated, it turns out to exceed by far the space needed for the animals alone. Those calculations can be made to work if the larger sorts of beasts are assumed not to be full grown and the food is in concentrated form: mostly grains and compressed hay. Having worked that out, the conclusion is drawn that the Ark was large enough. But there are other practical matters to be addressed, primary among them being the manpower needed to maintain a zoo consisting of thousands of animals. Whenever this problem is acknowledged, the solution offered is to have the animals

go into some degree of hibernation by divine intervention. This fits well with the supposed automatic loading of the Ark as the animals were mysteriously drawn to it. Of course the miracle wildcard will complete any hand, no matter what was dealt.

There are more questions to be answered: How did Noah finance the building of the Ark? Since no one had ever engineered a ship, did God also tell Noah how to arrange the structure? What in the way of food, equipment, and supplies did the Ark have to carry in order to restart civilization? How long after opening the door would some of the animals need continued feeding in order to survive on that mountain after the waters receded in the interval before sufficient vegetation appeared—and to avoid having the carnivores eat their former shipmates? Why did God not simply make new animals to replace those that perished, rather than save them through a series of miracles? Had Satan actually gained dominion over the earth? If so did that put a legal limit on the type of miracle God could use within Satan's territory? Did God have it all planned in advance? If so did the plan to preserve the animals through the future Flood place a constraint on the original Creation?

The theological implications of Noah's Flood are far-ranging. Questions that do not directly bear on the feasibility of the Ark swirl around this event. They are the big questions about why the Ark was necessary and what it accomplished. How does this fit into the war in heaven? Was the Flood a reaction to the proliferation of corruption within the first human society (as it seems on the surface), or was it a planned stroke against Satan? If the timing of the Flood was set by the orbits of heavenly bodies—one of which presumably came near the earth and triggered the catastrophe—was the Creation week

purposely set to be 1656 years in advance of this event in anticipation of the Fall and allowing time to develop the technology needed to build the Ark? Or was the hurtling asteroid a thing of Satan's doing, an attempt to wipe out the line to the promised Redeemer after everything else failed? What was the score after Noah successfully saved his family and the other creatures in his charge?—had God gained anything over Satan or was it a temporary loss? Was Noah's family such a prize, or was this strictly gene warfare? If it was about genetics, was it limited to the human line or were the genes carried by particular animals significant also? How were Satan's prospects altered by the Flood? If he might have corrupted the line leading to the Redeemer before the Flood, how was he prevented from doing the same after the Flood? If the human population on earth at that time was half a million or more, as seems likely, doesn't this act of mass destruction contradict certain characteristics attributed to God such as love and justice? These questions, except the last one, are certainly too hard for me; they simply prove to me that this story is for grownups.

Regarding that last question, I associate the Flood with the Creation: it comes soon after there was nothing, and it merely modifies the conditions from which civilization developed. In other words, the Creator owed nothing to those people who would not have been there in the first place had it not been for his creative work. They had many years to enjoy life, which apparently they did irresponsibly, either plunging into debauchery themselves or allowing their neighbors to degenerate. For whatever reason, it turned out to be an unsustainable batch, and it was not too late to throw it out and start fresh without losing much progress while still keeping the promise to

Eve that her offspring would one day score significantly against the serpent. There is no injustice in that. But who knows how much God suffered from it?

There is nothing intrinsically wrong with invoking divine intervention to explain apparent discrepancies in the stories of the Bible. But one must be careful. If you are concerned about answering skeptics, throwing a miracle at the problem it is not the best strategy. It has been my experience that the Bible will solve its own problems if I let it speak for itself. There is a passage in the second chapter of Genesis that has a direct bearing on the ark problem. Noah receives his commission to build the floating zoo in chapter six of Genesis, but chapter six is not to be taken in isolation from the preceding five chapters. In fact it is a culmination of everything that happened before it. The passage I refer to in chapter two is one of those about which theologians weave convoluted arguments as they attempt to explain its purpose while expositors gloss over it and wish it were not there. If you accept it at face value, it can trash your theology; but it can help solve the ark problem. Let's see what we can make of it.

In Genesis chapter one we learn that God spoke the world into existence. He said it, and it was so. One cannot overemphasize the importance of this. Who comprehends the enormity that stands behind this metaphor? In the Gospel of John chapter one we are made aware that we know only a little about the extent of the Word through whom and by whom and for whom all things were made. Nevertheless, there is something for us to understand: The purpose of speech is to impart information, and information is meaningless without a suitable receiver. There would be a host to receive the information, which is not mentioned unless it is in verse two of Gen-

esis chapter one. This would complete the picture of a design being implemented in the language of the host.

In chapter two, we encounter that curious episode where the man names the animals:

Out of the ground the Lord God formed every beast of the field and every bird of the air and brought them to the man to see what he would call them. And whatever the man called each creature, that was its name. The man gave names to all livestock and birds, including every beast of the field.¹

If we allow this passage the dignity of being literal and purposeful, we have to ask why God was interested in what the man would call each bird and animal. Apparently Adam was part of the process. God made a creature out of the ground (physical elements organized according to the design by the Word), but his work was not complete until he took it to the man and got a name for it. In other words God spoke (the design) then Adam spoke and the creature and its mate were sent to do whatever they did—according to their name. The name must have been something like a declaration of the creature's position and role in the living economy of the world.

This exercise might have been carried out merely for the utility of it or for the sheer enjoyment of bringing to life the designs of the Word, Adam being the only one beside God himself who delighted in it. But the text doesn't say that. In fact it indicates that there was another purpose:

There was not found a helper fit for Adam.

Adam proved something about himself: as much as he might have

1 Scripture citations are paraphrases by the author.

liked being a zoologist and participating in the process of bringing the designs of the Word to life, it was not enough. The man was demanding a wife, whether he knew it or not, and that pleased the Lord God.

Let us remember that Adam was a very special creature by virtue of being something of an image of God, presumably the first such being ever. If he had leaned too much toward his image of his Creator, he might have been satisfied simply to help make creatures to inhabit all the worlds of the cosmos—well, that may be stretching it a bit. The point is that Adam was a new kind of being, not just a smart ape. He had divine potentials that could conflict with his animal side—or would there be a seamless synergy? No doubt the naming of the birds and animals came easy for him, and he never forgot a face or a name. But his interests were not satisfied by purely divine or purely human endeavors.

How many animals did Adam name before his personality was proven to be what the Lord God desired? The Bible does not tell us how many there were (though it may be revealed in a roundabout way as we shall see). The text implies that all of the animals and birds were included. Everyone assumes that this must include all the genera if not all the species that ever existed. I am told that there are something like 3,300 genera of birds and mammals encompassing about 14,500 species. If this all happened on the sixth 24-hour day of Creation in the hours before Eve was made, it would have to be quick work. Say there were as few as 6,000 genera (many have become extinct since then). It would be a fast-moving stream of creatures going past Adam's eyes, allowing him three or four seconds to come up with each unique name. This is one reason why Chapter Two is

often treated as a sentimental creation poem even by those who say they take it literally. Some actually say they accept this unreasonably short time allowance, seeing no other way to reconcile the numbers. Some give Adam a few more seconds per animal by squeezing the number of birds and beasts down as far as they dare without stepping over some imaginary line into evolutionary quicksand. Some allow several days for the naming process without explaining how they reconcile that with chapter one.

If we take the biblical "kinds" to represent what biologists call families, we have about 330 kinds of mammals and birds, not allowing for dinosaurs and other extincts. This puts it into the realm of practicality, but few creationists will go so far as to define "kinds" in such a way that species had to evolve from them by means of the prevailing evolutionary model because that would put the sixth day of Creation back a long way. (Do they say millions of years? I think it would take longer than forever to evolve anything in that manner.)

We can challenge that assumption. The underlying assumption is that what God was about was creating every sort of creature that would ever live. But when we examine the text we see that this may not have been the primary purpose. Why should that be surprising? The considerations of the man far outweighed anything else. Compared to the man, animals were cheap, for they shared none of God's own image. And if we are to take that little word "image" to mean anything at all, it must stand for something substantial. Adam shared some of God's very nature.

The assumption underlying the assumption that God was making and Adam was naming these creatures to complete the sixth day of Creation is that God had to do it that way because all bird and animal

species were made on the fifth and sixth days and he rested on the seventh, having completed all creation by then. Underlying that assumption is the basic assumption that God was no smarter than the person making that interpretation of the scripture. There are sincere, Bible-respecting theologians who spend their careers defending God from having more intelligence than they do. To say that God was unable to make new creatures appear after the first six days without violating his Sabbath is to limit one's concept of Creation to something less than ordinary human beings use every day in their creative work. I will not go into this further at present. All I want to do right now is give a reason for asserting that Adam named fewer kinds of creatures than is ordinarily assumed. How many would that be? Why not let it be determined by a reasonable day's work? If Adam named one creature every five minutes, it would be a very busy day. Let's say that the activity took six hours. (Remember we need to reserve time for the rib operation later in the same day.) That adds up to 72 kinds of creatures. This easily covers all the orders of beasts and birds that are useful to have around if you are a human being. Personally I believe there is a way to have chapter two span more than one literal 24-hour day and still have the six-day, literal, 24-hour Creation. (See my essays on Genesis One. In fact, this is crucial because there are more problems: chapter one has the order wrong with birds being created on the previous day and all the animals appearing before, not after, the first man.) So I would allow Adam more than a day to enjoy naming birds and animals, and I would give him more time to spend with each one. Let's try a week for animals and a week for birds. Working eight-hour days, six days per week, and spending fifteen minutes to learn about each creature, he could name and become friends with as many as 384 kinds of birds and beasts. He

would have time to make the name reflect the characteristics of the creature (as many of the Hebrew animal names do). Ultimately this 384-kind number will have to agree with the capacity of the Ark—neither too many nor too few!

If you are willing to allow God unlimited foreknowledge, you could ask whether preserving the animals through the Flood might have been at least part of the purpose in Adam's being involved with animals at this point. And as to the number, God had a plan for preserving them, and he would not have created so many that the Ark would not be large enough to keep them for a year or so. There is a limit to the size that a wooden vessel can be made and still be strong enough to survive weather at sea. The dimensions God specified for the Ark puts it near that limit.

I will briefly add here a summary of the justification for asserting that all species could "evolve" from a few hundred prototypes without involving Darwinian evolution: Why not allow these primordial creatures to have extraordinary gene-generating abilities incorporated into their design? Genes are codes: information that can be edited. Computers are often programmed to edit their own codes. If man can build such a machine, are we justified in limiting God to something less? Perhaps many of Adam's creatures are extinct today because their purpose was to spawn an array of related species. Any competent computer programmer would generate the genetic codes that way. It is the smart way to work. Once the program is created it produces the codes automatically. There is no need for trial and error, and the results come out instantly. These are not "hopeful monsters." They meet the designer's specifications, and their survival is guaranteed.

In chapter three Adam and Eve are expelled from Eden and presumably leave the company of the beasts behind. (Two of them are dead, having given their lives to clothe Adam and his wife). They might have taken with them a pair of live sheep, which would be the minimum needed for their survival. But Adam carries in his head the pictures and names of all those animals.

In Genesis chapter four we learn about the beginnings of civilization. Interpretations of this chapter and the next have suffered from a fundamental misinterpretation of events in chapter six, which is to make Cain's line evil and Seth's line good even to the point of bringing the devil down to father Cain. This is all contrary to the spirit of the narrative. What we learn from chapter four that helps us understand Noah's Ark is that within seven generations technological developments went far enough to include metalworking in iron and bronze, which made good woodworking tools and building hardware possible.² Also, certain names among Cain's offspring suggest that God-fearing families were among them. Although consequences of Cain's crime continued to manifest from generation to generation, there is reason to believe that Cain himself repented. The establishment of the civilization that Cain founded east of Mesopotamia was successful and would not preclude God-approved mingling of Cain's and Seth's offspring.

In chapter five we get detailed chronology of the nine generations from Seth to Noah. Most of these were contemporary with Adam, who lived to be 930 years old. Presumably there was commerce back and forth between Adam's homestead (or however many of them he

2 The evolutionary idea that primitive man was mentally inferior to us and such developments took much longer is faulty. God said that nothing they decided to do would be impossible for them. (Genesis 11:6)

had during his life) and Cain's city of Enoch. Now if we are to take any of this seriously at all we must recognize that Adam would have been a celebrity. First of all, every human being on earth was a descendant of his. Secondly, he was the only man made directly by God. And thirdly, he knew the names of the animals; he was the master zoologist, and I would assume that he knew more about them than just their descriptive names. Adam would have told his sons Cain and Seth about his naming of the animals, but how could he describe each one of them in enough detail to pass this knowledge on? He could picture each one in his mind, but how could he tell it to others unless they had a sample of each bird and animal before them? After the initial struggle for survival was behind him and his offspring had multiplied, no doubt Adam began to formulate a plan. Remember that these names were not arbitrary; they were in some sense sacred, being part of the very creation process.

In the 700 years or so during Adam's prosperity, he would have succeeded in preserving this information. He could have built a zoo and captured samples of each bird and animal, or he could have made clay models of them from memory. Regardless of how he did it, Adam would have gotten people interested in zoology and made sure that the information was not lost.

Another thing we notice in chapter five is a very remarkable name with a meaning suggesting that the coming destruction was expected even before Noah was born. Enoch, son of Jared, was a prophet who was born when Adam was 622 years old. Enoch named his son Methuselah, which meant "to bring forth death." In fact, the year Methuselah died was the year the Flood came. Adam would have been a close friend to Enoch, for these two men were the two

prophets on earth at that time. Probably they got together to discuss the future. Is it too much to assume that they would have talked about the survival of the animals and birds?

In the first part of chapter six we get a description of the wickedness on the earth, and we get it straight from God that he intends to get rid of the corruption, which includes all flesh. Wicked angels were procreating their own versions of man and possibly beast, for God said:

"The kindred of all living things have perverted their way upon the earth."

How long the mischievous angels had been messing with genetics we are not told exactly, but it sounds as though it began early on:

When man began to multiply in the land and daughters were born to them, the sons of God saw that the daughters of men were attractive. They took as their wives any they chose ... and they bore children to them. These were the mighty men of old, the men of renown.

In fact they were giants.

³Obviously this was known to Enoch. It is reasonable to assume that he and Adam were concerned about preserving animals that had not been corrupted. Presumably when the fallen angels did their mischief in material form, they could be defeated by physical means. The logical thing for Adam and Enoch to do would be to build an animal preserve, or a zoo, where representatives of all the primordial birds and animals that Adam knew would be protected. This most likely would have been carried on by Methuselah and others because Adam was getting old and Enoch left the earth at the tender age of

3 The following conceit is original as far as I know. But since nothing is new under the sun, no doubt others have played with the same or similar ideas.

365. By the time Noah came along, 69 years after Enoch was "raptured," the zoo would have been well established for hundreds of years, housing two or more of every one of Adam's beasts and birds.

Apparently Noah had a rough start in life because his father had unrealistic expectations of him:

"Out of the ground that the Lord has cursed, my son shall bring us relief from our work and from the painful toil of our hands."

Maybe that statement only meant that he wanted Noah to be a farmer. In any case, Noah was 500 years old before he fathered the three sons who would accompany him in the Ark. Let us assume that Methuselah had influenced his grandson Noah, teaching him to walk with God and to love animals, and thus Noah became the chief zookeeper. Perhaps that is where Noah met his future wife: they worked together at the zoo for many years. God knew Noah would need a woman with a nose that could tolerate strong animal smells. Noah was attracted to her because she loved all the animals and had a talent for nursing the sick and ailing ones back to health. I suspect that Noah's father, Lamech, was not in favor of this engagement; he would have preferred a bookkeeper to help in the family business. But Methuselah approved of Noah's choice and persuaded Lamech to let Noah have her. Thus Noah found favor in the sight of God for choosing the woman who would contribute no corruption to his generations and who would be the perfect helper for him.

The zoo buildings were at the end of their useful life when Noah took over the administration, and his plan was to build a new zoo. He spent a couple of hundred years collecting, seasoning, and dressing the timber for his dream zoological shelter, which is why it took him so long to propose to his wife. He had a design in mind where every-

thing would be under one roof. This building would be strong enough to withstand earthquakes and last thousands of years. But before he started construction, the Lord told him he wanted it to float. That was the revelation of the type of doom faced by the inhabitants of the earth. Enoch had known something was coming, but he and everyone else had assumed it would be earthquakes and volcanoes.

Now Noah was neither a naval architect nor an engineer. It is one thing to make a building that can get all the support it needs from the ground and another thing to make it watertight and able to withstand the stresses of a seaway. Noah and his sons began drawing up plans to the dimensions the Lord had specified. Common sense told them they would need heavy, closely spaced frames to hold the planking so firmly in place that leaks could not develop between them. They had been told to make three decks, which is what Noah had envisioned in his zoo all along. And there would be cages for the large and cantankerous animals, which was part of the zoo plan too. In fact, it looked very much like the zoo he had in mind before God told him it would be a boat. There was to be an open gallery running down the middle of the ship from bilge to weather deck for ventilation and to facilitate removing waste. The third deck was to have areas like fields for all those animals and birds that could live in harmony together. The second deck would have the cages for the dangerous animals and those with special needs. The first deck, where the light was least, would be stowage primarily.

And so the Noah family got busy and began constructing the new zoo. The fact that it was actually to be a floating ark was a carefully guarded secret. Simultaneously they began collecting supplies for the

voyage, which they estimated (or were told) would be about one year from door closing to door opening. Since the supplies were the same that the zoo had been using for hundreds of years, there were no questions about the increase in their inventory. The zoo made use of wooden barrels for food and water storage, so when they gradually accumulated thousands more, it was seen as a replacement program. For labor Noah hired the giants, those cross-bred "men of renown." They were not very intelligent, but they loved to flex their muscles and do great things, so working with the massive timbers that went into the Ark was natural for them. Progress was good under the supervision of Noah's sons. The giants would work for next to nothing; if they got fed they were satisfied. (In those days everyone was a vegetarian, and these guys worked for peanuts.)

The zoo contained nearly all of the birds and animals that Adam had named. The figures below are based on there being 192 avian kinds, 96 small mammal kinds the size of a squirrel and smaller, 62 medium-size mammal kinds the size of a sheep and smaller but larger than a squirrel, and 32 large mammal kinds (25% being carnivores). In addition there were 42 clean mammals of three kinds and as many birds for sacrifices. The Ark would carry two of each kind plus extras in some cases. A lot of extra rabbits and mice were needed for food for the birds and beasts of prey while aboard the ship plus enough to feed the carnivores and sustain a population for some time after landing. Also, extras of work animals and herd animals were to be taken to help restart civilization. This made a grand total of 450 mammals and 400 birds. (The reptiles that survived survived on their own.) Noah had interpreted the Lord's command to refer only to the creatures he had in the zoo. There were some weird

ones running around that had come about by illicit genetic manipulation that were not in the zoo, and Noah had no desire to round them up. There were also many new species that had come from Adam's originals; they were not in the zoo either, and they did not have official names.

Who decided which creatures were ceremonially clean for sacrificial use? It could have come about in any number of ways. For example, one of the prophets, Adam or Enoch or perhaps both together, might have carried on an evangelistic campaign to get people to remember their debt to the Lord God. As part of that effort they designated certain animals as being suitable for the sacrifices based on associations of their names with the idea of the sinless substituting for the sinful. Taking a hint from history we can assume that a commercial enterprise developed from this. Noah's father, Lamech, became rich raising and selling the clean animals (though it was hard work). Noah joined him in the enterprise and acquired part of the business. This was before Methuselah taught him to walk with God. But the profits from the business financed the new zoo. After Noah's father died (five years before the Flood began), Noah would pour everything into finishing, equipping, and provisioning the Ark.

To provide drinking water for everyone, 2,765 barrels of fresh water were to be stowed aboard (145-gallon barrels), evenly distributed on both sides of the two upper decks. The barrels would occupy 11% of the 625,000 cubic feet of available volume in the ship. Food would take up 81% of the space: 13,050 bales of hay; 2,629 barrels of grain, dried fruits, seeds, and nuts; 500 barrels of dried biscuits; 500 barrels of carrots; 100 barrels of honey; 50 barrels of dried insects; and 25 barrels of olive oil. There was enough of the dry food

to feed them all for one year and most of the larger animals for two years.

Food for Noah and his family was needed not only for the year aboard the ship but also for another year before they would harvest crops out of the land after the Flood, plus some extra just in case. They would take dried biscuits, honey, dried fruits, and nuts from the same stores used for the animals. Many of the animals would not be able to survive outside the Ark until edible plants were reestablished, so zoo-keeping would not end until some months after landing and the opening of the door. Noah had a plan for this: the animals would be released by families when conditions became suitable for them.

In addition, they would take materials for restarting civilization: tents, lumber, tools of all sorts, carts, jars, kettles, lamps, clothing, blankets, skins, woven cloth, ropes, etc.

There were to be 123 mammal cages, which works out to fifteen cages to be maintained by each person on board plus one extra for each of Noah's three sons. (The bird cages were relatively easy to care for and Ham and his wife would take charge of them all.) It should be mentioned here that Ham, Noah's middle son, would make the voyage tolerable for everyone. He was high-spirited and cheerful all the time; he loved to be useful and was the first to fill in whenever there was a need.

Oh yes, all waste material was to be thrown down through the open gallery into the bilge of the vessel. They called this the abyss and calculated that its volume would be adequate for over a year's accumulation of waste. Shoveling the waste overboard would have more than doubled everyone's work and would have necessitated openings in the side of the vessel that could be troublesome.

Noah and his wife were so busy with all this that the years slipped by without them having made arrangements for wives for their sons. Mrs. Noah had her hands full nursing grandfather Methuselah, who was in poor health and had to be kept alive until the Ark was ready to go too. It is a little-known fact that she was responsible for Methuselah's famous longevity. (Women seldom get the credit they deserve.)

To the dismay of Noah, Shem fell in love with a young woman from Cain's line. Shem told her the secret of the Ark to prevent his parents from rejecting her. She was highly educated in the industrial arts and ran a construction company that designed and built large wooden bridges across rivers. When Shem showed her the drawings of the floating zoo, she laughed.

"Do you know what torsion is?" she asked Shem and his father.

No, they had not the slightest idea what torsion was.

"You need to stiffen this structure against twisting," she explained. "With this big open gallery down the middle you have no stiffening membrane running across the vessel. Your roof ..."

"Weather deck we call it," Shem interrupted.

"Your weather deck is not continuous either, with these windows running all around."

"What shall we do?" asked Noah.

"It will not be easy," said the bridge engineer. "I see your need for the light and ventilation, but you will have to extend portions of all three decks across the vessel. Those narrow catwalks you have crossing the gallery do nothing at all to resist twisting of the hull girder. I think if you divide your gallery into three open areas and make the deck between them the same length the openings are, it will be ade-

quate."

"We will need more material," said Shem.

"Yes, and some long beams," said his fiancé. "It looks like you have not used any beams running all the way across the ship except at the ends."

"Those are hard to come by," said Shem. "Fifty-cubit timbers have become rare."

Shem's engineer was counting the number they would need.

"You will need twenty-four of them," she said. "I know where I can get some. We will float them down from the mountains on the Tigris and bring them over on ox carts."

To say that things became hectic near the end would be an understatement. Methuselah had just celebrated his 968th birthday, and a rumor was flying among the guests about the new zoo being a boat. It seems that the giants had overheard discussions between Shem and Japheth about the depth of water it would take to float the Ark. (Japheth was of the opinion that they were making it so heavy that it would not float at all when fully loaded. Shem, who was the one who had decided to make the frames two cubits deep, tried to explain that the average weight of the Ark's volume was very much less than the weight of not only gopher wood but even much lighter types of wood that floated high in the water. Japheth was difficult to convince.)

One of the guests was a sad-faced young lady who was of no relation to anyone. Not only had she heard the rumor, she had overheard Shem and Japheth talking about it. She was not loose-lipped herself, so the rumor made her even sadder. No one had formally

shared the secret with her, but she had been hanging around the Noah household for years and had picked up enough to understand that God had told Noah to prepare for a great Flood. She had decided that she would make herself useful to Mrs. Noah, and if she were invited to go with them when the time came, she would accept. It made her sad to realize that her pagan parents would never believe what she believed was coming.

Japheth was absent much of the time when he was supposed to be helping Shem and Ham with the building project. He was a lyre player and had gotten himself involved with a lyre-and-pipe band called the New Jubalantes. Japheth carried his lyre with him wherever he went and as often as not was picking out some tune on it. When he did show up for work he often brought one of the band members with him, a pretty pipe player. Japheth treated her like she was one of the family, and it was apparent that she was in on the secret.

When it got down to transferring the birds and animals to their new homes, two controversies arose among Noah and his sons. The first one concerned the number of birds they were to take. Noah knew exactly what the Lord had said to him, and he often repeated it word for word. Japheth noticed that the instructions stated that seven pairs of every kind of bird were to be taken. Noah and Shem disagreed: they admitted that it sounded like that, but if you took it in the context of the clean and unclean animals, it meant seven pairs of the clean birds and one pair of all the unclean birds. But Japheth insisted on taking it literally. They did not have seven pairs of every kind of bird in the zoo. To get that many they would have to go after them in the wild, which would take more time than was available, for

it was getting right down to the wire with Methuselah. In the end they compromised and decided to take all the birds they had in the zoo.

The other controversy concerned the phrase "everything that creeps on the ground." Japheth insisted that this was meant to include all snails, spiders, insects, etc. Noah and Shem disagreed, but they had no reason other than an opinion that it would be unnecessary because such creatures could cling to floating debris. Finally Noah relented and told Japheth that he would be in charge of rounding up the creeping things as the zoo maintained no formal collection of them. He would have to find two of each kind, male and female. It would not do to have any mistakes in that. Japheth had to admit that he did not know anyone who knew how to identify male and female bugs, so he modified his theology and dropped his demand.

There was great turmoil at the Noah household on the day Methuselah died. The Ark had been fully loaded with food and water, and all the materials and equipment listed on the bill of lading were aboard. All of the selected birds and animals were in their places. Even though the Ark was ready, Noah had been unable to take his family aboard while Methuselah still lived because the old man was in his care. As soon as the news of the venerable patriarch's death got out, people came swarming to the house to mourn. Many of them were eyeing the glistening pitch-covered Ark. Its boarding door was open, and the boarding ramp was in place. It was still officially the new zoo, and although the sign said, "Under Construction, Keep Out—Danger Zone," not everyone could read and some were evidently curious enough to go inside uninvited. Noah had to make a quick decision. He told Mrs. Noah and his sons to go up into the Ark

as soon as everyone's attention was diverted from it. Then he went out into the crowd and held up his hand, a sign that he had an announcement to make.

"Thank you all for coming to pay your respects to my grandfather Methuselah. Please feel free to go inside the house. You will find him in his bedroom. We have decided that the house will be his mausoleum, and so we are taking up our residence in the zoo building. All of the furnishings that are in the house are of no further use to us, so help yourself. Take them away. Take as much as you like, and you will be doing me a favor."

There was a great rush toward the house, and soon a clamor of shouts and cries rose from it as people fought over every item that could be picked up or pried loose. Noah's wife and sons were making their way up the boarding ramp. Shem's engineer friend and Japheth's pipe player were with them, and following a few paces behind was the sad-faced girl. Noah hurried after them. The girl must be kept out; he knew nothing about her parents, and the Lord's instructions were for him to take his sons and their wives, not some stray wench.

Noah sprinted up the ramp just as the others disappeared into the shadows on the second deck, and as soon as he entered the hull there was a noise behind him. The ramp had fallen away and the door swung shut with a resounding thud, and the twenty-four dogs that secured the door tightly to the hull all turned of their own accord. God had shut them in. Either the girl was God's choice or

Noah suddenly remembered that he had intended to have his sons married before boarding, and now it was too late. He found the others waiting for his orders. Everyone had seen the door close of its

own accord, and they all began to realize like never before that they had been chosen to make the world's new beginning. Noah looked at his sons. Shem and Japheth had their arms around their girlfriends. Ham and the sad girl were standing on opposite sides of Mrs. Noah.

"Ham, as captain of this ship, my first order is to you. Take that sad girl and make her feel at home."

Ham smiled, stepped behind his mother, and went to the side of the girl.

"I said make her feel at home!" demanded his father.

Ham looked down at her. She stood as still as a stone and was looking down at her feet. He gingerly put his arm around her, but she remained stiff, still looking down at the deck.

"It has become clear to me," said Noah, "that there may be circumstances aboard a ship where a marriage must take place in the absence of the proper officials. In that case, the captain is authorized to preside over the ceremony and declare a couple man and wife. Therefore, I now pronounce my three sons husbands of their lady friends, who are now their wives."

Ham smiled, as he always did, and looked down at the sad girl who suddenly looked up at him and smiled a beautiful smile. That tickled Noah, who laughed, and everyone followed him and laughed too. And while they were all laughing, Japheth produced his lyre, his wife took out her pipe, and they had music and dancing while the angry crowds outside surged around the sides of the ship, pounding on the thick planks. But inside the Ark only music and laughter was heard.

