

**MORMON
EXPERIENCE
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Glen Lambert on
**Issues in
Mormon
Marriages** (p.22)

Mathew Schmalz
shares his
experiences
**TEACHING
MORMONISM IN
A CATHOLIC
CLASSROOM**
(p.46)

Armand L. Mauss
on **Explaining
the Priesthood
Ban without
Looking
Ridiculous** (p.56)

**ROSEMARY'S
GRAND-
DAUGHTER,**
Brown fiction contest
winner by Cass
McNally (p.52)

**IN MEMORIAM:
ELDERS NEAL
A. MAXWELL
AND DAVID B.
HAIGHT** (p.10)

Photos from the
2004 Salt Lake
Sunstone
Symposium (p.70)

NEWS

Two new apostles
called; Church
endorses marriage
amendment; T-shirt
controversies erupt
at BYU; HBO series
to depict Utah
polygamy (p.74)

NOAH'S FLOOD

Modern Scholarship and
Mormon Traditions

By Duane E. Jeffery



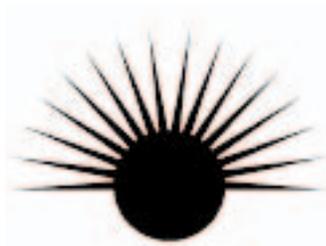
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MORMON EXPERIENCE, SCHOLARSHIP, ISSUES, & ART

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Issue 134



FEATURES

- 22 *Glen Lambert* TEN ISSUES IN MORMON MARRIAGES
27 *Duane E. Jeffery* NOAH'S FLOOD: Modern Scholarship and Mormon Traditions
46 *Mathew N. Schmalz* TEACHING MORMONISM IN A CATHOLIC CLASSROOM
52 *Cass McNally* ROSEMARY'S GRANDDAUGHTER: 2001 Brookie and D.K. Brown Fiction Contest Sunstone Winner
56 *Armand L. Mauss* DISPELLING THE CURSE OF CAIN: Or, How to Explain the Old Priesthood Ban without Looking Ridiculous

POETRY

- 9 *John P. Kristofco* ALMANAC, 1997
11 *Melvin Adams* NOTES TO GOD—6
26 *Richard Arnold* GALILEO'S DAUGHTER
45 *Judith Irwin* HER VOICE
51 *Anita Tanner* GROWING DOWN
55 *Scott Gallaway* A MAP TO GO BACK
61 *John Grey* HOUSE AND BARN

COLUMNS

- 7 *Frances Lee Menlove* DEVOTIONAL: Self-Righteousness: A Parable for Our Time
10 *Blake T. Ostler and Charlotte England* IN MEMORIAM: Elders Neal A. Maxwell and David B. Haight
12 *Dan Wotherspoon* FROM THE EDITOR: Shifting CORNUCOPIA
16 *Anonymous* RIGHTEOUS DOMINION: A Ward Town Meeting
16 *NetMo* CYBERSAINTS: A Fascinating Journey
18 *Todd Robert Petersen* IN THE BELLY OF THE WHALE: Two Masters
19 *Ken Jennings* BLOGWATCH: *Eternal Jeopardy!*
40 *Michael Schoenfeld* SUNSTONE GALLERY: A Surprising Life
62 *Robert A. Rees* THE LONG-PROMISED DAY? Black African Jews, the Mormon Denial of Priesthood to Blacks, and Truth and Reconciliation
68 *D. Jeff Burton* BRAVING THE BORDERLANDS...: Easy Come, Easy Go: Thoughts on Gaining and Losing a Testimony
70 IMAGES FROM A SYMPOSIUM: The 2004 Salt Lake Sunstone Symposium
80 *Elder Neal A. Maxwell* AN OLIVE LEAF: Stretching

UPDATE

- 74 *New members of the Quorum of the Twelve called; Amid controversy, LDS leaders endorse defense of marriage amendment; National publisher to produce a Book of Mormon edition; T-shirts cause an uproar at BYU; Utah polygamy to be depicted in an HBO series; and much more*

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Many of us have grown out of believing the story of Noah's flood to be literally true. Now scientists have pinpointed a large-scale deluge and a sudden population dispersion from the Black Sea area around 5600 BC. Is it time for Latter-day Saints to reexamine the Flood as well?

NOAH'S FLOOD: MODERN SCHOLARSHIP AND MORMON TRADITIONS

By Duane E. Jeffery

AUTHOR'S PREFATORY NOTE: The subjects embraced in this essay cover areas far beyond the academic expertise of any one person. Accordingly, I do not intend this analysis to be anything more than a starting point for discussion clearly needed in contemporary Mormonism. I seek public input from dedicated students who will seriously avail themselves of at least several of the critical books before venturing into the discussion.

Since delivering this presentation at the 2004 Salt Lake Sunstone Symposium, I have learned that a manuscript dealing with the Noachian Flood, authored by two BYU faculty members, has been in review at BYU Studies for many months. Interested readers should watch for the appearance of that analysis as well.

FOR THOSE OF US RAISED IN CHRISTIAN HOUSEHOLDS, the biblical story of Noah and the Flood is likely one of our earliest remembered tales. Its scope and drama have fascinated artists and scriptural commentators for centuries. It is also fair to say that the notion that all known animals were represented on Noah's ark easily lends itself to imaginative artwork, cartoons, and jolly good speculations. Just how did Noah stop the two tyrannosaurs from consuming half the creatures and people on the boat, and was it any trouble to keep the woodpeckers and woodworms from drilling holes in the boat's sides?¹

For most of us, there comes a time when we begin to evaluate more critically our childhood fascinations, and we soon realize that the Noah story as given does not square easily with the known world. Ancient cultures can be documented back into the mists of history, all across the earth; and human be-



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ings' diverse physical attributes, languages, and religions are so well developed that it becomes very difficult to imagine that all people could have derived from a common ancestral family just 4400 years ago. But if we check the Bible, that is the time span we must confront. It is simple indeed to just add up the given ages of biblical personalities and conclude that Noah entered the Ark in 2344 BC.²

For these reasons among others, the story is ignored as childish nonsense in most of the academic world, given no more attention nor validity than Grimm's fairy tales. But not all academic disciplines are quite so cavalier about Noah and the Flood. Folklorists, for instance, have spent a great deal of time collecting variants of the story, and scholars of ancient history have wrestled with it from a variety of perspectives. Still, few are those who give it any credence as a real historical event. Yet it is apparently the oldest recognizable story in existence.³

Is it time for a fresh look at the Flood? I believe so. Where has scholarship taken us regarding the idea of a universal deluge? What have new discoveries suggested about a possible literal event that might have spawned the Flood story? Exactly what have Latter-day Saints taught or believed about the Flood? Is there a way of understanding the Flood story as containing important moral imperatives for us today even if it is not accepted as historical in its literal reading?

I. BRIEF HISTORY OF INTERPRETATIONS OF THE NOACHIAN FLOOD

A downsized Flood; a mythologized Noah

THE BASIC STORY of the Flood is too well known to need repeating here. The tale of a universal flood that destroyed all human life save eight souls and all animal life save mating pairs of each species was generally accepted as literal truth in Christianity until just a few hundred years ago.

But with growing awareness of the natural world, interpretations of the story shifted from literal history to a figurative or mythological view. The change was gradual but definite as increasingly serious questions from geology, archaeology, and anthropology accumulated one after another, and few solid discoveries seemed to give any promise of resolving the issues in favor of historical reality. The recognition that fossils are the remains of formerly living organisms that are very different from extant species, that there are far more species on earth than can be by any stretch of the imagination be sequestered on one modest-sized vessel, that the species on distant continents are vastly different from anything recognizable in the Bible, created a domino effect that led many Christians to rethink the traditional understanding. The litany of problems also includes post-Flood dispersal of organisms from Ararat: how could marsupials have traveled to Australia, or how could animals that neither fly nor swim (e.g., dodos) have found their way onto isolated oceanic islands? There are practical problems: how could eight people have managed to feed that many animals and remove their wastes? The methane from animal wastes would have made the ark a floating bomb, susceptible to the slightest candle flame.⁴

Eventually, most mainline Christians decided that at least the first eleven chapters of Genesis (Creation through the Flood and Tower of Babel) were not *historical* events in the same sense that modern society understands history. They came to recognize that all peoples worldwide have stories that have been handed down from antiquity and that those stories carry fundamental messages about that group's ideas of who they are and how they fit into the wide scheme of life. Universally these stories focus on the particular group, asserting that theirs is the true historical story, and, where deity is concerned, they were or are the ones favored by the gods. These grounding tales are "cosmic history"—stories wound together to help people make sense of their lives and their world. But "cosmic history" does not necessarily match "event history"—the accounts of fact-based, empirical events that are usually what we think of when we hear the term "history."

While the majority of mainline Christians followed this mythologizing trajectory, others favored a tack of modifying the scope of the Flood from a world-wide devastation to one of more limited extent, from a violent pounding of waters to a float on a rather tranquil pond. It was variously argued that Noah, to whatever extent he actually is an historical figure, was relating events only from his own limited perspective, and that repeated re-tellings and interpretations over millennia have added details that make the story more appealing, more impressive, marvelous, and supernatural.

*Bucking the trend: The rise of
Young-Earth Creationism*

IN THE MIDST of this trend to scale down the story, there have always been those who, despite the overwhelming mass of contrary evidence, have insisted that the Flood indeed was worldwide and killed off "all flesh"; hence all living organisms

trace their genealogies back to Ararat in Turkey just 4400 years ago. During the early twentieth century, these ideas were kept alive by such persons as Harry Rimmer and George McCready Price. But in 1961, this literalistic view received a major boost in visibility and influence with the publication of the book, *The Genesis Flood*, by John Whitcomb Jr., an Old Testament scholar, and Henry Morris, a hydraulics engineer. Their book provided the major impetus to the resurgence of religious/political activists who can be designated collectively as "Young-Earth Creationists."⁵ Briefly, their views can be summarized in the following two assertions:

1. Some 4400 years ago, humans became so corrupt that God killed all but eight persons (men, women, children, and infants included), and generally all animal life except for those species preserved on the ark. Authors within the movement have differed as to whether God's statements that he would destroy "all flesh" and "every living substance that I have made" include fish, marine mammals and reptiles, and plants, but they agree that it certainly includes all birds and terrestrial animals: mammals, reptiles, insects, and so forth.

2. All the geological strata from what are known as the Cambrian rocks upward—essentially all the thousands of feet of strata holding the fossil record of macroscopic animals—are said to be the product of the Flood. This includes all the dinosaurs, mammoths, and other extinct plants and animals of all types. These commitments entail the assertion that the earth is very young, hence the name "Young-Earth Creationists."

In order to bolster their literalistic claims, Young-Earth Creationists expend great effort toward discrediting all the dating techniques that show the earth to be old. But new dating techniques are continually being developed, and they have a remarkable consistency that creationists have never yet been able to explain and have traditionally ignored.⁶

Creationists also face the challenge of shoehorning huge numbers of species onto the ark, a hurdle made all the more daunting in recent years as inventories of the number of species in the world have grown steadily. Recognized biologists now estimate the number of unique species at thirty or even one hundred million. A conservative estimate is ten million; I'll stick with that.⁷ Can one really fit ten million species onto a single ocean-going vessel, feed and care for them all with their often very restrictive diets or living conditions (many of which we are helpless to duplicate even with modern systems), and keep it all going with just eight people for an entire year? The answer, plainly, is no.

Yet defenders still try. The most ambitious recent defense of the idea is John Woodmorappe's book *Noah's Ark: A Feasibility Study*.⁸ His is a marvelously inventive attempt, envisioning bamboo tubes to carry water to the animals and divinely-selected animal personalities to keep the carnivores from eating the herbivores and the strong animals from destroying their cages. The book has been hailed as showing how the literalistic

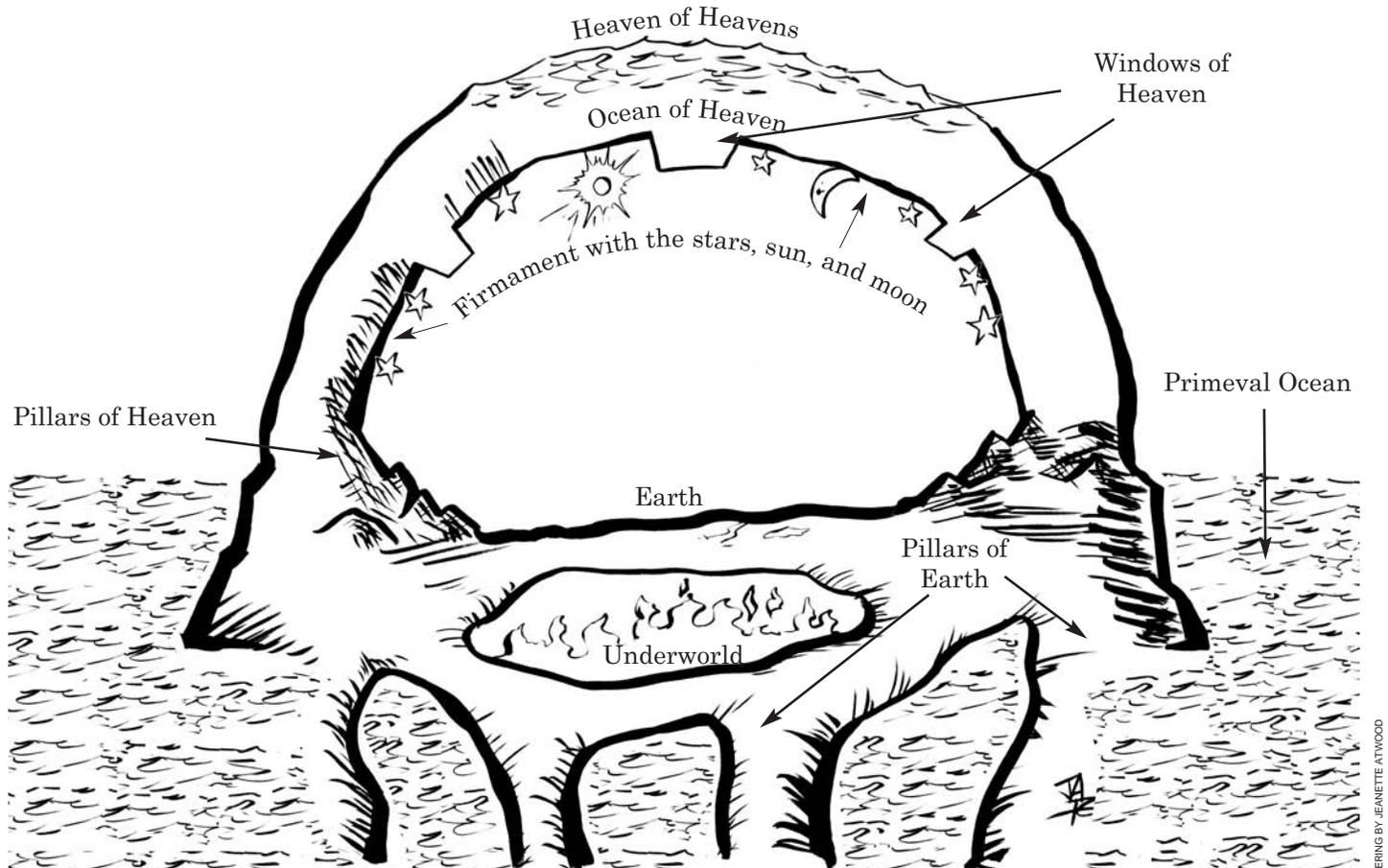


FIGURE 1. A COSMOLOGY OF THE ANCIENT WORLD

The earth is a flat disk surrounded by waters above and below. (The notion of a spherical earth did not appear in Jewish thought until the fourteenth or fifteenth century.) The firmament, with the sun, moon, and stars embedded in it (Genesis 1:17), is a solid dome which “divide[s] the waters from the waters” (Genesis 1:6)—the ocean of heaven from the primeval ocean upon which the earth floats. As a solid dome, the firmament requires support: the “pillars of heaven.” As a disk floating on “the deep,” the earth also requires support: “pillars of earth.”

As evidenced by Job 36:27–28, the ancient Hebrews had an elementary understanding of the relationship between water vapor and the source of rain in the clouds, but their experience had taught them that at times, God induces great atmospheric catastrophes. Therefore, they conceived of mechanisms through which God might execute his punishments. Since obviously the clouds alone could not have held enough water for the Flood, to unleash the amount of water needed for a universal deluge “all the fountains of the great deep [were] broken up, and the windows of heaven were opened” (Genesis 7:11).

(This explanation and rendering of the ancient cosmos were inspired by material found at <http://www.aarweb.org/syllabus/syllabi/gier/306/commoncosmos.htm>.)

Flood story can be understood without invoking any miracles whatever. This is pure puffery; despite its inventiveness, the book resorts to miracles from front to finish. Let us take just one item: the number of species.

Recognizing that Noah could not have had ten million species on the ark, Woodmorappe proposes that Noah needed to take only about eight thousand “kinds”—a reproductive pair of the dog kind, the kangaroo kind, the beetle kind, and so forth. As soon as animals left the Ark, Woodmorappe hypothesizes, God sped up the mutation rate by thousands of times to generate all sorts of different genes and chromosomes, sped up the speciation rate to produce the ten million or so species we presently have, and then slowed it all down again to

the rates we see today. On average, each “kind” would thus have had to give rise to 1250 new species. And in this scenario, God did not have 4400 years to do it, either, since numerous representatives of many “kinds” have been known and described from antiquity (e.g., references to the “dog kind” alone include domestic dogs, jackals, wolves, foxes, fennecs, dingoes and dholes). In Woodmorappe’s story, God had to do all this in one blazing hurry, essentially a Creation all over again. And since two of the standard arguments of creationism are that mutations cannot make anything new, or novel, or useful, and that new species cannot develop (evolve), Woodmorappe has had to jettison two of the creationists’ major historic doctrines even to get to the obviously compromised position he holds.

But give him credit, he *has* tried, more ambitiously than anyone else, to float a sunken ship.

Alternate explanations for the widespread flood motif

ARCHEOLOGISTS AND HISTORIANS of ancient civilizations have added further challenges to the literalistic view. The biblical account seems not to be the oldest version. Many scholars believe that the Genesis version was assembled from at least two earlier accounts, and estimates so far are that the Genesis account was put into written form only about 700–900 BC. The Genesis story is commonly claimed to have derived from earlier accounts stemming back to the ancient Sumerian and Babylonian civilizations, the Sumerian accounts dating even prior to 2000 BC.⁹

This recognition of flood tales far older than the Genesis story clearly raises the issue of the significance of the many more recent non-biblical accounts of massive floods. Historians have documented such stories among native peoples world-wide—China, Southeast Asia, Australia, the Americas. But the stories are missing in some regions: Egypt, interestingly, and most of pre-Christian Europe.¹⁰

Do these ancient stories validate the view that the Flood was indeed a world-wide phenomenon—that it has left such an impression on human collective memory? Apparently not, for several reasons.

First, if the existence of widespread stories from antiquity is a good criterion for establishing truth, we would all believe in mermaids, mandrakes, multiple competing gods, and reincarnation. Polytheism, so far as scholarship has ever been able to determine, has a far older and more widespread history than does monotheism. Popularity and age do not mean truth.

Similarly, floods are among the most common major meteorological or geological phenomena which humans experience, even with modern flood control measures. And we must remember that humans throughout the long sweep of history have experienced very different types of weather than you and I experience.¹¹

So what alternate explanations may plausibly account for the widespread flood motif, other than collective memory of a truly universal deluge? It is well established that about 12,000 years ago, our planet was just emerging from the latest of its numerous Ice Ages. Sea level was hundreds of meters lower than at present. With the melting of the ice, sea levels rose. Since humans have traditionally found their most hospitable homes in lowlands adjacent to oceans, and since these are habitats ready-made for massive flooding, a rise in sea level flooding into shallow valleys adjacent to the ocean provides a ready mechanism to generate widespread flood stories.

Tsunamis (sometimes called “tidal waves” but actually caused by underwater volcanic activity or earthquakes) add further possibilities for the emergence of flood stories. Indeed a significant proportion of the stories alleged to be linked with the Noachian Flood specifically refer to massive waves coursing violently upon the land from the sea.¹²

It is now well established that huge Ice-Age lakes such as

Lake Bonneville (which covered large portions of Utah, Nevada, and Idaho), and Lake Missoula (located mainly in modern Montana) were held in place by ice dams or other geological features, and that when those were breached, almost unbelievable amounts of water were released, causing catastrophic floods. I do not suggest that Lakes Bonneville and Missoula gave rise to the Noah’s Flood story—they seem to be slightly too old. But some readers may recall the Native American story reported in LeGrand Richards’ book *A Marvelous Work and a Wonder*, which purports to relate the loss of Lake Lahontan, an Ice-Age lake in present-day Nevada.¹³ Perhaps Amerind cultural memory does indeed go back further than we can presently validate.

But dozens of Ice-Age lakes existed in the Old World as well, and these could easily have given rise to their own remembered stories.

It seems clear that the claimed “Flood stories” from around the world stem from a wide variety of experiences. Indeed, many are likely (and some are known to be) contaminations of accounts of “primitive peoples” recorded by early Christian missionaries. One missionary to the Hottentots, for instance, records how a Hottentot told him a purported legend of his people. Suspicious because the telling was so close to the biblical account of the Noachian Flood, the missionary pressed his informant as to his source. The man adamantly insisted it was an old legend of his people. But when the missionary later shared his experience with another missionary, the latter laughingly reported that he had taught the story to that very Hottentot some time earlier.¹⁴

Indeed, one scholar of flood accounts evaluated 303 such stories and concluded that 35 were mere allusions with no meaningful detail. Among the 268 remaining, 77 were identifiably local floods, 80 were cases of inundation by rising waters (such as tsunamis or rising lake levels, as happened with Great Salt Lake in 1983–84), three were from melting snowfall, 58 were about excessive (but local) rain, and so forth. Very few seemed to resemble genuine Noachian accounts.¹⁵

Linguistic challenges to the literalist view

LINGUISTS HAVE ALSO joined the Flood game, challenging various biblical interpretations that have traditionally supported the creationists’ agenda. A critical issue in the Flood story in the King James Bible has to do with translations of the Hebrew words *eretz* and *adamah* as meaning the entire “earth.” What do these terms actually mean? It is widely recognized that Hebrew is a wonderful language for poets, since virtually every word has multiple meanings. But that same characteristic makes it a horrible language for precision. As it turns out, *eretz* and *adamah* can indeed be a geographical reference akin to what we usually mean by “the earth.” But it is not at all clear that the ancients had the concept of a spherical planet that you and I do. Many scholars argue that the Bible writers thought in terms of a flat earth that was covered by a bowl-shaped firmament into which the windows of heaven were literally cut, fore-ign though all that seems to you and me (see Figure 1).¹⁶ So

we must be very careful when reconstructing ancient perceptions of “earth.” Further, *eretz* and *adamah*, the “earth” of the biblical Flood, can also mean land, nation, country, field, or ground.¹⁷ In short, linguistic evidence allows those who want their Flood universal to construe it that way, but it also helps those who postulate that the writer(s) of Genesis could have been describing a more localized event.

Telling stories

THE ACADEMIC WORLD in general has concluded that the Noachian Flood is a legend, perhaps founded on some local event to which details have been added over time, or something possibly hatched up altogether. We would do well to remember that our ancestors used to sit in the evenings in community groups, or around open fires or the hearths in their homes, and tell stories—marvelous stories of the past, of great heroes and heroines, of wars among the gods, of great catastrophes. And sometimes these story sessions went on and on, evening after evening, for days on end. I suspect these gifted storytellers have had far more influence than we have imagined.

II. THE RISE OF THE BLACK SEA HYPOTHESIS

Is there evidence of a major flooding event during Biblical times that could have given rise to the Noachian Flood tradition?

DURING MY YEARS at BYU, my students and I have frequently puzzled over just what lies behind the Noachian story. The scientific data from geology, biology, genetics, archeology, and anthropology overwhelmingly negate the traditional view; the linguistic data also leave the story clearly compromised. Attempts by various Christian apologists to explain the story are unsatisfactory. Was the story merely fanciful folklore, like Pegasus or Pan, or was some historical event really involved?

In 1998, a book by two world-class geologists, William Ryan and Walter Pitman, both associated with Columbia University, appeared on the scene. In *Noah's Flood: The New Scientific Discoveries about the Event that Changed History*, Ryan and Pitman claim they have found evidence of a flooding event and subsequent major cultural dispersion that may conceivably match with much in the Noachian Flood story.

Ryan and Pitman build from the established knowledge that at the end of the last Ice Age, numerous massive meltwater



RENDERING BY JOHN HATCH

FIGURE 2. RENDERING OF THE HYPOTHESIZED NEW EUXINE LAKE AND THE CONTEMPORARY BLACK SEA

In Ryan and Pitman's hypothesis, a smaller body, the New Euxine Lake, once stood where today stands the Black Sea. A breach of the Bosphorus land bridge about 5600 BC, allowed waters from the Mediterranean Sea to flood into the lake basin (the dark area on the map), turning the lake into the larger, present-day Black Sea (the lighter-shaded areas).

(Source: Science 279, 20 February 1998, page 1132 See a color rendering of this map on the back cover)

lakes formed on the Eurasian continents. One of them has been named the New Euxine Lake, the forerunner of today's Black Sea. According to Ryan and Pitman's findings, the lake received sufficient amounts of meltwater that at one time its level was virtually even with that of the Sea of Marmara (the northeast portion of the Mediterranean Sea) and of the world's oceans at large. In fact, the lake had an outlet to the Sea of Marmara across what is now the Bosphorus land-bridge connecting Europe and Asia. Climatological data indicate that a dramatic thousand-year period of colder and drier conditions (the so-called Younger Dryas period) then set in, during which the inflow to the lake from northern rivers was greatly reduced. Evaporation lowered the lake's level some five hundred feet below the lip of the Bosphorus shelf. This dried up the lake's outlet to Marmara (Mediterranean).

At the end of the Younger Dryas, glacial melt raised the level of the oceans more than that of the lake. Eventually the rising ocean breached the Bosphorus shelf, and a massive flood ensued. This rapidly expanded the size of the lake, which we now call the Black Sea. (See Figure 2, which shows the size of both the New Euxine Lake and the present Black Sea.)

Ryan and Pitman argue that during the Younger Dryas, the New Euxine Lake would have acted as a biological magnet,



Figure 3



Figure 4

FIGURE 3 (LEFT): INFERRED HUMAN MIGRATIONS WEST AND NORTHWEST INTO EUROPE IN THE WAKE OF THE BLACK SEA FLOOD

FIGURE 4 (RIGHT): INFERRED HUMAN MIGRATIONS NORTHEAST INTO ASIA AND SOUTHEAST INTO THE LEVANT, EGYPT, AND MESOPOTAMIA

(Source: William Ryan and Walter Pitman, *Noah's Flood: The New Scientific Discoveries about the Event that Changed History*, 189, 194)

drawing animals and people from the surrounding arid areas. The thousand-year period would have given people centuries to establish themselves along the shoreline, probably close to the mouths of incoming rivers. Note that in Figure 2 that even along the southern edge of the Lake, there was several miles' distance between the New Euxine Lake edge and the present shores of the Black Sea; these areas would have been dry (and allegedly inhabited) land during the life of the Lake. And along the north shores, people at the edge of the Lake would have been more than a hundred miles inside the present shores of the Black Sea.

Reflecting on Figure 2, and recognizing that today's Black Sea is seven hundred miles long east-to-west, and three hundred wide from north-to-south, it is clear that great tracts of land exposed during the life of the Lake are now deep under water.

Ryan and Pitman calculate that once the ocean broke across the Bosphorus shelf, waters would have poured into the New Euxine basin at more than two hundred times the rates measured at current-day Niagara Falls. The Lake would have risen six to twelve inches per day throughout its basin. In many areas, people would have had to move at least a kilometer (about two thirds of a mile) per day, with children, animals, and possessions, to keep ahead of the water. Those isolated by irregularities in terrain would likely have moved to whatever

higher ground was readily available, but that ground, too, would have soon been overtopped. (There are no significant islands in the Black Sea; it is presently more than 7200 feet deep.) The only escape, then, was to move to the higher ground that surrounded the basin, if one could or, if the paths out were blocked, to try to escape on whatever floating material or devices one could cobble together.

And all this, Ryan and Pitman claim, may have provided grist for the story of the Flood. It is a very ambitious thesis. What is their evidence?

The story of how they arrived at their conclusions is as follows:

1. Ryan and Pitman were already familiar with a similar scenario involving the Mediterranean Sea. It was once a desert, with the ocean being held back by a geological shelf across what is now the Strait of Gibraltar. About five million years ago, evidence indicates, the Gibraltar shelf was breached and the Mediterranean flooded to essentially its present size.¹⁸

Some decades ago, the two geologists came upon some skimpy evidence that the Black Sea had been smaller than it is now. It appeared to them that underwater shelves exist in its bed, which they suspected could have been shorelines of a freshwater lake. These shelves are similar to the terraces we see in northern Utah today as remnants from Lake Bonneville.

But since the Black Sea was the Soviet Union's only reliable

year-round ocean port, it was tightly guarded; Westerners were not given access. That stalemate began to break down a bit in 1961, when an American research vessel was allowed in to perform a limited number of soundings of the bottom. Sporadic subsequent visits were also permitted.

2. Eventually Ryan and Pitman were contacted by a Soviet geologist who also had noticed the terraces and independently concluded that the Black Sea had once been a freshwater lake. The three researchers began a collaboration.

3. Eventually, better access was allowed, and the New Euxine Lake story became well established. But how the freshwater lake changed to a somewhat salty sea (still, today, only half as salty as the ocean) was less clear.

4. Eventually core drillings of bottom sediments were done all over the Black Sea. The corings contained mollusks (seashells). In the lower sediments, only freshwater species were found. But in the higher sediments, the corings revealed only salt-water species. Further, it appeared that the shift from fresh-water species to salt-water species had occurred, all at a given time, all over the Black Sea basin. The shift was geologically very sudden, occurring about 5600 BC.

5. Currently, the salt contents of the Black Sea and the Sea of Marmara (Mediterranean) are still moving toward full equilibrium. The salty water flowing in through the Strait of Bosphorus is heavier and therefore sinks to the bottom of the Sea. Fresh water then flows out as it is displaced to the top. This phenomenon creates an almost unbelievable situation in the Bosphorus Strait: surface water is flowing out of the Black Sea while the bottom water in the channel is flowing in. This oddity has been known from antiquity. For centuries, boatmen wishing to travel upstream in the Bosphorus would fill a basket with rocks, then suspend it on a rope from their boat deep enough to catch the lower current, which would pull them upstream through the outflowing surface water!

6. Recognizing that any major diaspora from the Black Sea area due to sudden flooding should result in peoples suddenly showing up somewhere else, Ryan and Pitman turned to archaeology. Figures 2 and 3 summarize the peoples they have identified that seem to fit that requirement—i.e., those that appeared in new areas in 5600 BC or shortly thereafter.

7. Ryan and Pitman have also mustered limited linguistic and genetic evidence in support of their thesis.¹⁹

Their basic argument for a tie-in to the Noachian story, then, is that from these events at the Black Sea, a story was transmitted orally through the generations, picking up additional dimensions and details, until it became the “Noah family” of flood legends that are identifiable as variants of the Book of Genesis. Different versions are identifiable among the ancient Babylonians (successors to the Sumerians), and most authors think the Genesis account was derived from these Sumerian and Babylonian sources.²⁰

An Australian writer who has previous experience with biblical subjects has taken up the torch from Ryan and Pitman. Ian Wilson’s book, *Before the Flood: The Biblical Flood as a Real Event and How It Changed the Course of Civilization*, adds extensive new evidence to bolster their position. As indicated by his

subtitle, Wilson does indeed argue that the Flood changed the course of civilization. Somewhat parallel to the thinking expressed by Hugh Nibley in his book *The World of the Jaredites*²¹ (see sidebar), Wilson argues that civilization spread out from the Black Sea area. He finds evidence in this region for the first, or at least very early, designed breeding of plants and animals, writing, bookkeeping and accountancy, for major developments in ancient city building and planning, and so forth. He traces religious motifs such as a widespread worship of a Mother Goddess (which he claims was deliberately quashed into oblivion by later patriarchal societies), and great respect for, and indeed worship, of bulls (which he ties to the golden calf of Exodus). Other motifs include temple prostitution (as found in Genesis), child sacrifice (also in Genesis), and priestly self-castration as referred to in the New Testament by Christ (“some make themselves eunuchs for the kingdom of heaven’s sake”—Matthew 19:12). He traces a deep cultural commitment to the color red (which appears in the Bible as the blood on Israelite doorposts and various other blood motifs). He makes an interesting case, but I do not have the expertise to evaluate the legitimacy of these claims of cultural contacts and dispersions.

There are detractors of the Black Sea hypothesis, of course. Most archeologists seem to be cool to the idea, but I know of no detailed refutations. The same goes for linguists and geneticists. Recognizably, most new ideas take time to gain popularity among professionals. The fact that the idea is tied to biblical matters possibly creates additional caution.

Among geologists, a team based in Canada have sampled sediment cores at the mouth and the outlet of the Strait of Bosphorus. They think they have evidence that the Black Sea has maintained a connection to the Sea of Marmara for at least the last ten thousand years, challenging the Ryan-Pitman proposal.²²

But despite this possible new evidence, the proposal does seem to be gathering a wider circle of interest—enough that Robert Ballard, the famed undersea explorer credited with finding the *Titanic*, *Bismarck*, John Kennedy’s *PT-109*, and numerous other sunken vessels, has mounted missions to the Black Sea. It is widely recognized that the critical evidence for the Lake-to-Sea story will be finding remains of human habitations on the bottom of the Black Sea. Ballard has reported initial findings, such as implanted timbers and stone tools, but the finds are not yet extensive, and it is not clear when he next plans to pursue the project. Even if he demonstrates that human habitations existed on the now-flooded shorelines, it will not, of course, demonstrate any connection to the story of Noah. It will only validate the Black Sea story as theorized by Ryan and Pitman.²³

More recently, a young British geologist has developed a sophisticated computer analysis of the Ryan-Pitman hypothesis. His models largely validate their basic story of the filling of the Black Sea basin, though his scenarios show that the filling probably took closer to thirty-three years rather than the three years postulated by Ryan and Pitman. Ryan reportedly sees this modeling as no problem for their overall thesis.²⁴

HUGH NIBLEY ON THE ORIGINS OF CIVILIZATION

THE IDEA THAT civilization spread out from the area that fits generally with the Black Sea hypothesis is not new to Latter-day Saints who have read Hugh Nibley. In one of his early books, *The World of the Jaredites* (Salt Lake City: Bookcraft, 1952), Nibley argues to a historian critic that the Jaredites were Asiatics, genuine Asiatics, *not* Hebrews or any other identifiable Biblical people. He argues that they traveled eastward across the steppes and mountains of Asia to the North Pacific, where they crossed and came to the New World.

Still, what interests here is not the Jaredites; it is rather what Nibley says about the origin of civilization:

- “The great Babylonian civilization throughout the many centuries in which it flourished was merely coasting, sponging off the achievements of a much earlier civilization. . .” (151).
- “Every great national shrine of antiquity had a founding legend of how in the beginning it was brought through the air from some mysterious faraway land. And this faraway land always turns out to have been in central Asia” (159).
- “The weather of Asia is the great central driving mechanism of world history” (168).
- “As you know, there are two classic points or centers of radiation from which all the great migrations of antiquity took their beginning—the heart of Asia and (to a far lesser degree) the Arabian desert” (170).
- “Now it is a fact that in ancient times the plains of Asia were covered with ‘many waters,’ which have now disappeared but are recorded as existing well down into historic times. . .” (177).
- “‘All the major migrations without exception,’ writes Eduard Meyer, ‘which repeatedly in the course of world history have changed the face of the European-Asiatic continent . . . have moved into the distant regions of the west from a point in central Asia’” (188).
- “Scholars began to suspect that both Egypt and Babylonia took their civilization ‘from an unknown common source,’ which ‘in the beginning at least,’ united all the civilizations of the world in a single world civilization, of which all subsequent civilizations are but variations on a theme. In my recent studies on the origin of the super-state, I have tried to show that the original heart and center of this world civilization is to be located somewhere in central Asia” (190).
- “Writing was already well-established somewhere in the world, and that somewhere would seem to be in the region to the north of Mesopotamia” (260).

So we wait. But the work to date has put an entire new face on the public view of the Flood.

III. THE NOACHIAN FLOOD IN MORMONISM

*Scripture, speculation, and revelation—What have
Latter-day Saints taught about the Flood?*

FOR MORE THAN four decades, I have discussed matters of science and religion with Latter-day Saints, investigators of the Church, and many scientists I have met during my career. Quite often during those interactions, the matter of the Noachian Flood comes up, and though for most the story seems too quaint and far away to be particularly relevant, for a few people it has been a matter of serious spiritual concern.

These encounters, especially with Latter-day Saints for whom the Flood story is vexing, have often left me hoping that someone would take up the task of gathering together the many and fragmented statements about the Noachian Flood in LDS scripture and discourse to see if it were possible to synthesize a coherent foundation for meaningful further reflection. As I have discussed the Black Sea hypothesis with friends and colleagues, it became increasingly suggestive that the time for such a project has arrived, so with their encouragement, I’ve begun.

A number of factors make forging such a synthesis a difficult task. For instance, Latter-day Saints don’t even seem to agree about the importance of the Flood story. Some Church members have opined that it’s not a key gospel issue since the LDS scriptures say so little about the biblical Noah. Whereas many creationist authors insist emphatically that belief in a literal universal Flood is fundamental to Christianity, many Latter-day Saints do not seem to share that view, at least with the same intensity. While some LDS commentators venture to identify the “pillars” of theology or of eternity (creation, fall, atonement), none known to me have included the Flood.²⁵

Current Church manuals seem to reflect this same sense that the Flood occupies no critical place in our theology. For instance, the Old Testament manual used by seminary and institute students takes a trifle more than one page of text to make (almost list) the following assertions: the ark was to float, not sail; the waters went back to their original sources after the Flood; all the high hills were covered; the earth’s baptism was an act of God’s love so righteous spirit children would not have to tabernacle with unrighteous parents; all humans were killed but eight; the Flood occurred circa 1600 years after Adam’s creation; the exact location of the biblical Ararat is unknown, but the Flood made “great changes” on the face of Earth as the continents were being divided. The manual also has a chart to compare the size of the ark to that of four other types of ships. This section is compressed into the middle of a single chapter titled “The Patriarchs,” which covers Genesis chapters 4 through 11. No attempt whatsoever is made to engage the

obvious issues that arise from any thoughtful analysis of the story.

The current Old Testament Sunday School manual has even less discussion of the Flood. Rather, it builds the story into a series of important moral lessons, especially about how we should be spiritually prepared for times of stress. It makes no attempt to analyze the specifics of the story and the many tasks required of Noah and his family, but it does include the same chart to illustrate the size of the ark.²⁶

Clearly, as a faith tradition, we don't know exactly what we think about the Flood. To me, the mixed signals from the manuals reflect the unspoken battle between our desire to read the scriptures literally whenever we deem it possible to do so while recognizing that perhaps they don't reflect literal events so much as they do opportunities for moral reflection.

Scriptural statements about the Flood

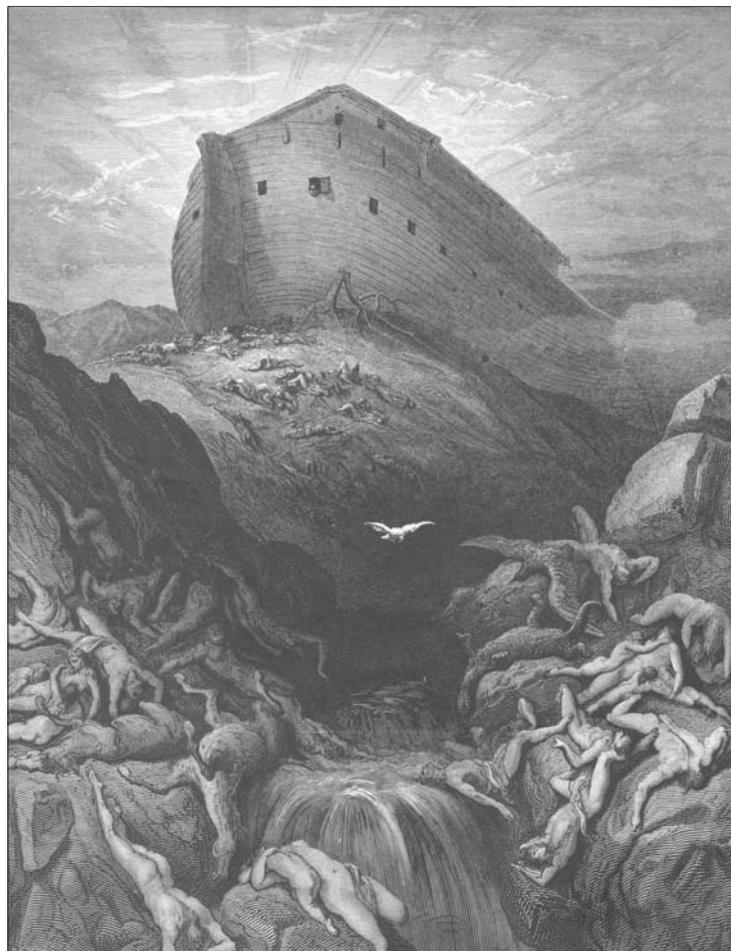
LEAVING THE SECONDARY literature behind for the moment, it is important for our attempt to frame the Flood story to see exactly what our LDS scriptures say about it.

The Book of Mormon refers to the biblical Noah only twice; both are ancillary comments without elaboration. The Doctrine and Covenants mentions Noah four times, each time in reference to genealogy or priesthood ordination. Although the D&C clearly suggests Noah is an historical figure, it never refers to the ark or the Noachian Flood.

As for the word "ark," the Book of Mormon has only one reference: that the Jaredite barges were "tight like unto the ark of Noah" (Ether 6:7). In Ether 13:2, Moroni does seem to refer to a universal flood. In the Pearl of Great Price, Noah is clearly presented as an historical figure. Moses 7 and Joseph Smith—Matthew (a reconstruction of Matthew 24) each mention the ark once but without elaboration.

What about the word "flood"? The Book of Mormon uses the term just once, in a passing comment (Alma 10:22). The Doctrine and Covenants contains no references. In the Pearl of Great Price, Joseph Smith—Matthew uses the term twice, again without elaboration. If we pursue the plural term, "floods," we find no relevant entries in the LDS scriptures except in Moses 7 and 8, where each time the word refers to the Noachian event. The passages always use the term floods, plural, never the singular. Is there any significance to that? Nowhere else in the standard works does such a distinction appear.²⁷

Latter-day scriptures do not really clarify the question of whether the Noachian Flood covered the entire earth or if it was a more localized event. Clearly, throughout our tradition's history, we have tended to read the Flood as universal, but I believe that is less from the influence of scripture itself and far more because we have been culturally predisposed to read it that way. In Moses is a comment attributed to the Lord: "I will destroy man whom I have created from the face of the earth, both man and beast, and the creeping things, and the fowls of the air. . ." (Moses 8:26). And the final two verses of Moses as-



GUSTAVE DORÉ, THE DOVE SENT FORTH FROM THE ARK

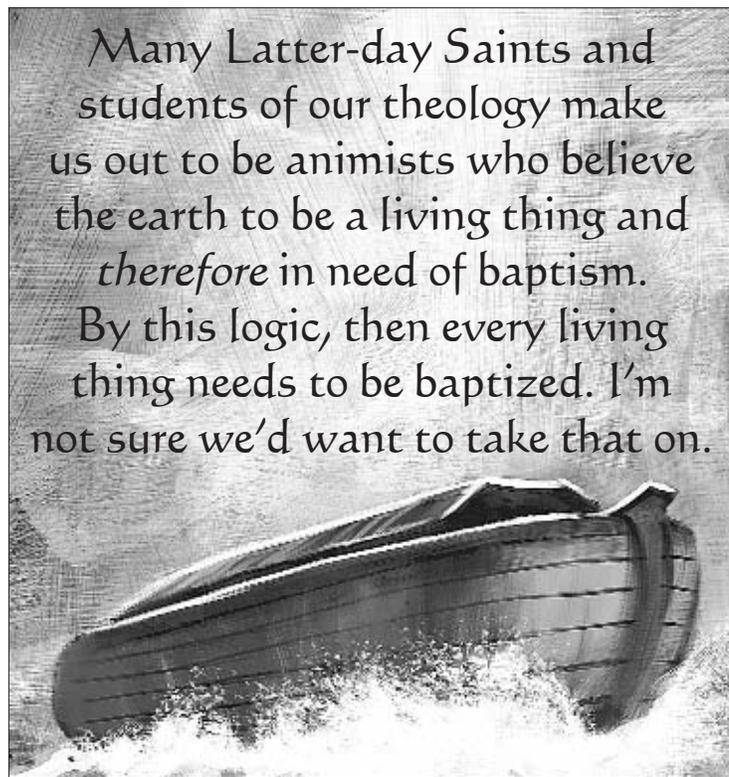
There seems to be a tacit assumption in LDS discourse that the Flood was universal. Usually it is treated as a miracle to be accepted without further analysis.

sure us that "all flesh" will be destroyed. But then the book closes, and we are not treated with any further comment on the Flood story.

What should we do with this? I think we have tended to understand "all flesh" as meaning "all animal life on earth." But as we know from our analysis of other scriptures, neither the term "all" nor the term "flesh" finds consistent scriptural use. The meanings of these terms seem to me to be beyond documentable resolution.²⁸

In his 1980 speech, "Before Adam," LDS sriptorian Hugh Nibley touched briefly on the possible survival of humans other than Noah's family. Nibley asserts that Noah merely described things from his personal point of view, that "all Noah tells us is what he saw. . ." that the Flood story from Noah's "point of view makes perfectly good sense." But Nibley then suggests that

people other than Noah's posterity survived the Flood. We remember that Enoch is said to have begotten Methusaleh, who begat Lamech, who begat Noah; Noah is thus the great-grandson of Enoch. If no humans other than Noah's descendants survived the Flood, then *all* subsequent humans must be descendants of Noah and of Enoch; nobody else would exist but their direct descendants. So why, asks Nibley, does God make it such a point to promise Enoch that "a remnant of [Enoch's] seed [will] always be found among all nations, while



the earth [shall] stand"? The blessing and promise have no meaning whatever if all nations, all people, *are* Enoch's direct seed, as they would have to be if only Noah's party survived.²⁹

Statements about the Flood from LDS leaders

WHAT HAVE LDS prophets and apostles taught about the Flood? To date, all seem to have accepted Noah as an historical personage, but very few have ventured substantively into analyzing the specifics of the Flood.³⁰ Uniformly there seems to be a tacit assumption that it was universal. Usually it is treated as a miracle to be accepted without further analysis.

Apostle/scientist John A. Widtsoe did work briefly with the issue.³¹ He recognized that we Latter-day Saints must deal with two basic complications that non-LDS commentators do not: the Flood's putative geography, and the concept of the earth's baptism. Let us consider these below.

Geographical concerns. Elder Widtsoe forthrightly acknowledged the most utilitarian problem that the Flood story requires the existence of massive amounts of water, far beyond what currently exist on Earth, water that had to be produced

quickly for the Flood and then eliminated quickly afterward. He proposed as one possibility that the Flood consisted merely of worldwide rain; that heavy rain blanketing the mountain slopes could fulfill the necessity of a baptism. Though this idea creates questions of its own, it does negate the "big water" problem. Then Widtsoe turned to the LDS concept that humanity began its history in the area of Missouri and that Genesis chapters 1 through 10 occurred on the North American continent. He considered that the heavy rains had possibly flooded down the Mississippi river valley to create the perception of a worldwide flood—that Noah faithfully reported events *as he saw them*, but that, one way or other, the ark made its way eventually (a year later) to somewhere in the Old World, i.e., the mountains of Ararat.³² Though he indicated that no one knows the real story, Widtsoe pointedly declined to defend the literalistic view.

Various other LDS writers have asserted that the Western and Eastern hemispheres were joined at the time of the Flood, so Noah did not need to be taken from the West to the East. This assertion exploits Genesis 10:25, the passage that one of Eber's sons was named Peleg, "for in his days was the earth divided." The general scientific consensus is that the continents were once joined across the present-day Atlantic, but scientists have adduced very strong evidence that the division took place over many millions of years. So any attempt to squeeze the data into a timeframe of, at maximum, 3900 years (from 2400 BC to Columbus around 1500 AD) seems insurmountable.

Far more likely, the Peleg statement refers to political divisions of the land, not to a dividing of continents. Indeed the Book of Jubilees, a very early Jewish work (from the second millennium BC), details clearly that the Peleg division was a stewardship designation of the locally known land among Noah's sons, Shem, Ham, and Japheth (Jubilees 8). Jubilees carefully describes the boundaries of the various allotments for each son and his descendants, and this has nothing to do with continental rupture.³⁴

Earth's baptism. Widtsoe's second concern, however, is the LDS notion that the earth needed to be literally baptized for its eternal welfare, with Noah's Flood being its baptism by immersion. As far as I can determine, this idea is not taught in scripture but was first outlined in brief by Joseph Smith and then articulated in much greater detail by Brigham Young, Orson Pratt, and others.³⁵

Many Latter-day Saints and students of our theology make us out to be animists who believe the earth to be a living thing and *therefore* in need of baptism. By this logic, then every living thing needs to be baptized. I'm not sure we'd want to take that on. If we choose to argue in some fashion that the earth needs baptism because it is a sentient entity with some capability of moral decision-making like that of humans, we run into further difficulty. Just for the sake of clarification, many animals have sentience far beyond anything we could likely adduce for the earth. Latter-day Saints also have a long-standing ecclesiastical policy that humans who lack the ability to make and exercise genuine moral decisions (i.e., those who

are mentally handicapped or under eight years of age) do not need baptism. But many such persons surely have sentience beyond anything we could likely identify for the earth as a planet. Admittedly, it is not clear what criteria one would use to evaluate sentience for a planet—but I personally find nothing even remotely promising.³⁶

It seems plausible to me that our gospel commentators may have posited that the earth itself needed baptism as a way to emphasize the importance of baptism in the gospel plan. The Flood story was handy, so it seemed a plausible connection. But the earth's need for baptism is not a doctrine defined in scripture.³⁷ In this context, it may be relevant to note that many early Church leaders also carried certain concepts of the relationship between spirits and bodies that later writers have chosen to ignore—i.e., that virtually everything, living organisms and inanimate objects, have life and spirits. For Orson Pratt, for instance, all plants have spirits just as we do; vegetable spirits are born to resurrected celestial vegetable parents. Heber C. Kimball avers that even houses and gardens possess spirits that “were made, as well as our spirits. . . .”³⁸ From this point of view, the necessity of baptism for the earth is quite logical, though a similar case could then be made for every organism and every thing. Revelation always arrives in bits and pieces, and in the absence of specific revelation, prophets are left, as Pratt admits, to draw their “own conclusions.”³⁹ We will return to this theme later.

LDS discourse on the fossil record

LET US NOW turn to the fossil record. Standard science synthesizes the available masses of data to indicate that what we know as the fossil record is the result of progressive accumulation through natural processes over millions of years of time. Young-Earth Creationism, on the other hand, insists that the entire geological column from the Cambrian strata upwards was deposited in one massive event, and all within a one-year timeframe. Every dinosaur and mammoth fossil, every plant that formed our coal beds, and all the organic remains that formed our petroleum deposits—all were formed, say they, by the Noachian Flood. This amounts to thousands of feet of sediment, fossils, coal, petroleum, and minerals.

Certainly a worldwide Flood would carry and deposit massive amounts of sediment. But explaining the fossil strata as deposits from the Flood is a luxury Latter-day Saints may not have. For instance, scripture makes clear that Adam blessed his posterity in a specific small valley before his death; other LDS scripture indicates very strongly that this event took place in Daviess County, Missouri, and that Adam will one day return there.⁴⁰ Tradition further states that the very altar that Adam built upon leaving the Garden of Eden was still standing on top of the ground in Missouri in the 1830s. Clearly this topography and altar could not have survived a massive, planetary Flood. If we wish to maintain the altar story, one highly treasured in some quarters of Mormonism, we must face squarely that there was no worldwide Flood. Either that, or we must become very inventive indeed to square our own theology.⁴¹

Some Latter-day Saints have tried to explain the fossil record with an uncanonized statement reportedly made by Joseph Smith that this earth was created from fragments of other earths.⁴² This sentiment is then extended to propose that dinosaurs, mammoths, and Australopithecines all come from other planets that have been destroyed, broken up, and recycled.

What size were the fragments? I have encountered claims all the way from continent-sized portions, to tectonic plates, to specific geological formations complete with living bristlecone pines on them, to mere atoms. Suffice it to say that no scientific evidence whatever exists to support such a model, and massive amounts of data indicate that our planet has, from its beginning, been a single dynamic but integrated entity—with continued accretions of space dust and meteorites of course.⁴³

Further, there seems to be no consistent theological support for the fragment proposal either. In fact, a well-ingrained teaching about the earth's wickedness may complicate the picture for those who align themselves with the fragment theory. Many LDS commentators have interpreted Moses 7:36, “Wherefore, I can stretch forth mine hands and hold all the creations which I have made . . . and among all the workmanship of mine hands there has not been so great wickedness as among thy brethren,” as applying in a cosmic, not just an earth-limited, sense. They argue that this planet's wickedness is beyond any wickedness God has ever encountered on his millions of other and older earths. Indeed this notion of the earth's supreme wickedness is well-entrenched in popular LDS theology, containing major implications for a variety of theological issues, such as the “infinite-ness” of Christ's atonement and why it was important for him to perform it on this planet. Such questions lie far beyond the scope of this present article, and we'll be content to recognize that the Church itself has never validated this interpretation nor resolved the many related questions it raises. But the scriptures *do* consistently teach that God's judgments are just. They further teach that the eventual destiny of our earth is to become a celestial kingdom (D&C 77:1; 88:17–20). Given this, the fragments idea raises the obvious question of how it would be just for planets that were more righteous than ours to be destroyed and recycled as part of the creation process of this earth. I am unable to resolve this contradiction, but it is a contradiction of interpretation rather than of scripture. Given the great number of problems with the fragments thesis, I think it merits no further serious consideration.

Questions for future LDS inquiry

WE MAY SAFELY say that LDS commentators in general have not developed any significant tradition of sustained study to understand the Flood. Why?

Clearly there are many reasons, a few of which we have explored above. But for those inclined to begin a sustained study, where might they start? What questions might they want to address head on?

First, it would seem reasonable to question the clearly problematic Flood date of circa 2344 BC, 1656 years after creation.

In my studies, I have found no one who wants to defend that date beyond just doggedly quoting the scriptures, both the King James Version and the Joseph Smith Translation, and insisting that secular knowledge and history are wrong. Other versions of the Bible derive other dates, though they still land within a few centuries or so of 2344 B.C. But other flood event dates exist among ancient records. The Sumerians, for instance, put the Flood at 241,200 years after creation (rather than the Bible's 1656 years) and claimed that many thousands of years had passed since.⁴⁴

Is it unthinkable to expand our usual time-frame for biblical events? We know that both New Testament writers and early LDS leaders had compressed views of time that demonstrably are not accurate—they expected the Second Coming, for instance, at dates that have long since passed. Such an erroneous conception of time seems to serve no better for the distant past than it has thus far for the future. Where good evidence dictates, it would seem reasonable to turn to dates other than those suggested in the Bible.⁴⁵

Second, I believe it is reasonable to re-examine the question of whether the idea that the earth needed baptism is really as solid as we have long assumed—and if it is, we should look at whether the Widtsoe suggestion about heavy rains covering even the highest mountain slopes is adequate.

Third, I believe it is crucial that we abandon the concern that because we've told the Flood story so often in the Church that many of our children believe it in the most literal sense, that their testimonies will be shattered to learn that perhaps the story isn't literally true. I would hope that no one has based his or her religious commitments on a literal universal Flood. But if there is such a risk, to delay facing the issues will only compound the problem. As James R. Christianson put it, "It is neither wise nor necessary to create barriers of misunderstanding where they need not exist."⁴⁶ I believe our sheer neglect in giving substantive analysis to the Flood has already given any such potential problems far more gravity than is merited.

Framing Flood discourse as folklore—and more

SO IS THERE any way to put the Flood into an understandable and constructive context? I believe so.

Evidence indicates that the Flood story has been handed down for millennia, accumulating additions as it has aged. Can such a view of the Flood be countenanced without denigrating the testimony of prophets and biblical peoples who have spoken of the Flood as a literal, earthwide event? Perhaps we can come to some peace on this question through a look at our own history.

In the Church we possess a rich history of folklore that illustrates how minor events grow into major ones, then into spectacular ones, and then, too often, into pillars of testimony.⁴⁷ I will not go into detail here, but as a people we have many examples that illustrate the mechanisms that may have occurred in the ancient retellings of the story of the Flood.

This is not to ridicule folklore. Folk narratives play an im-

portant role in the lives of human societies, including our own. The question we must ask ourselves is whether we have yet reached the cultural and institutional maturity needed to take longer views of our teachings and traditions in order to determine what is "event history" versus "cosmic history"? Regardless of how much emotion folk stories may be able to generate (and they can be powerful!), we need to ask if a genuine witness of the Holy Ghost can be nurtured and called forth by anything but truth.

Remember that LDS scripture seems to tacitly assume a universal Flood, but no particular discussion of that idea is given. As far as scripture is concerned, the Flood as a worldwide deluge basically hinges on the Genesis account.

So how reliable are we to consider the biblical account? As we ask ourselves this question, we immediately recognize that there are numerous, clearly stated matters in the Bible which we Latter-day Saints emphatically do *not* accept. We do *not* accept that all of King Zedekiah's sons were killed (Jeremiah 52:10)—the Book of Mormon insists that one of them (Mulek) escaped and gave rise to a large population in the western hemisphere. In the biblical creation stories, the same series that contains the Flood story, we do *not* accept the Eve and the rib story as literal; we do *not* accept a literal reading of how Adam was created; we do *not* accept that things were "created" in the traditional sense of that word but insist rather that the creation meant organizing previously existing matter. There are scores of other examples, but these should suffice.

But how should we approach the assumptions built into modern revelation that Noah was an historical figure⁴⁸ and the Flood was worldwide? How might we determine when a latter-day prophet is, as Pratt suggests, drawing his "own conclusions" rather than speaking about a matter on which he has received specific revelation?⁴⁹ This takes us to the mechanism, nature, and interpretation of revelation, which, in detail, is a topic for another time. But Apostle Stephen L. Richards gives us some beginning guidance.

In the 1933 *Improvement Era*, Elder Richards published "An Open Letter to College Students." Therein he deplores the tendency for academic persons to reject the scriptures because of errors, or at least contradictions of natural laws, the writers make.

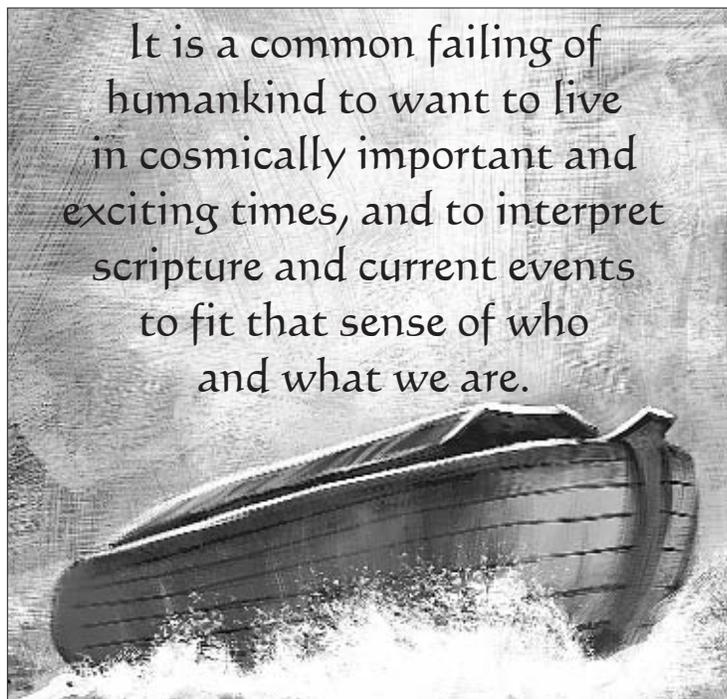
Many of the scientific world having discovered that the earth is round and not flat as the people of the Old Testament evidently believed it to be have ungenerously . . . thrown the good book into the discard. . . . They point out with glowing satisfaction that the God of the Hebrews is a capricious, jealous, tribal God, fighting the battles of his favored people and reveling in the defeat of their enemies. And then in . . . triumph they point to the so-called miracles of the Bible: the standing still of the sun, the incarceration of Jonah in the belly of the fish . . . and tell you that all these accounts are manifestly untrue because they contravene the known laws of nature.

Richards argues this is unfair, that the Bible is far too precious for this type of treatment. He then continues:

[So] what if Hebrew prophets, conversant with only a small fraction of the surface of the earth, thinking and writing in terms of their own limited geography and tribal relations did interpret [God] in terms of a tribal king and so limit His personality and the laws of the universe under His control to the dominion with which they were familiar? Can any interpreter even though he be inspired present his interpretation and conception in terms other than those with which he has had experience and acquaintance? Even under the assumption that Divinity may manifest to the prophet higher and more exalted truths than he has ever before known and unfold to his spiritual eyes visions of the past, forecasts of the future, and circumstances of the utmost novelty, how will the inspired man interpret? Manifestly, I think, in the language he knows and in the terms of expression with which his knowledge and experience have made him familiar. So is it not therefore ungenerous, unfair and unreasonable to impugn the validity and the whole worth of the Bible merely because of the limited knowledge of astronomy and geography that its writers possessed[?].⁵⁰

These points seem critical not only for the Bible but also for latter-day scriptures. Every writer of LDS scripture was raised in an environment, so far as we know, where the Noachian Flood was accepted as literal with little or no questioning. None, so far as we can identify, had gone to God for information on the details of the Flood; they either referred to the story in anecdotal asides or came to mention it through their seeking information on matters such as priesthood structure. I believe the same can safely be said for the utterances of our LDS leaders who have made similar, uncanonized statements. LDS tradition has rarely claimed that the recording and interpretation of scripture is infallible, and certainly a claim to infallibility for prophetic writers and speakers in our own dispensation cannot be defended.⁵¹ I believe many of the dilemmas we face in today's Church regarding possible conflicts between science and religion would be significantly reduced were we to more consciously remind ourselves of this principle: that leaders' fallibility on factual issues does not negate the sacredness and genuineness of their calling nor our responsibility to listen carefully and respond prayerfully to their guidance on spiritual and moral principles.

In conclusion, the distinction between "cosmic history" and "event history" does seem to be a useful one. A framing of the scriptures as cosmic history perceives that scriptural writers primarily intend to teach moral lessons and make it clear that Deity operates in the affairs of men, bolstering in the minds of adherents a sense of meaningful place in a larger scheme of things. This is distinguished from "event history," the type to which we are presently accustomed and which apparently became the norm only with the Enlightenment. It has been said that in order to understand these distinctions and the nature of scripture as cosmic history, we must learn to think like



Hebrews, not like Greeks. Modern society, it seems, thinks like Greeks.

I acknowledge my own personal bent toward "thinking like a Greek," though I try to blend Hebrew understandings with the science and general approach to the world I derive from the Greeks. But even as I say this, I strongly believe that most of the challenges facing our modern world must be addressed by thinking like a Greek. Let me conclude with one quick example illustrating why I think this entire discussion is worth our time.

LESSONS FROM A "COSMIC HISTORY" APPROACH TO THE FLOOD STORY

By turning the story of Noah's Flood into a story for Primary children, have we missed important lessons for today?

I AM CONCERNED with the notion of compressed time that underlies so much LDS discourse. From the very beginning, our people have underestimated God's timeline. We are not alone in that; it is a common failing of humankind to want to live in cosmically important and exciting times, and to interpret scripture and current events to fit that sense of who and what we are. This desire permitted some early Latter-day Saint leaders to prophesy emphatically that the endtimes would occur in the late 1830s or early 1840s, and we have seen many similar (and failed) assertions since.⁵²

But resolving or addressing many of our environmental and social problems clearly demands a long-term view—something we as a people are not used to adopting. Indeed, our penchant for short-term thinking brought early divine warnings. God repeatedly cautioned the Latter-day Saints as they

(Continued on page 42)

streamed unwisely into Missouri that they should gather “not in haste or by flight” (D&C 58:56, 101:68) but rather let things “be done in their time” (D&C 101:72), lest hastiness should bring “pestilence” (D&C 63:24). The wiser course, God counseled, was to take a long-term view; they should “act upon the land as for years, and this shall turn unto them for their good” (D&C 51:17). It took the pioneers considerable time to learn to act for the long-term good. Lorenzo Snow recalled, for instance, that when he first took the Saints to Brigham City, he could not even get them to plant currant bushes; they thought they would not be in Utah long enough for currants to mature!⁵³

So what difference will it make for our present generation to adopt a long-term view instead of the short-term one that has plagued us through our history? As a start, we could collectively acknowledge the physical and biological laws that have produced and presently operate our wonderful world and which we must apply to seriously discharge the real responsibilities of scriptural stewardship. The Church’s current Old Testament Sunday School manual, noted earlier for how it moves toward moral lessons from the Noah story, represents a first, small but hopeful step in this direction. There is room for far more development of the critical issues, for there are many among us who, like those of yesteryear, reject the increasingly obvious warnings that our planet and its organisms are in trouble, that serious problems lie in our foreseeable future. They assert that we need not worry about long-term planning on issues such as greenspace preservation, climate change, resource distribution, and population pressures.

Gratefully, some Latter-day Saints are alert to the tasks immediately ahead. Like Noah, they intuit what is soon to come unless we change our ways and are taking steps to meet the challenge.⁵⁴ But they, again like Noah, find that their warnings too frequently fall upon unhearing ears. ☹

PREFATORY NOTE ON SOURCES. The literature dealing with Noah’s Flood is truly vast. However, the following discussions seem indispensable for serious analysis and lead to hundreds of additional references. Sources within each section are listed chronologically.

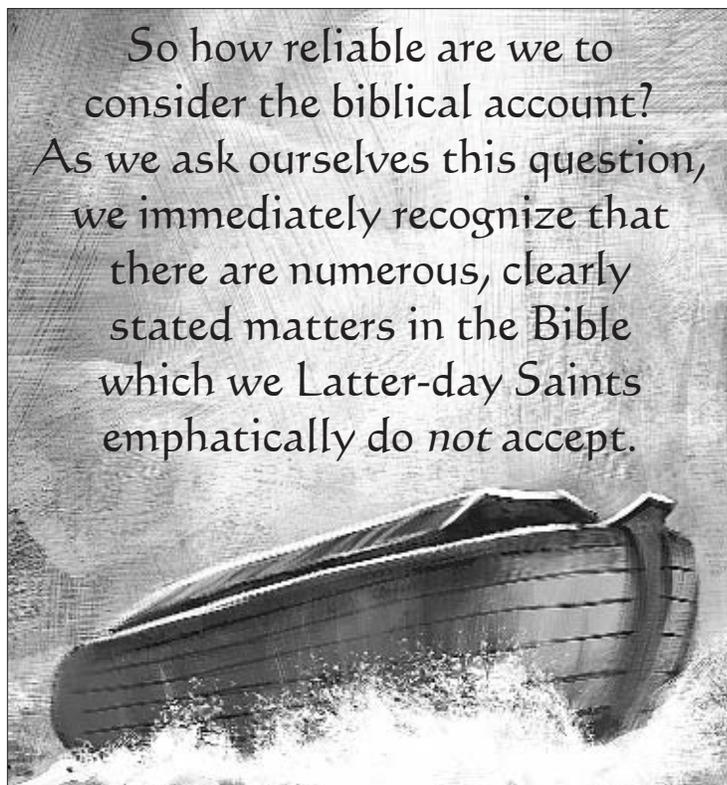
I. SOURCES DEFENDING THE FLOOD AS LITERAL HISTORY

- A. John S. Whitcomb Jr., and Henry M. Morris, *The Genesis Flood: The Biblical Record and Its Scientific Implications* (Grand Rapids, MI: Baker Book House, 1961).
- B. John Woodmorappe, *Noah’s Ark: A Feasibility Study* (El Cajon, CA: Institute for Creation Research, 1996).

Since none have provided substantive data, I do not list the many books recounting ambitious attempts to locate the ark in the mountains of modern-day Ararat.

II. SOURCES ON BIBLICAL MATTERS AND ANCIENT CIVILIZATIONS:

- A. James Strong, *The Exhaustive Concordance of the Bible . . . (including) . . . Dictionaries of the Hebrew and Greek Words of the Original, with References to the English Words* (Nashville, TN: Abingdon, 1890).
- B. J. D. Douglas and others, eds., *New Bible Dictionary*, 2nd ed. (Wheaton, IL: Tyndale House, 1962).
- C. James L. Mays et al., eds., *Harper’s Bible Commentary* (San Francisco: Harper and Row, 1988).
- D. J. M. Roberts, *History of the World* (New York: Oxford University Press, 1993).



So how reliable are we to consider the biblical account? As we ask ourselves this question, we immediately recognize that there are numerous, clearly stated matters in the Bible which we Latter-day Saints emphatically do not accept.

E. Loren Fisher, *Genesis: A Royal Epic* (n.p.: Xlibris, 2000). This book is a new translation of the available Genesis documents, attempting to avoid the “traditional patina” that is said to cover our usual translations.

III. SOURCES SPECIFICALLY CRITIQUING LITERALIST VIEWS

- A. J. R. Van de Fliert, “Fundamentalism and the Fundamentals of Geology,” *Journal of the American Scientific Affiliation* 21 (1969): 69–81.
- B. Robert A. Moore, “The Impossible Voyage of Noah’s Ark,” *Creation/Evolution* 11 (1983): 1–43.
- C. Howard M. Teeple, *The Noah’s Ark Nonsense* (Evanston, IL: Religion and Ethics Institute, 1978).

IV. SOURCES REVIEWING THE LITERATURE AND CONTROVERSY

- A. Alan Dundes, ed., *The Flood Myth* (Berkeley: University of California Press, 1988).
- B. J. David Pleins, *When the Great Abyss Opened* (New York: Oxford University Press, 2003).

V. SOURCES PRESENTING THE BLACK SEA HYPOTHESIS

- A. William Ryan and Walter Pitman, *Noah’s Flood: The New Scientific Discoveries about the Event that Changed History* (New York: Simon and Schuster, 1998).
- B. Ian Wilson, *Before the Flood: The Biblical Flood as a Real Event and How it Changed the Course of Civilization* (New York: St. Martin’s Press, 2001).

NOTES

1. Commentators vary as to whether dinosaurs would have been among the creatures on the ark, but modern biblical literalists have claimed that Job 40:15–24 (behemoth) refers to dinosaurs and thus “proves” that they survived the Flood. Some writers even propose that dinosaurs gave rise to the legends of dragons, complete with fire-breathing capabilities.
2. This is the date derived from the King James Bible and the Joseph Smith Translation. Other Bible versions give variant dates, but absolute precision is not critical. A nice summary table that calculates the date and will be readily available

to Latter-day Saints is in W. Cleon Skousen, *The First 2000 Years* (Salt Lake City: Bookcraft, 1953), xi. For the purposes of this essay, I use the rounded-off phrase “4400 years ago” to indicate the critical time frame.

3. See for example, Dundes, *The Flood Myth*, and Pleins, *Great Abyss*. It is widely concluded that the biblical version is derived from an older account, the Epic of Gilgamesh. “The oldest story in the world is the Epic of Gilgamesh . . . [which] . . . appears in Sumerian times and is known to have been written down soon after 2000 BC” (Roberts, *History of the World*, 41). The Sumerians were a Semitic-speaking people who in roughly 3300 B.C. moved into southern Mesopotamia (roughly southern Iraq on today’s map; the valleys of the lower Tigris and Euphrates Rivers). They somewhat displaced the region’s prior people, the Ubaidians, who apparently had been there for more than a thousand years. The Sumerian-Ubaidian culture features very prominently in early inventions (pottery wheels, wheeled vehicles, the earliest-known writing, and the development of civilization itself.) But the Sumerian culture as such was lost about 1800 BC (Roberts, *History of the World*, 31–51); Mark A. Stevens et al., eds, *Merriam-Webster’s Collegiate Encyclopedia* (Springfield, MA: Merriam-Webster), 1560–61.

4. Moore, *Impossible Voyage*, covers scores of these concerns. Pleins, *Great Abyss*, 70, cites a 19th-century German naturalist: “I find it incomprehensible how the sloth could have made the pilgrimage from Mt. Ararat to South America since it requires an hour to crawl 6 feet.” John A. Moore, *Science as a Way of Knowing* (Cambridge, MA: Harvard University Press, 1993), 102–115, nicely reviews earlier concepts of the nature of fossils.

5. I specifically refer to such groups as the Creation Research Society and their affiliated Institute for Creation Research, based in southern California, or Answers in Genesis, based in Kentucky.

6. Numerous books over the past thirty years have dealt with these issues. The subject of dating techniques eventually became so insistent that the Institute for Creation Research assembled a committee of their scientists to formulate rationales to nullify radiometric techniques. This committee is known as the RATE Group (an acronym for Radioisotopes and the Age of the Earth). This group plans to release its final report in 2005. *Acts and Facts* 33 (September 2004):1. Whatever RATE’s success dispensing with radiometrics, numerous other dating techniques also indicate a very old earth. Antarctic ice cores and their annual layers of deposition, for instance, have now revealed a continuous record of deposition dating back 740,000 years, and considerable optimism exists that this can be eventually taken to at least one million years of continuous deposition. See the series of three articles on the Antarctic ice core in *Nature* 429 (10 June 2004): 596–597, 611–612, 623–628, especially the third one, “Eight Glacial Cycles from an Antarctic Ice Core.”

7. R. M. May, “How Many Species?” *Philosophical Transactions of the Royal Society of London*, Series B 330 (1990): 293–304, or, more readily available, Laura Tangle, “How Many Species Are There?” *U. S. News and World Report* (August 18–25, 1997): 78–80.

8. Woodmorappe, *Noah’s Ark*.

9. “One thing is very clear. Genesis is made up of several sources. . . .” Fisher, *A Royal Epic*, 17. See further, Mays, *Harper’s Bible Commentary*, 90–92; Roberts, *History of the World*, 41, 49; Pleins, *Great Abyss*, 27–30; Douglas, *Bible Dictionary*, 904–905.

10. Dundes, *The Flood Myth*; Wilson, *Before the Flood*, 14–26; , Dorothy B. Vitaliano, *Legends of the Earth: Their Geologic Origins* (Bloomington: Indiana University Press, 1973), 142–178; Ryan and Pitman, *Noah’s Flood*, 229–259.

11. The data documenting climactic changes in the earth’s past are massive, highly detailed, and obtained from a wide variety of techniques. Those who argue for a worldwide flood or a young earth must face these data, but I have never encountered any attempts by literalistic groups to do so. The following sampling from my files will give readers a taste of the types of data available.

Daniel H. Sandweiss and others, “Transitions in the Mid-Holocene,” *Science* 283 (1999): 499–500 (the Holocene is roughly the last 10,000 years); F. S. Hu and others, “Abrupt Changes in North American Climate during Early Holocene Times,” *Nature* 400 (1999): 437ff; F. J. Polyak and Y. Asmerom, “Late Holocene Climate and Cultural Changes in the Southwestern United States,” *Science* 294 (5 October 2001): 148ff; S. J. Lehman and L. D. Keigwin, “Sudden Changes in North Atlantic Circulation during the Last Deglaciation,” *Nature* 356 (1992): 757ff; F. Gasse and others, “A 13,000-year Climate Record from Western Tibet,” *Nature* 353 (1991): 742ff; U. von Grafenstein and others, “A Mid-European Decadal Isotope-climate Record from 15,500 to 5000 Years B. P.,” *Science* 284 (1999): 1654ff; L. V. Benson and others, “Climatic and Hydrologic Oscillations in the Owens Lake Basin and Adjacent Sierra Nevada, California,” *Science* 274 (1996): 746ff; J. Nott and M. Hayne, “High Frequency of ‘Super-Cyclones’ along the Great Barrier Reef over the Past 5,000 Years,” *Nature* 413 (2001): 508ff.

12. Some Flood apologists have suggested that the tsunami-like stories are a reflection of the Bible’s statement that the “fountains of the deep” were broken open. Douglas, *Bible Dictionary*, 380–381, suggests rather that “. . . this may be a metaphorical statement” based on a Hebrew word usage usually confined to poetic passages “so it is not profitable to seek references to geological phenomena in it.”

13. LeGrand Richards, *A Marvelous Work and a Wonder* (Salt Lake City: Deseret Book, 1950), 75–76.

14. Vitaliano, *Legends of the Earth*, 152–153.

15. Johannes Riem, *Die Sintflut in Sage und Wissenschaft*, 1925, as quoted in Dundes, *The Flood Myth*, 443. Another author has produced a composite account of the Flood, using the biblical story and the five oldest non-biblical accounts. The result of his synthesis suggests the basis for the Flood story is a local, six-day flood on the Euphrates River about 2900 BC. See Robert M. Best, *Noah’s Ark and the Ziusudra Epic: Sumerian Origins of the Flood Myth* (Ft. Myers, FL: Enlil Press, 1999).

16. Douglas, *Bible Dictionary*, 466. These authors are clearly uncomfortable with the idea but acknowledge that it is held by scholars and apparently has some historical validity.

17. *Ibid.*, 381; Strong, *Exhaustive Concordance*, 8, 17. In Genesis 4:14 Cain is banished from the “earth” (adamah)—but this plainly does not mean planet. The word “land” in the Bible comes overwhelmingly from *eretz*; a few times from *adamah*. Ezekiel 29:5 translates *eretz* as field. The word “countries,” with only one exception, comes from *eretz*. The singular form, country, comes mostly from *eretz*, once from *adamah*, and a few times from other Hebrew words.

One finds this same “land/earth” intermixing in LDS scripture, as in Moses 1:29: “he beheld many lands; and each land was called earth. . . .” Helaman 14:20 says that at the time of Christ’s death total darkness will cover the entire “land,” while just seven verses later (14:27) it is to cover the “whole earth” for three days—which clearly it did not, since the New Testament makes no such mention but instead records events that occurred during the indicated period.

18. K. J. Hsu, *The Mediterranean Was a Desert* (Princeton, NJ: Princeton University Press, 1983).

19. Ryan and Pitman’s major reference for linguistics and genetics was L. L. Cavalli-Sforza and Francesco Cavalli-Sforza, *The Great Human Diasporas* (Reading, MA: Addison-Wesley, 1995). But genetic data in particular have exploded since then, and the newer data have yet to be analyzed as they relate to the Black Sea hypothesis. Recommended sources are: L. L. Cavalli-Sforza, *Genes, Peoples, and Languages* (Berkeley: University of California Press, 2001); Bryan Sykes, *The Seven Daughters of Eve* (New York: W. W. Norton, 2002); Steve Olson, *Mapping Human History: Discovering the Past Through Our Genes* (New York: Mariner Books, 2003).

20. Virtually all the books referenced as introductory sources, except for those of the Creationists, accept (on the basis of internal textual evidence) that the early Genesis chapters derive from at least two early Semitic texts. The Semitic languages include those of the Sumerians and Babylonians, and it is among those peoples that the earliest “Noah family” stories occur. Wilson, *Before the Flood*, 14–18 gives a side-by-side rendition of the early parts of the two postulated ancient texts, called J and P. The texts themselves, however, are not extant. See also Dundes, *The Flood Myth*, 61ff.

21. Hugh Nibley, *Lehi in the Desert and The World of the Jaredites* (Salt Lake City: Bookcraft, 1952).

22. Michael MacDonald, “Newfoundland Geologists Undermine Theory,” *CNews*, November 25, 2001, www.canoe.ca/CNEWSscience0111/25_nfldcp.html (accessed August 8, 2004); Robert Cooke, “New Findings Put Noah’s Epic Story to the Test,” *The Detroit News*, 6 February 2003, www.detroitnews.com/2003-religion/0302/06/a09-78822.htm (accessed 8 August 2004).

23. Jacqueline S. Mitchell, “The Truth Behind Noah’s Flood,” *PBS*, www.pbs.org/saf/1207/features/noah.htm, (accessed 8 August 2004).

24. Ryan’s reaction is described in a feature article reviewing and publicizing Siddalls’ work: Quirin Schiermeier, “Noah’s Flood,” *Nature* 430 (12 August 2004): 718–19.

25. A possible exception is found in the work of Apostle Mark E. Petersen, who cites the Flood as one of three major events in our planet’s eternal life. This is not, however, quite the same as being a pillar of the plan of salvation or the gospel. See Mark E. Petersen, *Noah and the Flood* (Salt Lake City: Deseret Book, 1982), 1.

26. Church Education System, *Old Testament Study Manual, Genesis to 2 Samuel*, 3rd ed. (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 2003), 54–57; *Old Testament [Gospel Doctrine Teacher’s Manual]*, (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 2001), 23–26.

27. Orson Pratt, *Journal of Discourses* 20: 9–10 (1878) does use the plural form in discussing the Noachian event. But this is due to his particular speculation about mechanism, not identifiably due to scriptural usage.

28. “All” is a term denoting absoluteness, of course. Such terms (“all” “every,”

“forever,” etc.) characteristically have both precise and vernacular meanings; the two can be quite different. The precise sense of “all” means, of course, that there are no exceptions. But it is a matter of taste, I suspect, as to which scriptural uses of the word are interpreted in the precise sense and which in the vernacular. It is a most revealing exercise to scan through a comprehensive concordance such as Strong’s (*Exhaustive Concordance*) for the word and see what proportions of its entries are defensible or comfortable in the precise sense and which surely must be vernacular uses. But since there are more than 5000 such uses of the term in the Bible, I shall leave this to individual study! Let us suffice here with just a few problematic illustrations. Genesis 6:12 makes it clear that “all” flesh was corrupt, apparently including even living forms with no moral capabilities whatever. Yet Genesis 7:12 makes it clear that Noah was not included: God had adjudged him to be righteous. Genesis 6:19 has instructions to take only two of all flesh into the ark; Genesis 7:2 divides organisms into the clean and unclean and says to take seven (some say seven pairs) of the clean, but Genesis 7:15–16 again says two by two of all flesh. Genesis 6:19–20 clearly stipulates fowls as among the two by two; Genesis 7:2–3 clearly says fowls are to be by sevens, etc. See also the final paragraph of this endnote.

“Flesh” is more interesting. Does it include aquatic organisms? I have never encountered a universal Flood defender who wanted to include aquatic organisms among the ark’s passengers; the usual claim is that they would survive without assistance. But that argument clearly negates the “all flesh was destroyed” statement unless flesh is interpreted to mean only terrestrial animals. Some religions, to be sure, try to exclude fish from the scriptural meaning of “flesh” or at least from “meat.” But aquatic organisms include not only fish, but marine reptiles (e.g., sea snakes) and marine mammals such as whales, walruses, seals, and sea lions. And we cannot invoke animal intelligence, to an exclusion of marine life, for our criterion of flesh, for by all measures, dolphins are more intelligent than virtually all terrestrial animals except ourselves and certain great apes. Scripture has no knowledge whatsoever of microscopic life, so the Flood’s application to that entire realm of God’s creations is beyond any attempt at resolution. Did Noah and his family carry all the known human disease pathogens, one wonders?

James R. Christianson of BYU’s College of Religion has proposed a novel approach. In his essay, “Noah, the Ark, the Flood: A Pondered Perspective,” *The Old Testament and The Latter-day Saints* (Salt Lake City: Randall Book, 1986), he suggests that God directly created only certain limited types of life—the ones into which God breathed “the breath of life” and which were pronounced “good.” Accepting the idea that the earth is a living thing, Christianson further suggests that additional forms of life were produced by the earth itself but did not form part of the divinely recognized group—they were only extensions of the earth. In this view, God’s concern for punishment and preservation was confined only to those species that God had originally called “good.” Christianson thus finds no difficulty with organisms that lacked the “breath of life” surviving the Flood; they did not fit in the “all flesh which I have created” category at all. But such survival does not negate the Flood’s destruction of “all flesh” since these earth-generated organisms have no eternal identity and it was only the “good” organisms with which God’s actions and commentary are concerned. Says Christianson, God “never intended that *all* (his emphasis) animal life should die.” Species which go extinct (no matter when) fall into the “earth-products” category, and one assumes that this category must include aquatic life of all sorts.

But though potentially resolving one problem, this view raises others, about such things as plants, aquatic species, and so forth. LDS teachings about spirits and spirit bodies (i.e., that all living organisms have spirits, and that their bodies look like their spirits) would also have to be re-assessed. Such questions must wait for another day.

The Old Testament uses the term “flesh” in various ways (Douglas, *Bible Dictionary*, 379–380). It can denote the principal constituent of the body, or the entire body itself, or meat to be used for sacrifices. Husband and wife are to become “one flesh” (Genesis 2:24), and Abimelech reminded his relatives that “I am your bone and your flesh” (Judges 9:2). Elsewhere “flesh” can mean just the moral qualities of humans, as in weaknesses or sins of the flesh. The New Testament adds yet other meanings.

I conclude that no commentator has made a case for the use of these terms consistent with even just the Flood story itself as to what proportions, and types, of God’s creations were taken on the ark. Most Bible scholars indicate that this is because the Genesis account is combined from two independent sources with different perspectives; cf. sources cited above.

29. Hugh Nibley, “Before Adam,” in *Old Testament and Related Studies* (Salt Lake City: Deseret Book and F.A.R.M.S., 1986), 77, citing Moses 7:51–53. Originally a speech delivered in 1980.

30. The most extensive such treatment seems to be that of Joseph Fielding

Smith, *Man His Origin and Destiny* (Salt Lake City: Deseret Book Company, 1954), 414–436. Petersen, *Noah and the Flood*, takes note of a few concerns but just asserts “it was a miracle” and humans cannot be expected to understand the things of God (various pages, but particularly 58–65). Pratt, *Journal of Discourses* 20: 9–10 gives a very imaginative interpretation of how the waters were distributed.

31. John A. Widtsoe, “Did the Waters of the Flood Cover the Highest Mountains of Earth?” *Improvement Era* 43 (June 1940): 353.

32. Widtsoe’s tying matters to the central portion of the continent, does not take note of the report by one of Joseph Smith’s brothers-in-law, Oliver Huntington, and published in the *Juvenile Instructor*; that Joseph taught that Noah built his ark in the vicinity of our present-day states of North or South Carolina. *Juvenile Instructor* 30 (November 15, 1895): 700–701.

33. R. Clayton Brough and Rodney D. Griffin, *Scientific Support for Scriptural Stories* (Bountiful, UT: Horizon, 2000), 64–68, identify three lay LDS views of the physical splitting of continents. All are at best speculative; none is identified with LDS prophetic commentary.

34. *Book of Jubilees*, <http://exodus2006.com/jubl-9.htm> (accessed 7 August 2004).

35. Joseph Smith: “the earth was washed of its wickedness by the flood . . .” *History of the Church* 1:283 (Salt Lake City: Deseret News Press, 1951), originally published in the *Evening and Morning Star*, August 1832; cf. Brigham Young, *Journal of Discourses* 1:274 (1853); Orson Pratt, *ibid.* 1:331 (no date given).

36. Some readers may be familiar with the so-called Gaia hypothesis, by which some secular writers have imputed a sort of mystical sentience to the planet and its ecosystems as a type of super-organism. Such interpretations have not generally been considered justified by the major proponents of the hypothesis, however, and a review of that literature is far beyond the scope of this paper. Among Latter-day Saints, many authors have referred to the anthropomorphic depictions of the earth in scripture, such as the earth “groaning” and a voice from within its “bowels” (D&C 123:7, Moses 7:48). John Tanner wrestles with the literary power of, and what literal meaning is to be given to these and similar passages but without conclusion. He does, however, recognize the problem of excessively literal interpretation of scripture. Reflecting those concerns, one does wonder what to do with comments from Brigham Young that the earth’s breathing in and out “causes the ebbing and flowing of the tides, and not the moon as some have vainly supposed. The moon has nothing to do with this natural phenomenon. The motion is natural to the Earth and independent of the moon’s influence.” Fred C. Collier, ed., *The Teachings of President Brigham Young*, 3:241 (Hannah, UT: Collier’s Publishing, 1988). Indeed, President Young may have received the idea from Joseph Smith himself. Martha Cragun Cox records Jacob Hamblin’s telling her that Joseph had taught this to him directly, along with other interesting details about our planet. See *Autobiography of Martha Cragun Cox*, 58–59, typescript copies in Harold B. Lee Library, Brigham Young University, and in LDS Church archives, Salt Lake City. Heber C. Kimball went further, arguing that this earth had come from its parent earths. Further, if the earth were not alive, it could not give rise to living things such as crops (*Journal of Discourses* 6:35–36, 1857.) Eric N. Skousen, *Earth: In the Beginning* (Orem, UT: Verity Publishing, 1996), 66, concludes that our earth is female. Readers may be interested also in the extensive collection of LDS scripture, literature, and lore regarding the earth in Rodney Turner, *The Footstool of God: Earth in Scripture and Prophecy* (Orem, UT: Grandin Book, 1983).

37. Numerous authors cite Doctrine and Covenants 88:25–26 as scriptural validation for their view of the necessity for the earth to be baptized, that “the earth abideth the law of a celestial kingdom, for it filleth the measure of its creation, and transgresseth not the law—[w]herefore, it shall be sanctified.” It seems to me, however, that the phrase “. . . transgresseth *not* the law” more clearly indicates that the earth has not been the moral transgressor that baptism would seem to require. One can do a variety of scripture chases with this topic, but I am unable to find substantive resolution of the scriptural meaning.

38. Regarding life in inanimate objects, see Brigham Young, *Journal of Discourses* 3:276–277 (1856). Benjamin F. Johnson, a close confidant of Joseph Smith, indicates that Joseph taught essentially the same doctrine (letter to George G. Gibbs, 5, typescript copy, in L. Tom Perry Special Collections, Brigham Young University Library). For vegetable and other types of spirits, see Orson Pratt, *The Seer* 1(3):33–34, 41, 1(7):102–103 (1853); also Heber C. Kimball, *Journal of Discourses* 4:136 (1856).

39. Orson Pratt, *Journal of Discourses* 16: 335 (1873).

40. D&C 107:53; D&C 116.

41. *History of the Church* 3:39–40. Further pursuing the tradition of Adam’s altar will take us far afield from this article. An early first-person account: Oliver B. Huntington, “Adam’s Altar and Tower,” *Juvenile Instructor* 30 (15 November 1895): 700–701.

42. Cf. Andrew F. Ehat and Lyndon W. Cook, eds., *The Words of Joseph Smith* (Provo, UT: Religious Studies Center, Brigham Young University, 1980), 60–61.

43. A comprehensive review is sorely needed of the teachings of LDS prophets on the earth as a planet. The books by Turner (*Footstool of God*) and by Skousen (*Earth*) are useful collections but incomplete. From a more analytical point of view, readers will benefit from Erich Robert Paul, *Science, Religion, and Mormon Cosmology* (Urbana: University of Illinois Press, 1992).

44. An exception regarding defense of the date is that of John P. Pratt, "Astronomical Witnesses of the Great Flood," *Meridian Magazine*, www.meridianmagazine.com/sci_rel/030813flood.html (accessed 28 September 2004). Pratt, who traces dates among various calendars, places Adam's first breath of life on Saturday, 17 October 4070 BC, the expulsion of Adam and Eve from the Garden on Sunday, 9 April 4001 BC, Enoch's birthdate on Friday, 19 September 3378 BC after 6 p.m., and the beginning of the Flood on Saturday, 16 November 2343 BC. It seems wise to wait until these are published in a peer-reviewed journal to see how well they withstand analysis.

I have encountered several different dates for the Sumerian kings list and the Flood, but all fall into this very long age range. The figure given here is from "Sumerian Kings," www.oddworldz.com/theoldpath/sumerkings.htm (accessed 6 August 2004). Douglas, *Bible Dictionary*, 188–89 discuss difficulties with dating the early Old Testament and warns against any literalistic interpretation of its dates for the Flood and similar events. It is also recognized that ancient writers "played with numbers;" and considerable skepticism must be exercised with many of them. Nibley, in his *World of the Jaredites*, also warns that Biblical chronology may be far too short (see p. 149).

45. For early Christian misperceptions, see Brigham Young, *Journal of Discourses* 12:65, (1867); Lars P. Qualben, *A History of the Christian Church* (New York: Thomas Nelson and Sons, 1960), 108; John McManners, ed., *The Oxford Illustrated History of Christianity* (New York: Oxford University Press, 1990), 30, 48, and elsewhere. For those of early Latter-day Saints, see Grant Underwood, *The Millenarian World of Early Mormonism* (Urbana: University of Illinois Press, 1993), and Dan Erickson, *As a Thief in the Night: the Mormon Quest for Millennial Deliverance* (Salt Lake City: Signature Books, 1998). The concerns addressed in these references and in our text raise the entire issue of historical reality vs. "historicity" of scripture. This has been addressed by LDS scholars in Paul Y. Hoskisson, ed., *Historicity and the Latter-day Saint Scriptures* (Provo, UT: Religious Studies Center, Brigham Young University, 2001). While these latter authors offer a far more sophisticated approach to the interpretation of scripture than appears in any other Latter-day Saint literature I know, they do not deal substantively with such issues in the early Old Testament.

46. Christianson, "Noah, the Ark, the Flood," 48.

47. William A. Wilson and Austin Fife, among others, have made a career of studying the origins and growth of such stories and have published extensively. See, for instance, Fife's review of elaborations on the seagull story in Austin E. Fife, "Seagulls and the Crickets," *Western Folklore* 37 (1978):61ff. David Knowlton, in "Missionary, Native, and General Authority Accounts of a Bolivian Conversion," *SUNSTONE* (January 1989): 14ff., traces one such story—an account of the "miraculous" origins of the LDS branch in Huacuyo, Bolivia—from its tiny start in an Andes village, to the *Church News*, to the General Conference pulpit, with new details and enlargement of scale being added all along the way.

Church members have doubtless heard many folk stories that serve to bolster doctrinal concepts (so-called "faith-promoting rumors"). These include LDS versions of the universally-known "Wandering Jew" and "Vanishing Hitchhiker" legends, stories of Cain, tales of the immanence of the Second Coming, or stories about how various temple sites were chosen by miraculous means. (The foundations of at least one Utah temple was formally laid by Nephites and all the Latter-day Saints had to do was sweep off the foundation rocks and then build the temple thereon.) A useful source to begin analysis of some of these is Donald Lee Penrod, *Critical Analysis of Certain Apocryphal Reports in The Church of Jesus Christ of Latter-day Saints as Related by Members of the Church*, masters thesis, Brigham Young University, 1971. Elder Harold B. Lee strongly chastised Latter-day Saints for inventing and promulgating such stories, especially those related to succession in the Church presidency. See "To the Defenders of the Faith," *Improvement Era* 76, no 3 (June 1970), 63–65.

48. Reportedly Noah was also the angel Gabriel. *History of the Church* 3:386; Joseph Fielding Smith, comp., *Teachings of the Prophet Joseph Smith* (Salt Lake City: Deseret News Press, 1948), 157.

49. See note 39.

50. *Improvement Era* 36 (June 1933): 451ff.

51. See J. Reuben Clark, Jr., "When Are Church Leader's [sic] Words Entitled to Claim of Scripture?" *Church News*, 31 July 1954, 8–11.

52. See note 45.

53. Lorenzo Snow, *Conference Report*, 10 April 1898, 64.

54. Terry Tempest Williams et al., eds., *New Genesis: A Mormon Reader on Land and Community* (Salt Lake City: Gibbs-Smith Publisher, 1998); Terry Ball and Jack Brotherson, "Environmental Lessons from Our Pioneer Heritage," *BYU Studies* 38, no. 3 (Summer 1999): 63–88; Matthew Gowans and Philip Cafaro, "A Latter-Day Saint Environmental Ethic," *Environmental Ethics* 25 (2003): 375–394; George Handley, "The Environmental Ethics of Mormon Belief," *BYU Studies* 40, no. 2 (2000): 187–211.



HER VOICE

It keeps me awake,
reminds me of nights
on the prairie,
when as a child,
I tiptoed into the bunchgrass,
looked into the deepest dark
for the invisible light
illuminating
the visible stars.

That great bowl
sprawled with bright notes,
filled the dome of my head
with perfectly pitched vibrations.
Subduing my breath, I listened
behind the mosquito's whine
to a music that
according to Mother
was all in my head.

Tonight, what keeps me awake
is Mother's voice, singing.
I hear it above the airliner's drone.
It is as clear
as those headlights
below, where some vehicle
arcs its light
across the dark plain,
down an invisible road.

—JUDITH IRWIN