Birds Along Lehi's Trail

Stephen L. Carr

Follow this and additional works at: https://scholarsarchive.byu.edu/jbms

BYU ScholarsArchive Citation
Available at: https://scholarsarchive.byu.edu/jbms/vol15/iss2/10

This Feature Article is brought to you for free and open access by the All Journals at BYU ScholarsArchive. It has been accepted for inclusion in Journal of Book of Mormon Studies by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.
When Carr traveled to the Middle East, he observed the local birds. In this article, he suggests the possibility that the Book of Mormon prophet Lehi and his family relied on birds for food and for locating water. Carr discusses the various birds that Lehi’s family may have seen on their journey and the Mosaic law pertaining to those birds.
Birds

ALONG LEHI’S TRAIL

STEPHEN L. CARR

PHOTOGRAPHY BY RICHARD WELLINGTON
The opportunity to observe birds of the Middle East came to me in September 2000 as a member of a small group of Latter-day Saints traveling in areas thought to mark the route of Lehi and Sariah’s wilderness trek—from Jerusalem, Israel, to Aqaba, Jordan; and from Sana’a, Yemen, to Dhofar, Oman. Another opportunity came in October 2004 with a second visit to southern Oman, one that included the leading candidates for Nephi’s Bountiful: Khor Kharfot, Khor Rori, and Salalah. For me, an amateur ornithologist, the excitement of these trips was multiplied because I was able to identify numerous birds along the way, most of which might have been present in those regions in 600 BC. Some birds, of course, were forbidden as food for ancient Israelites because of proscriptions in the law of Moses. For Lehi’s people, other birds may have served as food sources in areas where they were plentiful and could be snared.

In Leviticus 11 and Deuteronomy 14, Moses outlined many specific birds that were not to be eaten. Some Jewish authorities state one or two reasons for the prohibition, such as to prevent diseases stemming from consuming carrion-eating birds. Others state that the only reason not to eat certain birds was that the Lord wished to try his chosen people. Whatever the case, the majority of proscribed birds are scavengers and carrion eaters, with other birds eating a variety of lower vertebrate animal life that may be disease carriers or poisonous to humans.

The King James translators apparently experienced difficulty in knowing exactly which Middle Eastern birds were meant in certain passages of the Hebrew Bible. Obvious mistranslations of bird names in the King James Version of the Bible have been noted, as in several corrective footnotes in the 1979 Latter-day Saint edition of the KJV. A recent Jewish translation of the Bible makes similar delineations and issues this caveat: “A number of these birds cannot be identified with certainty.”

According to Deuteronomy 14:11 and 14:20, all clean birds could be eaten. Only the “unclean” ones listed in sidebar 1 were prohibited. Mosaic law allowed the majority of the class Aves to be used for food, but because many birds are small and difficult to catch, it naturally follows that only larger birds, such as geese, partridges, and grouse, would have been hunted. Even then, according to the Mosaic law, the birds had to be ritually slaughtered and/or ritually prepared. Lehi, holding the Melchizedek Priesthood, would have been qualified, in the absence of Aaronic Priesthood–holding Levites in his party, to perform the required rituals for food preparation.

The color and activity of bird life undoubtedly did much to offset the tedium of life along the trail to Bountiful. In addition, most land birds are attracted to water sources and may have helped desert travelers like Lehi’s caravan to locate water pockets.

Facing page: The Common Kingfisher is a regular seasonal migrant along the eastern Arabian coast. The Malachite Kingfisher is an inch smaller (5”), with a brilliant blue back and an oversized bright red bill. Both of these birds generally frequent small lakes and water courses that support small fish and surface invertebrates.
If Lehi owned an estate outside the walls of Jerusalem (elevation 2,500 feet above sea level), his gardens would have been populated with a variety of colorful and interesting birds, with others flying overhead (see sidebar 2). Birds are attracted to water sources as well as to trees, bushes, and gardens. Although some fruit-eating birds are considered a nuisance because they ruin much good fruit, they also eat many fruit- and tree-injuring insects.

Upon leaving Jerusalem, the Lehite colony may have traveled essentially due east to the Jericho area, crossed the Jordan River near there, continued up into Moabite lands, then taken the King’s Highway southward in what is now the Hashemite Kingdom of Jordan. Or they could have headed southward through the Hebron area, then descended to the level of the Dead Sea (elevation 1,200 feet below sea level) south of the sea itself. On the way they would have seen some of the familiar dry-country birds as well as a few new ones in the desolate Arabah Valley and in the long gradual climb from the Dead Sea to sea level at the now-ancient ghost town of Ezion-geber, situated between present-day Eilat, Israel, and Aqaba, Jordan. Most of these birds live in excessively dry habitats and subsist on seeds and insects. After three days of travel since encountering the Red Sea, Lehi’s group came to a valley that Lehi named after Lemuel. During their prolonged stay there, they would have seen many more bird species than those mentioned in sidebar 3.

When Lehi and his party (which now included Ishmael’s family and Zoram) left the Valley of Lemuel, they may have journeyed southeasterward, paralleling the eastern shore of the Red Sea for some 50 to 100 miles before crossing the Al-Sarāt Mountains and then traveling on the east side of that range. Surprisingly, we saw relatively few waterbirds near the coast, although there are presently fishing villages at intervals along the way. These few birds are listed in sidebar 4.

The higher elevations around Nahom would have brought new varieties of bird life. Then, as the caravan turned eastward from Nahom (a short distance east and north of present day Sanaʾa, Yemen), it may have first passed by the ancient Marib Dam, whose construction had begun almost a century earlier. This dam impounded water from several nearby canyons (wadis) following heavy rains. Numerous marsh and freshwater birds would have been detected in the swampy lands around the reservoir. The group may not have spent much time there, however, because most of the waterbirds they would have seen (e.g., herons, egrets, and storks) were not permitted as food, despite their large size. Although the ancient dam was breached sometime after the beginning of the Christian era, the watercourses and springs still exist today, and a new dam has been erected to hold water for irrigation. For several miles east of Marib, the country is quite green and fertile, with numerous birds flying about and catching reptiles and amphibians near the edges of the reservoir and adjacent canals. Near the ruins of the Temple of the Moon Goddess, a monument that the Queen of Sheba possibly contributed to, I watched several birds of the species Little Green Bee-eater. This rather unimposing light green bird flashes a bright, almost neon-like iridescent coppery orange color from the underside of its wings when it flies out from a branch to catch an errant bee. I would like to think that some members of the Lehite
party would have been interested and intrigued by this bird since it does not inhabit their native Jerusalem.

After leaving the area of ancient Marib, the party traveled in extreme desert habitat—far from the Red or Arabian seas, along the southern edge of the vast Rub‘ al-Khali, the Empty Quarter of the Arabian Peninsula, where only the hardiest of animals have adapted to survive. As expected, we saw very few birds as we traversed this harsh terrain devoid of the two most likely food sources for most land birds—plants with seeds that birds can extract and plants with insects. I did identify three insectivorous species that flew in, landed in the rocks, and tried to locate some morsel of food; but I could not tell how successful they were. One of them, a Long-tailed Shrike, came up to the hubcap of one of our vehicles and pecked and hammered at its reflection. Apparently it injured itself in so doing, because two minutes after I picked it up, it died in my hand.

Judging from the scriptural account, this hostile desert area was probably where the Lord did not allow the families to “make much fire,” saying, “I will make thy food become sweet, that ye cook it not” (1 Nephi 17:12). Before entering this bewildering desert, Lehi’s people could have harvested a number of mammals—ibex, wild goats, and ground fowl such as partridges and sandgrouse, to name a few. They then could have prepared the meat by smoking or drying it so it would be sweet and edible and require no further cooking during the next stage of their journey (see sidebar 5).

The Lord specified that animals that had cloven hooves and chewed their cud were clean and could

The Western Reef Heron occurs in two forms—one dark blue and the other white. Although large and imposing, it was an unclean bird according to the Mosaic law and therefore could not have been used for food. It is found along the shores of the Red Sea and the Arabian Peninsula.
be eaten (see Leviticus 11:3). This category included cattle, sheep, goats, deer, ibex, and antelope. Specifically mentioned as being unclean were camels, swine, and two small rodent-like mammals—the coney and the hare (11:4–7). The prohibition was then extended to virtually all other mammals that walked on four paws (11:27). This would include the dog, cat, weasel, rabbit, and rodent families. Bats were also included, though listed with the unclean birds (11:19). Also deemed unclean were animals that “creepeth upon the earth”—reptiles such as tortoises, lizards, chameleons, and presumably snakes and amphibians (11:29–30, 41; see Acts 10:11–14). Perhaps the Lord would not allow birds of prey to be used as food because they live almost entirely on small mammals and reptiles. The hawk and falcon families were proscribed (even if they never ate carrion as do vultures and some eagles) because they ate food that was not permitted for human consumption. Even though several of the smaller falcons and small owls subsist mainly on insects that were considered clean (e.g., the locust, bald locust [solpugid], cricket, and grasshopper family), they occasionally eat mice and voles and thus were also unclean.

At numerous places along the trail, particularly in the Aqaba area north of Sana’a and in the plateau country at the head of Wadi Sayq, we saw large hawks and eagles soaring in the air, searching the ground for prey. The number of such resident raptors usually indicates the types and quantity of animals (or carrion) available in the area. We never actually saw any of these birds swoop and dive down to catch prey, but there probably were numerous rodents and reptiles in the territory.

Eventually the Lehite colony, including the children born in the previous years, continued roughly due eastward from Nahom. As they emerged from the desert—whether at Wadi Sayq, at the wadis reaching the coast at Khor Rori or Salalah, or even at another site—looking ahead they could probably see fog and mist, large and abundant trees, and increased bird activity. As our expedition descended Wadi Sayq, vegetation increased to jungle proportions near the mouth, with numerous date and other palm trees, wild fig trees, and several other hardwood trees within a few hundred feet of the beach. We observed many birds in the wadi, as well as in the freshwater lagoon and marsh at Khor Kharfot. This water is produced by a permanently running spring, supporting a variety of grasses, reeds, and other plants.

A pair of brilliantly colored turquoise blue and orange Malachite Kingfishers, very small for kingfishers at barely 4.5 inches in length, repeatedly dived off
A reed to capture small minnowlike fish in the pool. This bird is so tiny that it appears to be a fat hummingbird with a large, bright red bill. This species is not known to breed outside of Africa; in fact, there are only two previous records of a single bird each on the Arabian Peninsula, both in Yemen. I have officially reported this sighting because it represents the farthest north and east record of this species. (See sidebar 6 for birds identified in Wadi Sayq/Khor Kharfot.)

Since it is possible that the Lehites descended from the plateau to the coast at Salalah, we evaluated that site as well. There is a freshwater pond and a large sea inlet with many marshy areas, and the avian activity was superb. The coastal area around Salalah is more extensive than at Khor Kharfot, with much human activity, which is completely lacking at Khor Kharfot. Despite the large number of people near the shores, the beach-combing sandpipers and plovers were quite numerous, allowing people to come fairly close to them before they moved away. (See sidebar 7 for birds at Salalah.)

Even relatively small birds like sandpipers could produce quite a stewpot if enough of them were caught at one time, such as during migration. During the spring and autumn months, the coasts of Arabia experience huge numbers of birds migrating from Europe and Asia to Africa. (We happened to be in the land Bountiful area in September and October.) It is certainly conceivable that the older people of Lehi’s party taught the younger ones how to make traps and snares to capture shorebirds as they landed in large numbers on the beaches to feed before resuming their flights. In addition, some of the larger edible birds, such as geese and swans, could have been taken with a throwing stick or arrow if a hunter crept up close enough or hid in a reed-enclosed blind. And the eggs and young of clean birds could have been harvested during breeding season.

In our two and a half weeks along the proposed Lehi trail, plus another week in and around Salalah and Khor Kharfot, we were able to identify a large number of birds. Of course, there were many more that we did not see because of the scarcity of certain species, migration patterns, food availability, and habitat differences. During their eight years in the wilderness, Lehi’s people probably would have become quite proficient in identifying which edible birds could be captured with the least effort. We can imagine that after a day of shipbuilding in the land Bountiful, the more introspective members of the group found time to enjoy watching the various birds flitting from tree to tree or the little kingfishers flying down from an overhanging reed to pluck a tiny fish from the pond, then flying back to the reed and juggling the fish so it could be swallowed headfirst.

The sidebars that follow list the birds spotted along the proposed Lehi trail by Stephen L. Carr in 2000 and 2004. Bird names appear in standard taxonomic order, as found in *Birds of the World: A Checklist*, by James F. Clements. Regional field guides were consulted to identify birds and determine their geographical distribution. In most cases, each listed bird represents multiple sightings. Asterisks identify unclean (prohibited) birds, and question marks identify possibly unclean birds.
SIDEBAR 1

UNCLEAN BIRDS
(see Leviticus 11:13–19 and Deuteronomy 14:11–20)

<table>
<thead>
<tr>
<th>King James</th>
<th>Tanakh Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leviticus</td>
<td>Deuteronomy</td>
</tr>
<tr>
<td>eagle</td>
<td>eagle</td>
</tr>
<tr>
<td>ossifrage</td>
<td>ossifrage vulture</td>
</tr>
<tr>
<td>ospray</td>
<td>black vulture</td>
</tr>
<tr>
<td>vulture</td>
<td>falcons</td>
</tr>
<tr>
<td>kite</td>
<td>kite</td>
</tr>
<tr>
<td>raven and kin</td>
<td>raven, varieties</td>
</tr>
<tr>
<td>owl</td>
<td>ostrich</td>
</tr>
<tr>
<td>night hawk</td>
<td>night hawk</td>
</tr>
<tr>
<td>cuckow</td>
<td>sea gull</td>
</tr>
<tr>
<td>hawk and kin</td>
<td>hawks, variety</td>
</tr>
<tr>
<td>little owl</td>
<td>little owl</td>
</tr>
<tr>
<td>cormorant</td>
<td>cormorant</td>
</tr>
<tr>
<td>great owl</td>
<td>great owl</td>
</tr>
<tr>
<td>swan</td>
<td>white owl</td>
</tr>
<tr>
<td>pelican</td>
<td>pelican</td>
</tr>
<tr>
<td>gier eagle</td>
<td>bustard</td>
</tr>
<tr>
<td>stork</td>
<td>stork</td>
</tr>
<tr>
<td>heron</td>
<td>herons, variety</td>
</tr>
<tr>
<td>lapwing</td>
<td>hoopoe</td>
</tr>
</tbody>
</table>

SIDEBAR 2

BIRDS OF JERUSALEM AND ENVIRONS
Eurasian Kestrel*
Sooty Falcon*
Oriental Turtle-Dove
Palm (Laughing) Dove
Eurasian Swift
Eurasian Crag-Martin
Common House-Martin
White-spectacled Bulbul (a common songbird that essentially takes the place of the American Robin of North America and that has a similar melodious song)
Eurasian Blackbird
Streaked Scrub-Warbler
Wood Warbler
Spotted Flycatcher
Isabelline Wheatear
Palestine Sunbird (there are no hummingbirds in the Eastern Hemisphere; the Sunbird family replaces them, although they are in no way related)
Arabian Babbler
Eurasian Jackdaw*
House Crow*
Hooded (Carrion) Crow*

SIDEBAR 3

BIRDS SEEN BETWEEN JERUSALEM AND AQABA, JORDAN
Long-legged Buzzard*
African Rock-Martian
White-tailed Wheatear
Blackstart
Brown-necked Raven*
Tristram’s Starling
Dead Sea Sparrow
**SIDEBAR 4**

**Birds along the Coast of the Red Sea**

White-eyed Gull*
Sooty Gull*
Caspian Tern ? (of the same family as gulls, terns belong to a different subfamily, one that does not scavenge as gulls do but rather dives into the water to catch fish)
Great Crested Tern ?

**SIDEBAR 5**

**Birds in the Deserts Eastward from Nahom and the Marshes around Marib**

Gray Heron*
Black Kite*
Spotted Thick-knee
Namaqua Dove
Little Swift
Little Green Bee-eater
Eurasian Hoopoe*
Yellow Wagtail
Shining Sunbird
Long-tailed Shrike
Fan-tailed Raven*
Yellowhammer
Cinereous Bunting

**SIDEBAR 6**

**Birds in Wadi Sayq from the Plateau to the Coast**

Upper Reaches of the Wadi
Verreaux’s Eagle*
Short-toed Eagle*
Bonelli’s Eagle*
Booted Eagle*
Eurasian Buzzard*
Eurasian Sparrowhawk*
Eurasian Kestrel*
Barbary Falcon*
Oriental Turtle-Dove
Bruce’s Green Pigeon
Pied Kingfisher
Gray-headed Kingfisher
Black-crowned Sparrow-Lark
Singing Bush-Lark
Fan-tailed Raven*
White-spectacled Bulbul
White Wagtail
Hooded Wheatear
Hume’s Wheatear
Desert Wheatear
Variable Wheatear
Common Redstart
Dark-throated Thrush
Savi’s Warbler
Arabian Warbler
Palestine Sunbird
Rufous-tailed Shrike
Tristram’s Starling
Cinnamon-breasted Bunting

On the Coast and Out into the Ocean
Socotra Cormorant*
Masked Booby
Gray Heron*
Western Reef Heron*
Little Egret*
Greater Flamingo ? (probably was prohibited because it belongs to the general stork family)

Mallard
Eurasian Wigeon
Eurasian Buzzard*
Eurasian Kestrel*
Kentish (Snowy) Plover ? (see no. 22 in sidebar 1)
Common Ringed Plover ? (ditto)
Red-wattled Lapwing ? (ditto)
White-tailed Lapwing ? (ditto)
Common Sandpiper
Eurasian Curlew
Common Redshank
Common Greenshank
Terek Sandpiper
Ruddy Turnstone
Common Moorhen
Sooty Gull*
Herring Gull*
Lesser Black-backed Gull*
Slender-billed Gull*
Bridled Tern ?
Great Crested (Swift) Tern ?
Brown Noddy ? (this is a type of tern)
Palm (Laughing) Dove
Malachite Kingfisher
Gray-headed Kingfisher
Common Kingfisher
Eurasian Roller
Eurasian Hoopoe*
Rock Pigeon
African Rock Martin
Desert Wheatear
Blackstart
Spotted Flycatcher
Rufous-tailed Shrike
Tristram’s Starling
Rueppell’s Weaver

sidebar 7

**Birds Seen in the Coastal Area of Salalah**

Gray Heron*
Little Egret*
Western Reef Heron*
Striated Heron*
Great (Eurasian) Bittern*
White Stork*
African Spoonbill ? (probably was prohibited because it belongs to the general stork family)
Greater Flamingo ? (ditto)
Bateleur* (a large eagle)
Osprey*
Western Marsh Harrier*
Eurasian Kestrel*
Arabian Partridge
Eurasian Coot
Common Moorhen
Eurasian Oystercatcher
Black-winged Stilt
Lesser Sand-Plover
Bar-tailed Godwit
Eurasian Curlew
Marsh Sandpiper
Common Sandpiper
Little Stint
Terek Sandpiper
Common Snipe
Common Redshank
Spotted Redshank
Common Greenshank
Sooty Gull*
Herring Gull*
Great Crested Tern ?
Saunders’s Tern ?
Rock Pigeon
Eurasian Collared-Dove
Palm (Laughing) Dove
Common Swift
Pallid Swift
Gray-headed Kingfisher
Eurasian Roller
Crested Lark
Barn Swallow
Spotted Flycatcher
White-spectacled Bulbul
White Wagtail
Yellow Wagtail
Citrine Wagtail
Fan-tailed Raven*

Rufous-tailed Shrike
Palestine Sunbird
Graceful Prinia
Upcher’s Warbler
Plain Leaf-Warbler
Tristram’s Starling
Rueppell’s Weaver
African Silverbill
House Bunting
Black-headed Bunting

Wagtails are birds of the open ground and are named because they constantly flick their tails sideways and occasionally up and down. This Yellow Wagtail would have been seen in substantial numbers during spring and fall migration. The Lehites in Bountiful would have been charmed by their presence.

17. See Aston and Aston, In the Footsteps of Lehi, 22.


22. See Aston and Aston, In the Footsteps of Lehi, 37–43.

23. See Potter and Wellington, Lehi in the Wilderness, 152–53.


Birds Along Lehi’s Trail
Stephen L. Carr

1. The trip leaders for this tour were Gregory Witt of Brigham Young University; Lynn M. Hilton, author of two books pertaining to Lehi’s journey, In Search of Lehi’s Trail and Discovering Lehi; and Warren P. Aston, author of the book In the Footsteps of Lehi.


3. Jeffrey R. Chadwick, in “Lehi’s House at Jerusalem and the Land of His Inheritance,” in Glimpses of Lehi’s Jerusalem, ed. John W. Welch, David Rolph Seely, and Jo Ann H. Seely (Provo, UT: FARMS, 2004), 81–130, presents evidence that Lehi’s house was located inside the city of Jerusalem and that his land of inheritance lay at some distance outside the city.


6. See note 2 for publication data.

7. See note 2 for publication data.

8. See note 2 for publication data.

9. This word, when broken down into its Latin components, means “bone-breaker,” or “a bird that breaks bones.” The Eurasian Lammmergeier, Gypaetus barbatus, a type of vulture, after cleaning off a carcass as much as possible, takes the animal’s bones high up in the air and repeatedly drops them until they break open and the marrow can be extracted.

10. If this bird is the same as the present-day Osprey Pachyga haliatus, it is bird of prey that feeds solely on bony fish, which were clean according to the Mosaic law, and does not consume carrion as a vulture does. If, however, this bird is
a Black Vulture, it would be unclear.
11. The kite, as well as the falcon, is a type of hawk.
12. This is the European Red Kite, Milvus milvus, which does not occur in the Middle East. Therefore, the term buzzard, as rendered in the Hebrew, although being more generic, is more accurate.
13. Buzzards are a large, soaring type of hawk.
14. The raven, after its kind, includes crows, magpies, and jays, all of which are scavengers.
15. There is a notable difference between the eight-foot-tall ostrich and even the largest owl. The present-day range of the wild ostrich is essentially confined to the savannah areas of central and east Africa, reaching as far north as the southern edge of Egypt. In millennia past, the range extended farther up into Egypt, the Sinai Peninsula, and even southern Palestine. Interestingly, in light of the Bible’s prohibition of eating ostrich, there are at least two ostrich farms in Israel, one in the south a few miles north of Eilat, the other near the Sea of Galilee.
16. This word apparently does not refer to the Cuckoo. Most modern biblical scholars consider it to be either the Seagull, as do the Tanakh translators, or the Petrel. Petrels are a seabirding family of gull-sized or smaller birds that feed off the surface of the water, thereby picking up anything that might be edible. They are scavengers of the high seas, similar to gulls, except that they do not come to the land except to breed and raise their young. They even sleep at night resting atop the rolling waves of the sea.
17. Practically all gulls are known to be scavengers, either on the open sea or along beaches.
18. While most hawks prefer to capture their prey fresh, if extremely hungry they might be forced to eat carrion.
19. Even now there is a species named Little Owl, Athene noctua, in the Middle East and North Africa.
20. There are several large owls in the Middle East similar to North America’s Great Horned Owl.
21. This is an obvious mistranslation, as the swan belongs to the larger goose-duck-swan family, which was and is currently used for food.
22. The only essentially all-white owl in the Middle East is the ubiquitous Barn Owl, Tyto alba.
23. The gier eagle is a type of vulture, probably the Egyptian Vulture, Neophron percnopterus.
24. The bustard is a large terrestrial bird, several species of which are native to the Middle East and are not related to the hawk-eagle family.
25. Included in the heron family are bitterns and egrets, all marsh waders, which besides catching and eating fish also consume many kinds of amphibians, spiders and reptiles, some of which may be poisonous to humans.
26. Why this mistranslation occurred is unclear. The Lapwing, Vanellus vanellus (a type of plover), and the Hoopoe, Upupa epops, occur both in continental Europe as well as in Turkey. However, only the Lapwing is common in Great Britain, where the King James translators lived, while the Hoopoe is found in the Middle East, including southern Palestine near where the Mosaic law was given and in parts of the Arabian Peninsula.

Weather Report from the Valley of Lemuel
Wm. Revell Phillips
1. Lehi was of the northern tribe of Manasseh (see Alma 10:3) but was living in the southern tribal lands of Judah.
3. See Butzer, “Environmental Change in the Near East.”
4. See Butzer, “Environmental Change in the Near East.”
7. See Issar, Climate Changes during the Holocene, 227.
10. See Issar, Climate Changes during the Holocene, 227.
14. Groom, Frankincense and Myrrh, 111.
18. See Potter and Wellington, Lehi in the Wilderness, 5.
21. A perched water table is formed where an impervious bed of limited horizontal extent (e.g., clay or granite) is overlain by permeable rock material (e.g., sandstone or alluvium). Rainwater accumulates in the permeable and porous upper rock material but cannot penetrate downward into the impervious rock. Thus water builds up on the impermeable surface and flows out where that surface is exposed by erosion, as in the floor of a canyon. A perched water table in the desert lies much nearer the surface than the regional water table, which may lie at very great depth.
24. It is noted here that no report of children being born appears in the record before the party left Nahom (see 1 Nephi 17:1). This is to no way precludes the earlier birth of children, and to assume from this that Lehi left Nahom nine months after Ishmael’s daughters arrived at Lehi’s camp would be an unfounded assumption. Lehi’s complete journey took eight years (see 17:4) and over 2,000 miles. If the left Nahom after one year on the trail, the remaining seven years and 700 miles are summed up in three scriptural verses (see 17:3–5).
27. See Potter and Wellington, Lehi in the Wilderness, 57.
29. See Potter and Wellington, Lehi in the Wilderness, 9.

[With Real Intent] Out of Judaism
Nancy Goldberg Hilton
1. I give more details about my conversion in my autobiography.