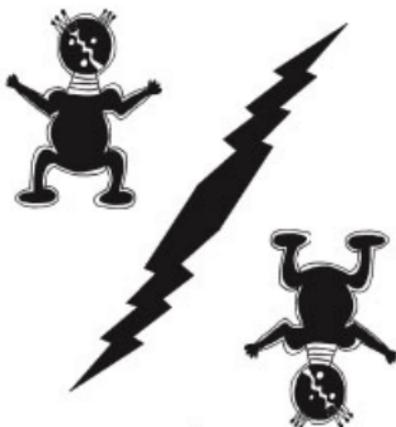


FIRECRACKER PUEBLO



By
Charlotte
Condia-Williams





Firecracker Pueblo

by
Charlotte Condia-Williams

Illustrations
by
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&
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The characters in this book are imaginary. There is a real Firecracker Pueblo on the northeast side of El Paso, Texas. The archaeologist in charge of the excavation is Thomas O'Laughlin, Curator of El Paso's Wilderness Park Museum. The site was dug in part by an archaeological field school and by volunteers. I am indebted to Mr. O'Laughlin and all of the people who worked at the site.

The section of the book, *The Village*, is based on information from archaeological sites, ethnographic literature and oral histories of Native Americans.

Charlotte Condia-Williams
Fall 1993

This book is dedicated to my Mother.

Firecracker Pueblo



The Pueblo

The wind coming in through the pickup's window was hot. Steve moved the ice chest to make more room for his long legs. He would be the tallest boy in his fifth grade class in the fall. He and his Uncle Mike had left Austin early that morning. He was getting tired of riding in the truck.

"We're almost there, Steve." Uncle Mike said. "Pete said to watch for the sign." "Pete" was Dr. Peter Mitsky, Uncle Mike's friend, an archaeologist.

Steve leaned forward to watch out the truck window. He was the first to see the sign.



CAUTION

**Field School
Firecracker Pueblo
14th Century**

Uncle Mike was coming to help his friend. Dr. Mitsky wanted a special sample to help date the prehistoric pueblo. Uncle Mike, who was a physicist, was going to try and get it for him. Steve had come along to be a volunteer worker at the dig.

The dig was a busy place. There were people everywhere. Some were digging with shovels. Others were washing pottery. One young man was standing on the top of a tall step ladder taking a photograph of a newly dug room.

Dr. Mitsky looked up and saw Uncle Mike and Steve.

"Hi, Mike. Glad to see you!"

"Me too Pete! This is my nephew, Steve."

"I'm glad you could come to help Steve. Let me show you around the dig."

"The man who owns this property wanted to level the land," Dr. Mitsky explained. "It was obvious that there was an ancient pueblo village here once the bulldozer started moving dirt around. First the bulldozer uncovered many



Uncle Mike was coming to help his friend.

pieces of broken pottery. Then the walls of the rooms began to appear.”

He looked at Steve. “Pueblo is the Spanish word for both village and house Steve. The pueblo houses are built on the surface of the ground with a number of rooms all joined together. Archaeologists describe pueblos as being like an apartment building today. This pueblo has twenty-three rooms.”

Dr. Mitsky made a sketch of the small pueblo in his notebook and showed it to Steve. “Two rooms often shared a common wall.”

“Here is a room we started to dig today,” he said hurrying Steve and Uncle Mike over to a roped off area. There were some low walls sticking up out of the ground.

“Here you can see the tree trunks that were used for the roof beams. The white flakes are plaster from the walls. We knew we had found the floor when we came to hard packed clay.”

“How did the site get the name Firecracker?” asked Uncle Mike.

“We named it Firecracker Pueblo because someone set up a firecracker stand right here on top of the ancient village. People came from all around to buy firecrackers. They would park their cars on top of the site. When it rained, people would find pieces of pottery and arrowheads and take them home. All this was destroying the pueblo. So I got permission from the owner to dig.”

It had been a long, hot day. Uncle Mike and Steve got a room in a nearby motel with a pool.

“Uncle Mike, why did Dr. Mitsky become an archaeologist?” Steve was cool and relaxed now, floating in the pool.

“Pete has been interested in archaeology as long as I’ve known him,” Uncle Mike replied. “When we were in college, we worked on a dig together one summer. After that, Pete decided to make archaeology his life’s work.”

“As you know, I decided to be a physicist. But I’ve been interested in archaeology ever since that summer.”

“That is why Pete has asked me to come to the site. He wants to get an accurate date for the site. This is what I will try to do.”



Steve's First Day

Early next morning Steve reported to Dr. Mitsky to get his job for the day. Dr. Mitsky gave him the special talk he gave to all new volunteers on their first day.

“When you dig up an archeological site, you also destroy it. We only dig if we have to. One reason to dig is that the site is being destroyed, piece by piece, like this one. We dig it to get as much information as we can. Each pueblo is one of a kind. There is no other like it in the whole world. We have to dig carefully and record everything we find.”

“Other pueblo sites have been dug near Firecracker. So, before we dig, we read all the reports about what was found at these other sites. Only after that do we begin.”

“It is my job to see that the site is dug properly. When we are finished, I will write a





The dig was a busy place.

book about the things that we discover here. Then everyone will know how people lived here at Firecracker Pueblo.”

Steve felt a bit intimidated. He would do his best to take good care of the artifacts that he found.

Dr. Mitsky took Steve over to where a tall, pleasant looking young man was hoveling dirt from a large pile onto a screen. “Steve, this is Jose Garcia. Joe, this is Steve. He will be giving you a hand today.”

“Thanks for the help.” Joe shoveled more dirt onto the screen. “This dirt is from the floor of one of the rooms.”

Joe shook the screen. “The screen acts like a large sieve. The holes are very small. They are one-eighth of an inch wide. Big enough to let the dirt through but small enough to leave pieces of bone, shell or pottery behind.”

Joe was a senior in college and needed a few more credits to get his degree. He had come to work in the field school for the summer to earn them. He was going to law school

in the fall. For as long as he could remember he had been interested in archaeology. One of his earliest memories was walking with his father, a farmer, over a newly plowed field looking for arrowheads.

Joe shook the screen again. He showed Steve a bead made of shell and a piece of bone from a jackrabbit.

At first Steve could not tell what anything was. Then, much to his relief, he saw the tip of an arrowhead. He began to see other things on the screen like beads and pieces of bone. He found many small, thin pieces of stone. Joe told him that these were flakes. Flakes are the garbage left behind when the farmers made stone tools.

What he found most often on the screen were broken pieces of clay pots. Joe called them potsherds. Steve asked Joe why there were so many of them.

"Every one in the Pueblo used clay pots for cooking and storage. So they made a great many pots," Joe explained.

Steve was still a bit puzzled.

“OK, Steve, here’s what happened. The women most probably were the ones who made the pots from soft clay. Then they baked them in the fire and they became very hard. But these hard pots broke easily. The broken pieces last a long time and that is what we find today.”

“We can sometimes tell when and where a pot was made by its color, shape and design. The designs changed over time just like styles of cars today.”

Later that day, Steve found two little pots which looked like they had been made by sticking a small thumb into a ball of clay. “Maybe these were the first pots made by a child long ago,” he thought.



The New Volunteers

On Saturday, Cora and her Mom drove past the site and stopped to ask what was going on. When they found out that it was a pre-historic pueblo, they asked if they could help. Soon Mom was digging with a shovel. Then she changed to a trowel. Cora carried buckets of dirt away from the room to the screening area. When Mom had finished digging a corner of the room, Cora cleaned it with a whisk broom and then gave it a finishing touch with a large soft paintbrush. She brushed the last bit of dirt into a dust pan leaving the floor clean. Cora and her mom had a wonderful day. They decided to come back on Sunday after church.

Cora's dad came by to see what his wife and daughter were up to. He laughed when





When they found out it was a prehistoric pueblo, they asked if they could help.

he saw his wife enthusiastically digging. "I wish I could get you to do all that hard work in the yard," he said.

"This is more fun than digging in the yard. You never know what you are going to turn up next," she replied.

As if to prove her point, Mom uncovered a cup. Dr. Mitsky watched while she carefully dug it out.

"It's unusual to find a cup in any dig in the Southwest," he said. "This one is very unusual in that it doesn't have a crack or chip."

Cora and her dad were impressed. Cora liked the cup very much. She especially liked the red and black design on it. "It would look very nice on the shelf in my room," she thought. Adding up the points in her favor, "After all, my mom dug it up." She decided to ask Dr. Mitsky if she could have it.

Dr. Mitsky thought a few moments before he answered. "No, Cora. I'm sorry but this cup will have to go to the museum. We will put it on display so that other little girls can see it. Every artifact is important. The cup tells us-

something about the person, possibly a woman, who made it. The pot also tells us about the designs the potter liked, what kind of clay she used and how it was baked or fired into a pot. This cup is a little bit smaller than other cups we have found. Maybe it was made for a special person.”

At first, Cora was angry that Dr. Mitsky would not let her have the cup. But after she thought about it for a while she decided that he had said no in a nice way, even if he did call her a little girl. Besides she knew she was not a little girl. She would be in the fourth grade in the fall.



Steve and Cora at the Screen

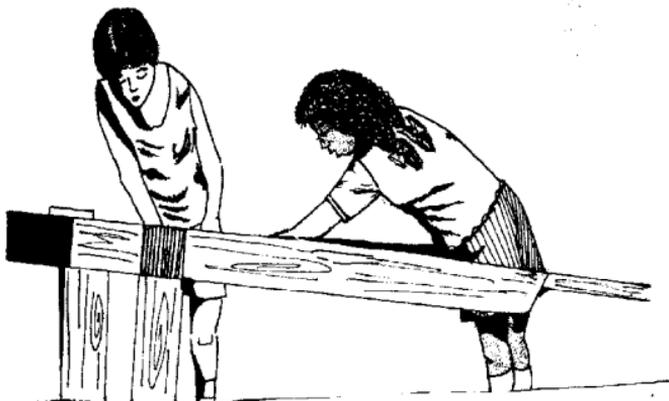
Monday morning Cora's mom and dad dropped her off at Firecracker on their way to work. Dr. Mitsky told her that she could work with Joe and Steve at the screen.

It was only nine o'clock but it was already hot. Joe had made a shade for the screen with a large blue and white striped canvas tarp. He checked the wind and moved the screen so that the dust would blow away from Steve, Cora, and himself. Cora said, "Thanks Joe for the shade. It makes it easier to work on a day like this."

Joe laughed, "Oh, the shade is not for us. It's for the artifacts. It's not good for them to be in the direct sun."

Cora laughed too. She was finding out what was important on a dig. She knew what





Dr. Mitsky told her that she
could work with Joe and Steve
at the screen.

an artifact was. The cup her mom had found was an artifact. It was anything that the people who had lived here in the past had made or used.

By the end of the morning, Steve and Cora had found quite a few different artifacts on the screen. There were lots of rabbit bones. Joe showed them how to tell the difference between the larger jackrabbit bones and the smaller cottontail bones.

They found a long slender pointed piece of bone. When Dr. Mitsky hurried past, they asked him about it. Without slowing down he said with a straight face, "It is a tetrahedral splinter of a long bone. The edges have been ground. Oh, and it's an awl."

Steve and Cora glanced at one another. They didn't say anything but their thoughts were identical. "What in the world does that mean?"

Joe acted as interpreter. "An awl is a tool used to make holes in leather. Tetrahedral means it has four sides. Ground means

that someone smoothed the four edges with a stone."

Cora showed Joe a number of small pieces of what she thought were black glass.

Joe glanced at them. "They look a lot like glass," Joe agreed. "But, they are volcanic stone called obsidian. These small pieces are flakes and they are very sharp. Be careful not to cut yourself."

Most of the artifacts Steve and Cora found were for everyday use. They were made from clay or stone from the nearby mountains. There were potsherds, covered with smoke, that were used for cooking. There were broken pieces of stone tools.

Other artifacts were made from materials from far away. Steve and Cora collected a handful of beads made from shell which had come all the way from the Pacific coast. The beads had most probably been made at the pueblo from shell the farmers had gotten in trade.



The Break

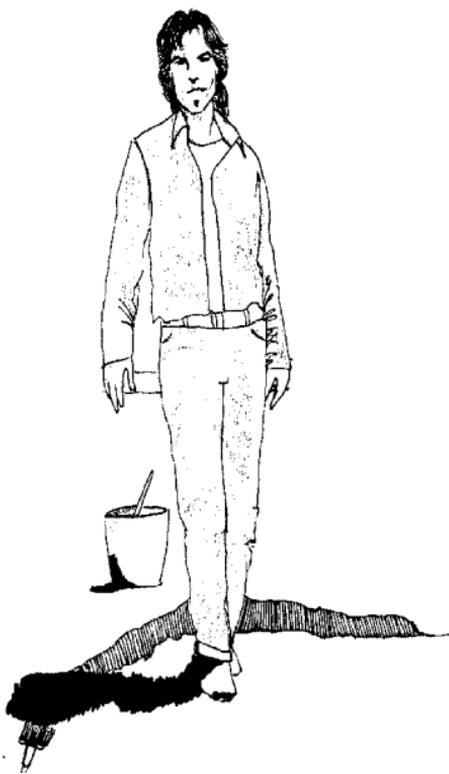
Steve and Cora were glad it was time for a break. It was hard work standing for long hours by the screen watching for small artifacts.

“I have a cache of peaches for us in my backpack,” Cora said. Cache was her favorite word since a handful of turquoise beads had been found hidden in the floor of one of the rooms.

“My cache of two cans of apple juice is in the ice chest,” Steve said.

Joe walked by and they asked him to come and sit in the shade with them. When he was comfortably settled, Cora asked him, “If it’s called prehistory because there were no written records, how do we know so much about the people who lived at Firecracker Pueblo?”





Joe walked by and they asked
him to come and sit in
the shade with him.

"A good deal of understanding the past is just common sense. Women had the babies in the past just like today."

Cora laughed. "I should hope so."

Joe smiled. "What I'm saying is that people who lived here 600 years ago were much like us. They had to solve the same problems we do. People are born, grow up and have families."

"They need food, homes and clean water. We look at the artifacts they left behind and try to see how they solved these problems."

"Every artifact tells us something about the people who lived here," Joe continued.

"Seeds tell us what plants they grew in their gardens and the wild plants they collected. A hunting snare made from yucca leaves tells us they used this plant. Charcoal from the fireplaces and artifacts made of wood tell us about the trees they used."

"Not that it's easy to take the little bits and pieces that you find and put them together to see how these farmers lived. It isn't. We need people with special skills to help us un-

derstand what was going on. Special people like botanists to identify the seeds and plants or physicists like your Uncle Mike, Steve.”

“You often find animal bones when you dig an archaeological site. These bones can tell us how the people hunted. They might show whether the farmers hunted young or old animals. The bones might also tell us how the animals were butchered and cooked. A zoologist, who knows about animals and can identify their bones, might look at the bones. But most archaeologists get to be specialists about the bones they find in a site.”

Cora, whose favorite skirt was made of leather, said, “If you found a piece of clothing made from leather, maybe you could identify the animal it came from.”

“Your most probably could,” Joe agreed.

“When American archaeologists came to the Southwest, more than one hundred years ago, they visited pueblos like the one we are finding here. When you visit pueblo villages today, say in northern New Mexico, you can see the same thing for yourself.”

"I've visited parts of the Southwest," Steve broke in. "I've been in New Mexico and of course I live in west Texas. I've never been to Arizona or Colorado. I guess southwestern archaeology is about the prehistoric sites you find in these states?"

"Yeah, that's right Steve," Joe replied. "When these first archaeologists came to visit long ago, they noticed that the houses and pottery looked like the prehistoric houses and pottery they were digging up at nearby sites. When these archaeologists would visit the pueblos, they would have a meal and maybe go to a religious ceremony. At the ceremony, the priest would take things like pollen, a painted stick or a bird carved from stone from a leather bag."

Both Steve and Cora got the idea right away. "Oh, I see," Cora said. "Then they found a leather bag with the same sorts of things in them when they were digging nearby."

Steve finished for her. "Since the two bags and the contents were so much alike, the

archaeologists thought that they were used in the past just like they are today.”

Joe was obviously pleased that they understood.” You two are starting to think like archaeologists.”

He stood up. “Come on. It’s time to get back to work.”

Cora whispered to Steve as they walked to the screen, “We worked hard on that break. Have you noticed how everyone on a dig thinks and talks about nothing but archaeology?”

“Who started it by asking a question?” Steve whispered back.

“Oh, you’re right. I’d forgotten that.”



Washing Potsherds

Steve and Cora had a new job the next day working in the field lab washing and sorting potsherds. When the potsherds were washed they spread them out to dry. After they were dry, they put them into cloth bags and marked the location where the potsherds had been found.

Most of the potsherds were decorated in the three colors of brown, red, and black. Some potsherds were round, oval or square shaped. They looked like markers for a game to Steve and Cora. Joe said that many archaeologists thought so too.

Steve washed a large curved potsherd which looked like the bottom of a bowl. When the dirt was washed away he could see the tail





When the potsherds were washed
they spread them out to dry.

of a large snake painted there. This was no ordinary snake. This snake had feathers on it. This feathered serpent was a picture of the god of rain. Without warning the sky became full of black and threatening clouds. Everyone hurried around getting large plastic sheets and canvas tarps to cover the precious artifacts and recently dug floors. Then they took shelter in cars and trucks and watched the spectacular lightning show and buckets of rain that began to fall.

When the rain ended, Uncle Mike and Joe took Steve and Cora to the anthropology museum. They enjoyed an exhibit of artifacts found in caves located not too far from Firecracker. These caves were very dry so artifacts, like a piece of cotton cloth, that don't usually last very long had lasted more than 600 years. So had a string with fur twisted on it.

A display card told them that the string was made of yucca leaves. Then strips of rabbit fur were wrapped around the string to make a blanket.

A sandal and needle were in the same case. Steve was surprised and said, "These pre-

historic sandals look a lot like the sandals you have on Cora.”

When they tried to imagine some other way to make sandals, they couldn't. The same was true for the needle. It seemed that some things could only be made in one way.



The Interview

Steve was relaxing at the motel that night watching the local evening news. All of a sudden he saw "THE SITE". A reporter was interviewing Dr. Mitsky. The camera panned over the site and Steve saw himself and Cora in the distance sorting potsherds.

"More people lived in the ancient villages during the middle of the Fourteenth Century than had lived there earlier," Dr. Mitsky was saying. "We think they were growing more food. The pueblo we are digging is located in the foothills of the Franklin Mountains. This is a good location to make use of the water that runs off the mountains after heavy rains like the one we had today."

The reporter asked, "How did they save the water after the rain?"





A reporter was interviewing Dr. Mitsky.

"We think they built small dams of dirt and brush to stop the water so they could use it to water their cornfields. Our volunteers have walked many miles looking for these dams and fields. We have also looked at photos taken from space to see if we could locate ancient cornfields. So far, we have not found any."

"What evidence do you have?" the reporter asked.

"One piece of evidence we do have is seeds of the warty squash. This squash, which people still grow today, requires quite a bit of water. In fact, it is only grown where extra water is available."

The reporter looked over the site, "Dr. Mitsky, was there any other water here?"

"We haven't found any wells or ponds," answered Dr. Mitsky. "But they have been found at other sites near Firecracker."

Steve hurried to the door and called to Uncle Mike who was in the pool. "Quick, Uncle Mike come here. Dr. Mitsky is on TV."

Dr. Mitsky was answering another question when Uncle Mike came into the room.

“The farmers who lived here grew corn, beans, and squash. They also collected wild plants for food and medicine. They raised turkeys for their feathers and eggs.”

“How would they use the turkey feathers?” the reporter wanted to know.

“They used feathers to make robes to keep them warm and for special clothing to be worn in religious ceremonies.” Dr. Mitsky continued, “These farmers hunted whatever game they could. In the ancient garbage dumps there are mainly rabbit and a few deer bones. The farmers’ wives most probably gathered wild foods like seeds from the amaranthus plant and beans from the mesquite tree. We found a small site, near the pueblo, with a ring of rocks cracked by fire and a pit for roasting. This pit could have been used for cooking agave. Agaves grow today on the slopes near the site.”

“Were there any buildings other than the pueblos?” asked the reporter.

“No, but some of the rooms in the pueblo are four times as large as the rooms that were used for living and sleeping. We think that

these larger rooms may have been set aside for religious use. A shell necklace, which may have been an offering, was found buried in the floor.”

“Were these people war-like Dr. Mitsky?” asked the reporter.

“We have found no evidence of a fort at any sites in this area. This would suggest that these people lived a fairly peaceful life,” Dr. Mitsky replied.

The reporter turned to the camera. “This is Jaime Garcia with a live report from Firecracker Pueblo.”

Steve phoned Cora. “Did you see Dr. Mitsky on TV?”

“Yes! I was just going to call you. Did you see us? We were on TV too.”

The next morning Uncle Mike and Steve complimented Dr. Mitsky on how well the interview had gone.



The Pit House

Steve and Cora looked down into the underground room. It was piled full of charcoal, ashes, potsherds, stone flakes, animal bones, burnt corncobs and seeds. Dr. Mitsky, who stood beside them said, "This underground room was built earlier than the pueblo. The farmers who lived in the pueblos later used the old pit houses as garbage dumpsters."

Dr. Mitsky picked up some burned seeds from among the ashes. He walked over to a large prickly pear cactus growing nearby. "These seeds come from the fruit of this plant," he said picking a fruit and cutting it in half. Steve and Cora looked at the burnt seeds and then at the seeds from the cactus fruit. They did look alike.



"Did they eat the fruit too?" Cora asked.

"They would eat the fruit raw like you eat an apple. They may have also dried the fruit and saved it for the winter."

Dr. Mitsky picked up a burnt corncob. "Today, people all around the world eat corn. Corn first grew in Mexico. There is evidence that corn, with very small kernels and cobs, was grown there 9,000 years ago. Here in the Southwest, the earliest evidence of corn was not until about 5,500 years ago."

"The news of how to grow corn took a long time to get from Mexico to the Southwest. Squash came from Mexico also but much later. When you eat beans, corn and squash together, you have a healthy diet."

"We don't know who first planted corn. Before they learned to farm, people lived by hunting animals and gathering wild plants, seeds and fruits to eat. Corn is a grass. Its seeds were most probably gathered with other wild grass seeds. These corn seeds may have started to grow in a garbage dump after a heavy rain. It's easier to go out into your back-



"Miss Schumaker told us the first farmers were most probably women."

yard and gather your food than to go a great distance for it. Someone got the idea of planting the corn seed."

"Miss Schumaker told us that the first farmers were most probably women," Cora said.

Dr. Mitsky looked surprised. "Who is Miss Schumaker?"

"She was my science teacher last year. She was the most wonderful teacher I've ever had."

"Miss Schumaker said that women collected the wild vegetable foods, did the cooking and took the garbage out. They had a lot of experience with plants. They may even have watered wild plants to get a better crop. So they may have been the ones who first planted corn."

Dr. Mitsky agreed with Miss Schumaker. "That may be the best explanation for how farming began."



Uncle Mike's Special Test

Uncle Mike kept everyone away while he collected the burnt corncobs or the special dating sample. He planned to do a radio carbon or carbon 14 date. He didn't want anything modern to get into the sample. He could clean up the sample in the lab, but it was better to have the cleanest sample possible to start with. He used a clean trowel to collect six burnt corncobs. Then he wrapped them in aluminum foil. Three corncobs made a regular sized sample. He wanted one twice that size to make sure.

Uncle Mike checked to see what artifacts, especially pottery, were found near the corn cobs. The pottery was another way to date the Pueblo.

After the sample was put safely away, it was lunch time. Steve, Cora, Uncle Mike and Dr.



Mitsky had tacos, enchiladas and corn on the cob at a nearby Mexican restaurant.

"As this corn grew," Uncle Mike said waving his ear of corn in the air, "It absorbed carbon-14 from the atmosphere as all plants do. Dr. Mitsky and I decided to use corn as the material to date, because corn lives only for one growing season which is a short time. When the corn was picked, it stopped taking in any new carbon-14."

"Miss Schumaker told us about carbon-14," Cora said.

"What did she say?" asked Uncle Mike.

"The earth, well really the air around our earth, is hit by very tiny particles from outer space," she said. "They're called...." she hesitated and turned towards Steve. "Steve, do you remember what they are called?"

"Yes. Cosmic rays. Isn't that right Uncle Mike?"

"Yes. They are tiny but they have a great deal of energy."

Cora went on with her explanation. "There's carbon dioxide in the air around the

earth. When cosmic rays hit the air, they make a tiny bit of radioactive carbon. That's carbon 14. The plants take in this carbon 14 when they take in carbon dioxide. So they become a little radioactive too. When the plants die, they start to lose this radioactivity."

"But, the carbon 14 doesn't just disappear," Steve joined in. "When the corn dies instead of taking in carbon 14, the carbon 14 begins to decay. It decays slowly at a regular rate. Scientists can get an idea of how old the corn is by measuring how much carbon 14 is left in it."

Uncle Mike laughed. "Good job guys. That's where I come in. I will measure how much carbon 14 is left in the corn cobs and this will give us a date for Firecracker Pueblo."



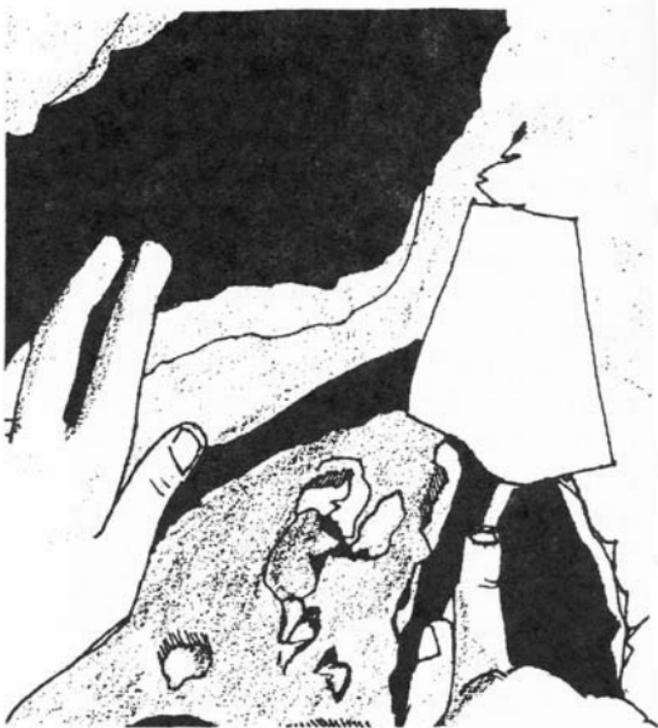
The Metate

Cora worked several days at the screen. She became very good at telling the difference between a bone and a shell bead. Then Dr. Mitsky said that she could be promoted to digging. He showed her the corner of a room where the soil was darker in color. "Cora, I want you to dig this darker soil."

The digging was slow and difficult because the ground was really hard. Then Cora felt the trowel hit something even harder than the dirt. She dug even more slowly and carefully. After a few minutes, she realized that she had found a large metate. A metate is a large, fairly flat stone, that was used to grind corn on. Cora looked for the mano, the stone that was used to grind the corn with, but didn't find one.

Cora got up and stretched. She rubbed





The digging was slow and difficult because the ground was really hard.

her back. She could see the outline of the metate under the dirt. It was large and looked heavy. The weight may have been the reason that it was left behind when the farmers and their families left the pueblo.

Dr. Mitsky said later that it was made of sandstone from the nearby mountains.

Dr. Mitsky who had been keeping an eye on her progress said, "We'll try to get some pollen from the surface of this metate."

"How do I do that?" she asked.

"Take a half a cup of dirt from the grinding surface and put it into a clean plastic bag. You need to take the sample as soon as the surface is exposed to the air. We don't want to add any of today's pollen to our sample."

Cora scraped the dirt from the grinding surface of the metate and put it into a plastic bag. She quickly cleaned the rest of the dirt away from the metate and covered the now clean metate with a large plastic bag. Dr. Mitsky wanted to take a second pollen sample from it.

Dr. Mitsky carried the metate to the field lab. He and Cora washed the grinding surface

by squirting it with distilled water. If there were pollen grains embedded in the tiny holes in the sandstone, the water might wash them out. Then a palynologist, a person who knew a lot about pollen, would remove the pollen from both the soil and water samples and identify the kinds of pollen found.

"If we find pollen Cora, it may tell us what kind of plants were ground on the metate."

"Pollen is the tiny male part of the plant," Dr. Mitsky said. "You see pollen every spring and fall as the yellow dust in the air. When you rub a daisy on your nose, pollen is what makes your nose yellow."

Cora laughed. "No one would rub a daisy on their nose and get it all yellow."

Dr. Mitsky hurried on. "Thousands of grains of pollen were blown into the ancient pueblo every year. Some of this pollen can still be found today. This helps to tell us how a room was used."

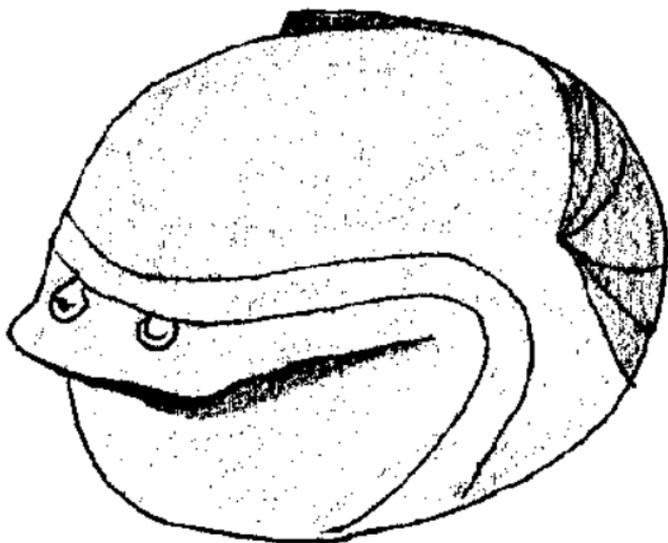
"Take the room where you found the metate. There is a fireplace in the floor and

smoke on the walls and roof beams. Burned corn and squash seeds were found in the fireplace. The metate most probably has some pollen from food plants on it. So, we can say that this room was most probably used for preparing and cooking food."

Steve and Joe had also been digging. Steve had dug for a while when he saw a penny in the dirt. At first, he thought that it had fallen out of his pocket. When he picked it up and looked at it he was surprised. The coin was dated 1910. Joe looked at it. "Someone dropped this penny long ago and the rain helped it get this deep. It's easy to tell that this coin was not made by the people who lived at Firecracker because they didn't know how to make metal coins."

Later, Steve uncovered a frog carved from stone.

Joe said, "Lets take a picture of this *in situ*. *In situ* means we don't move the frog before we photograph it," Joe said anticipating Steve's question.



Later, Steve uncovered a
frog made from stone.

Steve cleaned the last bit of dirt off the stone frog. He then set up the area around the frog to take the photograph. He placed a ruler marked in both centimeters and inches to the left of the frog. This would help anyone who looked at the photo see how big it was. Next, he wrote where he had found the frog on a small blackboard. He put the blackboard in what would be the lower corner of the photo. Then he put in an arrow pointing true north.

Joe checked the layout and then snapped the picture. Steve entered the photo on a list of all the pictures taken. Finally he got out the very nice camera that his parents had given him last Christmas and took his own picture.

A scream from the far end of the site attracted everyone's attention. Steve and Cora ran over to see what the excitement was about. On the top of an ancient garbage dump, swaying from side to side, making a hissing sound, hisrattle moving rapidly, was a very long, possibly six foot, diamond backed rattle snake. There

were mice in the old dump. And where there are mice, thereoften are snakes.

A breathless Dr. Mitsky ran up. "Ok, Ok! Everybody, get back to work. The rattler is just going about his business and you need to do the same. Don't bother him and he won't bother you."



The Lab

At the end of the day, all of the artifacts, bagged potsherds and samples that the field school students and volunteers had found and prepared that day were taken to the lab at the anthropology museum for more study.

Rose Pojoaque, a Pueblo Indian from Santo Domingo Pueblo, was in charge of the lab. When she was a girl, there was an archaeological dig on the reservation near where she lived. Her father had worked as a laborer. She had gone with him to watch and then to help. She wanted to know how people used to live. She thought that the site was a giant puzzle. She enjoyed trying to put it back together. In fact, she had liked it so much she decided this was what she wanted to do when she grew up.

When Cora and Steve, carrying bags and boxes, came into the lab Dr. Pojoaque was sitting at the microscope looking at potsherds. She was trying to see what kind of clay they were made of. Sometimes she could tell where the clay had been dug up originally. She asked Steve and Cora if they would like to try and glue a pile of potsherds into a pot. They thought they would enjoy trying.

Dr. Mitsky came into the lab. "Here are the pieces of the roof beams, Rose. We're using them as samples for the tree ring dates."

Dr. Pojoaque spoke to her assistant Susan Jefferson. "Please prepare these to send to the tree ring lab. Get a couple of the students to help you."

"This is the sort of wood we use for tree ring dating," she explained showing Steve and Cora a piece of burned roof beam. "As trees grow, they form a new ring each year. When you cut a tree down, you can tell how old it is by counting these rings. If a tree has five rings, this means it's five years old."



"This is the sort of wood
we use for tree ring dating."

"I don't see what the thick and thin rings have to do with dates?" Steve said.

"First, you get samples from the oldest trees you can. Next, you get a sample from the beam of an old building that you know the date of. Then, you compare the patterns of the living trees and the building beam sample. Some of the patterns may be the same. If the patterns are the same, these patterns can be given a date."

"Now you can move back to older and older beams. You compare samples from older beams and find patterns that match the younger samples. In this way, it is possible to go back 600 years and date pueblos like Firecracker."



The Pictographs

Cora, Steve and Uncle Mike got off the bus. The massive rocks of the park rose up ahead of them. They had come to see the pre-historic paintings called pictographs. They were especially interested in seeing the pictographs from the time when the farmers lived at Fire-cracker.

Steve read from the park brochure. "Over the years the wind and rain had formed basins or holes in the rocks. The Spanish name for these is huecos. These huecos trap rain water and make a dependable water source in the desert." Dr. Mitsky came up and joined them.

"This is an oasis." Cora said.

"Yes." replied Dr. Mitsky. "People have been coming here for a long time because of



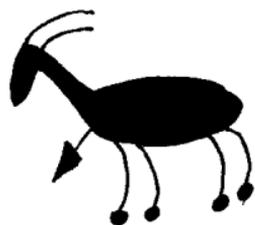
the water. There is evidence that they may have been coming here for 10,000 years. Animals and birds come here for food and water too.”

Steve and Cora had a wonderful time climbing over the rocks looking at the pictographs. Steve’s favorite paintings were of animals. There were mountain sheep, deer, snakes and birds. A picture of a jaguar wearing a cap was a surprise. A turtle wasn’t. The bus that had brought them had narrowly missed hitting a turtle in the middle of the road near the entrance to the park.

Steve identified animals with antlers as deer. Animals with long mule-like ears he thought must have been mule deer.

In most of the paintings of mountain sheep, they seemed to just stand there. But one painting showed some sheep jumping around. Another painting showed several wounded sheep; one with an arrow, another with a spear.

Cora liked the animals too. She often went bird watching with her parents and thought that the pictograph of a bird with a



In most of the paintings of mountain sheep, they seemed to just stand there.

curved bill looked like a desert thrasher. But, she liked the masks best. Her favorite mask looked like a clown with four pointed stars for eyes. Several of the masks were wearing earrings. Cora remembered the trouble when one of her cousins had his ear pierced and started wearing an earring. She wondered if the men depicted in the masks were rebels too. One mask had overlapped fish for a mouth. Cora was surprised to see pictures of fish in the desert. Dr. Mitsky told her that paintings of fish were common in the area. Steve spotted a small cave high up in the rocks. He asked Cora if she wanted to explore it.

The climb was hard but they finally made it to the entrance. Steve said, "It looks like we will have to kind of crawl and scoot in on our stomachs. Do you want to try?"

"Yeah, I guess so."

Steve looked into the cave and checked to see if there were any snakes or other creatures that he wouldn't want to meet head on. When they got inside the cave, they were able

to sit up and look around. There on the walls were a number of painted masks. Cora was glad she had come.

Steve and Cora sat at the picnic table with Uncle Mike and Dr. Mitsky. "I wonder what these paintings mean?" Cora asked.

"We don't know exactly what the pictographs mean," Dr. Mitsky said. "We can say a couple of things though.

"The paintings have something to do with the religion of the people who painted them. We can say this because whenever people living today paint these kinds of pictures, they have something to do with their religion. We think the people who painted the pictographs we looked at today were farmers. These paintings are in the desert so they probably have something to do with rain. When they painted zigzag lines, which may stand for lightening, they may have been trying to influence the supernatural beings in charge of rain."

"What about the mountain sheep with the arrow sticking in it?" Steve asked.

“Maybe a pictograph of a wounded animal was made by a hunter so that he would kill an animal when he went hunting. It is hard to say more than that.”



The Radiocarbon Lab

Uncle Mike and Steve were sad to have to say goodbye to Dr. Mitsky the ext day. They were taking the corn sample back to Austin with them to Dr. Fong's lab. He was going to let Uncle Mike use his lab and equipment to run the sample from Firecracker.

The next day Uncle Mike and Steve went to see Dr. Fong. "I'm much obliged to you, Pah, for letting me use your lab." Uncle Mike said.

"Glad to do it, Mike."

Uncle Mike let Steve come along to watch and help. Uncle Mike washed the corn cob sample with acid. Then, he burned and froze it.

When they were finished, Uncle Mike and Steve took the sample to Dr. Fong's com-



puter in a special building. There had to be a solidly built building to protect the sample. Radioactivity is everywhere. So to make an accurate count, samples need to be protected.

Steve was disappointed when he saw the computer. It looked like any other computer. He thought it would be different. "This looks just like a regular computer with a counter attached to it."

"That's right," replied Uncle Mike. "There is only a very small amount of radiation in any sample. You need a counter sensitive enough to count the faint radioactivity the carbon-14 gives off. When the carbon decays, a tiny signal is made in the detector. The computer counts these signals."

The computer counted signals for four days measuring the amount of carbon-14 left in the sample. Then it compared this count with a standard scale and printed out the date.

Uncle Mike called Dr. Mitsky and told him that the date was 620 \pm 15 B.P. (BP means before the present or how many years ago the corn died. A radio carbon date is written with



Steve was glad to hear she that
she was coming for a visit.

a + and a -. This means that the date is not exact. It could be some time between 625 and 655 years before the present.)

The carbon-14 date was not the only date Dr. Mitsky had for the site. There were dates from tree rings and pottery too. He was very pleased that the radio carbon date agreed so closely with them.

Steve called Cora to tell her the news. She was as pleased as Dr. Mitsky. "My Mother has to come to Austin for a meeting next month," she said. "I get to come along to visit the capital. I can see you too."

Steve was glad to hear that she was coming for a visit. He began planning all the places they would go and what they would see.

The Village



A Trip to the Holy Place

Badger adjusted his back pack to make it more comfortable. Ahead of him, the sky was blue with white clouds. But, directly overhead the sky was dark with big gray rain clouds. Some large drops of rain hit his pack. Then for a few minutes it rained hard. The rain priests were pleased with the brief rain.

Badger thought to himself, " It isn't fair that everyone thinks I'm spoiled." Badger's uncles had been teasing him as they walked along.

His uncles knew he collected the fire-wood for his mother and his aunt.

Everyday he had to go farther and farther up into the mountains to find the wood.

When his mother made pottery, his twin sister Evening Star helped her. He carried all the





Badger adjusted his backpack
to make it more comfortable.

water, and they needed a lot of water, to make the pottery. He also helped Uncle Left Handed, his mother's brother, in the cornfields weeding and hauling water. He watched for birds and chased them away from the corn as well.

There were three fields so he had to do everything three times. Badger knew the reason for the three fields. If the corn did not ripen in one field, it might ripen in another. That didn't change the fact that there was plenty of work for him to do.

Uncle Left Handed used his wooden digging stick to dig deep holes to plant his corn seeds. The corn had long roots that would go looking for moisture. When the corn was ripe, Badger went on to himself, he would have to help Mother, Uncle Left Handed, and Evening Star pick it. Then they would spread the corn on the roof of the house to dry. When the roof was full, they spread it in front of the house. After it dried, they would husk it and store it in a small back room where it would be safe. They stored dried beans, amaranths and prickly pear seeds there too.

There had been enough rain recently so that the corn was finally doing well. The ears were full and beginning to ripen. The rains had been late. It seemed like they would never come. If there was no rain, the corn would not grow and ripen.

The villagers had weeded the fields and planted them with beans, white flour corn, and striped squash. The seeds had germinated but they needed rain to grow. Everyone anxiously waited for the rain. When day after day there was no rain, everyone became worried. They whispered to each other, "The rain is dying." Mothers went out and collected all the green plants they could find to use for salads and greens, as well as any early cactus fruits.

When everyone was beginning to give up hope, it rained and rained and then it rained some more. Sheets of water flowed off the mountain to drench the soil. The sun shone brightly again. Finally, with plenty of water the corn, beans and squash grew.

Now if there was one more good rain there would be enough water for the crops to

ripen. So the rain priests and the people of the village had come to the sacred place in the desert. The place where the water collected in pools and the holy paintings were found. At this holy place they would pray, sing, dance and paint pictures for rain.

Evening Star walked ahead with her mother. She knew some people considered twins unlucky. But even though Badger annoyed her at times, she liked having a brother the same age as herself. Evening Star had been the bigger baby at birth. Badger was so tiny that his father could cradle him in his two hands. The family was afraid that he would not live. Aunt Mourning Dove, Mother's sister, took care of him so that her mother could care for Evening Star.

Aunt Mourning Dove was short and round but she had plenty of energy to take extra special care of Badger. She wrapped him in a blanket made of yucca cord and strips of rabbit fur and bound him onto his cradle with buckskin thongs. She put a small roll of soft fur under his neck. When she was finished, the tiny baby

was secure and comfortable. Then she put the cradleboard close to the fire so that he was nice and warm.

Aunt Mourning Dove was up many nights with Badger. When he cried she sang to him and bounced his cradle on her knee to try and get him to sleep. She didn't have to care for him all alone. The family helped her. Her older brother, Left Handed, would walk the floor with Badger when Mourning Dove was too tired to sing another song.

Other relatives brought good things for him to eat. But most of the work did fall to Mourning Dove. She ground corn, kneeling by the large metate, so fine that it was like dust. She made a thin, warm gruel from this corn dust and added a drop or two of honey to it. This was chiefly what Badger ate for the first three months of his life.

It was touch and go for a while. But when he began to eat solid food, he slept better and began to grow. His aunt gave him many special treats like bone marrow and quail eggs. He began to gain weight and thrived under her

loving care. Now, although he was a bit shorter than Evening Star, he was huskier. He stood straight and walked well.

Evening Star's short skirt, made of yucca leaves, had gotten wet but it dried quickly. As she looked around enjoying the cool air after the rain, she thought, "Badger is so spoiled. Of course Aunt Mourning Dove would make him a new shirt for the trip to the holy place." The shirt was made of four cotton rectangles, one for the front, one for the back, and one for each sleeve. Evening Star wasn't sorry to see that the shirt was soaking wet.

The recent rains had filled the rattlesnakes' holes with water, so the snakes would lie in the shade of a tree in the hot afternoon. A rain priest spotted one. The party gave it a wide berth. The rain priests were pleased. First there had been the rain and now the rattlesnake. These were good signs before the ceremony of painting the holy pictures.

The massive rocks of the holy place rose up ahead of them. Their destination was a small cave high in the rocks. The rain priest



There were masks already painted
on the walls of the cave.

set up an altar there and put a painted wooden tablet on it. A bowl, decorated with the feathered snake that mother had made, was there too. The priest took small bird effigies and corn pollen from his leather medicine bag. He sprinkled the altar with the pollen. He told the story of the rain god. There were masks already painted on the walls of the cave. The rain priest painted clouds and lightning next to them to bring rain.



The New Storage Room

Uncle Left Handed went out early in the morning and killed a deer with his bow and arrow. The whole family worked together preparing some of the meat to roast right away. The rest was cut into strips to be made into jerky and stored for the winter.

“We have to add another room to the house so we can store more food for the winter,” Mother said. “Evening Star and I have collected quite a few seeds and fruits.”

Mother measured off the room, taking steps in one direction and then the other to set its boundaries. She marked the place for the door. The room was to be added to the back of the house so it already had one wall. Since it was a storage room, it didn't need a window.

Mother asked Uncle Left Handed, Fa-



ther and Badger to go to the mountains and get some juniper trees for the cross beams of the roof. They had to go a long way into the mountains to find trees that were tall enough. They also collected large stones from a nearby arroyo to use in the foundation.

Uncle Left Handed got several eagle feathers from one of the rain priests and made a prayer plume for his sister. He buried it in what would be the floor of the new room. The preparations were complete. Now the building could begin.

Most of the village women helped build the walls. First they laid out a foundation of stones. Then they started building by puddling up mud into thick walls. They let the mud dry and then puddled up more mud. The walls gradually grew taller and taller throughout the hot summer until they were as tall as the house.

The roof was next. The men of the village laid the juniper logs as beams for the roof. Then they laid poles in the opposite direction over the beams. Grass and small twigs were

used to fill in the holes. Finally, a layer of mud finished off the roof.

The women and girls came back when the roof was done to make a floor of hard-packed clay. They also plastered the room inside and out. Finally, it was ready to be used.

Many jobs in the village needed the whole family and anyone else that Fortunately there was a deposit of the red clay the villagers used at the base of the nearby mountain. Father took a deer skin and wrapped up a large load of clay for himself. He wrapped smaller loads for the others to carry.

When everyone was back home and the clay stored away, Evening Star and Badger asked their father to tell them a story. Father told the best stories. They were getting all settled down to listen when a rather breathless Mother called to them, "Come quickly! There are rabbits in the corn." The four of them ran to the corn fields. Other families were already there. Women and children were shouting and clapping their hands trying to force the rabbits away from the corn into a long net held by several young men. The rabbits were caught in



"Come quickly! There are rabbits
in the corn."

the nets and the men killed them. They would make a good dinner.

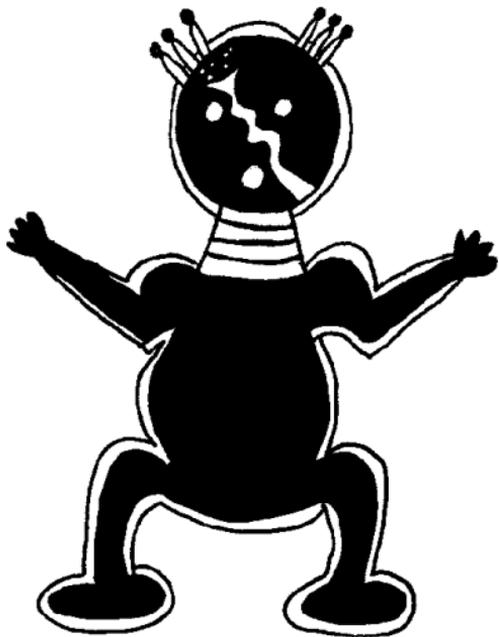


Little Blue Corn

Little Blue Corn, who was just a year old, was Evening Star's niece. Evening Star baby sat her while her mother, Rainbow, was parching seeds to dry them. Blue Corn smelled nice because her mother had just given her a bath with soaproot. Rainbow made the bath by pounding a piece of the root and then swishing it in a large bowl of water.

Evening Star remembered that when she was a little girl her grandmother had made her several tiny pots. Now that she was so grown up and could help her Mother make pots, Evening Star would make Blue Corn some tiny pots. Evening Star smiled to herself when she remembered the first pots she had made. She rolled the clay into a round ball and then used her thumb to form the pot.





Blue Corn seemed to think about it.
She took three very nice steps, her first,
then sat down with a plop.

Evening Star worked hard to entertain Blue Corn. She shook a rattle made from a bottle gourd and was rewarded when Blue Corn laughed.

Evening Star sat down to rest. Blue Corn was big for her to lift and hold. She looked over at Blue Corn who had pulled herself up to a standing position. She held out her arms to the baby and said, "Come here little Blue Corn." Blue Corn seemed to think about it. She took three very nice steps, her first, then sat down with a plop.

Evening Star picked her up and hurried over to Rainbow. "Look what Blue Corn can do," she said. Although Evening Star coaxed her, she would not perform the wonderful feat again that day.

Rainbow finished parching the seeds and put them into several jars which she sat near the fireplace. Blue Corn picked up a small jar filled with tiny amaranthus seeds. She held it for a few seconds and then dropped it with a loud smash. She looked surprised and then started to cry. While her mother picked up the

seeds and put them into another jar, her father petted on Blue Corn and said, "Don't cry precious."

Uncle Left Handed had made several bone rings for Evening Star. She put the smallest one on Blue Corn's fourth finger and the baby stopped crying.



The Necklace

Uncle Left Handed gave Evening Star a handful of shells. Blue Corn was taking a nap so Evening Star was free to make them into beads for a necklace. First she chose the shells that had two holes, one at each end, and could be strung as beads without any more work. She asked her uncle for a grinding stone to grind the ends off the other shells so they would have two holes. Her mother was making a bowl. Evening Star asked her for some of the soft clay to make some fat round beads. Then, she took a smooth round stick and poked a hole through each clay bead. This was easier than slowly grinding the shells down. Her mother fired the beads along with her pots.

Evening Star asked her father, who made turquoise into beads and pendants, if she



could have a piece of turquoise for her necklace. He said, "Sure, I'll give you a piece to use as a pendant. I'll put a hole in it for you."

Evening Star strung the shell beads and the turquoise pendant into a necklace. She wore it almost every day.



The Clown

Uncle Left Handed and Badger sat in the shade. It was cool there, away from the hot afternoon sun. Badger was watching to learn how Uncle Left Handed made stone points to tip his arrows. Uncle Left Handed struck a flake from a piece of obsidian. It wasn't shaped just like he wanted so he dropped it into the pile of obsidian trash at his feet. The next flake was useable. So he shaped it into a small point. Later he would tie the point to the tip of his wooden arrow.

Uncle Left Handed was a clown in the rain ceremony. The clown was funny and he made everyone laugh. But, he was a very important and serious person in the ceremony too. When Uncle Left Handed finished the arrow points, he began to work on a new dance





Uncle Left Handed was a clown in the rain ceremony.

for the next ceremony. He was a good natured man, laughing easily and often. He always had a funny story to tell. Badger liked him very much.

Badger laughed at the pranks that his uncle was going to play. Then he tried to do the twists and turns and jumps just like his uncle. They both laughed when Badger landed in a heap.



The Woman in the Moon

Mother and Evening Star climbed up to a spring in the mountains where the water was cool and good tasting. There, they filled several small jars with enough water to fill the large jar back at the village. This large jar sat in the shade made by the house so that the water would stay cool on these hot days. A big gourd ladle lay next to the water jar.

Mother saw a mesquite tree loaded with ripe beans on the trip down from the spring. She and Evening Star stopped to pick some of them. Mother saw some wild mint and picked that too. It would make good medicine for coughs next winter.

The trip to the spring had taken a long time. It was dark now. Mother and Evening Star sat on the ground, their legs stretched out in



front of them and looked up at the sky. Evening Star could see the seven stars that formed the dipper. The moon was a giant yellow ball.

"The Woman in the Moon is looking down at us," Mother said. "She is grinding corn."

"I can see her. But, I can't make out what she is doing," Evening Star replied.

"Turn your head a little to the side and you can see a large metate. She has a mano in her hand."

Evening Star turned her head this way and that and finally she thought she could see the metate. She snuggled up to her mother. She had heard the story of the Woman in the Moon many times but she liked to hear it again.

"Long, long ago there was a race to see who would live in the moon, a boy or a girl. The winner would live there," Mother said in her soft voice. "The boy was confident that he would win the race against a mere girl. He came up to the girl while she was grinding corn. 'I'll admit that you are a better grinder of corn than I am,' he said, 'but, I am a very good runner.'"



"The Woman in the Moon is looking down on us," Mother said.

"The morning of the race the boy and girl were to run around the village, out to the tall cottonwood tree in the distance and then back. They started out even but soon the girl was far ahead. While the boy was on his way out to the tall cottonwood tree, he met the girl coming back. She taunted him saying, 'Is that as fast as you can run?'

"The boy ran as fast as he could, but when he got back to the village the girl was already there grinding corn."

"The next day the villagers gave the boy a head start in the race. But again the girl passed him. He found her grinding corn, just like before, when he returned to the village."

"So the girl went to live as the Women in the Moon."

"The Woman in the Moon has many children so she must grind corn often," Mother continued. "She cooks many meals both baking and boiling meats and vegetables. She has children which means that life goes on. She cooks and feeds them and this means that life will last."



A Winter Hunting Trip

It was the end of a long day. Badger stopped to take off his moccasin. He had a stone in it again. The stone was buried in the grass he had put in his moccasins to make them warm and comfortable. Father, Uncle and Little Gray Wolf, Badger's cousin, stood waiting none too patiently.

It had been raining steadily most of the day. They were wet and cold. Even the dogs were muddy and dirty. Badger thought, "Why do these things always happen to me? No one else ever seems to get stones in their moccasins."

Suddenly, they heard the sound of a barking dog in the distance. It was definitely a dog, not a wolf or a coyote. Then against the darkening sky a thin plume of smoke appeared.



A campfire and a dog meant people. The four of them stood totally still. Badger and his cousin held the muzzles of the two hunting dogs closed. "If we can hear their dogs, they can hear our dogs," Badger thought. "Who could they be?"

It was unlikely they were relatives for the hunting party had come far from home looking for game. There was a shout and laughter from the camp. Whoever these people were, they felt comfortable and secure. At this distance there was no way of telling if they were friends or enemies. Enemies were people who didn't grow their own corn but would steal yours. Even worse, they would burn your crops. Sometimes they would cut off a hunting party. Those hunters never came home.

The hunting party would have turned around and gone home then if the people in the village hadn't needed the meat so badly. It was late in winter and food was scarce. It would be weeks before the first new green growth could be used as food. During the summer and fall a hunter could usually get a deer or a pronghorn

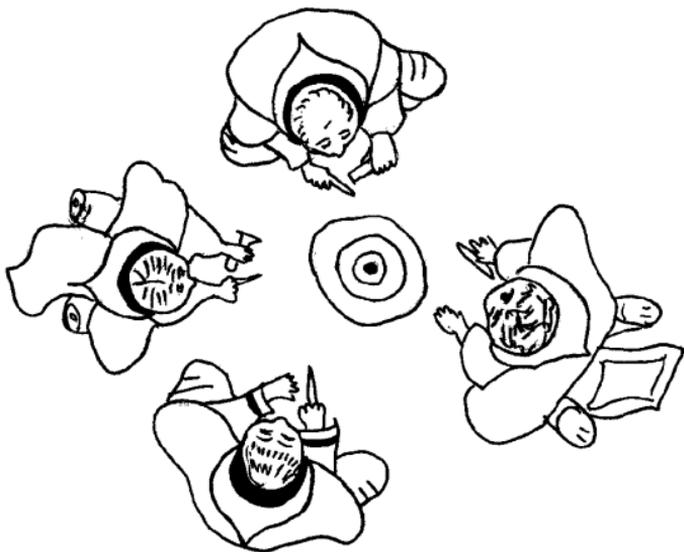
and there were plenty of rabbits. But it was winter now and no one had seen a deer or a pronghorn close to the village for some time. Rabbits had also become scarce. The men and boys had to go farther and farther away from the village to find any animals to hunt. They spent many days coming and going. Sometimes they had to eat some of the meat before they could make the trip home. Several people were ill and needed meat to help them get well. So Father and Uncle Left Handed had decided to go hunting. They would not come home without meat unless they absolutely had to. Badger and Little Gray Wolf were allowed to come along.

Before setting off, they purified themselves and said the hunting prayers. They had bows and plenty of arrows. Each of them carried a rabbit stick. They had several snares but Father and Uncle Left Handed had decided against bringing even a small net. Of course, two dogs came along.

Uncle Left Handed sprinkled a line of cornmeal across the path so that no one from the camp could cross it and hurt them. Then

he, father and Badger spread out and crept forward. Little Gray Wolf stayed behind to keep the dogs quiet. They moved silently not breaking a twig or snapping a branch. It seemed like it took forever. Finally they were near enough for Badger to climb up a tall tree and try to see who was making the noise.

Badger climbed higher and higher. His heart was beating so hard he thought his chest would burst. He could see the smoke more clearly but he still could not see the strangers through the branches. He climbed higher and higher until he was at the top of the tree. It swayed in a sickening kind of way under him. He closed his eyes and hung on for dear life. Slowly the tree became more steady so he opened his eyes. He saw four men. They were sitting around a small fire and seemed to be having a leisurely meal. Then he saw the carefully tied leather bundles hiding their contents. Badger gave a sigh of relief. He didn't recognize any of the men but he knew that they were traders. He climbed down quickly and slid the



Slowly the tree became more steady
so he opened his eyes. He saw four men.
They were sitting around a small fire.

last few feet of the trunk to the ground to tell his father and uncle what he had seen.

As the hunters approached the traders' camp, they were very noisy talking loudly and encouraging the dogs to bark. They wanted the traders to know they were coming. Father thought he recognized one of the traders when he had climbed up the tree to have a look for himself.

The traders gave a cheerful hello and soon everyone was sitting around the fire. The traders told them they were returning home with buffalo jerky. They had taken piñon nuts north to trade. Their village was also low on food.

The traders offered them some buffalo jerky. It was smoky but good tasting. After everyone had eaten, it was story time. Father told the story about the time he went on a trading expedition. "After we had harvested, dried and stored the corn for the year, there was to be a trip to a large trade fair in the north. I walked over to the Great River with Broken Arrow. He had a large jar full of salt that he had dug near

the Great River. Some traders, who had made the trip before, led the way. It was a long walk to the village where the trading was to be, but it was fun. Broken Arrow kept us all laughing with his jokes."

"I had a large load of baskets. It seemed like all the women in the village made baskets for me to take. They had collected grasses and yucca leaves to make the baskets. The yucca leaves ranged from dark green to the pale yellow of the inner leaves."

One of the traders interrupted, "Baskets are a good thing to trade. They're used every-day and for special religious ceremonies too. Men and women use them and will trade for them."

"You're right. I was able to trade all of them in a short time. We could see the village where the trading was to be long before we got there because it sits high in the rocks. Instead of the houses having one story like ours, their houses are four stories high," Father said.

"Instead of having a few rooms, there were many rooms. There were people every-

where. I have never seen so many people in my life all in one place. When we arrived at this big village, we had to go up a narrow steep path to enter. At the top of the path there were lots of noisy men and boys. Dogs were every where barking. Some people were playing drums and flutes. Everyone was shouting. I thought my head would burst."

"All the traders put their wares at one end of the court. I was glad to put down the big load of baskets. I kept the turquoise beads and pendants that I had made to trade in a leather bag tied to my waist."

"I walked around the village. There were no doorways on the first level of the houses. The people had to climb a ladder and enter through an opening in the roof. The courtyard was just like home, only lots more of it. Some women were cooking at their fires. Small children were playing and babies were on their cradleboards sleeping. I don't know how since there were so many people talking and laughing. Something was happening all the time. An-

other thing that was different from our village was that they kept large birds for their feathers and eggs.”

“The village was so high that I had a wonderful view. I could see great distances in all directions. There were mountains and a valley spread below us.”

“One thing my wife wanted me to bring back was a black and white water jar. I can’t understand why a woman who makes such nice jars herself would want someone else’s but she did. I found a well made jar but the woman wanted three baskets in exchange for it. So I looked around until I found a trade of one for one.”

“I traded some turquoise beads for a piece of cotton fabric. Then my brother-in-law,” nodding at Left Handed, “wanted some special shells from the Great Water in the west. So, I traded the rest of the turquoise for them.”

“They were just the kind of shells I wanted,” Uncle Left Handed said.

Everyone enjoyed sitting around the fire

eating and listening to the story. They slept well that night.

The next morning when the hunting party left for home the traders gave them some buffalo jerky to take with them. As they hurried on their way they saw a young male pronghorn. The white patch on his throat and rump made him stand out against a clump of trees so he was an easy kill. They didn't mind carrying the heavy load of meat home.

Mother saw the hunting party when they were still some distance away. She called to Evening Star and they quickly went out to meet them. The whole village had gathered together to welcome them by the time they arrived. Everyone had worried when they were away so long. So they were relieved and happy to see them.

The jerky and pronghorn meat helped the villagers get through the rest of the winter. Mother added her share to the quickly dwindling supply of food in the new storage room. It never seemed possible to save quite enough

food. In the spring everyone turned out to gather fresh green plants and then they planted their gardens with corn, beans and squash. So the peace and order of life continued.