

Fallen from the Sky

The DC9 cargo plane was 200 miles SSW of St. Louis when a door unexpectedly became unlatched and flung open. A large wooden crate tumbled out of the open door and plummeted 20,000 feet to the ground. Although the plane had lost cabin pressure, the crew acted quickly, and no one was injured. The only cargo lost was a crate marked "Consolidated Toy Company."

Upon landing at the St. Louis Lambert International Airport, the cargo company reported the mishap to Consolidated Toy. They informed the management that the incident had occurred on Tuesday, July 30, 2002, at 7:48 AM, just west of the little town of Pottersville, Missouri.

The executives at Consolidated Toy were very distraught and understandable so. The crate contained the prototype of what they had hoped would be their blockbuster toy for the upcoming holiday season. If the toy fell into the hands of their archrival, Fun Time Entertainment, it could spell doom for their company.

Duane Hogg, Consolidated's CEO, acted both quickly and decisively. He called Mark and Bonnie VanHecke, a husband and wife detective team who had worked with Consolidated in the past. Mark assured Duane that they would begin the search within the hour.

Duane's talk with Mark was not as private as he had planned. Patti Smith, a computer expert and a mole for Fun Time Entertainment, had overheard the entire conversation. Within minutes she had contacted Fun Time and informed them about the missing prototype, along with its approximate location. The procurement officer at Fun Time called Butch Snavely and Peachy Keen, two rather shady characters. He asked Butch whether he and Peachy would be willing to travel to Pottersville to fetch the toy using any means necessary.

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Mark and Bonnie left their downtown St. Louis office at 9:30 AM. They had hastily loaded clothing, equipment, and the maps they thought they might need into their new Lincoln Navigator. They then headed out of town on I-44, which is also **HM-1** US Route (A. 40, B. 50, C. 60). They entered I-44 at a juncture in downtown St. Louis near the Mississippi River.

"How far to Pottersville?" Bonnie asked.

"According to the Mileage Log on the highway map, it is **2 HM** miles from St. Louis to West Plains. From West Plains (Q-13) to Pottersville (Q-13) is another **3 P** miles (see note printed on the east neat line of the quad)." That makes the total distance about 209 miles. If we can average 60 mph, it should take us about **4** (A. 3 hours 30 minutes, B. 3 hours 33 minutes. C. 3 hours 35 minutes) to get to Pottersville."

"If we should happen to need assistance, do we know the sheriff of Pottersville?"

"Let's see," Mark replied. "Pottersville is in **5 HM** County. If I remember correctly, Big Jim Cooper is the sheriff. His office is in the county seat which is **6 HM**."

They continued on I-44 until they reached Rolla, Missouri (L-13). They turned south on US-63, Exit 186.

"What's the population of Rolla?" Bonnie inquired.

Mark glanced at the Missouri Index on the highway map and replied, "The population of Rolla is **7 HM**."

After traveling about 10 miles south on US-63, they entered the **8 HM** National Forest. Bonnie and Mark were both impressed with the size of the trees.

At Cabool the road veered to the SSW. At a little past noon, Bonnie spotted a welcoming sign to West Plains (Q-13). Mark asked Bonnie to leave US-63 by turning right onto County Road M-K. By 12:35 PM, they had arrived in Pottersville. It was a small town, and they checked into its only motel.

Their room was modestly furnished, but it was large, clean, and close to a Pepsi vending machine. After unpacking, they sat outside at a picnic table and discussed how they should proceed. They decided to visit with the citizens of Pottersville to discover whether anyone knew anything about the crate. They locked their room and the Navigator and walked toward the business section of town.

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Butch Snavely and Peachy Keen were in their office in Kansas City, Missouri (Kansas City and Vicinity Inset) when Fun Time Entertainment's call arrived. Within seconds of being told they would receive \$50,000.00 if they were able to find and deliver the lost toy to Fun Time, they were out the door heading for their apartments.

Forty minutes later, when Butch pulled his Ford Expedition to the curb in front of Peachy's apartment, he found her waiting with seven pieces of luggage, an overnight bag, and a hatbox.

"We're going to Pottersville, not Paris!" exclaimed Butch in an exasperating tone of voice."

"A girl has to be prepared for anything," Peachy retorted. "Maybe we'll be invited to a country club dance or a prom or something."

"Yeah, and maybe I'm the King of Siam!" Butch screamed.

"Stop yelling, and let's go."

"Okay," Butch replied. "Which way shall I go?"

"How should I know? I've never been out of Kansas City."

"Well, look at the road map. It's in the glove box."

After studying the map for several minutes, they decided to head south on US-71. They entered US-71 at 31st Street near the center of the Kansas City and Vicinity Inset to begin their southbound journey.

When they reached 63rd Street, Peachy said, "Hey, a block or two to the east is the **9 KC-I** Seminary where my former boyfriend learned to be a preacher."

"You dated a preacher?" quizzed Butch.

"Yeah, but he dropped me when I told him I didn't think I was cut out to be a preacher's wife."

Just south of the county line between Jackson and **10 KC-I**, Peachy "ran out of map." She seemed confused until Butch asked her to flip the map over.

They continued on US-71 to Harrisonville (I-5) where they turned left onto M-7. M-7 turned eastward near Clinton, but Butch stayed on the principal highway that soon turned into M-13. Traveling south on M-13, they crossed over a body of water twice within 10 miles.

“Hey, Butch, did we just cross over the Atlantic or the Pacific Ocean?” Peachy asked.

“For goodness sake, Peachy, that’s the **11 HM** Reservoir.”

They continued south on M-13 until they reached Springfield (O-8). Here they became lost, and it took them nearly an hour to finally get onto US-60 eastbound, heading toward Cabool (P-12). US-60 was a **12 HM** highway, so they made good time going to Cabool. In Cabool they turned right onto US-63 south and remained on that route until they had arrived in West Plains. In West Plains they turned right onto M-K. At 6:00 PM they finally pulled into Pottersville and checked into the motel. As Butch signed the motel register, he happened to see Mark’s and Bonnie’s names above his own. He knew that the VanHecke’s were ace detectives who had often handled cases for Consolidated Toy, but he was determined not to let their presence interfere with his plans.

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While Butch and Peachy were traveling to Pottersville, Mark and Bonnie spent the afternoon talking to local citizens. No one seemed to know anything about a crate falling from the sky. Feeling a little down, they decided to enjoy an early dinner at the Pottersville Diner.

As they were about to finish their meal, a farmer walked in and sat down at the counter. Bonnie overheard him talking to the waitress about that morning’s strange occurrence.

Bonnie and Mark strolled over to the farmer and introduced themselves. The farmer’s name was McDonald, and his farm was about seven miles west of Pottersville. He had been talking to his neighbor, Jed Clampett. Jed had told him about the crate that had fallen from the sky and had landed at Fogey Cave. Thanking the farmer, they returned to their room at about 6:30 PM.

Once in their room, Mark searched through his collection of topo maps and chose the Pottersville Quad. With his knowledge of maps, he knew without even looking that this quad was a **13 P** (A. 30’, B. 15’, C. 7.5’) series map. He also knew that its scale was **14 P**. Mark checked the contour interval and found it to be **15 P**. He also noted that there was a lot of green on the map. Solid green is the way USGS cartographers indicate **16 P** (A. woods or brushwood, B. marsh, C. mangrove).

Wishing to know whether the map was current, he rapidly scanned its lower margin and found that it had last been field checked in **17 P**. Mark wondered if he had brought along all the maps that bordered the Pottersville Quad. He discovered that he had seven of the eight. The only quad missing was the one located to the south of the Pottersville Quad, the **18 P** Quad. He hoped their search would not take them in that direction.

While searching for the town of Pottersville on the map, Mark noticed Gospel Hill Church Cemetery in sector 5. The cemetery was at an elevation of **19 P** feet above sea level. Finally he located Pottersville NE of the church in sector **20 P**. The bench mark, just NE of the main intersection of town and a little south of a small pond, gave Pottersville’s official elevation as **21 P**.

“Pottersville sure is a small town,” Mark said.

“Is Fogey Cave on the map?” asked Bonnie.

“I don’t see it. Farmer McDonald said his house is west of town. Let’s see if we can find it on the Cureall NW Quad. That’s the quad located to the west of the Pottersville Quad.”

Bonnie quickly located the cave in the SW corner of sector 6 on the Cureall NW Quad.

“I’ll determine the coordinates for Fogey Cave using the topographic map,” Mark stated. “Then, by using the GPS in the Navigator, we should be able to find the cave quickly.”

Mark determined the coordinates at the SE corner of the Correal NW quad. He recorded the latitude as **22 C N**. and the longitude as **23 C W**.

As Mark turned his attention to the black plus-like symbol to the SW of Fogey cave, Bonnie spotted it at the same time. "What's that symbol?" she asked.

"That's the SE graticule tick mark," Mark responded. "I think I will calculate and record its coordinates also. Let's see. Its latitude is **24 C N**, and its longitude is **25 C W**. Now I'll calculate the coordinates at the entrance to Fogey Cave.

Using a geo ruler, Mark quickly determined the coordinates for the entrance to the cave. He found these to be **26 C N**. latitude and **27 C W**. longitude.

"Could you calculate the coordinates if you didn't have a geo ruler?" Bonnie asked.

"Sure. I could do that with a ruler and a calculator," Mark replied. "Now that we know where we'll be going, let's get some shut eye and drive to the cave in the morning."

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In the room next to Mark's and Bonnie's, Butch, using a drinking glass pressed against the wall, had heard everything.

"Did you bring the maps?" Butch asked.

"I brought a map of Paris," Peachy answered.

"Paris! Why would you bring a map of Paris?"

"Well, a girl has to be prepared."

"Okay, we know where we need to go, but without a map our only option is to follow the VanHeckes when they leave in the morning.

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Mark and Bonnie left the motel at 6:00 AM. Bonnie noticed a blonde in shorts and high heels leaning against the Pepsi machine, but didn't give it much thought. They drove to the Pottersville Diner for breakfast. As they were leaving the restaurant, Bonnie once again saw the blonde. She was seated in a booth eating French fries, which she was dipping into a bowl of mustard and mayonnaise. She was with a man dressed in Bermuda shorts, a Hawaiian shirt, and cowboy boots. Bonnie remembered thinking how strange those two individuals looked.

Mark left Pottersville by heading west on M-K. a **28 P** (A. medium-duty, B. light-duty, C. unimproved dirt) road. About one mile out of Pottersville, Mark turned right onto M-KK. Soon they passed Crossroads Church whose elevation was **29 P** feet above sea level. In the NE $\frac{1}{4}$ SE $\frac{1}{4}$ 31 T24N-R10W they saw a **30 P**. Mark made the assumption that this was an important source of employment for the area. As they crossed the western boundary of 31 T24N-R10W, they left Howell County and entered **31 P** County. Mark asked Bonnie to take out the Cureall NW Quad. He once again saw the same Ford Expedition that had been following them ever since they left the diner.

Bonnie, studying the Cureall NW Quad map, asked Mark to turn left at the second road going off to the left, past Bond Ridge Church (sector 6). This unimproved dirt road was in the N $\frac{1}{2}$ NE $\frac{1}{4}$ 10 T23N-R11W on the Cureall NW Quad. As Mark made the turn, he quickly slammed on the brakes. Across the dirt road was a huge oak tree. It appeared freshly cut.

"Well," Mark sighed. "There's no way around the tree, so we'll have to hike to Fogey Cave. Since we can't use the GPS unit in the Navigator, we'll have to calculate the azimuth from the intersection of M-KK and this dirt road to the cave so we won't be stumbling about the woods and possibly get lost. Thank heavens we brought our compass."

Mark, using the quad, a ruler, and a protractor, found the azimuth to Fogey Cave to be **32 C**. Then he realized that he must adjust the azimuth to the proper declination. The Cureall NW Quad gave the declination between star north and magnetic north as **33 C** degrees.

"How far will we have to walk?" Bonnie asked.

"If we follow the azimuth closely, it's **34 C** miles to the cave."

As they set off through the woods, they failed to notice the Expedition pulling in next to their Navigator.

Even though the distance to Fogey Cave wasn't far, it took Mark and Bonnie an hour to complete the hike. The opening to the cave was next to an **25 C** (A. perennial, B. intermittent) stream flowing to the **36 C** (A. north, B. east, C. south, D. west).

"Where do you think we should begin our search?" Bonnie asked.

"Boy, I don't know," Mark replied as he scanned the dense forest.

"Don't even bother looking," came a muffled voice from inside the cave.

Mark and Bonnie turned toward the sound of the voice as a man wearing a helmet with a light emerged from the cave.

"Who are you, and why shouldn't we look around?" asked Mark.

"I'm Spelunker Dave. If you're searching for the crate that fell from the sky, don't bother. It's gone."

"Someone took it?"

"Yep, Jed Clampett loaded it onto his pickup and drove away."

"I wonder how he got out?" Bonnie mused. "There's a tree blocking the road."

"Who do you think cut down the tree?" replied Dave with a snicker.

"Do you know where Jed lives?"

"Sure do, but you'll not find him at home. He said that he was taking the crate to his brother Jub's place in Franklin."

"When did he leave?"

"Oh, about three hours ago. I reckon."

"Thanks for your help," Mark called to Dave. Turning to Bonnie he said, "Let's hurry back to the Navigator, locate Franklin on the highway map, and try to catch Jed."

Although they hadn't seen anyone as they walked away from Fogey Cave, Mark sensed they were being followed.

When they were almost to their SUV, they saw the blonde. This was the same woman Bonnie had spotted at the motel and later at the cafe sitting on a tree stump. She was holding a shoe with a broken heel while staring blankly into space.

"May we help?" Bonnie asked.

"My heel is broken, and these are new shoes. They cost a bundle," lamented Peachy. "But, hey, Butch ordered me not to talk to you two."

Shaking their heads, Mark and Bonnie continued their hike back to the Navigator. Once in the car, they drove east on M-KK toward Pottersville. Bonnie drove while Mark studied the highway map.

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A few moments after the VanHecke's had driven away, Butch staggered out of the underbrush. He was badly scratched and bleeding. His colorful shirt was torn. Without a word, he took Peachy's hand, and walked toward the Expedition.

Peachy could tell that Butch was upset by the way he explained what had happened. He had followed Mark and Bonnie to Fogey Cave, and had overheard some guy telling them the crate was on its way to Jub Clampett's place in Franklin.

"What happened to your pretty shirt?" Peachy asked.

"It was those little trees and shrubs. I had to stay out of sight. Didn't I? And they got me good," Butch whined. "Now we have to drive all the way to Franklin."

Butch shoved the vehicle into reverse, floored it, and promptly ran over a huge rock that smashed the muffler. Throwing the SUV into drive, he headed for Pottersville. As they drove away, deer, bears, and numerous other small varmints could hear their departure for miles around.

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Mark and Bonnie drove to their motel in Pottersville to check out. They then took M-K back to West Plains.

Mark, looking up from the highway map, said, "The Missouri Index lists Franklin as being in map grid **37 HM**. That puts it west of Columbia and north of I-70. Bonnie, turn north at US-63, and we'll be on our way to Columbia."

"Okay," Bonnie replied as she turned onto north US-63.

When they reached Jefferson City, US-63 crossed over the **38 HM** River. Mark mentioned that they would cross the river several more times before they arrived in Franklin. Later, in Columbia, home of the University of **39 HM**, they turned west onto I-70. They exited I-70 at Boonville (Exit 103) and drove the eight miles to Franklin.

In Franklin, Bonnie stopped at a gas station for fuel. She asked the attendant if he knew where Jub Clampett lived. The attendant saw that Mark had a Franklin Quad, so he simply leaned over and placed his finger on the symbol for Jub's house. Jub lived in the only house in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ 15 T49N-R17W. Mark noted that the house was located on a slight rise surrounded by an enclosed **40 F** (A. index, B. intermediate, C. supplementary) contour. The value of the enclosed contour was **41 F** feet.

After thanking the attendant, they drove west out of Franklin (sector 9, Franklin Quad) on a light-duty road. Bonnie commented that there were **42 F** (A. orchards, B. vineyards, C. swamps) north of town. The light-duty road ended at M-87. They turned right onto M-87 and soon turned right again, since M-Z continued straight and M-87 turned north. They passed Clarks Chapel. Consulting the quad, Mark determined that the PLSS description of the chapel was **43 F**. The bearing from Clarks Chapel to Jub's house was **44 F**.

"How far is it from Clarks Chapel to Jub's house?" Bonnie asked.

Using string and following the roads, Mark calculated the distance as being **45 F** kilometers.

As they pulled into the yard, they saw Jed and Jub standing next to the open crate, shaking their heads in dismay. Bonnie parked, and she and Mark walked over to the two men. Mark introduced Bonnie and himself to the Clampett brothers.

Mark said, "The crate belongs to a company we represent. They want it back."

"You can have it," Jed replied in disgust. "It's just some silly old toy."

"Yeah. We thought that it was going to be something good like bubblegum," Jub added.

After tipping the Clampett's twenty bucks for all they'd gone through, they loaded the crate into the Navigator and bid farewell. They couldn't help but notice the wry smiles on the Clampetts' faces as they drove away.

Back on M-87, Mark and Bonnie heard the very loud noise of a vehicle minus a muffler. Rounding a curve, they saw a Ford Expedition and a Missouri State Trooper on the side of the road. A man wearing a torn Hawaiian shirt was arguing with the trooper while a one-shoed blonde was leaning against a tree filing her nails.

"I wonder who they are," Bonnie mused.

"I don't know, but from the way they have been following us, I'm quite positive they were after the prototype."

As they saw the Navigator approach, Butch and Peachy started yelling and shaking their fists.

Mark and Bonnie shook their heads and continued their long drive back to St. Louis where they planned to return the prototype to the Consolidated Toy Company just as soon as possible.