

The Terwilliger Fire along Cougar Reservoir in Willamette National Forest. US FOREST SERVICE

Fire

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The report also details an investigation to find the responsible party that includes DNA testing a Pepsi can, fingerprinting a bag of pineapple, exploding fungus and searching surveillance video for a match to social media accounts.

The investigation lasted for more than a year — from Aug. 19, 2018, to Nov. 6, 2019 — before law enforcement closed the case due to "a lack of evidence."

Even so, the report offers a fascinating look at the challenges of trying to determine who was responsible for a wildfire that altered one of Oregon's most famous outdoor destinations.

A burning stump: how the fire originated

In the days leading up to the Terwilliger Fire, the forest was ready to explode.

The summer of 2018 was a recordbreaking one for Oregon, a season when wildfires torched an area the size of Rhode Island and the cost to fight them hit an all-time high of \$515 million.

The worst situation was in Southern Oregon, but by August 19, drought and unrelenting heat created a tinderbox in the forests around Terwilliger.

second fire."

Fire teams focused on keeping the blaze contained on the west side of the fire, to prevent it from spreading onto private timberland, while the fire spread deeper into the wilderness on the east side. It burned through August and September, and it wasn't 100 percent contained until October.

Cause of the fire, and odd behavior as the blaze took off

The fire was human-caused, that much was clear. What isn't clear is exactly how the stump began smoldering and lit aflame.

The most probable cause of the Terwilliger Fire was "from a possible hot set or a smoking-related smoldering ignition," the fire investigation says.

It's unclear exactly what is meant by "hot set," but the investigator wrote that "it is possible that someone may have used a lighter to hot set the stump. A lighter was found about 250 feet to the east of the stump, but it was very rusty and had been there for some time."

As for the smoking theory, the report notes the area is a popular place to smoke cigarettes and marijuana, and "based on the weather, fuel moistures and the type of fine decayed woody material found at the top of the stump, it's probable that a smoking related ignition may have smoldered there for some time before it was detected by hot springs visitors." The scene after the fire took off appears chaotic at best. Eyewitnesses recalled seeing two girls, possibly in their 20s, running downhill next to Rider Creek from where the stump was located.

accusations or suspicious pictures - nothing tangible appears to have materialized. Here are four leads and interviews from the investigation.

The Pepsi and pineapple

Two pieces of evidence found at the scene of the fire were a Pepsi can and a small bag of pineapple. Both of those items were sent to the forensics lab in Springfield. After testing, the lab returned a DNA match found on the Pepsi can.

An interview was set up with the person indicated and they said they had been at Terwilliger, in the Rider Creek area on Aug. 5 — weeks before the fire ignited — while they were returning from wedding in Central Oregon. The person said they and their girlfriend smoked marijuana with another couple, possibly from Salem, right next to the creek and big stump. The person apologized for leaving behind the Pepsi can and bag of pineapple. After the interview, the person was arrested for unrelated warrants by the Clackamas County Sheriff's Office, but wasn't charged in connection with the fire.

'What they don't know won't hurt them'

On the day before the Terwilliger Fire, a person reportedly went into the Blue River store and asked about campfire regulations at the hot springs. When employees told the person campfires weren't allowed, the man said something like "well what they don't know won't hurt them," according to the report. Surveillance photos showed the person, their name was found from a receipt and the investigator found him on social media along with Instagram pictures that "showed him standing on a large stump on the edge of Rider Creek," the report says. After being contacted, the person said they would not make themselves available, stating something similar to "I'm not comfortable meeting you" and that he doesn't like authority, the report said. The person did admit to being at the hot springs the day before the fire, couldn't remember if they smoked cigarettes and couldn't remember if they smoked marijuana that day or not. 'They stayed there all day until things started to get rowdy in the evening," the man told the investigator. When the investigator referenced the Instagram photo, the person "became uncooperative on the phone and resistant to answering any more questions," the report said. The person called back the following day and apologized for his prior attitude, but added that he didn't have any additional information about the Terwilliger Fire.

The most unique lead came from the original fire investigator who indicated a person who "may have information about a type of fungus that can spontaneously combust," the report said. An exhibit was taken, and the person was contacted and said a friend knew about the fungus, which was apparently white, and that he was at the hot springs that day. The person interviewed said he left the hot springs before the fire and didn't see anything suspicious but that he had a friend who was there and "even helped try to extinguish the fire." That person was contacted but was never interviewed.

Difficulty proving who it might have been

Cross said he wasn't surprised about the difficulty of finding a single person responsible. He said the stump could have been smoldering for days before it ignited.

"That happens quite a lot with lightning," he said. "A spark can remain in a stump for days, weeks, even months.

"This fire, it burned in 2018. But after a whole winter of rain and snow, it reignited in 2019. Those sparks can stay active in a stump for a really long time."

Some good comes from the Terwilliger Fire, but hot springs not the same

"The day the fire started, the energy release component — which is the measure we use to determine fire danger actually broke a record," Cross said.

All it needed was a spark.

That arrived from an old-growth stump sitting along Rider Creek, just below the hot spring pools at a popular place to smoke cigarettes and marijuana and drink.

At 2:25 p.m., an unnamed couple came across a fire burning on the top of the stump. They reported it to an employee of American Land and Leisure, the concessionaire that manages the hot springs under a contract with the Forest Service.

The employee took a picture of the stump before it had spread into the "nearby forest fuels," the report said. A picture included shows the fire almost oozing out of the stump.

It's unclear exactly how the fire moved from the stump to the forest — a chunk of the report is redacted — but the investigation says the employee "tried to suppress the smoldering old growth stump using fire extinguishers and water bottles. With the reported winds at the time of the incident, the fire could not be contained."

The blaze grew quickly. By 3 p.m., Noble, who was at the hot springs with his 10-year-old son Parker, said fire had begun to engulf the trail leading to the hot springs.

After Noble and his son leaped through the wall of flames, he said: "Looking back, we see could see the fire running up the mountain. I knew it was going to get big because it was just so dry in there."

Forest Service officials arrived quickly, swept the area and were able to get everyone out, but the fire raged out of control, leaping Cougar Reservoir and starting a second fire near the Three Sisters Wilderness.

"At first, we thought there were people out like, lighting fires, because we couldn't figure out how two wildfires popped up at the same time so far apart," Cross said. "Then we realized that the embers from the main fire traveled a quarter-mile, over to the other side of the reservoir, and started the Other observations include a man "in a floppy hat," who arrived from an odd location, who, after the fire broke out, was frantically attempting to slow the blaze with "a bucket or possibly a stick," the report says, even as the fire spread up the hillside.

The evidence collected from the scene, days later, included: a Four Loko beer can, a Winco water bottle, a Pepsi Cola can and a plastic bag of pineapple. Later, a leather satchel/purse was found in the changing room, with no way to identify who owned it.

A long and detailed investigation that results in two unrelated arrests

The search for the person responsible for causing the Terwilliger Fire lasted more than a year.

Three of the beverage containers found near the stump were submitted to the Oregon State Police forensic lab in Springfield for DNA and fingerprint analysis, and a special agent for the Forest Service conducted multiple interviews everywhere from the Blue River Store to a homeless shelter in Eugene to a Home Depot parking lot in Happy Valley.

The investigation turned up some enticing leads — a whodunit of suspicious characters — but apparently nothing that could be used to bring charges.

"No judicial action taken due to lack of evidence," the report says.

A pineapple and Pepsi interview, a homeless shelter, exploding fungus, and an inquiry

The investigation report illustrates the difficulty of tracking down a person responsible for a wildfire when there's such limited evidence.

Even when there were promising leads — a DNA match, word of mouth

Accusations lead to a Eugene homeless shelter

In another case, the investigator followed a string of rumors about a transient who'd been suspected of causing trouble and even starting a fire in the town of Blue River in the summer of 2018 and "was a known scammer," according to the report. Multiple people believed the person had started the Terwilliger Fire. The investigator found the person at a homeless shelter in Eugene, where they denied ever visiting Terwilliger Hot Springs. After the interview, the person was arrested on an outstanding warrant by the Eugene Police Department.

Exploding fungus?

The Terwilliger Fire burned from Aug. 19 into September before becoming mostly contained.

The fire damage led to a 10-month closure around the hot springs and the forest around Cougar Reservoir, after burning 11,555 acres and costing \$40 million to fight.

Cross said the fire actually did some good, particularly in the Three Sisters Wilderness.

"On the east side, we mostly let the fire burn into a part of the Three Sisters that hadn't had fire in a long time and really needed it," he said. "And it did a lot of good. It broke up the canopy, it burned mostly on the ground with mixed severity and we just got a lot of those diverse impacts you want from a natural wildfire, even though it wasn't a natural start."

After the fire burned the hot springs, a new bathroom with a modern composting toilet has been added, along with a new changing room and walkway.

Noble, who escaped the fire the day it ignited, returned to Terwilliger when it reopened.

"As we walked through the charred remains of the forest what was pricing was how familiar it was and yet completely different," Noble said. "(At the hot springs). it wasn't as bad as I thought it was going to be. There was still a little bit of shrubbery and ferns. The trees were all blackened but still standing. Some of them still had greenery at the top which gave me hope. Parker and I both walked around looking and feeling sort of dazed. After a soak we went home and haven't been back. Even though the water still flows from the rocks, it's not the same. It lost a lot of its charm and power that day and it's kind of heartbreaking to see it now.'

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