S2E10

Tuesday, June 29, 2021 8:24 PM

Timeline

1959

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Jan 26	A truck GAZ-63 takes the group to a logging community called District 41 (aka 41st district or quarter)
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Jan 28	Yuri Yudin goes back with the sled due to poor health (sciatica), the group now consist of 9 members they spend the night on the banks of Lozva river
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Feb 1	The group makes the cache (labaz) to lighten their backpacks, they start late, go 500m off their planned route, cover 2 km an d pitch their tent on the north slope of Kholat Syakhl
Feb 2	All members of Dyatlov group die in a mysterious way
Feb 12	The group was expected back in Vizhay
Feb 21	Search parties are on their way
Feb 26	Slobtsov and Sharavin find the tent Prosecutor Vasiliy Tempalov opens an official investigation
Feb 27	Bodies of Doroshenko, Krivonischenko (by Sharavin and Koptelov), Kolmogorova (by Moiseev rescue dog) and Dyatlov (mansi Kurik ov group) are found
Mar 2	The cache (labaz) is found by Slobtsov and Kurikov
Mar 4	Autopsy of Doroshenko, Krivonischenko, Dyatlov and Kolmogorova
Mar 5	Body of Slobodin is found by Karelin and soldiers from Lt. Potapov group. Akselrod notices the icy bed under the body.
Mar 8	Autopsy of Slobodin
Mar 9	Doroshenko and Kolmogorova are buried in Mihaylovskoe cemetery Krivonischenko is buried in Ivanovskoe Cemetery
Mar 10	Dyatlov and Slobodin are buried in Mihaylovskoe cemetery
Mar 17	Vladimir Korotaev is fired and Lev Ivanov is assigned as a lead investigator
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May 27	Radiation analysis report on clothes and tissues of Dubinina, Kolevatov, Thibeaux-Brignolle and Zolotaryov
May 28	Case closed

Official statement for closing the case given by Junior Counselor of Justice and Criminal Prosecutor of Sverdlovsk region, Lev Ivanov:
The deaths of the expedition members were due to a series of mistakes by Dyatlov. On 1 February he began the ascent to the summit at 3 PM, even though he knew about the difficulty of the terrain. Furthermore – and this was Dyatlov's next mistake – he chose a line 500 m to the left of the planned pass that lies between Peak 1079 and Peak 880. So the group found themselves on the eastern slope of Peak 1079. They used what was left of the daylight to ascend to the summit in strong winds (which are typical for this area) and low temperatures of minus 25 degrees centigrade. Dyatlov found himself in bad conditions for the night, so he decided to pitch his tent on the slope of 1079 so as to start in the morning without adding the distance from the forest (~1 km) to the remaining trek of about 10 km to the summit.
Considering the absence of external injuries to the bodies or signs of a fight, the presence of all the valuables of the group, and also taking into account the conclusion of the medical examinations for the causes of the deaths of the hikers, it is concluded that the cause of their demise was **overwhelming force**, which the hikers were not able to overcome.

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Apr 12	Exhumation of the body of Semyon Zolotaryov at Ivanovskoe Cemetery in Yekaterinburg
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Aug 31	Court's decision from 8/31/2018 to refuse the application to reopen the case Court Decision Letter
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2019

Mar 15	Prosecutor's office undergo expedition to Dyatlov Pass to test 3 theories - avalanche, snow slab and hurricane.

2020

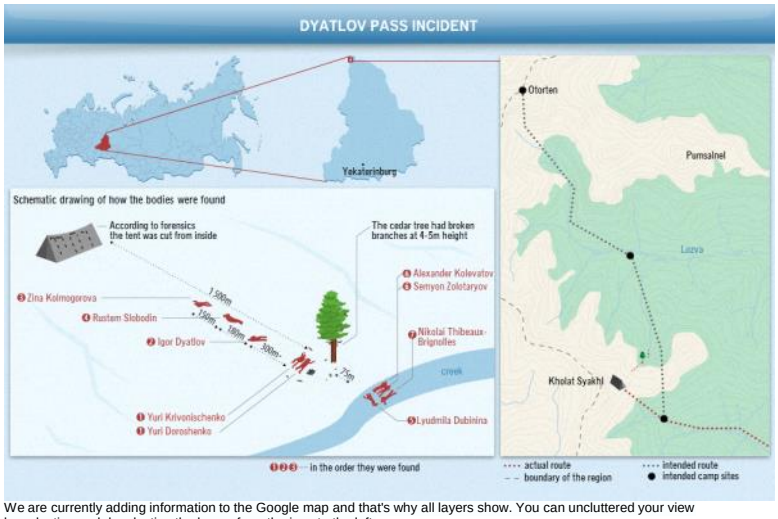
Jan 22	Yury Chaika was fired. New Prosecutor General of Russia is appointed Igor Krasnov.
Jul 11	Andrey Kuryakov announces the conclusion of the new investigation - it was an avalanche.
Aug 10	Krasnov reprimanded Kuryakov. The investigation was warned of incomplete official compliance. This is the maximum possible pu nishment before dismissal.

Dyatlov Pass incident

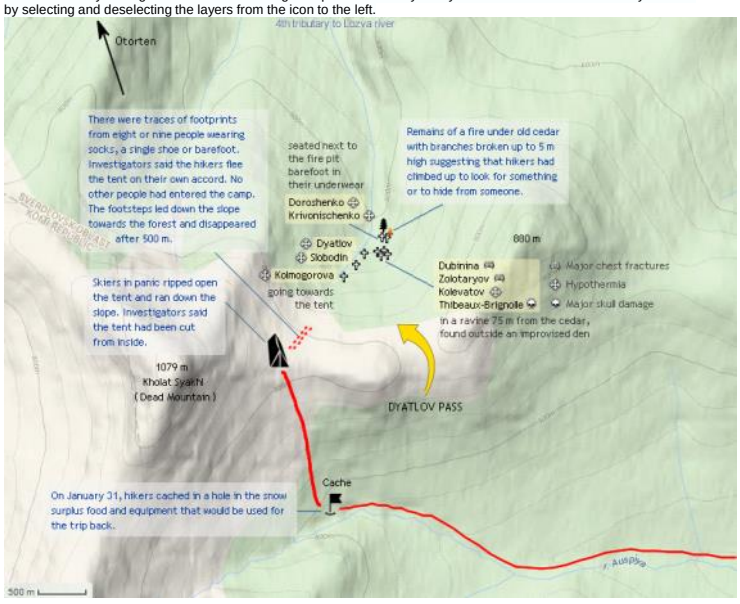
Tuesday, June 29, 2021 8:51 PM

The **Dyatlov Pass incident** (Russian: гибель тургруппы Дятлова, lit.'The Dyatlov Group demise') was an event in which nine Russian hikers died in the northern Ural Mountains between 1 and 2 February 1959, in uncertain circumstances. The experienced trekking group from the Ural Polytechnical Institute, led by Igor Dyatlov, had established a camp on the eastern slopes of Kholat Syakhl. During the night, something caused them to cut their way out of their tent and flee the campsite while inadequately dressed for the heavy snowfall and subzero temperatures.
After the group's bodies were discovered, an investigation by Soviet authorities determined that six had died from hypothermia while the other three had been killed by physical trauma. One victim had major skull damage, two had severe chest trauma, and another had a small crack in the skull. Four of the bodies were found lying in running water in a creek, and three of these had soft tissue damage of the head and face– two of the bodies were missing their eyes, one was missing its tongue, and one was missing its eyebrows. The investigation concluded that a "compelling natural force" had caused the deaths. Numerous theories have been put forward to account for the unexplained deaths, including animal attacks, hypothermia, avalanche, katabatic winds, infrasound-induced panic, military involvement, or some combination of these.
Russia opened a new investigation into the incident in 2019, and its conclusions were presented in July 2020: that an avalanche had led to the deaths. Survivors of the avalanche had been forced to suddenly leave their camp in low visibility conditions with inadequate clothing, and had died of hypothermia. Andrey Kuryakov, deputy head of the regional prosecutor's office, said: "It was a heroic struggle. There was no panic. But they had no chance to save themselves under the circumstances."[1] A study led by scientists from EPFL and ETH Zurich, published in 2021, suggested that a type of avalanche known as a slab avalanche could explain some of the injuries.[2][3]
A mountain pass in the area has later been named Dyatlov Pass in memory of the group. In many languages, the incident is now referred to as the "Dyatlov Pass incident". However, the incident occurred about 1700 metres away, on the eastern slope of Kholat Syakhl.[2] A prominent rock outcrop in the area is now a memorial to the group. It is located about 500 metres east south east of the actual site of the final camp.

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>



We are currently adding information to the Google map and that's why all layers show. You can uncluttered your view by selecting and deselecting the layers from the icon to the left.



Name (Age)	Found	Clothing (taken in, taken out)	Injuries & cause of death	
Doroshenko (21)	under tree	Underwear, shirt, no shoes; Kolevatov was wearing his jumpsuit; Igor was wearing a fur sleeveless vest which the case files say Yudin left to Kolevatov, but Yudin himself said in 2008 he gave to Doroshenko, read more.	Hypothermia	
Krivonischenko (23)	under tree	Underwear, shirt, no shoes; Dubinina had a sweater that tested radioactive which could probably be his, according to Ivanov she tore a flap of his underpants to wrap her foot probably after his	Hypothermia	

History's Mysteries Revealed: The Dyatlov Pass Incident

This historical mystery got very long when working on the previous blog post, so it was given its own post. This blog post will explore the mysterious and unexplained death of 9 hikers in Russia's Ural mountains.

Dyatlov Pass Incident

The nine hikers of the Dyatlov Pass Incident. Zolotaryov was the most experienced while Dyatlov was the leader of the expedition.

Background

In January of 1959, ten hikers, all but one students at the Urals Polytechnic Institute in Sverdlovsk, began a hike into the Ural Mountains. They were led by Igor Dyatlov. All ten were experienced hikers. They planned a three week trip with a return planned for February 12th. One hiker, Yuri Yudin, left early in the trip, on January 28th, due to a flare up of sciatica. He had made it to the final leg of the trip getting out to the Ural mountains by sled, but had to ride back on the sled to return home. By this time, he'd already taken two train rides, a bus ride, and then the sled ride with the other hikers to get to the place where they would begin their treacherous journey through the mountains in the winter. He was disappointed to leave, but this decision would ultimately save his life.
There are records of the hikers up through February 1st. That day, the hike started late and only managed to cover 2.5 miles, which could have been the burden of excess gear carried after Yudin's departure and low visibility due to the weather. At some point, the hikers dropped off excess gear at a camp base before continuing up Kholat Syakhi (Dead Mountain to the native Mansi people). They set up camp on the slope of the mountain, possibly because they did not want to lose the ground that they'd covered and because they were losing daylight. However, experienced hikers in the area have said it was an odd place to set up camp. They had dinner around 6-7pm and seemed to be in good spirits based on their personal and trip journals.
And then… nothing.
They did not arrive back by February 12th, though no one was immediately concerned. It was treacherous terrain. They could have been slowed down. Families, however, became worried when they had not heard anything by February 20th and a search party was sent the following day. Rescuers came across their tent a few days later, but the scene left everyone with more questions than answers.

Mystery

The tent, photographed by one member of the search party.

What happened to the hikers?
Last week, the mysteries we covered were simple. Two were questions of authenticity, and one that focused on why. The Dyatlov Pass Incident, however, has all the earmarks of a true mystery.
The tent was the first thing to be found. It was facing north-south, with the entrance facing south and the north part covered with 15-20 cm of snow. The snow appeared to come from the blowing wind and

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Krivonischenko (23)	under tree	Underwear, shirt, no shoes; Dubinina had a sweater that tested radioactive which could probably be his, according to Ivanov she tore a flap of his underpants to wrap her foot probably after his death, but this turn out to be her own blouse (read more); Thibeaux was wearing his wrist watch and possibly a sweater taken form him.	Hypothermia
Dyatlov (23)	300m	Very lightly dressed, no shoes, he was wearing the knitted vest Yudin said in the case files he left to Kolevatov, but later said he gave to Doroshenko, both version exist.	Hypothermia
Kolmogorova (22)	630m	Better dressed than the previously found hikers. No footwear.	Hypothermia
Slobodin (23)	480m	Better dressed than the previously found hikers, one felt boot (valenka) on his right foot.	Hypothermia Fractured skull, multiple areas of edema and abrasions on his face and his arms
Dubinina (20)	ravine (75m)	Her foot was wrapped in a piece of Krivonishenko's underpants according to Ivanov, but it turns out to be a piece from her own blouse (read more); she was wearing a brown sweater that tested radioactive and was most probably Krivonischenko's, but identification of the items on the last 4 bodies found in May was never made; Thibeaux is wearing her hat and coat, pair of gloves crumpled in the right pocket.	Major chest fractures; missing tongue, eyes, part of the lips, as well as facial tissue and a fragment of skull bone.
Zolotaryov (38)	ravine (75m)	He was wearing Dubinina's faux fur coat and hat according to Ivanov and this turn out not to be true (read more); Zolotaryov has Doroshenko's hat; camera on his neck, pair of quilted soft wadded boots without soles (burki) on his feet. Zolotaryov and Thibeaux were almost fully clothed and wearing some kind of footwear.	Major chest fractures; missing eye balls
Kolevatov (24)	ravine (75m)	He is wearing Doroshenko's jumpsuit; the waistband of his sweater and lower part of his ski trousers tested radioactive.	Hypothermia; exposed skull bones
Thibeaux-Brignolle (23)	ravine (75m)	Thibeaux like Zolotaryov was better dressed than the rest of the members of the group. On his feet he wore hand-knitted woolen socks and a pair of felt boots (valenki). He has Krivonischenko's wrist watch, possibly one of the sweaters is Krivonischenko's too, Lyuda's hat and coat. In the right pocket are crumpled pair of gloves that must be Lyuda's.	Major skull damage - multiple fractures to the side of his skull that would have made him unable to move

Autopsy reports

The radiation on two sweaters and pants was substantial

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Next, they found footprints leading downhill, though they were of people in socks or bare feet. There was the remains of a small fire under a cedar tree, with branches broken up to 5 meters up the tree. The first body was found under the tree, close to the remains of the fire. Identified as Doroshenko, he had burns on his head and foot, minor cuts and bruises, dried blood on his face, and a gray foam substance on his cheeks, indicated a pulmonary edema. His cause of death was determined to be hypothermia. Just nearby was the body of Krivonishchenko, who had similar minor cuts and bruises and was missing the tip of his nose. He had burns on his hands and a chunk of his knuckle was missing. It was later found in his mouth. His cause of death was hypothermia. Igor Dyatlov, the leader of the group (for whom the pass would later be named), was found 300m up the slope back towards the tent. He had minor cuts and bruises, a missing tooth, and blood on his lips. His cause of death was hypothermia. His watch had stopped at 5:31 AM. Kolmogorova was found face down, 630m up the hill from the cedar tree, closest to the tent. She had minor cuts and bruises and a large blunt force bruise of unknown origin. Her cause of death was hypothermia.
Slobodin wasn't found until March 5th, between Kolmogorova and Dyatlov on the hill. He was wearing one boot, had similar minor wounds, and a fractured the skull. The fractured skull, however, was not serious enough to cause death. His cause of death was determined to be hypothermia.
The last four hikers were not found until two months later, when the area began to thaw. They were found in a 6ft ravine. Kolevatov was found to have died of hypothermia, but had a broken nose and was missing his eyes and the soft tissue around them, likely from animal predation. His clothes were found at a later time to have traces of radioactivity. He and Zolotaryov, the one non-student member and the most experienced hiker of the group, were embraced, likely trying to preserve body heat. He died from a crushed chest and had pen and paper in hand, but was never able to write his message. Thibeaux-Brignolle was nearby died from an impact to his skull. And Dubinina died of a crushing injury to her chest and her eyes, tongue, and soft tissue was missing. She had blood in her stomach and radioactivity on her clothes (found later). The region itself was also said to have signs of radioactivity, though I could only find confirmation of the clothing. I wasn't able to determine how they originally discovered there was radiation.
(You can find a more thorough review of death and injury here, but the page contains images of dead bodies.)

Theories

So, what happened? As you can imagine, the theories range from mundane to ludicrous. The sheer amount of theories cannot be truly managed here, but there are a few categories of theory.
FOUL PLAY
One of the possibilities of a more mundane nature is that the camp was met with foul play. One theory posits some of the hikers were double agents, transporting radioactive samples and searching for CIA agents reportedly in the area. However, something went wrong and the CIA agents attacked. However, it seems very unlikely. If they were transporting radioactive samples, why were only their clothes radioactive? And the theory points the finger at Zolotaryov, Kolevatov, and Krivonishchenko as being the spies. But only Kolevatov of the group had radioactive clothes. The other was Dubinina. Why did they cut themselves out of their tent? Why did six of them die of hypothermia? It explains very little.
Another theory claims they were mistaken for fugitives from the gulags or witnesses to something they shouldn't have seen. The primary piece of evidence for this is that the region had gulags and Yuri Yudin, the survivor, claimed a piece of clothing was here that did not belong to anyone in the group. The piece of clothing was widely used among soldiers in the 40s and later among gulag prisoners. It later disappeared from the evidence room. This theory explains very little and the fact that Zolotaryov, a WWII veteran, had joined the group last minute is an easy explanation for how this piece of clothing got there. It is unlikely Yudin had a photographic memory of his compatriot's clothing items, especially if they were underclothes.
The indigenous people of the region, the Mansi, attacked the group, one theory says. However, they were an easy scapegoat and they would have no reason to. The area was not special to the Mansi. And all the belongings were left behind, so it wasn't robbery.
Another was an altercation between the hikers, but that explains very little. Why would everyone have died? Why did most of them die of hypothermia? Why did all of them leave the tent? There is also no evidence they had ill will towards each other.
SUPERNATURAL

Supposedly an image of a yeti on Thibeaux-Brignolles's camera.
There are two things about the Dyatlov Pass Incident that really stoke the fires of those who believe in a supernatural explanation: the signs of radiation and an image from Thibeaux-Brignolles's camera. The yeti attack theory is given weight by local legends among the Mansi people of such a creature, but doesn't explain much of the other parts. Why did most die of hypothermia? Why was the most severe injuries crushing injuries, not slash marks or bite marks? Why did they cut out of their tent instead of the yeti ripping into it? There are many things wrong with this theory. Why did they stop to build a fire?
As far as UFOs, this one is extremely popular. A UFO scared them from their tent and is the cause for the radiation. I still don't understand the explanation of the fire, the broken cedar branches, hypothermia, etc. Part of the intrigue comes from Lev Ivanov, the man in charge of the investigation at the time, making claims in the early 1990s about forest treetops being burned and being forced to take out the pictures Mansi hunters had given of flying spheres. Ivanov was paid for the interview where he gave this information. He was also a proponent of freak ball lightning in

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From <https://dyatlovpass.com/page.php?language_id=1&id=12786&flp=1#timeline>

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NATURE

Nature is the most likely culprit here. An avalanche is unlikely, due to the slope of the mountain they were on, the small amount of snow found on the tent, and this not being an avalanche prone area. The footprints would have been wiped away, the group would not have been able to outrun an avalanche either. The most likely scenario: katabatic wind.

Katabatic means "descending" wind. It is also called gravity wind. It is a phenomenon occurs over ice sheets or cooled mountain areas, including the topography of the Dyatlov Pass area. This hurricane-force wind can reach up to 81 meters/second and happen suddenly, without warning like a storm. This phenomenon often occurs at night. One such wind killed skiers in Sweden in 1978, when a wind erupted out of a calm day at 20 meters/second. They abandoned their camp, most died of exposure, and their bodies were found with minor injuries. The bodies were found at intervals that led away from a hastily-constructed snow shelter. The difference here is that one person survived.

In 2019, Swedish adventurers and local guides followed the path of the hikers to replicate the exact trip of the hikers. They went out at the same time of year, followed the same path, with the same supplies. They experienced extreme and unpredictable changes in weather. The Swedish adventurers then came up with the katabatic wind theory. This is supported by situational evidence.

1. After a tiring day of hiking, the tent was pitched hastily with standing skis and was not angled on the gradient as it should have been.
2. A gale-force wind swept down the gradient of the mountain, threatening to rip apart their tent, and they cut their way out of the tent for speed and shoveled snow on top of the tent to hold it down in the strong winds, using what they had - their bare hands.
3. They left a flashlight on top of their tent as they evacuated to act as a beacon to guide them back to camp.
4. They went down the slope to seek shelter in the trees and lower elevation from the winds on the mountain. They were buffeted by debris lifted by the strong winds.
5. The three found on the slope died where they fell as they descended the mountain without shoes in light clothing: Slobodin, Kolmogora, and Dyatlov.
6. Doroshenko, a notoriously brave man, and Krivonishchenko took responsibility for constructing a fire, with Doroshenko climbing the cedar tree to break off branches for the fire. The other four were to build shelters in the ravine to shield them from the winds. The wicked winds would explain the burns or collapsing into the fire as they succumbed to hypothermia. Krivonishchenko's knuckle injury was from biting it to stay conscious.
7. The remaining four members went into the ravine and huddled together in a snow shelter. But the snow shelter collapsed onto them, crushing the last four members. Dubinina had been crawling into the shelter when it collapsed on all of them. Soft tissue decomposition happens naturally, particularly in water. The individuals in the ravine had been in water and refroze during melting and freezing periods.

What of the radioactivity? Kolevatov was a student of nuclear physics and he could have come into contact with radioactive materials. Dubinina was an engineering and ecnomics major. There was also the fact that it was 2 months later before the bodies with radioactive traces were found. And there were several possibilities for contamination. Only beta particles were found, and they are used in product testing to determine the thickness of an item and these particles can be transferred to said item. Perhaps this was done on the clothes or on the tarp the students were carried in. The radioactivity appears to be little more than a red herring, leading people away from the most logical conclusion.

As is usually the case with mysteries.

From <http://www.museumcenter.org/the-curious-curator/2020/5/15/historys-mysteries-revealed-crystal-skulls-nazca-lines-shroud-of-turin-and-dyatlov-pass-incident-54lfg>

1959 Investigation

Saturday, July 3, 2021 6:50 PM

Investigation

A view of the tent as the rescuers found it on 26 February 1959: the tent had been cut open from inside, and most of the skiers had fled in socks or barefoot

A legal inquest started immediately after the first five bodies were found. A medical examination found no injuries that might have led to their deaths, and it was concluded that they had all died of hypothermia. Slobodin had a small crack in his skull, but it was not thought to be a fatal wound.[21]

An examination of the four bodies found in May shifted the narrative of the incident. Three of the hikers had fatal injuries: Thibeaux-Brignolles[21] had major skull damage, and Dubinina and Zolotaryov had major chest fractures.[22] According to Boris Vozrozhdenny, the force required to cause such damage would have been extremely high, comparable to that of a car crash. Notably, the bodies had no external wounds associated with the bone fractures, as if they had been subjected to a high level of pressure.[19]

All four bodies found at the bottom of the creek in a running stream of water had soft tissue damage to their head and face. For example, Dubinina was missing her tongue, eyes, part of the lips, as well as facial tissue and a fragment of skullbone,[23] while Zolotaryov had his eyeballs missing,[24] and Aleksander Kolevatov his eyebrows.[25] V. A. Vozrozhdenny, the forensic expert performing the post-mortem examination, judged that these injuries happened post-mortem due to the location of the bodies in a stream.

There was initial speculation that the indigenous Mansi people, reindeer herders local to the area, had attacked and murdered the group for encroaching upon their lands. Several Mansi were interrogated,[26] but the investigation indicated that the nature of the deaths did not support this hypothesis: only the hikers' footprints were visible, and they showed no sign of hand-to-hand struggle.[17]

Although the temperature was very low, around −25 to −30 °C (−13 to −22 °F) with a storm blowing, the dead were only partially dressed. Some had only one shoe, while others wore only socks.[17] Some were found wrapped in snips of ripped clothes that seemed to have been cut from those who were already dead.

Journalists reporting on the available parts of the inquest files claim that it states:

- Six of the group members died of hypothermia and three of fatal injuries.
- There were no indications of other people nearby on Kholat Syakhl apart from the nine travelers.
- The tent had been ripped open from within.
- The victims had died six to eight hours after their last meal.
- Traces from the camp showed that all group members left the campsite of their own accord, on foot.
- Some levels of radiation were found on one victim's clothing.[27]
- To dispel the theory of an attack by the indigenous Mansi people, Vozrozhdenny stated that the fatal injuries of the three bodies could not have been caused by human beings, "because the force of the blows had been too strong and no soft tissue had been damaged".[17]
- Released documents contained no information about the condition of the skiers' internal organs.
- There were no survivors.

At the time, the official conclusion was that the group members had died because of a compelling natural force.[28] The inquest officially ceased in May 1959 as a result of the absence of a guilty party. The files were sent to a secret archive.[17]

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

Members of the expedition					
Name (Romanization)	Russian name	Birthdate	Age	Sex	Supposed cause of death
Igor Alekseyevich Dyatlov	Игорь Алексеевич Дятлов	13 January 1936	23	Male	Hypothermia
Yuri Nikolayevich Doroshenko	Юрий Николаевич Дорошенко	29 January 1938	21	Male	Hypothermia
Lyudmila Alexandrovna Dubinina	Людмила Александровна Дубинина	12 May 1938	20	Female	Internal bleeding from severe chest trauma
Georgiy (Yuri) [a] Alexeyevich Krivonischenko	Георгий (Юрий) Алексеевич Кривонищенко	7 February 1935	23	Male	Hypothermia
Alexander Sergeyevich Kolevatov	Александр Сергеевич Колеватов	16 November 1934	24	Male	Hypothermia
Zinaida Alekseevna Kolmogorova	Зинаида Алексеевна Колмогорова	12 January 1937	22	Female	Hypothermia
Rustem Vladimirovich Slobodin	Рустем Владимирович Слободин	11 January 1936	23	Male	Hypothermia
Nikolai Vladimirovich Thibeaux-Brignolles	Николай Владимирович Тибо-Бриньоль	5 July 1935	23	Male	Fatal skull injury
Semyon (Alexander) [c] Alekseevich Zolotaryov	Семён (Александр) Алексеевич Золотарёв	2 February 1921	38	Male	Severe chest trauma
Yuri Yefimovich Yudin	Юрий Ефимович Юдин	19 July 1937	21	Male	Left expedition on 28 January due to illness; died 27 April 2013 at the age of 75

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

RESOLUTION TO CLOSE THE CASE

Russian

Sheet 384

I APPROVE:
PROSECUTOR OF THE SVERDLOVSK REGION
STATE ADVISER OF JUSTICE OF THE III CLASS
(N. KLINOV)
May 28, 1959

RESOLUTION.
May 28, 1959

city of Sverdlovsk

Prosecutor criminologist of the Sverdlovsk Regional Prosecutor's Office Jr. Justice Counselor Ivanov, having examined the criminal case instituted on the occasion of the death of 9 hikers in the Ivdel district of the Sverdlovsk region,
rulled:
January 23, 1959 a group of amateur hikers in the amount of 10 people went on a ski trip along the route: city of Sverdlovsk - city of Ivdel - 2nd Northern district - Mt. Otorten - Oyko-Chakur mountain - North Toschemka river - Vizhay settlement - city of Ivdel - city of Sverdlovsk.
The group consisted of: Igor Dyatlov - a student of the Ural Polytechnic Institute, leader of the expedition; Dubinina L.A., Kolmogorova Z.A., Kolevatov A.S., Yudin Y.E., Doroshenko Y.N. - UPI students; Zolotaryov A.A. - Instructor of the Kourovka Tour Base, Slobodin R.V., Krivonischenko Y.G., Thibeaux-Brignolle N.V. - engineers of enterprises in Sverdlovsk and Chelyabinsk.
All the participants of the expedition had good hiking training and could participate in a trek of III category of difficulty.
The group was supplied with the necessary equipment and food, the trade union committee of the Ural Polytechnic Institute financed the expedition.
Arriving safely to the place of the beginning of the trek - the 2nd Northern Ivdels district on 28.I.59 the group started the hike. One hiker - Yudin Y.S. returned home from the site of the 2nd Northern, as he could not continue the trek due to illness.
From diary entries, sketches of the route and developed photographic films of the hikers it is determined that on 28 May 1959 the group went upstream Lozva river, 30.I.59 the group continued its movement, 31.I.59 the hikers reached Auspiya river and tried to go over the pass to the valley of Lozva river, but because of the low temperature and strong wind they had to go back down and stopped for overnight. On I.II.59 hikers built a storage in the upper reaches of Auspiya river in which they left supplies of food and all unnecessary equipment.
On 31.I.59 going back in the valley of Auspiya river and knowing about the difficult conditions of the relief of the height "1079", where the ascent was supposed to be, Dyatlov, as the leader of the group, made a gross mistake allowing the group to begin the ascent on 1.II.59, only at 15-00.

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(changed from 382)
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Later, on the ski trail, which was preserved at the time of the search, it was possible to establish that the hikers, moving to the valley of the fourth tributary of the Lozva River, were 500-600 m to the left and instead of the pass formed by the peaks "1079" and "880" they went up on the eastern slope of height "1079".
This was Dyatlov's second mistake.
Using light day time to rise to the top of the "1079", in conditions of strong wind that is usual in this area, and a low temperature of the order of 25-30°C, Dyatlov group found themselves at unprofitable conditions for spending the night and decided to pitch the tent on a slope of height "1079" so that in the morning of the next day, without losing altitude, go to the Mt. Otorten, to which the distance in straight line remained about 10 km.
In one of the cameras the last frame shows the moment of excavation of snow for the installation of the tent.
Considering that this frame was shot with an exposure of I/25 seconds, with a diaphragm of 5.6 at a film sensitivity of 65 Un. GOST, and taking into account the density of the frame, we can assume that the hikers started the installation of the tent around 5 pm 1.II.59. A similar picture was taken with another camera.
After this time, no records and no photos were found.
According to the protocol of the route committee, the group leader, Igor Dyatlov, 12.II.59, was to telegraphically inform the sports club of the UPI and the Committee of Physical Education (comrade Ufimtsev) on arrival of the group in the village of Vizhay.
Since the deadline of 12.II.59 passed, and no information was received from the group, the hikers who knew Dyatlov closely demanded a search to start, and on 20.II.59 the Institute's leadership on the Dyatlov route sent a search team, and then several more groups. Subsequently, soldiers and officers of the Ministry of Internal Affairs, planes and helicopters of civil and military aviation joined the search operation.
On February 26, 1959, on the eastern slope of the peak "1079" the group's tent was found with all the equipment and food in it. The tent and all that was in it were well preserved.
Inspection of the tent showed that it was set correctly and provided accommodation for the hikers. In the tent there were 2 blankets, backpacks, storm jackets and trousers. The rest of the blankets were crumpled and frozen. On the blanket were found several pieces of crust from a loin.
Location and availability of items in the tent (almost all shoes, all outer clothing, personal belongings and diaries) indicated that the tent was abandoned suddenly by all hikers at the same time, and, as it was established in the subsequent forensic expertise, the lee side of the tent, where hikers usually laid their heads, it was cut from the inside in two places providing a free exit of a person through these cuts.

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(changed from 383)
- 3 -
Below the tent, for up to 500 meters in the snow, traces of people walking from the tent to the valley and into the forest have been preserved. The traces were well preserved and there were 8-9 pairs. Inspection of the tracks showed that some of them were almost barefoot (for example, in one cotton sock), others had a typical footprint of felt boots, legs covered in a soft sock, etc. Prints of tracks were located close to each other, converging and again separated one from another. Closer to the border of the forest, the footprints were covered with snow and disappeared.
Neither traces of a struggle nor presence of other people were found in the tent or near it.
26.II.59 in 1500 meters from the tent, at the forest boundary, the remains of a fire are found, and near it were the bodies of Doroshenko and Krivonischenko, stripped to the underwear. At 300 meters from the makeshift fire, in the direction of the tent, was found the body of Dyatlov, 180 meters away from him - the body of Slobodin, and 150 meters from Slobodin - Kolmogorova's body. The last three bodies were located on a straight line from the fire to the tent. Dyatlov lay on his backs, his head in the direction of the tent, his hands clasping the trunk of a small birch. Slobodin and Kolmogorov lay face down, their pose testified that they were crawling to the tent. Money and personal effects (pens, pencils, etc.) were found in the pockets of Kolmogorova, Dyatlov and Slobodin. On his left hand pointing outwards Slobodin was wearing a watch that stopped at 8:45. Dyatlov's watch showed 5:31.
Forensic medical examination found that Dyatlov, Doroshenko, Krivonischenko and Kolmogorova died from exposure to low temperature (frozen), none of them had physical injuries, not counting minor scratches and abrasions. Slobodin had a crack in the skull 6 cm long, which had spread to 0.1 cm, but Slobodin died from freezing.
May 4, 1959, 75 meters from the campfire, in the direction of the valley of the fourth tributary of Lozva, i.e. perpendicular to the way of the hikers from the tent, under a layer of snow 4-4.5 meters, the bodies of Dubinina, Zolotaryov, Thibeaux-Brignolle and Kolevatov were found. On the bodies, as well as a few meters from them, Krivonischenko and Doroshenko's clothes were found - trousers, sweaters. All clothing has traces of smooth cuts, as already photographed with the bodies of Doroshenko and Krivonischenko.
The dead Thibeaux Brignolle and Zolotaryov were found well-dressed, worse dressed Dubinina - her jacket made of artificial fur and a cap were found on Zolotaryov, Dubinina's naked leg was wrapped in Krivonischenko's woolen pants. Near the bodies, Krivonischenko's knife was found, which cut off the young firs near the fire. On the hand of Thibeaux-Brignolle were two watches - one of them shows 8:14, and the second - 8:39.
Forensic evidence of bodies revealed that Kolevatov's death had come from the effect of low temperature (frozen), Kolevatov had no physical injuries. The death of Dubinina, Thibeaux-Brignolle and Zolotaryov was the result of multiple physical injuries. Dubinina has a symmetrical fracture of the ribs: on the right 2, 3, 4, 5 and left 2, 3, 4, 5, 6, 7. In addition she has extensive hemorrhage in the heart.

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(changed from 384)
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Thibeaux-Brignolle has an extensive hemorrhage in the right temporal muscle - corresponding to him - a crushed fracture of the skull bones measuring 3x7 cm, with a bone defect 3x2 cm.
Zolotaryov has a broken ribs on the right 2, 3, 4, 5 and 6 along the parasternal and midaxillary lines, which caused his death.
The investigation did not establish the presence of other people on February 1 or February 2, 1959 in the area of the height "1079", except the hikers from Dyatlov group. It is also established that the population of the Mansi people, living in 80-100 km from this place, is Russian friendly, offers hikers accommodation, assistance etc. The place where the group died is considered to be unfit for hunting and reindeer breeding in the winter.
Considering the absence of external injuries to the bodies or signs of a fight, the presence of all the valuables of the group, and also taking into account the conclusion of the medical examinations for the causes of the deaths of the hikers, it is concluded that the cause of their demise was overwhelming force, which the hikers were not able to overcome.
For the shortcomings in the organization of sports work and weak control of the bureau of the Sverdlovsk GC the CPSU punished in party terms: the director of the Ural Polytechnic Institute Siunov, the secretary of the party bureau Zaostrovskiy, the chairman of the trade union UPK Slobodin, the chairman of the city union of voluntary sports societies Kurochkin and the inspector of the union Ufimtsev. The chairman of the board of the sports club of the Institute Gordo has been removed from work.
Given that between the actions of the above-mentioned people who have committed shortcomings in the formulation of sports work and the death of hikers there is no causal connection and, not seeing in this case the corpus delicti, guided by paragraph 5 of Article 4 of the RSFSR Code of Criminal Procedure,
ruled:
The criminal case on the death of the group of hikers and further proceedings are to be terminated.
CRIMINAL PROSECUTOR
JUNIOR JUSTICE COUNSELOR (IVANOV)
AGREED:
DEPUTY CHIEF OF THE INVESTIGATIVE DEPARTMENT
ADVISER OF JUSTICE (LUKIN)

From <https://dyatlovpass.com/case-files-384-387?rbid=17743>

2015-2019 Investigation

Saturday, July 3, 2021 6:50 PM

Repeated 2015 investigation[edit]
A review of the 1959 investigation's evidence completed in 2015–2019 by experienced investigators from the Investigative Committee of the Russian Federation (ICRF) on request of the families confirmed the avalanche with several important details added. First of all, the ICRF investigators (one of them an experienced alpinist) confirmed that the weather on the night of the tragedy was very harsh, with wind speeds up to hurricane force, 20–30 metres per second (45–67 mph; 72–108 km/h), a snowstorm and temperatures reaching −40 °C. These factors weren't considered by the 1959 investigators who arrived at the scene of the accident three weeks later when the weather had much improved and any remains of the snow slide had settled and been covered with fresh snowfall. The harsh weather at the same time played a critical role in the events of the tragic night, which have been reconstructed as follows:[44][45]

- On 1 February the group arrives at the Kholat Syakhl mountain and erects a large, 9-person tent on an open slope, without any natural barriers such as forests. On the day and a few preceding days, a heavy snowfall persisted, with strong wind and frost.
- The group traversing the slope and digging a tent site into the snow weakened the snow base. During the night the snowfield above the tent started to slide down slowly under the weight of the new snow, gradually pushing on the tent fabric, starting from the entrance. The group wakes up and starts evacuation in panic, with only some able to put on warm clothes. With the entrance blocked, the group escapes through a hole cut in the tent fabric and descends the slope to find a place perceived as safe from the avalanche only 1500 m down, at the forest border.
- Because some of the members have only incomplete clothing, the group splits. Two of the group, only in their underwear and pajamas, were found at the Siberian pine tree, near a fire pit. Their bodies were found first and confirmed to have died from hypothermia.
- Three hikers, including Dyatlov, attempted to climb back to the tent, possibly to get sleeping bags. They had better clothes than those at the fire pit, but still quite light and with inadequate footwear. Their bodies were found at various distances 300–600 m from the campfire, in poses suggesting that they had fallen exhausted while trying to climb in deep snow in extremely cold weather.
- The remaining four, equipped with warm clothing and footwear, were trying to find or build a better camping place in the forest further down the slope. Their bodies were found 70 m from the fireplace, under several meters of snow and with traumas indicating that they had fallen into a snow hole formed above a stream. These bodies were found only after two months.

According to the ICRF investigators, the factors contributing to the tragedy were extremely bad weather and lack of experience of the group leader in such conditions, which led to the selection of a dangerous camping place. After the snow slide, another mistake of the group was to split up, rather than building a temporary camp down in the forest and trying to survive through the night. Negligence of the 1959 investigators contributed to their report creating more questions than answers and inspiring numerous conspiracy theories.[1]

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

RESULTS OF THE INVESTIGATION

Jul 11, 2020

The press center of Komsomolskaya Pravda discussed one of the most likely, according to the conclusions of the Sverdlovsk prosecutors, versions of the mysterious death of the hikers in the Northern Urals. Here is a reconstruction of the last hours alive of Dyatlov group
In the winter of 1959, a group of nine hikers didn't return from the mountains of the Northern Ural. A fifth-year student of the Ural Polytechnic Institute Igor Dyatlov was leading the group. For 18 days the group was supposed to ski 300 kilometers along the north of the Sverdlovsk Region and climb two peaks. The expedition was of the highest category of difficulty according to the classification of the 1950s. A month after the group went missing, rescuers found a cut tent and five frozen bodies within a disance of one and a half kilometers on the slope of the nameless pass. The bodies of the rest were found only in May. The investigation found that some of them died from the cold, but some had fatal injuries of unknown origin. What exactly happened to the Dyatlov group is still a mystery to this day.
In September 2018, Komsomolskaya Pravda journalists appealed to the prosecutor's office of the Sverdlovsk region on behalf of an elderly relative of one of the dead hikers with a request to establish the circumstances of the death of the entire group. There have been dozens of versions so far, but not one of them is convincing.
A painstaking check began with the investigative prosecutor's group going to the scene of the tragedy, many expert examinations and declassification of archival documents. Finally, the results of the audit were obtained, which was announced to us by one of the heads of the prosecutor's inspection, attorney Andrey Kuryakov. He is currently writing a PhD thesis on this topic. Here we go.
WHY DID THEY PITCHED THE TENT IN SUCH A STRANGE PLACE?
During an expedition of the highest, third category of difficulty in the Northern Ural, on February 1, 1959, Igor Dyatlov, Lyuda Dubinina, Zina Kolmogorova, Aleksander Kolevatov, Yuri Doroshenko, Semyon Zolotaryov, Yuri Krivonischenko, Rustem Slobodin, Nikolai Thibeaux-Brignolle reached the eastern slope of Mount Kholat Syakhl. According to modern microclimatologists from the Voeykov Main Geophysical Laboratory, they faced north-west wind of 8 m/s, with gusts of up to 30 m/s.

They went uphill, and then along the slope for about 2.5 km, rose by five in the evening to a height of about 900 m above sea level.
– They decided to put up the tent in a place located 800 m below the top of Mount Kholat Syakhl and retreating 150 m from the northeast spur, said Andrey Kuryakov. - This is the calmest place on the slope, there is the so-called wind shadow, where the wind speed was 10-15 percent less than on the whole slope. Experts located the exact place of the tent with great accuracy, using phototechnical examination of photographs of the 1959 searches and modern photographs taken in March 2019 during an expedition to the Dyatlov Pass.
And yet, in our journalistic opinion, it is difficult to imagine a more inappropriate place for overnight. We are sure that many mountaineers will agree with us. There is a constant and strong wind. This place is cold even in summer. On a hot August day, we ourselves moved along the slope of Kholat Syakhl in dense windproof clothes and froze. And the Dyatlov group winter equipment was lousy in comparison with the current hiking ammunition. But back to the test results.
DYATLOV PASS 3D MODEL

– 2 –
A situational examination conducted by two independent masters of sports tourism from Perm and Yekaterinburg indicates that the installation of the tent took about two hours. At 5 pm they began clearing the site, and by 7 pm, when the tent was set up with an entrance to the south, they went inside, took off their wet clothes, changed into dry clothes and began to prepare for dinner.
WHAT MADE THEM COME OUT OF THE TENT SKIERS OUT OF THE TENT?
From the case files it is known that Thibeaux-Brignolle and Zolotaryov were better dressed than the rest. One of them - Nikolay, most likely, was on duty that evening, and Semyon, who had experience in hiking in the Carpathians and in Dombai, probably understood that the slope could be avalanche-hazardous and preferred not to undress. But this, of course, is only an assumption. No exact information on Zolotaryov's thoughts at that time was documented.
Further, situational experts argue that it was Semyon who could hear the characteristic sound of an avalanche starting above the tent and signal the entire company to flee. Hikers cut the canvas and ran down from the avalanche. A similar emergency exit is registered in all textbooks on sports tourism, and the guys acted strictly according to the rules.
It is curious that, according to experts, the Dyatlov group managed to sleep for the night in the most avalanche-hazardous place, where the slope is 25 degrees. And the accumulation of snow occurs 150 meters higher. The snow layer could have disappeared later, but the weather played a cruel joke with the guys. On the last day of the fateful expedition, a sharp drop in temperature occurred - from the thaw to severe frost. In addition, the northwest wind intensified, which blew from top to bottom along the slope at an angle, drawing even more snow onto the snow frame above the hikers tent, and as a result tore it off.
Let us return to the examination of the microclimate, whose author Galina Pigoltsina, Doctor of Geographical Sciences, established that at the time of leaving the tent (at about 9 pm) the wind-cold index (the effect of wind on a person at various temperatures) was 30 degrees below zero. This means that hikers could not only cool down for a maximum of half an hour, but also get frostbite on exposed skin. Closer to night, the index went down and the Dyatlov group had little chance for survival.
WHAT HAPPENED AT THE CEDAR?
Kuryakov claims that having descended a mile and a half on the slope to the border of the forest, the hikers stopped under a big cedar and decided to make a fire. They didn't warm up because there was not enough snow to make a hole to hide.
Now the border of the forest has moved significantly up the slope and in the cedar area you can easily fall into a snowdrift, waist-high, but in 1959 the searchers found the bodies of Doroshenko and Krivonischenko under the tree, barely covered with snow. Why didn't the hikers go a few tens of meters deeper into the forest is unknown. It can be assumed that they froze so much during the descent that they decided to make a fire here, without wasting energy on further movement.
Andrey Kuryakov, relying on the conclusions of situologists, suggests that Doroshenko and Krivonischenko were the first to die. They actively collected firewood for the rest. But since all the lower branches of birches, firs were covered with moss, hoarfrost, ice and did not burn, branches

Findings from New Investigation into Dyatlov Pass Incident Announced

July 13, 2020

By*Tim Binnall*

Russian officials have announced that their reopened investigation into the infamous Dyatlov Pass incident determined that an avalanche and subsequent hypothermia were to blame for the tragic event, but not everyone's convinced of the findings. The decision to take a fresh look at the curious case sparked headlines and excitement back in February of 2019 when it was announced in conjunction with the 60th anniversary of the eerie 1959 episode in which nine hikers in the Ural Mountains died under mysterious circumstances. Now, nearly 18 months later, the results of what was promised to be a rigorous study have been released to the public.

While many had hoped that the new investigation would examine some of the more exotic suggestions for what caused the incident, such as a Yeti attack or a weapons test gone wrong, it was made clear very early on the process that only prosaic explanations would be explored. This was revealed at the start of the study when lead investigator Andrei Kuryakov told reporters that "all fantastic theories have been dropped" and that "it is absolutely out of question" that the event had any connection to a clandestine government operation.

Therefore, it was not altogether surprising when Kuryakov held a press conference this past weekend in Russia and indicated that the months-long investigation into the case had concluded that the hikers perished due to an unfortunate series of natural events. Detailing what he believed to be the group's fateful final hours, he explained that the injuries sustained by the young men and women were akin to those suffered by "rock climbers caught in an avalanche." More specifically, Kuryakov said, when the hikers realized that their camp was about to be overwhelmed by snow, they fled the area to seek a safer shelter approximately a mile and a half away.

Alas, this only compounded the predicament as the ill-equipped group lost sight of their tent due to poor visibility and ultimately succumbed to hypothermia over the course of the evening as they were battered by a blizzard as well as unsuccessful and sometimes injurious attempts to return to the camp under those perilous conditions. No doubt trying to close the book on the Dyatlov Pass incident once and for all, Kuryakov declared that the avalanche theory "has found its full confirmation" via the new investigation. "It was a heroic struggle. There was no panic," he mused, "but they had no chance to save themselves under the circumstances."

As one might imagine, the results of the investigation have already been called into question by longtime Dyatlov Pass researchers as it fails to answer a number of questions surrounding the case. Additionally, the decision to only look at natural events from the outset has raised suspicions that the new study is really a cover-up of the clandestine weapons test theory. To that end, a group of independent researchers who have been looking into the case for the last twenty years expressed dismay at the findings and called for yet another official investigation into the case. Considering that the Russian government has portrayed their conclusions as rather definitive, it's doubtful that the case will be officially re-opened any time soon or ever again, despite the misgivings of critics.

From <https://www.coasttocoastam.com/article/findings-from-new-investigation-into-dyatlov-pass-incident-announced/>

for starting the fire had to came from the cedar, and they climbed up the trunk. The fire burned out for an hour and a half. By this time, both Yuri spent all their stamina in extreme cold. They had no strength left to survive.

The expert explains with the help of a table tennis ball how the injuries of Zolotaryov, Dubinina and Thibeaux-Brignolle occured.

The guys took off the clothes from their dead comrades, wrapped themselves in tatters and decided to return to the tent. And this was the only right decision for survival, but they made it too late. By 3 am, the wind-cold index was already 46 degrees below zero! And visibility was no more than 16 meters - a strong blizzard, moonless night. To find a tent under such conditions was akin to a miracle. But the miracle did not happen.

HOW DID THE REST DIE?

Dyatlov, Slobodin and Kolmogorova, one after another, began to climb back along the slope, but due to overcooling the felt helpless and fell to the ground. The remaining four - Zolotaryov, Dubinina, Thibeaux-Brignolle and Kolevatov moved 50 m southwest from the cedar away from the fire to the ravine of the fourth tributary of Lozva. They raked snow, made flooring from small tree branches. Sat on the floor and prepared for a cold overnight. The snow started pouring into the hollow.

According to the forensic examination conducted by 6 experts, the major fractures of the ribs on Lyuda and Semyon were caused by a snowfall of up to three meters in height. The four hikers fell from the flooring to the bottom of the ravine which filled up with snow.

– 3 –

According to the conclusion of the geodesy and cartography specialist of the Rosreestr Directorate for the Sverdlovsk Region, the slope steepness, i.e., the angle of the slope to the horizontal plane at the location of the bodies of Kolevatov, Dubinina, Zolotaryov and Thibeaux-Brignolle, is 11, the channel of the right source of the fourth tributary of Lozva has steep banks, especially the left. The height of the cliff is about 2 m, and in winter, together with the thickness of the snow cover, it can reach 3 meters or more. All this suggests that the hikers during the excavation cut snow and provoked its collapse.

– Besides Krivonischenko and Doroshenko, the rest died on February 2 from about 1 to 2 am, 4-5 hours after their last meal, says Andrey Kuryakov. - For most of them, the cause of death was hypothermia, and Zolotaryov and Dubinina died from chest injuries.

- It turns out that the group was at the wrong time and in the wrong place? - finally we asked the expert. Would have they survived if they had stopped a hundred meters further?

– Probably yes. But even in such terrible weather, they did everything they could to survive. The frost, blizzard and darkness were stronger than they could overcome.

ONE MORE VERSION

There still was a rocket!

Supporters of the technogenic version of the Dyatlov's tragedy are sure that the hikers death is somehow connected to an unsuccessful rocket tests. They refer to the launch of a rocket on February 2 from the Kapustin Yar training ground. It is known that this flight ended in an accident, but the details of the accident are classified.

The prosecutors managed to establish that there really was a launch. Only according to the now declassified data of the Ministry of Defense, it had no relation to the tragedy at the pass, because the rocket flew in a completely different direction and fell near the city of Emba in the Akhtyubinsk region of the Republic of Kazakhstan, covering a distance of 1,500 km.

«KP» INQUIRY

What examinations were carried out?

- Examination of photographic films and negatives with the image of the tent of dead hikers and the surrounding area, made by the participants in the search in 1959.
- Microclimatic examination at FSBI "Main Geophysical Observatory named after A.I. Voyeykova "(Saint-Petersburg).
- Medical and psychological examination.
- Forensic-medical examination.
- Situational expertise.
- Phototechnical examination, based on which the distances from the tent to nearby peaks were obtained from photographs of 1959 and photographs of 2019 (to verify the accuracy of the method for determining the location of the tent).
- Geodetic examination to determine the coordinates of the tent and other points of reference, e.g., dead bodies, cedar.
- Production of an interactive 3D model of the Dyatlov Pass area with the application of the location of the tent, dead bodies, cedar, which was later used in the appointment and conduct of special examinations and studies.

PRESSING QUESTION

Where did the radiation come from?

According to the prosecutor's office, the most likely source of radioactive contamination of the clothes of Aleksander Kolevatov and Yuri Krivonischenko was the East Ural radioactive trail (which appeared after the accident at the Mayak Production Association in 1957). Both hikers visited the pollution area more than once on weekend trips. Accordingly, there they could "pick up" radiation on their clothes.

When the pants and sweater were examined during the investigation in 1959, experts found only beta radiation. This coincides with the main radionuclide composition of the EURT, in which beta emitters were detected.

FROM THE AUTHORS

We are grateful to the attorney Andrey Kurykov and the prosecutor's office of the Sverdlovsk region for the work done. There are a number of ambiguities in the version they presented, but it should be noted that such an in-depth study of the topic at the level of state bodies and using state powers was carried out for the first time.

We will not limit ourselves to one publication and will continue the topic of the examinations made, having talked with the experts themselves.

In the meantime, these questions remained open:

- Why did the hikers ran from the avalanche ran not to the side, but on the path of the avalanche?
- Who left the flashlight that Slobtsov found on top of the tent?
- Why did investigator Ivanov decide to conduct a radiation examination?
- Why was the case closed referring to a certain elemental force, and not a weather conditions?
- How did Yuri Krivonischenko got the severe burn on his leg?
- Why the foresters Pashin and Cheglakov, having found Dyatlov tent two days before the search party didn't report it?
- Why did Dyatlov, Slobodin and Kolmogorova went from the cedar to the tent only in socks (Slobodin in one felt boot), while Zolotoryov and Thibeaux-Brignolle, who remained at the cedar, wore shoes? Did the group fight and split?

There are still many questions remaining to be answered.

From <https://dyatlovpass.com/prosecutors-investigation>

Mysterious Deaths At Dyatlov Pass May Finally Be Solved After 62 Years Thanks To A Computer Simulation

David Bressan
Contributor
Science
I deal with the rocky road to our modern understanding of earth
Follow

Soviet investigators examine the tent belonging to the Dyatlov Pass expedition almost one month ... [+]

PUBLIC DOMAIN

In late January of 1959, a group of nine students of the Ural Polytechnical Institute and an older ski instructor departed from the city of Sverdlovsk (now Yekaterinburg) on an expedition to Otorten Mountain in the northern Urals. Lead by Igor Dyatlov, an experienced mountaineer, the group traveled to the city of Ivdel first by train, then to Vizhay by bus. Riding a truck, they headed to "Sector 41," a woodcutting settlement, and then to the abandoned geological site "Nord 2," the last human settlement in the wilderness.

Conditions for a slab avalanche

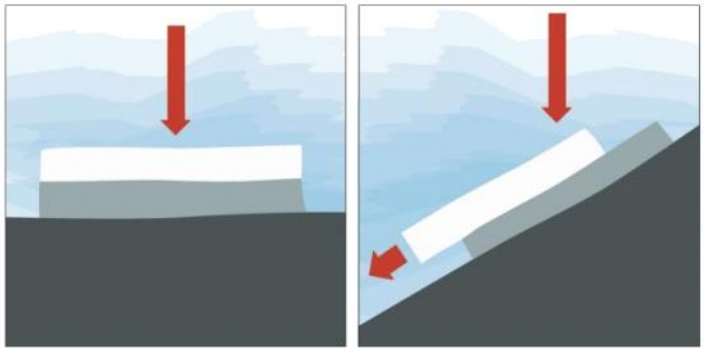
Snow and weather
But what is the difference between a hard or soft slab, what is a weak layer and when is a slope steeper than 30 degrees? This section will discuss this in more detail.

Three ingredients for trouble

After years of study we have found out that there is a higher risk when:

- The angle is larger than 30 degrees AND
- There is a (hard or soft) slab AND
- There is a weak layer present.

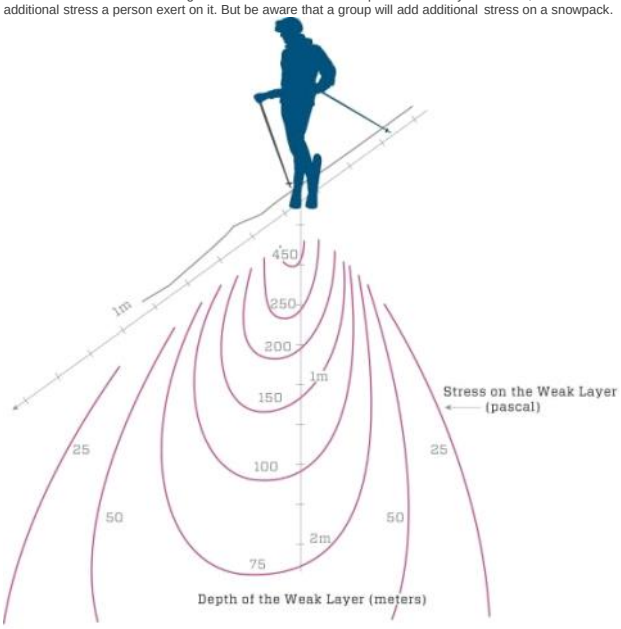
Combine these three and it is a guarantee for a dangerous situation. But with only two of three ingredients the chance on a slab avalanche is very slim.



Three ingredients for an avalanche: hard slab, weak layer and an angle

The trigger
We are going to add another important element to these three ingredients. A slab avalanche is triggered by something. And in most fatal slab avalanches the skier or snowboarder is the trigger. The chance of a slab avalanche being triggered by an external element is much smaller. It's possible that new snow could cause a slab to release naturally. If cornice breaks, a rock falls down or a spontaneous loose snow avalanche starts, that might also trigger the slab avalanche.

You might be the trigger. And you probably are.
Weak layers beneath slabs can be extremely sensitive. But the deeper a weak layer in the existing snow cover, the more limited the impact of additional stress, and therefore the less the chance of causing an avalanche. That looks like the figure below. Notice that the deeper a weaker layer is buried, the less additional stress a person exert on it. But be aware that a group will add additional stress on a snowpack.



Additional stress the snow feels when you cross it. The units are pascals. Notice that the deeper a weak layer is buried, the less additional stress a person will exert on it (source: SLF)

Watch out for extra stress
Now you know that you are likely the trigger. Try to apply as little force and stress to the snowpack as you can. This makes you are lighter. But when applying more force or stress to the snowpack you are heavier and this increases your riss. The next cases cause the extra stress:

- Hiking up (1-2 times your own bodyweight as extra stress)
- Short turns (4-5 times your own bodyweight)
- Falling (6-8 times your bodyweight)

In 90 percent of the cases you or your friends trigger the avalanche. The extra pressure from the weight of the skier or snowboarder can be enough to trigger an avalanche.

What makes a slab?
Even with the slightest amount of cohesion it's consider it a slab, whether it is hard or soft. What often feels like loose powder snow is actually a slab. Hard slabs are easy to identify. The biggest nuance is between very loose, but not cohesive snow, and very loose cohesive snow. A slab doesn't need to be so hard you can barely make a hole in it; It just needs to be relatively stronger than the snow underneath. Light, dry powder can behave as a slab as long as it has an even weaker layer beneath it. You can determine this by doing the shovel test. This is a common method among professionals. Without it, it can be difficult for a layman to recognise a slab.

The "Dyatlov group": Yuri Nikolayevich Doroshenko (23), Lyudmila Alexandrovna Dubinina (20), Igor ... [+]

PUBLIC DOMAIN

On January 28, one of the hikers, economics student Yuri Yudin, had begun to feel quite ill. Tormented by severe pain, he decided to head back - yet unaware of the irony that his illnesses had just saved his life - while the remaining group of nine continued as planned. They proceeded on foot and skies, following the Auspiya river into the mountains. Recovered photos and journal entries suggest that everything was fine, even if there was a lot of snow and the weather was bad, slowing down the hikers. Ten days into the trip, on the first of February, they set up a campsite for the night on the slopes of "Height 1079," known to the indigenous Mansi population as Kholat Saykhl Mountain.

A few weeks later, friends and relatives began to worry. On February 26, a search party discovers the abandoned tent on the slope. The tent was cut from the inside, as if the hikers had to rush to flee their night-time shelter, running into the freezing dark night. Nine pairs of footprints lead the search team down the slope towards the nearby woods. Under a large cedar tree at the edge of the forest next to the remains of an improvised campfire, two frozen bodies were found. The next three bodies were found at varying distances between the tent and the cedar tree, covered by snow.

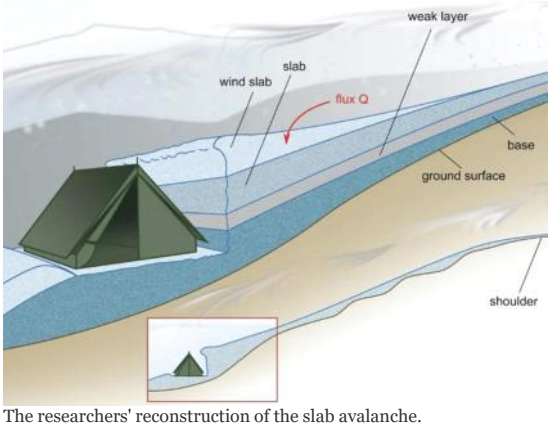
Autopsies later revealed that all five had died of hypothermia. The last four hikers were found in May 1959 at the bottom of a small ravine inside the forest, covered by 3 meters (9 feet) of snow. Three of them had sustained lethal injuries, one had a fractured skull, and two had fractured ribs. One had minor injuries and died of hypothermia.

Russian authorities quickly closed the case, noting that "the cause of death was an unknown compelling force which the hikers were unable to overcome." What really happened to the hikers at the "Dyatlov Pass" prompted wild speculations that range from a blizzard, serial killer, animal attacks, secret weapons, a military cover-up, gravity anomalies, a fire in the tent, killer snowmen, UFOs and temporary insanity caused either by drug abuse or infrasound.

In an article published today in the journal *Communications Earth & Environment*, a research team from the Geotechnical Engineering at ETH Zurich and École polytechnique fédérale de Lausanne presents data suggesting a "freak avalanche" as the most likely explanation.

Most people imagine an avalanche like loose snow sliding down a mountainside. However, slab avalanches, an avalanche formed by a sheet of hard, dense snow sliding down the slope, are responsible for almost 90% of all avalanche deaths. Avalanches can occur on any slopes but are more frequent and common on slopes steeper than 28°. The slope immediately above the campsite of the Dyatlov group was at 22-30°. On the day of the accident, the snow at the campsite was 2 meters (6 feet) deep. The hikers disturbed the snow pack by digging out the snow a couple of feet down to set up the tent. During the night strong winds, as described in the expedition's diary, accumulate additional snow and ice, stressing the snowpack to its breaking point.

Modifying a computer program also used for realistic snow physics in animation movies, the researchers simulated a slab avalanche on the slopes of Kholat Saykhl. Varying the mass and speed of the snow slide, and comparing the results with data from car crash simulations, the team demonstrated that a 5-meters-long (or 16-feet) block of snow suddenly sliding down the slope could be enough to break the ribs and the skulls of some of the hikers.



The researchers' reconstruction of the slab avalanche.

GAUME & PUZRIN

Based on these results and contemporary documents by Russian investigators, the research team suggests the following reconstruction of the incident:

On the evening of February 1st, the sleeping hikers suddenly awakened, surprised by a slab of snow crushing down on the part of the tent facing the slope. Three are partially buried, sustaining severe, yet not immediately fatal injuries. Panicking, one of the hikers cut the tent open with a knife, sending the shoeless and underdressed group into the pitch-black and freezing night, with temperatures below -22°F. All nine flee for almost one kilometer (about 2 miles) down the slope into the nearby woods. At the cedar tree, two hikers start a fire, realizing that the fading flame will not keep the group alive the entire night. Three hikers, despite the risk of further avalanches, try to find their way back to the tent to get supplies and warm clothing, but disoriented by the low visibility (less than 16 meters or 55 feet), will end dying on the slope. Four of them, venturing deeper into the woods, try to

between very loose, but not cohesive snow, and very loose cohesive snow. A slab doesn't need to be so hard you can barely make a hole in it; It just needs to be relatively stronger than the snow underneath. Light, dry powder can behave as a slab as long as it has an even weaker layer beneath it. You can determine this by doing the shovel test. This is a common method among professionals. Without it, it can be difficult for a layman to recognise a slab.


This snow pack is cohesive. It is more difficult to determine the difference between non -cohesive powder and lightly cohesive powder.

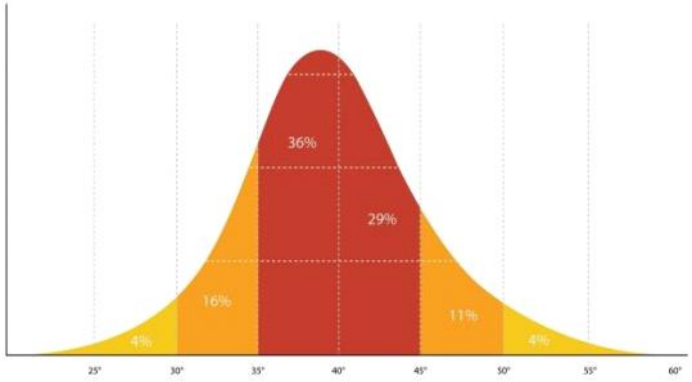
The shovel test is a term that originated in avalanche studies. The goal of the shovel test is to determine whether or not you are dealing with cohesive snow. Carefully take a small scoop with your shovel out of the suspicious layer so that it lays easily on the blade. Hit the bottom of the blade softly. If the snow falls off like loose sand, the snow is not cohesive. If you have to hit a little bit harder and the snow falls in smaller and larger lumps or stays whole, than you are dealing with cohesive snow.

Not every cohesive layer of snow is necessarily dangerous. Only in combination with a weak layer and a slope steeper than 30 degree it dangerous.

The angle

After years of studying data collected world wide, it became clear that slab avalanches happen on slopes steeper than 30 degrees. Most avalanches originate on slopes between 34 and 45 degrees—exactly the types of runs that are most fun to ski. Only in really unstable conditions do we sometimes see slab avalanches on slopes less than 30 degrees. Chapter four (terrain) will discuss how to measure the steepness of a slope. To summarize:

- Three out of four avalanches occur on slopes between 34 and 45 degrees;
- 38 to 39 degrees is the bulls eye;
- 10 percent of the slabs occur between 30 and 34 degrees
- less than 3 percent of slabs occur on slopes less than 30 degrees.



Most avalanche accidents happen in slopes between 35 and 45 degrees —exactly the type of slope that is most fun to ski.

How steep is 30 degrees?

What is the steepest run you ever did? Wait, before you answer, how steep do you think the steepest black slope is? While we are at it, look closely at the photo below. How steep do you think that is? Take a test with your friends. Ask them these questions and show them the photo below. Answers will probably range from 30 to 80 degrees.

The steepest black slopes are between 33 to 35 degrees. Le Tunnel in Alpe d'Huez, the Harakiri in Mayrhofen, the Mont Fort in Verbier and Le Mûr in Avoriaz are examples of this. But when standing in the powder it becomes clear that the steepness is not that bad. The fun only begins at 27 degrees. For most of us powder snow becomes fun between the 30 and 39 degrees. You feel the resistance underneath your feet, you can pick up speed and the snow hits your face. Unfortunately this is also the angle where most deadly avalanches take place.

(about 2 miles) down the slope into the nearby woods. At the cedar tree, two hikers start a fire, realizing that the fading flame will not keep the group alive the entire night. Three hikers, despite the risk of further avalanches, try to find their way back to the tent to get supplies and warm clothing, but disoriented by the low visibility (less than 16 meters or 55 feet), will end dying on the slope. Four of them, venturing deeper into the woods, try to find shelter in a snow cave, but to injured to continue finally succumbed to their internal injuries.
As rescuers later disturbed the ground around the tent, the snow slab's remains - still partially covering the tent - were mistaken as wind-blown snow or more recent snowfall. The case is officially closed, but the relatives categorically disagree with the findings and believe the students were killed by something else. Several important questions remain unanswered. Why did Russian authorities send a technician with a Geiger counter to measure radioactive contamination to the site? Why was the investigation closed so quickly and the case documents classified as top secret for almost 30 years?
"The truth, of course, is that no one really knows what happened that night," Puzrin - one of the authors of the avalanche model - says. "But we do provide strong quantitative evidence that the avalanche theory is plausible

From <https://www.forbes.com/sites/davidbressan/2021/01/28/mysterious-deaths-at-dyatlov-pass-may-finally-be-solved-after-62-years-thanks-to-a-computer-simulation/?sh=3b3477ff4d25>

AVALANCHE OR SNOW SLAB

This is not an avalanche prone area. Kholat Syakhl is not tall 1079 and it is certainly not very steep. Furthermore, the opponents of this theory suggest that hikers' diaries report a fairly thin snow cover. However, these facts don't exclude the possibility of a small avalanche. A portion of the upper layer of snow could simply shift and roll over the hikers as a slab of snow. This could damage the tent and create havoc among hikers who were suddenly trapped underneath several feet of snow. It would certainly explain why the tent was cut from inside. Further retreat would be necessary if the hikers were worried a second avalanche can strike again. According to the supporters of this theory Dyatlov group tried to make their way back to the Auspiya river and instead made a fatal mistake by descending into a valley of the Lozva river. After 4 weeks the snow that was rushed down the slope of the mountain was simply blown off by the strong winds that are common in the region. This would erase all signs of a natural disaster. However, this theory has its gaps. From what we can tell from the footprints left by the group everyone seemed to descent with relative ease. It is highly unlikely that three people with broken ribs and flail chest would be transportable at all. And here we see several badly damaged men and a woman walk without problems or even help from any of the members of the group. Secondly these men and women were experienced and well trained. They knew that chances of freezing to death is more likely than getting killed by an avalanche. Although the removal of the damaged tent from an exposed mountain side was out of the question, they had to retrieve all their warm clothes and footwear.

And finally if you see on the pictures on February 1st on the left and February 26th (according to Vadim Brusnitsyn who is squatting on the slope with his back toward the camera) on the right you can see part of the hikers gear that kept its vertical position on the slope weeks after the tragedy. Furthermore, the entrance of the tent is clearly elevated. Only the middle portion collapse probably due to hasty escape or weight of snow simply accumulated there.

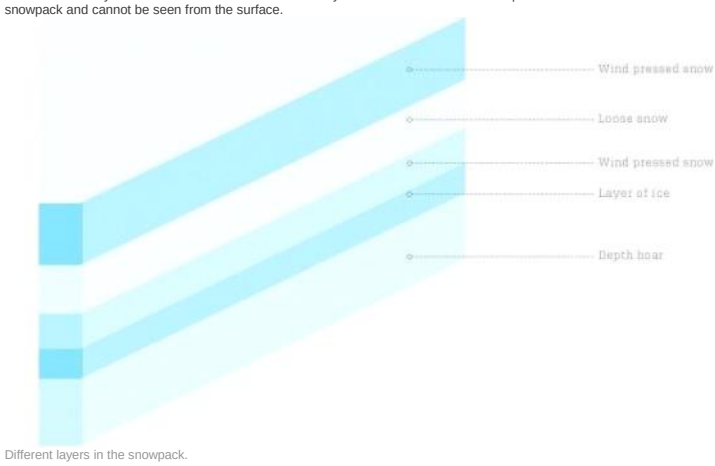
From <https://dyatlovpass.com/theories?flp=1#mansi>

Evidence contradicting the avalanche theory includes:[42][43]

- The location of the incident did not have any obvious signs of an avalanche having taken place. An avalanche would have left certain patterns and debris distributed over a wide area. The bodies found within a month of the event were covered with a very shallow layer of snow and, had there been an avalanche of sufficient

A turn in Tauplitz: How steep do you estimate this backcountry run is?

The weak layer and bed surface
Below is a diagram of what a cross section of a snowpack, with its different layers, could look like. But what is a weak layer and what is a bed surface? Weak layers can be located at several places in the snowpack and cannot be seen from the surface.



Different layers in the snowpack.

Most recurrent weak layers
Nearly any kind of snow can be a weak layer, but in general weak layers tend to be these:

- Faceted snow: very weak, angular and mostly larger grained snow that forms within the snowpack because of higher temperature gradients within that same snowpack. Experts might call it hoar or depth hoar.
- Surface hoar: the name for the feathery frost that forms on a snow surface during cold nights with clear skies. Once buried this hoar layer creates a particularly dangerous weak layer.
- Loose and badly bonded low density snow somewhere in the middle of the snowpack (think of graupel or hail)
- Snowed in icy layer
- Snowed in Sahara sand

What is a bed surface?
In general a bed surface is a layer of relatively hard snow (or ground) on which a slab may slide. In most cases, avalanches descend on a harder and slicker snow surface in the same way the books were sliding in the earlier example. Bed surfaces tend to be:

- Rain crusts
- Sun crusts
- A hard and older snow layer
- Wind packed snow
- Melt-freeze crusts

Besides these, a grass or smooth rock surface can act as a bed surface too.

Evidence contradicting the avalanche theory includes:[42][43]

- The location of the incident did not have any obvious signs of an avalanche having taken place. An avalanche would have left certain patterns and debris distributed over a wide area. The bodies found within a month of the event were covered with a very shallow layer of snow and, had there been an avalanche of sufficient strength to sweep away the second party, these bodies would have been swept away as well; this would have caused more serious and different injuries in the process and would have damaged the tree line.
- Over 100 expeditions to the region had been held since the incident, and none of them ever reported conditions that might create an avalanche. A study of the area using up-to-date terrain-related physics revealed that the location was entirely unlikely for such an avalanche to have occurred. The "dangerous conditions" found in another nearby area (which had significantly steeper slopes and cornices) were observed in April and May when the snowfalls of winter were melting. During February, when the incident occurred, there were no such conditions.
- An analysis of the terrain and the slope showed that even if there could have been a very specific avalanche that found its way into the area, its path would have gone past the tent. The tent had collapsed from the side but not in a horizontal direction.
- Dyatlov was an experienced skier and the much older Zolotaryov was studying for his Masters Certificate in ski instruction and mountain hiking. Neither of these two men would have been likely to camp anywhere in the path of a potential avalanche.
- Footprint patterns leading away from the tent were inconsistent with someone, let alone a group of nine people, running in panic from either real or imagined danger. All the footprints leading away from the tent and towards the woods were consistent with individuals who were walking at a normal pace.

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

How Disney's *Frozen* Led to a Breakthrough in Russia's Dyatlov Pass Mystery

BY MICHELE DEBCZAK

MAY 10, 2021

The abandoned Dyatlov party tent as it was found by searchers.
WIKIMEDIA COMMONS

The journey to Mount Ortorten in Russia's Ural Mountains was supposed to take the hiking group a few weeks. They had no reason to expect otherwise: Most of the party's college-aged members, led by 23-year-old Igor Dyatlov, were experienced skiers and hikers. After completing the journey through the mountainous wilderness, they would have qualified for the highest hiking certification granted in the Soviet Union.

But the hikers never reached their destination. In February 1959, they went missing.

Searchers found the first bodies—the remains of five of the hikers—a few weeks later. They were in a disturbing state: Some were shoeless and nearly naked in the snow. Their well-stocked tent, hundreds of yards away, had been cut open from the inside, as if they had escaped in a hurry.

It took months for the rescue team to find the bodies of the remaining four hikers in a streambed. Their corpses had developed a strange orange hue and several had suffered gruesome injuries. One person was found without eyeballs. Another was missing her eyes and tongue.

Foul play was considered at first, but the clues didn't come

This is not Photoshoped. Sometimes storms will pick up sand from the Sahara. This will cause a future weak layer.

How do you recognize a weak layer?
Weak layers in a snowpack are not visible from the surface, so how do you know if you are dealing with one? The answer is, you dig. This is a lot a work—and you're there to ride powder, not to dig—and recognising and assessing weak layers takes some training and experience. Luckily, in the Alpine countries local avalanche experts do this for you and post their findings in the avalanche forecast.

With the arrival of the avalanche forecast we no longer have to dig ourselves. The experts do that for us.

Summary
Our enemy is the slab avalanche. This avalanche generally consists of dry snow, happens mostly on slopes on shadowed aspects (between west-northwest and east-southeast (WNW-N-ESE)), is an average of 70 meters wide and 50 centimeters thick where the first fracture took place and the angle is usually 38 degrees or more.
For a slab avalanche the next three elements must be present:

- The slope angle must be larger than 30 degrees
- A soft or hard slab
- A weak layer / bed surface

A combination of these three elements is a guarantee for danger. If only one or two of these elements is present the chance of a slab avalanche is very slim. And do not forget, it goes wrong because you are there. Almost all lethal avalanches start due to an external trigger. In most fatal slab avalanches, the skier or snowboarder is the trigger. **You are the trigger!**

From <http://mountainacademy.salomon.com/en/demo/50/conditions-for-a-slab-avalanche>

together. An investigation produced no suspects or motives, and though some bodies were badly injured, there were no signs of a violent struggle. The Soviet Union initially concluded that a "compelling natural force" had caused the nine campers' deaths, but that hardly settled the case.

Amateur detectives put forth alternate explanations. Some victims' clothing was slightly radioactive—a clue, they said, of the Soviet government covering up a nuclear weapon test gone wrong. One theory pointed to an argument over romantic tensions in the group that resulted in a deadly fight. Some even suggested that the hikers were targeted by aliens or a Yeti.

The Dyatlov Pass incident has evaded explanation since it occurred more than 60 years ago. But in early 2021, a study suggested the most compelling theory yet: The Dyatlov team had been driven from their camp and fatally injured by a rare type of avalanche. Experts have long suspected that an avalanche was involved, though critics have argued there were too many inconsistencies in the evidence.

The new report, however, is different. Using computer models inspired by the Disney movie *Frozen*, scientists have come up with a theory that may finally solve the mystery.

A DESPERATE ESCAPE

February 1, 1959, was the last night the hikers spent at the camp, according to diaries recovered from the site. Dyatlov, a radio engineering student at the Ural Polytechnical Institute, had invited colleagues from his university to join him on the trip to Mount Ortorten in the remote northern Urals. Lyudmila Dubinina, Zinaida Kolmogorova, Yuri Doroshenko, Aleksander Kolevatov, Yuri Krivonischenko, Rustem Slobodin, Nikolay Thibeaux-Brignolle, Semyon Zolotaryov, Yuri Yudin, and Dyatlov made up the party. They set off in late January after traveling to their trailhead by train, bus, and sleigh. (Yudin left the trek early after falling ill and became the party's sole survivor.)

After trekking through deep snow and thick pine forests for several days, a storm forced them off their route, and they set up camp on the slope of a mountain called Kholat Syakhl. Whatever happened next caused them to cut through their tent and escape, without proper footwear or clothing, in a howling blizzard.

Investigators knew the hikers understood the danger of being stranded in the wilderness in winter without food or shelter. So why had they died (from hypothermia, in six of the cases) so close to camp? And why had many of them left the tent without taking supplies or even putting on shoes?

An avalanche would answer these questions. If the Dyatlov group had been woken up by snow sliding toward them, they likely would have fled the area as quickly as possible. The scenario is easy to imagine, which is why the theory has endured for so long. But there are many reasons why people have resisted it, the biggest of which is that the searchers saw no signs of an avalanche when they found the Dyatlov camp.

The abandoned tent was torn open and covered in snow, but not buried as it would have been in the case of a typical snowslide. The shelter had been erected on the mountainside at an incline slightly less than 30°—the number usually cited as the minimum needed to start an avalanche. According to evidence from the scene, the crew tried to escape the camp roughly nine hours after pitching the tent. That means there would have been a long delay between the campers possibly destabilizing the snow and any avalanche that did occur.

In addition to these logistical problems, the initial avalanche theory didn't provide satisfying answers to the case's more baffling mysteries. Three of the group members died of traumatic injuries: Thibeaux-Brignolle from a fractured skull, and Zolotaryov and Dubinina from severe chest trauma. A doctor who examined the bodies compared their wounds to what he'd seen in car crash victims. The causes of death didn't align with typical avalanche accidents, which usually kill people by suffocation. And even if an avalanche had driven the party away after battering some of them, that wouldn't explain the radioactive clothing, the sickly orange skin, or the missing eyes and tongue.

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Then, last year, a revised version of the avalanche theory was endorsed by Russia. Following a new inquest, the government concluded that a rare, small slab avalanche had been the catalyst of the Dyatlov Pass tragedy. Slab avalanches occur when a layer of snow close to the surface comes loose from the layer beneath it and rolls down an incline in large chunks. This would have left behind less evidence than a more dramatic event, and the fast-moving snow blocks would have been capable of injuring some campers without smothering them.

Russia's new report was certainly more convincing than a "compelling natural force," but there wasn't much research backing it up. To convince skeptics of the slab avalanche theory, scientists needed to figure out a way to recreate what happened on the night of Feburary 1, 1959.

RECIPE FOR DISASTER

Johan Gaume's impression of the 2013 Disney film *Frozen* differed from most viewers. Where many people saw a light-hearted musical for kids, he saw the potential for a scientific discovery. This makes sense considering what Gaume does for a living: The Swiss scientist studies avalanches and the way they act under different conditions. After watching the animated characters escape from snow falling down a CGI mountain, he started planning a trip to Hollywood.

Gaume met with *Frozen*'s snow effects specialist and got permission to use the actual code used to animate snow in the movie. He worked with Alexander Puzrin, a fellow avalanche researcher from the Swiss Federal Institute of Technology, to apply an adapted version of the code to the Dyatlov Pass incident. Their findings were reported in a study published in the journal *Communications Earth & Environment* in January 2021. With information from crash tests General Motors conducted on cadavers in the 1970s, the researchers demonstrated how a slab avalanche could cause traumatic injuries. Their computer simulation showed that a block of ice smaller than an SUV would have been capable of breaking the bones of the Dyatlov campers while they slept on their backs. The fractures wouldn't necessarily

have caused instant death, which would explain how the injured made it so far from the camp—likely with help from their luckier tent-mates—before succumbing to the damage.

The study also calculates how a type of wind known as katabatic wind may have triggered the slab avalanche hours after the group set up camp. There was no snowfall recorded in the area the night the party left their tent, so something else must have added pressure to the mountainside for an avalanche to occur. Katabatic winds are fast-moving, downward gusts propelled by gravity. Such winds could potentially transport enough snow to cause what looks like a spontaneous avalanche. This would have been possible even with the site's relatively shallow incline. Though 30° is considered the threshold for avalanches, snowslides have been known to occur at lesser angles. Some data supports avalanches happening at close to 15° under the right conditions.

The base layer of snow discovered beneath the camp consisted of something called depth hoar, or sugar snow. These large, grainy snow crystals don't adhere easily to each other. In other words, the conditions at the Dyatlov campsite may have been the perfect recipe for a lethal avalanche.

THE MYSTERY ENDURES

Gaume's and Puzrin's simulations may solve the problems of the angle, the delay, and the traumatic injuries often cited by critics of the avalanche theory. But other mysteries of the Dyatlov Pass incident are harder to run through a computer model. Many questions still surround the tragedy: Why were the bodies discolored? Why were some missing eyes and a tongue? Where did the radiation on their clothes come from?

Many of the more unusual elements of the case can likely be explained by the victim's exposure to the elements. The hikers described as having orangish skin were found months after their disappearance, and they may have started to mummify. The length of time they were outside would also explain why soft tissue was missing from some of their faces. The eyes and tongues of dead bodies are easy pickings for scavengers.

The radiation may be the most controversial detail and the hardest one to decipher. One theory states that the thorium in the gas lanterns they brought with them was powerful enough to make their clothes slightly radioactive. It's also possible that the trace amounts resulted from the bodies laying in direct sunlight for months.

We may have a possible explanation for how the Dyatlov party perished, but how they spent their last moments alive is still unclear. What happened in those hours or days between the avalanche and their tragic deaths is a question that will likely never be fully answered—and this new study doesn't attempt to. As the authors write, "we believe that this will always remain an intrinsic part of the Dyatlov Pass mystery."

From <https://www.mentalfloss.com/article/645349/disneys-frozen-dyatlov-pass-mystery-breakthrough>

Shocking new theory of the Dyatlov Pass Incident - the creepiest case in Russian history!

Archive photo

- 191
- 1

Fifty-nine years ago in the Urals, a team of 9 ascended ‘the mountain of the dead.’ Only one came down. The chilling details and inexplicable circumstances of their disappearance have become the stuff of nightmares and Hollywood fiction. Now, one Russian blogger believes he’s closer to the truth than we have ever been before.

The nature of the eventual discovery shocked the science community and investigators alike. The bodies had been discovered at different sites and at different times; some had signs of severe internal trauma, others showed traces of radiation. Half the bodies were naked or wearing each others’ clothes. And there was no object in the vicinity that could have caused any of that to happen, as concluded by the Soviet investigation.

Theories ranged from homicidal psychosis to aliens and government experiments. And they're showing no signs of slowing down - just look at this movie trailer for 'The Devil's Pass'. And it's not even the only horror movie to come out of Hollywood that deals with the subject matter.

Now, nearly 60 years later, Russian blogger Valentin Degterev - who manages a journal about the paranormal and unexplained - believes the deaths of the Dyatlov group were caused by a small-yield missile that hit the side of the rock. Evidence of a 30-meter wide crater, he says in his online journal, can be seen on closer inspection of the satellite images of the area and is situated about three km from the site of their tent.

“The granite was melted to basically red glass. I think the temperature at the moment of impact was very high. This is clearly visible on the satellite images.”

He continues: “Having been woken up by the shockwave, [the hikers] were blinded by the bright light, probably suffering temporary loss of vision. This explains their sudden escape and descent into the woods.”

The findings are even more strange, given Degterev’s belief that the firing of the missile had not been a test.

“The missile had probably gone off-course and changed direction, hitting the mountain face accidentally.”

The blogger states that, had there been no radiation found on the clothes, his other theory would’ve been that it was a meteor impact.

“I think the place needs a thorough look when spring arrives. If radiation is indeed found, and if there is an impact crater, then the mystery of the Dyatlov

In one speculation, the campsite fell within the path of a Soviet parachute mine exercise. This theory alleges that the hikers, woken by loud explosions, fled the tent in a shoeless panic and found themselves unable to return for supply retrieval. After some members froze to death attempting to endure the bombardment, others commandeered their clothing only to be fatally injured by subsequent parachute mine concussions. There are indeed records of parachute mines being tested by the Soviet military in the area around the time the hikers were there.[155] Parachute mines detonate while still in the air rather than upon striking the Earth's surface and produce signature injuries similar to those experienced by the hikers: heavy internal damage with relatively little external trauma. The theory coincides with reported sightings of glowing, orange orbs floating or falling in the sky within the general vicinity of the hikers and allegedly photographed by them,[156] potentially military aircraft or descending parachute mines. This theory (among others) uses scavenging animals to explain Dubinina's injuries.[157] Some speculate that the bodies were unnaturally manipulated, on the basis of characteristic livor mortis markings discovered during an autopsy, as well as burns to hair and skin. Photographs of the tent allegedly show that it was erected incorrectly, something the experienced hikers were unlikely to have done.[158]
A similar theory alleges the testing of radiological weapons and is based partly on the discovery of radioactivity on some of the clothing as well as the descriptions of the bodies by relatives as having orange skin and grey hair. However, radioactive dispersal would have affected all, not just some, of the hikers and equipment, and the skin and hair discoloration can be explained by a natural process of mummification after three months of exposure to the cold and wind. The initial suppression by Soviet authorities of files describing the group's disappearance is sometimes mentioned as evidence of a cover-up, but the concealment of information about domestic incidents was standard procedure in the USSR and thus far from peculiar. And by the late 1980s, all Dyatlov files had been released in some manner

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

ILITARY TEST WITH RADIOSONDES

According to Nagaev the hikers launched the sondes themselves but then something went wrong.
Vladimir Nagaev, a veteran of the KGB and the Federal Security Service of Russia, head of the faculty of the Military Medical Institute and candidate of Medical Sciences published a trilogy in 2018, that reveals the mechanism of death of the Dyatlov group - "The half-life of the Khibina group" (vol.1 vol.2 vol.3).
The Dyatlov group died while participating in a scientific experiment of national importance. They were launching special-purpose radio probes in an unpopulated area. Under the chloroprene shell of the balloon was a gas with short-lived radioactive isotopes - five-sulphur phosphorus. Meteorological rockets are known to have been used in the region of Mt. Otorten. At some point a missile must have hit one or more radiosondes and spilled the radioactive content.
After a certain time, some highly toxic chemicals (sulphur compounds for example) that enter a living organism are oxidized and quickly disappear from the body. It is proved that the process of oxidation of hydrogen sulphide in the blood occurs very quickly. About 99% of the hydrogen sulphide is gone from the body within 3-5 minutes. A toxic chemical element can be detected in the blood only if the rate of hydrogen sulphide intake equals or exceeds the oxidation rate. The final oxidation products that remain after death, such as sulphates, quickly decompose and cease to exist. A coroner may not detect the toxic chemical. However, traces of its effects remain in the organs of the corpse, for example, pulmonary edema, expansion of the borders of the heart, mainly the right half, fullness of organs, liquid dark blood. The Dyatlov group had signs of damage to internal organs by toxic chemicals, including organophosphorus compounds: pulmonary edema, changes in the borders of the heart (mainly the right half), plethora of organs, liquid dark blood.
Remember the sincere reaction of the criminal prosecutor Ivanov about the death mechanism of the Dyatlov group: "It was as if an air balloon had burst." As a result of the integrity of the shell of the balloon, radioactive gas (five-sulphur phosphorus) was in the environment with a radius of the affected zone of not more than 6 meters (20 ft). Under conditions of high humidity (snow mist), as well as ionization of the environment caused by radiation, began the formation of highly toxic sulphur dioxide gases, including hydrogen sulphide.
Search for the missing group was deliberately delayed. First bodies of the Dyatlov group were discovered almost a month after their death. This period corresponds to two half-lives of the radioactive isotope phosphorus-32. In favor of this theory is the skin of the dead reported by many witnesses to be of a dark brown color which is characteristic for phosphorus poisoning.

From <https://dyatlovpass.com/theories?flp=1#mansi>

SECRET LAUNCHES

The celestial phenomena that accompanied the Incident almost convinced everybody that the skiers' lives had been sacrificed to the new Soviet idol – the rocket. In the criminal case, there is a radiogram of particular interest, sent to the headquarters of the search party:
RADIOGRAM TO SULMAN
3/2-59 yr. — 18:30
[…] the main mystery of the tragedy remains the exit of the entire group out of the tent […]
The reason could be any extraordinary natural phenomenon, such as the flight of a meteorological rocket, OBSERVED ON THE 1st OF FEBRUARY IN IVDEL and by Karelin's group [stop]
Tomorrow we will continue the search [end]
A vague evidence of the “rocket version” once managed to reach Vladimir Korotaev:
“Many years later, I talked to some scientists from Korolyov's circle, the office of academician Rauschenbach, to be exact. It was hinted to me that, so they say, there were some tests being done.” All the requests sent to various launch sites by researchers, however, yielded no results: there had been no rocket launches in the Soviet Union from the 1st to the 2nd of February. Perhaps, the relics and stigmas of the rocket cult can be found in the Sverdlovsk taiga? Since the time of the search party operation, there were rumors of a secret training ground located somewhere near the site of the accident. Locals still relate legends of meetings with military patrols in the middle of the taiga, holes in the hillsides sealed with concrete, and the sound of a train that comes from under the ground in the woods.

Kizilov Gennadiy Ivanovich, a journalist from Yekaterinburg, is the first one and most avid advocates of the staged crime scene theory. He points out some major inconsistencies and conflicting testimony of witnesses and rescue team and says that this speaks of something much more sinister that sloppy investigation and that Dyatlov group

other theory would've been that it was a meteor impact.

"I think the place needs a thorough look when spring arrives. If radiation is indeed found, and if there is an impact crater, then the mystery of the Dyatlov Pass can be considered solved."

But can Degterev's theory explain everything?

What originally happened

Archive photo

The group, led by 23-year-old Igor Dyatlov, hadn't returned from their hiking trip to Otorten mountain in the winter of 1959. Later investigation showed that on Feb. 2 the tent the party had stayed in was ripped from the inside, with its inhabitants wandering into the night wearing only the clothes they wore to bed. All of the bodies were discovered weeks later - some of them were wearing the others' clothes, soaked in high doses of radiation.

Where it gets really bizarre is that some of the bodies had shown only signs of hypothermia (hence the theory on why they were naked), while others found deeper in the woods had shown signs of massive internal trauma: bleeding, fractures, and broken skulls. One member of the group, Lyudmila Dubinina, was missing her tongue.

READ MORE: The Dyatlov Pass Incident location draws in tourists

The Russians didn't know what to do with all of this, and shut the investigation after finding no reason to suspect foul play. The final report from the Soviets posited that the group was killed by an "unknown compelling force."

The Russians didn't declassify the documents until the 1990s, which, understandably, has fueled conspiracy theories ranging from nuclear tests to the presence of aliens and paranormal creatures.

Various theories

Archive photo

The new theory by Degterev has received mixed reactions. Many of the commenters responded positively to the alleged revelation; others, however, remembered other versions that, in their minds, deserve closer inspection. There are over 60 known versions of what transpired in the blizzard.

What the science tells us for sure is that the nine skiers could not have sustained their injuries from any object found in the vicinity.

One of the most interesting theories revolves around a sacred cave of the local Mansi tribe, which they use for ritual sacrifice. The tribe, apparently, does

Kizilov Gennadiy Ivanovich, a journalist from Yekaterinburg, is the first one and most avid advocates of the staged crime scene theory. He points out some major inconsistencies and conflicting testimony of witnesses and rescue team and says that this speaks of something much more sinister that sloppy investigation and that Dyatlov group have witnessed some secret trials or experiments that no one was supposed to see, and were deliberately liquidated by military forces. Kizilov concluded that the whole rescue operation was a farce and suggested that, a few days prior to the arrival of the search parties, "stage workers" were on the scene to prepare what was to be found by the rescuers. In order to avoid the disclosure of the secret facilities and to hide their crimes, the military and KGB removed the dead bodies from the real place of their death and brought them to ridge at 1079. Entries in the diaries of the group describing their route were then deliberately edited during the course of the investigation.
Some rescuers and commentators say the tent was pitched in exactly the right manner, but others say that, to pitch the tent on the slope of the mountain when the trees were so close by was not the mark of experienced climbers, because it would have been exposed to the strongest of the gales in that area. They say the tent was pitched elsewhere but was then moved to the slope by unknown people who wanted to create confusion.
Read short summary by Gennadiy Kizilov himself →
A 2008 conference at the Ural State Technical University, together with the Dyatlov Group Memorial Foundation, decided military testing was to blame. The Federal Security Service responded that all those involved in the case had long since died.

From <https://dyatlovpass.com/theories?flp=1#rocket>

not like to share the mountain with outsiders, and when the Dyatlov group allegedly robbed their sacrificial cave of its various items, hunted them down in the night and killed them. This theory, however, is more word of mouth than anything else.

Others argue that the chaotic and violent deaths could have been the result of a strong and toxic moonshine-type beverage the group had procured from the local hunters (possibly also used ritualistically). The stuff could easily have caused psychedelic hallucinations, it is believed. This would have accounted for the haphazard escape and the group's apparently inexplicable behavior.

There is still the fact of the tent ripped from the inside, as well as the absence of any footprints outside the tent that did not belong to the members of the Dyatlov group. It really does appear that the group had shot out of the tent, running in different directions. The mystery of what really happened persists.

From <https://www.rbth.com/history/329574-dyatlov-pass-russia-alien-conspiracy>

Infrasound

Saturday, July 3, 2021 7:27 PM

Another hypothesis popularised by Donnie Eichar's 2013 book *Dead Mountain* is that wind going around Kholat Syakal created a Kármán vortex street, which can produce infrasound capable of inducing panic attacks in humans.[53][54] According to Eichar's theory, the infrasound generated by the wind as it passed over the top of the Holatchahl mountain was responsible for causing physical discomfort and mental distress in the hikers.[53] Eichar claims that, because of their panic, the hikers were driven to leave the tent by whatever means necessary, and fled down the slope. By the time they were further down the hill, they would have been out of the infrasound's path and would have regained their composure, but in the darkness would have been unable to return to their shelter.[53] The traumatic injuries suffered by three of the victims were the result of their stumbling over the edge of a ravine in the darkness and landing on the rocks at the bottom.

From <https://en.wikipedia.org/wiki/Dyatlov_Pass_incident>

Infrasound: The Fear Frequency

Image: Flickr/Nils Rinaldi via CC by 2.0

Infrasound is sound below 20 Hz, lower than humans can perceive. But just because we don't consciously hear it, that doesn't mean we don't respond to it; in certain individuals, low-frequency sound can induce feelings of fear or dread or even depression.

They may even be responsible for some ghost sightings, but we'll get to that in a second.

What causes infrasound? Anything from earthquakes to meteors to ocean waves to fans to old, vibrating pipes in your attic. The occassional nuclear explosion, too (we actually use infrasound to detect them). Even certain animals produce infrasound to communicate with one another, like whales and elephants.

"Elephants, in particular, produce infrasound waves that travel through solid ground and are sensed by other herds using their feet, although they may be separated by hundreds of kilometres."

Animals also react to infrasound. This may be one of the reasons they're so quick to react when a natural disaster is looming, such as an earthquake.

In humans, infrasound can cause a number of strange, seemingly inexplicable effects: headaches, nausea, night terrors and sleep disorders. But low-frequency sound can do even more than that.

Infrasound and Ghosts

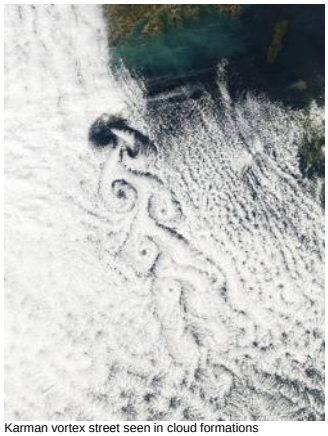
If infrasound hits at just the right strength and frequency, it can resonate with human eyes, causing them to vibrate. This can lead to distorted vision and the possibility of "ghost" sightings. Or, at least, what some would call ghost sightings. Infrasound may also cause a person to "feel" that there's an entity in the room with him or her, accompanied by that aforementioned sense of dread.

This bizarre phenomenon has been documented on multiple occasions. For example, one night while working at a "haunted" laboratory, Vic Tandy of Coventry University experienced feelings of anxiety, and even witnessed a dark "blob" out of the corner of his eye. The hairs on the back of his neck stood up. But when he turned to face the strange figure, he found nothing there.

The next day, Tandy saw the dark figure again, and he also noticed that the fencing foil he was working with — clamped to a vice — was inexplicably vibrating. So he decided to investigate.

As it turned out, there was a silent fan in the laboratory. The fan was giving off low-frequency sound waves at 18.98 Hz, right around the resonant frequency of the human eye. It had also created a standing wave in one area of the room, which is what caused the foil to vibrate.

INFRASOUND



Karman vortex street seen in cloud formations
off the coast of Jeju, South Korea

As part of technological theory there have been suggestions that an infrasound might have been responsible for sudden unpleasant feelings among the hikers. New research into rare weather phenomena has suggested that a 'perfect storm' could have struck the campers in the night, panicking them so much that they would have fled the tent, and fallen victim to the brutal cold before they came to their senses. Donnie Eichar, who spent five years researching the incident, and undertook the dangerous trek himself, believes that a wind phenomenon called a Karman vortex street could have produced a terrifying, powerful sound which is proven to induce irrational fear in humans. Due to the unique topography Dead Mountain (all mentions of Dead Mountain instead of Mountain of the Dead refer to Donnie Eichar's book), which is a perfect dome shape, the fierce winds that blow through the pass could have been warped as they struck the blunt surface. The wind, which was blowing in a straight line, would be twisted into a series of small but powerful tornadoes which would tear down either side of the pass. The tornadoes, spinning fast enough to tear the roofs off buildings, would have created a deafening noise, even if they missed the tents, as Eichar's theory suggests. But under certain circumstances they could also produce a more subtle and terrifying phenomenon known as infra-sound. The opposite of ultrasound, infra-sound is a type of vibration in the air which has a frequency so low it cannot be picked up by the human ear. But a succession of studies has shown that it can have marked effects on the human body, including loss of sleep, shortness of breath, and extreme dread. Eichar, backed by scientists at the National Oceanic and Atmospheric Administration in the U.S., believes that the combination of the effects on infra-sound, the deafening noise of tornadoes, and the claustrophobic, pitch black tent could unseat even the most steady-minded adventurer.

Though the science sounds incredible, Eichar believes it is the only logical explanation for the situation in which the bodies were found. Although Dead Mountain is so remote and inaccessible that the weather phenomenon cannot be directly observed there in the winter, it has been observed in similarly-shaped locations, including the rock of Gibraltar and an array of other peaks.

In the right conditions, a flow of wind can be directed in such a way that it creates a vortex. These vortices are created in sequences by the moving air, and travel away in a fan shape. With sufficiently high winds and the correct angles, these vortices of wind could form powerful tornadoes, with the potential to emit large amounts of infra-sound, as well as cause damage by themselves. Eichar's theory supposes that the Dyatlov hikers' tent was directly downwind from the peak of the mountain, and far enough away that the whirling winds themselves did not strike the tent. But they would have been close enough for the effects to be felt – and heard.

Infrasound, vibrations in the air which are too low for humans to hear, was first observed in the 1960s. The waves, defined as anything below human hearing range of 20 hertz (the upper range is around 20,000), can be made by man-made objects as well by natural phenomena. Vladimir Gavreau, a French scientists, first noticed the effect of infra-sound on his body thanks to a badly-designed fan. When his lab assistants began suffering nausea for no obvious reason, he discovered that the discomfort was cause by the motor of a large fan, which was emitting the sound waves. A 2003 study in the UK found that a fifth of people exposed to infrasound reported feeling anxious, scared or unable to breathe properly. Another theory holds that the waves are linked to ghost sightings. Eichar's hypothesis for the Dyatlov pass holds that the whirling tornadoes would have been able to produce infra-sound in sufficiently high levels to induce panic in the slumbering hikers, after which the Siberian weather did the rest.

According to Tandy, "When we finally switched it off, it was as if a huge weight was lifted."

The strange vibrations, optical illusions, and depressed feelings were due to infrasound, and had given the laboratory the reputation of being haunted. But it was all because of a vibrating fan.

Anyway, is infrasound an explanation for all ghosts sightings and supernatural activity? Of course not. The infrasound connection is ultimately just a theory. But if you ask me, the fact that low-frequency sound can affect humans in various ways is extraordinary in and of itself.

From <https://www.strangerdimensions.com/2013/06/21/infrasound-the-fear-frequency/>

Mansi

Saturday, July 3, 2021 7:27 PM

MANSI

Vladimir Korotaev and Mansi questioned in the case

Since there were no prison breakouts from the local Ivdelsky corrective labor colony, the next in line suspects for the culprit were the indigenous Mansi people living in Khanty–Mansia, an autonomous district within Tyumen Region in Russia. At the second week of the investigation the prevalent theory was that the evil Mansi hunters who often camped in Mount Kholat Syakhl committed the crime on the night of the February 1. The information we have on the Dyatlov Case can be mostly attributed to the work of St. Petersburg investigator Evgeniy Vladimirovich Buyanov. What made native Mansi people strong candidates to be the perpetrator:

- There was Mansi chum (definition) North-East from where Dyatlov group pitched their tent on the night of January 30th. A trail leading to the chum was passing 200 feet from where Dyatlov group camped. So they had an opportunity. read more »
- Mansi knew the area and definitely had the skills to hide their ski tracks and hunt the hikers into the woods. The MO (method of operation) is so unusual that can be easily attributed to somebody very used to hunt down and kill animals.
- Mansi are proud and secluded people. They consider these mountains their hunting grounds. If the Mansi told them that they should be there, and the hikers took it the wrong way a verbal confrontation could easily escalate into physical.
- Ethnographers knew of Mansi holy places scattered across the Northern Urals - mysterious stones and pagan prayer houses. In general, the mysticism and unknown made Soviet atheist prosecutors suspicious and fueled their desire to blame the crime on the Mansi. Common belief was that nothing not endorsed by the official law enforcement can lead to something good. It doesn't come as a surprise that the first and only coherent hypothesis in the course of the formal investigation is the involvement of Mansi hunters in the hikers' death.
- Rumors were circulating of a woman geologist that was tied and thrown in the lake in the 30s. The motive was desecration of Mansi shrines. We don't know if this is fiction and/or what exactly happened. There are no documents introduced to backup this story.

Inconsistencies:

- Even if the story about the geologist were true there hasn't been a crime committed in the area for 3 decades. Quote from a witness report by Pavel Makhtiyarov (Mansi native): *"Everyone goes to this mountain: Russian men and women, Mansi. There is no special prohibition to hike the mountain."*
- From the interrogation reports on the religions hypothesis is clear that there are no sacred places in the surroundings of the Kholat Syakhl. This theory was based on misinformation where the ritual objects and places significant for the Mansi are, complete lack of understanding how the Mansi practice their religion, and desire to have a politically correct hypothesis in an atheist society. It would be very convenient to have yet another use case what how religion can affect your mind and what crimes can be done in the name of a false idols and/or causes.
- Hikers property was not stolen after they were chased down the mountain. Life in Siberia is harsh. Mansi could easily make the tent and footsteps disappear never to be found and loot the stuff that was inside - boots, clothes, food, alcohol, money, pens and notebooks. Some of these things their kids never had. Even if the cameras and flashlights were not of a particular interest because they didn't have where to buy films and batteries, the alcohol they knew very well. The alcohol was actually considered a better currency that money among the tribes. Money found in the tent was 1685 rubles plus 310 rubles on Rustem Slobodin. 2000 rubles were impressive sum not just for the indigenous Mansi. This was the budget for the whole trip. For three weeks Dyatlov group property remained untouched in the ruins of their tent.

However, this contradiction was not of a considerable bother for the investigators, at least not in the first stage of the investigation. The temptation to blame the death of hikers on the local Mansi was too great. Several young Mansi hunters were arrested and interrogated in March 1959. It's hard to say what would have been the fate of these people, because the ability of the Soviet "machine of justice" to produce the necessary evidence is confirmed by the entire history of its existence, but the investigation in the second half of March made a surprising turn.

Krivonischenko camera

Krivonischenko camera

Khanty and Mansi

people

See Article History

Alternative Titles: Hanti, Khant, Khants, Ostyak

Khanty and Mansi, Khanty formerly **called Ostyak, Mansi** formerly **called Vogul**, western Siberian peoples, living mainly in the Ob River basin of central Russia. They each speak an Ob-Ugric language of the Finno-Ugric branch of the Uralic languages. Together they numbered some 30,000 in the late 20th century. They are descended from people from the south Ural steppe who moved into this region about the middle of the 1st millennium AD.

Their present-day territory lies to the east of the Urals along the Ob River and its tributaries, from the Urals and a narrow belt of foothills to a vast central lowland that slopes gently to the Gulf of Ob. Some of the territory, both highlands and lowlands, is covered by vast swamps grown over with moss, peat, sedge, and small marsh pine. The climate is severe: winter lasts for six months, producing snow accumulations of 6.5 feet (2 m); there is flooding in summer as the rivers—the Ob, the Irtysh, and their tributaries—form a vast expanse of water.

The Khanty and the Mansi have many similar features, including habitat, economy, organization, and a number of traditions. Their principal sources of subsistence are hunting (traditionally with bows and arrows and spears, later with guns), trapping, and fishing (with nets, weirs, seines, and traps); reindeer herding (mostly by the Khanty) was usually a subsidiary occupation and was probably a result of contact with the neighbouring Nenets in the 15th century. The Ob-Ugrians traditionally either were nomadic or had settled dwellings according to their subsistence pattern. At summer hunting sites they generally lived in tents; their permanent winter homes were wooden huts. Boats, skis, and some horse- or reindeer-drawn sleds provided transportation.

00:0600:30

The Khanty and the Mansi were formerly divided into tribes consisting of local territorial groupings. Each individual, regardless of tribe, belonged to one of two phratries and was expected to marry outside his phratry. A phratry consisted of several clans, each with a name or names of an ancestor or ancestor hero, a sign or brand to identify clan property, internal organization, an ancestor cult, and a sacred site.

Of all the peoples of northern Siberia, only the Khanty and Mansi had stringed instruments: a type of five-stringed zither and a one- or two-stringed, bowed instrument (its bow made like a small archer's bow strung with horsehair). The strings of both types were made from elk sinews.

Under Soviet administration the Khanty and the Mansi were settled on collective farms. In addition to the development of the aboriginal economy, such new activities as animal husbandry, fur farming, and agriculture were introduced.

From <https://www.britannica.com/topic/Khanty#ref272005>

Doroshenko looking at Mansi markings

Slobodin looking at Mansi markings

From <https://dyatlovpass.com/theories?flp=1#mansi>

Yeti

Saturday, July 3, 2021 11:14 PM

The Profound Awfulness of Discovery's Russian Yeti: The Killer Lives

by Daniel Loxton, Jun 01 2014

Discovery Channel "documentary", **Russian Yeti: The Killer Lives** makes a sensationalist hash out of a genuine historical mystery— the tragic deaths of nine hikers in the Ural mountains in February of 1959. Known as the "Dyatlov Pass incident", this unsolved cold case has unusual aspects that give it something of an air of the inexplicable, leading to the rise of conspiracy theories and paranormal speculations. Notably, though the bodies of the hikers were eventually recovered by a search party, they were found scattered over a large area in states of partial undress, as though they had fled their tents in the night in a panic. Perhaps, some speculate, they were running from someone—or something? Cue X-Files theme.

I shouldn't snark. It's ghoulish to make hay from the untimely deaths of other people—in this case, people who have surviving loved ones today. But mystery-mongering television programs have rarely found a tragedy they weren't willing to exploit—and distort. Russian Yeti: The Killer Lives caps a marathon of Discovery monster hoaxes (both of their infamous and profitable mermaids hoaxes and last year's Megalodon hoax are playing again earlier today). In this program, hosts Mike Libecki and Maria Klenokova set out to solve the Dyatlov Pass incident—or rather, to pretend on air that it had something to do with the Yeti.

For a detailed critique of the program's claims, see this useful analysis over at Doubtful News. Short version: we don't know what happened to those poor people, but it's easy to posit completely plausible explanations which fit the facts. The party may well, for example, have fled from what they believed was an imminent avalanche.

Tragic, plausible scenarios are in ready supply. They're just not good television.

You know what is good TV? Monsters. Huge, terrifying, tongue-eating monsters. (Much is made of the assertion that one hiker was missing part or all of her tongue — plausibly bitten during a fall, skeptics suggest, though her body was also found with other presumably post-mortem soft-tissue damage — almost inevitable after weeks of exposure in the forest.) Never mind that we have no particular reason to suppose that the Dyatlov Pass case involves Yetis in any respect (nor, for that matter, aliens, vampires, or griffins). Never mind that Yetis are probably best thought of as a modern myth, as Don Prothero and I discuss in our book Abominable Science!

When it comes to the paranormal, media producers are delighted to untether themselves from all responsibility. For all the investigative posturing of programs like Russian Yeti: The Killer Lives, the producers will sacrifice anything— facts, plausibility, dignity, a respected television brand — in the pursuit of a ratings monster.

How can you construct a two-hour special about Yetis around a case that has nothing to do with monsters at all? How can such vivid tapestries be woven from such insubstantial stuff? Tabloid television's traditional filler techniques are the pregnant question, the bald declaration, and the provocative non sequitur. Russian Yeti: The Killer Lives makes generous use of all three.

"When I found out one of the students was missing a tongue immediately I knew this was not caused by an avalanche. Something ripped out the tongue of this woman," Libecki flatly declares near the beginning of the program. Turning to a Sovie-era Yeti expedition, the narrator asks ominously, "why do so many files related to the expedition remain classified?" I don't know, because the show neither explains it nor demonstrates that any such files are classified at all. Citing one man's decades-old recollection of having seen a military-style boot cover (a gaiter) in the vicinity of the disaster, the show leaps to the claim that "Somehow the military reached he crime scene before the search party. Yet there is no official record of any military presence in the area when the hikers died— begging the question, was the yeti expedition actually ended?" Begging the question indeed.

This show about Russian history declines to interview any Russian historians. Instead we're treated to interviews with cryptid proponents Jeff Meldrum and Igor Burtsev. But this sort of cable mystery-mongering does cryptozoology few favors. Burtsev complains that the production came to him with a preconceived agenda:

I was interviewed by [Russian Yeti: The Killer Lives director] Neil Rawles too. I understood that he was making a program to fit the solution of the puzzle under the ready answer. And he tried to get from me the same answer about fault of the yeti in group's death. For this he was shooting me for many times asking only one question: could be yeti a reason of the death? But I couldn't agree and rejected that…

Frame №17 from Thibeaux Brignolle camera

The central showpiece of the program is a black and white still photograph showing a dark, unidentified figure standing in the trees. It is introduced with stark onscreen text: "The following image is one of the last photos taken by the hikers. It is being shown on television for the first time." This picture is presented as evidence that a Yeti was stalking the doomed party through the woods— their inhuman killer caught on film. What are we to make of this "extraordinary photographic evidence"?

To begin with, it doesn't look much like a Yeti. With its short, rather thin arms, it looks a lot like a person in a coat. Its very lameness as Yeti evidence may be the best sign of its possible authenticity— authenticity as a photograph taken during the expedition, that is. (Probably a photograph of a member of the party.)

But the faked footage and invented on-air "scientists" of previous Discovery / Animal Planet hoax "documentaries" leave us little choice but to consider other, more cynical possibilities when viewing programs of this type on Discovery's networks. Could the photo have been created for the production? How much of this "documentary" was simply made up from whole cloth? Libecki appears to be an actual person, at least — unlike "Dr. Paul Robertson" of Mermaids: The Body Found and Mermaids: The New Evidence, who was a fictional character played by Canadian game designer Dave Evans. (For more, see my 2013 Junior Skeptic story on mermaids inside Skeptic Vol. 18, No. 3.)

"No doubt it's one hundred percent real," Libecki says of the haunting photograph, explaining that it was included within the original, uncut negatives. Yet such is Discovery's tattered credibility on such topics that we can't take even the simplest facts for granted.

The rough cut I saw ends with the disclaimer, "This program contains elements of dramatization." Yes— but how many? Reading this and thinking of Mermaids: The Body Found's vague, blink-and-you'll-miss-it disclaimer that "certain events in this film are fictional," I can only reflect on the damage Discovery's phenomenally successful hoaxes have done to their once trusted nonfiction brand— at least for me.

From <https://dyatlovpass.com/theories?flp=1#teleportation>

The **Yeti** (/ˈjɛti/),[1] also known as **Meh-Teh** in Himalayan folklore, is an ape-like creature purported to inhabit the Himalayan mountain range in Asia. In western popular culture, the creature is commonly referred to as the **Abominable Snowman**. Supposed evidence of the Yeti's existence include anecdotal visual sightings, disputed video recordings, photographs, and casts of large footprints. Some of these are speculated or known to be hoaxes.

Folklorists trace the origin of the Yeti to a combination of factors including Sherpa folklore and misidentified fauna such as bear or yak.[2] Mainstream science has largely discounted the Yeti's existence for these reasons.[3]

Much like Bigfoot, a similar alleged creature said to inhabit North America, the Yeti has become an icon of cryptozoology and a part of modern popular culture.[4]

Alleged Yeti footprint found by Michael Ward and photographed by Eric Shipton taken at Menlung Glacier on the 1951 British Mount Everest reconnaissance expedition with Edmund Hillary in Nepal

Similar entities	• Bigfoot • Yeren • Almas • Yowie
Folklore	Cryptid
Other name(s)	Abominable Snowman
Country	• Nepal • Bhutan
Region	Asia

Yeti

From <https://en.wikipedia.org/wiki/Yeti>

Yuba County Five

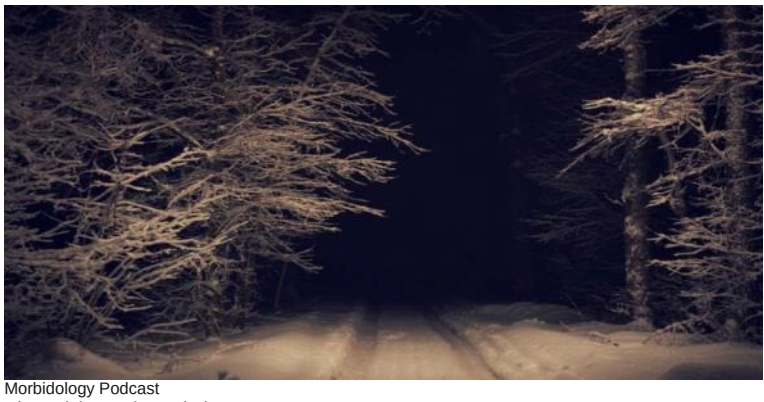
Saturday, July 3, 2021 11:17 PM

The **Yuba County Five** were all young men from Yuba City, California, United States, all with mild intellectual disabilities or psychiatric conditions, who attended a college basketball game at California State University, Chico on the night of February 24, 1978. Four of them—Bill Sterling, 29; Jack Huett, 24; Ted Weiher, 32; and Jack Madruga, 30—were later found dead; the fifth, Gary Mathias, 25,[1] has never been found.[2]
Several days after their initial disappearance, the group's Mercury Montego was found, abandoned, in a remote area of Plumas National Forest on a high mountain dirt road that was far out of their way back to Yuba City. However, investigators could not determine why the car was abandoned, as it was in good working order and could easily have been pushed out of the snowpack it was in. At that time, no trace of the men was found.
After the snow melted in June 1978, four of the men's bodies were found in and near a trailer camp used by backpackers as shelter deep in the forest, 20 miles (32 km) from the car.[2] Only bones were left of the three bodies in the woods, a result of scavenging animals; but the one in the trailer, Ted Weiher, had apparently lived for as long as three months after the men were last seen, starving to death despite an ample supply of food and heating materials nearby. Weiher was missing his shoes, and investigators found Mathias' own shoes in the nearby woods, suggesting Mathias also survived for some time beyond the last night they were seen alive.
A witness later came forward, a local man who said he had spent the same night in his own car a short distance away from where the Montego was found after suffering a mild heart attack trying to push it out of the snow. This witness told police that he had seen and heard people around the car that night, and twice called for help, only for them to grow silent and turn off their flashlights. This, and the considerable distance from the car to where the bodies were found, has led to suspicions of foul play.

From <https://en.wikipedia.org/wiki/Yuba_County_Five>

The Strange Disappearance of The Yuba County Five

In 1978, five mentally disabled men abandoned their car in the Yuba County wilderness & vanished without a trace. Months later, four of them would be found. What forced them to abandon their car and wander into the wilderness to their deaths?



Morbidology Podcast

The article continues below

Morbidology is a weekly true crime podcast created and hosted by Emily G. Thompson. Using investigative research combined with primary audio, Morbidology takes an in-depth look at true crime cases from all across the world.

On the night of the 24th of February, 1978, a group of five young men – who were all a part of a program for the mentally handicapped – attended a college basketball game at California State University, Chico. They were: Jack Madruga, 30, William Sterling, 29, Ted Weiher, 32, Gary Mathias, 25, and Jack Huett, 24, all from the Marysville area in California. The group of men had been anticipating their Special Olympic basketball tournament that was scheduled for the very next night in Sacramento. They planned on attending the college basketball game to get them enthusiastic for their own game. Before they left, they neatly laid out their basketball jerseys on their beds. If they won their game, they got a trip to Disneyland in California.

MISSING—Jack Huett, William Sterling, Jack Madruga, Theodore Weiher, Gary Mathias, from left. AP Wirephoto

However, the five friends would never make it to their game.
Following the college basketball game in Chico, the men intended on driving back home. They all climbed into Madruga's Mercury coupe and drove to a convenience store in downtown Chico to purchase snacks and drinks for the drive back. This was at approximately 10PM. After departing the store, the men seemingly vanished. Several days later, their abandoned car was found some 70 miles away on a Plumas National Forest road. It appeared as though the men unaccountably turned off a freeway on the way home, driving east rather than south. An investigation of the car indicated no signs of foul play and revealed it was in working order, ruling out the car breaking down. "The car was littered with candy wrappers, basketball programs, milk cartons, and other material indicating a good time," said a Butte County sheriff. [1]
The elevation of the site where the Mercury coup was found was 4,400 feet and the area was surrounded by deep snow. It wasn't looking optimistic. The missing men were wearing only light clothing and the area was exceptionally dense and mountainous. "Some places you can only get in on horseback," said Yuba County Undersheriff, Jack Beecham.[2] While the men did suffer from mental disabilities, they all could function quite well. However, their families said that their behaviour tended to "deteriorate" if put in a stressful situation. Nevertheless, it was completely out of character for them to just up and vanish on their own accord, particularly given the fact they were all so excited about their upcoming basketball game. "Ted wouldn't have missed that game for anything," said his mother. According to their families, they most definitely wouldn't have driven up an isolated, unknown road in the middle of the night and just abandoned their car for no reason. "I'm pretty sure he would have come home directly from the game," said Madruga's mother. "There's no way he would have gone voluntarily into the mountains at night." Several of the men were particularly afraid of the dark and two – Stirling and Wieher – abhorred the cold weather and the outdoors.
Foul play was suspected very early on in the investigation: "They could have stopped to aid somebody, and the people they aided took advantage of them," suggested Sheriff Jim Grant.

A headline from “The Tennessean”/ newspapers.com

Adding more to the mystery, a witness came forward to tell police that he had seen the Mercury coupe at some point between 11PM and midnight on the 24th of February. The witness, Joseph Schons, had gotten his car stuck in the snow while driving on the same Plumas National Forest road where the abandoned car would later be found. While attempting to push his car out of the snow, Schons suffered a heart attack. While awaiting help, Schons said two headlights appeared behind him and then stopped around twenty feet behind him. He said that a group of men then climbed out of a Mercury coup and climbed into the second vehicle and drove off. However, Schons later said he couldn’t confirm without doubt that there had been a second car: “I was half-conscious, not lucid, hallucinating and in deep pain,” he later said. He did confirm, however, that he had definitely seen a Mercury coupe. Shortly afterwards, another witness came forward to say she had seen the five men in a red, 1950s pickup truck at around 2PM on the 25th of February. She claimed she saw the men outside a store in Brownsville, approximately an hour away from where the Mercury coupe was found abandoned.

After the abandoned car was found, a severe blizzard blanketed the area, hindering search efforts and covering potential tracks. Nevertheless, teams of deputies from Yuba and adjoining Buttle counties searched the mountain on foot, on horseback, with dogs, in four-wheel drive vehicles and in a helicopter. The initial search was exhaustive but several weeks later, the ground search for the men was suspended. The Yuba County sheriff’s office said they wouldn’t resume the ground search unless new evidence came forward that indicated that the five men were still in the dense forest.[3] While the ground search was called off, a California Highway Patrol helicopter continued to scour the area from the sky. “We’ve searched every place possible,” said Yuba County Sheriff Jim Grant.[4]

The case went cold until four months later, when the melting of the mountain snow revealed a tragic fate when a group of motorcyclists went to a trailer maintained by the Forest Service around 19 miles from where the Mercury coupe was found. They noticed the window was smashed and inside, they found the decomposed body of Weiher; his feet had severe gangrene after suffering from frostbite. They also found food, clothing, books, matches and fuel, all of which remained untouched. There was enough food to feed the five men for over a year. It was determined that Weiher had remained alive for up to two months in the trailer before dying of starvation and hypothermia. The late spring thaw then uncovered the bodies of Madruga and Sterling around 11 miles from the abandoned Mercury coupe. Both died of hypothermia. Investigators theorised that one may have succumbed to the desire to sleep that marks the final stage of hypothermia and the other refused to leave his side. Shortly afterwards, Huett‘s father – who had joined in on the search – found his remains two miles from the trailer. Investigators believe that Huett had been in the trailer with Weiher when he died and after becoming confused and scared, fled from the trailer to get away from the body. Despite an exhaustive search, Mathias was never found.

The discovery of the bodies led to even more questions. Why would they walk more than a dozen miles uphill through deep snow instead of walking downhill or remaining in their car? And even more tragically, why would at least one of them – Weiher – live for more than two months in a forest service trailer yet ignore the food, clothing and fuel around him before finally perishing? Their families stick to their belief that somebody forced the men up that mountain road and ultimately, to their deaths.

From <https://morbidology.com/the-strange-disappearance-of-the-yuba-county-five/>

Crazyboard

Sunday, July 11, 2021 9:41 PM