

THE

SPIRIT OF THE ANDES

With

Dr. Kate Leeming



Kate at Machu Picchu, Peru

Explorer and expedition cyclist, Dr. Kate Leeming immerses herself in the spirit of the Andes as she sets off on an epic 4400km high-altitude journey. She tests her physical and mental limits by cycling the extreme altitudes of the Andes, across the high plains of the Altiplano and through the inhospitable Puna de Atacama, the driest non-polar desert on Earth.



Approaching the summit
Abre de Jahwaycate, 5081m

A four-part documentary series



Death Road
Bolivia



A pause on the summit before descending
1400m to Tupiza

Details

Format: 4x30min series

Producers: Kate Leeming/
Reza Pakravan

Director: Reza Pakravan

Status: Post-production

Cast: Kate Leeming

Trailer: [Watch](#)

Year: 2022

Master: 4K HD

Language: English

Duration: 4x30min

Country: UK/Australia



**The Andes,
the Altiplano
& the Atacama**
Expedition Route
2020/2022





Crossing a swollen river
Sajama National Park

Synopsis

For the people of the Andes, the mountains have always presided over their world. Mountain worship was the keystone of ancient Andean cultures. The mountains were venerated primarily because they controlled the climate and water sources and as a result, the fertility of crops and animals, communities and empires.

For explorer and expedition cyclist Dr. Kate Leeming, a 4400km altitude journey through the awe-inspiring Andes, the high plains of the Altiplano and the highest, driest non-polar desert on Earth, the Puna de Atacama, poses as one of the toughest challenges of her career so far.

Setting off from Cusco, once the capital of the mighty Incan Empire, Kate explores ancient ruins and engages with local cultures as she pedals through the spectacular highlands and across the Altiplano in Peru and Bolivia, before weaving a convoluted path over Argentina's Puna de Atacama to finish at Ojos del Salado, the world's highest volcano.

For almost the entire journey, Kate toils at elevations of around 4000 metres, where oxygen levels range from 10.5% to 13% (21% at sea level). These conditions,

coupled with the rugged terrain, violent thunderstorms, arctic winds and a debilitating illness push Kate to the edge of her capabilities.

The story of the journey, however, is more than an exploration of Kate's physical and mental limits and the positive mindset she must adopt to succeed. It is infused with insights about Andean cultures, past and present, focusing on what the mountains mean to the people.

On the eve of International Women's Day, Kate meets Elena Quispe, a founding member of the *Cholitas Escaladoras*, a renowned band of indigenous Bolivian women, who climb 6000m+ mountains in traditional clothing to create awareness about the plight of their people, the country's most disadvantaged group. Before climbing Acotango Volcano (6052m), Elena conducts a ceremony at the base of the mountain to ask the Gods for safe passage. Just below the summit, large ice sheets crack underfoot, immediately placing the team at risk of being trapped in an avalanche.

During her expedition, Kate investigates whether there are lessons to be learnt from Incan and other Andean cultures that can be related to some of the issues confronting our global community today, such as climate change, sustainable consumption and gender equality.

Ultimately, Kate discovers that her journey too is dictated by the power of the mountains. To succeed, she must listen to nature and adapt, to work *with* her environment, not against it.



Elena Quispe prepares an offering to Pachamama at the base of Volcan Acotango



Episodes

Episode 1

Andean cultures, past and present

February 2020, and Kate is excited and full of expectation as she sets off from the Plaza de Aramas on her Andean odyssey, ascending the narrow cobbled streets of Cusco, Peru's ancient Incan capital, pedalling in the direction of Machu Picchu. After exploring the world-famous archeological site and the Sacred Valley she diverts into Peru's Southern Highlands, struggling to breathe enough oxygen as she scales the 5080m Abre de Jahuaycate. Her path blocked by snow, she returns to the main route, taking a diversion through the north-eastern hinterland of Lake Titicaca, the world's highest navigable lake at 3810m.

Pedalling around the hilly eastern shoreline of Lake Titicaca and into Bolivia, Kate meets with villagers of Taypi Arco and is invited to take part in their annual festival, a celebration of traditional culture; music, dance and customs.

At Lake Titicaca's southern extremity Kate again diverts off her route, this time to explore the excavated ruins of the most important pre-Incan civilisation, World Heritage listed Tiawanaku. Lake Titicaca was the navel of the Tiawanakan's universe for 1000 years before the empire fragmented due to a severe and prolonged drought.

Kate continues to La Paz and then climbs to 4800m before descending the infamous Death Road and tackling the steep sub-tropical slopes of the South Yungas. As the Covid-19 pandemic sweeps the world, Kate makes the heartbreaking decision to postpone the expedition after 1106km and dramatically escapes Bolivia on the last commercial flight out of La Paz.



Celebrating International Women's Day with
Elena Quispe, a founding member of the
Cholitas Escaladoras

Episode 2

An adventure makes its own path

Exactly two years later, Kate returns to La Paz and resumes her journey from where she had stopped. She sets off through busy traffic, taking a cross-country route to Lake Titicaca, passing Tiawanaku before venturing south, then west towards the border. This was a great opportunity to immerse herself in traditional local cultures in villages like St Andre and Achiri.

Reaching the border town of Charaña was particularly challenging for Kate, not yet acclimatised to altitudes that ranged from 4000m-4550m while tackling a gravel rollercoaster of steep ascents and descents. Unable to cross into Chile, Kate takes an alternative, remote path tracking parallel to the border. She fords freezing rivers and endures wild weather with hailstorms on unnamed tracks to reach snowcapped Sajama volcano, Bolivia's highest mountain at 6542m.

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Exhausting all avenues to gain permission to cross the border into Chile, Kate decides on Plan B. She heads south on the backroads, passing through small rural settlements. The team out of contact, she cycles head on into a violent thunderstorm. There is no shelter. The sky turns black.

The heavens open. Frightened, Kate stops and crouches down to avoid being struck by lightning. The electrical storm whips the ground as it passes overhead. As she resumes pedalling, the tracks become sodden and ahead, the river had become swollen, too dangerous to cross. The team eventually reunites and, randomly, bump into the Bolivian military's narcotics squad who patrol the borderlands. The commander sends the team back to Sajama village for safety.

Plan C adds 150km to Kate's journey. She takes another short cut through a spectacular range towards Lake Poopo. Camping wild, overnight Kate is struck down by a severe gastro. Physically drained of all resources, she rolls as conservatively as possible to the nearest village, Turco, where she accesses medical treatment.



Ill in Turco Medical Centre

Episode 3

The Altiplano's salty heart and the unworldly Lipez Range

Still feeling depleted, Kate resumes her journey from Turco, cycling as efficiently as she can, aiming to reach Uyuni, 420km away in four days. Pedalling along the western shore of Lake Poopo into the freezing wind and rain, with a wind chill factor of -4C, doesn't make it easy.

Lake Poopo is central in Bolivia's Altiplano Basin, connected to Lake Titicaca in the north by the Desaguadero River that, like an umbilical cord, provides most of the Poopo's life-giving water. At

3700m elevation and virtually endorheic, the hyper-saline lake is just three metres deep. It's only outlets, which lead to the salt pans of Coipasa and Uyuni, no longer flow.

Lake Poopo is a trim tab for climate change. Although it contained water on the rainy day that Kate rode beside it, in 2021 and several years previously, it had dried up completely, threatening the ecologically important region and the livelihoods of those who inhabit its hinterland. Scientists predict Lake Poopo will totally dry up 1000 years before nature intended. Kate meets David Morales (cousin of the ex-president, Bolivia's first indigenous leader) who explains that drought caused him to leave the region but he recently returned to grow quinoa because the increasing global demand makes it more profitable.

Native to the Altiplano, quinoa thrives on the dry mineral-rich soils at between 3600m and 4500m. The production of quinoa provides a stable income to citizens of the poorest country in South America. On her way to Uyuni, Kate passes colourful fields of red, white and black quinoa.

The railways are the *raison d'être* of Uyuni, Rolando's home town. Kate explores the intriguing train cemetery before cycling out to the Salar de Uyuni, the world's largest salt pan. Tourism, now the driver of Uyuni's economy, revolves around the world famous salt pan.

Leaving Uyuni, Kate cycles around the southern perimeter of the salt pan with some trepidation. This next section promises to be the most arduous so far - higher, windier, poor tracks and more remote. Her worries are soon vindicated as she grinds her way up long climbs made more difficult by sand, deep corrugations and gibber plains, all at altitudes of around 4500m. The beauty of the arid landscapes make it worthwhile as she rides around lakes Hedionda (the Stinky Lake), Honda and over another high pass to reach Lake Colorada. Here, endemic micro-organisms colour the water red and the Andean flamingoes pink.

Plants and animals must adapt to survive in such inhospitable conditions. Llaraeda, a type of moss, only grows 1mm/year. Kate surmises that, by the size of the plants before her, many must be over 1000 years old! Local people use llareda plants as a source of fuel as the plants burn



Lake Hedionda

better than coal. The rabbit-like southern vizcacha, actually a rodent, has numerous adaptations to thrive in the cold.

Kate must similarly adapt to cycle through this hostile, unworldly landscape. South of Lake Colorada, sulphurous steam rising from the caldera of Sol de Mañana (4950m) is part of a truly Martian world, one where NASA tested the Mars Rover.

In the far southwest corner of Bolivia lies Licancabur, a 5921m, perfectly shaped volcano, one of the most sacred mountains to the Incas, and the Kumsa people before them. The Incas performed rituals and sacrifices atop the mountain (which has the world's highest lake in its caldera) to demonstrate their political power and to get as close as possible to the Gods. Kate explores the ruins of the base camp. At 4600m, it is where the Incas acclimatised for the ascent and made religious and sacrificial preparations.

Back on the road and over another 4851m pass, Kate gets her first glimpse of Uturuncu (6008m), another sacred, imposing mountain. The world's highest cycleable track (5770m) leads to a saddle between the volcano's twin peaks and Kate starts preparing her mind to make the attempt.

Setting off from Quetena Chico on the first day of the climb, Kate is pleased to reach 5000m, pedalling almost the whole way. Day 2 was a different story - with residual tiredness from the previous arduous days, an extremely steep track and oxygen levels dropping to around 10.2%,



Looking towards Uturuncu
Apachetas are transitional spiritual places
aligning important features in the landscape



A lone preserved building amongst the ruins of San Antonio de Lipez ghost town

Kate finally had to concede when the sulphur mining track became blocked by unseasonal snow at 5600m.

Both Licancabur and Uturuncu are a part of the Lipez Range that defines both the southern extremity of the Altiplano and the Bolivian-Argentinian border. The four day journey traversing the range from Quetena Chico to Tupiza was physically the most testing of the journey, primarily due to the constantly high altitudes. The colourful mountains are testimony to the great mineral richness of the region and much of the road network is due to the existence of the many old and new mining operations.

On the second day out of Quetena Chico, Kate reaches San Antonio de Lipez; a silver mining ghost town situated at 4758m, that 50 years ago had a thriving population of around 150,000. Almost overnight, the town was abandoned when residents believed it was haunted after a series of unexplained deaths.

The high altitude, rugged landscapes gradually become greener as Kate nears Tupiza. The finale to the section is a trilogy of epic climbs followed by a spectacular descent, dropping 1400m through the eroding, colourful range to the town of Tupiza. This vibrant town is where Butch Cassidy and the Sundance Kid carried out their last train robberies before being ambushed and shot by the Bolivian Army.

Buoyed by the prospect of entering a new country, Kate glides over the paved main road to Villazon and the Argentinian border. But at the border post there are complications that threaten to derail the carefully timed journey and ultimately Kate's chances of completing it.



The Devil's Spine
Tres Cruces

Episode 4

Spirits of the Andes

After a day of negotiation and problem solving, the team is finally able to enter Argentina and Kate puts in some long hours to make up time. She needs to reach Salta, 400km away, for an important meeting in two and a half days. The route is truly spectacular, taking in the Devil's Spine at Tres Cruces and the Humahuaca World Heritage region as she gradually descends from the Andean plateau and through subtropical rainforest to arrive in Salta (1150m).

In Salta Kate meets Professor Christian Vitry, a pre-eminent archeologist, to learn about the Children of Llulliallaco. In 1999, Professor Vitry was a member of an expedition that discovered three perfectly preserved Incan child mummies near the 6739m summit of Llulliallaco volcano. It is the world's highest archeological site. A 15 year old girl (Doncella), a seven year old boy (Llullaillaco Boy) and a six year old girl (Lightning Girl because she was struck by lightning in her mountain grave) were sacrificed to appease the Gods in the hope of bringing prosperity and as a political act to demonstrate Incan dominance over the other Andean cultures. The ritual was called *capacocha*.

The director of Salta's Museum for High Mountain Archeology, Gabriela Recagno gave Kate a private tour of the exhibit. Although the children lived 500 years ago, their discovery has enabled scientists to learn details about the Incan culture that were never recorded by the Spanish. Gabriela explained that perhaps the greatest legacy of the young lives is that their spirits continue to bring people together. The exhibit has opened a much needed discussion in Argentina and beyond about equality for the historically neglected indigenous communities.

From Salta's leafy streets, Kate journeys 600km to the base of the remote mountain, the children's spiritual home for 500 years. Following the Toro River valley, she ascends about 3000m over the next two days. The vegetation changes from verdant subtropical to pampas grasses to arid slopes studded with large cacti. Reaching Abra Blanca Kate enters the Puna de Atacama, the highest, driest non-polar desert on Earth.

From San Antonio de los Cobres to Pocitos, Kate endured two days to rival her most difficult; two high passes, very rough, sandy roads, and cold gale-force winds causing sandstorms. The team then drives from Pocitos to Lullillaco volcano to experience the extreme physical circumstances that the children and their entourage of priests and attendants would have faced 500 years ago.

By the time Kate returns to where she stopped cycling at Pocitos, she has just eight days to cover the final 880km of the journey. With winter approaching she faces piercing winds and freezing nights as well as more high mountain passes and rough roads. She crosses Dead Man's Salt Pan, cycles through the Antofagasta volcanic region and scales El Peñon pass before gradually descending 3000m to Belen city.

At the foot of the Zapata Range, three days from the finish of the expedition, Kate fittingly explores the last Incan site on her journey, El Shincal. Often referred to as the "New Cusco", the



Exploring the ancient Inca city of
El Shincal

powerful regional centre was built to serve the rapidly expanding empire, just decades before the Spanish conquest.

From here Kate battles powerful, swirling headwinds that are funnelling down the treeless valleys as she ascends from 900m to 4200m over 325km to the foot of San Francisco pass, only to find the Chilean border still closed. She is just 35km short of the base of Ojos del Salado.

The team celebrates before driving 900km to Mendoza, flies to Santiago in Chile and on to Copiapo and is then driven to Lake Verde near the base of Ojos del Salado. The intention was to climb the highest volcano on Earth, however, due to a pending storm with 150km/hr winds and a -41C wind chill factor forecast over the next week, Kate wisely chooses to respect and admire the power of the mountains.



Ojos del Salado
The tallest volcano on Earth
A powerful mountain



Case Study

This team has a proven track record having produced and distributed a global 4-part TV series (2021):

Diamonds in the Sand

<https://vimeo.com/462048683>

PRODUCER: AOK Media House

DISTRIBUTOR: Boulder Creek International

IN PARTNERSHIP WITH: OMDis (Namibian Tourism organisation)

BROADCAST: Primetime

OUTSIDE TV (US): 4.5million

NATIONAL GEOGRAPHIC ASIA: 20million

CNBC: 385 million households

OTHER NETWORKS (so far): Globosat Brazil, Sky Sports NZ, TV Catalunya, A Bola Portugal, PX TV, CBC Canada, Action 24, Spiegel Germany, BNT Bulgaria, RTI Mediaset Italy, Sport 1 Germany

PRESS: National, Cycling and Outdoors press (UK and US)





On Salar de Uyuni

Further Details

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A cemetery in front of the renowned coloured mountains of the Humahuaca World Heritage region



Tasil
A peaceful, technologically advanced pre-Incan civilisation recognised as being the Switzerland of the region



Llullallaco Boy and two of over 100 figurines and miniatures buried with the children for the afterlife





The final day into Tupiza
Bolivia



Cycling through an
ancient lava flow