

# The Andes, the Altiplano and the Atacama South America



An altitude bicycle expedition of 3500km+ from Cusco, Peru, across the Altiplano in Bolivia and Chile and the Argentinian Puna de Atacama to Ojos del Salado, the world's highest volcano

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# The Importance of Exploring



Exploration is the driving force behind humankind. We have been exploring since the dawn of time, because it is at the centre of everything we do. From birth, we learn through experience and we can make better decisions tomorrow from the information we have unearthed today.

Everything we know today has been the result of explorers who have gone before us. Exploring is to travel through the unknown to learn or discover new information. Discoveries in geography, medicine, space, flora and fauna, that have changed the world for the better, are but a few of the riches of exploration.

Today, society seeks riches of other kinds. Equality of race and gender, alleviation of poverty, advances in health and education, tolerance and peace and preservation of the environment among them. Discoveries in the modern world will come; but only if we seek them and we are prepared to embark on uncovering the source of today's unknowns.

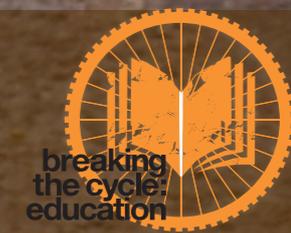
Real exploration cannot be done through a screen or second-hand; true perspective must be obtained first-hand as primary evidence. The great explorers and creators of history have known this and it remains the same today.

If the leaders of tomorrow are inspired to explore, understand how the world fits together and how they fit within it, our global community will be all the richer for the decisions they will make toward a better world.

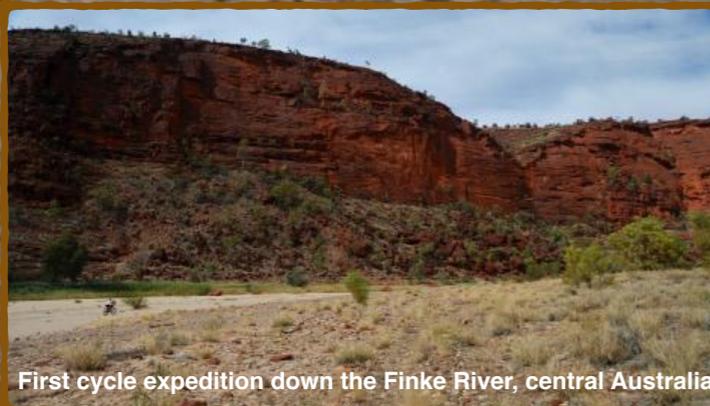
*Kate Leeming*

# The Project

## Breaking the Cycle: Education



First test run, polar training in Svalbard, Norway



First cycle expedition down the Finke River, central Australia



First cycle expedition down Namibia's entire coastline

For the last five years, Kate has been creating and preparing for the Breaking the Cycle South Pole expedition, which will be the first bicycle crossing of the Antarctic continent via the South Pole. Her preparations initially involved polar training expeditions in Svalbard, Northeast Greenland and Arctic Canada.

In 2018 Kate initiated **Breaking the Cycle: Education**, a programme that aims to help prepare our future leaders to make informed decisions to create a better world.

To create inspirational and educational content for the experiential learning programme, while also continuing to build toward Antarctica, Kate conceived the mission to perform a preparatory expedition on every continent (except Antarctica).

Each challenge has been designed to be a credible stand-alone expedition as well as appropriate training for Antarctica; in polar conditions, on sand or at altitude. So far Kate has completed a bike-packing journey down the Baja Divide (North America), polar testing in Iceland (Europe), an unprecedented bicycle expedition down the Finke River (Australia), a new route over some of the highest passes in Ladakh, India (Asia) and another first, cycling the entire coastline of Namibia (Africa).

The last and perhaps the most physically challenging preparatory expedition in the series will be the Andes, the Altiplano and the Atacama (South America).



Breaking the Cycle South Pole  
The Expeditions



★ Proposed expeditions for 2018/19  
★ Previous polar training expeditions

Climbing Sirsir La Pass, (4900m)  
Ladakh, India





Andean condor

# The Andes, the Altiplano and the Atacama



Spanning over 7000km, the **Andes** is the longest mountain chain in the world and boasts some of the highest peaks. The range also has the world's highest volcanoes. Ojos del Salado on the Chile-Argentina border measures 6,893m and there are more than 50 volcanoes that reach 6,000m. The Andes is also known for its ruins of ancient civilisations and the source of a malaria treatment.

The word *altiplano* means “high plain” in Spanish. The **Altiplano** is the area in west-central South America where the Andes are the widest. The bulk of the Altiplano lies in Bolivia, with its northern and western fringes extending into Peru and Chile respectively.



The Altiplano merges with the **Puna de Atacama** (Atacama Plateau) region of northern Argentina, Chile and southern Bolivia. It is the highest, driest desert on Earth.

The journey will be a bicycle exploration of these high regions, from the rainy, potentially muddy Peruvian highlands, across the Altiplano (average altitude 3750m) and its mountainous fringes, the Puna de Atacama and finishing by cycling as high as possible up Ojos del Salado. The current cycling altitude record is 6233m.





Machu Picchu, Peru



Moray, Peru



Acotango volcano, Bolivia



Volcanoes on the Chilean altiplano



Vicunas on the Bolivian altiplano



Peruvian Cordillera



La Rinconada gold miners, Peru



South Yungas, Bolivia



Uturuncu volcano, Bolivia



Puna de Atacama, Argentina



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# The Expedition



**When:** March/April 2020 (8 weeks)

**Distances:** The total distance from Cusco to Ojos del Salado is about 3500km. Kate aims to cover between 500km and 600km a week, including extreme altitude climbs up Acotango, Aucanquilcha (or Ollague), Uturuncu and Ojos del Salado volcanoes.

**Altitude:** The average altitude of the Altiplano is 3750m though Kate's route will take in several climbs in excess of 5000m+. The percentage of oxygen in the air at sea level is 20.9%; on the Altiplano it is around 13% and at 6000m it is just below 10%. This will add significantly to Kate's workload.

**Weather:** March in the southern Peruvian Cordillera and the Bolivian South Yungas usually receives some rainy days and it will be cold in the mountains. The remainder of the journey should be dry with the chance of electrical storms. Daily average temperatures will range from 0C-20C, the high mountains much colder and windier. Prevailing winds will be from the northwest and are expected to be a major factor. The upper slopes of Ojos del Salado could be around -20C.

**Road conditions:** Away from major centres most routes will be gravel, often corrugated and sandy. Mountain slopes in the Yungas and southern Peru could be muddy in places. On the big climbs up the volcanoes Kate expects rockfalls, sand, and steep, rough sections.

**The Bike:** Kate will use a custom-built Christini all-wheel drive MTB with 27.5 wheels, and 3" wide tyres. She is again working with Steve Christini to produce a bike that has a balance of enough flotation, stability and grip to deal with soft sand and steep, stony tracks without sacrificing too much speed on the asphalt and better surfaces. This will be a semi-supported expedition. Kate envisages carrying no more than 20kg on the bike in remote regions

**Why altitude training for Breaking the Cycle South Pole:** Antarctica is the highest, driest windiest continent on Earth, where the altitude on the plateau is around 3000m. In the extreme cold, this will feel more like 4000m. Learning how to cope with such conditions in the Andes will be important physical and mental preparation.



Aucanquilcha volcano



Aeolian (wind) forces sculpt the landscape on the Altiplano





# Kate Leeming



**Cycled a distance greater than twice around the world at the Equator and is considered one of the most accomplished Australian women explorers**

## Major expeditions containing world firsts

- *Trans-Siberian Cycle Expedition* – 13,400km, St Petersburg to Vladivostok in aid of the children of Chernobyl
- *Great Australian Cycle Expedition* – 25,000km through Australia, 7000km on remote desert tracks including the Canning Stock Route; an official activity for the United Nations Decade of Education for Sustainable Development
- *Breaking the Cycle in Africa* – 22,000km from Senegal to Somalia exploring the causes and effects of extreme poverty. Also an official activity for the UN DESD.
- *Breaking the Cycle Skeleton Coast* – A 1621km sand cycling expedition along the entire Namibian coastline: Kunene River mouth to the Orange River mouth.



## Books and films

- *NJINGA* – book, multi-award winning feature documentary and TV series (Africa, 2014-19)
- *Out There and Back* (Australia, 2007)
- Honorary Doctor of Education (University of Western Australia)
- Fellow of the Royal Geographic Society, UK
- Member of The Explorers' Club, New York
- Bachelor of Physical Education, Graduate Dip. Ed (UWA)
- Honorary advisor for the Duke of Edinburgh's International Award
- Scout Ambassador (Victoria, Australia)
- Real tennis professional – Reached World No.2;  
Won 5 Australian Open singles titles



# Outcome

## Outreach

Breaking the Cycle will serve to build on Kate's commitment to contribute towards ending extreme poverty and education. (Sustainable Development Goals 1, 4, 5, 10, 13)

**Breaking the Cycle: Education** aims to help prepare our future leaders to make informed decisions to create a better world. Partners include: the Duke of Edinburgh's International Award, Footprints on the Globe, JUMP! Foundation, Ivanhoe Grammar School, Belouga, Victorian Department of Education and Training, Scouts Victoria/Australia/WOSM & more.

A **role model** inspiring girls and women to aim high and achieve their full potential

## Documentary

Kate plans to create a documentary that not only chronicles this unique expedition, seeded with humanitarian and ecological stories, it will also examine Kate's mindset that enables her to push the boundaries of what is possible, maybe to new heights.

## Content

The team will produce quality content that can be used for PR, marketing, magazine articles, social media. Unique film and photo assets can be supplied en route

**Tracking app** - Working with Deakin University to develop an application that will enable followers to track and support the expedition. Building a platform for the Antarctic expedition.

**Branding opportunities** on clothing and website



Cycling through the Peruvian highlands



Vicunas in the high Andes are related to camels



Penitentes on Ojos del Salado



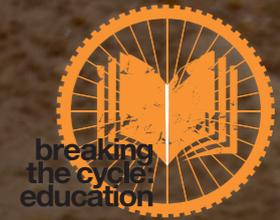
## Further details

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## Education Partners:

