Imperial College London

Bike Trip across Europe

2016



Page 1 of 40

Table of contents

1.	Forew	ord	3	
2.	Introduction4			
	2.1	Aim of the expedition	4	
3.	Team I	Viembers	5	
4.	Distan	ce travelled	9	
5.	Itinerary		11	
	5.1	Itinerary		
	5.2	Currency	38	
	5.3	Weather	39	
	5.4	Official papers	40	
6.	Budget			
7.	Equipment List		42	
	7.1	Clothes	42	
	7.2	Tents	42	
	7.3	Communication	42	
	7.4	Bike equipment	42	
	7.5	Food	43	
8.	Conclu	sion	44	
9.	Ackno	wledgement	44	
10.	Photo	s	43	
	10.1	Risk assessment	29	
	10.2	Road Traffic Accident	32	
	10.3	Evacuation Procedure	33	
	10.4	Biking Damage		
	10.5	Minor Illness/Injury	38	
	10.6	Dehydration	38	
	10.7	Natural Disaster- Earthquake/Landslide	39	
	10.8	Finding yourself in a disaster zone	40	
	10.9	Refusal of border crossing	40	

Foreword

The overall aim of this expedition was to travel Europe using bicycles. It took us 2 months during the 2016 summer break to accomplish our mission. Altogether, we travelled a total distance of 5500 km. It was a really big challenge and we are certainly proud of it.

The team consisted of 3 people which included Saturnin Pugnet who recently started his third year in Computing at Imperial College and his 16-year-old brother, Auguste Pugnet, a Year 12 student in France. Clement Bois, a 27-year-old French lad also joined us during this bike trip.



Figure 1: Berlin, Mid July

Introduction

1) Aim

The objectives of this expedition are:

- To accomplish a challenging mission that seems impossible and to demonstrate determination in achieving something that we really want to accomplish.
- -To motivate other Imperial students and generally the public in taking part in something challenging and persevering through that challenge in order to achieve a positive outcome
- -To represent Imperial and promote healthy activities like expeditions and sports as well as motivating people to get more involved in similar activities
- To encourage the public to step out of their comfort zone and face difficult situations that include living in tents and out of a rucksack for 2 months in order to achieve the main task of cycling across Europe

Another point to highlight was that we were very environmentally-friendly throughout the journey with collaborate efforts to minimise negative impacts on the environment by disposing rubbish accordingly and ensuring each place was left clean every time we stopped to rest or eat.

Team Members

In terms of forming a team for this bike expedition, we aimed for a relatively small group of people and decided to select each candidate carefully to ensure we all had the same determination and motivation and that we could get along with each other. We were aware of the social tension that could be created during long hours of this mentally and physically challenging trip. Therefore we had to ensure that each member would not give up or create tension in the group as well as constantly displaying a positive attitude. The leaders of this expedition are Saturnin Pugnet and Auguste Pugnet and two other members that did half of the bike expedition are Clement Bois and Maxime Pugnet.



Figure 2: Saturnin Pugnet

Saturnin Pugnet: A 19-year-old second year student in Computing at Imperial College London who enjoys a range of activities. He has done a lot of different sports like kickboxing, boxing, taekwondo, running, cycling, climbing, surfing, skiing and gym. He is an adventurous person who likes to stay active and spend his time efficiently. He has always been keen on organizing expeditions. Since he was young, he enjoyed going on trips and demonstrated excellent capability to plan trips and lead expeditions similar to this.

Role: He was the team leader and mostly responsible for the expedition. He prepared alternative plans and official documents needed for medical purposes for unplanned circumstances. He was also the treasurer, managing the money for the team.

Cycling experience: He had done a lot of cycling and is generally a really sporty person. Some of his achievements include the completion of a challenging marathon, a 440km bike trip in 2 days without any training and the regular practice of several sports such as kick boxing and running.

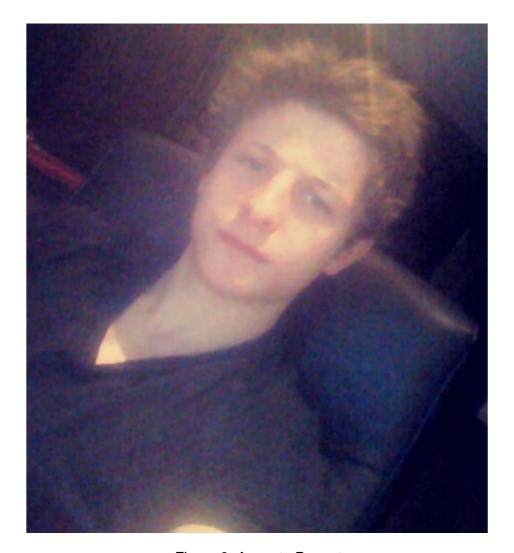


Figure 3: Auguste Pugnet

Auguste Pugnet: He is yet to follow the footsteps of his brother and he plans to go to Imperial in a few years from now. Although he is only 16 years old, he is more than capable to accomplish this expedition. He has always loved challenges and he has never considered a task too hard for him. He has already done many bike trips including the 440km bike trip recently. He is doing many sports like climbing, running, rugby, cycling, kite-surfing and taekwondo.

Role: His role in the expedition included preparing the itinerary, the list of things needed during the expedition as well as constantly checking the weather, the current law in the country related to camping and documents required if confronted by authorities. He was also responsible of taking pictures during the trip.

Cycling experience: He had always been cycling since he was young and had taken part in many small biking trips including a 10km mountain pass with 7% average slope 8 times in a row. He also does rugby, tennis and rock climbing.



Figure 4: Clement Bois

Clement Bois: He is a 27-year-old architect who manages his own company. He had always enjoyed going on trips and had already done a solo world tour and even climbed most of the highest mountains in the world, including the Cho Oyu which is more than 8000 meters high. He is a seasoned traveler as well as a really fit person and even managed to compete at a high level in Taekwondo. He joined us for half of the trip due to his limited time in the summer. From his background, he is clearly a determined person and familiar with expeditions and certainly demonstrates excellent teamwork skills.

Role: His role in the expedition was mainly related to critical situations and the person to rely on when we were uncertain where to go or what to do next. His great experiences were an advantage and helped the team stay united and positive.

Cycling experience: Since he was young he had always done a lot of sports. Among all of the sports he had done, cycling was one of his favourites. Having done many challenging expeditions before, this was relatively easy for him and added up to his long list of accomplishments.

Distance

This table summarises the total cycling distance accomplished on each day of the trip. There was a time when our bikes where stolen and when this happened, we had to walk.

Days	Distance
Day 1	45
Day 2	65
Day 3	100
Day 4	50
Day 5	110
Day 6	120
Day 7	40
Day 8	60
Day 9	120
Day 10	105
Day 11	95
Day 12	0
Day 13	70
Day 14	110
Day 15	100
Day 16	50
Day 17	45
Day 18	105
Day 19	100
Day 20	60
Day 21	50
Day 22	100
Day 23	100
Day 24	90
Day 25	35
Day 26 (walk)	13
Day 27 (walk)	50
Day 28 (walk)	7
Day 29	23
Day 30	120
Day 31	112
Day 32	100
Day 33	104
Day 34	84
Day 35	107
Day 36	149
Day 37	130
Day 38	126
Day 39	125
Day 40	106

Day 41	146
Day 42	133
Day 43	135
Day 44	132
Day 45	139
Day 46	124
Day 47	125
Day 48	125
Day 49	143
Day 50	48
Day 51	145
Day 52	126
Day 53	130
Day 54	133
Day 55	120
Day 56	175
Day 57	42

Itinerary

The trip started in Bergen, Norway. From there we headed to Denmark, using bikes and boats where necessary. We then headed south toward Croatia going through the entire Europe. The plane tickets were booked for the 14th of July. The plan was to finish by crossing Italy and reaching Rome, marking our victory.



Figure 5: Complete itinerary

1) Itinerary

Here is an overview of our itinerary. It gives a good summary of the path that we took. It must be noted that we sometimes took other forms of transportations instead of using bicycles to avoid dangerous situations and to complete the expedition within the time frame planned.

Why Europe: Our first thought on this project was to cross a continent from coast to coast and at first we wanted to go to America but soon realised that Europe was a much better choice in terms of landscape and cost wise. The culture is very different from one country to another and the landscape is outstanding.

Moreover, in summer, the weather is cool and the temperatures are usually adequate for cycling. As crossing a continent is not a small task, we decided to cross Europe as it is a culturally rich country. We tried to learn more and understand more about the history of the continent on which we originated.



Figure 6: Luggage in Bordeaux France, before taking the plane

NORWAY

Aims: The main objective of crossing Norway was to see the unique cliff of Europe, also called the Fjords. We discovered a culture and landscape that were really different from central Europe.

We went from Bergen to Kristiansand crossing half of Norway. It was a really tough start due to the hilly terranes.

Day 1

The journey started in mid-July from Bordeaux, France. We did not do any training or physical preparation but we were all confident and ready for it. We started packing everything a bit late and we arrived in a rush at the airport. We managed to carry all the equipment we had from Bordeax to London Gatwick and then to Heathrow to finally arrive in Bergen, Norway. The flights were during the night so we were really tired when we reached Burgen because we did not really sleep. It took us 5 hours to prepare the bikes and when they were ready, we were ready to start our adventure but first needed some sleep. On the first day, we managed to do 45 km which was really difficult due to the hilly terrane. We also had to cross one island Page 12 of 40

to another by boat, the only medium of transportation and once we did, we had a small meal of sausages and bread where we stopped for the night and dozed off to sleep in the tent after 36 hours of no sleep.



Figure 7: Norway Bus Stop

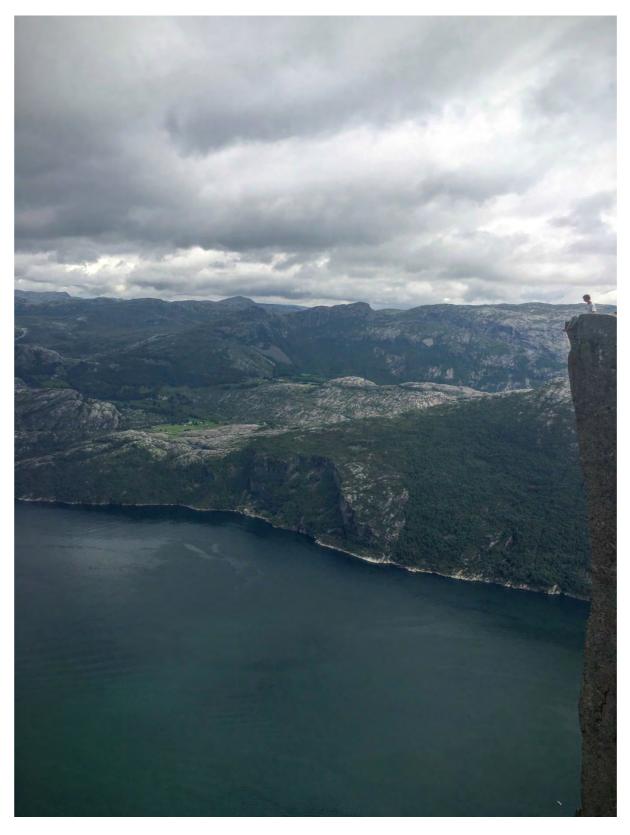


Figure 8: Preikeistolen, highest cliff in Europe



Figure 9: London Forest



Figure 10: Norway Bridge

SWEDEN

Aims: Exploring the next stop. There were many castles in the area that we travelled. We met many people here and visited many museums, it was overall really interesting.

Day 9

We woke up on the sofa as someone offered to let us stay overnight yesterday. We drunk a bit and met many people. Even though we were a bit tired we had to go. We said goodbye and thanked our new friends and left at noon. I had a minor injury in my left knee but it should be alright. We were now done with the never ending mountain of Norway. We had a long day until 11pm cycling a total distance of 120km through the fields. The road was really nice to cycle on. A few days later, we were in Goteburg, one of the biggest city in Sweden.

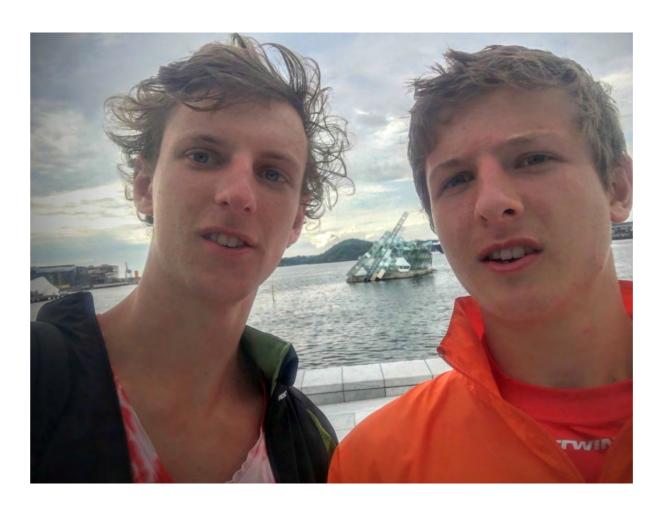


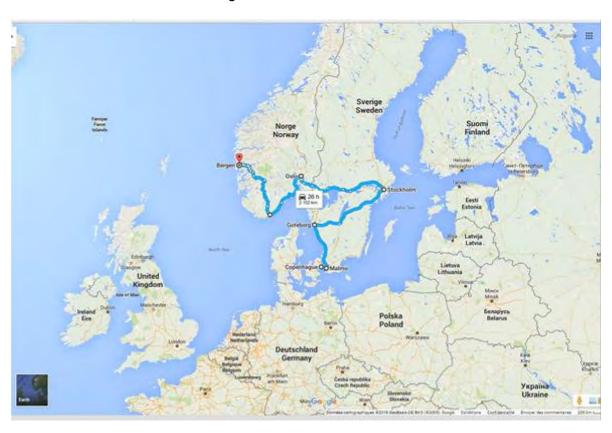
Figure 11: Sweden



Figure 12: North Sea



Figure 13: Sunset of Denmark



1st part Itinerary

Page 19 of 40

DENMARK

Aims: Viking's places are really common in this part of Europe, and the culture can be seen throughout the area we visited. It was also an opportunity for us to visit the biggest aquarium in Europe located in Copenhagen.

Day 18

We woke up late at 11am today. The tent was really hot this morning, warmed up by the sun. We quickly had a meal with what we had left. We said goodbye to the person who allowed us to stay overnight in a small area of his garden. We then left and headed to Billund where there was Legoland. After 30km we stopped to eat because we were so hungry. The landscape was truly amazing in this country. We saw breathtaking landscape all along the way. We had to make a big decision about the itinerary that night because we were not sure if we could use every road. We discussed for an hour then we ate and went straight to bed.



Figure 14: Denmark



Figure 15: Denmark

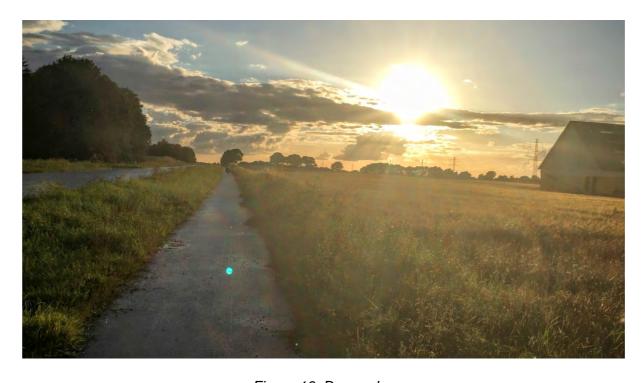


Figure 16: Denmark



Figure 17: Seaside of Denmark

GERMANY

Aims: We crossed East Germany and saw a lot of WW2 vestige. We also visited two big cities, Berlin and Hamburg. We also visited the Wall of Berlin as it is an important part of the European history.

Day 25

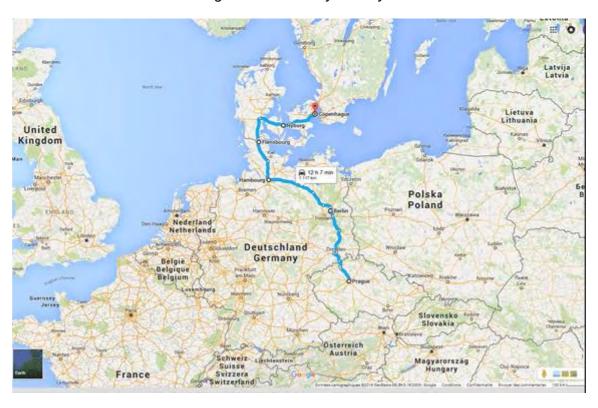
We slept in a park in Berlin the first night. We woke up early because we wanted to visit most of the city that day. We ate quickly and went straight to a museum about the Nazi during war. It was really interesting. We then visited the Jew museum and the Berlin Wall. The museums were huge and we learned a lot from them. We had a long day and it felt like we had been through the entire history of Germany in a day. As we were really tired we did not realise that we placed the tent in an unsafe area. We chose a random place in the city and probably the worst idea we had during this trip. The next morning our bikes were stolen. This led to a lot of unexpected adventures.



Figure 18: Field in Germany



Figure 19: Germany countryside



2nd part Itinerary

CZECH REPUBLIC

Aims: We saw the capital city, the castle and historical part of the Czech Republic.

Day 30

We woke up frozen, our duvet was supposed to be 15°C minimum but it felt like 0°C that night. We bought new bikes for 50 euros a bike yesterday. They looked really old but we hoped that they would be good. After only 5km, one of the tires on one bike got flat. We then had to walk for 1 hour to find someone willing to help us to fix the bike as we did not have any equipment to fix it. After a while, we realised that those bikes were not too bad. They had many minor problems but overall they worked fine and we would most likely be able to finish with them. We were heading to Poland but it was becoming harder and harder to communicate as people do not speak as good English as in the northern part of the country. We managed to do more than a 100km today. We realised that the food here was much cheaper so we took the chance to eat a full meal after so long.

POLAND

Aim: The aim of crossing just a little part of Poland was to visit some of the World War 2 vestige like the Schindler's factory in Krakow or the famous Auschwitz's concentration camp. We thought that it was important that we saw these with our own eyes to realise how horrible it was.

Day 33

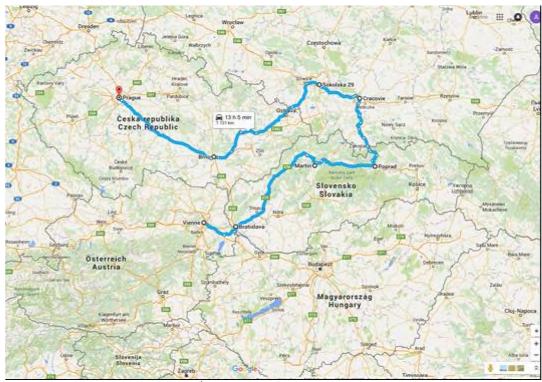
A big day ahead of us today as we had to reach Auswitch before dawn. We were in a rush. But we really wanted to see it so we had to get there before it closed. We went really fast and managed to make it an hour before it closed. We visited the entire camp, it was really impressive. We learned a lot from it as it was special and interesting. After we completed our visit, it was already dark and we had to cycle another 20km to finish the target of the day. We were really tired of today but happy that we were able to sleep indoors at someone's home after many nights camping outdoors as someone we met earlier decided to let us stay at their place.



Figure 20: Auschitch



Figure 21: Sunset Poland



3rd part Itinerary

SLOVAKIA

Aim: To cross the mountain chain called the "Tatras", a little part of the "Matura basses Tatars" and we planned to see the wildlife and meet some of the locals.

Day 39

We woke up in Slovakia today, it was not a really well-developed country as the surrounding looked really poor. We were heading to Bratislava today and then to Vienna. After a few hours we reached the first city, it looked really bad. We were really disappointed and left early. We bought a locker before leaving as we broke the old one. We now headed to Austria. There was strong wind ahead of us which made us took a longer time to reach the capital but it was definitely worth it. The city was beautiful and even though we reached by night time, we were really impressed. We managed to meet people early and one of them decided to let us stay overnight. We were certainly lucky.

AUSTRIA

Aim: To visit and learn about the musical history of the country at the opera and also to visit the Mozart's museum in Vienna. We visited a lot of museums and places in Vienna because it is one of the most beautiful cities in Europe.

Day 41

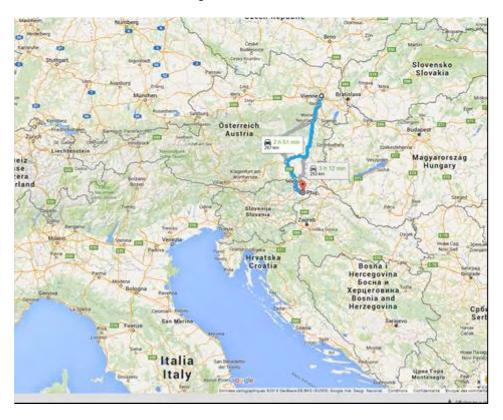
We woke up under the burning sun this morning. We had to cycle 40km uphill that morning to reach the peak of a mountain. We went at good speed and managed to finish it before noon. We had a little argument that morning about silly things but we quickly solved it. The mountain landscape was amazing and we were really happy to be there. The best part was going 100km downhill. It felt amazing. We did 136km today, a really big achievement. We were almost in Slovenia.



Figure 22: Mozart Museum



Figure 23: Gratz Austria



4th part Itinerary

SLOVENIA

Aims: We crossed this country to reach the sea and had a brief overview of it at the same time.

Day 43

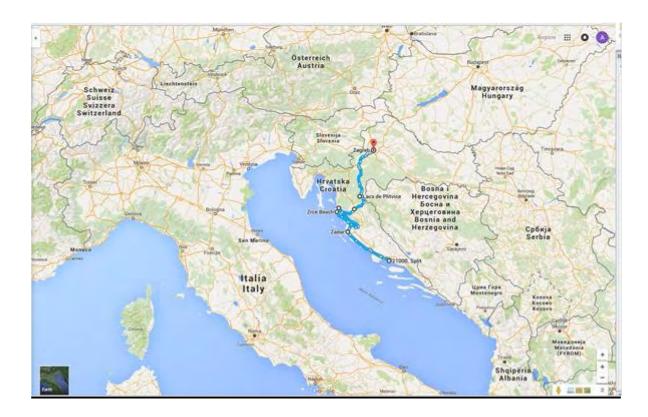
We did not sleep well that night. It was too cold and the floor was uncomfortable but we still had to go. We had a small hill to climb in the morning. After a few hours, we reached a town where we had a break. We started feeling the temperature rising as we went south. We did some detour and struggled a bit to reach the frontier but we managed to reach it by the afternoon. We were finally in Croatia and really excited to see the sea. We managed to reach Zagreb, the capital city before dark and found a place to sleep there. The food was so cheap here that we got a lot of it to keep for the upcoming days. Since our bikes were stolen before, we tried to hide our bikes every night to make sure it did not happen again.

CROATIA

Aims: We wanted to follow the west coast of Croatia to see the beautiful landscape and the Adriatic Sea. We also wanted to see the waterfall of Croatia, situated in Krka's National Park. Moreover, we were keen to know more about the history of the country which was why we decided to go through the capital city, Zagreb.

Day 46

There was a lot of fog this morning in the mountain. We had to wait for an hour for it to disappear. We were so close to the sea, only 50km till we reached our destination. We started to go down the mountain toward the sea and we were really happy to reach it. Even though it was really hot, we managed to go at a good speed. After a short break to eat we went back on our bikes and an hour later, we reached the sea and had a quick dip. We arrived right in front of an 8-meter springboard which made my brother really happy because he could jump from it. We were going to stay there for a few hours to enjoy the sun and the sea. It felt really good to finally reach the sea. We then cycled a bit more in the evening to achieve our daily goal.



6th part Itinerary



Figure 24: Sea Croatia

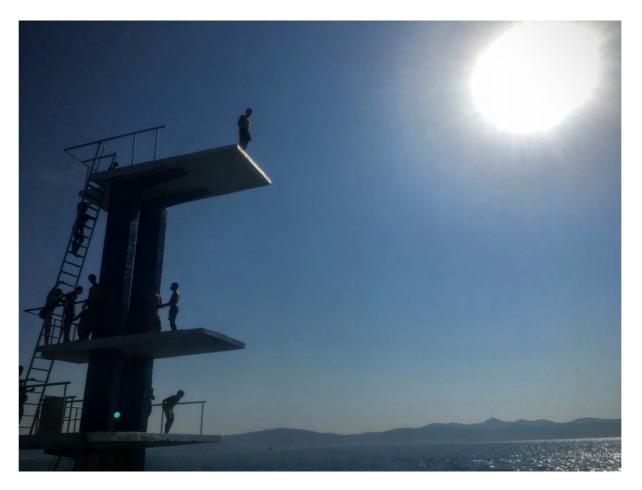


Figure 25: Springboard Croatia

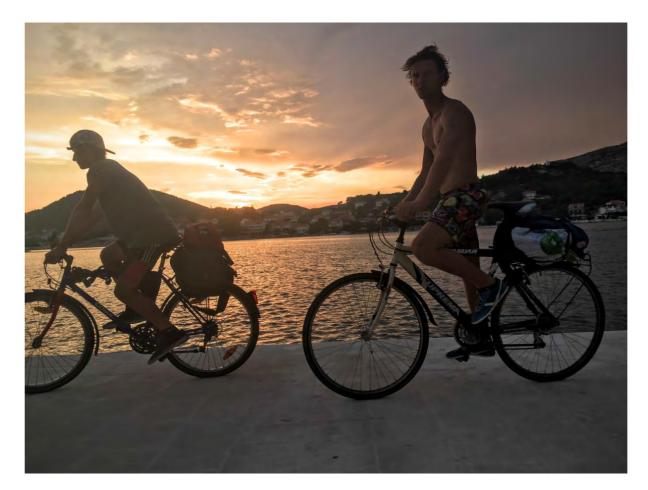


Figure 26: Sunset Croatia

BOSNIA

Aims: We only crossed this country briefly and cycled 10km.

ITALY:

Aims: Italy is a country with a huge historical past and there is the vestige of the Roman Empire such as the colosseum, the Bath or Pompeii known for the Vesuvius. We made it a priority to visit these places and also the monuments like the museum to learn about the artistic culture of the country (Leonardo Da Vinci, Donatello). Finally, explored Italy's gastronomic culture as it is known to be one of the greatest in Europe.

Day 55

Only 3 days left and Rome was only 100km away. It seemed so close yet so far at the same time. We struggled a bit to do those last kilometers. The days were long but we managed to do it and looked forward to victory. At 5pm, we reached Rome and we made it! We felt so happy as we had finally done it and achieved our main goal of this expedition which was to travel the entire Europe on our bikes. I was really happy but I knew that we still had 2 days of cycling at the same time and it was not completely the end. We needed to reach the targeted

distance in order to reach the objective of this expedition. We had time to visit Rome and the impressive colosseum before finding a place to put the tent and sleep.

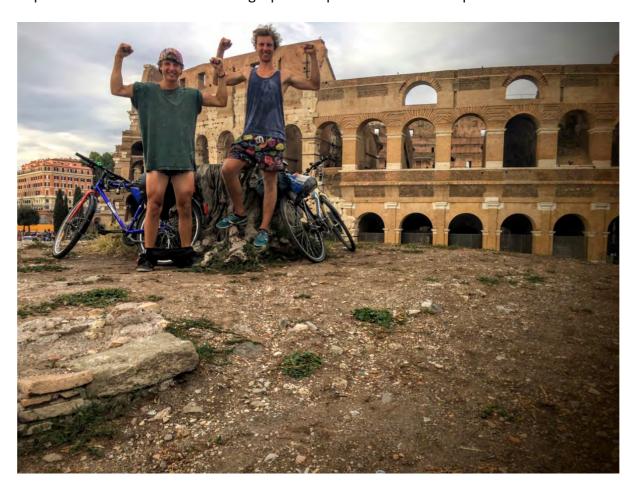
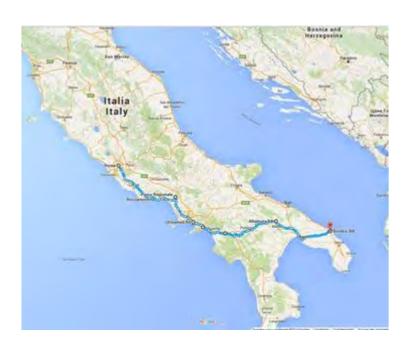


Figure 27: Arrival Roma



Figure 28: Coliseum



7th part Itinerary



Figure 29: Back Home Finally

Total kilometer: 5500km

Average kilometers: 97km/day for 57 days

2) Currency

Unfortunately during our trip, we mainly went through countries that did not use the euro currency even though all of the countries were European. This point was not too much of a problem as we decided to simply use a credit card when going through those countries in order to get cash.

3) Weather

The weather was an important part of the trip as we used our bikes regardless the weather. However, it did not matter how prepared we were for this because when it was raining we would get wet and when it was hot we would get hot. So this point was pretty minor for us but may be needed to consider carefully in different countries and different seasons.

It did vary a lot depending on the area; we thought that we might need to buy some equipment when we got there especially in the North. But we soon realised that it was far too complicated. Based on the following map, the weather in our itinerary goes from one extreme to another. The temperature went from more than 40 degree Celcius in Italy to 0 degree Celcius in Norway or even negative temperatures. The weather was only a minor issue overall.

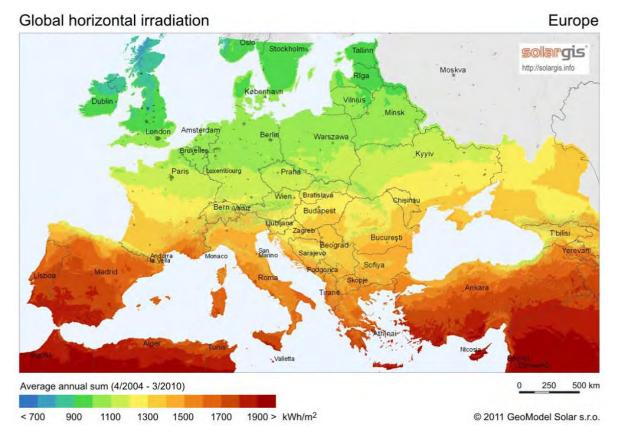


Figure 30: Average annual irradiation in Europe (sun).

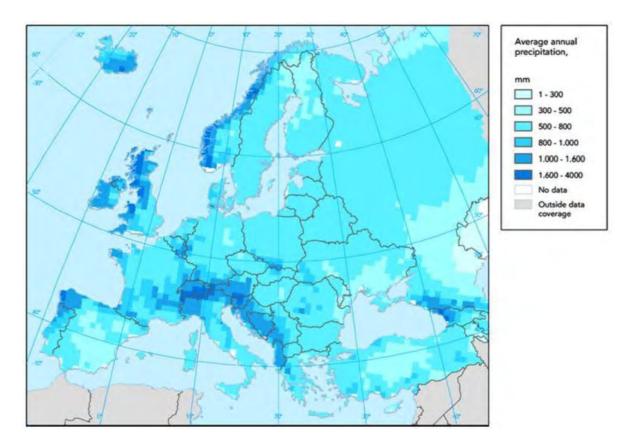


Figure 31: Average annual precipitation in Europe.

4) Official paper

There were also many official papers and information needed when travelling. For instance, we needed to take our ID and our visa. We also needed an International Card for medical care and a credit card as it was easier and safer to carry than cash. We always kept all the important things in one bag that we always guarded.

Budget

We had a budget of around 2500 pounds in total for the two main members of the expedition. After we bought the equipment and plane tickets, we had around 1000 pounds for 2 people for the entire duration of two months.

Auguste Pugnet had worked as a babysitter and in several small jobs in order to make money. Clement Bois had his own savings that he could use for this trip while Saturnin Pugnet was doing part time jobs alongside university to earn money.

The costs that we evaluated per person were the following:

		I	1
Equipment	Price (£)	Quantity	Total (£)
Bike	570	1	570
Transport	100-300	N/A	100-300
Bike Equipment	200-300	N/A	200-300
Protection	100-200	1	100-200
Tent	50-200	0.5	25-100
Sleeping bag	50-125	1	25-62
Mattress	20-70	1	20-70
Front lamp	20	1	20
Solar charger	20-40	0.5	10-20
Windbreaker	20-40	1	20-40
Camera	0-500	1	0-500
Phone Equipment (phone plan, SD card, plug adapter)	40-60	1	40-60
Medical equipment	60-120	1	60-120
Food	8-12	60	480-720
Sunglasses	10-50	1	10-50
Bags	100-200	1	20-200
Camping accessory (heater, sleeping bag etc)	100-200	1	100-200
Total	N/A	N/A	1800-2692

Figure 7: List of equipment and cost.

Equipment

1) Clothes

As we went through many different countries and experienced different weather patterns, we needed to be ready for every possibility but unfortunately we were not. This did not bother us too much as we easily adapted to the condition. Therefore, we only had the minimum and we lost some stuff on the way so we only had 1 waterproof coat in the end. Nevertheless, this was part of the adventure.

The worse thing was that the rain caused our stuff to get wet and it would stay wet for a long time. We did not have anything to dry it and that was a huge issue.

2) Tents

The tent and more generally sleep was really important and we carried a two person tent. As for everything else in this trip, we tried to make it as light as possible. We avoided taking too much stuff and bought it on the way if possible. The quality of the equipment that we purchased depended on the budget that we had which was not huge. We also used a sleeping bag for comfort and as a preparation for fluctuating temperatures.

3) Communication

We had to extend our phone plan to all Europe in order to be able to communicate. Nevertheless, we tried to stay close to each other as much as possible as cycling in a group is usually safer. We only got lost once and separated from each other in the whole trip but managed to find each other again shortly. As we were mostly in the EU, we did not have problems using phones and finding a phone plan.

4) Bike equipment

Bike equipment included signalization light, replacement wheel and all the equipment to repair the bike in case something got broken. We had to decide on how much equipment to carry as we had to decide a trade-off between weight and the quantity of equipment. As the bikes were stolen at some point, we had to send most of the stuff back home before finding new bikes and therefore finished the trip with only a backpack each.

As our route were mainly going through the roads, we decided on the type of bike according to this. We ended up choosing 2 bikes specialised for this purpose from a local shop and were able to test them. We tried to use them as much as possible before the trip to be able to adjust them accordingly. The bikes cost 750 euro each. Unfortunately these bikes were only used for half of the trip until they got stolen and then 2 bikes were bought for 50 euro each and used until the end of the journey.

5) Food

We knew that we should not use too many cooking equipment as it was expensive. Therefore, only a few light essentials were brought. We relied on supermarkets that we found on the way and carried extra food with us. We needed a lot of calories, around 5000 a day, therefore we made sure to eat a lot even if it was not really good food as we did not have too much money.

For water we carried 5 liters each and we refilled it every time we could. We discovered from our research that there were easy accessible water points at every location we went so we should be able to find water every day.

Conclusion

This trip was one of the most interesting challenges of my life. I learnt a lot from it and it will be useful to me all my life. Even though it seemed to be far too big at the beginning, we managed to accomplish it. We solved any problem we had on the way and managed to overcome every challenge. I would be really happy to help anyone or explain to anyone who is planning to take up a similar challenge and I would try my best to help them in their expedition. If I had one tip to give, it would be to be careful to not take too much things, try to think twice before deciding that something is really necessary. And I would encourage people to try this kind of expedition. We did not have much money but we still managed to do it, we met even more great people on the way and this was all part of the exciting adventure.

Acknowledgement

We would like to thank everyone who gave us support during this expedition. Starting with the Imperial College Exploration Board who helped us very generously. Our families who supported us from the beginning and finally everyone who that took part in the fundraising.

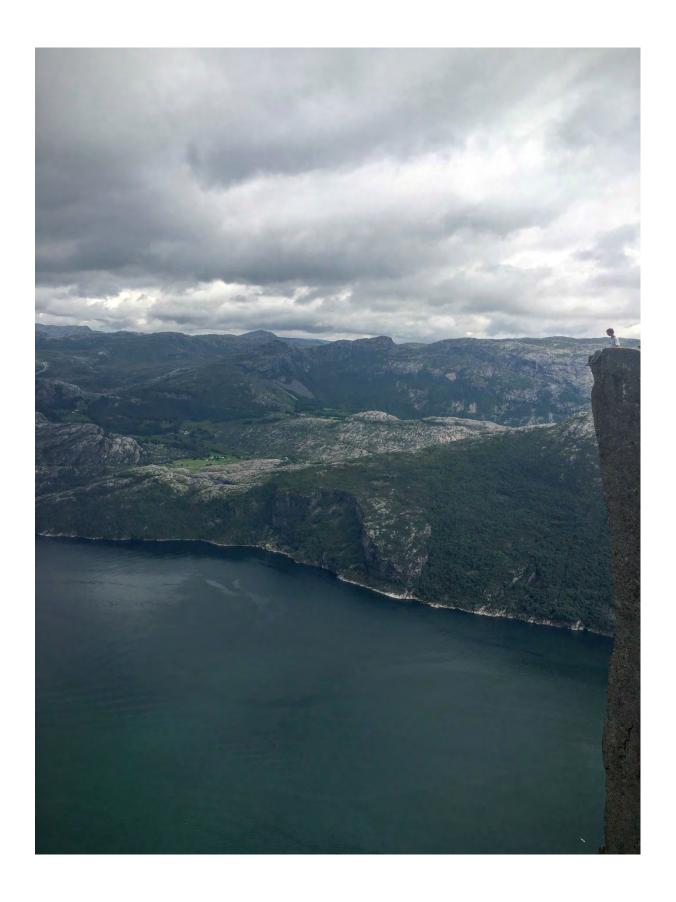
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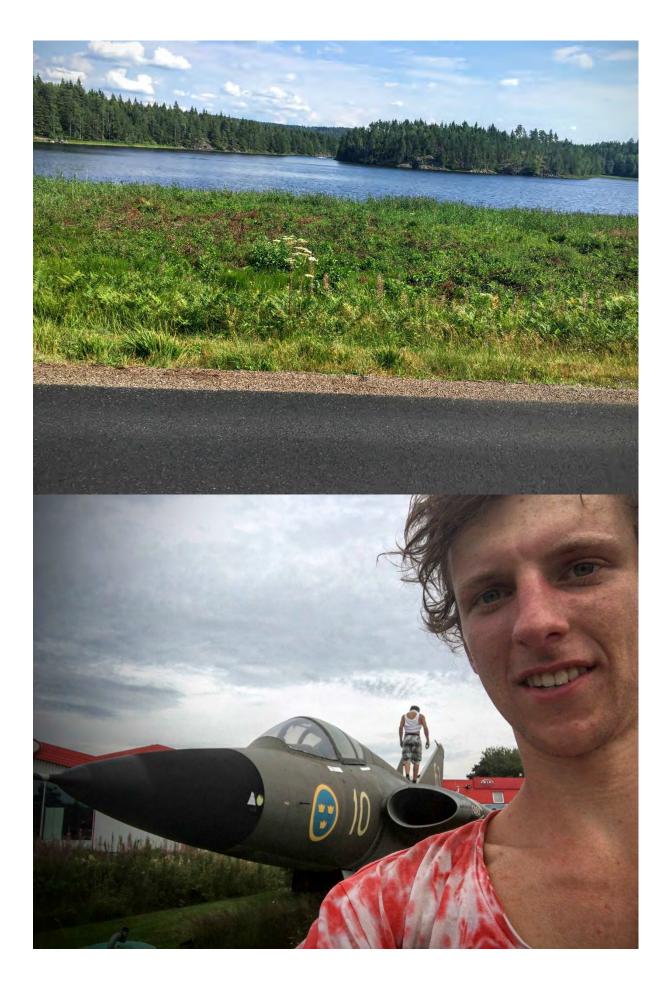


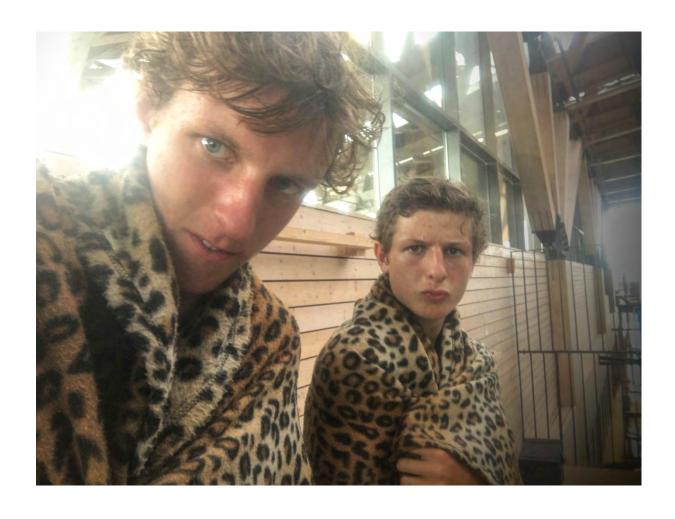


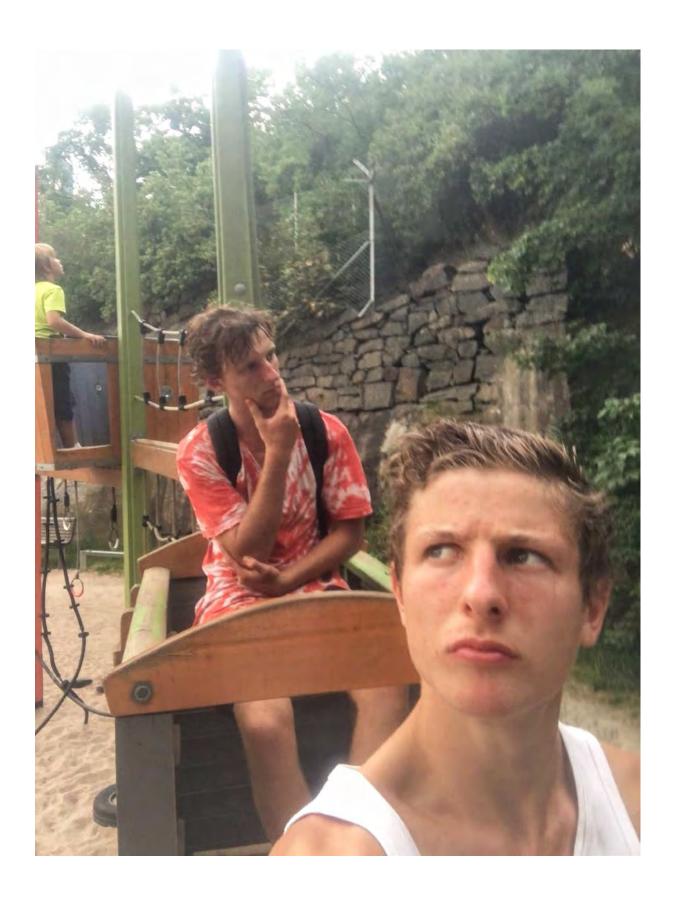


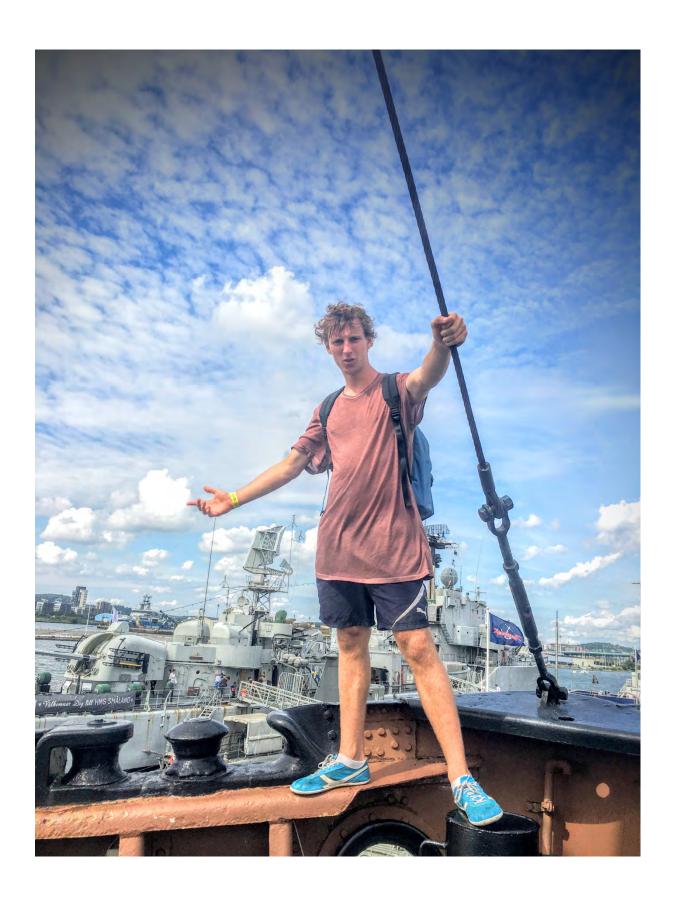


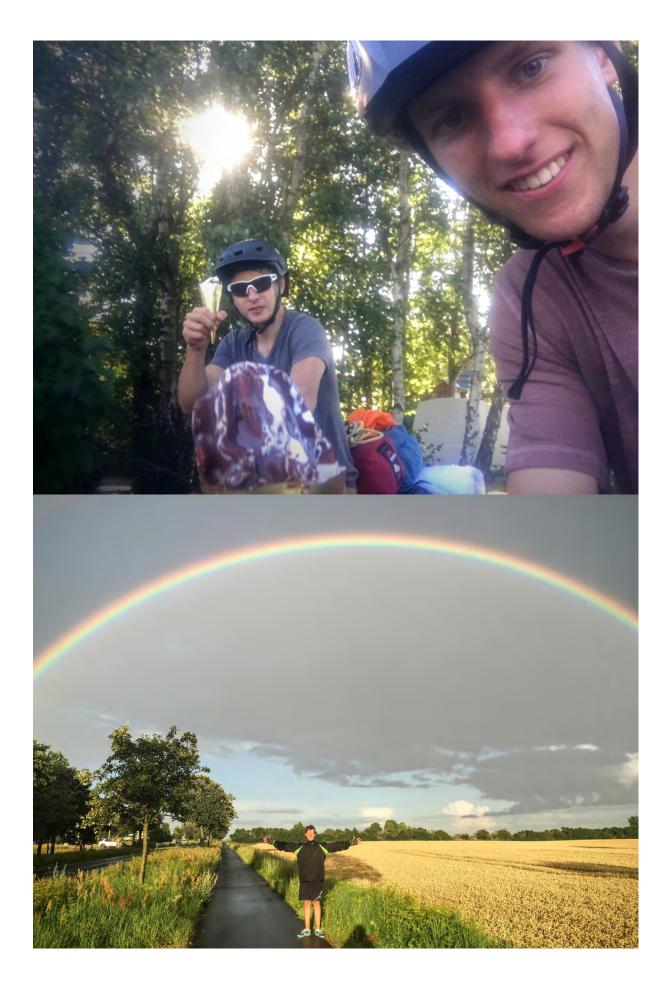








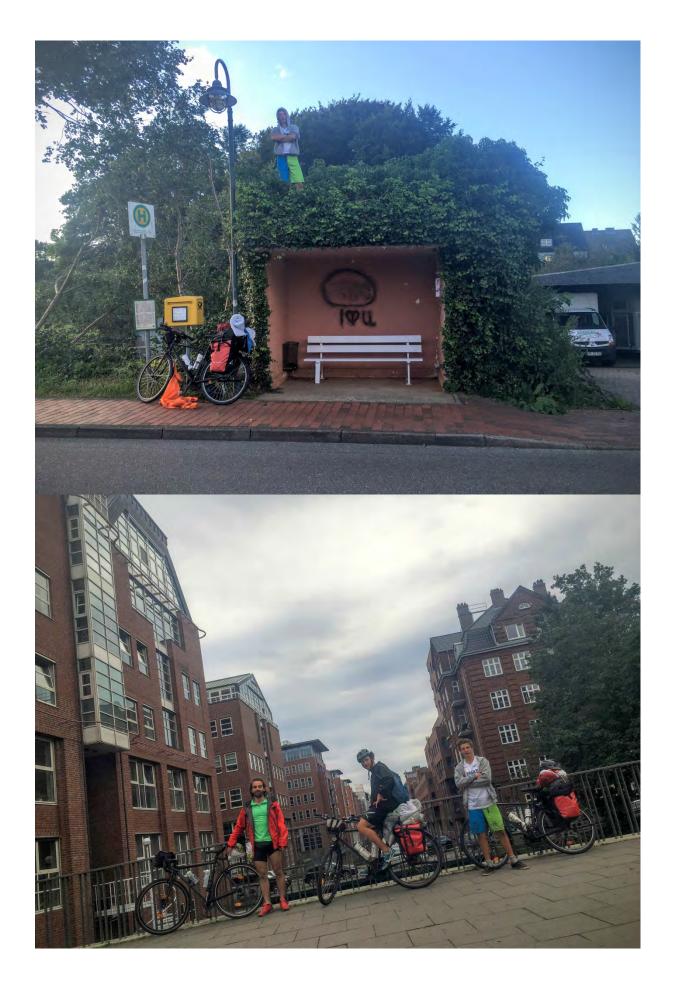




Page 54 of 40











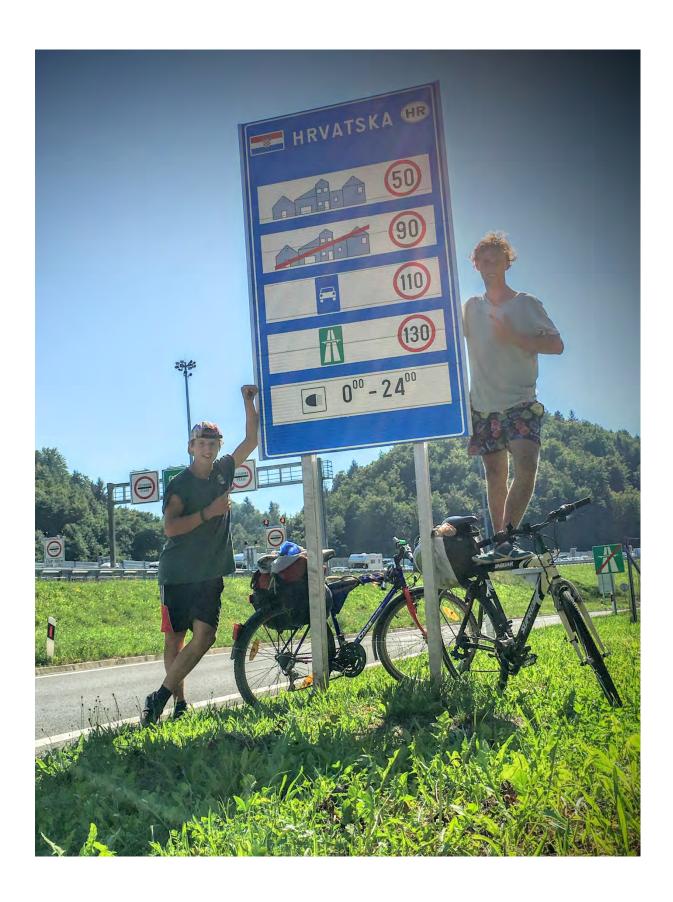


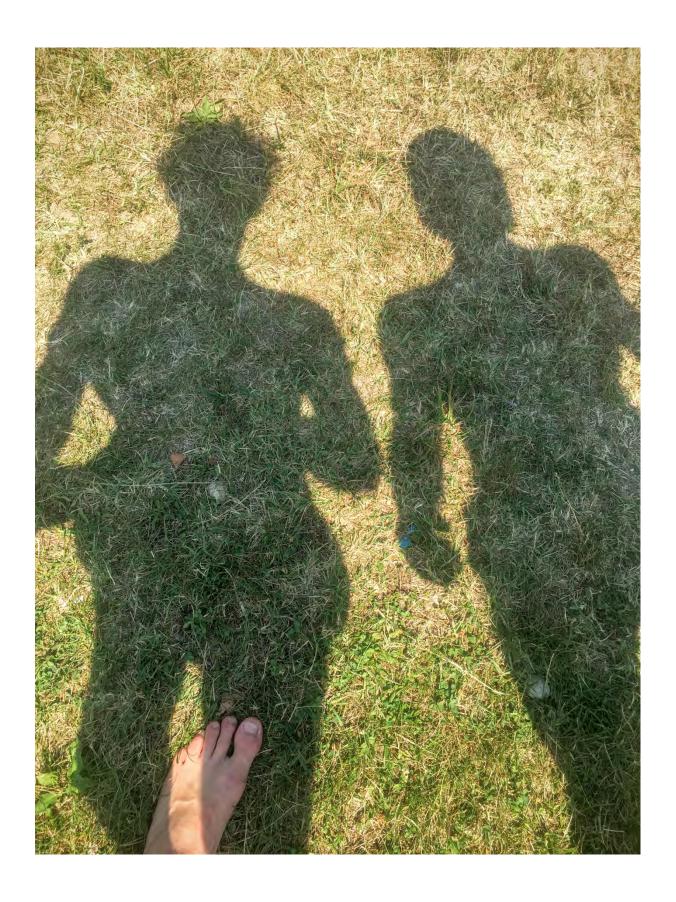


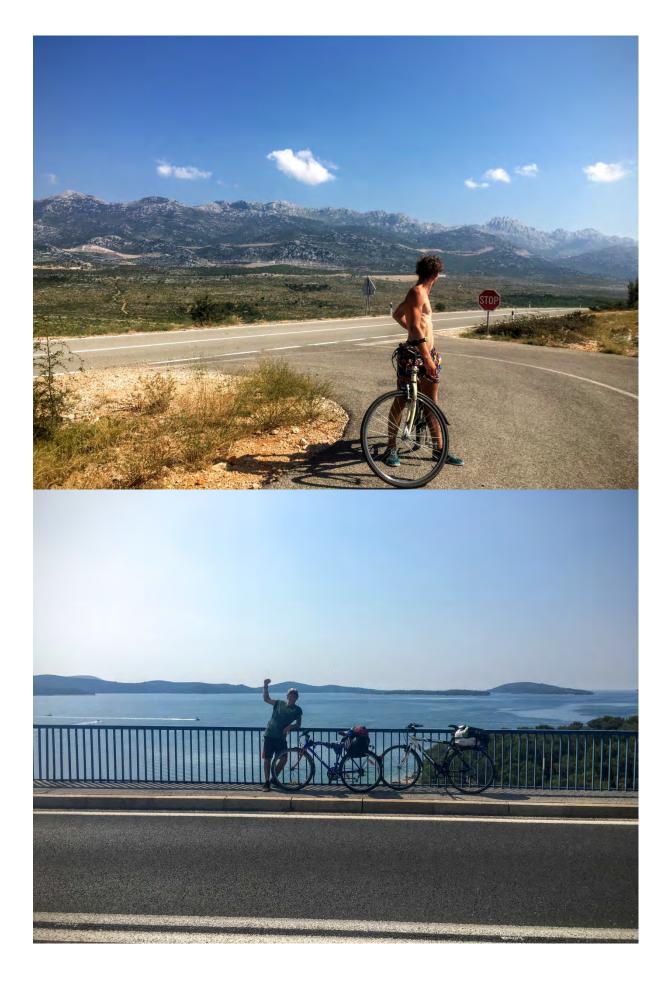
Page 59 of 40











Page 64 of 40



Page 65 of 40



Page 66 of 40





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