

A. Design project outline (investigate issues of a river in or near your town/city)

1st Lyceum of Rafina/Greece

1. Great Stream of Rafina (Megalo Rema Rafinas)

Our world is **rapidly changing**. Everyone knows that. **Climate change** is the word encompassing the entirety of every alteration that one can now examine just by taking a look out of the window, no matter where he lives. **Natural disasters** are on the rise even in areas that used to remain untouched of extreme phenomena. Most of the authorities pretend to fight against those disasters, while they silently contribute to them through their own woeful decisions.

Such is the case of **Megalo Rema Rafinas**, a vast river system extending from the rocky hilltops of **Mt. Pendeli** and **Hymettus**, to the agricultural Spata valley and on to Rafina, where its estuary is located. As its name reveals, it used to be a small stream (the greek word for it is "Rema") which grew up to become a river after the major man-made impact on Attica geomorphology because of the expansion of Athenian suburbs and the construction of an extensive road network during the late 20th and early 21st century.

Depending on the spot one visits he may form a different view on Megalo Rema and that's due to the fact that it's a world in itself. The **branch of Daou** and the **branch of Agia Marina** descend from the steep slopes, through gorgeous clumps of pine-trees, now badly damaged from the devastating wildfire of 2018, forming deep canyon-like features that evolve into hidden waterfalls during wintertime.

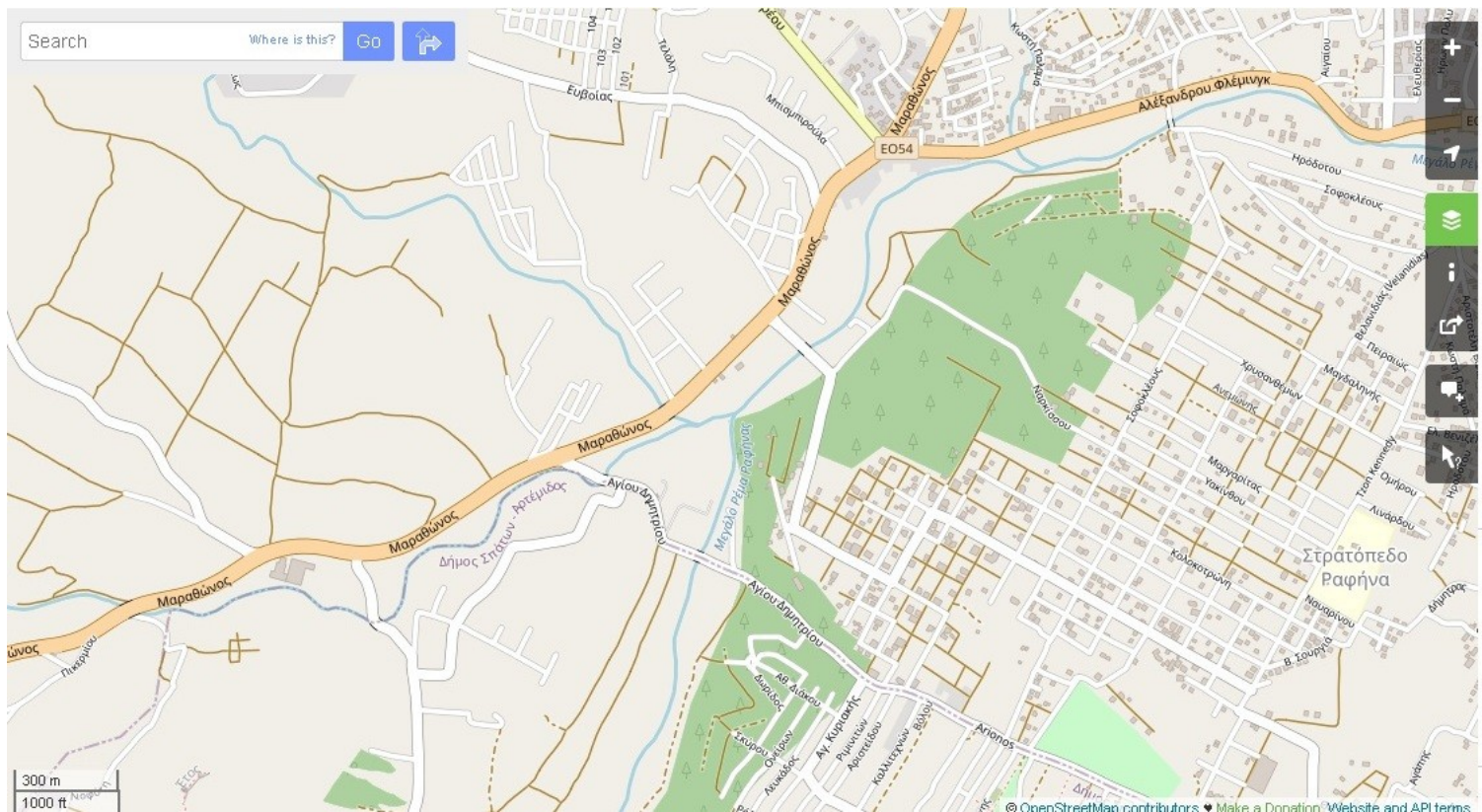
Valanaris follows a similar course boasting for its 8 meter waterfalls and paleontological finds it contains in the part of it close to Pikermi town. Those finds, often called the **Pikermi fauna** are one-of-a-kind remains of Savannah-like animals that used to inhabit the place upon the dawn of prehistory.

Petreza, nowadays the **largest branch**, differs significantly, its banks being close to sea level, even and located in an undisturbed area that includes few houses. A small willow trees forest with reeds so tall as to prevent one from easily finding his way through create a fairy tale scenery, leaving the visitor in amazement, because of the virginity it retains in spite of its proximity to the urban areas. Moreover, it creates a zone of protection for the endangered species of *Pelagus marathonicus* (Greek name: Attikopsaro, "Fish of Attica"), endemic of South and Central Greece and dwindling in population due to the complete destruction of the vast majority of its natural habitats. Hundreds of eels too live here, having chosen this place as their home.

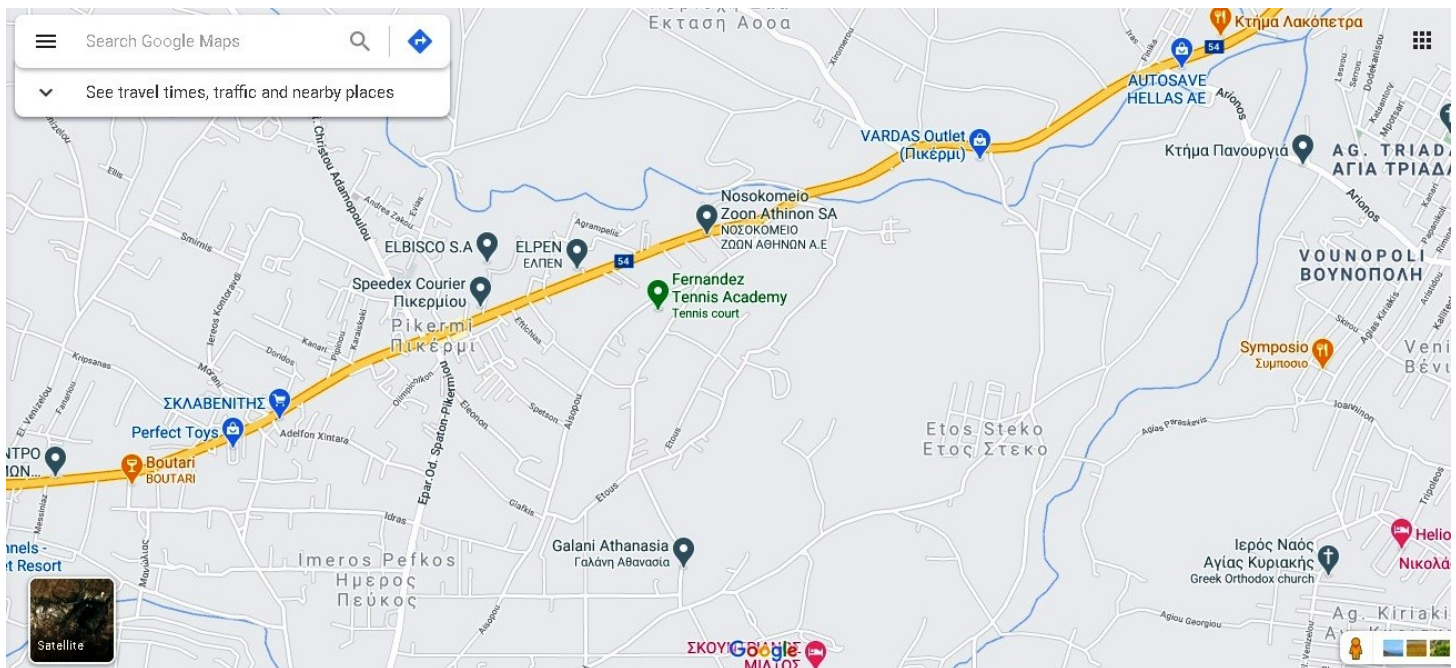




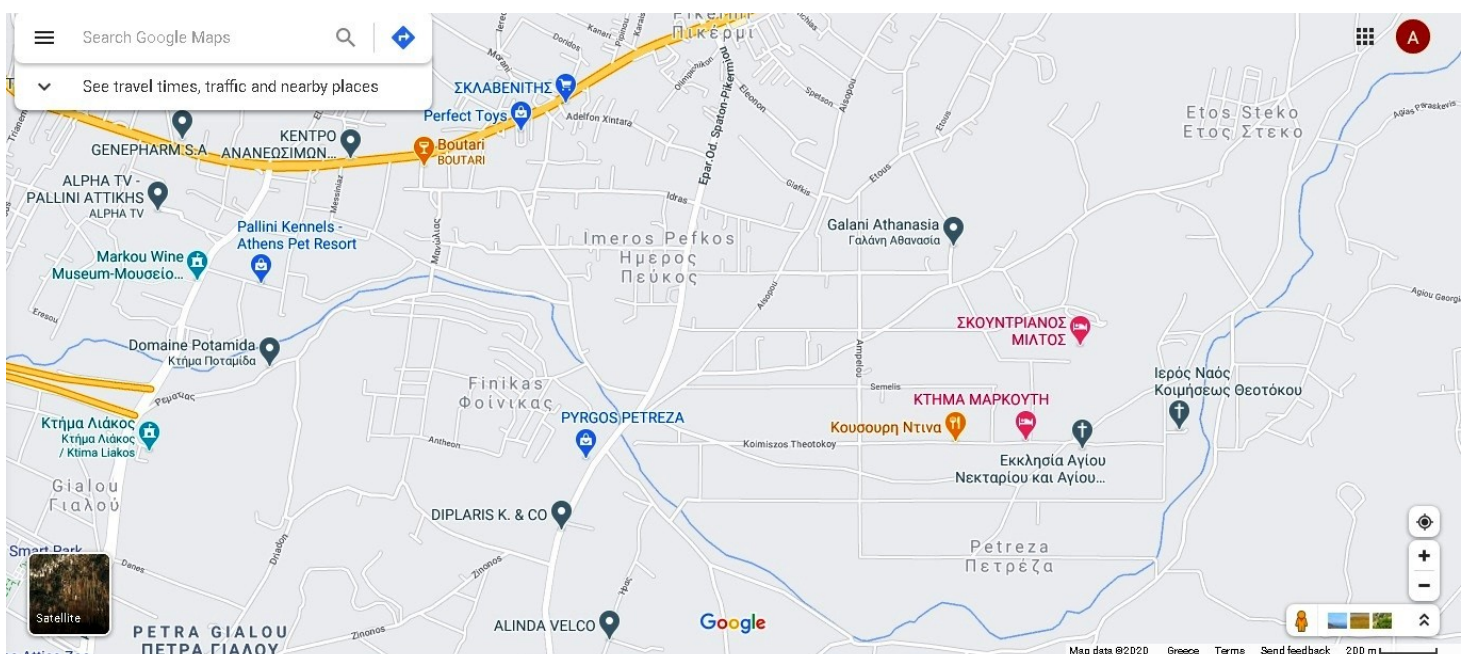
Megalo Rema Rafinas

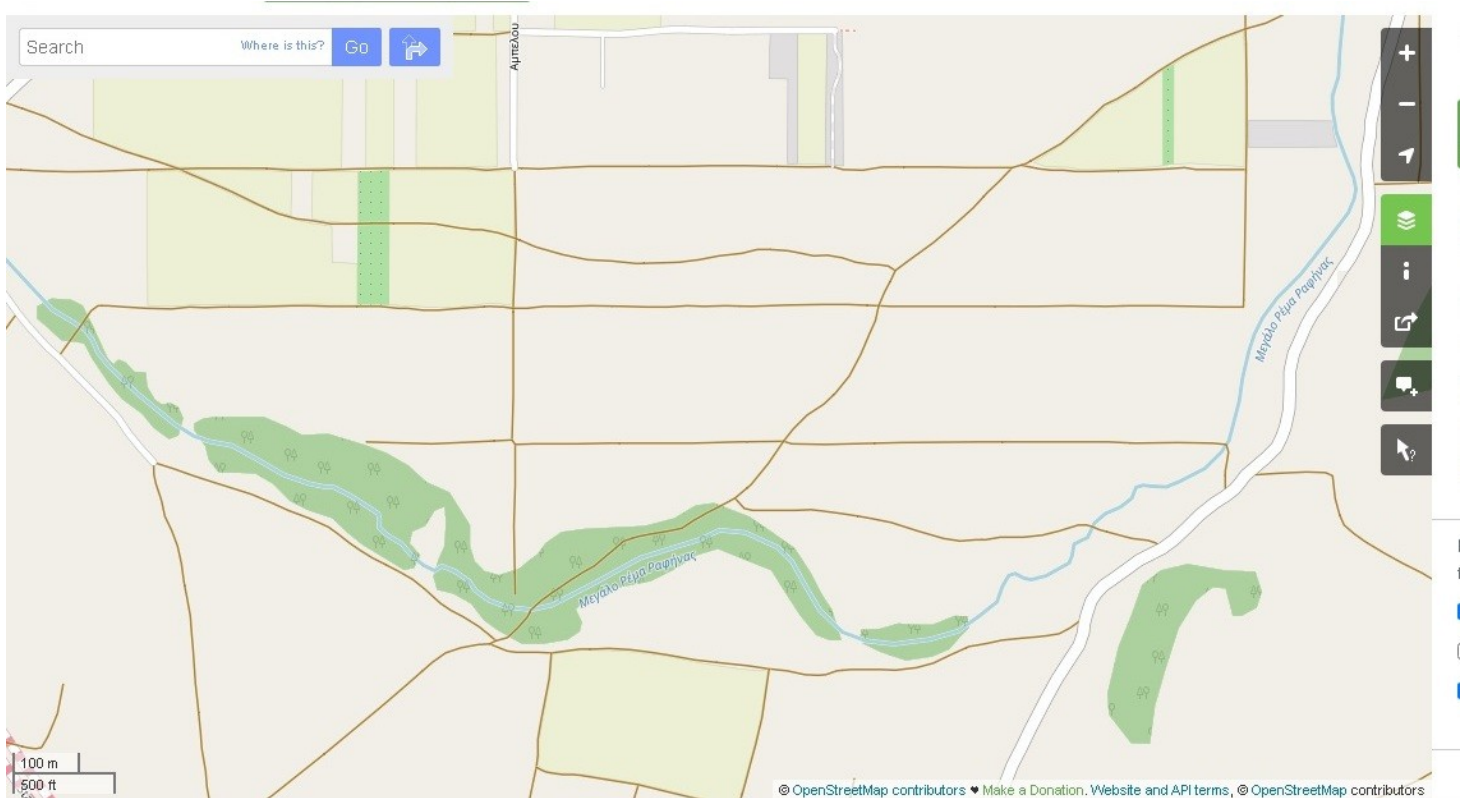


**The junction (confluence)
of Petreza branch and Valanaris branch**



The junction (confluence) of Petreza branch and Valanaris branch





Petreza branch, nowadays the largest branch of Megalo Rima Rafinas

All those branches, together with dozens of seasonal streams merge into one, which reaches the sea next to Rafina Port. The estuary formed here, albeit shrunk as a result of extensive urban growth, is where more than 100 species of birds, many of which migrating, create their nests every year. White proud egrets, small wagtails, little ringed plovers and various others are an everyday view for any of the passersby who would pause for a moment to admire it.

A world of birds, fish, insects, reptiles, foxes, frogs, badgers and who knows what else. A world of unexplored antiquities ranging from prehistoric to the late roman times. A world of mystery awaiting the adventurous visitor to explore it. Our little Amazon. The largest river in cement-torn Attica. And yet, so close to a lingering and abrupt end.

2. Describe the problem :::

During the previous years the authorities have pressed to apply what they call an anti-flood method and what we call a disaster. 15 kilometres of the most rich in beauty river parts are planned to be deprived of their natural vegetation. More than 3000 trees, some of these centuries old, will be cut, never to grow again, since the entirety of the banks and the riverbed will be covered in cement and gabions (metal boxes containing rocks), turning what now is a diverse ecosystem into an open water pipe with no eco-value.

Despite all efforts, the plan seems to have almost fully unwrapped and its implementation is due to start in a few months time. Greek people and politicians may eagerly announce their concern for the environment every now and then, but few of them actually seem to care.



3. Describe the positive and negative consequences of the changes that are foreseen or planned along the river.

The plan will erase this natural landmark from the map, only to pave the road for the alleged economic growth that extensive building will bring to the area. Practically, it will also affect the microclimate, since the average temperatures will rise. Removal of trees will make the river's self-cleaning impossible, rendering the Attica coast prone to the critical danger of pollution rise. Climate change always settles step by step. Cement comes at a cost.

Our towns are devoid of sensitivity. We are afraid everyone's trying to profit for his own good, too settled as he is in his own ways to fight for a common cause. Indifference reigns, not only towards nature, but at the same time towards the European legislation, which downright prohibits alterations of this sort in rivers, advising in favor of more environmental-friendly flood management.





4. A proposal about how we can address the problem....

The river must preserve its natural banks.

The best protection against the flooding is the natural river and not a canalized tube carrying water to the sea.

Ecomechanics should be applied to support the banks wherever they appear flimsy. Illegal dwellings and buildings dreadfully close to the river should be expropriated and, where it would be possible, its width should return to its initial condition through removal of decades old rubble disposed there. Meandrisation, the exact opposite of canalisation, also helps slow down water speed in case of a flood, being a vital element of healthy rivers.

In any case, any extensive antiflooding construction work should be preceded by a careful examination of the river's distinct characteristics, its strong and weak points, its problems and its assets. Under no circumstances should a hasty and technocratic assessment, like the one about to be applied, destroy a unique place that thousands of years have shaped.

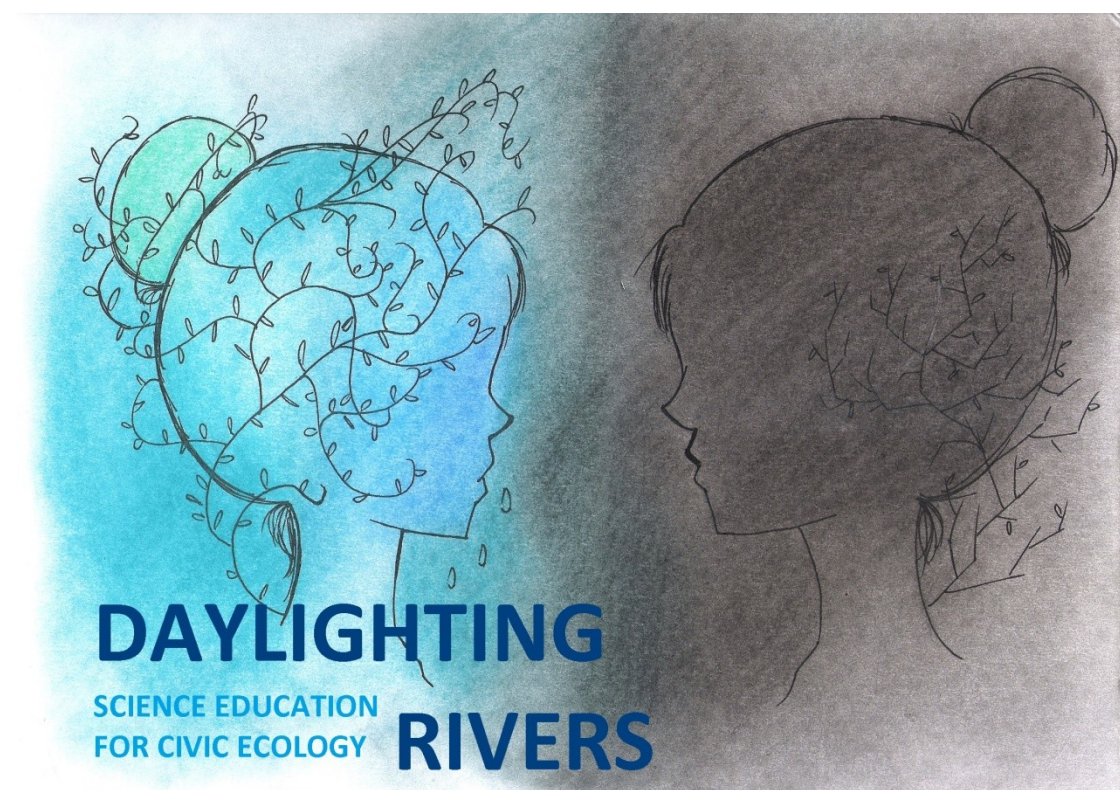
As a school, we have tried to raise awareness through open workshops and events, field trips to different segments of the river and co-operation with local experts and volunteers as part of the efforts to engage the local community in the search for a better solution.





5. Our proposal will be beneficial for your town/city ...

However, what we must to understand is that not only the ecosystem of the stream is endangered but also ourselves. We focus on profit and forget the value of Mother Earth that has become a living dead. One more reason to protect this huge asset is climate change and the planet's screams for help. As long as we continue to destroy and neglect the environment, unfortunately, we will not be able to see any recovery of the situation. We will perish in the end and we will be to blame for our own extinction. We forget that we are part of the earth, as a result of which we constantly try to dominate and impose it. What do we think we will prove with these actions? How powerful do we think we are? After all, nothing matters to man in this world. He is not interested in rivers and flowers. Everything is lost in this hazy fog created by the fire of the sun with its light that penetrates and stabs the Earth. You know, she is bleeding. After all, all the mornings in the world are the same. We are standing in the middle of a hurricane. The point is, we must not sink into the abyss in order to be reborn.



6.

In our project we chose to present the estuary of our river. It's not the most attractive segment of it, but it's a familiar place to us. It's the place of our first explorations. A spot we cross everyday going to school. We've known it as part of our strolls, next to the beach and the park. We've witnessed it in the freezing winter and in the scorching summer. One might wonder how this completely urbanised and heavily cement-impacted location could still contain an unexpected variety of life and, as one proceeds further away from the estuary, even beauty.

Due to our studying obligations (we are all preparing for the Panhellenic examinations), we created something only remotely connected to the game we had envisioned. Practically, we gathered together in one of the last sunny October Sundays and filmed *all' improvviso* small scenes of the river in different angles that try to concisely and accurately portray this bleeding nature, together with all the problems and challenges it faces. Each one is located on a different spot along the last 300 metres of the stream. The scenes are accompanied by our voices explaining and transferring the reality of an urban river. We hope this vivid combination will be able to successfully convey our own knowledge and sentiments.





The poem written in greek
by our team of students
and translated in three languages



Running...

Unstoppable it was, running and running

Constantly looking straight ahead.

Always to one dream entitled.

So vast a dream, that many more inside could
fit.

And running it would be, all running,

Far to flee...

The spring adored,

The winter not, it made it rage.

And raging people raged before its rage

And struck it hard,

All raged before its running they besieged it.

Anxious they were to chop its wings.

They couldn't understand.

Yet neither could it be in chains long restrained,
And run it would, together with its wounds it
would run away.

Together with its friends.

Various and different as they were
Every color and size.

And raging people to block its path with
obstacles they strived,
They had their eyes all tied with wires.
They didn't have a clue.

Still it was running,
And would run as far it could stand,
Colorful dazzling...

No, it was no child
Or might as well have been;

But certainly it was a river...



Correva...

Era inarrestabile e correva, correva
guardando avanti.

Sempre con lo stesso sogno.

Un grande sogno,
che accoglieva al suo interno così tanti altri.

E correva, sempre correva,
per scappare...

Adorava la Primavera,
l'inverno non gli piaceva,
lo infuriava.

E gli infuriati si infuriavano che si infuriasse
e lo picchiavano,
Si infuriavano che correva e lo assediavano.
Volevano tagliarli via le ali.

Non capivano.

Ma nemmeno lui capiva di catene,
e sempre correva, con le sue ferite correva.

Insieme a i suoi amici.

Tanti e diversi
di tutti colori.

E sempre gli infuriati gli mettevano ostacoli,
legati avevano gli occhi con cavi.

Non avevano idea.

Ma lui correva,
e per quanto avrebbe potuto correre,
pieno di colori...

Non era un bambino
o Forse lo era•

Pero sicuramente era (un) fiume...



Corría...

Imparable era y corría, corría,

Mirando adelante.

Siempre con el mismo sueño.

Un sueño grande, cabiendo tantos otros.

Y estaba corriendo,

para escaparse...

Le encantaba la primavera,

pero el invierno no, le hacía enojar.

Y los enojados se enojaban de su enojo

Y lo golpeaban,

Se enojaban de su correr y lo asediaban.

Querían cortarle las alas.

No le entendían.

Tampoco él se entendía con las cadenas,
y estaba corriendo, corría cicatricado.

Junto a sus amigos
Muchos y varios
de cada color.

Y los enojadas no paraban de ponerle
obstáculos,

Ceñidos tenían los ojos con cables.

No sabían nada.

Pero él corría,
Y iba a seguir corriendo, mientras él aguantara,
lleno de colores...

Non era un niño

O tal vez podría ser•

Pero a ciencia cierta era un río...

