http://www.comenius-rivers.eu

Rivers maintain unique biotic resources and provide critical water supplies to people. In some countries like Cyprus rivers give water drinkable supplies. Along the river valleys there is a living space, shelter, food, many rare and endangered plant and animal species. Half of the described species of fish live in fresh water, mainly in rivers. The river valleys are characterized by one of the highest rates of biological production, species diversity and abundance of organisms. They are home to valuable natural habitats, many of which are protected. The most important goal of the project is the comparison of flora and fauna of rivers of Poland, Turkey, Spain, Portugal, Cyprus, Romania and France and promote the importance of rivers for biodiversity of our globe.

The River Project offers unique educational opportunities to high school students. The project helps students realize that they can have an impact on the community. We plan to offer student research projects within the three areas that examine man's impact on river systems: river water chemistry, river biology and river geographic environment.

At the same time that the students work out the environmental aspects and realize the main dangers for the environment. It is also aimed to arouse in them the interest for the other European languages and also the importance to communicate with other peoples in order to establish a true European citizenship. During the project we are going to cooperate with scientists. We will develop this project using the web 2.0 and the eTwinning platform. We are going to spread information about biodiversity of rivers between students and local community.

The results of the project will be presented on a special web site and printed posters.

The project will last 2 years (2013-2015).

PROGRAM

Portugal – 3 to 7 March 2015, in Póvoa de Lanhoso

Foreign participants: 17 students and 15 teachers (Total 32)

Portuguese participants: 17 students/host families

Partnerships - Municipality of Póvoa de Lanhoso; Theatro Club; ATPL; Centro Ambiental C.Calvos; Musical group Canto D'Aqui

Planned activities

Saturday, 28th February – Arrival and welcoming the French team

Tuesday, 3rd March – Arrival and welcoming the other teams by the host families and accommodation

20.00 – Dinner in Braga with the teachers

Wednesday, 4th March ***Activities at school***

09.00 - 10.00 – Welcoming by the School Board and Guided visit to the school

10.00 - 11.00 – Lecture by University Professor Nuno Formigo (Topics: Biological water quality, the Water Framework Directive and macro invertebrates)

11.00 - 12.00 – Practical/Laboratory activities on macro/micro invertebrates

12.00 - 13.30 – Meeting of the Coordinators / Group work for the students

13.30 - 15.00 – Lunch at the school canteen (offered by the school)

15.00 - 18.00 – Group work for the students and presentations by all the teams

18.00 – Students return to the host families

20.00 – Dinner in Guimarães with the teachers

Biodiversity of Rivers 2015 PORTUGAL MEETING

Thursday, 5th March

09.00 – Welcoming of the teams at the Town Council

10.00 - 11.30 – Guided town tour (Castle, "Albufeira das Andorinhas" – Andorinhas Dam)

12.00 - 15.00 – Visit to the Basic School of Taíde to contact students and teachers of the Primary Schools and visit an exhibition (with break for lunch)

15.00 – Return to the host families and hotel

17.00 – Cultural show at the Theatro Club in Póvoa de Lanhoso (school talents, fashion runway with filigree accessories show, handout of certificates and offers exchange)

- Welcoming drink (green wine) / Photo Exhibition about river biodiversity
- Performance of the musical group Canto D'aqui

20.00 – Farewell dinner at school

Friday, 6th March

08.30 – Guided visit to Oporto – Visit to the city, Cruise in river Douro and visit to the Porto Wine Cellars (the bus leaves P. Lanhoso with the students and picks up the foreign teachers in Braga)

17.00 – Return to Braga/Póvoa de Lanhoso

20.00 – Dinner in Braga (teachers)

Saturday, 7th March

Departure of the teams from: Poland (train at 06.07), France (flight at 08.40) and Spain (Bus)

Free morning

15.00 – 18.00 Guided tour to Braga city centre and Sanctuaries of Bom Jesus and Sameiro with the teams from Romania, Cyprus and Turkey

Sunday, 8th March

Departure of the teams from:

Romania and Cyprus (flight at 06.30)

Turkey (flight at 12.30)

PÓVOA DE LANHOSO

Agrupamento de Escolas de Póvoa de Lanhoso (*www.espl.edu.pt*) is an institution integrated in a rural area. Our institution participates in these cooperation activities because it's a way to improve the qualifications of our pupils, make it larger and diversified and always creating a connection with what is done in Europe.

Our aims are: provide a better knowledge about the European continent; share pedagogic experiences; develop the concept of citizenship; use ICT and develop new searching skills; understand the advantages of team work; disseminate our work to public society; motivate our students and teachers to learn foreign languages and promote interdisciplinary activities.

In the school year 2013/2014 there are:

Students: 1503 and **Teachers**: 147

Levels:
Kindergarten/Pre-school; Basic Education - primary school (pupils between the ages of 6-9); Basic Education - 2nd cycle (pupils between the ages of 10-11); Basic Education - 3rd cycle (pupils between the ages of 12-14); Basic Education - vocational courses; Secondary Education – regular courses and vocacional (pupils between the ages of 15-17/18).

We also have students with special needs, who are integrated in regular classes.

Photos: Audiovisual Students

Póvoa de Lanhoso is a Portuguese village in the District of Braga, in the northern region and sub-region of the Ave, with about 5 000 inhabitants.

It is the seat of a municipality with 134.65 km2 of area and 21886 inhabitants (in 2011), subdivided into 22 parishes. The municipality is bordered on the North by the municipality of Amares, on the East by Vieira do Minho, on the South by Fafe and Guimarães and on the West by Braga.

The charter of the town was passed by King D. Dinis in September 25, 1292, and it was renovated by King Manuel I in January 4, 1514.

The county seat, Póvoa de Lanhoso, is dominated by its castle, rising on top of a hill and where Queen Teresa, mother of the first king of Portugal, Afonso Henriques, lived for long periods and where it is said he imprisoned her after the Battle of São Mamede (1128), fought to win control of the then county of Portucale.

The Castle is placed upon Portugal's largest granite monolith, surrounded by Cávado and Ave rivers. Its origins go back to the Pre-Roman period, preserving some quite unique vestiges of this time.

Filigree is the Portuguese art of working gold or silver thread. This tradition is prior to Roman occupation and nowadays there are still many artists in Póvoa de Lanhoso engaged in this craft. Filigree activity passed from generation to generation.

The filigree creations can be bought in the jewelleries and in The Museum of Gold.

BRAGA

adapted from Visit Portugal web site(www.visitportugal.com)

Photos: José Braga

Braga is a lively city, one of the oldest in the country, and is teeming with young people who study at its universities.

Built more than 2000 years ago, “Bracara Augusta” was, as the name indicates, founded by Augustus; it was located on one of the main Roman roads in the Iberian Peninsula, since it was the administrative seat of the Empire, and later given the status of capital of the Roman province of Gallaecia, present-day Galicia, by Emperor Caracalla. The Braga Diocese is the oldest in Portugal and, in the Middle Ages, the city even competed with Santiago de Compostela in power and importance. One of the Camiños de Santiago passed through here, when this pilgrimage cult grew with the Christian reconquest and the foundation of Portugal.

Braga’s Cathedral is also the oldest in the country and was built in the 12th century by the parents of Portugal’s first King, D. Henrique and D. Teresa, who are buried there. Braga is to this day one of the country’s main religious centres, having the Holy Week Celebrations and the São João Festival as the highlights in its liturgical and tourist calendar.

Besides the Tesouro-Museu da Sé (Cathedral Treasure Museum), it is worth visiting the Biscainhos Museum, housed in a Baroque palace, a landmark period in the history of Braga, and the D.Diogo de Sousa Archaeological Museum, since the city also abounds in remains from the Roman era.

We suggest a leisurely stroll around the historic centre to visit some of the many churches, admire the houses and historical buildings, such as the Palácio do Raio, the Theatro Circo, the Arco da Porta Nova, and to have a coffee at the emblematic Brasileira with a view of the busy Avenida Central. But Braga is considered the youngest city in Portugal and, from its contemporary landmarks, the Braga Municipal Stadium stands out, designed by Souto Moura, one of the most prestigious Portuguese architects and winner of the Pritzker Prize.


FITNESS
CENTER
adidas

PORTO

Porto, also known as Oporto in English, is the second-largest city in Portugal, after Lisbon, and one of the major urban areas in Southwestern Europe. The urban area of Porto, which extends beyond the administrative limits of the city, has a population of 1,4 million (2011) in an area of 389 km2, making it the second-largest urban area in Portugal. Porto Metropolitan Area, on the other hand, includes an estimated 1,8 million people. It is recognized as a Gamma-level global city by the Globalization and World Cities Study Group, being one of five cities in the Iberian Peninsula with global city status, along with Madrid, Barcelona, Lisbon and Valencia.

Located along the Douro river estuary in Northern Portugal, Porto is one of the oldest European centres, and its historical core was proclaimed a World Heritage Site by UNESCO in 1996. Its settlement dates back many centuries, when it was an outpost of the Roman Empire. Its Latin name, Portus Cale, has been referred to as the origin of the name "Portugal", based on transliteration and oral evolution from Latin. In Portuguese the name of the city is spelled with a definite article ("o Porto"; English: the port). Consequently, its English name evolved from a misinterpretation of the oral pronunciation and referred to as Oporto in modern literature and by many speakers.

One of Portugal's internationally famous exports, port wine, is named for Porto, since the metropolitan area, and in particular the adegas of Vila Nova de Gaia, were responsible for the production and export of the fortified wine.

adapted from Visit Portugal web site(www.visitportugal.com)
Photos: José Braga

The history of Porto dates back to the 4th century, to the Roman occupation of the Iberian Peninsula. Celtic and Proto-Celtic ruins have been discovered in several areas, and their occupation has been dated to about 275 BC. During the Roman occupation, the city developed as an important commercial port, primarily in the trade between Olissipona (the modern Lisbon) and Bracara Augusta (the modern Braga).

In 2001, Porto shared the designation European Culture Capital. In the scope of these events, the construction of the major concert hall space Casa da Música, designed by the Dutch architect Rem Koolhaas, was initiated and finished in 2005.

The first Portuguese moving pictures were taken in Porto by Aurélio da Paz dos Reis and shown there on 12 November 1896 in Teatro do Príncipe Real do Porto, less than a year after the first public presentation by Auguste and Louis Lumière. The country's first movie studios Invicta Filmes was also erected in Porto in 1917 and was open from 1918 to 1927 in the area of Carvalhido. Manoel de Oliveira, a Portuguese film director and the oldest director in the world who is still active, is from Porto. Fantasporto is an international film festival organized in Porto every year.

Porto has several museums, concert halls, theaters, cinemas, art galleries, libraries and book shops. The best-known museums of Porto are the National Museum Soares dos Reis (Museu Nacional de Soares dos Reis), which is dedicated especially to the Portuguese artistic movements from the 16th to the 20th century, and the Museum of Contemporary Art of the Serralves Foundation.

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CYPRUS MEETING

Photos: portuguese team

Lykeio Agiou Antoniou was first opened in 1976 as a Public School. Now it has more than 50 teachers and more than 300 students. Among the aims of the Lyceum is to make its pupils active European citizens through research projects for environment and energy.

Our school is located in a relatively poor neighborhood, therefore we have poor students and we also have students from other regions due to the fact that we live in a city that hosts people from other countries with different regions. Our school is integrated in an urban area with low social and cultural background; the majority of students and even their families have no expectations of their future; we have students in professional courses with low expectations of school; some of the students' families are immigrants, a fact which causes problem for students to learn Greek. We also have students with special needs, who are integrated in regular classes. Most of the students, aged between 15 and 18 years, are from the nearby small rural villages and poor neighborhoods, where unemployment prevails. In consequence of this, their parents are obliged to work abroad, leaving their children with other members of the families.

Many students are involved in actions that our Lyceum organizes, actions which are related with a variety of themes. Every year creative teams are set up in our school: a theatre team, a team for traditional and modern dances, a team for music and also scientific teams making researches. The research in our school has to do with scientific themes such as Environment, Energy, Renewable Energy Sources, Astronomy, Physics, Chemistry and Languages. In the projects that we are doing this year in our school they are involved more than 70 students. In these projects our first goals is to make the students to learn how to learn. With their involvement in these projects they have the opportunity to announce their results in other students and in public in general. Getting in contact with the educational system of another country, the teachers will increase their professional and personal experience, which will be a great benefit to our school. They will guide the students in their activities during the project; so they will improve both their ability to communicate in English and their ability to manipulate computers. The firm communication between them and their students will be beneficial, too.

Our School is one of the schools which have a leading role in organizing every year o Conference (for all Cyprus Schools) for teachers and pupils about Natural Sciences.

O u r meeting in Cyprus was full of excitement, surprises. I like your culture, music, food. I was charmed by the warmth and hospitality of the Cypriot schools. I am very happy with our group of teachers and beginning work on the project. Nicolas is a very good organizer full of new ideas. Teachers Cypriots are full of energy and joy. Each of the teachers made a lot of good in the project. All the moments spent together is for me the most valuable.

I am glad that I got to know the history of Cyprus, very sorry that you suffered such a great loss: the loss of people, houses, cultural heritage. Cypriots are a nation full of tolerance and respect for people. I am happy that you are proud of it.

Magdalena (Poland)

St. Anthony's High School hosted the 1st meeting of the European Comenius Program 'Biodiversity of Rivers' from October 8th to October 12th.

The meeting held in Limassol was attended by 5 of the 7 schools (Cyprus, Poland, Romania, Portugal and France) and it was the first introductory meeting and reorganization of schools for the program.

"When we arrived at Larnaca Airport we felt very nervous and anxious to meet the family that was going to host us. We didn't know what to expect because we had never had contact with them before that night. When we arrived at the hotel in Limassol, the students, Christina and Fotini, and their mother were waiting for us, and in that moment we realized that they were as excited as we were, we could see the enthusiasm in their eyes. We went home and in the car they asked many questions about us, our family and our country. We were very tired that night so we didn't talk much with them but in the next day we went to school and we attended two classes: one of Maths and another one of Physics. We had the opportunity to compare their school with our school and see that there are some differences.

On Tuesday evening we met the father of the girls and the other people involved in the project. We adored them! We had the opportunity to socialize with them and start relationships that were made stronger during the week.

On Wednesday we made a presentation about our school and our country and it went very well! Then we met the school headteacher who was very kind and we learned that the school is in a process of change. Some students' parents and the teachers have been involved in the renovation of the school because it had been undervalued for some years. The school headteacher embraced the transformation challenge with great determination. In that evening we had dinner in the school and each team took some typical food from their country. We got to know better the people involved in the project, the typical Cypriot music and we learned the traditional dances. We loved that dinner because we shared much more than the food of each country!

In the following days we visited some places of great archaeological interest as the Kolossi Castle, Kourion and Aphrodite's Rock, where, according to the legend, the Goddess Aphrodite appeared. We also visited the Diarizos river where we analyzed water and identified some invertebrates. Although we aren't students of Sciences, we saw this activity as a new experience and two hours passed quickly.

This was an unforgettable week! We met new cultures, new languages, new people and we made new friends. Everyone was great with us! We loved the time we were there and we hope to return soon!"

Ana Carolina Vale and Diana Gonçalves (Portugal)

Saint Anthony's High School, Limassol, Cyprus

Text and photos provided by the Cypriot Team

The Saint Anthony's High School was first opened in 1976 as a Public School. Now it has more than 50 teachers and more than 300 students. Among the aims of the Lyceum is to make its pupils active European citizens through research projects for environment and energy. Our school is located in a relatively poor neighborhood, therefore we have poor students and. We also have students from other regions due to the fact that we live in a city that hosts people from other countries with different regions. Our school is integrated in an urban area with low social and cultural background; the majority of students and even their families have no expectations of their future; we have students in professional courses with low expectations of school; some of the students' families are immigrants, a fact which causes problem for students to learn Greek. We also have students with special needs, who are integrated in regular classes. Most of the students, aged between 15 and 18 years, are from the nearby small rural villages and poor neighborhoods, where unemployment prevails. In consequence of this, their parents are obliged to work abroad, leaving their children with other members of the families.

Biodiversity in Cyprus in numbers

The Cyprus flora includes in total 1910 taxa native or naturalized, out of which 143 are endemic. The fauna contains 30 species of mammals, 25 species of amphibians and reptiles, about 375 bird species, 250 species of fish and about 6000 species of insects.

Vulnerabilities - Marine biodiversity

The Mediterranean can be considered as one of the regions most severely affected by marine species invasions: 745 alien species have been recorded in the Mediterranean Sea.

The eastern Mediterranean is an essentially land-locked basin with nutrient-poor surface waters ("marine desert"). In the past two decades rapid increases of the sea surface temperature have been observed, dominated by changes in summer. Modeling studies suggest that this tendency will continue in future, and the warming of surface and deep waters will result in salinization and water mass stabilization. The marine biodiversity can be affected, e.g. through reduced nutrient delivery to surface waters, "tropicalization" and the invasion of alien species through the Suez Canal.

Almyriki – Tamarisk – Cyprus

Eel Anguilla Anguilla

Potamon potamios-the crab

Marsh Frog Rana ridibunda

The small green tree frog

Cypriot Grass Snake. Normal pattern

Vulnerabilities - Fresh water biodiversity

The Mediterranean ecohydrology is vulnerable to climate change, and can affect flora and fauna of the region. In arid and semi-arid parts of the region, the biggest danger facing the lakes is the expected decrease in water input resulting from increasing evapotranspiration with increasing temperature and decreasing precipitation. This process can lead to conversion of existing freshwater to saltwater.

Adaptation strategies - Cyprus

The following adaptation measures have been recommended:

•Special attention should be given to the protection of priority and threatened species and their habitats;

•Ecological networks must be established and ecological coherence should be maintained or strengthened;

•Alien species (terrestrial and marine) must be recorded and their distribution must be prevented or removed;

•Sustainable use of ecosystem services and natural resources and conservation of ecosystem functions must be applied;

•Ecosystem-based adaptation, sustainable development and land use must be promoted and integrated with other policies and plans.

For watershed systems adaptation strategies should focus on increasing their resilience to climatic change. Given the heterogeniety in watershed types, strategies need to incorporate local needs and issues with active participation of all stakeholders. The conservation and sustainability of watersheds in the Mediterranean region is an important issue to sustain local and regional economies and ecosystems. A localized strategy that incorporates watershed characteristics and information is vital to sustain the region. A long-term strategy is needed to involve resilience enhancing measures that will enable watersheds to withstand and transform to climatic change.

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TURKEY MEETING

Erenköy Işık K-12 campus was opened in 2000, as a third campus of the Feyziye Mektepleri Foundation schools after Nişantaşı and Ayazağa Campuses which are situated on the European side of the city. The roots of FMV IŞIK go back to 1885 when the first school was founded in Thessalonica. 1996 marked the opening of Işık University to provide for the higher education of Işık Youth. As of present the number of students enrolled is now nearly 8000.

FMV Erenköy Işık located on the Asian side of Istanbul, serves a student community of 1554 students coming from a wide catchment area. There are four separate schools functioning on the same Campus under one body; kindergarten, primary school, high school and a science high school. All facilities on the grounds are used by students from all levels. There are six educational departments namely: Foreign Languages (English, German, French and Spanish), Mathematics and Natural Sciences, Social Sciences, Arts, Music and PE, Guidance and Psychological Counselling Service, and IT.

Each department is run by a head, this structure, therefore providing the basis for vertical coordination and curriculum alignment. FMV Erenköy Işık schools are fully accredited by MOE (Turkish Ministry of Education) and CIS (Council of International Schools).

In the Science High School the language of instruction is Turkish in accordance with MOE regulations. At the end of the 9th grade, the students choose a track and attend either Science and Mathematics or Turkish and Mathematics.

Besides its academic objectives, FMV Erenköy Işık Science High School aims its students to be successful in social, artistic, cultural and sports arenas with the use of its extensive facilities, an indoor swimming pool, outdoor tennis, basketball, volleyball courts, synthetic football pitches, a gym centre, pool tables, an amphitheatre, conference and exhibition halls, arts, music and dance studios, and a planetarium. In addition, 20 types of elective clubs are offered at FMV Erenköy Işık Science High School each academic year.

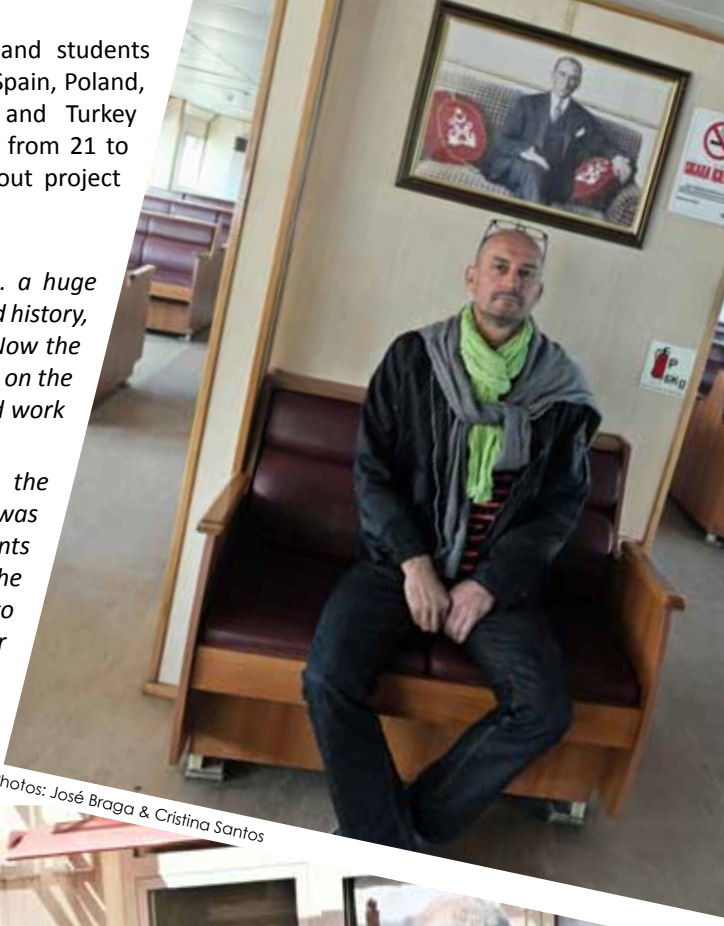
Second time, teachers and students from 7 schools: Portugal, Spain, Poland, Cyprus,Romania, France and Turkey meet together in Istanbul from 21 to 25 March 2014 to carry out project Comenius.

"Istanbul? A wonderful city… a huge city and so rich of varieties and history, so lively! Comenius friends? Now the dream team is full and we are on the same wave. I'm sure we could work hand in hand to succeed.

Turkish welcoming? For the teachers, the welcoming was great and for the students you only have to read the impressions of students to realize that they'll never forget those 4 days in Turkish atmosphere. What a pleasure to help students to reach higher step in their life. A step, where they feel more confident and able to adapt to new situations without prejudices.

See you in Severin !!!"

Philippe, Reunion



Photos: José Braga & Cristina Santos


Hoşgeldiniz

"I never thought that I'll could be part of a international team of students and work in a great project like this, which offer me a lot of new and unforgetable experiences.

This meeting brought us face to face so we can saw and compare our scientific projects on water quality. I think it was one of the most interesting time of the visit, we learned how our colleagues developed their work and saw new styles of presentation, like Prezi.

I spent in Istanbul some wonderful days in a wonderful home where I was received warmly by my hosts and now I say with great respect: Thank you."

Viorel Stuparu, Romania

GOKSU RIVER

Text and photos provided by the Turkish Team

Goksu River is located on the west side of Agva and it pours into the sea from the middle of the beach.

The structure of delta in the mouth of the stream differs depending on the season. In winter, due to harsh effects of northern winds and wild waves, the delta opens wide whereas in summer it closes completely under the sand, blocks the river and becomes a part of the beach.

The current from the river decreases, but continues to pour into the sea as a bottom current.

NATIVE SPECIES

Gobio gobio is a species in the Cyprinidae family. This small fish is widely distributed in the fresh-water streams and lakes across central and temperate Eurasia. Gobio gobio inhabits all kinds of fresh-water habitats with sandy bottoms. It is a gregarious species, and feeds on benthic invertebrates. Its life span is up to five years. Gudgeons are usually smaller than 12 cm, rarely over 15 cm long.

The **Golden grey mullet** (*Liza aurata*) is a fish in the family Mugilidae. It has hydrodynamic, very elegant elongated, more or less cylindrical body, with strong tail-fin.

Alitta succinea (known as the pile worm or clam worm) is a species of marine annelid in the family Nereididae (commonly known as rag worms or sandworms). It has been recorded throughout the North West Atlantic, as well as in the Gulf of Maine and South Africa.

INVASIVE SPECIES

Carassius gibelio

Body silvery-brown in color; last simple anal and dorsal rays strongly serrated; 37-52 gill rakers; lateral line with 29-33 scales; freed edge of dorsal concave or straight; anal fin with 5½ branched rays; and peritoneum black. (Kottelat, M. and J. Freyhof, 2007. Handbook of European freshwater fishes. Publications Kottelat, Cornol, Switzerland. 646 p.)

Pseudorasbora parva

Mouth superior and transverse; 6 branched anal rays; barbels absent; distal margin of dorsal convex; large adults with sexually dimorphic coloration. (Kottelat, M., 2001. Fishes of Laos. WHT Publications Ltd., Colombo 5, Sri Lanka. 198 p.)

Neogobius melanostomus

First branched ray of second dorsal about as long as penultimate ray; no scales on midline of nape, in front of preoperculum; pelvic-disc fraenum with small rounded lobes and the length is less than 1/6 of width at base; scales in midlateral series 45-54 + 2-3; a large black spot on the posterior part of first dorsal. (Kottelat, M. and J. Freyhof, 2007. Handbook of European freshwater fishes. Publications Kottelat, Cornol, Switzerland. 646 p.)

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ROMANIA MEETING

Photos: Adriana Pereira

Colegiul Tehnic de Transporturi Auto was founded in 1922 and it is known nowadays as a technical educational institution with a valuable tradition in preparing young people in trades and specializations especially in the field of auto transportation. The transitions undergone by Romanian education have influenced the history of our institution, which has experienced a sinuous route, with many changes. In our school there are now over 1,000 students enrolled in 36 school classes in vocational, secondary and post-secondary education and 56 skilled teachers. Our school's mission is the formation of a responsible, autonomous high school graduate , with the ability to decide on his own career, adaptable to change and able to integrate into the community.

"Help the student to discover himself and trust himself" is our slogan and much more - a duty assumed by all teachers who are working in this school.

Cooperation within multilateral Comenius project "Biodiversity of Rivers" was materialized between 30th April and 4th May through the third project meeting held on Colegiul Tehnic de Transporturi Auto in Drobeta Turnu Severin. 16 teachers and 21 students from all partner schools from Poland, Turkey, France, Portugal, Spain and Cyprus participated in the meeting.

"When I first heard that, I am going to Romania, I felt very happy because 1 month before I had a visitor from Romania and I thought that, to visit different places is such a good thing. Also the topic of our project was interesting for me and I wanted to learn more about it. Then time passed as a wind and I found myself at the airport with my teachers and friends. The trip after Bucharest was a bit long but it was also enjoyable with our group. We thanked god that we arrived to our hotel at midnight. I was hoping that I'll have a good sleep but we woke up for our projects early in the morning. Then we had a great presenting with other 6 countries. Also Romania hosted us really good both in our hotel and in their school. I'm thankful about everything. In my opinion our second day was better because we had a fabulous boat trip and a great lunch all together. It was enjoyable. Also I liked the natural

and historical places that we visited in the mornings. We got unhappy with a bad news on our last day but our forgetting party at night was great. Finally if I need to tell Romania with few words; it was very good and I love Romania also I missed Severin very much. And I make a lot new friends. I want to meet with them again. Happily I visit Romania. I'm thankful to everyone for everything…"

Berkin Atar İstanbul-Turkey

DANUBE BIODIVERSITY IN THE MEHEDINTI COUNTY

Text and photos provided by the Romenian Team

The Mehedinti county is located in south-western Romania and stretches over 4,900 km2. It is a place with all geographic and relief characteristics of Romania: mountains, hills, plateaus and plain, resembling with the form of an amphitheater in steps descending from north-west to south-east.

In the south the Danube flows, forming a wide valley - the Danube Defile. It is part of the Iron Gates Natural Park, one of the richest areas of Romania in terms of biodiversity.

Iron Gates tulip *(Tulipa hungarica)*

Botanically speaking, here can be found a valuable collections of plants, the number of species determined to date is 49.9% of all known species of our country - about 3,500 species. These include: Black pine, Iron Gates tulip, Chimes of Boilers, European waterclover, Pink butterfly orchid, Stipa danubialis, Minuartia cataractum etc. Some species of the Mediterranean flora have spread here, i.e., Oriental hornbeam, Turkish hazel, Common fig, Almond. In the Natural Park area 171 vegetation associations were identified, of which 26 are endemic for Romania and 21 of communitarian interest.

Night heron *(Nycticorax nyctiocorax)*

Black pine *(Pinus nigra ssp. banatica)*

Black Catfish *(Ictalurus melas)*

European waterclover *(Marsilea quadrifolia)*

Hermann's Tortoise *(Testudo hermanni boettgeri)*

Pygmy Cormorant *(Phalacrocorax pygmeus)*

Small Egret *(Egretta garzetta)*

Pink butterfly orchid *(Orchis papilionacea)*

Sterlet *(Acipenser ruthenus)*

Black Stork *(Ciconia nigra)*

The animal species are best represented by the high number of birds, fish or amphibians. 34 species of mammals are found in the park, from the big carnivores like brown bear or lynx to wild cats. The Iron Gates Natural Park is also the home of two special reptile species, Hermann's Tortoise and the Long-Noised Viper, both protected and endangered. Ichthyofauna is represented by species: Golden Spined loach, Sterlet, Chinese sleeper (invasive), Black Catfish (invasive).

It's also a favorite place for many aquatic birds that live in the park or migrate here for the mild winters, the area of the Iron Gates being included on the RAMSAR list of wetlands of international importance. Most of the bird species identified in the park are in fact aquatic birds and you can spot Black Storks, Night heron, Pygmy Cormorants, the Small Egret or the White Great Egret.

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RÚA DA
CALDEIRERÍA

SPAIN meeting

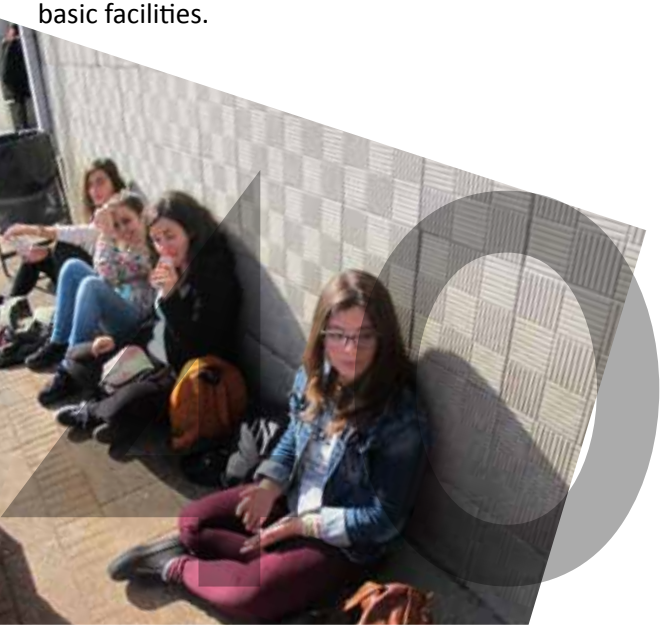
IES de SAR de Santiago de Compostela

Photos: Sofia Ribeiro

Our centre is a public school with students of the compulsary level of Secondary Education from 12 to 16 years old and also students from 17 to 18 years old of three types of post-compulsory Secondary Education: Nature and Health Science, Social Science and Humanities, and Drawing.Our centre is located in a disadvantaged area of Europe, named Galicia, at the northwest of Spain.

In our centre we have a significative percentage of immigrants from Latin America and from North Africa.

Our students' families have a low economic level, especially in the compulsary levels, and some students come from rural areas near the city of Santiago of Compostela (Lavacolla and others) that are underdeveloped and lack of basic facilities.



The fourth meeting Erasmus plus project was taken place in Santiago de Compostella in Galicia from 27 to 31 October 2014.

15 teachers and 14 students came to school to work and integrate together.

"The 4th meeting of Comenius in Santiago de Compostella was really a nice experience for all students and teachers from Cyprus. We would like through this note to thank all the organizing team of the meeting in Spain. The program was perfect and we all had a wonderful time in Spain."

Nikolas Nikolaou, Cyprus

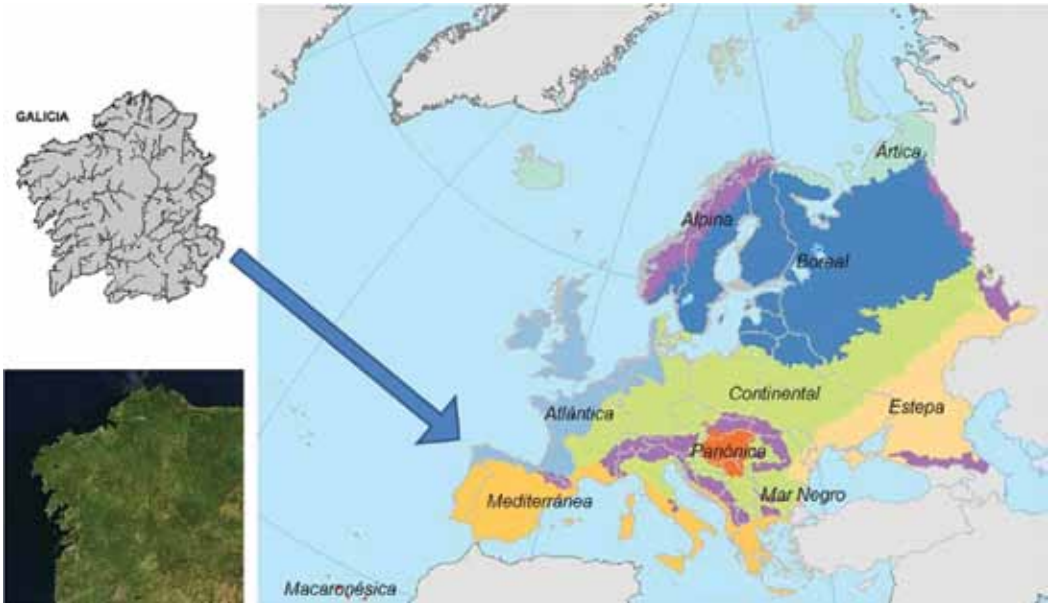
"It was very nice to spend time in Santiago. The old city is very beaulifull and of course the catedrial is amazing. We saw a incredible landscape. Our host families were very nice to us and we are very greatful for their hospitality. We had a opportunity to meet iteresting people from other coutries. We are happy that the weather was very good. The time we spent with the host families from other countries and teachers are unforgetfull. Thank for being on this project and that we can met you."

Martyna and Kasia from Poland

BIODIVERSITY OF THE RIVERS IN GALICIA

Instituto de Educación Secundaria de Sar (Santiago de Compostela)
Text and photos provided by the Spanish Team

Galicia has a privileged geographical location in a transition zone between the dominant Euro-Siberian region in our community, and the Mediterranean region, which gives a mixture of species of two biogeographic regions. All this, linked to the varied climate and structural complexity of Galicia, generates a diverse mosaic of habitats, resulting in the existence of a relatively diverse flora and fauna.



The gallery forests is one of the substantial elements of the fluvial ecosystem. It works as a stabilizing element of the banks, diminishes the temperature in the water sheet, retains pollutant and solid in suspension, provides refuge to fish. Besides, the arboreal coverage smooths the temperatures and avoids the proliferation of invasive macrophytes.

In Galicia these formations are tied to deep soils by phreatic influenc. They are forests of *Alnus glutinosa* (L.) Gaertn. or of *Salix* spp, though they also contain typical species of the oak woods.

Iberian rivers to the North Atlantic slope, including Galician, are generally characterized by having a short path and a relatively high gradient, with fresh, oxygenated waters; its flow regime is characterized by its abundance and constancy. Such characteristics contribute to species of the family *Salmonidae*, well represented in most of these rivers.

Among salmonids found in Galician waters we want to mention the Atlantic salmon (*Salmo salar L.*), brown trout (*Salmo trutta fario L.*) and sea trout (*Salmo trutta trutta L.*), all of great value both from an economic point of view and from a leisure point of view. We also note the presence of theeel (*Anguilla anguilla L.*) and the lamprey (*Petromyzon marinus L.*), thant reach high prices in the market.

Sea trout *(Salmo trutta trutta L.)*

Gold-striped salamander *(Chioglossa lusitanica)*

Due to the loss of habitats, the Galician amphibians, most of them endemic to the Iberian Peninsula, are seriously endangered, as the gold-striped salamander (*Chioglossa lusitanica*).

In Galicia only 16 families have regular presence of waterfowl with 29 nesting species, mixed wiht other species in our wetlands, as Passeriformes of the reed bed or the Common kingfisher.

We must emphasize the actions realized in Spain for the conservation the Pyrenean desman and the southern water vole, both species of mammal found in most of France, Spain and Portugal.

Galicia is a region with a high number of freshwater endemics, where records of Non-Indigenous Freshwater Species (NIFS) are recent when compared to the rest of the Peninsula. The high conservation value of the flora and fauna of Galician freshwater ecosystems urges the design of management plans to prevent the proliferation of these species.

Among the 31 NIFS mentioned, we would like to highlight the fern Azolla forms a dense layer on the surface of the water that prevents the passage of light to the sunken vegetation and, little by little, it eliminates the aquatic autochthonous flora.

The Red swamp crayfish is the bearer of a fungus that causes epidemics in the populations of autochthonous crabs. In addition, they open galleries in the river banks which cause severe structural damage concerning the flora and the fauna.

The Rainbow Trout causes significant changes on the autochthonous fish species. The common trout suffers direct depredation, competition in the food chain and transmission of exotic or endemic diseases from fish farms. The Black Bass is an huge predator which was brought to the rivers and reservoirs for sports fishing, due to its size. In Galicia causes the decline in populations of common trout and autochthonous fauna.

Lately, the presence of American Mink has two main effects on the territory. First, it is a great predator which competes for the resources; second, it is a vector of diseases. Recent educational programmes might be responsible for the reduction in the inflow of vertebrates, but there is still a need of certain control of less conspicuous but equally harmful invertebrates and plants.

PORTUGAL

Text and photos provided by the Portuguese Team

Location: Albufeira das Andorinhas (Swallows Reservoir) has a gravity type dam on the river Ave, surrounded by a beautiful landscape with oaks and chestnut trees.

The reservoir is classified, however the practice of sports and leisure activities (motor boat, swimming, fishing, surfing) are allowed with restrictions.

Pontido Urban Park in Póvoa de Lanhoso, crossed by the brook of Pontido (Rio Ave hydrographic ntework). Vegetation: grass, bushes and small trees. Has equipment for sports.

Indigenous Species: Plants

**Quercus robur* (Carvalho-alvarinho/oak)

Carvalho de Calvos (Calvos Oak) its estimated age is 500 years; this tree is of public interest since 1997; It can reach 23 m high and its diameter is approximately 40 m; the flowers of oak Alvarinho bloom in March/ April; its fruit is the acorn.

**Ruscus aculeatus* (Gilbardeira/butcher's broom)

The Butcher's broom is between 30 to 80 cm high; the flowers are small and blooms in Winter and Spring or in Autumn and Winter; the Butcher's broom produces red berries; the Butcher's broom is widespread in Portugal.

Indigenous Species: Animals

**Chondrostoma polylepis duriense* (Bogas)

Up to a maximum of about 30 cm; weight that normally does not exceed the 400/500 grams; it is a Portuguese endemic species, which means that it only exists in Portugal!

**Chioglossa lusitanica* (Salamandra Lusitânica)

This salamander exists in the north of Portugal and Galicia; it usually inhabits pure waters and brooks; the front legs have four toes and the hind ones have five toes.

Calvos Oak

Eucalyptus globulus (Eucalipto/Eucalyptus)

Acacia dealbata (Mimosa)

Invasive Species: Plants

**Eucalyptus globulus* (Eucalipto/Eucalyptus)

Origin: Southeast Australia and Tasmania; Reasons for the introduction: For forest production.

Features that facilitate the invasion: Species of very fast growth; It reproduces by vegetative way, forming vigorous shoots of sprouts.

**Acacia dealbata* (Mimosa)

Origin: Southeast Australia and Tasmania. Reasons for the introduction: Ornamental purposes and to fix the ground. Features that facilitate the invasion: Forms dense and impenetrable bosquets, reducing native species, decreasing the available water and facilitates the erosion.

Invasive Species: Animals

**Sander lucioperca* (Lúcio-perca)

Origin: Eastern Europe. The entry in Portugal took place through rivers (Douro, Tejo, ...) Predatory species of the trout, the carp, ...

**Cyprinus Carpio* (Carpa/Carp)

Is originally from eastern Europe and western Asia and was introduced in Europe in the twelfth century. Is very widespread as fish breeding in several environments in which they can be considered an invasive species.

REUNION island

Text and photos provided by the French Team

Reunion is a French volcanic island, lost far away from Europe in the middle of the Indian Ocean close to Mauritius and Madagascar.

The name of the active volcano is “Piton de la fournaise” and the “sleeping “one is called “Piton des neiges”. The first inhabitants were Europeans and the African slaves who were brought there.
The island is a kind of melting pot of numerous countries.

For instance, there are people with French, Chinese, Indian, African and Arabian origins. The island has first belong to France, then to UK and now to France again; its name was “Ile Bourbon”. Included in the tropical area, our little rock is a World Heritage Site thanks to its beautiful mountains, cliffs, calderas and rivers. We also have a rich and colorful lagoon, protected by the local authorities from degradations. Sometimes in summer, we have to face hurricanes. Our local food is very spicy, and a typical meal is the “carry”.

Endemic species:

Cabot bouche ronde
(Sicyopterus lagocephalus glabrum)

Demoiselle *(Ceriagrion)*

Héron *(Butorides striatus rutenbergi)*

Rivers Biodiversity

Due to our island's situation, just a few species have settled it:

Reunion Island is 2000 km far from Africa. - It is 2 million years old, and was formed by volcanoes. - Wetlands have to face hard rains during cyclones. That's why only a few species have managed to colonize our rivers and ponds for real.

Our rivers may look poor in terms of endemic species, but the biodiversity that it hosts is unique. But it is also very fragile and that's why we have to protect it!

Invasive species:

Laitue d'eau *(Pistia stratiotes)*

Crapaud *(Bufo gutturalis)*

POLAND

Text and photos provided by the Polish Team

Lower Silesia (Polish: Dolny Śląsk;) is the northwestern part of the historical and geographical region of Silesia in Poland; Upper Silesia is to the southeast. Lower Silesia is located mostly in the basin of the middle Oder River with its historic capital in Wrocław.

Lower Silesia is characterized by high natural and landscape values, due to the large diversity of terrain, including various elements of animate and inanimate nature.

Protected areas occupy 18.1% of the total area of the province. The number and size of individual forms of protection was: 2 national parks, 66 nature reserves, 12 parks, 25 protected landscape areas.

Invasive species are animals and plants that are introduced accidently or deliberately into a natural environment where they are not normally found, with serious negative consequences for their new environment. They represent a major threat to native plants and animals in Europe.

In 1999, the database on species introduced into Poland was developed at the Institute of Nature Conservation, Polish Academy of Sciences in Krakow for the Ministry of the Environment.

Currently there are 1268 alien species of plants, animals and fungi in the database: www.iop.krakow.pl/ias/en/project

European Network on Invasive Alien Species:

www.nobanis.org

LICEUM SALEZJAŃSKIE WROCŁAW

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Project presentation and meeting texts copied from the project website (http://www.comenius-rivers.eu)

Texts and photos of endemic and invasive species works are from national teams

Other authors of texts and photos are identified

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