



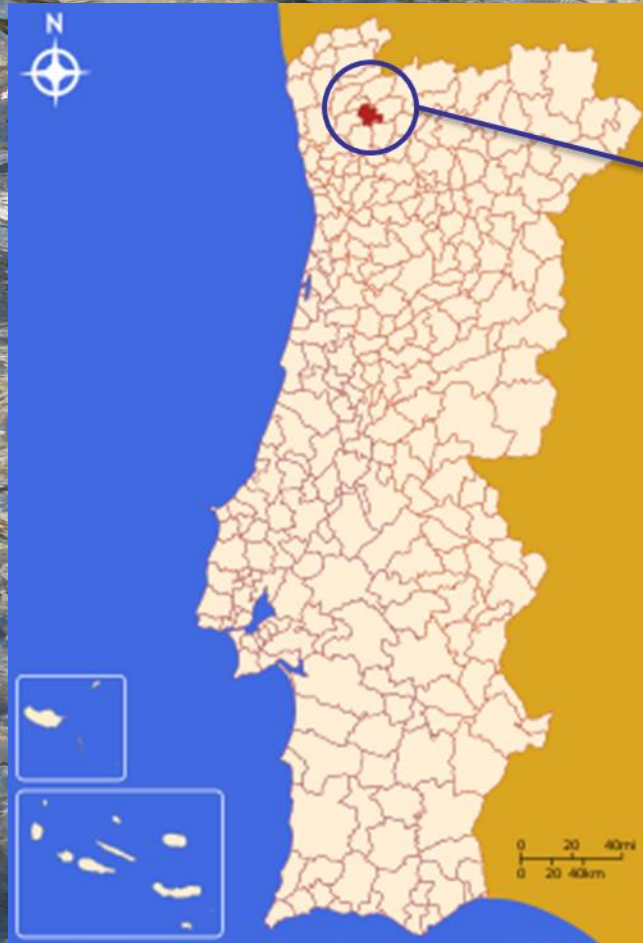
INDIGENOUS SPECIES AND MACROINVERTEBRATES



INDIGENOUS SPECIES AND MACROINVERTEBRATES FROM THE BROOK OF PONTIDO IN PÓVOA DE LANHOSO



BROOK OF PONTIDO IN PÓVOA DE LANHOSO





INDIGENOUS SPECIES

- *Indigenous species are naturally originated in their location, without human activity or intervention and can be found in multiple locations.*
- *Indigenous species are more resistant to pests, diseases and the long periods of heavy rains.*



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.
- Their height can reach 23 m and its diameter is approximately 40 cm.
- The flowers of oak Alvarinho bloom in March/ April.
- Its fruit is the acorn.



Castanea sativa (Castanheiro / Chestnut)



- It is a large tree that reaches 20 to 30 feet tall (sometimes more) and it is a deciduous tree.
- The european chestnut exists throughout southern Europe.
- The chestnut gives fruit in autumn.
- The fruit of the chestnut tree is the chestnut.



Alnus glutinosa (Amieiro / Alder)



- The Alder can be up to 30 feet tall and can last up to 150 years .
- In Portugal the blooming season is between March and April.
- There are at least 90 species of insects associated with Alder.
- The fruits of Alder have feature forms very similar to elongated cones, these persist on the tree even after the fall of the leaves.



Salix alba (Salgueiro branco / White willow)



- The White Willow reaches from 20 to 30 feet tall.
- The fruits as the flowers begin to emerge in March, April and May.
- The White Willow exists in several regions of Portugal as well as in Europe.



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.



Mentha suaveolens (Hortelã / Mint)



- The Mint is 30 to 40 cm tall, with leaves that have a strong and characteristic aroma.
- It is a plant originating from Asia, but with a long cultivation around the world.
- The Mint is spread all over Portugal.
- Normally it only dies if the soil gets completely frozen.



Iris pseudacorus (Lírio amarelo dos pântanos / Yellow lily swamps)



- The Yellow Lily is up to 120 cm tall.
- This plant blooms from March to June.
- Wide distribution in Europe, North Africa and West Asia.
- It grows in Portugal and in the island of Madeira.



Carex distans (Juncos/ Reeds)



- The usual size is 1.5 feet tall.
- The Reed is very common on the coasts of the Mediterranean Sea and in the Americas.
- The genre presents approximately 915 species.



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!



Squalius carolitertii (Escalos)



- Only exists in Portugal!
- It is a small fish with approximately 25 cm.
- Length that weighs more or less 1 kg.



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.



Chalcides striatus (Cobra de pernas)



- Both have the body covered with smooth scales, which give it a shiny appearance with metallic reflections, and are members of reduced size.
- This species exists in the Iberian Peninsula and the South of France.



Rana perezi (Rã-verde)



- This species has its origins in Portugal.
- Reaches 7.5 cm and can exceptionally exceed 10 cm.
- This species exists in all aquatic habitat types: marshes, swamps, lakes, ponds, reservoirs and streams.



Anax imperator (Imperador Azul)



- In adulthood, an emperor blue can achieve about 75 mm length 105 mm.
- This species has its origins in Portugal.
- This animal can be seen from southern Europe to Sweden, Middle East to Central Asia.



JOSÉ LOPES



AQUATIC MACROINVERTEBRATES



AQUATIC MACROINVERTEBATES

- "Macroinvertebrates are animals visible to the naked eye (macro) without spine (invertebrates)."
- Living beings that live in aquatic habitats near the substrate (eg, sediment and debris), at least during part of their life cycle.



AQUATIC MACROINVERTEBRATES

- The main taxonomic groups that live in the aquatic environment are the annelids, molluscs, crustaceans and insects.
- There is a large number of species, with a rich variety of shapes and life cycles.
- They are an important link in the processing of organic matter of vegetable origin (algae, leaves, trunks, etc.) and function as nutrient cycling in aquatic ecosystems.
- Are also the main source of food for most fish species.



AQUATIC MACROINVERTEBRATES

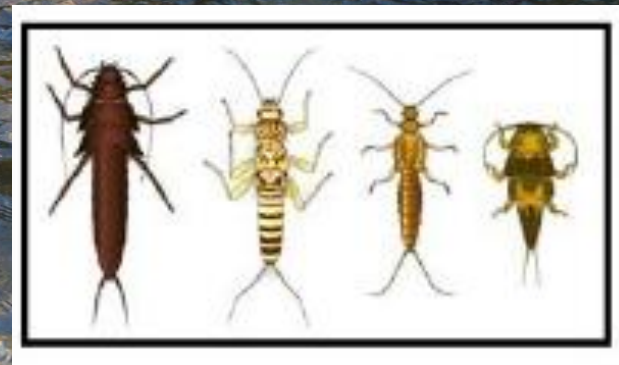
Plecóptero Larvae

(Stonefly Nymph)

Phylum: **Arthropoda**

Class: **Insecta**

Order: **Plecoptera**



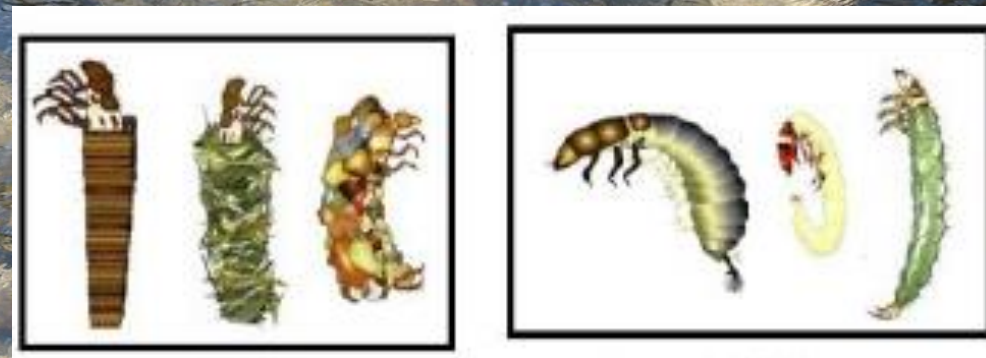
Tricóptero Larvae

(Caddisfly Larva)

Phylum: **Arthropoda**

Class: **Insecta**

Order: **Trichoptera**





Megaloptero Larvae

(Dobsonfly Larva)

Phyllum: Arthropoda

Class: Insecta

Order: Megaloptera



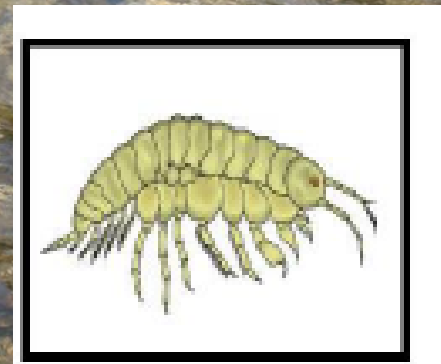
Anfípode

(Scud)

Phyllum: Arthropoda

Class: Crustacea

Order: Amphipoda





AQUATIC MACROINVERTEBRATES

Isopodes

(Sowbug)

Phylum: Arthropoda

Class: Crustacea

Order: Isopoda





MATERIALS AND METHODS ...FIELDWORK









MATERIALS AND METHODS ... LAB

- Observe the macroinvertebrates to magnifying glass.
- Classify living beings based on grid built by Faculty of the University of Porto.
- Proceed with the counting of the macroinvertebrates observed and classified.



Samplings made	09-12-2013	10-03-2014	02-10-2014
Stonefly Nymph	14	2	8
Mayfly Nymph	16	4	7
Dobsonfly Larva	1	0	1
Caddisfly Larva (with cocoon)	45	15	24
Caddisfly Larva (without cocoon)	6	0	3
Right-Handed Snail	0	0	0
Dragonfly Larva	40	0	0
Carnefly	1	0	0
Scud	1	0	0
Black Fly Larva	1	0	1
Planaria	0	1	2
Aquatic Worms	1	2	1
Blood Worm Midge Larva	0	0	1



Movie



Portuguese YouTube channel



QR CODE

Biodiversity
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2015
PORTUGAL
MEETING

A stylized yellow leaf logo with three lobes and a central vein, positioned to the right of the text. Below the text 'PORTUGAL MEETING' is a small circular icon containing a globe and silhouettes of a girl, a boy, and a bear.

3 - 7 MARCH