



**NBS
EduWORLD**



ELLINOGERMANIKI AGOGI

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**Field Visit to the Wetland of Vravrona
Scientific Monitoring of the Water Quality
of the Erassinos River**



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The Wetland of Vravrona



The wetland of Vravrona is located on the coast of Eastern Attica and is a protected area, included in the Natura 2000 Network. It has a special character, which has largely remained unchanged from antiquity to the present day.

The presence of the Erasinos River, which flows into the wetland and has water throughout the year, the closed and shallow bay that develops at its mouth, the surrounding hills, and the cultivated land have created a rich ecosystem, unique for the Mediterranean region.

In the western part of the wetland, there are the cultivated areas (vineyards, fig trees, pistachio and olive trees), while the eastern part is dominated by reeds and wet meadows.

The wetland is home to species of well-behaved, wading birds and waterfowl, while during the migration period, it is used as a staging area by species such as the Little Bittern and Squacco heron.

The wider area is of particular interest from an archaeological point of view, as it is one of the most important archaeological sites in Attica, dedicated to Artemis and Iphigenia of Vravronia. The presence of people in the area dates to the Neolithic era, due to its favourable position, and until the 9th century BC, there was an organised settlement.

An ideal place for birdwatching

The wetland is known for a diverse range of bird species, including waterfowl, waders, herons, and various passerines.

All year breeding species

Long-legged Buzzard, Little Owl, Sardinian Warbler, Zitting Cisticola, Cirl Bunting

Spring and Summer

Short-toed Eagle, Little Crake, Spotted Crake, Baillon's Crake, Scops Owl, Hoopoe, Great Spotted Cuckoo, Red-rumped Swallow, Bee-eater, Eastern Bonelli's Warbler, Olivaceous Warbler, Black-eared Wheatear, Rufous Bush Chat, Black-headed Bunting

Autumn

Cattle Egret, Booted Eagle, Bee-eater, Lesser Grey Shrike, Woodchat Shrike

Winter

Jack Snipe, Hen Harrier, Kingfisher, Mediterranean Gull, Slender-billed Gull, Moustached Warbler, Spanish Sparrow, Rock Bunting

How to plan the visit

The right clothing is hugely important. For cold or wet weather you will need:

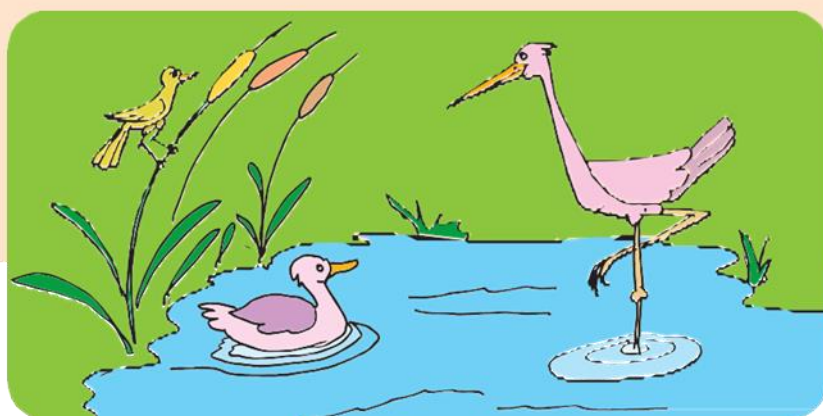
- Wellies
- Waterproof jacket
- Woolly hat
- Gloves
- Spare clothes, socks, and shoes

For hot weather, you will need:

- Wellies or sports shoes
- Sun hat and sun cream
- Clothing that covers legs and arms to minimise stings and scratches
- Spare clothes, socks, and shoes

For teachers:

- A first aid kit is recommended to take with you.
- You can see more guidelines to plan your visit here: <https://cranbornechase.org.uk/wp-content/uploads/2023/04/How-to-Plan-a-River-Visit.pdf>





Study of the river with the senses



What do you hear?



What do you smell?



Observe the area:

- | | | | |
|-------------------------------|------------------------------|-----------------------------|---------------------------------------|
| → Do you like it? | ☐ YES | ☐ NO | ☐ A FEW |
| → Is there rubbish or debris? | ☐ YES | ☐ NO | ☐ A FEW |
| → Are there animal traces? | ☐ YES | ☐ NO | ☐ I DON'T KNOW |
| → Are there human traces? | ☐ YES | ☐ NO | ☐ I DON'T KNOW |

**Describe the flow of the river:**

- Standing water ☐
- Apparently still water ☐
- Running water ☐
- Small waves during flow ☐
- Small waves when flowing with foam ☐
- Waterfall ☐

**Touch**

- The water is:
- The temperature of the water is:

**Smell**

- Good ☐
- Bad ☐
- It doesn't smell ☐

**Sight**

- Water's Color
- Water's Clarity

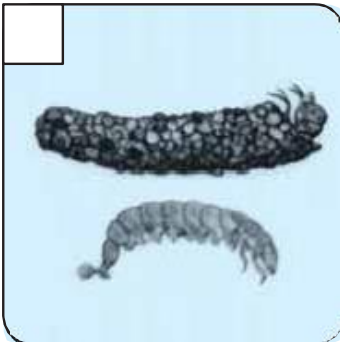
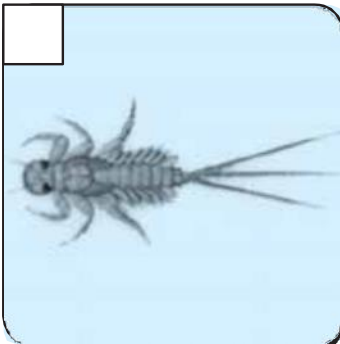
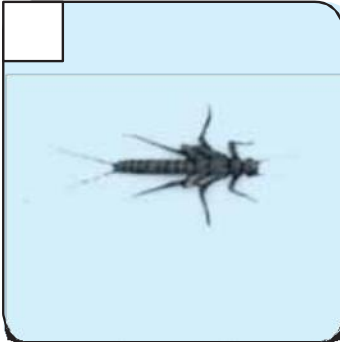
Scientific study of the river

1. What does Biology say?

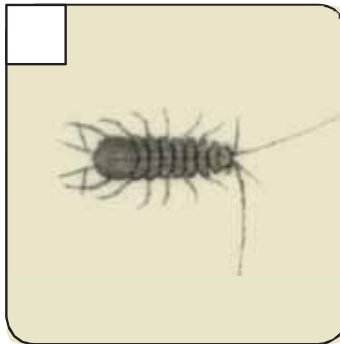
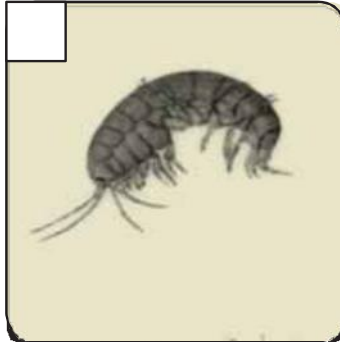
Depending on the existing microorganisms, we can conclude whether river's water is clean.

1. Invertebrate animals found in the river:

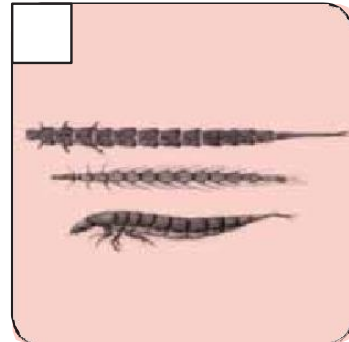
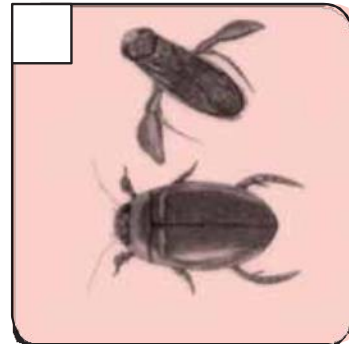
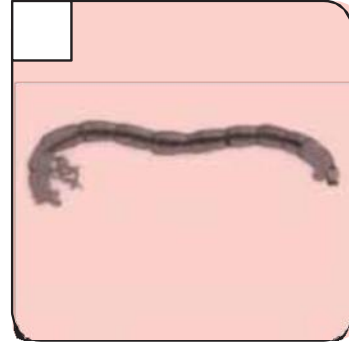
They live in clean water s



They live in relatively clean waters



Resistant to polluted waters





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Search the area for small animals (insects, birds) and evidence of their being there.

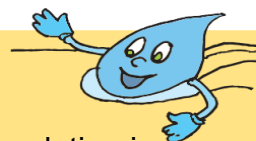
	YES	NO		YES	NO
Traces	☐	☐	Animals	☐	☐
Animal waste	☐	☐	Ants	☐	☐
Bird feathers	☐	☐	Worms	☐	☐
footprints	☐	☐	Bees	☐	☐
Half-eaten fruits/seeds	☐	☐	Caterpillars	☐	☐
Spider webs	☐	☐	Butterflies	☐	☐
Bird nests	☐	☐	Other	☐	☐

Write here other animals that you observed:



2. What does Chemistry say?

Depending on the PH of the water, we can conclude whether the river's water is clean.



PH is a measure of how acidic or basic a substance or solution is.

PH is measured on a scale of 0 to 14. On this scale, a pH value of 7 is neutral, which means it is neither acidic nor basic.

A pH value of less than 7 means it is more acidic, and a pH value of more than 7 means it is more basic.

The PH of the water is:

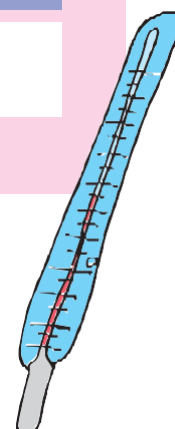
3. What does Physics say?

Depending on the temperature of the water, we can conclude whether the river's water is clean.



Water Temperature (°C)

Atmosphere Temperature (°C)



Reflect on your observations and conclude whether the river's water is clean.

Consider that:

- The ideal pH of the water in a river is between 6,5 and 7,5.
The ideal pH is between 4,5 and 9 for fish to survive.
For a pH between 6,25 and 8,25, the water is considered drinkable.
- The ideal water temperature for fish to survive is 16 °C.
- Water clarity refers to how clean or not the water is. Clean water has high levels of clarity, while non-clean water has low levels.
- Depending on the microorganisms we find in the water, we characterize the water as clean or not.

Conclusions



Here you can draw or put a photo of what you liked the most or what impressed you.

Write your impressions here.

The Archaeological Site of Brauron, Vravrona



Located on the eastern side of Attica, the Sanctuary of Brauronian Artemis was among the most important sacred sites in ancient times. Vravrona (or Brauron), about 20 km from Athens, was one of the 12 towns of Attica that Theseus united and formed Athens.

The first inhabitants settled in Vravrona in about 3,500 BC. Gradually, the town developed around an acropolis and many important politicians of Athens originated from Brauron,

including Miltiades, Cimon, and the tyrant Pisistratus. In fact, it was the tyrant of Athens, Pisistratus, and his sons who originally founded this cult of Artemis in the 6th century BC.

According to mythology, Iphigenia was brought by her brother Orestes to the temple when they met in the land of Tauris, where she served as a priestess in a local temple of Artemis. Iphigenia had been transferred to Tauris by the goddess Artemis herself when she saved her from the sacrifice in Aulis. Returning to Greece, Iphigeneia brought a wooden statue of Artemis from Tauris with her.

The story of Iphigenia is presented in two theatrical plays by the distinguished ancient playwright Euripides - Iphigenia in Aulis and Iphigenia in Tauris, respectively.

In the Temple of Brauronian Artemis, the goddess was worshiped as the protector of nature and women. She was mostly worshiped as the protector of childbirth. In fact, women who had a good delivery offered their clothes and personal items to the goddess, while the clothes of women who died during delivery were offered to the grave of Iphigeneia, who was considered a chthonic deity (deity of the Underworld). The grave of Iphigeneia still lies in a cave in the archaeological site.

A festival in honor of Artemis was also taking place every four years. A parade with girls aged 5-10 years old would start from the center of Athens and terminate at the temple. The girls were wearing furs of bear, the sacred animal of the goddess. This was like a preparation that symbolized the passage from childhood to youth and marriage. In fact, most items found in this archaeological site were female personal items, clothes, and jewelry.

In the ancient site of Brauronian Artemis, visitors can see the remains of the temple, the sanctuary of Iphigeneia, the gymnasium and other buildings. Many findings have been transferred to the Archaeological Museum of Vravrona and the Acropolis Museum.

The surrounding nature is lovely, and you will even see a stream crossing the site. The small river has been crossing the site since antiquity and has caused many problems to the buildings. Actually, it was due to an overflow of this river that the temple was abandoned in the 3rd century BC.

Source: <https://www.greeka.com/attica/athens/sightseeing/template-artemis-vravrona/>



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