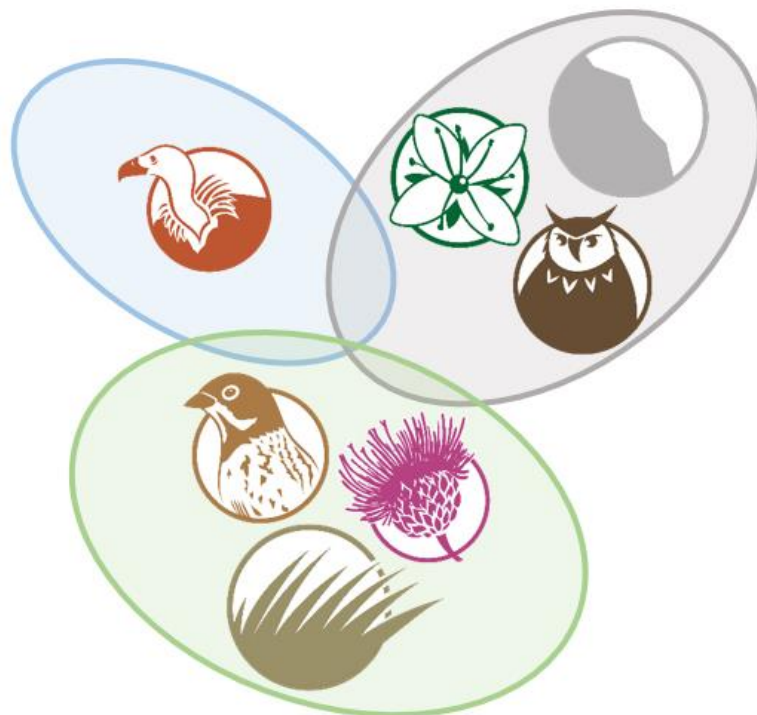


LIKE

Living
on the
Karst
Edge



Educational program

NATURE 2000

Team of Authors:

Ana Barešić, PhD, Natural History Museum Rijeka, Botany Curator (conceptual design and content)

Anita Hodak, Master of Arts, Natural History Museum Rijeka, Museum Pedagogue

Željka Modrić Surina, PhD, Natural History Museum Rijeka, Senior Botany Curator, Director

Suradnici za stručni dio:

Matej Varga, PhD, Master of Engineering in Geodesy and Geoinformatics (Natura 2000 area)

Primož Kmecl, PhD, DOPPS - BirdLife Slovenia (ortolan bunting)

Slavko Brana, B.Sc. in Forestry, Public Institution Natura Histrica (dry karst grasslands)

Luka Meštrović, Master of Geography, Public Institution Natura Histrica

(single-flowered saw-wort)

Boštjan Surina, PhD, Associate Professor, Botany Curator, Natural History Museum Rijeka

(*Moehringia tommasinii* Marches)

Tomaž Mihelič, DOPPS - BirdLife Slovenia (eagle owl)

Vedran Lucić, Master of Biology, BIOM Association (griffon vulture)

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Ana Barešić, PhD

Moehringia tommasinii Marches and Eagle Owl (3rd workshop)



eagle owl
(*Bubo bubo*)



carbonate rocks with
chasmophytic vegetation



Moehringia tommasinii
(*Moehringia tommasinii*)

Basic topic:

Carbonate rocks with chasmophytic vegetation – flora and fauna and reasons of endangerment. *These habitats are becoming more and more endangered because of the increased popularity of activities such as free climbing, due to which the species that used to be unavailable to people and thus protected have become endangered.*

Key information to be transferred:

- ✓ eagle owl – endangered because of disturbances in nesting areas due to free climbing
- ✓ Moehringia tommasinii Marches – endemic to the karst edge
- ✓ Moehringia tommasinii Marches – endangered due to free climbing

Topic introduction:

Conversation/discussion questions (example! – we always adapt the questions to the situation and the group!):

- ? Have you ever seen an owl? How does it look like? And are all owls the same? Have you ever seen this owl (show the photograph of the eagle owl)? Where?
- ? What do you think, is anyone endangering it in nature? Who? How?
- ? How would you protect it?

- ? Have you ever heard of Moehringia tommasinii Marches? What do you think, what is it?
- ? This is how it looks like (*show the plant or the photograph*) – have you perhaps seen it somewhere? Where?
- ? Could you conclude (based on the photograph) where it grows?
- ? It grows on rocks – who could endanger it there? How?
- ? How would you protect it?

The course of the workshop (recommendation):

Preschool age (3 – 6 years) and children with special needs (total duration 45 – 60 minutes):

Activity	Short description:	Approximate duration (recommendation):
Introduction	The workshop starts with an introduction during which all participants introduce themselves. During the introduction, the participants also state their favourite plant, animal or place in nature.	10 minutes

Topic introduction (presentation and conversation/discussion questions)	The presenter then introduces the topic (title and short description) and starts a conversation with the participants in order to assess their level of knowledge and further course of the workshop. The duration of this part depends on the group. Then he/she presents the topic in more detail through the presentation and conversation. <i>Conversation/discussion questions</i> (above)	10 – 15 minutes
Game (jigsaw puzzle) „Put <i>Moehringia tommasinii</i> together!“	The participants will have to put together the entire habit from different parts of the plant and place it on a rock, where it usually grows in nature. In addition, they will have to put together an eagle owl from different parts and also place it on a rock where it sometimes nests.	15 – 25 minutes
Revision (tic-tac-toe)	We will revise the topic with the tic-tac-toe game, in which we will use <i>Moehringia tommasinii</i> Marches, the eagle owl and a climber as elements for playing instead of crosses and noughts. (The duration depends on the course of the workshop.)	5 minutes
Assessment	Brief conversation about the workshop, feedback from the participants and, at the end, cleaning up the space and used items.	5 minutes
Total duration		45 – 60 minutes

Primary school age (1st – 4th/5th grade) (total duration up to 90 minutes):

Activity	Short description:	Approximate duration (recommendation):
Introduction	The workshop starts with the introduction during which all participants introduce themselves, they receive tags on which they write down their names and which they attach to their clothes.	10 minutes
Topic introduction (presentation and conversation/discussion questions)	The presenter then introduces the topic (title and short description) and starts a conversation with the participants in order to assess their level of knowledge and further course of the workshop. The duration of this part depends on the group. Then he/she presents the topic in more detail through the presentation and conversation. <i>Conversation/discussion questions</i> (above).	20 – 30 minutes
Game (owls) „Find the owls!“	In the space we have at our disposal we hide 10 owl species (this is the number of registered owl species in Croatia). Each owl has a letter on it. We tell the participants to find all the owls and write down their names on the sheet they have received as well as to mark the letter next to each species. At the end, with the help of letters we try to find the message the owls have brought to us.	25 – 30 minutes
Revision	In the revision we additionally review the most important facts about owls through conversation.	15 minutes
Assessment	Final comments and the end of the workshop, brief conversation about the workshop, feedback from the participants and, at the end, cleaning up the space and used items.	5 minutes
Total duration		75 – 90 minutes

Primary school age (1st – 8th grade) (total duration up to 90 minutes):

Activity	Short description:	Approximate duration (recommendation):
Introduction	The workshop starts with the introduction during which all participants introduce themselves, they receive tags on which they write down their names and which they attach to their clothes.	10 minutes
Topic introduction (presentation and conversation/discussion questions)	The presenter then introduces the topic (title and short description) and starts a conversation with the participants in order to assess their level of knowledge and further course of the workshop. The duration of this part depends on the group. Then he/she presents the topic in more detail through the presentation and conversation. <i>Conversation/discussion questions</i> (above).	15 – 20 minutes
Game (botanists) „Little botanists“	In this game the participants will become little botanists and research plant species in their environment. Their task is to bring (or draw) as many different plants as possible (leaves, flowers) which they will store into an herbarium at the end. Once we finish collecting, we will talk about the diversity of plant species and plant adaptations to environmental conditions (e.g. Moehringia has adapted seed dispersal to ants). We divide the participants into groups of 5 – 6 participants.	30 – 40 minutes
Revision	We will revise the topic while observing the collected plants and, on their example, explain the terms related to plant life, with the emphasis on Moehringia tommasinii Marches (and single-flowered saw-wort, the species covered with the project).	15 minutes
Assessment	Final comments and the end of the workshop, brief conversation about the workshop, feedback from the participants and, at the end, cleaning up the space and used items.	5 minutes
Total duration		75 – 90 minutes

Game/activity description:

1. „Little botanists – protectors of Moehringia tommasinii Marches!“

Biodiversity comprises diversity within specific species, among species, biological communities and habitats. As primary producers, plants make up the foundation of each ecosystem and the entire life on Earth depends on them. In the course of evolution, plant species have adapted to various factors which we can see today in the vast diversity of plant life. A part of that diversity will be observed by researching examples from a nearby meadow (forest, park). The participants will become researchers whose task is to locate and systemise as many plant species as possible and try to guess why they are formed the way they are. Through conversation we will learn why some plant species which grow in the Natura 2000 area have become endangered and how they have adapted to the life in their habitat, with special attention paid to Moehringia tommasinii Marches.

Terms: adaptations, biodiversity, Moehringia

Material: papers and drawing kit, scissors, dish for collecting materials, herbarium labels

Procedure:

We send the participants to a garden/park with various tasks – to bring (or draw) as many different plants as possible (leaves, flowers). When they return, we talk about the diversity of plant species and plant adaptations (e.g. Moehringia has adapted seed dispersal to ants). We also explain the terms related to plants (root, stem, leaf, blossom, fruit, photosynthesis).

2. **„Find the owls!“**

There are 10 species of owls registered in Croatia which live in different habitats and different parts of Croatia. In this game we will get to know them.

Terms: eagle owl, owls

Material: cards with 10 owl species, task sheets

Procedure:

Briefly talk about owl species that live in Croatia and give several interesting facts about them. Then tell the participants that the owls have visited their institution and hidden, and that their task is to find them. We give each participant a sheet which will be completed. They have to write down on the sheet the Croatian name of the owl they find and the letter which comes on the card with each owl. When all owls are collected, they are returned to their place. Next, alone or together, depending on the group, the participants try to put together the message from the letters the owls have brought them (the message is „We love owls!“).

3. **„Put me together!“**

The game in which the participants put together paper models of Moehringia tommasinii Marches and the eagle owl and place them in their habitat, vertical steep rocks.

Terms: Moehringia tommasinii Marches, eagle owl, habitat, carbonate rocks

Material: parts of the Moehringia tommasinii Marches habit, parts of the eagle owl, nest, drawing of carbonate rocks

Procedure:

The participants receive parts of Moehringia tommasinii Marches (4 – 5 flowers, plant habit) which they have to put together and subsequently glue on to a vertical carbonate rock which the plant inhabits in nature.

In addition, they receive an eagle owl in several paper parts which they also have to put together and place on a rock, where it nests. Apart from the eagle owl, they also need to place the nest on the rock. After they put everything together, they have a display of vertical carbonate rock habitats inhabited by two protected species they have learnt about through the game.

Final words

Dear all,

we hope that this educational program will help you design workshops or activities related to the protection of nature, and that it will serve as a tool to learn more about the species that have been studied as part of the LIKE project. It is conceived as a starting place where you can get basic insights about these species, the difficulties we face in protecting them as well as the habitats they inhabit, but it also provides us with knowledge on how to help them. We hope that it will be the starting point for developing your own educational activities and transferring these insights to future generations. If you have any additional questions or comments regarding the program itself, please direct them to ana.baresic@gmail.com, thank you.

Good luck with the workshops 😊!