

CATEGORY
DRAWING

Daiki Hayashi

Hongo elementary school 897
Iwanaga Shuho town, Mine city, Yamaguchi prefecture, Japan

Second prizes



*If you are a creator at heart and an artist
by vocation, reproduce what you have seen,
experienced and learned about karst and caves...*

Output things in the Cave

From "Invitation to Competition"



Second prize

Magical world of caves

Zhan Tagbergenov, Age 10

Unesco associated school "BEST"

Almaty, Republic of Kazakhstan

Втора награда

Вълшебният свят на пещерите

Жан Тагберенов, 10 г.

ОФРО «БЕСТ»

Алматы, Казахстан

CATEGORY MULTIMEDIA PRESENTATION FOR PUPILS

Patricia Obajdin

Elementary school Slunj, Croatia

second prizes

S e l e c t e d s h o t s

KARST LANDSCAPE IN MY HOMELAND

WHAT THE KARST LANDSCAPE, ACTUALLY IS?

The **karst** landscape is a particular kind of a scenery which develops on terrains that are composed of soluble, mostly carbonate rocks: limestone and dolomite. This topic is studied by expert and scientific disciplines such as geology, geomorphology, hydrogeology and speleology.

HOW ARE THE TRAVERTINE BARRIERS FORMED?

My homeland is recognized by numerous travertine barriers. They can be found in Istria and in hill Krupa i Lika. The process of their formation is based on numerous physical, chemical and biological factors. The hard crusts represent the solution of calcium carbonate, because they flow through limestone terrain. While water flows over the barrier, carbonate from water sediments.

TRAVERTINE BARRIERS

GEOLOGY

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    GEOLOGY
    /   \
GENERAL GEOLOGY   REGIONAL GEOLOGY
    |               |
    STRATIGRAPHY   |
    |               |
    GEOMORPHOLOGY  |
    |               |
    SEDIMENTOLOGY  |
    |               |
    METEOROLOGY    |
    |               |
    HYDROLOGY      |
    |               |
    MINERALOGY     |
    |               |
    PETROLOGY      |
    |               |
    METAMORPHOLOGY
  
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SPELEOTHEMS

MINERALS AND CRYSTALS

BIVOUACING, CAVE CAMPS AND EXPEDITIONS

BIVOUACING is a longer break up spending the night outdoor mountain huts, shelters and the other building elements.

CAVE CAMPS AND EXPEDITIONS are organized in a few days or week actions, in which participate a lot of speleologists.

www.spele.hr

The end

BY: **Patricija Obajdin** Grade: 4.9
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MENTOR:
Anita Krupina, Biology teacher

KARST LANDSCAPE IN MY HOMELAND

WHAT THE KARST LANDSCAPE, ACTUALLY IS?

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TRAVERTINE BARRIERS

ENDANGERED AND PROTECTED ANIMAL SPECIES (FAUNA)

CREEK/ STREAM CRAB (*Austropotamobius torrentium*)

HABITATS They settle the upper parts of streams with stony/ rocky bottom, but at higher elevations. They seek the shelter under the rocks and in the stream banks where the aquatic vegetation is developed.

Diversity of habitats, with many potential shelters (rocks, tree roots,...) in which they can crawl in during the daily rest and in cold winter season, is substantial.

NUTRITION They are omnivorous.

GEOLOGY

GENERAL GEOLOGY STRATIGRAPHY REGIONAL GEOLOGY

geodynamics
sedimentology
tectonics (geotectonics)
geomorphology
mineralogy

CHARACTERISTIC HYDROLOGICAL PHENOMENA

SPRING or WELL is a place where the subterranean water breaks out on the surface. Springs mostly appear at the places where permeable and impermeable layers touch. Considering the hydrogeological characteristics of the karst terrain, you could say that springs are the most numerous and the most accessible indicators of subterranean water regime. The problem of the karst spring protection is prominent in the existing conditions of subterranean waters, abyss and wells.

Surface forms in karst Karst formations

Grikes are karst formations, ranging from millimeters to decimetres dimensions, although they sometimes can be larger. They emerge by dissolution of meltable rocks where arise various shapes (eg, furrows, grooves, slots, channels). We know morphologically differentiation of various types of cracks in limestone (fissured, meshy), grooves (ribbed, meanders, etc.), oysters, etc. They can develop at bald or inclined surface rock, but also at the rocks who are partially or completely covered by soil or dense vegetation. Then their edges and surfaces are rounded and less sharp. The special types are cost grikes.

KARST FORMATIONS

Valleys in the karst

Dry valey
Blind valley
Source pebbles

SPELEOLOGY

SPELEOLOGY is a group of activities which main goal is to explore caves, abyss, dugouts and the other subterranean rocky phenomenons.

SPELEOTHEMS

stalactit curtains
stalagnates
stalagmites

MINERALS AND CRYSTALS

Aragonite
Calcite
Gypsum

BIVOUACING, CAVE CAMPS AND EXPEDITIONS

BIVOUACING is a longer break or spending the night outdoor mountain house, shelter and the other building objects.

CAVE CAMPS AND EXPEDITIONS are organised in a few days or week actions, or which participate a lot of speleologists.

Speleološka oprema

An equipment necessary for ascent and lowering down:

Čestni naves Blocker
bloker Krol
Krol Belt (band)
Pojas Security blockers
Osiguranje blokera The central carabiner
Centralni karabiner
Pupčana vrpca A navel tape
Stirrup
Stremen Foot blocker
Panin (nožni blokera)

CONCLUSION

After karst school I realized the value of my homeland. It is really nice to live in the karst area which is characterized by rivers, waterfalls, travertine barriers, rare plants, endangered animals, caves that adorn in the overhead and subterranean.

In this occasion I invite you to visit my homeland – Slunj, Rastoke and the Plitvice lakes.

Thank you for your attention!

The end

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MENTOR:
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Second prize

Karst landscape in my homeland
Patricia Obajdin, 6-th. grade
Osnovna škola Slunj
Slunj, Croatia

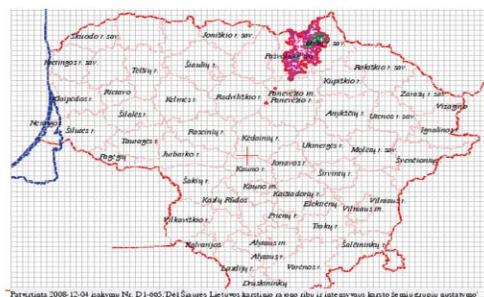
Втора награда

Карстовите ландшафти на моята родина
Patricia Obajdin, 6. клас
Osnovna škola Slunj
Slunj, Хърватия

Gypsum rocks



Map of sinkhole spread



Subsidence and underground cavities



Underground caves



Karst lakes

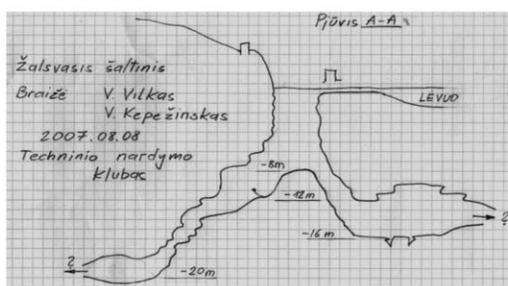


Sinkhole sources

- Green source - unique mineral water source, squirted out in sinkhole.
- It is the biggest source in Pasvalys district, its depth - 16 meters.
- Yield – 8-12 l/s.



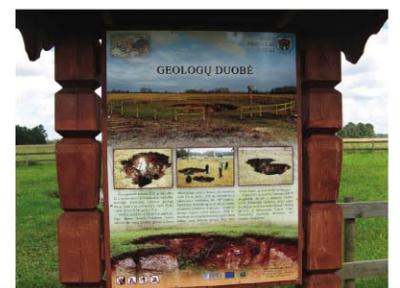
Scheme of Žalsvasis underground source



Dry sinkholes



The Geologists' Pit



Geologists' Pit



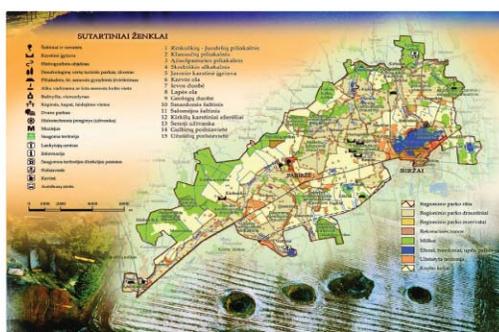
Cow's Cave



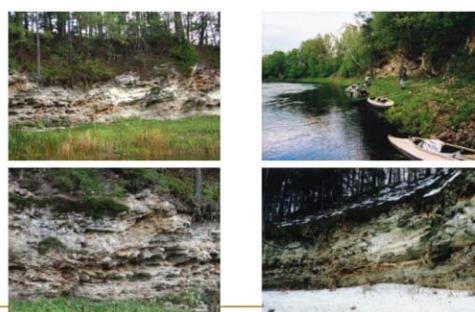
Kirkilai lakes



The map of Biržai regional park



Nemunėlis-Aspascia outcrops



Wall cracks due karst process



Second prize

Sinkhole Phenomenon in Lithuania
 Akvilė Montrimaitė, age 15
 Gintautė Pieslekaitė, age 15
 "Krantas" secondary school,
 Gargždai, Lithuania

Втора награда

Въртопи – карстови феномени в Литва
 Аквиле Монтримайте, 15 г.
 Гинтауте Пиеслекайте, 15 г.
 "Krantas" secondary school,
 Gargždai, Литва