



Geotourism path "Across the Ocean of Time".

Stowarzyszenie Kaczawskie





Distance: 7.7 km

Walking time: approximately 3 hours

Number of stops: 9

Elevation: 176 m

Location: The Land of Extinct Volcanoes Geopark, Poland

Municipality: Świerzawa

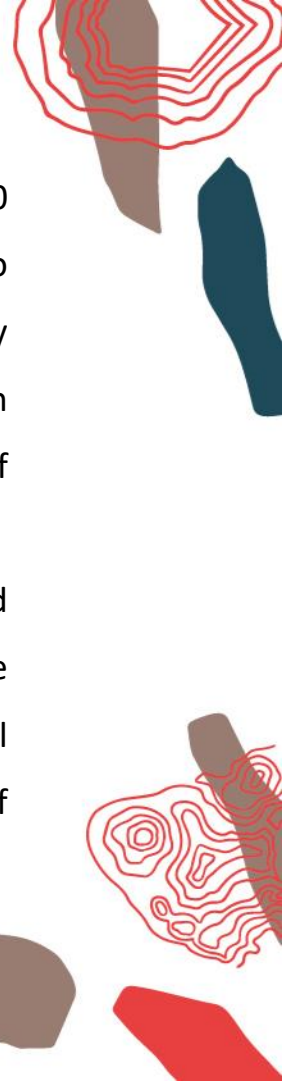
The educational path begins and ends in Dobków at the Sudetic Education Centre in the Land of Extinct Volcanoes Geopark. The entire trail marks a loop of about 7.7 km, covering 9 educational points. The newly created path follows existing hiking trails (green and black). At each point on the trail, a board with a QR code is placed, which will direct the tourist to a website with a posted description of the location along with figures/photographs/schemes. The map background is a simplified geological map of the area.

<https://mapa-turystyczna.pl/route/3y3xv>



The path offers educational points describing nearly 540 million years of Earth history! During its tour we will go back hundreds of millions of years - starting the journey from the oldest rocks formed more than 500 million years ago, to the youngest formations of tens of thousands of years ago.

The walk through the geotourism path can be combined with an outdoor game! For completing the game, there will be another stamp for the explorer's passport (a local game covering the attractions of the entire Land of Extinct Volcanoes Geopark).





Start: Parking lot next to the Sudetic Education Centre



1. Stone in architecture: Wall at the Roman Catholic Church of St. Idzi

The church in Dobkow itself was built in the 14th century. It has been reconstructed a number of times until modern times. It is difficult to say in which year the wall surrounding the church was built, but like almost all buildings across Lower Silesia it was built from local, available materials, i.e. various rocks. If we look at a small part of the wall, we can identify various rocks from local small quarries, but also picked up from the fields (such as boulders of glacial origin).



2.Greenstone quarry on the Chapel Hill

In the exposure we can observe metamorphic (transformed) rocks with a greenish color. Researchers estimate their age of about 540 million years (a period called the Cambrian). They were formed at the bottom of the sea basin in the so-called rift zone, i.e. where the new oceanic crust was forming. These rocks, used to be volcanic rocks of the basalt family, which moved through the Earth's crust for millions of years. During this time, under the influence of temperature and pressure changes, they changed their structure, turning into rocks from the herbaceous group.



3. Source area of the Bukownica River

The Bukownica River was formed about 130,000 years ago. It is a right inflow of the main river of the Kaczawskie Mountains - the Kaczawa.

It flows through Dobkow in the Swierzawa Rift taking its origin at an elevation of 470 meters above sea level on the slopes of Mt. Dłużek. The valley in which Bukownica flows forms the border between the Kaczawskie Mountains and the Kaczawskie Foothills. The differences in the type of rocks building the mountain slopes and their cracks promote the formation of source areas from which groundwater has the chance to flow to the surface. Bukownica is characterized by violent surges during long rains, which causes strong destruction of the valley and erosion of sediments. Bukownica, like other rivers of the Sudeten Foothills, often carry valuable minerals such as gold, silver, pyrite and hematite in their flow.





4. Wojcieszow Glade

From the glade you can observe, for example, Mount Polom, which rises above the town of Wojcieszow. The town and its surroundings are the site of the so called "Wojcieszow limestone". These rocks are composed mainly of calcium carbonate CaCO_3 (calcite). They were formed in a shallow part of the warm sea, where, with plenty of light and oxygen, life could develop. Skeletons of dead organisms ended up at the bottom of the reservoir and over time turned into rock. This happened at the beginning of the period called the Cambrian, about 540 million years ago (this is the age indicated by archaeocysts found in limestone - an already extinct group thought to be relatives of today's sponges).



Wojcieszow Glade

Archaeocysts were organisms that co-formed structures similar to today's coral reefs. The Wojcieszow limestones in the area of Podgórek and Wojcieszow form hills such as Bielec, Polom, Miłek, Osełka, Widok, Wapiennik.

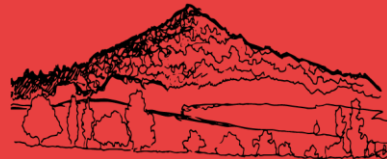


5. Viewpoint "Clearing"

The view allows observation of all three stages of volcanism that took place in the Kaczawskie Mountains and Foothills. It is represented by hills and ridges in the landscape.



Viewpoint "Clearing"

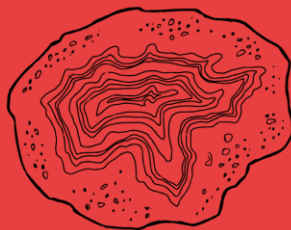


The Okole Hill

Starting the observation from the western side, we observe the forested Okole Hill, which is the highest peak of the Kaczawskie Mountains. It is composed mainly of greenstone – in other words, transformed volcanic rocks formed on the sea floor in the early Cambrian and it represents the first and oldest volcanic episode.

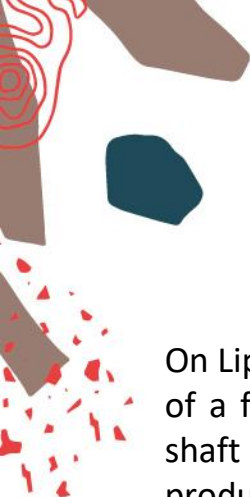
The Sokołowskie Hills

The adjacent Sokołowskie Hills are made of volcanic rocks formed during a period called the Permian about 250 million years ago. That was the second stage of volcanism.



The Ostrzyca Hill

The youngest stage can be observed at several points on the landscape, including Grodziec, Ostrzyca (in the NW direction), Czartowska Skąta, and Muchowskie Hills located in the northeast direction. Volcanism in the Land of Extinct Volcanoes Geopark ended about 2.5 million years ago.



6. Ruins of limestone quarry

On Lipna Hill (434 meters above sea level) are the ruins of a former lime kiln. Lime kilns, otherwise known as shaft kilns, were used to burn limestone rocks to produce quicklime (calcium oxide). The lime kiln used to be loaded from the top with layers of limestone and wood harvested from the surrounding forests. During burning, the temperature exceeded 1,000 C degrees. The limestone burned in this way went down the kiln and was collected through side openings.

There are many similar structures in the area. Lime kilns were typically built within a close distance of the occurrence of the raw material to avoid transporting heavy limestone boulders. In this case, it was an undersized lens of Wojcieszow limestone, all of which was completely selected in the last century.



7. The Red Soil

Red soil is visible in the slope. Its color is related to the bedrock on which it was formed. These are sandstones formed on the land in a semi-desert climate during a period called the Permian ca. 250 million years ago. Semi-arid conditions supported the weathering of iron contained in the rocks, coloring them red. This is the origin of the soil color visible especially after farmers plow the fields.



8. Ice Age



In the history of the Earth, the climate had changed a number of times. During periods when it cooled significantly, there could occur so-called glaciations, i.e. periods when a significant part of the earth was covered by an ice sheet. In the Kaczawskie Mountains and Foothills this occurred about 210,000 to 130,000 years ago. During this time, the landscape of our region was finally formed. The ice sheet slid in from the north, bringing to our area settlements with boulders from, among other places, the Izerskie Foothills and the region around Strzegom, as well as from further parts of northern Europe. One of such boulders is within easy reach of your eye.

9. Sudetic Education Centre - tour summary

The Sudeten Educational Centre is a modern, interactive education center where you will learn more about Earth's fascinating past.

A guide will be waiting for users of the path, who will guide you through the nooks and crannies of the Center revealing the secrets of Earth science.



Practical information


- Very good access. You can leave your car in the large parking lot located under The Sudetic Educational Centre..
- The trail is mostly easy or very easy guided mainly by existing hiking trails. The trail is ideal for a walk with children or for those not experienced in mountain hiking.
- The arrangement of the path is a loop, so the path can be walked in both directions. For the field game, the direction of hiking has been implied. The path begins with the green hiking trail, and then continues along the black trail.



Practical information

- It is possible to extend the route of the path - for example, by climbing to the Dłużek observation tower
- It takes about 3 hours to walk the path, so there is still plenty of time left to visit the other attractions in the Dobkow area, take part in creative workshops or visit the Sudetic Educational Centre to learn more about volcanic activity in the Land of Extinct Volcanoes Geopark.
- The best dates to visit in terms of sightseeing: Spring (spring vegetation), summer (lush summer vegetation), autumn (changing leaves, mushrooms), winter (observations of soil color).





See you in The Land of
Extinct Volcanoes Geopark!