Leka - Støypet

Information Sheet



Location: LEKA - STØYPET
Conservation designations: Cultural Heritage
Grid reference: 65˚6'1.6''N, 11˚36'52.6''E
Address: 7994 Leka, Norway
Parking available: Yes
Personnel to be contacted prior to visit: Arnfinn Holand, Leka Opplevelser , +4799593967 (optional)

Useful equipment:
- Paper
- Colouring Pencils
- Compass
- Measuring stick / ruler
- Camera

Relevance national curriculum:
5th grade at primary school (age 10)
8th grade at secondary school (age 13)
Geology and geography at high school (age 16 – 19)

Rock types: Dunite, iherzolite, websterite, orthopyroxenite
Geological processes: Isostatic rebound / uplift, freeze/thaw weathering, coastal processes and erosion, orogenesis
Geological structures: Beach ridges, magma chamber, folding, ophiolite
Geological periods present: Late Cambrian, early Ordovician, Quaternary and present day

Site specific hazards and risks:
- Falling rocks, especially in spring time
- Slippery paths
- High winds
- Wave zone
- Open water

Mitigation measures:
- Park in a designated area
- Do not remove rocks
- Do not build piles of rocks
- Wear appropriate clothing and footwear at all times
- Avoid open water and wave zones

Did you know: The rocks found here at Leka would have formed during the late cambrian and early ordovician when a supercontinent called Rodinia was breaking apart. This rifting created an ocean known as the Iapetus which separated new continents called Laurentia and Gondwana. Present day areas of Scotland, the north of Ireland, Greenland and North America were part of Laurentia. Two smaller continents existed between Laurentia and Gondwana, known as Siberia and Baltica, the latter of which now forms Scandinavia. By around 500 million years ago, the Iapetus Ocean had reached its maximum width of up to 5,000km and began to close over a period of 200 million years. This caused Baltica to collide with Laurentia. Ocean closure was enabled by subduction of the ocean floor. The ophiolite seen here formed when oceanic crust was thrust on top of continental crust. Similar aged Ophiolite complexes can be found in Geopark Shetland and Cabox Aspiring Geopark in Canada. They provide evidence of the scale and geography of continental movements at this time. Further information is available at www.driftingapart.eu .

Topics to cover before visit: Plate tectonics, formation of seafloor and spreading ridges, Ice Age processes (including land uplift), formation of an Ophiolite complex, local cultural history and theories about the Strandflat formation

Keywords: Raised beach ridges, rock formations, Leka Ophiolite Complex, Chromite, Platinum group elements, layered ultramafic bedrock

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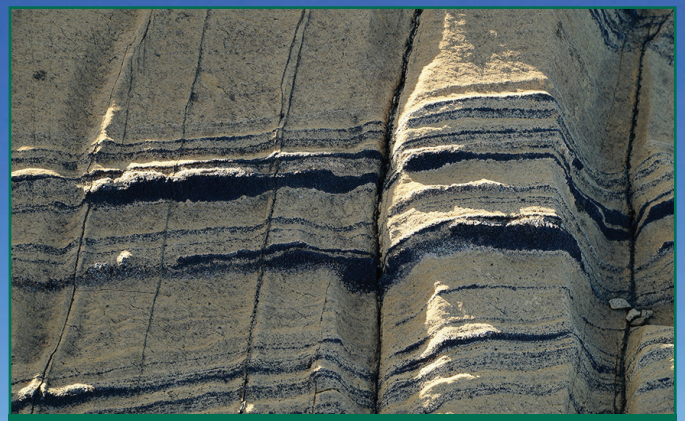

Chromite

Red layered mountains

The Eagle Catch

The Strandflat

Steinstind Mountain

Støypet raised shoreline

Geological history*:
Ophiolite complexes are remnants of ancient oceanic crust that once formed in the deep sea. Understanding of such deep-sea areas is central to science as they cover more than 60% of Earth's surface. They are the most dynamic parts of the planet, and the volcanic crust that forms the deep-seafloor today has only developed within the last 200 million years of Earth's 4.6 billion years history. Formation of seafloor at spreading ridges and destruction of seafloor at subduction zones reshapes our planet continuously, and this process has a strong, long-term influence on climate and life on Earth.