

# ADVENTURE MAP

## DISCOVERY GLOBAL GEOPARK

HALF A BILLION YEARS IN THE MAKING



## *Your journey starts here.*

The Bonavista Peninsula, located on the eastern coast of Newfoundland is home to Discovery, Newfoundland and Labrador's first UNESCO Global Geopark. The Geopark covers an area of 1150 km<sup>2</sup> and spans over 280 km of rugged, untouched, coastlines and landscapes. This historic region is known for its colorful cultural and enchanting stories. Adventure awaits as you travel along scenic driving routes, explore national and provincial attractions, hike, boat, and breathe in the breathtaking coastal scenery and dramatic rock formations.

Discovery is home to 27 town and communities, each offering their own unique sense of charm, attractions, events and infrastructure. Here, you will find a choice of hiking and walking trails to trek and explore. Hike Discovery, a world-class network of hiking trails, leads to a number of geosites, from sea aches to sea stacks, beaches, fossils, stunning views of whales, icebergs and unspoiled wilderness. With so many things to see and experience, an outdoor adventure awaits at the interface between land and sea. The Geopark showcases the enduring impact of a diverse and dramatic geologic past, glaciation and climate change on the landscape - the sculpting of rocks in the last ice age; from signs of rising sea level more than a half a billion years ago to raised beaches formed just 10,000 years ago as glaciers retreated.

Visit [hikediscovery.com](http://hikediscovery.com) for trail maps.

*Chose your adventure and get lost in time.  
You never know what you will discover -  
it might even be yourself.*





### Rider's Hill Lookout, Trinity - Gun Hill Trail

Hike the Gun Hill Trail, part of the Hike Discovery Trail Network to Rider's Hill Lookout. At the Rider's Lookout platform, is a panoramic view of Trinity and Trinity Harbour. From this vista, you can also see the headlands of the Skerwink Trail and the Fox Island Trail. The area is dominated by marine terraces created as the land rose with respect to the sea following the Last Glacial Maximum (LGM). The natural coastal and oceanic landforms and landscape surrounding the harbour is the result of millions of years of geological processes making it an ideal military location.

Hike Discovery Hiking Level: Easy to Moderate



### Haootia, Port Union - Murphy's Cove to Lodge's Pond Trail

Hike the Murphy's Cove to Lodge's Pond Trail, part of the Hike Discovery Trail Network to the *Haootia* fossil locality. The sedimentary rocks within this area primarily consist of dark grey shale, siltstone and grey sandstone. These rock formations contain fossils from the Ediacaran (635 to 541 million years). In 2008, scientists discovered one of the world's oldest complex animal fossils near this location. Named *Haootia quadriformis*, this fossil is important to our understanding of the origin of animal life, and contains the oldest evidence of muscular tissue ever found. This fossil is on display at The Rooms Provincial Museum in St. John's.

Hike Discovery Hiking Level: Moderate



### Fossil Site, Port Union - National Historic District Boardwalk

The rock surfaces below the boardwalk contain rare and exceptionally preserved fossils from the Ediacaran Period (635 to 541 million years). Organisms from the Ediacaran Period represent the first appearance of large, complex life living and flourishing in the ancient muddy and sea bottom. Explore the geosite to observe the brown-beige volcanic ash layers above the low-relief impressions. Ediacaran fossils visible at this site include *Charniodiscus*, *Bradgatia*, *Aspedilla*, and *Ivesbeadiamorpha*. Low tide is required to access the area.



### Puffin Colony and Root Cellars, Elliston

Elliston Point and the surrounding area highlights how the region's geologic past greatly defines the landscapes we see, how people live, and the ecological uses of the land. At the end of the footpath is a vista of the puffin colony. This island area serves as a natural, breeding place for the birds, offering protection from land-based predators. The dramatic cliffs, islands and sea stacks visible today have been shaped due to the powerful erosive agents of the sea, and at one time would have been connected. This area is also well known for the many root cellars. The surrounding rocks have well-cleaved properties, making it an ideal flat stone, called flagstone for constructing the root cellars.



### The Chimney, Spillars Cove - Cable John Cove Klondike Trail

Hike the Cable John Cove Klondike Trail, part of the Hike Discovery Trail Network to visit The Chimney in Spillars Cove. The Chimney is a protruding narrow sea stack, and is the remains of an igneous intrusion. This geosite is also significant because it marks the boundary between two geological halves on the Bonavista Peninsula. The Spillars Cove - English Harbour Fault Zone divides the Ediacaran fossil-containing rocks of the St. John's basin in the east from the rocks of the Bonavista basin in the west.

Hike Discovery Hiking Level: Easy to Moderate





### **The Dungeon, The Dungeon Provincial Park - Cape Shore Trail**

The Dungeon is a collapsed sea cave known as a gloop. Located in The Dungeon Provincial Park, the Dungeon has its origin as a cavern with two separate openings to the sea. Continuing erosion led to the widening of the cavern until eventually the roof collapsed inwards. Rock material was slowly removed from the collapse by wave action. The surrounding coastline is in a constant state of change, due to the erosion from waves, storms, winds and tides.



### **Lisbon Earthquake, Bonavista - Long Beach**

Long Beach is characteristic of a dynamic high energy beach environment, located at the interface between land and sea. On the morning of 1 November, 1775, the city of Lisbon, Portugal was struck by what is now estimated as the most destructive earthquake in European history. The quake generated a tsunami – a massive wave caused by a sudden movement of the tectonic plates. The tsunami was so big it traveled across the Atlantic Ocean, and observed in Bonavista, over 3500 km from the earthquake's epicentre. This event was recorded by Rev. Philip Tocque in his book of 1884, and serves to promote a greater awareness of geological hazards and ways to reduce their impacts to our communities.



### **Brook Point, King's Cove - Lighthouse Trail**

Hike the Lighthouse Trail, part of the Hike Discovery Trail Network to visit the Brook Point Lookout. The spectacular multi-coloured rock units exposed at Brook Point are 570-million-year-old sedimentary rocks from the Crown Hill Formation. These coastal cliffs reveal rock layers with variations in colour and grain size. The rock's red colour is primarily due to rusting or oxidation of fine, iron-rich grains when exposed to the ancient environment or oxidized sea. Other colour variations are due to the presence of volcanic ash and to chemical changes from ancient fluids percolating through the sediment.

Hike Discovery Hiking Level: Easy to Moderate



### **Devil's Footprints, Keels**

The story of the Devil's footprints has long been an attraction for visitors to Keels. Imprints in the rocks resemble a cloven, hoof-shared footprint. Local stories claim the footprints' origin are supernatural, and the tracks are impressions left where the Devil danced over Keels. Geological studies have shown the cavities have natural origins, and were left from carbonate nodules, called concretions, that have eroded out of the bedrock. Concretions form early in the process that turns buried sediment into rock, as carbonate, or mineral cement is deposited in layers growing outward from a central point.



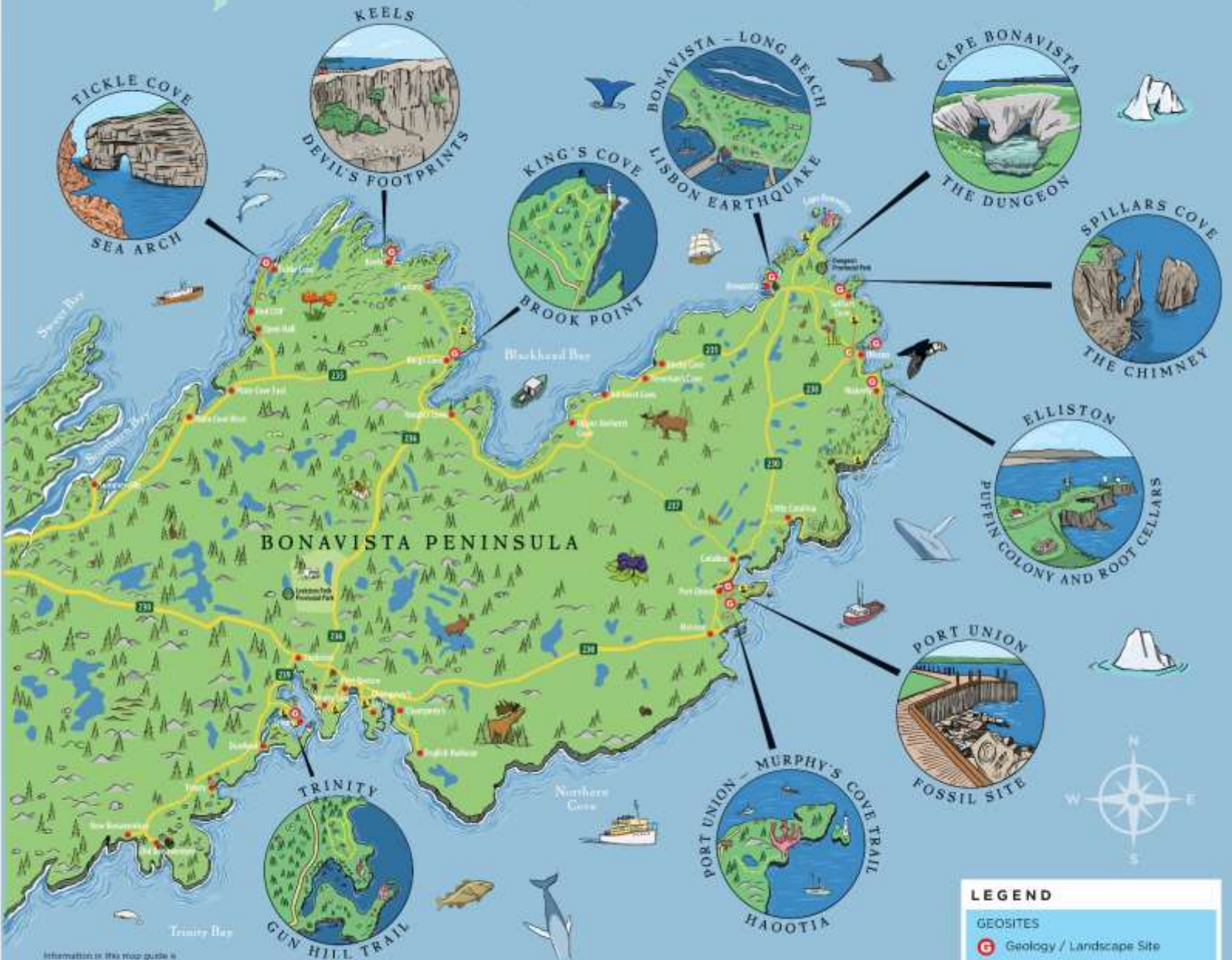
### **Sea Arch, Tickle Cove**

The Tickle Cove Sea Arch is a wave-weathered coastal feature due to the power of the Atlantic Ocean. Sea arches form at areas of rocky land that jut into the sea, known as headlands. The waves wear away or erode the rock from both sides of the headland, creating sea caves that eventually join to form a sea arch. This sea arch is made from sedimentary rocks, including red sandstone, siltstone and conglomerate. The curved cracks visible are tension gashes, recording the great stresses these rocks have encountered. The cracks are filled with a white-coloured mineral called quartz.





# Discovery UNESCO Global Geopark



Information in this map guide is current as of September 2020.  
Map created and edited by Lyric Education Inc.  
Design and illustration by

**WRECKHOUSE CREATIVE**

While every effort has been made to ensure accuracy, this map is provided for information purposes only.

### LEGEND

#### GEOSITES

- Geology / Landscape Site
- Cultural Site
- Town
- Provincial Highway
- Highway Route Number
- Provincial Park
- Hiking Trail

## DISCOVERY GLOBAL GEOPARK

[www.discoverygeopark.com](http://www.discoverygeopark.com)

### HALF A BILLION YEARS IN THE MAKING

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# CODE OF CONDUCT

## Hiker's Trail Etiquette

The geological heritage of our region is special. Please help us take care of it and only take memories.

**PRIVATE PROPERTY** Be mindful of directional signage and keep off private property.

**PETS** Pets are welcome on trails, but they must be leashed at all times. Please clean up after your pet and practice stoop and scoop on or near trails.

**LEAVE NO TRACE** Pack out any garbage that you have brought with you. Leave nothing behind - not even footprints. Stay on the trail.

**WHEN NATURE CALLS** When nature calls, go off the trail at least 50 metres and far from streams and lakes to avoid contaminating the water. Bury your solid waste and carry out toilet paper.

**WILDLIFE AND PLANTS** Be mindful of wildlife both on and off the trail. Do not feed wildlife. Be mindful of fragile flora such as plants, berries, mosses, lichens, wildflowers and other plant life. Leave plants undisturbed for others to enjoy.

**PROTECT YOURSELF** Protect yourself from the sun, insects and weather elements. Keep a safe distance from cliffs and avoid overhanging rocks.

**LAWS AND REGULATIONS** Respect Provincial laws governing palaeontological resources. Significant fossil resources are protected under Provincial legislation. It is illegal to remove, destroy or interfere in any manner with these resources. Penalties could include fines up to \$50,000 per day or imprisonment or both. For additional information, call +1 709 729 2462.

Everyone must play a key role in safeguarding and respecting our resources.



# unesco

## Global Geopark

## Celebrating Earth Heritage, Sustaining Local Communities

UNESCO Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development.

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