geography southwest

Place To Walk

A Circular Walk on the Lizard Peninsula

Location & Access:

Lizard village is located on the A3083 road ten miles from the nearest town of Helston.

The walk starts in the donation car park at Lizard Green - post code: TR12 7NH, grid reference: SW 702 125.

Bus service 34 operated by Transport Cornwall links Redruth railway station to Lizard via Helston and Mullion.



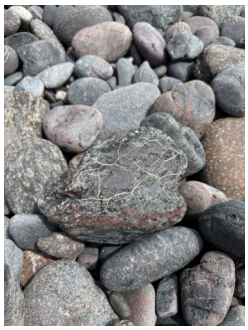
Kynance Cove. Photo: Paul Berry

The walk covers 10 kilometres (6 miles), mainly on the South West Coast Path, but with short sections on quiet roads. There are few steep sections, but some of the coast path is close to the edge of tall cliffs.

Key Geography: Ophiolite complex, unique geology (including different serpentine rocks), coastal landscapes (including cliffs, caves, stacks, arches & blowholes), history of wireless technology.

INTRODUCTION TO THE LIZARD OPHIOLITE COMPLEX

The geology of the Lizard peninsula is unique, quite different from the granite and slate rocks found in the rest of the county. To understand why the rocks here are so special, it is necessary to head back into deep time. The Lizard is an ophiolite complex, the result of a collision between the supercontinents of Euramerica and Gondwanaland around 370 million years ago, which squeezed out the deep Rheic Ocean that existed between them. During this time, a section of the ancient sea floor (a chunk of the ocean crust and upper mantle) was torn off and dragged up onto dry land. This process is known as obduction and is the opposite to the more common situation of subduction, where heavier oceanic crust sinks beneath a lighter plate into the mantle. It allows a rare opportunity to study material from the crust beneath the ocean and perhaps the mantle as well.



Serpentine pebbles. Photo: Paul Berry

So, in this part of Cornwall it is possible to walk on rocks which are not normally found on the surface of the earth. There is the opportunity to touch rocks which came from 10 km below the surface of the earth, having been squeezed up from the moho (boundary of the crust and mantle).

One of the geological highlights of the Lizard is the rock known as serpentinite or serpentine. So named due to its snakelike appearance, this rock was originally thrust up from under the earth's crust as peridotite, rich in iron and magnesium. Great heat and pressure transformed it into the different types of serpentine we can find on the Lizard today.

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Curiosity Questions:

The Spanish Armada was first sited from Lizard Point - but in what year?

It is purely coincidental that much of the Lizard peninsula is composed of serpentine rock. True or false?

What valuable mineral was discovered in this area by Reverend William Gregor in 1791?

Further information:

https://devongeography.wordpress.com/2026/06/09/romancing-the-ophiolite-investigating-the-unique-geology-of-the-lizard-peninsula/

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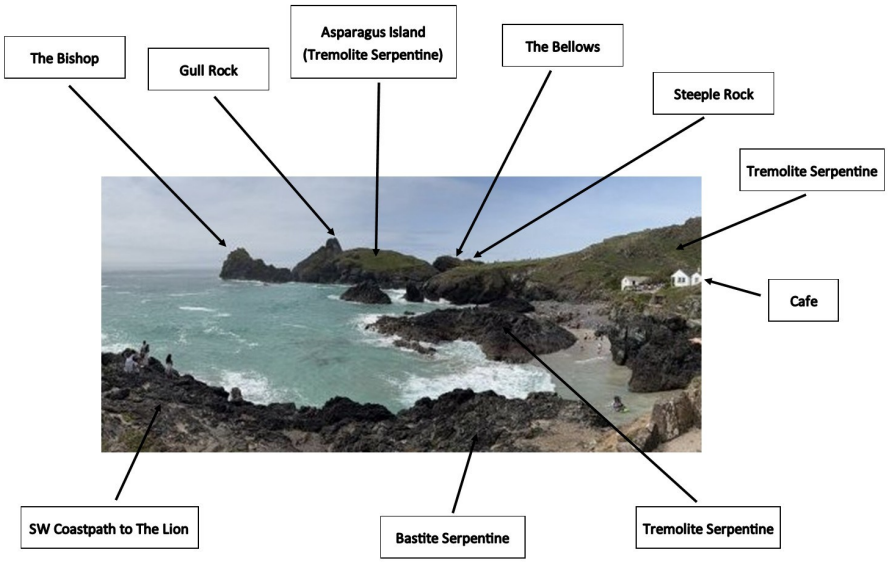
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A CIRCULAR WALK ON THE LIZARD PENINSULA

1) The walk begins at the Lizard Green car park (TR12 7NH) in Lizard village, mainland Britain's most southerly settlement. Lizard was mentioned in the Domesday Book of 1086, and later became famous for its serpentine quarries. Queen Victoria ordered several pieces of this decorative, soft and easy to work rock for her house on the Isle of Wight when she visited Penzance in 1846, setting off a boom industry which has sustained to the present day. Serpentine rock will figure prominently in our walk as we examine the geology of the Lizard peninsula. Today, tourists flock to the village to its many serpentine and mineral workshops, as well as the excellent Top House Inn and Anne's Pasty shop.

2) From the village green, take the path signed to Caerthillian and Kynance Cove, which runs along Pentreath Lane. A footpath soon leads off to the right. Follow it through the copse beyond and carry on through an area of grassland which leads to a road. This open ground is rare Cornish heath, bursting with songbirds in spring and summer and supporting a unique flora.

3) Continue on the road to the National Trust car park above Kynance Cove. The Cornish name for Kynance Cove is Porth Keynans, which means 'ravine cove'. Take the lower path at the end of the car park that descends steeply through Goose Curtain Valley directly to the cove. A higher path will take you to the same destination, on a slightly longer but flatter route.



4) The rocks you are about to encounter have come from the mantle, some 10 kilometres below the Earth's crust, after being bulldozed up as an ocean ridge. They began as peridotite, but have been altered to form the two types of serpentine found at Kynance. There are also other rocks like gabbros, basalt, schists and gneiss, all changed by heat and pressure. The path from the car park runs across Bastite Serpentine, which is coarse-grained with large shiny crystals. When you reach the viewpoint at the bottom of the valley, you have moved onto Tremolite Serpentine, which is fine-grained and more banded, being formed under greater pressure than Bastite Sepentine. Pause here to enjoy a panorama of Kynance Cove with the turquoise water washing against the cliffs and stacks of red and green serpentine that give this cove its character. On the far side of the cove, pick out the mitre shape of the Bishop, arrow-headed Gull Rock, the rounded curve of Asparagus Island (so named due to its cover of wild asparagus), and the sharp angle of the Steeple. The serpentine stacks have been left as isolated blocks due to the presence of faults and fractures and the erosion of other rock types like gneiss that have infiltrated here.

5) Descend the steps to reach the beach. The overhanging cliffs to the right are heavily brecciated where friction at fault lines broke up the rock, leaving a chaos of geology mixed with the serpentines. After around 40 metres, is the Devil's Throat, a deep gully cut along a fault in the serpentine that runs out towards the sea. Most of the rocks on the beach (like the stacks) are purple-brown Tremolite Serpentine, with some basalt and white granite intruders. Large intrusive chunks of pink gneiss are also easy to identify. It is best to explore Kynance Cove at a falling tide, so

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Pink gneiss at Kynance Cove. Photo: Paul Berry

you can explore the shoreline and the caves. With the tide halfway in (or out) you may hear the thunder of the Devil's Bellows where the sea rushes in and out of a cave in Asparagus Island that has collapsed to form a blowhole.

6) You could visit the popular cafe at the back of the beach which has been here since the nineteenth century, and then climb the set of gabbro steps at the far side of the cove that lead up to a grassy headland. There are great views here of the Steeple and along the coast to Lizard Point.

7) Retrace your route back across the beach, re-climb the steps, and follow the path to the upper viewpoint on top of the cliffs. Here you have a view to Lion Rock, where you may be able to pick out the shape of the reclining big cat in the serpentine headland that gives it its name.

8) Pick up the clifftop South West Coast Path from here, passing the arch at Holestrow before reaching Pentreath Bay, popular with surfers. A ship's boiler on the shingle beach is all that remains of the trawler 'Maud', beached here in February, 1912. Steps follow a gully down to the shore where gold ingots made from 2000-year-old Gallic coins were found by two local boys in 1973. The gully follows a fault which marks the change in geology from serpentines to mica schists (metamorphosed mudstones).

9) The coast path negotiates two steep valley that converge at Caerthillian Cove, also popular with surfers despite the lack of access to the shore. The mica schist cliffs here show several metres of a thick rubble of angular stone fragments at the top known as 'head'. This was brought her when frozen soils melted at end of the last ice age and flowed downhill picking up the rock fragments on the way. On top is a coating of fine orange brown dust called loess. This wind-blown sediment once covered much of Cornwall due to the prevailing north west winds that blew in the ice age when a tundra climate prevailed. The exposed coastal grassland on the top of cliffs is a National Nature Reserve, and is one of the richest wild flower areas in the UK. Found here are a number of rare maritime species, including Cornish heath, wild asparagus, and a number of rare stoneworts.

10) The coast path continues around Lizard Point, that looks out over one of the busiest shipping lanes in the world. Just offshore can be seen a collection of granite gneiss islets, the largest known as 'Man O' War'. The rocks of these dangerous reefs were formed some 500 million years ago, making them 150 million years older than the mica and hornblende schist cliffs of this stretch of coastline. They were were part of the northern tip of the supercontinent Gondwana when it collided with supercontinent Euramerica around 350 million years ago.

11) The route passes over Pistil Meadow, believed to be the location of the mass grave of 207 sailors drowned when the military vessel 'Royal Anne' went down after striking Shag Rocks in November, 1720. The ship was transporting Lord Belhaven and his family to Barbados where he was to be governor, and there were just three survivors.

12) In Polpeor Cove, the 'Wavecrest' cafe sits on top of the mica schist cliffs overlooking the old lifeboat station that functioned from 1859 to 1961. The lifeboat was launched from here 136 times, saving 562 lives. The poet Alfred Lord Tennyson swam from the small beach by the station in 1860. Pink and yellow Hottentot figs coat the cliffside, and are good indicators of the geology as they will not grow on serpentine. This native of South America was introduced by horticultural explorers around 100 years ago, and is a real gangster, growing up to 50 cm/yr to completely overwhelm less-hardy local species. It has proved difficult to get rid of, although steps being taken to curb its spread. A little further along is the Lizard Point National Trust car park, with another cafe and serpentine workshop.



Hottentot Figs. Photo: Paul Berry



Old lifeboat station in Polpeor Cove. Photo: Paul Berry

13) Lizard Point lighthouse. The first Lizard Point lighthouse was built in 1619 by Sir John Killigrew, but he couldn't afford its maintenance so King James I introduced a toll of a halfpenny per ton for passing

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vessels. This was met with uproar and soon withdrawn. The lighthouse fell into disrepair and was eventually demolished, but over the next hundred years so many ships were lost, a replacement was needed. The current lighthouse was built in 1751 and taken over by Trinity House in 1771. It was the world's largest independent lighthouse, described by Alfred Lord Tennyson as 'the southern eyes of England'. It boasts a 19 metre tower and stands 70 metres above the level of the sea. Its light flashes every three seconds and is visible out to sea for 26 nautical miles. The 107 decibel foghorn sounds off every 30 seconds when the weather demands. For the rest of the route from here to Church Cove, the geology changes to hornblende schist. This rock was once a lava flow altered by extreme temperature and pressure, and is lighter in colour than mica schist with green or black crystals.

14) Just past the lighthouse but well-hidden on the sloping cliffs is the Lion's Den, a large, deep hole created by the collapse of a sea cave that began on a fault line in the hornblende schist geology. The cave finally collapsed on February 19th, 1847, and erosion by the sea enlarged it to a depth of around 35 metres. The feature is now a blow hole, with the tide churning the water inside at high tides. Beyond is a small stack called Bumble Rock. Lion's Den is best seen looking back from a little further along the coast path.

15) Housel Bay Hotel is the most southerly hotel in mainland UK, and its web site describes its location as 'perched on natures edge'. A small arch can be seen below the hotel in Housel Cove.



Marconi Bungalow. Photo: Paul Berry

16) The black wooden buildings at Pen Olver were once used by Guglielmo Marconi for his early experiments in wireless telegraph communication. Marconi was born in Bologna in Italy in 1874, and his work with radio waves laid the foundations for the later development of radio, tv and all wireless communication systems. In 1909, he shared the Nobel Prize in Physics. In 1895, Marconi successfully transmitted and received the first wireless morse code signals over a few miles in his garden and attic in Bologna, but he failed to get support from Italian authorities so came to Britain in 1896 aged just 21. In 1897, he extended his transmission range up to 4.4 miles, then in 1898 to 14 miles, and by 1899 he had transmitted over a distance of 66 miles. Marconi operated a ship to shore wireless telegraph from his Lizard station, serving the busiest shipping lane in the world. At the beginning of the 20th century, Marconi turned his attention to transmitting wireless signals across the Atlantic Ocean. He constructed a new station at nearby Poldhu, and in 1901, he heard the morse code letter 'S' transmitted repeatedly from a station at St John's in Newfoundland, 2,200 miles away. He had shown that radio waves could travel across the curvature of the Earth. The Lizard station remained open until 1908, when it was taken over by the Post Office. In 1910, it was the first Post Office managed station to handle a SOS distress call when the 'Minnehaha' went aground in the Scilly Isles. All crew members were rescued. The station was closed in 1913 but reopened again between 1914-18 under admiralty control to listen for enemy transactions. It finally closed in 1920. The old mast is now gone, although the base still remains. The National Trust bought the property and restored it to its original configuration, and it is manned throughout the summer by volunteers and open for visitors.

17) The square white building on the hilltop is the Lloyds signal station. Built in 1872, by Falmouth shipping agents G C Fox and Co, semaphore flags were used to communicate with ships to remove the need for them to call at Falmouth. Lloyds operated it from 1883 to 1951, using telegraph messages to connect with ship captains entering and leaving the English Channel to ensure their safe passage. It is now a holiday home with stunning 270 degree views of the coastline, with 'Unique Homestays' charging £3,995 in peak season for 4 people for a 4 night stay.



Lloyds Signal Station.
Photo: Paul Berry

18) At Bass Point, a NCI (National Coastwatch Institution) lookout was established in 1994 (the first in the country) after two fishermen drowned within sight of the recently closed coast guard lookout. The NCI manage over 60 stations in the UK, all run by volunteers.

19) The Lizard Lifeboat Station at Kilcobben Cove was but in 1961 to replace the one at Polpeor passed earlier on the route. It houses 'Rose', a Tamar-class all-weather lifeboat, and is open to visitors at selected times during the summer.

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Church Cove. Photo: Paul Berry

20) At Church Cove, another redundant lifeboat station can be found. It became too difficult to launch from its steep slipway, and was used only twice between 1885 and 1889. From the 1870s, small steamships called here from Falmouth, allowing visitors to walk up the hill to Lizard village to buy serpentine souvenirs. Fishermen also worked the cove, and the old pilchard sheds can still be seen today. We leave the coast path here, and follow the road up the hill to head back to Lizard.

21) As we leave the cove, our route passes a thatched property on the right called 'Mariners'. Noel Coward spent many happy holidays here, and the building is said to have been the inspiration for his best- known song 'A Room With a View', penned in 1928. Coward's initials are carved into a wooden staircase in this former beer-parlour house.

22) Further along Church Cove Road, the ancient church dedicated to St Winwallaus is sited on the right, with its tower built from alternating blocks of granite and serpentine. Inside, local serpentine has been used for the font and pulpit. Customs officers once used the tower as a lookout post, and in 1678, Reverend Robinson gave the last sermon to be preached in Cornish language here.

23) Continue on the road past Landewednack Primary School to Beacon Terrace, and then back to the start point at the car park in Lizard village.



Housel Cove. Photo: Paul Berry

Answers to Curiosity Questions:

The invading Spanish Armada was first sited from Lizard Point - but in what year? (*July 19th, 1588)*

It is purely coincidental that much of the Lizard peninsula is composed of serpentine rock. True or false? *(True. The name Lizard is a corruption of the Cornish name Lys Ardh, meaning 'high court', while serpentine rock is so named due to its similarity in texture and colour to snake skin)*

What valuable chemical element was discovered in this area by Reverend William Gregor in 1791? (*Titanium)*

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