

万宜地质步道

High Island Geo Trail

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High Island Geo Trail



- 图例
LEGEND
- 西贡东郊野公园
SAI KUNG EAST COUNTRY PARK
 - 麦理浩径
MACLEHOSE TRAIL
 - 万宜地质步道
HIGH ISLAND GEO TRAIL
 - 断层
FAULT
 - 岩墙
DYKE
 - 解说牌
INTERPRETATION PANEL
 - 休憩凉亭
PAVILION
 - 厕所
TOILET
 - 告示板 / 资讯亭
INFORMATION BOARD / KIOSK

- 起点 Start 2.8公里 (来回 round trip) 2小时 hours
- 展示地质奇观的水库工程
The reservoir project that uncovered a geological spectacle
 - 一亿四千万年前的火山活动痕迹
Traces of volcanic activities 140 million years ago
 - 海浪切割出来的小岛
The island cut away by waves
 - 独特的浅色六角形岩柱
Unique light-coloured hexagonal rock columns
 - 壮观的六角形岩柱
Spectacular hexagonal rock columns
 - 大地的裂缝
Fissures in the Earth's crust
 - 六角形岩柱的秘密
The secret of the hexagonal rock columns
 - 外力造成的地标
A landmark produced by an exogenous force
 - 岩浆活动的记录
A natural record of magmatic activities
 - 抵御海浪的城墙—防波堤
The cofferdam – a bulwark against waves
 - 官门海门的由来
The formation of Kwun Mun Channel
 - 停留在昔日时光的海蚀洞
A sea cave where time stands still

R2G 地质赏团
Geopark tour

香港联合国教科文组织
世界地质公园
Hong Kong UNESCO
Global Geopark

漁農自然護理署
郊野公園及海洋公園管理局
COUNTRY AND MARINE PARKS AUTHORITY, A.F.C.D.

万宜地质步道全长约 1.4 公里，平坦易行，沿途设有解说牌，介绍地质特色。游客可以从东坝纪念碑出发，沿步道欣赏六角形岩柱、断层、弯曲的岩柱、侵入岩墙等大自然奇观，并于木桥步道上近距离观赏海蚀洞。

The High Island Geo Trail, about 1.4 km long, is an easy, level walk with interpretation panels along the way. Visitors can walk from the East Dam monument and enjoy the marvelous landforms along the trail, such as hexagonal rock columns, faults, distorted rock columns and an intrusive dyke. From the wooden boardwalk at the end of the trail they can get a good view of the sea cave.

S形六角形岩柱和侵入岩墙 S-shaped Hexagonal Rock Columns and Intrusive Dyke

约在 1 亿 4000 多万年前，岩柱仍处于半塑性状态，因受到地震和区域性下沉影响而扭曲成 S 形。岩柱弯曲的地方就是最脆弱的部分，在地质作用下，岩柱沿此裂开，地下的岩浆沿裂缝入侵，冷却后形成深灰色的侵入岩墙。岩墙要比周围的岩柱年轻约 4000 万岁。

About 140 million years ago, when the columns were still in a semi-plastic state, they were distorted into an S-shape under the influence of earthquakes and regional subsidence. The distorted area of the rock columns is the most vulnerable. During geological processes, magma intruded along the weak line of the columns and cooled to form an intrusive dyke, which is about 40 million years younger than the surrounding rocks.



S形六角形岩柱和侵入岩墙
S-shaped hexagonal rock columns and intrusive dyke

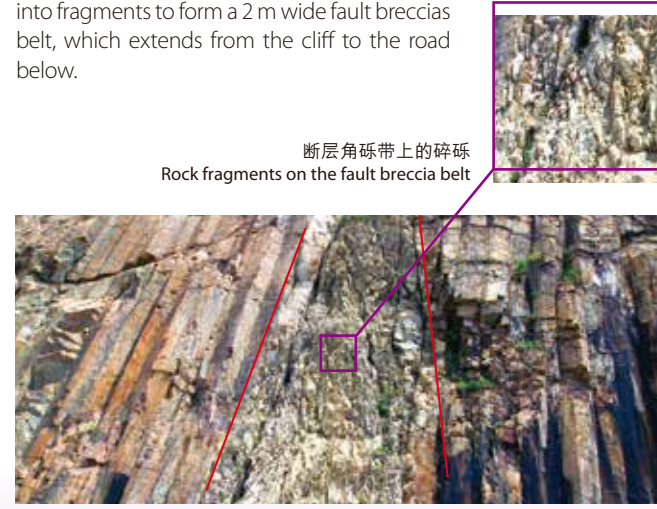
侵入岩墙
Intrusive dyke



大地上的裂缝 Fissures in the Earth's Crust

地壳轻轻错动一下，就可能引起地面强烈的大面积破坏现象。万宜水库东坝的断层就是大自然的杰作。由于受到两旁岩层剧烈摩擦，断层上的岩石被压碎成碎块，形成约 2 米阔的断层角砾带，从崖壁上一直延伸至马路下方。

A gentle dislocation of the Earth's crust can result in vast areas of massive destruction on the ground surface. The fault in the East Dam is one of Nature's masterpieces. Under the great impact of friction against the rock on both sides, the rocks within the fault were crushed into fragments to form a 2 m wide fault breccias belt, which extends from the cliff to the road below.



断层角砾带上的碎砾
Rock fragments on the fault breccia belt

典型的断层角砾带
A typical fault breccia belt

万宜地质步道 High Island Geo Trail

漁農自然護理署
Agriculture, Fisheries and Conservation Department

VOLCANO
DISCOVERY CENTRE
火山探知館

西貢區議會
Sai Kung District Council

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

HONG KONG
GEOPARK
香港地質公園

Hong Kong
UNESCO
Global Geopark



粮船湾景区 High Island Geo-Area

地质年代:
早白垩纪
(约1亿4000万年前)

Geological Age:
Early Cretaceous Period
(About 140 million years ago)

面积:
13.43 平方公里

Area:
13.43 km²

岩石种类:
• 凝灰岩
• 流纹岩

Rock Types:
• Tuff
• Rhyolite

特色:
• 万宜水库
• 六角形柱状节理
• 断层
• 弯曲的岩柱
• 侵入岩墙
• 海蚀地貌

Features:
• High Island Reservoir
• Hexagonal columnar joints
• Faults
• Distorted rock columns
• Intrusive dyke
• Erosional landscapes

如何前往 How to get there

* 只限星期六、日及公众假期(农历年初一、二除外)举办
This tour is available every Saturday, Sunday and public holiday
(except Lunar New Year's Day and the second day of Lunar New Year)

西贡市中心 Sai Kung Town	94号巴士 Bus No.94	或 OR	7号或9号小巴 Minibus No.7 or 9	北潭涌 Pak Tam Chung
北潭涌 Pak Tam Chung	计程车 Taxi ~25 分钟 mins	或 OR	步行 On foot ~2.5 小时 Hours	万宜水库东坝 High Island Reservoir - East Dam
西贡市中心 Sai Kung Town	*东坝半日游 East Dam Half-Day Tour ~40 分钟 mins			万宜水库东坝 High Island Reservoir - East Dam

粮船湾景区地质简介 Geological Overview of the High Island Geo-Area

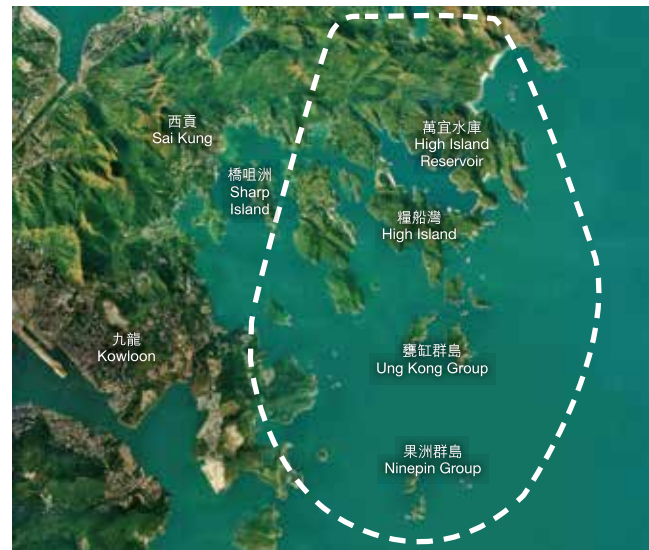
世界各地的岩柱大多由含硅质较低的深灰色玄武岩构成，惟香港的岩柱是富含硅质的浅色流纹质火山岩，柱状节理主要呈五边或六边形。根据估计，火山岩柱的面积逾100平方公里(含海域)，露出地面的高度达100米，总厚度超过400米，平均直径1.2米。火山岩柱拥有凝灰岩和熔岩的特征，关于它们的成因，地质学者持有不同的看法和解释。

Rock columns elsewhere are usually made of dark grey basalt with low silica content. By contrast, the rock columns in Hong Kong are light-coloured, silica-rich, rhyolitic volcanic rock. The columnar joints are mainly pentagonal or hexagonal. It is estimated that the columns cover an area of over 100 km² (including submerged areas), with an exposed height up to 100 m, a total thickness of 400m and an average diameter of 1.2 m. The rock columns have features of both tuff and lava, but there is still no consensus among geologists on the material that formed them.

香港地质景点的保育，全赖我们携手推动！

The conservation of the geosites in Hong Kong is in our hands!

西贡火山岩园区地质历史



古破火山口的推断位置
Inferred location of the ancient caldera

地质学家认为，西贡火山岩园区是约1亿4000万年前(早白垩纪)该地区(即今日中国东部一带)火山活动痕迹的典型例子。西贡曾经发生极度剧烈的火山活动，在现时香港东南面形成一个直径超过20公里的大型火山。

连串的猛烈火山爆发喷出大量火山灰和熔岩。后来，腾空的火山崩塌及下陷，形成破火山口。大量火山灰及富含硅质的熔岩在凹坑内缓慢冷却及收缩，最后形成壮观的六角形火山岩柱。岩柱的分布在西贡东郊野公园、濠西洲、吊钟洲、瓮缸群岛及果洲群岛等逾100平方公里范围。

Geological History of the Sai Kung Volcanic Rock Region

Geologists think that the Sai Kung Volcanic Rock Region is a typical example of traces of volcanic activities about 140million years ago (Early Cretaceous) in the area that is now eastern China. The area once went through a period of extremely intense volcanic activity, which resulted in the formation of a large volcano of over 20 km in diameter in what is now the south-eastern part of Hong Kong.

A huge amount of volcanic ash and lava spewed forth during a series of violent volcanic eruptions. Over time, the hollowedout volcano collapsed and subsided, forming a caldera. The large amount of volcanic ash and silica-rich lava inside the depression slowly cooled and contracted, forming the spectacular hexagonal volcanic rock columns which are now exposed in Sai Kung East Country Park, Kau Sai Chau, Jin Island, the Ung Kong Group and the Ninepin Group, an area of over 100 km².



发育良好的六角形柱状节理
Well developed hexagonal columnar joints

状如管风琴的破边洲 A Giant Pipe Organ - Po Pin Chau



破边洲海蚀柱
Po Pin Chau Sea Stack

从东坝远望海边，花山被海浪切割成两个部分，破边洲就是被分割出来的一座小岛，展现了一种典型的海蚀地貌——海蚀柱。破边洲原本是花山的一部分，因长期受到海浪冲击，最后与花山分离。其沿岸的石柱以近乎垂直的角度竖立海中，形状就好像巨大的管风琴一样。

Looking toward the sea from East Dam, Fa Shan is cut into two parts; the one being separated is Po Pin Chau, which is a type of the sea abrasion landscapes - sea stack. Po Pin Chau was once part of Fa Shan, but years of wave impact and erosion separated it. The rock stacks on the shore of Po Pin Chau tower almost vertically over the sea. The rock face looks just like a giant pipe organ.