



# Green Hong Kong



Environment Bureau



Environmental Protection Department



HONG KONG GEOPARK SPECIAL ISSUE

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## HK National Geopark joins Global Geoparks Network



Vertical and towering polygonal joint columns in Po Pin Chau, Sai Kung volcanic rock area.



Sunset in Tung Ping Chau, sedimentary rock area.



"Devil's Fist" in Wong Chuk Kok Tsui.



Hexagonal columnar joints at the East Dam of High Island Reservoir.

At the 10th European Geoparks Conference held at Langesund, Norway from September 16-18, the Hong Kong Geopark became a member of the Global Geoparks Network (GGN), and now among the 87 global geoparks recognised by UNESCO. This issue's Green Hong Kong will guide you through the different aspects of the "Hong Kong Global Geopark of China".

**W**e have always known Hong Kong as a city full of skyscrapers. But this bustling metropolis also hides unspoiled natural landscapes and greenery in the countryside and outlying islands. They provide a change of scenery to today's hectic city lifestyle and a soothing environment for city dwellers who seek to strike a healthy work-life balance. Many Hongkongers might not even have noticed the existence of these magnificent natural resources, which are only a short distance away from their homes. More than 40% of our land has been designated as protected areas, and some of our natural landscapes is internationally unique.

Recently, the Hong Kong Geopark has been admitted as a member of UNESCO-supported GGN, being rated alongside with the famous Giant's Causeway in Ireland, and San'in Coast Geopark in Japan, as well as the famous Lushan Geopark and Mount Taishan Geopark of Mainland China. At the ceremony to announce the GGN membership, Secretary for the Environment Edward Yau said that Hong Kong is blessed with the spectacular natural geological endowment in the close vicinity of our city. The award of the global geopark status

is a recognition of the unique geo-landforms of Hong Kong and a credit to our city's efforts to conserve the natural environment.

### The spectacular volcanic rock columns

From the photo here, we can see volcanic rock columns compose neat arrays of giant polygonal joint columns stretching along the shore, which makes for a spectacular picture and breathtakingly beautiful rare rock wonder. You might have mistaken them for some world famous geological landscape attraction overseas. In fact it is right on our doorstep – in High Island (Leung Shuen Wan) in Sai Kung.

These rock columns were formed in Sai Kung over 140 million years ago thanks to the volcanic activities in the vicinity. For those living in Hong Kong nowadays, it would be difficult to imagine that Hong Kong once experienced active volcanic activities. Indeed, if we look into Hong Kong's geological history, Sai Kung's coastal features were mostly formed after the volcanic eruptions that took place then. Furthermore, the numerous hexagonal columns found along the coast are one of the most unique geo-features in Hong Kong, and they resemble pipe organs in a cathedral when you look from afar.

### The natural beauty of sedimentary rocks

Another geological site that is popular among Hong Kong people is Tung Ping Chau – an island in the northeastern waters of Hong Kong. This crescent-shaped island is renowned for its layer upon layer of unusual rock structures, resembling the shape of the popular Chinese multi-layered sponge cake, which is a most delightful attraction for tourists among a range of extraordinary rock formations.

Unlike most other rock types across Hong Kong, some well-preserved fossils have been found on Tung Ping Chau. Studies have found that the Ping Chau Formation is the product of sedimentation that took place in Early Tertiary period (about 55 million years ago) and is the youngest rock formation in the geological history of Hong Kong.

The sedimentary rock in this area is well-defined and has a colourful layered structure, which effortlessly creates a naturally beautiful landscape.

The expansive Hong Kong Geopark also covers Yan Chau Tong, Ung Kong Group, Tolo Channel, Ninepin Group, Bluff Head and Sharp Island. All have different rock types that record the geological history of Hong Kong, which are worth exploring. ■



Kang Lau Shek at Tung Ping Chau.

## Geology and Humanity

Many of these geological sites are close to our historic and cultural attractions. For example, Kat O, located in the west of Mirs Bay and east of Sha Tau Kok, makes for a perfect side trip for people taking a cruise trip in the northeastern New Territories to see the many sedimentary rock formations there. Many will take the convenient opportunity to visit Kat O and enjoy a sumptuous and authentic Hakka cuisine there before having a tour of its nearly 300-year-old Goddess of the Sea temple to soak up the local history.

The establishment of Hong Kong Geopark has helped advance rural development. The Kat O Geological Education Centre, previously a building that housed the local village

hall, is now a mini geological museum that displays various rock and fossil samples as well as historical relics such as paraphernalia used in Goddess of the Sea parade including inspection robes, sedan chair and ritual supplies. Other artefacts on display include old appliances used by villagers in the past and samples of traditional Kat O cuisine. The centre is the joint effort of local villagers, voluntary groups as well as the government. Apart from promoting geological knowledge, the centre also helps to enhance visitors' understanding of Kat O's history and its culture. In this way, the natural landscape has been integrated with the cultural landscape in order to preserve the unique heritage and identity of the region, which is exactly what geopark aspire to achieve.

The designation of Hong Kong Global Ge-

opark of China is a worldwide recognition of the significant geological heritage of the region, as well as its great potential for sustainable development. Indeed, the range of significant geological sites and features within Hong Kong Geopark, and its proximity to the urban area are internationally unique. Our acceptance into the GGN makes Hong Kong Geopark an international icon that will attract both tourists and citizens, and will also serve as a strong catalyst for the continuous preservation of the environment. The success of this application is attributed to incredible community support as well as the organisations, government departments, businesses and individuals who were engaged in this project. The GGN Bureau also identified this broad-based support as one of the major assets of the Hong Kong National Geopark application. ■

## UNESCO Global Geoparks Network and its members



The Global Geoparks programme, supported by UNESCO, began in 2000. To be accepted to the Global Geoparks Network, a geological park must possess qualities of geological significance and a unique geological landscape and show the integration of natural and cultural landscapes.

The programme aims to identify more than 500 sites of geological significance across the globe and step up protection and conservation for them.

At present, the UNESCO-supported Global Geoparks Network has 87 members in 27 countries.

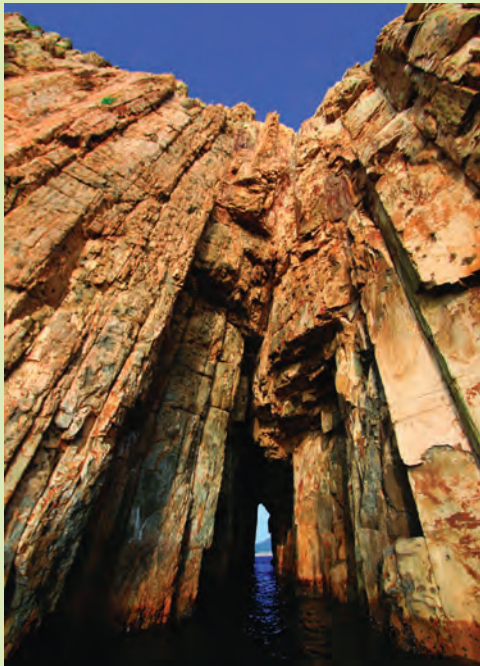
The objective of the Global Geoparks Network is to strengthen the protection of geoparks and geological heritage in all parts of the world, popularise science, and promote sustainable social and economic development through geo-tourism.

China has 183 national geoparks, of which 26 have been admitted to the Global Geoparks Network including Anhui's Huangshan Geopark, Jiangxi's Lushan Geopark, Shandong's Mount Taishan Geopark and Fujian's Ningde Geopark.



Map of Hong Kong Geopark Geo-Area.

# Hong Kong Geopark Highlights



### To High Island:

Take bus No 94 from Sai Kung Town or 96R from Diamond Hill MTR station (operates on Sundays and Public Holidays only). Get off after Pak Tam Chung Country Park gate. Walk ahead along Tai Mong Tsai Road until you reach the next junction. Keep right and walk along Man Yee Road for about 9 km to reach the East Dam of High Island Reservoir. Here you can tour the High Island Geo Trail.

## 1 High Island Geo-area

The East Dam of High Island Reservoir has the internationally unique acidic hexagonal volcanic rock columns. The S-shape section was formed as the rock columns buckled under gravity before they could cool down completely and solidify after volcanic eruptions. One of the dark grey dikes is formed by basalt that is younger than the surrounding rock columns by 40 million years.

## 2 Tung Ping Chau Geo-area

Located in Mirs Bay in the northeastern side of Hong Kong, some of its composition consists of sedimentary rock that has been found to contain many well-preserved fossils. This came about as a result of sedimentation that took place in Early Tertiary period, and is the youngest rock formation in Hong Kong's geological history. Tung Ping Chau is renowned for its "Three Flats and One Wonder" – flat sea, flat island and flat rock. It is an island of extremely low elevations; the peak of the highest rock – Hok Yan Ding -- is only 48 metres above sea level. The "One Wonder" refers to its famous sedimentary rock, formed when sedimentation took place in still water over a long period of time, resulting in the resemblance to the popular Chinese multi-layered sponge cake.



### To Tung Ping Chau:

Take MTR East Rail and get off at the University Station. Take Exit B and walk for about 15 minutes to Ma Liu Shui Pier where ferry services to Tung Ping Chau are available. The boat journey takes about 1 hour 40 minutes.

#### Ferry schedule:

Depart from Ma Liu Shui: Saturday 9:00am and 3:30pm; Sunday 9:00am.

Depart from Tung Ping Chau: Saturday and Sunday 5:15pm (Enquiries: 2527 2513).

#### Tips for tourists:

The best field study route is to trace the island outline through Ping Chau Country Trail because coastal rocks there have outstanding landscape.



## 3 Kat O

Located to the west of Mirs Bay, Kat O has a total area of only 2.4 square kilometres. It is the northernmost outlying island in Hong Kong. Kat O's cultural, traditional and historical heritage has continued to draw visitors who take cruise trips to the northeastern New Territories. Visitors are treated to its local traditional Hakka cuisine and its nearly 300-year-old Goddess of the Sea Temple. Last, but not least, a visit to Kat O Geoheritage Centre, a joint effort between local villagers, voluntary groups and the government, is an eye-opener, providing a rare glimpse of various rock and fossil samples as well as a collection of exquisite artefacts to illustrate the unique historical characteristics of Kat O.

### To Kat O:

Rent your own boat for a day or join a local tour.

You can also visit the Hong Kong Geopark website at [www.geopark.gov.hk](http://www.geopark.gov.hk) to find out how to get to various geo-areas across Hong Kong.

# HK Geopark Reaches Out to Local and International Communities



↑ Traditional and Geo Gourmets from Local Restaurateurs.



↑ Geopark Visitor Centre.



↑ Hong Kong Global Geopark Hotel.



↑ Fishermen's involvement adds a human touch.

The involvement of the community is crucial to the success of the Hong Kong Geopark. We welcome the participation of different sectors of the community in our ongoing efforts to raise public awareness and interest in our geological heritage. Such efforts will also draw more visitors to these sites to share our wonderful geological history.

## Geoheritage Centre

Geoheritage Centres can be found in the vicinity of our geo-sites; the Tai Po Geoheritage Centre in Sam Mun Tsai; the Lai Chi Wo Geoheritage Centre; Sai Kung Geoheritage Information Centre; and Kat O Geoheritage Centre.

These centres are joint efforts between voluntary organisations – both green groups and religious bodies, local villagers and the government. Some of these centres are converted from old village homes. Now they not only act as local museums to provide visitors with a glimpse into the intriguing world of rock wonders to promote geological knowledge but also offer information on local culture, history and local ecology.

Most locally organised geo-tours will include a trip to a geoheritage centre as well as a tour of some of the local historical sites and buildings. Finally, a trip of this kind is not complete without savouring some of the traditional local cuisines such as a seafood banquet.

## Geopark Visitor Centre

The target audience of this centre is the general public. The aim is to introduce the geological history of our geopark and the many interesting stories of these sites to visitors. The visitor centre is fully equipped with advanced facilities and use interactive displays, e.g., the Geofolks, to raise the interest of visitors, especially the younger ones, in getting to know more about the scientific aspect of the geological sites. There are “speaking pens” to provide visitors with more in-depth information of our geological sites and geological knowledge.

The visitor centre also established a geological trail called “Rock Academy” to allow visitors to view from different angles and touch a collection of 28 different types of big rock specimens on display. These outdoor close-encounters aim to enrich visitors’ geological learning experience.

The Sai Kung Geopark Visitor Centre, located inside the Lions Nature Education Centre in Tsiu Hang, is 160-square-meters in size. It was opened in December 2009. The goal of the centre is to raise the interest of the public and tourists in sustainable ecotours, to increase their awareness of geoconservation as well as to promote science

## Hong Kong Global Geopark Hotel

This is an example of promoting the geopark

in partnership with the business sector. Similar partnership relationship is conducive to the integration of the geopark into the community. The Hong Kong Global Geopark Hotel, a themed hotel, helps promote geoconservation and the geopark concept with thematic fossil decoration and a dedicated TV channel that introduces geopark. The dishes of the “Geolicious menu” at the hotel is also inspired by the geological environment to give guests a complete geological experience. For example, the dish - Challenge the “Jenga” Rocks - uses oven-baked Australia cod fillet to resemble sedimentary rock.

## Sister Geoparks

In order to enhance cooperation and communication, the Hong Kong National Geopark has, since its inception, formed partnership with geoparks in Zhejiang Province of the Mainland, Japan, Australia, Britain and Germany. The arrangement will promote exchange tours and allow more scientific exchanges in relation to geological research, management, training, and expert support. It will not only strengthen international ties and cooperation, but also achieve optimal results in environmental conservation and sustainable development in the long term. ■

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