



Every Rock Tells a Story 石頭會說話

ROCKS FORM THE FOUNDATION OF ALL LIVING THINGS.
Having existed on this planet for millions of years,
the ancient geological forms tell a wealth of stories about our Earth's rich history.

岩石是一切生物與植物之根本。
活過了億萬年，這沉默「老人」可有許多故事，娓娓道來……

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EMOTION

THE FORMATION OF A MOUNTAIN takes millions of years and each one is unique.

一座山的形成是億萬年，每一個地方的山景，也是獨一無異。

While rocks may seem commonplace and dull to most of us, their history dates back to the beginning of our planet. A seemingly insignificant, small rock that you encounter by the wayside may have existed for over 6,000 years. From its humble beginnings as cooled and solidified magma to sedimentation and petrification, rocks undergo vast changes in temperature, movement, and erosion to form land, canyons, mountains, dust and soil, making them a significant part of our world.

The Foundation of All

Dr. Young Ng, president of the Association for Geoconservation, Hong Kong, states that much of our soil is produced by rocks, providing nutrients for a variety of plants while allowing animals and insects to forage and rest. Rocks therefore, are the bedrock of our entire ecosystem. “Geoconservation is a concept that refers to the protection of our entire ecosystem and environment,” explains Ng.

Dr. Ng points out that most rocks found in Hong Kong are volcanic rock, granite, and sedimentary rock. To understand these rocks better, we can begin by looking at their exterior appearance and texture. “If you see fine, horizontal lines on the surface of a rock, you can deduce that it probably formed during a volcanic eruption many, many years ago. It can be classified as a type of volcanic rock formed from cooled lava.

NORTHEAST NEW TERRITORIES AND SAI KUNG are full of various sedimentary rocks and volcanic rocks. The area accounts for a fifth of Hong Kong.

新界東北及西貢一帶遍布各種沉積岩與火山岩，已佔全港土地面積約五分之一。



Sedimentary rocks, on the other hand, display horizontal layers and often contain fossils. On granite, crystallised minerals are present,” Ng explains. Each rock is unique in its history and tells a story of its own origin.

Educational Tourism

The Hong Kong Geopark is located on the east and northeast parts of the New Territories and is divided into two main areas - the Northeast New Territories Sedimentary Rock Region, and the Sai Kung Volcanic Rock Region. These two regions are then sub-divided into eight “geo-areas”. The rare hexagonal rock columns have even enabled the park to be recognised as a member of the Global Geoparks Network (GGN) three years ago.



THE THIN HORIZONTAL LINES reveal that this is a volcanic rock.

石頭中的幼細橫紋可以顯示出這是火山岩。



Geoparks are not just about rocks - they are about people.

地質公園並不止於岩山，它更關於人。

Having visited many geoparks around the world, Dr. Ng believes that Hong Kong’s geopark is unique in its own right. “A world-class city can be famous for its manmade structures, but geoparks are a gift from Mother Nature. Diverse geological formations create an abundant ecological landscape, and Hong Kong is unparalleled in this respect. We possess a cosmopolitan and vibrant city, as well as a diverse and ecological environment. The combination of the two admired aspects is something which the city can be truly proud of.” For those who have never visited Hong Kong Geopark, Dr. Ng suggests starting at the East Dam of High Island Reservoir, home of the awe-inspiring hexagonal rock columns. The increasing number of visitors at Hong Kong



ABERDEEN Nature Trail
香港仔水塘 郊遊徑

Geopark shows a change in peoples’ attitudes and inclination for leisure activities today. Dr. Ng recalls a time when people would go hiking and on outdoor excursions for exercising, but these days, they seek something further. In addition to exercising, people want to learn more about the places they visit, so through guided geology tours, they are able to learn about rocks and nature. “The guided tours not only provide information, but also build up interest and awareness so that more people will understand the important role and value of nature in our lives. Once we start to appreciate nature, we will be much more conscious about preservation and will not harm the natural beauty within our city,” says Ng.

Natural Beauty

The power and beauty of nature is evident all around us. Tung Ping Chau's wave erosion landscape, Jin Island's sea arches, Amah Rock's tor, Ma Shi Chau's faults and folds and Port Island's naturally red earth are clear evidence that rocks reflect nature's illustration of art.

"Before the advent of science, much of Chinese art depicted nature through landscapes, exhibiting humans' appreciation of nature from an artistic perspective," says Ng. Having studied geology for many years, Dr. Ng summarises the beauty of nature in ten words: power, danger, wonder, beauty, extraordinary, ancient, leisure, alluring, enchanting, and charming. The first five words echo the natural form and character of rocks while the latter represents the relationship between rocks and their surrounding environment, whether they are manmade structures or living organisms.

An Insight into Life

Walking along a trail near Aberdeen Reservoir, Dr. Ng suddenly stops at a small rock knoll and says, "these fine lines are one of the characteristics of volcanic rock that I mentioned earlier. However, this rock is quite "young", likely just one hundred million years old. You can find older rocks in the northeast area of the New Territories, some as old



as four hundred million years old." "Millions of years" far exceeds the lives of humans. "Humans are incredibly small in the grand scheme of things. Geology reveals the vastness of our planet and places the concept of time on a completely different level, contrasting how much shorter human history is," says Ng. Studying geology offered Ng new perception in life, allowing him to become more open-minded about matters.

The stories of rocks allow us not only to grow in wisdom but also to break through the barriers of time, giving us a new outlook on life.

石

頭俯拾皆是，看來平凡，卻擁有跟地球同樣遠古的歷史，一粒小石子隨時存在了六千年以上。從熔岩凝固、沉積到石化，經歷了高溫、冷卻、地殼變動與風化侵蝕，岩石組成了陸地、峽谷和高山，又化作沙塵土壤，成為地球上生命之源。

石頭是萬物的基礎

香港地貌岩石保育協會主席吳振揚博士 (Young Sir) 指出，泥由岩石變成，為植物提供養份和生長空間，令昆蟲雀鳥動物可以棲息覓食，所以整個自然生態系統最基礎的是石頭。「對於保育岩石地貌，即是對整個生態系統和環境的一種完整保護概念。」要讀懂石頭的故事，先要了解它的話語。吳博士指出，香港常見的石頭主要有火山岩、花崗岩及沉積岩，可由觀察他們表面的紋理開始。「例如在上方發現一條條天然形成的幼細橫紋，大概可以推測到是遠古時期火山爆發後，由火山灰形成的火山岩。至於沉積岩的特徵則是有層理，當中偶有動植物化石；在花崗岩則會看到礦物的晶體。」其實，每塊石頭都記載着一個地方的由來。

寓學習於旅遊

香港的地質公園位於新界東部及東北部一帶，分「新界東北沉積岩」和「西貢火山岩」兩個園區，當中共八大景區。因有獨特地貌和世界罕見的巨大六角形火山岩柱群，他們在三年前已獲聯合國教科文組織評為「世界地質公園」。到訪過全球不同的地質公園，吳博士認為香港獨當一面。「一個國際級大城市，可以因為人為的建築物而聞名，地質公園卻是渾然天成。只有多樣性的地質，才能衍生多元的生態環境和地貌。在世界上不能找到像香港一樣的大都會，擁有奇特多元的地貌，這絕對是值得香港人引以為傲的。」他建議，若從未接觸過地質旅遊的人，不妨先去萬宜水庫東壩地質公園，相信會被六角形岩柱壁畫震撼。近年，地質旅遊興起，反映人們對生活追求有所改變。吳博士指出，從前主要為運動而行山、郊遊，但時下不少人想強身健體之餘，能對身處的地方有多點認知，故加入地質導賞，正好讓人們了解到山石和自然



"IT SEEMS TOUGH to damage rocks. In fact, any damage made is irreversible."

「石頭似乎難以被破壞，其實若被破壞幾乎是無法回頭。」



RED EARTH on Port Island
赤洲的天然染紅



Conservation of nature is as important as a rock itself, so the public needs to be respectful to nature.

岩石的保育跟生態保育一樣重要，讓大眾對大自然保留一份尊重。

環境的關係。「地質導賞除了傳遞知識，最重要是引起人們的興趣，明白在大自然存在的每一樣東西都是有其價值和貢獻。學會欣賞，便不會隨便破壞。」

我的自然美態

大自然是最有力量的藝術家。若細心觀察地貌的話，不難發現大自然展示的驚人力量，例如東平洲的海蝕地貌、吊鐘洲的海蝕拱、望夫石的突岩、馬屎洲的褶曲岩層、赤洲的天然染紅等。石頭接受大自然的神奇塑造，也述說了有關大自然藝術家的故事。「未有科學的年代，中國人繪畫的山水畫，正是從觀賞山水而來，是一種純粹從藝術的美學角度出發。」觀察地質多年，吳博士歸納出十個字去形容山石的美—雄、險、奇、秀、優、古、逸、艷、媚、魅。前五種代表雄偉、險峻、奇特、秀麗、優秀，源於山石本身的形態；後五種代表古色古香、安逸、艷麗、嬌媚、魅力，源於山石與建築物或動植物等構成的感覺。

觀石看破人生

漫步於香港仔水塘的郊遊徑，吳博士突然轉身走到旁邊的一片小山坡說：「這些細小的橫紋，就是我說的火山岩特徵之一。不過它很年輕，只有一億歲，在新界東北有部分岩石年齡較大，有四億年。」億萬年光陰，超越了人類想像的時間觀。「人在大自然面前本來就是渺小。從事地質研究體現了地球浩淼，對於時間的概念完全不同，更能察覺到人類在歷史上的微不足道。」研究石頭讓吳博士學會不執着，對事物放開，變得豁達起來。從觀石讀了天地萬物的故事，其實也是智慧的增長，讓人看破了時間、感悟了人生。



DESTRUCTION OF STONES is akin to damaging plants and animals.

破壞石頭即破壞了動植物的生態環境。

WORLD GEOLOGICAL PARK helps to conserve geological characteristics of the environment and the universal knowledge of geology. It also educates the public about the geological evolution in the history of Hong Kong.

「世界地質公園」的成立，更有助保護具地質特色的環境，並將地質學知識普及化，教育市民認識香港地質演變的歷史。