



他山之石
Learning Experience

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跨越五大洲 走遍世界國家公園

無痕運動風行全球

Leave No Trace in National Park across All Continents

全球五大洲的國家公園在生態旅遊與生態保育之間，都試圖取得平衡點，並在開放遊客參觀的同時，也透過一些設施與做法，盡量減低人為對自然的干擾，做到無痕的原則，為世界保留些「野性」。

All national parks in the world try to keep balance between ecotouring and ecological conservation, while reducing artificial disturbance to the Nature to as little as possible via different facilities and methods. It is hoped that certain “wilderness” may be kept by following the principle of “Leave No Trace”.

亞洲篇

塔曼國家公園

馬來西亞的塔曼國家公園，位於馬來半島上，跨越吉蘭丹、丁加奴和彭亨州，總共4,343平方公里，約台灣的八分之一大，未曾遭遇大規模人為破壞，是馬來西亞最大面積的自然公園。

馬來西亞政府為了保護這座處女熱帶雨林，採取入園遊客總量管制，所有遊客必須先到國家公園外圍的小村落Kuala Tembeling，在當地國家公園辦事處購買入園許可門票、船票（船是前往塔曼的唯一交通工具），然後從Kuala Tembeling搭船進入塔曼。由於雨林處處草木叢生、多沼澤濕地，若遊客單獨活動，危險性高，因此該國家公園採取生態導覽、住宿、餐飲、許可證等各種付費配套行程，藉由生態解說員帶領小眾團體參觀國家公園，以避免旅客對環境造成不當的破壞。

Asia

Taman Negara National Park

The Taman Negara National Park is situated across the states of Kelantan, Terengganu and Pahang in Malaya Peninsula of Malaysia, covering 4,343 km², i.e. one eighth the size of Taiwan. It is the largest natural park in Malaysia and has never suffered any massive man-made damage in the history.

To protect this virgin tropical rainforest, the government relies on the control of visitors to the park. All visitors must first purchase permissions and boat tickets (as boat is the only means of transportation to Taman) at the office of the National Park at an adjacent village Kuala Tembeling, and then enter Taman by boat from Kuala Tembeling. Because the rainforest is covered with dense growth of trees and swamps, it is dangerous for tourists to travel alone. The park authority provides a package tour that includes ecological a guided ecotour, lodging, food, permissions and other necessary fees. Small groups of visitors are led by the interpreters so that no improper damages might be caused to the environment of the park.

左頁圖 Left:

塔曼國家公園的雨林步道極少使用人工建材，而是利用天然地形與倒木做架設。（馬來西亞觀光局 提供）

The rainforest trails of the Tarman National Park are built with little artificial materials but fallen trees instead and constructed according to the natural terrain.(by Tourism Malaysia)

右頁圖 Right:

水路是進入塔曼唯一的通道，園方因此能透過船隻控管入園遊客數。（馬來西亞觀光局 提供）

Waterway is the only access to the Tarman National Park and convenient for the park authority to control the number of visitors.(by Tourism Malaysia)



塔曼國家公園還厲行飲料罐回收的工作，園區內飯店、餐廳所售出的飲料罐，皆加上高價的押瓶費，讓旅客絕不會忘記將空瓶還給店家回收。塔曼規劃數條長、短程森林步道，供遊客探險。由於體力平平的遊客占大多數，園方選擇在雨林內架設樹冠吊索步道，讓遊客站在和雨林樹冠一樣的高度，俯瞰雨林景觀，可減少遊客踩踏濕軟的地面，影響雨林植被的生長。

A strict recycling policy is administered by the Tarman National Park. In the park, all beverage bottles and cans sold at the hotels and restaurants are charged with high deposit fee, so that the visitors will not forget to bring back them to the seller. Trails in different length are arranged for tourists to explore the forests. Since most visitors are of average physical health, the park authority establishes a canopy walkway for them to observe the view of the rainforest at the same height with the forest canopy to keep the visitors from treading on the soft ground and disturbing the vegetation growth of the rainforest.

美洲篇

優勝美地國家公園

美國加州優勝美地國家公園，因擁有美洲杉巨木林珍貴的生態資源，而在1864年被林肯總統指定為美國第一個州立公園，後來於1890年時成為國家公園，區內著名的景觀除了美洲杉巨木外，還有冰河作用的地形、超大獨立花崗岩、大瀑布等。

America

Yosemite National Park

Privileged with the precious growth of giant sequoia, the Yosemite National Park in California, USA, was designated by President Lincoln the first state park of the States in 1864 and later became a national park in 1890. In addition to the giant sequoia trees, the most popular attractions in the park are the glaciation landforms, the massive individual granite rocks and great waterfalls.

站在優勝美地的Olmsted Point，可欣賞到壯觀的花崗岩地形。（邱慶耀攝）

A spectacular view of granite topography can be enjoyed from the Olmsted Point of the Yosemite National Park. (by Ching-yao Chiu)





優勝美地的生態之美讓美國國家公園之父約翰·繆爾 (John Muir) 讚嘆不已。(邱慶耀 攝)
John Muir, Father of the USA national parks, gave high praise of the ecological beauty of the Yosemite National Park.
(by Ching-yao Chiu)

優勝美地過去曾遭洪水肆虐，被大水沖毀野營地與旅館，因園方採不重建方式，儘可能使公園回復自然狀態，並在步道上設置卡通熊圖案的告示牌，提醒遊客行走於步道上，不要抄近路，以免破壞易崩壞的地面。此外，園區內的解說義工也在遊客中心廣場，進行戶外定點的機動解說，並向遊客宣導無痕行為與環境教育的重要性。

帶食物進入優勝美地必須非常小心，這裡的熊可是會翻找遊客的帳棚、背包及衣服裡的食物。為了提防熊的侵略，園方會呼籲遊客要審慎處理垃圾與食物，不在帳棚裡放食物，休息時把背包和衣服口袋裡的食物或垃圾拿出來，以免食物的香氣不小心把熊吸引過來。

園方針對來訪的遊客、車輛收取入園門票，以控管遊客的數量。為了鼓勵遊客多利用公共交通工具，以減少汽車廢氣對環境的污染，園內提供班次密集的免費接駁巴士，讓遊客可將車輛停放在園區外，再搭接駁巴士入園。儘管這會對遊客造成不便，卻對重建國家公園的資源有莫大幫助。

The Yosemite National Park was once buffeted by floods, and some parts of its campsites and hotels were destroyed. The authority chooses to make the park recover naturally without any artificial reconstruction. Signs with the design of a cartoon bear are established by the trails to alert the visitors to stay on the trails instead of taking shortcuts and damaging the vulnerable ground. At the concourse of the visitor center, extemporaneous interpretations are offered by the park volunteers to advocate the Leave Not Trace movement and the significance of environmental education to the visitors.

Visitors must take particular care with the food they bring with them into the park, for the bears tend to search for food in the tents, backpacks and clothing. The park authority cautions the visitors to carefully dispose of their food and garbage. One must never leave any food in the tent, and take the food or garbage out of the backpacks and pockets lest the smell of the food should attract the bears.

Tickets are required for visitors and vehicles to enter the park so that the numbers of tourists may be in control. To reduce the environmental pollution by the exhausts from the cars, visitors must park their cars outside, and take the connecting buses with an intensive schedule provided by the authority to enter the park area. It might be a little inconvenient for the tourists, but will help greatly to rebuild the natural resources of the park.

非洲篇

依托沙國家公園

在1907年成立的納米比亞依托沙國家公園，原是全世界面積最大的野生動物保護區，擁有10萬平方公里的面積，後來因為政治動盪，縮減成22,270平方公里，以鹽沼窪地、紅色沙丘、灌木草原、草原動物等景觀著稱。

這裡不像非洲其他野生動物保護區擁有專屬的生態導遊，因此，遊客入園參觀時，最好參加園區內的營地或飯店所提供的套裝旅遊行程，由專業的生態導遊帶你導覽依托沙；而這些營地與飯店附屬的小店鋪，也只販售應付遊客的基本生活用品。

參觀依托沙的方式，跟其他非洲的國家公園一樣，是搭乘吉普車遊園。為顧及遊客的安全，也預防遊客因隨意走動而嚇壞動物，因此嚴格規定遊客必須留在車上，不准四處走動，只能在固定點停下來上廁所。園內的植物和土壤也都相當脆弱，而為了防止車輛的車速過快所揚起的沙塵，驚擾到動物，所以規定所有車輛限速60公里，並在園內鋪設良好的碎石道路供車輛通行，且禁止車輛抄近路行駛。

左圖 Left:

在依托沙園區內，可見到斑馬等野生動物行走其間。(by David Chang)
Zebras and other wild animals can be seen roaming around the Etosha National Park. (by David Chang)

右圖 Right:

紅色沙丘是依托沙的著名景觀之一，圖為納米比亞沙漠中的45號沙丘。(by David Chang)
Rusty dunes are notable features of the Etosha National Park. Shown in this picture is Dune 45 at Namib Desert. (by David Chang)



Africa

Etosha National Park

Established in 1907, the Etosha National Park in Namibia was once 100,000 km² in size and the largest wildlife reserve in the world, but later reduced to 22,270 km² due to the unstable political status. It is noted for its spectacular landscapes of Etosha Pan, rusty dunes, bushy grassland and prairie animals.

Unlike other African wildlife reserve areas that have designated ecological tour guides, the Etosha National Park is best visited by purchasing the package tours offered by the in-park campsites or hotels and guided by their professional guides. The small shops owned by the campsites and hotels sell only basic necessities to the visitors.

Similar to the other African national parks, the standard way to visit Etosha is taking a ride on a jeep. For the sake of tourists' safety as well as preventing them from scaring the animals, the tourists must absolutely stay in the jeep, never walk around, and answer to the call of nature only on specific spots. The vegetation and soil in the park are very vulnerable to any impact. To avoid the lifted dust scaring the animals, all vehicles must not exceed the speed limit of 60 km per hour on the well paved gravel driveway and taking a shortcut is strictly forbidden.

歐洲篇

塔特拉國家公園

橫跨波蘭與斯洛伐克邊境的塔特拉國家公園，被聯合國教科文組織列為「人與生物圈保護區」計畫，由波蘭與斯洛伐克兩國共同提出跨邊界的自然科學合作，針對塔特拉進行生物多樣性的保護、規劃永續發展政策、管理自然文化資源。

塔特拉的面積約212平方公里，其中有98%的面積為森林、高山，擁有冰河作用的冰斗與岩石塔，以及高山寒原、高海拔森林、鐘乳石石灰岩地形等豐富生態，吸引登山者造訪，是東歐有名的高山登山區域。

Europe

Tatra National Park

Sitting across the border of Poland and Slovakia, the Tatra National Park is a Biosphere Reserve site under the UNESCO Man and Biosphere Programme. A joint natural scientific collaboration between these two countries is proposed to realize the conservation of biodiversity, the planning of sustainable development policy and the management of natural and cultural resources of the park.

The Tatra National Park covers an area of 212 km², 98% of which is forestland and mountains. Comprising glacier cirques and rock towers as well as alpine tundra, alpine forest, stalactite of Karst topography and various ecological landscapes, this famous park in east Europe attracts countless mountain climbers through the years.

塔特拉區域範圍不大，卻擁有高山、冰斗、湖泊等多樣地形景觀。(王漢棠 攝)
Though not particular great in size, the Tatra National Park is privileged with high mountains, glacier cirques, lakes and a variety of landforms. (by Wen-sung Wang)





塔特拉國家公園在登山路線沿途的岩石上，以白底紅色標記為指引登山者的路標。

(王漢棠 攝)

Red-and-black indicating posts on the rocks will guide the mountaineers in the Tatra National Park. (by Wen-sung Wang)

從波蘭與斯洛伐克進入塔特拉的路徑，有多條交錯縱橫的登山路線。園方為了怕遊客迷路，便在登山步道上統一設置矮小的指標地樁，並根據不同的路線，漆上不同的代表顏色。登山客只要事先規劃自己的動線，確認好步道路線的代表顏色，走步道進入塔特拉山區後，在其沿途的叉路處即可依顏色地樁的指引，抵達目的地。這樣的規劃除了可以防止遊客迷路外，另一方面也可指引遊客走在堅實地表的步道上，保障遊客的安全，也避免遊客誤入未開發的地區。

Numerous interwoven mountain-hiking paths crisscross with the routes from Poland and Slovakia to the Tatra National Park. To help tourists avoid losing their directions, the park authority establishes many short indicating posts with different colors for different paths. Hikers can plan their own direction of move and identify it with the representing color. Once into the mountain area of the Tatra National Park, they can follow the colored posts at the intersections en route to their destination. In addition to preventing the tourists from getting lost, this design can also protect them from entering undeveloped areas by guiding them to walk on solid paths.

澳洲篇

大堡礁海洋公園

澳洲昆士蘭州東方外海的大堡礁海洋公園，擁有世界最大型的活體珊瑚群，珊瑚礁區域從昆士蘭州外海，往北延伸到巴布亞紐幾內亞以南，全長約2,300公里，總面積約35平方公里，約接近10個台灣面積的大小，是聯合國教科文組織認可的世界遺產。這裡大大小小的珊瑚礁約有2,900個，有的厚度達500公尺，形成時間甚至可追溯到200萬年至1,800萬年以前，非常珍貴。

珊瑚生態體系就像一處供應充足食物、住宿的海底飯店，提供沿岸魚類最好的棲息地，也吸引全球潛水愛好者前來探訪這處魚群優游、珊瑚斑斕的海底花園。因此，前來大堡礁旅遊的觀光客絡繹不絕，園方為了兼具自然保育與遊憩發展，在特定開放遊客潛水的珊瑚礁海域，在珊瑚礁打上勾環，綁上纜線與浮球。浮球漂在海面上，搭載遊客出海潛水的船艇一旦看到這個浮球後，即可用長勾勾起浮球纜線，與船纜繫緊後，船隻就可以停泊海面，不用投下錨錠到海底，而造成珊瑚礁被錨錠敲壞。

Australia

Great Barrier Reef Marine Park

The Great Barrier Reef Marine Park off the coast of Queensland in east Australia is the world's largest expanse of living coral reef system. As one of the selected World Heritage Sites by UNESCO, its reefs stretch for 2,300 km from offshore Queensland northward to the south of Papua New Guinea, covering a total area of 350,000 km², i.e. approximately 10 times of the size of Taiwan. It is composed of roughly 2,900 individual coral reefs, among which are some most precious ones as thick as 500 m and originated over 2 to 18 million years ago.

A coral reef system is like an undersea hotel habitat that provides ample food and lodging for coastal fish as well as a beautiful marine garden for divers. Tourists from all over the world pay all-year-round visits to the Great Barrier Reef. To take care of both natural conservation and tourism development, the Park Authority designates an area open for diving tourists where rings are fixed to the reef and tied with cables and buoys. When tourists on the boat catch sight of a floating buoy, they can hook up the cable attached to the ring and then tie the boat with it. Thus, the boat will stay still on the sea without using an anchor that might cause damage to the coral reef.



不管是浮潛或是肺潛，大堡礁園方都禁止遊客用手觸摸珊瑚。
(澳洲旅遊局 提供)

Touching the coral by hand in snorkeling or scuba diving is strictly forbidden by the Great Barrier Reef Marine Park authority. (by Tourism Australia)