




美洲死谷國家公園

寂靜之生

Lively Silence

Death Valley National Park in America

落差達3,000多公尺的帕那敏山脈
The height of Panamint Range is more than 3000 meters.



如果說，大自然是所教人們體會謙卑與包容的學校，那麼，世界上每座風情各異的國家公園，就是一本本不同主題的教科書。

而位於美洲、這座全世界最乾熱、不適合夏天造訪的死谷國家公園，則是一本「活的地理百科全書」，其天然地理環境造就她奇特的荒漠生態，在園區完善的規劃下，人人皆可體驗這荒漠震撼。

If Nature is a school where people learn to be humble and compassionate, then different national parks are textbooks with various themes.

Death Valley National Park, U.S., the driest and hottest national park in the world, would be a living encyclopedia of geography that is not suitable to be visited in summer. Its unique desert landscape is attributed to the geographical features around that area. The sound planning of the park allows all visitors to experience the fascinating desert wildlife.

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死谷之名從何而來

這是個真實的故事。

1849年12月，一群來自美國中西部的淘金客，攜家帶眷駕著馬車，為了尋找通往南加州洛杉磯的捷徑而誤入死谷，數十人被迫紮駐帕那敏山脈東側谷底死寂荒漠中。不知身在何處，加上糧食短缺，他們唯一能活下去的辦法，是在原地等待救援。

在那美西沙漠人跡罕至又缺乏地圖的時代。他們派出兩名體力最好的年輕人——曼利和羅傑斯出谷求救。兩人身負艱鉅使命，拼命趕路，徒步向西翻越了落差3,000多公尺的帕那敏山脈。他們以為洛杉磯幾天就到，卻不知那城市距離逾300公里遠，他們前後花了將近兩個星期，千辛萬苦好不容易才走到。

記掛其他人的安危，曼利和羅傑斯沒有稍歇片刻，立刻帶著救援糧食與馬匹就又急急上路。當他們馬不停蹄重返死谷時，前後已超過25天。那些等不及他們歸來而自行出走者，終究熬不過沙漠惡劣環境而不幸陳屍荒野，至少有一人屍體被發現，確切數字迄今仍是個謎。

這故事發生在冬季，是死谷氣候最宜人時。若換在七、八月盛暑之際，此區白晝高溫動輒衝上攝氏45度且常居高不下，說不定羅傑斯與曼利一開始根本就無法順利橫跨死谷。

How Death Valley Got Its Name

It is a true story.

In Dec. 1849, a party of prospectors from the Midwest came here with their family and got lost on what they thought was a shortcut to Los Angeles and stumbled into Death Valley. Dozens of them had to camp at a desolate desert east of the Panamint Range. With no ideas of where they were and food supplies almost depleted, they could only wait around for rescue.

Back then deserts in the Midwest U.S. were seldom visited and maps were rarely available. So William Lewis Manly and John Rogers were sent to seek help. The duo traversed hurriedly through the Panamint Range with a drop height of 3000 meters and eventually spent nearly two weeks before they reached Los Angeles.

Worrying about others' lives, they set out on the road back immediately after collecting enough food and horses. The entire round trip took over 25 days, during which some of their associates decided to leave the Death Valley. Unfortunately, those people did not survive the desert's harshness and died in wilderness. At least one dead body was found and the exact death toll still remains unknown.

The story happened in winter, when the weather was most pleasant in Death Valley. If it had taken place in summer, when the daytime temperature there often soars up to 45°C, Manly and Rogers could not even have trekked through the desert.





還好他們做到了。那些留在原地——就在今日火爐溪附近，耐心等待的人，不管是將馬匹殺了裹腹或拆馬車當柴燒，畢竟都安然活下。當這群人劫後餘生，將離開死谷之際，有人回望這荒漠最後一眼，感慨萬千道：「再見吧，『死谷』。」「死谷」之名因而誕生，並百年流傳下來。

最乾、最低、最熱之處

「我聽人家抱怨說，在死谷國家公園裡，溫度計根本無法顯示多熱，因為裡面水銀乾掉了。凡事皆乾，馬車乾，人也乾，雞也乾；不管死的活的，夏天結束前任何東西都已沒了水分。」美國知名的拓荒作家羅斯·布朗尼，曾在1868年這樣描述死谷。

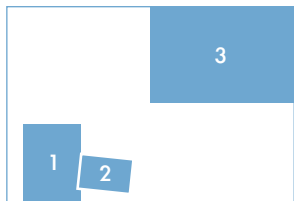
為什麼會這麼乾燥呢？

Fortunately the two young men made it. People who stayed put — near today's Furnace Creek — and waited for their return eventually survived. Some were forced to kill horses or burn wagons to stay alive. As they left the valley, one of them said, "Goodbye Death Valley," giving the valley its name, which lasts for more than a hundred years.

The Driest, Lowest and Hottest

"I have heard complaints that the thermometer failed to function because the mercury dried up. Everything dries...wagons, men, and chicken... No water is left in anything imaginable by the close of summer," described by a renowned American writer on west adventures, Ross Browne, in 1868.

Why is it so dry in the Death Valley?



1. 惡魔高爾夫球場鹽田，真只有鬼神才能在此打高爾夫了
Devil's Golf Course is an immense area of crude salt where only the devil could play golf on such rough course.
2. 近看惡魔高爾夫球場的粗鹽，在乾熱環境下結成尖銳晶體
The crude salt of Devil's Golf Course turns into jagged crystals under such dry and hot environments.
3. 死谷谷底積著厚粗鹽，在極乾熱氣候下，形成近六角形的格狀鹽盤
There are thick crude salts at the bottom of Death Valley. Under extremely hot and dry climate, these crude salts become hexagon patterns within a grid-like salt plate.



因為死谷位於北緯36度上下，受副熱帶高壓影響，此區空氣多下沉增溫，抑制地表對流作用而難以致雨。其西側除了帕那敏山脈和白山山脈，還有逾4,000公尺的內華達山脈橫亙千里，形成一道道厚實的高山屏障，阻絕了太平洋海風與濕氣。

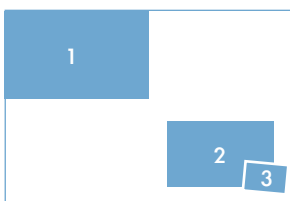
自從1911年火爐溪氣象站成立，有正式紀錄以來，死谷平均年降雨量僅46.5公釐。而一年超過300天的晴朗日照，使得沙漠區全年水蒸發率將近3,800公釐，遠遠超過了該地降水量，難怪成為北美最乾燥地區。

除了乾，死谷的「惡水」位於海平面以下86公尺，也是西半球地勢最低的地方。之所以取名「惡水」，因這一大片淺淺鹽澤含砷有毒，四周並堆積著白鹼。

The Death Valley is located at around latitude 36 degrees north, under the Subtropical Highs, where descending warm air currents restrain convection on land surface as well as precipitation. Apart from Panamint Range and White Mountain, it also has the above-4000-m Sierra Nevada stretching 1000 km on its west end. These mountains block moisture and winds from the Pacific Ocean.

The average annual precipitation in Death Valley is 46.5 mm since records began in 1911, when the Furnace Creek weather observation station was established. More than 300 days of sunshine per year mean an annual evaporation of nearly 3800 mm, which far exceeds its rainfall. No wonder it is the driest place in North America.

Death Valley also has the lowest point in the western hemisphere — Badwater, at 86 m below the sea level. The name derives from the toxic arsenic in the salty and shallow pools.



1. 惡水位於海平面以下86公尺處，是西半球陸地最低處
Badwater is the lowest place in the western hemisphere at 86 meters below sea level.
2. 沙漠冬青是死谷最耐旱耐鹽植物之一，到處可見其芳蹤
Desert Holly is one of the most drought and salt tolerant plants. It can be seen everywhere in Death Valley.
3. 沙漠冬青葉片蜷曲以減少曝曬面積，葉面並會分泌一層白色鹽膜以反射炙陽
Desert Holly has curly leaves to reduce areas exposed to sunlight; on the surface of the leaves a white layer of salty cover is secreted to reflect the sunlight.

地勢低和缺乏水氣這兩項要素，造就死谷另一項紀錄：西半球最熱之地——如果不能算地球上最熱的。1913年7月10日在火爐溪測得攝氏57度，創下全球最高溫。直到1922年利比亞的阿基基雅測得了攝氏58度更高溫，才取而代之成為今日世界紀錄保持者。

北美最乾、西半球最低、最熱之處。這是個與外界隔絕的，極端的世界。而一無是處，貧瘠荒寂的沙漠，也往往最容易被人們所忽略。

誰會無緣無故想要到荒漠去呢？更遑論，誰要花力氣去保護無用的荒漠？

死谷算相當幸運的，在1933年便被劃為國家紀念地。因當時的國家公園服務部長史蒂芬·馬瑟看到此荒漠的奇特，花好幾年時間致力於保護區的成立。最初面積不到71萬公頃，並因有許多礦採活動而無法成為國家公園。直到1994年，克林頓總統簽署加州沙漠保護法案，死谷才晉級為國家公園，並擴增至135萬多公頃，成為當今美國本土48州最大一座國家公園。

The low altitude and the lack of moisture make Death Valley the hottest place in the western hemisphere. The temperature recorded at Furnace Creek on July 10th, 1913 was 57°C, the highest temperature ever recorded in the world, which was only broken by the 58°C recorded in Azizia, Libya in 1922.

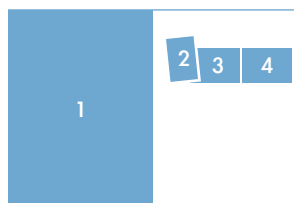
Death Valley is the driest area in North America as well as the lowest and the hottest place in the western hemisphere. It is an isolated land of extremes, and is most easily ignored.

Who would want to visit a desolate desert, not to mention to protect it?

But Death Valley is fortunate: Stephen Mather, the then director of the National Park Service, saw its unusual beauty, and spent years to establish it as a protected area. Death Valley was declared as a U.S. National Monument in 1933, with an area of less than 710,000 hectares. In addition, mining activities there prevented it from becoming a national park until President Bill Clinton signed California Desert Protection Act in 1994. Then the area was enlarged to over 1.35 million hectares, making Death Valley the largest national park in the contiguous U.S.







1. 尤瑞加沙丘位於死谷西北角，加州最高沙丘在此
Eureka Dunes are located northwest of Death Valley and are the tallest in California.
2. 仙人掌多長在海拔較高地區，谷底太乾太鹹，連仙人掌都無法存活
Cactuses grow mostly in areas of higher elevation. Due to the dryness and saltiness at the bottom of the valley, even cactuses can't survive there.
3. 死谷的蜥蜴，身體顏色和周圍沙土混為一體
The lizards in the Death Valley and the sand and soil around them are in the same color.
4. 在死谷也能見到大走鴿，此鳥性喜乾燥開闊之地
Greater Roadrunner can also be seen in the Death Valley. The bird loves dry and broad places.

死寂中的生命力

低、乾、熱這三項因子環環相扣，造就死谷今日不尋常的地貌，也繪上了奇異的生命色彩。

任何進到死谷裡的水，都不再出得去，唯一逃脫此處之法，只有蒸發。而水所帶進來的任何物質卻將永遠留在谷裡。久而久之，死谷如同變成了鹽鍋，裡面混雜千百公尺厚的石膏、粗鹽、及其它礦物。從高處俯眺，底下死谷真像一幅以灰白、淺黃、棕褐色調為主的，平坦廣闊的現代抽象畫。

令人驚奇的是，在這樣地獄般的蒸熱鹽鍋裡，居然還有生命！

在惡水邊、荒沙礫地、低地沖積扇、甚至鹽田遍佈的惡魔高爾夫球場附近，我都見過沙漠冬青。這種藜科植物耐旱又耐鹽，據說兩、三年沒下雨也能活，是死谷最常見植物。此外還有莧科的甜如蜜，這麼嬌美的名字，卻能忍受惡劣環境，植株灰綠而呈橢圓球狀，因其花味香甜而得名。

在死谷的鹽溪溪畔，可看到沿途生長著醃瓜草，不是幾株，而是茂密一片。此植物也稱碘灌，即使水中鹽度達6%，照樣欣欣向榮。另一種耐鹽植物為箭草，能耐上3%鹽度。此藜科植物根部紮實有力，儘管周圍沙土被風蝕殆盡，仍能在孤塚上昂然挺立。

Life in a Dead World

Lowness, dryness, and hotness result in the unusual landscape of Death Valley today and contribute to the fantastic life there.

Water entering the place never gets out but evaporates. All substances carried by water will have to stay in Death Valley forever. Death Valley seems to become a salt pan, a mixture, some tens of hundreds of meters thick, of plaster, crude salt, and other minerals. When one looks at Death Valley from a height, the place looks like a flat and vast abstract painting whose main tone is grayish white, pale yellow, and chocolate brown.

Amazingly, in such a hellishly hot place, life still survives!

I've seen desert hollies grow by Badwater, on gritty grounds, in alluvial fans of lower lands, and even near Devil Golf Course, where salt pans spread all over. Desert hollies of the goosefoot family and the most common plant in Death Valley, is drought and salt tolerant, and is said to be able to survive without rainfall for 2 or 3 years. Honeysweet also grows here. With its beautiful name, the elliptic and grayish green fragrant plant endures the harsh environment.

By Salt Creek of Death Valley, pickle-weed grows densely all along the way. Also known as the iodine bush, pickle-weed flourishes even when the salinity of water reaches 6%. Another salt-enduring plant is arrow-weed, which can endure 3% salinity. Although the sandy soil around arrow-weed is eroded by wind, the robust plant still stands upright.



死谷牧豆沙丘真長有牧豆灌(圖左下角)
In Mesquite Sand Dunes really grows the mesquite(The lower left).

此外在乾燥沙丘上還長著牧豆灌，雖寥寥可數，這般絕處逢生的景象，仍讓人匪夷所思。酚油叢是死谷另一種常見灌木，分佈範圍廣，從海平面以下的沖積扇到海拔 1,000 多公尺坡地都能看到。

生命，在反生命力量中成長。孤獨、艱澀、絕不妥協，深深撼動了我。

死谷其實是一個充滿生命的地方。只要用心去探索，或許哪天，你將和我一樣，在壯闊得令人心懾的蒼穹下，發現那嬌怯卻堅韌的絲絲生機，奇蹟似地，兀自在荒漠中，欣欣向榮。🌀

In addition, there grows mesquite in dry sand hills. Though small in number, its existence is still a sight of amazement. Creosote bush is another common shrub in Death Valley. It is widespread from alluvial fans below the sea level to hillside fields over 1000 m high.

Life grows despite such harshness. It never compromises and thus deeply touches me.

Death Valley is in fact a place full of life. As long as you explore it with your heart, you may find that life miraculously thrives in the desolate desert under the vast sky. 🌀

造訪死谷注意事項：

1. 國家公園全年開放，門票：一輛車20美元，7天內有效；徒步健行、騎自行車或機車者，每人10美元。
2. 健行者、背包客、和四輪傳動車欲深入荒漠，必須自給自足準備充分，攜帶詳盡地圖，並告知去處請人留守。想在荒野區過夜的背包客，必須先在遊客中心申請免費的荒野許可。
3. “Heat Kills!” 死谷有可能會熱死人，因此園方警告訪客：要喝很多水，避免在高溫中健行，多帶糧食與水以備不時之需，並常注意身體狀況是否不適。
4. 公園內某些道路會因天候或土石流而封閉，可上網查詢最新狀況：
<http://www.nps.gov/deva/planyourvisit/road-conditions.htm>
5. 公園住宿資訊：<http://www.nps.gov/deva/planyourvisit/lodging.htm>
6. 公園營區資訊：<http://www.nps.gov/deva/planyourvisit/camping.htm>

Notices:

1. Death Valley National Park is open all year round. Entrance Fee: US\$20 per vehicle for 7 days. For individuals who travel on foot, by motorcycle, or by bicycle, US\$10 per person.
2. Hikers, backpackers, and people traveling in four-wheel drives must be well-prepared before entering the desert. Bring detailed maps, inform others of the destination, and ask someone to stay behind in case of any emergency. Backpackers who want to stay overnight in the wilderness area must apply for free backcountry permit beforehand.
3. Heat Kills! The heat of Death Valley may cause death. Hence, visitors are warned to drink much water, avoid hiking in the heat, bring more food and water for contingent use, and constantly pay attention to physical conditions.
4. Some roads in Death Valley may be closed due to the weather or debris flows, visitors may check the most updated information in the following website: <http://www.nps.gov/deva/planyourvisit/road-conditions.htm>
5. Lodging Information: <http://www.nps.gov/deva/planyourvisit/lodging.htm>
6. Campground Information: <http://www.nps.gov/deva/planyourvisit/camping.htm>

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賓州州立大學環境社會學碩士。1997年成立工作室，用文字與影像替大自然說話。著有《跟我去阿拉斯加》、《凝固的波浪》、《優勝美地四季之歌》、《象鼻海豹》、《地圖會說話》、《荒野天堂》等書。

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MA in Environmental Sociology at The Pennsylvania State University, Lin set up her own studio in 1997. She uses words and images to speak for Nature. Her works include *Only in Alaska*, *Colorado Plateau*, *Yosemite Four Seasons and Elephant Seal*, *The Map Speaks*, *Wild Heaven*.

Wen-yao Li

MS in Geography at The Pennsylvania State University, Li is currently involving in R&D in GIS. He loves nature and wildlife photography. Many of his works are published in local and international journals and books. He is the co-author of *Only in Alaska*, *Colorado Plateau*, *Yosemite Four Seasons and Elephant*, *The Map Speaks*, *Wild Heaven*.

