



Special Report
特別企畫

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東沙環礁國家公園

百變海陸美麗新世界

A Brave New Ocean Wonderland

—Dongsha Atoll National Park



兇狠圓軸蟹 (林怡萱 攝)
Cardisoma carnifex (by Yi-hsuan Lin)

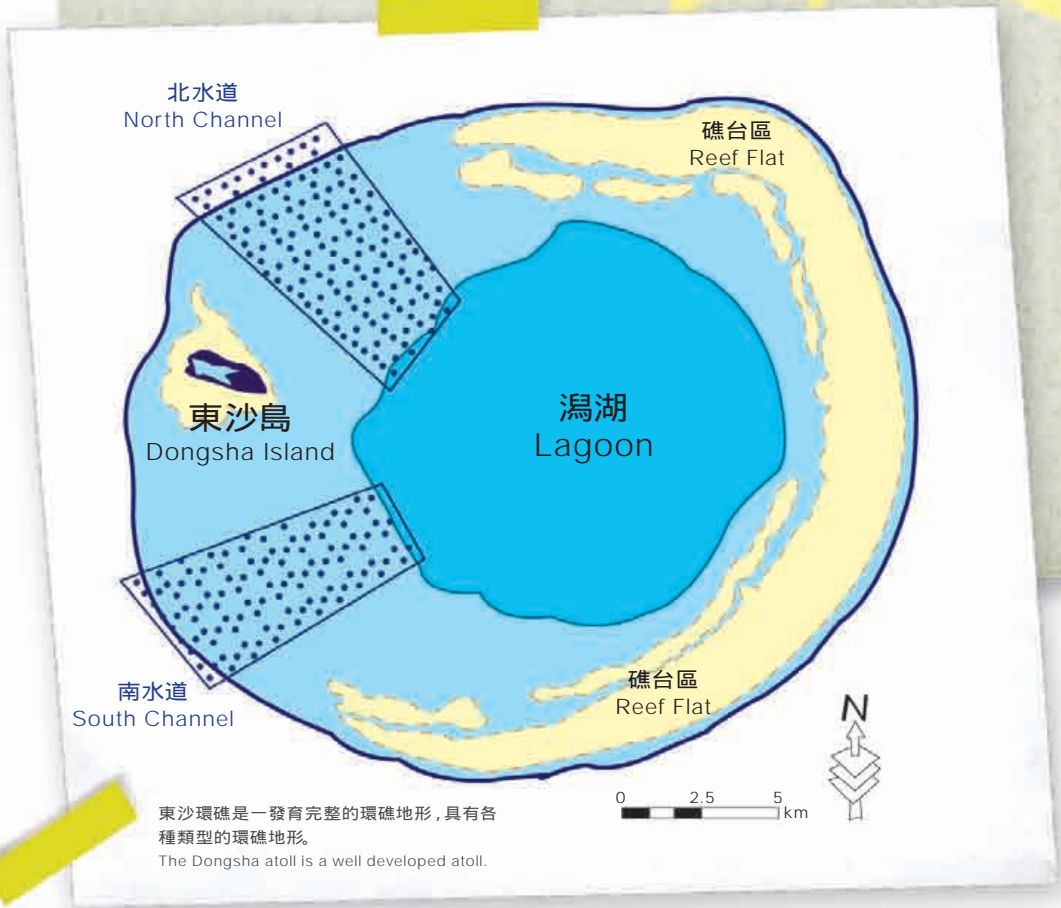
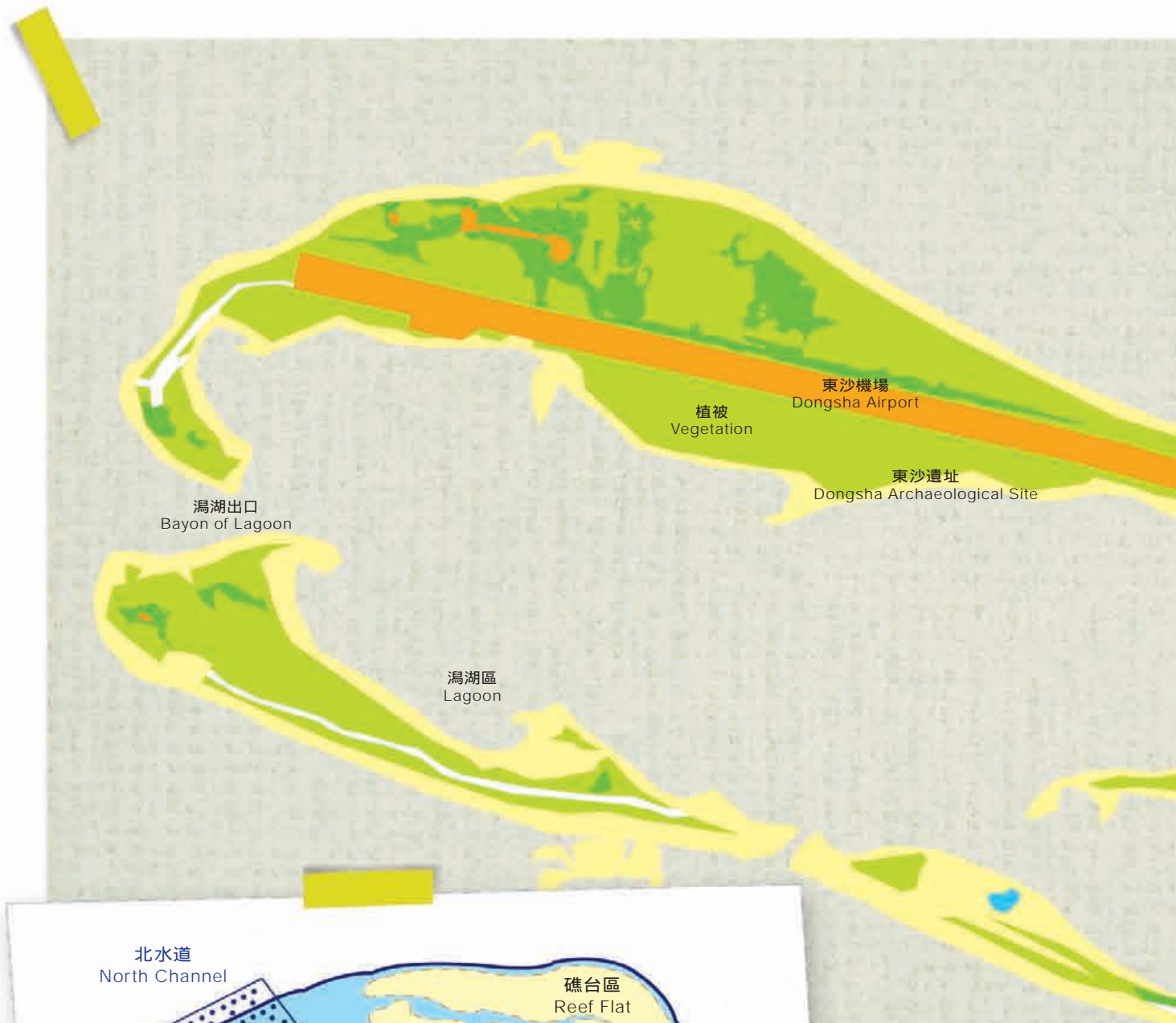
螿蟹花 (柯佳吟 攝)
Hymenocallis speciosa (by Chia-ying Ko)

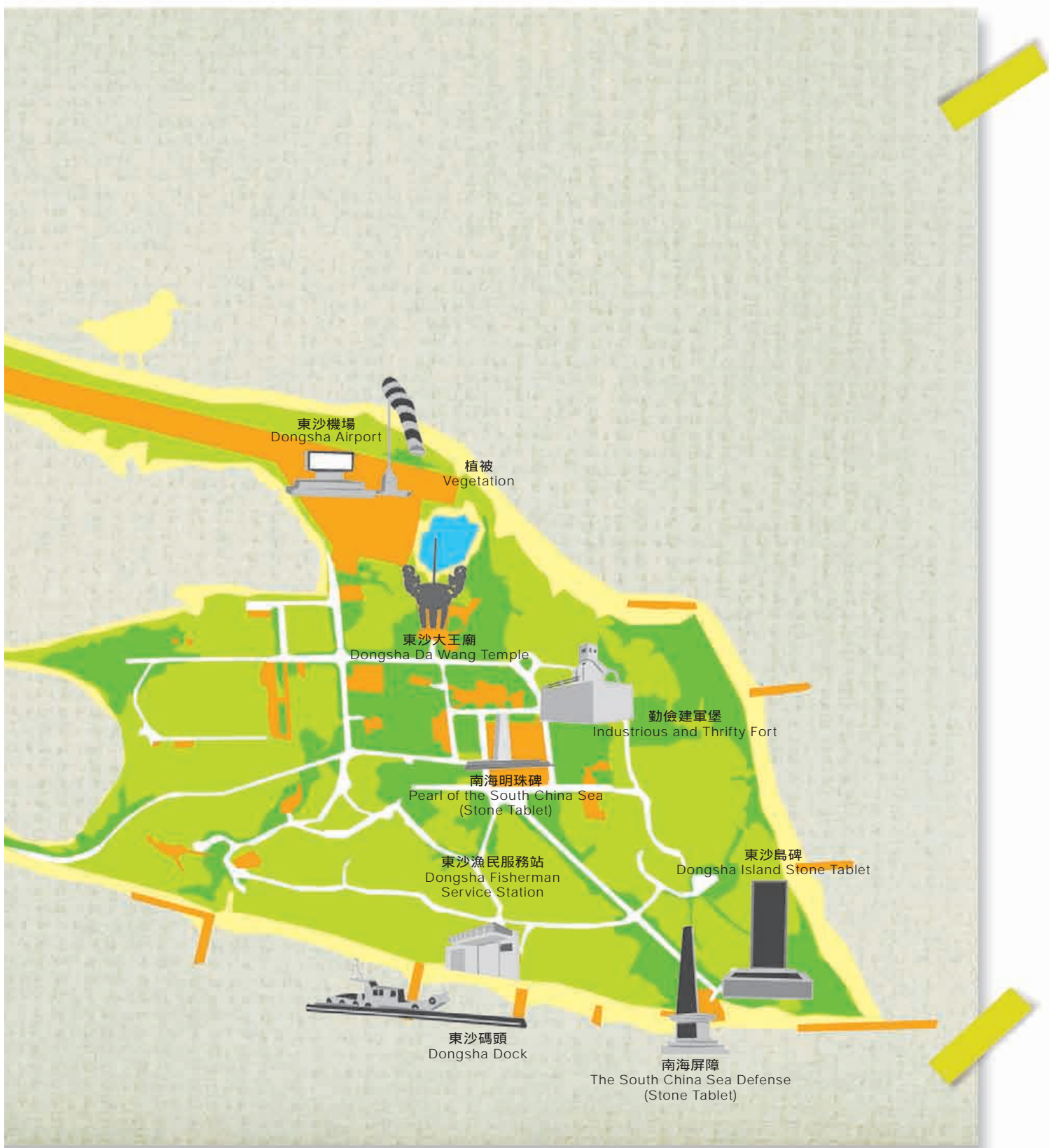
高掛在無瑕藍天中的暖陽，照耀著由貝殼、珊瑚碎屑風化而成的柔美白沙上，向無邊無際的碧海延伸而去，只見銀光隨波閃爍。漫步於沙灘的兇狠圓軸蟹與花脛綠紋蝗，正獻寶似的低吟東沙風光；沿岸的家燕、翻石鷗等群鳥，也在高聲歡唱；稀有的海人樹、毛苦參，不忘跟著迎風搖曳、翩翩起舞；湛藍深海中的白吻雙帶立旗鯛、橫帶唇魚等魚兒，也悠然地穿梭嬉戲在燦爛的珊瑚裙礁旁。

這裡是百變美麗新世界，生活在島上的成員們，無不賣力的歡迎大家，共同來探索大自然的瑰寶——東沙環礁國家公園的奧妙。

The sun shining in the blue sky reflects off the shiny grains of crushed seashells and coral on the sandy beach. In this secluded habitat for a variety of flora and fauna living in balanced harmony, *Cardisoma carnifex* wanders warily along the sandy beach, trying to avoid the *Arenaria interpres* which feeds on them. *Ailopus thalasinus tumulus* chirps in the low grass, and *Hirundo rustica* joins the singing as it flies in and out of the swaying bushes and trees such as *Simaroubaceae* and *Sophora tomentosa*. In the waters near the atoll, *Heniochus acuminates* and *Cheilinus fasciatus* play among other fish in the coral apron reef. It is the Dongsha Atoll National Park, a truly ocean wonderland.

柯佳吟 攝
by Chia-ying Ko





東沙環礁國家公園的輪廓

The Profile of Dongsha Atoll National Park



全 台灣第一座海洋型國家公園 東沙
環礁國家公園，雖已正式公告成立，
但因過往並未特別著重獨特海洋生態環境
的保育，造成東沙環礁周圍有許多的物種和
生態面臨嚴重的威脅。

因東沙位處中、西方航行要道，所以自古
島嶼海域資源就已被大量攫取，但最嚴重的
破壞，還是在清朝時期，日本人佔領東沙島，
驅趕漁民、蓄意濫採磷礦資源，爾後，雖然
滿清政府證明擁有主權歸屬、收回東沙，但
卻難以復原東沙舊風貌。

而後，隨著古往今來聚集登陸在島上的人
們，不論是為濫取資源，或為文明建設，其
實在在都是東沙潛藏的危機。營建署東沙環
礁國家公園籌備小組主任吳祥堅透露，其他
像是全球暖化的自然現象，加上少數漁民炸
魚、毒魚、電魚等行為，也是讓珊瑚礁大量白
化與死亡，摧毀島嶼生態系的原因。

The establishment of the Dongsha Atoll National Park makes it the first marine national park in Taiwan. However, environmental conservation was not being emphasized in the past, and, inevitably, some rare and sensitive marine species living in the Dongsha Atoll were damaged, and are now facing a severe threat. Because of Dongsha Island's strategic location for both Asian and western countries, the nearby marine resources have long been exploited. The most serious damage was done by the Japanese during the Qing Dynasty when they took over the island, expelled local Chinese fishermen and started recklessly mining the guano deposits to extract phosphorus. Though the Qing government finally recovered sovereign rights of the island, restoration to its original environment was impossible. Potential threats to ecology never end when people occupy Dongsha Island, no matter if their purpose is engineering construction or the exploitation of resources. Hsiang-chien Wu, Chief of Dongsha Atoll National Park Founding Committee counsels that factors as global warming, improper fishing with dynamite, electricity or poison, all lead to the bleaching and death of the coral reef, and subsequently to the end of the entire eco-system.



貝殼沙 (曾峰毅 攝)
Shell sand (by Fon-yih Tsuang)



不過，或許危機也正是轉機，決定設立海洋國家公園，就是欲透過機制化的方式，跨出系統化保育的第一步。然而，目前東沙雖已設置成國家公園，但在未臻完善前，還不會對外開放大眾旅遊，因需先著力於復育工作的進行，期許能在5年後完成初步計畫，讓登島的中外人士，體驗東沙原有的美麗曼妙。

雖然短時間內還沒機會親自體驗東沙島，但希望能透過文字與圖片的傳遞，讓大家能感受遨遊東沙的絕美魅力。

Still there is hope if a marine park is established and protected. With proper management, the first step can be taken toward sustainable conversation. Until the new national marine park is completely established, with a fully integrated regulation and management structure, it's not going to be open to the public for tourism. It is estimated that the park area needs a preliminary stage of five years for natural rehabilitation before opening to the public. Although most people won't be able to visit the Dongsha Atoll National Park in the near future, they can monitor its progress and view its stunning beauty through these stories and original photos.

東沙海域中，深色處為島上常見的海草—泰萊草（林怡萱 攝）

The deep color place in Dongsha ocean is common seaweed species "*Thalassia hemprichii*" (by Yi-hsuan Lin)



東沙初體驗

位在南海北部的東沙環礁，總面積約500平方公里，周圍為礁台地形，而礁台長約46公里，寬約2公里，隨著潮浪高低，露出或接近水面的程度也不同。環礁內部有珊瑚丘、小沙洲等分布；外環礁部分的淺礁區，則是珊瑚主要分布的礁斜坡，寬約數百至千餘公尺，坡度平緩，但水深處則多為陡坡或斷崖，幾乎呈垂直狀下降到深海。

位在環礁西側的東沙島，最高處海拔約僅7.8公尺，地勢相當低平，全島總面積約為174公頃，東西長約2,800公尺，寬約865公尺；島的西邊還由兩條延伸的沙脊環抱一處面積約64公頃的小瀉湖。豐富且獨特的多元自然地形，讓此處歸屬為標準的環礁。

雖然環礁生態相當特別，但因東沙長期未開放，對許多人來說仍相當陌生。通常，一般人最常聽到「東沙」兩字，多半是來自氣象報告，因東沙環礁位在颱風形成或路經的地區，尤其常見於8、9月的夏季，所以每當有颱風成形時，氣象預報員總會提到東沙字眼。再者，因東沙屬於標準的熱帶海島型氣候，所以全年溫度偏高，各月平均溫度維持在21°C以上，年平均溫度則約為26°C。

Geography of Dongsha

The Dongsha Atoll lies in the north part of the South China Sea, covering an area of approximately 500 square km. The atoll is formed by a series of reef flats, extending over a length of 46km from north to south, with a width of 2km east to west. Different parts of the reef exist above or below sea level according to the tides. The inner structure of the atoll includes coral knolls, shoals in the inner atoll. Extending from hundreds to thousands of meters, the gently sloping outer reef where most of the coral grows drops vertically in deeper sea.

The location of Dongsha Island is in the western part of the atoll, 1.74 square km in area, 2,800m long from east to west and 865m long from north to south. Its landscape is fairly even and flat, with the highest point only 7.8 meters above sea level. There is a 0.64 square km lagoon surrounded by two stretches of sand in the west of the island. The characteristic geography of Dongsha is fairly typical of all atolls.

A detailed picture of Dongsha Atoll is not familiar to most Taiwanese because of its isolation and seclusion. One of the typical impressions a Taiwanese gets comes from the weather forecast. The Dongsha Atoll is positioned along the incoming route of summer typhoons, and so the name of Dongsha is constantly heard in our weather reports. Dongsha's own climate is a typical tropical island climate, warm all year round with an average monthly temperature of 21°C and 26°C for annual average.

豐富多樣的東沙植被 (林怡萱 攝)
Enrich diverse of vegetation in
Dongsha (by Yi-hsuan Lin)



聯繫台灣與東沙的管道

東沙的暖陽，讓常駐島上的成員各個顯得神清氣爽有朝氣。不過，目前常駐島上的人口，僅有巡防人員、國軍或研究員等約200多人。前往島上的方式，其實也頗為辛勞，礙於地理位置的偏遠與建設程度的不足，目前只能仰賴班次稀少的船隻與飛機。

因該處交通狀況並不佳，沒有可供大型船隻停靠的碼頭，只能使用小型船隻接駁，由簡易浮動碼頭進出，從高雄港出發到東沙的海運航次，原則上包括民間貨輪與海巡署巡防船艦等，每月航行1到2次。空運部份，現也只有跑道較短、無過多助航設施的軍用機場，僅可讓特定小型飛機起降，撇除掉空軍運輸機不談，每週四當日有民航機立榮航空往返高雄小港機場與東沙島，飛行時間約70分鐘。

Transportation on Dongsha

Pleasant warm weather makes living on Dongsha Island pretty enjoyable. The population is approximately 200 inhabitants, mostly military or research personnel. Traveling to the island is not easy due to its insufficient facilities and remote location. Current access to Dongsha relies on limited flight and ship schedule.

Without a permanent wharf for large vessels, sea transportation depends on small boats docking at simple floating docks. The ship schedule from Kaohsiung Harbor to Dongsha Island is 1 to 2 sailings per month, operated by both private freight companies and patrol vessels of the Coast Guard Administration. The old military airport with a short runway and meagre navigation facilities can only handle the traffic of small airplanes. It takes 70 minutes to fly from Kaohsiung to Dongsha Island, there is only one flight by Uni Air every Thursday other than military flights.

東沙海巡隊巡防船艦 (林怡萱 攝)
The vessel of Dongsha Coast Guard Team (by Yi-hsuan Lin)





在人間仙境東沙島上，最常使用的交通工具就是腳踏車，再來則是往來於東沙機場、大王廟、海軍氣象台、東光醫院、國碑、漁民服務站、電廠與海淡廠之間的高雄市公車「東沙一路」。

看到公車行駛停駐的站名，也許已讓不少人驚覺，原來東沙不只有豐富的天然資源而已。其實在島上設立管理指揮部之後，就等同於將無人島東沙逐漸帶入以人類為主軸的文明化歷程，讓島上增添了關乎人文的諸多風情。

Bicycle is the most common transportation on the island. The Dongsha No. 1 bus is makes scheduled stops at Dongsha Airport, Da Wang Temple, Navy's Weather Station, Dongkuang Hospital, Dongsha Island Stone Tablet, Fisherman Service Station, Power Station, and the Station for Sea Water Desalination.

All the names of bus stops bring a startling realization to us that Dongsha is not a deserted island with only natural resources. In fact, since the establishment of a commanding headquarters there has been a slow and steady cultural development on the island.

公車站牌 (柯佳吟 攝)
The bus station (by Chia-ying Ko)



氣象空台站 (柯佳吟 攝)
Dongsha Meteorological Observatory (by Chia-ying Ko)





東沙小潟湖 (林怡萱 攝)
Dongsha Lagoon (by Yi-hsuan Lin)



停靠在東沙島旁的漁船 (林怡萱 攝)
Offshore ships (by Yi-hsuan Lin)



每週只有一個班次，往返高雄小港機場與東沙島的民航機 (柯佳吟 攝)

There is only one flight from Kaohsiung to Dongsha per week (by Chia-ying Ko)

東沙人文風情話

人文建設的第一步，就從東沙島北側的「東沙機場」開始。日治時代，此處原為行駛輕航機的機場，爾後再將機場跑道改成寬約30公尺、長為1,550公尺的軍用機場。特別的是，在飛機起降的特定時間中，空軍會嚴格管制人員車輛的進出，但在非飛航期間，機場跑道就化身為一般的道路系統，因此，常會出現駐守在島上的人們，騎著腳踏車閒晃於航行跑道上；或者，親睹各式群鳥停歇其中，畫面極其可愛逗趣。

Development of Dongsha Island

Initial modern development of the island started with the Dongsha Airport built by the Japanese during World War Two. After the war, when Taiwan government recovered Dongsha, the runway was widened and extended to 30m wide and 1,550m long, suitable for small military aircraft. When an airplane is landing or departing, all traffic to the airport is under strict control, but at most other times the runway is used as a regular road for the bus or bicycles. It is a common and interesting scene with cyclists riding and birds resting along the runway.



腳踏車與公車是東沙當地人最便捷的交通工具 (柯佳吟 攝)
The bicycle and bus are the most convenient public transport (by Chia-ying Ko)

續往下行，映入眼簾的就是與「人文」更息息相關的廟宇。島上有一「東沙大王廟」，據文獻記載，發現自古島上即有一間大王廟，但究竟建於何時、何地已不可考，甚至是否為現存在島上的東沙大王廟，也不得而知。

現在島上供奉「關公」的「東沙大王廟」，據廟誌記載，在民國37年的夏天，關聖帝君的聖像搭乘獨木舟漂流到東沙島，當時全島官兵十分驚喜，於是決定建廟奉祀，並尊稱為「東沙大王」，極具紀念性的獨木舟也保存於廟側。同時，廟內也奉祀「南海女神」媽祖，希望保佑往來離島東沙的人們都能平安。廟宇香火鼎盛，稱得上是東沙島的精神信仰中心。而位在廟宇左側的「忠烈祠」，即為國軍東沙公墓，裡頭多為無名塚，推估大半屬早期避居東沙島的先民。

Da Wang Temple is another cultural sign on the island. According to research done, there was a previous temple on the island called Da Wang Temple long ago, but there are no further records or evidence of its location nor date of construction. So there is no clear connection between the ancient temple and the one we see today.

Da Wang Temple today is dedicated to Guangong, the Chinese God of War. According to documents in the modern temple, a canoe carrying a statue of Guangong was washed up on Dongsha Island in 1948. The soldiers gave it the name Dongsha Da Wang (Big King), and decided to build a temple to honor it. The memorable canoe was also preserved there. In Da Wang Temple, people also worship a goddess, Mazu, the guardian for fishermen and people who journey by sea. Da Wang Temple is very popular with local people, providing an important focal point for spiritual sustenance. There is military martyrs' shrine to the left of the temple, and it's a cemetery for the anonymous dead of the old days.

島上唯一的廟宇—東沙大王廟
(曾峰毅 攝)

Dongsha Da Wang Temple is the only temple in Dongsha
(by Fon-yih Tsuang)





島上現今雖無一般住戶居住，但除駐守的官兵外，還有往來東沙海域的漁民，因此仍設置唯一一所醫療中心「東光醫院」，從事醫療服務、環保、餐飲衛生等項目。另一處「東沙漁民服務站」則是設立於民國76年，屬漁民休憩、補給站之用，也提供研究人員之住宿使用。

另外，東沙島上還聳立著2個重要的碑誌，其一為「東沙島碑」，島碑是民國43年由駐島軍官所設立，碑文詳述東沙島的地理位置與歷史；另一則是國碑「南海屏障」，緊臨島碑的國碑，以望海之姿矗立在東沙島南側，為民國78年由內政部為聲明我國對南海的主權而設立，民國81年時更在國碑旁新建迴廊，白柱藍瓦的設計，更襯托南海屏障的雄偉。

There is no historical community or long term settlement on Dongsha Island. Dongkuang hospital is necessary to provide a variety of medical services for the military personnel on the island and the fishermen from nearby waters. The Fisherman Service Station was built in 1987 to provide shelter and supplies for fishermen, and is sometimes used as short term accommodation for researchers.

Two stone monuments were erected side by side on Dongsha. The first was placed in 1954 by the Taiwanese troops stationed there, and the inscription details major geographical and historical information about the island. The second was erected in 1989 to symbolize national sovereignty over Dongsha Island, and the inscription reads "South China Sea Defence" commissioned by the Minister of Interior and placed on the southern side of the island, facing the ocean. In 1992, a beautiful corridor with white pillars and blue roof tiles was added to it.

東光醫院 (柯佳吟 攝)
Dongkuang Hospital (by Chia-ying Ko)



東沙漁民服務站 (柯佳吟 攝)
Dongsha Fisherman Service Station (by Chia-ying Ko)





東沙島碑 (柯佳吟 攝)
Dongsha Island Stone Tablet
(by Chia-ying Ko)



東沙一隅 (林怡萱 攝)
Landscape (by Yi-hsuan Lin)