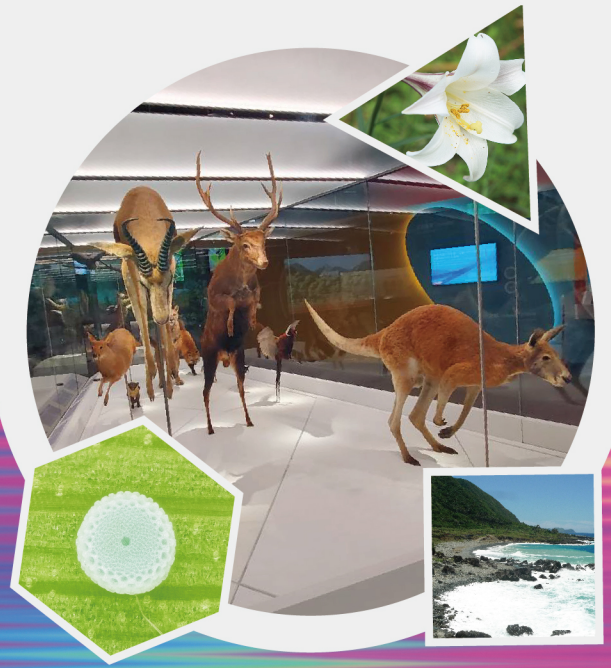
# Nature's Wonderland 奇幻自然

自然奧秘 × 科學解析
Nature Through Science

「奇幻自然」常設展延續原「數與形」展區（1988–2022）核心精神「自然奧秘，科學解析」，藉大自然中各種生命奧秘與科學研究成果，協助我們感受這個萬物共享互依的美好世界，理解其中蘊含的科學原理，邀請大家一同思考自然、科學與生命之間的關係與意義。




- A 哇自然！嗨科學：）
- B 圓不圓：蛋科學
- C 動一動：生物力學
- D 追呀追：計算與行爲
- E 說故事：探索自然，發現科學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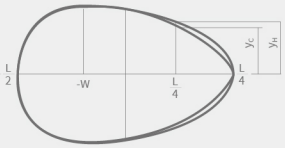
## A 哇自然！嗨科學：）

荷蘭人所繪福爾摩沙（臺灣）

對自然的讚嘆，是與科學相遇的開始。讓我們從自然出發，在一則又一則的科博館蒐藏故事中，用世界的視野來認識臺灣、與科學說聲嗨～

歐洲與其他國家主要航線圖（1703）

## B 圓不圓：蛋科學

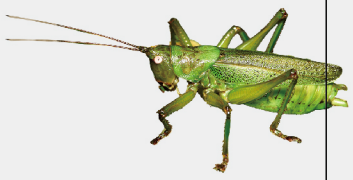


上：科學家試圖用數學方程式描述蛋的輪廓
下：崖海鴉仿真蛋

蛋是生命的開始、胚胎發育的場所，外形看似簡單卻有著四億年的漫長演化。為了因應各種嚴苛環境，脊椎與無脊椎動物的蛋發展出不可思議的精密設計，其對稱多樣的外形、斑斕繽紛的色彩，及結構與排列方式，都蘊含了數學、物理、化學、生物演化等科學，等待我們來發現！

## C 動一動：生物力學

地球上的真菌、植物與動物等生物，是如何適應陸地與水中環境，而發展出各種極具創意的運動方式傳遞孢子、種子與跳躍、游泳呢？讓我們與科學家們一起來感受這個世界吧。



蘭嶼所羅門蟲

銹色偽角扁蟲

## D 追呀追：計算與行爲

身形龐大的鬚鯨以體型細小的魚蝦為食，可發多樣聲音且游泳迅速靈活的不同齒鯨會捕食小型魚類、逐中大型魚類、或搜尋頭足類。在這些捕捉與被捕捉之間，藏著鯨豚不為人知的計算秘密。許多魚類與鳥類為了降低被獵食的機率，選擇成群聚集，在高速運動中個體判斷相鄰個體的相對速度與距離並精準調整自己的速度與方向，這些動物的計算能力實在令人驚嘆。

布氏鯨在黃昏時的泰國灣

## E 說故事：探索自然，發現科學

左：詹美鈴博士在實驗室研究居家昆蟲
右：李勇毅博士到野外調查蘭花

在這個舒適的空間中，我們可以藉由沉浸在螢火蟲之夜，或科學家探索自然、發現科學的精彩故事，思索我們與自然的關係。在特定的時段，科學家們會親自來到這裡與大家見面，或是科學教育人員帶著我們進行有趣的科學教育活動。

### —起來想—想吧！

臺灣多樣的生物從哪來？

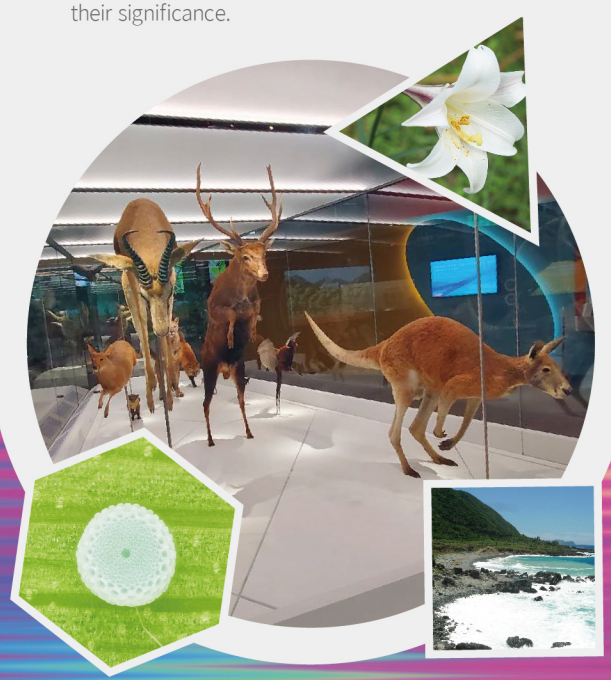
古今的環境有什麼變化？

什麼是自然？什麼是科學？

# Nature's Wonderland
# 奇幻自然

自然奧秘 × 科學解析
Nature Through Science

The permanent exhibition "Nature's Wonderland" continues the spirit of "Numbers and Forms", the previous exhibition (1988-2022), to approach "Nature through Science". Through the exploration of various amazing natural phenomena and extensive scientific research, this exhibition helps us to experience this beautiful world where everything is connected and interdependent, to understand the scientific principles that underlie it, and to reflect on the relationships between nature, science and life and their significance.




- A Wow, Nature! Hello, Science : )
- B Science of Eggs
- C Life in Motion
- D Science behind Animal Behavior
- E Fantastic Science and Scientists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## A Wow, Nature! Hello, Science : )

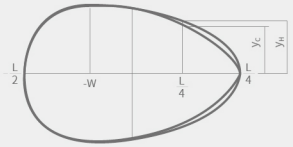
Map of Formosa (Taiwan) by Dutch

Our encounter with science begins with our admiration for nature. Let's start with nature and learn about Taiwan from a global perspective through story after story about the NMNS collections and say hello to science.

The Principal Voyages of Europeans to Foreign Lands, 1703

## B Science of Eggs

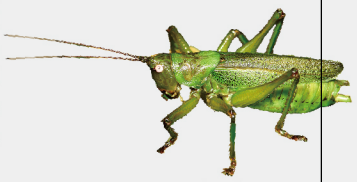
Eggs are where life begins and the embryo develops. De-spite their deceptively simple appearance, these wonders hide a rich evolutionary history spanning 400 million years. To adapt to diverse and challenging environments, vertebrate and invertebrate eggs have evolved remarkably complex designs, such as varied and symmetrical shapes, vibrant colors, structural intricacies, and patterns of egg arrange-ment. Behind all these appearances lie a host of scientific principles in math-ematics, physics, chemistry, and biology. Let's discover the secrets of the egg world together!




▲ Scientists trying to find a universal equation for determining the contours of bird eggs
▼ Common murre egg model

## C Life in Motion

How do organisms such as fungi, plants, and animals adapt to land and water and develop different creative ways of moving to transfer spores and seeds, jump, and swim? Let's feel the movement and experience this dynamic world with the scientists.



*Salomona ogatai* Shiraki, 1930

*Pseudoceros ferrugineus* Hyman, 1959

## D Science behind Animal Behavior

The giant baleen whales feed on small fish and shrimp, while the various toothed whales, which make a variety of sounds and swim quickly and flexibly, hunt small fish, chase medium and large fish, or search for cephalopods. Between catching and being caught, there are hidden secrets to their processing power. To reduce the chance of being hunted, many fish and birds gather in groups, judge the relative speed and distance of neighboring individuals during fast movements, and adjust their own speed and direction accurately. The ability of these animals is truly amazing.

Sunset and Bryde's whale in the Gulf of Thailand

## E Fantastic Science and Scientists

◀ Dr. Mei-Ling Chan studying household insects in the lab
▶ Dr. Yung-I Lee going into the field to study orchids

In this cozy space, we can reflect on our relationship with nature by immersing ourselves in the night of fireflies or the wonderful stories of science and scientists exploring and discovering nature. At certain times, scientists will come here to meet you in person, or science educators will take us on interesting science education activities.

### Let's think about it!

What is the difference between the environ-ment then and now?

Where do Taiwan's diverse life forms come from?

What is nature? What is science?