



NATIONAL GEOGRAPHIC

國家地理雜誌 中文版

以動人影像探索自然

2023 國家地理臺灣攝影大賽
生態永續攝影專刊

TAIWAN PHOTO CONTEST 2023
ECOLOGICAL SUSTAINABILITY SPECIAL EDITION



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1,130 隻

2021-2022救傷數量

調查、檢測與分析

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支持猛禽研究會進行毒物檢測計畫；與野灣啟動環境遊蕩犬調查計畫，透過科學調查數據和追蹤，為野生動物生存環境源頭把關。

386 隻

2021-2022野放數量



你拍的是美景？ 還是生命？

Are You Taking a Photograph or a Life?

2015 年開始，攝影大賽已經舉辦第七屆了，過去六屆累積了約三萬六千件的參賽作品，雖然因為疫情中間停辦兩年，但去年在緯創人文基金會的支持下，我們得以再次舉辦比賽，讓更多攝影愛好者持續用相機記錄珍貴影像，以及挖掘需要被關注的議題。

今年也是《國家地理》創立的第 135 週年，在這個有意義的年份，臺灣被報導出有一條鳥類攝影的產業鏈，正以不正當的方式牟利，不僅人為介入野鳥生態，以誘捕方式讓付費的拍攝者得以在基地棚拍、擺拍，更非法收購與圈養保育類，或將外來鳥種偷渡來臺，這樣的產業已經規模化，顯示問題存在已久，痛心之餘我們決定暫停接受鳥類的攝影作品。《國家地理》的精神是親近自然、了解自然、愛護自然，為了拍一張好照片去破壞生態，甚至是傷害動物的性命，這與我們的宗旨完全違背。

我們依然信任眾多鳥類攝影愛好者是以人道紀實的方式進行拍攝，但怎樣的拍攝符合倫理？該如何分辨？界線在哪裡？是攝影界刻不容緩，需要與學界、保育界共同討論的。在這樣的時機點，本次與華梵大學攝影與 VR 設計學系合作攝影入校計畫，希望把善待自然的攝影精神帶入年輕朋友的意識，因為影像不是個人利益的創造，是有機生命之間的彼此對談。



Inaugurated in 2015 and having received a total of 36,000 entries in the past six events, the National Geographic Taiwan Photo Contest is now being held for the seventh time. The pandemic had resulted in a two-year hiatus, but last year we were able to resume the contest thanks to the support of the Wistron Foundation. This has encouraged more photography enthusiasts to continue capturing invaluable images, exploring the beauty of Taiwan, and shedding light on important issues that deserve our attention.

This year marks the 135th anniversary of the founding of the National Geographic Society and its magazine. Yet, in this milestone year, reports have revealed that a bird photography industry exists in Taiwan, profiting through unethical means. Operators in this industry disrupt the natural ecology of wild birds by trapping and capturing them, then charge a fee for photographers who wish to take pictures of these birds in their studios. They further engage in illegal practices such as acquiring and captive breeding protected species or smuggling exotic bird species into Taiwan. That this industry already exists at scale indicates that the problem has existed even longer. Dismayed by this situation, we made the decision to temporarily stop accepting photographs of birds for the contest. The spirit of National Geographic is to approach, understand, and cherish nature. To harm the natural ecology, let alone put the lives of animals in danger, just to get a good photograph, goes against everything that we stand for.

We still believe that most enthusiasts of bird photography do so in a way that is humane and documentary in nature. However, it is important to consider what constitutes ethical practices in this field. How do we distinguish between what is ethical and what is not? Where do we draw the line? These are pressing issues that the photography community needs to explore together with academics and conservationists. It is with this in mind that we have collaborated with the Department of Photography and VR Design at Huafan University on a school photography program, with the hope of raising awareness amongst youths that photography should be practiced in a spirit that cherishes nature and treats it well. After all, images are not about generating personal profit, but about carrying out a dialogue between living beings.

《國家地理》雜誌中文版總編輯
Editor-in-Chief Yungshih Lee

Handwritten signature of Yungshih Lee.

走一條 真善美的 永續之路

Toward a Sustainable Path of Truth, Goodness and Beauty



緯創人文基金會董事長

成立基金會十多年來，我們不斷地思考，如何以企業的力量讓我們的環境更永續，讓生活在這片土地的萬物更美好。於是，我們陸續與長期投入在臺灣環境保育的公益合作夥伴串連，也透過多元媒體平臺，喚醒大眾對自然生態的重視。

去年的臺灣攝影大賽，除了既有攝影愛好者，更成功吸引了眾多青少年以鏡頭探尋臺灣生態，新增「生態永續組」成果也相當豐碩。然而，無論是認養濕地、支持野生動物救傷、關懷瀕危生物、營造友善動植物生態環境，或是支持研究事業廢棄物對環境的危害性，做這些事，對企業來說未必有相對應的回饋，但我們單純的相信，如果我們不做，以後真的會後悔。

治理之真、社會之善、環境之美是我們重視且持續推動的，身處 AI 浪潮之中，同時更需要重視人的真。作為一名科技人，亦很難判斷一張照片是 AI 合成？還是實景拍攝？如果沒有本著真心，人類除了造成環境汙染、破壞生物棲地，就連心靈也將逐漸在科技的進展中迷失。享受 AI 便捷的同時，更多真假難辨的訊息也正大量擴散蔓延，透過國家地理攝影大賽，可以用生命探索未知但卻存在的真實之物，而逐步以鏡頭照見人類活動對地球的衝擊和影響。

緯創人文基金會秉持初衷，透過各種方式與合作，為人與自然和諧之境而努力。當人心始終選擇善良與真實，便能以善念運用科技，而非被科技侵蝕，讓真善美持續在生活中自然湧現、在社會中不斷流轉。

For over a decade, our Foundation has been dedicated to exploring ways in which we can leverage our corporate influence to promote environmental sustainability and improve the well-being of all living beings in our community. To this end, we have collaborated with public service partners who have long been dedicated to environmental conservation in Taiwan. Additionally, we have utilized various media platforms to raise public awareness about the importance of nature and ecology.

The Taiwan Photo Contest held last year managed to attract not only photography enthusiasts but also a significant number of young people who were eager to explore Taiwan's ecology through their camera lenses. The newly introduced "Eco-Sustainability Category" also yielded fruitful results. Supporting such an event and engaging in activities such as adopting wetlands, supporting wildlife rescue efforts, caring for endangered species, creating a hospitable ecological environment for flora and fauna, or funding research on the detrimental effects of industrial waste on the environment may not yield immediate benefits for a corporation. Yet we simply believe that if we don't act now, we will surely regret it in the future.

We prioritize and strive to promote truth in our governance, goodness in our society, and beauty in our environment. Amidst the fervor over AI, it is all the more important to emphasize the truthfulness of human beings. Even for someone in the technology industry, it can be difficult to determine whether a photo has been generated by artificial intelligence or captured in real life. Without a sincere adherence to truth, humanity runs



- 1
- 2
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1 緯創人文基金會支持關渡自然公園《月池埤塘認養專案》與《水鳥繁殖棲地保育計畫》，復育臺灣原生淡水魚類，並提供水鳥良好棲息環境。

The Wistron Foundation launched the "Moon Pond Adoption Project" in Guandu Nature Park in 2022 to restore native freshwater fish species in Taiwan and preserve an environment where waterbirds can live freely.

2 由緯創員工組成的「富陽守護志工」，長期以實際行動投入富陽自然生態公園的棲地守護工作。

The "Fuyang Guardian Volunteers", comprised of Wistron employees, has engaged in long-term and practical work through guided tours and habitat protection at the Fuyang Park.

3 緯創人文基金會長期贊助支持生態紀錄片，喚起大眾共同關注自然生態。

The Wistron Foundation has long sponsored documentary filmmaking on the ecology of birds, raising more awareness about birds and natural environments.

not only the risk of causing environmental pollution and habitat destruction, but also of becoming spiritually lost as technology continues to advance. As we embrace the convenience of AI, we are also subject to the proliferation of information whose truthfulness can be difficult to verify. The National Geographic Photo Contest allows us to explore things that may be unknown but truly exist. Through the camera lenses, we can reveal the profound impact of human activities on our planet.

The Wistron Foundation remains committed to its mission of promoting harmony between humans and nature through all forms of collaboration. When people embrace goodness and truth, they can employ technology with good intentions in mind, instead of allowing technology to erode their mind. This in turn enables the natural emergence of truth, goodness, and beauty in life, fostering a continuous flow of these values in our society.

Chairman of Wistron Foundation
Simon Lin



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Beyond the Focal Length, What Moves You? | Spotlight on the 2023 National Geographic Photography Forum

《國家地理》雜誌臺灣攝影大賽連續舉辦三場攝影論壇，邀請榮獲首屆年度野生動物攝影師終身成就獎的國家地理學會駐會攝影師法蘭斯·藍汀 (Frans Lanting) 在線上以影像會友，娓娓道出自然與人類交織的喜與悲。無獨有偶地，也邀集擅以專題式攝影形繪庶民生活意象的藝術家沈昭良，以及從業 40 年連綿獲獎的環境暨生態紀錄導演柯金源，於臺北三創生活園區與攝影愛好者面對面，分享數十年的攝影經驗。

「我時時留神動物們傳遞的訊息，悄悄緩緩的接近，牠們如果對我的存在不反感，就再稍微靠近一點，給牠們機會決定。」藍汀以不打擾的姿態融入某一瞬的自然景象，讓野生動物幀幀生動，大相徑庭的，他也連袂分享多張因人類活動而釀災的影像，用數張照片道出了現代生活與天然生態

Three photography forums were organized as part of the National Geographic Taiwan Photo Contest. Among the speakers was Frans Lanting, National Geographic Photographer-in-Residence and recipient of the Wildlife Photographer of the Year's first Lifetime Achievement Award. He interacted with participants online, sharing images and stories both happy and sad that come from the interconnectedness of nature and humans. Also invited were Shen Chao-liang and Ke Chin-yuan, who appeared at in-person events at the Syntrend Creative Park in Taipei. Known for his thematic photography, Shen Chao-liang excels at capturing everyday life at the grassroots level. Ke Chin-yuan is an acclaimed director of environmental and ecological documentaries and a 40-year veteran of the industry. Both artists shared their decades' worth of experience with photography enthusiasts.



的無聲對立。如何拍出優秀的作品？當所有攝影愛好者都在尋找答案，埋首於昂貴器材與技術的精進時，沈昭良的提醒打破了這道學習高牆：「做

- 1 沈昭良以紀實影像，敘述臺灣當代民俗文化。
ShenChao-liang uses documentary images to depict contemporary folk culture in Taiwan.
- 2 觀眾專注聆聽生動的演講。
The audience enthusiastically listens to the lively presentation by the speaker.
- 3 & 4 觀眾踴躍地向兩位講師提出問題討論。
The audience actively raised questions for discussion.
- 5 沈昭良提到：「我們可以從攝影裡，找到前進的力量，發現生命美好的意義。」
Shen Chao-liang mentioned, "We can find the power to move forward and discover a precious and beautiful meaning in life through photography."

"I am always paying attention to the messages that the animals are sending," says Lanting. "I approach them slowly and quietly. If they don't seem to mind my presence, then I move a little closer, giving them the opportunity to decide for themselves." Lanting's ability to unobtrusively blend into scenes of nature allows him to capture vivid images of wildlife. Yet he also shared images of a very different nature; those which depict the devastating impact of human activities on the environment, and which speak to the silent confrontation between modern life and natural ecology. Shen Chao-liang addressed the question of how to take a good photograph. To the many photography enthusiasts seeking the answer to that question, immersing themselves in costly equipment and technical advancements, he offered a reminder that broke through all this: "Creating art is important, but not that important. What's truly important is being a good person," he said. "You don't have to become an artist, but you must become a good person." In an era where anyone can take a beautiful picture thanks to the latest cell phone models, photography has gone from being a complex and exclusive art form to an accessible and palatable pastime. The difference lies in whether a photographer sees photography as an artistic endeavor and a means to discover the beautiful meaning of life, finding within it the motivation and perseverance that broadens and enriches life. A case in point is Ke Chin-yuan, who dedicated himself to capturing the underwater behavior of humpback whales and dolphins and, after sticking with it for more than twenty years, was finally rewarded with the serendipitous encounters that he had been waiting for.

藝術說也重要，但也沒那麼重要，做個好人更重要。你可以不要成為藝術家，但你必須成為好人。」在這個你我都能用旗艦手機留下精美影像的時代，攝影從五星佳餚轉變成易於品味的桌菜，但能否將攝影視為一種發現生命美好意義的藝術活動，從中找到足以擴展人生的巨大動能與堅毅力？就像柯金源為了拍攝大翅鯨或海豚的水下行爲，在影像記錄的崗位上始終堅持，二、三十年後終於等到那無可預期的美妙機緣，期間也從不間斷地用相機與生命，留下衆多生物短暫生命的美好一瞬。

然而，三位攝影大師不約而同的輕聲提醒，只要人們團結，就能跨越政治疆界，永保自然生態。在攝影中追求美好畫面，留駐獨特影像之外，若讓它成為受到矚目的議題——透過藝術將世界一家的生態意識與現代社會接軌，這便是藝術能帶給人類的最大意義所在。

- 1 「只要大家一起行動，就有改變的機會。」柯金源呼籲現場聽眾。
"As long as we act together, there is a chance for change," Ko Jin-yuan urges the live audience.
- 2 柯金源關注生態領域逾40年，具豐富生態攝影經驗。
Ko Jin-yuan has been devoted to the field of ecology for over 40 years, possessing extensive experience in ecological photography.
- 3 小琉球在眾多觀光客與觀光利益的影響之下，近岸的海洋生態已不若90年代的盛況。
Under the influence of numerous tourists and tourism interests, the nearshore marine ecology of Liuqiu Island is no longer as vibrant as it was in the 1990s.
- 4 & 5 現場聽眾把握難得機會，與柯金源交流。
The live audience seizes the rare opportunity to seek guidance from Ko Jin-yuan.



Throughout that time, he also never ceased using his time and camera to capture beautiful moments in the fleeting lives of so many living creatures.

A gentle reminder from all three accomplished photographers was this: when people come together, they can surpass political boundaries and protect natural ecologies. Beyond capturing beautiful scenes and preserving unique moments, photography could also turn people's attention to this important issue. Using the art of photography to connect modern society to an ecological awareness that we are all one world, that is the most meaningful thing that art can give us. ■



攝影入校不僅僅是技術的指導，也是攝影與人文教育的議題。
Photography-in-school program is not just about technical guidance; it's also about the discussion of photography and humanities education.

攝影入校 Photography-in-school Program

攝影是生命的視角， 從景觀窗照見自己

——2023 國家地理攝影入校計畫

Photography is Your Perspective on Life, You See Yourself through the Viewfinder | 2023 National Geographic Photography-in-School Program

當代學子的成長背景被鋪天蓋地的數位資訊包裹著，若能放下手機、拾起相機，透過景觀窗與真實存在之物連結，能否啟發有志青年的生命與社會產生更好的連結，進而尋獲生命的意義？今年《國家地理》雜誌臺灣攝影大賽與華梵大學攝影與 VR 設計學系合作，首次攜手多位專業講師走入校園，引領高中、大學學子們一窺攝影之堂奧，觸發與喚醒對影像的細緻感受與思辨能力。

華梵大學攝影與 VR 設計學系助理教授沈裕融談

Students nowadays grow up immersed in a digital world, bombarded by information. Can individuals be inspired to build a stronger connection between their lives and society, and further find meaning in life, by putting down their cell phones, picking up their cameras, and engaging with the real world through the viewfinder? This year, the National Geographic Taiwan Photo Contest collaborated with the Department of Photography and VR Design at Huaan University for the first time to bring professional photographers to the campus. They guided high school and university students in exploring



攝影入校計畫於2023年首次展開，進入全臺灣多所高中以上的校園與學生互動。Photography-in-school program commenced in 2023, engaging with students in numerous high schools and higher education institutions across Taiwan for the first time.

及，攝影是交纏於世界並與現實打交道的行動過程，像是一個黏著劑，讓「當刻的觀看者」與「被觀看的對象」彼此黏合在一起。正由於攝影是一門「從真實世界中提取」的藝術，無論用何種等級的器材拍攝，都只能在肉眼所見的畫面中打撈，所有拍攝者必須離開 3C，從虛擬的世界中走出來，擷取自己喜愛或在意的有限景框內的影像，而那張照片不僅是某時某刻的真實故事或事件，也蘊涵了拍攝者對這個世界的主張——所有攝影者都能透過影像說話，表達個人意圖、世界觀與價值信念。



the intricacies of photography, inspiring in them a nuanced sensitivity and discernment when looking at images.

According to Yu-Rong Shen, assistant professor at the Huaan University's Department of Photography and VR Design, photography is a dynamic process intricately connected to the world and reality. It acts as a binding agent, bringing together the viewer and the subject that is being viewed. Photography is an art that extracts moments from the real world. Because of this, regardless of the equipment used, photographers can only ever find their frames from what is visible to the naked eye. All photographers must leave behind their 3C products and the virtual world to capture the images that they seek within the confines of the viewfinder. And each of those images not only tells a real story or documents a true event, but also reflects the photographer's perspective on the world—all photographers can speak through images to express their personal intentions, worldviews, and their values and beliefs.

For this reason, the photography-in-school program is more than just a two-month photography seminar. It is a lesson in life that connects students with the real world, allowing them to learn how to use photography as a unique form of expression to convey their values. During their conversation with students, Yang Wan-yi, a professor of Philosophy at Sun Yat-sen University, and Yuan Tzu-hsien,



因此，攝影入校不單是為期兩個月的攝影講座，亦是把學子與真實世界串連的生命教育，讓年輕生命學習用攝影這種獨特的表達方式，彰顯與傳遞自我價值。中山大學哲學所教授楊婉儀與臺南藝術大學動畫藝術與影像美學研究所助理教授袁子賢在與學生的對談中也提醒，影像看似如實地被擷取，但相框之外是否有未被收錄的真相？細讀照片時，不僅要啟動感官、進入影像中的世界，也不應被動的信服於影像傳遞的訊息，要保持警覺，以思辨之姿觀看它，即便畫面上是某個人拿槍指著另一個人，也不應妄自論斷誰是誰非。

走入真實世界，用攝影表達自我，並感知、思考影像與自身的連結。攝影正是如此具有魅力，能為年輕新血創造專屬自己的獨特意義。



an Assistant Professor at the Institute of Animation Art and Video Aesthetics of Tainan National University of the Arts, offered an important reminder: while images may appear to capture reality as it is, don't forget that there might be an untold truth excluded by the picture frame. When examining a photograph, it is important to engage your senses and immerse yourself in the image. However, it is equally crucial to avoid passively accepting the message conveyed by the image. Instead, one must stay alert and maintain a critical perspective. Even if the picture shows a person pointing a gun at another, we should still refrain from jumping to conclusions and passing judgement without knowing the whole picture.

Engage with the real world, express oneself through photography, understand and reflect on the relationship between images and personal experiences. Such are the lessons taught by photography and which will help the younger generation create their own, unique meanings. ■



攝影先鋒以多元視角， 驚喜呈現自然環境的無聲悲喜

Pioneering Photography Presents the Silent Joys and Sorrows of the Natural Environment from Diverse Perspectives

2023 年國家地理臺灣攝影大賽〈生態永續組〉得獎作品，由全球知名的《國家地理》攝影大師法蘭斯·藍汀 (Frans Lanting)、當代紀實攝影師沈昭良、知名環境紀錄片導演柯金源，與《國家地理》總編輯李永適等評審，決選出冠、亞、季軍及三名佳作。

由緯創人文基金會獨家贊助的〈生態永續組〉須以 5-10 張相片完整訴說生態故事，在此門檻下，歷經 3 個月的收件，投件數量達 1,085 張，實屬難得！由於鳥類拍攝爭議，本次停收鳥類攝影作品，卻使其他物種大放異彩，昆蟲、海洋與森林生態系都有眾多精彩作品呈現。

生動寫實的照片能激發人類保護自然環境與野生動物的渴望，精彩的照片若能在社交媒體上引人注目，就能在幾分鐘內迅速傳播，為處於危機中的野生動物帶來急需的關注，進而引發真正的改變。《國家地理》雜誌期待更多作品能展露對世界的探索與關愛，進而改變與修復人與自然之間的矛盾。

The winners of the "Ecological Sustainability" category of the National Geographic Taiwan Photo Contest 2023 were selected by a panel of judges that included the globally acclaimed National Geographic photographer Frans Lanting, contemporary documentary photographer Chaoliang Shen, renowned environmental documentary filmmaker Chin-yuan Ke, and Yungshih Lee, Editor-in-Chief of the traditional Chinese edition of National Geographic magazine. The panel chose the first, second, and third-place winners and three honorable mentions.

Sponsored exclusively by the Wistron Foundation, the "Ecological Sustainability" category required participants to tell ecological stories using 5-10 photographs. Even with these requirements, the contest still received an impressive 1,085 submissions over three months. While bird photography was not accepted due to recent controversies, this decision allowed other species to shine, resulting in numerous outstanding works depicting insects, marine life, and forest ecosystems.

Vivid and realistic photos have the power to inspire a desire in people to protect the natural environment and wildlife. If these remarkable photos can capture attention on social media, they can rapidly spread within minutes, bringing much-needed awareness to endangered wildlife and igniting real change. National Geographic magazine hopes to see more works that showcase exploration and care for the world, ultimately addressing and reconciling the conflicts between humanity and nature.



冠軍作品 1st Place

蜘蛛百態

Spider Chronicles

攝影 郭定中 Photographer Ting-chung Kuo

1 榮艾普蛛雄蛛眼域常有橙紅色的縱帶，以體型優勢撲上綠色的雌蛛並抓扣著，然後使用螯肢將精子轉移到雌蛛，譜出愛的交響曲。

1 The male Epeus gloriatus, a member of the jumping spider family, often has orange-red longitudinal stripes in its eye region. With its size advantage, it pounces on the green female spider and firmly grasps her. Then, using its chelicerae, it transfers sperm to the female spider, completing the mating process.



2 紅螫蛛以昆蟲為主食，能迅速的抓捕毛蟲並咬傷注入毒液及消化酵素，將獵物分解成半液體狀態，以便吸食。

3 圓頭貓蛛雌蛛會雙腳拉著兩條蛛絲，將卵囊懸掛在半空中來減少天敵的攻擊。育兒時會不眠不休也不進食的守護，直到小蛛新生並蛻皮後才完成使命。



2 The spider *Cheiracanthium taiwanicum* primarily feeds on insects. It swiftly captures caterpillars, biting them to inject venom and digestive enzymes, breaking down the prey into a semi-liquid state for consumption.

3 A member of the lynx spider family, the female *Hamataliwa* holds two silk threads with its legs, suspending its egg sac mid-air to reduce the risk of predator attacks. During the nurturing process, it remains vigilant, guarding the sac without sleep or food until the spiderlings hatch and molt, completing its mission.



4 橙額高腳蛛以相對大而扁平的蛛體及長腿，展現出色的奔跑和攻擊等狩獵能力，在雨後的夜晚靜享美食。

5 蚓腹寄居姬蛛駐網時，常將第一、二對步足併攏伸出成一直線，偽裝成枯枝。其雌蛛會守護著卵囊，一直到卵孵化為蜘蛛幼體。

4 A member of the huntsman spider family, the *Heteropoda pingtungensis*, with its relatively large and flat body and long legs, boasts excellent hunting skills such as running and attacking. Here, it enjoys a meal on a quiet, rainy night.

5 When the *Ariamnes cylindro-gaster* spider rests in its web, it often closes its first and second pairs of legs together and extend them into a straight line to mimic a dead branch. The female spider guards the egg sac until the eggs hatch into spiderlings. ■





2 多翼蛾的翅脈結構猶如鳥羽開屏，飛行時又似棉絮隨風而起。

3 同毛紋尺蛾的花紋，就像臺灣原住民的傳統服飾，極為風雅。

4 松村氏淺翅鳳蛾身上的紅色斑紋是一種貝氏擬態，使天敵誤以為牠與紅紋鳳蝶一樣具有毒性。



2 The Pterotopteryx formosana has a wing vein structure that resembles the spread feathers of a bird and looks like cotton fluff drifting with the wind when in flight.

3 The patterns on the wings of the Callabraxas convexa are as elegant as the traditional attire worn by Taiwan's indigenous people.

4 The red markings on the body of the moth Epicopeia hainesii are a form of Batesian mimicry, tricking predators into mistaking it for the poisonous swallowtail butterfly Pachliopta aristolochiae.

亞軍作品 2nd Place

鱗光閃閃－臺灣蛾類之美

Shimmering Scales - The Beauty of Taiwan's Moths

攝影 張少鈞 Photographer Shao-chun Chang

1 臺灣蛾類數量約有 4000 多種，是臺灣蝴蝶種類的 10 倍之多，蛾類身上的鱗粉與花紋能帶來各種驚奇。這隻刺啞鈴帶鉤蛾，身上的圖案像不像兩隻在吃鳥糞的蒼蠅呢？

1 Taiwan is home to over 4,000 species of moths, which is ten times more than the number of butterfly species it hosts. The scales and patterns on moths' bodies are a source of many wonders. Take this moth *Macrocilix maia* for instance: wouldn't you say its markings resemble two flies feasting on bird droppings?

5 枯球籬紋蛾在臺灣又稱作「阿里山神蝶」，因早期有人在阿里山知名的廟宇受鎮宮，看見牠們飛入且停留在神像而得名，具藝術性的線條交織其身，令人讚嘆。

6 三色豔苔蛾的翅膀圖樣，猶如一對銳利的貓眼。

7 長尾水青蛾有著長長的尾突，飛行時就像仙女的彩帶在空中飄舞一般。



5 The owl moth *Brahmaea wallichii insulata*, also known as the "Ali Mountain Divine Butterfly" in Taiwan, earned its name because early worshippers saw these moths flying into a famous temple in Ali Mountain and alighting on the statues of folk deities. Adorned with intricate lines, the moth is a marvel to behold.

6 The wing patterns of the moth *Asura tricolor* resemble a pair of sharp-looking cat eyes.

7 The Chinese moon moth (*Actias ningpoana*) boasts long tail projections that flutter like a fairy's ribbons when in flight. ■



無毒的青蛇樣貌清秀，翠綠的外衣與有毒的赤尾青竹絲相似，而偶遭錯殺。

The dainty-looking, non-venomous Chinese green snake, with its emerald-green coat, is sometimes mistaken for and killed as the venomous Stejneger's pit viper.

季軍作品 3rd Place

陽明山的生態

The Creatures of Yangming Mountain

攝影 陳柏樾 Photographer Bo-yue Chen



翡翠樹蛙是臺灣特有種，有著迷人的金黃色眼線。

The emerald tree frog is an endemic species of Taiwan, characterized by its captivating gold-rimmed eyes.



1 經過專業救治的穿山甲在傍晚時刻野放。在臺灣，穿山甲因棲地破壞與獵捕而受到威脅。

2 少了一支步足的蜘蛛正以觸肢享用盤中餐。

3 個性溫馴且無毒的紅竹蛇，卻有著鮮艷的外衣。

4 夜行性的環紋赤蛇具有神經性毒，頭上正停著一隻蒼蠅。

1 A pangolin is released back into the wild after being rescued and cared for. In Taiwan, pangolins are threatened by habitat destruction and hunting.

2 A spider missing one of its legs is savoring a meal using appendages near its mouth called pedipalps.

3 The gentle and non-venomous red bamboo snake sports vibrant colors often found on venomous snakes.

4 A fly perches on the head of a neurotoxic and nocturnal MacClella

5 6 白鼻心與鼬獾在臺灣皆為特有亞種，常分布於中低海拔淺山。乍看相似，但細看臉部就能辨識，白鼻心是貫穿的白線，鼬獾的白色部分則是中斷的。

7 臭巨山蟻其實不會臭，是臺灣特有種，罕見的配色與偏大的體型極具識別度，昆蟲的屍體是蟻群的食物。

8 食蛇龜正享受著日光帶來的溫暖。

5 6 The Formosan gem-faced civet and the Formosan ferret-badger are both endemic subspecies of Taiwan, often found in low to mid-elevation mountain areas. While they may appear similar at first glance, a closer examination of their facial markings reveals differences; the Formosan gem-faced civet has a continuous white stripe, whereas the Formosan ferret-badger's white marking is interrupted.

7 The Camponotus habereri is a carpenter ant found only in Taiwan. Its distinctive coloration and larger size make it easily recognizable. Here, the ant colony feasts on a dead insect.

8 A Chinese box turtle basks in the warmth of the sunlight.



1

佳作 Honorable Mention

Still Life

靜物畫

攝影 Jimmy Beunardeau Photographer Jimmy Beunardeau

1 一支蒼蠅拍在臺北紅樹林無聲永存，如花一般挺立，卻猶如靜物畫一般死寂。

1 A lone flyswatter rests in silence amidst the Taipei mangrove forest, standing tall like a flower and as lifeless as a still life.



2



3

2 紅樹林本該是野生動植物重要棲地，卻散落著毫無生命力的人造垃圾。

2 Meant to be vital habitats for wildlife, the mangroves are instead littered with lifeless garbage.

3 紅樹林生態系對水質淨化、海岸保護和碳儲存扮演重要角色。

3 The mangrove ecosystem is crucial for water filtration, coastal protection, and carbon storage.



4 水流攜帶的廢棄物逐漸累積在複雜的根系網絡中，改變了它們的原始功能。

5 永續存在的會是多樣化的生物，還是塑料垃圾？減少使用用過即丟的塑膠製品並制定保護紅樹林的政策，對棲地保育的未來有關鍵影響。

佳作 Honorable Mention

國家森林救火隊

National Forest Firefighting Team

攝影 林君達 Photographer Chun-ta Lin

1 野火無情地不時從地表竄出，爲了避免乾枯的枝條再次燃起成爲新的火勢，森林護管員經常是手腳並用的急忙滅火。

1 Wildfires can relentlessly erupt from the forest floor. Here, a forest ranger stomps on dry branches and twigs to prevent them from rekindling and fueling new flames. Putting out fires often requires the rangers to work with both their hands and feet.



4 Waste carried by the water gradually accumulates within the intricate network of roots, altering their original functions.

5 What will remain: diverse life forms or plastic waste? Reducing the use of disposable plastics and implementing policies to protect mangroves is crucial for the conservation of these habitats. ■

2 根據統計，2021 年臺灣共計發生 93 次森林火災，對生態帶來毀滅性的破壞，而每一場災難背後，都仰賴一群被稱作「森林護衛隊」的國家森林護管員守護山林，往返穿梭在祝融離去的林中，搜尋殘存的火煙。

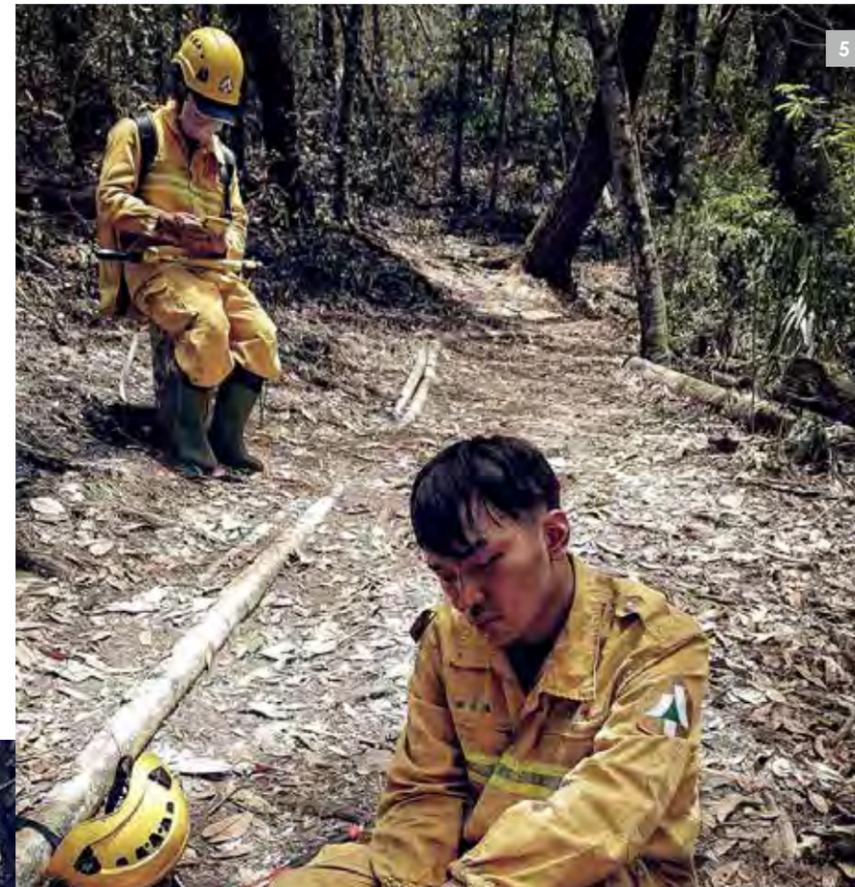
3 在火舌仍不斷升起的山林裡，來自不同隊伍的森林護管員合作，以手中的工具將燃料移除，避免延燒。

4 在森林火災撲救的過程中，國家森林救火隊常常要一連數日進駐現場，除了處理明火，更要搜尋殘火避免復燃，所以除了滅火用的唧筒、水袋之外，在轉移陣地前往下一個火場的同時，也將補給和必需品背負身上。

2 In 2021, Taiwan saw a total of 93 forest fires, which caused devastating destruction to the ecosystem. Behind every disaster is a team known as the "Forest Guardians" — national forest rangers who protect the mountains and forests. They traverse the scorched landscapes, searching for lingering fires.

3 Amid the still-rising flames, forest rangers from different teams collaborate, using their tools to remove fuel and prevent the fire from spreading.

4 When there's a forest fire to put out, the National Forest Firefighting Team often has to be on scene for days on end. In addition to dealing with visible fires, they search for any remaining embers to prevent rekindling. Along with their water bags and hand pumps, they carry supplies and essentials as they move from one fire site to the next.



5

5 Navigating mountainous terrain to extinguish forest fires is not just physically challenging. It can also be emotionally draining as rangers witness the devastation of the forests that they spend so much time trying to protect.

6 Following the white smoke billowing from the ground, forest rangers dig through the forest's topsoil to locate the heat source.

7 Forest rangers on the hillside dig for the heat source and then extinguish it thoroughly using waterbags and hand pumps.



2



6



3



4

5 翻山越嶺的撲滅林火，除了消耗體能之外，面對長期守護的林相變得滿目瘡痍的視覺震撼，更是透支森林護管員的精神。

6 森林護管員循著地表冒出的白煙，挖掘林地表土尋找熱源。

7 森林護管員在山坡上一邊挖掘熱源，一邊以背負式水袋和唧筒將熱源澈底熄滅。



7

8 陽光穿透焦黑乾枯的森林，宛如異界的景象。

9 無線電終於傳來前進指揮所宣告「火場控制！」的消息。

10 著日光消逝之前，背負裝備離開火煙熄滅後的山林，結束森林護管員的一天。

8 Sunlight penetrates the charred and desolate forest, creating a surreal, otherworldly scene.

9 From the radio finally comes the announcement from the forward command post: "Fire controlled!"

10 Carrying their equipment and trying to beat the fading light, rangers leave the forest after extinguishing the fire, concluding yet another day in their line of work. ■



佳作 Honorable Mention

媽祖生

Matsu's Birthday

攝影 游原煥 Photographer Yuanhuan Yu

1 庇佑海洋的媽祖，在臺灣民間信仰中被視為海上守護神，媽祖誕辰日適逢春夏交替的時節，而墾丁海域的珊瑚也總在此一時期的夜晚上演集體產卵、排精的年度繁衍盛事，因此又被稱作「媽祖生」。

1 Matsu, the protector of the seas, is revered in Taiwanese folk belief as the goddess who watches over the ocean. Matsu's birthday falls at the cusp of spring and summer, a time when the coral reefs in the waters of Kenting National Park put on a grand annual spectacle of mass spawning. The event is therefore also known as "Matsu's birthday".

2 在臺灣，三面臨海的墾丁國家公園有超過 200 種造礁珊瑚，具傲視全球的多樣性。其中一株珊瑚的粉色精卵束來到口部，準備釋卵。

3 在洞口的珊瑚精卵束蓄勢待發，一顆顆來到汪洋大海，準備啟動生命之旅，附近的同種珊瑚也會在相近時間集體排出數量驚人的精卵，以提高短時間的精卵濃度，來增加受精成功率。

4 珊瑚的繁殖方式因種類而異，有些種類以顆粒狀或連續的方式釋放生殖細胞，有些則一次只釋放一粒精卵束，精卵束是精子和卵共同組成的粒狀物。

2 Taiwan's Kenting National Park, surrounded by the sea on three sides, is home to over 200 species of reef-building corals, boasting remarkable diversity on a global scale. In this image, the pink gamete (sperm and egg) bundle of a coral is poised near its mouth, ready to release.

3 At the opening of the coral, gamete bundles are waiting to be released into the vast ocean, embarking on their journey of life. Nearby corals of the same species will also simultaneously release a remarkable quantity of gametes to increase the short-term concentration of gametes in the water, enhancing the chances of successful fertilization.

4 The method of reproduction varies among coral species. Some release their reproductive cells in granular or continuous form, while others release only one gamete bundle at a time. A gamete bundle is a granular structure that contains both sperm and egg.



5 由於水下空間過大，精卵束被珊瑚排出體外後，會浮上海面，在同一平面，不同的精卵束破裂時更容易相遇。受精完成便沉入海中，尋找合適位置發育茁壯，持續循環著生生不息的過程。

6 排出的精卵束飄向水表，形成如銀河般浪漫的夜間景緻。

7 相較於在海中受精的排放型產卵，孵育型的珊瑚則會先在體內受精。藍珊瑚的觸手在產卵時，會膨大呈小花狀，孵育體內受精後的幼苗，周遭白色球體便是卵。

5 Due to the vast underwater space, once the gamete bundles are released from the corals, they rise to the sea surface and stay on the same plane. This increases the likelihood of fertilization when bundles break open simultaneously. Once fertilization is complete, they sink into the sea, seeking suitable locations for growth and development, continuing the life cycle.

6 The released gamete bundles float to the water's surface, creating a romantic night scene reminiscent of the Milky Way.

7 In contrast to broadcast spawning, where fertilization occurs in the open water, brooding corals undergo internal fertilization. During egg release in blue corals, their tentacles expand into small flower-like structures to nurture the developing larvae. The white spheres surrounding them are the eggs.

捕捉生態影像， 需恪守攝影倫理與堅實研究

Capturing Images of the Natural World Requires Strict Adherence to Ethical Photography and Solid Research

2023 國家地理臺灣攝影大賽評審

National Geographic Taiwan Photo Contest 2023 Judging Panel



《國家地理》攝影大師
Photographer and
National Geographic frequent
contributor

法蘭斯·藍汀
Frans Lanting



《國家地理》雜誌 總編輯
Editor-in-Chief,
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當代紀實攝影師
Documentary
photographer

沈昭良
Shen Chao-liang



環境紀錄片導演
Environmental
documentary filmmaker

柯金源
Ke Chin-yuan

本次大賽的評選過程，對自然攝影的倫理問題多有討論。法蘭斯·藍汀指出，生態攝影作品最重要的是呈現「真實的情境」，為了攝影需求而刻意擺設的情境並不屬於真實，以昆蟲微

The judging process for this competition sparked discussions on the ethical aspects of nature photography. Frans Lanting emphasized that the most crucial aspect of nature photography is presenting "authentic situations."

距攝影為例，更需強調是否受到人道對待，絕對不鼓勵把昆蟲冷凍處理，讓牠們固定不動之後再拍攝，評選時會仔細辨別作品是否為自然攝影，剔除人工飼養與擺拍。

此外，用影像說故事是一門藝術，許多攝影師都難以掌握其訣竅。李永適認為本次作品水準整體來說比去年更好，也展現了有別以往的拍攝角度，但多數評審皆認為，比起陳述故事更像是相片集錦。沈昭良指出故事若要說得好，了解生態是很重要的，由於攝影是一種創作藝術，拍攝主題與自己的關係緊密與否，能影響故事是否能流暢的串連或具有深意。這也關乎「攝影」對自身的意義，若是影像創作跟自己的生命有緊密的關係，攝影就能是一種獨特的創作或情感表達，在故事的呈現上，便可以展露更別樹一幟的內涵。

柯金源則表示，參賽作品缺乏圖片故事敘事的結構，環境永續的內涵也較為不足。部分作品的微距運用、美學結構、快門機會掌握得很好，若能增加生物行為觀察記錄、環境變遷的因素與影響，作品內涵將會更加豐富與動人。也提醒參賽者對於自然生態與環境議題類型的創作，要先做足研究功課、長期細心的觀察與田調，以及善用攝影器材、掌握快門機會，更要恪守攝影倫理，不要干擾被攝主體，假以時日就能以圖像組合成一個具有意義的故事。

Deliberately arranging scenes for the sake of photography does not align with authenticity. For example, in macro insect photography, it is essential to consider whether the subjects are treated humanely. The freezing of insects to immobilize them for photography is absolutely discouraged. When judging contests, he carefully looks at entries to determine whether they are genuine works of nature photography, eliminating photos that used farmed insects or were staged.

Judges also noted that storytelling through imagery is an art many photographers find challenging to master. Yungshih Lee noted that, overall, the quality of this year's submissions was better than last year's, showcasing different perspectives compared to previous years. However, most judges found that, rather than conveying stories, the submissions resembled collections of photographs. Shen Chao-liang emphasized the importance of understanding the natural environment in telling a compelling story. Since photography is a creative art, the connection between the photographic subject and the photographer can significantly affect the narrative's flow and depth. This also concerns the significance of "photography" in one's life. If making photographs is closely related to one's life, then photography can serve as a unique form of creative or emotional expression, making the storytelling more unique and substantive.

Ke Chin-yuan noted that many entries lacked the narrative structure for a photo story and were not substantive enough in addressing environmental sustainability. Some submissions demonstrated excellent macro techniques, aesthetic structures, and the ability to capture the right moments with the shutter. However, enriching the content by including observations of biological behaviors and environmental changes and their impacts could have made the narratives more compelling. He also reminded contestants that for creative work related to natural ecology and environmental issues, thorough research, long-term and meticulous observation and fieldwork, effective utilization of photographic equipment, and being able to seize the decisive moment are all essential. Even more important is adhering to ethical photography to avoid disruption to the photographic subject. In time, all this will lead to separate images coming together to tell meaningful stories. ■



生態永續報導任務

Ecological Sustainability Reportage Mission

國家地理臺灣攝影大賽由緯創人文基金會大力支持，並增設〈生態永續組〉比賽項目，特別邀請臺灣環境紀錄片導演柯金源擔任指導老師，攜手生態永續組冠軍得主郭定中至臺北關渡自然公園進行「生態永續報導任務」，傳授生態攝影的心法與技巧，也在新一代優秀攝影師的心中，種下守護環境生態的種子。

The contest invited Ke Chin Yuan, a Taiwanese environmental documentary director, to participate as an instructor, teaming up with the winner of the ecological sustainability category to conduct an “ecological sustainability reportage mission” in Guandu Nature Park, to impart the techniques and know-how of ecological photography as well as to cultivate the seeds of environmental and ecological protection in the hearts of the new generation of outstanding photographers.



羽化後的寬闊視野， 是所有生命的新希望

On Assignment: Reporting on Nature and the Environment Burgeoning Photographer Gains New Perspective from Mentorship Program

世代傳承如何激發更多元的生態攝影視角？傳遞生態與環境資訊已 43 年的柯金源導演，這次指導的冠軍是年僅 15 歲的郭定中，在關渡自然公園的賞鳥小屋中，兩位攝影師將鏡頭伸出木屋窗框，試圖用相機的景觀窗從埤塘、樹叢與草地探尋各種鳥類生態，「有一隻鷺要起飛了，有看到嗎？」、「牠的飛行姿勢好特別！」，當涼風吹進隱蔽的小屋，掀起了此起彼落的拍攝閒談，仍帶有攝影教育的醍醐味。

「年輕人感興趣的議題和我們不同，要不斷地聊，透過他的反應，找出對方好奇的話題。」柯導長年透過媒體傳遞資訊，引發外界對環境與生態議題的關注，「當他了解之後才會在意，在意之後便會付諸行動，開始行動之後，所有生命都有了希望。」無論是迷失於功利價值的人，抑或是蒙受災難的環境與生物，都會在大眾的關注中找回希望，在消失與滅絕中，拾回更多與人類共存共榮的可能。

How can the transmission of knowledge from one generation to the next catalyze a more diverse perspective in nature photography? The answer can be found in the interaction between director Chin-yuan Ke, a veteran with 43 years of experience disseminating ecological and environmental information, and his latest mentee, 15-year-old Ting-chung Kuo and winner of this year's National Geographic Taiwan Photo Contest. In a bird-watching cabin nestled in Guandu Nature Park, the two photographers poked their lenses through the window, looking through their viewfinders for birds in action in the ponds, trees and grassy areas of the park. “Do you see that heron preparing to take flight?” “What a unique way to fly!” As a breeze blows into the hidden cabin, a spirited conversation about photography ensues, peppered with instructional advice.

“Young people have different interests from ours, so it takes constant dialogue and paying attention to their reaction to discover the topics that interest them,” says Ke, who



柯金源
Ke Chin Yuan

從 1980 年開始記錄與關懷臺灣環境，長期推動環境教育、協助培養臺灣環境與生態媒體工作者，獲選為《國家地理》華人探險家，現為公視紀錄片導演、製作人。紀錄片作品獲頒與入圍臺灣卓越新聞獎、電視金鐘獎、臺北電影節紀錄片首獎，國際獎項有韓國綠色影展、美國 CINE 金鷹獎、蒙大拿國際野生動物影展 IWFF「最佳電視節目獎」與「最佳觀點獎」，以及紐約電視展銀獎、休士頓影展白金獎等。

Ke Chin Yuan has been documenting and taking an interest in Taiwan's environment since 1980.

He is known as "Master Ke" and has been promoting environmental education as well as helping to train environmental and ecological media workers in Taiwan, earning him the title of National Geographic Chinese Explorer. He is now a documentary film director and producer for Taiwan's Public Television Service.

His documentary works have been awarded and nominated for the Taiwan Excellence in Journalism Award, the Golden Bell Award for Television, the first prize for documentary films in the Taipei Film Festival, and international awards such as the Green Film Festival in Seoul, the CINE Golden Eagle Awards in the U.S., the Best TV Program Award and the Best Point of View Award in the Montana International Wildlife Film Festival (IWFF), the Silver Award in the New York Television Festival, and the Platinum Award in the Houston Film Festival.



郭定中也在與柯導的互動中明白，作品不僅要呈現細緻的畫面，還能訴諸情懷，以完整敘事來表達。「原來會這樣捕食？這樣交配？當我深入了解某種生物再去拍攝，就能在影像中發展出自己的敘事風格，有了故事性，年輕人就會喜歡。」郭定中談到。

成長背景相距 40 年的攝影師徒，在兩日的拍攝指導中，幸運的親睹豆娘從稚蟲水蠶的狀態羽化，當豆娘從窄小的水蠶殼中探出頭，緩緩伸展新生的清透翅膀、學習起飛，如同稚嫩的優秀攝影者，正等著在世界探索更多可能性。

has been using media platforms for years to disseminate information and raise awareness about environmental and ecological issues. “Once people grasp the issues, they start to care, which inspires action,” he says. “And once they take action, it brings hope for all life.” Environments and species affected by disaster will have hope for survival once the public starts paying attention, renewing the possibility of natural life thriving alongside humans, even amidst the decline and extinction of species.

Through his interaction with Ke, Ting-chung Kuo learned that photography goes beyond capturing intricate visuals; it can also tell stories and tap into emotions. He explains: “So this is how they hunt? And that’s how they mate? When I gain in-depth understanding of a certain species before taking pictures of it, I can develop my own style of storytelling through images. Once the narrative element is there, the work will resonate with young audiences.”

In two days of shooting, the mentor-mentee duo, forty years apart in age, were lucky enough to witness the transformation of a damselfly as it emerged from its nymph stage. As the damselfly pushed its head out of the narrow nymph shell, gradually unfurling its translucent wings and learning to take flight, it bore a striking resemblance to a young, promising photographer about to start exploring the world’s endless possibilities.

郭定中拍攝成果

What Ting-chung Kuo Learned and Photographed

身處大自然，常態性的觀察生物，讓我在生命的視野與格局上，有別於同齡的學子。柯前輩在傳遞影像故事的層次上，給了我很多提醒，當我對特定生態有基礎了解與好奇，故事的輪廓就會自然浮現。



Regularly being in nature and observing wildlife has given me a different perspective on life than my peers. Mr. Ke gave me many pointers on how to convey a story through images and its different dimensions. Equipped with a basic understanding of and curiosity about a certain natural environment, the outlines of a story will naturally emerge. ■

- 1 水牛 Water buffalo
- 2 豆娘 (身旁有羽化前的水蠶空殼) Damselfly (with the empty nymph shell it emerged from)
- 3 紅鳩 Red collared dove
- 4 高蹺鴿 Black-winged stilt



尊重生物多樣性， 有賴地球公民的努力

Respecting Biodiversity Depends on the Efforts of Global Citizens

地球充滿著各式各樣的生物，依獨特的生物群落方式，分別存在於如森林、草原、河流、湖泊、海洋、沙漠等生態系統中。高生物多樣性的生態系統，能更有彈性的應對環境變化、外來物種入侵等種種威脅，也能穩定地為我們提供不同種類食物、新鮮水源、原材料和其他資源。當某些物種消失或減少時，其連鎖反應會影響整個生態系統，包含人類所需的物資。

生物多樣性正在世界各地受到威脅，包括生態棲地的破壞與喪失、汙染、氣候變化、過度捕撈與開發，恢復生物多樣性已是迫切的目標。生物多樣性的保護和恢復需要採取綜合性的措施：保護關鍵棲地與受威脅物種、控制外來入侵物種、建立自然保護區、修復受損生態系統、提高公眾意識、可持續的土地利用，以及實施保護政策和法規等，需要國際間多方合作和持續努力，才能確保地球上多樣性生命的存續。

The Earth is teeming with various life forms, each uniquely adapted to its biological community within ecosystems such as forests, grasslands, rivers, lakes, oceans, and deserts. Ecosystems with rich biodiversity possess greater resilience in the face of environmental changes, invasive species, and numerous other threats. They also provide a stable supply of food, fresh water, raw materials, and other resources crucial for our well-being. When certain species disappear or decline, it triggers a chain reaction that affects the entire ecosystem, including the resources humans rely on.

Worldwide, biodiversity is under threat by habitat destruction and loss, pollution, climate change, overfishing, and rampant development. All this makes restoring biodiversity all the more urgent. Protecting and restoring biodiversity requires a combination of actions, such as safeguarding critical habitats and endangered species, controlling invasive species, establishing nature reserves, restoring damaged ecosystems, raising public awareness, sustainable land use, and implementing conservation policies and regulations. International cooperation and sustained efforts are necessary to ensure the survival of diverse life forms on Earth.

為了更好的生活，開發建設帶來的經濟成長，似乎有其必要性，人類社會與生態保育，卻往往陷入二擇一的難題。

荒野保護協會、台北市野鳥學會和臺南市社區大學研究發展學會與緯創人文基金會合作，守護了四個臺灣重要的自然生態棲地，並試圖找到人與自然和諧共存的方式，讓我們的下一代得以坐擁便利生活與美麗的環境。

生態與城市的完美共存 ——富陽自然生態公園

The Perfect Symbiosis between a Natural Environment and an Urban Center | Fuyang Eco Park



在市區佔有 3.8 公頃的富陽自然生態公園，比鄰於臺北市麟光捷運站，因早期作為軍事彈藥庫而意外保留了原始的淺山林相與豐富的生物相。2004 年開始荒野保護協會以「都會中的綠寶石」的都會生態觀念進行認養，與公園處研議讓富陽自然生態公園依既有生態分布、資源與使用目的規劃為演替區、濕地區、親水區等，更

Fuyang Eco Park spans an area of 3.8 hectares in Taipei City and is located right next to the Lin Guang MRT Station. The park's history as a former military ammunitions depot had the unintended effect of preserving its pristine low-elevation mountain forests and diverse flora and fauna.

In 2004, envisioning “a green gem in the city”, the

於之後臺北市公園處試辦都會區「自然生態公園」時，依分區管理的概念規劃為生態維護區、緩衝區與一般使用區，更大程度的保留在地的野生動植物的原始棲地，大幅降低人為活動對棲地生態的干擾，也打破過往以人為主體打造公園的舊思維。2006年起緯創人文基金會開始與荒野保護協會共同認養，協助富陽自然生態公園持續以清除外來種、生態調查監測、更好的巡守管理機制，為了棲息於此的各種動植物及周遭居民營造一座共存共榮的都會公園，也利用假日為民衆進行生態導覽，讓善待環境、保護生命的觀念深入人心。

富陽自然生態公園的成功示範，促使臺北市政府持續打造共 12 座的城市生態公園，也促成了嘉義、臺南兩大城市加入公園生態化的行列。「它是一種召喚。時間到了，你就自然放下一切，然後就走進富陽。」生態與城市是可以互依共存的，當人類活動與自然環境找到和諧共存的平衡點，永續發展便不再是想像與口號。

Society of Wilderness (SOW) adopted the Fuyang Eco Park and set out a plan for the park based on its existing ecological distribution, resources, and intended purpose. As a result, the park was divided into an ecological succession area, wetland area, and waterfront area. Later, during the trial implementation of urban ecology parks by the Taipei City Parks and Street Lights Office, careful planning was undertaken based on the principles of zoning management. This led to the designation of ecological maintenance areas, buffer areas, and general use areas within the park, which allowed the original habitats of local fauna and flora to be even better conserved. This approach dramatically decreased disruption to the habitat's natural ecology due to human activities and challenged the conventional wisdom of building a park around human needs.

The Wistron Foundation joined the SOW in 2006 to sponsor the ongoing conservation efforts for Fuyang Eco Park. These efforts include the removal of invasive species, ecological surveys and monitoring, as well as enhancements



to the park's patrol and management measures. To further build a park that allows both the flora and fauna and the people living around it to thrive, ecological tours have also been organized for the public on holidays to enable a deep-rooted understanding of environmental stewardship and the importance of protecting all forms of life.

The success story of Fuyang Eco Park has encouraged the Taipei City Government to proceed with the establishment of twelve urban eco-parks and inspired the cities of Chiayi and Tainan, both major urban centers, to begin making their own parks more friendly to natural ecologies. It is possible for natural environments and urban centers to exist side by side in a mutually dependent relationship. When human activities and the natural environment coexist in harmony, sustainable achievement becomes not just a vision or catchphrase, but an attainable goal. ■





生態復育示範 Model of Ecological Rehabilitation

重現消失的物種天堂 ——雙連埤

Recreating a Safe Haven for Species | Shuanglianpi

一座特殊的內陸型濕地座落在宜蘭縣員山鄉，原本是上下相鄰的埤塘，稱作雙連埤。這裡曾是水生植物愛好者的天堂，只有臺灣幾萬分之一的面積，卻蘊藏了全臺 1/3 的水生植物種類、2/3 的原生種蛙類及 1/2 的蛇類，還能看到保育類的穿山甲、麝香貓、食蟹獾等野生動物。湖面還有世界罕見、歷時數百年才能形成的天然浮島，巨大如移動的森林般，依時序遞嬗而飄移。

這座獨特具有豐富物種的珍稀棲地，在 20 年前受到嚴重的擾動，當時經濟開發更勝保育的

There is a unique inland wetland in Yuanshan Township, Yilan County called Shuanglianpi (“two joined ponds”), which gets its name from the two interconnected bodies of water that form it. Once regarded as an idyllic haven for aquatic plant enthusiasts, the lake covers just a tiny fraction of Taiwan's area, but accounts for one-third of all of Taiwan's aquatic plants. It is also home to two-thirds of the native frog species and half of the snake species found in Taiwan. Even protected animals such as pangolins, civets, and crab-eating mongooses can be found here. Additionally, the lake surface features natural floating islands, a rarity found in only a few

土地使用觀念，沒能留意長遠的生態系價值，於是將瀕危甚至極度瀕危的物種用怪手剷除，所幸當時許多學者、在地人士與荒野保護協會的志工都到場搶救且另尋合適的庇護所，於 2003-2004 年間，宜蘭縣政府陸續徵收雙連埤水域並劃設為野生動物保護區，並於 2007 年雙連埤升格為國家級重要濕地。

荒野攜手緯創人文基金會，在十多年的努力下，將瀕危消失的物種與受干擾棲地，透過資料查詢、來源鑑定、人工繁殖復育、移植與地貌修復，逐步讓雙連埤恢復原本的樣貌，但外來種魚如草魚及吳郭魚、人厭槐葉蘋等強勢入侵，再次扼殺了原生種植物的生存空間，盼持續教育提高大眾對外來種的防治意識，讓臺灣獨有的物種能順利回到歸屬之地。

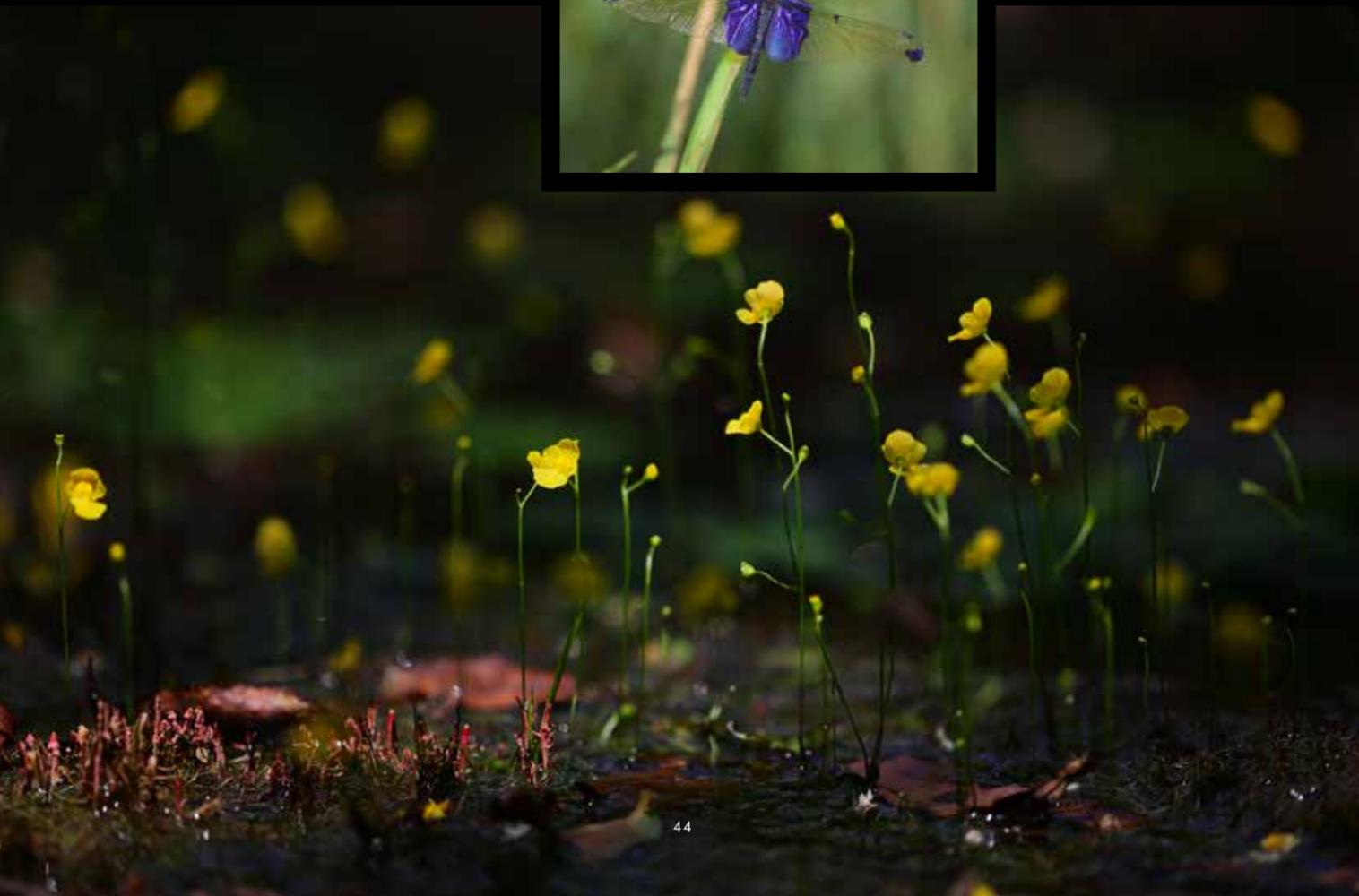
places worldwide. These islands have taken centuries to form and are immense in size, resembling mobile forests that drift and shift with the passage of time.

The unique habitat, characterized by its abundant biodiversity, experienced serious disruption two decades ago. The prevailing approach to land use at the time prioritized economic development over conservation, resulting in a lack of consideration for the long-term value of ecosystems. This led to various endangered or critically endangered species being uprooted by excavators. Fortunately, a number of scholars, locals, and volunteers from the Society of Wilderness (SOW) acted quickly and found appropriate shelter for the plants. During 2003-2004, the government also undertook efforts to appropriate and designate the Shuanglianpi waters as a wildlife sanctuary.



Finally, in 2007, Shuanglianpi was officially designated and elevated to the status of a nationally important wetland.

The SOW, in collaboration with the Wistron Foundation, has dedicated over a decade to the restoration of Shuanglianpi's endangered species and disrupted habitats through data analysis, identifying sources, artificial propagation and restoration, transplantation, and landscape rehabilitation. Despite these efforts, the proliferation of invasive species such as the grass carp and giant salvinia is once again threatening the survival of native species. It is hoped that continued education and enhancement of public awareness regarding the prevention of invasive species will help Taiwan's endemic species return to their natural and rightful habitats. ■



生態復育示範 Model of Ecological Rehabilitation

荒土中的盎然生機 ——龍崎牛埔

Vibrant Life in a Barren Land | Longci Niupu

滿山的泥岩地質宛如置身月球，這片壯麗的泥岩地在臺南市龍崎區牛埔里，灰階色調的壯麗淺山丘陵，帶狀綿延至緊鄰的高雄市田寮區，卻會因其惡地（Badlands）地形人煙稀少，被指定作為彈藥工廠而劃為工業區，彈藥工廠結束後險被開發成有害事業廢棄物掩埋場。臺南社區大學環境行動小組於 2016 年與當地里長陳永和來到濟公廟靈隱寺，觀察掩埋場預定地，大片延續不斷的泥岩惡地特殊地形，因 336 公頃的彈藥工廠

The mudstone geology of the mountains in Niupu Borough, Longci District, Tainan City, recalls the lunar landscape. This remarkable mudstone terrain, characterized by its grayish tones and low-elevation hills, extends to the neighboring Tianliao District, Kaohsiung City. However, due to its badlands topography and low population density, it was once designated as an industrial zone and used for an ammunition factory. Following the closure of the factory, the site risked being developed into a hazardous waste landfill.



門禁森嚴，而景觀保留完整，是非常珍貴的自然地景。

小組進行踏查發現，原被認為是草木不生的泥岩惡地，卻是許多珍貴動植物的生長樂園。2018年小組與緯創人文基金會合作，以紅外線攝影機進行長期記錄，在牛埔溪流域發現珍稀保育類動物如穿山甲、食蟹獾、水鹿、白鼻心、野兔、鼬獾等，以及大冠鷲、魚鷹、鳳頭蒼鷹、臺灣畫眉等珍貴鳥類；古亭坑層、龍船斷層、龍船背斜等也座落於龍崎牛埔，可觀察到斷層、地形抬升、滑移、錯動等，可說是生態及地質教育的最佳場域；再加上此處地形變動劇烈，是全臺年平均抬升高度的第二名，並不適合作為有毒事業廢棄物的掩埋場，因此小組與在地居民發起保護行動。

經小組、當地居民與民間團體、學界多方串聯倡議，臺南市政府在 2021 年公告 281 公頃公有

In 2016, the Environmental Action (EA) Team from Tainan Community University, accompanied by Niupu Borough Warden Chen Yong-he, conducted a site visit at the planned landfill area. The extensive mudstone badlands had been remarkably well-preserved thanks to the strict security measures at the 336-hectare ammunition factory, making it an invaluable natural landscape.

Further investigation revealed that the badlands, thought to be barren and lifeless, was a haven for precious flora and fauna. In 2018, the EA team collaborated with the Wistron Foundation to conduct long-term observations using infrared video cameras in the Niupu Creek watershed, discovering several rare and protected animals, including pangolins, crab-eating mongooses, sambars, masked palm civets, hares, and ferret-badgers. The recordings also captured rare bird species such as the crested serpent eagle, osprey, crested goshawk, and melodious laughingthrush.

The Longci Niupu area encompasses other notable geological features, such as the Gutingkeng Formation, Longchuan Fault, and Longchuan Anticline. These features offer valuable opportunities to observe fault lines, topographic uplifts, slides, and dislocations, making it an ideal location for both ecological and geological education. Furthermore, the area undergoes dramatic topographical changes, with the second highest average annual uplift in Taiwan, making it unsuitable for the disposal of toxic waste. In light of these factors, the EA team and the local residents launched an initiative to protect the area.

In 2021, after the joint advocacy of the EA team, local residents, civic groups, and academics, the Tainan City Government designated a total of 281 hectares of public land as the “Longci Niupu Badlands Nature Reserve and Geopark”. Concerned about the potential revival of the hazardous waste landfill project located nearby, the EA team has been working to address this issue. It is utilizing the ecological survey materials gathered through long-term collaboration with the Wistron Foundation to recruit and train volunteers to



地為「龍崎牛埔惡地自然保留區及地質公園」。因擔心一路之隔的 51 公頃有害廢棄物掩埋場計畫未來有重啟的可能，正積極以與緯創人文基金會長期累積的生態調查素材，進行「野地龍崎士」、「阿甲戰士：穿山甲自然創作營」等地生態守護志工的招募與培訓，希望可以引動更多人的關注。

兩年後的今天，地質公園仍尚未開放，野生動物如穿山甲遭到路殺、生態棲地被破壞的事件屢見不鮮，小組也呼籲政府應加速規劃、早日開放，透過環境教育的設計，讓世界遺產級的泥岩惡地自然地景，能成為全民共享，兼具生態與教育的重要資產。

help protect the local ecology. Programs such as the “Longqi Wilderness Soldiers” and “Armored Warriors: Pangolin Nature Creation Camp” aim to raise awareness and draw more public attention to these efforts.

Now, two years after the designation, the geopark has yet to open, wild animals such as pangolins still fall victim to roadkill, and the destruction of ecological habitats continues to happen. The EA team has urged the government to expedite the planning and opening of the geopark, whose mudstone badlands are on par with world heritage sites. Through well-designed environmental education programs, it can serve as an important ecological and educational resource enjoyed by all. ■



生態復育示範 Model of Ecological Rehabilitation

首都圈的水鳥淨土 ——關渡自然公園

Waterfowl Sanctuary in the Capital Metropolitan Area |
Guandu Nature Park

「今日鳥類，明日人類。」這是 1980 年代各界保育人士為了保留被經濟巨輪嚴重破壞的臺北市關渡濕地，四處奔走請願喊出的口號。十餘年的努力下，臺北市政府以 150 億元徵收了民間土地，留下臺北最後一塊濕地淨土，成立關渡自然公園，並在 2001 年委由台北市野鳥學會經營管理，這種模式是深具示範效應的全臺第一案，也是開創保育合作的重大里程碑。時隔二十多年護守濕地有成，關渡自然公園已於 2022 年成為臺灣第一處摘下國際濕地網絡 (WLI) 評選的星級濕地中心。

「鳥是濕地的主人」，這個核心概念讓台北鳥

“Today birds, tomorrow humans.” During the 1980s, conservationists from various backgrounds rallied under this slogan to advocate for the preservation of the Guandu Wetlands in Taipei City, which had suffered severe degradation due to rapid economic development. After a decade of tireless efforts, the Taipei City Government successfully acquired private lands for 15 billion NTD, preserving the only remaining wetland area in Taipei and establishing the Guandu Nature Park. In 2001, the management of the park was entrusted to the Wild Bird Society of Taipei. This collaboration, the first of its kind in Taiwan, became a model for such cooperative conservation efforts and marked a major milestone. More than twenty years later, the Guandu Nature



3.36 公頃的區域，並號召企業志工實際參與守護行動，一同維護與認識濕地的重要性。

消失了就無法再重現了。台北鳥會深諳保護生態與人性需求的兩難，若鳥類攝影者或愛好者能透過親近自然而感到喜悅，便能以尊重生命的信念純然的欣賞、研究鳥類，台北鳥會正不遺餘力的將關渡自然公園打造成北部主要濕地環境教育中心，讓自然生態得以在正確的保育觀念下豐富而永續。

diverse range of flora and fauna. It supports over 200 species of terrestrial aquatic plants and more than 830 species of birds, insects, amphibians, fish, shrimp, and shellfish. However, due to pollution from sewage and agricultural return flow, invasive species, the developmental pressures on the Guandu Plain, and the disruption caused by transportation and river embankment engineering projects, it has become increasingly challenging to keep “the lungs of the capital city” robust and healthy. Fortunately, in 2022, Guandu Nature Park received a boost to the efforts to protect it: the Wistron Foundation committed to adopting 3.36 hectares of the park, including the freshwater Moon Pond. The foundation also recruited



會即使面對連年虧損，保育濕地的原則上仍堅持有限度的開放園區，避免開發新潮的景點吸引過多遊客而干擾水鳥，由南北入境的候鳥嬌客也能安心駐足。這片 57 公頃的濕地蘊養了 200 種以上的陸生水生植物及 830 種以上的鳥、昆蟲、兩棲、魚蝦貝類等動物。然而，民生廢水汙染、農業回歸水影響的水質問題，外來種侵襲、關渡平原開發壓力的內憂外患，以及交通與河防建設對濕地環境的干擾，都讓這座首都之肺的健康變得愈加艱辛且挑戰不斷。所幸 2022 年關渡自然公園注入新的守護力量，緯創人文基金會認養公園中的淡水埤塘月池等共

Park is a success story in wetland conservation, becoming the first wetland center in Taiwan to be awarded a star rating by Wetland Link International (WLI) in 2022.

“Birds are the owners of the wetland” —with this core belief, even in the face of consecutive years of financial loss, the Wild Bird Society of Taipei has stayed true to the principle of wetland preservation. By limiting access to the park, the Society avoids disruptions to the waterbirds from too many visitors and ensures that a safe environment exists for migratory birds arriving from both the north and the south. The wetland, spanning an area of 57 hectares, is home to a





corporate volunteers to take part in conservation activities, learning about the importance of wetlands while helping to safeguard it.

What's gone will never come back. The Wild Bird Society of Taipei recognizes the challenge of balancing ecological preservation with human needs. Yet if bird photographers and enthusiasts can derive joy from immersing themselves in nature, they will be able to simply appreciate and study birds with the belief that all life should be respected. The Wild Bird Society of Taipei remains dedicated to transforming Guandu Nature Park into a leading wetland environmental education center in northern Taiwan, helping natural ecologies remain rich and sustainable by spreading the right concepts of conservation. ■



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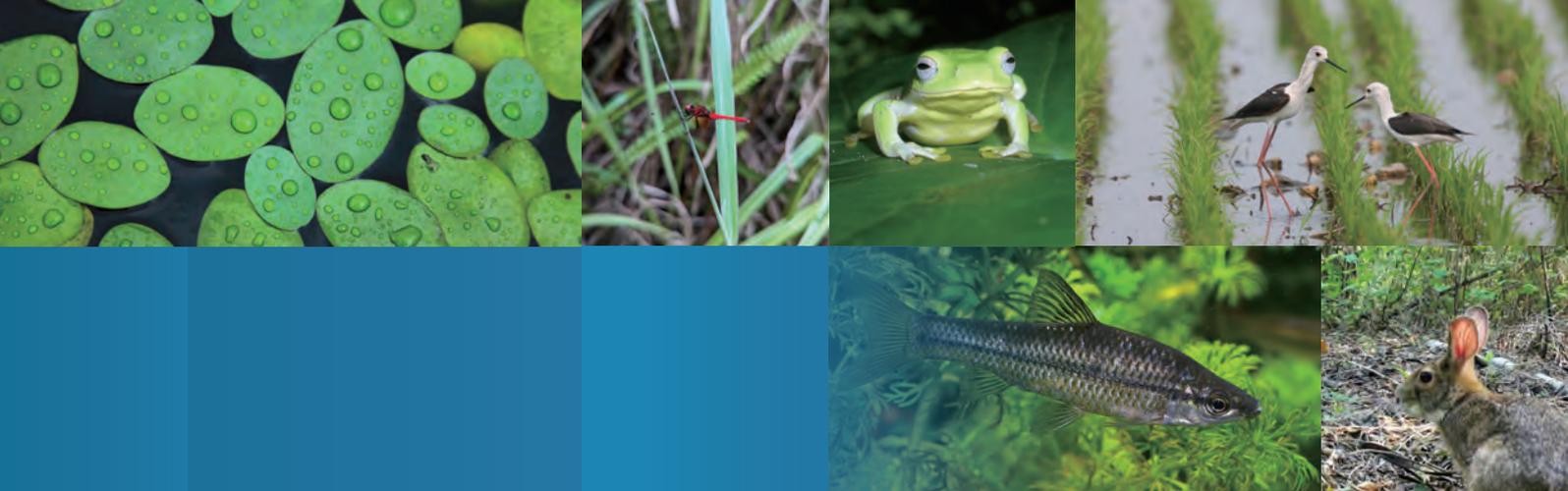
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