



協辦機構:

深圳市紅樹林濕地保護基金會

香港科學館

背景

為了促進濕地保育工作者間的經驗及資訊交流，同時令公眾進一步瞭解淡水及濕地保育工作，世界自然基金會在 2013 年 4 月舉辦了第一屆「后海灣濕地保育研討會」，而自 2016 年開始本會聯同深圳市紅樹林濕地基金會每年輪替主辦此研討會。承蒙滙豐的多年來的慷慨捐助，本會將於 2017 年 2 月再次舉辦研討會，繼續提供平台予各界人士瞭解在后海灣濕地的最新研究結果和提高公眾對后海灣濕地的保育意識。

此外，這次研討會也是為期兩年的「香港濕地生物多樣性普查」的總結。計劃由 2015 年開始，公開招募了超過 450 位「公民科學家」連同本會及一眾本地物種專家，於米埔自然保護區及后海灣一帶濕地進行超過 15 項的生態基線調查，親眼目睹香港富饒的生物多樣性。是次計劃的調查結果更為米埔自然保護區和后海灣的濕地保育工作提供重要的生態資訊，亦為政府的《生物多樣性策略及行動計劃》提供重要的參考資料。

這次研討會將邀請一眾自然愛好者共同參與，當中包括政府代表、非政府組織、濕地物種專家、學生、大學教授及公眾人士。在這兩天的研討會中，本會將會分享在「香港濕地生物多樣性普查」中所收集的得來的生態資料，並為本地及海外的保育人士和環境教育工作者創造交流平台，分享彼此的濕地保育和教育的經驗。

目標

1. 增加香港市民對生物多樣性的認識和其重要性。
2. 分享在后海灣的研究成果（包括「香港濕地生物多樣性普查」的生態調查結果），並制定未來研究專案的重點。
3. 促進不同地方的濕地管理、保育及環境教育經驗和知識交流。

問答環節

在 2 月 12 日的演講或討論環節中，參加者可使用 **Sli.do** 向講者發問問題。如需使用 **Sli.do** 請按以下步驟：

1. 登上以下網址 <https://www.sli.do/> 或掃描右方的 QR 碼。
2. 於「Event code」欄中填上 0202。
3. 選擇「Symposium on Deep Bay Wetland Conservation」。
4. 填寫你要發問的問題。



研討會時間表

第一天 (2017 年 2 月 11 日)			
主題	時間	內容	講者
開幕禮	9:00 – 9:30	登記	/
	9:30 – 9:35	歡迎詞	江偉智先生 世界自然基金會香港分會 行政總裁
	9:35 – 9:40	支持機構致詞	唐丹妮女士 滙豐亞太區企業可持續發展總監
	9:40 – 9:45	協辦機構致詞	闫保华博士 紅樹林基金會副秘書長
	9:45 – 9:55	頒發獎項	/
	9:55 – 10:40	主題演講 什麼是拉姆薩爾濕地公約?	楊路年博士 拉姆薩爾公約秘書處 亞洲 - 大洋洲高級區域顧問
	10:40 – 11:00	休息	
主題一 香港及后海灣的 生物多樣性保育	11:00 – 11:30	演講 1 香港的生物多樣性及濕地保育	周咏新女士 漁農自然護理署代表 濕地及動物護理主任(善用)
	11:30 – 12:00	演講 2 濕地管理的重要性及 「香港濕地生物多樣性普查」成果分享	劉惠寧博士 世界自然基金會香港分會 濕地保育總監
	12:00 – 12:30	演講 3 「香港濕地生物多樣性普查」公民科學家分享環節	王偉東先生 世界自然基金會香港分會項目經理 及 「香港濕地生物多樣性普查」 公民科學家
	12:30 – 14:00	午飯	
	14:00 – 14:30	演講 4 (以普通話進行) 福田自然保護區后海灣的保育工作	李榮先生 紅樹林基金會項目總監
主題二 • 如何向公眾推動濕地保 育及參與科學研究 • 亞洲的濕地保育	14:30 – 15:00	演講 5 全港麻雀普查日	彭俊超博士 香港觀鳥會 高級研究員
	15:00 – 15:30	演講 6 香港生態速查	何浩怡女士 大潭篤生態教育中心 聯合創辦人
	15:30 – 15:45	休息	
	15:45 – 16:15	演講 7 (以普通話進行) 關渡自然公園之公眾參與自然保育 – 以企業與關渡國際自然藝術季為例	吳金玲女士 台灣關渡自然公園 公共關係部門主管
	16:15 – 16:45	演講 8 (以普通話進行) Wetland and flyway conservation of WWF China	張亦默先生 世界自然基金會中國分會 候鳥遷飛網絡項目經理
	16:45 – 17:15	演講 19 (以英語進行) 題目: Empowering the Guardians of Setiu Wetlands, Malaysia through Conservation Partnership	Dr Wan F. A. Jusoh Setiu Wetlands Team Leader WWF-Malaysia
第一天完			

第二天 (2017 年 2 月 12 日)

主題	時間	內容	講者
主題三 后海灣的研究 及監測	09:00 - 09:30	登記	/
	09:30 - 09:55	演講 14 (以英語進行) Potential Causes of Salinity Trend in Deep Bay Wetlands	徐婷芳博士 香港大學土木工程系 助理教授
	09:55 - 10:25	演講 9 (以英語進行) Baseline Monitoring Programme for the Mai Po Inner Deep Bay Ramsar Site	陳羽嵐女士 漁農自然護理署 自然護理主任(錦田)
	10:25 - 10:55	演講 10 (以英語進行) Findings on “Discovering Biodiversity in Hong Kong Wetlands”	黎雅儀女士 世界自然基金會香港分會 保護區主任
	10:55 - 11:15	休息 (研究海報展示)	
	11:15 - 11:40	演講 11 (以英語進行) Diversity and distribution of spiders from Mai Po Nature Reserve 及 Bees & Wasps Diversity at Mai Po Nature Reserve	吳卓倫先生 蜘蛛研究員 及 Mr. Christophe Barthelemy 昆蟲學家
	11:40 - 12:05	演講 13 (以英語進行) Greenhouse gas dynamics in the subtropical mangroves of Hong Kong	黎育科教授 香港中文大學 地理與資源管理學系 助理教授
	12:05 - 12:30	演講 12 (以英語進行) Bird ringing in Mai Po	利雅德先生 AEC Ltd 執行董事
	12:30 - 13:00	討論環節 1 (以英語進行) (主持人: 譚鳳儀教授 香港城市大學生物及化學系生物學講座教授)	
	13:00 - 14:30	午飯	
	14:30 - 14:50	演講 15 (以英語進行) Preliminary results in Hong Kong wetlands reveal interesting and alarming aspects of ant diversity	管納德博士 香港大學生物科學學院 助理教授
	14:50 - 15:10	演講 16 (以英語進行) Dispersal, invasive potential and management of <i>Sonneratia</i> , exotic plants, in mangrove wetlands	譚鳳儀教授 香港城市大學 生物及化學系生物學 講座教授
	15:10 - 15:30	演講 18 (以英語進行) Ecological impact and biological controls of exotic mangrove species <i>Sonneratia apetala</i> in coastal wetlands	林光輝教授 清華大學 地球系統科學系教授
	15:30 - 15:50	討論環節 2 (以英語進行) (主持人: 文賢繼博士 世界自然基金會香港分會米埔保護區及華南濕地項目主管)	

主題	時間	內容	講者
	15:50 - 16:20	休息(研究海報展示)	
主題四 后海灣的最新生態狀況	16:20 - 18:30	演講 17 (以英語及普通話進行) 分享后海灣受威脅物種的最新情況 (以小組討論形式進行) 主持人: 劉惠寧博士 世界自然基金會香港分會 濕地保育總監 4 個物種主題 1. 黑臉琵鷺 2. 鷺鳥 3. 鴨類 4. 歐亞水獺	蘇偉恩女士 漁農自然護理署代表 濕地及動物護理主任 (鳥類)
			黎雅儀女士 世界自然基金會香港分會 保護區主任
			余日東先生 香港觀鳥會 研究經理
			利雅德先生 AEC Ltd 執行董事
			張瑪珊博士 科學事務經理 生態教育及資源中心
			黃繼展先生 澳門鳥會 社會活動基金管理委員會委員
研討會結束			

研究海報主題 (只限英語)

	作者名稱	主題
1	Ho Yin Chiang Dr Jinping Cheng Dr Cindy Lam Prof Pei-yuan Qian	An investigation of phytoplankton and heavy metals in Mai Po Nature Reserve
2	Ka Yuen Cheung Dr Jinping CHENG Dr Cindy Lam Prof Pei-yuan Qian	Screening of Algicidal Activities from Marine Bacteria in Coastal Area
3	Mr Jiangong Liu Dr Suvadip Neogi Prof Derrick Y.F. Lai	Net Biosphere-Atmosphere Exchange of Carbon Dioxide in the Mangroves at Mai Po Wetland
4	Dr Suvadip Neogi Prof Derrick Y.F. Lai	Influence of land use and land cover types on the ecological stoichiometry of carbon, nitrogen, phosphorus and potassium in subtropical estuarine wetland soils in Hong Kong
5	Ms Sharne E. McMillan Dr Timothy C. Bonebrake Dr Billy C.H. Hau	Ecology and Conservation of the Eurasian Otter (<i>Lutra lutra</i>) in Hong Kong
6	Mr Leung Yu Yan Dr Caroline Dingle	Using stable isotopes to detect migrant individuals in Mai Po
7	Mrs Daria Mathew Abdullah Muhammad Zaid Nasir Nur Syahirah Wahab Haramaini Arifin Dr Wan F. A. Jusoh	Setiu Wetlands: Nature's Jewel

演講大綱

主題一: 香港及后海灣的生物多樣性保育

演講 1	
講者:	周咏新女士 漁農自然護理署代表 濕地及動物護理主任(善用)
演講主題:	Conservation of the Mai Po Inner Deep Bay Ramsar Site
演講大綱:	米埔內后海灣於 1995 年被列為《拉姆薩爾公約》下的國際重要濕地，生境包括基圍、紅樹林、泥灘和魚塘，面積超過 1500 公頃。后海灣生態系統獨特，生物多樣性豐富，是數百種雀鳥及其他生物的重要棲息地。漁農自然護理署制訂《米埔內后海灣拉姆薩爾濕地管理計劃》，在生態監測、善用濕地、執法等方面維護這片濕地的生態價值。
語言:	廣東話

演講 2	
講者:	劉惠寧博士 世界自然基金會香港分會 濕地保育總監
演講主題:	濕地管理的重要性及「香港濕地生物多樣性普查」成果分享
演講大綱:	在過去 30 多年，世界自然基金會對米埔自然保護區進行了不少管理工作，以為維持及提高米埔濕地的生態價值和生物多樣性。可惜周邊環境發展迅速，對保護區內以至整片后海灣濕地影響甚為嚴重。為了解整片米埔及內后海灣拉姆薩爾濕地的最新生態資料，本會於 2015 年展開為期兩年的〈香港濕地生物多樣性普查〉，對這片珍貴的濕地進行了多項生態基線調查。在此演講中，講者將分享過去 30 多年的濕地管理經驗及普查得來的最新生態資訊。
語言:	廣東話

演講 3	
講者:	王偉東先生 世界自然基金會香港分會 項目經理 及 「香港濕地生物多樣性普查」公民科學家
演講主題:	「香港濕地生物多樣性普查」公民科學家分享環節
演講大綱:	世界自然基金會香港分會於 2015 年展開為期兩年的〈香港濕地生物多樣性普查〉，公開招募了超過 450 位「公民科學家」於米埔一帶進行多項生態基線調查。項目職員將介紹「公民科學家」於科學研究中所帶來的成果。參與普查的公民科學家將分享成為專業生態研究團隊一份子的過程和點滴。
語言:	廣東話

主題二: 如何向公眾推動濕地保育及參與科學研究, 亞洲的濕地保育

演講 5	
講者:	彭俊超博士 香港觀鳥會 高級研究員
演講主題:	全港麻雀普查日
演講大綱: (只限英語)	Eurasian Tree Sparrow (<i>Passer montanus</i>) is a common and familiar bird in Hong Kong. The first-ever Hong Kong Sparrow Census was conducted on May 2016 by the Hong Kong Bird Watching Society. The method of this census is conducting line-transect survey in all 18 districts of Hong Kong. A total of 87 transects were completed in different habitats including urban areas, residential area, farmland, villages and natural terrains, there were 4,503 sparrows recorded and by the calculation on each habitat's areas and sparrow density the total population was estimated to 320,000 individuals in Hong Kong. From this citizen science project, we can engage more citizens who are interested but without any scientific background to participate the survey, that provides another approach for raising their environmental awareness and respecting nature.
語言:	廣東話

演講 6	
講者:	何浩怡女士 大潭篤生態教育中心 聯合創辦人
演講主題:	香港生態速查
演講大綱: (只限英語)	Bio means biodiversity and Blitz means to do something quickly and intensively. BioBlitz is a collaborative, open source, Citizen science survey of all forms of life in a set area over a set time. In 2015 ECF sponsored Hong Kong's first large scale 30 hour BioBlitz at Tai Tam Harbour (Inner Bay) SSSI, site of the last mangrove forest on Hong Kong Island. We will share what we found, what we learned, and what we would do next time. We hope this inspires anyone to join a local BioBlitz, and maybe even run one yourself!
語言:	廣東話

演講 7	
講者:	吳金玲女士 台灣關渡自然公園 公共關係部門主管
演講主題:	關渡自然公園之公眾參與自然保育 – 以企業與大型活動為例
演講大綱:	關渡自然公園所處的關渡地區，是高度發展的臺北市僅存的大面積綠地，擁有美麗而珍貴的河口濕地，自古以來就是候鳥過境停棲與度冬區域，是一處具有重要保育價值的生態保護區。以關渡的經驗與切入角度，介紹多元的公眾參與方式為自然保育帶來實質影響。
語言:	普通話

演講 19	
講者:	Dr Wan F. A. Jusoh Setiu Wetlands Team Leader WWF-Malaysia
演講主題: (只限英語)	Empowering the Guardians of Setiu Wetlands, Malaysia through Conservation Partnership
演講大綱: (只限英語)	The Setiu Wetlands in Terengganu represents WWF-Malaysia's priority site for freshwater and wetlands conservation within the Peninsular Malaysia landscape. The Setiu Wetlands is undeniably a jewel of Malaysia's natural world. In fact, the Setiu Wetlands has been classified as nationally important for its ecological and conservation values, and is featured in the Malaysian Wetland Directory 1987. However, there are major challenges in the conservation of Setiu Wetlands due to the pressure and demand for economic growth as it is located in one of the poorest districts in the state of Terengganu. The prospects of faster economic returns from development are often perceived to outweigh the ecological and social benefits provided by wetlands ecosystems which are usually not directly measurable. Therefore, it is a challenge to convince decision makers as well the community themselves about the need to conserve the Setiu Wetlands for sustaining the livelihood and well-being of communities. One of WWF-Malaysia's strategies for Setiu Wetlands is to empower the local community to support and participate in conservation efforts through conservation partnership with three Community-based Organisations (CBOs). The CBOs act as wetlands guardians and catalysts for change by promoting custodianship over wetlands and empowering the larger local communities to manage their wetlands resources in a responsible and sustainable manner. Since 2006, WWF-Malaysia has been working closely with the CBOs in Setiu in a variety of community participatory activities such as mangrove replanting, wetlands camp, community surveys and participation in planning processes for development and protected area. It is envisaged that through community stewardship, there is greater possibility for ensuring the Setiu Wetlands remain healthy, ecologically functioning and biologically diverse. Together Possible.
語言:	英語

主題三: 后海灣的研究及監測

演講 14	
講者:	徐婷芳博士 香港大學土木工程系 助理教授
演講主題: (只限英語)	Potential Causes of Salinity Trend in Deep Bay Wetlands
演講大綱: (只限英語)	Salinity is one of the most important environmental parameters of coastal wetlands. The salinity of Deep Bay wetlands is sensitive to the salinity level at outer bay, the amount of river flow, and changes in the bay's salt transport processes. Our recent research examines the salinity trend in Deep Bay, particularly the intertidal mudflat in inner bay, and attributes the changes to their potential causes. Historical data from the Environmental Protection Department of Hong Kong has been analyzed, and numerical salinity transport models have also been developed. The salinity at outer bay in general increased, while that at inner bay decreased from 1994 to 2007. The land reclamation within the bay together with the increase in the flow of Shenzhen River could explain the opposite salinity trends. The study overall allows us to better understand the factors that influence the salinity and thus the overall health of Deep Bay wetlands.
講者:	英語

演講 9	
講者:	陳羽嵐女士 漁農自然護理署 自然護理主任(錦田)
演講主題: (只限英語)	Baseline Monitoring Programme for the Mai Po Inner Deep Bay Ramsar Site
演講大綱: (只限英語)	AFCD has implemented a baseline ecological monitoring programme for the Ramsar Site since 2001. This long-term monitoring programme aims to collect ecological baseline information on the water and sediment qualities, benthic communities and the condition of wetland habitats of the Ramsar Site. Monitoring results show that the water and sediment qualities generally have remained stable. For benthic communities, seasonal variations of mudskipper and crab abundance have been observed. For habitat conditions, the mangroves have shown much slower growth in recent years.
講者:	英語

演講 10	
講者:	黎雅儀女士 世界自然基金會香港分會 保護區主任
演講主題: (只限英語)	Findings on “Discovering Biodiversity in Hong Kong Wetlands”
演講大綱: (只限英語)	Mai Po Nature Reserve has become an iconic wetland for Hong Kong and South China – providing food and habitat for 60,000 individual birds from over 400 species every year. Alongside the Mai Po and Inner Deep Bay Ramsar site, the Reserve is home to various types of local wildlife including aquatic fauna, insects, amphibians, reptiles, fish and mammals. In the two-year “Discovering Biodiversity in Hong Kong Wetlands”, with the support from local experts and citizen scientists, baseline ecological surveys on various fauna and flora were conducted at Mai Po Inner Deep Bay Ramsar Site and nearby wetland. In the presentation findings of the surveys, including the latest species list, historical trend and up-to-date biological information, will be presented. This baseline information will be important for the future conservation of the biodiversity at Deep Bay and also the habitat management at Mai Po Nature Reserve and nearby areas.
講者:	英語

演講 11	
講者:	吳卓倫先生 蜘蛛研究員
演講主題: (只限英語)	Diversity and distribution of spiders from Mai Po Nature Reserve
演講大綱: (只限英語)	The study describes the identification of the spider assemblage with the respect to their distribution and diversity in Mai Po Nature Reserve, Hong Kong. This 2-year study aims to figure out the species and the abundance of the neglected Order-Araneae which is a blank in science particularly in Mai Po. A total of 106 species of spiders belonging to 68 genera and 21 families were recorded during the study from June to August (2015-2016). The species were identified using The Spiders of China (Song, Chu and Chen, 1999), Fauna Hunan: Araneae in Hunan, China (Yin, Yan, Bao, Xu, Tang, Zhou, Peng and Liu, 2012), Fauna Sinica: Invertebrata Vol. 35: Arachnida: Araneae: Tetragnathidae (Zhu, Song and Zhang, 2003). Methodology included active search, beating and sweeping at layers from ground to tree canopy accessible easily for hand collection and visual surveys. The surveys covers the diurnal and nocturnal species in 5 different habitats: Mangrove area outside the border fence, Mangrove area inside the Geiwei, Reed bed, Woodland and Fresh water pond. Such surveys are important for building a biodiversity database of this mega diverse group from one of the Internationally important wetland, Mai Po.
講者:	英語

演講 11	
講者:	Mr Christophe Barthélémy 昆蟲學家
演講主題: (只限英語)	Bees & Wasps Diversity at Mai Po Nature Reserve
演講大綱: (只限英語)	Preliminary surveys indicated a high level of diversity of bees and wasps (28 families) in the wetland habitats, both predatory wasps (<i>Aculeates</i>) and Parasitic (<i>Parasitica</i>) wasps are well represented and diverse. However, lack of resources impedes identification but collecting and disseminating material helps and is encouraged, future generations will benefit from this. Generally speaking little attention is given to Insects in biodiversity counts save for charismatic species such a Dragonflies and Butterflies. However Insects represent between 70 and 90% of the total biodiversity and as such should be given far more attention for biodiversity analysis to make sense. In addition ecological services rendered by insects are only partially known, but all indicates that without them most ecological chains would collapse.
講者:	英語

演講 13	
講者:	黎育科教授 香港中文大學地理與資源管理學系 助理教授
演講主題: (只限英語)	Greenhouse gas dynamics in the subtropical mangroves of Hong Kong
演講大綱: (只限英語)	Mangrove ecosystems are generally considered to be significant carbon sinks, but they are also potential sources of greenhouse gases owing to the frequently flooded environments. This presentation will share some of the results obtained from field measurements at the Mai Po Marshes on the spatio-temporal variability, environmental controls, and effects of land cover change on greenhouse gas fluxes in subtropical wetlands. The findings will help shed light on the role of mangrove ecosystems in mitigating future climate change.
講者:	英語

演講 12	
講者:	利雅德先生 AEC Ltd 執行董事
演講主題: (只限英語)	Bird ringing in Mai Po Nature Reserve
演講大綱: (只限英語)	A long-term bird ringing study of birds in the reedbeds at Mai Po has been on-going since 2001. Some of the findings of this study will be presented, these will include the status of globally-threatened birds in the Mai Po reedbeds, the effects of different management regimes on reedbed birds and the importance of reedbeds in Hong Kong.
講者:	英語

演講 15	
講者:	管納德博士 香港大學生物科學學院 助理教授
演講主題: (只限英語)	Preliminary results in Hong Kong wetlands reveal interesting and alarming aspects of ant diversity
演講大綱: (只限英語)	Wetland habitats are generally perceived as suboptimal for ant diversity. Yet, preliminary results in Hong Kong indicate that a relatively diverse ant fauna might occupy these habitats. Here focusing on early work in mangroves I will present some of the first results on the ants that occupy mangroves and other humid areas. Then, focusing on recent preliminary surveys conducted in Mai Po I will present some of problems associated with the spread of invasive ants and their occurrence within the reserve. Abundant populations of several invasive ant species could represent serious threats to many invertebrate and vertebrate species living in this area. Finally, I will explore some options that could contribute to limit the spread of these species and of their impacts. Overall, these results indicate limited knowledge on the impacts of some of the most notorious invasive species in Hong Kong and their potential to strongly hinder conservation efforts.
講者:	英語

演講 16	
講者:	譚鳳儀教授 香港城市大學生物及化學系生物學 講座教授
演講主題: (只限英語)	Dispersal, invasive potential and management of <i>Sonneratia</i> , exotic plants, in mangrove wetlands
演講大綱: (只限英語)	<i>Sonneratia apetala</i> Buch.-Ham and <i>S. caseolaris</i> (L.) Engl are two exotic mangrove species distributed in wetlands in Hong Kong and South China, as they have been used for reforestation purposes in Mainland China. These exotic species may out-compete the native mangrove species and disturb the ecological functions of mangrove wetlands. The talk will focus on the distribution, abundance, reproduction, dispersion, germination and construction costs of these two <i>Sonneratia</i> species, aiming to evaluate their invasive potential. The talk will also compare different removal methods to control their spread in Deep Bay, Hong Kong.
講者:	英語

演講 18	
講者:	林光輝教授 清華大學地球系統科學系 教授
演講主題: (只限英語)	Ecological impact and biological controls of exotic mangrove species <i>Sonneratia apetala</i> in coastal wetlands
演講大綱: (只限英語)	<i>Sonneratia apetala</i> is an exotic mangrove species that has been used extensively in mangrove restoration projects in mainland China, which has raised great concerns of potential biological invasion. In this talk, I will review current understandings on <i>S. apetala</i> biological performances in China, possible effects on native mangrove plants and associated fauna, and potential invasion risks. Then I will summarize some recent progresses in the biological control of this exotic mangrove species in Shenzhen bay and nearby regions.
講者:	英語

研究海報大綱 (只限英語)

研究海報 1	
作者:	Ho Yin CHIANG, Dr Jinping CHENG, Dr Cindy LAM, Prof Pei-yuan QIAN
研究海報主題:	An investigation of phytoplankton and heavy metals in Mai Po Nature Reserve
研究海報大綱:	<p>Mai Po Nature Reserve is famous for its high diversity of wetland habitats and wildlife species in Hong Kong. In this study, water from Gei Wai was collected and filtered through 20 µm plankton net for phytoplankton identification and enumeration under stereomicroscope. The dominant mangrove species, including root sediment, stem and leaves, in floating boardwalk and outside bird hide were collected for heavy metal analysis using ICP-OES. Results showed that phytoplankton in Gei Wai was dominated by <i>Cyclotella</i> spp. at the density of 32,000 cells/L. Zinc was found to be the highest quantity in root sediment at concentrations of 942.07 and 878.20 µg/g in bird hide and floating boardwalk respectively. Bioconcentration factors of all tested metals were generally lower than 1.0 indicating a limited amount of metal transfer from sediment to stems and leaves. Ecological importance of <i>Cyclotella</i> spp. and anthropogenic sources of heavy metals in the Reserve are addressed and discussed.</p>

研究海報 2	
作者:	Ka Yuen CHEUNG, Dr Jinping CHENG, Dr Cindy LAM, Prof Pei-yuan QIAN
研究海報主題:	An investigation of phytoplankton and heavy metals in Mai Po Nature Reserve
研究海報大綱:	<p>Algal blooms affect the coastal areas due to the rich nutrient levels. Active algicidal compounds are actively sought and investigated to control harmful algal blooms. In this study, the sediment in mangrove ecosystem were isolated and tested for its algicidal activity against cyanobacteria (<i>Synechococcus</i> sp. Strain CB0101) and <i>Chattonella marina</i> in the coastal mangrove ecosystem. The diversity and abundance of algae in the adjacent coastal area were studied. Results showed that algal species were highly abundant in Mai Po gei wai and 7 different algae were observed. Three out of six actinobacterial strains isolated from the collected sediment samples showed algicidal activity to CB0101 and all have algicidal ability to <i>Chattonella marina</i>. These findings suggested that the algal-bacterial interaction could be one of the important factors regulating the occurrence of the algal blooms. The genetic identification of bacteria, structure determination of active substances, stability and mechanism of algicidal activity still need further study.</p>

研究海報 3	
作者:	Jiangong Liu, Dr Suvadip Neogi, Prof Derrick Y.F. Lai
研究海報主題:	Net Biosphere-Atmosphere Exchange of Carbon Dioxide in the Mangroves at Mai Po Wetland
研究海報大綱:	Mangroves are generally regarded as long-term sinks of atmospheric carbon dioxide (CO ₂), only a few studies have quantified the magnitude and temporal dynamics of CO ₂ fluxes in these coastal wetlands at the ecosystem scale. In this study, we aimed to characterize the variability and controls of net ecosystem CO ₂ exchange (NEE) in a subtropical estuarine mangrove wetland dominated by <i>Kandelia obovata</i> in Hong Kong by means of an eddy covariance system. Our one-year results show that the diurnal NEE on monthly average varied between -4 to +3 μmol m ⁻² s ⁻¹ with weak seasonal variation. The mangrove acted as a net CO ₂ sink on annual timescale. Variability of NEE was found to be related to various biophysical parameters, including photosynthetically active radiation, normalized difference vegetation index, air temperature, and vapour pressure deficit. Our findings shed light on the temporal variability and governing factors of CO ₂ fluxes in the subtropical mangroves.

研究海報 4	
作者:	Dr Suvadip Neogi, Derrick Y.F. Lai
研究海報主題:	Influence of land use and land cover types on the ecological stoichiometry of carbon, nitrogen, phosphorus and potassium in subtropical estuarine wetland soils in Hong Kong
研究海報大綱:	This study encompassed the spatial variability of elemental stoichiometry viz. total organic carbon (TOC), nitrogen (TN), phosphorus (TP), potassium (TK) and their controlling factors in estuarine wetland soils exposed to varying land use and land cover types at Mai Po and its adjoins in Hong Kong. Concentrations of TOC and TN were higher in surface (0-10 cm) as compared to subsurface (10-20 cm) soil. Concentrations of TOC, TN, TP and TK varied in the range of 65.17-17.62, 13.03-1.17, 0.41-0.09, 9.59-3.36 g kg ⁻¹ . Mole ratios of TOC:TN, TOC:TP, TOC:TK, TN:TP, TN:TK, and TP:TK were in the order of 26.63-5.01, 509.33-71.17, 12.17-1.81, 84.67-5.21, 2.42-0.13, and 0.08-0.01. We found limiting N and P in Gei Wai (water channel, subsurface soil), fish pond, brackish water pond (surface soil), mangrove, and mudflat. In other land uses mole ratios were at par or higher than the global soils average. High spatial heterogeneity influenced the elemental stoichiometry.

研究海報 5	
作者:	Sharne E. McMillan, Timothy C. Bonebrake and Billy C.H. Hau
研究海報主題:	Ecology and Conservation of the Eurasian Otter (<i>Lutra lutra</i>) in Hong Kong
研究海報大綱:	No study has been undertaken for the extant Eurasian Otter (<i>Lutra lutra</i>) population in Hong Kong except ecological surveys in EIA projects and an attempt to provide holts by WWF-HK. As such, we know very little about this species in Hong Kong, despite its status as a species of conservation importance, and protection under local legislation. In the absence of fundamental ecological knowledge, adequate protection from potential threats and successful conservation and management of this species is difficult. This study therefore aims to 1) Establish the baseline status of the otter population including population dynamics via DNA genotyping (number of individuals, sex ratio) and spatial organization (distribution, home ranges). 2) Determine diet to understand resource requirements and carrying capacity. 3) Identify potential threats to otter and constraints to otter population expansion including the influence of proximity of development, area/proportion and/or quality of otter habitats, the presence of dogs, and pollution (e.g. PCBs).

研究海報 6	
作者:	Mr Leung Yu Yan, Dr Caroline Dingle
研究海報主題:	Using stable isotopes to detect migrant individuals in Mai Po
研究海報大綱:	The East Asian-Australasian Flyway supports a high diversity of threatened migratory species, yet we know very little about population connectivity or ecology of species along this important migration route. Mai Po Marshes Nature Reserve is a major stopover and wintering site for thousands of migratory species. We used C/N ratios to test whether resident and migratory populations of two species intermix at Mai Po in winter (Chinese Bulbul <i>Pycnonotus sinensis</i> and Japanese White-eye <i>Zosterops japonica</i>). Analysis revealed two distinct groups within each species in Mai Po, one with significantly higher δN than the other. We hypothesize that the high δN group are likely residents due to elevated anthropogenic nitrogen inputs to the site. Alternatively, these two groups could represent resident birds with distinct trophic niches. Further isotope and genetic analyses will help determine which of these hypotheses is correct, improving our understanding of migration patterns along this flyway.

研究海報 7	
作者:	Daria Mathew Abdullah, Muhammad Zaid Nasir, Nur Syahirah Wahab, Haramaini Arifin & Wan F. A. Jusoh
研究海報主題:	Setiu Wetlands: Nature's Jewel
研究海報大綱:	<p>The Setiu Wetlands is located in the state of Terengganu on Peninsular Malaysia's east coast that encompass a coastal floodplain formed by the Setiu-Chalok-Bari-Merang riverine complex with the presence of nine inter-connected ecosystems: sea, beach, mudflat, lagoon, estuary, river, islands, coastal forest and mangrove forest. The wetlands is of national importance and could be considered as a nature's jewel on the basis of its rich biodiversity as well as the great array of ecosystem services such as flood control, erosion mitigation, nursery for juvenile marine fishes and traditional livelihoods for the local population that it provides. To date, 29 species of mammals, 176 species of birds, 36 species of herpetofauna, 56 species of butterflies and 217 species of plants have been recorded in Setiu Wetlands. The wetlands also have great potential as an ecotourism destination that can generate additional or alternative income for the local communities. Working with partners and key stakeholders, WWF-Malaysia strives to ensure that the natural resources and ecosystem services provided by the Setiu Wetlands will be sustainably managed and protected for the benefit of all in the long run.</p>

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