



生物多樣性速查 (下花山) Bioblitz (Ha Fa Shan)

姓名Name: _____ 組別Group: _____ 日期Date: _____

學習目標 Learning goals

完成課程後，學生應能 After the course, students should be able to:

1. 製作生境地圖 Construct ecological map,
2. 應用各種生態調查方法 Apply different ecological survey methods,
3. 辨認和分類一些本港常見生物物種 Identify and classify some common species in Hong Kong,
4. 解釋一些生態現象 Explain some common ecological phenomena,
5. 與他人合作進行考察和資料整理工作 Cooperate with others to do field investigation and data processing,
6. 製作簡單科學報告 Make simple scientific report,
7. 欣賞自然，尊重生物 Appreciate nature and respect living things.

程序 Schedule

09:00 - 10:00	簡介 Briefing
10:00 - 12:00	野外考察 Field work
12:00 - 13:00	午膳 Lunch
13:00 - 13:45	顯微鏡觀察 Microscopic observation
13:45 - 14:15	數據分析 Data analysis
14:15 - 15:15	準備匯報 Prepare presentation
15:15 - 16:30	匯報與總結 Presentation & summary

儀器和工具 Equipment and tools

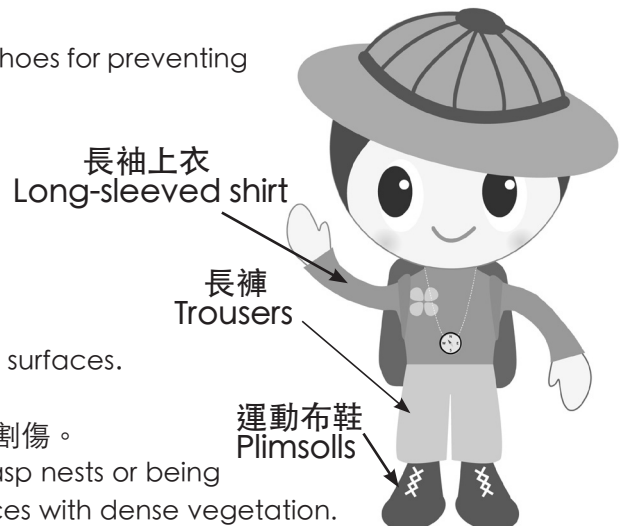
寫字夾板 Clipboard
平板電腦 / 數碼相機 Tablet computer / Digital camera
雙筒望遠鏡 / 微距望遠鏡 Binocular / Macroscope
軟尺 Measuring tape
三款圖鑑 3 sets of Pictorial Guides

衣著 Clothing

1. 穿著長袖上衣和長褲能更有效防止蚊蟲叮咬，亦可減低被太陽曬傷的機會，不應穿著短褲。
Long-sleeved shirt and trousers for better protection against mosquito and insect bites, as well as preventing sunburn. Shorts are not recommended.
2. 不應穿著拖鞋或涼鞋，而應穿著運動布鞋。A pair of shoes for preventing injuries. Slippers and sandals are not recommended.

安全 Safety

1. 要注意安全。Beware of your own safety.
2. 避免踏足陡斜和濕滑的岩石和泥土表面。
Avoid stepping on steep and wet rock surfaces and soil surfaces.
3. 切勿闖入植物生長茂密的地方，以免觸及蜂巢或被植物割傷。
To prevent being attacked by wasps from disturbed wasp nests or being injured by plant leaves and thorns, do not get into places with dense vegetation.



考察地點 Field Site

1. 生境調查 Habitat Survey

在考察過程中，辨認下列各種生境，並將各種生境所佔位置繪畫在提供之地圖上。

During field study, identify different types of habitat listed below and draw the occupied area of each habitat on the map provided.

草地 Grassland	灌叢 Shrubland	天然樹林 Natural Woodland	植林 Plantation
農地 Farmland	廢棄農地 Abandoned Farmland	引水道 Catchwater	溪流 Stream

2. 沿樣條數算 Transect Count

沿一段路徑步行，沿途記錄下列三類動物的物種數目，並嘗試記錄牠們的一些特徵。

- 鳥類：記錄路徑兩旁看見和聽到叫聲的雀鳥物種
- 蝴蝶、蜻蜓和豆娘：記錄路徑兩旁10米距離內看見的蝴蝶、蜻蜓和豆娘物種

Along the path, record the following 3 types of animals, and try to record their features:

- Birds: record all bird species seen or heard on either sides of the path.
- Butterflies, dragonflies and damselflies: record all species within 10m from either sides of the path.

物種數目 No. of Species	蝴蝶特徵 Features of Butterflies	蜻蜓/豆娘特徵 Features of Dragonflies/Damselflies	鳥類特徵 Features of Birds
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

3. 定點數算 Point Count

分別在兩個位置進行10分鐘定點數算，記錄記錄下列三類動物的物種數目，並嘗試記錄牠們的一些特徵。

- 鳥類：記錄看見和聽到叫聲的雀鳥物種
- 蝴蝶、蜻蜓和豆娘：記錄直徑10米範圍內看見的蝴蝶、蜻蜓和豆娘物種

Do 10-minute point count at two different sites respectively. record the following 3 types of animals, and try to record their features:

- Birds: record all bird species seen or heard.
- Butterflies, dragonflies and damselflies: record all species seen within a radius of 10 meters.

地點一 Site No. 1 _____

物種 Species	蝴蝶 Butterfly	蜻蜓/豆娘 Dragonfly/Damselfly	鳥類 Bird
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

地點二 Site No. 2 _____

物種 Species	蝴蝶 Butterfly	蜻蜓/豆娘 Dragonfly/Damselfly	鳥類 Bird
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			



4. 樣方數算 Quadrat Count

在指定位置放置一個 2米 X 2米的樣方，按下列分類記錄樣方內所有生物物種數量，並嘗試記錄牠們的一些特徵。
Place a 2m x 2m quadrat in a designated area. Record species count of each type of living organisms listed below. Try to record their features.

生境 Habitat: _____

物種數目 No. of Species	灌木 Shrubs	草本及攀援植物 Herbs & Climbing Plants	昆蟲 Insects	其他節肢動物 Other arthropods	其他動物 Other animals	其他生物 Other living organisms
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

5. 主動搜查 Active searching

在指定範圍內仔細搜查各種生物，按下列分類記錄樣方內沒有記錄過的生物物種數量，並嘗試記錄牠們的一些特徵。

Search the designated area thoroughly. For species not found in the quadrat, record species count of each type of living organisms listed below. Try to record their features.

生境 Habitat: _____

物種數目 No. of Species	灌木 Shrubs	草本及攀援植物 Herbs & Climbing Plants	昆蟲 Insects	其他節肢動物 Other arthropods	其他動物 Other animals	其他生物 Other living organisms
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

6. 深入觀察生物 Comprehensive observation on living organisms

選擇一種動物和一植物，對其形態、適應、行為、與其他生物的關係等進行深入觀察和記錄。

Select one animal species and one plant species, observe and record their morphology, adaptations, behaviour, relations with other living organisms, etc., in details.

深入觀察的動物 Animal observe in details	
深入觀察的植物 Plants observe in details	

7. 生態現象調查 Ecological Phenomenon Survey

尋找以下幾項生態現象的一個實例，用相機拍攝，並在下表簡單描述。

In Ha Fa Shan, look for one real example each of the following ecological phenomena, take photos and make a briefly description on the following table .

偽裝 (身體顏色圖案與環境或物件相似) Camouflage (Body colour pattern very similar to the environment or other objects)	
警戒色 (以鮮艷顏色或對比強烈的顏色作為警戒訊號拒捕食者) Warning colouration (Bright colours or contrasting colours as warning signal to deter predators)	
擬態 (一種生物與另一種生物相似，以獲取己方或雙方的保護) Mimicry (Similarity of one species to another which protects one or both)	
寄生 (一種生物從另一種生物身上攝取營養並損害對方利益) Parasitism (One organism obtain nutrient from the body of another organism at the expense of the other)	
互利共生 (兩種生物形成互相向對方提供利益的關係) Mutualism (Two organisms of different species exist in a relationship in which each individual benefits from the activity of the other)	

8. 問題討論 Discussion

A) 生境地圖 Habitat map

簡單描述在考察地點的生境分佈並說明與該區生物多樣性和生物分佈的關係。

Briefly describe the distribution of habitats in the field study area. Explain the relations with the biodiversity and distribution of living organism in the district.

B) 各種取樣方法的比較 Comparison of different sampling methods

列舉曾應用的每種取樣方法的優點和缺點，利用所得考察數據加以說明。

List the pros and cons of each sampling methods applied. Use the data obtained from the field to explain.

C) 生物多樣性報告 Species diversity report

利用考察所得數據，撰寫簡單的下花山地區生物多樣性報告。

Use data obtained from the field, write a brief report on the species diversity of Ha Fa Shan district.

D) 詳細生物報告 Detail species report

製作某種生物的詳細觀察報告。

Make a detailed observation report on a particular species.

E) 生態現象報告 Ecological phenomenon report

利用考察所得數據，製作涉及一個或多個生態現象的報告。

Use data obtained from the field, make a report on one or more ecological phenomena.