



Discovering Aquatic Plants



水生植物的類別 Types of Aquatic Plants

水生植物泛指生長在水中的植物。水生植物一般可根據生長形態分為四類：
Aquatic plants are plants that adapt to the aquatic environment. They can be broadly divided into four groups according to their morphology:

1 漂浮植物 Floating plants

植株在水面並隨水漂流，體型通常較小，根部不固定在泥土或沒有根部。
The plants are free-floating on water surface and usually small in size. Their roots are either absent or not attached to substrates.

2 沉水植物 Submerged plants

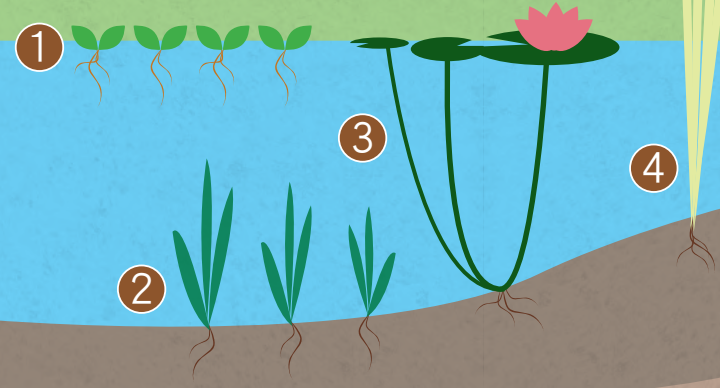
全株植物沉浸在水中，大部分品種扎根於泥土，但部分缺乏根部的品種則會在水中隨處漂流。
The whole plant submerges in water. Most of them root in substrates but some rootless species are free-floating in water.

3 浮葉植物 Floating-leaved plants

植物根部固定在水底土壤中，闊大的浮水葉片通常呈圓形，並由長長的葉柄支撐著。
Their roots anchor in substrates. Their flat leaves are usually circular in shape and supported by a long petiole.

4 挺水植物 Emergent plants

通常生長在淺水區域，基部沉浸在水中，而莖部的其餘部分及繁殖器官則挺出於水面。
They inhabit in shallow water. Basal portions of the plants submerge but the upper parts of stems and the reproductive organs rise above the water surface.



缺乏空氣 Lack of oxygen

生長在水中環境的植物難以吸收足夠的氧氣及二氧化碳。
It is difficult for aquatic plants to absorb sufficient oxygen and carbon dioxide in water.

1 儲存空氣及通氣組織 Air storage and aeration tissue

有些水生植物擁有特有的空氣儲存結構，例如水龍的氣囊狀呼吸根。很多挺水植物都擁有通氣管道，可把空氣帶到水底下的其他部分。

Specialised structures are present in many aquatic plants for air storage (e.g. Water-dragon has developed sac-like breathing roots). Many emergent plants possess air transportation channels that deliver air to underwater organs.



水龍
Water-dragon

2 增加吸收溶解氣體 Increase dissolved gas absorption

沉水植物的表皮較薄，作用是增加溶解氣體的吸收（例如水車前）；而浮葉植物的葉面則有較多氣孔，可提高氣體交換的效率。

Thin epidermis in many submerged plants enhances absorption of dissolved gas (e.g. Water Plantain), while numerous stomata on the leaf surface of floating-leaved plants enhance the efficiency of gaseous exchange.



水車前
Water Plantain

水流沖擊 Strong water current

不斷的水流沖擊會使水生植物難以扎根於泥土，甚至容易被沖走。
It is difficult for aquatic plants to root in substrates under strong water current. They may even be washed away.

1 減低水的阻力 Reduce water resistance

沉水植物（例如苦草）的莖一般較柔軟，葉片呈絲狀；而很多浮葉植物也有柔軟又修長的葉柄。這些結構可減低水流阻力，使植物不易折斷或被連根拔起。

Submerged plants (e.g. Eel Grass) usually have soft and flexible stems with thread-like thin leaves. Many floating-leaved plants have elongated soft petioles. These features can reduce water resistance and prevent them from snapping or being rooted out.



苦草 Eel Grass

2 強壯的根部結構 Strong root system

有些挺水植物會有較強壯的根部，避免被水流沖走。Some emergent plants have strong supporting root systems so as to stay firm against the water current.



苦草 Eel Grass

水生植物對環境的適應 How Aquatic Plants Adapt to the Environment

缺乏陽光 Lack of sunlight

植物需要陽光進行光合作用，以製造食物。陽光較難穿透混濁的水體，因此水生植物難以吸收足夠的陽光。Plants need sunlight for photosynthesis to produce food. Turbid water impairs the penetration of sunlight into the water. Thus, it is harder for aquatic plants to obtain sufficient sunlight.

1 浮水組織 Water buoyancy structures

水生植物會利用儲存空氣的結構或氣室增加自身浮力，讓植物可吸收更多陽光。Air storage structures or air chambers can enhance water buoyancy in aquatic plants, allowing them to absorb more sunlight.



鳳眼藍的海綿狀莖
Spongy stem of Water Hyacinth

2 增加吸收陽光 Maximise sunlight absorption

一些浮葉植物有寬大的葉面，可增加接觸陽光的表面面積。Some floating-leaved plants have large leaves to enlarge their surface area for sunlight absorption.



大葉蓮 Victoria sp.

繁殖困難 Reproduction problems

在水中環境，花粉及種子傳播的成功率和幼苗存活率都較陸生植物為低。In the aquatic environment, the success rate of pollen and seed dispersal as well as the seedling survival rate are lower than that in the terrestrial environment.

1 水力傳播 Water dispersal

有些水生植物的繁殖器官會露出水面。花粉及種子通常很輕且防水，可浮在水面。The reproductive organs of some aquatic plants expose above water. Their light and water-resistant pollen and seeds can float on water.

2 無性繁殖 Asexual reproduction

很多水生植物會利用無性繁殖（例如分裂或長出匍匐莖）以快速擴展族群及增加存活率（例如速生槐葉蘋）。Many aquatic plants reproduce asexually (e.g. splitting or using stolons) for rapid colony expansion and survival in aquatic environment (e.g. Giant Salvinia).



速生槐葉蘋 Giant Salvinia

水生植物的功用 Functions of Aquatic Plants

提供食物 Source of food

水生植物處於食物鏈的基層，是許多動物的食物來源。

At the base of the food chain, aquatic plants are a food source for many animals.



為動物提供棲居之處 Shelter for animals

水生植物在水中形成生存空間，既為水生動物提供棲息和繁殖地方，也是養育幼雛成長之處。

Aquatic plants form a living space in water. They provide aquatic life with habitats and spawning grounds, as well as shelters for nestlings.

提供氧氣 Source of oxygen

沉水植物在光合作用過程中釋放出氧氣，讓水生動物得以呼吸。

Submerged plants release oxygen into water during photosynthesis, providing aquatic life with oxygen for respiration.

水生植物與人類 Aquatic Plants and Us

1 食物 Foods

蓮藕是荷花的地下莖，是日常食物
Lotus root, the rhizomes of Indian Lotus, are a common food



2 日用品及加工製品 Daily utensils and processed products

短葉芒草又稱鹹水草，它的莖部堅韌，曬乾後能用作紮糉子

The tough dried stems of short-leaved Malacca Galingale are used as natural strings for tying rice dumplings



3 點綴園林環境 Landscaping features

睡蓮是常見的觀賞性水生植物
Water Lily is a common ornamental aquatic plant



香港濕地公園的水生植物 Aquatic Plants at Hong Kong Wetland Park

香港濕地公園有多種水生植物，按照其生長習性分布在不同的生境。以下將介紹園內數個水生植物生境區，讓大家一同欣賞四季不同的水生植物。

Many aquatic plants grow in the habitats of the Hong Kong Wetland Park. The following are highlights of these aquatic plant habitat zones. Come and discover the diverse beauty of aquatic plants in different seasons of the year.

觀賞水生植物地點：
Aquatic Plant Observation Sites:



A 溪畔漫遊徑 Stream Walk



B 生態探索區 Life Zone



C 濕地工作間 Wetlands at Work



D 點水池 Dipping Pond

觀賞須知 Observation Guidelines

切勿採摘或攀折植物
Do not pick or damage the plants



以照片或筆記作記錄
Record the plants by taking photos or making notes



請勿騷擾任何動物
Do not disturb the animals



小心地面濕滑
Be aware of slippery floor



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A 溪畔漫遊徑 Stream Walk

1 風車草 Umbrella Plant

Cyperus involucratus 莎草科 Cyperaceae



特徵：莖頂上有多塊葉狀苞片，排列成螺旋形，就像風車一樣。真正的葉片已經退化成鞘葉，長於基部。

Features: Its leaf-like bracts are arranged spirally at the tip of the stem, resembling a windmill. The true leaves are degenerated into sheath leaves at its base.



2 燈心草 Common Rush

Juncus effusus 燈心草科 Juncaceae



特徵：燈心草有修長的莖部。莖部綠色表層內是白色的海綿狀組織，往日被用作燃點油燈的燈芯。

Features: Its stems are slender. Inside the outer green sheath of the stem, there are white spongy tissues that were used as wicks for oil lamps in the old days.

3 茭苳 Malacea Galingale

Cyperus malaccensis 莎草科 Cyperaceae



特徵：茭苳擁有堅韌而帶稜角的莖，莖頂長有放射狀的花序。人們會用曬乾的茭苳（俗稱鹹水草）作為繩子捆綁物品和作編織之用。

Features: Malacea Galingale has a rigid and angular stem with radial inflorescence at the tip. Dried stems of the plant are used as natural strings and weaving threads.



C 點水池及濕地工作間 Dipping Pond and Wetlands at Work

1 荸薺 / 馬蹄 Water Chestnut

Eleocharis dulcis 莎草科 Cyperaceae



特徵：荸薺有綠色管狀的莖部；無葉片，只在基部有葉鞘。埋在泥中的球狀莖，就是食用的馬蹄。

Features: It has a green tubular stem. Leaves are absent with only leaf sheaths at its base. The edible water chestnut is the globular corm of the plant.



馬蹄球狀莖 Corm of Water Chestnut

2 稻 Rice

Oryza sativa 禾本科 Poaceae



特徵：稻的種子含豐富的蛋白質、澱粉質、維他命等，是人類的主要食糧。另外，不少雀鳥也喜歡在稻田流連，進食初熟的穀粒。

Features: Its seeds are rich in protein, starch, vitamin and other nutrients. Rice is a staple food for humans. Birds also like to forage in paddy fields when the rice grains ripen.



3 半邊蓮 Chinese Lobelia

Lobelia chinensis 桔梗科 Campanulaceae



特徵：半邊蓮嬌小的身形令它易受忽略，但只要仔細觀察，就會發現它的花朵形狀非常奇特，像一朵沒了半邊的蓮花。它除了外型獨特，亦是一種中草藥。

Features: The dainty Chinese Lobelia may be easily neglected due to its small size. Closer observation reveals its peculiarly shaped flower, which looks like a halved lotus. It is a kind of Chinese medicinal herb.



4 蓮 / 荷花 Indian Lotus

Nelumbo nucifera 蓮科 Nelumbonaceae



特徵：荷花有圓形的挺水葉，葉面披有白色絨毛；花形美麗，觀賞價值甚高；莖部和種子皆可食用，亦即蓮藕及蓮子。

Features: It has emergent round leaves with white fine hair on the surface. The spectacular flowers make it a plant of significant ornamental value. Both the seeds and underground stems are edible, i.e. lotus rhizomes and lotus seeds.



5 薑花 Ginger Lily

Hedychium coronarium 薑科 Zingiberaceae



特徵：薑花帶有像蝴蝶的白色花，是很受歡迎的觀賞植物。薑花可用作提煉香薰油。

Features: With beautiful butterfly-like white flowers, Ginger Lily is a very popular ornamental plant. Essential oil can be extracted from Ginger Lily.



4 芋 Taro

Colocasia esculenta 天南星科 Araceae



特徵：芋是擁有心形葉的食用植物，植物的地下莖是食用的芋頭。

Features: Taro is a food plant with heart-shaped leaves. Its underground stem is a common crop.

6 王蓮屬 Victoria

Victoria sp. 睡蓮科 Nymphaeaceae



特徵：王蓮屬，俗稱大王蓮，是睡蓮科中的一屬。它們的葉片巨大，似一個圓型的盤子浮在水面。它的葉底佈滿細小的刺，避免成為水生動物的「美食」。

Features: *Victoria* sp. belongs to the Nymphaeaceae family. Its leaves are huge in size like a gigantic circular plate floating on water. The tiny spines on the underside of their leaves act as a protection against the herbivorous aquatic animals.

7 蘆葦 Common Reedgrass

Phragmites australis 禾本科 Poaceae



特徵：蘆葦常大片的生長於淡水沼澤，為不少雀鳥提供棲息地，它的根部能有效去除水中污染物。

Features: Common Reedgrass is usually growing in marshes in extensive colonies that provides valuable habitats for many birds. Its roots can help to remove the pollutants from water effectively.

5 睡蓮屬 Water Lily

Nymphaea spp. 睡蓮科 Nymphaeaceae



特徵：睡蓮是常見的園藝植物，而人們常把睡蓮與荷花混淆。睡蓮的葉片浮在水面，邊緣有缺口，但荷花的葉片挺出水面，邊緣完整。

Features: Water Lily is a famous ornamental plant, but it is usually confused with Indian Lotus. Water Lily has floating leaves with incomplete rim, while Indian Lotus has emergent leaves with complete rim.



6 蕹菜 Water Spinach

Ipomoea aquatica 旋花科 Convolvulaceae



特徵：蕹菜是香港農民常種植的蔬菜，有白色，呈喇叭狀的花。因為莖部中空，所以又名通菜或空心菜。

Features: It is an edible plant widely grown in Hong Kong, and its flowers are white and trumpet-shaped. Given its hollow stem, it is also called "Hollow Green" or "Water Convolvulus".



7 慈姑 Chinese Arrow-Head

Sagittaria trifolia subsp. *Leucopetala*

澤瀉科 Alismataceae



特徵：慈姑的英文名 "Chinese Arrow-head" 意思是葉的形狀如箭頭一般。慈姑生長在淺水泥地中，高度可達半米多，是一種能同時耐寒及耐熱的植物。慈姑的根狀莖生長於泥土下，含有豐富澱粉質，是農曆新年的應節食物。

Features: Chinese Arrow-head grows in muddy shore with shallow water and can be as tall as half meter. Its name comes from the arrow-shaped leaves. This species is both cold and heat-resistant. The root tuber of Chinese Arrow-head, which grows just below the surface of the mud, is edible with starchy texture. It is particularly popular during Chinese New Year.



B 生態探索區 Life Zone

1 三白草 Lizard's Tail

Saururus chinensis 三白草科 Saururaceae



特徵：三白草擁有兩片白色葉子，白色穗狀的花序及白色的地下莖，故稱為「三白草」。

具消炎的藥用功效。

Features: Known as "Three-white Grass" in Chinese, it is so named for its two white leaves, a white spike and a white underground stem. It is a herbal medicine for inflammation.



2 假馬齒莧 Water Hyssop

Bacopa monnieri 玄參科 Scrophulariaceae



特徵：假馬齒莧常見於淺水區域。這種植物具有匍匐莖，以及亮綠色和肉質化的無柄小葉片。花朵由五瓣白色或淡紫色的花瓣組成。

Features: The plant is usually found in shallow water. It has creeping stems and bright green leaves which are fleshy and sessile. The flowers have five white or pale purple petals.



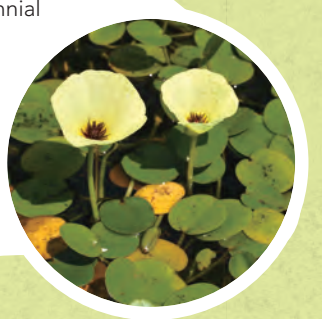
3 水金英 Water Poppy

Hydrocleys nymphoides 澤瀉科 Alismataceae



特徵：水金英是多年生浮葉植物。夏季時淡黃色的花鋪滿池塘，極具觀賞價值。在浮水的葉片上還不時可以找到正在歇息的蜻蜓。

Features: Water Poppy is a perennial aquatic plant with floating leaves. Creamy-yellow flowers bloom during summer and spread across the surface of pond. You may also find dragonflies resting on its floating leaves.



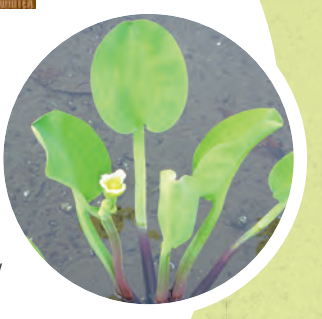
4 黃花蘭 Yellow Velvetleaf

Limncharis flava 黃花蘭科 Limncharitaceae



特徵：黃花蘭又名黃花絨葉草，它們生長於淺水塘中，葉片和花都挺水而生。葉柄質厚，嫩枝和葉在東南亞可作食用。

Features: Yellow Velvetleaf is a type of emergent plant that prefer growing in shallow ponds. Its leaves are erected and the stems are thick and hollow. This plant is recognized as an important vegetable in Southeast Asia.



5 圓葉節節菜 Round-leaved Rotala

Rotala rotundifolia 千屈菜科 Lythraceae



特徵：圓葉節節菜是小型的草本植物，常在水邊聚成一大群。有像中式鈕扣般的圓葉，一層層在莖的兩邊對生。春天時，枝頂開滿一串串紫紅色的小花。

Features: It is a small herbaceous plant and usually grows in colonies along water margins. It has round leaves resembling Chinese buttons that grow in layers along opposite sides of the stem. The plant flowers in spring with small purplish-red flowers growing in clusters at the top of the stem.



6 粉綠狐尾藻

Myriophyllum aquaticum 小二仙草科 Haloragaceae



特徵：粉綠狐尾藻是觀賞性的水生植物，葉片分裂得很細緻，就像鸚鵡的羽毛一樣。這種植物能快速生長，並且長得十分緊密茂盛。

Features: It is an ornamental plant with delicately divided leaves that resemble parrot feathers. It is a fast growing plant which can form a dense clump on the water surface rapidly.



7 筆管草 Frail Horsetail

Equisetum debile 木賊科 Equisetaceae



特徵：筆管草直立的莖部中空，並且有明顯的分節，環狀小葉融合為一節鞘。莖頂有一個球形組織，就是用作繁殖的孢子囊穗。

Features: It has an erect, hollow and distinctly jointed stem, and its small ring-shaped connate leaves form a node. There is a globular part at the tip of the stem. It is a spore producing structure called strobilus.



圖例 Legend



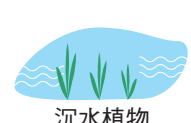
挺水植物
Emergent plant



浮葉植物
Floating-leaved plant



漂浮植物
Floating plant



沉水植物
Submerged plant

最佳觀賞季節
Best season(s) for watching

