維多利亞港浮游生物圖鑑

Guide to the plankton in Victoria Harbour

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Ho Koon Nature Education *cum* Astronomical Centre
(Sponsored by Sik Sik Yuen)

HONG KONG maritime museum 香港海事博物館

浮游生物是游泳能力較弱、主要隨水流漂移的生物。有些甚至能夠自主移動並調整方向。主要分成**浮游植物**（自養生物）和**浮游動物**（異養生物）。**浮游植物**具有色素、以光合作用獲取能量，而**浮游動物**則攝食**浮游植物**。**浮游動物**可再分為全生性和暫時性，前者整個生命週期浮游在水體中，而後者幼體則利用浮游階段作擴散，成年後依附在海岸或海床（如蟹、龍蝦和藤壺），或當漸長至成年階段，發展出足夠游動能力（如魚和章魚），成為自游生物。根據香港漁農自然護理署的數據，本港浮游植物物種或超過800種，生物多樣性極高，這與多樣的海洋生境有關。而人類對浮游動物的認識卻相對有限，香港有多少種海洋浮游動物，似乎仍是一個謎！這份圖鑑收錄了維多利亞港常見的浮游生物，讓我們來欣賞一下，維多利亞港浮游生物之美！

Plankton are organisms with weak swimming ability that mainly drift with water movement, though some can move and orientate their body. Mainly divided into **phytoplankton**, which contain pigments and obtain energy through photosynthesis (autotrophs), and **zooplankton**, which feed on other **phytoplankton** (heterotrophs). **Zooplankton** can further be classified into **holoplankton** and **meroplankton**. The former remain planktonic throughout their entire life cycle, while the latter have a planktonic larval stage for dispersal but become benthic (such as crabs, lobsters, and barnacles) that live on the seabed as adults or gain sufficient swimming ability by their juvenile and adult stages to become nektonic (such as fish and squid). According to the Agriculture, Fisheries and Conservation Department, the number of phytoplankton species in Hong Kong may exceed 800, indicating extremely high biodiversity. This might be related to the diverse marine habitats in Hong Kong. Our understanding of zooplankton remains limited. The number of marine **zooplankton** species in Hong Kong is still a mystery! This guide features the common plankton found in Victoria Harbour. Let's appreciate the beauty of plankton in Victoria Harbour!

浮游植物 Phytoplankton

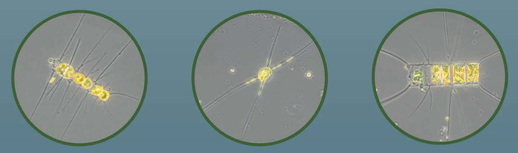
淡色藻門 Phylum Ochrophyta

硅藻 Diatoms

硅質細胞壁的單細胞生物、色素體黃褐色。單獨生活或形成鏈狀、帶狀、扇形等的群體。

Unicellular organisms with siliceous cell walls, yellowish brown chloroplasts. Solitary or in colonies forming chains, ribbons or fan shapes.

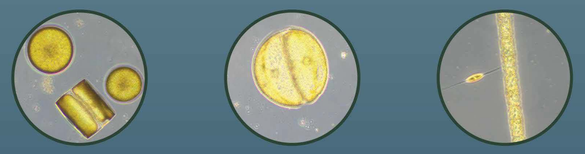
角毛藻屬 Genus *Chaetoceros*



圓篩藻屬 Genus *Coscinodiscus*

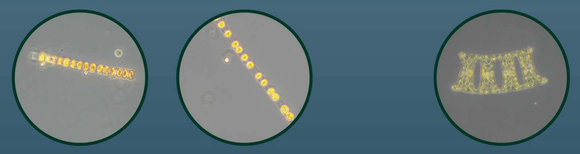
掌狀藻屬 Genus *Palmerina*

筒柱藻屬 Genus *Cylindrotheca*



骨條藻屬 Genus *Skeletonema*

彎角藻屬 Genus *Eucampia*



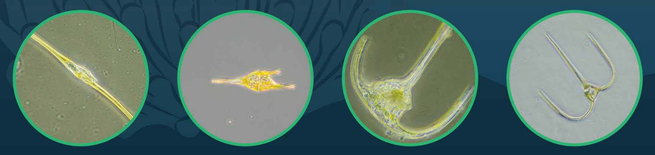
黏孢子門 Phylum Myzozoa

甲藻 Dinoflagellates

游動的單細胞生物，具細胞核和兩條鞭毛。大多呈球形或橢圓形，由5微米到2毫米之間。

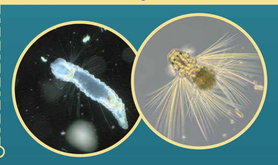
Unicellular organisms that are motile and solitary, a nucleus and two flagella, mostly spherical or elliptical, ranging in size from 5 to 2000 µm.

角甲藻科 Family Ceratiaceae



浮游動物 Zooplankton

環節動物門 Phylum Annelida



多毛綱 Polychaeta worm

身體呈環節形態，具剛毛和複雜眼睛，也有纖毛帶會不斷轉動。

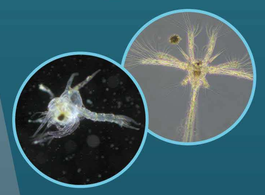
Segmented body, with bristle and complex eyes, ciliary bands frequently rotate.

節肢動物門 Phylum Arthropoda

端足目 Amphipoda

相對較大（>5毫米），左右扁平，常有大眼睛。

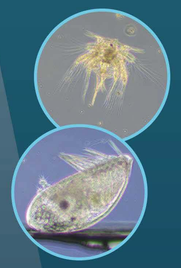
Relatively large (>5mm), laterally compressed, often with large eyes.



十足目（蝦、蟹等） Decapoda (Shrimps, crabs, etc.)

幼體相對較大 (>3毫米)，一般擁有明顯的頭和尾及大眼睛，具有很多有節的足肢。

Decapoda larvae relatively large (>3mm), normally have distinct head and tail with large eyes, many segmented appendages.



蔓足下綱（藤壺） Cirripedia (Barnacles)

兩個浮游幼體階段：

無節幼體：細分為六個階段。外形半頭盔狀，背甲左右各有突刺。

腺介幼體：由兩片硬殼包覆成貝殼狀。有明顯眼點及六對足狀泳肢。

Two pelagic larval stages:
Nauplius: further divided into six stages. Body helmet-shaped, with two lateral spines.
Cyprid: A clam-like hard case with an obvious eye spot and six pairs of thoracic limbs.

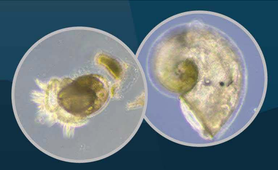
橈足綱 Copepoda

地球上數量最多的多細胞生物，超過1萬種，自由生活或寄生性。長度0.2-10毫米。

外貌特徵是身體短而筒形，圓頭。

Most abundant multicellular organisms on the planet, with over 10,000 species of free-living and parasitic copepods. 0.2-10mm in length. Short, cylindrical body, with a rounded head.

軟體動物門 Phylum Mollusca



全生性浮游或暫時性浮游，有些具有纖毛帶，會不停轉動。有些像迷你版的貝類或腹足類。

Holoplanktonic and meroplanktonic gastropods, some with ciliary bands, moving non-stop. Some look like miniature bivalves and snails.

脊索動物門 Phylum Chordata

海鞘綱 Ascidiacea

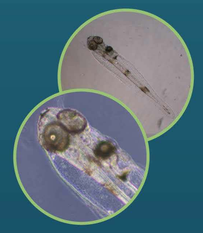
幼體像蝌蚪，長尾巴為脊索。頭兩邊有附着的乳突，供成年後粘附在硬物上。

The larvae form looks like tadpoles, with a notochord that looks like a long tail. Adhesive papillae at the head is for attaching to hard substratum in the adult form.

尾海鞘綱 Appendicularia

明顯而量多的全生性浮游動物。與海鞘綱幼體最大分別是尾部與軀幹（頭部）成90度相連。

Appendicularians (also known as larvaceans) are conspicuous and abundant holoplankton. Can be differentiated from the Ascidiacea by the tail connecting at 90° to the trunk (head end).

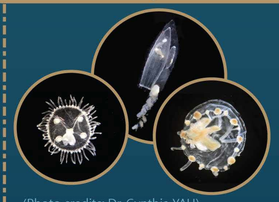


輻鰭魚綱 Actinopterygii

魚卵通常圓形，比其他浮游生物的卵大（~1毫米）。幼體長條形，有明顯的眼睛、顎和鰭。

Fish eggs usually spherical, and larger (~1mm) than other planktonic eggs. Elongated larvae with distinctive eyes, jaws and fins.

刺胞動物門 Phylum Cnidaria



(Photo credits: Dr. Cynthia YAU)

浮動型的水螅一般三角或者方形，有些具有觸手。很多像水母（鐘形的）多為幼體，難以辨別至種或屬。

Hydrozoan cnidarians often triangular or squarish in shape and some with tentacles. Many bell-shaped cnidarians are juvenile, hard to identify to species or genus level.

棘皮動物門 Phylum Echinodermata

(Photo credits: Dr. Cynthia YAU)

只生存於海洋環境，所有浮游個體都是暫時性的幼體。幼體左右對稱，表面會有擺動的纖毛。

Echinoderms are only found in marine environments. All echinoderms found in the planktons are meroplanktonic. Its larva is bilaterally symmetrical. The surface of the larva has ciliated locomotory bands.