Coral Reefs Mapping Drone

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Hong Kong Corals Database

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Corals database

http://www.coralsoftheworld.org/page/home/

https://www.sealifebase.se/search.php

https://www.afcd.gov.hk/english/conservation/con_mar/con_mar_cor/con_mar_cor_cor/con_mar_cor_cor3_2_3.html

https://www.comp.hkbu.edu.hk/~db/CoralTBase/#&panel1-1&panel2-5

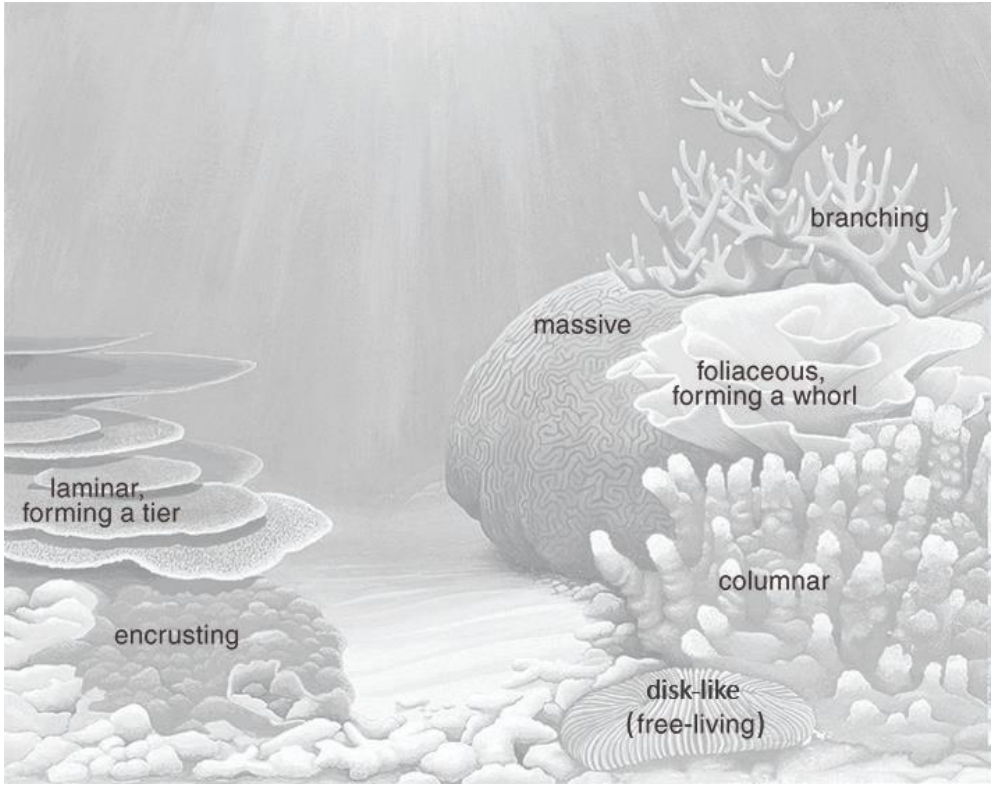
Corals can be tricky to identify for a variety of reasons:

- High number of species (each genus can have up to 80 species).
- High similarity among different species.
- Corals look different when the polyps are out compared to when they are inside the skeleton.
- The same species can grow in different ways depending on the surrounding and water quality.

Being able to recognize the genus is already a lot and to do so we can look at the:

- Growth form.
- Corallites (and if they share the same wall or not).
- Colour.

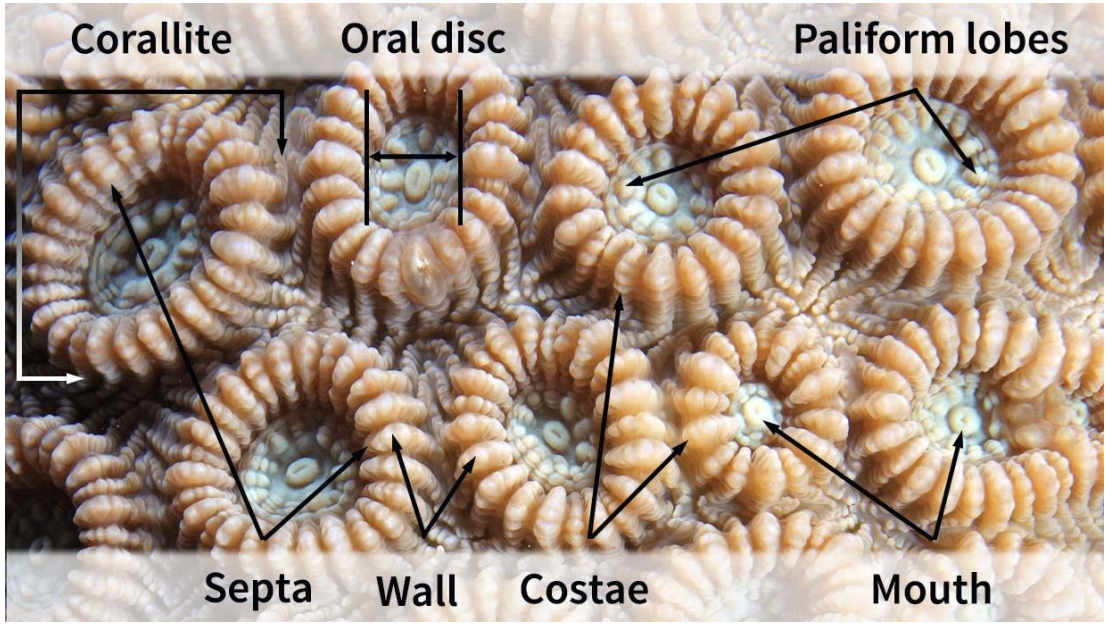
Corals growth form:
encrusting (adhering as a thin veneer to the substrate); **branching** (forming branches); **arborescent** (tree-like); **columnar** (forming columns); **laminar** (plate-like - sometimes forming tiers).'massive' does not necessarily mean large but means solid, often hemispherical to spherical.



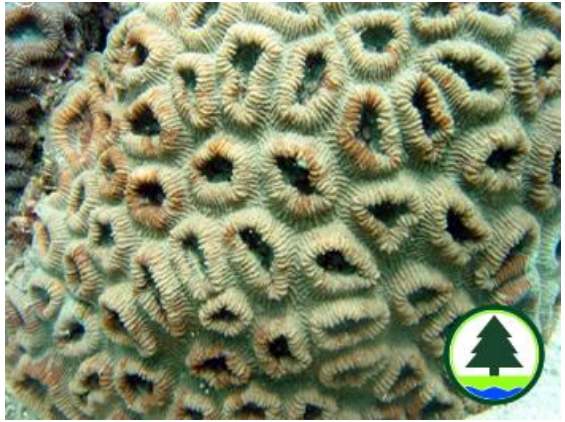
Massive or Submassive	*Platygyra*, *Favia*, *Favites*, *Cyphastrea*, *Plesiastrea*, *Porites*
Columnar	*Goniopora*
Tabular	*Acropora*
Branching	*Acropora*
Encrusting	*Hydnophora*, *Leptastrea*, *Montipora*
Foliaceous / Laminar	*Pavona*, *Montipora*, *Lithophyllon*, *Echinophyllia*

AFCD, HK

Corallite : the skeleton of an individual polyp, it’s a tube.



Corallites that share the same wall



Corallites that don’t share the same wall

Common genera in Hong Kong

Acropora (Elkhorn coral)

Favia (Moon coral)

Montipora (Velvet coral)

Favites (Pineapple coral)

Galaxea (Starbust coral)

Pavona (Leaf coral)

Platygyra (Brain coral)

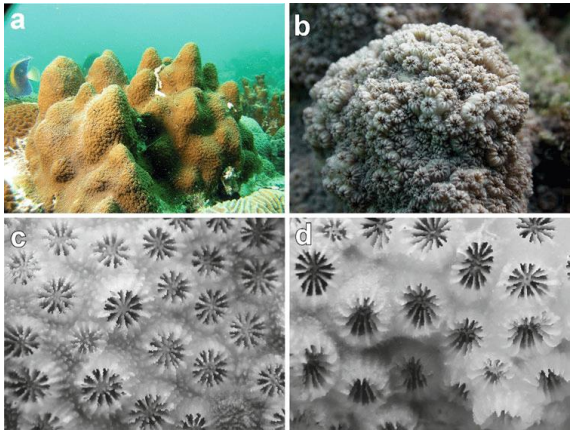
Turbinaria (Pagoda coral)

Goniopora (Flowerpot coral, the polyps look like tiny flowers and they are always out)

Leptastrea

Porites (Pore or boulder coral)

Cyphastrea

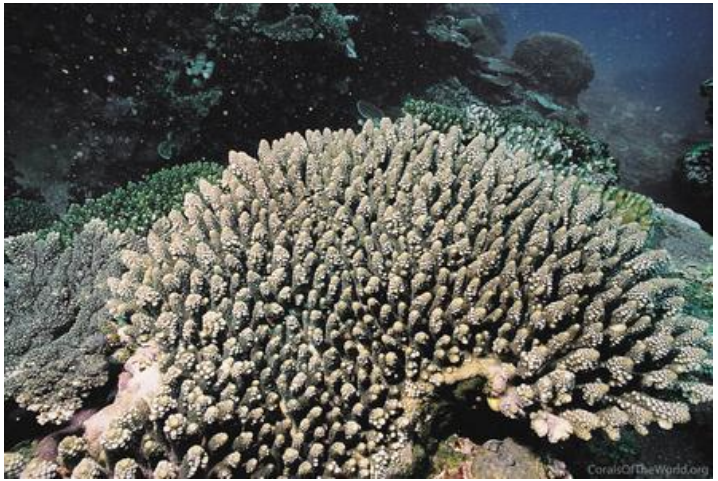


Family Acroporidae

Genus : Acropora

Species : *Acropora digitifera*

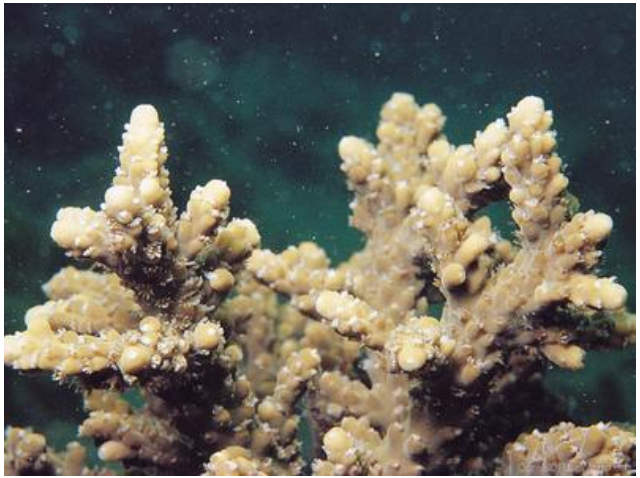
Branching growth form. Branches are thick and finger-like, typically green in colour with orange or white branch tips. Not commmon in HK, Records made for Hoi Ha Wan, Yan Chau Tong and highest occurrence is recorded from Tung Ping Chau Marine Park. AFCD, HK.



Species: *Acropora pruinosa*

Branching colonies either bush or plate shaped, bushy colonies are recorded from shallow, sheltered coral habitats. Plate-like forms are recorded from deeper coral habitats. Branches are thin and brown with tubular, white tips. Bushy growth forms can exhibit irregular branching pattern.

Recorded was made from Hoi Ha Wan, Tung Ping Chau and Yan Chau Tong Marine Parks. AFCD, Hong Kong.



Genus Montipora

Species: *Montipora peltiformis*

Colonies are submassive, laminar and very delicate.The coral sometimes has a lighter colour growing edge which appears pink or purple. Shallow water colonies form extensive horizontal plates typically dominated by nodular upgrowth. Deep water colonies form large plates with very few upgrowth (second image).

Common in HK. This coral is recorded in the northeastern Marine Parks of Tung Ping Chau, and Hoi Ha Wan.

(I found many colonies in Sai Kung close to Tso Wu Hang Pier).

Family Oculiinidae

Genus Galaxea

Species *Galaxea fascicularis* (Galaxy coral)

Usually massive and can be encrusting. Its colour ranges from distinct bright green to dull green**.** Not common in HK, found in Sai Kung waters.

Family Faviidae

Genus Favia

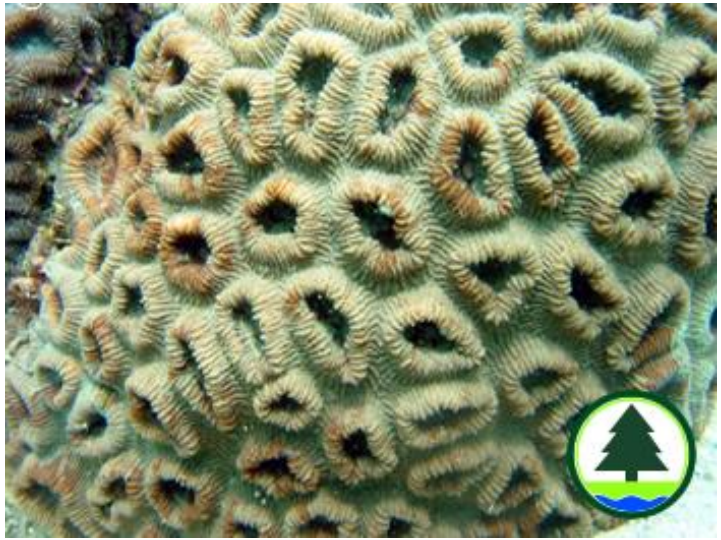
Species : Favia rotumana

Coral colonies are submassive to massive. Corallites are closely packed together, and they share the same wall. Their shapes are irregular. Common in HK. AFCD HK.

Species : *Favia maritima*

Colonies are massive, and usually small. Corallites are highly exert (raised up from the colony surface), which is a very distinctive feature of this species. Corallites are not closely packed, they don't share the same wall and they are usually circular. Colour light to dark brown.

Common, AFCD, HK.

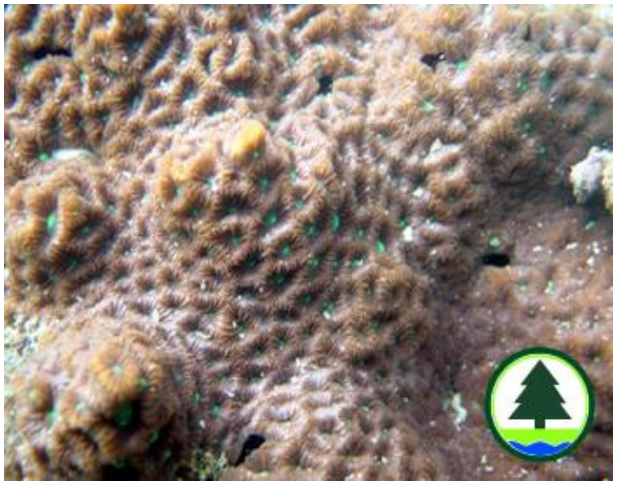


Genus Favites

Species: *Favites pentagona* (Honeycomb coral)

Colonies growth forms range from massive, submassive to encrusting and usually small. Corallite walls are thin and angular. Walls are shared between corallites.The typical colouration is brown walls with bright green corallite centres, however, there are numerous variations such as uniform golden brown and plae grey.
Neighbouring colonies can exhibit totally different shapes and colour.

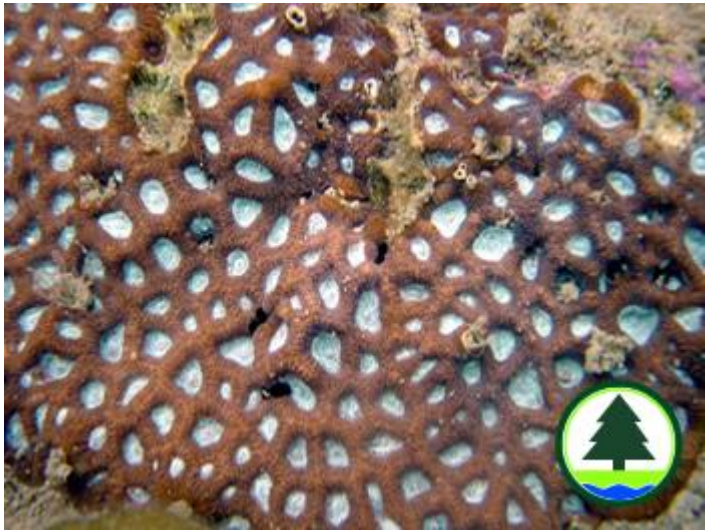
Very common, AFCD, HK.



Species : *Favites abdita* (Large star coral)

Colonies are submassive to encrusting, can have either a simple bumpy appearance or contain contorted upright growths that look like mini-turrets. Colouration can vary from light to dark brown walls with bright green or white corallite centres. The walls are also shared between corallites.

Very common, AFCD, HK.



Species: *Favites flexuosa* (Pineapple coral)

Colonies are typically large, hemispherical massive, sometimes also small submassive. Corallites are irregular, oval shaped and deep. Colouration consists of various shades of brown.

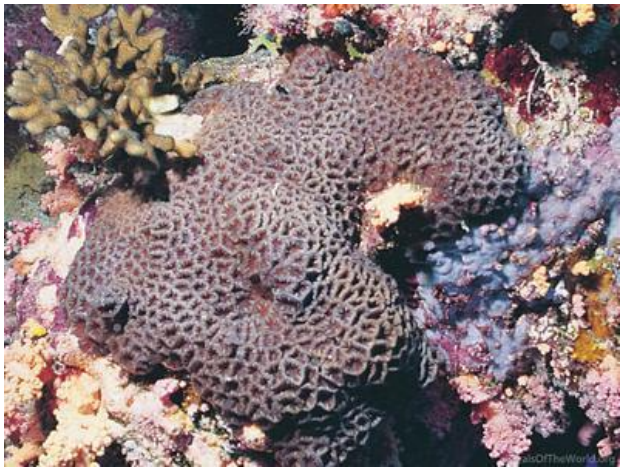
Very common, especially in the northeastern waters, Tung Ping Chau, Crescent Island and Hoi Ha Wan. AFCD, HK.

Genus Platygyra

Species: *Platygyra carnosus*

***Platygyra* corals are Hong Kong's flagship species**. *P. carnosus* colonies are massive, reaching heights of >1 m. This species is known as a fleshy coral with short valleys. Colouration varies from a distinctive red-brick, uniform brown to pale grey with mottled red/brown tissue. Upper surfaces of colonies often form rounded turrets m**a**king the colonies appearing like miniature castles.

Very common, main component of coral communities in the northeastern waters of Hong Kong. Well-represented in Hoi Ha Wan and Tung Ping Chau Marine Parks , also present in Yan Chau Tong Marine Park. AFCD, HK.



Genus Leptastrea

Species: *Leptastrea purpurea*

Colonies are usually encrusting but may become submassive.This is a distinctive and common coral **recognizable through its colouration.** Colonies are brownish purple with white corallite centres and the brown polyp tentacles are often extended during th day. Very common, present in the three marine parks of Hoi Ha Wan, Yan Chau Tong and Tung Ping Chau. AFCD, HK

Genus: Cyphastrea

Species: *Cyphastrea serailia*

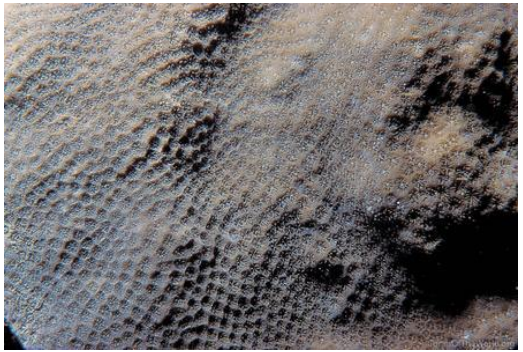
Colonies are massive, submassive or encrusting. Colonies can have a smooth or bumpy appearance.Corallites are small, conical and give the impression of miniature volcanoes. This species exhibits a wide range of colour variations from dark to light brown, green or grey. Very common, present in the three marine parks of Hoi Ha Wan, Yan Chau Tong and Tung Ping Chau. AFCD, HK

Family Poritidae

Genus Porites

Species*: Porites lutea*

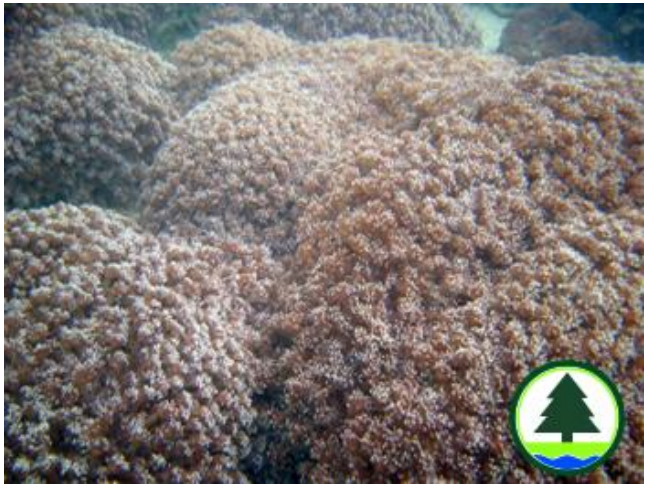
They have massive growth form and can reach large sizes. This form is typical of the shallow, sheltered coral habitat of the marine parks. The corallites of all *Porites* species are small. Massive colonies typically have lobed or undulating surfaces in the shallows. Colour is generally uniform throughout the colony and ranges from dark to light brown and various shades of grey or green. Very common, well-represented in Hoi Ha Wan, Yan Chau Tong and Tung Ping Chau Marine Parks.

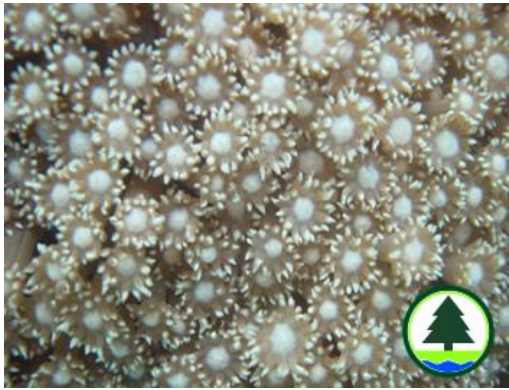


Genus Goniopora

Species : *Goniopora columna* (Anemone coral)

The colonies are columnar with club-shaped ends. This is a distinctive coral as it has long, **expanded polyps that are extended day and night.** *G.columna* is often recorded on sandy seabed in the deeper section of coral communities. Polyps are brown with white, broad centres and often the tentacle tips are white. All Goniopora species have 24 tentacles per polyp. Abundant, AFCD, HK.



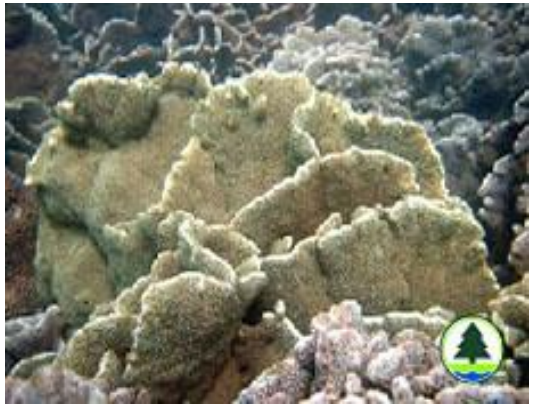


Family Agariciidae

Genus Pavona

Species: *Pavona decussata* (Cactus coral)

Coral colony consists of plates, forming small individual colonies to large fused continuous beds. The colour of the colonies ranges from brown to yellowish brown to green. **Corallites are small, and deeply seated**, distributed on both sides of the fronds. Common species in HK. Recorded in Tung Ping Chau and Hoi Ha Wan Marine Parks and fringing communities in Port Shelter in Sai Kung. AFCD,HK



Family Fungiidae

Genus Lithophyllon

Species : *Lithophyllon undulatum* (Stone leaf coral)

Coral colonies form encrusting and overlapping plates. Corallites are distinctly white in colour and are distributed throughout the plates. However, no clear wall is found around the corallite. Colonies usually appear brown in colour and have lighter growing margins.

Family Merulinidae

Genus : Hydnophora

Species: *Hydnophora exesa*

Colonies are submassive to encrusting. Coral surface is characterized with uneven elaborations, giving the colony a spiny appearance. Colour varies from creamy, pink to purple, and sometimes grey or green. Tentacles are extended during the day, and are surrounded by small mound structures on the coral surfaces.

Family Dendrophylliidae

Genus : Turbinaria

Species: *Turbinaria peltata* (Pagoda coral)

Corals are in laminar form, composed of several plates stacking onto each other. Some colonies have only a single plate with undulating margins, giving rise to a bowl shape growth form. The plates are fairly thick and large, polyps are well separated and are extended during the day. Sometimes these plate-like colonies have columnar upright growth. Colours range from pink to purple. Common in HK. AFCD.