

An Introductory Guide to Coral Taxonomy



2mm

CoralsOfTheWorld.org

Euphyllia *baliensis* showing calice opening. INDONESIA. Photograph: Emre Turak. Reprinted with permission^[1].

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/euphyllia-baliensis/

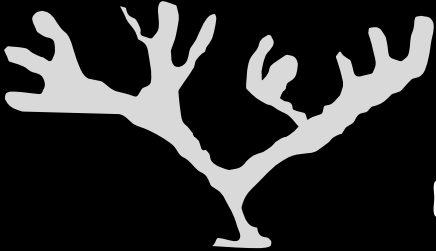
Hard Coral SHAPES

Scleractinian Growth Forms

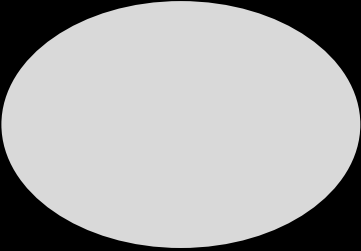
Name: _____

Date: _____

Activity: Fill in the blanks with the following descriptive words....
 Laminar Columnar Massive Encrusting Branching Foliaceous Free-living



BRANCHING coral is _____ which means it forms branches



BOULDER coral is _____ which means it is solid-like and mound-shaped

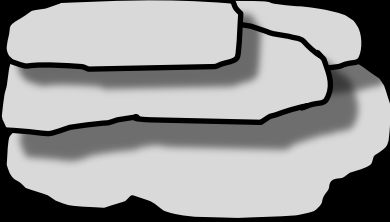




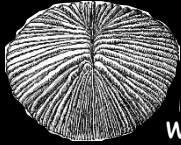
PLATE coral is _____ which means it is plate-like




Encrusting coral is _____ which means it has a flat crust with the same shape as the underlying reef



Columnar coral is _____ which means it forms thick columns (with no secondary branches)



Solitary corals are _____ which means they are NOT attached to the substrate



Foliose coral is _____ which means it forms shapes similar to foliage (i.e. a whorl, scroll, tier or vase)

The prefix 'sub' is sometimes attached to descriptive words. It means 'less than' or 'not quite'. For example, *submassive*.

Name Game

Common Hard Corals

Phylum: Cnidaria Class: Anthozoa Order: Scleractinia

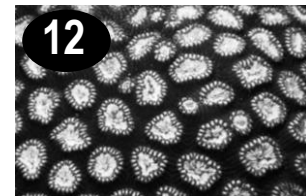
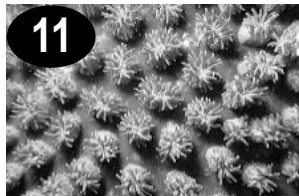
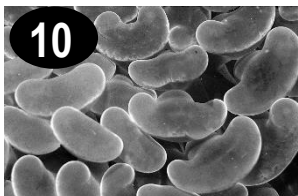
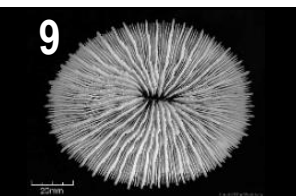
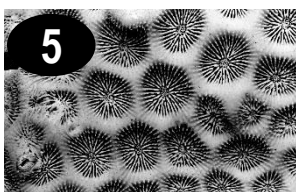
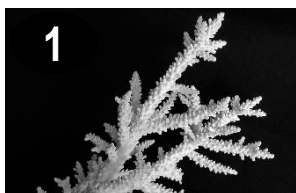
Name:

Date:

Challenge! Try to match the Common Name to the Number on the picture^[1]

When you think you have finished, check your answers using www.coralsoftheworld.org/ (search the Genus on 'Species Factsheets')

Common Name	Genus species	Growth Form	Number
Branching coral	<i>Acropora parahemprichii</i>	Branching	1
Plate coral	<i>Montipora foliosa</i>	Laminar	
Cauliflower Coral	<i>Pocillopora meandrina</i>	Branching	
Helmet coral	<i>Porites lutea</i>	Massive	
Larger star coral	<i>Favites abdita</i>	Massive	
Lesser valley coral	<i>Platygyra acuta</i>	Massive	
Pineapple coral	<i>Favia leptophylla</i>	Massive	
Lobed brain coral	<i>Lobophyllia hemprichii</i>	Massive	
Galaxy coral	<i>Galaxea astreata</i>	Massive	
Anchor coral	<i>Euphyllia ancora</i>	Massive	
Mushroom coral	<i>Fungia corona</i>	Solitary	
Cactus coral	<i>Pavona cactus</i>	Foliaceous	



Note: There are now several classifications for Scleractinian corals. Frequently cited, and used in this guide, is Veron *et al.* (2016)^[1]. However, keep in mind that Wikipedia and the World Register of Marine Species (WORMS) may cite the names of scleractinian corals a little differently to Veron *et al.* (2016). For example, in Wikipedia, many Indo-Pacific corals in families Pectiniidae, Faviidae and Mussidae have been moved to families Merulinidae and Lobophyllidae. As a result, Pectiniidae was deleted, Mussidae now only has Atlantic species, Lobophyllidae is new (2009), and Merulinidae just got bigger. Thus, well-known species (such as *Goniastrea apsera*) might have a different name^{[2][3]}.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coral of the World*. Accessed 02 May 2019. http://www.coralsoftheworld.org/species_factsheets/

^[2] Huang D., Arrigoni, R., Benzoni, F., Fukami, H., Knowlton, N., Smith, N.D., Stolarski, J., Chou, L.M. and Budd, A.F. (2016). Taxonomic classification of the reef coral family Lobophyllidae (Cnidaria: Anthozoa: Scleractinia). *Zoological Journal of the Linnean Society*. Vol. 178 (3), p.436-481. DOI: 10.1111/zoj.12391

^[3] Pichon, M. (2014). *Recent changes in Scleractinian coral nomenclature and classification: a practical guide for coral and reef ecologists*. James Cook University. Accessed 10 November 2018. <http://www.mideastcrs.org/mcrs/sites/mcrs/files/documents/Scleractinian%20nomenclature%20update%20%28Michel%20Pichon%202014%29.pdf>

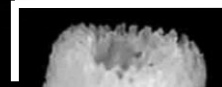
AXIAL and RADIAL CORALLITES

50mm



Figure 1: *Acropora muricata* showing branching pattern. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1]

Axial corallite (on the tip of the branch)



Radial corallites (on the side of the branch)

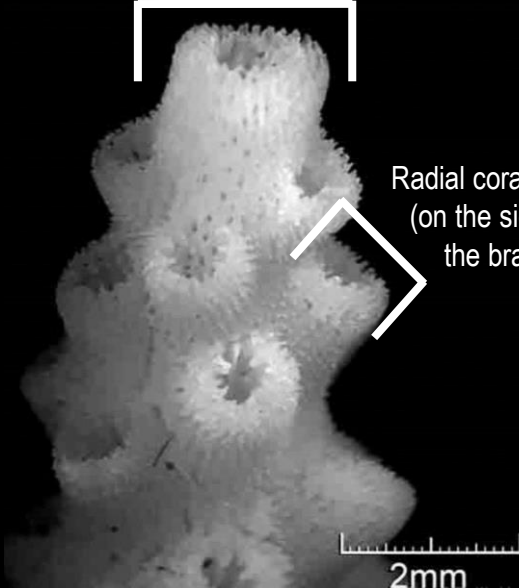


Figure 2: *Acropora muricata* showing axial corallite. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1]

Is that BRANCHING coral ACROPORA?

If you are looking at a *lot* of branching coral, there is a pretty good chance it comes from the Genus *Acropora*. But, if you want to be sure, simply look at the very tip of a branch. If there is a single corallite (the 'cup' that holds the polyp) at the very tip of the branch, then it is *Acropora*!!! This corallite is called the **axial corallite**. It is the starting point of every branch. As it grows, its corallite 'cup' grows into a 'tube' and forms the central axis of the branch. All the other *Acropora* corallites are called **radial corallites**. Radial corallites grow around the sides of branches. Radial corallites come in a range of shapes that are used to help identify each species (Figure 2).

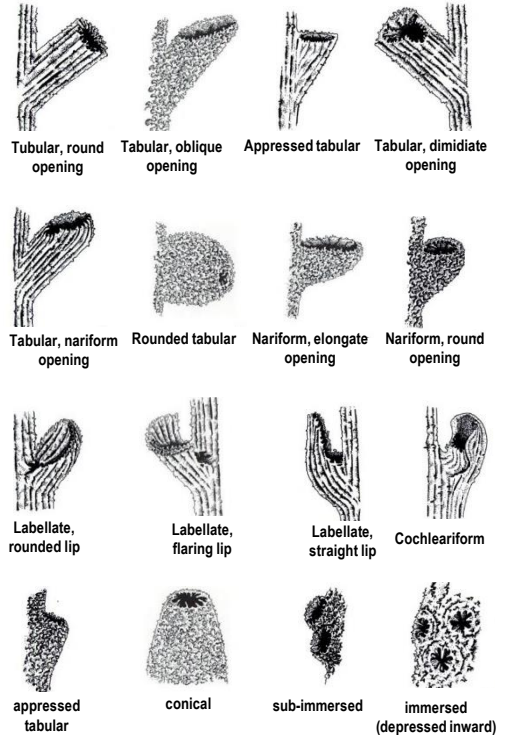


Figure 3: *Acropora* radial corallite shape categories. Adapted from Wallace (1999) with permission from CSIRO Publishing^[2]

Q. What are the two types of corallites unique to *Acropora*? Ans.

Q. What shape category is the radial corallite in Figure 2? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 05 May 2019. http://www.coralloftheworld.org/species_factsheets/species_factsheet_summary/acropora-muricata
^[2] Wallace, Carden C & CSIRO (1999). *Staghorn corals of the world : a revision of the coral genus Acropora (Scleractinia; Astrocoeniina; Acroporidae) worldwide, with emphasis on morphology, phylogeny and biogeography*. CSIRO Publishing, Clayton, Vic

**BUMPS on COENOSTEUM
BETWEEN tiny CORALLITES**

'Ridges' look like dripping wax
'Corallites' look like tiny beads

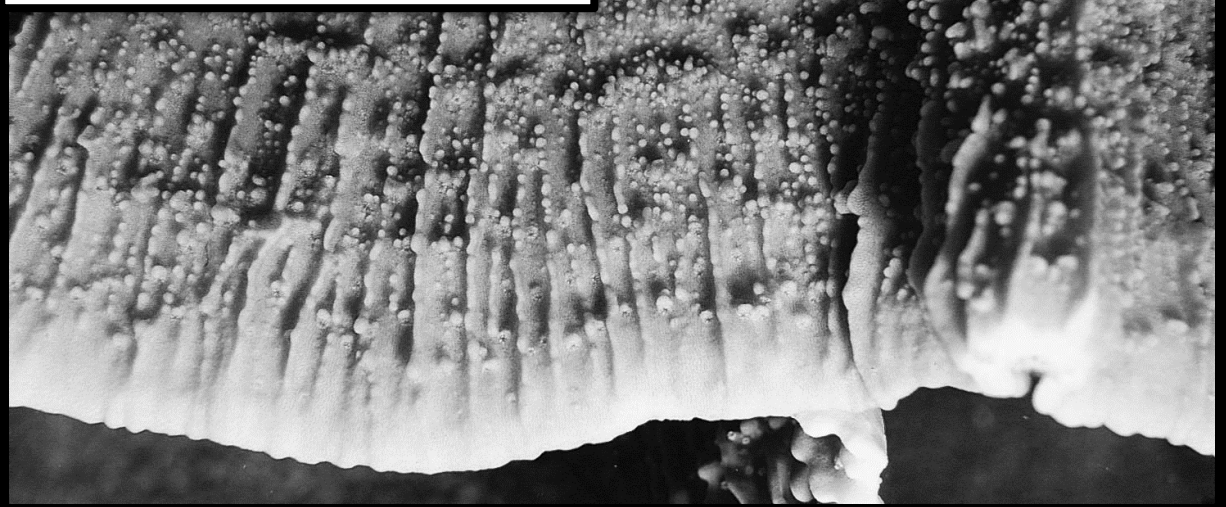


Figure 1: *Montipora foliosa* Broken coenosteum ridges. GREAT BARRIER REEF, AUSTRALIA. Photograph: Charlie Veron. Reprinted with permission^[1].

Montipora are perhaps best known as some form of *bumpy* plate coral or *bumpy* encrusting coral (sometimes with random branches jutting upwards). The bumpy appearance is due to the bumps or ridges that grow on its skeleton, *between* the tiny corallites on the **coenosteum** (Figure 2).

- Sometimes the bumps are small (papillae).
- Sometimes the bumps are big (tuberculae).
- Sometimes the bumps are *very* big and dome-like (verrucae).
- Sometimes the bumps fuse to make ridges (Figure 1).
- Sometimes there are no bumps.

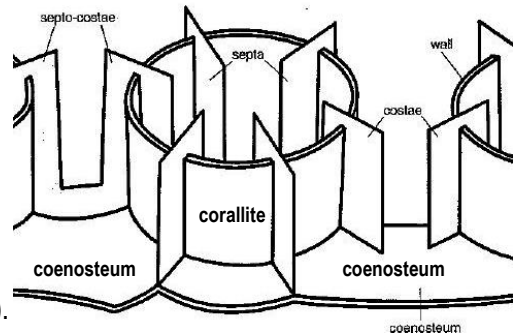


Figure 2: The coenosteum is located *between* the corallites^[2].

Activity: Complete the table below using the *Species Factsheets* on www.coralsofttheworld.org

Genus species	Coenosteum Description
<i>Montipora informis</i>	
<i>Montipora danae</i>	
<i>Montipora digitata</i>	

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsofttheworld.org/species_factsheets/species_factsheet_summary/montipora-foliosa/*
^[2] Adapted with permission from: Veron, J.E.N. and Stafford-Smith M.G. (2000). *Coralsofttheworld.org/species_factsheets/species_factsheet_summary/montipora-foliosa/*

**VERRUCAE (BIG bumps)
COVERED IN CORALLITES**

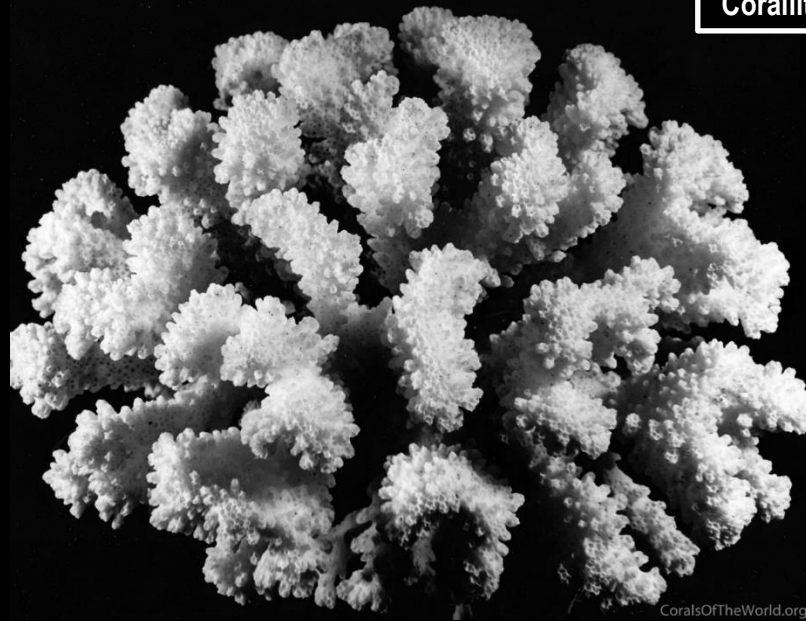


Figure 1: Cauliflower coral *Pocillopora meandrina*. HAWAII Photograph: Veron archives. Reprinted with permission^[1].

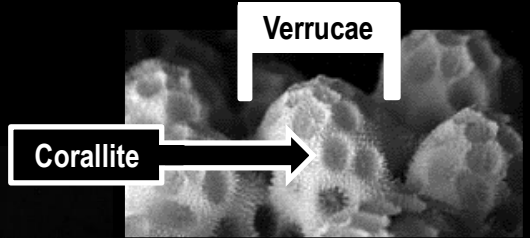


Figure 2: *Pocillopora fungiformis* Showing verrucae. MADAGASCAR. Photograph: Veron archives^[2]



Figure 3: *Pocillopora capitata* Showing branch end. EASTER ISLAND, SOUTH PACIFIC OCEAN. Photograph: Veron archives^[3]

Pocillopora are tough, weed-like branching corals (although still very colourful) occurring in habitats ranging from exposed reef-fronts and wave-washed reef flats to protected lagoons and lower reef slopes.

They do *not* have the axial and radial corallites like *Acropora*.

Instead, they have **verrucae** (dome-like bumps).

Can you see tiny holes on the verrucae? These tiny holes are corallites!

Activity: Complete the table below using the *Species Factsheets* on www.coralsoftheworld.org

Genus species	Verrucae Description
<i>Pocillopora eydouxi</i>	
<i>Pocillopora meandrina</i>	
<i>Pocillopora ankeli</i>	

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/pocillopora-meandrina/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/pocillopora-fungiformis/
^[3] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/pocillopora-capitata/

**SMALL CORALLITES
SMOOTH APPEARANCE**

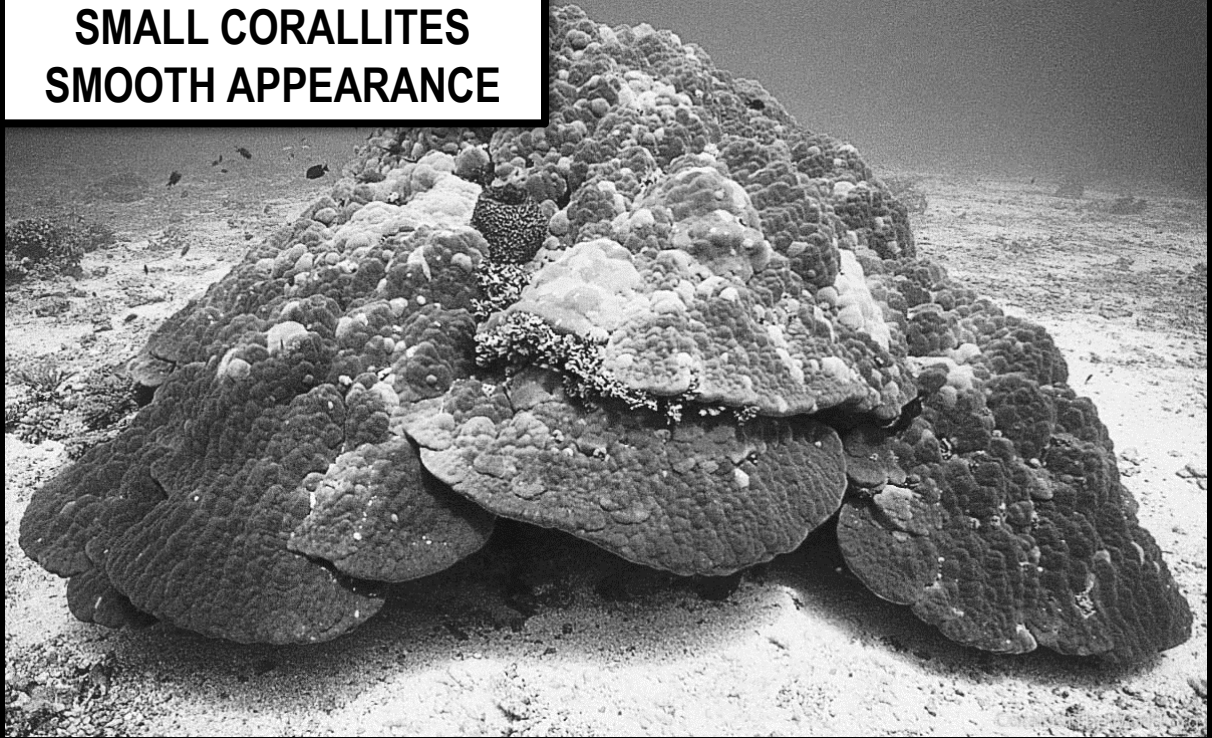


Figure 1: *Porites lutea* A large helmet-shaped colony. GREAT BARRIER REEF, AUSTRALIA. Photograph: Charlie Veron. Reprinted with permission^[1].

Porites have very **small corallites** (<2mm) thus the colony often has a smooth appearance



Figure 2: *Porites lutea* An intertidal 'micro-atoll'. GREAT BARRIER REEF, AUSTRALIA. Photograph: Charlie Veron. Reprinted with permission^[1].

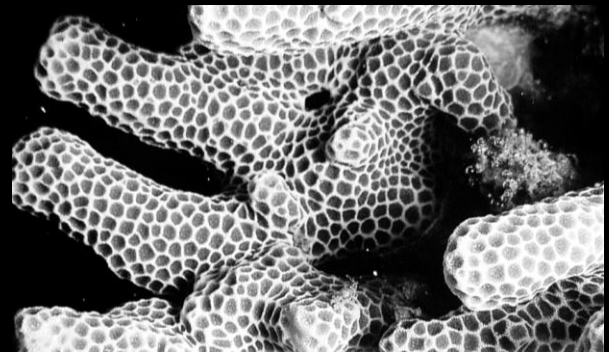


Figure 3: *Porites profundus* Branches dropping over an overhang. PAPUA NEW GUINEA. Photograph: Charlie Veron. Reprinted with permission^[2].

Colonies come in a great variety of shapes - from flat (laminar or encrusting) to massive (Figures 1 & 2) or branching (Figure 3). However, they are perhaps best known as the helmet-shaped colonies in deeper water (Figure 1) or the circular, flat-top structures on reef flats called 'micro-atolls' (Figure 2).

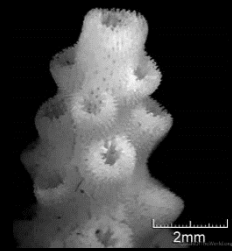

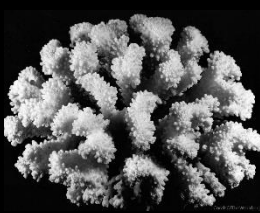
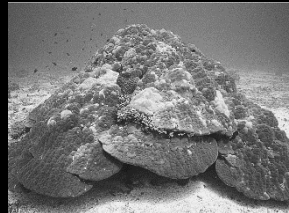
Q. What two shapes are recognisably *Porites* coral? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/porites-lutea/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/porites-profundus/


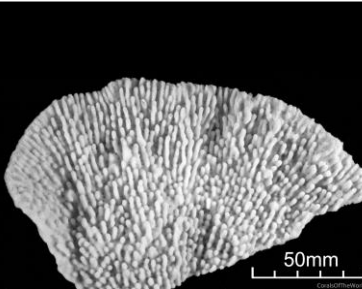
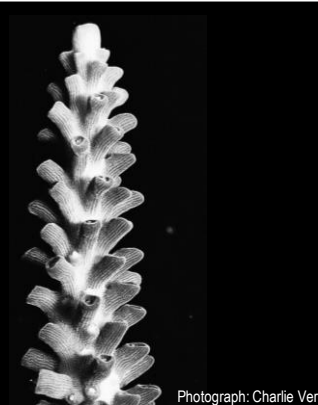
KNOWLEDGE REVIEW 1

Name:

Date:

<p>Acropora</p>  <p>2mm Photograph: Charlie Veron</p> <p>Axial and radial corallites</p>	<p>Montipora</p>  <p>Photograph: Charlie Veron</p> <p>Bumps on coenosteum between tiny corallites</p>	<p>Pocillopora</p>  <p>Photograph: Charlie Veron</p> <p>Verrucae (big bumps) covered in corallites</p>	<p>Porites</p>  <p>Photograph: Charlie Veron</p> <p>Small corallites Smooth appearance</p>
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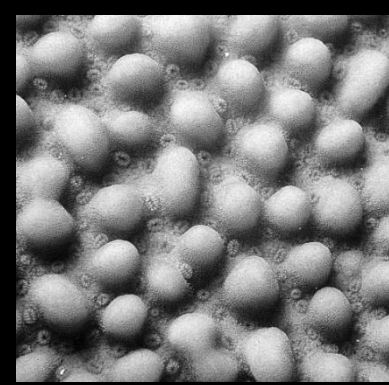
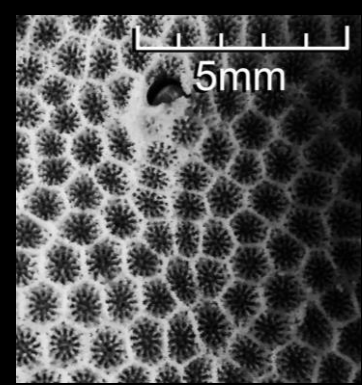

Activity: Identify the coral samples below^[1]. Choose from one of the four Genus pictured above^[1].

<p>Photograph: Charlie Veron</p>  <p>10mm</p>	 <p>50mm</p> <p>Photograph: Emre Turak and Charlie Veron</p>	 <p>Photograph: Charlie Veron</p>
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Genus:

Genus:

Genus:

 <p>Photograph: Charlie Veron</p>	 <p>5mm</p> <p>Photograph: Charlie Veron</p>	 <p>10mm</p> <p>Photograph: Charlie Veron</p>
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Genus:

Genus:

Genus:

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/

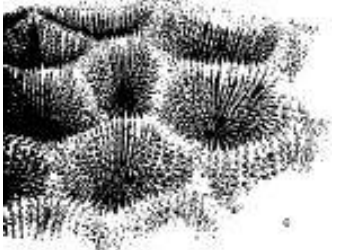
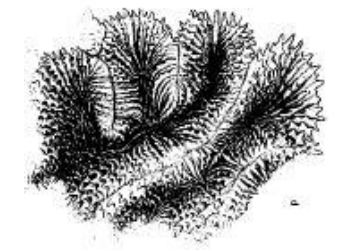
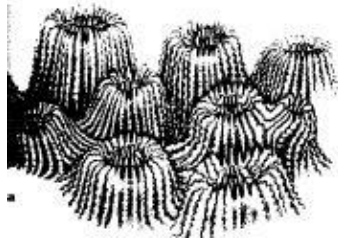
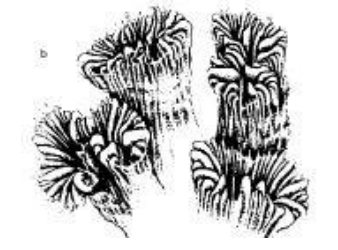

It has a What?

Coral ID Terminology

Name:

Date:

When identifying species, the terminology used to describe the shape of the corallite skeleton include:

Shape of corallites	Diagram ^[1]	Description
<p>CERIOID</p>		<p>The corallites share a common wall. No valleys.</p>
<p>MEANDROID</p>		<p>The corallites create valleys that share a common wall.</p>
<p>PLOCOID</p>		<p>The corallites have their own separate walls – not shared.</p>
<p>PHACELOID</p>		<p>The corallites have their own separate walls – not shared. But, unlike Placoid corallites, the walls are long and tubular (stalk-like).</p>
<p>FLABELLO-MEANDROID</p>		<p>The corallites have formed valleys. But, unlike meandroid corallites, the valleys do NOT share walls.</p>

^[1] Adapted with permission from: Veron, J.E.N. and Stafford-Smith M.G. (2000). *Corals of the World: Volume 1*. Australian Institute of Marine Science and CRR Qld Pty Ltd. Townsville, Australia. Page 55.

Most *Favites* have **cerioid** corallites, meaning, the corallites share a common wall^[1]

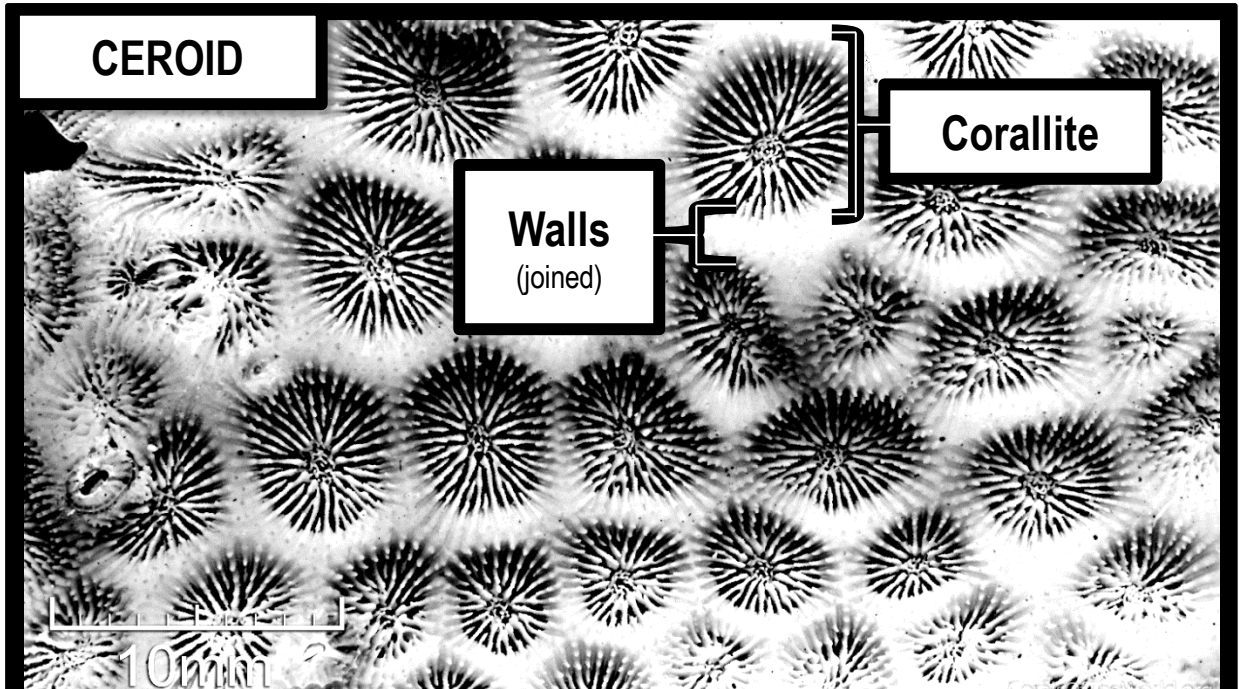


Figure 1: *Favites abdita* Showing corallites. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1].

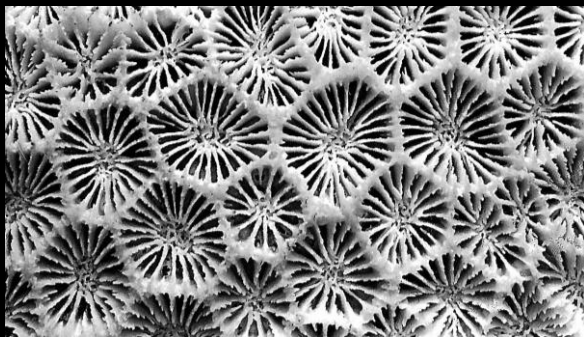


Figure 2: *Favites chinensis* Showing corallites. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[2]

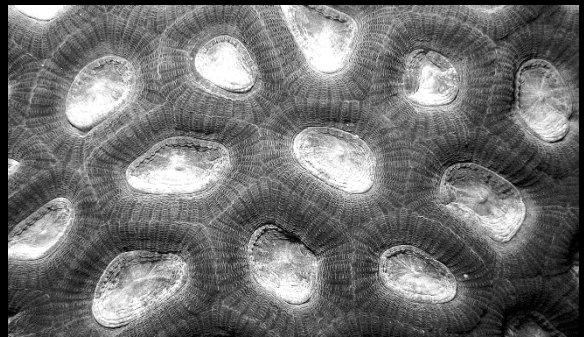


Figure 3: *Favites paraflexuosa* Corallite detail (alive). PHILLIPINES. Photograph: Veron archives. Reprinted with permission^[3].

Activity: Complete the table below using the *Species Factsheets* on www.coralsoftheworld.org

<i>Genus species</i>	Wall Description
<i>Favites acuticollis</i>	
<i>Favites vasta</i>	

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/favites-abdita/

^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/favites-chinensis/

^[3] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Coralsoftheworld.org*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/favites-paraflexuosa/

Platygyra have **meandroid** corallites, meaning, they create valleys that share a common wall

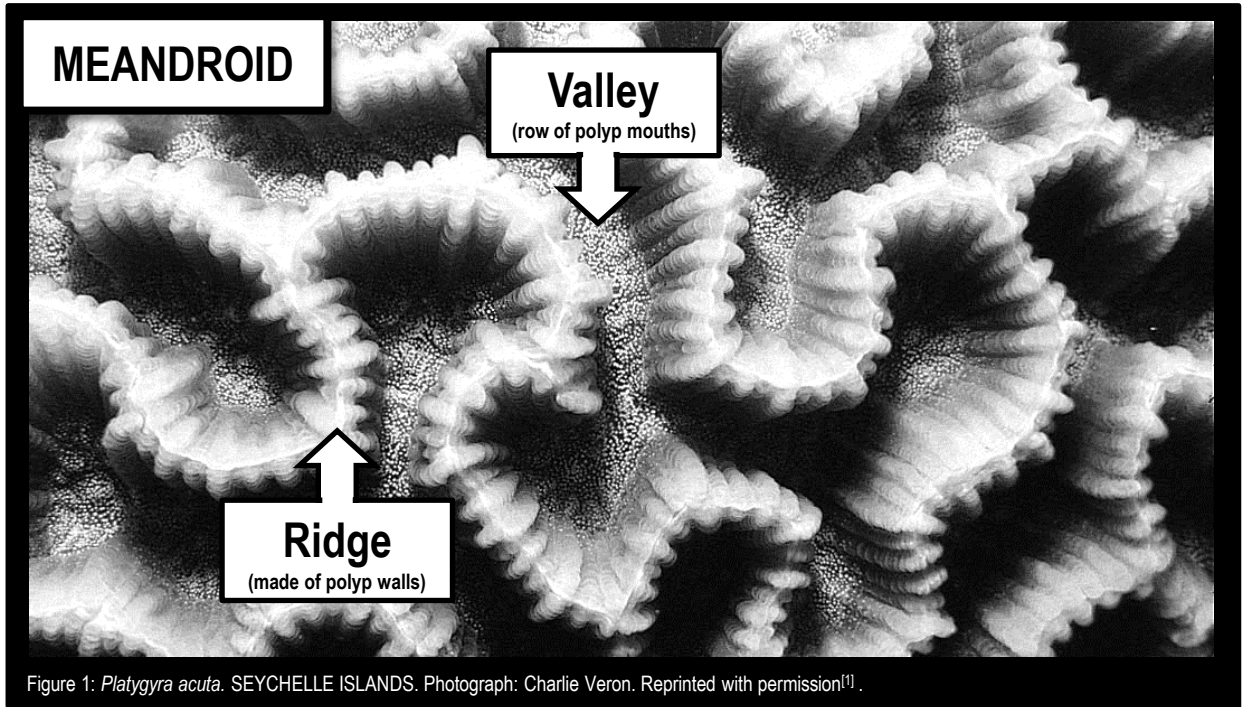


Figure 1: *Platygyra acuta*. SEYCHELLE ISLANDS. Photograph: Charlie Veron. Reprinted with permission^[1].

BRAIN corals

Platygyra (and *Leptoria*) are often called **brain coral**.

- The technical term used to describe their brain-like appearance is **meandroid**
- Dividing polyps form walls along their sides (forming the ridges) but not between their mouths (forming the valleys).

For example, look at the ridges (high walls) and valleys (deep channels) in Figure 2. If this were alive, it would be covered in a thin layer of soft tissue, and the polyp mouths would be sitting side by side in the valleys.

The average length and width of the valley is a common measurement tool used to ID different species.

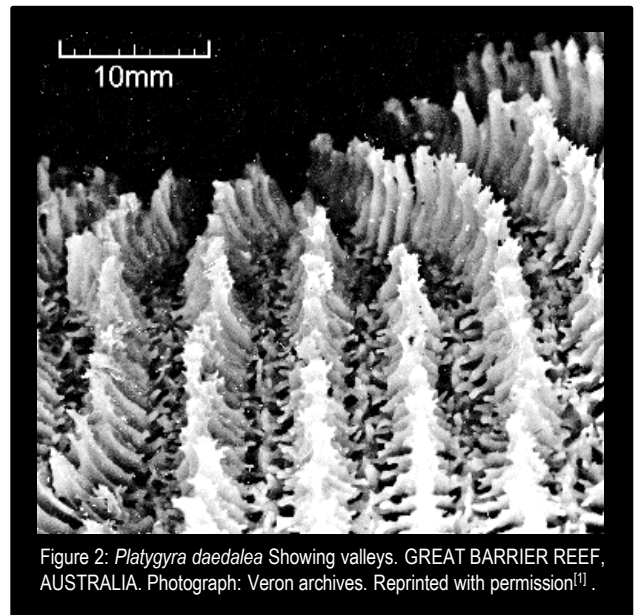


Figure 2: *Platygyra daedalea* Showing valleys. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1].

Q. How wide (in mm) is a valley of *Platygyra daedalea* in Figure 2? Ans.

Q. Are the valleys on *Platygyra daedalea* 'long' or 'short'? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/platygyra-acuta/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 27 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/platygyra-daedalea/

Genus: *Favia* (*Dipsastraea*)

Note: *Favia* corals in the Indo-Pacific may instead have the Genus name *Dipsastraea*^[2]

Name:

Date:

Favia have **plocoid** corallites, meaning, they have their own separate walls – not shared

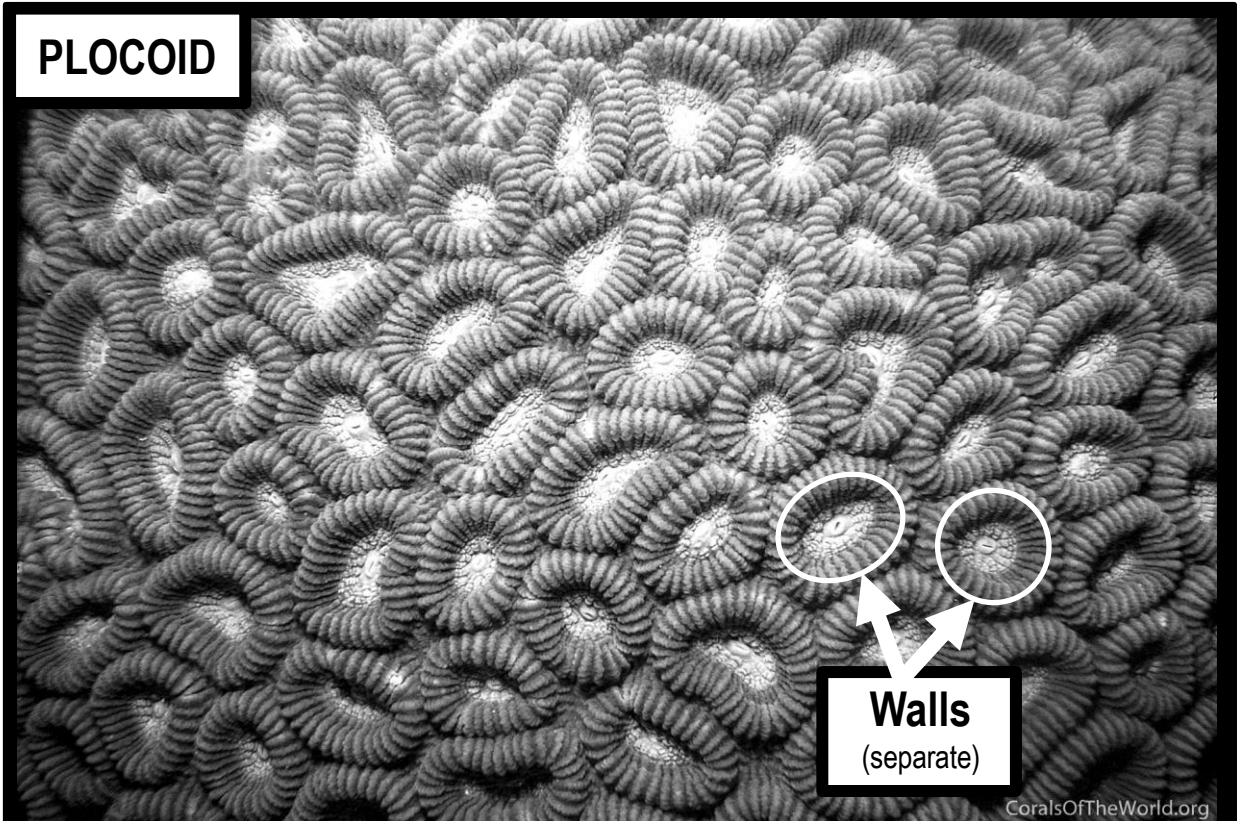


Figure 1: *Favia lizardensis* The characteristic shape and common colour of corallites SEYCHELLES ISLANDS. Photograph: Charlie Veron. Reprinted with permission^[1].

In *Favia* corals, the colour inside a corallite wall is usually very different to the colour outside a corallite wall.

Note: different colonies (same species) can also be different colours

Activity: Complete the table below using the *Species Factsheets* on www.coralsofttheworld.org

Genus species	Colour inside corallite wall	Colour outside corallite wall
<i>Favia speciosa</i>		
<i>Favia speciosa</i> (different colony)		
<i>Favia pallida</i>		
<i>Favia pallida</i> (different colony)		

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). Corals of the World. Accessed 28 May 2019. http://www.coralsofttheworld.org/species_factsheets/species_factsheet_summary/favia-lizardensis/

^[2] Pichon, M. (2014). Recent changes in Scleractinian coral nomenclature and classification: a practical guide for coral and reef ecologists. James Cook University. Accessed 10 November 2018. <http://www.mideastrcs.org/mcra/sites/mcra/files/documents/Scleractinian%20nomenclature%20update%20%28Michel%20Pichon%202014%29.pdf>

Genus: *Caulastrea*

Note: also spelt *Caulastraea*

Name:

Date:

Caulastrea have **phaceloid** corallites, meaning, they are long and tubular with separated walls

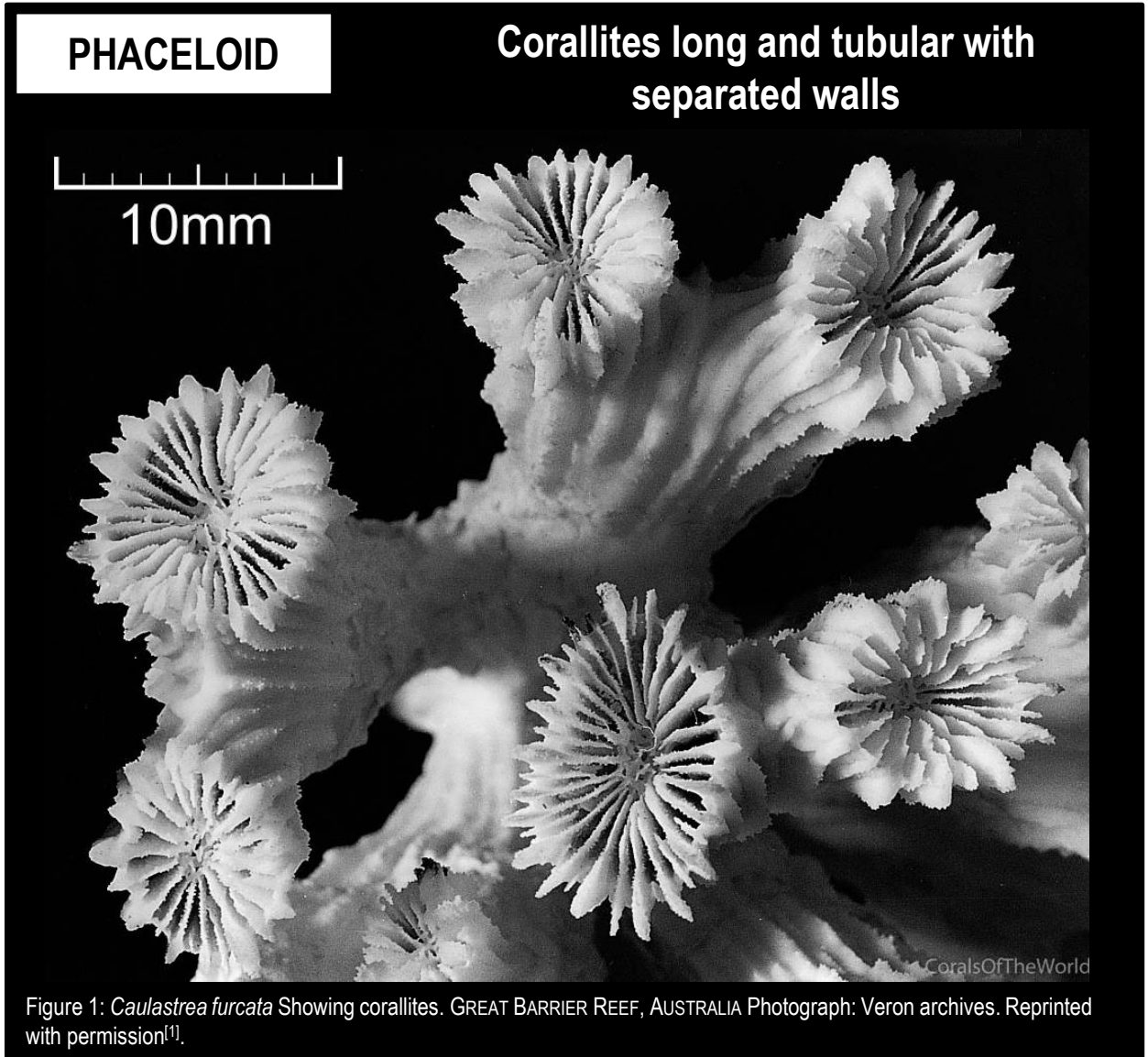


Figure 1: *Caulastrea furcata* Showing corallites. GREAT BARRIER REEF, AUSTRALIA Photograph: Veron archives. Reprinted with permission^[1].

Q. How are plocoid and placeloid corallites the same? Ans.

Q. How are plocoid and placeloid corallites different? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/caulastrea-furcata

Genus: *Lobophyllia*

Name:

Date:

Lobophyllia have phaceloid to **flabello-meandroid** corallites.

Flabello-meandroid means the corallites have formed valleys. But the valleys do NOT share walls.

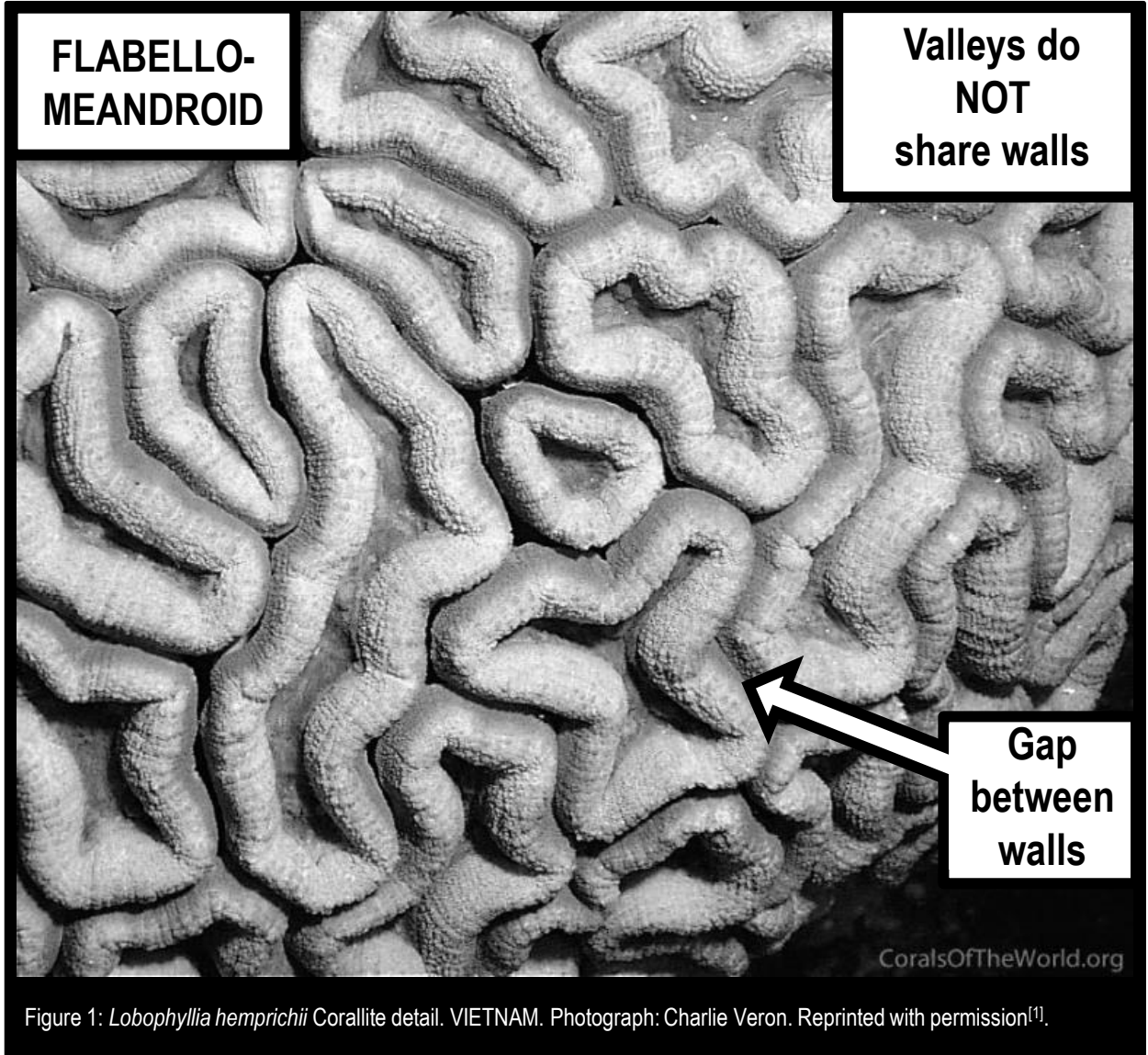


Figure 1: *Lobophyllia hemprichii* Corallite detail. VIETNAM. Photograph: Charlie Veron. Reprinted with permission^[1].

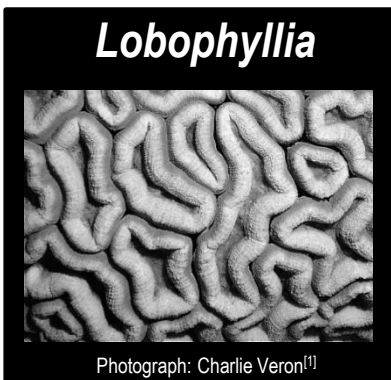
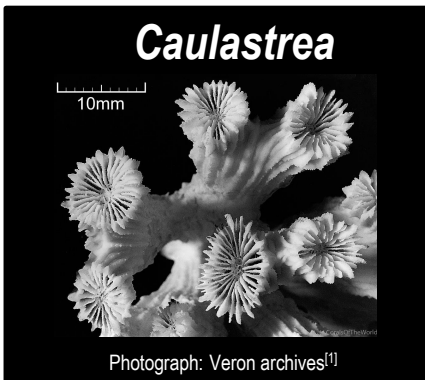
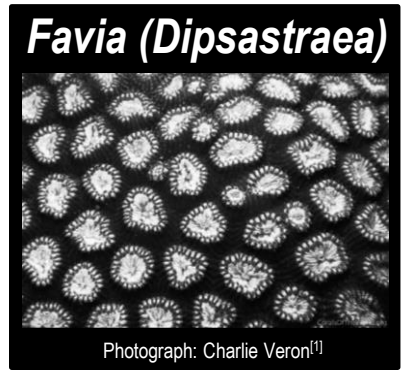
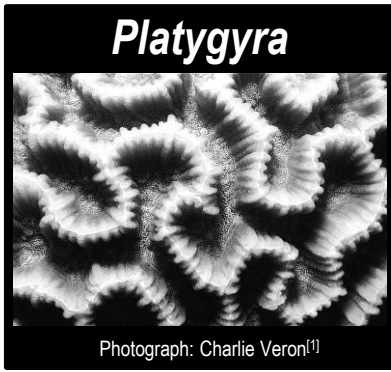
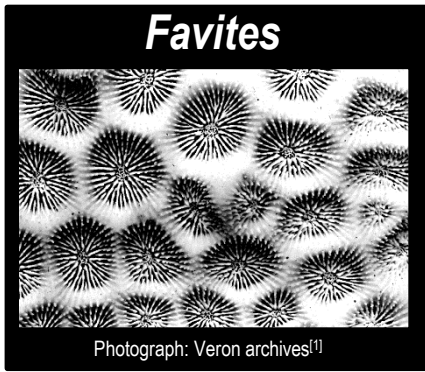
Q. What is flabello-meandroid? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/lobophyllia-hemprichii/

KNOWLEDGE REVIEW 2

Name:

Date:



Activity: Complete the table below (choose from one of the five Genus pictured above^[1])

Shape	Diagram ^[2]	Description	Genus
CERIOID		The corallites share a common wall. No valleys.	
MEANDROID		The corallites create valleys that share a common wall .	
PLOCOID		The corallites have their own separate walls – not shared.	
PHACELOID		The corallites have their own separate walls – not shared. But, unlike Placoid corallites, the walls are long and tubular.	
FLABELLO-MEANDROID		The corallites have formed valleys. But, unlike meandroid corallites, the valleys do NOT share walls.	

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/

^[2] Adapted with permission from: Veron, J.E.N. and Stafford-Smith M.G. (2000). *Corals of the World: Volume 1*. Australian Institute of Marine Science and CRR Qld Pty Ltd. Townsville, Australia. Page 55.

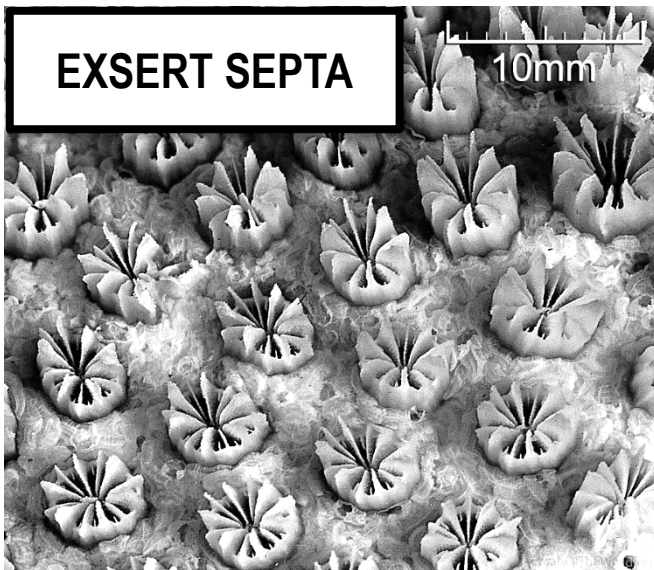


Figure 1: *Galaxea astreata* showing corallites. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1].

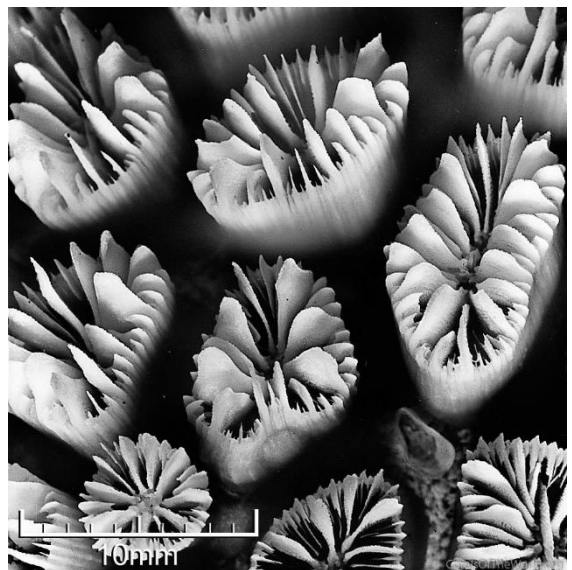


Figure 2: *Galaxea fascicularis* showing corallites. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[2].



Figure 3: *Galaxea astreata* Corals growing in conditions of low light are usually flat plates with widely spaced corallites. PHILIPPINES. Photograph: Charlie Veron. Reprinted with permission^[1].



Figure 4: *Galaxea acrhelia* showing corallites. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[3].

Galaxea have exsert septa

Septa that extend above the top of the corallite wall are referred to as *exsert septa*.

Note: the term 'exsert' can also be used to describe *corallites* that clearly project above surrounding structures (e.g. exsert corallites).

Q. What are EXSERT septa? Ans.

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/galaxea-astreata/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/galaxea-fascicularis/
^[3] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/galaxea-acrhelia/

**LARGE, FLESHY TENTACLES
(or vesicles)
EXTENDED night AND DAY**

Common Names
Anchor Coral
Hammer Coral

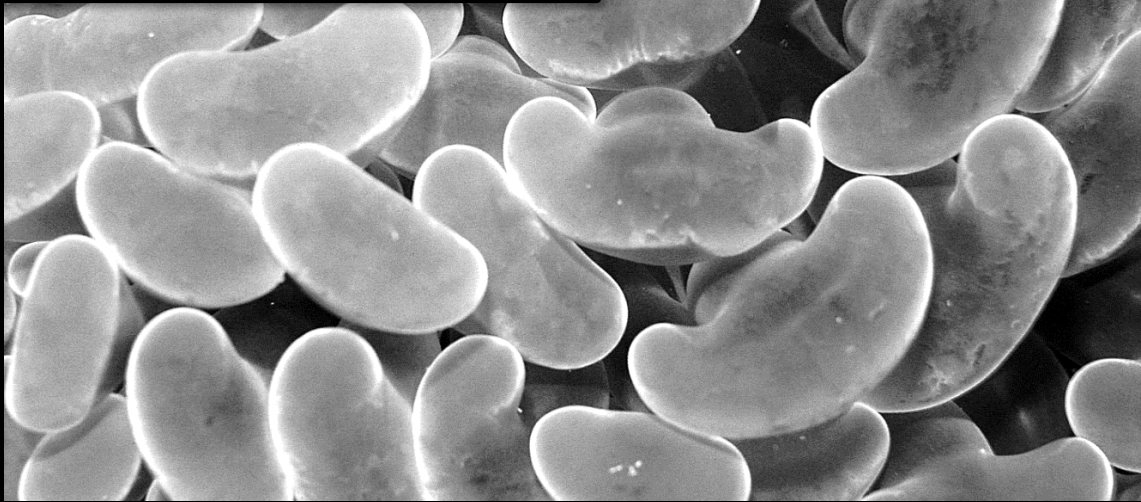


Figure 1: *Euphyllia ancora* variation in tentacle shape and colour. This variation is common throughout the geographical range. PHILIPPINES. Photograph: Charlie Veron. Reprinted with permission^[1].

Phaceloid (trumpet-like) corallites

- Grape coral (*E. cristata*)
- Torch coral (*E. glabrescens*)
- Branching anchor coral (*E. paraancora*)
- Branching frogspawn coral (*E. paradivisa*)
- Bubble coral (*E. baliensis*)

Flabello-meandroid corallites

- Brain anchor coral (*E. ancora*)
- Frogspawn coral (*E. divisa*)

Phaceloid to Flabello-meandroid

- Thick branched frogspawn coral (*E. yaeyamaensis*)

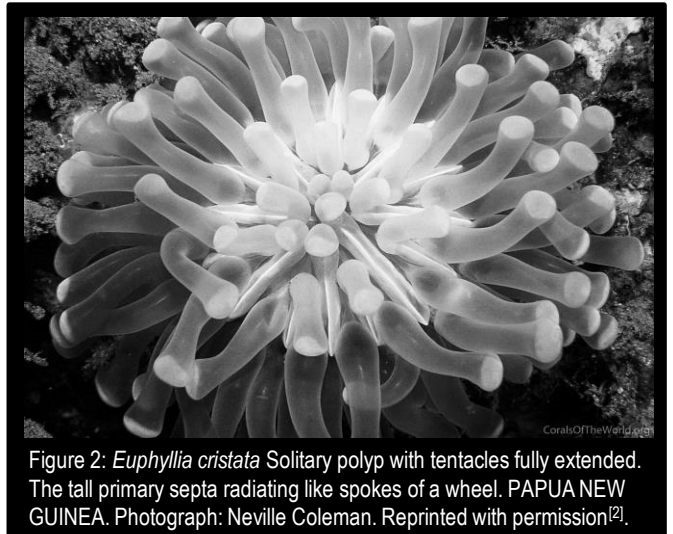


Figure 2: *Euphyllia cristata* Solitary polyp with tentacles fully extended. The tall primary septa radiating like spokes of a wheel. PAPUA NEW GUINEA. Photograph: Neville Coleman. Reprinted with permission^[2].

Q. What large, fleshy structures are extended night and day making this Genus easy to ID? Ans.

Hint: the shape of this structure is often the inspiration for their common name!!

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/euphyllia-ancora/

^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/euphyllia-cristata/

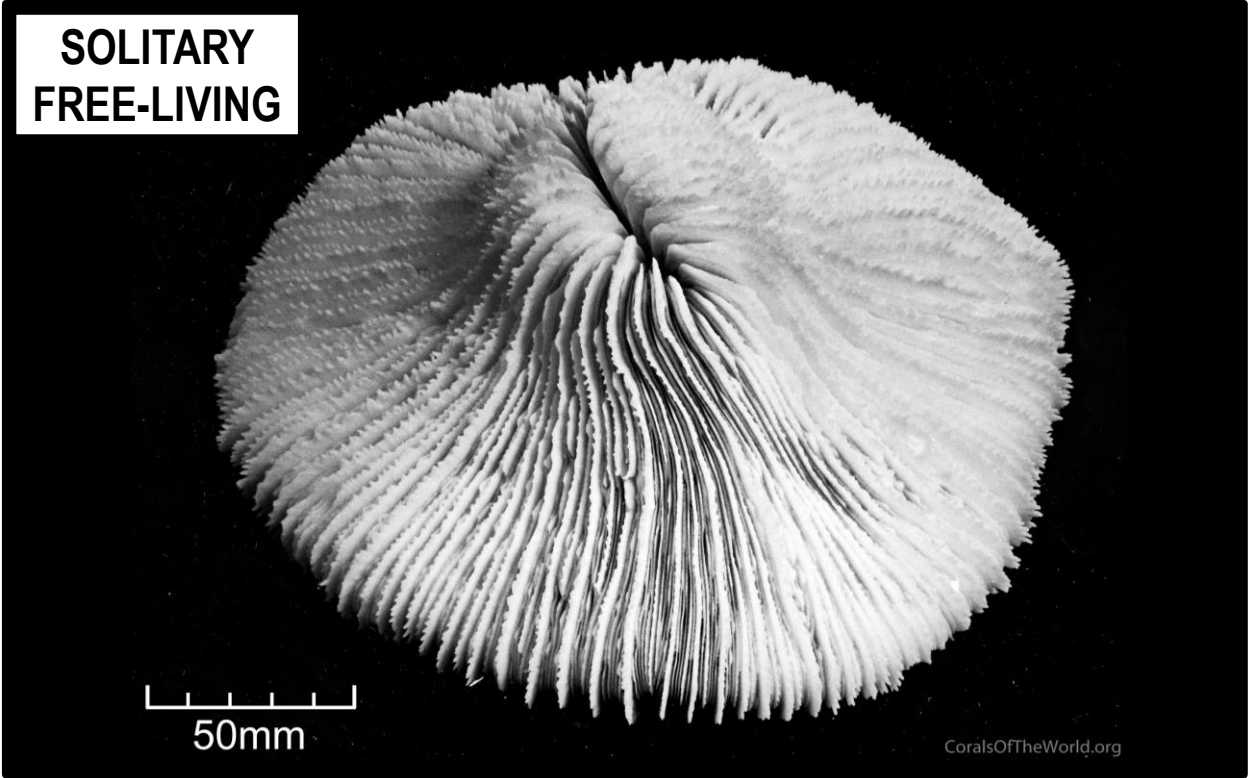
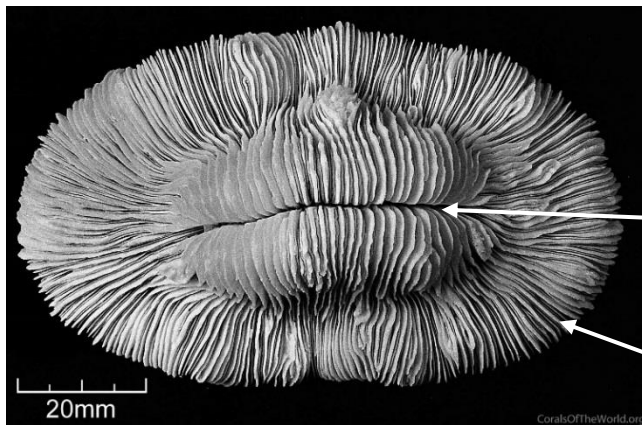


Figure 1: *Fungia danaei* Showing upper surface. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[1].

***Fungia* form domes or discs and detach from the reef when they grow larger. So, they are free to move about!**



Q. How many polyps are pictured left?
Ans.

Q. What is the slit across the middle?
Ans.

Q. What are the teeth-like projections?
Ans.

Figure 2: *Fungia paumotensis* showing upper surface. GREAT BARRIER REEF, AUSTRALIA. Photograph: Veron archives. Reprinted with permission^[2].

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/fungia-danaei/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/fungia-paumotensis/

**POORLY DEFINED WALLS.
EXSERT SEPTO-COSTAE.**

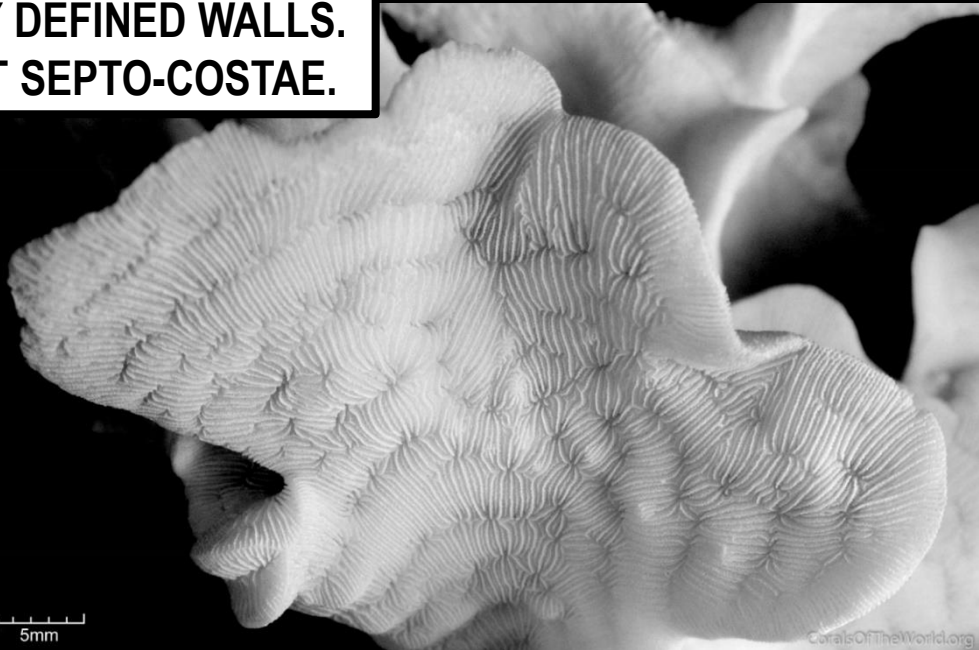


Figure 1: *Pavona cactus* Showing frond surface. COCOS KEELING ISLANDS, INDIAN OCEAN. Photograph: Emre Turak and Charlie Veron. Reprinted with permission^[1].



Figure 2: *Pavona clavus* A large dome-shaped colony composed of compact columns. TANZANIA. Photograph: Charlie Veron. Reprinted with permission^[2].

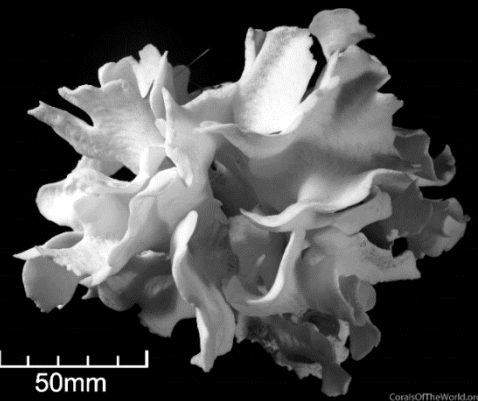


Figure 3: *Pavona cactus* Showing whole colony. GREAT BARRIER REEF, AUSTRALIA. Photograph: Charlie Veron. Reprinted with permission^[2].

***Pavona* have corallites with poorly defined walls.
Corallites are interconnected by exsert septo-costae.**

Q. What do septo-costae connect? Ans.

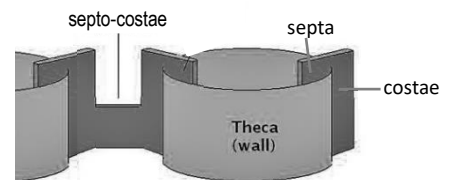


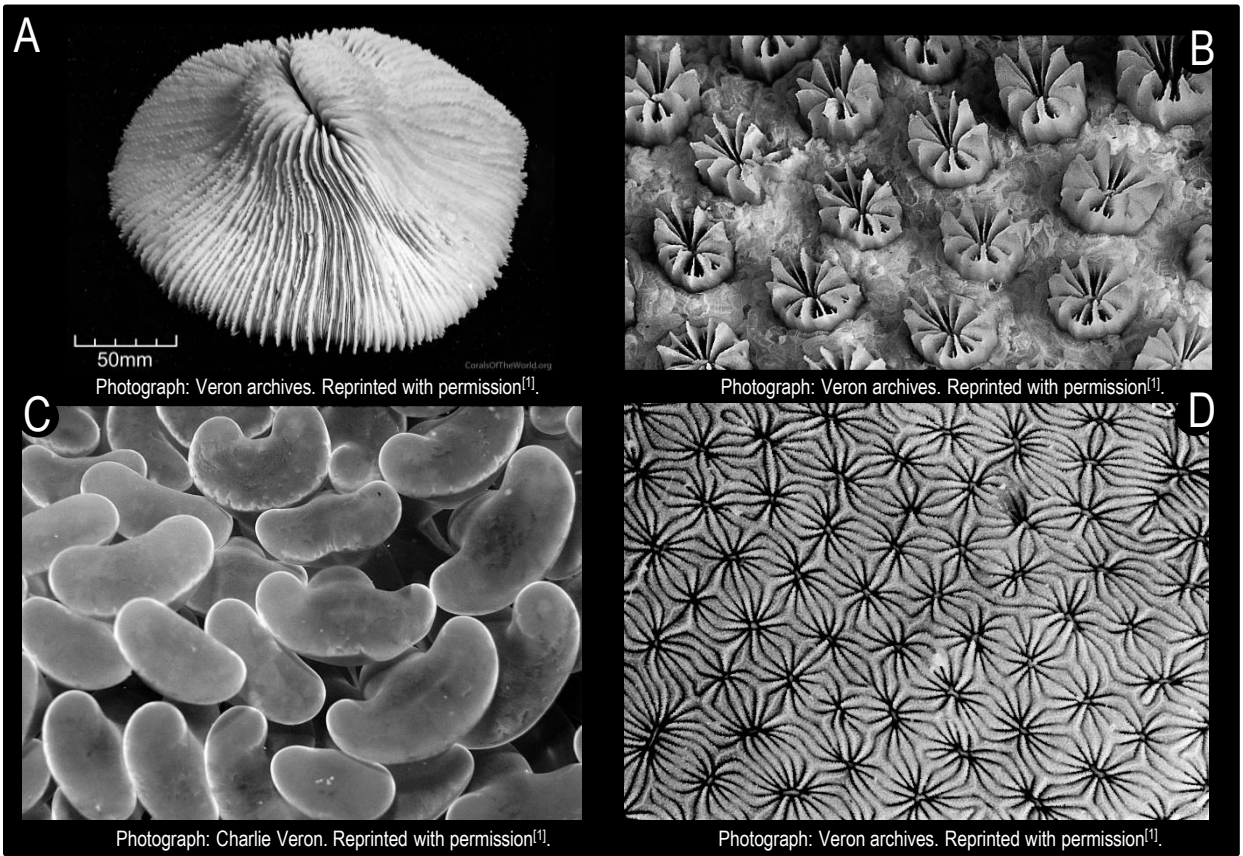
Figure 4: Location of septo-costae^[3]

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). Corals of the World. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/pavona-cactus/
^[2] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). Corals of the World. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/species_factsheet_summary/pavona-clavus/
^[3] Adapted from: Riddle, D. (2007). Feature Article: Stony Coral Identification Primer for Aquarists, Part One. Advanced Aquarist from: www.advancedaquarist.com/

KNOWLEDGE REVIEW 3

Name:

Date:



Activity: Complete the table below (choose from one of the five Genus pictured above labelled A-D^[1])

Genus	Description	A - D
<i>Galaxea</i>	Exsert SEPTA	
<i>Pavona</i>	Poorly defined walls. Exsert SEPTO-COSTAE.	
<i>Fungia</i>	Solitary and Free-living	
<i>Euphillia</i>	Large, fleshy tentacles (or vesicles) extended night AND DAY	

^[1] Veron J.E.N., Stafford-Smith M.G., Turak E. and DeVantier L.M. (2016). *Corals of the World*. Accessed 28 May 2019. http://www.coralsoftheworld.org/species_factsheets/