

Solitary Corals

Simplified key to coral genera in the wildlife trade (continued)

- | | | | |
|-----|---|--------------------|--------------------|
| 6. | a. colonial coral - skeleton with many calices, corallites, polyps | SEE PAGE 26 | |
| | b. solitary coral - skeleton has single calice | | 7 |
| 7. | a. coral is circular to oval with large, fleshy rim | | 8 |
| | b. coral is discoid, round or oval with prominent, raised radiating septa | | 9 |
| 8. | a. calice has more than one columella, septa large and triangular; septa may be covered by tissue | | <i>Scolymia</i> |
| | b. calice has one central columella, septa pronounced, with teeth; tissue forms large, inflated lobes that radiate out; septal teeth visible through tissue | | <i>Cynarina</i> |
| 9. | a. septa are smooth, or with small teeth, tentacles short, may be retracted | | <i>Fungia</i> |
| | b. septa have large teeth, tentacles always extended | | <i>Heliofungia</i> |
| | c. septa smooth, exsert; live colony covered with vesicles in day | | <i>Plerogyra</i> |
| 10. | Coral is oval, round or elongate, with distinct oral and aboral surface and prominent radiating septa, may have central furrow or groove | | 11 |

Scolymia (1999:4,100 pieces in trade; most live)

- “Doughnut corals” are solitary, occasionally with 2 mouths; most <6 cm diameter
- characteristic raised, fleshy ridge surrounds the central area of the corallite
- small tentacles, expanded at night, form a single row on the rim of the disc

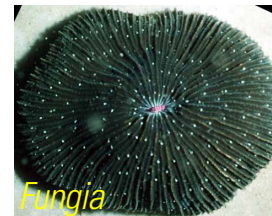
Cynarina (1999: 7,850; most live)

- “Button corals” inflate their body cavity with water during the day, forming a series of radiating lobes that correspond to the septa
- body wall is translucent, and the septa are visible beneath lobes; body has pastel colors
- when disturbed, body wall folds inward like an anemone
- septa have large rounded teeth; columella is spongy
- common in aquaria; tolerate wide range of environmental conditions



Fungia/Heliofungia **SEE ALSO PAGE 24-25** (1999: 60,000 pieces in trade, over 50,000 live)

- “Mushroom Corals” are free-living and unattached; can cover large areas of rubble and sand
- corallum is flat or slightly convex with oral and aboral surfaces; most >10 cm diameter
- septa form straight ridges that radiate from the center to the tips; look like spokes on a wheel
- most do not extend tentacles in day; *Heliofungia* has long, anemone-like tentacles always expanded (even when disturbed)



Other small corals that may be traded, but are much smaller than those depicted here:

Heteropsammia - free living, up to 2.5 cm, may have 1-5 corallites

Balanophyllia - solitary, up to 2 cm

Several colonial corals may be in international trade as single polyps; these may appear to be solitary when young, or they are a taxa with phaceloid growth form and consist of a single stalk terminating in a large corallite .

Euphyllia



Trachyphyllia

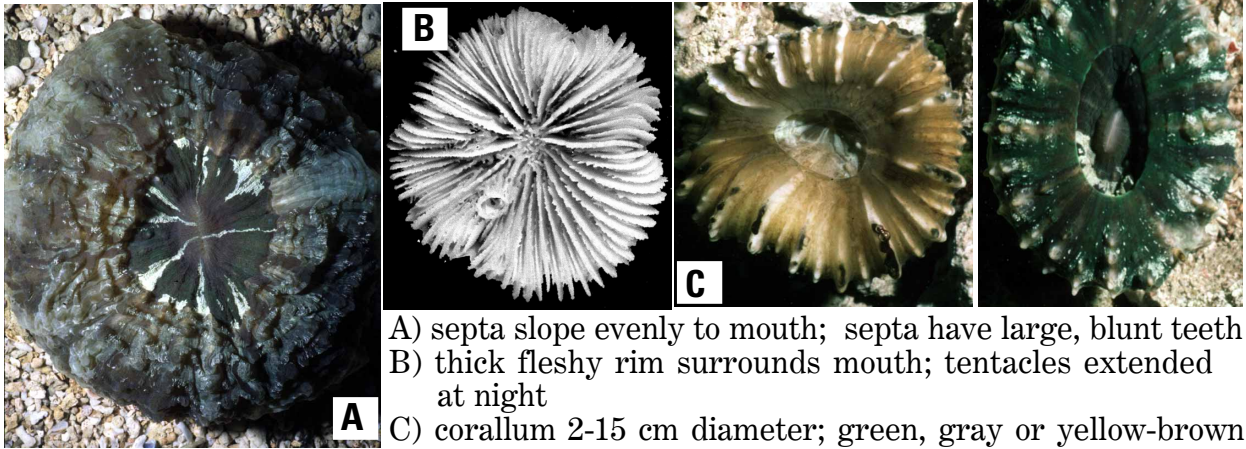


Plerogyra
vesicles retracted
expanded



Family Mussidae

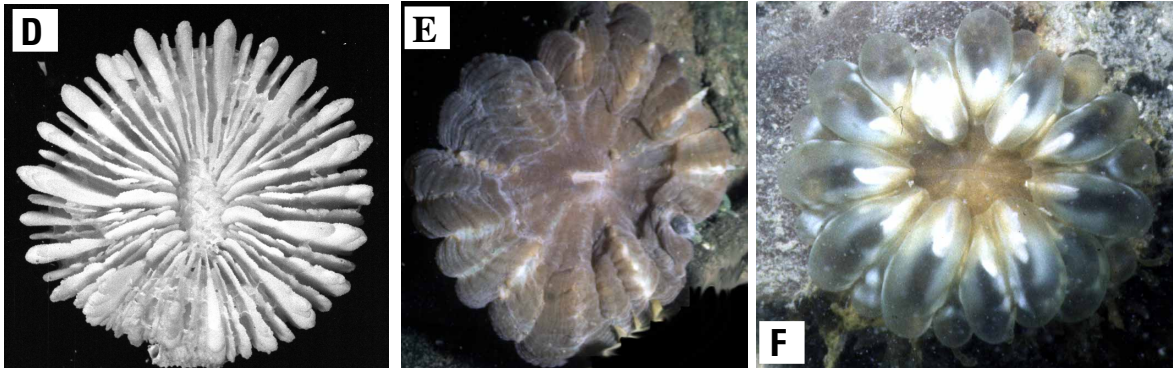
- Scolymia*** ■ common name: Doughnut Coral
 ■ single large, fleshy, circular to oval polyp



A) septa slope evenly to mouth; septa have large, blunt teeth
 B) thick fleshy rim surrounds mouth; tentacles extended at night
 C) corallum 2-15 cm diameter; green, gray or yellow-brown

Cynarina lacrymalis

- common name: Button Coral; one species
 ■ single large polyp with radiating lobes

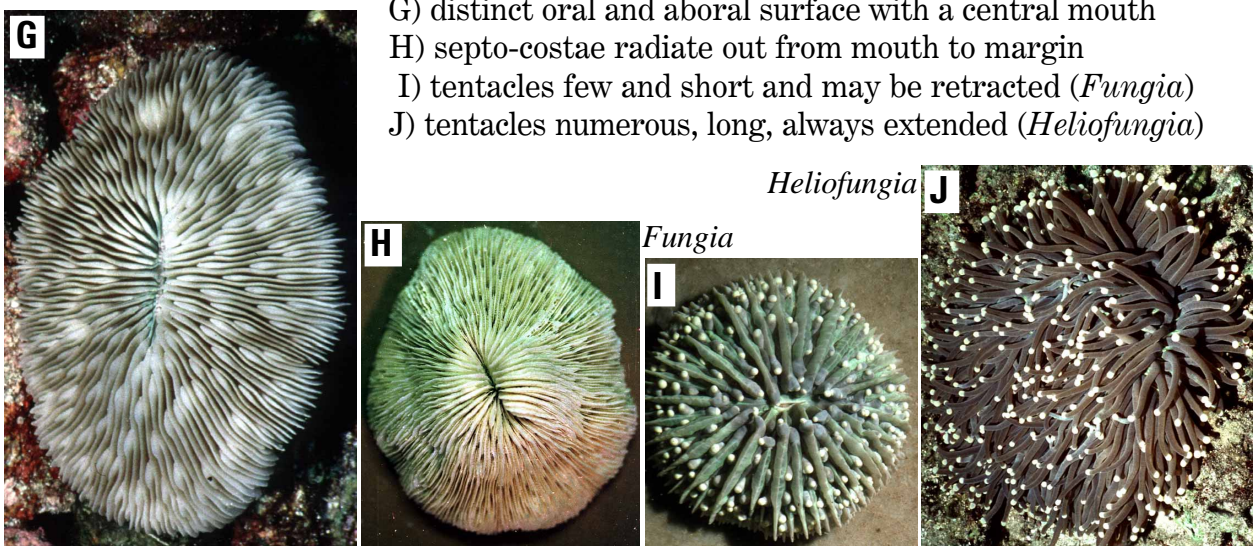


D) corallum up to 60 mm diameter; septa thick with lobed teeth
 E) body cavity inflated with water, but deflates when disturbed
 F) tissue forms radiating lobes; body wall may be translucent; tentacles extended at night

Family Fungiidae

Fungia & *Heliofungia*

- common name: Mushroom Coral
 ■ circular or oval corallum, 5-20 cm diameter



G) distinct oral and aboral surface with a central mouth
 H) septo-costae radiate out from mouth to margin
 I) tentacles few and short and may be retracted (*Fungia*)
 J) tentacles numerous, long, always extended (*Heliofungia*)

Heliofungia

Fungia

Simplified key to coral genera in the wildlife trade (continued)

	Go To:
11. a. flattened or concave, discoid or elongate with two distinct surfaces, one bearing calices and septa, and the other lacking calices	12
b. single or multiple large, oval to round corallites, each on a long stalk	17
12. a. circular or discoid with a single mouth (solitary)	13
b. oval or elongate with convex oral side and concave aboral side and more than one mouth (colonial)	14
13. a. discoid or elongate; short, tapering tentacles primarily extended at night	<i>Fungia</i>
b. polyps extended in day and night; tentacles largest of all corals	<i>Heliofungia</i>
14. a. central row of calices forming an axial furrow	15
b. mouths scattered over oral surface, no axial furrow; oval to round, concave	<i>Halomitra</i>

The most common free-living corals on Indo-Pacific reefs are in the Family Fungiidae.

- Fungiidae includes “mushroom corals”, “slipper corals” and “Neptune’s Cap”
- most species are solitary; the polyps are the largest of all corals, up to 50 cm in diameter; includes *Fungia* and *Heliofungia*
- colonial animals are elongate (*Polyphyllia*, *Herpolitha*) or dome-shaped (*Halomitra*)
- the skeleton has a distinct upper (oral) concave, and lower (aboral) convex surface
- *Heliofungia* and *Polyphyllia* extend tentacles in day; other genera only open tentacles at night

Fungia, *Heliofungia* (1999: over 60,000 pieces in trade, over 50,000 live)

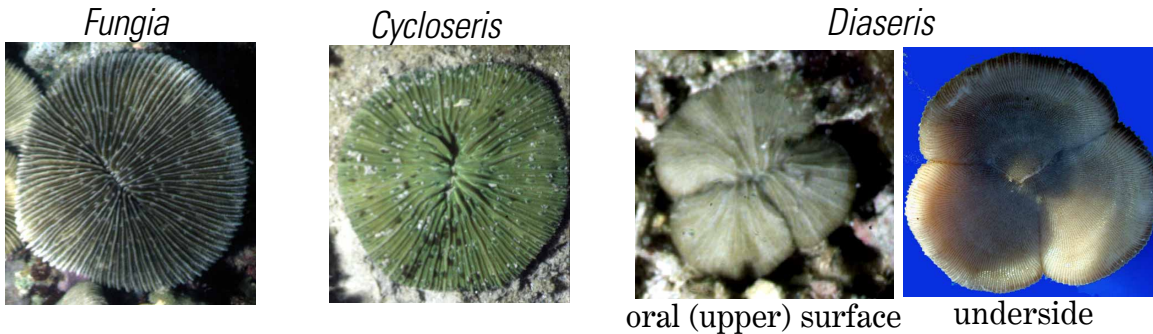
- “Mushroom corals” are circular or oval shape; corallum is flattened or slightly concave; septa (on oral surface) and costae (on aboral surface) are arranged like the spokes of a wheel; septa have teeth and costae have spines
- *Fungia* and *Heliofungia* have one central mouth and septa that radiate out
- *Fungia* contains 25 species in four subgenera; *Heliofungia* is monospecific

Fungia is distinguished from *Heliofungia* by the size of teeth on septa, which are larger and lobed in *Heliofungia*.

Cycloseris and *Diaseris* (no reported trade in 1999).

- corallites smaller than *Fungia*
- septo- costae are inconspicuous.

- *Cycloseris* is solitary and circular like *Fungia*, but septa have fine teeth.
- *Fungia* has small nipple-like projections on the underside (aboral) while *Cycloseris* is smooth.
- *Diaseris* is also solitary and small, and most closely resembles *Cycloseris*.
however, *Diaseris* is readily distinguished as the disc is partitioned into sections.



oral (upper) surface underside

Family Fungiidae

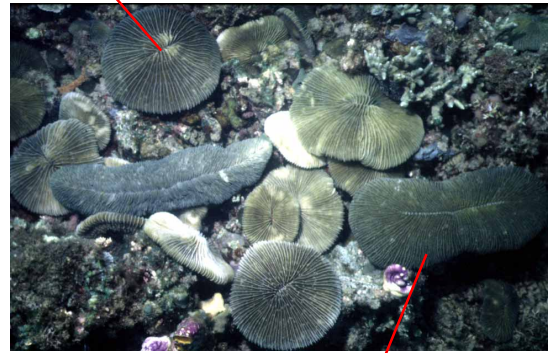
solitary *Fungia* spp.

- free living, solitary and colonial species
- distinctive oral and aboral sides
- solitary taxa include *Fungia* and *Heliofungia*

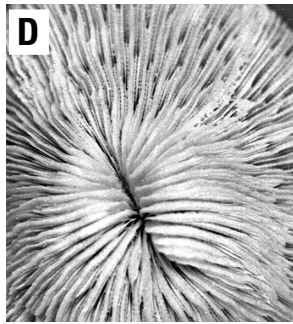
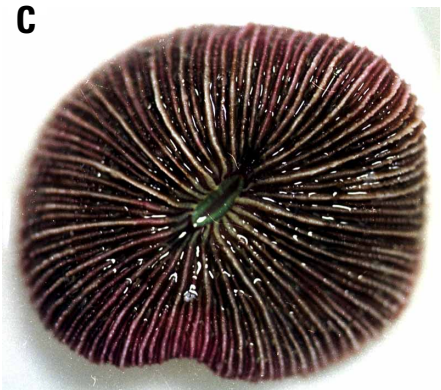
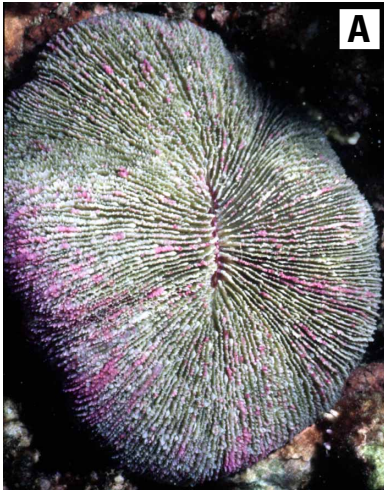
Solitary fungiids

- common name: Mushroom Corals
- round to oval shape, central mouth
- septo-costae radiate from mouth to margin

Fungia



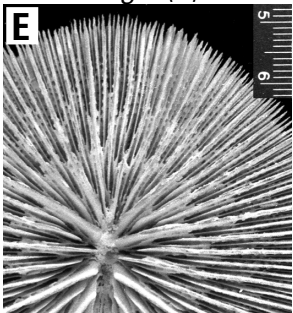
colonial *Ctenactis* spp.



Fungia

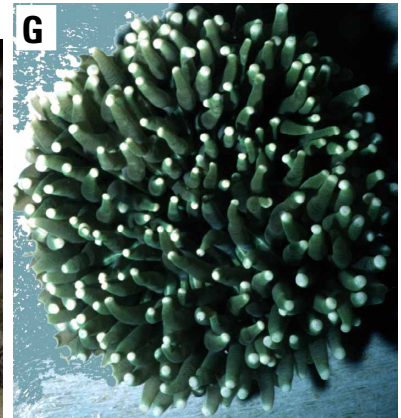
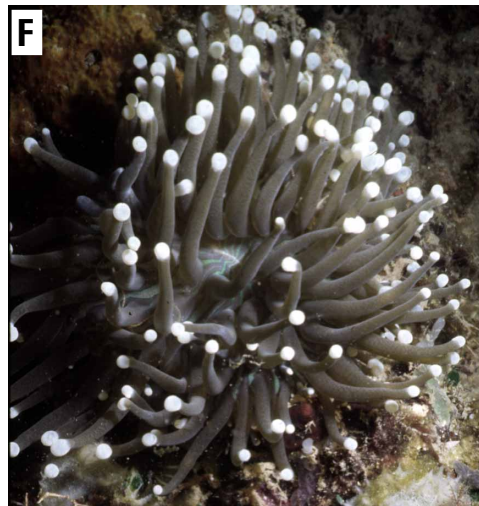
A-D) septo-costae form prominent ribs that radiate from the mouth to the edge of the corallum like the spokes of a wheel
 B-C) short tapering tentacles may be visible, but retract when disturbed

Fungia (D)
Heliofungia (E)



Heliofungia

- E) septa with lobed teeth
- F) long tentacles always extended
- G-H) tentacles green, tan or brown with white or purple tips
- I) tentacles do not retract if disturbed



Simplified key to coral genera in the wildlife trade (continued)

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12. a. circular or discoid with a single mouth (solitary)	13
b. oval or elongate with convex oral side and concave aboral side and more than one mouth (colonial)	14
13. a. discoid or elongate; short, tapering tentacles primarily extended at night	<i>Fungia</i>
b. polyps extended in day and night; tentacles largest of all corals	<i>Heliofungia</i>
14. a. central row of calices forming an axial furrow	15
b. mouths scattered over oral surface, no axial furrow; oval to round, concave	<i>Halomitra</i>
c. mouths scattered over oral surface, but are closely spaced and exsert	<i>Sandalolitha</i>
d. septo-costae running in opposite directions	<i>Zoopilus</i>
e. colony plating; corallites inclined toward colony margin	<i>Podabacia</i>

Colonial fungiids currently uncommon in trade include *Halomitra*, *Sandalolitha*, *Zoopilus*, *Lithophyllon* and *Podabacia*.

Halomitra, *Sandalolitha*, *Zoopilus* are free-living and corallites are only found on the oral (upper) surface.

Lithophyllon and *Podabacia* are attached, and encrusting or laminar; septo-costae are similar to *Sandalolitha*.

Sandalolitha and *Zoopilus echinatus* resemble *Halomitra* in gross morphology, but they are more delicate and skeletal structures are like *Fungia*

Zoopilus: septo-costae run in opposing directions, unlike *Fungia* which have septa that radiate out from the mouth.

Halomitra (1999: not reported)

- “Neptune’s Cap” has many mouths scattered over the upper surface; colonies thin-walled and delicate; elliptical, concave and dome or bell-shaped
- colonies lack an axial furrow; corallites may be slightly raised, but lack distinctive walls;
- septa are not exsert, but have teeth

Sandalolitha

- elliptical, concave and dome-shaped colonies
- corallites are more numerous than *Halomitra* and are closely spaced and exsert
- septo-costae are exsert.

Zoopilus

- elliptical, concave and dome-shaped colonies
- colonies are delicate and thin-walled but may be 0.6 m in diameter
- septo-costae radiate from a central corallite, but may also run perpendicular

Podabacia

- colonies form explanate plates that are attached
- undersurface of plate is pitted
- septo-costae are exsert, similar to *Sandalolitha*
- corallites inclined toward plate margin