

# Dichotomous key for soft coral identification

By Adam Cesnales

Key includes only true Octocorals excluding gorgonians.

1. Colony encrusting.....**Proceed to 2**  
Colony massive.....**Proceed to 3**  
Colony comprised of individual polyps arising from hard red tubes.....**Proceed to 4**  
Colony with hard blue skeleton.....**Proceed to 5**
  
2. Polyps retractile.....**Proceed to 6**  
Polyps variously contractile, but not retractile.....**Proceed to 8**
  
3. Colony unattached from substrate. Distinctively “Christmas tree shaped”, with branches radiating from a central stalk. Upper branched section can completely retract into branch free lower section.....**Proceed to 9**  
  
Colony unattached from substrate. Distinctively “Club Shaped”.....**Proceed to 17**  
With very elongate polyps radiating from upper section with bare, often curved lower section that burrows into soft substrates.  
  
Colony not as above and with dimorphic (two types) polyps and clearly distinct stalk and “head”.....**Proceed to 10**  
  
Colony not as above, with monomorphic (one type) polyps.....**Proceed to 12**
  
4. **Tubipora Musica (Organ Pipe Coral)**  
\*Could be confused with Clavularia or possibly Anthelia if skeleton not visible
  
5. **Heliopora (Blue Ridge Coral)**  
\*Could be confused with Millepora sp. (fire coral) or true hard corals.  
Verify 8 tentacles per polyp.
  
6. Distinctly Stoloniferous, large bushy polyps retract into distinctive bulbous anthostele.....**Clavularia**  
  
Forming continuous or web-like mat, polyps with reduced or nearly absent pinnules.....**Proceed to 7**
  
7. Web-like to continuous mat, often weakly adhered to substrate, polyps usually retract into raised calyces.....**Briareum**  
\*Briareum includes corals formerly in Pachyclavularia **(Star Polyps)**  
  
Web-like to continuous mat, well adhered to substrate, polyps usually retract into smooth surface of may.....**Erythropodium**  
**(Encrusting Gorgonian)**

Ribbon like to continuous colorful mat, polyps retract into large calices surrounded by large obvious sclerites.....**Rhytisma**  
 \*Formerly (still often in aquarium literature) known as parerythropodium **(Encrusting Leather)**

**Notes:** Briareum and Erythropodium can be impossible to distinguish on the basis of gross physical characteristics since significant overlap occurs. Descriptions above are generalities. Sclerite examination is required for definitive ID.

8. Wispy polyps with visible iridescent sclerites (Magnification may be required to see individual sclerites).....**Sansibia**  
**(“Blue Xenia”)**

Polyps with no visible sclerites, non pulsing.....**Anthelia**  
**(Waving Hand Polyps)**

9. **Studeriotes (Christmas Tree Coral)**. Formerly Classified as Sphaerella Kremphi.

10. Small smooth/slimy colonies, with large (> ¼”), bushy, usually pulsatile polyps.....**Heteroxenia**

Colony sandpapery/leathery with small diameter (> ¼” across) polyps.....**Proceed to 11**

11. Polipary (“Head”) flat to wavy, but without raised lobes.....**Sarcophyton**  
**(Toadstool/Umbrella Leather)**

Polipary with raised, often radially arranged lobes that may appear branch like.....**Lobophytum**  
**(Crown/Finger Leather)**

12. Colony branching with retractile (or appearing so) polyps.....**Proceed to 13**

Colony with a central stalk/base with non-retractile polyps.....**Proceed to 14**

Colony with retractile polyps but non-branching.....**Proceed to 16**

13. Colony smooth and slimy/slippery.....**Klyxum**  
 \*Contains corals formerly classified as Cladiella and Alcyonium **(Colt Coral)**

Colony sandpapery/leathery.....**Sinularia**  
**(Finger Leather)**

Colony brightly colored or white, polyps retract into prominent calices.....**Nephtyigorgia**  
**(Chili Coral)**

14. Small, smooth/slippery colony with large (usually  $>1/4''$ ), elongated.....**Xenia**  
 polyps arising from dome shaped summit of stalks. Stalks may occasionally branch. Polyps often pulsate.
- Small, smooth/slippery colony with short branches and elongated.....**Cespitularia**  
 polyps that may arise from any part of the branches. Visible highly (Blue Xenia, Phosphor polyps)  
 iridescent sclerites give the appearance of glitter imbedded in tissue.
- Not as above.....**Proceed to 15**
15. Branches occur as upward projections from common low, stout base, rarely re-branching. Polyps concentrated on distal 2/3 of branches.....**Paralemnalia**
- Small colony with a central stalk and short simple branches  
 polyps usually concentrated on distal 2/3 of branches.  
 Contracted polyps may lay against branches “giving pine” cone appearance.....**Capnella**
- Colony with complex branching, may have muted colors.....**Nephthea**  
 \*These three genera have significant overlap. Distinguishing  
 between them can be quite difficult without examination of sclerites **Lemnalia**  
**Litophyton**
- Colonies brightly colored, with numerous large sclerites visible.....**Dendronephthya**  
 through tissue and often protruding from tissue (especially **Scleronephthya**  
 around polyps) giving contracted colonies a very prickly texture **Stereonephthya**  
 \*These three genera are very similar. All are azooxanthellate  
 (non-photosynthetic) and should be avoided by casual aquarists.
16. Colony leafy with sparse polyps. Some polyps may retract.....**Sinularia**  
 into raised calyces, but most do not.
- Colony low and broad with thick lobes. Polyps are concentrated on.....**Dampia**  
 ridges and all polyps retract into prominent raised calyces giving  
 the colony a bumpy or nubby appearance.
- 17. Cavernularia sp. (Sea Pen)**

Notes

This key does not contain every soft coral that exists and not even every soft coral that enters the aquarium trade. It does contain most of the common ones. If you find a specimen that does not seem to fit the key or seems very different than other members of the same genus, it is wise to check other references.

This key is not absolutely definitive. The gross physical characteristics used in this key are often variable. In order to ID many of the corals with certainty, microscopic examination of their sclerites may be necessary.

Feel free to use and distribute this key as long as these notes stay attached. Please send any questions, suggestions or errors to [acesnales@zoominternet.net](mailto:acesnales@zoominternet.net) Happy reefing!