Overview of Corals and Hardbottom Resources in Southeast Florida

Contents (Unit 1, file 2 of 3):

- Introduction
- General Biology & Ecology of SE Florida Reefs
  - Threats to SE Florida Reefs
- Identification Resources for SE Florida Corals (cont.)
  - Nearshore Hardbottom Resources
Other Common Corals, Not Threatened, but All Protected under State & Federal Rules* (*: Units 2 & 3)

Great star coral
*Montastraea cavernosa*

Mustard hill coral
*Porites astreoides*

Smooth star coral
*Solenastrea bournoni*

Grooved brain coral
*Diploria labyrinthiformis*

Maze coral
*Meandrina meandrites*

Elliptical star coral
*Dichocoenia stokesii*
Montastraea cavernosa / great star coral

- Size = 2 – 8’
- M. cavernosa has the largest polyps of the genus Montastrea. Easy to identify due to large polyps.
- Can appear as yellow, blue, green, color varies
- Could be confused with the colonial zoanthid Palythoa, which encrusts over dead corals, but Palythoa forms a mat (not a hard colony), and has smaller polyps.

- **TO REMEMBER:** has the largest polyps – like caverns - cavernosa
Porites asteroides / mustard hill coral

- Size = 6” - 2’
- One of the most common species in our region

- **TO REMEMBER:** often mustard yellow or brown and size of ant hill (mustard hill coral)
Solenastrea bournoni / smooth star coral

- Size = 4 - 18”
- Corallite rims protrude noticeably, giving a blistered appearance

<table>
<thead>
<tr>
<th>Location</th>
<th>Confirmation</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Miami-Dade</td>
<td>confirmed</td>
<td>common</td>
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<tr>
<td>Broward</td>
<td>confirmed</td>
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<tr>
<td>Palm Beach</td>
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<td>fairly common</td>
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<tr>
<td>Martin</td>
<td>confirmed</td>
<td>?</td>
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**Diploria labyrinthiformis/**

**grooved brain coral**

- Size = 1 – 4’
- Deep grooves on top of the ridges (labyrinths)
- Colonies form hemispherical heads

• **TO REMEMBER:** Labyrinth – the only brain coral with a labyrinth / groove on the ridges.

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<tbody>
<tr>
<td>Miami-Dade</td>
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<tr>
<td>Broward</td>
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<td>&lt;1%</td>
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<tr>
<td>Palm Beach</td>
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<tr>
<td>Martin</td>
<td>not confirmed</td>
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Meandrina meandrites / maze coral

- Size = 1 - 3’
- Relatively easy species to ID
- Doesn’t really look like anything else out there

- TO REMEMBER: meandering maze
Dichocoenia stokesii / elliptical star coral

- Size = 4 – 15”
- Protruding corallites (up to 1/4”)
- Colonies typically form rounded heads
- Meandroid (elliptical) long calices
- Corallites protrude up to 1/4” and are usually elliptical or circular and occasionally Y shaped
**Siderastrea siderea** / massive starlet coral

- Size = 1 - 6’ (to six feet)
- Probably the most common species in our area
- Easy to confuse recruits (new colonies) with *S. radians*

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<tbody>
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<td>Palm Beach</td>
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<td>very common</td>
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<tr>
<td>Martin</td>
<td>confirmed</td>
<td>?</td>
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</table>

*S. radians vs. S. siderea*
**Siderastrea radians / lesser starlet coral**

- Size = 4 - 12”
- Lighter color and less common than *S. siderea*
- Colonies small, often flat shaped
- Polyps darker than colony
- Colony pale white (looks bleached) with dark polyps
- Irregular corallites (square, polygonal, triangular)

**Easily confused with:** *S. siderea*

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</thead>
<tbody>
<tr>
<td>Miami-Dade</td>
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<td>abundant</td>
</tr>
<tr>
<td>Broward</td>
<td>confirmed</td>
<td>8%</td>
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<tr>
<td>Palm Beach</td>
<td>confirmed</td>
<td>very common</td>
</tr>
<tr>
<td>Martin</td>
<td>confirmed</td>
<td>8%</td>
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*S. radians vs. S. siderea*
Montastraea annularis – forma faveolata (boulder) mountainous star coral

- Size = 1 - 10’ (to 15’)
- Can have ribs (rows of vertical ribs on colony)
- Bumps (like M. franksii, but larger and with pigment)
- Oldest local colony = 314 years old (15’ tall) off of Ft. Lauderdale

**TO REMEMBER:** look for
- vertical ribs
- and/or bumps
- and/or mountainous growth

<table>
<thead>
<tr>
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<th>Abundant</th>
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</thead>
<tbody>
<tr>
<td>Broward</td>
<td>confirmed</td>
<td>2%</td>
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<tr>
<td>Palm Beach</td>
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<td>?</td>
</tr>
<tr>
<td>Martin</td>
<td>confirmed</td>
<td>?</td>
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Reef Coral / Humann: pg #113
Common to abundant South FL
Diploria strigosa/ symmetrical brain coral

- Size = 6” – 6’
- Horizontal or vertical (parallel) ridges near base
- Can be confused with other brain corals, but:
  Colpophyllia natans – has thicker ridges
  D. labrinthyformis – has labyrinth (groove in ridges)
  D. clivosa – has knobs
Eusmilia fastigiata/ smooth flower coral

• Size = ½’ – 2½’
• Polyps = ¾” – 1¼”
• Polyps on long stalks
• Corallites round to oval
• Easy to identify

• **TO REMEMBER:** You smell (*Eusmilia*) the flowers (bouquet - smooth flower coral)