Microhabitat characteristics used by newly settled fishes in nearshore hardbottom habitats
Common fish species known to settle on nearshore hardbottom habitats

• Snappers
• Grunts
• Damselfishes
• Wrasses
• Sweepers
• Porgies
• Angelfishes
• Blennies
Grunts (Family Haemulidae)

- Numerically dominant on nearshore hardbottom habitats
- Eleven species recorded from nearshore hardbottom habitats
- Important components of local food webs
- Some are federally managed
Newly settled and early juvenile grunts
Questions

• Do newly settled fishes use microhabitats that differ from randomly selected sites?
• If so what characteristics are important?
• Do newly settled fishes differ in their microhabitat use on nearshore artificial and natural hard bottom areas?
• How does microhabitat use relate to habitat quality?
Approach

• Compare biotic and abiotic substrate and structural characteristics on sites occupied by newly settled fishes with substrate characteristics on randomly selected sites

• Sample microhabitats (and random sites) on both natural hardbottom and artificial reefs using quantitative photography and direct measurements

• Analyze results with univariate and multivariate statistics
Microhabitat characteristics

Detached Plants
Turf Algae
Macroalgae
Coralline Algae
Sponges
Hydrozoans
Bryozoans
Tunicates
Worm Rock

Sand
Rubble
Shells
Sand/Hardbottom
Emergent Hardbottom
Worm Rock
Relief
Distance from reef edge
Water depth
Natural hardbottom
Artificial reefs
Comparison of measured variables
Preliminary results

• Newly settled fishes are using microhabitats with characteristics that differed from randomly selected sites
• There appears to be overlap in microhabitat use among taxa examined
• Biotic characteristics are less important than abiotic and structural attributes
• Sand-rock interface was important to the NS fishes examined
• Newly settled grunts are most abundant and frequently occurring
• Other species that settle as single individuals may be attracted to groups of NS grunts