

Early Colonization of the Wheeler North Reef (WNR)



Wheeler North Reef
Polygon #4, near NW corner of Module 17
January 14, 2009
(c) Richard Herrmann

Early Colonization of the Wheeler North Reef (WNR)



Wheeler North Reef
Polygon 2, near south-mid Module 20
January 15, 2009
(c) Richard Herrmann / SCE

- Reef construction completed Sept. 11, 2008
- Photo-reconnaissance Jan 14, 2009 (4 months post-construction)
- 1st quantitative survey completed Feb 3, 2009 (~ 5 months post-construction)

Photo-survey on January 14, 2009 – 4 months post-construction

Polygon 10 – north end of WNR



Polygon 4 – middle of WNR



Polygon 2 – south end of WNR



Module 17 – middle of WNR



Survey Methods

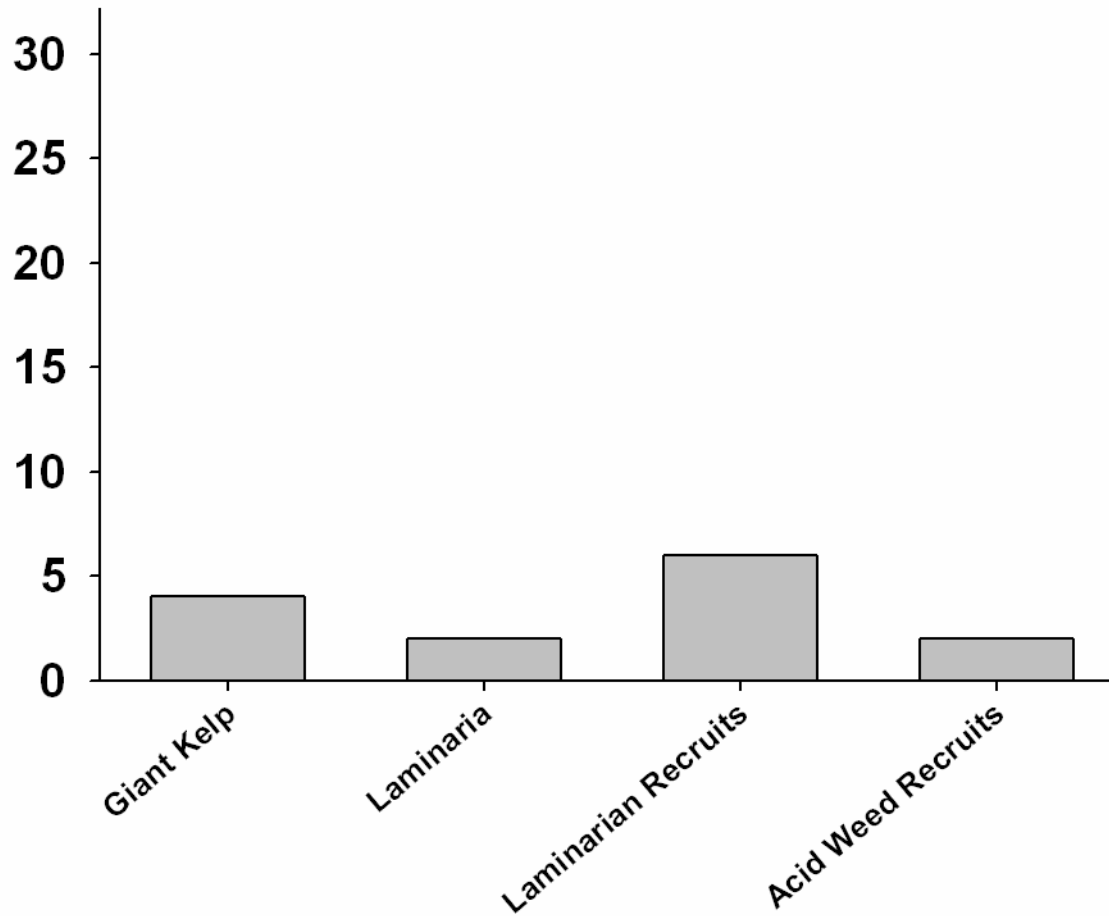


- 10 – 15 minute swims per transect
- Note fish, large invertebrates and algae along entire transect
- Note smaller invertebrates and algae on 3-5 “typical” rocks along each transect

Wheeler North Reef
Polygon #4, near NW corner of Module 17
January 14, 2009
(c) Richard Herrmann / SCE

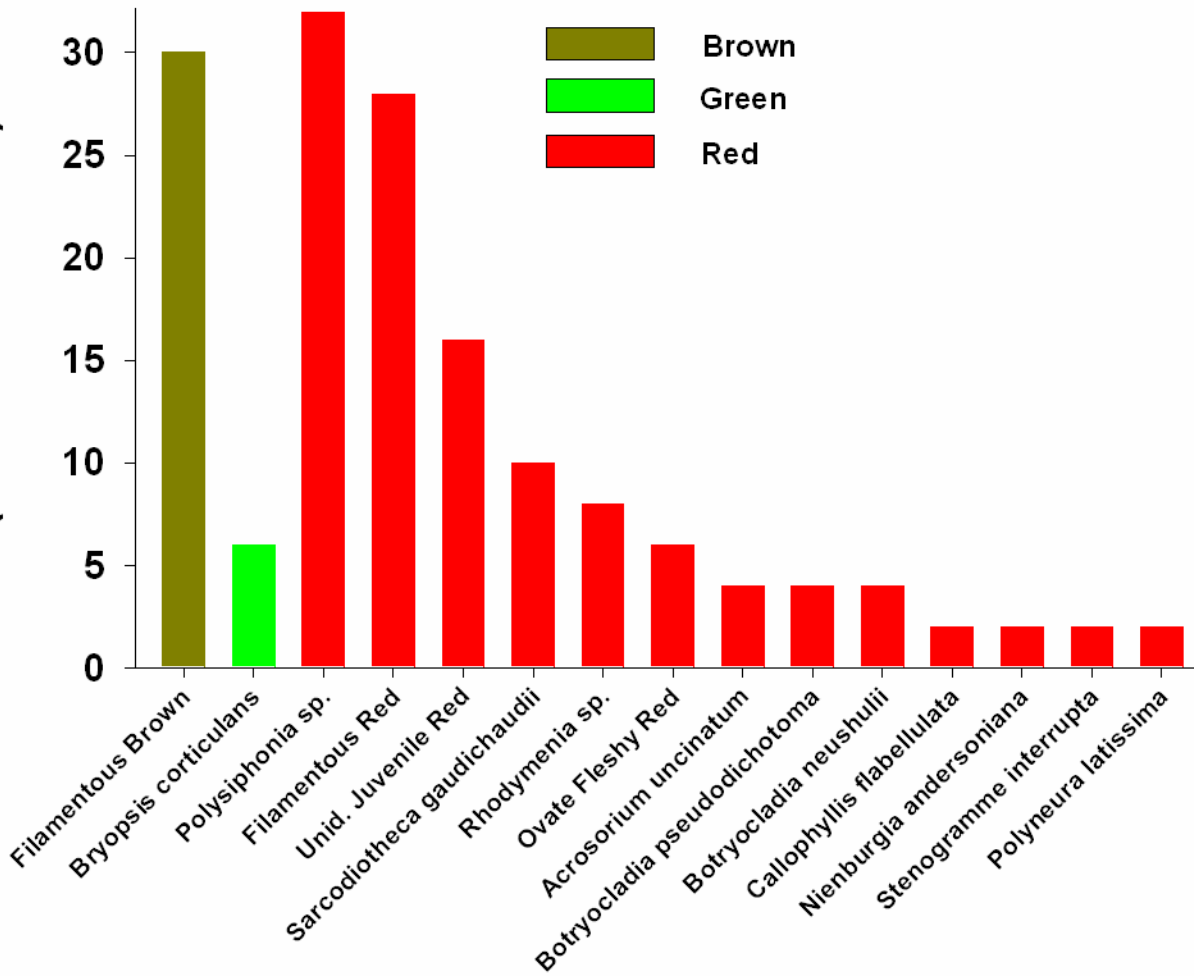
Large brown algae (3 species)

Number of Transects
(maximum of 32)



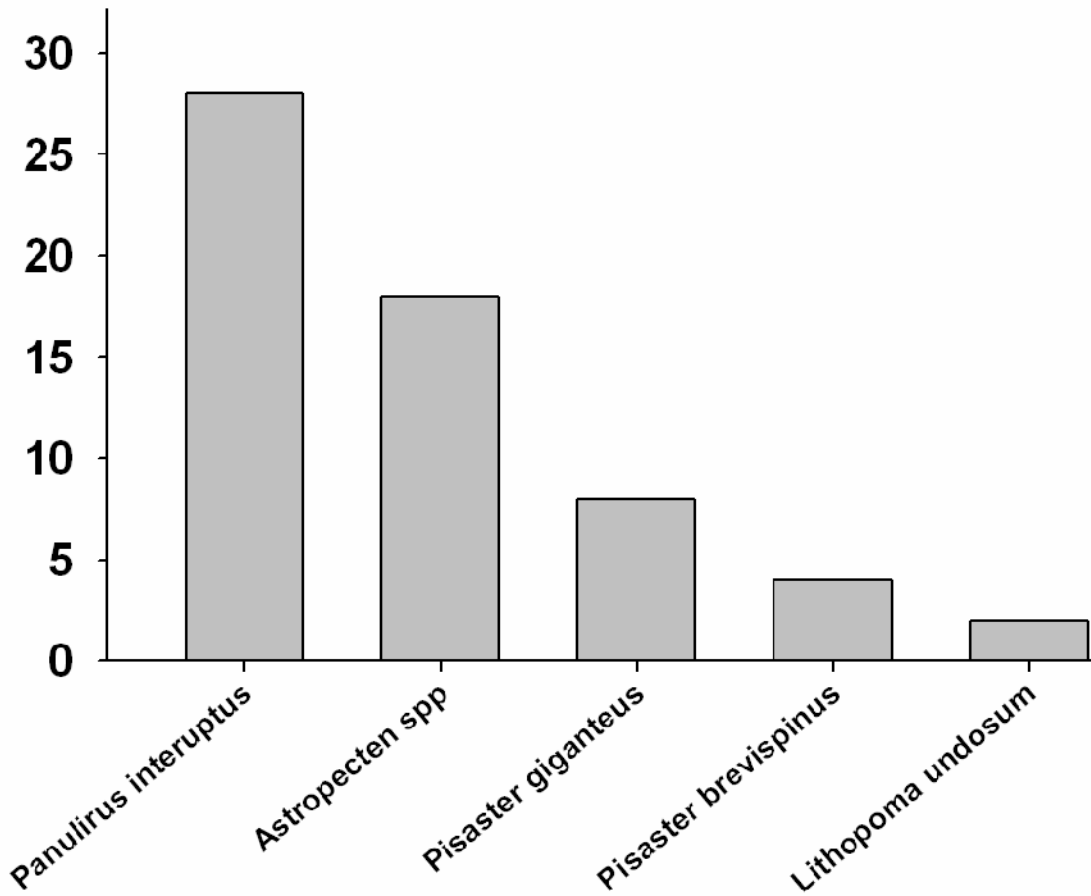
Small understory algae (15 species)

Number of Transects
(maximum of 32)



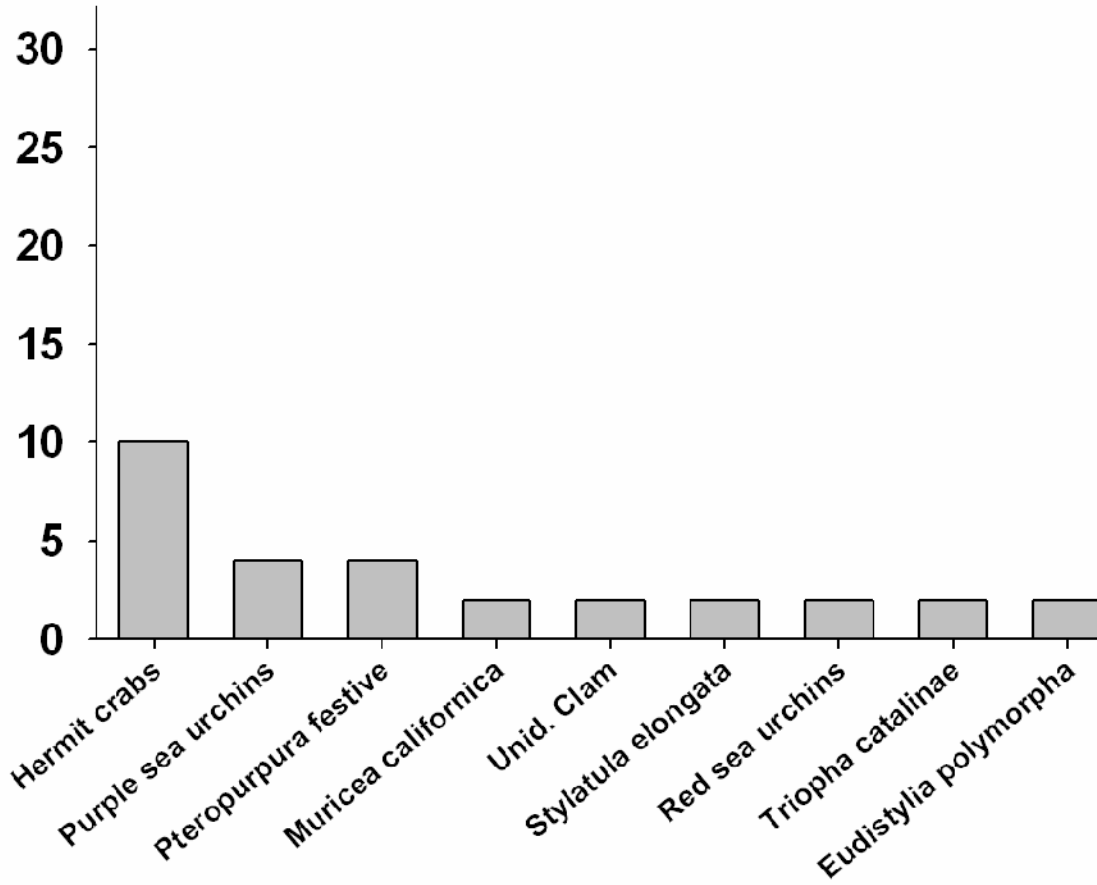
Large mobile invertebrates (5 species)

Number of Transects
(maximum of 32)

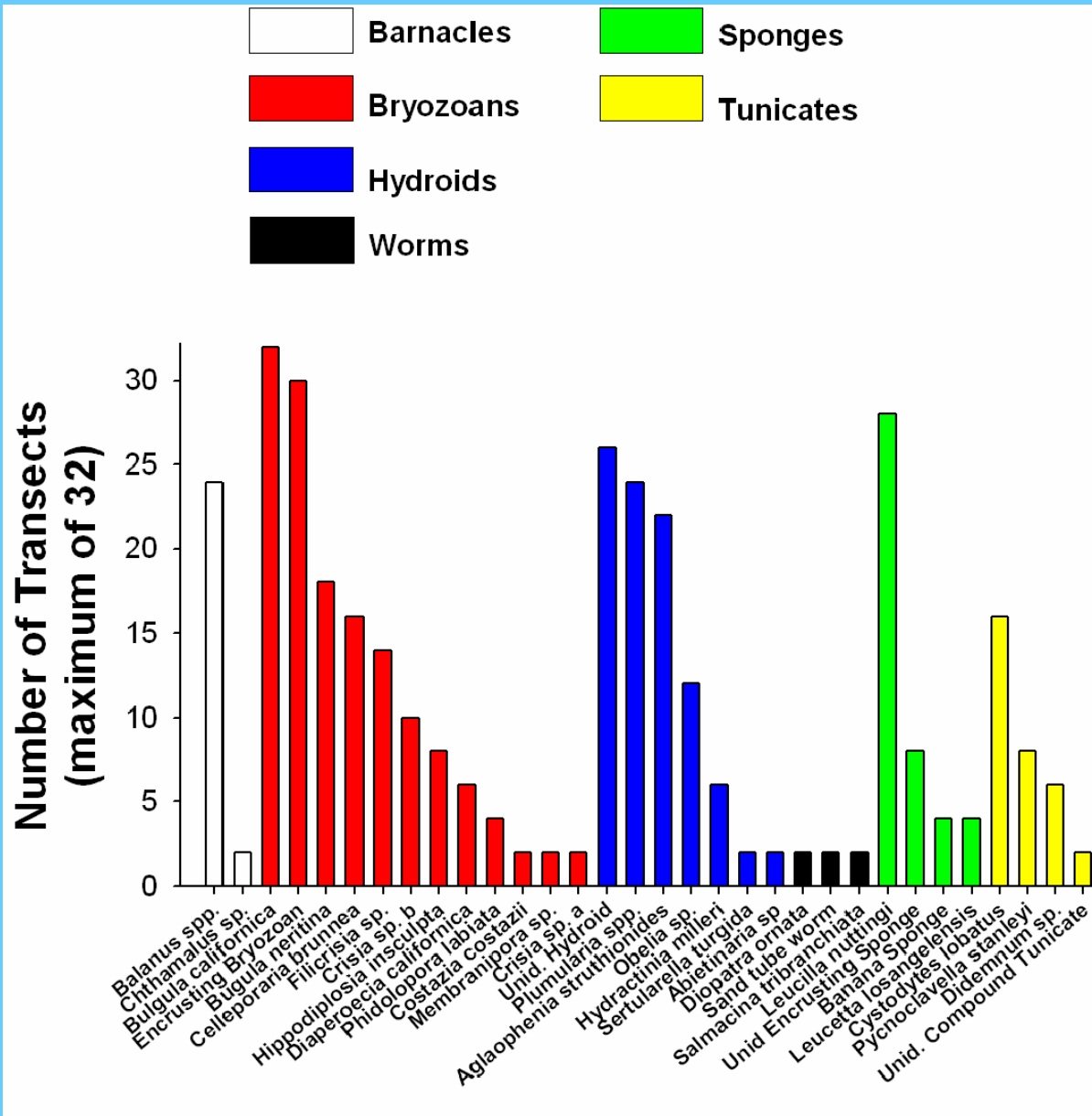


Smaller invertebrates (9 species)

Number of Transects
(maximum of 32)

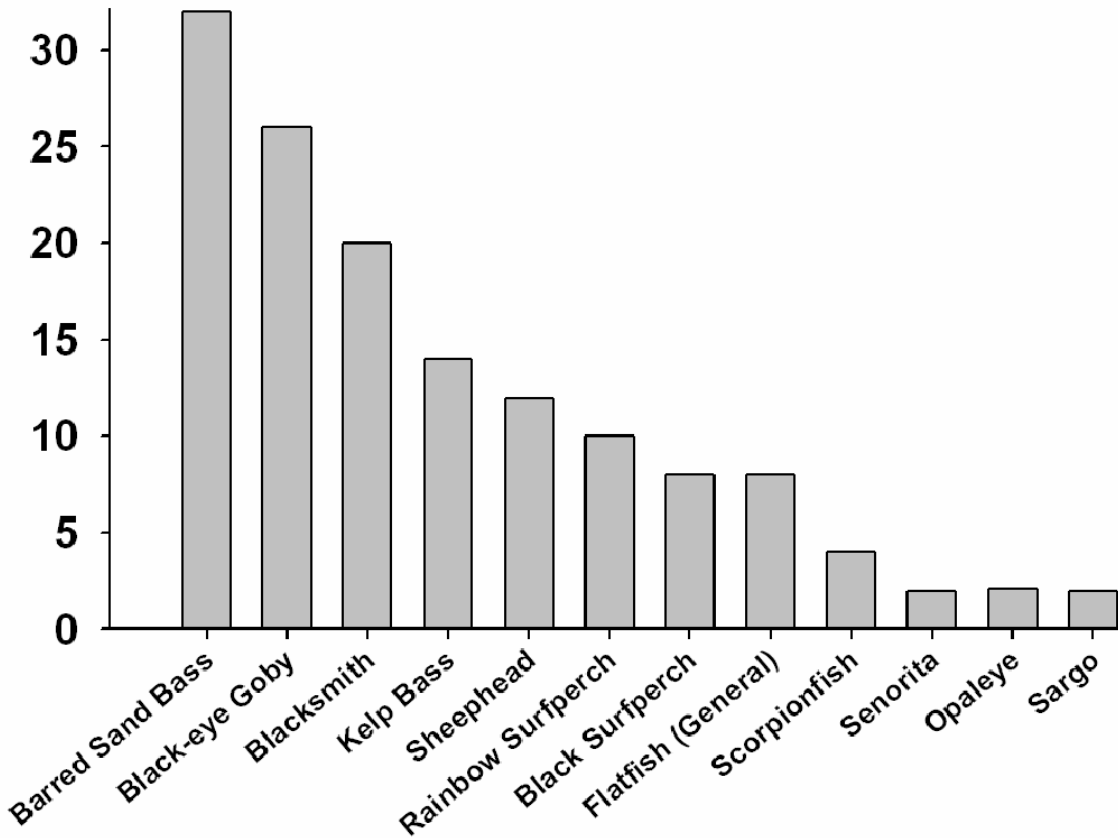


Sessile invertebrates (33 species)



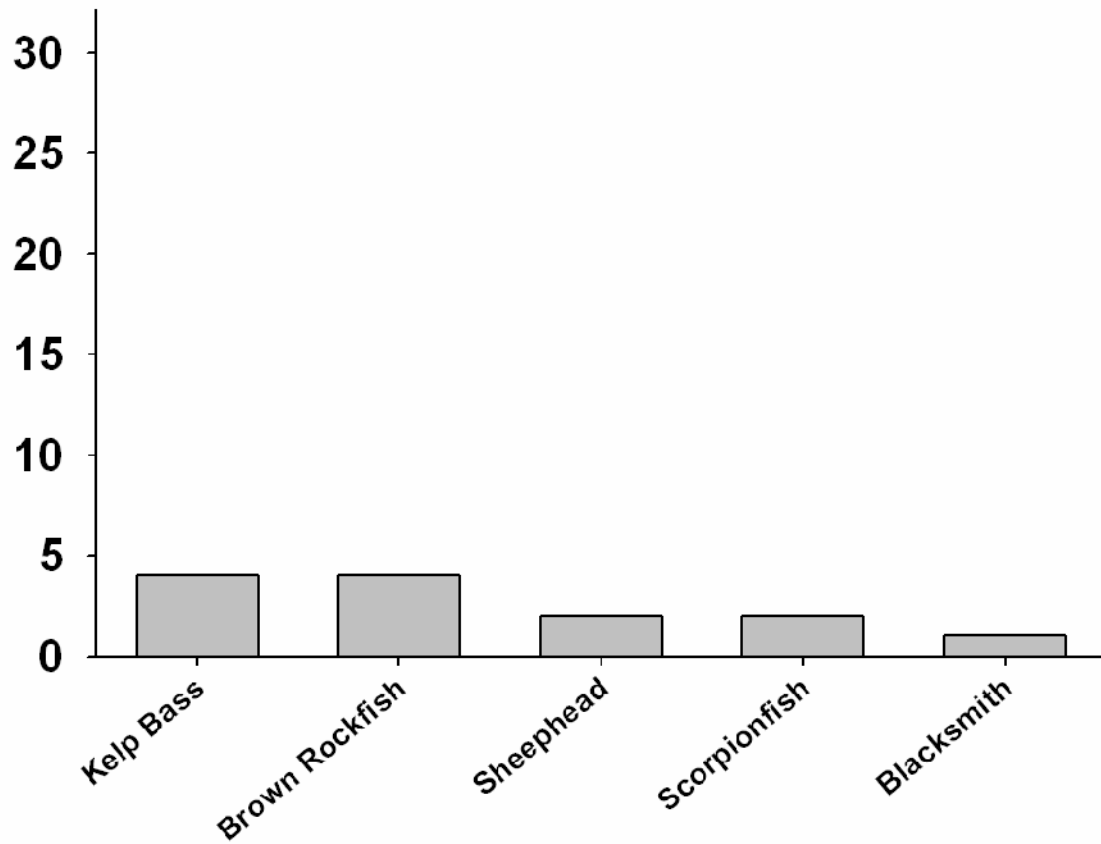
Adult fish (11 species)

Number of Transects
(maximum of 32)



Juvenile fish (5 species)

Number of Transects
(maximum of 32)



Summary

•Algae

- dominated by early successional filamentous red or brown algae
- brown algae recruits present but in low frequency
- adult giant kelp either drifters or on interspersed pre-existing habitat

•Invertebrates

- large invertebrates dominated by lobsters and sea stars – all relatively mobile colonists from pre-existing habitats
- smaller sessile invertebrates dominated by early successional bryozoans, barnacles, hydroids, tunicates, and sponges

•Fish

- adult fish – dominated by species abundant on pre-existing hard-bottom (e.g. black-eyed gobies, blacksmith) or ecotonal habitats (barred sand

The Crew



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