

Influences of ontogenetic phase and resource availability on parrotfish foraging preferences in the Florida Keys, FL (USA)

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Estimating Substrate Composition

Substrate composition was estimated using Coral Point Count with excel extensions (CPCe). We used this program to create substrate categories based on the identification of the organisms at the genus level. Live hard coral consisted of *Orbicella* (formerly *Montastraea*), *Siderastrea*, *Porites*, *Montastraea*, *Millepora*, *Acropora*, *Oculina*, *Agaricia*, *Eusmilia*, *Diploria* and *Mussa* species. We also included Zoanthids with hard corals. Turf algae included filamentous algae that forms large mats. Brown algae (*Dictyota* and *Sargassum*) and red algae (*Wrangelia* spp.) were classified into the fleshy algae category. Calcareous algae consisted of organisms with a calcium carbonate skeleton (*Halimeda* spp. and *Amphiroa* spp.). Gorgonians included *Eunicea*, *Pseudopterogorgia*, *Pterogorgia*, *Gorgonia*, and *Erythropodium* species. The sponge category consisted of *Anthosigmella*, *Haliclona*, *Cliona*, *Holopsamma*, *Iotrochota*, *Ircinia*, *Callyspongia* and *Agelas* species. We also had a category for sponges we were unable to correctly identify to the genus level. The other category included sand or other substances in the sand that were not clearly identifiable.

Table S1. The average Manly's Alpha for turf algae, calcareous algae and fleshy algae for each species and phase of the two genera. Standard error is below each average.

Genus	Species	Phase	N	Turf algae	Calcareous algae	Fleshy algae
<i>Scarus</i>	Rainbow	Juvenile	9	0.413892 (± 0.1204)	0.094467 (± 0.1094)	0.412871 (± 0.0723)
		Initial	109	0.560662 (± 0.0342)	0.231667 (± 0.0309)	0.099585 (± 0.0206)
		Terminal	49	0.470677 (± 0.0515)	0.185251 (± 0.0448)	0.219434 (± 0.0310)
	Blue	Juvenile	30	0.254532 (± 0.0786)	0.211370 (± 0.0542)	0.057153 (± 0.0572)
		Initial	37	0.450480 (± 0.0688)	0.127357 (± 0.0502)	0.032119 (± 0.0321)
		Terminal	5	0.600000 (± 0.1816)	0.082250 (± 0.1933)	0.000000 (± 0.0495)
	Midnight	Juvenile	6	0.369852 (± 0.1581)	0.544569 (± 0.1423)	0.060888 (± 0.0970)
		Initial	56	0.50318 (± 0.0479)	0.271738 (± 0.0453)	0.145230 (± 0.0303)
		Terminal	10	0.560544 (± 0.1158)	0.362825 (± 0.1201)	0.115454 (± 0.0763)
	Queen	Juvenile	13	0.800423 (± 0.0818)	0.000000 (± 0.0423)	0.060888 (± 0.0471)
		Initial	76	0.778442 (± 0.0336)	0.050439 (± 0.0165)	0.079605 (± 0.0192)
		Terminal	57	0.780441 (± 0.0389)	0.012905 (± 0.0195)	0.099747 (± 0.0224)
	Princess	Juvenile	2	0.592616 (± 0.3458)	0.000000 (± 0.0326)	0.115549 (± 0.2586)

Genus	Species	Phase	N	Turf algae	Calcareous algae	Fleshy algae
<i>Sparisoma</i>	Striped	Initial	3	0.379094 (± 0.2093)	0.264911 (± 0.0196)	0.355995 (± 0.1817)
		Terminal	8	0.426295 (± 0.1322)	0.000000 (± 0.0110)	0.319694 (± 0.1038)
		Juvenile	145	0.438132 (± 0.0294)	0.144244 (± 0.0207)	0.174761 (± 0.0207)
		Initial	102	0.46817 (± 0.0346)	0.101878 (± 0.0249)	0.185689 (± 0.0246)
		Terminal	187	0.600816 (± 0.0259)	0.093098 (± 0.0178)	0.150842 (± 0.0182)
		Juvenile	130	0.541314 (± 0.0322)	0.091281 (± 0.0258)	0.192175 (± 0.0260)
	Stoplight	Initial	169	0.532225 (± 0.0276)	0.151861 (± 0.0220)	0.190216 (± 0.0220)
		Terminal	100	0.551858 (± 0.0364)	0.207712 (± 0.0298)	0.163972 (± 0.0293)
		Juvenile	2	0.453881 (± 0.2688)	0.378046 (± 0.2655)	0.062897 (± 0.2270)
		Initial	35	0.390466 (± 0.0674)	0.245784 (± 0.0703)	0.238769 (± 0.0567)
		Terminal	44	0.397963 (± 0.0597)	0.236854 (± 0.0621)	0.266230 (± 0.0495)
		Juvenile	4	0.317646 (± 0.1398)	0.527881 (± 0.1754)	0.020371 (± 0.1564)
	Redtail	Initial	105	0.298356 (± 0.0272)	0.270443 (± 0.0350)	0.326865 (± 0.0306)
		Terminal	29	0.248969 (± 0.0526)	0.188410 (± 0.0695)	0.431456 (± 0.0592)
		Juvenile	137	0.422810 (± 0.0254)	0.223741 (± 0.0344)	0.212966 (± 0.0266)
		Initial	186	0.295315 (± 0.0298)	0.307724 (± 0.0289)	0.275902 (± 0.0226)
		Terminal	164	0.342893 (± 0.0270)	0.304256 (± 0.0305)	0.235026 (± 0.0241)
		Juvenile	4	0.317646 (± 0.1398)	0.527881 (± 0.1754)	0.020371 (± 0.1564)

Table S2. The average percent cover for the three types of algae measured on nearshore and offshore sites. The standard error is below each average.

Location	N	Turf algae	Calcareous algae	Fleshy algae
Nearshore	65	0.3180 (± 0.0138)	0.0698 (± 0.0100)	0.1328 (± 0.0141)
Offshore	93	0.3470 (± 0.0106)	0.0287 (± 0.0030)	0.1949 (± 0.0109)