

Status of *Montastraea* from coral reefs in Natural Reserves of Puerto Rico

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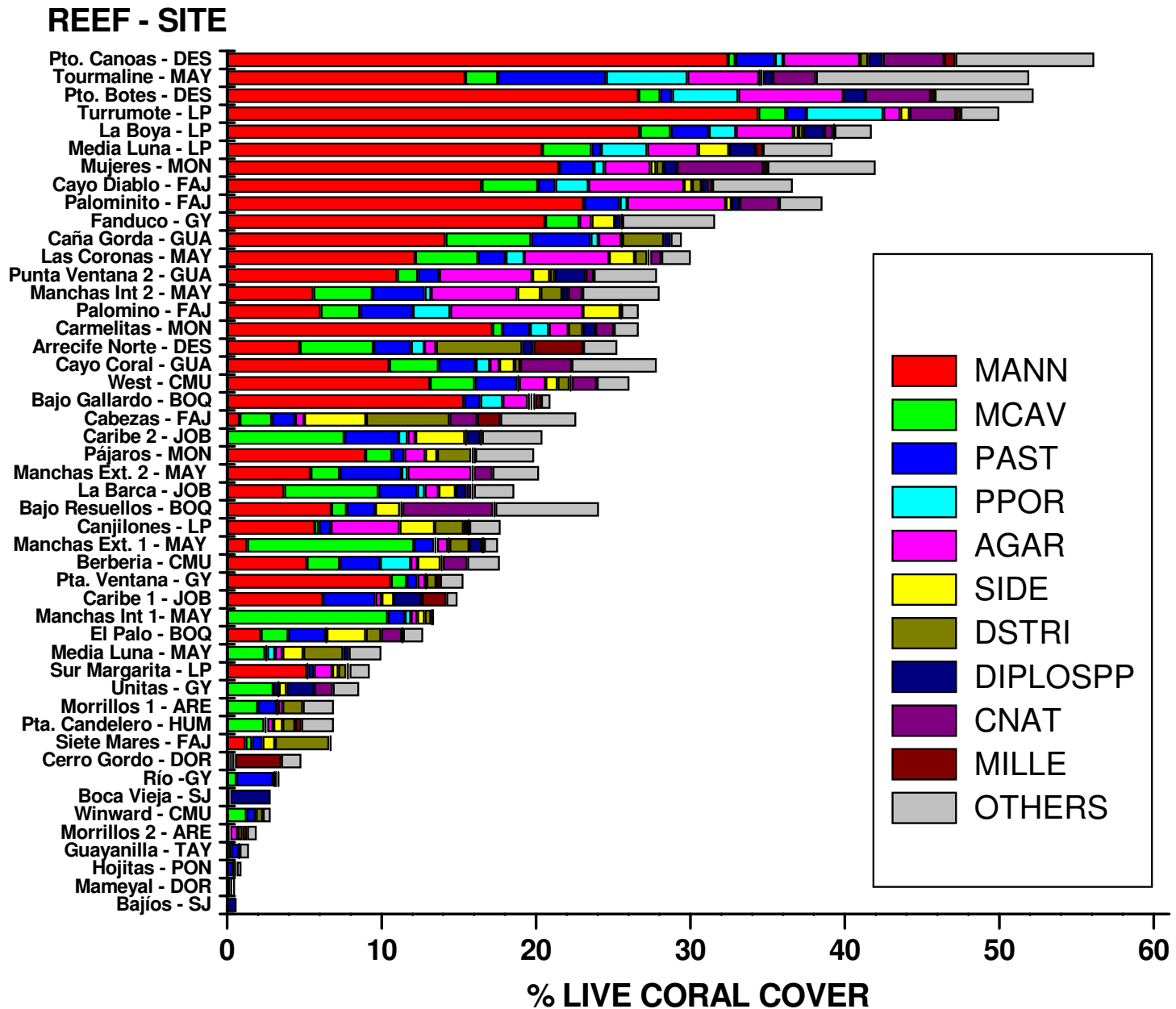
Acropora/Montastraea Workshop – DNER
October, 2009, San Juan, P. R.



Baseline Assessment of *Montastraea annularis* from Puertorrican Coral Reefs (1999 -2004)

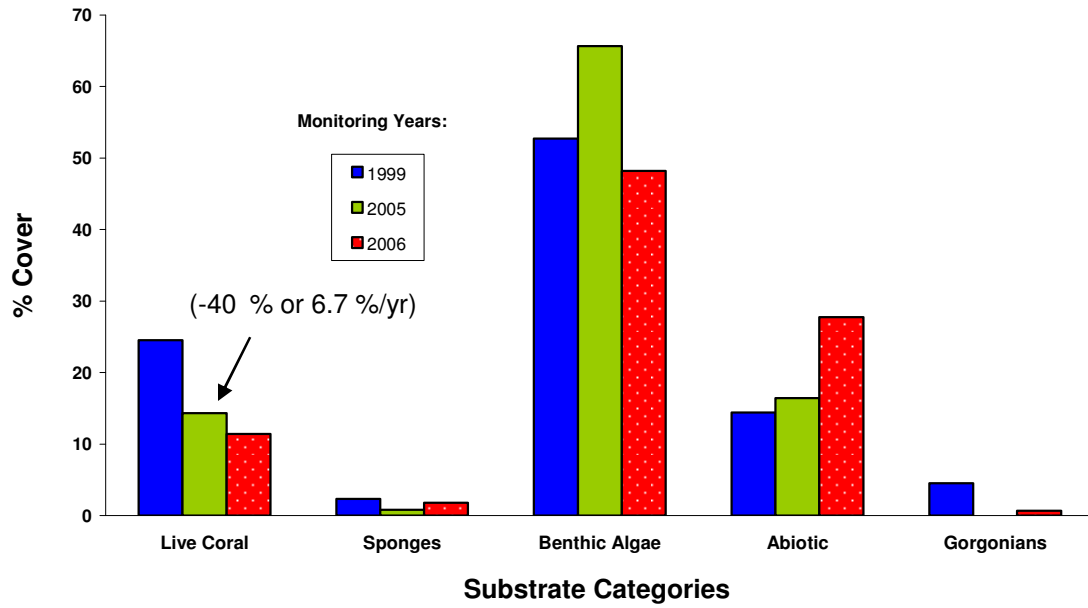
- Coral reefs zones between 10 – 20 m dominated in terms of % substrate cover and rugosity by *M. annularis* (complex)
- Most reef sites with very high live coral cover (> 40 %) strongly influenced by large, centenary colonies of *M. annularis*
- *M. annularis* most prevalent coral of “pristine” reefs - off the west and southwest coasts, oceanic islands, reefs distant from the coast, up-current from rivers, clear water reefs down to 40 m (130’).
- Gradual loss of live coral tissue by *M. annularis* measured from coastal reefs during 2001- 2005 monitoring period
- 1989 coral bleaching event could have been first serious setback of *M. annularis* from Puertorrican reefs

Percent live coral cover at reef sites – baseline data set (1995 – 2001)

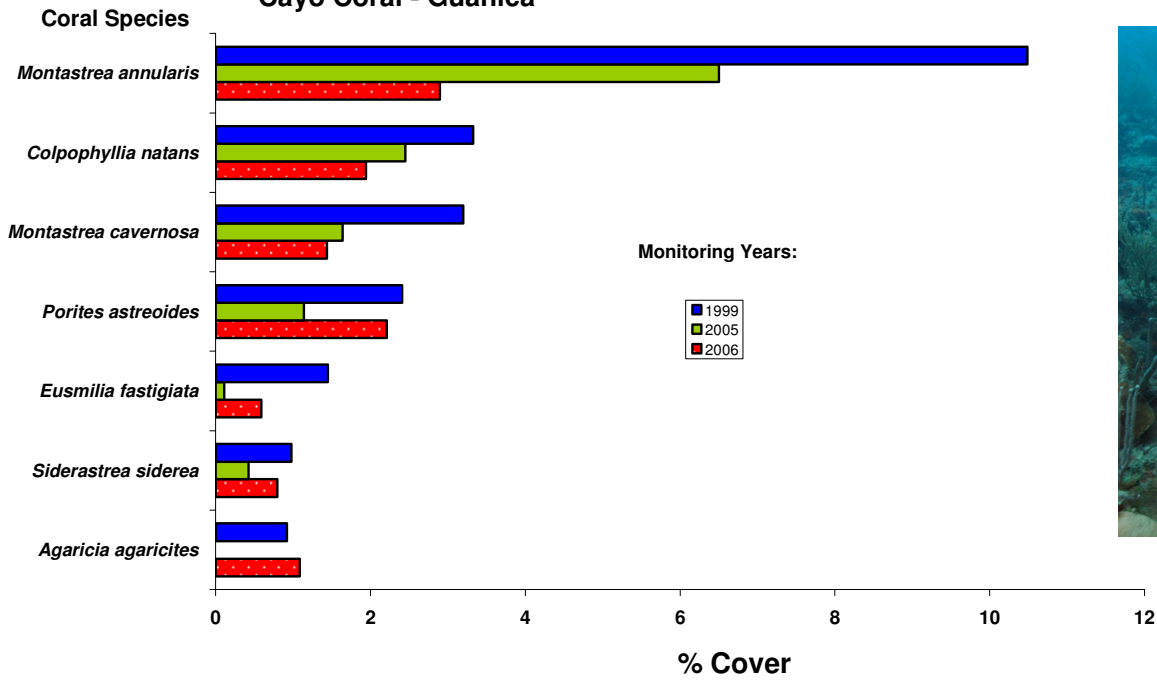




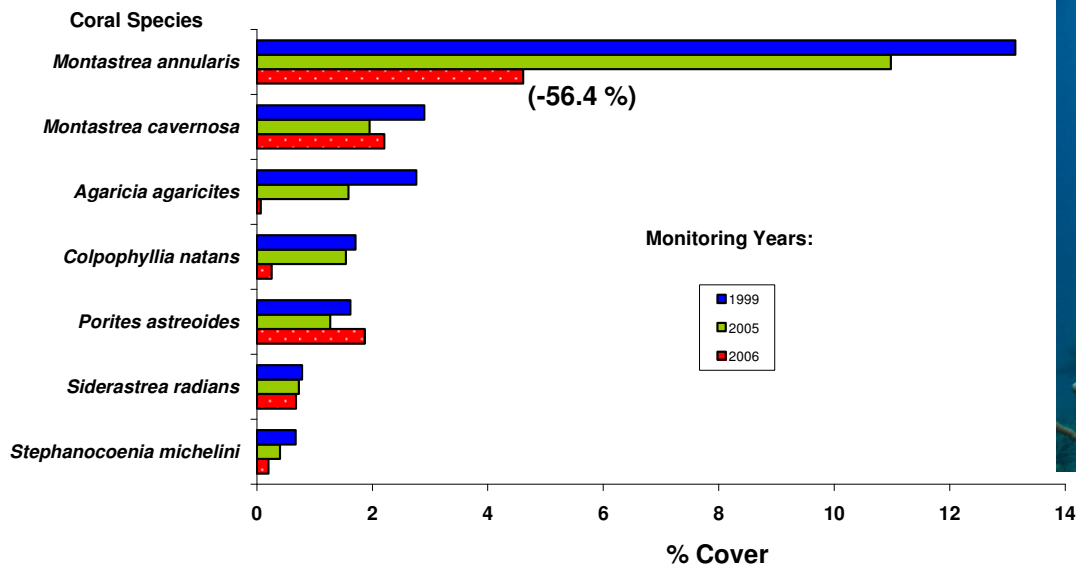
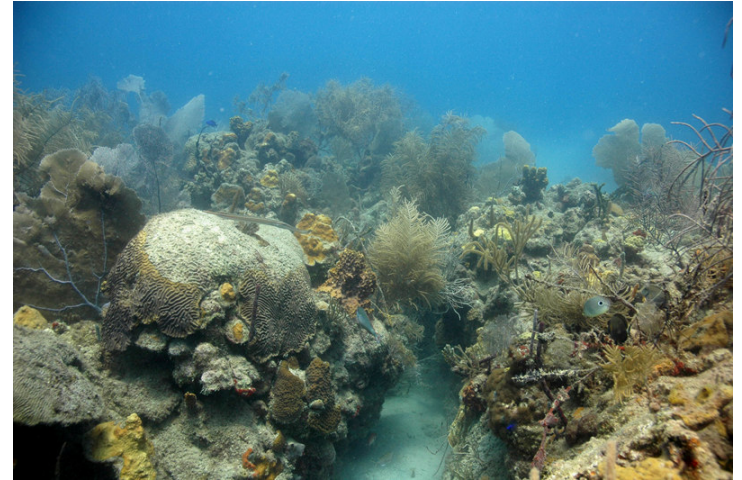
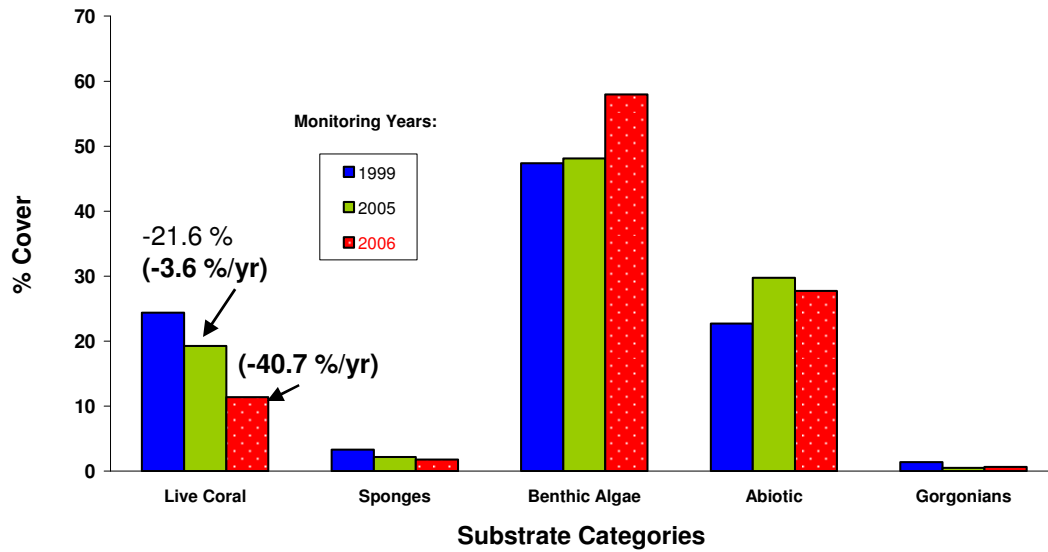
Cayo Coral Reef



Cayo Coral - Guanica



Caja de Muerto Reef - Ponce



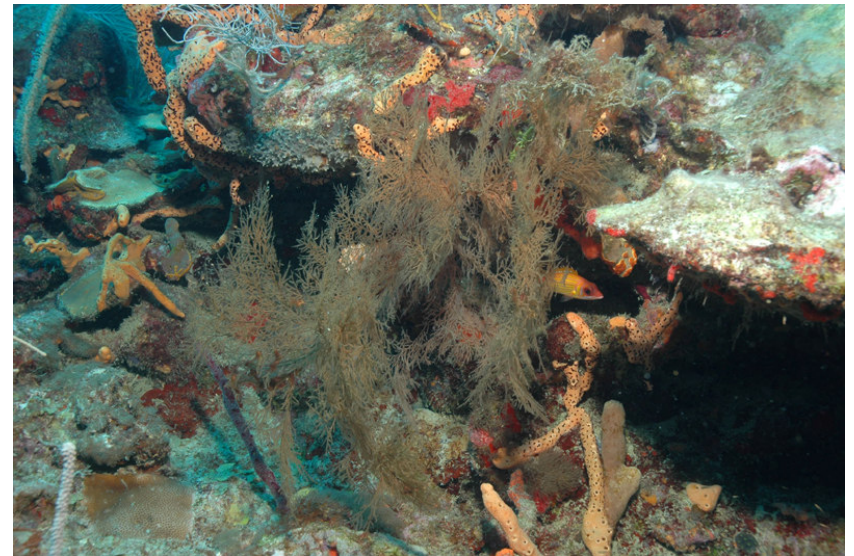
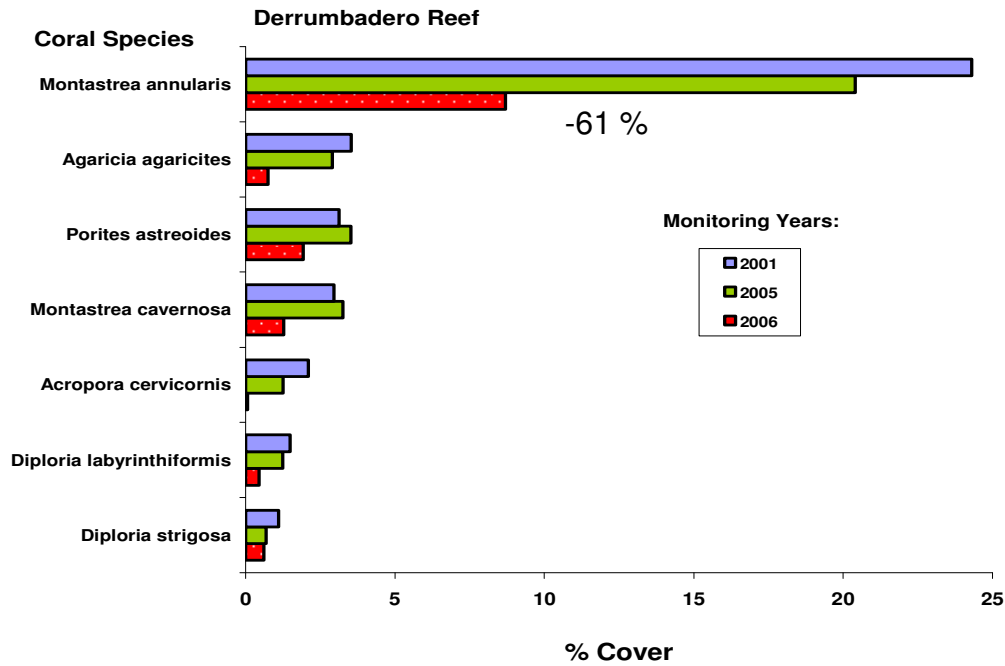
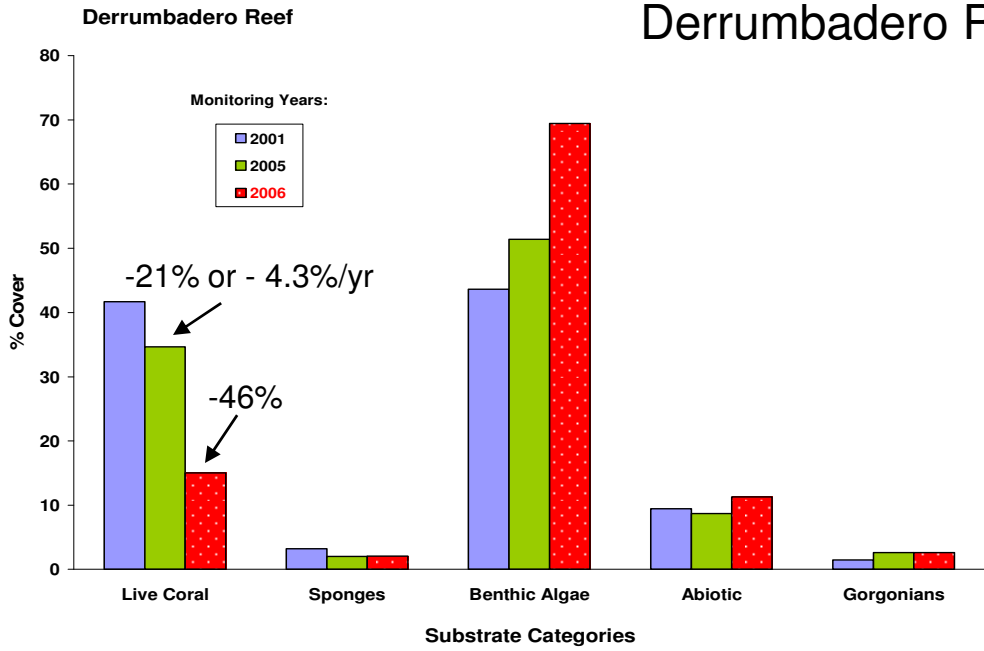
CORAL BLEACHING EVENT 2005-06

An intense, regional coral bleaching event associated with high SST affected reef systems in PR during August - October 2005 causing drastic shifts in the community structure

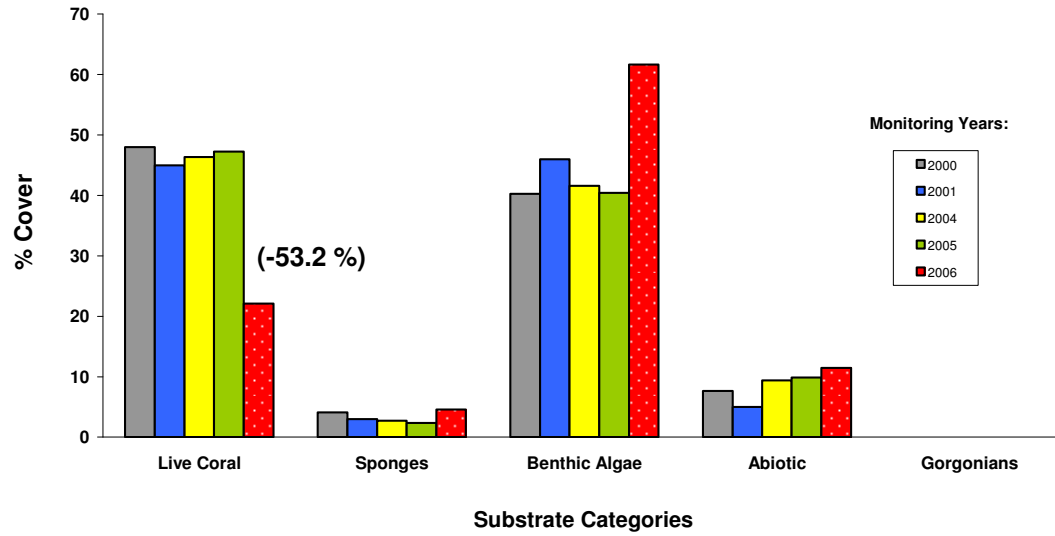
Boulder Star Coral, *Montastraea annularis* was the most severely affected species, presenting large scale mortalities throughout PR. Reef systems dominated by *M. annularis* suffered significant degradation



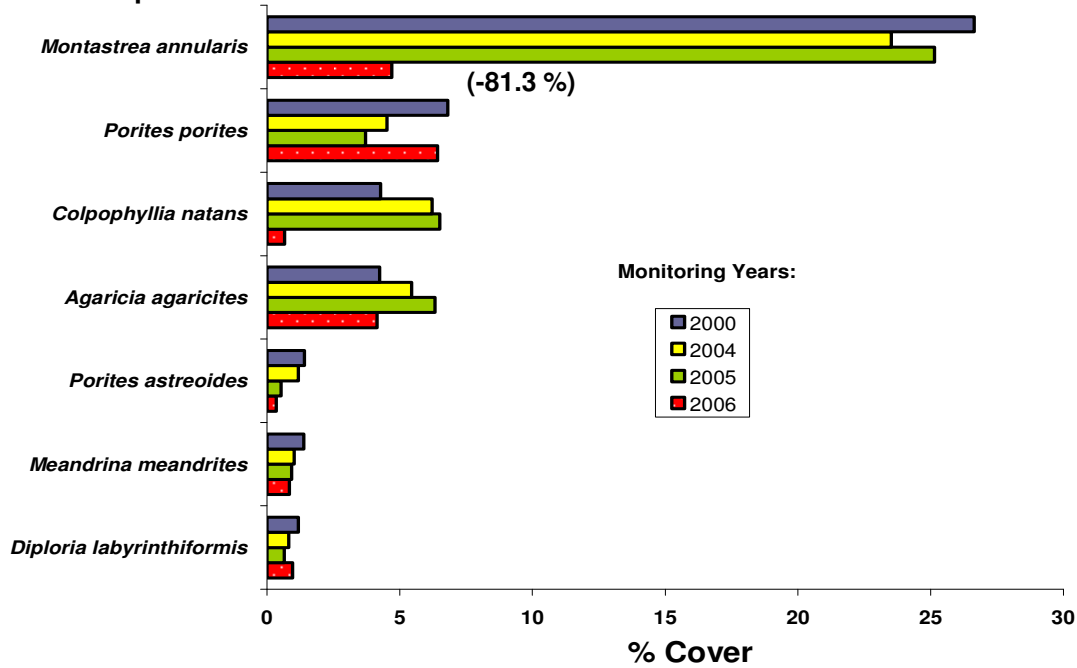
Derrumbadero Reef - Ponce



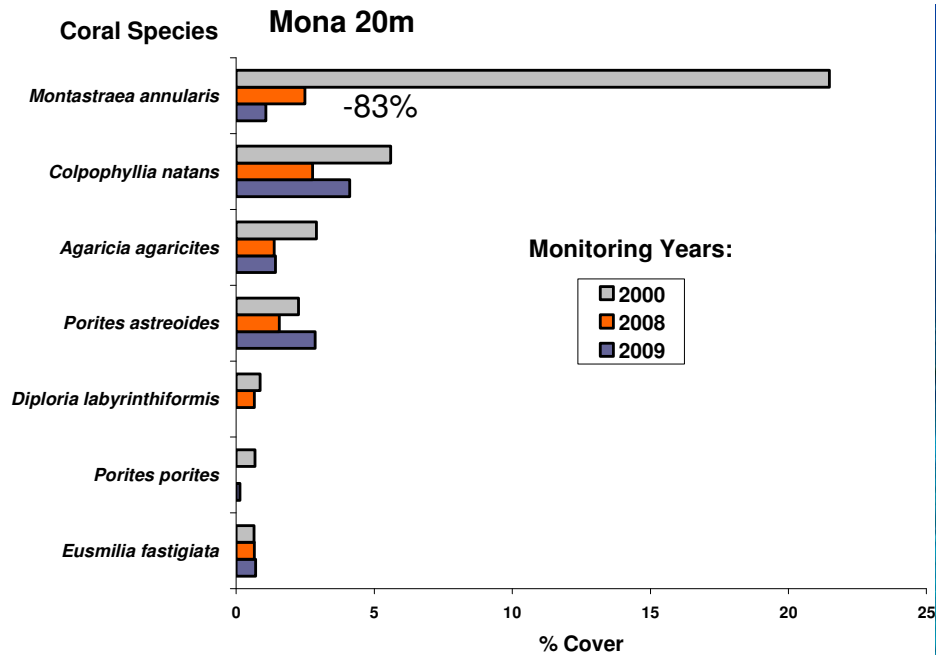
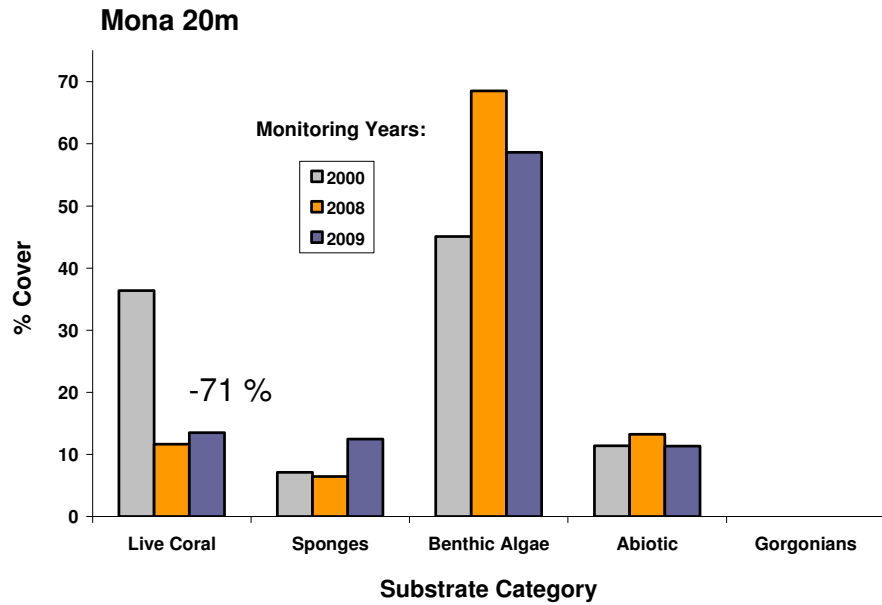
Puerto Canoas Reef 20 m - Desecheo



Coral Species

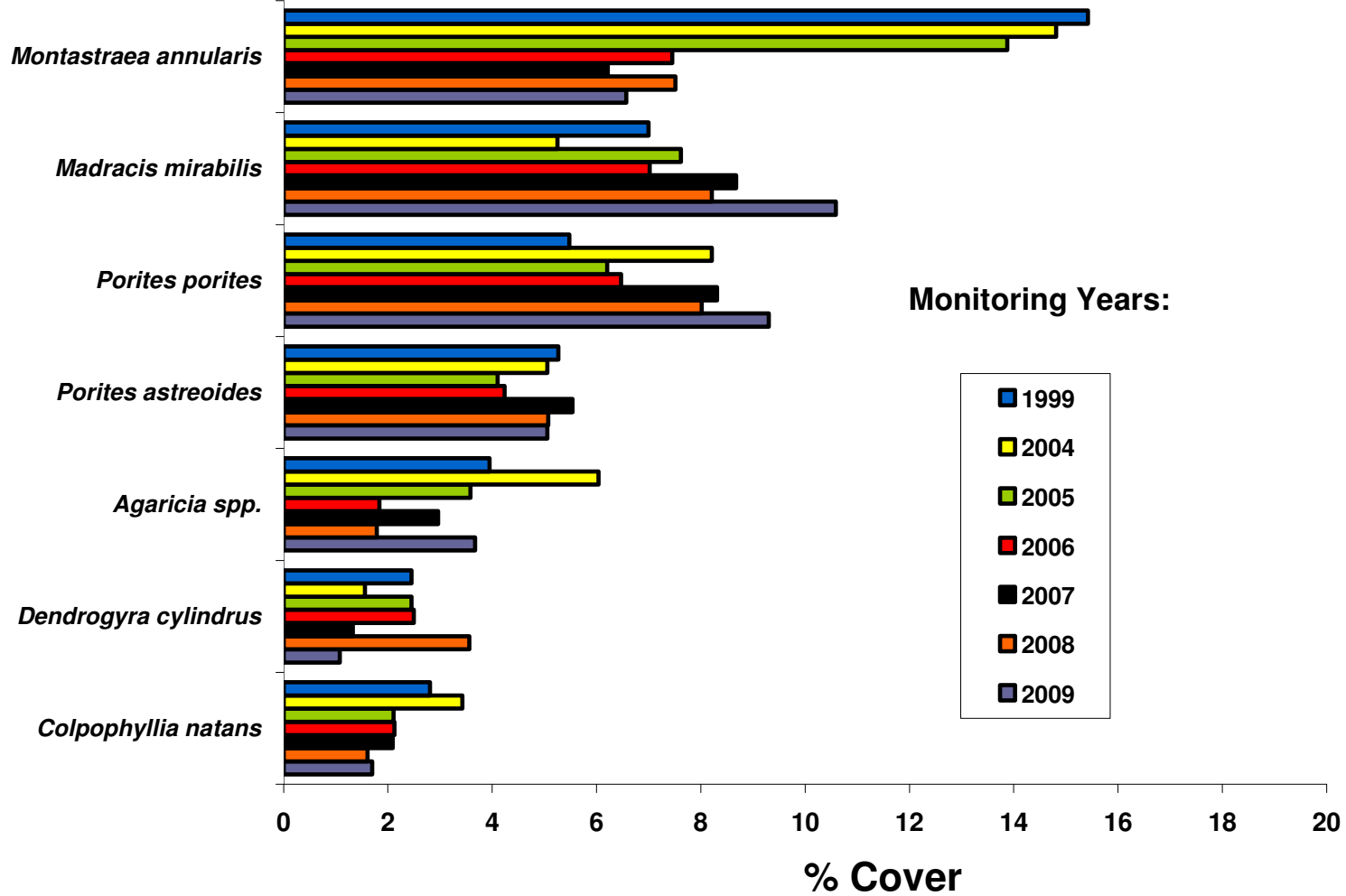


Playa Mujeres – Isla de Mona

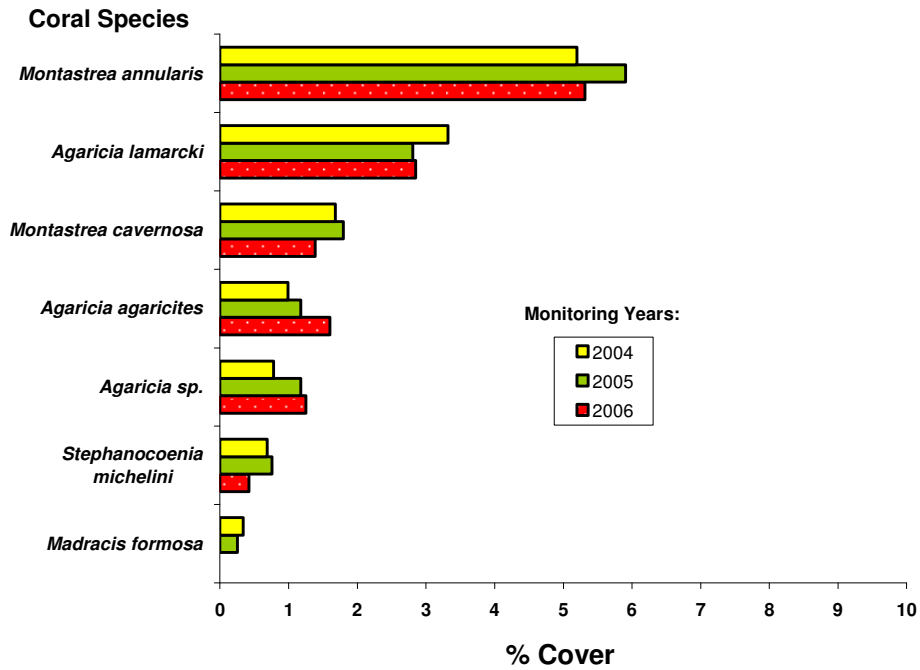
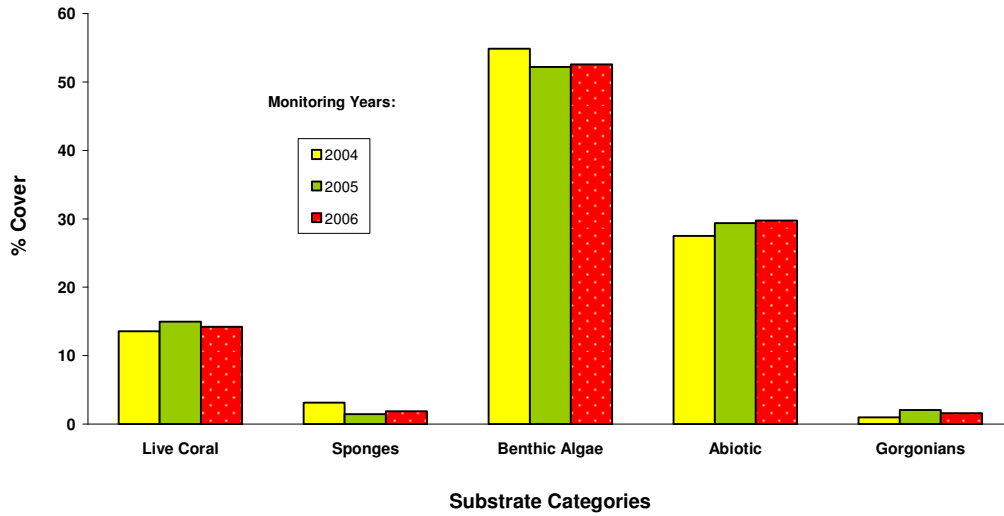


Tourmaline 10m

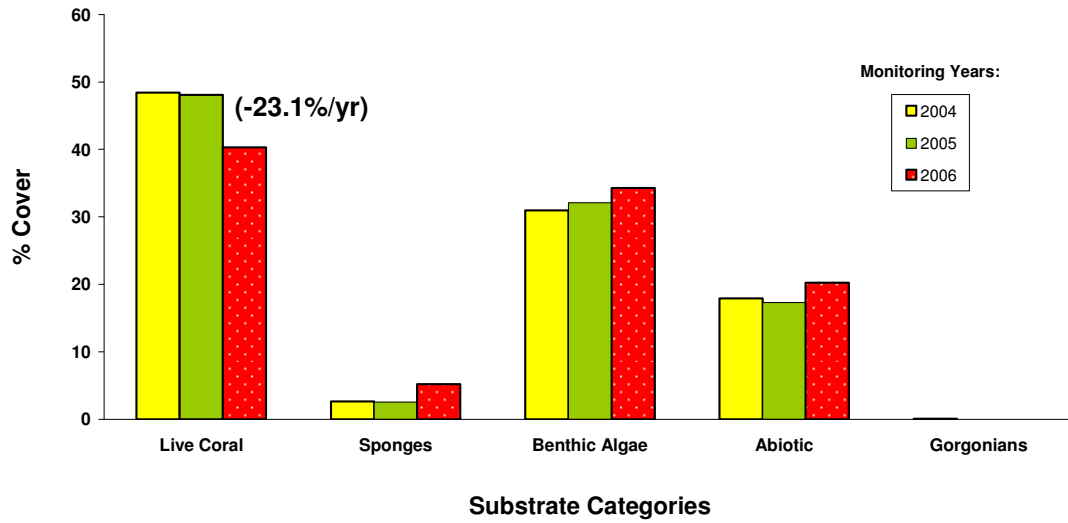
Coral Species



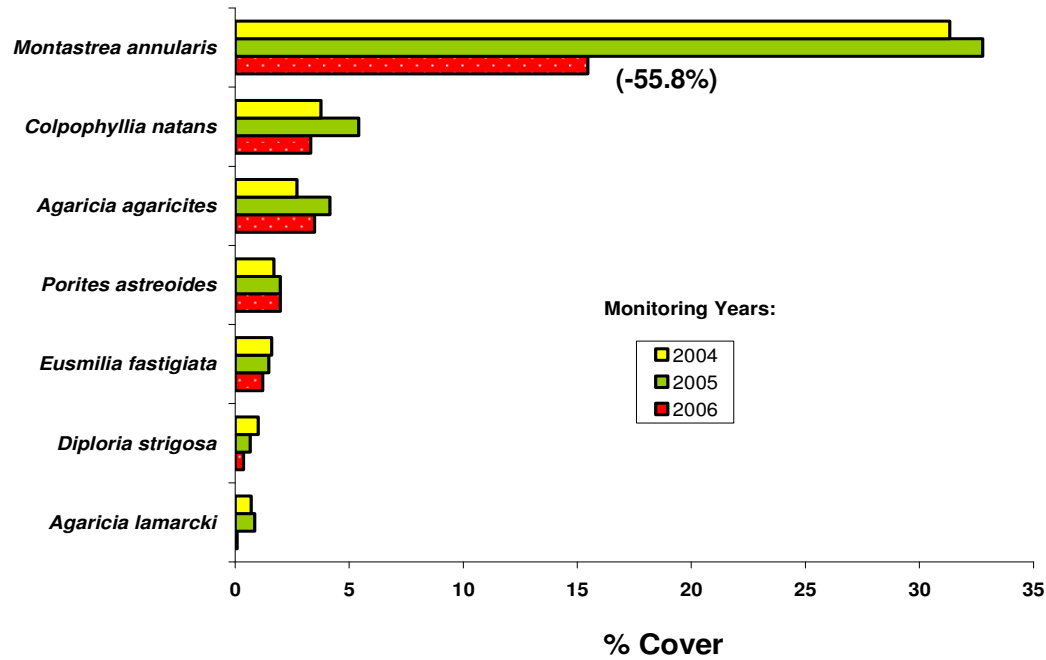
Tourmarine 30 m - Mayaguez



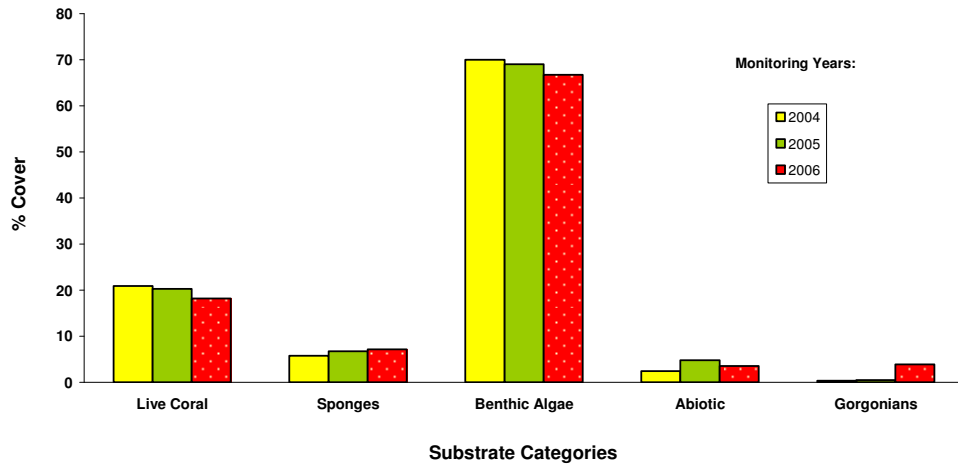
Puerto Canoas Reef 30 m - Desecheo



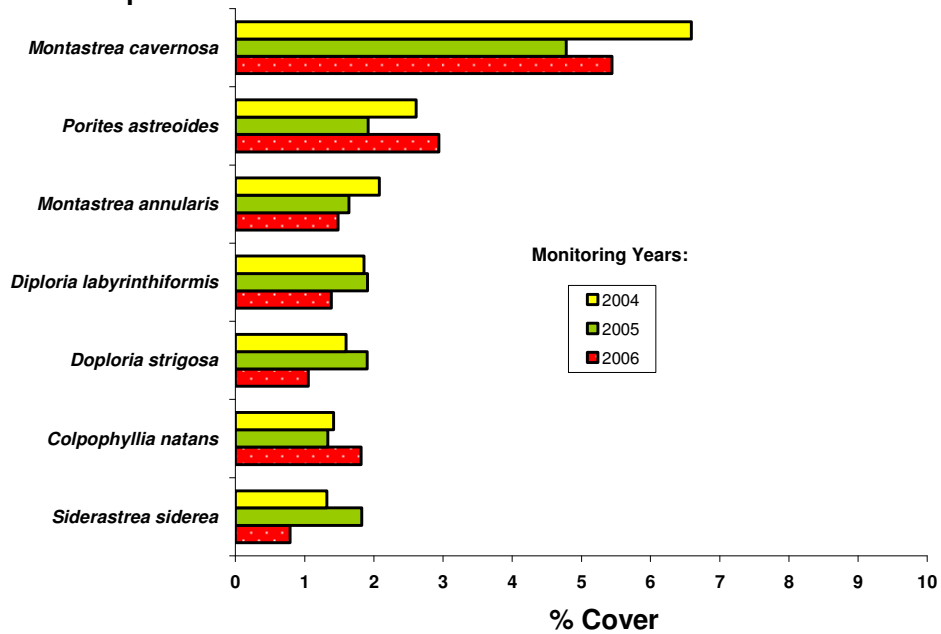
Coral Species



Tres Palmas Reef 10 m - Rincon

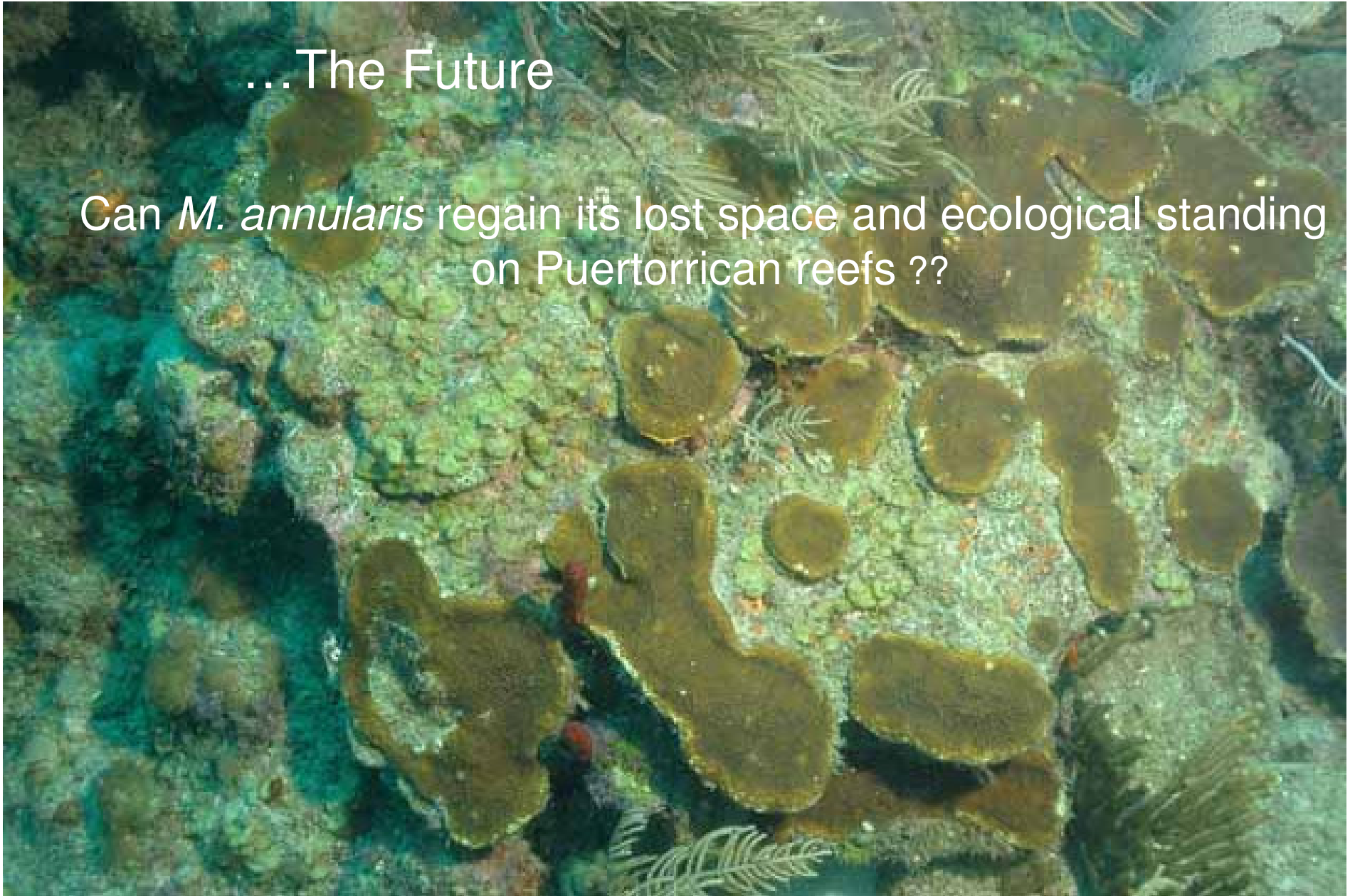


Coral Species

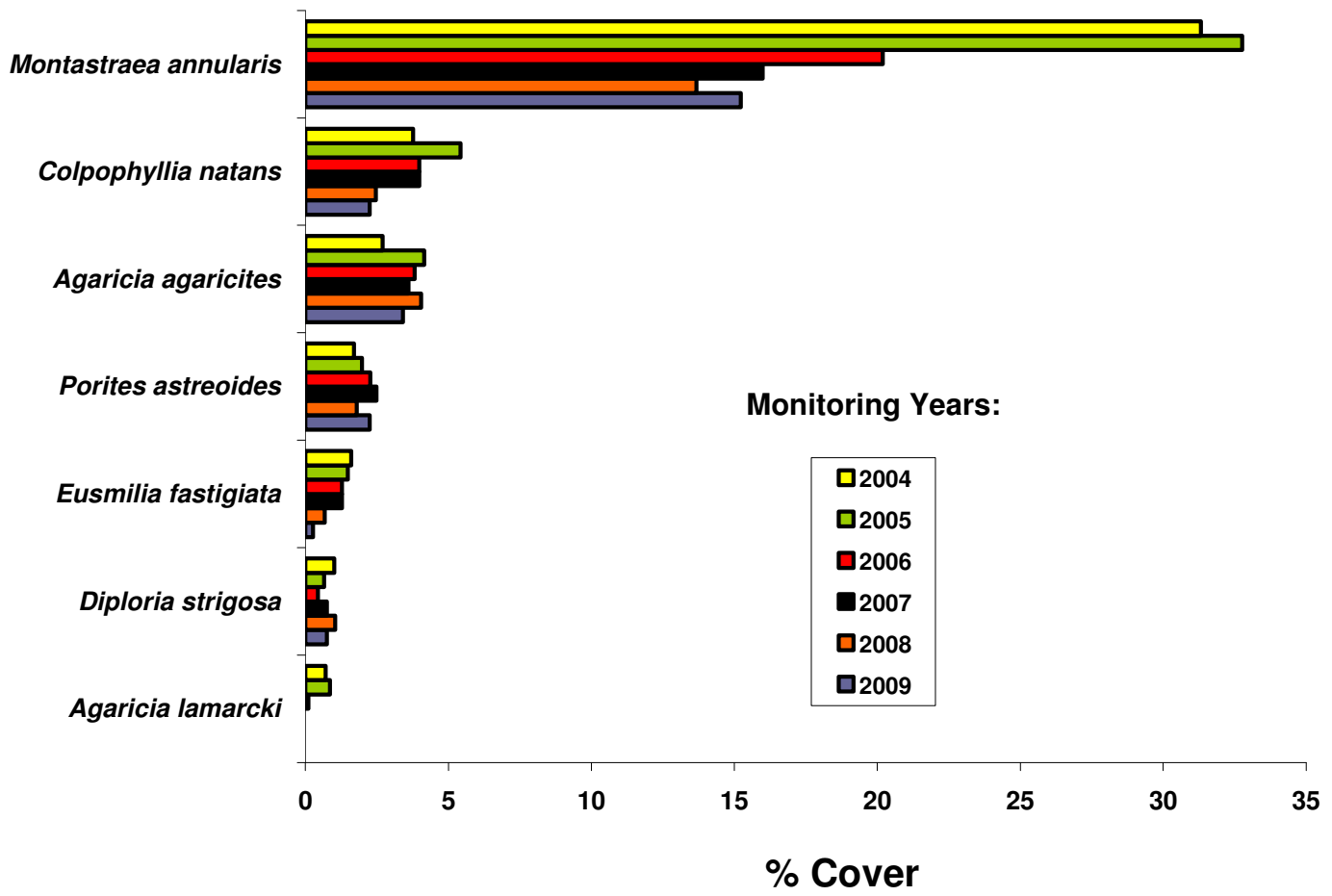


...The Future

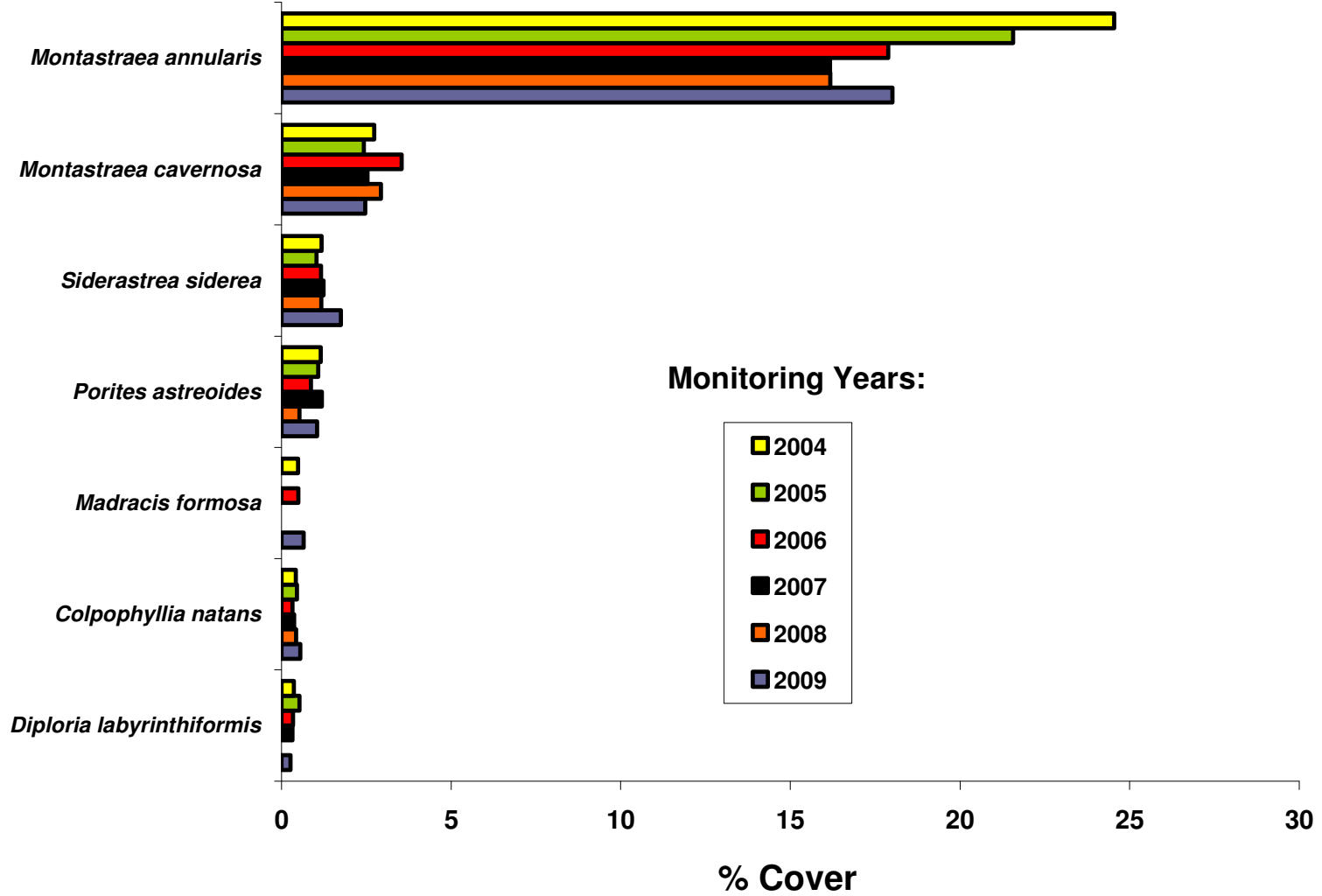
Can *M. annularis* regain its lost space and ecological standing on Puertorrican reefs ??



Coral Species **Desecheo 30m**

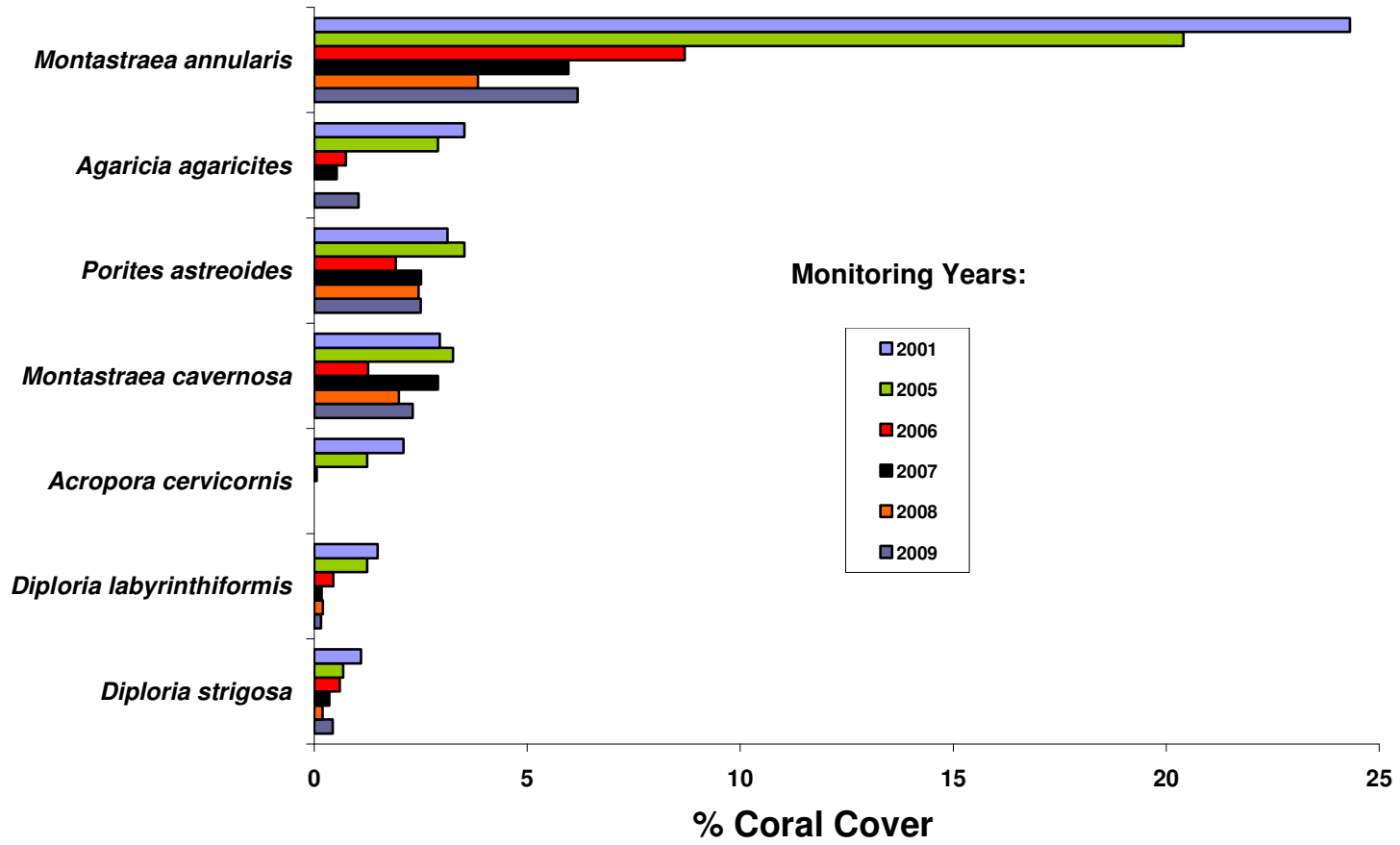


Coral Species **Tourmaline 20m**



Derumbadero - Ponce

Coral Species



Caja de Muertos

Coral Species

